

**Entrepreneurship: The
Engine of Growth,
Volumes 1-3**

*Edited by
Maria Minniti*

PRAEGER

Entrepreneurship

ENTREPRENEURSHIP

The Engine of Growth

Volume 1
PEOPLE

Edited by **Maria Minniti**

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Contents

| | |
|--|-----|
| Preface | vii |
| Introduction <i>Maria Minniti</i> | ix |
| 1. Entrepreneurial Behavior as a Human Universal <i>Roger Koppl</i> | 1 |
| 2. Cognition and Affect: Invaluable Tools for Answering “Why,” “How,” and What” Questions about Entrepreneurs and the Entrepreneurial Process <i>Robert A. Baron</i> | 21 |
| 3. Heuristics, Biases, and the Behavior of Entrepreneurs <i>Christian Schade and Philipp Koellinger</i> | 41 |
| 4. The Role of Risk in Entrepreneurial Behavior <i>Julie Ann Elston and David B. Audretsch</i> | 65 |
| 5. Entrepreneurship as an Occupational Choice <i>Simon C. Parker</i> | 81 |
| 6. The Influence of Social Capital on Entrepreneurial Behavior <i>Christian Simoni and Sandrine Labory</i> | 101 |
| 7. Entrepreneurial Behavior and Institutions <i>Peter J. Boettke and Christopher J. Coyne</i> | 119 |

| | |
|---|-----|
| 8. Entrepreneurs in the Global Economy <i>Kent Jones</i> | 135 |
| 9. Immigration, Ethnicity, and Entrepreneurial Behavior <i>Jonathan Levie and David Smallbone</i> | 157 |
| 10. Perspectives on Women Entrepreneurs: Past Findings and New Directions <i>Patricia G. Greene, Candida G. Brush, and Elizabeth J. Gatewood</i> | 181 |
| Index | 205 |
| About the Set Editors | 211 |
| About the Contributors | 215 |

Preface

The editors of this three-volume set are pleased to present readers with insight into the field of entrepreneurship by some of the leading scholars around the world. Babson College, the home institution for all the editors, has been a leader in entrepreneurship education for over thirty years and is recognized by many leading publications as the top school for teaching entrepreneurship at both the MBA and undergraduate levels (thirteen years running by *U.S. News and World Report*). Since 1999, Babson College, in conjunction with the London Business School, has led the Global Entrepreneurship Monitor (GEM) research project. GEM assesses the state of entrepreneurship activity across more than forty countries around the world (comprising two-thirds of the world's population and over 90 percent of the world GDP), and has shown that entrepreneurship can be found in all economies and that almost 9 percent of the adult population is actively attempting to launch a new venture at any given time.¹ While the percentages vary by country, GEM illustrates the importance of entrepreneurship and provides context as we try to better understand the entrepreneurial phenomenon.

We have compiled three volumes focusing on entrepreneurship from three different perspectives: people, process, and place. Volume 1, edited by Maria Minniti, looks at the intersection of people and entrepreneurship. Taking a broad view of entrepreneurship as a form of human action, chapters in this volume identify the current state of the art in academic research with respect to cognitive, economic, social, and institutional factors that influence peoples' behavior with respect to entrepreneurship. Why do people start new businesses? How do people make entrepreneurial decisions? What is the role played by the social and economic environment on individuals' decisions about entrepreneurship? Do institutions matter? Do some groups of people such as immigrants and women face particular issues when deciding to start a business? The volume addresses

these and other questions. Each chapter provides an extensive bibliography and suggestions for further research.

Volume 2, edited by Andrew Zacharakis and Stephen Spinelli, examines the entrepreneurial process. The book proceeds through the lifecycle of a new venture start-up. Chapter authors tackle several key steps in the process, ranging from idea, to opportunity, team building, resource acquisition, managing growth, and entering global markets. These chapters identify the current state of the art in academic research, suggest directions for future research, and draw implications for practicing entrepreneurs. What is clear from this volume is that we have learned a tremendous amount about the entrepreneurial process, especially over the last fifteen years. This deep insight leads us to ask more questions and suggest new research to answer these questions. This learning is also applied in the classroom and shared in this book so that students and entrepreneurs can assess best practices.

Volume 3, edited by Mark Rice and Tim Habbershon, examines place. In this volume and in the literature, *place* refers to a wide and diverse range of contextual factors that influence the entrepreneur and the entrepreneurial process. We represent these contextual factors as a series of concentric circles ranging from environmental and global forces, to national and regional policies, industries and infrastructures, to cultural communities, families, and organizational forms. Chapters in this volume address entrepreneurship in the context of the corporation, family, and franchise. We provide insights on ethnicity and entrepreneurship in the U.S. Hispanic, Slovenian, and German context. We look at the impact of public policy and entrepreneurship support systems at the country and community level, and from an economic and social perspective. We also examine the technology environment and financing support structures for entrepreneurship as context issues. By placing this array of contextual factors into an ecosystem perspective, we show how entrepreneurship is a complex input–output process in which people, process, and place are constantly interacting to generate the entrepreneurial economy.

It is our hope that the chapters spur the reader's interest in entrepreneurship, that the academic who is new to entrepreneurship will see an opportunity to enter this field, and that those who are already studying this phenomenon will see new questions that need investigation. We hope that practitioners and students will glean best practices as they work in entrepreneurial ventures and that the prescriptions within these chapters will help them succeed. We also think that these volumes can help policymakers get a firmer grasp on entrepreneurship and the potential it has to spur economic growth within a country, state/province, and town. Entrepreneurship operates in an ecosystem that is reliant upon all the audiences of these volumes. As we gain better understanding of the ecosystem, we all benefit.

NOTE

1. M. Minniti, W. Bygrave, and E. Autio, *Global Entrepreneurship Monitor: 2005 Executive Report* (Boston, MA: Babson College and London Business School, 2006).

Introduction

Maria Minniti

Entrepreneurship is often identified with the creation of new business ventures or with self-employed individuals. These activities are indeed expressions of entrepreneurial behavior. Entrepreneurship, however, is a much broader phenomenon. Whether starting a new business, solving a problem, or deciding what route to take driving home, individuals are always on the alert to the possibility of changes that may improve their life, even if in very small ways. All individuals are potential innovators seeking new and better ways to do things. Thus, entrepreneurship is a characteristic of human behavior consisting in the identification of new end-means frameworks.¹ It is also a timeless human universal present in all places and cultures. People are at the core of the entrepreneurial phenomenon, and without a clear understanding of their behavior our object of inquiry disappears. “The entrepreneur,” William Baumol wrote, “is one of the most intriguing and at the same time most elusive characters in the cast that constitutes the subject of economic analysis.”² This first volume of the trilogy on entrepreneurship is about people. Who are entrepreneurs? What motivates entrepreneurial behavior? Why are some individuals more entrepreneurial than others?

Social scientists look at the world from a variety of disciplinary perspectives, and social science consists of the application of scientific methods to the study of the human aspects of the world and, specifically, of individual relationships in and to society. Entrepreneurship is a complex and multilayered phenomenon. Entrepreneurial actions produce personal and collective changes which, because of the interdependence among individuals, ultimately, change the world. Thus, the identification, description, and theoretical explanation of what entrepreneurs do, and how they do it, can only be rooted in a comprehensive social science approach. Any other attempt to understand entrepreneurship would have to set

boundaries and, because of its very nature, entrepreneurship does not lend itself to be bound. Any delimitation of what counts as entrepreneurial behavior would cause artificial exclusions whether of topic or of disciplinary approaches and would be, therefore, scientifically unsound.

The goal of this volume is to show the breadth and richness of the social science approach to the study of entrepreneurial behavior and to illustrate how such a wealth of knowledge can be fully understood and exploited only if entrepreneurship is properly characterized as a universal aspect of human action. By presenting a variety of disciplinary approaches and a wide range of areas of inquiry, the volume allows the reader to appreciate how they all overlap and complement each other in meaningful and interesting ways.

Although designed primarily for an academic audience, the volume is of interest and accessible to anyone interested in understanding entrepreneurial behavior or in exploring in detail how entrepreneurship and its implications influence individuals' lives and economic growth and development. Although each chapter is self-contained and deals with a different area of inquiry, all chapters are logically linked. Also, chapters are based on different disciplinary perspectives. Thus, readers will gain insights on how related topics are treated from very different disciplinary backgrounds. Authors were invited to contribute to the volume because of their intellectual leadership in their chosen fields, and I am grateful to each and all of them for participating in this project. Finally, the sequence and selection of chapters allows readers to gain a holistic view of the issues and literature related to entrepreneurial behavior. Although the list of topics does not pretend to be comprehensive, the volume provides a rich and up-to-date overview of the most interesting developments in the field.

Since entrepreneurship is an attribute of human action, all individuals are entrepreneurs. Yet, some are more entrepreneurial than others, and the entrepreneurial behavior of some groups may appear to differ systematically from that of others. Why? Human decisions are molded by cognitive processes and emotional states that influence how individuals learn and what they attribute importance to. These processes lead to the decisions that determine human actions. Such decisions are sometimes rational and sometimes biased. In the case of entrepreneurship, many of them also involve employment choices and risky situations. Moreover, decisions are influenced and become meaningful within specific social contexts. Institutions are a particularly important part of this context since they determine individuals' incentives and, as a result, what individuals will do. Explaining these observations helps us know why individuals behave entrepreneurially albeit not all in the same way or degree.

In Chapter 1, Roger Koppl addresses the question of who the entrepreneur is, and what constitutes entrepreneurial behavior. This is indeed a central issue for this volume, one to which, in the literature, different answers have been proposed, but no general agreement exists.³ Building upon the tradition of Austrian social science, Koppl's argument is that progress is possible only if entrepreneurship is acknowledged as a human universal and entrepreneurs as agents of change.

To say that entrepreneurs are agents of change is equivalent to saying that they are innovators. To innovate, however, one must be alert to new opportunities for innovative actions. Building upon Kirzner's classic works, Koppl presents a comprehensive review of works in entrepreneurship theory and introduces the term *post-Kirznerian theory* to identify works rooted in the Austrian tradition and in which time and uncertainty are central elements.⁴ Post-Kirznerian theory replaces *homo economicus* with *homo sapiens* and gives us the theoretical foundations for a unified view of entrepreneurial behavior showing that the field is not defined by its object of inquiry, but by its point of view.⁵

Koppl contributes to this volume by providing a unifying approach to the study of entrepreneurial behavior and by correcting several mistakes about Austrian theory often found in the entrepreneurship literature. In addition to explaining the importance of a social science approach to the study of entrepreneurship, Koppl points out the importance that psychological factors play on entrepreneurial behavior and prepares the readers to fully appreciate Chapter 2.

In Chapter 2, Robert Baron focuses on the cognitive processes involved in the acquisition, transformation, and use of information, and on their interdependence with the emotions and moods that individuals experience. Significant evidence exists indicating that cognition and affect are interrelated in complex ways, so that the moods or emotions that individuals experience influence many aspects of cognition, and cognition, in turn, influences feelings.

A large body of evidence in cognitive science suggests that pattern recognition is a basic aspect of our efforts to understand the world around us.⁶ The initial section of Baron's chapter focuses on the idea that opportunity recognition, a key aspect of entrepreneurial behavior, is essentially a form of pattern recognition and argues for the usefulness of applying prototype models to its analysis. *Prototype models* are cognitive frameworks representing idealized representations of the most typical member of a category. Applying them to the study of opportunity recognition, Baron argues, may help us understand in a unique framework the links between active search, alertness, and prior knowledge, the three factors that have been found to play important roles in entrepreneurial behavior.

The second part of Baron's chapter focuses on *affect*, that is, the moods or emotions individuals experience daily. Affective reactions strongly influence perceptions of the external world and judgments based on such perceptions. Baron argues that the important links between affect and cognition have significant implications for entrepreneurial behavior and our understanding of it, since they influence our perceptions of the external world and associated risks, susceptibility to various forms of cognitive biases, and even creativity. Baron's analysis leads directly to Chapter 3 in which Christian Schade and Philipp Koellinger discuss in detail the importance of heuristic thinking and perceptual biases on entrepreneurial behavior.

In their early seminal work, Tversky and Kahneman demonstrated that decision makers may strongly deviate from rationality because of the use of a number of *heuristics*, that is, rules of thumb, instead of formal techniques.⁷

Heuristics influence the perception and processing of information and the intuitive optimization processes used by individuals in selecting their actions. In Chapter 3, Schade and Koellinger take a decision theory approach to describe how heuristics and biases can influence decision making in general and why they are particularly relevant for entrepreneurial behavior.

A major difficulty often encountered by decision makers is that likelihoods and outcomes are not easy to assess. This is particularly relevant for entrepreneurial decisions since potential entrepreneurs are often subject to Knightian uncertainty.⁸ That is, they operate in situations in which both outcomes and their likelihoods are unknown. Schade and Koellinger discuss potential effects of well-known heuristics and biases by dividing them into three distinct groups: reference-dependent behaviors, biases in probability perceptions, and biases in self-perceptions.

Discussing both theoretical and empirical evidence, the authors show that some types of heuristics and biases, such as the escalation of commitment, illusion of control, and overconfidence, may be relatively more frequent or significant among entrepreneurs, while others, such as the status quo bias, are less prevalent. On the one hand, heuristics are shown to help in managing the complex task of assessing uncertain future prospects and might even be necessary to act quickly in uncertain environments. On the other hand, they are shown also to lead to errors of judgments and suboptimal decisions.

Overall, Schade and Koellinger complement Baron's analysis since the impact of heuristics and biases and affective reactions on cognition suggests a mixed pattern of potential benefits and potential costs. These elements increase entrepreneurs' tendencies to cope with uncertainty and to react to situations in creative ways. At the same time, however, they increase entrepreneurs' susceptibility to various cognitive errors.

The decision theory approach taken by Koellinger and Schade's highlights the important distinction between heuristics and optimal decision making in risky situations. Unlike their chapter, whose focus is on deviations from optimal behavior, in Chapter 4, Julie Elston and David Audretsch take a standard economics approach and address the relationship between entrepreneurial behavior and calculable risk. While Schade and Koellinger deal with the individual's subjective perception of uncertain situations, Elston and Audretsch discuss entrepreneurs' exposure and attitude toward situations in which risk can be objectively measured. As explained by Koppl in Chapter 1, an important distinction has been made in the literature between risky and uncertain situations: A decision is inherently uncertain if the outcomes resulting from that decision cannot be assigned a probabilistic distribution. A decision is risky if its resulting outcome is uncertain but the probability distribution associated with all outcomes is known.

In asking the question of why some people start businesses while others do not, much of the entrepreneurship literature has implicitly or explicitly focused on individuals' willingness to take on risk. Often, in the literature, entrepreneurs are described as risk-loving individuals or as individuals willing to take on more

risk than nonentrepreneurs. Within this context, much can be learned from economics, where behaviors with respect to risk can be analyzed in a rigorous and systematic way. The starting point to study behavior toward risk is individuals' tendency to refuse fair games and their natural tendency toward risk aversion. Thus, *taking a risk* can be defined as making a choice where the outcome resulting from that choice is less than certain but can be anticipated with known a priori probabilities.

Elston and Audretsch argue that entrepreneurs, like all other individuals, exhibit risk-averse behaviors although, possibly, less than nonentrepreneurs. They also discuss entrepreneurs' exposure to risk due to asymmetric information. The latter creates principal-agent problems that penalize entrepreneurial behavior more than other business behaviors because, everything else being the same, size and liability of newness put entrepreneurs at a comparative disadvantage. According to Elston and Audretsch, these are some of the factors behind the standard characterization of entrepreneurial behavior as being inherently risky.

The economic approach by Elston and Audretsch leads directly to the economic analysis of entrepreneurship as an employment choice. In Chapter 5, Simon Parker provides an overview of the way in which neoclassical economists have traditionally modeled entrepreneurial behavior. Microeconomists have a distinctive perspective on entrepreneurship, commonly viewing it in terms of an occupational choice between paid employment and any form of self-employment.⁹ Parker's chapter starts and develops around the simple fundamental equation of occupational choice and addresses the question of who becomes an entrepreneur and why. In this basic economic formulation individuals decide to become entrepreneurs by comparing the profits available to an individual from self-employment with those that the individuals can obtain from paid employment given a set of variables influencing the individual's personal preference for self-employment.

In the basic occupational choice equation, Parker shows, the relative returns to self-employment and paid employment are based on the observation that each individual in a population possesses some ability, which is, however, unequally distributed. If individuals' ability increases their self-employment potential but has no effect on the wage they receive from dependent labor, the more able individuals select into self-employment. If, on the other hand, their ability influences also their wage from dependent labor, it is more difficult to determine who will become self-employed and whether those choices will lead to desirable aggregate outcomes in terms of quality and quantity of self-employment.

In addition to heterogeneous ability, Parker develops further Audretsch and Elston's argument and shows the basic occupational choice equation to be suitable also for the study of the relationship between the decision to become self-employed and risk aversion. The economics literature on this subject has shown that less risk-averse individuals become entrepreneurs, that the largest firms tend to be run by the least risk-averse entrepreneurs, that economies in which individuals are more risk-averse have lower living standards than economies in which

individuals are less risk-averse, and that in the absence of risk-sharing mechanisms, free occupational choice does not maximize welfare and/or efficiency.

Finally, Parker connects the microeconomic approach to insights from psychology and sociology. In particular, he discusses how sociologists have contributed to our understanding of the importance of social interactions and networks, and argues that entrepreneurship is as much a social as an economic process. In fact, entrepreneurial behavior does not take place in a vacuum. Rather, it is embedded in networks of social relationships. Parker's acknowledgment of the importance of social interactions is developed further by Christian Simoni and Sandrine Labory in Chapter 6. Simoni and Labory take a management approach and review the extent to which entrepreneurial behavior is influenced by the availability (or absence) of social capital.

Unfortunately, to date no generally accepted definition of social capital exists and, as a result, several researchers have become critical of the concept.¹⁰ According to the more widely accepted definition, social capital lies in the social structure of a collectivity and in the links that provide individuals with cohesiveness, thus facilitating the achievement of shared goals. According to Coleman, for example, social capital is an attribute of the social structure in which individuals are embedded and is not privately owned by any of them.¹¹ Thus, social capital is not provided to individuals through the links of their social networks, rather it is the links of such networks. This view is consistent with economics which treats social capital as a resource capable of creating un-traded interdependencies and producing trust thereby reducing transaction costs and encouraging sustainable cooperative behavior.¹²

In Simoni and Labory's review, and as anticipated by Parker in Chapter 5, the literature on social capital leads organically to the study of networks, the area in which more scientific progress has been achieved, partly because of the clearer identification of the topic of study.¹³ In general, membership in networks has been shown to affect entrepreneurial behavior by facilitating exposure to opportunities, access to knowledge and information, and by legitimating entrepreneurial behavior. The interdependence between social capital and entrepreneurial decisions has been shown also to generate a positive network externality that increases the information publicly available about starting new businesses.¹⁴ Asymmetries in the endowments of social capital, instead, appear to help explain differentials in entrepreneurial behavior and performance.¹⁵

Simoni and Labory provide some suggestions for future research by identifying some gaps in the literature. They note, for example, that the amount of social capital available to entrepreneurs is usually treated as being exogenously determined rather than being itself a dynamic and embedded concept. They further suggest that more research should be carried out on the social capital factors that play a positive role in the successful continuation and completion of the entrepreneurial process beyond the start-up stage.

Clearly, the quality, quantity, and use of available social capital are, as pointed out by Simoni and Labory, determined endogenously by the broader context in

which individuals live. In Chapter 7, Peter Boettke and Christopher Coyne develop this important point by discussing the relationship between institutions and entrepreneurial behavior.

Institutions refer to the formal and informal rules governing human behavior and can vary across time and space. Like Koppl, Boettke and Coyne leverage the Austrian tradition and, in addition to discussing the importance of institutions, provide an analysis of the connection between institutions, the market process, and entrepreneurship. The goal of their chapter is to explore how various institutional structures influence entrepreneurial behavior and the linkage between the latter and sustainable economic growth. The underlying logic of the connection between institutions and entrepreneurial behavior is the realization that institutions provide a framework that guides activity, removes uncertainty, and makes the actions of others predictable. In short, institutions serve to reduce transaction costs and facilitate the coordination of knowledge dispersed throughout society.

Formal and informal institutions influence the behavior of individuals of all cultures and traditions. Indeed, Boettke and Coyne argue that while cultural factors may explain some aspects of human behavior, they cannot explain all behaviors. The same individuals, with the same motivations, will tend to act very differently under different sets of institutions.¹⁶ Thus, institutional arrangements have major implications for the way we understand economic change and progress or the lack thereof.

Developing an argument put forward by Baumol, Boettke and Coyne argue that institutions determine the type of entrepreneurial behavior individuals pursue.¹⁷ When engaging in productive activities, such as arbitrage, innovation, and other socially beneficial behaviors, entrepreneurs foster economic growth by acting upon previously unexploited profit opportunities and by innovating. In countries with low growth, they argue, it is not that entrepreneurs are absent or are not acting, but rather that profit opportunities are tied to socially destructive behaviors. Thus, the adoption of certain institutions is a necessary condition for the existence of productive entrepreneurial behaviors since it is the institutional framework that enables the right type of entrepreneurship.

The analysis put forth in this chapter suggests that in order to adopt institutions that promote productive entrepreneurial behavior, we need to understand the conditions and institutions necessary for political entrepreneurs to adopt such policies. In other words that, since entrepreneurship is a universal aspect of human action, the entrepreneurial mind-set applies not only to the private realm, but also to the public arena and the meta-rules followed by policymakers and that, as a result, appropriate political systems need to be in place.

The importance of institutions conducive to productive entrepreneurship highlights the crucial role played by markets in creating incentives for productive entrepreneurial behavior to take place. In Chapter 8, Kent Jones develops the topic of institutions further by discussing the role of global markets and their openness in generating an ever-growing pool of entrepreneurial opportunities.

Jones defines globalization as the process of progressive integration of markets around the world. While the study of domestic entrepreneurs focuses on those who create new value in their national markets, global entrepreneurship focuses on how new value is created through international transactions. The chapter considers the role entrepreneurs play in extracting gains from international trade and the impact they may have on a country's comparative advantage and patterns of trade.

The extent to which entrepreneurs operate abroad depends largely on the type and incidence of transaction costs, network structures across borders, and on how knowledge and technology about entrepreneurial opportunities spread. Jones argues that entrepreneurs are, by definition, creative individuals at the forefront of market development, who exploit opportunities and introduce innovation, change, and dynamism in markets across national borders. As a result, any policies that limit import competition and the market signals associated with it are implicit obstacles for entrepreneurs, and to the entire incentive structure of entrepreneurship itself.

In view of the benefits that come from international entrepreneurship, policymakers from all countries face the challenge of creating a business environment that encourages these activities. Thus, Jones argues that a policy agenda aiming at promoting global entrepreneurship must focus on the progressive liberalization of global markets. To the extent that entrepreneurial activity is linked to international trade, agencies such as the World Trade Organization improve the global environment for entrepreneurs through the reduction of political risk and uncertainty regarding foreign markets.

To summarize, Chapters 1 through 8 provide a review, from a variety of disciplinary perspectives, of the main factors that influence entrepreneurial behavior such as cognitive processes, heuristic decision making, risk behavior, economic incentives, social capital, and institutions. In spite of differences in perspectives, the first eight chapters suggest that the same model of entrepreneurial behavior applies to all individuals, regardless of time and place. Namely, individuals are sensitive to incentives and differ with respect to entrepreneurial behavior because of differences in their psychological and socioeconomic backgrounds. And yet, in the last two decades, a significant amount of literature has addressed issues related to why certain groups seem to be more entrepreneurial than others. In most cases, such differences may be reduced to differences in institutional settings which, in turn, influence the socioeconomic environment of individuals' actions. Three groups exist, however, that warrant inclusion in this volume since their analysis, in addition to having very significant policy implications, may provide useful for our understanding of entrepreneurial behavior in general. The three groups are minorities, immigrants, and women.

In Chapter 9, Jonathan Levie and David Smallbone take a management approach and ask if, with respect to entrepreneurship, immigrants and ethnic minorities behave differently from native-born and ethnic majorities. Although

being an immigrant and a member of an ethnic minority are two very different things, in practice, these attributes are often, and in most countries, closely interrelated.

The record on the entrepreneurial behavior of immigrants and ethnic minorities is mixed. Most indicators suggest that rates of entrepreneurial activity differ between different immigrant and ethnic minority groups within countries, across countries, and over time. In some countries or regions, for example, some immigrant and ethnic minority groups show a high involvement in entrepreneurial activity, bringing benefits to themselves and the host countries. In other cases, the same immigrants and ethnic groups perform less well.

Levie and Smallbone's review of research on ethnic and immigrant entrepreneurship suggests that ethnic minority and immigrant status, on their own, do not necessarily imply a higher (or lower) propensity to engage in entrepreneurial activity. Minorities and immigrants behave exactly like anybody else once other contingent factors, such as the length of time an individual has lived in the host country, the circumstances that led to migration, and, especially, the opportunities presented by the host environment, are taken into account.

Although the early literature on ethnic minority entrepreneurship emphasized the role of cultural differences between ethnic groups as a key element responsible for differences in entrepreneurship rates, more recent developments in the literature recognize that focusing exclusively on cultural traits overlooks what all individuals have in common across cultures, namely alertness to profit opportunities and the desire to better their lot in life. Specifically, Levie and Smallbone argue that overemphasizing the role of ethnicity rather than socioeconomic status neglects to take into account the set of circumstances within the host country. In other words, that ethnicity and minority status may matter given the contextual circumstances but not as an autonomous factor.

Finally, in Chapter 10, Patricia Greene, Candida Brush, and Elizabeth Gatewood provide a survey of the rapidly expanding research on women's entrepreneurial behavior. Taking a feminist point of view, they follow the development of the field from the early 1970s up to contemporary works.

In their review, Greene, Brush, and Gatewood point out that research on women's entrepreneurial behavior, just as the majority of research on men, was initially rooted in trait psychology and focused on personal characteristics. The most frequently studied topics were women's education, business experience, skill sets, and psychological profiles including motivations and risk-taking propensity. Only in the 1980s, Greene, Brush, and Gatewood argue, with the rise of feminist ideology and its application to the study of women's entrepreneurship, did *sex* begin to be considered as a physiological difference between men and women, while *gender* began to refer to differences in patterns of behavior between the sexes based on values and roles.

Within this context, research focusing on women entrepreneurs and on women-led businesses studied motivations, internal attributes, entrepreneurial

tendencies, and organizational behaviors. Unfortunately, the authors write, studies in this tradition have provided conflicting findings. Some have found that women display entrepreneurial behaviors that differ from those of men, in particular with respect to risk-taking and profit motivation.¹⁸ Others have found greater differences across job categories (managers and entrepreneurs) than across men and women.¹⁹ Even in comparative studies, it is unclear whether the impact of context differs between men and women. Overall, Greene, Brush, and Gatewood conclude that, in spite of significant progress, the field is still characterized by a variety of inconclusive findings and it is still far from having developed a comprehensive theory of women's entrepreneurship.

The study of women entrepreneurship has, very recently, been addressed by some works rooted in behavioral economics and evolutionary psychology. These works have provided some evidence that, unlike immigrant and minority status where no systematic differences appear to exist across groups, some systematic differences with respect to entrepreneurial behavior may exist between men and women.²⁰ Although very new, this line of research looks very promising for this area of inquiry.

To summarize, in this volume, entrepreneurial behavior is described as a universal aspect of human action related to individuals' ability to perceive opportunities for potential changes that may improve their lives. Entrepreneurs are individuals motivated by economic incentives, but also by personal aspirations and social considerations and constraints. Furthermore, since entrepreneurs assess risks and opportunities, their institutional context, both locally and internationally, matters.

Overall, the volume makes several contributions. First, each chapter provides a state-of-the-art treatment of a topic and a broad literature review. Second, the diverse approaches presented across chapters provide interesting perspectives not only on theory but also on the possibilities of applied methods ranging from mathematical and econometric formulations, to experimental techniques, to anthropological and ethnographic methods. Third, all chapters highlight areas of inquiry where more research is needed. Thus, it is hoped that some readers will be inspired to take on new and interesting projects.

Finally, and perhaps most important, the volume introduces readers to the opportunities presented by a true social science approach to the study of entrepreneurial behavior. All authors in this volume refer to insights provided from disciplines other than their own. Thus, although contributions to our understanding of entrepreneurial behavior must be grounded in disciplinary foundations such as those of economics, psychology, anthropology, and other social sciences, only by viewing the study of entrepreneurial behavior as an area of social science and entrepreneurship as a universal aspect of human actions we can hope for theoretical unity in entrepreneurship studies. Any other attempt to understand entrepreneurship would have to divide observable behaviors between entrepreneurial and nonentrepreneurial. But any such division would have to be necessarily arbitrary and, therefore, scientifically unsatisfactory.

NOTES

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1

Entrepreneurial Behavior as a Human Universal

Roger Koppl

The conclusion we can draw from the state of the art of the research on entrepreneurship is that the most interesting studies are often located at the borders between disciplines, such as those by economists who reject simple rational models and recognize the influence of social interaction and culture, or by sociologists and anthropologists who reject oversocialized conceptions of man and take into account the strategies of individual actors.

—Alberto Martinelli¹

The central figure in entrepreneurship research is the entrepreneur. This is the individual without whom our object of inquiry disappears. One might expect, then, that all our efforts would be based on a clear, scientific understanding of entrepreneurs and their function. This is not the case, however. We do not know who the entrepreneur is and what makes him or her an entrepreneur. The purpose of this chapter is to clarify these issues. As we shall see, this task requires us to establish some foundational points in entrepreneurship theory.

Confusion over the identity of the entrepreneur does not reflect any neglect of the question by entrepreneurship scholars. On the contrary, the problem has received considerable attention in the entrepreneurship literature. It is a difficult scientific problem, however, to decide precisely who is an entrepreneur and what entrepreneurial behavior is. Different answers have been proposed without a consensus view emerging.² Progress and consensus are possible if we are willing to shift our perspective a bit and recognize entrepreneurial behavior as a universal aspect of human action.

As I argue below, entrepreneurs are not a class of people distinct from other persons, and entrepreneurial behavior is not a class of actions distinct from other actions. Entrepreneurship is an aspect of all human action. Entrepreneurship is

a human universal. If so, then entrepreneurship theory must be a part of a broader social theory that encompasses many areas, including sociology, psychology, economics, and finance.

Viewing entrepreneurship as a human universal requires us to view it simultaneously as a characteristic of the entrepreneur and a description of what the entrepreneur does. Entrepreneurs are change agents, which is to say they are innovators. To innovate, however, one must be alert to new opportunities for innovative actions. Thus, our concept of what the entrepreneur does, namely innovate, implies something about what the entrepreneur is like, namely alert. The coin has two sides: One side shows us what the entrepreneur is like, while the other side shows us what the entrepreneur does. Most definitions of entrepreneurship today refer to one side of the coin or the other, but not both.

The unified view of entrepreneurial behavior as a human universal was put forward by Israel Kirzner.³ Kirzner's theory has been misconstrued as static and narrowly economic, as the example of Scott Shane illustrates.⁴ A proper understanding of Kirzner's theory, however, shows that it is a vital and dynamic element of a general social theory comprising each of the special social and behavioral sciences such as economics, sociology, and psychology. Kirzner's theory emerged from, and is a part of, the modern Austrian school in economics.⁵ While this might suggest disciplinary narrowness, the Austrian tradition views economics as merely one branch of a general social theory. Thus, I will speak of the Austrian school rather than Austrian economics, and I will speak of post-Kirznerian theory rather than post-Kirznerian economics.⁶

The next section gives a quick overview of Kirzner's theory in the context of the Austrian school of economics from which it derives. The section following it examines the problem (as I see it) that entrepreneurship scholars do not have a common theory. Doing so sets the context for the following section, which resolves the problem by proposing a unified perspective on entrepreneurial behavior. This section develops Kirzner's theory more carefully, including an exploration of some of the important dimensions of the theory, such as the role of uncertainty in creating entrepreneurial opportunities. The section following it puts flesh on the claim of earlier sections that Kirzner's theory is transdisciplinary. As my epigraph suggests, I share the common view that entrepreneurial studies must draw on the results of several social science disciplines. It is important, therefore, to demonstrate that the post-Kirznerian theory I propose is genuinely transdisciplinary. The final section contains a few closing remarks.

POST-KIRZNERIAN THEORY AND THE MODERN AUSTRIAN SCHOOL

Israel Kirzner first set out the elements of his theory of entrepreneurial behavior in his 1973 book, *Competition and Entrepreneurship*.⁷ In this work, he gives *entrepreneurship* a double meaning. First, it is alertness to new opportunities.

Second, it is the arbitrage that follows the alert discovery of an opportunity. According to Kirzner, alertness “is present in all human action” and is “an element which, although crucial to economizing, maximizing, or efficiency criteria, cannot itself be analyzed in [those] terms.”⁸

Kirzner contrasted his model of entrepreneurial behavior with the “rational choice” model of neoclassical economics.⁹ In Kirzner’s early statement of the theory in 1973, entrepreneurs live in the static world of neoclassical economics. Alertness to new opportunities is the vital human element missing from the rational choice model. In such a world, the only entrepreneurial opportunities to be found are opportunities for risk-free simultaneous arbitrage. These arbitrage opportunities all come from preexisting price differences. Thus, entrepreneurial opportunities were just “out there” waiting to be discovered. Kirzner chose to place his entrepreneurs in such a thin and timeless world because he was addressing neoclassical economists. Kirzner showed that the static models of neoclassical economics (c. 1973) required the addition of entrepreneurial behavior. The equilibrium assumed by neoclassical theory could never be reached without entrepreneurial behavior because movement toward equilibrium requires someone to change his plans and that cannot happen without entrepreneurial alertness. Even static neoclassical economic theory requires an agent of change, namely, the entrepreneur.

The robot of old-fashioned neoclassical economics, however, could never change its program of action. A new program, a new ends-means framework, cannot itself be part of the old program; otherwise it would not be new. Real people, however, do change their programs of action. They are alert to opportunities for gain and change their plans whenever they discover one. In *Competition and Entrepreneurship*, Kirzner had shown that even if you had the static world of neoclassical economics, you would still need entrepreneurial behavior to bring order to events. Unfortunately, the “even if” assumption of a static world has often been mistaken for a necessary assumption of his theory. The truth is almost the opposite. Indeed, Kirzner made a radical departure from static assumptions in 1982 with the publication of his article “Uncertainty, Discovery, and Human Action: A Study of the Entrepreneurial Profile in the Misesian System.”¹⁰

In seminars and private conversations, Kirzner has repeatedly insisted that the static assumptions of *Competition and Entrepreneurship* were meant as simplifying assumptions suited to his audience and purpose and were never meant to deny the dynamic points about time and uncertainty that were the center of his 1982 article. He has repeatedly cited his 1982 paper as an important statement clarifying the meaning of his 1973 book and has indicated to me that the three main statements of his position are *Competition and Entrepreneurship* (1973), “Uncertainty, Discovery, and Human Action” (1982), and “Entrepreneurial Discovery and the Competitive Market Process” (1997).¹¹

It is useful to distinguish the seemingly static theory of Kirzner’s *Competition and Entrepreneurship* from the subsequent writings of the modern Austrian

school. I will use the term *post-Kirznerian theory* to identify these later works, in which time and uncertainty are central elements.¹² Kirzner's 1982 article is the first important contribution to post-Kirznerian theory.¹³ *The Economics of Time and Ignorance*, by O'Driscoll and Rizzo, is the second.¹⁴ Together they helped establish time and uncertainty as essential to our thinking about entrepreneurial behavior.¹⁵

Post-Kirznerian theory has produced an institutionally rich theory, in which the dynamic market process creates not only uncertainty, but also opportunities for entrepreneurial action. Post-Kirznerian theory integrates economic, sociological, and psychological perspectives in the context of a vision of the dynamic market process as a complex adaptive system. In "Austrian Economics at the Cutting Edge," I explain how post-Kirznerian theory relates to modern economics.¹⁶

Post-Kirznerian theory has an important advantage for entrepreneurship theory: It is not (as we might say) econo-centric. In other words, post-Kirznerian theory recognizes that economic action, and all human action, happens in a social context that shapes the goals and thinking (the cognition) of the people taking those actions.¹⁷ Post-Kirznerian theory builds on the broad notion of human action, rather than the narrow ideas of economic man.¹⁸ It replaces *homo economicus* with *homo sapiens*.¹⁹ Thus, in post-Kirznerian theory, traditional economics is merely one branch of a unified social science. Kirzner's teacher Ludwig von Mises used the term *praxeology* to identify this general theory of social science. Economics, Mises explained, is "a part, although the hitherto best elaborated part, of a more universal science, praxeology."²⁰ Following Mises, Kirzner said, "The praxeological view sees economic science as the branch of praxeology that has been most highly developed."^{21, 22}

The Austrian context of post-Kirznerian theory is important. Entrepreneurship research is highly interdisciplinary. This interdisciplinarity has been an obstacle to a comprehensive theory of entrepreneurial behavior. One researcher emphasizes economic factors, another emphasizes psychological factors, and still another emphasizes sociological factors. The Austrian school, however, is transdisciplinary. It represents that much needed integrated view of social science I mentioned earlier. Post-Kirznerian theory is thus able to integrate insights from different disciplines. It gives us theoretical foundations for a unified view of entrepreneurial behavior, showing that the field is defined not by its object of inquiry, but by its point of view.²³

THE PROBLEM

I have noted earlier that there is no consensus on who is an entrepreneur. This fact reflects a difficulty with entrepreneurship research that might be attributed to its relative youth as a separate discipline.²⁴ Entrepreneurship research today is rich in facts but poor in theory. Entrepreneurship scholars have produced many important empirical results. No broad theoretical framework has yet emerged,

however, that might give them coherence and order. But there is no progress without theory. Without a broad theoretical framework for scholarly work in entrepreneurship, it is hard to decide which empirical results are complementary and which are contradictory, which are more important and which less. It is hard to know what general inferences to draw and which puzzles and questions are most worth examining. “We are getting more pieces of the puzzle, but no picture is emerging.”²⁵

I have said that there are many empirical works in entrepreneurial studies, but no unifying theory. This claim should not be taken to imply that these empirical works are, somehow, theory free. They often have quite strong theoretical grounding. But there is little or no theoretical consistency from one scholar to the next and one study to the next. I believe the root cause of this unproductive form of theoretical diversity is the lack of generally agreed upon criteria for what counts as entrepreneurial behavior. Along similar lines, Shane and Venkataraman say, “Perhaps the largest obstacle in creating a conceptual framework for the entrepreneurship field has been its definition.”²⁶

Within entrepreneurial studies, two competing notions of entrepreneurship dominate. On the one hand, *entrepreneurship* may refer to what entrepreneurs are like. On the other hand, it may refer to what the entrepreneur does. This basic division was already in place in 1990 when Gartner published a study showing that the professionals he surveyed fell into two groups, each with a different basic concept of entrepreneurship. The first group thought of the characteristics of entrepreneurship and the second thought of the outcomes of entrepreneurship such as creating value or owning an ongoing business.²⁷

Gartner’s first definition, concerning the characteristics of entrepreneurship, is most commonly identified today as *opportunity recognition*. Entrepreneurs are distinguished by their propensity to recognize opportunity.²⁸ Advocates of this definition of entrepreneurship include Shane and Venkataraman.²⁹ Gartner’s second definition, concerning the outcomes of entrepreneurship, is most commonly identified today as *innovation and firm formation*. Entrepreneurs launch innovations and found enterprises. Advocates of this definition of entrepreneurship include Low and MacMillan.³⁰

Many scholars in management and entrepreneurship believe that opportunity recognition is the characteristic feature of entrepreneurial behavior. Others in this field believe that firm formation or innovation is the characteristic feature of entrepreneurial behavior. Both concepts are quite reasonable, and a good case can be made for either one. I am not aware of any compelling argument to abandon one of the two in favor of the other. And because each definition excludes the other, neither one enables us to enjoy the full benefits of the diversity of disciplinary perspectives relevant to entrepreneurship.³¹

We need a broad theory of entrepreneurship that will bring order, coherence, and unity to the growing body of empirical research in entrepreneurship. In this sense, we need a unifying theory. In this essay I will not pretend to provide all details of such a theory. I will, however, attempt to explain the most important

and fundamental elements of such a theory. The first and most important task of such a theory is to give a coherent account of the entrepreneur as an individual.

In this section, I have pointed to the theoretical incoherence and disunity of studies of entrepreneurship and to the need for a unified theory. I explain the elements of such a theory in the next section, where I argue that post-Kirznerian theory offers a unified perspective, encompassing both opportunity recognition on the one hand and innovation and firm formation on the other.

A UNIFIED PERSPECTIVE ON ENTREPRENEURIAL BEHAVIOR

The post-Kirznerian theory of entrepreneurial behavior I propose in this essay might be divided into three main pieces. First, there are the most fundamental elements identifying what entrepreneurs do and what entrepreneurs are like. As we shall see, the key concepts are *alertness*, *discovery*, and *innovation*. Thus, the first subsection that follows discusses the elements of post-Kirznerian theory. Second, we may ask what sort of a world permits alert entrepreneurs to discover opportunities for profitable innovations. Thus, the second subsection that follows argues that such innovations are possible only in the context of “uncertainty” and explains the post-Kirznerian theory of uncertainty. Third, we may ask how entrepreneurs gear into the world. How do they put their innovations into practice? Addressing this question, the third and final subsection examines the entrepreneurial process.

Fundamental Elements of Post-Kirznerian Theory

Post-Kirznerian theory, I have said, can offer us a unified perspective on entrepreneurial behavior. The key concepts are Israel Kirzner’s twin notions of alertness and innovation and his notion of discovery as a bridge linking alertness to innovation. As I will explain presently, alertness leads necessarily to discovery and discovery leads necessarily to innovation.

Alertness is the leading concept in post-Kirznerian theory. Alertness is alertness to opportunities. We are alert to opportunities to revise our plans and habits, to do something new. Thus, we are alert to desirable ways of changing the ends-means framework with which we have been operating.³² If the prospective change is desirable, it is because it seems to offer a gain, that is, a profit. Discovery is finding such a profit opportunity. As the term is used in post-Kirznerian theory, an entrepreneur may discover the results of his or her own creative imagination. Sometimes the entrepreneur discovers what is “out there”; sometimes the entrepreneur discovers his or her own creation. Finally, when a discovery is made, the entrepreneur acts on it by taking the innovative action newly available. The concept, though not the word, *innovation* is prominent in Kirzner’s work. As I note again here, for Kirzner, the element in decision making that “cannot . . . be

explained by [standard economic] rationality” is “the selection of the ends-means framework” within which action occurs. Kirzner notes that the selection of an interpretive framework is “essentially creative.”³³ This “creative” act is necessarily an innovation for the person undertaking it. Thus, the concept of innovation is essential to Kirzner’s theory even though he tended to use a different vocabulary. The new action may, of course, be the founding of a new enterprise.

Kirzner recognized the creative element in entrepreneurship in the seminal article of 1982 to which I have referred already. There he notes that “[a]lertness must, importantly, embrace the awareness of the ways in which the human agent can, by imagination, bold leaps of faith, and determination, in fact *create* the future for which his present acts are designed.”³⁴ He cites favorably Lawrence White’s remark that “[e]ntrepreneurial projects are not waiting to be sought out so much as thought up” and Ludwig Lachmann’s dictum that “[t]he future is unknowable, though not unimaginable.”³⁵

This brief sketch of the theory of entrepreneurship would seem to apply quite widely and well beyond the context of creating a new business. And indeed it does. At the highest level of abstraction, entrepreneurship is an aspect of action.³⁶ Thus, we may use a simple and homey example to illustrate the leading ideas of the post-Kirznerian theory of entrepreneurial behavior.

A professor walks the same route to class every day.³⁷ His path is optimal given his knowledge; it gets him there in the least time. One day he discovers that a slightly roundabout route allows him to avoid his dean, who usually pesters him along his accustomed path. He takes the new route and avoids the dean. Our professor has found a new ends-means framework. He had been minimizing travel time; he now minimizes the bother of getting to class, considering both travel time and obnoxious deans. Thus, his ends have changed. The means have changed too; he takes a different route. Our professor could have made this change only by being alert to the opportunity to improve his situation by changing his route. The new, roundabout route was a profit opportunity; he could profit by switching to the new route. When he discovered it, his actions changed. His actions had to change if the new route was truly a profit opportunity. For him this is an innovation. If he had considered the new route but found it to be too long, then it would not have been a true profit opportunity and he would not have taken it. Of course, the dean may find the professor along the new route too and the new plan may fail. It is not profit that drives the professor to the new route but the expectation of profit.

As I have noted already, in post-Kirznerian theory, entrepreneurship is an aspect of action. In Kirzner’s words, “[T]he entrepreneurial element cannot be abstracted from the notion of individual human action.”³⁸ This fact follows from what I will call the “groundhog principle.” The groundhog principle says that every context for action is in some degree novel, if only because the actor has lived through all his previous experiences before the current situation arose. This point was made by the philosopher Henri Bergson and, perhaps, by others before

him.³⁹ More recently, it was used as a plot device in the Hollywood movie *Groundhog Day*.⁴⁰ The protagonist rises each day to find that it is precisely the same as the previous day. Every day is February second; every day is Groundhog Day. The townspeople are unaware of this and behave identically on each repeated day. But the protagonist is aware of the past Groundhog Days and behaves differently from repeated day to repeated day. Even in the fantasy setting of this Hollywood movie, every context for action is in some degree novel, if only because the individual has lived through all his or her previous experiences before the current situation arose. This insight is the groundhog principle.

The protagonist of *Groundhog Day* varied his actions over time, sometimes slightly, sometimes radically. By the groundhog principle, he was always facing something at least a little bit new and unprecedented. Thus, he had to improvise even if only slightly. The groundhog principle tells us, then, that all action must be in some degree an improvisation. To improvise is to do something new and different. It is to innovate. Thus, all action is innovation. But an innovation implies a previous discovery of an opportunity. And such a discovery can be made only if the actor is alert.

It is only by viewing entrepreneurship as an aspect of all human actions that we can hope for theoretical unity in entrepreneurship studies. Any other approach to identifying entrepreneurial behavior would have us divide observable behaviors into those we will classify as entrepreneurial and those officially labeled nonentrepreneurial. But any such division is more or less arbitrary and open to objection. For example, if “opening a business” is the dividing line, some will object that “intrapreneurs” and social entrepreneurs are wrongly excluded.

Although entrepreneurship is an aspect of all human actions, most studies in entrepreneurship will, presumably, be conducted at a somewhat lower level of abstraction. The operational meaning of *entrepreneurship* will often be “starting a new business.” Almost by definition, however, any theory capable of integrating the many diverse strands of entrepreneurship research will have to be relatively abstract and general. At the highest level of abstraction, all persons are entrepreneurs, entrepreneurial behavior is a human universal, and the theory of entrepreneurship is a way of looking at all human action. Thus, entrepreneurship theory is the social science that views social processes from the perspective of the element of change and improvisation in all human action. For this reason it is sensible to have theories of corporate entrepreneurship, social entrepreneurship, political entrepreneurship, and so on. As mentioned earlier, the field is not defined by its object of inquiry, but by its point of view.⁴¹

As we have seen in the context of the groundhog principle, every context for action is in some degree novel and every action is in some degree an improvisation. Thus, entrepreneurs live in an uncertain world. Indeed, what sense would it make to imagine innovative entrepreneurs in a mechanical world without uncertainty? Uncertainty is an important and, I shall argue, necessary element of the world in which entrepreneurs act. It is important, therefore, to have as much clarity as we can about the nature of uncertainty and its influence on action.

Thus, the next subsection examines the post-Kirznerian theory of entrepreneurial uncertainty.

A Post-Kirznerian Understanding of Entrepreneurial Uncertainty

Israel Kirzner's teacher, Ludwig von Mises, defined the entrepreneur as an "acting man exclusively seen from the aspect of the uncertainty inherent in every action."⁴² As the word is used here, uncertainty is distinguished from risk. When numerical probabilities (1) exist, (2) are known, and (3) cover all possibilities, the situation is one of risk. When one or more of these three conditions fails the situation is one of uncertainty, not risk. In situations of risk, one may apply the probability calculus and the logic of Bayesian decision making. In situations of uncertainty this is generally not possible.⁴³

Discussions of risk and uncertainty can grow complicated. For example, in the last paragraph I spoke of situations of risk and situations of uncertainty without specifying whose perceptions of risk and uncertainty matter. If I observe someone rolling dice who cannot calculate the probabilities involved, we might say that this is a situation of risk because we, the observers, know the probability of each outcome. We might, however, say that this is a situation of uncertainty because the person rolling the dice does not know the relevant probabilities. Some writers rank situations of uncertainty according to how fundamental, in some sense, the uncertainty is.⁴⁴ From such a perspective, it may seem a mild form of uncertainty when probabilities are merely hard to calculate, whereas a more fundamental uncertainty exists when different outcomes do not exist ahead of time. "Fundamental uncertainty," Dequech says, "is characterized by the possibility of creativity and non-predetermined structural change. The list of possible events is not predetermined or knowable *ex ante*, as the future is yet to be created."⁴⁵

Kirzner's concept of uncertainty is close to Dequech's "fundamental uncertainty." In the "open-ended" world Kirzner imagines, entrepreneurial behavior is linked to "the unpredictable, the creative, the imaginative expressions of the human mind."⁴⁶ Kirzner links uncertainty to "an element" in decision making that "cannot . . . be explained by [standard economic] rationality," namely, "the selection of the ends-means framework" within which action occurs.⁴⁷ The selection of an interpretive framework is "essentially creative."⁴⁸ Kirzner emphasizes that uncertainty in his sense is not just the difficulty of forecasting. For Kirzner, it "is not a matter of two unfolding tapestries, one the realized future, the second a fantasized [picture of] what the first might look like." Instead, the entrepreneur is "motivated *to bring about* correspondence" between his vision and reality.⁴⁹

Kirzner's last point may deserve some elaboration. Consider a theater patron after the second act. He does not know what will happen in the third act. He might guess, but his guesses will not influence what the actors do on stage. Social scientists often think of uncertainty in such theater-going terms. It is an error to do so. Post-Kirznerian theory recognizes that entrepreneurs are not like theater

patrons. They can act, and their actions are aimed precisely at changing the future. As Butos and I have put it, “our knowledge of future events is in the form of a kind of architecture of the situation. The future is not a sequence of specific events, but a field of action. Indeed, if the future were not uncertain for the passive observer, it could not be the object of action for the active participant. We act in the world precisely to change the course of events. Uncertainty does not prohibit action; it makes action possible.”⁵⁰

As we have seen, in post-Kirznerian theory the entrepreneur acts in and through time. No time, no uncertainty. The passing of time implies that entrepreneurial innovations are launched over time and come to fruition only after the passage of some time, however much or little. Thus, post-Kirznerian theory implies that there is an entrepreneur process that carries an entrepreneur from his first moment of alertness to the final execution of a plan of action. The next subsection examines this entrepreneurial process.

Austrian Understandings of the Entrepreneurial Process

Post-Kirznerian theory recognizes that, because entrepreneurial opportunities may be complex, there is an entrepreneurial process. This process may be described by the “logic of effectuation” described by Sarasvathy.⁵¹ Entrepreneurial plans start out vague. They are refined and altered as entrepreneurs put the pieces together. They are making a deal or a linked set of them. Thus, they must adjust to the wishes of others. They will learn from them too. The plans they finally execute are the results of this process. In this sense, the entrepreneur’s plans are endogenous to the process of negotiation with other stakeholders in the enterprise that eventually emerges from this same process.⁵²

A broadly similar analysis of the entrepreneurial process has been provided by Harper.⁵³ As Minniti and I have explained, “Harper suggests that the entrepreneurial process is similar to the scientific process of conjecture and refutation” as articulated in the philosophy of Karl Popper.⁵⁴ “Entrepreneurship,” for Harper, “begins with the alert discovery of an opportunity,” which is “like the scientist’s conjecture” because it is “a prediction (of success in the marketplace) that must be tested.” The test is made through market research or talking to others. The entrepreneur learns from this “test” and modifies his plan, which is then subject to another similar “test.” The process may repeat any number of times. Eventually, entrepreneurs put their ideas to a market test. That experience produces new learning, which inspires entrepreneurs to revise their business plans again. In Harper’s theory, therefore, the process is ongoing.⁵⁵

The entrepreneurial process as described by Sarasvathy might seem to suggest that entrepreneurs do not calculate.⁵⁶ As Minniti and I have explained, however, even the simplest entrepreneurial opportunity requires calculation.⁵⁷ If I am to buy here and sell there, I had better compare the two prices to be sure that the selling price exceeds the buying price—and that is a calculation. More complex cases require more complex calculations, which may also be less certain. However

much inspiration and creativity enter the entrepreneurial process, each new (contingent) business plan requires new calculations of prospective profit.

The nature of the entrepreneurial process is incompletely understood. It is an area requiring close empirical study. Austrian understandings of entrepreneurial behavior recognize both the vital element of radical or fundamental uncertainty and the centrality of numerical calculations of prospective profit. Some discussions of the entrepreneurial process implicitly deny the uncertainty inherent in all human action, or model it as a probabilistic risk. Other discussions, in contrast, emphasize fundamental uncertainty, while ignoring or denying the importance of monetary calculation. Post-Kirznerian theory, instead, has always recognized that monetary calculations are our best guide in a world of radical uncertainty.⁵⁸

In this section, I have outlined the elements of a post-Kirznerian theory of entrepreneurship. The most fundamental elements of the theory are the concepts of alertness, discovery, and innovation. By the groundhog principle, we know that alertness, discovery, and innovation are possible only in a world of time and uncertainty. We thus examined both the entrepreneurial process and the post-Kirznerian theory of uncertainty. I believe that these elements of post-Kirznerian theory will prove to be useful, indeed, indispensable foundations for a unified theory of entrepreneurial behavior. If that claim is correct, however, it must be consistent with the long-established fact that the field of entrepreneurial studies draws on the results of several social science disciplines and is, in this sense, transdisciplinary, as explained in the next section.

DISCIPLINARY AND TRANSDISCIPLINARY PERSPECTIVES ON ENTREPRENEURIAL BEHAVIOR

Post-Kirznerian theory allows us to examine the entrepreneur from several diverse perspectives, including those of complexity theory, management, finance economics, sociology, and psychology. Unfortunately, Kirzner's work has sometimes been misconstrued as somehow prohibiting researchers from taking a transdisciplinary approach. Scott Shane provides a rather flamboyant example of this error.⁵⁹

Shane contrasts psychological approaches to entrepreneurship with the supposed approach of the Austrian school.⁶⁰ From the post-Kirznerian perspective, this is a puzzle. While Kirzner himself did largely eschew psychological inquiries, especially in *Competition and Entrepreneurship*, he explicitly recognized that psychological factors influence the different degrees of alertness characterizing different people. "To be a successful entrepreneur," Kirzner explains, "requires vision, boldness, determination, and creativity. There can be no doubt that in the concrete fulfillment of the entrepreneurial function these psychological and personal qualities are of paramount importance. It is in this sense that so many writers are undoubtedly correct in linking entrepreneurship with the courage and vision necessary to *create* the future in an uncertain world."⁶¹ Under Kirzner's

direction, Benny Gilad (1981) wrote a dissertation on entrepreneurship that relied on a psychological concept that was explicitly dismissed by Shane as, somehow, inconsistent with the Austrian school, namely, "locus of control."⁶² Citing Gilad, the Austrian economist David Harper makes use of this same psychological concept of locus of control to explain both why some individuals are more entrepreneurial than others and why different social and legal institutions tend to produce different levels of entrepreneurship in the populations subject to them.⁶³

Shane's notion that the psychological dimension of entrepreneurship is somehow denied by the Austrian school becomes even more puzzling when we consider that learning is, after all, a psychological phenomenon. It was the great Austrian economist F. A. Hayek who first argued that any statement about the process of equilibration is necessarily a statement about entrepreneurial learning. The "assertion that a tendency toward equilibrium exists," Hayek explained, "can hardly mean anything but that, under certain conditions, the knowledge and intentions of the different members of society are supposed to come more and more into agreement or, to put the same thing in less general and less exact but more concrete terms, that the expectations of the people and particularly of the entrepreneurs will become more and more correct."⁶⁴ Hayek's 1937 article is a classic of the Austrian school and of modern economics. It is a part of the canon of post-Kirznerian theory just as it was part of the canon of the Austrian school before the post-Kirznerian stage. Kirzner's theory was always a theory about learning in the market process and learning, as I have noted, is a psychological process. Far from being inconsistent with the Austrian school, as Shane claims, the psychological understanding of entrepreneurship is central to it.

Entrepreneurs are social actors. Therefore, social psychology should not be neglected by scholars of entrepreneurship. Evolutionary psychology is an important recent development that has not yet had as great an influence on entrepreneurial studies as it probably deserves.⁶⁵ The recent revolution in cognitive science may also prove useful to entrepreneurship researchers. The new field of neuroeconomics is an important part of this revolution.⁶⁶

Like psychology, sociology is an important perspective on the entrepreneur. Post-Kirznerian theory is better suited to integrate the economic and sociological perspectives than, perhaps, any other modern school of economics. Post-Kirznerian theory builds on the foundations of sociology of Max Weber and Alfred Schutz.⁶⁷ Thus, it is not imperialistic toward sociology or, indeed, any other social science or business discipline. The Weberian tradition is only one of the many valuable sociological traditions on which scholars of entrepreneurship should build. Among them, Mark Granovetter's network analysis has provided important tools of analysis as illustrated by the work of Howard Aldrich.⁶⁸

Psychology, sociology, and economics are but three of the many disciplines upon which scholars of entrepreneurship should draw. Complexity theory, for example, helps us to understand how the actions of individual entrepreneurs influence the overall behavior of the system. Minniti provides an important

example of how to link individual action and overall outcome in the context of a complexity model.⁶⁹

Between economics and sociology is the important field of economic sociology as developed by Richard Swedberg et al.⁷⁰ Unfortunately, entrepreneurship scholars do not seem to have made much use of this literature, in spite of several works from this tradition that directly address issues in entrepreneurship.⁷¹ This fact may represent an opportunity for an academic entrepreneur to bring the literature on economic sociology into greater contact with the literature in entrepreneurial studies.

Thus far, I stressed that scholars of entrepreneurship should not construe post-Kirznerian theory to exclude psychological or sociological insights. Nor should they dismiss insights coming from traditions in economics other than the modern Austrian school, for example, Schumpeter and modern evolutionary economics.⁷² Complexity economics has proved useful to entrepreneurial studies as noted earlier. The foundational work of William Baumol shows that orthodox neoclassical economics has in fact an important place in the study of entrepreneurship and should be taken very seriously.⁷³

CONCLUSION

The entrepreneur is the central individual in entrepreneurial studies. We have not had, however, a clear and well-developed theory of the entrepreneur. In this chapter, I have tried to show that post-Kirznerian theory gives us a useful and, indeed, necessary theory of the entrepreneur. The key to doing so is Kirzner's insight that what the entrepreneur is like (alertness) necessarily determines what he does (innovate).

Martinelli argues that "future research on entrepreneurship" should adopt "a multidisciplinary comparative approach, capable of integrating the analysis of the context (market, social structure, culture) with a theory of the actor (both individual or collective) with his or her motives, values, attitudes, cognitive processes, and perceived interests."⁷⁴ Post-Kirznerian theory and the Austrian school provide the theoretical framework, which allows us to integrate the many different disciplinary perspectives Martinelli rightly calls for. Without such a framework, no integration is possible and the different disciplinary perspectives on entrepreneurial behavior will remain so many separate pieces sitting side by side.

We study entrepreneurial behavior in order to uncover new and important facts about the world. Thus, the benefit of the post-Kirznerian approach to the entrepreneur comes from applied studies. Often the operational meaning of "the entrepreneur" will be some measure of founding a business. I say "some measure" for a reason. In empirical studies it can become a delicate matter to decide the operational meaning of founding a business. In psychology-based studies, however, entrepreneurship may have more to do with personal qualities such as

an “internal locus of control.” Although everyone is an entrepreneur, some of us have more entrepreneurial alertness than others. Entrepreneurial studies must continue to produce work on the vital question of why this is so. What are the personal and social, psychological, and institutional factors that influence the degree of entrepreneurial alertness in the system? Baumol asks the related question of what social factors determine the direction of entrepreneurial alertness. Only the sort of general theoretical vision I have outlined in this chapter allows us to absorb and coordinate knowledge from studies asking all these different sorts of questions without falling into conceptual confusion or empty eclecticism.

Conceptual clarity about what, precisely, we mean by “the entrepreneur” requires us to recognize that entrepreneurship is an aspect of action. In this sense, everyone is an entrepreneur. I believe that we cannot hope for theoretical clarity in entrepreneurial studies without this broad understanding of who the entrepreneur is. For this reason, I have argued for the view that entrepreneurship theory is the social science that views social processes from the perspective of the element of change and improvisation in all human action.

NOTES

1. A. Martinelli, “Entrepreneurship,” in *International Encyclopedia of the Social and Behavioral Sciences*, eds. N. J. Smelser and P. B. Baltes (Amsterdam: Pergamon, 2001), 4551.

2. W. B. Gartner, “Is There an Elephant in Entrepreneurship? Blind Assumptions in Theory Development,” *Entrepreneurship Theory and Practice* 25, no. 4 (2001): 27–39.

3. I. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973); I. Kirzner, “Uncertainty, Discovery, and Human Action: A Study of the Entrepreneurial Profile in the Misesian System,” in *Method, Process, and Austrian Economics: Essays in Honor of Ludwig von Mises*, ed. I. Kirzner (Lexington, MA: Lexington Books, 1982); I. Kirzner, “Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach,” *Journal of Economic Literature* 35 (1997): 60–85.

4. S. Shane, “Prior Knowledge and the Discovery of Entrepreneurial Opportunities,” *Organization Science* 11, no. 4 (2000): 448–469.

5. R. Koppl, ed., *Austrian Economics and Entrepreneurial Studies*, vol. 6 of *Advances in Austrian Economics* (Amsterdam: JAI, 2003) brings Austrian economics and entrepreneurial studies together. See especially M. Minniti, “Entrepreneurship Studies: A Stocktaking,” in *Austrian Economics and Entrepreneurial Studies*, vol. 6 of *Advances in Austrian Economics*, ed. R. Koppl (Amsterdam: JAI, 2003); and R. Koppl, “Gains from Trade between Austrian Economics and Entrepreneurial Studies: An Introduction to the Volume,” in *Austrian Economics and Entrepreneurial Studies*, vol. 6 of *Advances in Austrian Economics*, ed. R. Koppl (Amsterdam: JAI, 2003).

6. The Austrian school is not a school of economics, but a school of social theory. Post-Kirznerian theory is not a theory of economics, but a theory of society; it is a social theory. Economics is but one branch of social theory.

7. Op. cit., note 3.

8. Ibid., 31.

9. The term *neoclassical economics* can have a fluid meaning. But at the time Kirzner wrote *Competition and Entrepreneurship*, there was a well-entrenched neoclassical orthodoxy. In this old-fashioned orthodoxy, hyperrational agents acted in a world of certainty or, at best, merely probabilistic uncertainty.

10. Op. cit., note 3.

11. Ibid.

12. The main point distinguishing post-Kirznerian economics is the role of time and uncertainty emphasized by Ludwig Lachmann. L. Lachmann, "The Role of Expectations in Economics as a Social Science," in *Capital, Expectations, and the Market Process*, ed. W. Grinder (Kansas City, Missouri: Sheed Andrews and McMeel, 1977). Karen Vaughn explains Lachmann's importance in this connection in her 1994 book. K. Vaughn, *Austrian Economics in America: The Migration of a Tradition* (Cambridge: Cambridge University Press, 1994).

13. Op. cit., note 3.

14. G. O'Driscoll and M. Mario Rizzo, *The Economics of Time and Ignorance* (Oxford: Basil Blackwell, 1985).

15. My own interpretation of this tradition is given in R. Koppl, *Big Players and the Economic Theory of Expectations* (London: Palgrave Macmillan, 2002). This work includes a post-Kirznerian theory of entrepreneurship in Chapter 6. In that theory, I rely on Alfred Schutz's notion of relevancy to explain how the structure of the entrepreneur's knowledge guides his actions. See A. Schutz, "The Well-Informed Citizen," in *Alfred Schutz: Collected Papers II: Studies in Social Theory*, ed. A. Brodersen (The Hague: Martinus Nijhoff, 1964) and A. Schutz, "Choosing Among Projects of Action," in *Alfred Schutz: Collected Papers I: Studies in Social Theory*, ed. M. Natanson (The Hague: Martinus Nijhoff, 1962).

16. R. Koppl, "Austrian Economics at the Cutting Edge," *Review of Austrian Economics* 19, no. 4 (2006): 231–241. The paper is a transcript of my presidential address before the Society for the Development of Austrian Economics. I argue that Austrian economics is a part of the heterodox mainstream of modern economics. Recent developments such as behavioral economics and neuroeconomics are consistent with the tenets of post-Kirznerian theory, but not with the old-fashioned neoclassical orthodoxy of, for example, Paul Samuelson (1947) or Gérard Debreu (1959). These new developments represent the cutting edge and the future of economics. Examples of behavioral economics include D. Kahneman and A. Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica* 47, no. 2 (1979): 263–291; R. Thaler, *The Winner's Curse: Paradoxes and Anomalies of Economic Life* (New York: Free Press, 1992); and S. Mullainathan and R. Thaler, "Behavioral Economics," in *International Encyclopedia of the Social & Behavioral Sciences* (Amsterdam: Pergamon Press, 2001). Examples of neuroeconomics include K. McCabe, "Neuroeconomics," in *Encyclopedia of Cognitive Science*, ed. L. Nadel (Nature Publishing, 2003); K. McCabe et al., "A Functional Imaging Study of Cooperation in Two-Person Reciprocal Exchange," *Proceedings of the National Academy of Sciences* 98 (2001): 11832–11835; and C. Camerer et al., "Neuroeconomics: How Neuroscience Can Inform Economics," *Journal of Economic Literature* 43, no. 1 (2005): 9–64. The most representative works of Samuelson and Debreu are probably P. A. Samuelson, *Foundations of Economic Analysis* (Cambridge, MA: Harvard University Press, 1947) and G. Debreu, *Theory of Value* (New Haven: Yale University Press, 1959).

17. E. Krecké et al., *Cognition and Economics*, vol. 9 of *Advances in Austrian Economics* (Amsterdam: JAI, 2006); S. Rizzello, *The Economics of the Mind* (Cheltenham, UK: Edward Elgar, 1999); S. Rizzello, *Cognitive Developments in Economics* (London: Routledge, 2003); M. Egidi and S. Rizzello, *Cognitive Economics* (Cheltenham, UK: Edward Elgar, 2004); P. J. Boettke, "Interpretive Reasoning and the Study of Social Life," *Methodus: Bulletin of the International Network for Economic Method* 2, no. 2 (1990): 35–45; S. Horwitz, "From *The Sensory Order* to the Liberal Order: Hayek's Non-Rationalist Liberalism," *Review of Austrian Economics* 13, no. 1 (2000): 23–40.

18. L. Mises, *Human Action: A Treatise on Economics* (New Haven: Yale University Press, 1949).

19. A. Aktipis and R. Kurzban, "Is Homo Economicus Extinct? Vernon Smith, Daniel Kahneman and the Evolutionary Perspective," in *Evolutionary Psychology and Economic Theory*, vol. 7 of *Advances in Austrian Economics*, ed. R. Koppl (Amsterdam: JAI, 2004).

20. Op. cit., note 18, p. 3.

21. I. Kirzner, *The Economic Point of View: An Essay in the History of Economic Thought* (Kansas City: Sheed and Ward, 1976).

22. Kirzner was a student of Mises. For an explanation of Mises' role in shaping the Austrian school, see R. Koppl and D. G. Whitman, "Rational-Choice Hermeneutics," *Journal of Economic Behavior and Organization* 55, no. 3 (2004): 295–317.

23. I. Kirzner, *The Economic Point of View* (Kansas City: Sheed and Ward, 1976).

24. Scholarly work on entrepreneurship goes back at least as far as Richard Cantillon who noted in 1755 that "the Beggars even and the Robbers are Undertakers," that is, entrepreneurs, who "may be regarded as living at uncertainty." H. Higgs, trans. & ed., *Essai sur la Nature du Commerce en Général* (New York: Augustus M. Kelley, 1964), 55. But a separate discipline of entrepreneurial studies did not exist until, perhaps, shortly before the opening of the Center for Entrepreneurial Studies of Babson College in 1978. The center is now called the Arthur M. Blank Center for Entrepreneurship.

25. R. Koppl and M. Minniti, "Market Processes and Entrepreneurial Studies," in *Handbook of Entrepreneurial Research*, eds. Z. J. Acs and D. B. Audretsch (Boston: Kluwer, 2003), 81.

26. S. Shane and S. Venkataraman, "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 25, no. 1 (2000): 217–226, p. 218.

27. W. Gartner, "What Are We Talking about When We Talk about Entrepreneurship?" *Journal of Business Venturing* 5, no. 1 (1990): 15–28, p. 27, emphasis in original.

28. Gartner rightly criticizes the view, which has since lost currency, that entrepreneurship can be defined by some special psychological characteristics such as a need for achievement. W. Gartner, "'Who Is an Entrepreneur' Is the Wrong Question," *Entrepreneurship Theory and Practice* 13, no. 4 (1989): 47–68.

29. Op. cit., note 26.

30. M. B. Low and I. C. MacMillan, "Entrepreneurship: Past Research and Future Challenges," *Journal of Management* 35 (1988): 139–161.

31. W. Gartner, "Is There an Elephant in Entrepreneurship? Blind Assumptions in Theory Development," *Entrepreneurship Theory and Practice* 25, no. 4 (2001): 27–39.

32. Op. cit., note 3, 1982, pp. 143–145.

33. Ibid., pp. 143–144.

34. Ibid., p. 150.

35. Ibid., pp. 156, 157.

36. Ibid., p. 139.

37. The illustration is borrowed from Koppl and Minniti, op. cit., note 24.

38. Op. cit., note 3, 1982, p. 139.

39. Bergson's point was explained and emphasized by O'Driscoll and Rizzo, who noted that "the swelling of memory alone changes the perspective from which the world is seen," op. cit., note 14, p. 62. They explicitly follow Bergson in developing their concept of "real time." When Bergson described the flow of consciousness as "a river without bottom and without banks," he alluded to Heraclites' remark, "One cannot step twice into the same river, for the water into which you first stepped has flowed on." H. Bergson, *Introduction to Metaphysics* (New York: Wisdom Library, 1961); G. Davenport, trans. & ed. *Heraclitus and Diogenes* (San Francisco: Grey Fox Press, 1979).

40. Sony Pictures, 1993.

41. I. Kirzner, *The Economic Point of View* (Kansas City: Sheed and Ward, 1976).

42. Op. cit., note 18, p. 254.

43. A Bayesian might object, arguing that one simply assigns prior probabilities and that Bayesian logic identifies the uniquely rational way to update probabilities. This response might have some force when we can list all possible contingencies, although I will point to some limits to Bayesianism even in such cases. The Bayesian response we have imagined has less force, however, when we cannot list all the possible outcomes in a situation. The best one might do is to create a residual category containing "everything else." It is not clear, however, how one might assign a reliable or meaningful subjective probability value to such a contingency. Even when this listing problem does not arise, real people may not be able to calculate probabilities. Even values that are not difficult to compute in any formal mathematical sense may be too much for real people. The notion that Bayesian logic somehow saves probabilistic reasoning seems to be an expression of faith and not a legitimate conclusion of analysis. On hard problems, see R. Axtell, "The Complexity of Exchange," *The Economic Journal* 115, no. 504 (2005): F193–F210.

44. D. Dequech, "The New Institutional Economics and the Theory of Behaviour Under Uncertainty," *Journal of Economic Behavior and Organization* 59, no. 1 (2006): 109–131.

45. Ibid., p. 112.

46. Op. cit., note 3, 1982, p. 147.

47. Ibid., p. 143.

48. Ibid., p. 144.

49. Ibid., p. 149, emphasis in original.

50. W. Butos and R. Koppl, "Confidence in Keynes and Hayek: Reply to Burczak," *Review of Political Economy* 13, no. 1 (2001): 81–86, p. 84.

51. S. Sarasvathy, "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review* 26, no. 2 (2001): 243–263.

52. I think Sarasvathy exaggerates when she says, "Effectual reasoning, however, does not begin with a specific goal. Instead, it begins with a given set of means and allows goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and the people they interact with." S. Sarasvathy, "What Makes Entrepreneurs Entrepreneurial?" manuscript, 2001, available at <http://www.effectuation.org/ftp/effectua.pdf>. In this passage, which seems to follow the ideas of George Shackle, she says entrepreneurs think of means first and ends second. The phenomenological analysis of

Alfred Schutz reveals, however, that we imagine ends first, means second. I examine this issue in some detail in R. Koppl, "Schutz and Shackle: Two Views of Choice," *Review of Austrian Economics* 14, no. 2/3 (2001): 181–191.

53. D. Harper, "New Approach to Modeling Endogenous Learning Processes in Economic Theory," *Advances in Austrian Economics* 1 (1994): 49–79; D. Harper, *Entrepreneurship and the Market Process: An Inquiry into the Growth of Knowledge* (London: Routledge, 1996); D. Harper, "Institutional Conditions for Entrepreneurship," *Advances in Austrian Economics* 5 (1998): 241–275.

54. R. Koppl and M. Minniti, "Market Processes and Entrepreneurial Studies," in *Handbook of Entrepreneurial Research*, eds. Z. J. Acs and D. B. Audretsch (Boston: Kluwer, 2003), 81; K. Popper, *The Logic of Scientific Discovery* (London: Routledge, 1977).

55. *Ibid.*, pp. 93–94.

56. I do not believe that Sarasvathy intends to make such a suggestion. I think it is easy, however, to enter into such a misapprehension.

57. *Op. cit.*, note 54, pp. 90–91.

58. P. Boettke, "Economic Calculation: The Austrian Contribution to Political Economy," *Advances in Austrian Economics* 5 (1998): 131–158.

59. *Op. cit.*, note 4.

60. *Ibid.*, pp. 449–450.

61. *Op. cit.*, note 3, 1982, p. 155.

62. B. Gilad, "An Interdisciplinary Approach to Entrepreneurship: Locus of Control and Alertness" (Ph.D. diss., New York University, 1981). Shane claims that in the Austrian theory, entrepreneurial action "depends on factors other than people's ability and willingness to take action." *Op. cit.*, note 4, p. 450.

63. *Op. cit.*, note 53.

64. F. A. Hayek, "Economics and Knowledge," *Economica*, n.s. 4, no. 13 (1937): 33–54, p. 44.

65. The central statement of the theory of evolutionary psychology is J. Barkow et al., eds., *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* (New York: Oxford University Press, 1992). A primer by L. Cosmides and J. Tooby can be found at <http://www.psych.ucsb.edu/research/cep/primer.html>. The work of David Sloan Wilson represents another tradition that might also be considered evolutionary psychology. E. Sober and D. S. Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behavior* (Cambridge, MA: Harvard University Press, 1998). I have given an overview in which I distinguish evolutionary psychology in the strict sense from evolutionary psychology in the broad sense. R. Koppl, "Economics Evolving: An Introduction to the Volume," in *Evolutionary Psychology and Economic Theory*, vol. 7 of *Advances in Austrian Economics*, ed. R. Koppl (Amsterdam: JAI, 2004). Post-Kirznerian economists value Hayek's psychological work, *The Sensory Order*, which is an example of evolutionary psychology in the broad sense. F. A. Hayek, *The Sensory Order* (Chicago: University of Chicago Press, 1952). For a potentially useful resource on how to apply evolutionary psychology to issues in social science, see R. Koppl, ed., *Evolutionary Psychology and Economic Theory*, vol. 7 of *Advances in Austrian Economics* (Amsterdam: JAI, 2004).

66. *Op. cit.*, McCabe, note 16.

67. This is the tradition of interpretive sociology. R. Koppl, *Big Players and the Economic Theory of Expectations* (London: Palgrave Macmillan, 2002); P. Boettke and R. Koppl, "Introduction," Special Issue on Alfred Schütz Centennial, *Review of Austrian*

Economics 14, no. 2/3 (2001): 111–117; A. Oakley, *The Foundations of Austrian Economics from Menger to Mises: A Critico-Historical Retrospective of Subjectivism* (Cheltenham, UK: Edward Elgar, 1997); C. Prendergast, “Alfred Schütz and the Austrian School of Economics,” *American Journal of Sociology* 92, no. 1 (1986): 1–26.

68. H. Aldrich and M. Ruef, *Organizations Evolving*, revised edition (Thousand Oaks, CA: Sage, 2006).

69. M. Minniti, “Entrepreneurship and Network Externalities,” *Journal of Economic Behavior and Organization* 57, no. 1 (2005): 1–27.

70. N. J. Smelser and R. Swedberg, *The Handbook of Economic Sociology*, 2nd ed. (Princeton, NJ: Princeton University Press, 2005).

71. A good start is R. Swedberg, ed., *Entrepreneurship: The Social Science View* (Oxford: Oxford University Press, 2000). Swedberg’s introductory chapter includes a valuable review of the social science literature on entrepreneurship.

72. J. A. Schumpeter, *The Theory of Economic Development* (Oxford: Oxford University Press, 1934). Koppl and Minniti explain why Schumpeter is not usually considered an Austrian economist. Op. cit., note 25.

73. W. Baumol, “Entrepreneurship: Productive, Unproductive, and Destructive,” *Journal of Political Economy* 98, no. 5 (1990): 893–892; S. Parker, “Entrepreneurial Learning and the Existence of Credit Markets,” *Journal of Economic Behavior and Organization*, forthcoming.

74. Op. cit., note 1.

2

Cognition and Affect

Invaluable Tools for Answering “Why,” “How,” and “What” Questions about Entrepreneurs and the Entrepreneurial Process

Robert A. Baron

In an important sense, entrepreneurs are a central component of the entire entrepreneurial process; after all, unless specific persons recognize opportunities and act to develop them, new ventures are not formed and the new products and services they provide will not be brought to market. In fact, as noted by Baumol almost forty years ago, trying to understand entrepreneurship without considering entrepreneurs is like trying to understand Shakespeare without including Hamlet in the process.¹ Or, as I prefer to put it, “Trying to understand entrepreneurship without considering entrepreneurs is like trying to bake bread without yeast—the active element is missing.” For these reasons, understanding what entrepreneurs do—the actual steps they take to recognize opportunities and develop them, how they carry out these actions (e.g., what skills and knowledge are required), and why they do it—what motives cause them to give up jobs in mature organizations to assume the risks of starting a new venture, are all questions of major interest to entrepreneurship researchers.^{2, 3} While entrepreneurs are certainly not the entire story where entrepreneurship is concerned—market forces, technological and social changes, shifts in government policies and changing demographic patterns are all important, too—it is suggested here that entrepreneurs themselves do indeed play a central role in the overall process.⁴ To the extent that they do, anything that helps us to understand their motives, actions, decisions, and strategies can shed important light on the entire entrepreneurial process. As Shane, Locke, and Baum have noted, entrepreneurship arises, ultimately, from the actions of particular persons; consequently, understanding why and how these persons behave as they do is crucial to comprehending the entire process.⁵

But how are we to gain such knowledge? Previously I suggested that one useful strategy involves drawing on the knowledge and theoretical frameworks of older branches of management (e.g., organizational behavior), and other relevant fields outside management.⁶ These fields have long studied the actions, motives, and performance of individuals in a wide range of business contexts, so it seems reasonable that they may offer potentially valuable ideas, relevant conceptual tools, and useful research methods to the field of entrepreneurship. The present chapter derives from this basic idea. Specifically, it suggests that we can learn a great deal about important aspects of the entrepreneurial process by focusing on two interrelated topics: (1) various aspects of entrepreneurs' *cognition*—the cognitive mechanisms involved in the acquisition, storage, transformation, and use of information; and (2) entrepreneurs' *affect*—the positive or negative emotions and moods they experience either briefly, as passing “states,” or continuously, as more stable tendencies or dispositions.^{7–9}

Both cognition and affect have been found to play a crucial role in many aspects of human behavior in a wide range of contexts; indeed, many experts on behavior in work or business settings would contend that these are the central aspects that underlie everything we think, say, do, or experience.¹⁰ Further, as is noted in more detail later in this chapter, a large body of evidence indicates that these two factors—cognition and affect—are interrelated in complex and important ways, so that feelings (moods or emotions individuals experience) often influence thought (many aspects of cognition), and cognition, in turn, strongly influences feelings.¹¹

Since a vast amount of research has been conducted on both of these factors, it would be impossible to examine all of this work or its implications for entrepreneurship here. Instead, attention will be focused on two major issues. First, an initial section of the chapter examines recent efforts to apply a cognitive perspective to understanding one central aspect of entrepreneurship, *opportunity recognition*.^{12, 13} Research and theorizing employing a cognitive perspective have already added much to our knowledge of opportunity recognition as a process. However, many questions remain unresolved, so this section of the chapter will also describe directions for future research within a cognitive framework. This section will focus, specifically, on theory and findings suggesting that *pattern recognition*, a basic perceptual process in which individuals recognize emergent patterns in seemingly unrelated events or stimuli, plays an important role in opportunity recognition. Further, it will describe how cognitive frameworks developed by entrepreneurs through experience (e.g., prototypes) influence this process. Finally, it will also consider how pattern recognition models can help explain the role of alertness, active search, and past experience in opportunity recognition.

A second major section will then focus on affect—the moods or emotions that individuals experience throughout each day and indeed, throughout life. This section will first review some of the important ways in which affect can influence cognition—existing evidence concerning the impact of affect on perceptions of the external world, susceptibility to various forms of cognitive bias, modes of thought (heuristic versus systematic), and even creativity. Then, implications

of such effects for entrepreneurial cognition will be discussed. Affective reactions, it is suggested, may strongly influence entrepreneurs' susceptibility to various forms of cognitive bias, their intentions to become an entrepreneur, perceptions of risk, ability to cope effectively with high levels of stress, and their ability to recognize new business opportunities.^{14–18} All of these potential effects will be examined, and possible directions for future research will be identified. Since little work has been conducted to date on the role of affect in entrepreneurship, discussion in this chapter will, of necessity, emphasize avenues for future research rather than an extensive review of relevant literature.

OPPORTUNITY RECOGNITION: A PATTERN RECOGNITION PERSPECTIVE

“We are most uniquely human when we turn obstacles into opportunities.”¹⁹ In a sense, the field of entrepreneurship strongly concurs with these words: it is widely believed that opportunity recognition, identifying ideas for new products, services, markets, or means of production that are not currently being exploited is a central step in the entire process. Indeed, it is often viewed as a primary action, one from which all else often follows.^{20–22} Given the central role of opportunity recognition in the creation of new ventures, this process has long been the subject of empirical research and theory in the field of entrepreneurship.^{23, 24} This work has added greatly to our understanding of the factors that play a role in opportunity recognition.^{25–27} To date, however, it has not provided a single unifying theoretical framework—one helpful in fully integrating this diverse and extensive body of knowledge.

It is suggested here that such a framework can be derived from theories relating to basic aspects of human cognition and human perception.^{28, 29} More specifically, recent evidence suggests that important insights into the nature of opportunity recognition, and perhaps a unifying theoretical framework for understanding this process, can be obtained from theories in the field of cognitive science relating to the process of pattern recognition.³⁰

Pattern recognition is the process through which complex and seemingly unrelated events are perceived by specific persons as constituting identifiable patterns.³¹ In essence, it involves recognition, by such persons, of links between apparently independent trends, changes, and events. The patterns suggested by these links or connections then point to new products or services, new markets, or new ways of serving existing ones. In short, a pattern recognition perspective suggests that opportunity recognition involves instances in which specific individuals connect the dots—perceive links between seemingly unrelated events and changes. The emergent patterns they then perceive provide the basis for identifying new business opportunities.

Several lines of evidence indicate that pattern recognition may indeed play a key role in opportunity recognition. First, it is clear that many opportunities exist

for years before they are noticed and developed. For instance, consider wheeled luggage of the type that is now used by a large majority of all air travelers. Such luggage was used for decades by air flight crews before it was introduced into the market for general sale. Why? Perhaps because no one connected the dots between several pertinent trends: a large increase in the number of passengers, growing problems with checked luggage, expansion in the size of airports, and so on. Once these trends were seen as connected, the benefits of wheeled luggage became apparent, and this product soon dominated the luggage market.

Second, there is a large body of evidence in cognitive science suggesting that pattern recognition is a basic aspect of our efforts to understand the world around us. That is, we do indeed expend considerable effort searching for patterns among various events or trends in the external world.³² To the extent that opportunity recognition, too, involves perceiving links or connections between seemingly independent events or trends, it may be closely related to this basic perceptual process.

Finally, recent findings point to the conclusion that pattern recognition is closely related to opportunity recognition by entrepreneurs. For instance, in one revealing study, experienced (repeat) entrepreneurs were asked to describe the process involved in the identification of the opportunities they pursued.³³ Findings indicated that these highly experienced entrepreneurs (they had started more than four ventures each) uniformly mentioned engaging in an active search and also in restricting these searches for opportunities to areas in which they already possessed considerable knowledge. In other words, they reported engaging in a process very similar to that involved in pattern recognition—a process in which they employed their existing cognitive frameworks and knowledge to notice connections between diverse events and trends. Indeed, many stated explicitly that they had recognized opportunities by combining a number of external factors into a meaningful pattern. These findings suggest that pattern recognition may indeed play an important role in the identification of new business opportunities.

Several different models of pattern recognition exist, but all agree on the following basic point: On the basis of cognitive frameworks they have developed through experience, specific individuals notice links between seemingly independent events, changes, or trends; then, and again on the basis of cognitive frameworks they possess, they perceive meaningful patterns in these links or connections. Since all models of pattern recognition agree on this basic point, we will focus here on one model that appears to be especially relevant to opportunity recognition: the prototype model of pattern recognition.

Prototype Model of Pattern Recognition

This theoretical model emphasizes the importance, in pattern recognition, of what are known as *prototypes*. These are cognitive frameworks that, in essence, are

idealized representations of the most typical member of a category.³⁴ Basically, newly encountered events or trends are compared with existing prototypes to determine whether they belong to specific categories or can be seen as connected to them in some manner. For instance, consider the prototype for “car,” one most persons possess. This mental framework is broad enough so that everything from a huge limousine or SUV to a small sedan can be recognized as a car, while other objects used for transportation that do not match this prototype well (e.g., motorcycles, scooters, or bicycles) are excluded. Prototypes represent the modal or most frequently experienced combination of attributes associated with an object or pattern. So, for example, the prototype of car would probably include such attributes as four wheels, a motor, a system for steering, and one for stopping.

Applying a prototype model to opportunity recognition suggests that entrepreneurs may use prototypes as a means for identifying patterns among seemingly unrelated events or trends. For instance, consider an engineer who has two very different hobbies: woodworking and cooking. As a result of his woodworking hobby, the engineer has well-developed prototypes for various kinds of tools—ones designed to cut wood, others designed to sand it, and so on. As a result of his cooking hobby, the engineer has well-developed prototypes for various kinds of kitchen equipments—knives, pots, graters, and many other types. One day, the engineer is preparing a dish that requires grating hard Italian cheese (e.g., Parmesan) and also grating the peel of three lemons. The engineer has several kinds of grater, but recognizes that none does a really effective job. Moreover, the graters that are good for cheese are not very useful for oranges, lemons, and many other items. Suddenly, the engineer sees a connection between his two hobbies: Why not adapt one kind of woodworking tool—a rasp (a tool used for sanding wood)—for grating foods in the kitchen? Being an engineer, he also has prototypes related to making models of various products and when he constructs one for the kind of grater he has imagined it works like a charm, on hard cheeses, oranges and lemons, and on many other foods as well. In short, the engineer has noticed this possibility (this opportunity) because several prototypes he possesses have helped him to do so; these cognitive frameworks have assisted him in perceiving an emergent pattern among seemingly diverse and independent events or actions (sanding wood, grating cheese, grating lemons). In fact, precisely such a product has recently been brought to market. It is clearly based on the kind of rasps woodworkers have used for centuries and is greatly superior in its performance to most previous graters.

Much evidence suggests that individuals do indeed form prototypes and that once these cognitive frameworks exist, they are employed in many ways. For instance, individuals often use them for perceiving patterns in diverse and seemingly unrelated events or trends.³⁵ Used in this manner, prototypes may well play an important role in the process of opportunity recognition. Moreover, as will be noted in a later section, prototype models appear to offer a means of integrating

many key findings concerning the factors that influence opportunity recognition. These findings will now be briefly reviewed and then ways in which prototype models can help to integrate them into a unitary theoretical framework will be described.

The Role of Active Search, Alertness, and Prior Experience in Opportunity Recognition

Previous research on opportunity recognition has examined many different factors that play a role in this process.^{36, 37} Among these, however, three have been identified as especially important: engaging in an *active search* for opportunities, *alertness* to opportunities (the capacity to recognize them when they emerge), and *prior knowledge* of a market, industry, or customers as a basis for recognizing new opportunities in these areas. Past research suggests that all three are indeed important. For instance, with respect to an active search for opportunities, many studies offer support for Shane's suggestion that access to appropriate information plays a crucial role in opportunity recognition.³⁸ Gilad et al. and Kaish and Gilad, for example, found that entrepreneurs were more likely than managers to engage in active search for opportunities and potential but as yet untapped sources of profit.^{39, 40} Similarly, Hills and Shrader found that entrepreneurs belonging to the Chicago area Entrepreneurship Hall of Fame were less likely to identify their opportunities from public information such as magazines, newspapers, and trade publications; rather, they actively sought such information in more unique sources.⁴¹ These and other findings indicate that actively searching for information is an important factor in the recognition of many opportunities by entrepreneurs. As noted by Fiet et al., though, such searches must be carefully directed to succeed.⁴²

Alertness, in contrast, emphasizes the fact that opportunities can sometimes be recognized by individuals who are not actively searching for them, but who possess "a unique preparedness to recognize them" when they appear.⁴³ Kirzner, who first introduced this term into the entrepreneurship literature, defined it as "alertness to changed conditions or to overlooked possibilities."⁴⁴ This strongly suggests that opportunities can be noticed even by persons who are not actively seeking them. What are the foundations of such alertness? Shane suggests that alertness rests, at least in part, on cognitive capacities possessed by individuals—capacities such as high intelligence and creativity.⁴⁵ These capacities help them to identify new solutions to customer needs or market needs in existing information, and to imagine new products and services that do not currently exist. Evidence for the importance of these cognitive processes in alertness to opportunities has been obtained in many studies. For instance, intelligence has been found, in several investigations, to be linked to founding new ventures.^{46, 47} Creativity, another aspect of cognition, has also been found to play a role in alertness; for instance, entrepreneurs tend to score higher on various tests of creativity than other persons.⁴⁸ In addition, recent findings indicate that alertness

may interact with information asymmetries, so that the influence of alertness is greater when information is not evenly distributed across individuals than when it *is* evenly distributed.⁴⁹

Finally, with respect to prior knowledge, a wealth of evidence indicates that information gathered through rich and varied life experience can be a major plus for entrepreneurs in terms of recognizing potentially profitable opportunities. For example, Shane found that prior knowledge of customer needs and ways to meet them greatly enhanced entrepreneurs' ability to provide innovative solutions to these problems—in other words, to identify potentially valuable business opportunities.⁵⁰ Similarly, McKelvie and Wiklund compared two high-tech start-up companies—one that was highly successful and one that failed.⁵¹ They found that the failing company (which designed antitheft devices for personal computers and was known as Handsoff) did not keep abreast of current developments in its potential market. For instance, it continued to design antitheft devices even as the price of personal computers dropped drastically, thus eliminating the need for such products. As a result of this lack of pertinent knowledge, the company failed and ceased operations before it could bring even one of its products to market. In contrast, the start-up that succeeded (Buyonet), continued to gather pertinent information about its potential markets and in fact, expanded these greatly as such knowledge was obtained. The company began by setting up Internet stores for its own products, but quickly expanded into setting up such operations for other companies. As a result, it soon gained considerable financial success. In short, knowledge—especially knowledge concerning specific markets or industries—often provides a solid base for opportunity recognition, and the broader this foundation, the more opportunities, and the higher the quality of such opportunities, entrepreneurs will tend to recognize.

This is just a small part of the evidence suggesting that these factors (active search, alertness, prior knowledge) play a key role in opportunity recognition, so overall, there seem to be strong grounds for assuming that they are indeed important. To date, however, they have been studied separately and viewed as largely independent aspects of opportunity recognition. In other words, no framework for integrating these factors—for understanding how they might operate together—has been developed. It is suggested here that such integration can be provided by prototype models of pattern recognition.

How Prototype Models of Pattern Recognition Help Integrate the Effects of Active Search, Alertness, and Prior Knowledge

To see how prototype models of pattern recognition provide integration of the effects of active search, alertness, and prior knowledge within a unified model, it is useful to examine each of these factors in turn. First, consider active search. In the context of pattern recognition and prototype models, this would involve searching for connections between seemingly unrelated events and trends. In essence, this task is actually twofold in nature: First, key changes, trends, and events

are noticed or identified. Second—and more challenging—a search for potential links between them occurs. Perhaps a concrete example will be helpful as a means of illustrating these processes.

One such example—and a very dramatic one—is provided by Chester Carlson, the individual credited with inventing the modern copy machine. At the time he invented (or rather, adapted) the basic process used in copy machines (and in laser printers, too), there was a clear need for better means of making copies, especially in business and educational settings. During the 1940s and 1950s, many products for making copies had been invented, but none seemed to meet this basic and rapidly growing need very well. Carlson, who held both a law degree and a technical degree, was well aware of this fact, and began an active search for a means of meeting this need. Prototypes derived from his engineering training helped him to direct his search toward technical processes that might be used to produce a superior copier, while prototypes provided by his legal training and experience suggested the wide range of uses for such a product. Once Carlson decided to try to solve this problem, he restricted his efforts (i.e., his search) to technologies and processes he understood well. By focusing on processes for which he already had well-developed prototypes, he enhanced his own ability to perceive the emergent pattern that, ultimately, suggested to him an effective way of making dry, permanent copies. In a sense, he was able to develop a practical and efficient copier because he possessed several cognitive frameworks (prototypes) that guided his search and directed it into productive channels.

Turning to alertness, this factor, too, can be understood within the context of prototype models of pattern recognition. Alertness refers to the capacity to recognize opportunities when they exist—when they have emerged from changes in technology, markets, government policies, competition, and so on. Prototype models suggest that this capacity, in turn, may rest, on possessing appropriate cognitive structures—prototypes. These assist specific persons to perceive connections between divergent events and trends, and these connections, in turn, suggest new business opportunities to them. In other words being able to connect the dots between seemingly independent events, trends, and changes depends on having appropriate cognitive frameworks that facilitate this task. Again, a concrete example may be helpful.

In recent years, the number of persons getting married for the second, third, or even fourth time has increased greatly. In contrast to persons marrying for the first time, such individuals often have greater financial resources. Further, having worked for a number of years, they feel entitled to make the occasion of their new marriage a special event, marked by a significant celebration. Until recently, however, no businesses existed that specialized in serving the needs of this large and rapidly growing segment of the population. Two entrepreneurs—Bill and Cheryl Brown—were aware of the rapid growth in the number of such persons because it reflected their own life experience (they had both been married before), and many of their friends, too, fit into this category. In other words, their own prior life experience provided them with cognitive frameworks (prototypes)

useful in perceiving links between these seemingly independent trends, and connecting them into a pattern suggestive of a new business opportunity. The company they founded, The Second Time Around, specifically addressed the needs and preferences of this rapidly growing market, and has experienced very rapid growth. Given that it had no direct competition during its first years of operation, this is hardly surprising. It is important to note that the founders of this new venture did not stumble blindly upon this opportunity; rather, they were, in a sense, prepared to notice it (i.e., to be alert to it) by their own previous experience, which equipped them with prototypes that helped them connect seemingly independent trends into a meaningful pattern.

Finally, the effects of prior knowledge, too, can be understood within the context of prototype models. Knowledge of a particular market, industry, or group of customers, for instance, would help entrepreneurs know where to search for new patterns that could, potentially, suggest viable business opportunities. Further, knowledge is the raw material from which prototypes and exemplars are constructed. Individuals with a broad range of work experience will have greater knowledge about particular industries, markets, technologies, government regulations, and competition than will persons with more limited experience. This knowledge will enable them to develop more accurate and appropriate prototypes and a broader range of exemplars. These cognitive frameworks, in turn, can facilitate the identification of new opportunities.

At this point, it should be noted that these three factors—search for opportunities, alertness, and prior knowledge—may be interrelated. For instance, when alertness is very high, active searches for opportunities may not be necessary; entrepreneurs are so sensitive to them that they do not have to engage in formal, systematic search processes. Similarly, high levels of prior knowledge may reduce the necessity for active searches. A cognitive perspective can readily explain these relationships. Within this perspective, high alertness implies well-developed cognitive frameworks useful for perceiving meaningful patterns in diverse events or trends. To the extent these frameworks exist, active search for opportunities may not be necessary because such frameworks permit highly efficient interpretation and processing of new information. Similarly, a large store of prior knowledge may contribute to the formation of broad and richly connected cognitive frameworks, again rendering participation in formal search activities less crucial. In short, yet another advantage of a pattern recognition perspective is that it can help explain interrelationships between search, alertness, and prior knowledge, thus clarifying the effects of these three important factors.

One additional point is also worth noting. Not all patterns connecting diverse events, changes, or trends perceived by entrepreneurs serve as the basis for founding new ventures. Such patterns lead to new ventures only when they suggest new products or services that seem, on initial, informal examination, to be feasible. If emergent patterns do not point to products or services that seem feasible, they will often be ignored or discarded by current or potential entrepreneurs.

In sum three factors that have been found to play important roles in opportunity recognition by entrepreneurs—active search, alertness, and prior knowledge—can all be understood within the context of a cognitive perspective, and, more specifically, within the framework of prototype models of pattern recognition. Since such models rest on basic research in the field of cognitive science, this fact underscores the great power of a cognitive perspective to clarify important aspects of the entrepreneurial process.

AFFECT: ITS POTENTIAL ROLE IN ENTREPRENEURSHIP AND IN ENTREPRENEURIAL COGNITION

A song popular in the early 1950s was titled “La Vie en Rose.” This title cannot be translated literally from the French, but overall, it implies “Seeing life through rose-colored lenses (or glasses).” In other words, it refers to the fact that when we feel happy, everything around us takes on a positive glow or tint. Nearly everyone has experienced such effects, so they appear to be quite general in nature. Positive emotions or moods tend to impart a rosy glow to everything—objects, experiences, other people, and even ideas. Negative emotions or moods, in contrast, often have the opposite effect. These informal observations are supported by a large body of empirical evidence indicating that affective states or reactions (current or more lasting moods or feelings) do indeed influence many aspects of cognition.⁵² In other words, feelings often influence thought. The opposite also seems to be true: cognitive processes can often strongly influence our moods or feelings. For instance, dwelling on unhappy memories or events can produce shifts toward negative emotions while thinking about anger-provoking events can often induce strong feelings of anger.⁵³ It is suggested here that these important links between affect and cognition may have significant implications for the entrepreneurial process and our understanding of it. To clarify the nature of these implications, this section will consider two major topics. First, it will examine several ways in which affective reactions—negative as well as positive— influence cognition. Second, it will describe specific implications of these effects for entrepreneurs and the entrepreneurial process. (Note that the effects of cognition on affective states will not be examined in detail for the following reason: although such effects are both strong and important, they appear to have less direct relevance to entrepreneurship.)

At this point, it should be noted that affective reactions can be either brief and temporary (rapid shifts in current moods), or longer-term in nature (e.g., stable tendencies to experience mainly positive or negative feelings). Since both types of reactions can exert important effects on cognition and behavior, no strong distinction will be made between them in this discussion. However, systematic research designed to examine the impact of affective reactions on entrepreneurship would, of necessity carefully consider this difference.⁵⁴

Affect and Cognition: Various Ways in Which Feelings Influence Thought

As the song mentioned earlier suggests, affective states or reactions often influence perceptions of the external world. Positive moods or feelings produce the “*vie en rose*” effect noted previously: people experiencing such affective reactions tend to perceive objects, other persons, or ideas more favorably than persons experiencing neutral or negative moods.^{55, 56} For instance, in one recent investigation,⁵⁷ individuals experiencing positive feelings tended to evaluate the ideas for new products or services proposed by entrepreneurs more favorably than persons experiencing more neutral feelings. The ideas were seen as more practical, feasible, and economically profitable by persons who had been induced to experience positive affect than by persons who were experiencing more neutral moods. This finding is similar to results reported in the field of organizational behavior, where it has been found that interviewers’ moods or feelings can strongly affect their evaluations of job candidates, and that the moods of raters (managers) can significantly influence performance reviews.⁵⁸ In both cases, the more positive the moods of the individuals doing the ratings, the higher the evaluations they assign. In sum, affective reactions strongly affect the perceptions of the external world and the judgments based on such perceptions.

Second, and perhaps even more relevant to entrepreneurship, current moods or affective reactions have been found to exert strong effects on creativity.⁵⁹ Individuals experiencing positive feelings tend to be more creative than those experiencing neutral or negative moods, apparently because positive feelings tend to activate a wider range of ideas or associations than negative moods or feelings; creativity, it is widely agreed, often involves combining associations or ideas into new patterns.⁶⁰ Positive affect has also been found to activate a wider range of ideas or associations than negative affect and to enhance combining such associations into new patterns.⁶¹ Thus, it is not at all surprising that positive moods or feelings enhance creativity. As will be noted next, these effects, in turn, may play a role in the process of opportunity recognition.

It should be noted in passing that although informal observations suggest that negative affect can sometimes contribute to creativity (e.g., famous artists and authors have often been described as deeply troubled persons, who suffer from deep anguish and sorrow), there is little or no empirical evidence for this suggestion.⁶²

Third, considerable evidence suggests that another effect of experiencing positive affect is that it encourages heuristic thinking—a reliance on mental shortcuts that reduce effort but can lead to serious errors of judgment. This may be the case because persons experiencing positive feelings do not want to do anything that might reduce or interfere with such feelings, and engaging in careful, systematic thought (which, in several respects, is the opposite of heuristic thought) can produce such effects.^{63–65}

What does this mean in practical terms? For one thing, that when individuals are in a good mood they tend to make judgments and decisions on the basis of *heuristics*—quick rules of thumb that require little effort to use, but which can often result in serious errors (e.g., the availability or ease-of-retrieval heuristic: “The more easily I can remember something or bring it to mind, the more important it is”). Conversely, they show reduced tendency to make such judgments or decisions on the basis of effortful, systematic thought. In other words, when feeling especially happy, individuals tend to shoot from the hip where processing information is concerned, and that can prove very costly. In addition, heuristic thinking is often associated with increased susceptibility to various cognitive errors—overconfidence, overoptimism, the planning fallacy, in which individuals overestimate what they can accomplish in a given period of time or how long a given task will take.⁶⁶ Implications of such effects for entrepreneurship are described next.

An especially clear illustration of how affective states or reactions can influence important judgments or decisions is provided by the findings of an ingenious recent study.⁶⁷ This study compared persons with damage to areas of their brains that are normally involved in the processing of emotions, with persons who had no such damage, in terms of their ability to make good investment decisions. Results indicated that the brain-damaged persons actually made better decisions than persons without such damage. Why? Apparently, because they did not let their emotions get in the way and color their decisions. They made their investment choices on the basis of relevant information rather than their feelings or moods, and this increased their performance in a standard investment game. (Real investments were not made; the study involved simulation methods.) These findings are consistent with the observations by experienced investment strategists, who note that often, it is persons who are able to suppress their emotions and make investment decisions independent of such feelings who are most successful.⁶⁸ The persons with brain damage in this study were unable to process both positive and negative emotions in the normal manner, so these findings indicate both kinds of affective reactions may sometimes interfere with effective decision making.

Finally, affective reactions have been found to exert powerful effects on memory. One such effect is known as *mood-dependent memory*. This refers to the fact that when experiencing a particular mood, individuals tend to remember information they acquired while in a similar mood in the past. Current moods, in other words, serve as a kind of retrieval cue, helping individuals to recall information they entered into memory when experiencing the same kind of feelings. The result of this process is that when individuals experience a particular kind of mood—for instance, a happy mood—they tend to remember experiences they had in the past when in a similar mood. As will be noted next, such effects can exert strong effects on decision making, since the information individuals bring to mind in a given situation is, in a sense, the basic raw material on which decisions are often based. Clearly, this aspect of memory can be relevant to entrepreneurs with respect to important decisions concerning their new ventures.

A second way in which mood influences memory is known as the *mood congruence effect*. This refers to the fact that individuals tend to notice or remember information that is congruent with their current moods.⁶⁹ Thus, an individual who is in a good mood tends to notice and remember information congruent with that mood, while individuals in a negative mood tend to notice and remember information that matches that mood. In other words, current moods determine what information is noticed and entered into memory—in general, this is information consistent with such moods. Again, such effects can strongly influence the nature of information that entrepreneurs recall in many situations, and this, in turn, can influence their decisions or judgments in those situations.

A simple way to think about the difference between mood-dependent memory and mood congruence effects is this: In mood-dependent memory, the nature of the information does not matter—only an individual's mood at the time he acquires it and his mood when he later tries to recall it are relevant. In mood congruence effects, in contrast, the affective nature of the information—whether it is positive or negative—is crucial. Individuals experiencing positive moods tend to remember positive information while those experiencing negative moods tend to remember negative information.

In sum, it is clear that affective states or reactions exert powerful and general effects on various aspects of cognition, including perceptions, decisions, memory, and creativity. We will now examine some of the implications of these effects for entrepreneurs and the entrepreneurial process.

Interactions between Affect and Cognition: Implications for Entrepreneurship

Many researchers now agree that understanding entrepreneurial cognition can help us answer basic questions about entrepreneurship such as these: Why do some persons but not others choose to pursue this career and lifestyle? Why are some so much more successful in this role than others? Why do some persons but not others recognize specific opportunities for new ventures?^{70, 71} Given this fact, it seems clear that affective reactions, which can strongly influence cognition, may have important implications for entrepreneurship. It also seems reasonable to suggest that entrepreneurs, because of their strong commitments to their new ventures and because of the highly uncertain environments they face, are exposed to a very wide range of affect or emotion-evoking events—perhaps a wider range than persons who choose other career paths.⁷² What are the effects of the intense affective reactions (both positive and negative) they frequently experience? One involves the influence of affect on perceptions and judgments, or decisions based on these perceptions.

If entrepreneurs tend to perceive objects, other people, ideas, and experiences more favorably when experiencing positive affect than when experiencing neutral or negative moods, this may strongly influence their judgments and decisions,

even in important situations. For instance, an entrepreneur experiencing positive feelings may evaluate a potential partner or employee more favorably than would otherwise be the case, and might react to an offer from a potential supplier, or a deal from a venture capitalist more positively than would be true if the entrepreneur were experiencing more neutral moods or feelings. Moreover, this may be true even if the positive emotions or feelings the entrepreneur is experiencing are generated by sources totally unrelated to the current situation. For example, consider an entrepreneur who experiences positive feelings because of happy events at home (e.g., her child has recently won an award). These positive feelings can strongly influence her decisions and judgments concerning her new venture even though they derive from a source totally unrelated to them. To put it succinctly, an entrepreneur's current affective state may tip the balance toward or away from particular decisions, and this can have important effects on the success of the entrepreneur's new venture. Such effects may also play a role in the initial feasibility check that entrepreneurs conduct to determine if an idea for a new product or service makes financial sense: Being in a good mood at the time such analysis is conducted could result in a bias toward accepting even false alarms (opportunities that are more apparent than real) as a viable basis for new ventures.

Turning to the impact of affective reactions on heuristic thinking, additional important implications arise. As noted earlier, heuristic thinking is often subject to influence from various forms of error and bias. For instance, such thinking is often associated with increased susceptibility to errors such as overconfidence, overoptimism, and the planning fallacy. Increased vulnerability to such errors can have important consequences for entrepreneurs and their new ventures.⁷³

In sum, to the extent that positive affective reactions encourage heuristic thought, entrepreneurs' judgment and decision making may, again, be impaired. Further, when individuals engage in heuristic thinking, they often show greater reluctance to switch to more systematic modes of thought.⁷⁴ The ability to switch back and forth between these alternative kinds of thought—quick and low in effort (heuristic) and slower, but more careful and balanced (systematic)—may be one hallmark of successful entrepreneurs.^{75, 76} Specifically, successful entrepreneurs may be better at determining when careful, systematic thought is essential, and when this high-effort activity can be avoided and low-effort heuristic thought may, instead, suffice. The time and energy saved by making this distinction may be extremely valuable to entrepreneurs who do, of course, often face intense time pressures. Overall, the implications for the success of new ventures of affective reactions and their role in these two modes of thought may, again, be considerable.

At this point, it should be noted that although most evidence suggests that strong positive affect encourages heuristic thinking, this is not always the case. Other findings indicate that persons experiencing positive affect may switch to more systematic processing when clear situational cues indicating that such effortful cognitive activity is necessary are present—for instance, if such cues suggest that the current task is important or is one with significant consequences for them.^{77, 78}

While the implications described up to this point appear to be largely negative for entrepreneurs and their new ventures, other implications regarding the possible impact of affective reactions on cognition may actually be favorable. First, as noted earlier, positive affect has been found to enhance creativity, perhaps by increasing the breadth of associations individuals form or the ease with which they can combine such associations into new patterns. In other words, positive affect may enhance entrepreneurs' ability to recognize opportunities for new ventures by contributing to the richness and complexity of their prototypes, and by enhancing their tendency to perceive novel connections between seemingly unrelated events, changes, or trends. The impact of affective reactions on memory, too, might be beneficial, in the sense that affect may enhance entrepreneurs' capacity to recall and integrate important forms of information.⁷⁹

Second, the role of affective reactions on memory can also have important implications for entrepreneurs. For instance, experiencing positive affect, whatever the source of such feelings, may cause entrepreneurs to recall information they acquired in the past when they experienced similar feelings. This may contribute to their motivation and enthusiasm for their new ventures and as a large body of research findings suggest, enthusiasm does indeed often sell. Opposite effects might well occur when entrepreneurs are experiencing negative affect: They will tend to recall mostly negative information or experiences, and this may also color or change their decisions and judgments—perhaps, in such instances, making them overly cautious. On the other hand, such reactions might also help entrepreneurs avoid the danger of overlooking real risks and potential problems, and this could contribute to the success of their new ventures. Clearly, then, the impact of affective states on memory can have important implications for entrepreneurs and their new ventures.

Strong affective reactions can also produce potentially beneficial effects for entrepreneurs in at least one other way that is worthy of attention. Affective reactions have been found to be related to cognitive processes involved in coping with stress and other negative life events.⁸⁰ Specifically, positive affect encourages the adoption of effective styles of coping (e.g., problem-focused strategies) while negative affect tends to encourage less-adaptive tactics (e.g., avoidance, use of alcohol and drugs⁸¹). Given the high levels of stress experienced by entrepreneurs and the many negative outcomes they must confront, it appears that high levels of positive affect may be beneficial to them from the point of view of resisting the harmful effect of stress and negative life events.

Overall, then, the present review of the impact of affective reactions on cognition suggests something of a mixed pattern of potential benefits and potential costs. On the one hand, positive affective reactions may increase entrepreneurs' tendencies to engage in heuristic thought, with all the risks this implies for accurate decision making and good judgments. Similarly, positive affective reactions may also increase entrepreneurs' susceptibility to various cognitive errors. Since entrepreneurs appear to experience higher levels of positive affect than other persons, they may already be at considerable risk for such effects.⁸² On the other hand, since positive affect also tends to enhance creativity and may

contribute to abilities to cope with high stress, entrepreneurs' tendency to experience relatively high levels of such affect may assist them in recognizing and actually developing ideas for new products or services.

The view that affective states can strongly influence important aspects of entrepreneurial cognition also has implications for entrepreneurship education. On the one hand, it suggests that nascent entrepreneurs should be encouraged to reign in their natural exuberance and enthusiasm, at least to a degree: doing so may save them from important forms of error. This may be especially true during phases of the entrepreneurial process when being overly optimistic can be especially costly—for example, overexpanding during the early days after a new venture is formed, or in making unrealistically optimistic financial projections when seeking new rounds of funding. On the other hand, giving free vent to these feelings and tendencies may be beneficial when new ideas and approaches are needed and creative ideas and solutions are essential (e.g., before the new venture is started; when new markets are sought). The bottom line, it would appear is simply this: A cognitive perspective can indeed offer us many important insights into key aspects of the entrepreneurial process, and the benefits of this approach can be further magnified by including affective states and reactions in the equation. Such reactions can be viewed as important moderators of cognitive processes, and as such can be either beneficial or potentially harmful, depending on the specific circumstances under which they arise, and the precise form that such moderation effects take. In essence, it is suggested here that in order to fully understand entrepreneurs, and entrepreneurship, we must consider not only entrepreneurial cognition, but the potential impact of entrepreneurial affect as well. In the words of Charlotte Brontë, an English novelist of the nineteenth century: “Feeling without judgment is a weak drink indeed; but judgment untempered by feeling is too bitter . . . a morsel for human consumption” (Charlotte Brontë, 1847; slightly paraphrased).

NOTES

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3

Heuristics, Biases, and the Behavior of Entrepreneurs

Christian Schade and Philipp Koellinger

Consider the following decision problem: As the president of an airline company, you have invested \$10 million of the company's money into a research project. The purpose was to build a plane that would not be detected by conventional radar, in other words, a radar-blank plane. When 90 percent of the project is completed, another firm begins marketing a plane that cannot be detected by radar and is much faster and far more economical than the plane your company is building. The question is, should you invest the last 10 percent of the research funds in finishing your radar-blank plane, yes or no?

Alternatively, consider a second situation: As the president of an airline company, you have received a suggestion from one of your employees. The suggestion is to use the last \$1 million of your research funds to develop a plane that would not be detected by conventional radar. However, another firm has just begun marketing a plane that cannot be detected by radar and is much faster and far more economical than the plane your company could build. Should you invest the \$1 million to build the radar-blank plane proposed by your employee anyway, yes or no?

Of course, both situations are identical in that they require you to decide whether to invest \$1 million into an apparently hopeless project. The difference between the two situations is only in that the first case involved a prior investment of \$9 million, whereas the second does not. The prospects of investing the last million, however, are equally unattractive in both situations. These questions are taken from an experiment by Arkes and Blumer.¹ In the first situation involving sunk costs, 85 percent of the subjects involved in the experiment said they would invest the \$1 million. In the second situation, only 16 percent said they would invest in the project. Only the framing of the situation was different in both cases; nevertheless, the framing influenced the perception of how attractive

the respondents considered the two alternatives. This, in turn, influenced their decision. The majority of the respondents in the first situation fell prey to a bias, specifically the *sunk cost effect* or *escalation of commitment* that led them to invest in a forlorn project.

The point of this admittedly artificial example is simple: Individuals' decisions are often distorted by different kinds of heuristics and biases.² In this chapter, we argue that heuristics and biases are also relevant for entrepreneurial decisions. Entrepreneurs may use simplifying heuristics and can be subject to a variety of biases that can influence their behavior. This can lead to suboptimal outcomes, either for the individual or for society at large. Some types of biases appear to be typical for entrepreneurial behavior. This is because the exploitation of business opportunities requires the entrepreneur to make decisions in complex situations without complete knowledge of all relevant facts and likelihoods. By the time all necessary information for a sound decision is available, the opportunity might already be gone. Decision-simplifying heuristics can be particularly valuable in such situations, even though they might lead to systematic errors. Baron includes this behavior under the "specific cognitive style" of entrepreneurs.³ Most heuristics and biases, however, are relevant to all individuals in certain kinds of situations.

Our chapter is organized as follows. The second section describes how heuristics and biases can influence decision making in general and why they are particularly relevant for entrepreneurial behavior. The third section describes how heuristics and biases can influence the specific decision to start a new business. The fourth section discusses a variety of perceptual biases and heuristics that have been identified and their implications for the decision to start new businesses. This section also points to existing empirical evidence on the relevance of these biases for entrepreneurial behavior in general. The final section concludes with some ideas for future research that we believe to be exciting and worth exploring.

HEURISTICS AND BIASES IN ENTREPRENEURIAL DECISION MAKING

In their early seminal work, Tversky and Kahneman demonstrated that decision makers may strongly deviate from rationality because of the use of a number of *heuristics*, that is, rules of thumb, instead of formal techniques.⁴ They detected systematic deviations of most decision makers which they called *biases*, and initiated a large research stream on the topic. The reason for the use of heuristics by individuals and their susceptibility to biases is straightforward: Individuals are *boundedly rational* in the sense of being intentionally rational but having only limited capacity to be so.⁵

Heuristics can be described informally as tools and shortcuts that the human brain uses to quickly identify and interpret patterns in its environment in order to guide courses of action. It is important to describe how heuristics can influence

decisions and to disentangle them from individual preferences, thus, we start outlining briefly the basic components of all decisions. Any decision process can be decomposed into four successive steps: (1) The perception of information from the environment, (2) the processing of the perceived information, (3) the (intuitive) optimization process which identifies the best alternative, and finally (4) the decision, which manifests itself in the selection of the best alternative through a specific course of action.

In order to select the best alternative, the individual needs four types of information:⁶

1. What are the alternative courses of action?
2. What are the events that could follow from these actions?
3. What is the likelihood of each event?
4. What is the value of each event to me?

The decision process is moderated by two different factors: (1) The preferences of each individual and the heuristics an individual uses may lead to biases; and (2) individual preferences have an impact on how a person evaluates the attractiveness of an alternative. Abstracting from asymmetrical information, individual preferences are the economic explanation of behavioral differences between individuals in a given situation. Heuristics, instead, influence the perception and processing of information and the (intuitive) optimization process used by individuals in selecting the preferred course of action.⁷ Thus, behavior reflects more than preferences, it may also exhibit biases due to the use of heuristics. Heuristics and biases are one possible explanation for differences in behavior across individuals identified by psychologists.⁸ We argue that both preferences and heuristics are moderators of the decision process and can both lead to differences in the actions taken by individuals in identical environments and decision situations.

In general, a major difficulty often encountered by decision makers is that likelihoods and outcomes are not easy to assess. This is particularly relevant for entrepreneurial decisions since potential entrepreneurs are often subject to Knightian uncertainty or to ambiguity, that is, to situations in which outcomes and their likelihoods are often unknown.^{9, 10} In such situations, instead of making a decision based on known outcomes and probabilities, the potential entrepreneur has to form a belief and a personal judgment about the expected outcomes and their probabilities. Such beliefs are often expressed in statements like “I think that . . .,” “Chances are . . .,” “It is unlikely that . . .” and so forth.

To illustrate the difficulties involved in making judgments under uncertainty, consider the following example: What is safer for a child in the United States? To play at a friend’s house where parents keep a gun? Or to play at a friend’s house where parents do not have a gun but a beautiful swimming pool in the garden? Intuitively, most of us would agree that the child is much safer at the house with the swimming pool. Yet, the data tell a different story: In any given year, one child

drowns for every 11,000 residential pools in the United States. But only one child is killed by a gun for every 1 million-plus guns. Hence, the likelihood of death by drowning (1 in 11,000) is significantly higher than that of death by gun (1 in 1 million-plus). Indeed, they are not even close, with the child being 100 times more likely to die in the swimming pool than from gunplay.¹¹

It also appears that people are sometimes bad at assessing risks. Human judgment in uncertain situations has been shown to make use of a variety of heuristics and to be prone to biases that can influence decision processes in a systematic way.¹²⁻¹⁴ Often, these heuristics are quite useful, but sometimes they can lead to systematic errors.¹⁵⁻²⁰ The evidence suggests that people are better at assessing risks they are used to, but perform badly when assessing risks associated with small probabilities since such events occur rarely.²¹

Because of the uncertainty that typically surrounds entrepreneurial activity, and because of the idiosyncrasies characterizing many entrepreneurial decisions, it can be expected that probability judgments are especially difficult. Furthermore, it can be expected that heuristics and biases contribute significantly to explain many entrepreneurial decisions, such as the choice of business activities that an entrepreneur engages in, the choice of business location, and the selection of staff and business partners. The use of simplifying heuristics and biases may lead to suboptimal outcomes, such as excess entry into markets and low average survival chances for young businesses.²² On the other side, it can also be argued that the use of such simplifying heuristics and biases is particularly appropriate or even necessary for entrepreneurial decisions.²³⁻²⁵ Some entrepreneurship scholars propose a compromise between these two positions and advocate the appropriateness of certain heuristics in some situations, but the inappropriateness of the same heuristics in other situations.²⁶

Studying heuristics and biases may help us to better understand entrepreneurial behavior, for example, why some people in some situations decide to become entrepreneurs while others do not. It may be important for policymakers who are interested in fostering entrepreneurial activity and for entrepreneurs by helping them to improve their decision making. Also, understanding the role heuristics and biases play in entrepreneurial behavior may be of interest to entrepreneurship teachers who want to prepare their students to become successful entrepreneurs. Finally, understanding the role of heuristics and biases in entrepreneurial behavior might help researchers to explain recurrent anomalies noted about entrepreneurship. For example, it is known that many new businesses fail shortly after inception, and business venturing has been shown to be—on average—an inferior decision both in terms of returns to money invested and career choice.²⁷⁻³⁰ Yet, despite these depressing prospects, individuals continue to start businesses. A better understanding of the individual decision to start a business and the potential impact of heuristics and biases on this decision could be the key to solving these puzzles.

In the following sections, we focus on the influence of heuristics and biases on the decision to start a new business because this is arguably the most fundamental

decision characterizing entrepreneurial behavior. The success probabilities are unknown, resources are typically limited, experience may be scarce, and there is no safety net. While still uncertain, later decisions are typically based upon more experience, information, and resources.

HEURISTICS AND BIASES IN THE DECISION TO FOUND A NEW BUSINESS

The entrepreneurship literature often differentiates between the exploration and the exploitation of business opportunities.^{31, 32} According to Sarasvathy, decision theoretic frameworks normally used to explain that the exploration process suffers from some severe limitations.³³ In most decision theoretic approaches, decision alternatives are just assumed to exist, that is, they are exogenously given. Hence, it is not surprising that most of the literature in descriptive decision theory that underlies the heuristics and biases paradigm does not concern itself with situations where the objects to judge or the alternatives to decide upon are not given. Since this chapter builds upon this decision theoretic framework, we will also not deal with exploration and opportunity recognition processes.³⁴ Instead, we assume that at least one business opportunity and at least one other decision alternative are given.

Research on heuristics and biases has provided us with a general understanding of how individuals deviate from rationality in different decision situations. With a few exceptions that we will discuss in the context of specific examples, there is not much empirical research on the use of heuristics by entrepreneurs and the impact of biases on entrepreneurial decisions. Specifically, not much work exists on the relevance of these aspects for the decision of prospective entrepreneurs, although their possible relevance has been suggested in theoretical articles.^{35, 36}

From the perspective of economics and operations research, the decision whether to start a business may be seen as an optimization decision involving complex trade-offs.³⁷ To simplify, the decision maker is assumed to consider the opportunity costs of being an entrepreneur—typically determined by a job in a dependent position—as well as potential outcomes of different entrepreneurial opportunities and their probabilities of occurrence.³⁸ The decision to become an entrepreneur requires individuals to decide whether they actually want to exploit a business opportunity themselves by starting a business or if other courses of action are more desirable. Let us consider a simple example to illustrate the elements of this decision process and the role of perceptions.

Marie works for an advertising agency and writes promotional texts. She earns fairly good money and she is popular among her clients. She also thinks she could do a better job than her boss in running the company and has always dreamed about being independent. Thus, she considers starting her own advertising agency and believes she has fairly good chances to take some of her clients along. There is, however, the risk she will fail.

Her possible actions are to remain employed or to start her own company. Staying with her current job yields a safe income. Starting her own company bears the risk of failure. Marie knows from casual observation that those start-ups in the advertising business that manage to survive for at least three years usually continue to exist or provide their owners with a nice sum of money when the business is sold. She estimates that her own company would have an 80 percent chance of surviving for three years. Marie considers successfully running her own business to be the most desirable scenario with a utility value of 1. A start-up failure would be her least desirable scenario with a utility value of 0. Staying with her current job is not as attractive as being successful with her own venture, but clearly more attractive than failing, thus she attaches to this outcome a utility value of, say, 0.7. Given their probability of occurrence, remaining with her current job yields for Marie an expected utility of $1 \times 0.7 = 0.7$, whereas starting her own advertising agency yields $(0.8 \times 1) + (0.2 \times 0) = 0.8$. Because the expected utility of starting her own business is higher (0.8) than remaining with her job (0.7), Marie decides to dare her own venture.

Obviously, Marie's decision is highly sensitive to her personal preferences (the subjective utility values that she has assigned to each outcome) as well as to her perceptions of the outcomes and the associated probabilities. Her colleague Rachel had the same idea but was more skeptical about her business prospects: She estimated that her venture would only have a 50 percent chance of survival and was quite surprised when she heard about Marie's decision to start her own business. Although Rachel also shared Marie's preferences, she was less optimistic that running her own venture would yield a considerably higher income compared to her wage job. As a consequence, she evaluated the utility of staying in her current job at 0.85 compared to 1.0 for starting her own business. Evaluating her options, she decided to stay with her wage job (expected utility of 0.85 compared to 0.5 for her own venture).

This example illustrates the typical difficulties in business venturing decisions. Both the outcomes of the alternative actions and the probabilities of each outcome are not precisely known *ex ante*. The evaluation of expected outcomes and probabilities requires judgments based on individual perceptions: What information does the potential entrepreneur receive and how does she interpret them? Even when the individual has well-defined preferences and no doubts about the relevant time horizon, misperceptions of chances or outcomes can still yield suboptimal decisions.

POTENTIAL EFFECTS OF WELL-KNOWN HEURISTICS AND BIASES

We now discuss the effects on decision making of a number of well-known heuristics that are relevant for entrepreneurial decisions and point to some related empirical evidence. The heuristics and corresponding biases are taken from

behavioral decision theory and are grouped according to their common features. We present three distinct groups: reference-dependent behaviors, biases in probability perceptions, and biases in self-perceptions. Under reference-dependent behavior we include all situations in which behavior is influenced by a specific predetermined anchor, or reference point, that influences subsequent behavior. A rational decision maker should not react to these kinds of past experiences, or at least not very strongly. Under biases in probability perceptions, we include heuristics used to judge the probability of potential events that typically lead to deviations from an objective processing of information about probabilities. Finally, under biases in self-perceptions, we include biases indicating the tendency of individuals to judge their own behavior and abilities more favorably than they objectively should.

Reference-Dependent Behaviors

The most striking fact about human decision making is that all comparisons are made relative to some anchor, reference point, or aspiration level. Unlike standard or subjective expected utility theory, which assumes that individuals look at their final state of wealth, reference-dependent behaviors imply comparing potential outcomes of a decision with what you have or what you want to have or what you regard as a typical outcome. Hence, behavior becomes dependent on experiences, on expectations, and so on, in nonrational ways. Since these behaviors are relevant for individuals in general, we expect them to be also relevant for entrepreneurs and will discuss reasons why some of these behaviors may be stronger and others weaker when entrepreneurial behavior is concerned.

Escalation of Commitment

In the example opening the chapter, individuals had a tendency to invest the last million into the development of a radar-blank plane when \$9 million were already sunk, but they did not invest \$1 million without this history. In both cases, the success prospects were equally poor. This type of bias is called escalation of commitment and is not limited to strategic decisions with large monetary consequences but may as well apply to intimate personal relationships.^{39, 40}

How could this phenomenon be explained? The theory of cognitive dissonance suggests that individuals try to avoid situations where they have to deal with conflicting thoughts or emotions.⁴¹ Clearly, a revision of a previous decision leads to a cognitive conflict about which between the old and the new decision is right. According to Bem, individuals have a strong urge to perceive themselves as good decision makers.⁴² According to Baron, Staw and Ross, and Bobocel and Meyer, several factors such as feelings of responsibility for the initial decision, concerns about the loss of face, and the urge to justify one's initial choice to oneself may play a role in the genesis of this effect.⁴³⁻⁴⁵

Baron discusses a possible reason why entrepreneurs may be more prone to this behavior than others.⁴⁶ For example, after an individual has detected an opportunity and become a nascent entrepreneur, he or she may feel more and more committed to continuing in the business where more time and money have already been invested, even though the objective prospects may have turned out less favorable than expected. Hence, individuals tending to an escalation of commitment would be more prone to start businesses once they have detected an opportunity. These individuals will also exhibit a tendency not to quit their business, even if after some time they are only burning money.⁴⁷ A different explanation for this phenomenon is that individuals perceive the incurred losses as pulling them more and more below their aspiration level and hope that a final breakthrough investment will bring them back to the subjective break-even point. Even a small probability of success will be sufficient to make such additional investments subjectively attractive. This line of thought is related to what will be discussed in more detail under “Aspiration Levels and Reference Dependence.”

Anchoring and Adjustment

Another heuristic frequently used by people in producing estimates is to start from some initial value and to adjust that value to yield a final answer. Thus, the term *anchoring* describes a phenomenon in which different starting points typically lead to different estimates for an identical problem, and in which these estimates are biased toward the initial value.⁴⁸ The initial value might be somehow suggested or it might be the result of some reasonable partial calculation or thought. Whatever the origin of the starting value, adjustments are typically insufficient.⁴⁹ This phenomenon may have significant implications for business venturing decisions.^{50, 51} A potential entrepreneur, for example, might try to estimate the potential profit of her new business by considering business reports in the media. She might know that the profit is likely to be biased upward because the media reports predominantly about successful enterprises. Yet, even if she knows this and adjusts her estimate, the anchoring and adjustment heuristic implies that in such situation she will be prone to make an insufficiently large adjustment, thereby overestimating her potential profit.

Although the processing of probabilities will be dealt with in a subsequent section, anchoring and adjustment is also relevant for probability estimation. A consequence is that people often overestimate conjunctive probabilities and underestimate disjunctive probabilities.^{52, 53} Conjunctive probabilities are relevant, for example, when the successful completion of a project requires each of a series of events to occur. Disjunctive probabilities are relevant, instead, when a particular event can occur if any one of a series of instances occurs. According to statistical theory, the overall probability of a conjunctive event is lower than the probability of each elementary event if the elementary events are independent. Vice versa, the overall probability of a disjunctive event is higher than the probability of each elementary event. The anchoring and adjustment heuristic

implies that people do not actually compute the correct probabilities but that they take the probabilities of the elementary events as starting points, and insufficiently adjust these probabilities up or down for disjunctive or conjunctive events, respectively. This has implications for the risk assessment of new ventures: The successful launch of a new business is clearly a conjunctive event. It requires the successful completion of each of a number of events, like finding a competent management team, acquiring necessary resources, finding a good location, hiring qualified staff, producing a product, and finding customers who are willing to pay a certain price for the product. Even if each of these events is very likely, the conjunctive probability can be quite low. As Tversky and Kahneman note, the general tendency to overestimate the probability of such conjunctive events leads to unwarranted optimism.⁵⁴

To the best of our knowledge, the only empirical study on this heuristic in the context of entrepreneurship is Lévesque and Schade's who show, in an experiment with students, that anchoring and adjustment are the major heuristics driving the time allocation decisions between developing a new business and holding a wage job.⁵⁵

Aspiration Levels and Reference Dependence

This is the most general phenomenon in the group of reference-dependent behaviors. Indeed, some of the above-mentioned behaviors can be traced back to aspiration levels and reference dependence. No one, including entrepreneurs, seems to be able to escape the strong behavioral tendencies to behave in this biased way: Individuals typically evaluate the attractiveness of an outcome not in terms of total wealth, but in terms of gains and losses compared to an aspiration level or a neutral state, such as the maintenance of the status quo. This neutral state or aspiration level is called reference point. According to prospect theory, decision makers transform the possible outcomes of a risky decision or prospect into subjective values.⁵⁶ A central feature of prospect theory is that people evaluate one and the same prospect as more or less desirable depending on their reference point, which determines whether outcomes are perceived as relative gains or a losses. People are usually risk averse with respect to gains (e.g., they would prefer a sure win of \$800 over an 85 percent chance to win \$1000, although the expected value of the risky outcome is higher) and risk seeking with respect to losses (they would prefer a chance of 85 percent to lose \$1000 and a 15 percent chance to lose nothing over a sure loss of \$800, although the expected value of the risky outcome is lower). Thus, according to prospect theory, how attractive someone perceives a risky alternative critically depends on what the point of reference is and whether the person believes to be in a win or loss situation.

Specifically, prospect theory implies that unemployed people should be more likely to attach higher subjective values to the possible gains from a new business and lower subjective values to possible losses compared to people who currently have a job. Hence, they should be expected to be more likely to start a business

but also more likely to fail (on average) than people who start a business from a neutral or gain position. Some empirical evidence supports this argument. Taylor and Ritsila and Tervo, for example, have shown that unemployment increases the chance that a person will make the transition to self-employment or to starting a business.^{57, 58} Also, Cooper et al. have shown that ventures founded by people who quit their previous jobs to pursue an entrepreneurial opportunity were more likely to survive three years than those who started businesses upon losing their jobs.⁵⁹ Finally, Reid and Smith have found that pull factors such as the detection of a business opportunity lead to a larger chance to survive than pull factors such as unemployment.⁶⁰ All these studies, however, do not allow differentiating between the explanation based on prospect theory and alternative explanation based on the fact that unemployed people face lower opportunity costs.

That reference dependence according to prospect theory is indeed an important phenomenon for entrepreneurial decisions can be more directly demonstrated via the risk-return paradox.⁶¹ Among others, Fiegenbaum and Thomas demonstrated the risk-return paradox in detail: Businesses with an above than average profitability exhibit a positive relationship between risk and return—which is consistent with risk-averse decision making.⁶² However, companies with a below-average performance exhibit a negative relationship between risk and return; a result that is consistent with risk seeking. These results have been found to hold in various countries such as the United States and Germany.⁶³ These results also hold in hypothetical questionnaires where, in a low performance situation, individuals opt for riskier investments.⁶⁴ Although the risk-return paradox has been demonstrated for all kinds of businesses, including large firms, its effect is of particular importance for entrepreneurs because start-ups typically operate below the entrepreneurs' aspiration levels. Entrepreneurs may start small and with negative returns, but most of them have higher goals. A potential implication is that entrepreneurs are risk taking in the beginning, but may become risk averse as they become successful.

The phenomenon is supported by some anecdotal evidence: Fred Smith, founder of FedEx Corp., facing a deep crisis of his company, went to the casino to gamble with a substantial part of the company's capital to save the enterprise (and won). Donald Trump, real estate tycoon, twice threatened by insolvency, got back to the top via some very risky real estate speculations. There is much reason to believe that such behavioral tendencies also occur among small-business owners and in business venturing decisions.

Reference dependence also works in the absence of risk. An entrepreneur may be satisfied if she reaches profitability in a given year, if the aspiration level was becoming profitable. However, if she compares her performance with that of a close friend who founded a business in the same year but has a much higher profitability, happiness may turn into unhappiness if the friend's performance becomes the aspiration level. This, in turn, may have severe consequences for the evaluation of future prospects.

Status Quo Bias

The status quo bias is defined as the tendency to select a previously chosen alternative disproportionately often.⁶⁵ Instead of an unbiased consideration of all available information in the decision-making process, most people have a tendency to rely on what they have chosen before, on what represents the actual state, or even what someone else has chosen for them and consequently is the status quo. Numerous empirical studies have demonstrated the relevance of the status quo bias for human decision making in various contexts.^{66–70} The status quo bias implies that people have a tendency to stick with the current state even if objectively better alternatives are available. Interestingly, this bias is contrary to what entrepreneurs are expected to do. For example, Schumpeter described entrepreneurs as revolutionary, unconventional individuals who break the routines.⁷¹ Thus, we would expect status quo bias to be of low or no importance for entrepreneurial behavior. Burmeister and Schade investigate in a quasi-experimental study whether entrepreneurs are actually less susceptible to the status quo bias compared to students and to bankers specialized in start-up financing.⁷² Their results suggest that bankers are more susceptible to a status quo bias than entrepreneurs. So in a way, entrepreneurs seem indeed to outperform other professionals when it comes to the status quo bias.

To summarize, this overview of the different facets of reference-dependent behaviors has described a variety of important behavioral phenomena and shown that, among them, some find entrepreneurial behavior to be more susceptible (such as in the escalation of commitment), while others (such as the status quo bias) find it to be less so. Clearly, most of these behaviors will need to be investigated more deeply in the context of entrepreneurial actions.

Biases in Probability Perception

In the category of biases in probability perceptions, we include heuristics used by individuals to judge the probability of potential events that typically lead to deviations from the objective processing of information about probabilities.

Availability

One way to assess the downside risk of a new business is to imagine the various difficulties it could encounter. Similarly, the upside risk of a new business could be assessed by thinking about entrepreneurs who succeeded in their markets. This procedure is called an availability heuristic. In general, an availability heuristic implies that people assess the probability of an event by the ease with which instances or occurrences of that event can be brought to mind.⁷³ This simple rule allows people to make guesses about probabilities because instances of common events are usually recalled better than instances of less frequent events. However, the availability of cues can also lead to systematic biases

because things other than frequency and probability influence the ease with which instances or occurrences can be recalled.

A bias can result from the retrievability of instances. An event or a class of events that are easily retrieved from memory appear more frequently than a class of equal frequency whose instances are, however, less retrievable. For example, knowing someone who has gone bankrupt with her business makes business failure appear more likely. Also, witnessing the business failure of a close friend will have a stronger effect on subjective probability judgments regarding business venturing than just reading about a business failure in the newspaper. Furthermore, recent occurrences are more likely to be available than occurrences in the far past: Presently, witnessing a business failure or a successful start-up can temporarily influence the subjective probability of the risk associated with a business venture if the availability heuristic is applied. Thus, if people assess risks and outcomes based on the availability heuristic and if their judgment is influenced by the ease with which a class or an event can be recalled, random events in the individual's environment that are totally independent from the prospects of her own business idea influence her judgment.

Imaginability can also lead to biased estimates of risks and outcomes. For example, a potential entrepreneur who considers her business idea to be unique will probably not rely on the statistics of the past or the experiences of other entrepreneurs to assess her prospects. Kahneman and Lovallo called such a perspective the inside view.⁷⁴ To evaluate the prospects of a business idea, the potential entrepreneur typically constructs several scenarios and evaluates their likelihood by the ease with which they can be constructed. In fact, such multiscenario calculations are often part of business plans that are submitted to banks and venture capitalists to seek funding. However, the ease with which the scenarios can be constructed does not always reflect their actual likelihood of occurrence and this mode of evaluation is prone to biases.⁷⁵ Hence, the upside chances of a new business might be evaluated by how vividly the entrepreneur can portray favorable scenarios. If the potential entrepreneur can easily imagine such scenarios, she might overestimate the likelihood of success of her business idea. Conversely, the chances of success might be grossly underestimated if the decision maker is very imaginative in thinking about possible difficulties and constructing unfavorable scenarios.

Overall, the influence of the availability heuristic on business venturing decisions has been discussed by various authors.^{76, 77} We are not aware, however, of any empirical test demonstrating, yet, the relevance and the performance implications of this heuristic on entrepreneurial behavior.

Representativeness

Representativeness, also called the law of small numbers, is the willingness to generalize and draw strong conclusions from small samples that do not represent a population.⁷⁸ Thus, in trying to answer the question whether some object or

event A belongs to or originates from class B, the representativeness heuristic implies that people search for similarities between A and B. If A closely resembles B, it is believed that it belongs to or originates from B, regardless of prior probability distributions or sample size.⁷⁹ This heuristic can help in formulating judgments and can enable quick decisions in situations in which only very limited information exist or the search for further information would not significantly reduce uncertainty. Thus, the representativeness heuristic should encourage a person to exploit entrepreneurial opportunities because they often have only a limited window of opportunity and require quick action based on very limited information. In this sense, the belief in the law of small numbers may be beneficial to entrepreneurs.

Yet, it may also lead to biased judgments that result in poor decisions. For example, an entrepreneur may be unduly encouraged by limited feedback from two potential customers who state they would buy the new venture's proposed product or from articles in the press that report about successful new ventures.⁸⁰ Although generalizing from a small sample may in principle lead either to overly optimistic or pessimistic judgments, some scholars argue that individuals are more likely to utilize limited amounts of positive information which result in overly optimistic forecasts.^{81, 82} Consequently, people who rely on the representativeness heuristic tend to ignore base-rate probabilities and underestimate risks such as, for example, the high average rate of new business failures. Busenitz and Barney found evidence that entrepreneurs are more likely to follow the representativeness heuristic than managers.⁸³ In other words, they are more likely to use rules of thumb rather than accurate statistical analysis to guide their decisions. This may suggest that entrepreneurs and managers have different cognitive decision-making styles. Looking at students' responses to a survey based on a teaching case about entrepreneurial activity, Simon et al. found evidence that individuals who showed a strong tendency to generalize from small samples had lower perceptions of risk and a higher tendency to start new businesses.⁸⁴

To summarize, biases in probability perception are likely to influence entrepreneurial behaviour. The heuristics that typically lead to such biases often help an individual to make decisions in situations with limited information about actual probabilities and distributions. In this sense, they might be beneficial or even necessary for entrepreneurial behavior that often requires action despite prevailing uncertainties, but they may also lead to suboptimal decisions.

Biases in Self-Perception

In the context of behavioral decision theory, the third and last group of heuristics and corresponding biases is biases in self-perception. In this category, we include biases indicating the tendency of individuals to judge their own behavior and abilities more favorably than they objectively should.

Self-Serving Bias

Individuals differ in the way they make attributions, that is, they exhibit different tendencies when identifying whether the causes of positive or negative events are external (outside world) or internal (within the individual).⁸⁵ Watkins et al., for example, have shown that depressive individuals have a tendency to attribute success to the outside and failures to internal causes, whereas individuals falling prey to a self-serving bias attribute positive developments to internal causes and negative developments to external causes (bad luck, etc.).⁸⁶ As an example, think of a student attributing all successful exams to his own superior skills and preparation, and all failed exams to professors having had a bad day when inventing the (clearly unfair) exam. According to Baron, entrepreneurs may be more prone to self-serving biases than other people.⁸⁷

Indeed, a self-serving bias may facilitate the decision to start a new business. Specifically, the bias may have a twofold impact. (1) If failures in former occupations have mostly been attributed to external causes, trying it on your own may be a logical consequence. (2) If successes have been mostly attributed to oneself, chances of surviving as an entrepreneur will be judged to be higher than they objectively are. Along similar lines, Baron suggests that the self-serving bias might be one driver of entrepreneurial overconfidence.⁸⁸

Illusion of Control

The illusion of control is another bias that influences individuals' perceptions of risks and outcomes.⁸⁹ It occurs when individuals erroneously believe they are in control of a situation when, objectively, they are not. This has important implications because usually there is a causal link between skill or effort and performance, whereas success in luck or chance activities is apparently unrelated to skill and effort. The seminal study by Langer showed that people often do not distinguish these two concepts correctly.⁹⁰ For example, people in Langer's experiment demanded a significantly higher price to sell a lottery ticket they had selected themselves than a control group who did not have a chance to self-select their ticket. Obviously, whether a lottery ticket wins or not entirely depends on chance. Yet, people in the experiment demanded a premium for self-selected lottery tickets, erroneously believing the value (the winning chances) of this ticket to be higher.

A consequence of the illusion of control is that individuals believe that they can influence largely uncontrollable events, which makes them more optimistic about the expected outcome and more confident in their ability to correctly predict that outcome. Duhaime and Schwenk have interpreted the illusion of control as a reaction of individuals to alleviate discomfort with uncertainty.⁹¹ Managers with an illusion of control may generate overly optimistic performance estimates and are more likely to engage in risky decisions.⁹²⁻⁹⁵ This, in turn, may ultimately influence the performance of their business.

There is also some evidence that an illusion of control is positively related to an individuals' propensity to start a business: Boyd and Vozikis found that individuals' beliefs in their ability to control outcomes affect their intentions to start businesses.⁹⁶ Also, Simon et al. found evidence that an illusion of control negatively affects perceived risk and positively affects the chance of starting a business.⁹⁷

Overconfidence

There are different ways to perceive yourself or the outside world too optimistically. Perceiving a risky environment far too optimistically is typically referred to as overoptimism and may be due to already discussed concepts such as availability or illusion of control. Within this context, overconfidence is about self-perception although the term has been used in different ways. For example, the term has been used to describe an excessive belief in the precision of private judgments. Overconfidence has also been used to describe people's tendency to overestimate their own performance and, finally, to describe the so-called better-than-average effect, where respondents believe they perform better than the average individual.^{98, 99}

A number of studies have shown that most people are overconfident about their own relative abilities and unreasonably optimistic about their future.^{100, 101} It is also well known that the vast majority of people claim to be above average on almost any positive trait, although of course, only half can actually be above average.¹⁰² Thus, this concept is closely related to self-efficacy, that is, the belief in one's own ability to perform a given task.¹⁰³ Overconfidence is greatest for difficult tasks, for forecasts with low predictability, and for undertakings lacking fast, clear feedback.^{104–107} Given the complexity of factors that influence the possible success or failure of a new business, the lack of fast and clear feedback, and the high uncertainty of the outcome, it is not surprising that potential entrepreneurs should tend to be overconfident. Perhaps overconfidence may also contribute to the high level of self-efficacy found among entrepreneurs.^{108, 109}

Overconfidence leads people to follow their own judgment instead of paying attention to the information or advice provided by others, to disregard disconcerting information, or to neglect the skills of competitors.^{110–112} Thus, overconfidence encourages people to exploit opportunities and to enter markets. In fact, there is robust empirical evidence showing entrepreneurial decisions to be related to overconfidence. Cooper et al. report that one-third of the new business founders they surveyed were certain of their success and 81 percent believed their chances of success to be at least 70 percent.¹¹³ Respondents also estimated their chances of survival to be much higher than those of other comparable companies. Yet, at the time of Cooper et al.'s study, 66 percent of all newly founded businesses were failing. Along similar lines, Camerer and Lovoallo conducted an incentive compatible market entry experiment and found that subjects overestimate their chances of success.¹¹⁴ More surprisingly, they also found

that overconfidence in success is even higher when subjects know that their success will depend on their skills. According to Mahajan, not even experience helps against overconfidence. In a study with marketing managers, those with the broadest job experience exhibited the largest degree of overconfidence.¹¹⁵ Aldrich found that entrepreneurs often overstate their own skills and abilities, and Bhide found evidence that entrepreneurs exploit opportunities despite a lack of competitive advantage.^{116, 117}

It is important noticing, however, that despite evidence that entrepreneurial decisions are probably related to overconfidence and that many entrepreneurs seem to start their businesses with erroneously optimistic beliefs about their abilities, overconfidence may not be such a bad thing after all. There can be situations in which the benefits of being overconfident clearly outweigh the costs. For example, some people might start a business with the erroneous belief that they have the sufficient skills and experience for doing so. But just starting may help them to acquire the skills and the experience that they actually need.¹¹⁸ Also, there is some evidence that confidence is actually positively related to success. Kalleberg and Leight, for example, studied the survival of a sample of owner-managed small businesses in Indiana.¹¹⁹ They found that owner's confidence in their ability to run the business reduced the likelihood that the firms would go out of business over the observed period.

To summarize, biases in self-perception such as the self-serving bias, illusion of control, and overconfidence can all lead to overly optimistic judgments about business prospects and have been found to facilitate the decision to start a business. Thus, biases in self-perception may help to explain the high failure rates of young businesses and the comparably low average financial returns on entrepreneurial activity.

CONCLUSION AND FUTURE RESEARCH

Although the list of perceptual phenomena is not exhaustive, it suggests that the expected outcomes and probabilities of entrepreneurial decisions are likely to be affected by heuristics and biases. On the one hand, heuristics may help in managing the complex task of assessing uncertain future prospects and might even be necessary to act quickly in an uncertain environment without wasting time and resources. On the other hand, they might also lead to miscalibrated judgments and suboptimal entrepreneurial decisions. Previous research has indicated that entrepreneurs are more likely to fall prey to certain biases (e.g., overconfidence, representativeness) and less likely to fall prey to others (e.g., the status quo bias). Yet, there is still much need for further empirical studies on the relevance and types of how other heuristics and biases (e.g., anchoring and adjustment heuristic, availability, aspiration levels) apply specifically to entrepreneurs. For example, it would be interesting to test whether suboptimal reactions to recent events have a measurable influence on business start-up decisions.

Lacking appropriate data, experimental methods provide a useful approach to tackle these issues.

Closely related to the question whether perceptual biases influence start-up decisions, is the question whether these biases have any implications for the performance of newly founded businesses. Existing evidence on this topic is scanty. Which of these perceptual biases is potentially harmful to performance? An interesting approach to study the performance implications of perceptual biases could be a longitudinal survey of new business founders that would include psychometric items measuring individual perceptions, miscalibrations, and preferences.

Also, Koellinger and Minniti and Koellinger et al. have shown surprisingly large differences in how individuals perceive themselves and their environment across countries and social groups, leading to strong implications for start-up activity.^{120–122} To what extent are these differences in individual perceptions influenced by culture, institutions, or public policy? How would changes in institutions and public policy, for example, influence entrepreneurial activity and the way people perceive their individual prospects?

Finally, as we also discussed, the very nature of entrepreneurial decisions makes them susceptible to some perceptual biases and likely to lead to overoptimistic judgments. For example, the conjunctive nature of a successful business launch (each of a series of events must occur for a successful launch) lead to overoptimistic judgments due to the anchoring and adjustment heuristic. The complexity and uncertainty surrounding business ventures and the lack of fast and clear feedback make it also highly probable that people will make overconfident judgments. On the other hand, without the presence of overoptimistic judgments, we would probably see fewer business start-ups, but higher average returns and success rates among those who become entrepreneurs.

Overall, it is far from clear whether overconfidence in individual behavior yields a positive or negative social return: It may be that unsuccessful businesses create negative externalities for society (e.g., if the costs of their failure have to be paid—at least in part—by others). But it may also be that even the overconfident and unsuccessful entrepreneurs generate positive returns to society by generating valuable information (knowing that something is a bad idea can be very valuable).

Our discussion has emphasized that people frequently rely on simple heuristics and are affected by biases when making decisions in complex and uncertain environments. This is particularly relevant for entrepreneurial behavior because taking advantage of business opportunities often requires quick decisions without complete knowledge of all facts and probabilities. The frequent use of heuristics and biases implies a deviation of the decision maker from fully rational predictions of behavior. Although this might lead to suboptimal outcomes in some situations, it might be beneficial or even necessary in other situations. We believe that a further investigation of these issues is a highly relevant and interesting field for future entrepreneurship research.

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4

The Role of Risk in Entrepreneurial Behavior

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OPPORTUNITY RECOGNITION AND THE WILLINGNESS TO TAKE ON RISK

The fields of management, psychology, and more recently economics, have provided many insights into the complex decision-making process, leading individuals to start a new business. This research has primarily focused on the emergence and evolution of entrepreneurial cognition as it assumes, for example, that entrepreneurship is an orientation toward opportunity recognition. Central to this research agenda are these questions: How do entrepreneurs perceive opportunities? How do these opportunities manifest themselves as being credible versus being an illusion?¹

Krueger examines the nature of entrepreneurial thinking and of the cognitive process associated with opportunity identification and the decision to undertake entrepreneurial action.² He shows that a perceived opportunity and intent to pursue that opportunity are the necessary and sufficient conditions for entrepreneurial activity to take place. The perception of an opportunity is shaped by a sense of the anticipated rewards accruing from and the costs of becoming an entrepreneur. In the literature, some of the research has also focused on the role of personal attitudes and characteristics, such as self efficacy (the individual's sense of competence), collective efficacy, and social norms.

Shane and Eckhart have also introduced the concept of the entrepreneurial decision resulting from the cognitive processes of opportunity recognition and ensuing action,³ and suggest that an equilibrium view of entrepreneurship stems from the assumption of perfect information. In contrast, imperfect or asymmetrical information generate divergences in perceived opportunities across different people. Imperfect information means that the individuals under consideration

do not have complete information about the possible outcomes of their decisions. Asymmetrical information, instead, means that different people have access to different information about the possible outcome of their decisions. The sources of heterogeneity across individuals include differing access to information, as well as cognitive abilities, psychological differences, and access to resources, such as financial and social capital. Imperfect and asymmetrical information, however, lead also to the presence of risk. Since entrepreneurial outcomes are unknown, entrepreneurial behavior is inherently risky.

In asking why some people start businesses while others do not, much of the entrepreneurship literature has historically focused on the ability of individuals to observe an opportunity that can be exploited and on their willingness to take on risk. Shane and Eckhardt⁴ summarize this literature by introducing the individual–opportunity nexus. Specifically, they discuss the process of opportunity discovery and explain why some actors are more likely to discover a given opportunity than others. The differences between actors involve the willingness to incur risk.⁵

In a related study, Gifford⁶ defines the entrepreneurial process as the perception of an opportunity for profit and the necessary decision making for, and acceptance of, responsibility for the outcome of its exploitation. Her study suggests that the entrepreneur has a role in the economy only if the environment is uncertain, thus separating the concept of risk (measurable uncertainty) described earlier from true uncertainty, which refers to the unknowable probability that an event will occur and is not associated with a statistical probability. In other words, developing an argument originally presented by Knight, Gifford provides a theoretical argument supporting the idea that, as mentioned earlier, entrepreneurial behavior is not only inherently risky, but deals primarily with situations in which statistical probability are unknown. Already since Knight, a distinction has been made between risk and uncertainty.⁷ While in the first case, the entrepreneur can take calculated risks, such calculation is impossible in the second type of situation.

Entrepreneurship research has also made a key distinction between the role of actual risk and perceived risk when individuals confront the entrepreneurial choice. The difference is that while the first reflects the statistical probabilities of outcomes associated with a particular action—in this case, starting a business, the latter reflects the individual's subjective perception of the (risky) activity in question. Camerer and Lovallo, Kahneman and Tversky, and Koellinger, Minniti, and Schade have demonstrated that perceptions of risk and own ability have a systematic influence on the decision of individuals to start a new business and may deviate systematically from actual risks.^{8–10}

The purpose of this chapter is to explore the fundamental role of risk in entrepreneurial behavior from an economics perspective and, specifically, to examine the sources of risk facing entrepreneurs as well as the relatively less explored area of their risk preferences. While this topic has been the focus of extensive analysis in the management literature, it has remained elusive in the

field of economics. Thus, the goal of the chapter is threefold. First, we discuss differences between the concepts of risk and uncertainty. Second, we focus on an economic approach to risk and show how different types of risk are relevant for entrepreneurial behavior. Third, we discuss the nature of entrepreneurial preferences with respect to risk. Overall, we find that both the concepts of risk and uncertainty play a central, albeit different, role in entrepreneurial behavior and that, while the theory of risk has played a prevalent role in much of economic choice, it has remained underutilized in the area of entrepreneurship.

The rest of the chapter is organized as follows: The next section makes the key distinction between the concepts of risk and uncertainty. The third section discusses entrepreneurial behavior as being an inherently risky occupational choice. The fourth section discusses the influence of asymmetrical and imperfect information on entrepreneurial behavior. The fifth section discusses the role of individual risk preferences on the entrepreneurial decision process. Finally, in the last section, a summary and conclusion are provided.

RISK VERSUS UNCERTAINTY

Risk is typically associated with the unknown but probabilistic outcomes associated with tossing a die. In contrast, when Columbus set sail westward into a world presumed to be flat, he was confronted by uncertainty. No probability distribution existed predicting what his uncertain future might face. According to Kirzner, the chief function of the entrepreneur is to arbitrage risk.¹¹ It is risk differentials that give rise to entrepreneurial opportunities and it is entrepreneurial alertness that identifies the risk differentials that yield entrepreneurial opportunities. Thus, as Koppl and Minniti point out, “According to Kirzner, the entrepreneur is an alert individual. Entrepreneurship is a change in the ends-means framework of this individual. Such change happens because the potential entrepreneur is alert to new possibilities for action.”¹² In contrast, Schumpeter identifies uncertainty as giving rise to entrepreneurial opportunities.¹³ It is the inability of incumbent organizations to make decisions when confronted with uncertainty that gives rise to the entrepreneurial opportunity.

We can define *taking a risk* as making a choice where the outcome resulting from that choice is less than certain but can be anticipated with known a priori probabilities. Tossing a die, for example, is a risky action in the sense that the outcome is unknown, although all possible outcomes are unknown and so are their probabilities. In 1921, Knight made the important distinction between risk and uncertainty.¹⁴ Knight characterized a cognitive decision as being inherently uncertain if the outcomes resulting from that decision cannot be assigned a probabilistic distribution.¹⁵ According to Knight, “With the introduction of uncertainty—the fact of ignorance and the necessity of acting upon opinion rather than knowledge—into this Eden-like situation (that is a world of perfect information), the character of decision making is entirely changed... with

uncertainty present doing things, the actual execution of activity becomes in a real sense a secondary part of life; the primary problem or function is deciding what to do and how to do it.”¹⁶ Thus, risk involves outcomes that are known with certainty but are probabilistic, suggesting that they can be assigned a probability distribution. Uncertainty, on the other hand, involves outcomes that are not known and for which no probability distribution can therefore be assigned. Entrepreneurs will often face business alternatives for which the risks are unknowable and, as a result, will often operate under uncertainty.

Sarasvathy et al. also distinguish between uncertainty and risk by identifying three types of situations.¹⁷ They are: (1) a future with a known distribution and diversifiable risk known in advance, (2) a future with a known distribution and diversifiable risk not known in advance, and (3) unknowable risks or true uncertainty. The assumption of perfect information implies decision making under risk. In contrast, imperfect information implies decision making under uncertainty. Alchian pointed out that the existence of knowledge asymmetries would result in the inevitability of mistaken decisions in an uncertain world.¹⁸ When uncertainty is present, the task of deciding what to do and how to do it takes precedence over execution, and the action of selecting among alternative options is no longer a matter of indifference or a mechanical detail.

Entrepreneurship is primarily about innovation in products and processes. Within this context, Arrow makes a clear distinction between uncertainty associated with economic knowledge and risk associated with traditional economic factors.¹⁹ In particular, he argued that new knowledge differs from the traditional factors of production, in that new knowledge involves a greater degree of uncertainty. The expected value of any new idea is highly uncertain, and as Arrow pointed out, has a much greater variance than the one that would be associated with the deployment of traditional factors of production. After all, there is relative certainty about what a standard piece of capital equipment can do, or what a (unskilled) worker can contribute to a mass-production assembly line. In contrast, Arrow emphasized that when it comes to innovation, there is uncertainty about whether the new product can be produced, how it can be produced, and whether sufficient demand for that visualized new product might actually materialize.

In addition, new ideas are typically associated with considerable asymmetries. In order to evaluate a proposed new idea concerning a new biotechnology product, for example, the decision maker might not only need to have a PhD in biotechnology, but also a specialization in the exact scientific area. Such divergences in education, background and experience can result in a divergence in the expected value of a new project or the variance in outcomes anticipated from pursuing that new idea, both of which could lead to divergences in the recognition and evaluation of opportunities across economic agents and decision-making hierarchies. Such divergences in the valuation of new ideas will become greater if the new idea is not consistent with known competences or with technological trajectory of the market.

Thus, because of the conditions of high uncertainty and asymmetrical information, individuals may decide not to (or be forced not to) pursue an innovation or try to commercialize new ideas.²⁰ In this sense, entrepreneurship is the economic action of individual decision makers who possess an endowment of knowledge with a positive but uncertain expected value. This means that the knowledge endowment of individuals leads some of them to associate a given opportunity with a more positive outcome than others. Those with high positive outcomes become entrepreneurs. Williamson, for example, points out the existence of an inherent tension between hierarchical bureaucratic organizations and entrepreneurial activity.²¹ He argues that only when large firms are able to compensate internal entrepreneurial activity in ways approximating that of the market do they experience no entrepreneurial disadvantage with respect to smaller businesses.

To summarize, taking risk means operating in an environment where outcomes are less than certain but can be anticipated with known a priori probabilities. Uncertainty, on the other hand, involves operating in an environment where outcomes and relative probability distributions are both unknown. Both concepts are highly relevant for entrepreneurial behavior and entrepreneurs are individuals who choose to operate in such environments.

ENTREPRENEURSHIP AS AN INHERENTLY RISKY BEHAVIOR

While the previous section differentiated between risk and uncertainty, this section analyzes the entrepreneurial exposure to risk, leaving the discussion of asymmetrical information and risk preferences to the following sections. As mentioned in the introductory section, much of the entrepreneurship literature has historically focused on the ability of individuals to observe an opportunity that can be exploited and on their willingness to take on risk. Furthermore, since entrepreneurial outcomes are unknown, entrepreneurial behavior is inherently risky.

Within the economics literature, the prevalent theoretical framework used in modeling entrepreneurial behavior has been the general model of income choice, which has been at times referred to as the general model of entrepreneurial choice.^{22, 23} The model characterizes the fundamental choice that an individual faces when deciding how to obtain her income. The model becomes adapted to entrepreneurial choice when that decision involves the possibility of starting a new business. The model of income or entrepreneurial choice dates back at least to Knight, but was more recently extended and updated by Lucas, Kihlstrom and Laffont, Holmes and Schmitz, and Jovanovic.^{24–28} Basically these studies suggest that individuals are confronted with the choice of obtaining their income either from wages earned through employment in an incumbent enterprise or from profits accrued by starting a new business. The essence of the income choice

consists in comparing the certain wage an individual expects to earn through employment, with the profits that she is expected to accrue from a new business.

The model can be summarized through a simple equation in which a comparison is made between the wage an individual expects to earn through employment, W^* , and the risky profits that are expected to accrue from a new business start-up, P^* . Thus, the probability of starting a new business, $Pr(s)$, can be represented as:

$$Pr(s) = f(P^* - W^*)$$

The model of income choice has been extended by Kihlstrom and Laffont to incorporate aversion to risk, and by Lucas and Jovanovic to explain why firms of varying size exist. It has also served as the basis for empirical studies about the decision to start a new firm by Blau, Evans and Leighton, Evans and Jovanovic, Blanchflower and Oswald, and Blanchflower and Meyer.²⁹⁻³⁷ This model clearly highlights the inherent riskness of entrepreneurial behavior. The key contribution of this model to our understanding on entrepreneurial risk is twofold. First, the model allows researchers to analyze how potential entrepreneurs compare certain wages with risky profits. Second, it allows researchers to analyze how risk aversion influences the decision between alternative employment choices.

In a related study, Van Praag et al. have argued that risk aversion significantly decreases the probability that an individual would choose to be an entrepreneur.³⁸ Parker observes that researchers in this area often seem to misconstrue overoptimism regarding expectations of outcomes with greater risk tolerance on the part of the entrepreneur.³⁹ Thus, there is both theoretical and empirical evidence suggesting that entrepreneurs are less deterred by risk than are their nonentrepreneurial counterparts. In addition, Parker's insight is to challenge the conventional wisdom that entrepreneurs are overly optimistic.⁴⁰ Rather, it may be the lower degree of risk aversion that leads them to start a new business when more risk-averse individuals would abstain.

Empirical tests of the model of income or entrepreneurial choice have focused on personal characteristics with respect to labor market conditions. For example, using U.S. data and a sample of about 4000 white males, Evans and Leighton linked personal characteristics, such as education, experience, age, and employment status to the decision to take on entrepreneurial risk and start a new business.⁴¹ Other studies, also using U.S. data, such as those by Bates and Blanchflower and Meyer, have emphasized human capital in the income choice.^{42, 43}

To summarize, when the decision to start a new business is thought of as the choice between employment options characterized by certain and uncertain returns, entrepreneurial behaviour may be viewed as being inherently risky since, by choosing to pursue a perceived opportunity, the entrepreneur voluntarily chooses to operate in an environment characterized by both risk and uncertainty.

ASYMMETRICAL INFORMATION AND ENTREPRENEURIAL BEHAVIOR

Entrepreneurs face many sources of risk, many of which are confounded in the literature and some of which are nonunique to the entrepreneurial process. Here we will attempt to identify and clarify some of these sources and their particular impact on entrepreneurial behavior. The main reason why entrepreneurs are exposed to risks emerge from asymmetrical information. The size and newness of entrepreneurial ventures limit significantly what economic agents know about entrepreneurs and their ability to assess properly the risks associated with each of them. As a result, everything else being the same, entrepreneurial behavior tends to be penalized more heavily than other business behaviors by the existence of such asymmetries. Among several possible examples of such exposure are financing and portfolio risks.

Financial Risks

As Barney has pointed out, access to resources is critical to a firm's competitiveness.⁴⁴ One of the most important resources to start a new firm is financing. The inability to have access to financing options can constrain entrepreneurs' ability to start or grow a new business, thus finance ranks among the most crucial resources constraining entrepreneurial performance. Stiglitz and Weiss have pointed out that, unlike most markets, the market for credit is exceptional because the price of the good (the rate of interest) is not necessarily at a level that clears the market.⁴⁵ That is, at a point where supply equals demand and the market is in equilibrium. They attribute this to the fact that interest rates influence not only the demand for financial capital but also the risk inherent in different classes of borrowers. As the rate of interest rises, so does the riskiness of borrowers, leading the suppliers of financial capital to rationally decide to limit the quantity of loans they make at any particular interest rate. The amount of information available about an enterprise seeking financing is also generally not neutral with respect to size. As Petersen and Rajan observe, small and young businesses are most likely to face this kind of credit rationing, because less information is available about them and, as a result, they are perceived as being riskier than their larger counterparts.⁴⁶ Most potential lenders have little information on the managerial capabilities or investment opportunities of such businesses and are unlikely to be able to screen out poor credit risks or to have control over a borrower's investments. Such information differentials create asymmetrical information problems that may have particularly serious consequences for entrepreneurs.⁴⁷ The risk that lenders perceive in financing the operations of a nascent entrepreneur invariably has an impact on their willingness to extend credit. For example, in their interviews of randomly selected individuals, Blanchflower and Oswald found that many of those who were not self-employed

claimed that the primary reason they were not self-employed was a shortage of financial capital.⁴⁸

It is clear that even if an individual correctly perceives an entrepreneurial opportunity, she may still be constrained from pursuing that opportunity if there is a lack of capital, collateral or access to capital markets. The issue of collateral is particularly binding for entrepreneurs and, among them, especially in the case of high-technology entrepreneurs whose firms' assets are predominantly intangible, such as ideas, copyrights, licenses or patents and thus not conducive to collateral-based lending. Further, because of the relatively complicated nature of many new technologies and innovations, both bankers and the capital markets will have more than the usual asymmetrical information problems in assessing the risk of such projects. As Hart and Moore put it, the threat of default is high for the investors, as they cannot prevent an entrepreneur from withdrawing their human capital from a funded project.⁴⁹

Alternatively, De Meza and Southey argue that the often-repeated claim that entrepreneurs have poor access to capital can be explained by a tendency for those who are excessively optimistic to dominate new entrants, while banks and financiers are relatively well informed and are efficient processors of information.⁵⁰ They conclude that the tendency to unrealistic optimism on the part of entrepreneurs leads to excess entry and maximum use of self-financing by a self-selected group of risk-lovers. Hence banks should be applauded for stemming the rush for capital that would otherwise just be wasted. In a related study, Hillier finds evidence that entrepreneurs are biased in their perceptions of both risks and opportunities.⁵¹ If this is true, it is a serious problem as contrary to popular belief; small businesses use about 50 percent debt financing (the same as large firms), and even pre-IPO firms average about 33 percent debt according to Berger and Udell.⁵²

Since debt is a vital form of financing for entrepreneurs, any differences between borrower and lender perceptions of risk will lead to inefficient credit markets. If lenders are unable to identify the quality or risk associated with particular borrowers, Jaffe and Russell show that credit rationing will occur.⁵³ This phenomenon is analogous to the well-known lemons argument advanced by Akerlof according to whom the existence of asymmetrical information prevents the suppliers of capital from engaging in price discrimination between riskier and less risky borrowers.⁵⁴

Business and Other Related Risks

In addition to the employment choice model, the common sentiment that entrepreneurial behavior is inherently risky can be the outcome of exposure to general business risks. Although to a large degree all firms face business risk, small businesses are likely to be more sensitive to it and suffer from extreme outcomes. In fact, a plethora of studies spanning a broad spectrum of time periods, country contexts, and industries have resulted in the stylized fact that the likelihood of

failure is significantly greater for new businesses.⁵⁵ This evidence supports the view that entrepreneurial start-ups are inherently riskier than their established incumbent counterparts. For example, the chance that a new business may be unable to cover its operating costs or sustain its revenues is more likely to result in failure for smaller firms. It is important to notice that this is not the same as saying that unprofitable firms will fail. In fact, even profitable firms can fail due to uneven cash flows or liquidity constraints. Market risks are also a potential risk and include the possibility that the value of an investment or business will decline due to market factors independent of the entrepreneur's decisions. Business cycles and natural disasters, adverse regulatory environments (unexpected legal, environmental, or institutional changes) can all lead to significantly altered returns on investment for the entrepreneur. Macroeconomic and international fluctuations further add to the inherent risk of conducting business for the entrepreneur through such factors as purchasing power risk, tax regime risk, and exchange rate risk. Because of their size and lack of diversification, smaller and newer firms are more likely to be sensitive to this type of risk.

Riskiness of Return on an Individual Firm, Project, or Asset

Economic theory suggests that if risk is measurable (i.e., not related to uncertainties where probabilities are unknown) then we can measure it in statistical terms as the variation in returns associated with a particular investment project or asset. For the entrepreneurial firm the standard deviation of performance is expected to be higher than for established incumbent firms. In addition, since entrepreneurial start-ups typically emerge from a single idea or project, many entrepreneurs may be unable to diversify beyond their core focus across multiple projects as larger firms do. As a result, by being constrained to choose only one project, the business investment of entrepreneurs are inherently riskier than a portfolio of projects.⁵⁶

In summary, asymmetrical information creates principal-agent problems in credit allocation, which, when credit markets do not clear, penalize smaller and newer businesses more than their larger counterparts, every thing else being the same. Size and the liability of newness create similar problems for entrepreneurs also with respect to portfolio diversification and all other standard business risks. In the economics literature, these are some of the factors behind the standard characterization of entrepreneurial behavior as being inherently risky.

ENTREPRENEURS' RISK PREFERENCES

In economics, risk aversion is a concept with a very precise meaning. For example, the relative risks between two financial options is usually measured as the variation in outcomes or returns, which includes the probability distribution of the associated outcomes in performance, the standard deviation about the

expected value of performance, and the coefficient of variation that is a measure of relative dispersion in the performance outcomes. When considering two alternative investments, an individual will consider the risk and return trade-off using the three measures. If one asset carries a higher expected return and a lower variance, that asset will be the preferred investment of rational individuals. However in the event that the asset with the highest returns also has the highest variation in risk and return, the risk preferences of the individual need to be considered in order to predict what she will select.

Basically, risk aversion refers to the individuals' tendency to refuse to accept fair games. The preferences of risk-averse individuals are described by utility functions with diminishing marginal utility of wealth. In contrast, the preferences of risk-loving individuals are described by utility functions with increasing marginal utility of wealth.

In Figure 4.1, the risk-averse individual is depicted as actually paying a premium (in the form of reduced expected returns) to reduce risks from X_2 to X_1 . The risk-lover, on the other hand, is willing to pay a premium to face this risk/opportunity, while the risk indifferent individual cares only about the expected value and is not influenced by riskiness. Thus, risk lovers may be individuals who gamble for the thrill of gambling regardless of payoffs. This is clearly not the case for entrepreneurs who, in fact, exhibit behaviors that are consistent with risk aversion but whose degree of risk aversion may be, perhaps, lower than that of nonentrepreneurs, everything else being the same.

Assumptions about entrepreneurial risk preferences, however, vary between literatures, studies, and disciplines. For example the financial literature generally assumes that owners/managers are risk averse or risk neutral, while some

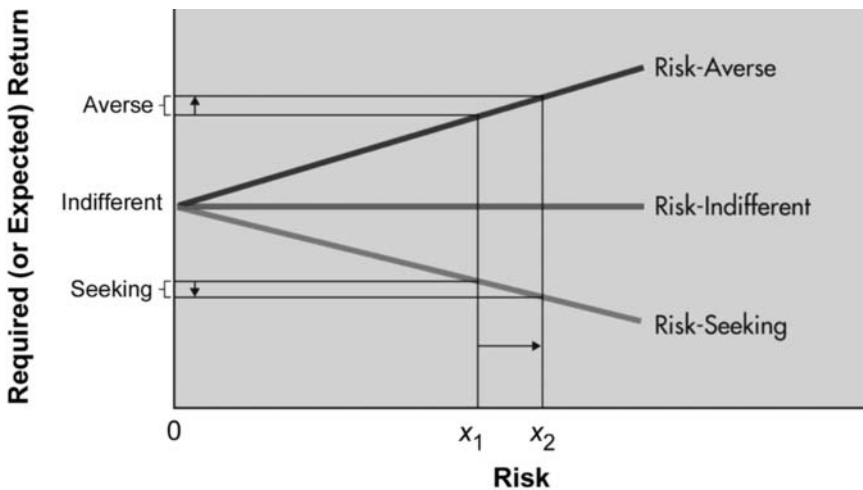


Figure 4.1. Individual risk preferences.

entrepreneurship studies either implicitly or explicitly assume entrepreneurs to be risk lovers. In fact, especially in the management literature, entrepreneurs are often characterized as risk-loving individuals in spite of the fact that there is little empirical evidence to support this claim.

We believe the role of risk attitudes on entrepreneurial behavior to be an important question for empirical researchers to address. Many economists, including Knight and Kihlstrom and Laffont have argued that less risk-averse individuals are those that become entrepreneurs, and that those with greater wealth may also be less risk-averse.^{57, 58} Unfortunately, the potential dependence of risk attitudes on wealth makes it difficult to separate out the entrepreneur's greater willingness to take risks. This means that, in empirically examining risk attitudes, a particular challenge lies in the ability to separate out potentially confounded effects. For example, in order to determine whether an individual is truly risk-loving, one must be able to separate risk attitudes from other effects that are positively correlated with risk-loving behavior, such as lack of wealth. The literature has in fact many related characterizations of the entrepreneur, which need to be measured separately, including claims that entrepreneurs are biased in their perceptions of both risks and opportunities, optimistic, or overly confident.⁵⁹ We suggest that a promising direction for empirical research lies in the examination and potential validation of theoretical assumptions about the risk attitude of entrepreneurs through the use of experimental methods.

Experimental methods are an obvious choice as they have been used for decades to elicit risk preferences from individuals, such as binary choices over lotteries or valuations of goods. Such methods are in many ways also ideal for studying expected utility theory, for marketing exercises, or for evaluating hypothetical bias in survey instruments. In economics, experiments have been developed mainly within the relatively new field of behavioral economics. In traditional neoclassical economic theory, it was assumed that decision makers, given their knowledge of utilities, alternatives, and outcomes, can calculate which alternative yields the greatest personal utility. To complement this view, behavioral economics is a combination of psychology and economics that investigates what happens when decision makers display limitations and complications and are, as a result, not necessarily able to select their best options. In other words, behavioral economics uses rational choice models that take into account the cognitive limitations of both knowledge and learning ability. Because of its nature, entrepreneurship lends itself well to a behavioral economics approach and to the use of experiments.

Clearly, how much the methods of experimental economics can contribute to our understanding of entrepreneurs remains to be explored. Recent studies, however, suggest that the use of experimental methods can now be viewed as complementary to the use of econometric methods with naturally occurring data. Surveys of entrepreneurial research can be found in Acs and Audretsch, and for experimental economics in Davis and Holt, and Camerer.⁶⁰⁻⁶² Gifford also underscores the need for more research in this area noting that previous

explanations of entrepreneurial behavior based on risk aversion are inherently flawed by the fact that we could not observe or explain risk aversion.⁶³ She further explains that the primary difficulty with the risk-preference approach is that risk aversion cannot be observed separate from other influences on choice. Recent research using experimental methods suggests that now we can.

Elston, Harrison, and Rutstrom, for example, have performed field experiments on high-technology entrepreneurs in order to directly elicit and measure risk preferences.⁶⁴ They found evidence that entrepreneurs are not risk lovers, as many claim. In fact the entrepreneurs in their study were generally found to be risk neutral or risk averse, just like most people. However they did find that they were less risk averse than nonentrepreneurs in the study. These results support a conclusion already found in such studies as Van Praag et al. and Parker.^{65, 66} Interestingly, they also found evidence that full-time entrepreneurs are significantly less risk averse than others, and in particular, much less risk averse than part-time entrepreneurs. This suggests the existence of more than one type of entrepreneur and that those types may be distinguished in terms of risk preferences. This finding also supports Parker's conclusion that it is precisely the lower degree of risk aversion that leads entrepreneurs to start a new business when more risk-averse individuals would abstain.⁶⁷

An additional important finding of their study is that even when entrepreneurs are risk neutral or risk loving, they do not necessarily suffer from judgmental error associated with excessive optimism. This is important because it provides evidence to refute the oft-repeated claim that the reason why entrepreneurs have poor access to capital is because individuals who are excessively optimistic dominate among new entrants.⁶⁸ This result calls into question the legitimacy of credit rationing based on the lenders' perception that entrepreneurs are biased in their perceptions of risks and opportunities.⁶⁹

Kahneman and Tversky also provide evidence that the individual's attitudes toward risk depend on other factors such as the status quo and on whether outcomes generate gains or losses.⁷⁰ In a related study, Blanchflower and Oswald have found that the probability of self-employment depends on whether the individual ever received an inheritance or gift.⁷¹ Again, since wealth eliminates financial barriers to innovative activity but also reduces risk, we need to separate out these confounding effects to understand the underlying relationship between risk propensity and entrepreneurial behavior.

CONCLUSION

Many sources of risk and uncertainty face entrepreneurs, and part of what distinguishes entrepreneurs from nonentrepreneurs is how decisions are made in the face of risk and uncertainty which, in turn, is influenced by the entrepreneur's own risk preferences. Perhaps it is a truism that, in the absence of risk and uncertainty, there would be no entrepreneurship. In fact, this chapter has

suggested that risk, as well as uncertainty, is at the heart of the entrepreneurial process.

The entrepreneurship literature suggests that first the entrepreneur observes an opportunity, then decides to undertake the process of exploiting the opportunity, and that the process inherently carries some degree of risk. Entrepreneurship researchers have argued that it is precisely this willingness to take risks, which separates the entrepreneur from nonentrepreneurs. Elston et al., however, provide some empirical evidence suggesting that entrepreneurs are not risk lovers (those willing to give up some of the expected value of return in order to take a risk) as sometimes inappropriately claimed, but are in fact just less risk-averse individuals than nonentrepreneurs.⁷² This important distinction between risk preferences suggests that entrepreneurs may not only have different perceptions of risk but also different risk preferences, both of which have an impact on the decision to start a new business. In contrast, Schumpeter has identified uncertainty as giving rise to entrepreneurial opportunities.⁷³ Specifically, he suggests that it is the inability of incumbent organizations to make decisions when confronted with uncertainty that gives rise to the entrepreneurial opportunity. We suggest that entrepreneurs often face business alternatives for which the risks are both unknowable and undiversifiable.

In order to better unravel the relationships between risk and uncertainty, on one hand, and the entrepreneurial decision, on the other hand, we note that experiments and field experimentation may prove to be enlightening. Only by controlling for a large array of individual-specific characteristics and contextual situations can the exact nature of the relationship between risk and entrepreneurial behavior be unraveled.

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5

Entrepreneurship as an Occupational Choice

Simon C. Parker

$$p^* = g(\pi - w, Z)$$

Economists have a distinctive perspective on entrepreneurship, commonly viewing it in terms of an occupational choice between a nonentrepreneurial job (e.g., paid employment) and an entrepreneurial job (commonly involving some form of self-employment). For example, the *Journal of Economic Literature* JEL code J2 includes two subsections relating to self-employment and occupational choice. J2 itself falls under the umbrella of labor economics, which is the field of specialization of most (though not all) economists who have contributed to the entrepreneurship literature. This is distinct from contributions in business and management, which have their own JEL code M13 for entrepreneurship under “Business Administration.”¹

This chapter starts with a simple equation. This equation will help answer two fundamental questions in entrepreneurship research: Who becomes an entrepreneur and why? What are the influences of personal characteristics and environmental factors on the decision to become an entrepreneur? This chapter will discuss some theoretical and empirical insights uncovered by researchers in attempts to answer these questions, drawn mainly on economics with insights from psychology and sociology.

The chapter is organized around the equation, in which π denotes profits available to an individual from entrepreneurship, and w denotes the returns individuals can obtain outside entrepreneurship in, say, paid employment. Z denotes a variable (or set of variables) affecting an individual’s utility derived from entrepreneurship and p^* is the probability that an individual chooses entrepreneurship. Here g is an increasing function of relative returns in

entrepreneurship, $\pi - w$. The derivative of g with respect to Z depends on what Z is. For example, if Z is past experience of entrepreneurship, then we might expect $\partial g/\partial Z > 0$.

This equation, which I will call the *fundamental equation of occupational choice*, is a convenient platform from which to analyze entrepreneurship. It can be regarded as the reduced form corresponding to the probability that an individual's utility derived from entrepreneurship exceeds the utility from not being an entrepreneur.² It is expressed in terms of a probability rather than an all-or-nothing choice to reflect the existence of two distinct types of uncertainty. One is the entrepreneur's uncertainty about which occupation he or she will prefer. The other is the researcher's uncertainty about what occupation given individuals will choose. The entrepreneur's uncertainty arises because the entrepreneur cannot perfectly predict what will happen in the future. Researchers' uncertainty derives from their inability to fully characterize individuals' choice sets and so predict perfectly their future choices.

The first and second sections of this chapter discuss the role of the first argument of the fundamental equation in the context of economic models of occupational choice. The first section focuses on the implications of heterogeneous entrepreneurial ability, while the second section analyzes the implications of heterogeneous aversion to risk. The third section broadens the discussion by considering contributions from other disciplines, notably psychology and sociology. Broadly speaking, contributions from these disciplines are encapsulated in the second argument, Z , of the fundamental equation. The fourth section briefly reviews empirical results obtained by estimating the fundamental equation.

HETEROGENEOUS ENTREPRENEURIAL ABILITY

Suppose that individuals have some entrepreneurial ability x , which is unequally distributed in the population. We can think of x as a general index of entrepreneurial aptitude or flair. It is most conveniently represented by a scalar variable, whose values are heterogeneous and distributed in some known fashion across the workforce. As an explicitly productive characteristic, x is distinct from Z in the fundamental equation of occupational choice. For example, x might capture one's innate ability to manage, whereas Z includes more directly measurable characteristics like years of experience, or some other measure of human capital.

Two alternative assumptions about x are made in the literature. One assumption is that greater x increases entrepreneurs' profits while leaving w unchanged: then $\pi = \pi(x)$, with w as constant. The alternative assumption is that x increases wages too: that is, $\pi = \pi(x)$ and $w = w(x)$, where both functions have positive first derivatives with respect to x . Both cases leave aside explicit treatment

of the second argument, Z , of the fundamental equation. I now consider each assumption in turn.

$$\pi = \pi(x) \text{ with } w \text{ constant}$$

In 1978, in a pioneering article, Nobel Prize winner Robert Lucas posed the following three questions:³

- Who becomes an entrepreneur and what kind of firms do they run?
- What is the size distribution of entrepreneurial ventures?
- What happens to the number of entrepreneurs as economies accumulate capital?

Lucas assumed that entrepreneurs produce more, the greater is their ability and the greater their use of factor inputs, namely capital and labor. Ability scales up a production function exhibiting diminishing returns to capital and labor. Markets are competitive and clear in all periods; there is no uncertainty. Lucas obtained the following theoretical answers to the aforementioned questions.

Individuals with ability greater than some cut-off level x^* choose to become entrepreneurs and employ the less able (those with $x < x^*$) as workers. The most able run the largest firms, because unlike wage work, operating a firm enables them to spread their ability over a larger scale and so reap the greatest returns. The cutoff ability x^* identifies a *marginal entrepreneur* whose ability is such that they are indifferent between becoming an entrepreneur and becoming a worker. (Because Lucas's model is deterministic, we can write $p^* = g[\pi(x) - w, Z] = 1$ for $x \geq x^*$, and $p^* = 0$ for $x < x^*$.) The concept of the marginal entrepreneur is a key one in the economics of entrepreneurship, and is particularly useful because it provides a clear dividing line between who does and does not enter entrepreneurship. By having different characteristics to those who choose paid employment, entrepreneurs are amenable to theoretical analysis that often proves revealing in other ways. In this context, it enables the remaining two questions to be answered. In particular, Lucas finds that firms are of unequal sizes, reflecting the unequal distribution of innate entrepreneurial ability. And if the elasticity of technical substitution—an index of the substitutability of labor and capital in entrepreneurs' production functions—is less than unity (as independent evidence suggests), then average firm size increases, and the total number of entrepreneurs declines, as economies accumulate capital and grow. This last finding is especially noteworthy. Intuitively, this means that extra capital increases entrepreneurs' incentives to hire labor to use in production, driving up the wage and pulling the lowest ability entrepreneurs into paid employment. Lucas gives the example of how greater capital availability has replaced small independent owner-managed restaurants with franchises of large national restaurant chains.

The Lucas model has been enormously influential, partly by clarifying our understanding of the economic causes and consequences of entrepreneurship, and partly by introducing the concept of the marginal entrepreneur, which a large body of subsequent research has taken up. However, the Lucas model has three principal theoretical limitations, which have also helped spur subsequent research. One is its neglect of innovation. Another is its silence about the deep causes and facets of entrepreneurial ability, x . A third is that it assumes away uncertainty. In an early follow-up paper designed to address the first of these limitations, Calvo and Wellisz defined x specifically as an individual's ability to learn about and exploit productivity-enhancing technological information.⁴ Calvo and Wellisz showed that the faster the growth in the stock of knowledge, the abler is the marginal entrepreneur and the larger is the average firm size. Just as in Lucas, the number of entrepreneurs is predicted to decline as economies grow. However, recent evidence on this issue does not support this contention, so more work remains to be done here.⁵ Currently, work is underway to address the second objection, with Guiso and Schivardi bringing data to assess whether entrepreneurial ability is innate or can be learned from other entrepreneurs.⁶ Their findings suggest that ability can be learned, which potentially opens up a whole array of ways that government might intervene to promote sustainable and successful entrepreneurship.

Recent researchers have extended Lucas's concept of a marginal entrepreneur and used it to explore various topics in applications as diverse as credit markets, trade, and economic development (among others). As in Lucas, many of these models predict that the ablest individuals select into entrepreneurship: see Blau, Bond, and Lloyd-Ellis and Bernhardt.⁷⁻⁹ For example, Lloyd-Ellis and Bernhardt showed that the path of economic development depends on the distribution, as well as the level, of entrepreneurial ability, with more skewed distributions of ability resulting in less favorable development patterns. Other research shows that economic development is impeded when borrowing constraints enable only the wealthiest, rather than the most able, to become entrepreneurs.^{10, 11}

The asymmetry of information underlying borrowing constraints may also cause free occupational choice to be inefficient.¹²⁻¹⁴ For example, if lenders cannot discriminate between entrepreneurs whose heterogeneous ability causes their proposed investment projects to differ in terms of their probability of success, then the result is excessive entry into entrepreneurship. In the words of de Meza and Webb, there is "too much investment."¹⁵ The reason is that able entrepreneurs cross-subsidize less able individuals. This gives the latter incentives to turn entrepreneur that they would not possess if information were complete.

Inefficient occupational choice can also arise when there are multiple industrial sectors, in which each sector has a production function that exhibits diminishing marginal returns, and where technology evolves according to best practice within each sector. Murphy et al. showed that the ablest entrepreneurs will rationally choose to bunch together in the most technologically advanced sector, as this way they can spread their ability over the greatest scale.¹⁶ But these

choices are suboptimal. It would be in society's best interests for the best entrepreneurs to be spread across the sectors. That way, they would optimize best practice across both sectors and so maximize the economy's total output.

Other researchers have emphasized the multidimensional nature of ability. For example, Lazear extended the Lucas occupational choice model by introducing two different skills: x_1 and x_2 .¹⁷ Lazear's theory proposes that specialists earn $\max(x_1, x_2)$ while entrepreneurs earn $\lambda \min(x_1, x_2)$, where $\lambda > 1$ is the market value of entrepreneurial talent. The basic idea here is that employees are rewarded for the ability in which they are most endowed, and hence specialize in, whereas entrepreneurs' returns are only as good as the weakest link in the chain of activities which makes up running a business. By inspection of these two payoffs, the more similar are x_1 and x_2 , the likelier the individual is to be an entrepreneur. This implies that entrepreneurs have balanced skill sets, that is, entrepreneurs are jacks-of-all-trades." Some independent evidence supports this hypothesis: see, for example, Wagner.¹⁸

$$\pi = \pi(x) \text{ and } w = w(x)$$

Some researchers have enriched the occupational choice model by allowing ability to also affect returns in the other (nonentrepreneurship) occupation. If w is decreasing in x , Lucas's prediction that the ablest individuals become entrepreneurs remains intact.¹⁹ But if w is an increasing function of x , then either the least able or most able types can become entrepreneurs, depending on the relative slopes of the $\pi(x)$ and $w(x)$ functions. For example, if entrepreneurial profits exceed wages at very low and very high levels of ability, then we would expect entrepreneurs to be drawn from the two tails of the ability distribution. And, if there are multiple crossings of the $\pi(x)$ and $w(x)$ functions, there may be multiple sources of inefficiency in the credit market.²⁰ The idea here is that the people applying for credit to start up a business may no longer have uniformly high levels of ability, as predicted by the Lucas model described earlier; instead, they may have low levels of ability (which is nevertheless rewarded more in entrepreneurship than in paid employment). Parker's model generalizes de Meza and Webb's model of the credit market (which assumed a fixed outside option of safe investment) and implies that both overinvestment and underinvestment may arise simultaneously. That is, free markets may contain both too many of the "wrong" kind of entrepreneurs, and too few of the "right" kind.

An interesting case arises when returns increase in ability at a faster rate in entrepreneurship than in paid employment. That is, $\pi'(x) > w'(x)$ for all x : The ablest individuals once again optimally choose entrepreneurship. This case was considered explicitly by Frank Knight:

It may well be true that able leaders are in general also more competent workers, or operatives, but the gain in superior direction is so much more important than that from superior concrete performance that undoubtedly the largest single source

of the increased efficiency through organization results from having work planned and directed by the exceptionally capable individuals, while the mass of the people follow instructions.²¹

Laussel and Le Breton studied the case where $\pi'(x) > w'(x)$.²² Entrepreneurs know their own ability, but cannot discern that of their workers. So they must offer a pooled wage to their employees. But this gives an extra incentive for able individuals to choose entrepreneurship, as the ablest people know they do worst under a pooled wage that reflects average (rather than their own high) productivity. This prompts excessive entry into entrepreneurship from the standpoint of the social good, because occupational choices are partly being made for a socially unproductive, but privately rewarding, reason (i.e., to help the able separate themselves from less able people). Laussel and Le Breton suggest that this might have implications for transition or developing economies, which lack institutions for screening workers efficiently, and which might therefore be burdened with too many (rather than too few) small-scale enterprises.

HETEROGENEOUS RISK AVERSION

Consider again the fundamental equation of occupational choice. Now π is uncertain, so the function $g(\cdot)$ includes an expectation operator, defined over the feasible range of values of π . And Z includes a measure of aversion to risk, which is now allowed to vary across individuals. If returns in entrepreneurship are uncertain, who will select into it? This was one of three questions first posed formally by Kihlstrom and Laffont:

- Who becomes an entrepreneur and what kind of firms do they run?
- Are there differences between economies whose citizens exhibit systematic differences in risk aversion?
- What are the implications of risk aversion for the efficiency of free occupational choice?²³

Kihlstrom and Laffont analyzed a general equilibrium occupational choice model and showed that the marginal entrepreneur is identified with an intermediate degree of risk aversion. Their analysis generated the following answers to the earlier questions:

- Less risk-averse individuals become entrepreneurs, and the least risk averse end up running the largest firms.
- Economies in which individuals are more risk averse have lower living standards than economies in which individuals are less risk averse. The reason is that more risk-averse societies have fewer entrepreneurs, each of which hires less labor. So average wages are lower.

- In the absence of risk-sharing mechanisms, free occupational choice neither maximizes welfare nor efficiency. There is too much risk taking from an individual standpoint. Also, insufficient production is undertaken by the most risk-averse entrepreneurs, while the least risk-averse entrepreneurs produce too much.

Once again, free occupational choice is inefficient, as social welfare would be higher if entrepreneurs could insure their risks. In contrast to the inefficiency of occupational choice under asymmetrical information discussed in the previous section the cause of inefficiency here is insufficient risk sharing. In Kihlstrom and Laffont's model, the only way to allocate risk is through occupational choice; entrepreneurs emerge as those able and willing to insure workers in return for the right to residual profits. But entrepreneurs' welfare would be higher if they could share risk. A constructive suggestion for achieving this is to introduce a stock market. In practice, however, few entrepreneurs can afford a stock market listing to sell equity, even if they could find investors willing to buy it. Nevertheless, risk-sharing mechanisms are preferable to tariffs designed to protect domestic entrepreneurs from foreign competitors, for standard free-trade reasons.²⁴

In fact, Kihlstrom and Laffont's claim of insufficient risk sharing in entrepreneurship is weakened when their model is generalized. If entrepreneurs must supply costly effort to generate output, risk bearing can be necessary to encourage entrepreneurs to supply efficient effort levels.^{25, 26} Indeed, Newman showed that if entrepreneurs can obtain partial insurance, some of Kihlstrom and Laffont's predictions change dramatically and counterintuitively: Optimal firm sizes become independent of wealth, and workers become richer than entrepreneurs.²⁷ Arguably, this casts doubt on the robustness of Kihlstrom and Laffont's occupational choice model. The evidence relating to the empirical veracity of the Kihlstrom–Laffont model is also mixed. Some authors have claimed that risk aversion significantly reduces the probability that individuals become entrepreneurs.^{28–30} But others have failed to find supportive evidence.^{31, 32}

Overall, despite the fact that the jury is still out on the Kihlstrom and Laffont model, it has together with the Lucas model emerged as one of the central building blocks of economic analysis of entrepreneurship and occupational choice. The idea of occupational selection on the basis of risk attitudes is simple and attractive, which has motivated many subsequent theoretical and empirical research papers.^{33–36} The insight that, all else being equal, less risk-averse individuals are more likely to consider entering risky entrepreneurship than those who are very risk averse accords with casual intuition and is a view that is often articulated informally. The important point is that formal analysis of this issue has generated many additional insights and opened up areas where further research is needed. This includes a thorough-going analysis of occupational choice under risk aversion where incentive compatibility (i.e., moral hazard) issues are also pertinent. It seems certain that further research on entrepreneurial occupational choice will continue to draw inspiration from Kihlstrom and Laffont.

INSIGHTS FROM PSYCHOLOGY AND OTHER DISCIPLINES

In this section, I discuss contributions from two different disciplines, psychology and sociology.

Psychology

Risk aversion is just one *Z* factor that psychologists believe bears on who becomes an entrepreneur. In their review of the role of psychological factors in entrepreneurship research, Amit et al. identified several others that have attracted substantial research effort, including need for achievement, internal locus of control, and tolerance of ambiguity.³⁷ This list is by no means exhaustive. Other traits that may predispose individuals to entrepreneurship include overoptimism, aggressive behavior, and rebelliousness. The idea behind trait research is that individuals who possess certain key traits in abundance are more likely to be entrepreneurs, all else equal.

It is possible to appeal to classic authors in entrepreneurship for a justification of this view. For example, Schumpeter was an early proponent of psychological, rather than economic, rewards providing the motivation for entrepreneurs: he referred to the

will to found a private kingdom, . . . , to conquer: the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself. . . . Finally there is the joy of creating, of getting things done, or simply of exercising one's energy and ingenuity.³⁸

Psychological research on entrepreneurship has courted controversy over the last few decades. Typical of studies conducted in the 1980s was the article by Begley and Boyd.³⁹ These authors, like many others at that time, compared mean psychological test scores of entrepreneurs with those of nonentrepreneurs. They identified characteristics, such as need for achievement, risk-taking propensity and tolerance of ambiguity that were significantly higher among small-business founders than among small-business managers. However, by the end of the 1980s, pair-wise comparisons of the Begley–Boyd type encountered increasing criticism. Gartner argued that it is not useful to examine entrepreneurship in terms of personality.⁴⁰ Instead, the behaviors involved in creating new ventures, rather than the personality of founders, is fundamental to entrepreneurship. Other critics pointed out that some nonentrepreneurs, such as company CEOs, possess similar psychological characteristics to entrepreneurs; that some of the earlier findings were based on small and unrepresentative samples; and that being unobservable, some characteristics are impossible to separate *ex post* from luck and other extraneous factors.⁴¹ However, there has been a rejoinder to this challenge; and some entrepreneurship researchers continue to incorporate controls

for psychological characteristics in empirical models of occupational choice (see below).^{42, 43}

Most recent psychological contributions to entrepreneurship have moved away from personality traits, focusing more on entrepreneurial cognition. For example, there is growing interest in entrepreneurial overconfidence and overoptimism, which appears to be especially pronounced among entrepreneurs.^{44–46} Cognitive biases can be incorporated into the fundamental equation of occupational choice by specifying $g(.)$ to overweight the risky entrepreneurial option. Examples of maximizing choices being made in the presence of overoptimism are relatively straightforward to handle if this approach is taken; see, for example, de Meza and Southey.⁴⁷

Finally, economic historians have argued that American entrepreneurs have historically been responsive to incentives, directing their attention to profitable innovations and satiation of demand.⁴⁸ This suggests that it is probably appropriate to include economic motives in the fundamental equation together with nonpecuniary factors. That of course is achieved by the fundamental equation of occupational choice given at the start of this chapter, in the form of the argument $\pi - w$. Hence economic motives need to be taken into account in entrepreneurship research, a point that sometimes appears to be overlooked by noneconomists.

Sociology

Sociologists offer another approach to exploring occupational choice. The essence of this approach in entrepreneurship to date is the importance of social interactions and networks, and the observation that entrepreneurship is as much a social as an economic process. Without claiming to be exhaustive, or even representative of this part of the literature, I will focus on just two issues in the sociology of occupational choice: social networks and the transmission of entrepreneurial values through families.

According to Davidsson and Honig, “social capital refers to the ability of actors to extract benefits from their social structures, networks and relationships.”⁴⁹ Social networks can involve the extended family, communities and organizational relationships. Networks help facilitate discovery of new opportunities, as well as the identification and exploitation of resources.⁵⁰ The productivity of social capital derives from trust, through social bonding of agents, and from bridging external networks to access resources. Strong ties come from close relationships such as one’s direct family or close friends, while weak ties are loose relationships that can transmit information efficiently, for example, membership of a business network such as a trade association or a local chamber of commerce.

Aldrich argues that personal networks enhance entrepreneurial confidence by providing advice, support, and examples.⁵¹ Kim and Aldrich point out that forces of homophily (i.e., the tendency for “birds of a feather to flock together”) mean

that many people, including entrepreneurs, form social networks with people of similar types.⁵² While this facilitates trust and knowledge sharing, Kim and Aldrich argue that entrepreneurs should also cultivate diverse networks, meeting and staying in contact with people that would not normally be part of their social group. That way, they can access new information and opportunities that would otherwise not be revealed to them. An implication of Kim and Aldrich's work is that a mixture of diverse and local ties is more likely to promote new venture creation and the growth of enterprises. There does appear to be case study evidence that networking, trust and cooperation facilitate exploitation of new opportunities.^{53, 54}

The principal way that these insights have been incorporated into multivariate analyses of entrepreneurship as an occupational choice is via *Z* variables that capture aspects of social capital that can be included in empirical models. Unlike psychology, where several *Z* variables spring readily to mind, sociologists have not yet agreed on any single unambiguous way to measure social capital. Various proxies have been used instead, some of which are based on memberships of local networks.

One strong tie that has been especially well researched is that of parents or other family members with business experience. Sociologists in particular have stressed the role of the family as a channel through which cultural values can be passed on to individuals. Hence entrepreneurial families can be expected to foster favorable attitudes to entrepreneurship in their offspring. The evidence points to strong intergenerational links between parents and children.^{55, 56} In these empirical studies, a dummy variable representing a parent's self-employment status serves as the *Z* variable in the offspring's occupational choice equation. It is striking that the strong and positive impact of this variable appears to be robust to the inclusion of other control variables in empirical models. Dunn and Holtz-Eakin identified two conduits through which intergenerational occupational choice operates.⁵⁷ Parental success in self-employment appears to be the key factor encouraging offspring to follow this route. While parental participation in self-employment is important, it is somewhat less influential. This suggests that parents primarily transfer managerial skills to their offspring, rather than mere familiarity with or a taste for entrepreneurship. Another possibility is that, to the extent that parental business wealth and nonbusiness wealth have large positive effects on the probability that an individual makes a transition to entrepreneurship, family finance may also be a means of overcoming borrowing constraints.

In addition, Davidsson and Honig reported that social capital in the form of having parents with business experience significantly increases the probability of being a nascent entrepreneur in Sweden.⁵⁸ Having close friends or neighbors in business has similar effects. There is also evidence that role model effects are important in transition economies. Djankov et al. reported that the proportion of parents, aunts, and uncles running a business was 42 percent among Russian entrepreneurs but only 20 percent among Russian nonentrepreneurs.⁵⁹ Also,

more than a quarter of Russian entrepreneurs claimed that having friends who were entrepreneurs influenced their decision to become one too.

Finally, it is worth pointing out that sociologists have also studied Z variables that embody characteristics of organizations as well as those of individuals. Thus Dobrev and Barnett, for example, claimed that founders and senior members of existing firms are more likely to found new firms than more lowly employees are.⁶⁰ They raise the intriguing possibility that serial entrepreneurship might reflect not personal characteristics, but inevitably recurring frustration with growing bureaucracy in entrepreneurs' own organizations.

To summarize, this section has discussed the relevance of a range of variables proposed for the second argument of the fundamental equation of occupational choice, from the perspectives of psychology and sociology. We have seen that additional factors that bear on entrepreneurship as an occupational choice involve personality traits, social capital, and family background factors, though the controversy over trait research continues and the emphasis in this literature seems to be shifting toward considerations of cognitive biases. However, it should be stressed that this is not an exhaustive list of factors that affect the occupational choice decision; others proposed by economists include human capital (e.g., age, experience, and education), unemployment, and wealth. A theoretical discussion of these factors would lengthen this chapter unacceptably; the reader can find discussions in Parker.⁶¹ Instead, we now turn to consider what the evidence has to say about the empirical determinants of entrepreneurship as an occupational choice.

EMPIRICAL MODELS AND RESULTS

This section reviews the major empirical methods currently used to estimate models of occupational choice based on the fundamental equation. The main findings are then summarized in the following section.

Current Empirical Methods

The fundamental equation is commonly estimated using binary choice models. In these models, $g(\cdot)$ is a link function that connects the binary choice of being or becoming an entrepreneur, p^* , to the explanatory variables $\pi - w$ and Z . If these variables are entered into the link function in an additively separable fashion, logit or probit link functions can be used to estimate the fundamental equation directly. Probit and logit methods are widely used in applied entrepreneurship research.⁶² In part this is because they are implemented on virtually all modern software packages. Researchers from a wide variety of disciplinary backgrounds have estimated them.

A practical complication is entailed by the presence of the relative income term. In cross-sections of sample data, individuals are typically observed in only

one occupation, so their potential income in the other occupation is not observed. The so-called structural probit model has been proposed to deal with this problem.⁶³ The structural probit model uses the characteristics of individuals to predict the earnings they would expect to receive in the other occupation, had they chosen to work there. These estimates are corrected for sample selection bias arising from the fact that occupations are not randomly chosen. Having observed actual incomes in one occupation and predicted incomes in the other, the researcher can estimate values of $\pi - w$ for every individual in the sample.

When panel data are available, researchers can ask more searching questions about occupational choice. For example, if individuals are observed switching into and out of entrepreneurship from paid employment, direct measures of incomes in both occupations can be calculated directly.⁶⁴ Also, panel data can control for the influence on occupational choices of unobserved characteristics, and inertia.⁶⁵

Even using cross-section data, the logit and probit approach can be extended in several interesting directions. I will mention just three. First, one can distinguish between factors affecting individuals' willingness to be an entrepreneur and factors affecting their opportunities. An individual is only observed to be an entrepreneur if he or she is both willing and has the requisite opportunity. The *bivariate probit model* can be used for this purpose. It also identifies the relative importance of willingness and opportunity processes, as well as the salient variables embodied in them.⁶⁶ Second, one might wish to analyze choices between more than two occupations, for example, between being an entrepreneur with employees, an entrepreneur without employees, or an employee. A *multinomial logit* or *multinomial probit model* can be used to estimate this kind of model.⁶⁷ Third, if spouses make interdependent occupational choices, the decision of one individual to be an entrepreneur depends on whether their spouse is an entrepreneur, and vice versa. A *simultaneous equation probit model* can be used to explore this issue.⁶⁸

Finally, time series data have also been used to analyze trends in occupational choices over time. At the aggregate level, one can track the evolution of entrepreneurship rates and attempt to uncover the determinants of temporal and spatial (e.g., national) differences in these rates. Methods of *cointegration analysis* are applicable in these circumstances: see Parker, Cowling and Mitchell, and Parker and Robson for examples.⁶⁹⁻⁷¹

Main Findings

This chapter commenced by reviewing theoretical studies that emphasized relative incomes as a determinant of entrepreneurial occupational choices. In fact, the evidence from structural probit models indicates that relative incomes are not very robustly related to the decision to be an entrepreneur. While some studies have reported significant effects from relative incomes, others have found no significant effects.⁷²⁻⁷⁵ Parker obtained insignificant effects using several

British data sets from various years, although there was some weak evidence that switchers into entrepreneurship were somewhat more sensitive to relative incomes.⁷⁶ It may be that longstanding entrepreneurs face considerable inertia and sunk costs, which deter them from switching occupation costlessly to exploit a (possibly temporary) relative income advantage in paid employment. Consistent with this view, evidence is accumulating that there is substantial state dependence in entrepreneurship.^{77, 78} For whatever reason, however, we must accept for now that relative incomes do not appear to play a decisive role in explaining cross-section entrepreneurship choice.

Taking these findings at face value, individuals might be choosing entrepreneurship for nonpecuniary (e.g., lifestyle) reasons; or they might be overoptimistic.⁷⁹ Perhaps the results in the previous paragraph should not be taken at face value, however, and merely reflect econometric problems with weak identification of components of the structural probit model. Another possible problem is that the studies cited earlier use self-employment as a proxy for entrepreneurship, which might be inappropriate. Further research is needed to dig deeper into this issue. There is also a policy imperative for doing so, given ongoing interest in how income taxes affect entrepreneurial choice.^{80–82}

A far larger number of studies have estimated a simple version of the fundamental equation without controlling for relative incomes. Many of these have been reviewed by Parker.⁸³ The key findings can be briefly summarized as follows. First, entrepreneurs tend to be significantly older, more experienced, and more likely to have a self-employed parent than employees are. There is, however, a limit to the benefits of age, as strong evidence suggests that the tendency to become an entrepreneur begins to tail off in one's late forties, and declines in one's fifties and sixties. Also, the nature of experience seems to matter. For example, previous self-employment experience appears to be strongly correlated with subsequent propensities to become self-employed, while previous employment experience is not.⁸⁴ This all suggests a role for human and social capital variables in the entrepreneurial occupational choice decision. Second, while many researchers have found that entrepreneurs tend to be better educated on average than nonentrepreneurs, the evidence on this issue is not clear-cut. For example, Parker summarizes the findings from fifty studies, which include education in their entrepreneurial choice logit/probit.⁸⁵ Half of the studies reported a significant positive impact of education on the propensity to be an entrepreneur, while the other half reported either insignificant or significantly negative effects. There could be a range of reasons why mixed effects for education have been found, including the likelihood that high levels of education are well rewarded outside entrepreneurship, especially in wage employment where specialization is more productive than in entrepreneurship.⁸⁶ Third, regarding race and gender, white Britons and white Americans are more likely to be entrepreneurs than their black or Latino compatriots are; while entrepreneurs of all ethnic groups are more likely to be male. The literature has not yet decided on whether these racial and gender differences reflect discrimination, the availability of role models, or

cultural factors. Fourth, a disproportionate number of entrepreneurs are married, and a disproportionate number of these are married to other entrepreneurs. Ongoing research by the author using simultaneous equation probit methods has suggested that the source of within-couple interdependent occupational choices may be knowledge spillovers.⁸⁷ Once these are taken into account, child rearing appears to play a much smaller role in explaining female entrepreneurship than some previous studies have suggested.⁸⁸

Second, evidence of the impact of psychological traits on the probability that the given types of individuals are entrepreneurs is mixed. For example, while Evans and Leighton and Schiller and Crewson claimed that individuals with a higher locus of control are more likely to become entrepreneurs, van Praag and van Ophem obtained contrary results.⁸⁹⁻⁹¹ The mixed findings may reflect the fact that having a high locus of control is not unique to entrepreneurs, since it has also been identified among successful business managers.^{92, 93}

Third, there is growing evidence that social capital helps to explain observed occupational choices of entrepreneurship. As noted earlier, social capital is hard to measure: The main proxies for it used in previous empirical work include membership in entrepreneur networks;⁹⁴ marital status;^{95, 96} and, in Jamaica, church attendance.⁹⁷ These variables have generally been found to increase the probability that individuals choose entrepreneurship—and also to enhance the performance of their enterprises.

Fourth, ongoing research points to three useful empirical distinctions when analyzing entrepreneurship as an occupational choice. One is that different variables affect the willingness to be an entrepreneur from the opportunity to be one. For example, according to van Praag and van Ophem, age increases the opportunity for individuals to become entrepreneurs, but decreases their willingness. A second useful distinction is between entrepreneurs who employ others (job creators) and those that work as sole traders.⁹⁸⁻¹⁰⁰ In this respect, multinomial logit and probit models are useful for teasing out the factors that affect one mode of entrepreneurship rather than another.¹⁰¹ Finally, time series econometric methods have proven useful for analyzing how the evolution of unemployment, the state of economic development, and taxes and benefits affect entrepreneurship at the aggregate level, over time, and across countries. According to Parker and Robson, the key determinants of aggregate variations in self-employment rates appear to be taxes and social security benefits. States with high taxes and generous welfare benefits have lower self-employment rates, all else equal.¹⁰²

CONCLUSION

In this chapter I proposed a simple equation, which I called the fundamental equation of occupational choice, as a useful way of organizing our thinking about the determinants of entrepreneurship. I have attempted to review several contributions from economics, psychology, and sociology, in an effort to present

a more rounded view of this phenomenon. The review and synthesis contained in this chapter highlighted several areas where our state of knowledge is pretty well advanced. But it is evident that there remain other areas where further research is needed.

One area where more research would be fruitful relates to linkages between labor markets, capital markets, attitudes, and institutions. There is some work on these issues, but much more needs to be done. For example, attitudes such as fear or stigma from failure may reflect, and be perpetuated by, draconian bankruptcy laws, which in turn lead to forms of financial intermediation, which hinder the development of risk capital markets and thereby new firm starts.¹⁰³ In a similar vein, Gromb and Scharfstein's study of entrepreneurship versus intrapreneurship—that is, the development of new firms within an existing firm—unites labor markets, capital markets, and internal firm organization.¹⁰⁴ Further work is needed to develop this research agenda. Also, internal labor markets, knowledge spillovers and factor markets all come together when one seeks to explain why many incumbents do not exploit new ideas within their organizations.¹⁰⁵ This addresses another fundamental question: Why do we need new firms at all? I foresee future research in which occupational choice models are combined with internal labor markets and the literature on innovation and knowledge spillovers in efforts to answer this question.¹⁰⁶ Overall, it seems likely that future research on entrepreneurship as an occupational choice will combine insights from many different areas, and will grow beyond the confines of labor economics, sociology, and psychology.

Elsewhere, I have proposed other areas where further research is needed. They include:

- Government regulation and its effects on entrepreneurship
- Discrimination as a blockage to free occupational choice, especially in credit markets
- Labor supply and participation in entrepreneurship, household production and leisure choices
- Learning, performance, and entrepreneurship
- Persistent differences in regional entrepreneurship rates
- The role of nonstandard forms of finance to circumvent bank borrowing constraints and to free up occupational choice¹⁰⁷

In addition, we need more research on the reasons why relative incomes do not matter as much as economic theory suggests they should. The role of psychology, especially cognitive biases, may be especially valuable here. At the same time, sociologists as well as economists are likely to continue developing models of networks, clusters, spillovers, and their linkages with occupational choice. In short, we can expect to see many exciting interdisciplinary developments over the coming years that analyze entrepreneurship as an occupational choice.

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6

The Influence of Social Capital on Entrepreneurial Behavior

Christian Simoni and Sandrine Labory

The image of atomistic actors competing for profits against each other in an impersonal marketplace is increasingly inadequate in a world in which firms are embedded in networks of social, professional and exchange relationships with other organizational actors.¹

Traditionally, the theory of entrepreneurship is associated with an individual's employment choice and with innovation. In the last decade, however, sociologists and organization theorists have shown that social networks and embeddedness are also crucial factors in the decision whether to become entrepreneurs.² In fact, entrepreneurial action does not take place in a vacuum; rather it is embedded in networks of social relationships.

By observing and interacting with other individuals, entrepreneurs acquire information and skills, and learn how to find competent employees and inputs at affordable prices, obtain financial support, and find potential buyers.³ The environment they live in and the relationships they develop influence their decisions and legitimize their activities. In fact, researchers have shown that when choosing in an ambiguous environment, individuals tend to base their decisions on social cues and that participation in social networks is a crucial element for entrepreneurs.^{4, 5} Throughout the entrepreneurial process, interactions are important for existing and potential entrepreneurs and are usually referred to as the entrepreneur's social capital. Saxenian has argued that much of the success of Silicon Valley is to be attributed to its social capital.⁶ Minniti, for example, describes the social environment of entrepreneurs analogously to Coleman's definition of the "first form" of social capital, in which the latter is described as the ability of information to flow through a community and form the basis for action.^{7, 8} But what is social capital exactly?

Coleman argues that social capital may take three forms. In addition to the first form cited here, social capital may consist of obligations and expectations that depend on the trustworthiness of the environment, or it may describe the existence of norms accompanied by possible sanctions. However, several other definitions exist. In some cases, for example, the expression *social capital* has been used to describe labor market connections and, in yet other cases, to describe the existence of good behaviors in a specific group.^{9, 10}

Overall, a generally accepted definition of social capital does not exist, and the term is used to describe a variety of things. Different definitions are found in the literature depending on the disciplinary approach taken and even within the same discipline. As a result, some researchers have become critical of the concept since the variety of its meanings prevents a rigorous use of the notion.¹¹ To some extent, the use of social capital as an umbrella construct that comprises multiple complex concepts, including trust, interfirm and social networks, culture, and social support has lost its focus and is leading to a paradoxical situation in which a concept that has been used to explain a variety of social phenomena can no longer be used to explain any without being criticized.¹² Critically, social capital has been referred to as a concept “that means many things to many people,”¹³ or, ironically, “a wonderfully elastic term.”¹⁴ The question, as Adam and Rončević put it, is “[w]hether the concept of social capital is a fashionable (and short-lived) term proposed as a cure-all for the maladies affecting contemporary communities, organizations, and societies as a whole or whether it has more long-term strategic—theoretical as well as applicable—meaning for sociology and other social science disciplines.”¹⁵

Solving the debate about the real meaning of social capital is beyond the scope of this chapter. Our goal, instead, is to review briefly the literature on the subject and to assess how social capital (in its variety of meanings) has been used for, and has contributed to, our understanding of entrepreneurial behavior. The chapter is organized as follows: The following section reviews works on social capital from the sociology, political science, management, and economics literature. The successive one discusses the role played by social capital on entrepreneurial behavior distinguishing between nascent and established entrepreneurs. Finally, we address the challenging issue of how to measure social capital, identify some gaps in the literature, and raise some suggestions for future research.

SOCIAL CAPITAL IN THE LITERATURE

The concept of social capital has its roots in classical sociology from the nineteenth century.¹⁶ Early studies stressed the importance of the development of individuals in social organizations.¹⁷ Later conceptualizations included not only social relationships among individuals, but also the shared norms and values associated with them.¹⁸ These initial works have then been integrated and expanded.

To eliminate some of the confusion generated by the variety of definitions, Adler and Kwon have summarized them stressing their similarities and differences based on where social capital is assumed to reside.¹⁹ They identify two main approaches: The first approach considers social capital as a resource that lies in the social ties that a focal actor has with other actors. The second approach argues that social capital lies in the social structure of a collectivity and in the characteristics of the links that provide the actors with cohesiveness, thus facilitating the achievement of shared goals.

Bourdieu, one of the main original contributors to the first approach, defines social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition.”²⁰ Therefore, Bourdieu considers social capital as an attribute of the individual rather than of the social structure and adopts an individual-centric view in which individuals access social capital through their social networks. Loury also considers social capital as an individual resource, although he attempts to conciliate this idea with a more socio-centric view by defining social capital as “naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace . . . an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society.”^{21, 22}

Burt also defines social capital as opportunities an actor receives through relationships with others such as colleagues.²³ According to Burt, social capital is an attribute of individuals that contributes to their human capital. However, while Bourdieu argues that social capital accrues to individuals as a result of network closure, via trust and cooperation, Burt suggests that open networks create brokerage opportunities for individuals between rather than within network groupings.²⁴ Open networks are characterized by the existence of structural holes (communication gaps in the social network), which provide individuals with opportunities for boundaries spanning and for knowledge transferring.^{25, 26}

Among the exponents of the second approach, Coleman distinguishes between human and social capital arguing that the first is an individual-related resource that can be found in the human nodes of a social network, while the second is in the links between those nodes within a group or between groups.²⁷ According to Coleman, social capital has four main characteristics.²⁸ First, it has, at least in part, the characteristic of a public good in that it is not excludable (it is not a private property) and in that an individual benefiting from it does not reduce others' usage and benefits. Second, social capital is specific to a given society or social interaction structure. Third, it only has value in use. That is, when individuals of a particular group or society actually use it in their productive activities. Finally, social capital is dynamic, since it emanates from, and changes with, aspects of social relationship structures such as membership, members' interests, communication style, and so on.

According to Coleman, although social capital cannot exist without a structure of relationships, such as an organization or a network, it is not in itself

limited to the structure. Social capital is rather the usage of relationships in economic activities. Thus, according to Coleman, social capital is “an attribute of the social structure in which a person is embedded” and “is not the private property of any of the persons who benefit from it.”²⁹ In Coleman’s point of view, social capital is not provided to individuals through the links of their social networks; rather, it is the links of such networks and it “facilitate[s] certain actions of individuals who are within the structure.”³⁰ Coleman therefore stresses the value of social closure with trust and cooperation among the members of a collectivity.

Putnam has a similar view and argues that “social capital refers to features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit.”³¹ Thus, he considers social capital as a public good.³²

Some attempts have also been made to integrate these two approaches. In doing so, Adler and Kwon define social capital as the good-will available to individuals or groups whose source lies in the structure and content of the actor’s social relations as, for example, the relationships between individuals and organizations that facilitate action and thereby create value.^{33, 34} Along similar lines, Nahapiet and Ghoshal suggest that social capital has different attributes, which can be organized along three nonmutually exclusive, but rather interconnected dimensions: structural, relational, and cognitive.³⁵ *Structural* social capital is related to the overall pattern of links between actors. Important elements of this dimension are the existence or absence of ties and the network configuration.^{36, 37} *Relational* capital refers to the kinds of relationship people develop when experiencing social interaction. It involves trust, respect, friendliness, and trustfulness, which, in turn, affect the quality of the relationships and the availability of resources, information, and knowledge through networking. *Cognitive* capital consists of the resources that provide shared representations, interpretations, and systems of meaning among parties.³⁸

The economics literature has also used social capital. Becker, for example, connects social capital to the individual’s utility function and argues that the latter does not depend only on the variety of goods consumed, but also on the stock of personal and social capital.³⁹ Thus, according to Becker, social capital takes the form of preferences developed through past experiences. In general, however, economists treat social capital as a resource capable of creating untraded interdependencies and of producing trust thereby reducing transaction costs and encouraging sustainable cooperative behavior.^{40, 41} Given that agents involved in a transaction may behave opportunistically, trust is generated from others’ awareness that future benefits depend upon current honesty or on efficient enforcement mechanisms. An important aspect of social capital in economic theory is that agents involved in transactions based, at least in part, on social capital cannot capture all its returns since part of them is public. Hence social capital is described as a mixed-public good. That is, a good that jointly provides private and public benefits.⁴²

The theoretical literature modeling social capital leads organically to the study of networks. Several authors suggest that analyzing networks implies examining interaction structures and, specifically, modeling inclusiveness, that is, the size and heterogeneity of a network as a general factor contributing to social capital.⁴³ This literature is based on rational choice and stresses the use of social capital as a resource for individuals' own self-interest. Alternatively, networks are also the focus of another strand of literature on social capital that focuses on embeddedness, in the sense that economic processes are grounded in social relations.⁴⁴ In this literature, the form and degree of embeddedness of individuals into social relations determine their ability to innovate and their performance.

In conclusion, the definitions of social capital have several nuances. We briefly reviewed the content of some of the most relevant contributions to the topic from sociology, political science, management, and economics literature. In spite of the lack of a precise definition, general agreement exists that social capital, as any other form of capital, affects individual actions in a variety of ways and is a valuable resource related to social ties between actors that ease the circulation of information, knowledge, and resources facilitating cohesiveness and coordination among individuals.

SOCIAL CAPITAL AND ITS IMPACT ON THE BEHAVIOR OF ENTREPRENEURS

Entrepreneurial actions are conditioned by social relations and social capital is as relevant for entrepreneurial action as financial, real, and human capital. Entrepreneurs are immersed in dynamic personal relationships that affect their alertness and their success in creating new ventures. This leads to considering how social capital affects accessibility to knowledge, receptivity to learning, and the combinative and absorptive capabilities of the entrepreneur.⁴⁵ Recent empirical research has confirmed the social embeddedness of entrepreneurship.⁴⁶ In this section, we discuss the influence of social capital on entrepreneurial behavior.

Social capital has been used in entrepreneurship research in a variety of contexts. At the aggregate level, Aldrich and Zimmer, and Larson and Starr, among others, relate social capital to the way entrepreneurs create, manage, and exploit networks.⁴⁷ Consistently with the socio-centric view of social capital, Johannisson discusses the relationship between social capital and entrepreneurship and views both as collective phenomena.⁴⁸ Cooke and Wills discuss the role of policy to support the creation of social capital for SMEs and new ventures creation.⁴⁹ And Amsden, Evans, and Kyle have discussed the role of social capital in entrepreneurial behavior within the context of minorities and ethnic groups' entrepreneurship.⁵⁰

At the individual level, consistent with the more "individual-centric" view, social capital has been viewed as a vehicle allowing the entrepreneur to gain access

to resources otherwise not available.⁵¹ For example, a favorable reputation, relevant business experience, and direct personal contacts allow entrepreneurs to get access to venture capitalists, potential customers, market and competitive information.⁵² Minniti has proposed a dynamic model describing the interdependence between social capital and entrepreneurial decisions in which social capital generates a positive network externality that increases the information publicly available about starting new businesses.⁵³ Noticeably, in conceptual terms, her view of social capital is perfectly consistent with established economic models on interdependence such as those found, for example, in game theory and in the economics literature on social interaction.^{54,55}

Bonding and *bridging* social capital have been considered and described as two complementary forms of social capital that are vital for entrepreneurial behavior.^{56, 57} In fact, successful entrepreneurs have to be able to both bond with partners within networks in order to exploit the advantages of closure (information sharing and trust), and bridge with entrepreneurs and individuals outside their social context in order to expand variety (weak ties can provide greater diversity of information). By doing so, entrepreneurs compensate between the need for expanding their social relations and the opposite need to limit the complexity that consequently needs to be managed. Because of the role played by innovation in entrepreneurial activity, bridging capital may become particularly important, since an entrepreneur's sustainable success is based on the creation of differences rather than conformity (which may result from deeply specialized social capital). According to Jones, for example, outsiders may be more effective than insiders in mobilizing social capital among groups that have been together for long periods of time.⁵⁸ It may also be argued, that the closer a social network of entrepreneurs (the stronger the ties among them), the higher the entrepreneurial spirit and motivation in the short term, but the higher the possibility of obsolescence in the long term.

Along similar lines, Davidsson and Honig suggest that having parents or close friends who owned a business and their active encouragement (bonding social capital through strong ties) differentiated between early-stage entrepreneurs and nonentrepreneurs.⁵⁹ In addition, they found that being a member of a business network, such as a chamber of commerce, club, or start-up team was also an effective predictor in differentiating between the two groups. Thus, their results confirm that bridging social capital may become increasingly more important relative to bonding social capital as the entrepreneurial process progresses.

In line with Jones and Davidsson and Honig, it is convenient to distinguish the impact that social capital has on the behavior of nascent entrepreneurs versus its impact on the behavior of more established entrepreneurs. Social capital can expose nascent entrepreneurs to ideas and information that can nurture new business projects.⁶⁰ Abell et al., for example, examined the link between social capital and the propensity to become entrepreneurs using self-employment as a proxy for entrepreneurship.⁶¹ They propose to consider three types of networks.

- Legitimation networks, which consist of weak ties between the individual and others, and confer legitimacy upon the individual's decision to become self-employed.
- Opportunity networks, which consist of ties between the individual and others who operate in industries offering entry opportunities.
- Resource networks, which consist of relations between the individual and others who have the resources and appropriate human capital for entry.

Their research suggests that having self-employed friends has an impact on one's decision to become self-employed. Potential entrepreneurs often make entry decisions based upon friendship or advice or upon family inspiration.^{62, 63} Self-employed friends and family members work as motivators to engage in entrepreneurial behavior and establish new enterprises. Having close relationships with self-employed people increases the possibility of legitimating entrepreneurial risk-taking behavior, the exposure to entrepreneurial opportunities, and the access to the resources needed for business venturing. Thus, if being close to self-employed people is viewed as a form of social capital, then the latter facilitates the discovery of opportunities, the identification of the necessary resources, and supports the exploitation process by providing access to information and resources.⁶⁴

Davidsson and Honig (2003) examined nascent entrepreneurship comparing a sample of individuals engaged in nascent activities with a control group of nonentrepreneurs and looked at the gestation activities of nascent entrepreneurs during an eighteen-month period considering two measures of successful emergence, namely, first sales and profitability. Social capital variables were found to be strong and consistent predictors of entrepreneurial behavior and more significant for the nascent than the control group. Similarly, social interactions based on friendship, affections, and confidential relationships were also shown to affect new venture creation by accelerating the decision-making process through the facilitation of coordination and communication between individuals.⁶⁵

Nahapiet and Ghoshal and Larson and Starr argue that being part of a social network improves nascent entrepreneurs' ability to recognize opportunities and to get access to those information, resources, and support that are so critical to the success of new ventures.⁶⁶ The social network size, through its influence on the variety of resources accessible to the entrepreneur, also seems to be positively related to the creation of a new business and its initial performance because it affects the probability of being exposed to entrepreneurial opportunities, of getting access to the necessary resources and information, and of learning.⁶⁷

Also, using Nahapiet and Ghoshal's interpretive model, Liao and Welsh found some empirical evidence that nascent entrepreneurs use their social ties and interactions (*structural capital*) to influence and shape their *cognitive capital* and, ultimately, develop trust and trustfulness (*relational capital*) to get support from various actors.⁶⁸ They also found that, although the general public might have relatively higher cognitive capital than nascent entrepreneurs, they were

incapable of converting such capital into relational capital. Overall, it appears that it is not only the collective endowment of social capital that explains differences in entrepreneurial behavior but, rather, the asymmetries among different entrepreneurs' ability to transform a public good into a resource that facilitates entrepreneurial action.⁶⁹

Clearly, social capital is a resource for entrepreneurs not only during the early-stage of the venture, but also throughout the entire entrepreneurial process. Fountain, for example, suggests that social capital has a fundamental role in supporting innovation processes in existing businesses.⁷⁰ Also, the availability of resources that entrepreneurs obtain through social ties has been shown to enhance the survival and growth potential of their businesses.⁷¹

Social capital also seems to stimulate the entrepreneurial behavior of people within organizations. Chung and Gibbons investigated the relationship between social capital and corporate entrepreneurs and argued that values and beliefs underpin successful innovation.⁷² Corporate entrepreneurs can be considered social deviants willing to break organizational rules to implement change. Social capital stimulates entrepreneurship within existing organizations by encouraging individuals to undertake risk-taking activities and loosening fear of possible sanctions.⁷³ Both entrepreneurs and corporate entrepreneurs "must mobilize social capital through their networks: external in the case of entrepreneurs and internal in the case of corporate entrepreneurs."⁷⁴

Finally, it should be noted that, as other forms of capital, social capital can be both productive and unproductive in the sense that it can facilitate entrepreneurial behavior or inhibit it.⁷⁵ Entrepreneurship-facilitating social capital reduces transaction costs, information search costs, and contract costs, while reducing free riding and the related control costs and sanctions. This has a positive effect on entrepreneurship via a reduction of experimentation and risk-taking costs. Social capital also positively affects entrepreneurial action through its positive relation with human capital.⁷⁶

Entrepreneurship-inhibiting social capital, on the other hand, can reduce variety by limiting the emergence of unique business ventures. The problem is related to that of localized path-dependent development processes. An abundant availability of learning opportunities in a local cluster is a positive factor for imitating entrepreneurs, but it can be a negative element for the most innovative ones.⁷⁷ Within this context, Gargiulo and Benassi found evidence that a lack of structural holes due to relational inertia and parochialism associated to overembeddedness in relationships based on solidarity limits the capability to change.^{78, 79}

In conclusion, social capital affects entrepreneurial behavior by facilitating exposure to opportunities and access to knowledge and information that would not otherwise be easily available and by legitimating risk-taking behavior. Also, at the individual level, bonding social capital allows actors to gain encouragement, trust, and information sharing (particularly important at the very early stages of entrepreneurship), while bridging social capital allows actors to expand variety, thereby increasing the possibility to discover opportunities and acquire the

necessary knowledge and resources to exploit them. Finally, asymmetries in the endowments of social capital appear to help explain differentials in entrepreneurial behavior and performance. At the same time, with their actions, entrepreneurs create, develop, renovate, and protect social capital. Thus, they are, at the same time, creators and users of social capital.

CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The purpose of this chapter is to review current literature on the relationship between social capital and entrepreneurial behavior. Our review has shown that a rigorous generally accepted theory of social capital is still lacking. Significant problems arise, for example, with respect to the measurement of social capital. Solow summarizes effectively those concerns: “Just of what is social capital a stock of? . . . What are those past investments in social capital? How could an accountant measure them and cumulate them in principle?”⁸⁰ Some of the difficulties in measuring and operationalizing social capital are related to the heterogeneity of its meaning, and the fact that social capital can be observed at various levels of aggregation, that is, at an individual, a group, a place, a region, or a nation level.^{81, 82} Of course, the confusion and diversity of approaches surrounding the concept of social capital is also reflected in the difficulty to measure it empirically.

With regard to measurement of social capital and its effects on entrepreneurial decisions, most of the literature consists of regional or local level analyses focusing on productive or innovative clusters of SMEs or in studies of network activities among groups of self-employed people. The various elements and forms of social capital have generally been measured using surveys of individuals (entrepreneurs or managers) or firms. The most comprehensive datasets appear to be those of the World Bank and the European Bank for Reconstruction and Development. Knack and Keefer, and Dakhli and De Clercq, for example, have used the World Value Survey in order to evaluate social capital. This survey assesses socio-cultural and political changes in more than sixty-five countries.⁸³ The survey has been used to measure phenomena such as trust, values, and cultural change.⁸⁴ The measure of social capital in these papers focuses around “[s]ocietal features that comprise trust, associational activities and norms of civic behavior that together facilitate coordination and cooperation for collective benefit.”⁸⁵

Other measures of social capital include measures of embeddedness. This type of empirical analysis generally focuses on small samples (specific clusters) and use social network analysis to analyze the nature, scope, and structure of relationships. Unfortunately, although they appear to be one the most promising avenues of research on social capital, surveys result in qualitative datasets that show a number of problems as they tend to be very specific and most often do not lend themselves to comparisons.⁸⁶

Of course, the proxy variables for measurement would vary according to what the concept of social capital taken into consideration is. Developing indicators and empirically testing their suitability to measure social capital and predict its consequences on entrepreneurship could be a fundamental step to move from a chiefly conceptual view to a more concrete view of the theoretical construct.

In addition to measurement difficulties, it should be noticed that the relationship between social capital and entrepreneurial behavior has been studied considering primarily social capital as a unidimensional construct, with an emphasis on its structural component, the network.⁸⁷ Future research on the subject, however, should include other dimensions such as social ties, trust, and value systems that facilitate the entrepreneurial action in a specific context.⁸⁸

With a few exceptions, most authors have also adopted the implicit assumption that social capital influences entrepreneurial behavior in a homogeneous way, regardless of the specific characteristic of the entrepreneur, the business, and the industry.⁸⁹ Krackhardt and Hanson, for example, have pointed out that what matters is whether networks are in sync with a company's goals.⁹⁰ Although they specifically refer to informal networks in organizations, more research is needed to investigate if differences in the relationship between social capital and entrepreneurship exist across different industries, different entrepreneurial models, and different firms.

In most cases, researchers have also adopted an approach in which the amount of social capital available to entrepreneurs is exogenously determined. In other words, not much has been written about what entrepreneurs can do to increase social capital or about how social capital can be exploited for new venture creation and development. If it is true that social capital, like any other form of capital, is appropriable and convertible into other forms of capital, then it is legitimate to ask how an individual, or a group of individuals, can appropriate it and convert it.^{91, 92} Simply suggesting that social capital is the resource available to actors as a function of their social relations does not help scholars in explaining how entrepreneurs capitalize on this available resource. From the entrepreneur's perspective, social capital is a resource only as far as the entrepreneur is able to actually use it and extract value from it. In fact, a distinction may be made between potential and actual social capital to stress the importance of the entrepreneurial actions required to unleash the potential of social capital to serve as a resource.⁹³

Second, for social capital to have a real positive value, entrepreneurs must have access to it and be able to use it to pursue their own goals. In some cases, social capital may be a public good; in other cases, however, it may be exclusive to a network. This means that entrepreneurs must first connect to the network. Thus, more research could be conducted on the strategies and the mechanisms entrepreneurs can adopt to create, accumulate, and access social capital. Greve and Salaff studied the use of social networks in three different phases of the new business establishment process.⁹⁴ Namely, motivation, when potential entrepreneurs discuss their ideas and develop a first business concept, planning, when

they get the necessary resources and knowledge to set up the business, and establishment, when they actually get the business started and begin to run it. They find that entrepreneurs in the first phase limit their discussion to the closest relations, probably as a way to protect their idea. The discussion network is enlarged in the planning phase. While during the third phase, entrepreneurs reduce both the size of the discussion network to include only relevant helpful relations, and the networking time.

Further research should be also carried out on the social capital factors that play a positive role in the successful continuation and completion of the phases following the start-up process. Davidsson and Honig, for example, found some evidence of the presence of an increased specificity of social capital success factors over time.⁹⁵ Within this context, Adler and Kwon write: "Social bonds have to be periodically renewed and reconfirmed or else they lose efficacy."⁹⁶ Thus, another aspect that needs to be analyzed is the cost of creating, accumulating, using, and maintaining social capital for the individual entrepreneur. Similarly, we need principles to estimate its depreciation rate.

The interaction between social capital and cognitive biases in influencing entrepreneurial behavior could be more thoroughly investigated. Social cognitive theory suggests that individual cognition originates from social life, personal interaction, and communication. De Carolis and Saporito, for example, suggest that social capital deriving from being embedded in a network shapes entrepreneurs' cognitive process and ultimately their behavior.⁹⁷ More empirical research to support this proposition seems necessary. In general, as suggested by Jin-ichiro, researchers should also adopt a multidimensional approach to entrepreneurship in order to integrate the insights on social capital with other complementary theories.⁹⁸

Last, Portes and Landolt stress the need for taking into consideration the possible negative effects of social capital.⁹⁹ Portes identifies four of these effects as the exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward leveling norms.¹⁰⁰ Putnam writes about the "dark side of social capital."¹⁰¹ Adler and Kwon point out that investments in social capital are not costlessly reversible or convertible and that, as a result, unbalanced investment or overinvestment in social capital can transform a potentially productive asset into a constraint and a liability.¹⁰² Furthermore, even when social capital is beneficial to a focal actor, it may still have negative consequences for the broader aggregate of which that actor is a part, and social capital risks may outweigh its benefits.¹⁰³ Within this context, close and geographically concentrated social networks with limited bridging tension may be particularly exposed to the possibility of path-dependency traps.

In general, it is clear that the debate around entrepreneurship and the fostering of entrepreneurial behavior will vary according to the adopted view of social capital.¹⁰⁴ Thus, once again, achieving a shared integration among the different levels and dimensions of the concept that take into consideration both benefits and risks appears to be a necessary step that could lead to more consistent and

comprehensive understanding of what factors influence individuals' entrepreneurial decisions.

In conclusion, drawing insights from literature in a variety of disciplines, we have taken a management approach and highlighted some of the classic contributions to the theory of social capital. Throughout the chapter we have also stressed the lack of a coherent definition and theory of social capital and the resulting difficulties of its empirical measurements. We have reviewed applications of the concept to the study of entrepreneurial behavior and pointed out how social capital is important throughout the entire entrepreneurial process from opportunity recognition to business growth. Finally, and most importantly, we have identified some important areas in which the interdependence between social capital and entrepreneurial behavior has been neglected in the literature. In spite of the lack of a precise definition, general agreement exists that social capital is a valuable resource for entrepreneurs that may ease the circulation of information, promote opportunity recognition, and increase the availability of resources. It is to be hoped that future research will fill these gaps.

NOTES

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7

Entrepreneurial Behavior and Institutions

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There is increasing focus, both in the policy and academic realms, on the entrepreneur as the driver of economic change and growth. For policymakers, the focus on entrepreneurship has been a recent phenomenon. In 1998, for example, the Organization for Economic Cooperation and Development launched a program, Fostering Entrepreneurship, to better understand the role of entrepreneurs in the economy.¹ Along similar lines, governments throughout the world have launched various initiatives designed to promote entrepreneurship and economic growth.² The importance of the entrepreneur in economic development has also been realized by key international aid organizations. The World Bank, the United States Agency for International Development (USAID), and the International Monetary Fund (IMF) have undertaken initiatives to understand and promote entrepreneurship in developing countries.³

Although many in the economics literature realize the importance of the entrepreneur, this topic has not received the widespread recognition that it deserves.⁴ This lack of focus results primarily from the fact that it is difficult to formally model and measure entrepreneurial behavior.⁵ Institutions are also often missing from formal models and their influence on economic decisions is often ignored. Economists associated with the Austrian school of economics, on the other hand, have long focused their attention on the economic study of entrepreneurship and institutions, providing a robust literature emphasizing the importance of these areas.⁶

Institutions refer to the formal and informal rules governing human behavior and vary across time and space. In contrast to other schools of economic thought, the Austrians have not only realized the importance of institutions, but have attempted to provide a connection between an economic understanding of institutions, the market process, and entrepreneurship. This is an important

connection because institutions create the rules of the game that influence the behaviors of private actors including entrepreneurs.

Further, Austrians stress that entrepreneurship does not describe a distinct group of individuals, but rather, is an omnipresent aspect of human action. In fact, the entrepreneurial element in human action entails the discovery of new data and information; discovering anew each day not only the appropriate means, but also the ends that are to be pursued.⁷ Moreover, Austrian scholars show that the ability to spot changes in information is not limited to a selective group of agents—all agents possess the capacity to do so (see chapter 1 in this volume).

The recognition that the institutions in which economic agents (including entrepreneurs) operate in—political, legal, and cultural—directly influence their behavior and hence economic development is a recent development. Until very recently, as we will discuss in the next section, economists interested in growth and development had been largely influenced by the work of the economist John Maynard Keynes. Keynes's main work, *The General Theory of Employment, Interest and Money*, provided a critique of the classical model of self-regulating markets, a diagnosis of why the economies of Great Britain and the United States had entered a depression, and policy advice on how to alleviate the problems of unemployment and instability.⁸ In short, Keynes argued that markets were not self-regulating and self-correcting.⁹ Because of this, he argued that government intervention was necessary to correct these failures and stimulate investment and consumption. In the context of economic development, those influenced by Keynes emphasized the importance of foreign aid and government planning to overcome the failures of unregulated markets and forgot to pay attention to institutions.

Only in the past few decades have academics and policymakers focused on the role that institutions play in the facilitating or constraining efforts at generating sustainable growth. It is our goal here to contribute to this discussion by exploring how various institutional structures influence entrepreneurial behavior and the linkage between the latter and sustainable economic growth. The underlying logic of the connection between institutions and entrepreneurial behavior is the realization that institutions, or the rules of the game, provide a framework that guides activity, removes uncertainty, and makes the actions of others predictable. In short, institutions serve to reduce the costs of action and facilitate the coordination of knowledge dispersed throughout society. Simply put, entrepreneurs do not act in a vacuum. Instead their actions are constrained by both the formal and informal rules of the game. This indicates that only by understanding the impact of institutions can we truly understand various types of entrepreneurial behavior.

We proceed as follows. In the next section we explore how the development community has neglected the important connection between entrepreneurial behavior and institutions for understanding economic outcomes. In the succeeding two sections, we further develop the critical connection between institutions and entrepreneurial behavior. For example, we discuss why we observe

entrepreneurs contributing to economic progress and development in some countries but not in others. We argue that the answer to this question lies in the institutional environment in different countries. It is our contention that entrepreneurs can be found in all countries and in all settings. As such, institutional, and not cultural, explanations can best aid us in understanding different entrepreneurial behaviors and economic outcomes. The next section explores the implications of the connections between institutions and entrepreneurial behavior. While entrepreneurs are the means to economic change, they can only act productively once certain institutions are in place. As such, certain institutions must be in place prior to the occurrence of productive entrepreneurial activity. Finally, the penultimate section considers the implications of our analysis for future research and the last section is the conclusion.

Before proceeding, we would like to emphasize that the analysis that follows is applicable to entrepreneurial behavior in a wide variety of settings. We focus on economic development as one specific example of how institutions relate to entrepreneurial behavior in order to illuminate our claims. The implications of the analysis, however, can be generalized well beyond economic development and applied to all growth-related issues.

THE RISE OF DEVELOPMENT ECONOMICS AND THE NEGLECT OF ENTREPRENEURSHIP AND INSTITUTIONS

A brief review of the evolution of development economics will serve to illuminate a more general point. Specifically, it highlights the neglect of institutions and entrepreneurial behavior and the resulting implications for our understanding economic outcomes. In fact, such neglect leads to incomplete and inaccurate analysis and conclusions.

The issue of economic development can be traced back to at least Adam Smith.¹⁰ However, it was only after World War II that economists began to pay particular attention to the needs of poor countries. Prior to World War II, economists studying growth theory focused mainly on wealthy countries.¹¹ These economists, influenced by the Great Depression in the United States and the industrialization of the Soviet Union through forced investment and saving, focused on a labor surplus that they concluded had to be absorbed.¹² The result was what became known as the investment gap theory. According to this view, capital accumulation was critical because growth was proportional to investment. How was this investment gap to be filled?

Lacking a well-defined notion of entrepreneurship and entrepreneurial behavior, development economists at the time postulated that poor countries would be unable to save enough to grow. Foreign aid and investment from wealthy countries were needed to fill the gap. This aid would, in theory, increase investment in capital in the poor countries and lead to greater output and growth. Because foreign aid would flow from the governments of wealthy countries to

the governments of poor countries, the state was placed at the center of all efforts at economic development. Indeed, the intellectual climate in the 1950s was grounded in the belief that state planning within both developed and developing countries was critical for economic success.

Amid the widespread acceptance of the investment gap theory, Nobel Prize winner Robert Solow published his famous growth model in 1957.¹³ The underlying argument was that investment cannot sustain growth due to diminishing returns. Simply put, the incentive to invest falls as an individual invests more. For Solow, long-term growth could only be sustained with technological change, not investment. Solow's model was fiercely debated in the literature and while it had a large impact, development economists were hesitant to accept that investment was not the dominant cause of long-term growth.

Solow's model is important for our purposes for a few reasons. For one, it illustrates the neglect of the entrepreneur in the economics profession and larger development community. Solow's model failed to incorporate the entrepreneur and answer the question, where does technological change come from? Further, a consideration of the conditions, or institutions, under which sustainable technological change could take place was completely absent. This neglect was due to the absence of a theory of entrepreneurship and an understanding of how institutions influence entrepreneurial behavior.

This neglect continued for several decades following the initial publication of Solow's model. For instance, with the advent of the computer in the 1970s, economists attempted to calculate the exact amount of foreign aid necessary to fill the investment gap. The revised standard minimum model was developed with the growth part of the model known as Harrod-Domar. The Harrod-Domar model postulated that the growth rate of GDP was proportional to last year's investment level.¹⁴

Eventually, it was realized that investment was not the key to sustained growth. The assumptions of the aforementioned models were simply unrealistic. For instance, it was assumed that aid would correlate with investment one-to-one. It was also assumed that the country receiving aid would increase its level of national saving. Finally, it was assumed that there was a linear relationship between investment and GDP growth.

The major issue was that there was no incentive for individuals in the country receiving aid to increase their own level of savings. There were incentive issues in terms of the government as well. Most important, government officials, when operating under the investment gap theory, have the incentive to maintain or increase budget deficits since doing so widens the gap leading to more aid. Although the investment gap theory eventually fell out of favor in the academic literature, Easterly notes that it is still widely used in the many international financial institutions that make decisions regarding aid, investment, and growth.¹⁵

A shift in the trend of economic development occurred in the 1980s and 90s. Unfortunately, this shift continued to neglect the role of entrepreneurship and

institutions in generating sustainable economic development. Instead, it was argued that investment in physical capital was not the only factor of production. Also important was investment in human capital. Given this, the Solow growth model was augmented to control for the education of workers.¹⁶ The fashionable trend in development economics became pushing an agenda of government-sponsored education. Adriaan Verspoor of the World Bank perhaps summarizes this position best: “The education and training of man—and although often neglected—of woman contributes to the economic growth through its effects on productivity, earnings, job mobility, entrepreneurial skills, and technological innovation.”¹⁷

With the human capital model gaining momentum, there was an explosion in education. As of 1960, only 28 percent of countries worldwide had 100 percent primary enrollment. The worldwide median primary school enrollment increased to 99 percent in 1990, from 80 percent in 1960. Further, between 1960 and 1990, the median college enrollment rate of countries worldwide increased from 1 to 7.5 percent.¹⁸ Despite the growth in education, it is widely agreed that the actual correlation between growth and schooling is highly disappointing.

To understand why the investment in education failed, consider that education and skills provide a benefit in an uninhibited marketplace where labor resources are free to move and where institutions create a relatively high payoff to an ethic of workmanship and entrepreneurship. If these conditions do not exist, the incentive to take full advantage of educational opportunities remains small. With little incentive to develop one’s skills, few individuals become educated and the circle of poverty continues. Simply forcing education has little or no effect without the other contributing factors. Transferring resources to build schools and providing teachers does not lead to growth. Instead, a country’s environment must provide a set of incentives that creates a high payoff to investing in one’s future.¹⁹

In this section, we have traced the evolution of development economics. When one considers this evolution, the neglect of entrepreneurship, entrepreneurial behavior, and institutions is glaringly apparent. As we will discuss in subsequent sections, the entrepreneur is the means through which desired outcome of economic change and progress is realized. Institutions create the rules of the game that influence entrepreneurial behavior and the range of possible outcomes that can be achieved.

Unfortunately, even today the importance of entrepreneurship and institutions does not receive the attention it deserves, both in the development community and more generally in the social sciences. In the development community, the emphasis on human capital and education, while failing to produce results in terms of sustained growth, has remained one of the key focuses of both development economists and international organizations involved with development. It is true that no unskilled country has become rich. But then why have efforts to invest in education failed? There must be something else that is being overlooked.

FILLING THE MISSING GAP: THE IMPORTANCE OF INSTITUTIONS FOR THE DIRECTION OF ECONOMIC ACTIVITY

As mentioned at the outset of this chapter, only recently have economists begun to pay attention to the role of institutions and how they influence entrepreneurial behavior. The recognition that institutions matter is largely a response to the work of Nobel laureate Douglass North, who emphasized the importance of institutions and institutional change.²⁰ In this section, we discuss how institutions influence the behavior of entrepreneurs and economic activity.

As discussed in the Introduction, institutions can be understood as the formal and informal rules governing human behavior and their enforcement. This enforcement can occur through the internalization of certain norms of behavior, the social pressure exerted on the individual by the group, or the power of third party enforcers who can utilize force on violators of the rules. Institutions can be traditional values or codified law, but as binding constraints on human action, they govern human affairs for good or bad, and as they change, so will the course of social development.

Formal and informal institutions influence the behavior of individuals of all cultures and traditions. Indeed, while cultural factors may explain some aspects of human behavior, they cannot explain all behaviors. The same individuals, with the same motivations, will tend to act very differently under different sets of institutions.²¹ To illustrate this point, consider Alvin Rabushka's analysis of the three Chinas.²² His examination of the post-World War II development of mainland China, Taiwan, and Hong Kong, three jurisdictions with a common cultural heritage, suggests that economic and social progress depends far more on economic institutions than on cultural traits of the populace or the availability of natural resources. Institutions serve to constrain the set of feasible opportunities and actions. This realization applies to individuals with similar and different cultural backgrounds.

This has major implications for the way we understand economic change and progress or the lack thereof. It is not the case that cultural factors play no role in economic and social activities. Instead, focusing exclusively on cultural traits overlooks what all individuals have in common across cultures—namely alertness to profit opportunities and the desire to better their lot in life. These are distinctive traits of entrepreneurial behavior and individuals who are driven by these motivations can be found in all cultural settings. As Baumol indicates, the institutional environment of a society will determine the relative payoffs attached to various opportunities.²³ As such, the institutional environment will direct entrepreneurial activity toward those activities where the payoff is relatively high.

INSTITUTIONS AND ENTREPRENEURSHIP: PRODUCTIVE, UNPRODUCTIVE, AND EVASIVE

Within a given set of institutions, individual actors can increase their wealth and generally better their position through three main courses of action. Entrepreneurs can engage in *productive*, *unproductive*, or *evasive* activities. Here we build on William Baumol's earlier work, which made the distinction between productive and unproductive activities.²⁴ We contribute to this existing work by also considering evasive activities as a category of entrepreneurial behavior and by exploring how institutions direct entrepreneurial behavior. We consider each of these potential courses of entrepreneurial behavior in turn.

Productive activities—arbitrage, innovation, and other socially beneficial behaviors—constitute the very essence of economic growth and progress. When engaging in productive activities, the entrepreneur has a dual role. The first is in discovering previously unexploited profit opportunities. This pushes the economy from an economically (and technologically) inefficient point toward the economically (and technologically) efficient production point. The second role takes place via innovation. In this role of an innovator, the entrepreneur shifts the entire production possibility frontier (PPF) outward.²⁵ This shift represents the very nature of economic growth—an increase in real output due to increases in real productivity. Proxies for the magnitude of productive activities would include business start-ups, foreign investment, foreign trade, and the use of capital and financial markets among other measures.

When undertaking productive activities, entrepreneurs drive economic growth through arbitrage and innovation. Further, productive entrepreneurial activities continually contribute to the development of new markets and their subsequent evolution as well as the evolution of existing markets. Through the discovery of some new good or service that is demanded by consumers, entrepreneurs create a market for that good or service. By discovering new means of production or interacting with buyers of already existing goods or services, entrepreneurs influence the composition of existing markets. Additionally, entrepreneurs entering existing markets increase competition and place constant pressure on incumbents to innovate and satiate consumer wants.

In contrast to productive activities, unproductive activities include crime, rent-seeking, and the destruction of existing resources among other socially destructive activities. In the case of unproductive entrepreneurship, it is possible that innovation is taking place, but these activities do not shift the PPF outward. For example, consider new techniques for engaging in rent-seeking. Rent-seeking occurs when actors seek to extract uncompensated value from others by manipulating the economic and political environment. Examples would include lobbying efforts for tariffs, subsidies, and other barriers to competition. While rent-seeking activities lead to increased profit for the entrepreneur undertaking the activity, they result in a larger deadweight loss for society as a whole. Proxies for the magnitude of unproductive activities would include the level of corruption, per

capita number of rules and regulations passed in a specific period and per capita numbers of lines of work that assist in unproductive activities. For instance, Murphy et al. looked at the proportion of engineers to lawyers.²⁶ They concluded that a high level of engineers has a positive impact on growth and a large number of lawyers have a negative effect because of a high level of rent-seeking.

To productive and unproductive entrepreneurship, one can envision a third category of entrepreneurial activity—evasive entrepreneurship. Evasive activities include the expenditure of resources in evading the legal system or in avoiding the unproductive activities of other agents. Tax evasion is one readily apparent example of evasive activities, as are efforts to avoid bribing corrupt officials. Proxies for the magnitude of evasive activities would include the size of the black markets and tax evasion. As rules become more burdensome and raise the costs of interaction, one should expect economic actors to invest more resources in avoiding those rules.

In summation, entrepreneurs are present in every country and every cultural setting. The institutional environment will direct the behaviors of these entrepreneurs. If individuals can profit and better their position by engaging in productive activities, we should expect them to do so. Likewise, if the profits attached to unproductive activities are relatively greater as compared to productive activities, more individuals will undertake the former. We observe different outcomes from entrepreneurial behaviors because activities yielding the highest payoffs vary across societies. In countries with low growth, it is not that entrepreneurs are absent or are not acting, but rather that they are stymied by either a lack of functional markets and hence profit opportunities or by the existence of profit opportunities yielding outcomes counter to economic progress. In other words, in some countries, profit opportunities may be tied to socially destructive behaviors. To reiterate our main point, entrepreneurial behavior is directly tied to the institutional environment. Institutions serve to create the payoffs to various alternative behaviors. Economic growth and progress requires that higher payoffs be attached to productive activities.

INSTITUTIONS AS CAUSE, ENTREPRENEURSHIP AS CONSEQUENCE

A key insight of the Austrian school is that entrepreneurship is an omnipresent aspect of human action. While the level of alertness varies across individuals, entrepreneurs are present across all times and locations. As discussed in the previous sections, the institutional environment guides the direction of entrepreneurial behavior. Although we illustrated this point by discussing its implications for economic development, the same framework can be applied to a wide array of settings.

A key implication of our analysis is that entrepreneurs are the means while institutions are the cause of economic change and progress. Since entrepreneurs

are present in all settings, it is the different institutional structures which generate the large variances in standards of living across societies. What this indicates is that it is the adoption of appropriate institutions that, by increasing the relative payoff to productive activities, provides incentives for individuals to engage in entrepreneurial activities that generate economic growth. In other words, the adoption of certain institutions has to precede productive entrepreneurial behaviors because these institutions enable the right type of entrepreneurship.

Once certain institutions are adopted, entrepreneurs will recognize the profit opportunities attached to productive, socially beneficial activities and tend toward engaging in those activities. In other words, entrepreneurs are the means through which outcomes such as economic growth and progress come about. However, given that entrepreneurial behavior is influenced by institutions, institutions are the cause of economic growth. It is the institutional environment that directs entrepreneurial behavior toward productive, unproductive, or evasive activities. In this section, we focus on understanding the institutional environment conducive to productive entrepreneurship.

To illustrate our argument, we return to our discussion of economic development. For example, given the realization that economic growth and development are a consequence of specific institutions and policies, we can better understand why we observe an increasing world income gap and a lack of convergence between rich and poor countries. The problem lies in the combination of private and public institutions currently in place in less developed countries. Unfortunately, as discussed earlier, over the last several decades, the development community has met with continued failure by focusing on foreign aid instead of the institutional environment of less developed countries. The key question then turns to the institutional environment that promotes productive entrepreneurial activity.

One of the earliest to recognize the institutions and policies necessary for productive entrepreneurship was Adam Smith in 1776:

Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things. All governments which thwart this natural course, which force things into another channel or which endeavor to arrest this progress of society at a particular point, are unnatural, and to support themselves are obliged to be oppressive and tyrannical.²⁷

As research by Gwartney et al., Scully, and the Fraser Institute indicates, Smith's claim was on target.²⁸ Their work, among others, has highlighted the importance that economic freedom, manifested through well-defined property rights, a freely functioning price mechanism, a stable legal system and the rule of law, and trade liberalization plays in providing incentives for productive entrepreneurship and in generating economic growth.

When one compares those countries possessing economic freedom to those lacking these freedoms, the differences are staggering. Perhaps the best illustration

of this is provided by the *Economic Freedom Index*. This annual index analyzes and scores economic freedoms across a wide range of activities including government intervention, monetary policy, foreign intervention, wages and prices, property rights, regulation, and trade among others. In other words, the index provides a measure of some of the key institutions which influence entrepreneurial behavior. To understand the impact of institutions that allow for economic freedom, consider that the per capita income of countries in the top quintile of economic freedom is more than nine times that of those in the lowest quintile. Similar results hold for economic growth, as measured by changes in per capita income, with those in the top quintile experiencing the greatest growth and those in the lowest quintile experiencing negative growth.²⁹

Indeed, on most key margins, countries with economic freedoms outperform those lacking these freedoms. Countries with the greatest amount of economic freedom also provide the best opportunities for their citizens to live healthy and prosperous lives. Life expectancy in those countries in the top quintile is 75.9 years as compared to 53.7 years for those countries in the lowest quintile. Infant mortality falls drastically from 81.4 per 1000 births for those countries in the bottom quintile to 9 per 1000 births in those countries in the top quintile. With increasing economic freedom, literacy, human development, and political freedoms increase while child labor and corruption fall as economic freedom increases.³⁰

Of course a central question in economics and political science focuses on understanding how to establish sustainable institutions which direct entrepreneurial behavior toward productive activities in countries where such institutions are lacking. The analysis put forth in this chapter suggests that in order to adopt policies that promote productive entrepreneurial behavior, we need to understand the conditions and institutions necessary for political entrepreneurs to adopt such policies. In other words, our analysis applies not only to the private realm, but also to the public arena and to the metarules followed by policymakers. Political entrepreneurs act within a set of metarules which determine the rules of the game faced by private actors. We will return to this last point in the second half of the next section.

IMPLICATIONS FOR FUTURE RESEARCH

The connection between entrepreneurship and institutions has implications for future research efforts across social science disciplines. The main implication is the need for the study of everyday life. This approach combines on-the-ground research with an analytic narrative approach to understand the formal and informal institutions of various organizations and societies. This approach is already in use in disciplines such as anthropology and sociology. However, other disciplines in the social sciences, such as economics and political science, could also benefit from the use of this method. To clarify our position, consider the matrix in Table 7.1, which depicts the landscape of the social sciences.

Table 7.1. Methodological Predispositions and the Social Science Landscape

| | <i>Clean Empirical Work</i> | <i>Dirty Empirical Work</i> |
|-------------------------------|---|---|
| Thin theoretical description | Economic theory and econometrics | Analytic narrative political economy |
| Thick theoretical description | Sociological and political science econometrics | Anthropology, cultural sociology, and institutional political science |

Given the insights of this chapter, the upper right quadrant is the domain that research in the area of entrepreneurial behavior is best suited to occupy. For instance, economists have traditionally approached their subject matter by providing a parsimonious theory and then confronting that theory with as clean an empirical test as possible. The problem with this approach is that by stressing the universal in all human behavior the specific is lost, whereas in asserting that all behavior is specific as in traditional anthropology, the ability to communicate and understand across history and culture is lost. Neither thin/clean, nor thick/dirty provide satisfactory explanations of the world. But somewhere between the economist's penchant for the general (the thin and clean), and the anthropologist's demand for respect for the specific, there lies an approach that maintains the analytical structure of the economic way of thinking, but respects the unique institutional arrangements that structure the rules of the game and their enforcement in any particular historical setting. This is the intellectual space where progress in research on institutions and entrepreneurial behavior will be made in the coming decades.³¹ This method also provides a means of finding common ground across the social sciences.

Realizing the critical connection between institutions and entrepreneurial behavior means that social scientists must broaden their notion of empirical work to include the narrative form that permits detailed examination of the historical and social conditions that shape social phenomena. The analytical structure provided by basic economics enables the scholar to examine the incentive structures and the flows of information that are embedded in the historical setting under examination. In the process, the connection between institutions and entrepreneurial behavior in various settings will be illuminated in rich detail. This method can be applied to a wide range of situations from developing countries to business organizations—both profit and nonprofit—as well as government organizations. In each of these cases, the institutional environment will influence entrepreneurial behavior for better or worse. Only by understanding the incentives that entrepreneurs face can one hope to understand their behaviors.

One readily apparent example of the type of analysis we are promoting is the work of Hernando de Soto. In *The Other Path*, for example, he printed a picture of researchers from his Instituto Libertad y Democracia with a printout 30 meters long of the procedures an entrepreneur would need to set up a small company.³²

De Soto and his team of research compiled the list of procedures by actually going through the process of setting up a business. In Lima, Peru during the 1980s, de Soto estimated that the informal sector comprised 60 percent of the economy. This channeling of economic activity into informal markets was a function of hundreds of regulations that made it next to impossible for an entrepreneur to negotiate the bureaucracy and start a new business. In other words, the institutional environment was such that the payoff to unproductive and evasive activities was relatively high compared to productive activities.

In *The Mystery of Capital*, de Soto modifies this conclusion slightly to warn that the act of unleashing the productive capacity of capitalism requires more than government curtailing its onerous regulations.³³ The fundamental problem that countries face is turning “dead capital” into “live capital.” In de Soto’s narrative this is a function of formal property holdings. The de facto owners discussed in *The Other Path* can realize the gains from exchange, but they cannot realize the full benefits of specialization and exchange that a more secure property system would enable. The formality of property holdings is required in order for entrepreneurs to be able to use their ability to raise live capital that can generate new wealth-creating activities.³⁴

There is often a tendency in the social sciences to divide disciplines into theory and empirics (whether historical or statistical). This is especially evident in economics but also in political science. We contend that the most pressing questions are to be found in the institutionally contingent theory discussed in this chapter. In the context of this chapter, social scientists must move to a model that relies on understanding the institutional specifications within which entrepreneurs act. Only by understanding the institutional context can we hope to understand why we observe different behaviors by entrepreneurs and potential entrepreneurs across settings and over time.

The approach that we are advocating is broadly conceived and includes anthropology, economics, legal studies, the management sciences, political science, psychology, and sociology. It is the study of the evolution of institutions that will allow us to understand things such as economic, organizational, political, and social changes. Thus, it is the study of institutions that will also allow us to understand the behavior of entrepreneurs and its variety across cultures and contexts. Only by understanding institutional arrangement, can we explain how a particular entrepreneurial environment emerges in various settings. This requires social scientists to expand their research approach to allow for institutional contingencies.

At the end of the last section we briefly discussed the notion of political entrepreneurs and changes in the overarching metarules in which private entrepreneurs act. The main focus of this chapter has been on the actions of entrepreneurs within a given institutional framework. But the recognition of the importance of overarching metarules raises another important area for future research. This is the recognition that entrepreneurship can take place both within a set of institutions and rules but also over the rules and institutions in which others act. When we focus on the role that institutions play in directing

entrepreneurial activity, we are treating the rules of the game as an exogenous constraint. It is important to recognize that changing the rules of the game also involves entrepreneurship that generates change in the rules of governance.

Entrepreneurship over the rules of the game entails alertness to new forms of governance that change the relative price of private and public governance. The analytic narrative approach can contribute to understanding the barriers to changes in the rules of the game. These barriers may include political and bureaucratic constraints that prevent the movement toward the adoption of institutions which foster productive entrepreneurship and economic growth.

A final area of research that deserves attention is entrepreneurial behavior in the nonprofit realm. In short, the central question is, what factors influence the behavior of social entrepreneurs? Understanding the behavior of entrepreneurs in the nonprofit sector is critical, especially in particularly difficult circumstances. For instance, in the wake of Hurricane Katrina, one observes many nonprofit organizations contributing to the recovery. Understanding the institutions—both within the larger United States, but also within the specifics of nonprofit organizations—that allow these organizations to be entrepreneurial and behave as they do will yield important insights into our understanding of, responding to, and recovering from natural disasters.

CONCLUSION

In summation, entrepreneurs are present in all societies no matter the time or place. Institutions determine the relative payoff to various courses of actions and hence direct entrepreneurial behavior toward productive, unproductive, or evasive activities. Poor institutions that create a higher relative payoff to unproductive and evasive activities will reduce productive behaviors. For instance, in the case of less developed countries, it is not the case that there is a lack of entrepreneurial spirit, but rather that there is a relatively higher payoff for unproductive and evasive activities. This reasoning applies beyond economic development and to a wide range of situations. The types of for-profit and nonprofit organizational forms as well as political and social changes one observes are all connected to entrepreneurial behavior which is, in turn, linked to the institutional environment. The most fruitful way for the study of entrepreneurial behavior and institutions to proceed is to recognize how the rules of the game and their enforcement dictate how entrepreneurs behave.

NOTES

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1. An overview of the Fostering Entrepreneurship program is available at: http://www1.oecd.org/publications/PoI_brief/1998/9809-eng.htm.
2. See Zoltan J. Acs et al., *2004 Global Entrepreneurship Monitor* (London: London Business School and Babson College, 2005); Maria Minniti et al., *2005 Global Entrepreneurship Monitor* (London: London Business School and Babson College, 2006).
3. For instance, the World Bank supports the National Foundation for Teaching Entrepreneurship and also undertakes many activities related to entrepreneurship through the International Finance Corporation, which is the private sector arm of the World Bank group. A central aspect of the Millennium Challenge Account (MCA), which aims to fund initiatives to improve less developed countries, is the recognition of “sound economic policies that foster enterprise and entrepreneurship.” For more on the MCA, see <http://usinfo.state.gov/journals/ites/0303/ijee/usaidfs.htm>.
4. On the importance of entrepreneurship, see Israel M. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973); Nathaniel H. Leff, “Entrepreneurship and Economic Development: The Problem Revisited,” *Journal of Economic Literature* 17 (1979): 46–64; William J. Baumol, “Entrepreneurship: Productive, Unproductive and Destructive,” *Journal of Political Economy* 98 (1990): 893–921; William J. Baumol, *The Free-Market Innovation Machine* (Princeton, NJ: Princeton University Press, 2002).
5. See William J. Baumol, “Toward Operational Models of Entrepreneurship,” in *Entrepreneurship*, ed. Joshua Rosen (Lexington, MA: Lexington Books, 1983), 29–48; William J. Baumol, “Formal Entrepreneurship Theory in Economics: Existence and Bounds,” *Journal of Business Venturing* 8 (1993): 197–210.
6. See Peter J. Boettke, “Alternative Paths Forward for Austrian Economics,” in *The Elgar Companion to Austrian Economics*, ed. Peter J. Boettke (United Kingdom: Edward Elgar, 1994), 601–615; Peter J. Boettke, “The Reform Traps in Economics and Politics in the Former Communist Economies,” *Journal des Economistes et des Etudes Humaines*, 5 (1994): 234–247; Nicolai Foss “On Austrian Economics and Neo-Institutionalist Economics,” in *Austrian Economics in Debate*, eds. Willem Keizer, Bert Tieben, and Rudy van Zijp (New York: Routledge, 1997); Emiel F. M. Wubben, “Entrepreneurship, Interdependency and Institutions: The Comparative Advantages of the Austrian and post-Keynesian Styles of Thought,” in *Austrian Economics in Debate*, eds. Willem Keizer, Bert Tieben, and Rudy van Zijp (New York: Routledge, 1997), 192–219.
7. Kirzner, 1973, pp. 30–87.
8. John M. Keynes, *The General Theory of Employment, Interest and Money* (New York: Harcourt Brace Jovanovich, 1964 [1936]).
9. More specifically, Keynes argued that investment was unstable because it was based on the volatile expectations of investors and their moods of optimism and pessimism. In addition, Keynes argued that the introduction of money into an economic system repudiated the classical law of markets that maintained self-regulation. Prices were not linked to the supply and demand for money any more than investment was determined by the interest rate in the modern economy, according to Keynes. The introduction of expectations into economic analysis ruptures the old relationships that were established in classical economics. For example, during a recession, because of expectations that the economy is caught in a liquidity trap, attempts to get out of that trap through monetary policy stimulus will be ineffective. If investment is not rational, but instead based on “animal spirits,” then private markets cannot be relied upon to assess the marginal efficiency of capital allocations among competing projects.

10. Adam Smith, *The Wealth of Nations* (New York: Prometheus Books, 1991 [1776]).
11. Heinz W. Arndt, *Economic Development: The History of an Idea* (Chicago: University of Chicago Press, 1997).
12. A major driver of the focus on development economics was aggregate techniques developed in the Keynesian revolution. These techniques provided economists with a way to easily measure economic development through per capita income.
13. Robert Solow, "Technical Change and the Aggregate Production Function," *Review of Economics and Statistics* 39 (1957): 312–320.
14. William Easterly, *The Elusive Quest for Growth* (Cambridge, MA: MIT Press, 2001), 35.
15. *Ibid.*, pp. 35–37.
16. On the augmented Solow model, see Wolfgang Kasper and Manfred E. Streit, *Institutional Economics: Social Order and Public Policy* (London: Edward Elgar, 1999).
17. Adriaan Verspoor, "Educational Development: Priorities of the Nineties," *Finance and Development* 27, no. 1 (1990): 20–21.
18. Easterly, 2001, pp. 73.
19. On this point, see Maria Minniti, William Bygrave, and Erkko Autio, *2005 Global Entrepreneurship Monitor* (London: London Business School and Babson College, 2006), who found that while education is important, the least educated individuals in high-income countries are just as likely as highly educated individuals in that country to own an established business. In other words, it is not education alone that generates entrepreneurship but the institutional environment which directs entrepreneurial behavior.
20. Douglass C. North, *Institutions, Institutional Change, and Economic Performance* (New York: Cambridge University Press, 1994).
21. Maria Minniti, "Entrepreneurship and Network Externalities," *Journal of Economic Behavior and Organization* 57 (2005): 1–27.
22. Alvin Rabushka, *The Three Chinas* (Boulder, CO: Westview, 1987).
23. Baumol, 1990.
24. *Ibid.*; Baumol, 2002.
25. Israel M. Kirzner, *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985); Peter J. Boettke and Christopher J. Coyne, "Entrepreneurship and Development: Cause or Consequence?," *Advances in Austrian Economics* 6 (2003): 67–88.
26. Kevin M. Murphy, Andrei Shleifer, and Robert W. Vishny, "The Allocation of Talent: Implications for Growth," *Quarterly Journal of Economics*, 106 (1991): 503–530.
27. Smith, 1991, p. xliii.
28. James Gwartney, Robert Lawson, and Randall Holcombe, "Economic Freedom and the Environment for Economic Growth," *Journal of Institutional and Theoretical Economics* 155 (1999): 643–663; Gerald W. Scully, "The Institutional Framework and Economic Development," *Journal of Political Economy* 96 (1988): 652–662; Gerald W. Scully, *Constitutional Environments and Economic Growth* (Princeton, NJ: Princeton University Press, 1992); Fraiser Institute, *Economic Freedom Index of the World 2004*. Available at: <http://www.freetheworld.com/release.html>; last accessed on July 23, 2005.
29. See Fraiser Institute, *Economic Freedom Index of the World 2004*, chap. 1, p. 22. Available at: <http://www.freetheworld.com/2004/efw2004ch1.pdf>; last accessed on July 23, 2005.
30. Fraiser Institute, 2004, pp. 23–26.

31. A first attempt can be seen in Robert H. Bates et al., eds. *Analytic Narratives* (Princeton, NJ: Princeton University Press, 1998).
32. Hernando de Soto, *The Other Path* (New York: Basic Books, 1989).
33. Hernando de Soto, *The Mystery of Capital* (New York: Basic Books, 2000).
34. For other examples of ethnographic research see, Emily Chamlee-Wright, *The Cultural Foundations of Economic Development: Urban Female Entrepreneurship in Ghana* (New York: Routledge, 1997); Edward Stringham and Peter J. Boettke, “Czech Your Premises: Will Regulators Help Stock Markets in Transition?,” working paper (2003); Christopher J. Coyne and Peter T. Leeson, “The Plight of Underdeveloped Countries,” *Cato Journal* 24, no. 3 (2004): 235–249.

8

Entrepreneurs in the Global Economy

Kent Jones

Entrepreneurship is the process by which individuals, through their own efforts and through the organizations in which they are principal decision makers, actively seek to generate and capture new value in the marketplace. Globalization is the process of progressive integration of markets around the world. It follows that the environment for entrepreneurs has expanded. Whereas the study of domestic entrepreneurs focuses on those who create new value in their local or national markets, by extension global entrepreneurship focuses on how new value is created through international transactions.¹ Technological improvements in communications and transportation have brought markets closer together, so that international trade and investment have increased the scope of opportunities and of competition. Technology itself now spreads quickly across the globe, and people and their ideas travel to new outposts of opportunity. At the same time, both natural and government-induced barriers continue to impede the full mobility of goods and services, capital, people and ideas across borders, and also within borders. While entrepreneurial activity is now nearly universally regarded as a significant factor in economic growth and development, there is an inherent tension between the private impulse for unfettered entrepreneurial activity and the tendency of governments to assert control over their national economies and limit such activity. This chapter sets out to identify the impact of globalization on entrepreneurial behavior, and to suggest a framework for understanding this relationship as a policy issue.

The chapter begins with a discussion of the concept of entrepreneurship as a multidimensional process of value creation. There follows a consideration of the role of entrepreneurs in the gains from international trade and investment. These ideas provide the foundation for a broader inquiry regarding the impact of entrepreneurship on a country's comparative advantage and the pattern of trade.

This discussion moves from traditional trade models that focus on factor endowments to more recent models based on market structure and sources of innovation, and finally to the eclectic business environment model of Michael Porter.² The final sections deal with policy issues: trade policy, protectionism, the World Trade Organization, and fostering entrepreneurship in developing countries. A concluding comment presents a policy agenda for global entrepreneurship.

THE CONCEPT OF ENTREPRENEURSHIP

In order to facilitate an assessment on a global basis, it is important to understand the concept of entrepreneurship in broad and inclusive terms. As an economic phenomenon, entrepreneurial activity combines innovation and informed risk taking to create new value for the firm, which also creates new value in the marketplace and society. Joseph Schumpeter defined entrepreneurship as the creative act of combining existing supplies of productive means in new ways, and he offered a taxonomy of entrepreneurial outcomes that includes new products, new production methods, new markets, new sources of supply of intermediate goods, and new organizations.³ Typically, the entrepreneur has the goal of maximizing profits over a particular time horizon, but other goals may also be considered.⁴ While small firms are often regarded as the epitome of entrepreneurship, innovation and risk-taking are also possible in larger and older firms. William Baumol, for example, has observed the tendency for many large firms to internalize the process of innovation through systematic research and development budgeting, a strategy driven by survival instincts in increasingly competitive markets with rapid technological change.⁵ This is especially important in considering business opportunities in global markets, where new value has appeared in the midst of far-flung supply chains and investments by multinational firms.

As Schumpeter's listing indicates, innovation in the entrepreneurial sense includes new inventions and production processes, but also many other market initiatives that combine elements of existing market concepts.⁶ Entrepreneurship therefore encompasses a wide range of creative and innovative activity, from the commercialization of a new technology to a multinational strategy to create a more efficient supply chain, to opening a new restaurant or retail outlet in a promising neighborhood.

Defining entrepreneurship in terms of activities that add value to the economy deliberately excludes activities that may be inspired by an entrepreneurial impulse, but which Baumol has described as unproductive or even destructive.⁷ In the broad sweep of economic history, innovative activities by would-be entrepreneurs have usually been channeled into corruption, crime, patronage seeking, acquisition of government entitlements, war and conquest, activities that do not typically generate economic efficiency and growth. This is the result of the fact

that, until recent times, social structures as well as political and economic incentives have tended to support the established order by suppressing innovations and business activities that generate independent economic profits and wealth for creative individuals. History thus indicates the importance of the social, legal, and political environment, and especially economic policies, in fostering productive, as opposed to unproductive, entrepreneurship. The distinction is important even today, as some firms pursue protectionist trade policies with entrepreneurial zeal, leading, in turn, to the introduction by governments of new and exotic forms of market barriers that reduce economic efficiency and growth.

In addition, entrepreneurship is a process, a multidimensional human activity that takes place in a social, legal, and political environment. First of all, it is a process of decision making and action that has a behavioral component and therefore lends itself to psychological and sociological study.⁸ Entrepreneurs are individuals that are motivated to do what they do not only by economic incentives, but also by personal aspirations and cultural, social, and family considerations and constraints. Since entrepreneurs must assess risks and opportunities, they must act within a legal and regulatory environment, and must typically receive financing based on a combination of persuasion and access to family savings, venture capital, or bank loans, all of which may in turn depend on the broader business and economic environment. Global factors may play a role in these aspects of the entrepreneurial process as well, through immigration, the availability of foreign venture capital, foreign competition and opportunities, and the incentives of international trade and investment policies.

GAINS FROM INTERNATIONAL TRADE AND INVESTMENT

Globalization is an important element of entrepreneurship because the economic gains from international trade and investment can enhance—or even introduce new opportunities for—the economic gains from entrepreneurship. In the simplest economic models of trade, two trading countries both gain from trade because trade allows each to specialize in the production of its most efficient (comparative advantage) industries, and then export that output in exchange for imports of the goods it makes less efficiently. The static gains from trade in this case come from improved resource allocation and expanded consumption opportunities. Even in this basic model, entrepreneurs play a role in capturing the gains from trade to the extent that they are constantly seeking out new business opportunities and thereby improving the economy's efficiency and production base. Under free trade, new businesses will constantly be pushing the economy to the outer frontiers of its productive capacity, since the competitive conditions of open trade will set prices on inputs that reflect their true market value, and thereby allow them to move to their activity of highest reward, assuring absolute economic efficiency. Optimizing internal economic capabilities through entrepreneurship

in turn helps to maximize the gains from trade, since it provides the most productive and efficient base from which to begin trade.⁹

If the country is also open to foreign direct investment (FDI), the economic benefits increase further, since the transfer of additional capital into the country will improve the productivity of labor there. FDI also typically brings new technologies, managerial experience, and training into the country, and may also create additional business opportunities for local entrepreneurs. In terms of the Schumpeterian definition of entrepreneurship as the creative act of combining productive means in new ways, a policy of free trade and free inward FDI will tend to maximize the domestic opportunity set for its entrepreneurs by maximizing allocative efficiency and providing access to lowest cost inputs, technologies, and world-class business practices. To the extent that other countries also practice free trade and investment, all entrepreneurs globally will benefit, as their opportunity sets will now include access to foreign consumer markets, inputs, technologies, and partners. Thus the environment for both domestic and international entrepreneurship will tend to improve significantly from progressive multilateral trade and investment liberalization, a key policy finding to be discussed next.

The gains from trade go beyond these allocative efficiencies, however. Extensions of the basic model introduce the possibilities of additional gains from trade based on economies of scale, product variety, differing tastes across countries, and the spread of new technologies. In an economy open to international competition, entrepreneurs can thereby seek out new market opportunities, and must at the same time meet the highest global standards in relevant competitive elements, whatever they may be in a particular market: quality, customization, cost minimization, managerial practices, and so on. The competitive element of globalization is perhaps the single most important impulse for motivating and disciplining the entrepreneur, as it provides all the ingredients of new market opportunities and challenges that lead to the creation of new value for the economy.

Globalization also improves countries' availability of resources for entrepreneurs through labor movements across borders. The most fundamental contribution in this regard comes from the number of potential entrepreneurs themselves in a country who arrive through immigration. The German economist Wilhelm Röpke, in a classic defense of open immigration policy, described immigrants as a dynamic economic force in their new homelands and this characteristic is often manifested in their disproportionate role in the entrepreneurial activities of their destination countries.¹⁰ In addition, immigration itself is often the result of the unequal distribution of populations and economic opportunities across the world. As a self-selected group of travelers typically facing either repression, deprivation, or at the very least minimal opportunities in their home countries, many new immigrants tend to be highly motivated in achieving business success in their new countries. Immigrant entrepreneurship has become a distinctive subfield of study, based on patterns of cultural and community behavior among entrepreneurs in broader immigrant communities, on the

characteristic industry and market focus of such groups, and on the sources of financing of specific ethnic groups.¹¹ In general, immigration tends to endow the destination country with a greater supply of entrepreneurs, and to provide increased dynamism in the economy at large.

Furthermore, even if they do not engage directly in entrepreneurial activity, immigrants and temporary migrants can also provide critical labor resources for new business development. Massive inflows of immigrants provided labor for the expansion of American industry in the nineteenth and early twentieth centuries, and guest worker labor from Turkey and other Mediterranean countries fueled much of West Germany's economic growth after the Berlin Wall was built in 1961, an event that had deprived the country of its existing source of new workers from the east.¹² Highly qualified foreign-born scientists and engineers have contributed significantly to the growth of high-technology firms in the United States. Immigration and more generally, labor mobility across national borders, therefore represent important channels of market adjustment when domestic sources of labor are constrained.

While immigration is often associated with the negative effects of a "brain drain" on the country of origin, recent studies suggest that immigrant entrepreneurship may not necessarily lead to a diminution of business activity in the country of emigration. National and cultural ties to the homeland often provide collaborative business and trade opportunities.¹³ With business knowledge that spans both the old and new countries, immigrant entrepreneurs are in a position to recognize new market possibilities, gaps in current market coverage, and opportunities for cross-country cost savings, technology adaptation and strategic alliances. Again, the interaction of entrepreneurship and trade leads to a compounding of the economic gains from both sources.

Another critical resource for entrepreneurship is financing, and globalization has vastly increased the integration of financial capital markets among countries. This trend has generally improved the efficiency of global financial markets for all participants, as capital availability has improved in previously capital-scarce regions, and as capital is now better able to move to places where it receives the highest reward. In addition, however, globalization has also led to the increase in the availability of global venture capital in particular. The increasingly global nature of market opportunities implies in many cases the need for global, rather than simply domestic, commercialization, as a prerequisite for success. Venture capitalists are thus more likely to look abroad to support new business ideas that have global market potential, and they are also motivated by the search for higher profit opportunities among the larger global pool of entrepreneurial ventures. Cross-border financing of entrepreneurial ventures is increasing, with about half of Asian countries' and 90 percent of Israel's private equity funding coming from foreign sources.¹⁴ Foreign-sourced venture capital financing is also increasing in Central and East European countries, and in the developing world in general.¹⁵

An assessment of entrepreneurship in the global economy rests in many ways on the policy environment for innovation and risk taking among sovereign

nations in the world, which may also be subject to the forces of globalization. At the same time economic policy trends often tend to spread across borders as part of a globalization of ideas. The decline and fall of communism in the Soviet Union and East European countries led to the spread of market reforms in most of the successor countries, although not all to the same extent. The deregulation trend in the United States and the United Kingdom, beginning in the late 1970s, spread through the Single European Act to other European Union countries, and in various forms also to many developing countries as well. The central bank tendency toward anti-inflation policies began in the early 1980s and spread throughout much of the world. This development has been particularly important for the expansion of entrepreneurial activity, as inflation heavily discounts future earnings from risky ventures, discouraging risk taking. All of these trends have benefited the spread of entrepreneurship, both domestically and globally.

ENTREPRENEURSHIP AS AN ELEMENT OF COMPARATIVE ADVANTAGE

The previous section focused on the links between globalization and entrepreneurship, and how they reinforce each other. A closer examination of international trade concepts can shed further light on the possible role of entrepreneurship as a determinant of trade patterns among countries. Neoclassical economic theory has traditionally paid little attention to entrepreneurship in explaining market effects and outcomes, including those of international trade and investment.¹⁶ Heckscher-Ohlin trade theory, for example, is based on the pattern of relative factor endowments among countries in determining the pattern of prices, imports and exports, and rewards to factors of production. Firms are defined as disembodied combinations of labor and capital in perfectly competitive markets, producing homogeneous commodity-type goods. The relative factor intensity of production among industries is determined by existing technologies, to which all producers have equal access globally. A country's endowment ratio of labor to capital then establishes its pattern of comparative advantage, and thus its export good and import good. There is no distinctive or differentiating role for entrepreneurial activity in this model: outcomes follow deterministically from impersonal market forces. As Baumol has put it, "the theoretical firm is entrepreneurless—the Prince of Denmark has been expunged from the discussion of *Hamlet*."¹⁷ The simple determinant pattern is that a country will tend to export the good that uses its relatively abundant factor of production intensively, and import the other good.

Entrepreneurs and Factor Endowment Models

Extensions of traditional trade theory, along with new trade models, have afforded entrepreneurship at least a potential role in determining trade patterns,

however. One avenue for this influence comes from augmenting the types of factors of production to include *human capital*, for example, the total value of education, training, and experience in a country's workforce.¹⁸ Human capital can represent entrepreneurial ability in at least two ways: First, as a measure of innovative capability (e.g., through technical and scientific training) and second, as a direct measure of entrepreneurship education as a dedicated program of study. This extension of trade theory therefore predicts that a country's relative endowment of human capital linked to entrepreneurship, compared to other countries, will help to determine its export performance in entrepreneurship-intensive goods such as new products or the output of start-up firms. Yet this approach is incomplete in that it rests on a definition of entrepreneurship that is limited to measures of education and training, which ignores the influences of the economic and social environment, as well as government policies in fostering entrepreneurial activity. In addition, entrepreneurial activity encompasses more than technological innovation, and many entrepreneurs have certainly not completed the sort of education that human capital statistics would measure.

A more subtle approach to the role of entrepreneurs in trade patterns comes from a consideration of the distinctive character of entrepreneurial financing. An article by José Wynn sets out to identify entrepreneurial ventures as small businesses that have limited access to traditional financing, as opposed to larger firms, which have easier access to bank loans and traditional capital markets.¹⁹ Under these circumstances, a country with greater accumulated wealth among entrepreneurs (and their families) will allow the small firms to overcome the limited access to financing, and thereby induce greater output from them, while improving the incentive structure for their success. Therefore, the larger a country's relative endowment of wealth, the more it will tend to export the output of its small, entrepreneurial firms.

Representing the role of entrepreneurs in trade models through the use of factors of production such as human capital and wealth begs the question of why entrepreneurship itself cannot stand alone as a factor of production. The proliferation of entrepreneurship as an academic field of study certainly suggests that education can impart a specific body of knowledge that will significantly contribute to entrepreneurial activity. If this is true, then entrepreneurship could be represented as a distinct subcategory of human capital. Alternatively, statistical measures of entrepreneurial activity, such as the number of new start-ups, or trends in new patent filings and patent commercialization, could perhaps measure a country's endowment of entrepreneurship. Yet the difficulties addressed earlier in this chapter in defining entrepreneurship, along with the myriad influences on it through social, cultural, and political environments, indicate that establishing a measurable, stand-alone factor of production representing entrepreneurial capacity is likely to remain elusive. In this regard, the very idea that the supply of entrepreneurs in an economy can change is a controversial issue. Baumol, for example, surmises that the ratio of productive to nonproductive entrepreneurial activity depends on the rules of the game in a society.²⁰ Combining this factor

with social and cultural influences, one can appreciate the fact that entrepreneurship is, in the end, a multidimensional process that defies simple deterministic modeling. As a result, the neoclassical trade model based on factors of production is too restrictive a framework to use in establishing a satisfactory link between entrepreneurship and trade patterns. It is perhaps best to regard entrepreneurship as an element of an economy's production capability that interacts with other factors—human capital, wealth, the socio-political-legal environment and relevant policies—to enhance output potential and determine trade patterns.

Market Structure and the Sources of Innovation

Other developments in trade theory have tended to imply the presence of entrepreneurship without ascribing a systematic role to it. In particular, as trade theory extended its analysis beyond the assumption of perfect competition into monopolistically competitive and oligopolistic markets, the possible influence of entrepreneurship became more apparent. In monopolistic competition, for example, many firms compete by varying the characteristics of a basic product type. Thus entrepreneurial strategies to create innovative designs, quality enhancements, and other differentiating features for particular submarkets play a prominent role in this form of market structure. Trade opportunities arise as the dispersion of consumer preferences across the global market causes submarkets to overlap national borders, leading to *intraindustry trade*, that is, cross-trade among countries in similar products. Globalization has resulted in an expansion of trade and entrepreneurial opportunities based on the proliferation of product varieties to satisfy global consumer preferences, and the efficiencies of expanding production to take advantage of scale economies. Markets for fashion apparel, consumer electronics, toys, and cosmetics provide examples of heavily traded and differentiated goods in global monopolistically competitive markets.²¹

Oligopoly, a market structure characterized by competition among a small number of firms, also exhibits entrepreneurial features in many cases. Barriers to market entry typically come from specific firm assets, such as patents, capital-intensive or research-and-development production processes, and exclusive access to inputs that often are the result of entrepreneurial innovation and effort. Entrepreneurial value may also derive from strategies to develop distinctive capabilities and to maintain networks of supplier and customer relationships that are difficult for potential rivals to imitate. In a globalized economy of heavy competition and possible new rivals, however, such firms must remain entrepreneurial in order to maintain their market positions, through a constant renewal of innovation and other strategies to keep ahead of potential competitors. In this regard, the global economy has increasingly forced large corporations to adjust to market changes in an entrepreneurial manner, as the specter of eroded market share and commoditization of their products must be met with creative new strategies of differentiation, innovation, and cost reduction. Many oligopolistic industries have experienced this sort of crisis, including steel, automobiles,

chemicals, pharmaceuticals and commercial aircraft producers, with varying degrees of success over the years. At the same time, globalization itself often provides channels of adjustment for oligopolistic firms, through global supply chain rationalization, outsourcing, and multinational investment. All of these possibilities to create new value for the firm and the market constitute entrepreneurial activities.²²

Entrepreneurship becomes more prominent in trade theories that emphasize the role of local demand, technological advancement, and innovation. Staffan Linder developed a model of a country's trade pattern based on "native demand" or local tastes in a country.²³ Entrepreneurs recognize the consumption preferences in local markets and develop new technologies and products to satisfy that demand. As they become expert in designing and producing such products, and especially if the local market is large enough to exploit economies of scale, they develop a competitive advantage in exporting those products. Alternatively, access to world markets may also provide opportunities for economies of scale. Furthermore, trade in consumer goods will tend to be most intensive among countries with similar per capita income levels, based on shared income elasticities of demand for these products.²⁴ The logic of this proposition lies in the presumed correspondence of tastes across countries in terms of underlying income-linked characteristics, for example, the growing preference for labor-saving household appliances as wages and income rise in various countries. In broad and general terms, global trade patterns support the Linder model, as most world trade in consumer products occurs among high-income countries. Progressive globalization in consumer markets has been marked by a convergence in tastes in some (not all) products. An important implication of this model is that globalization provides entrepreneurs in high-income countries with increasing export and international investment opportunities in other high-income countries' markets. It cannot, however, provide a comprehensive explanation of trade in these products, since such trade also takes place between countries with dissimilar income levels.

In a similar vein, Raymond Vernon developed a paradigm of trade patterns based on the product life cycle that explicitly entails innovation as a central part of the story.^{25, 26} In a typical product cycle scenario, an entrepreneur will introduce a new product or production technology in its home market, creating a monopolistic advantage for the firm on world markets and leading to exports from the country of innovation. In intermediate stages of the product life cycle, various scenarios are possible. Rival entrepreneurs from other countries may develop similar technologies or products and begin to compete with the innovating firm, undermining its monopoly position and reducing its exports. On the other hand, the entrepreneur in the innovating firm may make direct foreign investments preemptively in foreign countries where competition would otherwise begin, in an attempt to forestall (at least for a time) rival production. The innovating firm may also choose to license the product or form partnerships or alliances as part of its strategy to sustain the product's profitability. As the

product cycle continues to mature, the product becomes increasingly standardized, and competition will tend to erode the innovating country's exports of the product, and the innovating firm's profits. At this point, the original firm may have begun to harvest any remaining profit opportunities by establishing production in the lowest cost locations, so that any export now comes from low-cost countries.

Across the product life cycle, the innovating firm thus faces a series of entrepreneurial decisions on which current and future profits for the firm from this product will depend. Trade patterns will typically show initial exports solely from the country of innovation, then competing exports from other countries (either from rival firms or from subsidiaries of the innovating firm), and during the final stage of standardization, exports from lowest-cost countries (again from the innovating firm subsidiaries or other firms). In the meantime, the country of innovation is likely to have become a net importer of the product.

The product life cycle outlines a typical pattern of entrepreneurial behavior in global markets that are open to trade and investment. Development of a new product creates profit opportunities in domestic and foreign markets, which lead to export activity and perhaps foreign investment. Rival firms are thereby attracted into the global market and try to exploit their own profit opportunities through competing R&D, competing or differentiated products and cost competition. Strategic moves and countermoves in foreign investments, outsourcing, partnerships, and licensing are designed to capture as much of the product's present-value profit potential as possible. It is important to note that the product's profit opportunities in general tend to diminish in time; hence, many firms will attempt to renew the product cycle with additional innovations. In fact firms with distinctive capabilities to generate innovations continually will invest systematically in R&D as a long-term market strategy. As noted earlier, globally competitive markets tend to bring out the best in entrepreneurs, providing incentives for them to maximize their innovative and profit-seeking activities, and also maximizing the gains from entrepreneurship, trade, and investment for the global economy.

The Business Environment and the Porter Model

Economic theories of trade tend to offer analytically rigorous models that establish cause-effect relationships among measurable inputs, market factors, and outcomes, such as the structure of a country's imports and exports. As shown by the preceding discussion, in many ways such models can provide significant insights into the impact of entrepreneurship on international trade and investment, even when the entrepreneurial function is not specifically identified. Michael Porter, in his book, *The Competitive Advantage of Nations*, has developed a broader and more eclectic paradigm of what he calls "competitive" (as opposed to comparative) advantage in global trade markets.²⁷ By including the national business environment, local firm rivalry, and producer-supplier incentive

structures as determinants of a country's firms' performance on international markets, he gives the contextual nature of entrepreneurship a systematic role in trade not revealed by traditional trade theories. It is worth citing Porter's specific reference to entrepreneurship in this regard:

Invention and entrepreneurship are at the very heart of national advantage. Some believe these acts are largely random. . . . If we accept this view, the determinants become important in developing an industry but its initial formation is a chance event. Our research shows that neither entrepreneurship nor invention is random. . . . determinants [of national advantage] play a major role in locating where invention and entrepreneurship are most likely to occur in a particular industry.²⁸

Porter's model of national competitive advantage is based on an interconnected set of four factors: (1) firm strategy, structure and rivalry, (2) domestic demand conditions, (3) related and supporting upstream and downstream industries, and (4) factor conditions. Most of these elements reflect the influences of traditional trade theories, such as the imperfect competition in the first, Linder's income and home demand model in the second, and the Heckscher-Ohlin factor proportions theory in the fourth. Perhaps the most compelling statement Porter makes regarding entrepreneurship and the pattern of trade, however, is that innovation and entrepreneurial activities do not occur in a vacuum. They are inspired and motivated by the exacting demands of the customers that entrepreneurs know; by competition among rivals, usually within the country, vying for bragging rights in the industry; by the presence of specialized experts and researchers produced by local universities; and by networks of innovative and efficient firms providing inputs or purchasing outputs from entrepreneurs.

Porter goes on to observe that the favorable business environment for commercializing new medical products in the United States, for example, arose as the result of a particularly strong and specific combination of competitiveness factors, such as the presence of leading engineering and medical schools and teaching hospitals, increasing demand for sophisticated medical services, and the regional proliferation of competing high-technology firms specializing in this area. Even foreign firms entered the U.S. market with direct investments in this sector.²⁹ Such a business environment tends to maximize the incentives for entrepreneurs. The single most important element that runs through Porter's model of national competitive advantage is the spur and discipline of competition. Businesses must compete with each other for scarce resources and inputs in the economy, including qualified technical, research, and managerial staff. In addition, firms compete with their rivals on domestic markets for market share and bragging rights for best performance and also with international rivals on global markets, for world competition provides the ultimate test of world-class performance. At the same time, national industries grow from the soil of their own traditions and culture, domestic market conditions, and incentives emanating from government policies.

Globalization, in this context, enhances the value of national competitive advantages by expanding markets and market opportunities. It can also be disruptive, by increasing competition and accelerating change, so that the churning of markets causes the decline of some firms and industries and the rise of others.

Porter's model focuses on the business environment at the national level in presenting his model of trade and national advantage. Ultimately, however, entrepreneurship is about individuals acting upon their perceived opportunities, and it is clear that each individual enterprise has a story to tell with regard to its decision to enter international markets. This aspect of international business activity has given rise to a growing literature on the management of the global entrepreneurial venture, especially among small and medium-sized firms.³⁰ Globalization provides opportunities for the entrepreneur to exploit through export markets, direct foreign investment, licensing, and partnerships. While for some firms, international opportunities appear only after their formation, as an extension or supplement of their domestic market, other firms are "born international." The form that the international enterprise takes depends largely on the type and incidence of transaction costs, network structures across borders, the resources of the firm, and how knowledge and technology regarding the business opportunity spread.³¹ The international aspect of entrepreneurial ventures therefore combines both national characteristics and firm- and industry-specific elements. The crucial underlying policy issue remains the extent to which entrepreneurs can transact freely across borders, which is the subject of the next section.

ENTREPRENEURIAL BEHAVIOR, TRADE POLICY, AND GLOBAL TRADE INSTITUTIONS

The account of entrepreneurship and globalization so far has highlighted the advantages of open markets and competition in terms of incentives for efficiency, innovation, and informed risk-taking to create new values for both the entrepreneur and the economy as a whole. The logical conclusion to draw at this point is that policies of free trade and international investment will maximize these economic gains for all participating countries and their citizens. Yet entrepreneurial activity in global markets presents a special challenge to existing firms (and workers in those firms) that may be forced to adjust to trade liberalization and increased imports. Lobbying activity places pressure on governments to protect domestic firms from the sting of foreign competition. As a result, in reality very few countries come anywhere close to practicing free trade. It is therefore important to consider the impact of government economic policies designed to diminish the disruptive effects of globalization and free markets on existing domestic industries and workers. While an extended commentary on the issue of protectionism is beyond the scope of this chapter, a focused discussion of its relevance to entrepreneurs is in order.

The economic gains from international trade, investment, and entrepreneurial activity are not typically shared equally among all participants in the economy. Trade theory, in particular, has shown that certain factors of production, especially a country's scarce factor in the traditional Heckscher-Ohlin model, will typically suffer economic losses as trade begins. It is noteworthy that the gains from trade are theoretically sufficient to compensate the losers from trade while still allowing everyone, on balance, to gain. Unfortunately, devising policies to achieve this goal without introducing perverse incentives has proven to be difficult. In general, workers in import-competing industries will often oppose trade liberalization for fear of losing their jobs. Company owners may join them in opposing imports, but this depends on what alternatives they face as import competition increases. Domestic firms with heavy investments in fixed capital with few alternative uses may face large capital losses from import competition, and would therefore tend to join hands with workers to lobby for tariffs. As suggested by the adjustment measures described earlier, however, it may be possible for the firm to outsource part of its production, rationalize its supply chain, specialize its production, or make foreign direct investments or partnerships as means of adjusting to the new competition. In such instances, workers and firms may not necessarily be on the same side of the issue.

Since entrepreneurs are by definition creative individuals who exploit opportunities and introduce innovation, change and dynamism in markets, any policies that close off import competition and associated market signals are inherently inimical to them, and to the entire incentive structure of entrepreneurship itself. Within a national economy, entrepreneurs compete with other businesses for scarce production inputs. Suppose now that in a simple economy entrepreneurs produce a good that can be exported and other firms produce a good that competes with imports. Tariffs on imported products artificially raise their prices compared to other goods, and thereby divert scarce inputs toward the protected markets, increasing the costs of making the goods produced by entrepreneurs, leading to lower production and exports in that sector. A tariff on imports thus also represents an implicit tax on exports and therefore in many cases a tax on entrepreneurship. In this particular example, tariffs are biased against entrepreneurs to the extent that they favor older, larger, established, and less efficient firms that cannot compete with imports, over newer, smaller, export-oriented firms. Protectionist measures in general "save" existing jobs in declining sectors, which often have strong political representation, at the cost of creating potential new jobs in nascent and growing sectors that may not yet exist and therefore have little or no political representation.

Protectionist lobbying is typically a form of unproductive entrepreneurship, as described by Baumol earlier, in that it represents investments by existing firms with the goal of capturing additional value from consumers through higher prices. It also shifts value away from other firms through reduced competition and the artificial scarcity of inputs used in the protected sector, thereby increasing costs for more innovative firms. Rather than creating new value in the

marketplace, protectionist lobbying redistributes value toward favored industries, and also destroys value in the process. In economic terminology this activity is called *rent seeking*, which entails two types of economic costs: a misallocation of resources due to the distortion of prices and output, and a diversion of resources toward unproductive activity—the lobbying effort. Regarding this last point, purely market-driven outcomes would require that the firm's assets be used to manage the firm efficiently, invest in R&D, and develop new strategies to maximize profits, in other words, to act in an entrepreneurial manner. Protectionist lobbying, on the other hand, systematically changes the firm's decision-making behavior in that it presents the possibility for the firm to profit from the acquisition of political influence through investments in lobbying assets.³² It is worth noting, furthermore, that lobbying, in itself, tends to be biased against entrepreneurs because political influence is easier for large, established firms with entrenched and endangered workforces to obtain. Small and medium start-up companies in new sectors are not typically in a position to purchase favors from government policymakers.

Most governments have come to recognize the central issue of trade policy, which is the tension between open trade policies that create economic gains for the economy as a whole, and trade restrictions to protect the interests of favored industries from the ravages of disruptive global markets. Politically, the siren call of protectionism is very strong and difficult for governments to resist, and it therefore makes sense for them to establish a global trading system that can provide an external anchor to discourage all member countries from imposing excessive protectionism at home, while providing an attractive way to focus on the export-enhancing aspects of increased trade. The General Agreement on Tariffs and Trade (GATT), concluded in 1947, and its successor, the World Trade Organization (WTO), founded in 1995, are institutions that have attempted to maintain this delicate and often precarious balance.³³ The current WTO system establishes a set of rules for member countries' trade policies to curb protectionism, while providing a forum for trade liberalization and dispute settlement. The WTO membership stood at 150 countries in 2006, with most other countries planning to join.³⁴

The WTO is of great importance to the expansion of global entrepreneurship because it sets up rules of market access that all member countries must honor. The main underpinning of the WTO system is its rule of nondiscrimination, the most-favored nation principle. This element of the WTO agreement, combined with multilateral agreements on trade liberalization, assures member countries and their exporters and importers that countries are not allowed to arbitrarily cut off or restrict market access to imported products, or suddenly give preferential market access to other countries.³⁵ Consider the implications of this arrangement for entrepreneurs engaged in international trade as either exporters, importers, or investors. Entrepreneurs often face considerable uncertainty in entering or sourcing from foreign markets, not knowing if market access might be arbitrarily closed by the foreign or domestic governments. The denial of access, or the

unexpected shift of access rights to other countries' exporters, would result in a loss of the value of investment in production capacity, foreign distribution, supplier relations, and other trade-related activities. As a result, investment in trade-related activities and participation in international markets would be discouraged. The role of the WTO has been to establish an agreement on rules of reciprocal and nondiscriminatory market access, and in so doing to facilitate an environment of certainty regarding trade and investment in the world economy.³⁶ The fundamental motivation for the WTO system lies in the simple but compelling consensus among its members that increased trade improves national economic welfare for all trading countries. Insofar as entrepreneurial activity is linked with trade and its expansion, the WTO thereby improves the global environment for entrepreneurs through the reduction of political risk and uncertainty regarding foreign market access.

EXTENDING ENTREPRENEURSHIP AND TRADE OPPORTUNITIES TO THE DEVELOPING WORLD

The foregoing discussion has generally assumed that countries possess the basic foundations of a functioning business environment, including the political stability and legal framework necessary to carry out business transactions. Yet in many of the world's countries, these prerequisites for sustainable business and economic development are absent, and as long as this situation persists, it will be impossible for their populations to participate in the benefits of trade and entrepreneurship. This is not to deny that entrepreneurship exists in developing countries, but only that entrepreneurs there often face a much more limited set of opportunities for value creation.³⁷ In order to reap the benefits of systematic value creation through global market participation, national economies must plug into the global economy, requiring a minimal alignment of domestic economic structures with those of the world market. This process in turn may often require a fundamental transformation of the domestic economic environment, and even of the society itself. The reciprocal nature of the economic gains across markets implies that the rest of the world stands to benefit as well when entrepreneurship, trade, and growth take hold in these countries.

The underlying issues are vast and difficult, and go well beyond the scope and capacity of this study to treat them meaningfully. However, any overview of entrepreneurship and globalization, and any policy agenda for improving the environment for trade and growth, requires at least a brief acquaintance with the main issues. For example, Baumol's proposition that the rules of the game represent the main determinant of innovative, value-creating activity suggests that a particular agenda of policy reforms and institutional developments in a given country could succeed in unlocking the country's potential for productive entrepreneurship on a national scale. The basic functions of government in a market economy, including provision of the rule of law, a system of property rights, and

protection of contracts, would be necessary. In addition, the provision of macroeconomic stability, political stability, a working banking and credit system, and public health services (especially disease prevention) need to be in place before the business environment can support sustainable entrepreneurial innovative and risk-taking activity. There are of course many other gaps of a material nature, such as infrastructure for communication and transportation, basic education, and administrative training to provide government services without excessive corruption (a major channel of nonproductive entrepreneurship in many countries). Many of these same requirements apply to a country's capacity to participate in the global trading system, and to comply with obligations under WTO membership.³⁸ World development agencies and foreign aid may be able to provide some of the resources needed to fulfill these goals, and there have been interesting and promising experiments in providing entrepreneurship education in developing countries. However, fulfilling the fundamental domestic requirements of stability and internalized incentive structures for growth are likely to require many years or even decades of slow and organic progress for the least developed countries.

In the meantime, it is possible that the broader phenomenon of global entrepreneurship can contribute to the economic welfare of developing countries in other ways, especially through the international movement of factors of production. Foreign direct investment (FDI), for example, can provide not only capital for creating new value in natural resource industries, basic manufacturing, and basic consumer product markets, but also introduce technologies and training. FDI has played a prominent role in the development of several Southeast Asian economies, particularly in clothing, toys, and sports equipment for export.³⁹ In addition, these FDI installations have provided opportunities for local entrepreneurs to supply inputs and supporting services. Other possibilities of beneficial FDI in developing countries include communications, water and other utilities, and infrastructure. The constraint on further expansion of FDI in developing countries is due to political and economic instabilities in many countries, notably in Africa, to continued weak domestic consumer demand, and to the uncertainties and restrictions of local government policies and regulations regarding foreign investment.

A less conventional proposal, presented in discussions of multilateral trade negotiations, is the idea of allowing more open labor movement across borders through guest worker programs, especially less-skilled labor. As an alternative to more politically explosive immigration liberalization, the guest workers would return with their wages to the home country. A number of economic studies have estimated that the potential gains from such labor movement are much greater than the gains from trade liberalization in goods alone.⁴⁰ In many developing countries with limited internal markets and other resources, repatriated wages may be one of the best ways to stimulate development.⁴¹ The associated business opportunities would come for entrepreneurs both in the host countries and in the countries of the guest workers.

A POLICY AGENDA FOR ENTREPRENEURSHIP AND GLOBALIZATION

Entrepreneurship, as a manifestation of innate human creativity disciplined by the market system, is not essentially about genius, but about incentives. In view of the benefits that come from the fruits of entrepreneurship and from trade, policymakers from all countries face the challenge of creating a business environment that will foster and encourage these activities. The traditional focus of entrepreneurship policy has been on local and domestic regulations regarding business start-ups, taxes, and labor hiring and benefit policies. The present study has highlighted the links between entrepreneurship, trade and trade policy, which point to a related policy agenda to keep global markets as free as possible. Globalization, with its relentless competitive pressures and shifting patterns of market advantages, imposes the challenge of adjustment on all countries, but simultaneously provides the opportunities for new ventures and economic growth. Governments, ever mindful of entrenched business interests and widespread anxieties over rapid economic change in their populations, are sorely tempted to block global market forces. The economic cost of resisting change, however, is high.

The central policy agenda to promote global entrepreneurship must focus on progressive liberalization of global markets. Since entrepreneurship is typically at the cutting edge of new market development, technological innovation, and rationalization of production and cost, trade restrictions in general tend to be biased against it. There is, as a result, a compelling case for supporting trade liberalization as an instrument of promoting entrepreneurship, both domestic and global. To borrow an anatomical metaphor, a healthy and growing economic system requires the free flow of goods, services, factors of production, technology and ideas in the same way that a healthy human body needs the unrestricted flow of nutrients into the blood and blood to the heart. Constricting such flows within the economy, and into the economy through trade and investment restrictions, compromises the system in the same way that arteriosclerosis—a hardening of the arteries—damages the functioning of the human heart and body in general.

In assessing the overall role of government policies in promoting economic growth and a higher standard of living, the logical requirement would be to have policies that increase worker productivity and the availability of new and better products, in other words, policies that foster entrepreneurship. The principal role of government in this regard lies in providing political and macroeconomic stability, as well as a legal framework for property rights and contracts and regulatory oversight over competition and the banking system. Beyond that, the scope for governments to play an active role in enhancing domestic or international entrepreneurship is limited. Porter finds evidence of a modest contribution by governments to cultivating national competitive advantage, based on successful policies to complement existing national strengths in his four-point paradigm.⁴² Government action can improve on market outcomes in cases where market externalities—the failure of private market signaling to allocate resources

efficiently—indicate underinvestment in certain areas. Basic education through public schooling is a prominent example, as well as some elements of infrastructure, such as transportation networks, port development, and basic scientific research. These efforts are characterized by their broad impact on the entire economy, usually in the form of public goods. In contrast, helping particular industries with government policies tends to be inherently biased against other industries, and is much more problematical. It is virtually impossible to devise general industrial policies that can rely on the superior judgment of government bureaucracies over private market forces in guiding resource allocation and value creation.⁴³ It is the free market, a system of open price competition, resource allocation, and trade that is, in the end, the ultimate public good and generator of economic value.⁴⁴

Foreign aid to promote economic and entrepreneurial capacity in developing countries has also proven to show at best modest success so far. In the least developed countries, efforts to eradicate disease and avert mass starvation are necessary in order to make any progress toward development possible, and should therefore continue. More focused development programs and foreign aid, directed by the World Bank, have the potential to improve economic capacity and even entrepreneurship in some cases, but tend to suffer from the fact that the aid is channeled through governments, which, as noted here, are typically incompetent at micromanaging national economies, even at basic stages. In order to generate an economy based on expanding entrepreneurship, a more fundamental transformation of these economies will be required. There is much room for governments in developing countries to reform their economies by lowering trade barriers and opening their markets to more international investment, and by introducing institutional changes to move towards a functioning market economy. In this regard, the introduction of private microfinancing in some developing countries has been more successful at stimulating a nascent entrepreneurial culture than government-directed subsidy programs, for example.⁴⁵

Unlocking the entrepreneurial potential of domestic and international economies therefore seems to require, in general, that governments provide a stable business environment and otherwise get out of the way. There is, however, one crucial area in which government can and in most cases must play a positive role in supporting entrepreneurship: to manage the political issue of adjustment to market changes and import competition in their economies. Protectionism remains one of the principal and most potent enemies of entrepreneurship, and it achieves political resonance by exploiting domestic fears of lost jobs and displacement. The antidote to protectionism is economic flexibility, which ideally comes from market structures that allow the free mobility of capital and labor from declining industries to new employment in growing industries. Clearly, entrepreneurship itself can play a major role in this process, providing new employment opportunities amidst the churning of economic change. Unfortunately, market adjustment often does not occur smoothly on its own, as it may require workers to retrain and relocate, which contributes, in turn, to a preference for the

alternative of forestalling the adjustment altogether through protectionist policies. If ever there was a need for entrepreneurial thinking in government policy, this is a prime example. Creative policymaking is required in order to bridge the adjustment gap, perhaps through temporary wage subsidies between jobs, so that one-time assistance will result in long-term productive reemployment in another industry or region.⁴⁶ Similar adjustment issues will occur in developing countries, but with lower resource bases, suggesting the possible role of international and institutional foreign aid to help finance these efforts in poor countries. While all such government assistance programs are vulnerable to abuse, there is an urgent need to develop and refine such programs in order to promote trade liberalization. Without the assistance of a trade adjustment safety net, the resulting political opposition to globalization will continue to be a dangerous toxin in efforts to keep markets open for global entrepreneurship. The abundant gains from entrepreneurship and from international trade and investment are worth the political effort needed to ensure political support for them.

NOTES

1. For a discussion of the definition of international entrepreneurship, see Patricia McDougall and Benjamin Oviatt, "Defining International Entrepreneurship and Modeling the Speed of Internationalization," *Entrepreneurship Theory and Practice* 29, no. 5 (2005): 537–554.

2. Michael Porter, "What Is Strategy?," *Harvard Business Review* 74, no. 6 (1996): 61–78.

3. Joseph Schumpeter, *The Theory of Economic Development* (Cambridge, MA: Harvard University Press, 1934). This is one of the earliest systematic treatments of entrepreneurship, completed in its original German version in 1911.

4. Entrepreneurship can also encompass goals related to charity and social utility, such as the elimination of disease in a region, direct service to the poor, and so on. These objectives are equally subject to the creative and innovative activities associated with traditional business entrepreneurship, and many such initiatives have a global dimension, as represented by such groups as Doctors Without Borders and Oxfam International. Entrepreneurship in general may therefore be defined to include activities that increase social value, either in terms of market value or of social utility. See, for example, the collection of essays by Marilyn L. Kourilsky and William B. Walstad, eds., *Social Entrepreneurship* (Dublin: Senate Hall Academic Publishers, 2003).

5. William J. Baumol, *The Free-Market Innovation Machine* (Princeton, NJ: Princeton University Press, 2002).

6. For example, an earlier entrepreneurial venture to produce steel more efficiently combined the ideas of steel and the Bessemer process. In ancient times, existing concepts of ceramics and wooden basket gave rise to the invention of pottery. Similarly, combining the ideas of an existing retail service and a potentially underserved location would represent yet another entrepreneurial combination. For a theoretical examination of this concept, see Ola Olsson and Bruno S. Frey, "Entrepreneurship as Recombinant Growth," *Small Business Economics* 19, no. 1 (2002): 69–80.

7. William J. Baumol, "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy* 98, no. 5 (1990): 893–921.

8. Mark Granovetter, "The Economic Sociology of Firms and Entrepreneurs," in *Entrepreneurship: The Social Science View*, ed. Richard Swedberg (Oxford: Oxford University Press, 2000).

9. In graphical terms, entrepreneurship pushes domestic production onto the production possibilities frontier, and, based on its link with economic growth, will push the frontier itself outward. Unless there are adverse terms-of-trade effects, the expanded domestic production base will almost always lead to even greater national economic welfare under free trade.

10. Wilhelm Röpke, "Barriers to Immigration," in *Twentieth Century Economic Thought*, ed. Glenn Edward Hoover (New York: Philosophical Library, 1950).

11. Robert Kloosterman and Jan Rath, eds., *Immigrant Entrepreneurs: Venturing Abroad in the Age of Globalization* (Oxford: Berg, 2003).

12. The classic treatment of immigrant workers as a supply of labor is contained in William A. Lewis, "Economic Development with Unlimited Supplies of Labor," *The Manchester School* 22 (1954): 139–181.

13. Anna Lee Saxenian, "Brain Circulation: How High-Skill Immigration Makes Everyone Better Off," *Brookings Review* 201 (2002): 28–31.

14. Martin Haemig, "The Globalization of Venture Capital," *Israel Venture Capital Journal* 3, no. 1(2003): 8–12; see also Kent Jones, *The Globalization of Venture Capital: A Management Study of International Venture Capital Firms* (Bern: Verlag Paul Haupt, 2003).

15. Anthony Aylward, "Trends in Venture Capital Finance in Developing Countries," IFC Discussion Paper no. 36 (World Bank, 1998).

16. Keith S. Glancey and Ronald W. McQuaid, *Entrepreneurial Economics*, chap. 3 (Houndsmill, UK: Palgrave, 2000), for a general discussion of neoclassical economic theory and its view toward entrepreneurship.

17. William J. Baumol, "Entrepreneurship in Economic Theory," *American Economic Review* 58, no. 2 (1968): 66.

18. Theodore W. Schultz, *Investment in Human Capital: The Role of Education and of Research* (New York: Free Press, 1971); Gary Becker, *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (Chicago: University of Chicago Press, 1993). The value of human capital can be estimated as the accumulated value of investments in education and training among workers over time.

19. José Wynn, "Wealth as a Determinant of Comparative Advantage," *American Economic Review* 95, no. 1 (2005): 226–254.

20. William J. Baumol, "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy* 985 (1990): 893–921.

21. For a brief but broad review of economic theories and evidence regarding monopolistic competition and intraindustry trade, see Edward E. Leamer and James Levinsohn, "International Trade Theory: The Evidence" in *Handbook of International Economics*, vol. 3, eds. Gene M. Grossman and Kenneth Rogoff (Amsterdam: Elsevier, 1995).

22. For a general discussion of firm strategy, see Michael E. Porter, "What Is Strategy?," *Harvard Business Review* 74, no. 6 (1996): 61–78.

23. Staffan B. Linder, *An Essay on Trade and Transformation* (New York: John Wiley, 1961).

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25. Raymond Vernon, "International Investment and International Trade in the Product Cycle," *Quarterly Journal of Economics* 80, no. 2 (1966): 190–207.

26. For a more general treatment of technology and trade, see Gene M. Grossman and Elhanan Helpman, "Technology and Trade," in *Handbook of International Economics*, eds. Gene M. Grossman and Kenneth Rogoff (Amsterdam: Elsevier, 1995).

27. Michael E. Porter, *The Competitive Advantage of Nations* (New York: Free Press, 1990).

28. *Ibid.*, pp. 125–126.

29. *Ibid.* Porter goes on to use several industry and national business environment studies to document patterns of international competitiveness.

30. See, for example, the collections of essays, Hamid Etemad and Richard Wright, eds., *Globalization and Entrepreneurship: Policy and Strategy Perspectives* (Cheltenham, UK: Edward Elgar, 2003); Marian V. Jones and Pavlos Dimitratos, eds., *Emerging Paradigms in International Entrepreneurship* (Cheltenham, UK: Edward Elgar, 2004), and the many references they provide.

31. Benjamin M. Oviatt and Patricia Phillips McDougall, "Toward a Theory of International New Ventures," *Journal of International Business Studies* 25, no. 1 (1994): 45–64, reprinted in 36, no. 1 (2005): 29–41.

32. Jagdish Bhagwati, "Directly Unproductive, Profit-Seeking Activities," *Journal of Political Economy* 90 (1982): 988.

33. For a general discussion, see Bernard M. Hoekman and Michel Kostecki, *The Political Economy of the World Trading System* (Oxford: Oxford University Press, 2001).

34. The largest country outside the WTO in 2006 was the Russian Federation, which was in the process of WTO accession. For a listing of current member countries and those seeking to join, access the Internet page http://www.wto.org/english/thewto_e/acc_e/status_e.htm.

35. Nondiscrimination is not an absolute rule in the WTO, as countries can form free-trade areas and custom unions under the provisions of GATT article 24. However, the rules are designed to ensure that such arrangements do not restrict particular imports from efficient supplier countries. Bernard M. Hoekman and Michel Kostecki, *The Political Economy of the World Trading System*, 2nd ed. (Oxford: Oxford University Press, 2001).

36. Jan Tumlir, *Protectionism: Trade Policy in Democratic Societies* (Washington, DC: American Enterprise Institute, 1985).

37. The implication of this analysis is that entrepreneurs can create new value to the extent that the business foundations are in place. In traditional economies based on family and local community ties, the scope of entrepreneurial activity tends to be limited to transactions within the ambit of local markets and the relationships they can sustain. Extending the reach of entrepreneurial activity to broader regional, national, and international markets therefore requires the introduction of impersonal market institutions such as formal property rights and enforceable contracts, as well as reciprocal access to foreign markets.

38. David F. Luke, "Trade-Related Capacity Building for Enhanced African Participation in the Global Economy," in *Development, Trade and the WTO: A Handbook*, eds. B. Hoekman, A. Mattoo, and Philip English (Washington, DC: World Bank, 2002); see also Bernard M. Hoekman and Michel Kostecki, *The Political Economy of the World Trading System*, 2nd ed. (Oxford: Oxford University Press, 2001).

39. For a general discussion of the economic impact of multinational corporations on developing host countries, see Edward M. Graham, *Fighting the Wrong Enemy: Antiglobal Activists and Multinational Enterprises* (Washington, DC: Institute for International Economics, 2000).

40. For a summary and overview of these studies, see Andrew H. Charlton and Joseph E. Stiglitz, "A Development-Friendly Prioritisation of Doha Round Proposals," *World Economy* 28, no. 3 (2005): 293–312.

41. A general discussion of the case for liberalized labor movement is contained in Prahdip Bhatnagar, "Liberalising the Movement of Natural Persons: A Lost Decade?," *World Economy* 27, no. 3 (2004): 459–472.

42. Porter, 1990, chap. 12.

43. Ibid.

44. Nancy Birdsall and Robert Z. Lawrence, "Deep Integration and Trade Agreements: Good for Developing Countries?" in *Global Public Goods: International Cooperation in the 21st Century*, eds. Inge Kaul, Isabelle Grunberg, and Marc Stern (New York: Oxford University Press, 1999).

45. For background on microfinance for developing countries, see Maguerite S. Robinson, *The Microfinance Revolution* (Washington, DC: World Bank, 2001).

46. See the proposed adjustment assistance program presented by Lori G. Kletzer and Robert E. Litan, *A Prescription to Relieve Worker Anxiety* (Washington, DC: Institute for International Economics, 2001).

9

Immigration, Ethnicity, and Entrepreneurial Behavior

Jonathan Levie and David Smallbone

This chapter is concerned with the question of whether or not immigrants and members of ethnic minorities behave differently than native-born and ethnic majority individuals when it comes to entrepreneurship, and if so, why. Understanding immigrant and ethnic minority entrepreneurship is important for two main reasons. First, in some countries, immigrants and ethnic minority entrepreneurs make significant and unique contributions to the stock of business activity. Second, in some cases immigrants and ethnic minorities may face barriers to developing their full entrepreneurial potential, in addition to those faced by members of the indigenous population.

This chapter is organized as follows. In this introductory section, we define immigrant and ethnic minority entrepreneurs and identify what makes them different from other entrepreneurs. In the second section, we consider the literature with respect to rates of immigrant and ethnic minority entrepreneurial activity across countries and over time. In the third section, we review explanations for these differences in rates of entrepreneurial activity. Specifically, we review the evolution of theories and empirical evidence on immigrant and ethnic minority entrepreneurship over the past few decades. Next, we suggest what this means for policy, and describe selected examples of policy initiatives in different parts of the world. Finally, we pull it all together in a concluding section that summarizes what we know and do not know about immigrant and ethnic minority entrepreneurship, and suggests future directions for research in this area.

Being an immigrant and being a member of an ethnic minority are two different characteristics of an individual, providing different life experiences and evincing different behaviors, although in practice the attributes are often closely interrelated. Two broad categories of origin are recognized: native-born, that is,

those who live in the country of their birth; and immigrants, those who were born outside their country of residence. Ethnic minority individuals are distinguished from those from the ethnic majority on the basis of commonly accepted socially or culturally distinctive categories with which they identify themselves.¹ In some countries, such as the United Kingdom, these categories have labels that may refer to ancestral, rather than personal, geographical origin (e.g., Asian) or skin color (e.g., black) or both (e.g., black Caribbean). This is because in these countries, members of some ethnic minorities may be second- or third-generation migrants, with the younger generation being born, brought up, and educated in the host country. In other countries, both ancestral and current geographical origin may be identified, for example, African Americans or Native Americans in the United States. Not surprisingly, ethnic majorities vary between countries. For example, in the United Kingdom and the United States, the commonly accepted ethnic majority, and the label used in ethnic studies, is white, while in Scandinavia, the ethnic majority is Nordic.^{2, 3} The characteristics of ethnic minorities also vary between countries, with former colonial influences reflecting the composition of ethnic minority communities in some European countries, such as the United Kingdom, France, and the Netherlands.

In the entrepreneurship literature, the distinction between a focus on entrepreneurship among ethnic minorities and among immigrants is not always clearly made. In some countries, such as Canada and Sweden, for example, a common working assumption is that in studying or working with ethnic minority entrepreneurs one is studying immigrant entrepreneurs. An important exception is research on indigenous communities, which tend to be treated as a special case. In the United Kingdom, on the other hand, the dominant focus by researchers and policymakers has been on ethnic minority business, although recently there has been an increasing recognition of the distinction between first generation and subsequent generation ethnic minority entrepreneurs, where generation refers to their immigrant status.⁴ In the United States, a distinction is sometimes made between voluntary and involuntary migrant communities; the principal examples of the latter being African Americans descended from slaves, and Native Americans.⁵ In seeking to understand the entrepreneurial behavior of immigrants and members of ethnic minorities, it is important to recognize that differences can exist between immigrant or ethnic minority groups in relation to characteristics that may have implications for their involvement in entrepreneurship. For example, the proportion of foreign-born individuals may vary greatly between different ethnic groups; age profiles of different ethnic/immigrant groups may be very different; and there can also be differences in their educational profiles, all of which may be associated with the circumstances in which the group in question came to be in the country.⁶

In an attempt at definitional clarification, Radha Chaganti and Patricia Greene suggested a three-way split between immigrant entrepreneurs, ethnic entrepreneurs, and minority entrepreneurs.⁷ The difference between ethnic and minority entrepreneurs is that ethnic entrepreneurs are identified based on their degree of

social affiliation with others of a similar national or immigrant background, while minority entrepreneurs are identified solely on the basis of their identified ethnic origin.⁸ In practice, however, ethnic entrepreneurs are almost invariably a subset of minority entrepreneurs who may or may not be also immigrants.

The context for immigration also varies between countries. Immigrants may be perceived very differently by indigenous populations of immigrant-based societies, such as Canada, Australia, and Israel, which seek and welcome newly arrived immigrants, compared with the populations of nation states with a dominant ethnic majority, where immigrants are in a minority and may be viewed with suspicion. This, of course, influences entrepreneurial behavior, and sometimes in unexpected ways. For example, in France, researchers have found that Maghreb immigrants may start their own business not because French society welcomes their entrepreneurial flair but because of discrimination in the labor market or expected discrimination in their workplace.⁹ In Malaysia, the dominance of Chinese entrepreneurs in Malaysian business is a political issue, and has prompted government attempts to encourage entrepreneurship among the indigenous Malay population, which represent the ethnic majority.¹⁰

Because of its complexity and diversity, the topic of ethnicity and minority entrepreneurship is a difficult one to summarize in simple sound bites, given the difficulty of drawing generalizations. However, in the remainder of this introductory section, we draw some major trends from the literature.

As the growth of small firms and self-employment has become an increasingly widespread feature of economic development in the last thirty years, many immigrants and members of ethnic minorities have contributed to this process. As Monder Ram and David Smallbone have noted, despite problems of cross-national comparison, the rise of immigrant and ethnic minority entrepreneurship is an international trend, being especially prominent in Anglo Saxon economies, such as the United States, the United Kingdom, Canada, and Australia, as well as in some continental European countries, such as the Netherlands and France.¹¹⁻¹⁷ The factors influencing this trend vary over time and also between countries, representing a combination of the opportunity structures facing these groups, cultural factors influencing the propensity toward business ownership, and structural factors. One driver of this trend is demography. Many developing countries have rapidly growing populations and insufficient employment opportunities, while the more mature market economies have aging populations and low birth rates, needing an inflow of immigrants to fill positions that might otherwise be unfilled, although the nature of these employment opportunities may change over time.¹⁸ A perhaps unanticipated side effect of these economic migration flows is the corresponding increase in immigrant and ethnic minority entrepreneurship.

At the same time, the entrepreneurial record of immigrants and ethnic minorities is mixed. In some countries, regions and cities, certain immigrant and ethnic minority groups show a high propensity to engage in entrepreneurial behavior, bringing benefits to themselves and their host countries, while in other

cases, immigrants and ethnic groups have performed less well in this respect. According to Ivan Light and Parminder Bhachu, “the entrepreneurial performance of immigrant groups depends on the reception contexts,” and there is some evidence to support this.¹⁹ For example, studying ethnic Koreans in Japan and also in the United States, Pyong Gap Min found Koreans in Japan, under dominant societal pressure to conform, to have low levels of entrepreneurship.²⁰ In the United States, in contrast, Koreans had high levels of entrepreneurship. Annie Phizacklea and Monder Ram also reported considerable differences between the reception contexts for Pakistani-led businesses in the United Kingdom with Maghrebian-led businesses in France.²¹ Ezra Razin traced differences in self-employment rates of immigrants to Israel, Canada, and California to the greater bureaucratization of the Israeli absorption process, its economic attributes, and its regional policies in comparison with Canada and especially the United States.²² This and other studies suggest that immigrant entrepreneurs can be successful in some countries, relative to their employed peers, and less successful in others.²³ The reception context can also vary tremendously within a country. For example, Razin found that new immigrants in Jerusalem and Tel Aviv had “Californian” rates of self-employment.²⁴ This research seems to confirm that the reception context of the receiving country is an important factor influencing the level of entrepreneurial activity of immigrant and ethnic minority entrepreneurs, perhaps in combination with the circumstances in which the in-migration took place. This has implications for policy, and we will return to this in a later section.

There is some debate about the historical contribution of immigrants generally to entrepreneurship in their host countries. This is complicated by the phenomenon of waves of immigrants from certain countries arriving on the shores of other countries at different times. Overall, however, immigrants seem to behave entrepreneurially in a way that does not displace employment chances of native-born individuals. They tend not to be as successful as natives in the labor market and while it may take some time for immigrants to find their feet before starting up on their own, their business creation activities are more likely to provide employment for other immigrants, again reducing displacement.^{25, 26} A further complication is that some immigrants are temporary; these so-called sojourners migrate for economic gain but intend to go home as soon as possible.²⁷

In summary, immigrant and ethnic minority entrepreneurship seems to be a growing phenomenon, mirroring the latest wave of human migration that began in the closing decades of the twentieth century. Being an immigrant and coming from an ethnic minority community bring different perspectives to entrepreneurship and influence entrepreneurial behavior. It is therefore important to try to identify those factors and behaviors that distinguish immigrant and ethnic minority entrepreneurs from those of the indigenous and ethnic majority population. In the next section, we review research that seeks to identify how entrepreneurial immigrant and ethnic minority groups are.

HOW ENTREPRENEURIAL ARE IMMIGRANTS AND ETHNIC MINORITY GROUPS?

In this section, we review a selection of published estimates of entrepreneurship rates among immigrant and ethnic minority groups in a selected group of countries. Some of these estimates conflict because of different ways of measuring entrepreneurship; for example, as self-employment, as self-employment and employing others, and as starting a business. Self-employment rates are relatively static measures, as a considerable proportion of the self-employed can remain self-employed for many years. Starting a business, however, is a time-limited activity. Different people start businesses each year. So the rate of change in ethnic and immigrant self-employment may be slower than the rate of change in ethnic and immigrant business startup, if the ethnic and immigrant makeup of a country is changing. Measurement issues aside, most indicators suggest that rates of entrepreneurial activity differ between different immigrant and ethnic minority groups within countries, across countries and over time.

Differences in rates of entrepreneurship by immigrant and ethnic status have important political implications. For example, supporters of immigration point to the economic contribution of entrepreneurial immigrants, while opponents argue that, on the contrary, immigrants are a drain on the receiving society. So it is important to understand the accuracy of the data that is available, and to interpret it carefully. Taking the United States and the United Kingdom as case studies, we start by considering entrepreneurial activity over time among different ethnic groups with high and low rates of immigration, then look at rates over time among immigrants and natives, and finally attempt to reconcile differences in interpretation of trends by researchers in this area.

Using a broad definition of self-employment and Current Population Survey data, Robert Fairlie found that the proportion of individuals who are self-employed in the United States has moved in a narrow band between 9.5 and 10.5 percent between 1980 and 2003.²⁸ Between 1994 and 2003, the proportion of whites in the labor force that was self-employed hardly changed, with a ten-year average of 11 percent. The equivalent figure for African Americans was 4.4 percent, for Latinos was 6.4 percent, and for Asians was 10.8 percent, thereby indicating that in the U.S. case, members of some ethnic minorities demonstrate a lower propensity to engage in self-employment than the white population. However, the ten-year trend line was down for Latinos and Asians and up for blacks. By 2003, white and Asian self-employment rates were similar to each other and black rates were approaching Latino rates. What this shows is that different ethnic groups with high current rates of immigration can have high (e.g., Asian) or low (e.g., Latino) self-employment rates, and that nonimmigrant groups of different ethnicity can have high (e.g., white) or low (e.g., black) self-employment rates. Furthermore, rates of change in self-employment can differ between different ethnic groups over the same time period.

Recent measures of immigrant versus native self-employment for the United States reveal some conflicting tendencies. For example, a report by Jeanne Batalova and David Dixon of the Migration Policy Institute, using 2000 and 1970 Census data, suggested that nonfarm self-employment rates for eighteen- to sixty-four-year-olds are about 10 percent higher for foreign-born than native-born individuals.²⁹ This pattern is similar to that calculated by Maude Toussaint-Comeau using the PUMS database for individuals based in metropolitan areas.³⁰ On the other hand, using U.S. Census Bureau data on self-employment from 1960 to 1997, Steven Camarota of the Center for Immigration Studies came to a different conclusion: “while immigrants were once significantly more entrepreneurial than natives, this is no longer the case. Since 1980, immigrants and natives exhibit remarkably similar levels of entrepreneurship.”³¹ Fairlie, using a different national annual sampling database (the Current Population Survey) and including both incorporated and unincorporated individuals who worked more than 15 hours a week and were self-employed as their primary employment, also found that immigrant self-employment rates in 2003 were almost exactly the same as those for the total labor force. The reasons for these different conclusions may lie in the way these rates were measured, but also in the fast-changing ethnic and immigrant makeup of the United States, which is discussed in the following.

The number of immigrants has been growing in the United States in recent decades, and thus Fairlie found that the proportion of immigrants among the self-employed has grown from 10.9 percent in 1994 to 14.7 percent in 2003. As the proportion of Latinos in the population has grown, so too has their share of the self-employed, up from 3 percent in 1979 to 8.5 percent in 2003. Overall, the share of whites among the self-employed has fallen from 91.5 percent in 1979 to 79.3 percent in 2003, according to Fairlie’s calculations. This suggests that the combination of an increase in immigrant Latinos and a rise in (native-born) black rates may have changed the balance in self-employment rates in recent decades.

Unfortunately, Fairlie’s data source suffers from high nonresponse rates, and this has led some to cast doubt on its reliability.³² On the other hand, Fairlie points out measures of other researchers may underestimate self-employed individuals with incorporated businesses, which tend to have the greatest economic significance. Moreover, as previously mentioned, self-employment rates are a less-than-perfect measure of entrepreneurship. Finally, these results take no account of differences in demographic characteristics between ethnic and migrant groups, such as age and gender, which may also contribute to variations in entrepreneurship rates. The age profile of foreign-born individuals in the United States is very different from that of the native-born. According to the U.S. Census, in 2000, 58 percent of foreign-born individuals of working age (twenty to sixty-four) were aged between twenty-five and forty-four, the peak age for entrepreneurial activity according to the 2003 Global Entrepreneurship Monitor United States Executive Report, compared with only 51 percent of native-born individuals.^{33, 34} In addition, the proportion of males to females in this key twenty-five to forty-four age group was slightly higher for foreign-born and slightly lower for native-born

individuals. This means that age and gender differences between foreign- and native-born individuals could also account for some of the differences in entrepreneurial activity between them.

One of the few studies to control for age, gender, education, wealth, ethnicity, and foreign-born status, and to measure people who were starting businesses rather than running existing businesses, is that of Phillip Kim, Howard Aldrich, and Lisa Keister.³⁵ Using the Panel Study of Entrepreneurial Dynamics (PSED) random sample of 816 nascent entrepreneurs, that is, individuals who were actively trying to start a business, and a comparison sample of nonnascent entrepreneurs, they found that being foreign born, or having foreign-born parents, did not significantly change the odds of being a nascent entrepreneur, when the other variables were controlled for. However, being black or Hispanic rather than white significantly increased the odds. This suggests an independent role for ethnicity rather than migrant status in entrepreneurship in contemporary American society. However, it should be noted that while the self-employment statistics suggest that blacks have a low rate of self-employment, the PSED data suggest that blacks have a high rate of business startup activity. Both are probably correct, but this again illustrates the measurement problems that can cloud our understanding of this area.

In the United Kingdom, a variety of databases suggest that self-employment rates vary widely among different ethnic groups, although when all ethnic minority groups are combined, their overall self-employment rate is similar to that of the ethnic majority, or white, population. As in the United States, absolute (uncontrolled for other variables) rates of blacks, both of African and Caribbean origin, tend to be much lower than the average, while rates among Pakistanis and Chinese tend to be much higher than average. The U.K. Small Business Service, using Labour Force Survey data for spring 2003, found that ethnic majority and minority self-employment rates were identical at 11 percent, although there were significant variations between ethnic minority groups, with Asian rates of 14 percent and black rates of 7 percent.³⁶ It must be recognized, however, that factors other than ethnicity may help to explain such variations in the propensity toward entrepreneurial behavior, including an individual's age, education, and socio-economic status. The U.K. ethnic minority population is considerably younger than the ethnic majority population, which largely reflects differences in birth rates. According to Jonathan Levie, age difference accounts for the bulk of the overall difference in entrepreneurship rates between ethnic groups in the United Kingdom.³⁷

In the same study, immigrants had significantly higher entrepreneurship rates than those who had never moved from their home region (8.4 percent versus 4.3 percent) but, interestingly, did not have significantly higher entrepreneurship rates than U.K.-born regional migrants within the United Kingdom (7 percent). Levie's analysis of Global Entrepreneurship Monitor data suggested that neither immigrant status nor ethnic minority status significantly changes the odds of being a nascent or new entrepreneur, when a range of demographic and attitudinal

variables is controlled for. However, being a recent migrant (i.e., having arrived in the region within the last four years) increased the odds, although being an ethnic minority recent migrant had the reverse effect. Thus, based on this analysis, in the United Kingdom, ethnicity appears to affect the speed with which individuals start businesses in a new location, whether they are immigrants or in-migrants.

As Per Davidsson has emphasized, entrepreneurship must be interpreted in its social context, and this can be illustrated with reference to examples drawn from various European countries.³⁸ Recent ethnic minority immigrants face a new social context, and it may take time for them to adjust before embarking on a new venture that requires local resources. There is some evidence for this, apart from the U.K. study by Levie, although ethnic minority immigrants are not distinguished from ethnic majority immigrants in all studies. In Sweden, a detailed study of self-employed immigrants by Mats Hammarstedt suggested that recent ethnic minority (i.e., non-Nordic) immigrants, irrespective of origin, had lower rates of self-employment than the native population.³⁹ More established immigrants from southern and western Europe and Asia had higher levels, but that was not true of immigrants from other regions of the world. George Borjas also found that self-employment rates were lower among recent immigrants than among those who had been resident for five to ten years.⁴⁰ However, Felix Buchel and Joachim Frick studied sources of income in a number of European countries (but not the United Kingdom or Germany) and found that the proportion of income from self-employment was about the same for immigrants as for native-born across Europe.⁴¹ Together, these studies suggest that if entrepreneurship is initially low among recent immigrants in Europe, it may rise to at least match native-born rates once immigrants have become established.

From this summary of research on ethnic and immigrant entrepreneurship rates, it appears that ethnic minority and immigrant status, on their own, do not necessarily bring a higher propensity to engage in entrepreneurial activity. This is because of the need to consider other contingent factors, such as which ethnic minority an individual identifies with, the length of time an individual has lived in the host country; various personal attributes, the country of origin, the circumstances which led to migration, and the opportunities presented by the host environment. Further insight into how such factors are interrelated may be gained from the following section.

WHY DO DIFFERENT ETHNIC AND IMMIGRANT GROUPS HAVE SUCH DIFFERENT RATES OF ENTREPRENEURIAL ACTIVITY?

There is a long-established literature on what makes ethnic minority and immigrant groups more or less entrepreneurial.⁴² One stream of literature took the view that in ethnically stratified societies, opportunities emerged to act as economic middlemen. Early writers observed that certain ethnic groups acted as

middlemen between the dominant class or race, and subject or minority races or ethnic groups. The minority groups constituted both markets and sources of supply for the ethnic majority groups and vice versa, but typically the majority would refuse to trade directly with certain minority groups thus creating an arbitrage opportunity for an ethnic minority group that was tolerated by both. Examples of this theory of middleman minorities (coined by Edna Bonacich in 1973) included Chinese and Koreans serving a mainly black and Latino customer base in parts of the United States, Indians in British colonial Africa, and Parsis in India.⁴³ This phenomenon undoubtedly exists in certain contexts, although, at best, it offers a partial explanation for the differences in entrepreneurial activity found between different immigrant and ethnic groups, given that it applies only to situations where economic interaction with one ethnic group is avoided by another ethnic group, but a third ethnic group is tolerated by both.

Early literature on ethnic minority enterprise, such as that of Ivan Light, tended to emphasize the role of cultural differences between ethnic groups as a key element responsible for differences in entrepreneurship rates.⁴⁴ More generally, such explanations attach significance to so-called ethnic resources, such as family or co-ethnic labor, as a resource to initiate and sustain the enterprise. In later works, Light distinguished between cultural practices that stemmed from the home country, such as rotating credit arrangements of some East Asian groups, practices that arose from being in the host country, such as employing immigrant or ethnic resources, and between ethnic and class resources. As a simplification, one might think of resource-poor ethnic minority immigrants, based in urban ethnic enclaves, as most likely to draw on ethnic resources, while wealthier ethnic minority individuals might draw on their personal resources and also on their different, more individualistic, values.⁴⁵

Other researchers have found that interaction between culture and entrepreneurship may be stronger in some groups than in others. For example, in an empirical study of 163 London-based immigrant entrepreneurs from six different immigrant communities (i.e., Indian, East African Asian, Pakistani, Bangladeshi, Turkish, and Cypriot), Anuradha Basu and Eser Altinay found that entrepreneurs' motives for starting their own businesses, their sources of start-up finance, and the degree of family involvement varied across the ethnic groups.⁴⁶ However, they also reported that sometimes culture has little influence where one might expect it. For example, they found that Muslim entrepreneurs seemed just as likely to borrow from banks as non-Muslims.

This emphasis on cultural perspectives has been challenged, first, for over-emphasizing the role of ethnicity, rather than socioeconomic status or the class of business owners, and second, because of insufficient attention being paid to the social and economic context in which ethnic minority firms are operating.^{47, 48} Such criticisms have informed a perspective, which has been described as a material structural approach, that emphasizes the material constraints faced by ethnic minority businesses, notably racial discrimination, which limit their labor market opportunities.⁴⁹ In such a view, ethnic minority business activity often

arises from a context of disadvantage, rather than from the development of cultural or ethnic resources.

The disadvantage theory argues that those who are excluded from the mainstream economy because of discrimination may turn to business ownership as an alternative to the labor market, thereby choosing self-employment as an alternative to unemployment.⁵⁰ This theory has been used to explain why, in a wide variety of societies, immigrants and minorities often embrace entrepreneurship as a survival strategy and have high rates of small-business ownership.⁵¹ As we have seen in the previous section, however, self-employment rates can actually be higher among more advantaged racial groups than among the less advantaged ones. Thus the disadvantage theory does not completely explain the complex pattern of ethnic and immigrant entrepreneurship.

A further stream of literature, emerging in the 1980s, introduced the idea of ethnic and immigrant entrepreneurship as stemming from the interaction of opportunities and resources rather than mainly from cultural values. The classic statement of this school was written by Howard Aldrich, Trevor Jones, and David McEvoy in 1984: "the opportunity structure of the receiving society outweighs any cultural predisposition toward entrepreneurship."⁵² In addition, Roger Waldinger, among others, has written about the "other side," that is, the disadvantages and sometimes dead-end nature of ethnic and immigrant entrepreneurship trapped inside an ethnic enclave.⁵³ This theory seems much closer to mainstream entrepreneurial management theory, which is based on the premise that entrepreneurs seize opportunities within a possibility set that is limited by the resources they can access.⁵⁴

More recently, the emergence of the so-called mixed embeddedness perspective, introduced by the Dutch researchers Robert Kloosterman, Joanne van der Leun, and Jan Rath, seeks to understand ethnic minority entrepreneurship by locating it more explicitly in the socioeconomic milieu in which it operates.⁵⁵ In this view, social aspects of ethnic minority entrepreneurship are assessed in light of the economic and institutional contexts in which such enterprises operate. Accordingly, the particular forms that ethnic minority enterprises take will be influenced by a range of factors, such as their sector of activity, locality, labor markets, and institutional support. The complex interplay of these processes, rather than the simple mobilization of ethnic ties, is likely to account for the manner in which ethnic minority firms differ from the wider small business population. Hence, a key strength of mixed embeddedness is that it is a comprehensive perspective that aims to locate ethnic minority businesses in the wider societal structures in which they are embedded. The mixed embeddedness approach builds on the opportunity-resources approach by specifying some of the contexts for those opportunities and resources for ethnic minority and immigrant entrepreneurs, and in doing so achieves some reconciliation with earlier cultural perspectives and disadvantage theory. Mixed embeddedness emphasizes the role of the institutional framework in enabling or constraining immigrant entrepreneurship, not just in terms of the socioeconomic aspects, but more widely to

include legal restrictions, immigration policies, attitudes to small businesses, and so on.⁵⁶

The Dutch researchers noted how immigrants to Dutch cities had transformed derelict areas, introduced new ways of doing business, made transnational economic links; in short, created new economic activity and in ways that the native-born community would never have conceived of. This perspective does not just distinguish between ethnic minority or immigrants and the native population; it recognizes that the particular origin and history of individuals, as well as their position within the host country, creates a unique set of circumstances that affects their propensity to engage in entrepreneurial activity. Mixed embeddedness recognizes the downside as well as the upside of ethnic and immigrant entrepreneurial activity; for example, discrimination in the labor market, the lack of capital forcing entry to highly competitive sectors, and the low returns of many immigrant and ethnic businesses. At the same time, it recognizes that the achievements that have been made are a consequence of the origin and distinct cultures of these groups, often despite restrictions within the host society. The implications of a mixed embeddedness perspective for our understanding of individual behavior in ethnic minority and immigrant groups, in an international context, are to emphasize the role of differences in national legal systems, policies on immigration, and socioeconomic institutional frameworks as key influences.

Building on this, one of the positive aspects of a synthesis of culture and opportunity perspectives is the awareness of the emergence of the transnational entrepreneur. Transnational entrepreneurship straddles continents. With their personal links in both host and origin country, transnational entrepreneurs can rapidly take advantage of innovative market-creation opportunities and arbitrage opportunities, shifting production across continents to gain competitive advantage. Because they do not have the routines of a large multinational organization, they can move more quickly. Although one theme in the transnational entrepreneurship literature has been the shift of entrepreneurs from highly regulated to less-regulated economies, for example, the presence of European entrepreneurs in Silicon Valley as noted by Sami Mahroum in 1999, a more positive one has been AnnaLee Saxenian's documentation in 2002 of the Taiwanese "astronauts," who have shuttled regularly across the Pacific ocean to California, creating a major computer industry in Taiwan that is intimately connected with, and a major supplier to, Silicon Valley.^{57, 58} Saxenian has also expressed hope that the liberalization of the economy in India and other developing countries would prompt a similar flowering of transnational entrepreneurship by U.S.-educated but foreign-born engineers.

Transnational entrepreneurs are not restricted to one highly visible California valley. They exist in other regions and other sectors. For example, Alejandro Portes, William Haller, and Luis Eduardo Guarnizo have researched Latin American transnational entrepreneurs in the United States, and have found that they are well educated, well connected, and more likely to come from stable

countries.⁵⁹ Ewa Morawska has documented three distinct varieties of transnational entrepreneurs in New York, while Bill Jordan and Frank Duvell have studied how Turkish transnational entrepreneurs shift production of their garment industry between Turkey and London and back again according to market prices, labor costs, and customer specifications.^{60, 61}

Another emerging theme in the literature is the hypothesized link between (ethnic) diversity, entrepreneurship, and competitiveness, often associated with the work of Richard Florida.⁶² Drawing on the work of Jane Jacobs, Florida argues that diversity influences economic competitiveness indirectly by fostering creativity.⁶³ Human creativity, in all its forms, is seen as the principal driving force of economic development. Creative people, Florida suggests, are attracted to tolerant places, which are understood in terms of low barriers to entry to people. Although Florida's work has been criticized on the basis that correlation does not necessarily mean causality, the link between ethnic diversity, entrepreneurship, and innovation has some empirical support. For example, in describing the role of Asians in London's creative sectors, Smallbone with Marcello Bertotti and Ignatius Ekanem identified areas where ethnic diversity appeared to be a source of creativity and innovation, contrasting firms owned by young, relatively well-educated Asians in London's creative industries, with the low-value-added nature of many traditional areas of Asian business activity in the United Kingdom.⁶⁴

To conclude, this section has traced the evolution of concepts of ethnic minority and immigrant entrepreneurship from early theories of cultural and class-based disadvantage to a more balanced mixed embeddedness approach. Empirically, this has been associated with recognition of transnational entrepreneurs and of the contribution that ethnic and immigrant entrepreneurs can make to the regeneration of cities through creativity and innovation.

POLICY AND IMMIGRANT AND ETHNIC MINORITY ENTREPRENEURS

The previous section has given us a perspective on why immigrant and ethnic minority entrepreneurs behave in certain ways. We now take a look at government policy and how it may influence (positively or negatively) entrepreneurial behavior by altering the opportunities and constraints facing immigrants and ethnic minority groups to engage in entrepreneurship. First we consider different types of policy relevant to immigrant and ethnic minority entrepreneurship, followed by some examples of how such policies can, deliberately or inadvertently, affect ethnic minority and immigrant entrepreneurs.

There are a variety of ways in which government policies can affect the nature and extent of immigrant and ethnic minority entrepreneurship, particularly when a broadly based view of what constitutes policy is adopted. The contemporary interest in a mixed embeddedness approach to explaining immigrant and

ethnic minority entrepreneurship emphasizes the role of the institutional context in this regard, particularly in relation to the macroeconomic, political, and regulatory environment. The approach emphasizes that entrepreneurship and self-employment, among any groups in society, cannot be understood by focusing solely on the microlevel, because of the influence of institutional structures on the choices of individual actors.

This can be illustrated with reference to a paper by Kloosterman, who presents a typology of policies that may affect the opportunity structures faced by immigrant and ethnic minority entrepreneurs.⁶⁵ Kloosterman's classification is based on a three-dimensional conception of opportunity structures, in terms of the types of policy impacts. It includes what he describes as policies with direct impacts, such as deregulation or privatization; policies with indirect impacts, such as policies that affect the price of factors of production; and the effect of enforcement or nonenforcement of laws and regulations. Privatization policies can increase the range of market opportunities, such as through outsourcing, although Kloosterman suggests that immigrants from less-developed countries are not well positioned to benefit from such opportunities, because of their lack of financial clout. In contrast, the indirect effect of policies, in the Netherlands, aimed at increasing female participation in the labor force did have an impact on immigrant entrepreneurs, who are becoming increasingly active in personal services, such as house cleaning and child care. While this tendency is not caused by the indirect effects of policy interventions, it is encouraged by them. Shifts in the enforcement regime can have significant consequences for immigrant entrepreneurs, particularly if they are heavily involved in informal economic activities.

As in the case of Kloosterman, the paper by Jock Collins, in the same special issue of *Entrepreneurship and Regional Development*, also demonstrates the role of macrolevel policies on immigrant entrepreneurship.⁶⁶ Referring to the case of Australia, Collins shows how the changing policy context over the last twenty years has helped to shape the rates of formation and growth of ethnic minority enterprise, through its influence on the nature of the opportunity structures these entrepreneurs face. According to Collins, microlevel policies targeted at minority entrepreneurs remain underdeveloped in Australia, which helps to justify his emphasis on macrolevel policies.

Other studies show the unforeseen consequences that can arise from regulatory policies, where immigrant and ethnic minority entrepreneurs adjust their business behavior in response to regulatory pressures. This can be illustrated with reference to Maggi Leung's study of Chinese restaurant owners in Germany, where regulations designed to maintain the authenticity of Chinese restaurants by controlling who can legally work as chefs in them, encouraged some restaurant owners to shift to fast food, where the skills required by staff are minimal.⁶⁷ The creativity of human nature, combined with the adjustment capability of small enterprises, means that the impacts of regulation are not always what policy-makers intend. The effects of the regulatory environment are transmitted through a broad range of state activities, including through the knock-on effect of

immigration laws, which may not have had an intended influence on entrepreneurship, but may do so in practice if they affect the status of immigrants and their descendants, for example, by contributing to their feeling of insecurity.^{68, 69}

In the U.K. context, restrictions on immigration, combined with birth-rate trends, contribute to a growing proportion of second- and third-generation migrants in the ethnic minority communities. This has implications for entrepreneurship because younger members of these communities are increasingly reluctant to become involved in traditional family business activities, such as catering, and instead use their educational qualifications to gain entry to the professions and corporate employment, or if they become entrepreneurs, to engage in higher value-added activities than their forebears.⁷⁰

For some years, the entry of labor migrants into Germany has been highly regulated, which has had some specific implications in the involvement of immigrants in entrepreneurship. For example, Leung describes the case of a program that encouraged the development of the Chinese catering sector in Germany in the 1960s.⁷¹ At this time, the German government initiated a skilled worker recruitment scheme with Taiwan, largely for political reasons. Under the policy, 5000 cooks from Taiwan were invited to work in Germany. Each chef was allowed to set up a restaurant and invite five others to join them, within five years of their arrival. Leung reports that this policy greatly affected the pattern of development of the Chinese restaurant trade in Germany, alongside the influx of Hong Kong Chinese, who entered Germany via the United Kingdom in the 1960s and 1970s. This Germany–Taiwan agreement provides a specific example of politically motivated immigration policy impacting on the development of immigrant entrepreneurship.

Turning to measures specifically targeted at ethnic minority or immigrant entrepreneurs, at the microlevel, a key aim in a number of countries has been the reduction of social exclusion and the raising of living standards in groups that are often among the more disadvantaged in society. Moreover, because of a tendency for ethnic minorities and immigrants to concentrate in particular localities, the development of some local economies, and the standard of living within them, may be heavily influenced by the nature and extent of business development among these groups.

Given the geographical concentration of ethnic minority and immigrant groups, and the fact that some of these are relatively disadvantaged, some governments have sought to develop support programs to boost ethnic minority and immigrant businesses through the work of dedicated agencies. In the United States and in the United Kingdom, for example, government assistance for ethnic minority business developed in response to civil unrest—in the 1960s in the case of the United States, and the 1980s in the case of the United Kingdom.⁷² In the United Kingdom, targeted assistance has also been developed because of an apparent reluctance of some communities, notably Asians, to utilize mainstream business support services despite a higher than average level of self-employment.⁷³ There have been various approaches to this issue over the years, including the

development of specialist business support agencies targeted at ethnic minority groups; the appointment of specialist advisers within mainstream agencies; and the use of cultural awareness training for mainstream business advisers. However, it has been suggested that the key element is an approach that is focused on maximizing the level of engagement with ethnic minority and immigrant communities.⁷⁴

In terms of the targeted support offered to ethnic minority and immigrant-owned businesses, a key question concerns the extent to which their support needs are similar to, or distinctive from, those of other small firms. In a large-scale survey of business support organizations across fifteen EU member states and selected “accession countries,” specialist support organizations for minority entrepreneurs identified a range of problems facing their clients, that in many cases were typical of those facing small businesses in general, but appeared to be particularly intense for ethnic minority entrepreneurs.⁷⁵ The problems identified included:

- difficulties in accessing finance for start up and business development;
- perceived discrimination on the part of some financial institutions and support providers;
- problems associated with language difficulties; and
- limited skills and experience in business and management issues.

Since finance emerges as the most commonly reported problem, we review the recent literature on this topic first. We then briefly review language and skills issues, and then consider access to public procurement, an issue which did not feature highly on this list but which has recently attracted the attention of policy-makers in Europe.

Access to finance for ethnic minority entrepreneurs is a controversial issue. The most comprehensive study of this topic in the United Kingdom to date included a large-scale survey, comparing a sample of ethnic minority businesses in the United Kingdom with a white control group. It showed that, as a group, ethnic minority businesses were not disadvantaged in terms of start-up capital from banks and other formal sources.⁷⁶ This applied to their propensity to raise some finance, as well as to the typical percentage of total start-up capital raised. However, more detailed analysis shows considerable variation between ethnic minority groups, with Chinese entrepreneurs showing significantly higher success rates in accessing bank finance compared with white-owned firms, and their African and Caribbean counterparts significantly lower. In the United States, David Blanchflower, Phillip Levine, and David Zimmerman provide evidence that black-owned businesses in the United States experience higher loan denial probabilities and pay higher interest rates than white-owned businesses even after controlling for differences in credit-worthiness and other factors.⁷⁷ In addition, Fairlie finds evidence that the relationship between assets and entry into self-employment appears to be much stronger for blacks than for whites.⁷⁸ Using

data on Trinidad and Tobago, David Storey also finds that denial rates on loan applications are higher for Africans compared with other ethnic groups, and interprets this as possible evidence of discrimination.⁷⁹ Along similar lines, using the 1993 National Survey of Small Business Finances, Ken Cavalluzzo, Linda Cavalluzzo, and John Wolken find a substantial difference in denial rates between firms owned by black Americans and white males, although unobserved variables like personal wealth may account for some of this difference.⁸⁰ They also find that black American owners were less likely to apply for credit in lending markets characterized by higher concentration. Finally, Timothy Bates finds that racial differences in levels of financial capital partly explain racial patterns in business failure rates.⁸¹

Turning to language difficulties, Toussaint-Comeau concluded from the fact that recent and less well-educated immigrants have relatively lower self-employment rates than more established immigrants that policy initiatives that promote language and entrepreneurship training were worth considering for some immigrant groups.⁸² With regard to language training, Alberto Davila and Marie Mora demonstrated using U.S. Census data that immigrant entrepreneurs who are proficient in English earn more than those who do not, and that the economic return on fluency in English has grown over time.⁸³ This would support the case for language training. Other researchers have shown that for some U.S. immigrant groups in particular, poor English skills can restrict the opportunities available for entrepreneurs within their own ethnic community.⁸⁴

In the United States, several government agencies have developed programs that cater specifically for immigrant rather than ethnic minority groups. An example from Maine in the United States is StartSmart. This program uses one-to-one coaching rather than classes to cater for the specific needs of its very diverse clients, who come from all over the world with very different ideas about how businesses should be run and about the role of government in business.⁸⁵

A potentially significant policy area that has been attracting increasing attention concerns access to procurement contracts from both public- and private-sector organizations by ethnic minority enterprises.⁸⁶ There is international interest in this topic, with policymakers and academics in some European countries looking closely at the U.S. experience in this regard. For example, a potentially important source of opportunities for ethnic minority business in the United States is the Public Works Employment Act of 1977, which requires state and local government to reserve 10 percent of federal funds for public works to contract with minority-owned businesses.⁸⁷ The focus is on so-called supplier diversity initiatives and their potential for increasing market opportunities for ethnic minority businesses. The context is the need for increased business diversification among ethnic minority firms, in order to increase the scope for significant business and income growth.

In the United Kingdom, few ethnic minority businesses appear to be successfully accessing procurement contracts. This may result from discrimination in some cases, but it is also affected by supply side factors, such as their typically

small size and sectoral mix. This means that they do not always have the capacity to supply to match the purchasers' needs, or access to information about those opportunities that are available. Evidence of successful policy interventions from the United States, where affirmative action and supplier diversity initiatives are well established, is somewhat mixed. Although there have been some notable successes,⁸⁸ such initiatives have also attracted criticism, because of allegations of favoritism and the effects of overly relaxed bidding procedures on the quality of supplies. One of the positive lessons that can be drawn from the United States is that the private sector has recognized the business case for the adoption of supplier diversity initiatives, since minorities now represent the largest sales growth markets for some products.

Having demonstrated that there are some real differences in the needs of ethnic minority and immigrant entrepreneurs, we now turn to issues related to their access to business support to help address these needs. A consistent finding of previous research on ethnic minority businesses is their low propensity to use mainstream national, regional, or local business support agencies, often relying instead on self-help and informal sources of assistance.⁸⁹ The low take-up of formal sources of business support draws attention to the capacity of mainstream business support agencies to cater adequately to the needs of ethnic minority firms. In this regard, based on the large-scale study of business support for minority entrepreneurs across Europe referred to earlier, Steve Johnson and Smallbone identified five different approaches to delivering support to minority groups, as follows:⁹⁰

- Full integration into mainstream provision, where ethnic minority and immigrant entrepreneurs are treated the same as any other clients
- Targeted marketing and monitoring by mainstream agencies, based on the assumption that the key reason for low take up of business support is a lack of awareness of mainstream provision by minority entrepreneurs
- Special modes of delivery by mainstream agencies, focusing on delivery methods that are suited to the nature and background of minority entrepreneurs
- Special services within mainstream agencies, since some groups of minority entrepreneurs may suffer from specific problems (e.g., discrimination) or general problems (e.g., access to finance) more intensely than do mainstream entrepreneurs
- Specialist agencies for minority entrepreneurs

Johnson and Smallbone concluded that one of these approaches is not necessarily superior to others in all circumstances, and for all groups of entrepreneurs. This is because of differences in the size and distribution of ethnic minority groups, differences in needs, and differences in business support models in different countries and localities. What is important, however, is to ensure that support for minority entrepreneurs is not marginalized, and that specialist support, regardless of the type of organization providing it, needs to be linked in

appropriate ways with mainstream provision of support services to small businesses in general.

In concluding this section, we note that policymakers see scope for enhancing both the opportunities for doing business for members of ethnic minority and immigrant groups, for example, through opening up public procurement systems, and enhancing the resources available to entrepreneurs, for example by improving access to finance and upgrading language and business skills. We have seen that how governments do this can be just as important as what they do. Delivery often needs to be customized so that targeted policies actually reach ethnic majority and immigrant groups, while at the same time not isolating them from mainstream support services. Instead, support for these groups should act as a bridge to the wider economy, if it is to avoid marginalizing them.

CONCLUSION

What do we know about ethnic minority and immigrant entrepreneurship and what do we not know? While our review is not exhaustive, it does reveal the tremendous diversity of rates and types of entrepreneurial activity among different ethnic minority and immigrant groups both within and across countries. Current context and past history shape the individual decisions of people to start a restaurant that sells the food they used to eat in the “old country,” for example, or to grow a transnational clothing enterprise that shuffles the links of its value chain between countries to the rhythm of global supply and demand. The result is a kaleidoscope of ventures that add immeasurably to the variety of entrepreneurship in a nation.

Clearly, our knowledge of the nature and extent of entrepreneurial activity among different ethnic subgroups is partial. As in other aspects of entrepreneurship research it is affected by the quality of the data available. Researchers working with different databases come up with different answers to the question how does entrepreneurial activity vary across different ethnic and immigrant groups. Getting an accurate answer to this question is an important part of the evidence base needed by governments to make appropriate policy interventions. We are also just beginning to understand what may become a powerful globalizing and wealth-creating force: transnational entrepreneurship. At the other end of the scale, we need to understand how ethnic entrepreneurs can break out of the confines of their local ethnic communities and generate wealth from the wider economy, and what policy measures and delivery mechanisms are appropriate in this regard.

The need for answers to these questions prompts us to make the following specific suggestions for further research. On the topic of entrepreneurship rates, the recent emergence of large-scale databases of nascent and new business entrepreneurship, such as PSED and GEM holds out the possibility that researchers will be able to more accurately quantify the entrepreneurship dynamics of different ethnic and immigrant groups, getting closer to the phenomenon than

self-employment data alone permits us to do, provided they contain sufficiently large samples of individual ethnic minority or immigrant subgroups. With this proviso, such large-scale databases are necessary to isolate differences in entrepreneurial activity that are due to being a member of a particular ethnic or immigrant group from those that could be due to other, more basic factors, such as age or education. They may also enable us to more accurately estimate the apparent phenomenon, noted by several researchers, of entrepreneurial activity changing with time in country, or even time in region, as immigrants move out from ethnic enclaves and disperse through a host country.

At the same time, such large-scale studies are usefully complemented by detailed case study research that can provide a greater understanding of the processes operating and the social context in which particular ethnic and immigrant groups find themselves, and the implications these have for entrepreneurial activity. A particularly challenging subject for case study research is transnational entrepreneurship, because of the global reach and shifting nature of the phenomenon. As trade barriers fall, and as the quality of communications and transportation improve, while costs decline, transnational entrepreneurship may well become a significant feature of the global economy. Researchers may have to create new transnational consortia to track and understand this phenomenon. There remains considerable scope for high-quality, policy-related research in the field of ethnic minority and immigrant entrepreneurship, which adopts the broadly based view of policy and institutions, represented in the mixed embeddedness framework. Proper contextualization of policy approaches is essential if useful and relevant lessons are to be drawn from the growing international experience in this field.

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10

Perspectives on Women Entrepreneurs

Past Findings and New Directions

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In 1976, the *Journal of Contemporary Business* published Eleanor Schwartz's article "Entrepreneurship: A New Female Frontier."¹ While Schwartz's was not the first academic paper on entrepreneurship, it was groundbreaking because it was the first focusing on women entrepreneurs. At the time, slightly more than 5 percent of all U.S. businesses were women-owned, or approximately 700,000, and generated \$41.5 million in revenues.² But these numbers soon increased and the Bureau of Labor statistics reported female self-employed increasing from 2.1 million in 1979 to 3.5 million in 1984.³ From 1997 to 2002, women formed new businesses at twice the national rate.⁴ Today, in many countries, women are recognized as a driving force in the economy, whether measured by the number of businesses owned, the revenues generated, or the number of people employed. Overall, female entrepreneurs are increasingly prominent as employers, customers, suppliers, and competitors in the global community.

What have we learned about women entrepreneurs since Schwartz's article? Research about women entrepreneurs considers several units of analysis—women founders, their teams, their ventures, and communities. At the individual level, studies provide demographic information identifying characteristics of women entrepreneurs, their personal goals, as well as their reasons for selecting business ownership over wage and salary work.⁵ Some scholars study operational descriptions of how women create their businesses, building an understanding of their expectations for their businesses. At the business unit level, research focuses on organizational structure, financing and growth strategies, and operations. Besides a broad consideration of the phenomenon of women's entrepreneurship, early research identified several key areas of entrepreneurship in which male and female populations are similar. Many studies examined the degree to which women had similar demographic or human capital characteristics, or whether

their businesses performed similar to male-owned firms. Research, however, was slow to investigate areas of difference. Consequently, researchers produced descriptive publications that did little more than clarify the state of female entrepreneurship and identify the key issues to be addressed.⁶ Some research generated and tested hypotheses, and—where significant challenges or barriers were identified—contributed prescriptive recommendations. But this focus on similarities, grounded in the assumption that men and women entrepreneurs are not different, and that there is one overarching model of entrepreneurial behavior, also limited our understanding of women and entrepreneurship in general.

The remainder of this chapter discusses approach, method, theory, and findings of research over past decades. Specifically, we review scholarly work published on female entrepreneurship since 1976 and summarize its contribution to our understanding of the phenomenon. Our review is divided into four sections: First, we provide a brief overview of the state of research on women's entrepreneurship in the 1980s. We show that research in that decade treated gender as an analytical variable and focused on possible differences between men and women entrepreneurs. Second, using feminist theory as a context for understanding, we provide a review of research conducted in the 1990s. Specifically, we show that emerging theories suggested that context and perspectives were important for conducting research and, as a result, gender began being treated as a lens. Third, we summarize the large amount of literature emerged at the beginning of the new century. Finally, we identify future directions for research and conclude with recommendations for researchers and educators.

LAYING THE GROUNDWORK: GENDER AS A VARIABLE

Until 1990 research focused almost exclusively on male entrepreneurs.⁷ This was not surprising given that men were the primary and more visible population engaged in entrepreneurship up to the mid-1980s. As a result, it was assumed that men and women entrepreneurs were essentially the same, and there was no need to study women separately. But in 1979, a U.S. government report, *The Bottom Line*, catalyzed research on women entrepreneurs.⁸ For the first time the characteristics of women-owned businesses in the United States were documented and the report reflected differences between men and women in terms of both individual behavior and business demographics.

About the same time, feminist perspectives had emerged in the United States on the heels of legislative changes, such as the Civil Rights Act of 1964, the Equal Credit Opportunity Act of 1975, and the Affirmative Action Act of 1978. The design of each of these acts addressed some of the challenges that women faced in starting and growing their own businesses. And already by 1967 the more radical women's liberation movement had popularized political theories and methods to bring attention to women's rights and increase opportunities in the workforce.

Feminist theory, a specific area of social theory, addresses issues of political, economic, and social rights. This theoretical approach also provides a rich tradition for analyzing relations of gender and of class, which make it useful for researching the economic activity of women and men. Early research on women's work was linked to Marxist feminism, arguing that the relationship between women's domestic labor and their market labor is the key determinant of their disadvantaged position compared with men.⁹ Research about women entrepreneurs considered the challenges of managing work and family, their motivations for starting ventures (e.g., more flexible family time) and potential economic benefits of self-employment. However, because the phenomenon of women's entrepreneurship was in the nascent stages and public interest in this population was new, most studies did not test theory but, rather, considered gender (or sex) as a variable. As a result, two streams emerged: research describing the woman entrepreneur and her venture, and research comparing male and female entrepreneurs.

Who Is the Woman Entrepreneur?

Schwartz's pioneering article, "Entrepreneurship: A New Female Frontier," combined exploratory and descriptive research to identify individual characteristics, motivations, and attitudes of women entrepreneurs.¹⁰ Her results showed that the primary motivators for the women in her sample were quite similar to those of men: the need to achieve, job satisfaction, economic payoffs, and independence. Unlike their male counterparts, however, women entrepreneurs reported experiencing difficulties and possible credit discrimination during the capital formation stage. Comparing her own findings to the existing body of literature on male entrepreneurs, Schwartz concluded that there were few differences in the personal attributes of male and female entrepreneurs.

Schwartz's article on female entrepreneurship stood alone for five years until 1981, when Hisrich, Brush, and O'Brien (sometimes working together and sometimes working separately) launched a stream of descriptive research detailing the characteristics of women entrepreneurs, their businesses, performance, and barriers to enterprise growth. Hisrich and O'Brien described motivations, the nature of women entrepreneurs and their businesses, and barriers encountered, concluding that the characteristics of male and female entrepreneurs were similar.^{11, 12} In 1983, Hisrich and Brush launched the first national longitudinal study of women entrepreneurs in the United States.¹³ This research covered the characteristics of the individual women, their motives for start-up, social support systems, barriers and challenges, and the characteristics, growth and performance of their businesses. The initial study yielded a description of the "average" woman entrepreneur: a first-born, middle-class college graduate with a major in liberal arts, married, with children, and a supportive spouse in a professional or technical occupation, founder of a business in traditionally female industries (retail, hospitality, services).¹⁴

A series of studies were built off this early work, using similar research questions and measures to replicate findings. Scott (1986) explored “glass ceiling” issues and the desire for increased flexibility to handle family responsibilities as possible motivators for women.¹⁵ Kaplan (1988) found that motivation differed depending upon the age of the woman business owner and the circumstances of founding.¹⁶ Pellegrino and Reece found that obtaining start-up capital and financial management were the greatest challenges for women.¹⁷

International studies were also launched around these key questions. Swedish researchers found that men and women entrepreneurs had similar economic goals, but they found differences in other types of goals, such as customer satisfaction and personal flexibility.¹⁸

In another study, British women business owners were found to have educational and experiential levels similar to British male business owners, but were found to have very different cumulative educational and work experience patterns.^{19, 20}

In 1987, Brush and Hisrich surveyed their original respondents about growth and performance patterns, strategies of ventures, goals, and future plans.²¹ They found that the majority of the businesses were moderately successful with revenue increases of approximately 7 percent per year, which was slightly less than the average for male-owned ventures. But when compared with the national average, they found that women-owned businesses were less likely to quit or fail. Other studies reported that education and experience were significant factors in predicting financial success.²²

How Do Women Entrepreneurs Compare with Men Entrepreneurs?

Just as the majority of research on men was rooted in early trait psychology and centered on personal characteristics, the overwhelming majority of early research about women entrepreneurs focused on individual attributes.²³ The most frequently studied topics were human capital—particularly education, business experience, specific skill sets—and psychological profiles including motivations and risk-taking propensity. This concern with differences in the characteristics of entrepreneurs grew out of a long-standing effort to develop a trait theory of entrepreneurship and entailed identification and cataloging of those characteristics that separated entrepreneurs from all others with particular attention paid to psychological measures.

In 1983, Geoffee and Scase wrote the most radical U.K. study.²⁴ Starting from the position that entrepreneurial behavior is inherently gendered and can, as a result, reproduce a system of dependent patriarchal relationships rather than economic liberation for women, they proposed a typology of women entrepreneurs based on their motives and choices of both industry and type of business organization. Other articles considering psychological dimensions of women entrepreneurs found that male and female entrepreneurship students differed in their need for control and their risk-taking propensity.²⁵ These results, however,

were countered by Masters and Meier, who found no differences in risk-taking propensity by sex.²⁶

Other researchers sought to determine if maleness or femaleness were salient in predicting success. For example, Smith, McCain, and Warren proposed patterns of male and female entrepreneurial types based on the manner in which the business was operated.²⁷ They concluded that women entrepreneurs were more optimistic. Pellegrino and Reece examined the start-up problems and the challenges women business owners faced and concluded there were basically no differences based on sex.²⁸ Other studies of gender differences explored management style, questioning whether the “entrepreneurial” management style was gender neutral or if there was a particularly “feminine” management style preferred by women entrepreneurs.²⁹ Within this context, one study posited that women-owned businesses were more likely to be informally structured.³⁰

The root causes of limited financial success were often attributed to these management practices. Buttner and Rosen used an experimental design methodology to determine whether women faced obstacles in obtaining bank loans due to their sex.^{31, 32} They found that lending institutions perceived women business owners to be less successful than men even though lending officers did not perceive any differences in the quality of the plans. Buttner and Rosen’s work supported the existence of stereotypes (lender preconceptions that women did not possess the characteristics necessary for successful entrepreneurship), although no evidence was found that these stereotypes influenced lenders’ funding decisions.

Another stream of research linked Marxist feminist issues of work–family balance and considered the effect of domestic attachments on the entrepreneurial behavior of women. One study examined this as an issue of concern for both male and female business owners, but the topic quickly became relegated to being a “woman’s issue.”³³ A study of time use patterns and the use of household help by self-employed women found that increased responsibility for family did provide some explanation for the lower profitability of women’s firms.³⁴

Studies of social networks also emerged in this era. While noting the positive effects of utilizing appropriate networks on rates of business formation, survival, and growth, Aldrich et al. found important distinctions between the content and relevance of men’s and women’s networks, arguing that women’s networks were organized around spheres of work, family, and social life.³⁵ Their work showed that women’s networks were largely similar to men’s networks in terms of activity and density, but that men’s networks included very few women, whereas women’s networks were more likely to include men.³⁶ In a related study, women were found to be more likely to use other women as information sources.³⁷

Overall, this first wave of research during the 1970s and 1980s focused primarily on the characteristics of the business owner, industry or business choice, and barriers to success (with a particular emphasis on access to capital). Descriptive studies provided greater awareness of women’s participation in entrepreneurship, showed similarities in individual demographics, but differences in

industry sector, start-up processes, and performance. Evidence emerged that theories developed on male samples did not necessarily generalize to women. An overarching concern was whether systematic or random biases existed and worked against women business owners.³⁸ Further, this early research raised the awareness of the need for training, workshops, and other mechanisms to educate women about financing and business start-up processes.³⁹

BUILDING THE FOUNDATION: GENDER AS A LENS

In the 1990s, because of a number of political, social, and economic changes, research gained momentum. In 1991, in the United States, for example, the secretary of labor and the Glass Ceiling Commission examined barriers that blocked women and minorities from achieving high-level executive positions in corporations and explored policies to eliminate disparities. The U.S. Small Business Administration Office of Advocacy began publishing comprehensive data about women business owners by sector, state, size, and industry in the *State of Small Business* reports. The National Foundation for Women Business Owners launched a series of national studies to characterize women-owned businesses and identify unique capabilities and concerns.⁴⁰ Women entrepreneurs' networking groups emerged and, in 1995, the National Women's Business Council organized a National Summit to consider a research agenda for women's entrepreneurship. The visibility and awareness of the contributions of women entrepreneurs changed dramatically.

During this time, calls for theoretically based research emerged. Brush reviewed the state of the field and offered an integrative approach that considered a woman's professional and family life.⁴¹ Not only did this article provide a useful framework for research, it also paved the way for increased application of feminist theories in the field and new streams of feminist theory.

Liberal feminism is an outgrowth of political views of equality, entitlement, and individual rights. The fundamental basis assumes that men and women are equal and that rationality, not sex, is the basis for individual rights. Liberal feminism assumes the existence of discriminatory barriers and systematic biases facing women (e.g., restricted access to resources), which must be eliminated. The view argues that it is possible to have equal opportunities. Alternatively, social feminism assumes that men and women have different experiential backgrounds and are socialized to think differently. The premise is that sexuality is socially constructed and therefore sex is regarded as physiological differences between men and women, while gender refers to differences in patterns of behavior between the sexes based on value and roles.⁴² Social feminism seeks to acquire recognition for women's unique achievements and values, viewing genders as "different but equal."

Contrary to research in the 1980s, gender is now often viewed as a lens through which to conduct research rather than just a variable to measure. Fischer,

Reuber, and Dyke offered the first articulation of feminist theory in the context of women's entrepreneurship by applying both liberal and social feminist theories to their exploration of gender differences.⁴³ They found few differences between male and female entrepreneurs in motivations or educational background. Following this line of research, Barrett examined the role of gender in learning styles.⁴⁴ Her Australian study found that women entrepreneurs used a greater variety of sources for learning (e.g., advice from investors, suppliers, business acquaintances, and seminars), while men were more likely to identify a major setback in the current firm as a basis for learning and change. Theoretical approaches also took a unique turn when a feminist geography perspective led to the conclusion that place was important in explaining gender relations and entrepreneurial behavior.⁴⁵

In summary, researchers who took a feminist point of view noted that women had historically been excluded from the entrepreneurship literature and argued for the need to understand entrepreneurship as a gendered activity. They focused on two issues: the construction of the category of the female entrepreneur and the exploration of the unique ways in which the connections among gender, occupation, and organizational structure affect female and male business owners.⁴⁶ Noticeably, while many questions were being investigated from the feminist perspective, most research in the 1990s did not explicitly or directly test feminist theory. Instead, studies continued to focus on the woman entrepreneur, her business, and the context of the business.

Women Entrepreneurs: The Individual

Research focusing on individual women entrepreneurs studied motivations, internal attributes, entrepreneurial tendencies, and behaviors. Studies of values, attributes, roles, and beliefs provided conflicting findings. Fagenson found gender-based differences in fundamental values, but results showed greater value differences by job category (managers and entrepreneurs) than by sex (men and women).⁴⁷ In contrast, others concluded that women did not display "classic" entrepreneurial values, particularly those such as risk taking and profit motivation.⁴⁸ Bellu, on the other hand, found female entrepreneurs and managers to be more likely to take risks than their male counterparts, partly because of their likelihood to face a more hostile and prejudicial work environment.⁴⁹ Similarly, women in nontraditional industries were found more likely than men to allow external pressures to influence their strategies, regardless of their personal values.⁵⁰

Men and women were both found to be more likely to attribute successful entrepreneurial characteristics to men.⁵¹ One reason for this was a perception by women that they were held back in careers because of their gender and pursuit of self-employment as a solution to dual domains of work and family with the suggestion that these feelings are "tainted by patriarchal expectations."⁵² On the other hand, studies of psychological profiles showed few gendered differences or

that specific differences, for example, locus of control, were better explained by other variables, such as level of success, or attributions.^{53–55}

Research from other countries supported U.S. findings about the individual women entrepreneur. For instance, women's motivations for starting a business were remarkably similar across countries, with robust findings supporting independence and personal freedom, security, and satisfaction.^{56, 57} Questions were also asked about the measures of success that women entrepreneurs used, finding the importance of self-fulfillment and goal achievement to be more important than financial profitability.⁵⁸

Early social learning experiences more often influenced men in their preference for entrepreneurship, because of higher self-efficacy and expectations.^{59, 60} Holliday and Letherby conducted an ethnographic study showing that women integrate their business and social lives examining, in particular, roles and authority.⁶¹ A related study found support for gender similarities rather than differences with respect to the relationship between work–family connections and economic success.⁶² Schiller and Crewson found that role models, self-assurance, and marriage were positively related to the supply of female entrepreneurs, while education and experience were negatively correlated with female entrepreneurship but positively correlated with female entrepreneurial performance.⁶³

The pull between family and work, and the other multiple social roles that women play, was found to be more prevalent in owners with lower self-esteem or self-worth.⁶⁴ In particular the relationship between time commitment to work, and time commitment to family mediated the effect of role demands for women, along with expressive and instrumental support from the spouses.⁶⁵ In the United Kingdom, contribution of a spouse's labor was seen as a vital resource.⁶⁶ These resources were seen as potentially providing role flexibility and included such things as higher levels of husbands' earnings from self-employment, access to the husband's knowledge and experience regarding start-up activities, and help from the husband in providing child care.⁶⁷ A study from Turkey found that women faced role conflict in their personal and professional lives with entrepreneurial status having a negative impact on their family life but a positive affect on their social, economic, and individual lives.⁶⁸

Women Entrepreneurs and Their Businesses

Questions relating to strategic choice include those related to the type of business as well as strategies adopted during the start-up and growth processes. Carter, Williams, and Reynolds argued that strategic choice is shaped by experiences to which individuals are subjected and that females and males have fundamentally different socialization experiences that result in the development of unique capabilities.⁶⁹ They found that women-owned businesses had higher odds of discontinuing, fewer resources at start-up (including industry-specific experience in retail), and were launched on a smaller scale.⁷⁰ Women were more

likely than men to develop strategies that emphasized product quality and less likely to emphasize customization or cost efficiency. At the same time, there is evidence that women are more likely to use a relational strategy when working with employees and clients, focusing on creation and development of teams, mutual empowering, achievement, and perseverance.⁷¹ Still other studies found that women business owners underperformed on both survival and growth dimensions, thereby raising the critical question of whether initial business goals for the business influenced financial outcomes.⁷²

Research about the influence of ownership structures on growth aspirations shows husband-wife partnerships having lower growth aspirations while owners with business partners other than a spouse were more likely to be growth-oriented.^{73, 74} Similarly, an Indonesian study found that women started their businesses with different objectives than men and suggested that, as a result, programs and policies need to be gender-differentiated. Findings in the United Kingdom suggested that women were less likely to own more than one business and that when women did plan to grow their businesses, they selected different expansion strategies.^{75–77}

Self-efficacy offered another possible explanation for women's choice of smaller retail and service (traditional) businesses. Anna, Chandler, Jansen, and Mero proposed a model combining venture efficacy, career expectations, and individual context as determinants of industry selection to address these questions.⁷⁸ Barrett identified a male–female image component in strategic choice, finding that men are more likely to choose businesses with a female image than women are to found a business with a male image.⁷⁹

Though the importance of social networks was introduced already during the 1980s, few studies on the topic existed. One exception found that having a high proportion of kin and homogeneity in the network created critical disadvantages for small business owners.⁸⁰ Research in Israel demonstrated that network affiliation, human capital, and motivation theories have greater explanatory power for performance than do social learning or environmental perspectives.⁸¹ A Hong Kong–based study found that reliance on the immediate network or channel for information was more important to women business owners than it was to men business owners.⁸² However, a study in Northern Ireland found few gendered differences in networks.⁸³

Growth and Performance of Women-Owned Businesses

Research on growth and performance of women-owned businesses shows mixed results. A Canadian study showed that women-led businesses were no more likely to go out of business or be less successful than those led by men, or to differ significantly in earnings growth.⁸⁴ This study stands in contrast to those showing women-owned businesses had lower sales volumes and lower incomes as a result of positioning in less profitable industries, as well as lack of access to

capital, and inability to secure government contracts.⁸⁵ Another study found that women business owners had smaller annual sales and employment growth but no gender differences in return on assets.⁸⁶

On the other hand, a study about gender and growth found that having access to financial resources and emphasizing the financial aspects of the business had stronger effects on growth than did intention or choice.⁸⁷ A qualitative study found that gaining start-up capital was not nearly as difficult as acquiring growth capital.⁸⁸ Gundry and Welsch compared women-owned businesses that exhibited high levels of growth with low or no growth businesses, and found differences on the selection of strategies that focused on market expansion and new technologies, a greater intensity of commitment to business ownership, and a willingness to incur greater opportunity costs for the success of their business.⁸⁹

Researchers in other countries also explored issues related to growth of women-owned businesses.⁹⁰ Cliff found that personal considerations appeared to override economic consideration in the business expansion decision.⁹¹ Canadian female entrepreneurs were found to be just as likely to want to grow their businesses as their male counterparts. However, they reported more concerns about the risks associated with fast growth and generally preferred to adopt a slower and steady rate. In the United Kingdom, a study found no impact of any gender-based effects of individual or business characteristics on the firms' potential to achieve significant growth.⁹² However, in Sweden, one study supported the conclusion of no gender differences, while another concluded that growth preferences for women were lower.^{93, 94} Another study showed that during economic fluctuations, particularly recession, the growth probability for firms run by males increased, but for firms run by females, growth became more limited.⁹⁵

Financing Women-Owned Businesses

Many researchers believe that growth and performance are a function of financing. Financing was and continues to be a major topic of research in the field. Research in the 1990s showed that at start-up, female owners preferred internal sources to external financing. However, the owner's sex was not an issue in predicting the choice of equity versus debt financing. Also, no gender difference was found in the use of financial management services.^{96, 97} Using data from Britain, however, Carter and Rosa found several significant gender differences in business financing.⁹⁸ Men used larger amounts of capital at start-up, whereas women were less likely to use financial instruments, such as overdrafts, bank loans, and supplier credit.

Results from research about possible discrimination in banking practices are mixed. After accounting for structural differences between male- and female-owned businesses, one study found no differences in the rate of loan rejections (or any other objective measures of terms of credit).⁹⁹ Haynes and Haynes examined women's access to institutional and noninstitutional lenders in 1987 and 1993, finding a higher probability for women of borrowing from family and

friends but suggesting that women-owned small businesses had gained access to line-of-credit loans from commercial banks on a par with the men-owned small business in the same period of time.¹⁰⁰ Another study found that women-led businesses that used bank loans as a primary source of start-up capital outperformed those that used alternative funding sources.¹⁰¹

Riding and Swift studied men and women business owners operating in similar industries and explored whether gender differences existed in the terms and conditions of bank financing, the level of service provision, and the overall quality of the banking relationship.¹⁰² Few differences were found except that females secured larger loans than males, yet were charged higher interest rates than males. Higher interest rates and higher collateral requirements were a recurring theme. In addition, 12.5 percent of the women business owners reported that they believed they had experienced gender-related discrimination in their banking relationship.¹⁰³ Indeed, some evidence of discriminatory behaviors in the personal interactions between female business owners and bank managers appeared to exist. Buttner and Rosen concluded that women were more likely to attribute the denial of a bank loan to gender bias than men were, and some evidence existed that some of the differences were based on the gender stereotypes held by the capital providers.¹⁰⁴ Similarly, a study in New Zealand tested for discrimination and found significant gender differences around levels of education, although not always favoring males.¹⁰⁵ Women business owners were also significantly more likely to perceive disrespectful treatment by lending officers.¹⁰⁶ Women in the United Kingdom were more often refused credit on the basis of their lack of business experience and their domestic circumstances.¹⁰⁷ Finally, Dutch entrepreneurs also reported encountering some barriers that they believed were gender specific.¹⁰⁸

Finally, while the body of literature concerning women and debt capital is now quite robust, the first article to focus specifically on women and venture capital appeared more recently and reported that over the time of the study women-led firms received only 2.4 percent of all equity investments in the United States.¹⁰⁹ Three explanations were proposed for why women received so little equity capital: institutional or network barriers, lack of appropriate human capital, including education, experience, and leadership skills, and strategic choices of growth, product, and markets.

Country Context

Only a few studies directly compare female entrepreneurship in more than one country. In one review of women's entrepreneurship in twenty-three countries in the Organization for Economic Cooperation and Development, similarities appeared across countries in terms of education level, as well as focus and type of experience.¹¹⁰ Another study found that independence, recognition, learning, and roles were primary motives but that the only career reason that applied across gender and countries was the ability to develop one's approach to work.¹¹¹

A longitudinal comparison of the movement of young people in and out of self-employment in the United States and Australia provided differing explanatory factors in each of the two countries.¹¹²

In some instances, country context has a more significant effect on entrepreneurship than others due to the interplay of culture, history, politics, and economics. For example, in South Africa, the conversation about entrepreneurship is intermingled with societal issues of socioeconomic reparation. Ahwireng-Obeng suggested a mainstream assistance program attentive to gender in order to negate institutional discrimination.¹¹³ In Poland, the transition from a centrally planned economy to political pluralism and economic transformation was seen as a platform for increasing numbers of women entrepreneurs.¹¹⁴

In summary, research in the 1990s was characterized by studies of two main units of analysis—the individual woman entrepreneur and her venture. Topics and methods varied widely with increasingly sophisticated methodologies toward the end of the decade. The 1990s brought a more explicit call for a feminist theory of entrepreneurship.¹¹⁵ Several researchers continued to raise important questions about the methodological bias inherent in conducting research on women entrepreneurs using research designs, scales, and interpretations based entirely on a male model.¹¹⁶ These researchers also noted biases stemming from an over-reliance on structured, quantitative research approaches and the possibility of sexual imperialism in interpretation of the results. They argued for the development of more robust data sets and the application of more sophisticated statistical techniques.¹¹⁷

THEMES IN THE NEW MILLENNIUM

Over the last few years there has been a significant increase in the amount of research in the field. Theoretical developments, unfortunately, seem to be slow to progress. A notable exception proposing a gendered theoretical framework was Bird and Brush, who posited a gendered perspective on organizational creation.¹¹⁸ On the other hand, many studies of individual characteristics or demographics have been conducted, including research investigating personality, ethics, risk orientation, expectancy theory approaches, goals, motivations, and issues related to careers.^{119–125} A few studies have also examined the effect of various measures of human capital.^{126, 127}

In addition to attributes of the individual woman entrepreneur, her relationship to others is also of interest. Entrepreneurial teams have been explored, as well as entrepreneurial networks.^{128, 129} The interest in relationships is not limited solely to women entrepreneurs' professional lives, but to the rest of their lives as well. This is true particularly around issues of health, motherhood and childcare.^{130–132}

The body of research on women-owned businesses is also growing. Reflecting an emerging trend in the field, opportunity recognition has emerged as a topic

along with increased study of strategies, particularly related to growth of the business, constraints, and myths.^{133–137} It is also not surprising that financing remains of concern with examinations of need, access to debt capital, informal sources of funding, and the impact of human and social capitals on obtaining finance.^{138–141}

The performance of women-owned businesses remains an important topic, but the question of performance is also becoming more finely tuned and includes increased consideration of aspects, such as inputs, strategic capabilities, risk, gender balance of the management team, and failure.^{142–146} Importantly, the potential role of gender is also becoming an important component of other academic conversations around entrepreneurial behavior. For instance, questions in the family business arena are being expanded to include combinations of gender with issues, such as divorce and business demise, and are one of the few areas to be approached with a proposed theoretical framework.^{147–149} International studies have also expanded rapidly during the past decade. While some studies are across cross-country comparisons or examine types of economies, all address questions related to the launch or growth of women-owned businesses.^{150, 151} This move toward identifying country differences parallels research that considers subpopulations of women entrepreneurs and various work on the intersection of gender with race and ethnicity is ongoing.

CONSTRUCTING NEW APPROACHES: SEX, GENDER, AND THEORY

The previous sections argued that research in past decades approached women's entrepreneurship from two different perspectives. Research in the 1980s treated gender as an analytical variable, and examined women entrepreneurs and their ventures for similarities and differences with respect to their male counterparts. From this perspective, gender, or sex, was then treated as an analytical result. By the 1990s, on the other hand, emerging theory suggested that context and perspectives were important for conducting research and, as a result, gender was treated as a lens. These gender-based or feminist theories are useful for explaining, testing, and interpreting women's entrepreneurial behavior. However, as we move into the future, what will guide research on women's entrepreneurship?

Less than 5 percent of all entrepreneurship research focuses on or includes women entrepreneurs.¹⁵² While this stands in direct contrast to the size of the phenomenon, as with most fields of research, the area and the plethora of inconclusive findings suggest that it is too early to contemplate a general theory of women's entrepreneurship because there is little empirical convergence on themes, concepts, and/or definitions.¹⁵³ On the other hand, there is a need to test current theories of entrepreneurship to determine whether they can be applied to samples of women, or women and men. We argue that analyzing data by sex or

applying gender as a lens remain fruitful approaches for better understanding women's entrepreneurial behavior.

What is the next step? Recent literature suggests that no single feminist theory or gendered approach to research exist.¹⁵⁴ Yet, we argue that gender needs to be a basis from which to assess and question assumptions that guide our research. Too often research takes for granted assumptions about similarities or differences between male and female entrepreneurs and their businesses. Or, similarly, an assumption is made that entrepreneurship theories are gender neutral and, therefore, applicable universally to all populations. Given the paucity of research on women entrepreneurs, it is possible that this overarching assumption guided the majority of entrepreneurship research. However, organizational theories are seldom gender neutral and researchers therefore need to test theories for gender bias in contexts that have gender relevance.¹⁵⁵ In other words, future research should be guided by informed assessment of variables, lenses and theory.

Within this context, we propose three topics (among many possible) that we believe to be of particular interest for advancing research on women's entrepreneurship. First, there are issues related to human capital. Research about human capital factors in women's entrepreneurial behavior is more than thirty-five years old, with nearly 50 percent of all studies including these dimensions. However, the vast majority of the research relies on a narrow set of theories (e.g., trait psychology, motivational theory) and measures (e.g., experience, education, and other demographics). Future studies of the role of human capital in women's entrepreneurship should draw from cognitive theory, leadership, and career theories in order to examine questions related to the vision and aspirations for the entrepreneur's future. The introduction of social learning theory to examine how entrepreneurs learn over the life cycle of their career and venture could also provide a significant contribution. Interesting questions for future research in this area include:

- How do women perceive entrepreneurial opportunities and how do these perceptions influence growth?
- Does women's socialization influence their success in acquiring resources and, in particular, growth capital?
- Do women entrepreneurs manage their entrepreneurial careers in the same way as their male counterparts? What are the cycles, transitions, and challenges they face and how do they overcome them?

Second, there are issues related to strategic choices. Research to date lacks a clear understanding of the aspirations and strategies of women entrepreneurs. A significant portion of the research draws from previous instruments developed for and about men and much of the research on women is not theoretically grounded. We believe that research about the strategic choices women make—from the type of business they start, to the sector they select, to their growth

strategies—should be explored in greater depth. Interesting research questions in this area include:

- What factors influence the growth strategies for women-led ventures?
- What role does the strategic choice of sector and firm type play in the growth of women led ventures?
- What are patterns of financing for women-led ventures and how do these compare to men-led ventures?
- How do women approach resource acquisition and do their approaches influence growth and performance of their ventures?

Third, important issues related to structural barriers exist. Past research has concentrated on objective barriers and, in particular, on access to credit and financing. More recent research also examines women's access to equity capital. Many other resources, however, are needed to start and grow a venture: Potential barriers to acquiring equipment, technology, or gaining access to distribution channels, expertise, information and other resources have been often ignored so far. In addition, the subtle barriers inhibiting women's ability to grow and expand their ventures have been examined in some research but not studied in depth. Both a liberal-feminist and social-feminist perspective might be useful for testing these ideas. Future research might also use institutional or social network theory to examine whether institutional norms or network configurations influence women's ability to acquire resources or grow their ventures. In particular, the extent to which barriers exist and influence successful capital acquisition and subsequent growth would shed light on reasons for the equity-funding gap. Alternatively, resource-based theories might be the basis for exploring how women-led venture develop capabilities leading to competitive advantages. Interesting research questions in this area include:

- What institutional norms in various industries are relevant for women entrepreneurs? And how do they influence women's ability to acquire resources at start-up and during the growth of their ventures?
- What is the role of industry beliefs, practices and norms in determining whether women are successful in acquiring equity capital?

Looking ahead, it is to be hoped that the twenty-first century will see greater legitimacy given to research on women's entrepreneurship. Until 2000, only very few journal issues were devoted to women's entrepreneurship and the absolute and relative number of articles in academic journals devoted to the topic were both small. At this writing, three academic journals are working on special issues on women's entrepreneurship, several edited volumes will appear, and the Diana International Research Conference will mark its third year.¹⁵⁶ Although there is a long way to go and many questions are yet unanswered, research is starting to address the phenomenon more seriously and systematically.

Research about women's entrepreneurship is needed to inform both academic and practitioners and their approaches to research and education. Worldwide policymakers are increasingly interested in learning more about how to encourage and promote women's entrepreneurship as a means of advancing wealth creation, innovation, and general economic development. The demand for the knowledge is readily acknowledged but the pace of the research still needs to be advanced.

NOTES

This chapter is based on an earlier white paper authored for the Coleman Foundation, titled "Women Entrepreneurs: Moving Front and Center—an Overview of Research and Theory."

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Index

- adjustment, 48–49
- affect, 21–40; cognition and, 31–33; implications for entrepreneurship, 33–36; reactions, 30; role in entrepreneurship and in entrepreneurial cognition, 30–36
- Affirmative Action Act (1978), 182
- Africa, 165
- African Americans, 158
- Aldrich, Howard, 12
- alertness: prototype models, 27–30
- Altinay, Eser, 165
- anchoring, 48–49
- Arthur M. Blank Center for Entrepreneurship (Center for Entrepreneurial Studies of Babson College), 16 n.24
- Asians, 161
- aspiration, 49–50
- attributions, 54
- Australia, 159, 169, 187
- Austria: economics, 2, 14 n.6; entrepreneurship and, 120; social science, x–xi; understanding the entrepreneurial process, 10–11
- Basu, Anuradha, 165
- Batalova, Jeanne, 162
- Bates, Timothy, 172
- Baumol, William, ix, 136, 140
- Bayesian decision making, 17 n.43
- behavior, 1–19; adjustment, 48–49; alertness, 6; asymmetrical information and entrepreneurial behavior, 71–73; Austrian understanding of the entrepreneurial process, 10–11; decision making, 32–33; discovery, 6; entrepreneurial, 108, 146–49; entrepreneurial disciplinary and transdisciplinary perspectives, 11–13; entrepreneurial model, 3; entrepreneurial uncertainty, 9–10; entrepreneurship as a risky behavior, 69–70; heuristics and biases of entrepreneurs, 41–63; immigration and, 157–80; influence of social capital on entrepreneurial behavior, 101–17; innovation, 6; institutions and entrepreneurial behavior, 119–34; memory and, 17n39, 17 n.39, 32–33; moods, 31; organizational, 22; perceptions, 31; perspective, 6–11; post-Kirznerian theory and the modern Austrian school, 2–4, 6–9; reasoning, 17–18 n.52; reference-dependent, 47–51, 49–50; role of risk in entrepreneurial behavior, 65–80; social capital and its impact on entrepreneurs, 105–9; socially beneficial, 125
- Bergson, Henri, 7–8

- Berlin Wall, 139
 Bertotti, Marcello, 18
 bias: in decision to found a new business, 45–46; of entrepreneurs, 41–63; heuristics and, 42–45; interaction between social capital and cognitive biases, 111; potential effects of, 46–56; in probability perception, 51–53; in self-perception, 53; self-serving, 54; status quo, 51
 bivariate probit model, 92
 blacks, 93, 161, 163, 172
 Bonacich, Edna, 165
Bottom Line, The, 182
 Brontë, Charlotte, 36
 Brown, Bill, 28–29
 Brown, Cheryl, 28–29
 Buchel, Felix, 164
 Bureau of Labor Statistics, 181
 business: environment, 144–46; female entrepreneurs and, 188–89; financing female-owned, 190–91; foreign-born owners, 176 n.6; growth and performance of female-owned, 189–90; macroeconomic and international fluctuations, 73; performance of female-owned, 193; risks, 72–73

 Camarota, Steven, 162
 Canada, 159, 190
 Cantillon, Richard, 16 n.24
 capital, 117 n.93; cognitive, 104, 114 n.38; relational, 107–8; structural, 107–8
 Carlson, Chester, 28
 Center for Entrepreneurial Studies of Babson College (Arthur M. Blank Center for Entrepreneurship), 16 n.24
 Center for Immigration Studies, 162
 Center for Women's Business Research (National Foundation for Women Business Owners), 198 n.40
 Chaganti, Radha, 158–59
 child care, 188
 China, 124, 159, 165
 Civil Rights Act (1964), 182
 cognition, 21–40; affect and, 31–33; implications for entrepreneurship, 33–36; role of affect in entrepreneur-ship and in entrepreneurial cognition, 30–36
 cognitive frameworks, 28–29
 cognitive processes, xi
 cognitive social capital, 107–8
 cointegration analysis, 92
 colleagues: social capital and, 103
 Collins, Jock, 169
 commitment: escalation, 47–48
 Community Reinvestment Act, 198 n.39
 competition: financial risks and, 71–72
Competition and Entrepreneurship (Kirzner), 2–3, 11
Competitive Advantage of Nations, The (Porter), 144–45
 confidence/overconfidence, 55–56
 control: illusion of, 54–55
 Current Population Survey, 161
 CWBR (Center for Women's Business Research), 198 n.40

 Davidsson, Per, 164
 debt, 72
 decision making, 59 n.38; Bayesian, 17 n.43; to found a new business, 45–46; heuristics and biases, 42–45; moods and, 32–33; optimization process, intuitive, 43; outcome, 43; potential effects of well-known heuristics and biases, 46–56; process, 43, 65
 demography, 159
 Dequech, D., 9
 de Soto, Hernando, 129–30
 developing world, 149–50; demographics, 159
 Diana International Research Conference, 195
 Dixon, David, 162
 Dutch, 166, 167

 economics, xii–xiii, 12–13, 14 n.6, 65; Austrian, 2; business environment and the Porter model, 144–46; development, 133 n.12; disadvantage theory, 166; entrepreneurs in the global economy, 135–56; freedom, 127–28; growth, 154 n.9; importance of institutions for the

- direction of economic activity, 124; institutions as cause of change and progress, 126–27; market structure, 142–44; neoclassical, xiii, 3, 15 n.9, 81–100; path of development, 84; rise of development economics and neglect of entrepreneurship and institutions, 121–23
- Economics of Time and Ignorance, The* (O'Driscoll and Rizzo), 4
- education, 133 n.19; human capital and, 123
- Ekanem, Ignatius, 168
- employment: choice, 72–73
- endowment: models, 140–42
- entrepreneurship, 153 n.6; as an occupational choice, 81–100; Austrian understanding of the process, 10–11; availability, 51–52; behavior, 1–19; cognition and affect, 21–40; concept of, 136–37; definition, 136–37; description, 68, 135; disciplinary and transdisciplinary perspectives on behavior, 11–13; endowment models, 140–42; ethnicity and, 157–80; finance and, 139; in the global economy, 135–56; goals related to charity and social utility, 153 n.4; heterogeneous entrepreneurial ability, 82–86; heterogeneous risk aversion, 86–87; heuristics, biases, and behavior of entrepreneurs, 41–63; history, 16 n.24; identity, 1–2; immigration and, 157–80; influence of social capital on behavior, 101–17; insights, 88–91; institutions and, 119–34; lack of definition, 5; marginal, 83; nascent versus established, 106; opportunity recognition, 22, 23–30; overview, ix–xx; pattern recognition, 22; perspectives on women, 181–204; prototype models, xi; rationale, 42; research, 66–67; as a risky behavior, 69–70; role of affect, 30–36; role of risk in entrepreneurial behavior, 65–80; role of the family, 90; teams of, 192–93; theory of, 5–6, 7, 101; trade opportunities in the developing world, 149–50; transnational, 167–68; uncertainty, 9–10
- Entrepreneurship and Regional Development* (Collins), 169
- Entrepreneurship Hall of Fame, 26
- Equal Credit Opportunity Act (1975), 182
- escalation of commitment, 42
- ethnic minorities, xvi–xvii, 105; entrepreneurial behavior and, 157–80; support, 173
- experience, 26–27
- experiential capital, 77 n.5
- Fairlie, Robert, 161
- family, 155 n.37; financing female-owned businesses, 190–91; role in entrepreneurship, 90; social capital and, 106; work–family balance, 185
- FDI (foreign direct investment), 138, 150
- FedEx Corp., 50
- feminism, 182. *See also* women; liberal, 186; Marxist, 183; theory, 183
- finance, 77 n.5, 139; bank loans, 185; debt and, 72; financing female-owned businesses, 190–91; risks, 71–72
- Florida, Richard, 168
- foreign aid, 152
- foreign direct investment (FDI), 138, 150
- Fostering Entrepreneurship, 119
- France, 158, 159
- Fraser Institute, 127
- Frick, Joachim, 164
- gender, xvii–xviii, 93, 181–204
- General Agreement on Tariffs and Trade (GATT), 148
- General Theory of Employment, Interest, and Money, The* (Keynes), 120
- Germany, 139, 164, 169, 170
- Gilad, Benny, 12
- Glass Ceiling Commission, 186
- Global Entrepreneurship Monitor United States Executive Report (2003), 162–64
- globalization, xvi, 135–56; description, 135; entrepreneurial behavior, trade policy, and global trade institutions, 146–49; entrepreneurship as an element of comparative advantage, 140–46;

- international trade and investment gains, 137–40; policy agenda for, 151–53
- global markets, xv–xvi
- government policy, 168–69; on immigrant and ethnic minority entrepreneurs, 168–74
- Granovetter, Mark, 12
- Great Depression, 121
- Greene, Patricia, 158–59
- Hammarstedt, Mats, 164
- Harper, David, 12
- Harrod–Doman model, 122
- Hayek, F. A., 12
- Heckscher–Ohlin trade theory, 140, 145, 147
- heuristics, xi–xii; affective reactions and, 34–36; biases and behavior of entrepreneurs, 41–63; in decision to found a new business, 45–46; definition, 31; description, 42–43; potential effects of well-known, 46–56; reference-dependent behaviors and, 47–51
- Hispanics, 163; as business owners in the United States, 176 n.6
- Hong Kong, 124
- human capital, 77 n.5, 141
- IMF (International Monetary Fund), 119
- immigrants, xvi–xvii, 138, 139, 150; earnings, 177 n.23; entrepreneurial behavior and, 157–80; historical contribution of, 160; laws and, 170
- income: elasticity, 155 n.24; model of choice, 70
- Indians, 165
- innovation and firm formation, 5
- institutions, xv; as cause of economic change and progress, 126–27; definition, xv; description, 119–20; entrepreneurial behavior and, 119–34; entrepreneurship and, 125–26; global trade, 146–49; importance for direction of economic activity, 124; nonprofit, 131; research, 128–31; rise of development economics and neglect of entrepreneurship and, 121–23; sustainable, 128
- Instituto Libertad y Democracia, 129–30
- International Monetary Fund (IMF), 119
- international trade: investment and, 137–40
- investors, 117 n.93; gains from international trade and, 137–40
- Israel, 160, 189
- Jacobs, Jane, 168
- Japan, 160
- Journal of Contemporary Business*, 181
- judgment, 44
- Keynes, John Maynard, 120, 132 n.9
- Keynesian economics, 133 n.12
- Kihlstrom–Laffont model, 87
- Kirzner, Israel, 2–3. *See also* post-Kirznerian theory
- knowledge: prototype models of pattern recognition, 27–30
- Koreans, 160, 165
- labor, 138
- Labour Force Survey, 163
- Lachmann, Ludwig, 7, 15 n.12
- Latinos, 93, 161
- law of small numbers, 52–53
- laws: immigration, 170
- legislation, 182
- Leung, Maggi, 169–70
- Levie, Jonathan, 163
- Light, Ivan, 165
- lobbying, 146; protectionist, 147–48
- Lucas, Robert, 83
- Maghreb, 159, 160
- Mahroum, Sam, 167
- Malaysia, 159
- management, xiv, 65, 101–17
- marginal entrepreneur, 83
- Martinelli, Alberto, 1
- Marxist feminism, 183
- memory, 17 n.39; mood-dependent, 32, 33
- men: compared with female entrepreneurs, 184–86; as entrepreneurs, 182

- Migration Policy Institute, 162
 Min, Pyong Gap, 160
 mood congruence effect, 33
 moods, 31; current, 32–33; mood congruent effect, 33
 multinomial probit model, 92
Mystery of Capital, The (de Soto), 130
- National Foundation for Women Business Owners (Center for Women's Business Research), 186, 198 n.40
 National Survey of Small Business Finances (1993), 172
 National Women's Business Council, 186
 Native Americans, 158
 neoclassical economics, xiii, 3, 15 n.9, 81–100
 Netherlands, 158, 159
 networks: social, 89–90
 new business: heuristics and biases in decision to found, 45–46
 New Zealand, 191
 Nobel Prize winners, 83, 124
 Nordic, 158
 North, Douglass, 124
- occupations: choice, xiii–xiv; empirical models and results, 91–94; entrepreneurship as a choice, 81–100; fundamental equation of occupational choice, 82; inefficient occupational choice, 84–85; models, 84, 87
 OECD (Organization for Economic Cooperation and Development), 119, 191
 oligopoly, 142–43
 opportunity recognition, 5, 22, 23–30; culture and, 167; prototype model of pattern recognition, 24–26, 27–30; role of active search, alertness, and prior experience, 26–27; search for, 29–30; willingness to take on risk and, 65–67
 optimization process: intuitive, 43
 organizational behavior: knowledge, 22
 Organization for Economic Cooperation and Development (OECD), 119, 191
Other Path, The (de Soto), 129–30
 outcomes: positive, 69
- Pakistan, 160
 Panel Study of Entrepreneurial Dynamics (PSED), 163
 Parsi, 165
 pattern recognition, 22; prototype model, 24–26
 perceptions, 31; biases in self-perception, 53
 Phizacklea, Annie, 160
 political science, 128
 Porter, Michael, 144–46
 Porter model, 144–46
 post-Kirznerian theory, xi, 2, 14 n.6, 15 n.12.; fundamental elements, 6–9; understanding entrepreneurial uncertainty, 9–10. *See also* Kirzner, Israel
 production possibility frontier (PPF), 125
 protectionism, 146, 152
 prototype models, xi
 PSED (Panel Study of Entrepreneurial Dynamics), 163
 psychology, 12–13, 65; insights on entrepreneurship, 88–89; traits of entrepreneurs, 94
 Public Works Employment Act of 1977, 172
- Rabushka, Alvin, 124
 race, 93
 Ram, Monder, 160
 reasoning, 17–18 n.52
 relational capital, 104
 rent seeking, 148
 representativeness, 52–53
 research, 66–67
 risk, xiii, 140–41; actual, 66–67; assessment of, 44; aversion, 86–87; business, 72–73; definition, 67; downside, 51–52; of entrepreneurship, 69–70; entrepreneurs' preferences, 73–76; financial, 71–72; market, 73; model choices, 69–70; opportunity recognition and, 65–67; perceived, 66–67; preferences, 74–75; of return on individual firm, project, or asset, 73; role in entrepreneurial behavior, 65–80; versus uncertainty, 67–69

- Russia, 90–91; industrialization of Soviet Union, 121
- Sarasvathy, S., 17–18 n.52
- Saxenian, AnnaLee, 167
- Schumpeter, J. A., 13, 136
- Schutz, Alfred, 12
- Schwartz, Eleanor, 181, 183
- Second Time Around, The, 29
- self-efficacy, 189
- self-employment, 160; immigrant versus native, 162; rates, 161
- self-perception: biases, 53
- Shane, Scott, 2
- Silicon Valley, 167
- simultaneous equation probit model, 92
- Smith, Adam, 121, 127
- Smith, Fred, 50
- social capital, 77 n.5, 94; bonding and bridging, 106; cognitive, 107–8; definition, 102–3; history, 102–5; impact on the behavior of entrepreneurs, 105–9; influence on entrepreneurial behavior, 101–17; interaction between cognitive biases and, 111; in the literature, 102–5; measures of embeddedness, 109; relational, 104; research, 109–12; as resource for entrepreneurs, 108; structural, 104; theory of, 112
- social learning, 188
- social networks, 89–90
- social science, ix–x; Austrian, x–xi
- sociology, 12–13; insights on entrepreneurship, 89–91
- Solow, Robert, 122
- StartSmart, 172
- status quo bias, 51
- Storey, David, 172
- structural social capital, 104, 107
- subsidy programs, 152
- sunk cost effect, 42
- Sweden, 90, 164, 177 n.23
- Taiwan, 124, 170
- Toussaint-Comeau, Maude, 162
- trade, 154 n.21; entrepreneurship and trade opportunities in the developing world, 149–50; gains, 138; intraindustry, 142; models, 141–42; nondiscrimination, 155 n.35; patterns, 141; theory, 142
- Trinidad and Tobago, 172
- Trump, Donald, 50
- Turkey, 139
- uncertainty: versus risk, 67–69
- United Kingdom, 140, 158–60, 163, 164, 170, 172–73, 188, 190
- United States Agency for International Development (USAID), 119
- U.S. Census (2000), 162
- U.S. Small Business Administration Office of Advocacy, 186
- Vernon, Raymond, 143
- Verspoor, Adriaan, 123
- von Mises, Ludwig, 4, 9
- Weber, Max, 12
- whites, 158, 161, 171
- women: British, 184; compared with male entrepreneurs, 184–86; as entrepreneurs, xvii–xviii, 181–204. *See also* feminism
- World Bank, 119, 123, 132 n.3, 152
- World Trade Organization (WTO), 148–49

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Entrepreneurship

ENTREPRENEURSHIP

The Engine of Growth

Volume 2
PROCESS

Edited by **Andrew Zacharakis**
and **Stephen Spinelli Jr.**

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Contents

| | |
|---|-----|
| Preface | vii |
| Introduction | ix |
| <i>Andrew Zacharakis and Stephen Spinelli Jr.</i> | |
| 1. The Timmons Model of the Entrepreneurial Process | 1 |
| <i>Stephen Spinelli Jr., Heidi M. Neck, and Jeffrey A. Timmons</i> | |
| 2. Idea Generation from a Creativity Perspective | 19 |
| <i>Dimo Dimov</i> | |
| 3. Perceiving and Shaping New Venture Opportunities through Mindful Practice | 43 |
| <i>Andrew C. Corbett and Jeffery S. McMullen</i> | |
| 4. New Venture Teams | 65 |
| <i>Gaylen N. Chandler</i> | |
| 5. Business Angels: Investment Processes, Outcomes, and Current Trends | 87 |
| <i>Frances M. Amatucci and Jeffrey E. Sohl</i> | |
| 6. Venture Capital Financing | 109 |
| <i>Andrew Zacharakis and Matthias Eckermann</i> | |
| 7. Small-Firm Growth Strategies | 135 |
| <i>Johan Wiklund</i> | |

| | |
|---|-----|
| 8. Going Global <i>Pat H. Dickson</i> | 155 |
| 9. Entrepreneurial Exit <i>Monica Zimmerman Treichel and David L. Deeds</i> | 179 |
| Index | 203 |
| About the Set Editors | 207 |
| About the Contributors | 211 |

Preface

The editors of this three-volume set are pleased to present readers with insight into the field of entrepreneurship by some of the leading scholars around the world. Babson College, the home institution for all the editors, has been a leader in entrepreneurship education for over thirty years and is recognized by many leading publications as the top school for teaching entrepreneurship at both the MBA and undergraduate levels (thirteen years running by *U.S. News and World Report*). Since 1999, Babson College, in conjunction with the London Business School, has led the Global Entrepreneurship Monitor (GEM) research project. GEM assesses the state of entrepreneurship activity across more than forty countries around the world (comprising two-thirds of the world's population and over 90 percent of the world GDP) and has shown that entrepreneurship can be found in all economies and that almost 9 percent of the adult population is actively attempting to launch a new venture at any given time.¹ While the percentages vary by country, GEM illustrates the importance of entrepreneurship and provides context as we try to better understand the entrepreneurial phenomenon.

We have compiled three volumes focusing on entrepreneurship from three different perspectives: people, process, and place. Volume 1, edited by Maria Minniti, looks at the intersection of people and entrepreneurship. Taking a broad view of entrepreneurship as a form of human action, chapters in this volume identify the current state of the art in academic research with respect to cognitive, economic, social, and institutional factors that influence people's behavior with respect to entrepreneurship. Why do people start new businesses? How do people make entrepreneurial decisions? What is the role played by the social and economic environment on individuals' decisions about entrepreneurship? Do institutions matter? Do some groups of people such as immigrants and women face particular issues when deciding to start a business? The volume addresses

these and other questions. Each chapter provides an extensive bibliography and suggestions for further research.

Volume 2, edited by Andrew Zacharakis and Stephen Spinelli, examines the entrepreneurial process. The book proceeds through the life cycle of a new venture start-up. Chapter authors tackle several key steps in the process, ranging from idea, to opportunity, team building, resource acquisition, managing growth, and entering global markets. These chapters identify the current state of the art in academic research, suggest directions for future research, and draw implications for practicing entrepreneurs. What is clear from this volume is that we have learned a tremendous amount about the entrepreneurial process, especially over the last fifteen years. This deep insight leads us to ask more questions and suggest new research to answer these questions. This learning is also applied in the classroom and shared in this book so that students and entrepreneurs can assess best practices.

Volume 3, edited by Mark Rice and Tim Habbershon, examines place. In this volume and in the literature, *place* refers to a wide and diverse range of contextual factors that influence the entrepreneur and the entrepreneurial process. We represent these contextual factors as a series of concentric circles ranging from environmental and global forces, to national and regional policies, industries and infrastructures, to cultural communities, families, and organizational forms. Chapters in this volume address entrepreneurship in the context of the corporation, family, and franchise. We provide insights on ethnicity and entrepreneurship in the U.S. Hispanic, Slovenian, and German context. We look at the impact of public policy and entrepreneurship support systems at the country and community level, and from an economic and social perspective. We also examine the technology environment and financing support structures for entrepreneurship as context issues. By placing this array of contextual factors into an ecosystem perspective, we show how entrepreneurship is a complex input–output process in which people, process, and place are constantly interacting to generate the entrepreneurial economy.

It is our hope that the chapters spur the reader's interest in entrepreneurship, that the academic who is new to entrepreneurship will see an opportunity to enter this field, and that those who are already studying this phenomenon will see new questions that need investigation. We hope that practitioners and students will glean best practices as they work in entrepreneurial ventures and that the prescriptions within these chapters will help them succeed. We also think that these volumes can help policymakers get a firmer grasp on entrepreneurship and the potential it has to spur economic growth within a country, state/province, and town. Entrepreneurship operates in an ecosystem that is reliant upon all the audiences of these volumes. As we gain better understanding of the ecosystem, we all benefit.

NOTE

1. M. Minniti, W. Bygrave, and E. Autio, *Global Entrepreneurship Monitor: 2005 Executive Report* (Babson Park, MA: Babson College and London Business School, 2006).

Introduction

Andrew Zacharakis and Stephen Spinelli Jr.

We are pleased to present the second volume of Praeger Perspectives on Entrepreneurship. *Entrepreneurship: The Engine of Growth* contains the research and thinking of eminent scholars in the field of entrepreneurship. Whereas Volume 1 of this set looks at the intersection of the individual and entrepreneurship and Volume 3 looks at the intersection of the physical place and public policy with entrepreneurship, this volume examines the entrepreneurial process: the pattern of phenomena that starts with creativity and ideas and progresses through growth and harvest. It encompasses opportunity, teams, and resources, and the behavior that brings those components together into a business. The entrepreneurial process is generally viewed from the perspective of new venture creation. However, it is so deeply embedded in the development of our economic and social well-being that the concepts covered in the volume can be applied to most existing businesses and social entities.

The entrepreneurial process is a global experience. Babson College and the London Business School lead a contingent of forty universities in a worldwide study of individuals' propensity to start and grow businesses. The Global Entrepreneurship Monitor (GEM) annually issues forty national reports, a global report, and special issues such as women in entrepreneurship and venture capital (VC) investment.¹ The report continues to show high rates of entrepreneurial activity around the world. In the United States, 9 percent of the population is actively attempting to start a business, termed nascent entrepreneurship. Another 5 percent of the U.S. population are owners of established businesses less than forty-two months old. That means more than 16 percent of the U.S. population are involved in the entrepreneurial process at any point in time.^{2, 3} These statistics tell us that it is important for both individuals and nations to understand the new venture process if we hope to build and sustain our economic well-being.

This volume is designed to describe the entrepreneurial process in both holistic terms and in its components; from idea to exit and the steps inbetween. Chapter 1, by Spinelli, Neck, and Timmons, lays out the framework in the Timmons model. This model is well defined in entrepreneurship research and has been used in entrepreneurship education for over thirty-five years. Dimov then examines idea generation, described in chapter 2 as intertwined with opportunity recognition and supported by Corbett and McMullen's following chapter on opportunity. Chapters 4, 5, and 6 look at the team and resource elements laid out in the Timmons model. Chandler reviews the research on entrepreneurial teams and provides direction for future research as well as implications for practicing entrepreneurs. Amatucci and Sohl examine angel financing while Zacharakis and Eckermann review VC financing. Wiklund moves us to the next phase after the team and financing are in place; venture growth strategies. Because the factors of influence in entrepreneurship, customers, supply, financing, and so on, are global in nature, Dickson describes international entrepreneurship as an extension of growth strategies and in terms of high potential vision of a firm's impact and scope. Finally, Treichel and Deeds conclude with an overview of trade sale (being acquired) and initial public offering (IPO) exit mechanisms. Exit, sometimes termed harvest, is seen as a liquidity event for investors, not as an exit for the entrepreneur.

Entrepreneurship is sometimes referred to as an *ecosystem*, a network of people, places, and behaviors that seek and exploit opportunities. We expect that the major players in that system, academics, students, support professionals,⁴ and practicing entrepreneurs will find this book of use. For academics, the volume reviews the research on significant perspectives of entrepreneurial activity and suggests direction for future research. Students will find that the chapters uncover and explore the underlying mechanisms central to the entrepreneurial process. Support professionals will better understand the expectations and goals of their clients. Finally, entrepreneurs will learn from leading scholars, many of whom have entrepreneurial experience, the state of the art on new venture creation, growth, and launch. We hope that the Praeger Perspectives on entrepreneurship will provide a useful resource that you refer to again and again.

In chapter 1, Spinelli, Neck, and Timmons lay out the Timmons framework of the entrepreneurial process. This model has been widely taught for almost three decades as it has evolved through the various editions of Timmons' *New Venture Creation*.⁵ In the chapter, they describe how opportunity, team, and resources are joined in a symbiotic process leading to the creation of a venture. In particular, Spinelli et al. articulate the importance of balancing the opportunity, resources, and team elements inherent in all new start-ups. While this chapter asserts that the entrepreneurial process starts with opportunity identification, it is clear that the model captures the iterative nature of opportunity recognition, team-building, and resource acquisition. The dynamic shaping of the opportunity influences and is influenced by marketplace feedback, team input, and the resources controlled and sought.

We used the Timmons model as a guiding framework to target and identify chapter authors to further explore issues related to the entrepreneurial process. Specifically, chapters 2 and 3 drill into the idea and opportunity recognition components. Chapter 4 adds greater depth on team issues. Chapter 5 looks at acquiring equity capital from angels whereas chapter 6 examines VC. We believe the Timmons model, as asserted by the chapter authors, consistently maps the entrepreneurial process, the texture and complexity of which is increasingly strengthened by continuing academic research.

Dimov in chapter 2 focuses on idea generation, presenting a concise view of the literature. Drawing from a number of process models, the chapter crafts a systematic architecture of how idea generation occurs in entrepreneurship. First, it is a process—typified by the Wallas and other models—rather than a “eureka” inspiration.⁶ Second, a product is conceived; third, the role of motivation, cognitive styles, and knowledge; and fourth, idea generation occurs in a context—different situations influence which ideas are developed and pursued. Although exploring the process, product, person, or situation in isolation adds to our knowledge, it may be misleading as much of the variance is left unexplained. Dimov rightly calls for entrepreneurship research to expand and capture this complexity. He explains that loosening the boundaries between the phenomena in entrepreneurship will reveal textured linkages and insights.

Chapter 3 also focuses on opportunity but stresses the power of “mindfulness,” being truly cognizant of one’s current situation. Mindfulness occurs within the individual and is driven by the opportunity under consideration, the motive for pursuing the opportunity and the means of achieving exploitation of the opportunity. The chapter authors assert that if one is practicing mindfulness, one will discover opportunities through entrepreneurial alertness. These opportunities will be both economically attractive and fit the individual entrepreneur. Corbett and McMullen then suggest that mindfulness is a Zen-like concept that can be taught and learned. The chapter concludes with a concise prescription for how one can increase mindfulness.

Chapter 4 examines the research involving teams and new venture creation. This chapter sets out a uniform definition for new venture teams, which is important for researchers, so that results can be generalized across studies and is important for entrepreneurs so that they can follow the prescriptions of research. Chandler goes on to review a number of the important research questions regarding teams, including how and when teams form, and how important are teams to success. The research in this area is accumulating, but Chandler notes that entrepreneurship would benefit by building off of the work team literature. In particular, the work team literature suggests a framework: forming, storming, norming, performing, and adjourning. This framework provides a lifecycle view for new venture teams. For instance, we can examine team composition within this framework. While it is intuitive that stronger teams have complimentary skills, research suggests that complimentary benefits can be offset if the team is not cohesive. This research cuts across all stages of the new venture team process.

The model also facilitates discussion of adding or firing (or losing) team members and the impact on performance. While the chapter offers a thorough review of the literature and a number of directions in which to further research the phenomenon, the punchline is that ventures founded by teams (which are two-thirds of all new ventures) outperform those founded by individuals.

The successive two chapters continue to dig into elements of the Timmons model, in particular, resources. Chapter 5 reviews what we know about angel financing and chapter 6 looks at VC. The two sources of equity capital are complementary, especially for high-potential ventures. Angels typically fund earlier-stage deals than VCs and as the venture progresses, angels work with the entrepreneurs to obtain follow-on VC financing. Since the goal of this volume is to investigate the new venture process, we do not review debt sources of capital as these typically become available after a firm is operational. Moreover, debt financing has received less attention in the academic literature than either angel or VC financing. Perhaps the area that we should have devoted space and time—but did not—is friend and family financing. Friends and family financing is the most available source during the start-up process and we expect that the motivation for these investors differs dramatically from that of angels and venture capitalists (VCs), yet this area is mostly neglected in the entrepreneurship research literature. Therefore, we did not commission a chapter on friends and family financing, but we hope that academics will find direction for researching this important component by reading the chapters on angels and VCs.

Chapter 5 provides an excellent overview of angel financing. This area is one of the most neglected in the entrepreneurship literature due to the difficulty of identifying and collecting data from angel investors. The chapter, nonetheless, proceeds to review relevant research according to the stage of the investment process (roughly divided into pre- and postinvestment). Next, Amatucci and Sohl highlight that the nature of the angel industry is changing. Although traditional individual angels (who are often former entrepreneurs) still represent the largest segment in terms of investment dollars, there is a rise in informal angel groups and more formalized angel groups. Amatucci and Sohl suggest that due in part to the emergence of these new segments, angel investors are becoming more formal in their process (although they question whether this is good for the overall health of the marketplace). They also suggest that as VCs continue to move to later-stage deals, angels are following and now entering second-stage follow-on financing (while still retaining a large involvement in seed and start-up financing). They suggest that this trend is a function of opportunism, necessity, and protection. It is opportunistic in that there is an investment gap created by VCs looking at later-stage deals. It is a necessity because without angel participation at this stage, many of the companies would fold and endanger earlier round angel investments. Finally, it is protectionist in that when VCs do offer financing, they are cramming down the value of earlier investments by angels, meaning that VC forces angels to revise their initial investment terms, thereby damaging the angel's potential returns. Amatucci and Sohl speculate that the

angel market will be self-correcting in that if there develops a large seed/start-up capital gap, angels will return and increase their involvement there. This presumption suggests that VCs would then back in and fill the gap they are creating in second-stage financing. However, considering the ever larger funds that VCs are raising, it is not clear that they will come back to this sector.

Chapter 6 continues the examination of equity financing by looking at VC. VC is disproportionately researched considering the number of new firms that receive VC financing, yet from the overview it appears there is much that we still do not know about it. Zacharakis and Eckermann systematically step through the VC process from raising a fund through to a liquidity event and find many areas that are underresearched. In particular, they look at the many dyads that are involved in the investment process. There is the limited partner and VC dyad to consider when raising a fund. VCs often syndicate financing deals, creating a VC/VC dyad. Additionally, VCs interact with other investors (both earlier-stage and later-stage investors) creating dyads between VCs/angels, earlier- and later-round VCs, and so forth. Of course, the most important dyad and the one receiving the most attention is the VC/entrepreneur dyad. Success in VC is directly a function of how well VCs manage these dyads and recognizing that the relative importance of the dyad depends on the stage of the VC investment process. Zacharakis and Eckermann suggest several research questions surrounding these dyads. Considering the VC boom and bust of the late 1990s and early 2000s, many of these questions need to be reevaluated in light of contextual factors such as the irrational exuberance of a bubble period.

Wiklund in chapter 7 highlights the importance of growth for entrepreneurial survival and success. Wiklund conducted a large-scale study of small business in Sweden and found that entrepreneurs who enact a strategy can achieve growth. Successful growth is more a function of taking action than what type of action the firm takes. Specifically, Wiklund stresses the importance of personal attributes such as the entrepreneur's motivation to grow and asserts that this may be more important than the entrepreneur's skill when it comes to long-term entrepreneurial success. The chapter concludes with a typology of motivation and resources/capabilities. Firms within all quadrants can survive and Wiklund offers some suggestions for these varying firm types based upon where they fall. The chapter concludes with some policy implications for government.

While many might not consider international expansion as part of the new venture process, chapter 8 reviews research that shows just how prevalent it is. For instance, 80 percent of all small and medium-sized enterprises (SMEs) are affected by or involved with international trade.⁷ Dickson cites several other studies that also indicate the growing importance of international efforts by entrepreneurial companies. Thus, the chapter builds nicely from chapter 7 on growth in that going global is one form of a growth strategy (although many firms start global from their first day of operation—"born globals"). Dickson notes the increasing literature on this topic and highlights the three competing (complimentary) models of international expansion by entrepreneurial firms. "Gradual globals" stage their

international expansion in order to learn and reduce the risk of such moves. This model is similar to the traditional stage model applied to large multinational corporations. However, Oviatt and McDougall changed the nature of international research by identifying “born global” entrepreneurial firms.⁸ According to the born-global model, entrepreneurs often think and pursue global expansion at the very earliest stages of their firm’s launch. A more recent model is the born-again iteration that suggests that some triggering event causes entrepreneurial domestic-only firms to quickly consider and then expand internationally. While the merit of each of these models continues to be debated, the models do not speak directly to how entrepreneurial firms go international.

Dickson provides a model that ties the strategies employed with enabling and enacting processes (see Figure 8.1). Considering that entrepreneurial firms are resource-constrained during the new venture process, Dickson asserts that the firms seek enabling mechanisms to compensate, such as using intermediaries (via networking or building alliances) or direct means (which have declined in cost dramatically due to new technology such as the Internet). The chapter concludes with an overview of enacting mechanisms such as exporting, foreign direct investment, outsourcing, licensing, franchising, and merger and acquisition activities. This growing field of research is ever more important to entrepreneurs as the world continues to globalize.

Entrepreneurial exit is about realizing the value of the organization that an entrepreneur has built. While the term suggests that entrepreneurs leave the firm at this point, that is often a misnomer. IPOs, for instance, are about bringing in growth capital to take the firm to the next level. In chapter 9, Treichel and Deeds lay out the three most common means of exit (IPOs, acquisitions, and liquidations). IPO research is well developed. It focuses on the antecedents that impact how well the venture does in the IPO process (as most often measured by underpricing and by money raised). While Treichel and Deeds identify dozens of factors that influence IPO performance, it seems that research on which factors have the biggest impact would be valuable. Research on acquisitions and liquidations is less developed. The authors believe two key questions should drive acquisitions research: First, under what conditions do acquisitions allow entrepreneurs and investors to capture the wealth that their new venture has created. Second, how should entrepreneurs and their investors prepare for a successful acquisition? Liquidation is mostly explored in the research on venture failure and thereby receives a cursory glance. It is imperative to directly assess the liquidation process and understand how it can be best managed. Treichel and Deeds call for research into corporate governance as it relates to liquidation.

CONCLUSION

What all these chapters illustrate is the growing breadth and depth of entrepreneurship research. In the ten-plus years that each of us has been an entre-

preneurship academic, we have seen an explosion of interest in the field. There have been a number of new entrepreneurship journals introduced such as *Venture Capital: An International Journal of Entrepreneurial Finance* and *The Journal of International Entrepreneurship*. There have been a number of new conferences devoted to entrepreneurship and the existing conferences have seen their submissions grow exponentially. For example, the Babson College Entrepreneurship Research Conference, which is over twenty-five years old, has grown from 200 submissions in 1995 to over 600 submissions today. Likewise, there is growing demand for entrepreneurship professors as more universities create and expand their entrepreneurship offerings.⁹ As the field matures, we see our research going deeper into the phenomena under consideration. Likewise, the methods, samples, and data collected are richer and allow for more rigorous tests.

What this means for students and practicing entrepreneurs is a greater knowledge of what works and does not work. In an ever increasingly global and competitive environment, we firmly believe that those students who pursue an entrepreneurial career will achieve greater personal fulfillment and wealth. As our large corporations continue to shed jobs, especially those well-paying factory jobs of past generations, entrepreneurship can be the best means to achieve social mobility. We believe that this book gives the reader a taste of what has been learned in new venture creation, and more importantly what we still need to learn. At the same time, the astute student and entrepreneur will glean best practices that can help them achieve their goals and entrepreneurial success.

NOTES

1. See <http://www.gemconsortium.org/>.

2. Note that the sum of nascent entrepreneurs (9 percent) plus new business owners (5 percent) plus established business owners (5 percent) is greater than the percentage of people who are involved in at least one of these activities (16 percent) because some individuals are doing more than one activity at a time. In other words, this subset of individuals includes both nascent and new business owners, or nascent and established business owners because they are in the process of starting a second venture.

3. M. Minniti, W. Bygrave, and E. Autio, *Global Entrepreneurship Monitor: 2005 Executive Report* (Babson Park, MA: Babson College and London Business School, 2006).

4. Lawyers, accountants, venture capitalists, advisors, and others.

5. *New Venture Creation for the 21st Century* is in its seventh edition (March 2006). Editions 6 and 7 were written with Stephen Spinelli and published by McGraw-Hill.

6. G. Wallas, *The Art of Thought* (New York: Harcourt-Brace, 1926).

7. Paul D. Reynolds, "New and Small Firms in Expanding Markets," *Small Business Economics* 9, no. 1 (1997): 79–84.

8. Benjamin M. Oviatt and Patricia P. McDougall, "Toward a Theory of International New Ventures," *Journal of International Business Studies* 25, no. 1 (1994): 45–64.

9. T. Finkle, "A Review of Trends in the Market for Entrepreneurship Faculty from 1989–2004," presented at the 2005 Babson Kauffman Entrepreneurship Research Conference, Wellesley, MA, 2005.

1

The Timmons Model of the Entrepreneurial Process

Stephen Spinelli Jr., Heidi M. Neck, and Jeffrey A. Timmons

Entrepreneurship is opportunity obsessed, holistic in its approach, resource parsimonious, and leadership driven for the purpose of value creation.¹ As an iterative, business-churning process, entrepreneurship stimulates economic development and generates social wealth through opportunity discovery and exploitation.² Fundamental to the research, teaching and practice of entrepreneurship is opportunity exploitation through the enactment of new business models. Briefly described, a business model is an array of resources (inputs) in new ventures or existing organizations, supplying new or better forms of goods and services (outputs) yielding revenue. We take a Shumpeterian view of entrepreneurial pursuits—defined as opportunities with delivery systems and competencies differing significantly from those of existing organizations.³ The study of entrepreneurship as a phenomenon requires a multidisciplinary lens.⁴ Such a holistic and integrated view is well served by frameworks that helps bind content and process and brings some clarity to venture creation. This chapter describes one framework that supports the evolution of the venture creation process from opportunity recognition forward through the decision to exploit the opportunity via start-up.

The framework described herein is the Timmons model that highlights the essential components of the entrepreneurship process: opportunity evaluation, resource marshalling, and entrepreneurial team formation.⁵ The Timmons model originally evolved from Jeffrey Timmons' doctoral dissertation research at Harvard University about new and growing ventures.⁶ It has evolved over nearly three decades and has been enhanced by ongoing research, case study development, teaching and hands-on experience in high-potential ventures and venture capital funds.⁷⁻⁹ The fundamental components of the model have not changed,

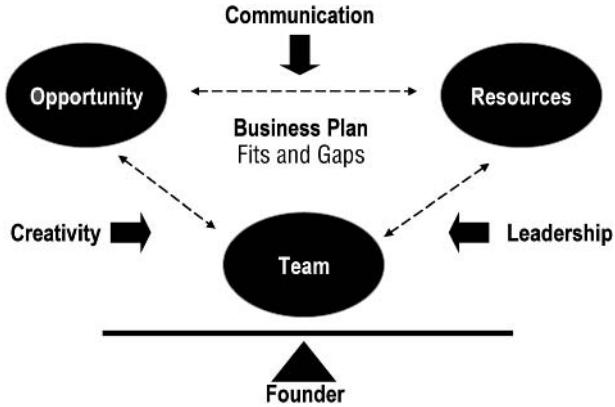


Figure 1.1. The Timmons model.

but their richness and relationships of each to the whole have been steadily enhanced, as they have become better understood.

This chapter seeks to explain the theoretical constructs of the Timmons model (Figure 1.1), yet elevate its use as an applied framework. Teaching entrepreneurship as a rigorous course of study demands the conversion of scholarly research into applied frameworks that can be understood at all levels of education and application. Entrepreneurship education seeks to minimize the risk of venture failure when exploiting new opportunities in the marketplace and the Timmons model reflects the delicate balance of opportunities, resources, and entrepreneurs responsible for execution.

We position the Timmons model as a process that gives fluid boundaries to the entrepreneurship platform that has foundations in opportunity recognition, founding conditions and emergence, resource acquisition and development and human capital and decision making.¹⁰⁻¹⁷ The components of the Timmons model are in constant motion, expanding and contracting as the environment and opportunity change. We begin with an overview of entrepreneurship as process followed by a description of each component in the Timmons model. We conclude with a holistic view of the model and its implications for practice and applications for teaching.

MAPPING THE ENTREPRENEURIAL TERRITORY: A PROCESS ORIENTATION

A process orientation of entrepreneurship necessitates the establishment of boundaries. Entrepreneurship portrayed as the lone entrepreneur starting a small business regardless of growth aspirations is an outdated and underestimated view

of a significant business and economic phenomenon. The context in which opportunity is discovered, business models created, and opportunity exploited may occur in many settings and in organizations of all sizes and types including new ventures, corporate new business development, government entities, and nonprofit organizations and the unit of analysis will occur on many levels, such as individual, team, company, industry, and economy.^{18–21} However, many core concepts in entrepreneurship are consistent across context and units of analysis.²² In essence, a framework of entrepreneurial processes describes the nature of economic and psychological opportunity and the patterns of actions and behaviors that create ventures. The motivations for being entrepreneurial are wide ranging, but most research in the field discusses behaviors that foster value creation. Broadly defined, value creation through entrepreneurship is either subjective in nature (from psychology) or financial in nature (from economics).^{23, 24} The lessons and principles underlying successful new ventures are embedded in a dynamic process of new venture creation, not a single event or even a series of events. It is the coalescing of dynamic forces, some in the control of the entrepreneur and others not in their control, that we call entrepreneurship. Bygrave and Hofer describe entrepreneurship as a process that is discontinuous, holistic, and unique with outcomes sensitive to a set of antecedent variables.²⁵ Unlike Garter's view that entrepreneurship is simply the act of creation, we believe entrepreneurship is a continuous cycle of renewal through opportunity identification and exploitation.²⁶ Thus, growth is central to the process of entrepreneurship.^{27, 28}

The entrepreneurship domain provides particularly rich territory for intellectual and practical collisions, between academic theory and the real world of practice. This integrated, holistic balance is at the heart of what we know about the entrepreneurial process.^{29, 30} Entrepreneur typologies exist in multitude but the commonality among all entrepreneurial "types" is the act of engagement to create something with the intent to capture value.^{31–34} Despite the great variety of businesses, entrepreneurs, geographies, and technologies, central themes dominate this highly dynamic process such as opportunity creation, entrepreneurial teams, resource parsimony and creative resource marshalling, integrated and holistic.^{35–39} Furthermore, success is dependent on the fit and balance among these themes. The Timmons model does not intend to capture all nuances in the entrepreneurial process because it is virtually impossible to capture the dynamics of entrepreneurship in one model. However, the Timmons model does describe key areas of disciplinary focus and provides guidelines to assess venture potential. Ultimately, a critical assessment of new venture potential is necessary for bringing the risk-return balance into sharper focus.

COMPONENTS OF THE TIMMONS MODEL

The Timmons model (Figure 1.1) identifies three components of the entrepreneurship process that can be assessed, influenced, shaped, and altered. The

entrepreneur is responsible for assessing the opportunity, marshalling resources to capture the opportunity, and developing a team to exploit the opportunity for value creation. An appropriate metaphor for the Timmons model is a juggler bouncing up and down on a trampoline that is moving on a conveyor belt at unpredictable speeds and directions, while trying to keep all three balls in the air. That is the dynamic nature of an early-stage start-up. Few high-growth ventures are started without the assembly of an experienced and skilled team.⁴⁰ Creativity, communication, and leadership moderate the strength of the model components and increase the likelihood of venture success. Finally, the business plan provides the language and code for communicating the quality of the three driving forces, of the Timmons model, and of their fit and balance.

The Timmons model aligns with Kirzner's perspective of discovery and alertness to opportunities in the marketplace.⁴¹ Kirzner believed market equilibrium resulted from alert entrepreneurs that capitalize on opportunities waiting to be discovered in the marketplace. Once the opportunity is captured, market gaps diminish and there are movements toward equilibrium. However, the Timmons model argues that a discovery is not sufficient for entrepreneurship. The process of opportunity identification, evaluation, and exploitation must be balanced by resource acquisition and team development. Thus, enactment of the opportunity in creative ways (new business models) is central to the process of entrepreneurship.

Opportunity exploitation is an evolutionary process, though not linear and often stochastic in nature. The venturing process starts with the discovery of an opportunity to the parsimonious use of resources (e.g., capital, labor, and materials) differently than they are currently being used.⁴² Again, the creation of a venture is not an event but almost always an evolutionary process, during which entrepreneurs engage in venturing activities such as the acquisition of the requisite competences and resources to realize the venture opportunity's commercial value and the formation of a team.⁴³ Most genuine opportunities are much bigger than either the talent or capacity of the team or the initial resources available to the team.⁴⁴ The role of the lead entrepreneur and the team is to juggle all of these key elements in a changing environment.⁴⁵ Organizing these activities is central to the successful creation of a new firm.⁴⁶ Successful assemblage and organization is depicted in the Timmons model (Figure 1.1).

We illustrate the entrepreneurial process in the Timmons model as equal size of the circles and therefore assume balance in the model. It is important to understand that perfect balance might never exist for a new venture. And, the striving for balance is a never-ending entrepreneurial behavior. The shape, size, and depth of the opportunity establishes the required shape, size, and depth of both the resources and the team. We have found that many people are a bit uncomfortable viewing the opportunity and resources somewhat precariously balanced by the team. It is especially disconcerting to some because we show the three key elements of the entrepreneurial process as circles, and thus the balance appears tenuous. These reactions are justified, accurate, and realistic. Those who recognize the risks better manage the process and garner more return.

Though the entrepreneurial process is dynamic, it is important to understand each component, or driving force, of the Timmons model. We begin with a discussion of opportunity.

The Opportunity: Identification and Evaluation

At the heart of the entrepreneurial process is the opportunity.⁴⁷⁻⁵² Generally, entrepreneurs possess distinct cognitive processing skills and capacity that aid opportunity recognition and exploitation.⁵³ The main theoretical advances regarding opportunity are sourced from Hayek on the dispersed nature of knowledge and Kirzner on entrepreneurial alertness.⁵⁴⁻⁵⁶ Much of the current theoretical and empirical work on opportunity recognition has focused on the construct of alertness, and in particular its utility in distinguishing entrepreneurs from nonentrepreneurs.⁵⁷⁻⁶⁰ Kirzner focused on the individual's propensity to recognize opportunity through a process of discovery and posited that entrepreneurs are alert individuals able to identify opportunities when markets are in states of disequilibrium.⁶¹

Differences in alertness have been attributed to cognitive frameworks developed through possessed knowledge that has come through experience.^{62, 63} Shane argues that existing market knowledge, experience in serving markets, and in-depth understanding of customer problems influences both opportunity recognition and opportunity exploitation processes.⁶⁴ Existing knowledge relates to mental schemas that allow one individual to have acute observation skills relative to others leading to a level of alertness conducive for opportunity capture.⁶⁵ The way different individuals respond to the same innovation stimulus is related to their particular knowledge and understanding of the processes in which they are currently involved. Therefore, it is important to note that separating individuals from the context of their previous and current environment can provide misleading indicators of entrepreneurial propensity. The holistic nature of entrepreneurship is an important qualifier of research, analysis, and execution.

Successful entrepreneurs and investors know that a good idea is not necessarily a good opportunity. In fact, for every 100 ideas presented to venture capitalists in the form of a business plan or proposal of some kind, only one or two ever receive formal funding.⁶⁶ Over 80 percent of those rejections occur in the first few hours; another 10 to 15 percent are rejected after investors have read the business plan carefully. Less than 10 percent attract enough interest to merit thorough due diligence and investigation over several weeks, and even months.⁶⁷ These are very slim odds. An important skill, whether one is an entrepreneur or an investor, is to be able to quickly evaluate whether serious potential exists, and to decide how much time and effort to invest.

Opportunities have the qualities of being attractive, durable, and timely and are anchored in products or services that create or add value for customers or end users.⁶⁸ The most successful entrepreneurs, venture capitalists, and private investors (business angels) are opportunity focused and maintain a keen

understanding of the customer and market. Although formal market research may provide useful information and reduce market uncertainties, intuition of “gut feel” based on experience should not be discounted in evaluating market potential.⁶⁹ Some researchers have described this intuition in terms of prior knowledge of a particular field that provides individuals the capacity to recognize certain opportunities.⁷⁰ For truly innovative products and services, the market may indicate need or acceptance. Customer information and perceived need is of limited use for breakthrough innovation. Similarly, the promise of financial reward triggers an individual’s motivated propensity to discover that opportunity.⁷¹

Beyond motivation and experience-based intuition, developing skill in opportunity analysis adds rigor to the subjective nature of opportunity identification and evaluation. Opportunity evaluation requires analysis at three levels: market demand at the customer level, market size and structure at the industry level, and margin analysis at the organization level.

Assessing market demand requires an understanding of the target market, customer access points, and customer perception of the price-value relationship. In other words, entrepreneurs must exhibit knowledge of market demand in order to provide some confidence to investors regarding the durability of the product or service. Perhaps the most important metric of market demand is the customer perception of value. An early return to the customer, as valued by the customer, enhances the likelihood that an idea will gain traction and prove to be a sustainable opportunity. That is why the customer value proposition is so aptly named. Value to the customer in the earliest period of time supports the notion that the new venture is differentiated from the competition. The longer it takes for a customer to perceive value the more risk inherent in the opportunity.

Initial customer acceptance is not enough to support high potential opportunities. Evidence of market share and growth potential equally underpins the high potential opportunity.⁷² A truly valuable product or service gains market share. A low market share projection, sometimes called conservative by the business plan author, is a signal to investors that the entrepreneur is not confident in the customer value proposition. Understanding available channels has significant implications for market share and makes timing and cost assumptions more accurate; it also helps the entrepreneur better understand the value proposition of potential channel partners. Channel partners can be important resource providers.

The size of an opportunity is determined by the depth of its impact. Thus, market structure and size are necessary antecedents of high potential opportunities.^{73, 74} An emerging and/or fragmented market is the most fertile territory for the seed of a new opportunity to germinate. An emerging market is one in which there is a foreseeable escalating increase in market demand. New demand can be satisfied by the entering firm and customers can be less difficult to acquire than taking business from an existing competitor. A fragmented market is one in which there are no clear market leaders. As a result, a new entrant to a fragmented

market has considerable opportunity for consolidation. Current demand from a fragmented supply base signals need and potential upside value. Additionally, proprietary assets of the new entrant signals differentiation and imply greater durability of the new venture.

Margin analysis exhibits the financial manifestation of an opportunity and is a differentiator between idea and opportunity.⁷⁵ The willingness of the marketplace to reward the new firm must eventually surface in the financials and margins. Some researchers support this view, stating that new ventures penalize themselves unless they compete directly with the market leaders, including competing on the basis of price.⁷⁶ When vetting ideas the entrepreneur must articulate the manner in which competitive advantages will emerge as margin advantages. Examples of margin advantages include: low-cost provider with robust gross margin; low capital requirement relative to the competition yielding a higher return on invested capital; and shortness of time to cash breakeven correlates with lower risk of venture failure.

In short, the greater the growth, size, durability, and robustness of the gross and net margins and free cash flow, the greater the opportunity. The more imperfect the market, the greater the opportunity. The greater the rate of change, the discontinuities, and chaos, the greater is the opportunity. The greater the inconsistencies in existing service and quality, in lead times and lag times, and the greater the vacuums and gaps in information and knowledge, the greater is the opportunity. Assuming that the opportunity is present, successful opportunity capture depends on the appropriate resource base.

Resources: Creative and Parsimonious

One of the most common misconceptions among untried, nascent entrepreneurs is that all resources must be in place, especially cash, in order to succeed with a venture. The rationale behind such misconceived logic is that an extensive resource base will somehow reduce the perceived risk of starting a new venture. Money follows high potential opportunities conceived of and led by a strong management team. In other words, there is a shortage of quality entrepreneurs and opportunities, not funding. Successful entrepreneurs devise ingeniously creative strategies to marshal and gain control of resources.⁷⁷

The entrepreneur's resource mantra is "minimize and control versus maximize and own" as well as "think cash last."⁷⁸ In other words, creative resource marshaling is the art of bootstrapping, which allows entrepreneurs to use resources they may not necessarily own.⁷⁹ Leasing rather than buying equipment, working out of a garage before renting space, using credit cards as the sole source of start-up capital, using an advisory board rather than hiring consultants are all examples of bootstrapping. Resource parsimony is a source of competitive advantage for the new venture. Some scholars have argued that too many resources can hinder growth because the firm will lack discipline.⁸⁰ The leanness of a new venture encourages creative resource marshalling, a seminal entrepreneurial behavior.^{81, 82}

Yet creative resource marshaling is often dependent on the entrepreneur's ability to develop social networks to build a resource base and begin to establish legitimacy for their venturing activities.^{83–86} Laumann, Galskeiwicz, and Mardsen defined a social network as “a set of nodes (e.g., persons, organizations) linked by a set of social relationships (e.g., friendship, transfer of funds, overlapping membership) of a specified type.”⁸⁷ Birley stated that entrepreneurs draw from informal (friends, family, colleagues) and formal (SBA, banks, venture capitalists) networks for resources.⁸⁸ Schell developed the notion of “community entrepreneurship” created by formal and informal networks that link the entrepreneurial community to the more powerful organizations in a community.⁸⁹ Lipparini and Sobrero argued that entrepreneurs form interfirm linkages to overcome their individual organization's size limitation.⁹⁰ Based on network research, it can be concluded that likelihood of venture success is highly correlated to experience and tenure because the more experienced entrepreneurs are likely to have extended networks.

Networks give access to resources but start-up resources are not homogenous. The type of resources needed is determined by the nature of the opportunity as well as the development stage of the business. Resources acquired too early will sit idle; therefore, timing of acquisition is important to ensure timely arrival for competitive posturing. Resource typologies are many. The traditional economic classification of land, labor, and equipment has been expanded by management scholars. Hofer and Schendel classify resources as financial, physical, human, and organizational, which is similar to Barney's classification.^{91, 92} Broader classifications include tangible and intangible and general and specific.^{93–95}

In sum, the type of resource needed for new venture creation goes far beyond the demand for financial resources; thinking cash first is often to the demise of the new venture. Gathering other, more specific, resources in a creative fashion will often be a source of competitive differentiation. However, the goal is to develop resources that are valuable, inimitable, durable, and value capturing leading to competitive superiority.⁹⁶ For the new venture, resources evolve from bootstrapped resources to mature assets as they are developed, leveraged, eventually invested, and continuously upgraded.

The Entrepreneurial Team

Few high-growth ventures are started without the assembly of an experience and skilled team.⁹⁷ Venture capitalist John Doerr reaffirms father of American venture capital General George Doriot's dictum: I prefer a Grade A entrepreneur and team with a Grade B idea, over a Grade B team with a Grade A idea. Doerr stated, “In the world today, there's plenty of technology, plenty of entrepreneurs, plenty of money, plenty of venture capital. What's in short supply is great teams. Your biggest challenge will be building a great team.”⁹⁸ Famous investor Arthur Rock articulated the importance of the team over a decade ago.⁹⁹ He put it this way: “If you can find good people, they can always change the product. Nearly

every mistake I've made has been because I picked the wrong people, not the wrong idea.”¹⁰⁰ At the apex of new ventures is not a single entrepreneur; rather, there is an entrepreneurial team that drives the start-up and growth of the new venture.¹⁰¹ Rapid growth can place great pressures on an entrepreneurial firm. A team of multitalented people is often necessary to manage such pressures and overcome obstacles to continued, rapid growth.

The mode of team formation, like resources previously discussed, must be mapped to the opportunity. Different modes of entrepreneurial team formation exist.¹⁰² First, the lead entrepreneur has the business idea and then builds a team to develop the new venture. Second, a team of entrepreneurs recognize an opportunity and develops the idea to fruition. Finally, the team is developed over a period of time. For example, the lead entrepreneur recruits a CFO but waits until product development is complete to recruit a marketing executive to lead commercialization efforts.

As with our discussion on resources, the ability to develop a high performing entrepreneurial team is often dependent on the lead entrepreneur's social network. Dubini and Aldrich distinguished between weak ties and strong ties in an entrepreneur's network.¹⁰³ They argued that the diversity of an entrepreneur's network is correlated to the scope of perceived opportunities available.¹⁰⁴ Strong ties are considered to be direct relationships such as family, friends, and colleagues. Conversely, weak ties are indirect relationships such as venture capitalists, trade associations, and banks. It has been argued that too many strong ties and not enough weak ties can limit the entrepreneur and his potential for resource acquisition because strong ties are often with like-minded individuals.¹⁰⁵

THE HOLISTIC AND INTEGRATED APPROACH OF THE TIMMONS MODEL

The Timmons model depicts a holistic entrepreneurial process. By that we mean it connects opportunity, team, and resources. An impact on any one of the driving forces necessarily affects the other dimensions of the process. The connections among the key drivers is shown as a dotted line, not a solid line because the driving forces will never connect perfectly and create impenetrable barriers to exogenous forces. Uncertainty will, to some extent, influence every new venture and increase the risk of the deal. But the entrepreneur can tighten the bonds among the driving forces through leadership, creativity, and communications.

Importance of Fit and Balance

The concept of fit and balance between and among opportunity, resources, and team is key to understanding the entrepreneurial process. The literature tends to an analysis of the individual entrepreneur's ability to balance the requirements necessary for opportunity recognition and exploitation.¹⁰⁶ It alludes to

a systematic balancing of the myriad of variables but tends to focus on the array of variables associated with individual characteristics or behaviors in search of opportunity in a state of disequilibrium. Market equilibrium adjustments via new venture opportunities have a long history of research focus, but equilibrium within a venture is scantily reviewed.^{107–109} Venkataraman discusses the equilibration of stakeholder value in the entrepreneurial process.¹¹⁰ All new ventures require a diverse set of stakeholders to succeed: founders, investors, suppliers, customers, and so on. These stakeholders have vested interests in the entrepreneurial equation. The entrepreneur and founding team must find the balance among the venture variables that generally satisfy the universe of venture stakeholders, which implies a constant balance challenge in the entrepreneurial process.

The Timmons model is explicit. Where there is imbalance there is risk. The model provides a broad framework within which key driving forces can be reviewed and researched. It is the balancing of the key drivers that is at the heart of the model. The positioning of circles on the model is not random. The entrepreneurial team is positioned at the bottom of the triangle in the Timmons model (Figure 1.1). Imagine the founder, entrepreneurial leader of the venture, standing on a large ball, grasping the triangle over her head. The challenge is to balance the balls above her head, without toppling. This imagery is helpful in appreciating the constant balancing act since opportunity, team, and resources rarely match. When envisioning a company's future using this imagery, the entrepreneur can ask herself; what pitfalls will I encounter to get to the next boundary of success? Will my current team be large enough, or will we be over our heads if the company grows 30 percent over the next two years? Are my resources sufficient (or too abundant)? The list of questions is infinite with very few correct answers.

The potential for attracting outside funding for a proposed venture depends on this overall fit, and how the investor believes he or she can add value to this fit, and improve the fit, risk–reward ratio, and odds for success.

Importance of Timing

Equally important is the timing of the entrepreneurial process. Each of these unique combinations occurs in real time, where the hourglass drains continually, and may be friend, foe, or both. However, the literature supports the importance of prior knowledge to opportunity capture. As a result the opportunity presented to an inexperienced entrepreneur can look very different from a skilled and experienced entrepreneur. Stephenson and Roberts urge researchers to connect with the realities of practice by (in part) understanding the specific temporal issues facing entrepreneurs.¹¹¹ Seminal work on venture capital returns in the semiconductor industry noted timing variances' important impact on initial public offering and overall return.¹¹² Decisiveness in recognizing and seizing the opportunity can make all the difference, particularly when the sand disappearing from the hourglass is cash. In fact, there is no such thing as the perfect time to take advantage of an opportunity. Most new businesses run out of money before

they can find a sufficient customer-based and experienced team to make it to the next level. Time and place are consumer marketplace and capital marketplace phenomena. Opportunity is a moving target.

The Impact of Leadership, Creativity, and Communication

Despite the fact that the popular press has turned entrepreneurs into rock stars, individual leadership in the creation of business is an essential ingredient of the entrepreneurial process. The entrepreneurial leader is one who focuses the new organization on the nature of the opportunity and takes action to move the venture forward.¹¹³ The entrepreneurial leader sets the work climate as one of urgency. But entrepreneurial leaders also recognize that while the biggest opportunities are found in space that is most uncertain, teams can be paralyzed by ambiguity. Doig and Hargrove researched the use of social networks and rhetoric in entrepreneurial leadership.¹¹⁴ Simply stated, entrepreneurs inspire their teams to believe in the opportunity. Therefore, we show the greatest influence of leadership on the connection between the opportunity and the team.

Founders bring certainty to their efforts through real options mentality.¹¹⁵ They make small investments of resources in a number of areas, keeping as many options open as possible. Experimentation and improvisation are commonplace. Most people understand that creativity is necessary for entrepreneurs to generate innovative concepts. But it is equally logical that entrepreneurs be creative to convince a varied set of stakeholders that value can be created and to marshal the resources necessary to exploit the opportunity. Novel approaches to problem-solving can often emerge when previously separate phenomena are combined, sometimes yielding a new set of stimuli.¹¹⁶ The entrepreneurial process is a particularly rich environment for the combination of divergent forces. Indeed, our argument of a holistic perspective of the entrepreneurship process requires the combination or potential combination of ideas and events. What we have found is that this dynamic and sometimes hectic pace results in a unique perspective on resource marshaling. Some of the most creative thinking in a new venture involves the marshaling of resources to foster parsimony. Multiple stimuli collide with stark necessity and the result is a closer bond between the opportunity and the resources necessary for exploitation.

The entrepreneur has a unique responsibility in mediating the information flow within the team and among new venture stakeholders. Often this role is connected to the governance function of the organization. The requirement of sophisticated communications might be well exemplified in the venture capital-backed new firm.¹¹⁷ Venture capital funds represent other financial intermediaries and supply financial investment to the emergent company. They evaluate hundreds of business plans (a primary form of entrepreneurial communication), interact with the new firm (a second order of entrepreneurial communications), negotiate the supply of capital (a third order of entrepreneurial communications), and then typically serve as an active participant in the governance of

the firm (the fourth level of entrepreneurial communications). A similar, albeit somewhat less intense, process occurs between the entrepreneur and suppliers, regulator customers, and host of other stakeholders. Communicating the value-creating nature of the opportunity is at the heart of all of these relationships.

SUMMARY WITH IMPLICATIONS FOR PRACTICE AND TEACHING

John Doerr is a senior partner at one of the most famous and successful venture capital funds ever, Kleiner, Perkins, Caulfield and Byers, and by all accounts is the most influential venture capitalist of his generation. During his career he has been a highly disciplined student (and teacher) of the entrepreneurial process, investing in entrepreneurs who have created new industries such as Sun Microsystems, Compaq Computer, Lotus Development Corporation, Intuit, Genentech, Millennium, Netscape, and Amazon.com. He describes the understanding of the entrepreneurial process as the key to a vibrant economy. “In the past, entrepreneurs started businesses. Today they invent new business models. That’s a big difference, and it creates huge opportunities.”¹¹⁸

The Timmons model of the entrepreneurship process provides a framework for identifying and evaluating venture potential. It helps determine the viability of new business models and emphasizes rigor in opportunity assessment. The process is driven by opportunity but requires matched balance by the available resources and a highly evolved entrepreneurial team. Moderating the strengths of the relationships between opportunity, resources, and team is creativity, communication, and leadership. The business planning exercise is an analysis of fit and gaps between and among all components.

Any depiction of an entrepreneurial process has controllable components that can be assessed, influenced, and altered. Founders and investors focus on these forces during their careful due diligence process to analyze the risks and determine what changes can be made to improve a venture’s chances of success. A common entrepreneurial trap is failing to move forward because of a perceived lack of resources. Too much attention is given to the entrepreneur’s quest for funding, yet more attention needs to be given to opportunity identification and shaping as well as developing the Grade A team to further refine the opportunity and move forward as a high potential venture. Funding will find the big opportunity with an effective team.

At first glance, the Timmons model is purposefully simple yet the theoretical foundations of the model are highly complex and illustrate the dynamic nature of the entrepreneurship process. Remember the metaphor of the entrepreneur juggling three balls, each representing opportunity, resources, and team. Rarely are the balls the same size in practice; therefore, successful juggling is not easily achieved without constant shifts in order to maintain rhythm and balance. Furthermore, the components are time- and place-sensitive creating an inherent

assumption regarding new ventures: no two ventures are alike and each requires significant analysis, due diligence, and thoughtful decision making. Simplicity in frameworks is needed to explore the territory of new opportunities for venture creation. It helps practicing and nascent entrepreneurs ask the very important questions related to opportunity evaluation and guides an internal discussion on the fits and gaps of the opportunity with the resources available and the current team in place. Course changes are inevitable in entrepreneurial pursuits and it is the wise entrepreneur that can recognize the need for change and alter the course as necessary.

Entrepreneurship research integrates multiple academic disciplines in an attempt to understand the dynamic process of new venture creation. It is well served by frameworks. While we present the Timmons model, by no means do we propose it is the only framework. But the key components of the model—opportunity, team, and resources—are essentially included in most perspectives of the entrepreneurial process. The temporal nature of the model requires researching and understanding entrepreneurship as a dynamic perspective.

The Timmons model is a constructive framework for teaching courses in entrepreneurship and new venture creation. Illustrating the Timmons model in practice through case study discussions, business plan writing projects, feasibility analyses, and other entrepreneurial problem-based exercises is very powerful in a course that requires disciplinary integration. Furthermore, the research literature that exists supporting the opportunity-resource-team framework is rich and extensive, which allows educators to teach at the intersection of theory and practice.

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2

Idea Generation from a Creativity Perspective

Dimo Dimov

There is strong agreement that somewhere early in the entrepreneurial process there is an encounter between individuals and opportunities, and this encounter is a distinct and defining feature of the process.¹⁻⁶ The accumulating evidence on nascent entrepreneurs (i.e., people committing time and resources to founding new firms) suggests that thinking seriously about a potential business is among the very first events to occur as these individuals enter the entrepreneurial process.^{7, 8} Understanding the origin of the business idea (i.e., the recognition and subsequent development of an opportunity) is thus a major milestone in entrepreneurship research. The challenge for researchers, however, is that the original business idea is both ephemeral and fragile in nature, easily distorted by the subsequent unfolding of events and people's post hoc rationalization of them—success turns the idea into a proactive vision, while failure turns it into naivete.

The purpose of this chapter is to review, critique, and direct the research progress on our understanding of the early gestation of business idea (i.e., the idea generation phase of the entrepreneurial process). I start from the assumption that ideas are very important. They are the birth of the entrepreneurial process. Some of them are developed into opportunities while others are abandoned along the way. Ex ante, however, it is close to impossible to discern or foresee the path that a particular idea will take. For this reason, to the extent that we are interested in their emergence, all ideas should be treated equally. I acknowledge, however, that the distinction between idea and opportunity has not been clearly made and accepted. For this reason, I attempt to draw a more formal conceptual separation between the two in the next section.

Entrepreneurship is not the only field interested in the origin of ideas. Neither is it the most advanced. The study of creativity, “the production of novel and

useful ideas by an individual or small group of individuals working together,” although not accelerated until the 1950s, represents a long and advanced tradition in social and cognitive psychology.⁹ In many senses, including intuition, the study of idea generation in the domain of entrepreneurship entails the study of creativity.¹⁰ In addition, creativity further enriches the entrepreneurial process through its role in how ideas, once emerged, are shaped and developed. However, a comprehensive review of this broader literature is beyond the scope of this chapter. (Those interested in this broader literature should review the special issues of journals in this field—*Journal of Creative Behavior* and *Creativity Research Journal*.) I will use some of the more established ideas in it to frame and organize the work in the field of entrepreneurship that has dealt, directly or indirectly, with the topic of idea generation. This will help expose research gaps and thus suggest directions for further research progress.

One of the central ideas in the broader creativity literature is that explaining creativity necessitates an interactionist perspective and thus a constellation of factors: process, product, person, and situation.¹¹ Woodman and Schoenfeldt suggest that creativity involves a complex interaction between a person and a given situation.^{12, 13} While the individual faces the situation with an arsenal of antecedent skills and predispositions—knowledge, cognitive skills, and noncognitive traits—the situation may further facilitate or inhibit the individual’s creative accomplishment. What the interactionist perspective suggests, however, is that if we studied the two elements in isolation, there will be a large unexplained component that remains. As I will argue in this chapter, while there has been a growing application of insights from the creativity literature to the field of entrepreneurship, these insights have been limited to only some of the elements mentioned earlier, namely person and process. Therefore, in order to advance entrepreneurship research in this direction, we need to understand the complexities of the creative product and situation as well as their interaction with the creative person and process.

IDEA VERSUS OPPORTUNITY

Are ideas and opportunities distinct? We often teach our students that not every idea is a good opportunity, thereby implying that what is interesting and what has commercial viability are two distinct considerations. Pushing this further, I argue that every opportunity has an initial idea as its progeny (i.e., someone must have thought about it for it to ever become a subject of human discussion). These two arguments suggest that opportunities are nested within the realm of ideas. In other words, ideas are necessary but not sufficient condition for opportunities to emerge. The sufficiency condition is established through accumulating evidence and conviction of commercial viability, existence of potential market, ability to generate profit, and ability to sustain this profit over time in the face of (increasing) competition.

As they become shaped and developed into opportunities, ideas almost never survive in their original form. In fact, in most cases their original form is probably too fuzzy and therefore needs a lot of elaboration and specification. Idea shaping and development require the engagement of other people and, in many cases, parts of an entire organization. The path from idea to opportunity, to the extent that it exists or is found, is therefore an inherently social process of continuous learning. Crossan and colleagues present a formal model, the 4I framework, of the stages and subprocesses that lay between some initial “Aha!” and a venture being launched.^{14, 15} This process occurs at three distinct levels: individual, group, and organizational. These levels are linked through four social and psychological processes: intuiting, interpreting, integrating, and institutionalizing (hence the 4I name). At each stage of this process, there is tension between the decision to continue or to abandon the refinement and pursuit of the developing idea. A brief elaboration of this process would help us place the current discussion in the broader entrepreneurial process.

Intuiting is “the preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experience.”¹⁶ This is the “cognitive cradle” where ideas are generated. At this stage, individuals simply become aware of what they perceive as holding some potential in meeting current or emerging customer needs.¹⁷ These initial ideas tend to be very basic—simply a sense that something is possible—and there is no way of judging these as right or wrong at this stage. *Interpreting* is “the explaining, through words and/or actions, of an insight or idea to one’s self and to others.”¹⁸ In this process, potential entrepreneurs engage in explaining, defending, and ultimately shaping the “fuzzy” images of their insights. They thus interact not only with their immediate social network—family, friends, classmates, colleagues, teachers, and so on—but also with some potentially more instrumental stakeholders to the development of the idea: partners, informal and formal investors, consultants, accountants, customers, suppliers, employees, and so on. Through these social interactions, shared understanding of the opportunity idea begins to emerge and thus the overall learning process enters the *integrating* phase. This is the stage at which a nascent entrepreneurial team may be formed as the idea shows continuing merit and induces an even more intensive pursuit. Finally, to the extent that the actions and dialogs associated with integrating become more intentional toward forming a venture in order to exploit the emerging opportunity, there is routinization involved that signifies the process of *institutionalizing*. At this final stage, the well-articulated contours of the idea drive the establishment of decision-making procedures as well as resource planning, acquisition, and organization.

I can summarize my line of thought so far using the following photography metaphor. Idea generation (i.e., intuiting in the model mentioned earlier) pertains to pointing the camera to a fuzzy object that one finds interesting and that one feels could develop into a good picture. Opportunity recognition, capturing the processes of interpreting and integrating, is an unfolding process of zooming, focusing, and adjusting the aperture and shutter speed that may (or may not)

reveal that the picture is indeed there and worth making. This chapter is focused on idea generation and thus on the raw input to the entrepreneurial process. While I may use the terms *opportunity* and *opportunity recognition* in ways consistent with the original intentions of the reviewed research, I only draw implications for idea generation (i.e., the early birth of business ideas). As the generation of ideas is the main focus of the creativity literature, understanding creativity in an entrepreneurship context is an important foundation for our field. I have organized the remainder of the paper around the five main areas highlighted by the interactionist perspective on creativity—process, product, person, situation, and the interaction thereof—and conclude with overviews of future research directions and implications for practice.

THE CREATIVITY PROCESS

When pondering how great ideas occur, we intuitively accept, and scholars have duly formalized this intuition, that there is more or less a general process involved. This notion has also been introduced in entrepreneurship research, as evidenced by the continuous effort to identify just how business ideas are born. Because of the significant analogy between opportunity conception and creative insight, there have been several attempts to use a creativity process framework to explain opportunity recognition.

Process Stages

The main influence on the study of creative processes has been Wallas through his five-stage model.¹⁹ The stages involved are preparation, incubation, insight, evaluation, and elaboration. Based on this model, the principal hypothesis guiding entrepreneurship researchers has been that entrepreneurs also follow these steps in conceiving of their business ideas. In their empirical approach, researchers have sought confirmation of this either by searching for common themes in the narratives of entrepreneurs on their early experience with their business ideas or by measuring the degree to which entrepreneurs agreed that they had indeed gone through these stages. In perhaps the earliest study, Long and McMullan, using a small-scale exploratory approach, found support for and proposed a refinement to the original model, consisting of four stages: prevision, point of vision, opportunity elaboration, and decision to proceed.²⁰ Hills, Shrader, and Lumpkin asked 187 business owners/entrepreneurs about the degree to which they agreed with the thirty-one statements about the opportunity recognition process. Using a factor analysis, they showed that there was good consistency with the model proposed by Wallas.^{21, 22} They also extended that model by suggesting that the creative process was a staged one, involving feedback loops between the stages of preparation, incubation, and insight. In their

latest elaboration of the model, the five stages are grouped into two main stages—discovery and formation—with a refined elaboration of the feedback loops among the stages.²³ The empirical test of this refined model has met mixed support.²⁴

Cognitive Processes

In addition to the general stages describing the process, there has also been interest in the type of thinking employed by entrepreneurs in generating their ideas. Most of the insights here have come from cognitive psychology, a discipline with a long tradition of studying the nature and emergence of insights. I use the term *insight* as representing the process through which a person suddenly moves from a state of not knowing to a state of knowing.²⁵ Finke further distinguishes between convergent and divergent insight on the basis of the interplay between function and form that they involve: convergent insight is of a form-follows-function type, while divergent insight is of a function-follows-form type.²⁶ The former involves making sense out of apparently disconnected facts, while the latter is outward flowing, generating possibilities that one might not ordinarily consider.^{27, 28} More recent theoretical developments in the entrepreneurship field stress the role of creative cognition, specifically the usage of conceptual combination, analogy, and initial problem formulation in conceiving of opportunities.²⁹

Search Processes

While idea generation can certainly be influenced by what goes on in entrepreneurs' heads, it may also be influenced by what entrepreneurs do. In particular, how one goes about searching for information or simply following their gut feeling could plausibly make one more or less likely to spark with ideas. Following in the Carnegie tradition of bounded rationality, attention driven behavior, and problemistic search, entrepreneurship researchers exploring this area have added an important motivation angle to the study of the idea generation process.³⁰ Since the nature of an insight is greatly dependent on the information available to the individual, how individuals go about searching for information is an important aspect of the process. Notwithstanding the value or personality reasons for seeking entrepreneurial careers, search is driven by the perception that particular aspirations have not been met.^{31, 32} The motivated search model, proposed by Heron and Sapienza applies the concept of problemistic search to the context of entrepreneurship by specifying the conditions that propel individuals toward searching for business opportunities.³³ Specifically, they suggest that individuals engage in problemistic search when their current performance is below their aspiration level. In an empirical setting, consistent with the aforementioned predictions, Sine and David showed that environmental jolts shook the institutional logics of incumbent organizations and induced search for new

logics, thereby creating an environment of increased ability to discern opportunities.³⁴

Motivated search, however, is one of several possible ways for the initiation of the opportunity recognition process. Bhava proposed a model for the venture creation process, which suggested two separate paths leading to opportunity recognition.³⁵ In the first path, the process initiates with a decision to start a business, while in the second it starts with a recognized need to which a solution is developed. Another distinction made among the search processes is that of directed search and chance occurrences. For example, Long and McMullan found that the path to opportunity vision could lead through either deliberate search or serendipity.³⁶ The distinction between search and serendipity is also reflected in other early work on this subject.³⁷

More recently, there has been active interest in developing more formal classifications of search processes. Chandler, Dahlgvist, and Davidsson developed a taxonomy of opportunity recognition processes by examining the emerging business initiatives of 136 Swedish ventures.³⁸ They identified three distinct processes: proactive search, reactive search, and fortuitous discovery. Proactive search is exploratory in nature and capitalizes on unique knowledge; reactive search is triggered by poor performance, consistent with Heron and Sapienza's model mentioned earlier; fortuitous discovery pertains to unexpected events involving no search. Similarly, Chandler, DeTienne, and Lyon developed a typology of opportunity detection/development process based on a survey of accomplished entrepreneurs.³⁹ They also identified three distinct processes: opportunity as a solution to a specific personal problem, opportunity as a solution to a market problem, and opportunity as created, whereby individuals act on their (bold) imagination to disrupt existing market structures and establish new ones. Although all three processes involve active search and fortuitous discovery, they are distinct in the way the process of opportunity recognition is triggered. Overall, where studies have sought to examine the relative prevalence of these search approaches, the empirical results have shown that there is no dominance of one approach over the other.⁴⁰⁻⁴²

In addition to the type of search employed by entrepreneurs, researchers have also examined the intensity of search, focusing on the amount or type of information sought. Cooper, Folta, and Woo found that the intensity of search was negatively related to prior entrepreneurial experience, domain differences, and confidence.⁴³ Finally, several studies have looked directly at the sources of opportunity ideas. Almost all sources are, in one way or another, related to the entrepreneurs' prior experience and undertaken action.^{44, 45} In a survey of 483 small businesses, Peterson found that spontaneous thoughts had the highest frequency (24 percent), followed by competitor imitation (18 percent) and scanning of business periodicals (11 percent).⁴⁶ In a more systematic study, Cooper and colleagues distinguished between professional and personal sources of information and related their usage to the prior experience of entrepreneurs.⁴⁷

They found that the use of professional sources was positively related to domain similarity, while the use of personal sources was negatively related to prior entrepreneurial experience and domain similarity, and positively related to domain differences. Simon and Houghton elaborated further on the entrepreneurs' search processes by providing a theoretical examination of the effects of decision environments, specifically firm age and the introduction of pioneering products.⁴⁸ They argue that entrepreneurs in younger firms exhibit more active search and rely more on personal and external sources of information. Further, entrepreneurs striving to introduce pioneering products also exhibit more active search and rely more on personal and external sources of information.

To recapitulate, the process of idea generation has been studied from various angles—from the general stages that the process entails to the more specific cognition and search behaviors that entrepreneurs employ. Perhaps the main deficiency in this area comes from the predominant focus on retroactive accounts of how ideas came about. This poses the well-recognized problems of recollection bias and highlights the need for research that is more contemporaneous with the ideas it studies. In this regard, there is a ripe opportunity to employ the more rigorous research designs that have by now been well established in creativity and cognition research as well as rich qualitative studies.⁴⁹ Some of the design possibilities include field observations, field and lab experiments as well as surveys that allow the collection of rich, contextual data.

THE CREATIVITY PERSON

Given the alluded importance of perception, courage, and action for entrepreneurship, one of the oldest research traditions in entrepreneurship has focused on understanding how entrepreneurs differ from the general population in terms of various personal characteristics.⁵⁰ In a sense, this mirrors similar developments in the study of great creative persons or great leaders.^{51, 52} Similar to these fields, there have been strong criticisms of the trait paradigm, mainly stemming from its failure to account for the diversity among entrepreneurs and the situations they face.⁵³ As a consequence, there have been suggestions to redirect the study of entrepreneurs toward a focus on behaviors rather than traits.⁵⁴ Nevertheless, it has been argued that personality remains an important general predictor of behavior, once specific mediating factors are considered.⁵⁵ In the more complex social context of creativity, it is now well accepted that there are three individual factors—cognitive, knowledge, and intrinsic motivation—that are instrumental in accounting for differences in creative outcomes.^{56, 57} With the understanding that personality characteristic and specific attitudes affect one's motivation to generate ideas and eventually become an entrepreneur, I will focus in the remainder of this section on the cognitive and knowledge differences among individuals.⁵⁸

Differences in Cognitive Abilities

In the last decade, the emphasis on individuality has staged a strong comeback, through the introduction of a cognitive perspective to entrepreneurship, focusing on the entrepreneurs' unique mental representations of the world.^{59–61} Using the conceptual advancement and widening popularity of cognitive psychology, this new paradigm has produced influential studies on the specific and distinguishing characteristics of entrepreneurs that have created some convergence among researchers in regard to the uniqueness of entrepreneurial cognition.^{62–64} The cognitive perspective currently represents a powerful theoretical tool in the study of opportunity recognition.^{65–68}

In the transition of ideas from cognitive psychology to entrepreneurship, however, there has been a conceptual twist. While cognitive psychology is typically blind to individual differences (i.e., it looks for commonality among people in the mental processes they use), entrepreneurship researchers have, for the most part, assumed that entrepreneurs are somehow better at the processes conducive to idea generation. In keeping with the long and powerful mystique of the entrepreneur, there has been a shifted focus from process to the person.⁶⁹ Thus, while many of the perspectives discussed later could easily be perceived as process-focused, their underlying assumption is that the processes discussed apply differently to entrepreneurs versus nonentrepreneurs.

Perhaps the main and most influential idea guiding this research domain has been on the construct of alertness as a distinguishing characteristic of entrepreneurs.⁷⁰ Alertness is not a simple possession of knowledge, but rather involves knowing where to obtain and deploy information. Fundamentally, it is the quality (or state of mind) necessary for the discovery of hitherto unknown profit opportunities; it is the “motivated propensity of man to formulate an image of the future.”⁷¹ Alertness is considered a personal trait and is assigned a “primordial role” in the Austrian approach.^{72, 73} In the subsequent building on Kirzner's work, researchers have tried to establish a more concrete conceptualization of alertness, in terms of distinct cognitive skills or behaviors.

Entrepreneurial cognitions represent “the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth.”⁷⁴ Further, it is about “understanding how entrepreneurs use simplifying mental models to piece together previously unconnected information that helps them to identify and invent new products or services, and to assemble the necessary resources to start and grow businesses.”⁷⁵ In regard to its influence on idea generation, I have discerned three main topics, based on what Ucbasaran and colleagues define as the components of strong entrepreneurial cognition, namely the usage of heuristics, higher-level learning, and off-line evaluation.⁷⁶

With regard to the usage of heuristics, empirical studies have sought to extend the findings from the cognitive psychology literature on heuristics and biases in decision making, pioneered by Kahneman and Tversky, to the context of

entrepreneurs.⁷⁷ They have thus demonstrated that entrepreneurs use more heuristics than managers and that, cognitive biases are an essential contributor to risk perception and the decision to start a venture.^{78–80} In reflecting on this work, Alvarez and Busenitz argue that it is this heuristic-based thinking that gives entrepreneurs the distinct capability to discover opportunities.⁸¹ However, in comparing entrepreneurs and managers in terms of having analytical versus intuitive cognitive styles, Allinson and colleagues found that while entrepreneurs were more intuitive than the general population of managers, they were also no different from senior managers and executives.⁸²

Higher-level learning pertains to the achievement of new understanding and interpretations.⁸³ One conceptualization of this process has focused on the usage of mental schemas, which represent individuals' understanding of how the external world works.⁸⁴ In this context, entrepreneurial alertness is viewed as a particular schema that is of higher complexity and flexibility, and that involves heightened sensitivity to market disequilibrium signals.⁸⁵ Finally, offline evaluation is related to the concepts of mental simulations and counterfactual thinking, which pertain to reflection over past and future events and are seen as a distinctive feature of opportunity finders.^{86, 87} In an attempt to further focus the application of concepts and findings from cognitive science to the study of opportunity recognition, Baron argues that perception, schemas, and self-regulation of behavior all provide valuable insight into the opportunity recognition process.⁸⁸ As most of these presented arguments have been theoretical, one of the main gaps that needs to be filled is the empirical testing and theoretical refinement of this perspective.

While the various aspects of entrepreneurial cognition have greatly enhanced one's theoretical arsenal for studying idea generation, one significant gap remains: explaining why, other than by assumption and definition, entrepreneurs are better able to use or access these particular cognitive processes or possess better cognitive skills.

Differences in Behavior

Again, moving out from inside people's heads to their external behaviors, some work has focused on identifying entrepreneurs' distinct behaviors that could explain their heightened alertness to potential opportunities. The specific behaviors studied include information search, usage, and attention. In a much-cited early study of entrepreneurial alertness, Kaish and Gilad found differences between entrepreneurs and executives in terms of time spent on information search and scanning, sources of information used, and attention to risk cues.⁸⁹ However, a wider-scale replication of this study by Busenitz failed to reconfirm these results and suggested that the self-reporting scales used by Kaish and Gilad had low reliability.⁹⁰ Subsequent studies within this stream have reported that there are no individual differences in self-perceived alertness as well as in the proportions of sought and triggered opportunities.^{91, 92}

These findings essentially add further fuel to the argument that, other than differences related to the motivation to engage in the entrepreneurial process, protruding, stable differences between entrepreneurs and nonentrepreneurs in regard to their opportunity-related behavior may be hard to find.^{93–95} With the understanding that this logic runs counter to the general tendency to glorify successful entrepreneurs, perhaps much more rigor and cumulative findings are needed before making such conclusion convincing and informing our teaching and practice.

Differences in Knowledge

One of the central tenets in creativity research is the positive relationship between (domain) knowledge and creativity.⁹⁶ In fact, studies of creative people in art have shown that a long period of immersion in a field, often up to ten years, is needed before new, creative paths can be laid out.⁹⁷ This notion has also been taken up in entrepreneurship research. In addition to how they think and what they do, people have different ideas because of what they know. Several empirical studies have provided support for a positive relationship between prior knowledge and opportunity recognition. Shane argues that knowledge of markets, of how to serve markets, and of customer problems influences both opportunity recognition and opportunity exploitation processes.⁹⁸ His detailed, qualitative analysis of eight different opportunities based on the same MIT technology invention showed that the way different individuals responded to the same innovation stimulus was related to their particular knowledge and understanding of the market processes in which they were involved. Shepherd and DeTienne sought to replicate Shane's findings on the positive effect of prior knowledge of customer problems in an experimental design with seventy-eight MBA students.⁹⁹ They manipulated the amount of prior knowledge participants possessed through varying the amount of information provided and affecting the recall of this information. Their results showed that prior knowledge had a positive effect on both the number of opportunities identified and the innovativeness of those opportunities. Ucbasaran, Wright, and Westhead, having surveyed a representative sample of 631 UK entrepreneurs, showed that human capital, in terms of prior business ownership experience, was positively related to the number of identified opportunities within the previous five years.¹⁰⁰

There have been several studies, however, that have established that the relationship between human capital and opportunity recognition is not a direct one, but is rather moderated by learning or cognitive skills. In a study of 380 technology entrepreneurs, Corbett found that the effect of prior knowledge was moderated by the way individuals learn from experience, as measured by Kolb's Learning Style Inventory.^{101, 102} Specifically, for individuals who used more sensory inputs in learning from experience there was no relationship between specific human capital and the number of identified opportunities; conversely, for individuals who used more conceptual abstraction in learning from experience

there was a positive relationship between specific human capital and the number of identified opportunities. Similarly, Ko and Butler found that the effect of alertness (prior knowledge) on opportunity recognition was mediated by individuals' bisociative thinking ability.¹⁰³ In a sense, this set of studies resonates well with some suggestions in the broader literature on knowledge and creativity that too much domain knowledge may in fact impede one's ability to come up with unusual, outside-the-box solutions.¹⁰⁴ Further understanding the relationship between prior knowledge and idea generation is thus one important area for future research. This also serves to highlight the need for integrating an array of individual and situational factors. In what situations does knowledge enhance idea generation and in what situations does it not?

Differences in Learning

While there is a tendency in the economic literature to treat information in an objective way, assuming that all actors perceive it in the same way, the management cognition literature has pointed to differences in interpretation as an important factor in explaining different behaviors or outcomes.¹⁰⁵ Differences in interpretations are not necessarily due to differences in the perceived quality of the information that individuals receive, but to the different meanings that a given piece of information may contain.^{106, 107} An individual's perception and interpretation of a particular action situation is guided by his or her developed cognitive maps or representations of the particular domain.¹⁰⁸ As these maps differ in their structure and complexity across individuals, different individuals are likely to interpret the same stimulus differently.¹⁰⁹ At the basis of such differences in map structures and resulting interpretations lies one's domain-specific knowledge and associated knowledge structures.^{110, 111} Experts and novices differ in their cognitive representations of particular problems and such differences imply different abilities to form new knowledge associations and thus achieve novel interpretations. In particular, experts encode and process information in a more abstract way than novices.^{112–114}

While this interpretation-based angle is reflected in the social constructivist views of opportunities, attempts to build more precise theories in the entrepreneurship literature are only fledgling at best.¹¹⁵ This initial work has so far focused only on some of the characteristics that affect information processing. Corbett argues that it is important to account for how knowledge is acquired and processed—cognitive and learning style.¹¹⁶ He finds evidence that domain knowledge matters only when coupled with a particular learning style. Further expanding his work on experiential learning, Corbett argues that each of the creative process stages requires particular learning skills.¹¹⁷ Finally, Dimov also uses the construct of learning style as a distinguishing individual characteristic.¹¹⁸ While certain learning styles are conducive to idea generation in some situations, they may act as a deterrent in others. It interacts with one's specific human capital in responding to particular situations. Beyond individual differences and in

further support to the interactionist angle this chapter advocates, there is a rich opportunity for studying how situations differ in the way they present information to individuals and then how different individuals respond to this information.

THE CREATIVE PRODUCT

What do the ideas generated by potential entrepreneurs actually represent? How can we distinguish and conceptually organize the multitude and diversity of ideas that potential entrepreneurs pursue? Are there any differences in how these ideas are conceived, by whom, and in what situations? These are all questions that, I believe few will disagree, are of great importance in entrepreneurship research. Our limited ability to answer them, however, serves to highlight the areas that need work in order to make the field more theoretically sound.

As a beginning in understanding the nature of ideas, there is a tradition, coming mainly from economics, of classification of ideas (opportunities). Shane distinguishes among inventions (ideas) on the basis of their importance, radicalness, and broadness of scope.¹¹⁹ More recently, Eckhardt and Shane propose a more comprehensive opportunity classification framework that also captures aspects of the change process and has three dimensions: locus of changes, sources of opportunities, and initiator of the change.¹²⁰ The locus of change dimensions reflect the elements of the value chain identified by Schumpeter as objects of innovation: products or services, markets, raw materials, methods of production, and ways of organizing.¹²¹ In regard to the sources of opportunities, Eckhardt and Shane identify the following opportunity types: information asymmetries versus exogenous shocks, supply- versus demand-side changes, and productivity-enhancing versus rent-seeking. Finally, opportunities are classified on the basis of the actors initiating the change—noncommercial entities, existing commercial entities, and new commercial entities. While this work is an excellent first step in gaining a richer understanding of the complexity of entrepreneurial ideas, such taxonomies remain disconnected from the other elements of the creative process, namely process, person, and situation.

Another approach to classifying opportunity ideas has been more subjective in nature, based on specific knowledge and beliefs of entrepreneurs. Sarasvathy and colleagues divide human beliefs about the future into three categories: predictable, unpredictable but driven by an independent environment, and unpredictable but driven by human agency.¹²² Under the first two beliefs, people are passive observers of how the future unfolds; at best, they can foresee it, yet still without influencing it. Under the last belief, while the future is unpredictable, people play active roles in shaping it. The authors further argue that each of these beliefs would be associated with a pursuit of opportunities associated with more or less clear sources of demand and supply. Under beliefs about the predictability

of the future, entrepreneurs would pursue opportunities involving clear sources of supply and demand. Under beliefs in an unpredictable future resulting from an independent environment, entrepreneurs would pursue opportunities involving a clear source of either demand or supply. Finally, under beliefs in an unpredictable future resulting from human agency, entrepreneurs would pursue opportunities with no clear sources of demand and supply. Using a similar logic of demand and supply knowledge, Ardichvili, Cardozo, and Ray present a typology of opportunities based on their origin (value sought) and degree of development (value creation capability).¹²³ They categorize value sought as unidentified and identified, and value creation capability as undefined and defined. Their main argument in relation to this typology is that the more established the value sought and value creation capability, the higher the likelihood that a venture pursuing this opportunity will succeed.

While the knowledge and beliefs are treated as exogenous factors here, it is quite plausible that their particular configurations may be found only in some situations and not in others. In addition, one's beliefs in the predictability of the future may drive what and how one perceives change.

THE CREATIVE SOLUTION

There is a well-known phenomenon in social psychology—the fundamental attribution error—whereby in judging the behavior and deeds of others, people typically underestimate the power of situations and situational pressures and thus ascribe what they see to individual strengths or weaknesses.¹²⁴ When we talk and think about (great) entrepreneurs, the fundamental attribution error is evident in our tendency to praise their individual characteristics or skills and overlook the enabling force of their environment. There are, however, many aspects of one's surrounding that enable or impede one's ability to come up with opportunity ideas. Among these are available information, situational motivation, incentives, social network, and situational pressures. Each of these serves to make ideas accessible to some individuals and not to others.

One of the fundamental characteristics of the economic environment is the dispersed nature of knowledge.¹²⁵ In some cases what one needs to know is missing, while in other cases what one knows does not appear immediately needed. This dispersion is further swirled by continuous change in all aspects of society. Drucker argues that change and its perception by various actors is one of the fundamental drivers of the entrepreneurial process.¹²⁶ In a very insightful discussion, he proposes a classification of opportunity ideas based on their source or stimulus. He distinguishes between sources within a particular industry or activity setting (the unexpected, the incongruity, process need, changes in industry or market structure) and outside (changes in demographics, perception, and knowledge) of it. While this work does not exactly hone in on how perceptions of

change are built and acted upon, it does move us closer toward a person–situation interaction. Only certain people can be found in certain situation and thus able to acknowledge the particular change.

In addition to the information they provide, situations may affect idea generation through the way the information is framed and perceived. McMullen and Shepherd show that different framings may induce an offensive or defensive motivation and thus trigger different behavior.¹²⁷ Dimov argues that the way information is structured and presented pushes those willing to come up with idea toward different types of thinking (convergent or divergent).¹²⁸ In an experimental setting, he shows that the individual responses in such situations vary depending on how easy it is for individuals to engage in such thinking.

Situations are also instrumental through the incentives or other pressure and stress conditions they create for individuals to think and act. Shepherd and DeTienne show that the promise of financial reward may act as an inducement for idea generation.¹²⁹ This also reflects the wider, macroeconomic argument that the incentive structure of the capitalist process is the one that promotes entrepreneurship.¹³⁰ Baron argues that differences in opportunity recognition may be due to the different situational pressures that entrepreneurs and nonentrepreneurs face.¹³¹ Such contextual influences create conditions that induce cognitive biases in people. Among the conditions suggested are information overload, uncertainty, novelty, emotions, time pressure, and fatigue.¹³² These in turn make people more prone to employ counterfactual thinking, regret, and affect infusion, self-serving bias, planning fallacy, and self-justification. Similarly, Simon and Houghton argue that specific decision environments, particularly those of younger firms and firms introducing pioneering products enhance the cognitive biases of entrepreneurs in regard to the inferences and decisions they make in estimating market demand, competitors' responses, and the need for complementary assets.¹³³ In developing this perspective further, more focus is needed on the empirical testing and further refinement of these theoretical arguments.

One's social network also influences the generation of ideas.¹³⁴ Findings have shown that the number of social network contacts as well as the number of weak ties in a network are positively related to both the number of venture ideas identified and the number of opportunities recognized.¹³⁵ The size and diversity of the network have been shown to influence a new venture team's performance prospects, as demonstrated by Vissa in the context of eighty-four high-technology ventures in India.¹³⁶ Such network-based advantage stems from the importance of information diversity for the quality and speed of decision making, and so for the refinement of opportunities.¹³⁷

Some of the opportunities for future research in this area come from incorporating change into the situational characteristics. Are people in highly changing environments more likely to generate ideas? What particular personal characteristics make one better able to comprehend and respond to such changes with new ideas? Are there different processes associated with idea generation in slow-versus fast-changing environments?

THE INTERACTION AMONG THE ELEMENTS

Although there has not been, so far, any work in the entrepreneurship field that focuses on more complex interactions among process, product, person, and situation, some of the studies reviewed in the preceding section integrate more than one factor and thus represent building blocks for a more advanced interactionist perspective. I will summarize these briefly.

Baron integrates process and situation by arguing that certain heuristics and biases are more likely to emerge in certain situations.¹³⁸ Dimov integrates person and situation by showing that the match between one's learning style and the situation at hand plays an instrumental role in idea generation and further action.¹³⁹ In addition, he also argues that these interactions may generate qualitatively different ideas (i.e., products). Corbett presents a person–process interaction by arguing that the various stages of the creative process necessitate specific experiential learning skills (i.e., aspects of one's learning style).¹⁴⁰ Finally, another person–process interaction relates to the findings that one's domain-specific knowledge affects one's search direction and intensity as well as one's opportunity interpretation.^{141, 142}

The next step in increasing the order of interaction entails integrating and reconciling existing research findings and theoretical models, thereby allowing the theoretical mechanisms highlighted in some to activate the boundary conditions of others. There are many intuitive questions that help guide such integration. Here is but a small, teasing sample. Is a particular knowledge or skill equally important in all situations? Do they lead to qualitatively different ideas in different situations? Are these different ideas generated through qualitatively different processes?

OVERVIEW OF FUTURE RESEARCH DIRECTIONS

Perhaps the main research challenge facing entrepreneurship scholars in studying idea generation and opportunity development is building upon the respective advances on the topic in the creativity and cognition literatures. There has now been a longstanding recognition that creativity is a complex phenomenon that necessitates study from and integration of many different angles. Such recognition is now due in the entrepreneurship field as the research rigor in it increases. Understanding how ideas emerge and are subsequently developed (into opportunities) entails paying careful attention to the nuances that process, product, person, and situation as well as their interaction bring. There are specific questions that guide the building of more coherent theories within each of these areas, as I have outlined in my review of these areas earlier. In addition to these, we need a collective effort in building a well-balanced picture of how (potential) entrepreneurs generate ideas by integrating each of the process, person, product, and situation aspects. Achieving four-factor integration right away is far from

realistic. Rather, research will follow a more disciplined, incremental path, elaborating first the two-factor models and gradually relaxing their boundary conditions by including additional constructs into the models.

OVERVIEW OF PRACTICAL IMPLICATIONS

The practical implications of a better understanding of how ideas are generated are clear. Entrepreneurship is taking a firm ground in many schools and universities. While teaching students how to prepare a business plan is very valuable, no one gets to a business plan without first having an idea. And teaching students how to generate, evaluate, and shape ideas is not a trivial task. We need to harness their personalities, abilities, knowledge, and experiences, and so, understanding the conditions under which these are most conducive to generating novel ideas would make course designs more than a shot in the dark.

Based on the ideas presented in this chapter, there are two main aspects in which the educational experience related to idea generation may be enhanced. The first pertains to having students unleash the generative potential of their minds. There are many creativity modules in business school programs, focused on inducing students to think “outside the box” by putting them in relaxing, mind-freeing situations and teaching them some idea-generation and idea-enhancing techniques. While this approach tends to overemphasize the creative skill component, it downplays the roles of situation, intrinsic motivation, and the students’ own knowledge and ways of thinking. Many students find such exercises futile, as they simply do not consider themselves having a creative spark. Such dejection is based on the well-ingrained tendency to glorify the individuality and uniqueness of creative minds, and to make it a question of “either I am or I am not.” To make one’s motivation really intrinsic, we need to suspend our normative judgment of what is good creativity, and emphasize to and convince students that everyone is creative in their own, unique way. In addition, given the diversity of students’ prior knowledge and experience, we need to provide them with a sufficient diversity of situations in order to ensure that each will find their own, exciting domain in which to be creative.

The second aspect of enhancing the educational experience pertains to teaching and encouraging students to suspend their initial judgment of their ideational embryos. Very often, it is our own tendency, based on our own beliefs and experience, to call an idea stupid that prevents us from ever verbalizing it and letting it take a life of its own. Removing this self-imposed hurdle will increase not only the number of ideas floating in the classroom but also their growth and impact as they absorb the input from the other class participants.

Moving away from the classroom, there are also implications for practitioners in regard to improving the gestation and impact of their ideas. Restraining and suspending initial judgment could work equally well in the domain of practice—increased intrinsic motivation and flow of ideas could make the wheel of the

social process of opportunity development spin even faster. In addition, through building teams to complement their knowledge and skills, potential entrepreneurs could harness the complexity of idea generation to their own benefit. They could either increase the fit with a current situation by harnessing new knowledge and ways of thinking or expose themselves to better-fitting situations by leveraging their social network.

NOTES

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3

Perceiving and Shaping New Venture Opportunities through Mindful Practice

Andrew C. Corbett and Jeffery S. McMullen

“How do I find a good opportunity? I would really like to start my own business, but I just don’t know where to begin.” This question is familiar to anyone who has ever consulted with nascent entrepreneurs or taught a class on entrepreneurship. More often than not, the question is inadequately answered. Instead of instructing nascent entrepreneurs on how to identify opportunities, we discuss what entrepreneurship is, drawing on a number of descriptive theories from economics, or we offer instruction in industry and organizational analysis by using theoretical frameworks from strategic management.^{1–7} However, if you stop and listen carefully, the question is rarely, “How do I gain and sustain competitive advantage?” and it is almost never, “What do entrepreneurs do?” No, what most aspiring entrepreneurs want to know is, “How do I perceive new venture opportunities?”

Given this question, very few theoretical explanations exist. One can either create opportunities through new combinations of resources or discover them through either entrepreneurial alertness or formal search.^{8–10} The logic of the first approach appears to be responsible for the creativity exercises that many consultants and professors use. Though fun, these exercises tend to generate impractical possibilities that ignore market demands. In contrast, subscribing to the logic of discovery leads to the unhelpful advice “keep your eyes open” or to exercises designed to search for inefficiencies resulting from exogenous shocks to the economy caused by changes in technology, consumer tastes, regulation, or demographics.^{11, 12} Like creativity exercises, the formal search of industry analysis tends to be so generic that it produces a slew of impersonal and often impractical possibilities, which ignore the idiosyncrasies that define every individual, including who and what they are (i.e., passion, knowledge, roles filled in their family

and community, and so on) and who and what they would like to be (i.e., dreams, duties, desired contribution or legacy, and so on).

Filling some of this gap is the theory of effectuation which takes an inside-out approach to entrepreneurship.¹³ Effectuation begins with the effects that individuals wish to create and then focuses on how entrepreneurs achieve these effects by asking and answering questions, such as who am I, what do I know, and whom do I know? At the firm level, resource-based theory (RBT) and dynamic capabilities theory (DCT) operate in a similar manner, suggesting that firms should seek competitive advantage by developing core competences around the resources and capabilities in their control.^{14–17}

Although these theories are exceptionally helpful in transforming ideas into profitable realities, they tend to assume that actors have a clear understanding of what they want. With effectuation, the actor is deliberately attempting to enact some desired effect, whereas the firm of RBT or DCT is clearly striving for competitive advantage and the above-average profits it promises. The frustration experienced by would-be entrepreneurs, however, is often attributed to the fact that they do not know what they want. Therefore, what these individuals seem to want to know, is what to do, then and in some cases only then are they interested in learning how to do it.

Thus, there are a significant number of nascent entrepreneurs who are asking a question that is not answered by effectuation, RBT, industrial organization, or even entrepreneurial alertness. This is by no means an indictment of the utility of these theories which have proven to be extremely powerful tools for describing what entrepreneurs do and how people may best bring their ideas to fruition to create value for both themselves and their stakeholders. However, there is a process that precedes them, a process that speaks to these nascent entrepreneurs' frustration. This process concerns the interface between individuals and the ever-changing environment in which they live. It is a process that goes beyond factors of production and beyond the means of human action to strike at its motive and opportunity for realization.

We define an opportunity as a situation that allows advancement toward the fulfillment of some desire. With this definition in mind, we recognize the importance of two often-neglected variables: motivation (as captured by “fulfillment of some desire”) and environment (as captured by “situation that allows advancement”). Although there is no reason to believe that the theoretical approach we are proposing is limited to new venture opportunities, we have limited our analysis in this respect because it is this subclass of opportunities which is of interest to most aspiring entrepreneurs. Therefore, we define a *new venture* opportunity as a situation that allows advancement toward the fulfillment of some desire through the creation of a new venture, which, in turn, presumably meets customers' needs through the introduction of either a new good or service or a new and improved way of providing existing goods and services.

Because the creation of a new good, service, or firm, involves novelty, we argue that this creation is better conceived as a process than an act, which begins and

ends in a moment's time. Therefore, we equate new venture opportunities with projects, which can vary in duration and complexity.¹⁸ As a result, we view the acts of perceiving and shaping opportunities as inextricably linked and evolving over time. However, we also recognize that entrepreneurial action, like all human action, is hierarchical in meaning. Therefore, what constitutes a new venture opportunity for a prospective entrepreneur depends upon the motive that an individual is seeking to fulfill. Accordingly, we limit our discussion to the opportunity perception and shaping process that transpires between the decision to become an entrepreneur and completion of the business plan that one writes to specify how one intends to achieve this goal.

We argue that teaching people to become better at perceiving and shaping new venture opportunities does not require knowledge of the particularities of an individual's motivation and environment. For example, detectives are taught that motive, means, and opportunity are required before an individual can be considered a viable suspect in a crime, but that is not the same thing as applying the process to solve a particular crime. Therefore, it is the structure of the entrepreneurial process that we emphasize in this chapter, and perhaps more importantly, how to use it to become more intentional in developing one's ability to perceive and shape new venture opportunities.

To this effect, we introduce the concept of mindfulness from psychology. Like the crime analogy mentioned earlier, we suggest that opportunity is only one of three pillars that individuals must consider if they hope to ever initiate the entrepreneurial action of new venture creation. By acknowledging each of these elements (the others being means and motive), we argue that individuals can take steps to enhance the mindfulness that they experience and that this mindfulness will contribute significantly to an individual's entrepreneurial alertness, which enables the recognition and exploitation of opportunities. Unlike entrepreneurial alertness, however, mindfulness can be developed. This potential for development allows entrepreneurial alertness to be transformed from a trait that someone either does or does not have to a skill that can be learned. In turn, this transformation allows economic theory to be used at the individual as well as the system level.¹⁹

AN INTRODUCTION TO MINDFULNESS

You can't think and hit at the same time.

Yogi Berra

When some people think about the concept of mindfulness, they think about focus and tend to misinterpret that to mean proceeding with tunnel vision. This understanding, however, is contradictory to the concept of mindfulness as it is discussed in the psychology literature. Although attention and awareness are important related factors, mindfulness is slightly different, emphasizing the importance of being truly cognizant of one's present situation.

Consider the following story of Kirk Gibson's dramatic home run in game one of baseball's 1988 World Series. The moment proved to be a rallying point that propelled the Los Angeles Dodgers to a five-game victory over the heavily favored Oakland Athletics in the series. You may recall pictures or video footage of a gimpy and limping Gibson rounding the bases and pumping his fists after hitting a game-winning two-out two-run home run in the bottom of the ninth inning. Gibson's hit is part of baseball's fabled lore because of its timing, the stage, and Gibson's ability to get beyond his physical pain. However, as is often the case in feats of unusual athletic wonder, the mind plays as big a part as the body.

The 1988 World Series began with experts expecting the Athletics to stomp the Dodgers. In the first game, the Dodgers were hanging tough, trailing by only 4–3, but were now down to their last out in the bottom of the ninth. Unfortunately for Gibson and the Dodgers, All-Star pitcher and future Hall of Famer Dennis Eckersley was now on the mound for Oakland. Eckersley, the dominant relief pitcher of the time, had saved forty-five games that year and had just saved all four Oakland victories in the previous series. He was as un-hittable as a pitcher gets. With two outs, Eckersley walked a batter and now faced Gibson who was sent in to pinch hit.

Gibson played baseball with the mentality of a football player. Over his career, he had the bruises, breaks, sprains, strains, and pulled muscles to show for it. Unable to swing a bat the day before the game, Gibson was nursing two bad legs that had left him unable to even jog. He was so certain he would not be able to play that he did not even arrive at the stadium in time to be introduced during pregame ceremonies.²⁰

During the game, Gibson spent considerable time in the clubhouse getting treatment for his legs and thinking about what might happen if he was able to try to hit. Gibson remarked, "Throughout the game, while you're working on your leg, you just kind of visualize and create this moment in your mind. You say things to yourself like, 'When I walk out of the dugout, the fans are going to go nuts and then I won't hurt anymore.' And you visualize certain pitches that you're going to see. And you visualize yourself running around the bases, celebrating."²¹

Before the game Gibson was practicing visualization, a very popular technique used by athletes and others in an attempt to prepare one's mind for an upcoming action. During the game, however, he also practiced mindfulness. Visualization occurs before the action, and mindfulness occurs during the moment. Eckersley immediately fired two strikes, but Gibson battled back to get the count to three balls and two strikes. It was at that time that Gibson recalled that his hitting coach had told him that Eckersley would always use a backdoor slider as his out pitch.²² In baseball *out pitch* refers to each pitcher's favorite pitch—the one that he believes is most likely to produce a strikeout or a bad swing by a batter. Knowing that Eckersley was in a bind and that the backdoor slider was coming, Gibson was ready.

Eckersley had thrown Gibson seven pitches. The crowd was going crazy, but Gibson was able to block out the noise, stay alert to the current environment, and

remain attentive and aware of what was to come. This was Gibson's time to make something happen. Now, in the present, as it turns out, injuries would not allow him to play in the final four games of the series. Remembering what his coach had told him, Gibson now had his mindful moment. He called timeout and stepped out of the batter's box. "I looked at Eckersley and I said to myself, 'Partner, as sure as I'm standing here breathing, you're going to throw me that 3-and-2 backdoor slider.' And I got it. He threw it. And I did it."²³

As we progress through this chapter it will become apparent how Gibson's actions have the telltale signs of someone acting mindfully. He was alert to the distinctive circumstances and was prepared for this exact context. Most important, while focusing on the task at hand (hitting the ball) and with all the excitement and craziness surrounding him, he was able to stay mindfully in the present—pause, gather his thoughts—and recognize the opportunity that was about to come to him (a backdoor slider). Admittedly, hitting a home run in a baseball game and identifying new venture opportunities may have little in common. However, we see mindfulness as the one common denominator between Gibson's actions and those of prospective entrepreneurs seeking opportunities to create new companies or create value within existing organizations.

Shortly, we detail the construct of mindfulness, and together with its other dimensions, highlight the importance of staying in the present. But before we do, a second example of mindfulness involving the Gibson home run may be beneficial. When initially preparing to write this chapter, the authors discussed the need for an example of mindfulness that could help readers identify with the process. Just after our phone conversation, one of us was listening to the radio on the way home from work and heard the Gibson story. Like Gibson, he was prepared and mindful of the present and therefore was able to find an example to satisfy our need.

What Mindfulness Is Not

Mindfulness is not simply about being aware, paying better attention to the object at hand, or focusing exclusively on it. Mindfulness certainly is related to attention and awareness because together the three concepts form the construct of consciousness.²⁴ However, compared to awareness and attention, mindfulness remains relatively underresearched and misunderstood.²⁵ For example, scholars find that—contrary to popular perception—being mindful is not about holding an image still as if focusing a camera.²⁶ This type of unwavering focus is more descriptive of attention. In contrast, mindfulness is about noticing new insights by varying your stimulus (i.e., seeing something common in an uncommon way).

Another way to understand mindfulness is to look at its antithesis: mindlessness. Researchers explain that mindlessness comes from the routinization of tasks and standardization of processes, which leaves humans with little apparent need to engage in active thought.²⁷ These authors warn that because of standardization, mindlessness has crept into many professions. Although some might

argue that automating mundane processes allows individuals more free time to think, discover, and perceive new opportunities, research suggests that it tends to lead to human error, prejudice, and stereotyping.²⁸ In fact, authors Ellen Langer and Mihnea Moldoveanu argue that disastrous consequences could be in store for many complex tasks that have become increasingly mechanized, such as flying planes and performing surgery. Previous research found mindlessness to be the root cause of most American military casualties, more than actual military conflict.²⁹ Thus, it appears that mindlessness numbs individuals into accepting conditions and situations as absolute.

Because the entrepreneurial action of new venture creation is inherently novel to the actor, it is inconsistent with the mindlessness that characterizes standards, routines, and stereotyping. Instead, identification of a new venture opportunity would appear to require mindfulness, at least to the degree of the novelty inherent in the project. Therefore, we believe an examination of mindfulness and its usefulness for enhancing the perception of new venture opportunities and, consequently, the likelihood of entrepreneurial action is needed.

Mindfulness and Related Constructs

Many Eastern philosophies and spiritual traditions speak about the connections between consciousness and well-being.³⁰ Consciousness is comprised of three primary capacities: attention, awareness, and mindfulness. Because they operate together, it is difficult to dissect awareness and attention. For example, awareness can be seen as the background radar of consciousness that continually monitors a person's environment. Attention is the process through which one focuses this awareness to produce an increased sensitivity to a particular experience.³¹ Therefore, attention is contingent upon awareness as it "pulls figures out of the 'ground' of awareness, holding them focally for varying lengths of time."³²

In relation to awareness and attention, mindfulness has been described as open or receptive awareness and attention.^{33, 34} For example, Nyanaponika Thera defines mindfulness as "the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception."³⁵ Similarly, mindfulness has been described as "keeping one's consciousness alive to the present reality."³⁶ In this sense, it stands in direct contrast to the "autopilot" many of us use as we drive home or perform more routine activities.

Whereas attention and awareness are relatively constant features of normal functioning, mindfulness has begun to grow in popularity not only because of its more discriminatory nature, but also because of its demonstrated efficacy within the domains of psychology, business, education, and general health.^{37, 38} For instance, within the field of health, mindfulness has been shown to lead to increased longevity and to reduce adverse ills, such as arthritis and alcoholism.^{39, 40} In education, researchers have demonstrated that mindfulness can be used to heighten creativity simply by using conditional rather than absolute language.⁴¹ Other researchers have found that varying stimuli evokes mindfulness and the

noticing of new things.⁴² Within business, mindfulness has been linked to increased creativity and decreased burnout as well as productivity.^{43, 44}

What Mindfulness Is

Mindfulness can be seen as a state of psychological freedom without an attachment to any point of view or being attentive to and aware of what is occurring in the present.^{45, 46} It has also been referred to as a process of drawing novel distinctions.⁴⁷ Langer and Moldoveanu explain that instead of relying upon categorizations and distinctions made in the past, we can find novelty by being more mindful of our current context and actions. These authors explain that if individuals rely on past categorizations “rules and routines” will supersede our ability to view the current situation and its potential novel distinctions. Behaving in this manner leads to mindless behavior. Conversely, if individuals are mindful they will be more open to their environment, more open to new information, and more likely to find new ways to structure problems by developing new perspectives.

Langer defines mindfulness as having five components, all of which have been empirically tested.⁴⁸ The five dimensions include:

- *Openness to novelty*—the ability to reason with relatively novel kinds of stimuli
- *Alertness to distinction*—the ability to distinguish minute differences in the details of an object, list, action, or environment
- *Sensitivity to different contexts*—tasks and abilities will differ depending on context
- *Awareness of multiple perspectives*—the ability to think dialectically
- *Orientation in the present*—paying attention to current surroundings

We believe that placing these dimensions in an entrepreneurial context provides prima facie support for exploring the possibility that mindfulness may enhance the ability to perceive and shape new venture opportunities. For example, consider the following sentence: By being open to novelty and aware of multiple perspectives, a prospective entrepreneur is able to discern opportunities by seeing possible distinctions in everyday experiences and applying them in different contexts.

MINDFULNESS AS ENABLER OF ENTREPRENEURIAL ALERTNESS

Even though opportunity identification research has advanced greatly in the past decade, there remains a need for more empirical studies, and perhaps even more importantly, a theoretical approach which might ultimately lead to useful

prescriptions for practicing professionals.⁴⁹ Foremost among the handful of theories that have discussed entrepreneurial action as a process of opportunity recognition is Israel Kirzner's theory of entrepreneurial alertness. Entrepreneurial alertness has been defined as a set of perceptual and processing skills that help aid the opportunity identification process.⁵⁰⁻⁵² Much of the research on entrepreneurial alertness has sought answers to the questions: How do entrepreneurs represent and interpret the market environment to discover opportunity? And do these representations and interpretations differ from those of nonentrepreneurs?⁵³

Kirzner's theory of entrepreneurial alertness has proven to be an important step forward in the theoretical understanding of opportunity perception. Arguing that the economy's health depends on the pursuit of opportunities by individuals who are alert to market imperfections, Kirzner's theory discusses opportunity recognition as a means to an end but not an end in itself. Therefore, owing to its economic tradition, this perspective does not easily lend itself to application in individual practice. This is because Kirzner's theory is based at a system level where the focus is on some individual within the marketplace perceiving an opportunity and converting it to a new product or business. As a result, "[w]ho acts is inconsequential as long as someone does."⁵⁴ Thus, Kirzner's theory does an exemplary job in explaining what alertness is and what it does for the economy. However, it leaves individual practitioners still asking the question "How do I find a good opportunity?"

Recognizing the psychological implications of Kirzner's theory, Connie Marie Gaglio and Jerry Katz develop a detailed model of entrepreneurial alertness in an attempt to describe how entrepreneurs identify opportunities.⁵⁵ Using social cognition as a foundation, these authors build a number of interesting propositions regarding the alertness skills of entrepreneurs. The authors state that their work is built around a proposition that "there is a chronic schema that heightens the individual entrepreneur's awareness to the possibility of innovations that have commercial potential" (p. 98).

Schemas are mental models based on each individual's knowledge and beliefs about how the world works. Generally enacted unconsciously, a chronic schema is the habitual activation of a schema regardless of its appropriateness to the current moment or situation.^{56, 57} Therefore, with respect to delineating mindfulness from alertness, there are a couple of important implications of the work of Gaglio and Katz. First, the use of a chronic schema suggests that the ability to identify opportunities is contingent upon a chronic mental model that one either does or does not possess. This is useful for discovering differences between entrepreneurs and nonentrepreneurs as these authors state. However, it suggests that you either have it or you don't and implies that entrepreneurs are born, not made. Although Gaglio and Katz's work provides an eloquent model for alertness and for uncovering distinctions between entrepreneurs and others, its dependence on a chronic schema prevents it from helping to equip those who are not alert to opportunities.

Gaglio and Katz theorize that entrepreneurs use their alertness schema to filter information from the market in an effort to determine whether it affects their current interpretations of the market, industry, and society. They suggest that this process will lead to opportunity identification. Our intention here is, not to argue against Gaglio and Katz, but to augment their perspective. We believe that mindfulness allows an individual to become alert and is therefore its enabler. Gaglio and Katz demonstrate *how* alertness affects opportunity identification. In contrast, we believe mindfulness explains *why* individuals are alert to opportunities, and perhaps more importantly, how anyone can become more perceptive of new venture opportunities. That is, unlike alertness, which is descriptively rooted in chronic schema, mindfulness can be developed through practice regardless of one’s innate ability or natural endowments.

Thus, we believe that mindfulness acts as the bridge that moves alertness from the system level of the economy to the individual level of the practitioner. By moving beyond what entrepreneurial alertness is and does for the economy, mindfulness demonstrates how one can heighten his or her entrepreneurial alertness. As a result, a mindful approach to opportunity perception allows us not only to view alertness from a psychological lens, but it enables individuals to develop their alertness intentionally. Our perspective, therefore, builds upon the work of Gaglio and Katz’s by using mindfulness to engage and disrupt our chronic schemas in an effort to perceive opportunities.

Figure 3.1 shows the mindfulness construct as a precursor to Gaglio and Katz’s model of alertness schema. Gaglio and Katz theorize that entrepreneurs use their alertness schema to filter information, which affects their current interpretations of the market, industry, and society. Here we augment their model to show how mindfulness enables alertness.

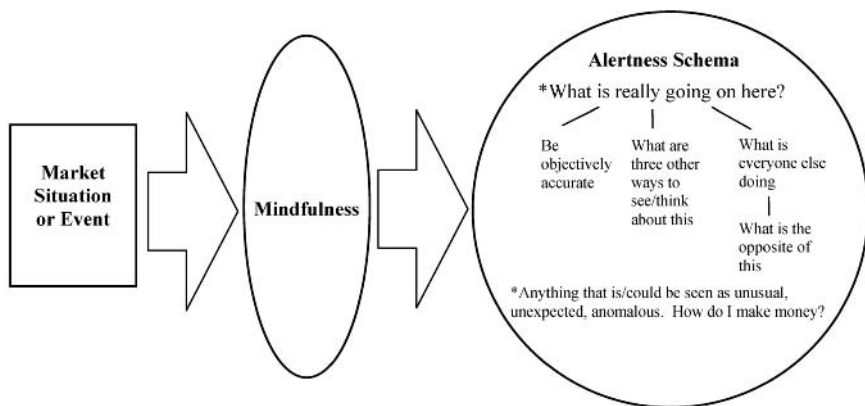


Figure 3.1. Mindfulness and alertness.

We believe that by practicing mindfulness, individuals can heighten their awareness and increase their ability to perceive opportunities. This distinction is important because it directly addresses the needs of practitioners who are looking for tactics to become alert to more opportunities. If an individual wants to become an entrepreneur, mindfulness is a technique that allows him to activate a need that stimulates alertness to opportunities. Following this reasoning, we posit a number of propositions that connect mindfulness to alertness.

Gaglio and Katz theorize that alert individuals are more sensitive to market disequilibrium. They argue that alert individuals have radar that lets them detect a “herd mentality” and that they also can develop contrarian positions, which can often be useful in seeing alternatives. We see mindfulness as a precursor to this sensitivity. Therefore, we propose that mindfulness will heighten the perception of new venture opportunities by allowing individuals to activate their alertness schema, which subsequently increases sensitivity to market disequilibrium.

When an event in the marketplace does not fit with the schema of an alert individual, he will change his schema to make more sense of the occurrences in the market. In contrast, nonalert individuals will attempt to change the information.⁵⁸ We see mindfulness as the trigger that allows individuals to change or contradict their chronic schemas. Thus, mindfulness will also heighten the perception of new venture opportunities by allowing individuals to disengage from their chronic schema.

Research indicates that nonalert individuals are likely to accept information in its original form which makes them susceptible to relying upon a base of knowledge built from inaccurate information.^{59, 60} In this case nonalert individuals have a frame of reference that is potentially flawed due to inaccurate framing effects. Alert individuals tend to “be impervious to framing effects.”⁶¹ The psychological freedom from any point of view that defines mindfulness supports our last proposition: mindfulness heightens perception of new venture opportunities by allowing individuals to resist framing effects.⁶²

By explicating the relationship of mindfulness to entrepreneurial alertness and ultimately to the perception of opportunities, these propositions offer scholars a base for future research. For practitioners, however, the question becomes, “How can mindfulness enhance my ability to perceive new venture opportunities?”

DEVELOPING ENTREPRENEURIAL MINDFULNESS: A PRESCRIPTIVE MODEL

In this section, we rely on research that examines mindfulness in other domains to develop an approach for enhancing one’s ability to perceive new venture opportunities.^{63–65} Our goal is to prescribe a set of action steps that prospective entrepreneurs can take to improve their ability to perceive and shape new venture opportunities.

How Mindful Are You?

Mindfulness has attributes of being a cognitive ability, personality trait, and a cognitive style.⁶⁶ Regardless of precise delineation, viewing the construct of mindfulness as a state rather than a trait may be most beneficial for entrepreneurs and for the practice of perceiving and shaping new venture opportunities. “People may differ in their average levels of mindfulness, but perhaps the standard deviation in a person’s mindfulness is a more interesting construct than the mean.”⁶⁷ Highlighting the fact that a person’s ability to be mindful varies implies that it can be purposefully enacted, trained, or enhanced. This contention is supported by previous empirical research that suggests that mindfulness is a naturally occurring characteristic and that mindfulness can be trained.^{68, 69}

Before seeking to develop one’s mindfulness, it may be beneficial to determine your base-rate (i.e., the degree to which you experience mindfulness on a day-to-day basis as compared to a normal population of individuals). Research shows that mindfulness varies from person to person, so please take a moment to complete the Mindful Attention Awareness Scale (MAAS, Figure 3.2), an instrument designed to measure mindfulness in day-to-day experiences by examining variations in awareness and attention to actions, interpersonal communication, thoughts, emotions, and physical states.⁷⁰

To give you some idea of how you measure up against the sample ($N = 313$) employed by Brown and Ryan, we have included the means and standard deviations of each item (Table 3.1). Remember that 64 percent of the population falls within one standard deviation of the mean. Therefore, if your score is outside this range, you are either extraordinarily high or low in mindfulness.

Perhaps you are within one standard deviation of the mean, suggesting that your mindfulness is fairly normal for that particular item. What does this imply about your level of entrepreneurial alertness, and consequently your ability to perceive new venture opportunities? Obviously, it depends. Perhaps you are high in mindfulness but have no interest in identifying new venture opportunities. Or, vice versa, you may be low in mindfulness but heavily interested in identifying new venture opportunities. In the first case, mindfulness is likely to contribute to heightened perception of opportunities, but not entrepreneurial opportunities, such as possibilities for new ventures, goods, or services. In the second case, a lack of mindfulness is unlikely to stop you from engaging in deliberate search for opportunities in a manner that resembles industry analysis.⁷¹ However, this will put you at a comparative disadvantage with someone who possesses similar knowledge and motivation but who is more mindful of his environment—we return to this point later.

Thus, mindfulness is not the only determinant of new venture opportunity identification and entrepreneurial action. However, we would argue that more mindfulness leads to better perception of opportunities, which means that a larger opportunity set is generated, thereby increasing the likelihood of discovering one

Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think experience should be.

1. I could be experiencing some emotion and not be conscious of it until some time later.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

2. I break or spill things because of carelessness, not paying attention, or thinking of something else.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

3. I find it difficult to stay focused on what's happening in the present.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

6. I forget a person's name almost as soon as I've been told it for the first time.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

7. It seems I am "running on automatic" without much awareness of what I'm doing.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

8. I rush through activities without being really attentive to them.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

9. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

10. I do jobs or tasks automatically, without being aware of what I'm doing.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

11. I find myself listening to someone with one ear, doing something else at the same time.

| | | | | | |
|---------------|-------------------|-------------------|---------------------|---------------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

Figure 3.2. Brown and Ryan's mindful attention awareness scale (MAAS).

| | | | | | |
|---|-------------------|-------------------|---------------------|---------------------|---------------|
| 12. I drive places on "automatic pilot" and then wonder why I went there. | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |
| 13. I find myself preoccupied with the future or the past. | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |
| 14. I find myself doing things without paying attention. | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |
| 15. I snack without being aware that I'm eating. | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <i>almost</i> | <i>very</i> | <i>somewhat</i> | <i>somewhat</i> | <i>very</i> | <i>almost</i> |
| <i>always</i> | <i>frequently</i> | <i>frequently</i> | <i>infrequently</i> | <i>infrequently</i> | <i>never</i> |

Figure 3.2. (continued)

that is highly feasible (i.e., exploitable with the means at one’s disposal) and desirable (i.e., profitable in terms of the actor’s motive).

Although empirical evidence is necessary to formulate more specific expectations, the reasoning presented in this chapter suggests that someone of average mindfulness would be likely to perceive an average number of opportunities. Given that entrepreneurship is a break with the norm, and therefore somewhat

Table 3.1. Means and Standard Deviations of the Mindful Attention Awareness Scale (MAAS)

| <i>Item</i> | <i>Mean</i> | <i>Standard Deviation</i> |
|-------------|-------------|---------------------------|
| 1 | 4.02 | 1.12 |
| 2 | 4.13 | 1.47 |
| 3 | 3.80 | 1.23 |
| 4 | 3.41 | 1.27 |
| 5 | 3.83 | 1.22 |
| 6 | 3.40 | 1.54 |
| 7 | 3.72 | 1.24 |
| 8 | 3.81 | 1.11 |
| 9 | 3.74 | 1.15 |
| 10 | 3.70 | 1.20 |
| 11 | 3.52 | 1.16 |
| 12 | 4.36 | 1.42 |
| 13 | 2.66 | 1.03 |
| 14 | 3.66 | 1.14 |
| 15 | 4.11 | 1.42 |

anomalous in nature, an average amount of mindfulness would suggest that entrepreneurial action would remain less likely, and in the off-chance that it did take place, would probably involve a suboptimal goal. Therefore, the question becomes, is there some way in which mindfulness can be developed?

Can Mindfulness Be Developed?

Over the past three decades, Robert Boice has applied mindfulness to the process of scholarship.⁷² Like entrepreneurship, scholarship is a process that involves discovery, novelty, uncertainty, and experimentation. Although important distinctions exist, the parallels between the two processes suggest that research establishing how mindfulness has been cultivated to enhance scholarly performance may prove exceptionally useful to individuals wanting to perceive and shape new venture opportunities. For example, in the prolog to Hébert and Link's survey of economic theories of the entrepreneur, economist George Shackle observes:

[R]egarding the creative process of discovery, the basic entrepreneurial act, there is little difference between the scientist and the businessman/entrepreneur. Apparent differences may exist in the motivation and/or the milieu of each class of actors. But consider the process of discovery alone for the moment. Those geniuses who have been responsible for the major innovation in the history of thought or in the world of affairs seem to have certain characteristics in common. One shared characteristic is skepticism, sometimes carried to the point of iconoclasm, in their attitudes to traditional ideas or ways of doing things. The other is an open-mindedness, often verging on naïve credulity, toward new concepts and techniques. Out of the combination comes the capacity to perceive a familiar situation or problem in a new light.⁷³

In studying highly effective scholars, Boice observed general themes that represented seven simple practices of mindfulness and from them derived ten rules that he has used successfully to train others in how to become more mindful in their own writing. Although we would love to discuss each practice and rule in detail, space precludes us from doing so. Instead, what we offer is a simple three-step model that combines the dimensions of experimentally derived MAAS scale of mindfulness with the lessons learned from Boice's field studies of successful writers.^{74, 75}

Three Steps to Becoming More Mindful

Using a medical analogy, we organize our examination of the role of mindfulness in the perceiving and shaping of new venture opportunities around three steps: (1) stop to recognize symptoms; (2) wait actively to derive a clear diagnosis; and (3) moderate emotions when prescribing treatment.

Step 1: Stop to Recognize Symptoms

Because mindfulness “offer[s] a bare display of what is taking place,” it enhances sensitivity to one’s external and internal environment.⁷⁶ It asks the questions, “What’s happening around me and within me?” As a result, it is highly attuned to the emergence of new needs or the recognition of existing but unmet needs, especially when these needs are perceived as anomalies or violations of the normal order or functioning of the world.

Unlike many forms of self-awareness, which examine one’s own cognitive processes through “reflexive consciousness,” mindfulness is “prereflexive” operating on, rather than within, thought, feeling, and other contents of consciousness.^{77, 78} Therefore, mindfulness concerns the quality of consciousness itself. For example, in asking yourself, “How conscious am I of what I am experiencing at this very moment,” you become more mindful. Boice notes:

The experience of awakesness begins with the elementary act of stopping to notice our customary reactions to ongoing experience. Awakesness alerts us when we are caught in blind thinking or impulsive action, unaware of why we are doing what we are doing. Once awakened, we become more aware and involved.⁷⁹

The simple act of breathing provides a clear illustration of this phenomenon. In periods of stress people often hold their breath without realizing it, but if they stop to pay attention to their breathing, they find that it returns almost instantly to deeply drawn breaths that provide immediate relaxation and beneficial change in both their mental and physical condition. The transformation involves little more than a shift of attention, but the effect is dramatic. Therefore, learning to stop and wake up to one’s ongoing reactions to real or imaginary stimuli enhances mindfulness and one’s awareness of symptoms. Often indicative of abnormalities, these symptoms tend to signal a change in external conditions, which are likely to leave customer needs unmet, thereby justifying or even mandating the emergence of new ventures in situations where existing organizations leave these changes, and the needs they represent, unattended.

Step 2: Wait Actively to Derive a Clear Diagnosis

Upon recognizing symptoms, many people leap to treatment without an adequate diagnosis. Thus, questions, such as “What am I currently experiencing, and why do I feel this way?” are often left unexamined in favor of jumping to action. Mindless behavior prevents the diagnosis of symptoms addressed by these questions, but just as importantly it precludes one from sufficiently contemplating what if anything should be done about them. This prevents mindfulness from revealing the novel distinctions of a condition or event, which would occur under a more thorough examination. Therefore, to encourage the necessary reflection, mindfulness scholars recommend a combination of active waiting and beginning early.

Active waiting is a process in which individuals intentionally hold back from impetuously diving into making irreversible commitments of resources. This, however, takes patience. It is often hard for writers (or entrepreneurship students) to believe that they will get more done by starting out slowly, patiently, planfully (i.e., by waiting around), but the patience of active waiting is essential for slowing and preparing the mind, which otherwise races on to the next crisis. Thus, “active waiting is less a matter of time management than of emotional management.”⁸⁰ For instance, Jon Kabat-Zinn notes,

To find our way, we will need to pay more attention to this moment. It is the only time that we have in which to live, grow, feel, and change. . . . There is nothing passive about it. And when you decide to go [after waiting and attending to the moment], it’s a different kind of going because you stopped. The stopping actually makes the going more vivid, richer, more textured.⁸¹

By pausing reflectively, you enhance the likelihood that your actions will seek to answer the right question, and you diminish the tendency to rebuke yourself for making inevitable missteps. Thus, active waiting occurs in the space between stopping to recognize symptoms and prescribing a treatment. It involves considering *and* reconsidering what we might do until eventually arriving at a clear understanding of what we are going to do and how we are going to do it. In the process, active waiting takes advantage of the numerous environmental stimuli that often go unnoticed in our surrounding environment. That is, unlike passive waiting, which is the child of mindlessness and the parent of procrastination, active waiting is purposeful. As a result, awareness is activated to bring environmental cues to our attention, making us more mindful of relevant information and making us the beneficiaries of seemingly costless gifts of relevant information extracted from our environment as we engage in other activities.

Although this process occurs regularly, its development can be encouraged by looking forward enough to set goals and imagining what means would provide opportunities and threats to attaining this goal. For example, the professor who has a lecture in a couple of weeks may decide that she would like to discuss mission statements that day and determine that what she needs to bring her class to life is a hook (i.e., a good illustration that her audience finds relevant and interesting). Going about her normal business, she runs across some relevant articles from the *Wall Street Journal* only to “luckily” catch, as she is relaxing in front of the television, the opening scene of the movie, *Jerry Maguire*, which is all about a compelling mission statement. She thinks to herself, “Perfect! And I didn’t even have to search for it.” Had she searched for the illustration, she may have only uncovered a *WSJ* article. Not only would she have had to invest time and energy for that exclusive purpose, but the result would have been suboptimal in comparison to the movie clip that she costlessly discovered by a combination of active waiting and beginning early.

Following these first two steps, we suggest that individuals who want to improve their ability to perceive opportunities first stop and ask themselves,

“Why do I want to be an entrepreneur? What’s my motivation? How is starting a new venture going to serve this purpose?” By actively waiting and mindfully attending to one’s thoughts and feelings, one increases the saliency of the need producing them. As a result, one’s awareness, which is perpetually monitoring the environment, is tasked with the goal of finding a possible means of filling this need, often leading to what appears to be a serendipitous discovery, but is in reality a search process occurring outside of one’s focal awareness (i.e., attention). To set this process in motion, however, one must take a moment to wake up from routine, especially when this routine is characterized by intense feelings of stress. Whereas unexamined stress, anxiety, or worry has a tendency to stifle creativity and constrict awareness, it seems that these same feelings can also be the clues to people’s most salient needs. Consequently, stopping to examine them activates them such that mindfulness is allowed to task awareness with the job of finding relevant information encountered in the environment.

The process of diagnosing needs may produce benefits well beyond the enhancement of our conscious understanding. That is, if articulating a need activates it, and if activating a need triggers our awareness to be on the lookout for relevant stimuli, then the very process of diagnosis can prime our perception, thereby enhancing the likelihood of seemingly serendipitous discoveries. This possibility explains why it is crucial to begin the search for new venture opportunities early and to refrain from premature commitments to a particular course of action in favor of an approach grounded in active waiting. This can be highly counterintuitive and frustrating to the proactive individuals so often drawn to entrepreneurship. This frustration, however, is often grounded in the need to learn (a) how to manage excessive emotion and (b) how to channel one’s proactive tendency primarily into thought rather than behavior. Doing so enhances the quality of the “treatment” prescribed while lowering its costs.

Step 3: Moderate Emotions When Prescribing Treatment

We argue that recognition of symptoms, and diagnosis of the needs they represent, leads to the contemplation of what treatment, if any, to prescribe. For the prospective entrepreneur this often takes shape as a feasibility or business plan. Despite the belief of many nascent entrepreneurs, rarely does a business plan resemble the initial idea that stimulated its creation. Therefore, it is likely to benefit greatly from the informational discoveries made through the practices of active waiting and beginning early. Additionally, a mindful approach requires that you moderate your emotions to avoid getting too attached to a flawed idea or impulsively rejecting a potentially successful idea. Our experience and that of the numerous colleagues with whom we have spoken, suggests that few creative processes are momentary acts as Kirzner’s theory of entrepreneurial alertness suggests. Instead, they are a process of converting chaos to coherence. And as such, individuals would benefit greatly by moderating their emotions. From a less emotionally charged state, individuals can then play a seemingly endless

game of “what if” until arriving at the cleanest, clearest storyline before committing what will become sunk costs.

This mindful moderation of emotion is achieved in a number of ways.⁸² First, prospective entrepreneurs must learn to work with constancy and moderation. This is done by recognizing the power of brief daily sessions, which are devoted to ideation and the clarification of the initial business concepts that one generates. Second, and perhaps more difficult, prospective entrepreneurs must learn to stop in a timely fashion. That is, one should not proceed to turning to the prose of a feasibility plan, or worse yet contractual commitments, until she can create a clear conceptual outline, which Donald Murray suggests requires answers to the following questions (note: we offer an equivalent business concept in parentheses to aid the reader in transferring the concept from writing to entrepreneurship):⁸³

- You see possibilities for writing on something you have studied, noted, and filed. (You have identified what you believe may be an opportunity for someone.)
- You have a definite, perhaps distinctive, point of view on the writing topic. (You have a clear value proposition.)
- You have listened to yourself prepare until you sense a “voice” in how you might present it; the writing will sound distinctively like you. (You have a distinctive competence regarding this value proposition.)
- What you have to say is news—for example, somewhat novel information or a novel way of presenting it. (The good or service is new or a new improvement to existing goods or services.)
- You have a single line to begin the manuscript, one that informs and entices readers while giving you more sense of control as the writer. (You have an elevator pitch and your venture has a clear identity.)
- You see a pattern in the subject, one that begins to suggest a shape for the entire piece of writing. (You have a strategy and/or business model.)
- You begin to see and hear images that will help guide that whole. (You continually notice relevant environmental cues, such as examples in the media.)
- You know, with some clarity, what problem you are going to solve in your manuscript and you are confident you can get it said in prose. You are, at last, ready to stop conceptual outlining and to start prose writing. (You know who your intended customers are and what need your venture will contribute to filling in their lives.)

Through these brief daily sessions and timely stopping, individuals establish conditions that allow them to enjoy flow, which is often described as a state of behavioral fluency in which one is lost in consideration of how best to implement a task and unlikely to revisit expectancy-value issues, such as whether the goal of becoming an entrepreneur is still likely to produce the desired effect.⁸⁴

As one decides to commit to a course of action and initiate “treatment,” the entrepreneurial function becomes increasingly managerial in nature. Given that

resources must be irreversibly committed at that point and that sunk costs will therefore play a greater role in decision making, it would seem that the entrepreneurial manager may be well served by developing mindfulness during the planning process, as this ability is likely to become more, rather than less, in demand. After all, commitment requires investments of physical resources and reputation in addition to the emotional attachment to ideas experienced in the planning phase. This makes it all the more difficult to work mindfully with the reflective contemplation necessary to keep immediate concerns in a broader perspective. Thus, researchers interested in mindfulness may find the construct particularly helpful for managers engaged in the early stages of organizational emergence or the difficult transitions that accompany strategic renewal.

CONCLUSION

“How do I find new venture opportunities? Can I improve my ability to perceive opportunities?” These are questions that professors of entrepreneurship have faced from many students. Typically, the response has been grounded in economic theories that describe what entrepreneurs do, but provide little advice in how to do it. Or, the professor is left recommending fairly generic content-driven models of industrial organization in which opportunity is thought to arise from exogenous shocks to the economy as the result of a change in consumer tastes, technology, demographics, or regulation.

What we offer in this chapter is a prescriptive process-oriented model of enhancing one’s perception of new venture opportunities. In so doing, we show how individuals can enhance their perception of new venture opportunities, thereby contributing to the amount of entrepreneurial alertness that they experience. This should not only provide them with a larger opportunity set from which to choose, but also help to prevent settling on the pursuit of a suboptimal goal.

However, the mindfulness that acts as the engine of our model is not limited to identifying entrepreneurial opportunities. For example, mindfulness has been shown to be positively related to a person being perceived as more genuine by others.⁸⁵ We believe this finding has important implications for entrepreneurs’ “postopportunity perception” because this perceived sincerity may be of great assistance as an entrepreneur attempts to recruit individuals, build a team, and close sales. Therefore, future work may benefit from investigating the role that mindfulness plays throughout the entrepreneurial action process.

Finally, because entrepreneurial alertness is only one possible area in which mindfulness pays dividends, investment in developing it is likely to enrich an individual’s life in many other ways as well, whether it is putting your kids to bed, enjoying the landscape as you walk from your car to work, or doing dishes, life takes on new meaning when one is truly present and experiencing it with a childlike curiosity, playfulness, awareness, and passion.

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The authors of this chapter are listed in alphabetical order and have contributed equally to this chapter.

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4

New Venture Teams

Gaylen N. Chandler

The focus of this chapter is new venture teams. It is intended for a broad audience that includes both practitioners and academic researchers. It presents a comprehensive review of the new venture team literature and discusses recent advances in knowledge. The compiled findings are intended to provide very practical prescriptions for practitioners and direction for researchers with respect to the formation, composition, and team development processes employed by new venture teams.

In spite of the fact that empirical research regarding new venture teams has been somewhat slow to emerge, there is agreement among experienced entrepreneurs, investors, and researchers that the success of an emerging business is strongly influenced by the venture start-up team. In a 1990 review article the authors concluded that our lack of knowledge regarding new venture teams represents a fundamental gap in the literature.¹ They went on to state that many businesses are started by teams and that new venture teams seem to importantly impact the venture's performance; yet, these teams are difficult to assemble and keep together, and neither practitioners nor academics know much about them and how to avoid or overcome the associated problems. In 1997 another review of the literature discussed the definition of entrepreneurial teams, concluded that the research on new venture team formation processes is scarce, and discussed team composition issues.² In 2000 a third review discussed the definition of new venture teams, their composition, and the impact of differential team size.³ These review articles captured the state of knowledge at the time they were written, however, in the past four or five years a number of articles have appeared that substantially increase our knowledge of new venture teams, how they are composed, and how they function. These articles begin to explore a number of interesting issues with respect to new venture teams. Thus, after a significant time-lag

following a call to study new venture teams, our knowledge of new venture teams is beginning to develop.

This chapter materially augments the review articles that have been written previously and presents the state of the art with respect to knowledge about new venture teams. Because a number of articles have been published during the last five years the current review moves substantially beyond previous reviews.

I will address the following questions with respect to what is known and disseminated. Each of these questions deals with some aspect of new venture teams for which new information is available since the last review articles were published:

1. What is a new venture team?
2. How and when do new venture teams form?
 - a. How do teams develop team processes as the firm evolves?
 - b. What happens when members are added or subtracted from the team?
 - c. If venture capitalists are involved, what influence do they have on the team?
3. How important are teams with respect to successful launch and future performance?
 - a. What guidelines should be followed as new venture teams are composed?
 - b. How do teams learn and develop?

The answers to these questions, along with the acknowledgment of gaps in knowledge regarding these questions will provide a good benchmark against which to measure progress in our understanding of new venture teams.

WHAT IS A NEW VENTURE TEAM?

The term *new venture team* implies that two criteria must exist in order for a group of individuals to be considered a new venture team. First is the term *new venture*. There has been little discussion of what constitutes a new venture in the literature. For example, if a team of individuals purchases an already-existing business, do they become a new venture team? Is it a new venture team if it is an owner-managed second-generation family business? Some researchers consider the team an entrepreneurial team if it is associated with a recent independent start-up while others include privately held firms up to fifty years old.^{4, 5} Because firm dynamics change as organizations develop, it is of vital importance to clearly consider what is meant by a “new venture.”⁶ One study justified using a period of the first five years of a venture’s existence, because in retrospective interviews it appeared that team membership tended to stabilize within a five-year period.⁷ However, there is no commonly shared opinion of what this time period should be. Amidst the ambiguity, I propose that the term “new venture” refers to an

independent start-up going through the process of establishing and initial growth of a business organization.

This leads to the second important question. Who should be counted as a member of the team? In discussions with entrepreneurs and a review of the literature it is obvious that there is not a universally accepted definition of who should be considered as a member of the new venture team. Some restrict their view of team membership to individuals who have financial membership and decision-making responsibility, as I have done here. However, while I was interviewing entrepreneurs as part of an earlier project, it became obvious that some entrepreneurs are fairly restrictive in their use of the word *team*, applying it to the small group of individuals with financial ownership and decision-making responsibility, while others consider all employees and advisors to be a part of the team. There is one principle reason why it is important to clearly define who should be counted as part of the new venture team. For researchers if a uniform definition is not applied, findings may not be generalizable beyond a specific study. For practitioners, it is difficult to follow prescriptive recommendations if the concept of team is not clearly specified and mutually understood. For example, adding an employee is likely to be very different from adding a management team member who has financial ownership and executive-level decision-making responsibility.

In the existing literature there have been varying definitions of who should be counted as part of the entrepreneurial team. The research agenda proposed in 1990 by Kamm, Shuman, Seeger, and Nurick did not clearly define who should be counted and considered to be a member of the new venture team.⁸ However, subsequent researchers have grappled with the issue as they have sought to operationalize the new venture team construct. Some researchers have defined the entrepreneurial team as the group of people holding full-time executive positions at the time of founding.⁹ Cooper and Daily stated that membership in an entrepreneurial team involves a shared commitment to the new venture, but did not clearly define shared commitment.¹⁰ They concluded that at the time of their review that there was no consensual definition in the literature. Birley and Stockley pointed out that various researchers have used different definitions including equity ownership and managerial involvement, which might include a responsible position within the hierarchy or several other measures of commitment or involvement.¹¹

Schoedt suggested that an entrepreneurial team consists of two or more persons who have an interest, financial and otherwise to the venture's future and success, and that they are considered to be at the executive level in the early phases of the venture.¹² As criteria for inclusion in the new venture team, Ensley, Pearson, and Amason required that two of the following conditions were met: being a founder, having equity ownership, and exercising significant decision-making responsibility.¹³ They, however, did not clearly define what it meant to be a founder. Indeed, as the area of study has evolved, the field has evolved toward a position that requires both financial ownership and decision-making responsibility as criteria for inclusion in the new venture team.¹⁴⁻¹⁷

This definition incorporates both ownership and control, and is relatively easy to operationalize. It clearly defines the construct. Viewed from a practical perspective, managers without financial ownership usually do not have the same decision-making authority as those with ownership.¹⁸ However, the ownership requirement ignores the role of key employees or individuals affiliated in other ways that may have a substantial influence in the team and on the development of an emerging venture. In spite of this drawback, it is necessary to draw a definitional line and even though it may be prudent to not include employees and advisors as part of the formal definition of the new venture team, this does not imply that the contributions of such individuals should be ignored.

HOW AND WHEN DO NEW VENTURE TEAMS FORM?

It has been pointed out that nothing in the venture creation process is less understood than the dynamics of organizing and building effective entrepreneurial teams.¹⁹ Kamm et al. stated that there was a gap in the literature with respect to how and why individuals seek venture partners, where they look, what criteria they use for selection, and methods used to recruit and induce partners to join them.²⁰

Although there are recent efforts to better understand these issues, in general the new venture team literature has not relied very heavily on the long and rich literature discussing the formation, development, and functioning of work teams. Forty years ago, after reviewing the existing literature, Tuckman proposed a four-stage model of team development describing a “forming, storming, norming, and performing” sequence.²¹ A subsequent review concluded that the literature generally supported the original model, to which a fifth stage (“adjourning”) was added.²² In the current team literature, the stages are considered to have some face validity as a general sequence.²³ That is to say, the stages may have considerable face validity as a general sequence, yet empirical observations of specific teams expose complexities that do not cleanly fit the model. For example, teams may never attain a norm of performance, or may regress to an earlier stage of development. The basic model starts with an initial orientation process (forming), which continues until key interpersonal conflicts are uncovered and resolved (storming). The resolution of conflict establishes group expectations (norming). Then, team efforts are directed toward task accomplishment (performing). In the concluding part of the model, the team terminates either because the task is completed or membership is disrupted (adjourning). The implication of the model is that teams must go through several stages of development. It is assumed that individual needs and concerns must be resolved in order to establish behavioral norms and achieve task effectiveness.

Other researchers have also discussed team-building issues in substantial detail. For example, Dyer discusses several different approaches to team building, as does Golembiewski.^{24, 25} My intention here is not to do a thorough review of

the general team-building literature, but rather to indicate that the new venture teams literature has not relied heavily on the already existing body of team-building literature. I suggest that more focus should be placed on determining exactly how new venture teams differ from work teams, and then determining how and when existing models might apply to our understanding of new venture teams.

As I mentioned earlier, the processes by which new venture teams form has only recently been addressed. The available information suggests that new venture team formation is not a systematic process. In the scant documentation available, the process starts with an idea that someone champions.²⁶ One person may have the idea and recruit potential partners, or alternatively that the team may form from the outset on the basis of a shared idea.²⁷ The latter type of team may be subject to jockeying for position.²⁸ It would be useful to study these processes and provide better evidence of the interpersonal dynamics associated with these potential different types of team-formation processes. Tuckman's stage model may provide a framework for this investigation.²⁹

Research suggests that teams can be composed based either on a demographic composition model or alternatively on a social network model.³⁰ The demography approach, consistent with that frequently prescribed in the new venture teams literature, proposes that it is necessary to ensure that new venture teams are well balanced in terms of functional expertise.^{31, 32} However, research findings suggest that demographic characteristics are rarely considered, and there have been mixed results with respect to the relationship between functional completeness of the new venture team and performance.³³ Some studies have found no evidence that functional completeness is a significant predictor of team performance.^{34, 35} In contrast, others have found that team functional heterogeneity was significantly and positively correlated with small firm growth.³⁶ The studies finding a relationship measured functional heterogeneity at a point of time several years after start-up and not at start-up. One explanation for the discrepancy between the studies is that new venture teams may evolve toward functional heterogeneity as the organization grows and develops. Indeed, the evidence suggests that sales growth is usually accompanied by increasing specialization and formalization, providing some support for that explanation.³⁷ Taken together there is little evidence that functional heterogeneity is important at start-up, but there is evidence that as the organization grows and specializes, the management team must develop functional heterogeneity.

On the other hand, there is some evidence that demographic heterogeneity (differences in age, job tenure, race, sex, and religion) in new venture teams has a positive influence on venture performance. Using a composite measure of new venture team heterogeneity, Chandler and Lyon provided evidence of relationships between demographic heterogeneity and sales levels in four out of five years.³⁸

The second major rationale that has been discussed with regard to the formation of new venture teams is the social networks model. Consistent with this

model, most new venture teams are comprised of friends, relatives, and associates from work.^{39, 40} The social network explanation focuses more on the interpersonal characteristics of the relationships rather than the functional completeness of the team. Kamm and Nurick stated that when they asked entrepreneurs how they decided who would make a good team member, the entrepreneurs responded that it is like a marriage and the appropriateness is based on interpersonal attraction and chemistry.⁴¹ This is consistent with the observation by Chandler and Lyon that little emphasis appears to be given to functional area expertise as a criterion for selecting team members.⁴² Rather, mutual interest in the technology of the business, the excitement of a start-up, or independence and growth opportunities tend to be the driving factors.

Kamm and Nurick point out that interpersonal attraction theory suggests that we are attracted to individuals who are associated with rewarding situations.⁴³ In addition, research suggests that individuals are more likely to be attracted to those they have more exposure and proximity to and those who are perceived to be similar in a variety of ways.^{44, 45} Thus, the evidence suggests that theories focusing on factors related to interpersonal attraction may be more useful than theories focusing on functional heterogeneity to explain why individuals are motivated to join a new venture team. Even though the research is currently very limited in scope, interpersonal attraction theory may provide a reasonable starting place for the study of how partners in entrepreneurial ventures are selected.

These combined findings have practical implications for those who may be considering putting together a new venture team. Being able to work with and get along with team members seems to be an important part of new venture team composition process. In addition, it is important to recognize that teams must resolve individual needs and concerns in order to establish behavioral norms and achieve task effectiveness. It appears to be useful to have some diversity in the team. However, it appears that functional differentiation can be developed, as the development of the venture requires. Thus, team members must be willing to learn and specialize as the venture grows.

HOW DO NEW VENTURE TEAMS DEVELOP EFFECTIVE TEAM PROCESSES?

There is a small body of research that focuses on the development of effective team processes. In the general field of organization development, the process of intervening in organizations to improve productivity has been called team building. Before a group of people can begin to improve their performance, group members must be able to work together effectively and collaboratively. The group process model predicts that process will be directly related to organizational performance with process accounting for variation in performance that demography leaves unexplained.⁴⁶ Bettenhausen reviewed 250 articles that referenced team and group research.⁴⁷ In his summary discussion he included group

cohesion, commitment, conflict, and goal setting as key topic areas in team-process research. Subsequent researchers have added group innovation processes to the mix, while others have focused on interpersonal processes, which would include cohesion and conflict, group norms, and individual roles as part of the team process.^{48, 49} Although there is a large volume of research focusing on team and group processes, there is very limited research regarding the team processes of new venture teams. The research has focused on three major areas: (1) cohesion and conflict, (2) decision making, and (3) team interpersonal processes. This research is summarized in the following.

Team researchers have long discussed the benefits of team cohesiveness.^{50, 51} Ensley and Pearce examine the implications of shared strategic cognition and develop theoretical underpinnings supporting the importance of shared cognition regarding organizational strategies.⁵² Cohesion and conflict in new venture teams have been shown to be related to performance. Ventures with cohesive teams experience higher levels of sales growth.⁵³ Utilizing similar measures, Ensley and Pearson added a dimension of potency, or the belief by the team that they can be effective, and studied differences between family and nonfamily firms on these group process characteristics.⁵⁴ They showed that there are significant differences in group potency, group cohesion, shared strategic cognition, idea conflict, and relationship conflict between two types of family firm top management teams and the top management teams of nonfamily firms. The first type of family top management team is referred to as a parental team, in which a small number of closely related family members control decision making. The second type is a familial team, in which a larger group of extended family members control decision making. This type of management team has been referred to as a *cousin consortium*.⁵⁵ Parental teams had higher levels of group potency and cohesion. Familial teams had higher levels of shared strategic cognition, but also higher levels of idea conflict and relationship conflict. Nonfamily teams were between the two types of family teams on all five dimensions.⁵⁶ Thus, different types of family relationships impact the interpersonal dynamics associated with team processes. However, neither parental teams, familial teams, nor nonfamily teams were universally superior.

In a related vein, Talaucar, Grundei, and Werder investigated differences between the CEO model and the departmental model of top management team organization in a sample of fifty-six German start-up companies.⁵⁷ In the CEO model, a single CEO is given decision-making authority for the organization. In the departmental model, each top management team member has decision-making authority for her or his individual area of responsibility. The findings suggest that the departmental model led to greater decision comprehensiveness, defined as the degree to which a decision is based on thorough problem analysis. In addition, the departmental model is linked with greater speed of decision making.

Watson, Ponthieu, and Critelli studied the interpersonal effectiveness of new venture team dyads.⁵⁸ Building on the team literature and grounded theory

development, they identified four dimensions of new venture team interpersonal process: leadership, interpersonal flexibility, team commitment, and helpfulness. Teams that regarded themselves as more effective on team interpersonal processes also regarded themselves as more successful business ventures. Leadership and team commitment were stronger predictors than flexibility and helpfulness.

In summary, new venture team process issues have not been studied extensively, yet there is information that if applied could strengthen team performance. As pointed out earlier, there is some recent research on cohesion and conflict, decision-making processes, and team interpersonal processes. However, there remains much about team process issues in the specialized context of new venture teams that we do not understand. In addition, there are issues discussed in the general team literature that have not been studied extensively enough in the new venture team literature to appear in journals or scholarly books. For example, the team-building process has not been extensively analyzed. Individual roles in new venture teams have not been analyzed or discussed. Likewise, the establishment of group norms and involvement in goal-setting activities in new venture teams has received very little attention.

WHAT HAPPENS WHEN TEAMS GAIN AND LOSE MEMBERS?

Recent research suggests that membership in new venture teams often changes during the early stages of development, yet research focusing on new venture teams has usually focused on conditions at start-up or at a single point in time.⁵⁹ Only recently have entrepreneurship researchers started to look at what happens when new venture teams gain and lose members. If Tuckman's stage model were applied, the team adjourns when members exit.⁶⁰ Thus, the team-development process would start over when team composition changes. However, because the venture is an ongoing entity, it is important to study how the organization reacts to team changes. Such changes have been shown to have an impact on the development of firms, which suggests that more complex modeling may need to be used. In the top-management team literature, changes in the management team are viewed as an adaptation mechanism that is frequently associated with strategic changes.^{61, 62} Yet most of the studies with new venture teams have treated start-up team composition as a static variable and have not accounted for changing team membership.^{63, 64} A related issue is that the demands on a team may differ at different developmental stages.⁶⁵ Possible differences in requisite team characteristics at different developmental stages have been noted in the evolutionary literature; but such speculations have not been verified empirically in the literature on entrepreneurial teams.^{66, 67}

A study in the United Kingdom analyzed team characteristics with respect to their impact on member entry and exit.⁶⁸ The researchers found that the size of

the team was negatively associated with subsequent team member entry. Functional heterogeneity was positively associated with entry. Heterogeneity of prior entrepreneurial experience was positively related with member exit, and family firm teams were less likely to experience exits. The study did not investigate the impact of entries and exits on subsequent performance.

In contrast, in a study in Sweden and the western United States initial team size was found to be positively related to entry in the Swedish sample and positively related to exit in the U.S. sample.⁶⁹ In addition, heterogeneity of industry experience was positively related to both entries and exits. In contrast religious heterogeneity was related only to exits, and heterogeneity of educational backgrounds was positively related to entries. Although the results are partially conflicting, in general, they seem to indicate that more heterogeneous teams are likely to experience more entries as well as exits, and entries and exits may be somewhat correlated.

Entries and exits of team members have been shown to influence new venture performance.⁷⁰ A common prescription in the entrepreneurship literature is that emerging firms can gain access to expertise by adding team members. Huber refers to the addition of members to the team as *grafting*.⁷¹ Organization learning theorists specify that teams can gain knowledge by adding new members who have knowledge that the organization previously did not possess.^{72, 73} Grafting team members appears to be somewhat successful in rapidly changing environments; however, there is evidence that adding team members in stable environments is detrimental. One study showed that perceived environmental dynamism was a positive moderator of the relationship between adding team members and sales growth. In other words, adding team members was positively associated with sales growth when respondents perceived that their environments were changing rapidly, but negatively related to sales growth when there was little perceived dynamism.⁷⁴ It has been proposed that these negative results occur because new team members disrupt the social flow of the team and the disruption of team processes translates into negative performance outcomes for the emerging venture.⁷⁵

The research regarding changing membership in new venture teams consists of only a few articles. The overall results conflict with respect to the impact of team size on entry and exit. The conflicting results suggest that initial team size influences turnover, differentially based on undefined contextual differences. The studies converge with respect to heterogeneity in that heterogeneous teams are more likely to have both entries and exits. It has been suggested that new team members may disrupt the social flow of the team.⁷⁶ However, there is little empirical research to substantiate that view. Additional research needs to focus on explaining why adding team members is frequently associated with negative performance results. In addition, the direction of causality needs to be investigated. Do teams perform poorly because they have added members, or do poorly performing teams add members in hopes that the new team member will make a dramatic enough difference to save the company?

HOW ARE NEW VENTURE TEAMS IMPACTED BY VENTURE CAPITALISTS?

When venture capitalists are involved in an emerging venture it appears to influence team processes. Although a small minority of new ventures is funded by venture capital, such firms are usually in industries with substantial growth potential. Venture capital has been a driving force in the development of many of the most vibrant economies.⁷⁷ As a result, venture capitalists and the firms they finance are often the targets of research.^{78, 79} This is true also with respect to the relationship between venture capitalists and new venture teams.

The relationship between venture capitalists and new venture teams occurs at two levels: (1) the selection of venture opportunities by venture capitalists, and (2) ongoing control and guidance of the team during the time period covered by the particular round of financing. Shepherd provides evidence that venture capitalists assess the probability of success to be higher when founding teams have higher educational capability and greater industry-related competence.⁸⁰ Indeed, the quality of the new venture team is often viewed to be more important than the product or service, industry structure, and perceived competitive intensity in the industry.⁸¹

A few recent articles address the impact of the venture capitalists in the ongoing management of the firm. In contrast to most other forms of investment, venture capitalists frequently play a role in helping to manage the ventures in which they have invested.⁸² The objective of venture capitalists is to increase the perceived value of the organization for the next round of financing or to groom the organization for a buyout or an initial public offering (IPO). In order to do so, venture capitalists often play a key role in recomposing the management team in cases of conflict and as a signal to potential investors further down the stream that the venture is well poised for the next stage of development.⁸³

Busenitz, Moesel, Fiet, and Barney point out that the venture capitalist–new venture team relationship is a two-way exchange of information and value.⁸⁴ However, in an empirical study, Busenitz, Fiet, and Moesel could find no evidence to support the proposition that venture capitalists provide value by adding strategic information.⁸⁵ In addition, they proposed that according to agency theory, dismissing new venture team members would decrease the amount of conflict inherent in the relationship, and have a long-term positive benefit. However, their findings indicate that dismissing venture team members has a negative impact on long-term venture performance. This finding is in direct opposition to what Chandler, Honig, and Wiklund found in their sample of firms that were not venture capital funded.⁸⁶ It appears that exits initiated by the venture capitalists do not have the same effect as voluntary departures or departures initiated by team members. Although there are a variety of potential explanations, the simplest appears to be that the presence of venture capitalists changes the dynamics of the relationship between the exit of team members and venture performance.

Busenitz and his coauthors introduce the concept of procedural justice to the relationship between the new venture team and venture capitalists.⁸⁷ Their initial study suggests some inherent conflict in the relationship because venture capitalists often prefer to invest in companies with team members who have experience working with each other and in the industry. However, the evidence suggests that such teams are less receptive to input from the venture capitalists. In spite of those conflicts, the evidence suggests that perceived procedural justice is positively associated with long-term venture performance.⁸⁸ In a later study, Busenitz, Fiet, and Moesel proposed that the proportion of ownership retained by the new venture team would signal their expectations for the performance of the venture, but they found no support for their proposition.⁸⁹

In summary, the research provides some insights into the relationship between venture capitalists and new venture teams. However, there is much that we do not know about how the presence of venture capitalists impacts the new venture team. The special case of new venture teams and venture capitalists represents an area where substantial additional research could be conducted. For example, do internal team dynamics change because of the presence of venture capitalists? Busenitz et al. propose that dismissals may have a negative impact because suitable replacements are hard to find.⁹⁰ However, an alternative explanation may be found by examining the internal dynamics of the new venture team. When dismissals of existing team members are initiated by venture capitalists it may result in a negative effect, which changes team processes in a negative way. Clearly, more fine-grained research needs to be conducted to explain the anomaly. Additionally, it is unclear how lack of procedural justice between the new venture team and the venture capitalists may impact the internal functioning and performance of the team.

HOW IMPORTANT ARE TEAMS WITH RESPECT TO SUCCESSFUL LAUNCH AND SUBSEQUENT PERFORMANCE?

Researchers have provided evidence that a significant proportion of new ventures are started by more than one individual.^{91–94} Even though the topic of new venture teams has become increasingly researched over the past decade, relatively few studies report the number or proportion of team-founded ventures. This occurs because a significant number of studies select only team-founded ventures.⁹⁵ Alternatively, a number of studies report mean number of founders, but do not differentiate between team-founded and individual-founded ventures.⁹⁶ Although the sample size does not allow the findings to be conclusive, evidence from eight samples in which the proportion of team versus individually founded ventures is reported indicates that approximately two-thirds of ventures in the industries covered by these studies were team founded.^{97–101} Cooper and Daily make the point that the proportion of team-founded ventures is likely to

vary by industry, yet there is little empirical evidence to verify this speculation.¹⁰² The fact that a large proportion of new ventures are started by teams is important from the perspective that it highlights the importance of new venture teams in general, and also suggests that it is important for researchers to continue to study the effects that teams have on the new venture creation process and subsequent outcomes.

HOW DO TEAM CHARACTERISTICS INFLUENCE THE DEVELOPMENT AND PERFORMANCE OF EMERGING FIRMS?

This section summarizes what is known about how team characteristics and processes influence the performance of new businesses. There is substantial support for the proposition that team-founded ventures achieve better performance than individually founded ventures.^{103–105} Research has extended this finding to show that larger teams tend to achieve better venture results.¹⁰⁶ The logic used to support this finding is typically a resource-based explanation. Larger teams have greater pooled human resources (knowledge, skills, and abilities) and also greater social resources. As a result, they have larger contact networks. This finding has been verified over more studies and a longer time period than any other knowledge we have about how teams impact performance.

Initial team size is significantly and positively related to performance. Yet there is evidence that change in team membership is fairly common during the emerging phases of new businesses. One study found that 37 percent of teams added members, and 45 percent dropped members during the first five years of the venture.¹⁰⁷ The results show that adding team members was negatively related to performance (except in highly dynamic environments), and dropping team members was positively related to performance. In contrast, Busenitz and coauthors found a negative relationship with performance when venture capitalists dismiss team members.¹⁰⁸ Even though there is no complete agreement about the direction of the relationship, the combined evidence suggests a significant link between the addition and departure of team members and the performance of the firm. It should be noted, however, that performance might be a factor that leads to change in the top management team. As a field we are only beginning to scratch the surface as we seek to better understand the relationship between changes to the venture team and new venture performance.

There is also some evidence that team processes make a performance difference. Ensley and Pearce provided evidence that involvement in processes that lead to shared cognitive models was significantly linked to new venture performance.¹⁰⁹ They developed a theoretical frame that ties shared strategic cognition to group process and new venture performance. The results indicate that the group processes leading to the development of shared strategic cognition are more important than the outcome of shared strategic cognition in terms of predicting

organizational performance. In a related study, Ensley et al. provide evidence that ventures with cohesive teams experience higher levels of sales growth.¹¹⁰ Watson et al. found that teams that regarded themselves as more effective on team interpersonal processes also regarded themselves as more successful business ventures.¹¹¹ Leadership and team commitment were stronger predictors than flexibility and helpfulness. The success of these initial studies in linking team interpersonal processes with performance provides some indication that this may lead to a fruitful stream of research.

HOW DO NEW VENTURE TEAMS LEARN AND DEVELOP?

When new venture teams are composed, the individuals involved usually pay little attention to the functional completeness of the team. When a new venture is formed, it has access only to the knowledge of environments and processes that founders already possessed prior to the birth of the organization. Thus, new ventures tend to start without a full measure of knowledge, skills, and abilities. Yet if the complementarity of skills is not a significant criterion when selecting team members, how do new ventures acquire or develop the necessary competencies after start-up?

This question can be partially addressed by the organizational learning literature and some recent studies that focus on organizational learning in new ventures.^{112–117} The knowledge possessed by team members when the team is composed is referred to as congenital learning.¹¹⁸ The founding team is the heart of the company and individual knowledge is transformed into organizational competencies.^{119–122}

However, the concept of congenital learning does not explain how new venture teams are able to gain knowledge and competencies that they do not possess at venture start-up. The literature on organizational learning provides some insights into how new venture teams acquire the necessary competencies. Teams can gain knowledge by adding new members who have the knowledge the organization previously did not possess.^{123, 124} Huber refers to the addition of members to the team as grafting.¹²⁵ The evidence suggests that grafting team members occurs somewhat frequently. In two studies reporting the addition of team members, one (in a sample from the western United States) reported that 37 percent of teams in their study added one or more members during the preceding six years and another (in a sample from the United Kingdom) reported that 42 percent of their teams added members during the first five years of the business.^{126, 127} Grafting team members appears to be somewhat successful in rapidly changing environments; however, there is evidence that adding team members in other circumstances is detrimental because new team members disrupt the social flow of the team and the disruption of team processes often translates into negative performance outcomes for the emerging venture.¹²⁸

Although many teams attempt to graft knowledge by adding members, virtually all teams gain knowledge as a part of the venture-development process.¹²⁹ In other words, the evidence seems to indicate that much of the knowledge necessary to successfully start and grow a company is developed as the organization itself grows and develops. This appears to happen in a variety of different ways. An expanding body of research focuses on experimental learning in new ventures.^{130–134} Organizations change as they accumulate experiences, adjusting reactions to problems while absorbing feedback and developing routines of various types to capture positive outcomes for the future.¹³⁵ The basic premise of experimental learning is that organizations learn by the outcomes of past decisions, and that present decisions are informed by that knowledge.¹³⁶

Thus, new venture teams acquire knowledge by grafting team members, and by experimental learning—learning by doing. In addition, Huber discusses vicarious learning and search and notice learning as additional processes.¹³⁷ Building on these concepts, involvement by team members in informal learning activities (talking to people familiar with the particular industry, benchmarking activities, gathering information about competitors and competitive practices, reading trade journals and publications), nonformal education (attendance at seminars, workshops, and other structured educational experiences) and formal education (involvement in formal trade school or university-based training) has been shown to be positively related to sales growth.¹³⁸

Combined, the evidence suggests that functional completeness is typically not a primary consideration when new venture teams are composed. However, as the venture develops, team members are likely to engage in a variety of different learning activities in order to gain the necessary competencies. Certainly, involvement in these different forms of knowledge acquisition activities is not mutually exclusive. Emerging organizations can graft team members, be involved in experimental learning, and gather information from a variety of vicarious sources. However, in general, involvement in knowledge acquisition activities appears to be more effective than grafting team members into the organization.

SUMMARY

This section presents a very practical summary of what we know about new venture teams. There is much we still do not know about new venture teams, but knowledge has expanded significantly since the last published review. First of all, new venture teams are important. There is evidence suggesting that about two-thirds of all businesses are founded by teams of two or more individuals.

The field is converging on a definition of the new venture team, which requires individuals to have financial ownership and decision-making responsibility in order to be considered as part of the team. This is useful from a research perspective and also useful to help interpret and apply results. However, it is not

meant to imply that employees, advisors, or other individuals not formally recognized as a team member cannot have a substantial impact on the development of an emerging venture.

Individuals are attracted to new venture teams because of interpersonal connections and shared interest. For the most part, there seems to be very little emphasis on putting together a team that has the necessary competencies to grow a firm beyond start-up. Although it is frequently prescribed that the functional composition of the new venture team is important, there is little empirical evidence supporting this position. However, there is substantial evidence suggesting that teams must gain the competencies necessary to support change and growth more effectively by learning through experimentation and participation in activities, such as searching out and reading relevant articles and books, talking to knowledgeable people, attending seminars and workshops, and enrollment in formal educational programs.

There is still very little information to suggest how venture teams develop effective team processes. I believe there is much to be gained by linking more closely to the existing teams literature, and recommend that researchers do so. From a practical perspective, effective team processes are associated with decision-making effectiveness and performance. The initial evidence suggests that leadership, interpersonal flexibility, team commitment, and helpfulness of individuals are associated with better team performance. In addition, collaborative decision-making processes lead to greater decision comprehensiveness. The evidence strongly suggests that team cohesiveness is more important than the initial functional composition in predicting performance.

Adding team members appears to be effective in highly dynamic environments. However, in more stable environments, adding team members is negatively associated with performance. It appears that the disruption caused by adding a team member upsets the social fabric of the team, making it difficult to integrate the individual's knowledge, skills, and abilities. When team members leave the organization, the impact is significantly beneficial with the exception of when venture capitalist firms are involved. Venture performance is affected negatively when the venture capitalist firm removes team members.

This work represents a comprehensive review of the published research on new venture teams. Our knowledge has advanced significantly within the past five years. The accumulated knowledge provides evidence to support four very practical prescriptions. First, there is strong support for the belief that team-founded ventures outperform those founded by individuals. In general, it appears to be more functional to start with a larger team and allow members to drop out as they choose. However, the involvement of venture capitalists changes the dynamics of the team in such a way that dismissals from the team become dysfunctional. Second, extensive involvement in a variety of knowledge acquisition activities by existing team members is generally more efficacious than trying to graft new members into an already existing team. Third, team cohesiveness

appears to be an important ingredient in developing and growing a business effectively. Therefore, new venture teams should seek cohesiveness. Fourth, participative decision styles are more efficacious than styles in which a lead entrepreneur makes decisions with little consultation with other team members.

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5

Business Angels: Investment Processes, Outcomes, and Current Trends

Frances M. Amatucci and Jeffrey E. Sohl

The entrepreneurial economy and its contribution to economic growth have been well noted. High-growth entrepreneurial ventures have been the major source of job creation in the United States.¹ These firms also hold the greatest potential for innovation, commercialization of technology, and sustainable economic development. However, entrepreneurial ventures face significant financial hurdles in the early stage of their development. These high-growth ventures lack the assets necessary for collateral-based lending, and their high growth and accompanying high risk, results in reluctance by the banking sector to provide start-up capital. In addition, start-up firms often do not have the cash flow requirements that accompany debt financing, and any cash flow that does exist is needed to fund the growth of the start-up rather than servicing debt. This inability to attract debt capital in the early stage, and the mismatch between the need for growth capital and the short-term financial requirements of debt financing, contributes to the importance of equity financing. Equity capital supplies the venture with much needed capital for development and expansion while at the same time typically does not require a repayment until the exit event. As such, both the entrepreneur and the investor share the risk inherent in the start-up of these ventures. This critical role of early stage equity financing throughout the history of the entrepreneurial economy has been well documented.²⁻⁵

Angels (private investors) are the oldest and largest source of seed and start-up capital for entrepreneurs. Angels are equity investors that seek returns that are commensurate with the risk and illiquidity that are inherent in seed-stage investing. Angels are different from friends and family in that the investment is based on the financial risk/reward ratio as opposed to the affinity to the investment that is the predominant driver for friends and family. In the United States, angels invest more dollars in more companies than the formal, or institutional,

Table 5.1. Investment Activity

| Year | <i>Angel Investors</i> | | <i>Venture Capital</i> | |
|------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|
| | <i>Total Dollars (billions)</i> | <i>Number of Investments</i> | <i>Total Dollars (billions)</i> | <i>Number of Investments</i> |
| 2004 | 22.5 | 48,000 | 21.3 | 2910 |
| 2003 | 18.1 | 42,000 | 19.4 | 2840 |
| 2002 | 15.7 | 36,000 | 21.7 | 3046 |

venture capital market (Table 5.1). In 2004, in the United States, angels invested US\$22.5 billion in 48,000 ventures, or approximately US\$470,000 per deal.⁶ In contrast, during this same time period venture capital funds invested US\$21.3 billion in 2910 deals, for an average of US\$7.3 million per deal. Since over 75 percent of venture capital deals are follow-on funding for existing portfolio companies, these 2910 deals represent close to 700 unique companies.⁷

As indicated in Table 5.1, this relationship between the angel and venture capital market, with respect to dollars invested and number of deals, has persisted for several years. In the seed and start-up stage, the difference between angels and venture capitalists is even starker. Close to 45 percent of angel deals in 2004 were in the seed and start-up stage (52 percent in 2003 and 50 percent in 2002), while venture capitalists allocated 6 percent of their 2004 deals to these stages (6.0 percent in 2003 and 4.9 percent in 2002). Even during the best of times, venture capitalists, over the last decade, have never invested more than 15 percent of the deals in the seed and start-up stage. Angels invest smaller amounts per investment and are the seed engine for entrepreneurs, while venture capitalists invest in larger deals in the later stages of growth. As such, angels invest in sixteen times more deals and over fifty times more firms than venture capitalists, and the majority of these angel deals are in the critical seed and start-up stage.

However, in spite of the size, scale and importance of the angel market, it is one of the least understood and underresearched equity markets. The major difficulty in conducting angel research is the inaccessibility of reliable angel data. At the present time, and in the foreseeable future, no directories of angels exist, nor are there any public records of their transactions. This lack of readily accessible public databases implies that to conduct angel research requires the arduous task of collecting primary data from individuals who wish to remain anonymous. Clearly, this need for anonymity is understandable, since successful angel investors rely on a reasonable flow of quality deals often obtained through an informal network of business associates and service providers. Once an angel assumes a public profile they are often inundated with a plethora of entrepreneurs seeking capital and the quality of these proposals can be quite varied. Thus, finding angels to participate in research studies is time consuming, labor intensive and the cost can be prohibitive. In essence, the angel researcher undertakes the unenviable task

of searching for individuals who do not want to be found. Given that this initial hurdle can be overcome, significant obstacles remain. Since angels are high-net-worth individuals, they represent consumers with considerable buying power and influence. It is the goal of many organizations, from high-end retailers to financial planners, to reach these individuals both as a source of product demand and to solicit opinions. As such, the angel researcher is one among many competing for the interest and attention of angel investors. One direct result is that the angel researcher is confronted with the likely prospect of low response rates to surveys that attempt to collect meaningful data on the angel market and the inherent potential of a significant presence of nonresponse bias. An additional difficulty is that even if angels can be found, and they respond in significant numbers, complete and usable responses are difficult to obtain given the sensitivity of the requested information. Specifically, information on private financial transactions, including investment amounts, terms and conditions of private equity deals, return rates, failure rates, and portfolio sizes, is not readily disclosed due to the highly sensitive and personal nature of such information. Thus, obtaining angel data places an additional burden on the academic researcher in terms of multiple contacts with the target population and a scrutiny with respect to the accuracy of the data that is received and the high standard of data confidentiality that the angel must be convinced exists.

In this chapter, we will summarize what is known about the business angel investment processes, outcomes, and current trends. First, a selective literature review focused on the equity investment process is provided. Then current trends in the business angel market, such as the evolving business angel–venture capitalist relationship, investment behavior of angels, and the institutionalization of the angel market, are described. We conclude with suggestions for future research based on both existing knowledge and future trends in the business angel sector.

LITERATURE REVIEW

The private equity investment process is frequently divided into preinvestment, contract negotiation, and postinvestment stages, and can be examined from the different perspectives of either the investor or the entrepreneur.^{8–13} A flow diagram illustrating these stages is provided in Figure 5.1. Most research adopts the view of the investor, and is predominantly in the venture capital sector. In the following paragraphs, we examine existing research on the various stages with particular emphasis on the business angel sector.

Preinvestment Processes (Stage I): Search, Initial Screening, and Due Diligence

The search process involving finding a business angel is complicated by the anonymity and informality of the business angel market. Sohl identified several

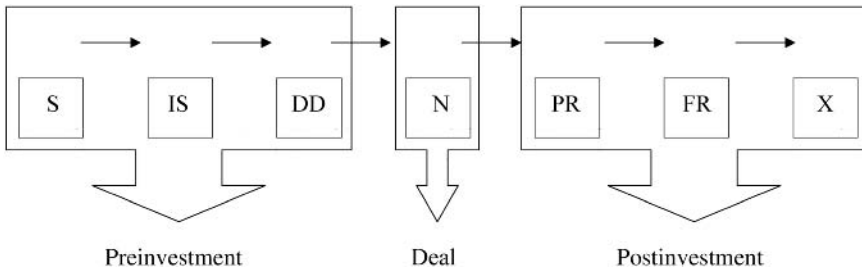


Figure 5.1. Business angel/venture capitalist investment process. S, Search; IS, Initial Screening; DD, Due Diligence; N, Negotiation; PR, Postinvestment Relationship; FR, Future Rounds; X, Exit.

mechanisms for matching entrepreneurs with investors; these included loosely organized referrals among professionals, venture capital clubs, business angel portals, and matching networks.¹⁴

As investors and entrepreneurs decrease the number of matching opportunities, initial screening is very important. Mason and Harrison point out that business angels consider two elements in the initial screening stage: the extent to which the proposal meets their personal investment criteria and the intuitive assessment of the proposal.¹⁵ Although this stage takes only about ten minutes, 73 percent of all proposals are rejected. Focusing on technology-based ventures, Mason and Harrison examine the demand-side deficiencies that determine an entrepreneur not to be “investment ready” and conclude that management skills are critical in raising finance from outside investors in this stage. Investment criteria, quality of investment opportunities, and quality of the business plan are also important to investors during the screening stage.^{16, 17}

Using qualitative data analysis on a sample of Canadian private investors, Feeney et al. evaluated attributes and shortcomings of the business and owners as important investment-screening criteria.¹⁸ Mayfield maintained that the relationship between business angels and entrepreneurs forms during the due diligence process, and that relationship becomes the primary determinant of proposal acceptance or rejection.¹⁹ Sapienza et al. confirmed these findings and even went further to point out that the relationship during the due diligence stage can also be adversarial.²⁰ Dibben et al. and Harrison et al. suggest “swift trust,” which is the main type of trust developed between angel investors and entrepreneurs during due diligence, is built through the expression of different opinions between the two sides.^{21, 22} See Table 5.2 for more research on Stage I of the investment process.

Negotiation/Contract Agreement Processes (Stage II)

Research on the processes associated with contract negotiation and agreement addresses topics, such as the role of context, trust and partnership formation,

Table 5.2. Selected Literature Review: Business Angel/Venture Capitalist Investment Process

| <i>Stage</i> | <i>Author(s)</i> | <i>Topic(s)</i> |
|---|--|--|
| Stage I | Carter et al. (2003) | Human, social, and financial capital/gender |
| Preinvestment process: search, initial screening, and due diligence | Brush et al. (2002) | Role of social capital/gender |
| | Mason and Harrison (2002) | Barriers to investment |
| | Greene, Brush, Hart, and Saporito (2001) | Role of gender in venture capital funding |
| | Mayfield (2000) | Relationship development during due diligence |
| | Mason and Harrison (2000) | Investor readiness in initial screening |
| | Kolodinsky, Osteryoung, and Anthony (2000) | Rational and nonrational processes |
| | Feeney, Haines, and Riding (1999) | Private investor decision process |
| | Sohl (1999) | Uncover, clubs, alliances, and matching network |
| | Dibben, Harrison, and Mason (1998) | Trust/cooperation during initial screening |
| | Freear, Sohl, and Wetzel (1996) | Technology due diligence |
| Stage II | Manigart et al. (2001) | Impact of trust |
| Negotiation/contract agreement | Sohl and Areson-Perkins (2001) | Deal structure in high-tech ventures |
| | Kelly and Hay (2000) | Influence of context on contract comprehensiveness |
| | Shepherd and Zacharakis (1999) | Effect of anchoring and adjustment heuristic |
| | Landström, Manigart, Mason, and Sapienza (1998) | Agency and social exchange theory to examine contract terms and negotiation processes |

(continued)

Table 5.2. *(continued)*

| <i>Stage</i> | <i>Author(s)</i> | <i>Topic(s)</i> |
|---|--|---|
| Stage III | Parhankangas, A. and Landström, H. (2003) | Psychological contract violations |
| Postinvestment process: relationship, future rounds, and exit | Kelly and Hay (2001) | Agency theory regarding postinvestment relationship |
| | Farrell and Howorth (2001) | Behavior, cognitions, and motivations at exit |
| | Ardichvili, Cardozo, Tune, and Reinach (2002) | Assembly of nonfinancial resources |
| | Higashide and Birley (1998) | Impact of conflict in postinvestment relationship |
| | Sapienza and Korsgaard (1995) | Timely information, trust, and monitoring |
| Process: Multistage | Amatucci and Sohl (2004) | Women entrepreneurs and business angels |
| | Paul, Johnston, and Whittam (2003) | Business angel investment process |
| | Ramy and Gavius (2003) | Control, trust, and confidence |
| | Shepherd and Zacharakis (2001) | Business angels and venture capitalist comparisons |
| | Roberts, Stevenson, and Morse (2000) | Principle-agent versus incomplete contracts |
| | Van Osnabrugge (2000) | Partnership formation over time |
| | Sapienza, Korsgaard, Folger, Sagrera, Zhang (1999) | Process, postinvestment experience, performance |
| | Wright and Robbie (1998) | Social judgment theory perspective |
| | Mason and Harrison (1996) | Process versus outcomes in decision making |
| | Zacharakis and Meyer (1996) | |
| | Zacharakis and Meyer (1995) | |
| | Fried and Hisrich (1994) | |
| | Tyebjee and Bruno (1984) | |

formality and comprehensiveness and decision processes.^{23–33} From the business angel's perspective, this stage is very difficult because of information asymmetries between the investor and the entrepreneur. Kelly and Hay argued that the information gap is mainly created because angels may not have complete knowledge regarding how the venture will develop over time and the managerial competencies of the entrepreneur.³⁴ In addition, time and financial resource constraints inhibit extensive due diligence. They examine numerous contextual factors that may influence the contract comprehensiveness, including the relevant industry experience of the entrepreneur, the amount of involvement in the venture development process, and the amount of investment, equity stake, and referral source. The level of new venture experience of the entrepreneur, the general management experience of the entrepreneur, the number of investments made by the investor, the manner in which the investment is made (solo or syndicate), and the postinvestment employment of the investor were not found to be relevant. Moreover, contrary to research findings in Stage I, the level of interpersonal trust did not appear to influence contract comprehensiveness.

In general, it appears that some degree of formality does exist in the angel investor market with regard to contract comprehensiveness. Using frameworks of agency theory and social exchange theory, semistructured interviews with investors and entrepreneurs in Belgium, Sweden, the United Kingdom and the United States, found evidence to suggest that prior experience of contractors, number of investors involved, and the involvement preferences influence the level of contract formality.³⁵ Basically, an angel investment contract includes clauses about changes in ownership of the venture, postinvestment managerial agreements and monitoring, and exit agreements. To address new developments during the postdeal period, new clauses that increase contract complexity can be added. Based on the assertion that a contract is to protect investors, there is a strong case in their research for the notion that building trust between angels and entrepreneurs is not the main purpose of a written contract.

In a simulation involving 144 entrepreneurs and investors, Manigart et al. examine the relationship between trust and contractual agreements.³⁶ Results suggest that trust impacts contractual preferences of entrepreneurs but not investors. The investor preferences appeared to be independent of the level of trust of the entrepreneur.

As important participants in Stage II, lawyers may also influence the process, terms, and outcomes of contract negotiation. Bankman and Cole examine agency and nonagency explanations for the venture capital investment boom prior to the bust in 2001.³⁷ Fixed management fee structures and increased compensation supported the agency explanation that venture capitalists negotiated deals which put self-interest above investor interest. See Table 5.2 for more research on Stage II of the equity investment process.

Postdeal (Stage III) Processes: Postinvestment Relationship, Future Rounds, Exit

As indicated in the investment decision process flow diagram (Figure 5.1), the post investment stage involves the postcontract relationship between the entrepreneur and the investor, potential future rounds, and eventual exit. One of the major differences between business angels and venture capitalists lies in the expectation that the former brings industry experience and a network of potentially valuable contacts (i.e., the gold-plated rolodex) that can serve as intangible assets to the firm in the postinvestment stage.^{38–40} The research indicates that the entrepreneur often values the business experience of the angel on par with the capital provided. This value-added investing is a key distinguishing feature of the angel market.⁴¹

In a survey of UK investors, Kelly and Hay question the use of agency theory in the context of informal venture capital since: (1) private investors and entrepreneurs often have already developed a high level of interpersonal trust; (2) often private investors bring badly needed managerial resources during the seed and start-up stages; and (3) investors can consider active postinvestment involvement as an effective risk-reduction strategy.⁴² Ardichvili et al. employed formal qualitative data analysis of in-depth interviews with twenty-seven successful serial angel investors to examine the nonfinancial resources investors bring to new ventures.⁴³ The Ardichvili et al. research suggests that business model development and management of and sourcing of funding were most important. Given that the initial typology was limited to human, social, physical, and financial resources, the findings suggest the addition of an intellectual capital category that is separate from human capital.

Although focused on the venture capitalist, Parhankangas and Landström conducted a study to examine three forms of psychological contract violations, which occur between the venture capitalist and entrepreneur during the postcontract period.⁴⁴ These included: (1) a disagreement over goals or strategies; (2) entrepreneur incompetence; and (3) shirking or opportunistic behavior by the entrepreneur. Such psychological contract violations are likewise applicable to angel investors and entrepreneurs. Amatucci and Coleman described how disagreement over firm goals and strategies and *perceived* entrepreneur incompetence undermined the angel investor–entrepreneur relationship.⁴⁵ See Table 5.2 for more research on Stage III of the equity investment process, as well as studies that examine multiple stages.

Women and Minority Entrepreneurs

According to the U.S. Census Bureau, from 1997 to 2002, minority groups and women have increased business ownership faster than the national average.⁴⁶ From 1997 to 2004, majority-owned, privately held women-owned businesses increased by 23 percent compared with the national growth rate of 9 percent. In

2004, this group accounted for 30 percent of all businesses in the United States.⁴⁷ Women entrepreneurs are at a particular disadvantage in finding angel investors because they often do not have access to the networks where information about equity financing exists.⁴⁸ Although little research exists on minority entrepreneur access to seed and start-up capital in the business angel market, it is widely recognized that ethnic minority groups do experience more problems than other firms in obtaining financial resources from banks and other formal sources.^{49, 50} In response to the low proportion of equity capital received by minorities and women, funds have been created to address the dearth of supply in equity capital for these groups. By providing a venue for women entrepreneurs to present to venture capitalists, Springboard Enterprises has served as a conduit for raising US\$3 billion in venture capital. Likewise, the Minority Business Roundtable Venture Capital Fund and the New Africa Opportunity Fund assist in the minority and women entrepreneur's search for capital.⁵¹

On the supply side, as more women become entrepreneurs, an increasing number of women are becoming business angels. Although still relatively low, estimates are that 10 percent of all business angels in the United States are women and 5 percent of all business angels in Britain are women.⁵² Sohl and Hill found that in 2003 only 13.3 percent of the investments made by women angels were in women-owned or operated businesses; however, since this was double the national average of 6.6 percent, it appears there is some partiality toward women-led businesses.⁵³

In this section, we attempted to provide a selected review of the literature on the equity investment decision process, predominantly involving business angels. In the following section, current trends involving both investment processes and outcomes are described.

TRENDS IN THE BUSINESS ANGEL MARKET

The Business Angel–Venture Capitalist Relationship

As indicated, angels and venture capitalists occupy unique spaces in the spectrum of providers of risk capital. These singular positions of angels and venture capitalists are complimentary in the sense that the angel seed deal often migrates to the venture capital market for later stage expansion financing. With this mutual, though indirect, dependence between the two markets, it is expedient for both angels and venture capitalists to develop relationships on a broad level, rather than on a per deal basis. While angels often invest in small groups of five to six angels for a given deal, individual investor angels rely on their personal net worth as a source of funds. Given a desire to distribute these investment dollars over a portfolio of companies as a means to mitigate risk, there are inherent limits to the amount of capital that angels can invest. These limits, in turn, often prevent the angel from providing the larger dollars necessary for their start-up

investments to expand and grow into competitive ventures with a higher potential for an exit event. Thus, for angels, venture capitalists often represent a source of follow-on funding for their investments. An amicable working relationship with the venture capital market is an important strategy for angels to adopt in their quest to achieve an eventual merger, sale, or initial public offering (IPO) for their investments. In addition, to ease this transition from an angel-backed deal to venture capital funding, angels are often negotiating terms and conditions in their seed deals that mitigate any friction that may arise and provide for a smooth transition to later stage equity markets.⁵⁴

Of note is that while this relationship is often viewed as the progression from angel to venture capital deal, the contrary position also holds. For the venture capitalist, with the predominance of later stage investments and the virtual abandonment of the seed-stage market, the existence and knowledge of quality seed and start-up ventures is pivotal for deal flow. Since the seed and start-up market is the space occupied by angels, a connection to angels provides the venture capitalists with deals that have passed due diligence by angels and have reached a stage of development that is within the investment objectives and expertise of the venture capital market. An ancillary benefit of the relationship is that venture capitalists may refer deals deemed too early for their fund objectives to angels, with the belief that these deals, after an initial investment and seasoning by angels, will find their way back to the venture capitalists. Thus, a two-way relationship between angels and venture capitalists is a beneficial strategy for both markets—for angels to secure later stage funding for their investments and for venture capitalists to maintain a source of quality deal flow.

However, while this bidirectional approach for business angels and venture capitalists is an advantageous strategy, this relationship has experienced some discontinuities over the last several years. Prior to 2000, over 80 percent of angel investments were in the seed and start-up stage.⁵⁵ In the post-2000 business angel market, a trend in the redistribution of angel investments, with respect to stage, has emerged and has accelerated in recent years. As indicated in Table 5.3, the business angel market is exhibiting a reallocation of investments by reducing the percentage of seed-stage deals and increasing investments in postseed second rounds. This movement by angels to second-stage financing is a redistribution of capital, as opposed to the creation of investment dollars. Business angels are not abandoning the seed market, since nearly half of their investments remain at this

Table 5.3. Angel-Stage Investing

| | <i>Percent of Investments</i> | | |
|----------------|-------------------------------|-------------|-------------|
| | <i>2002</i> | <i>2003</i> | <i>2004</i> |
| Seed stage | 50 | 52 | 43 |
| Postseed stage | 33 | 35 | 44 |

critical early stage, but they are redistributing their investment capital. A consequence of this redistribution is an exacerbation of the seed and start-up capital gap that currently exists for high-growth entrepreneurial ventures.⁵⁶

It appears that there exist three motivations for this realignment of the business angel market and the business angel–venture capitalist relationship: an opportunistic, a necessitous, and a protectionist strategy. Inefficient markets yield opportunities for investors and a substantial secondary, postseed funding gap in the US\$2–4 million range now exists for high-growth entrepreneurial ventures. This postseed stage gap has contributed to the inefficiency of the early stage equity market and angels are adopting an opportunistic motive in providing second round (postseed), follow-on funding for their seed deals. By exploiting market inefficiency and investing in the postseed stage, angels are able to preserve their seed stage position. In addition, through postseed funding from angels that have a vested interest in the firm as seed investors, entrepreneurs avoid the costly and time-consuming search for capital from new sources that are unfamiliar with their ventures. In addition, one of the goals of this additional funding round is to increase the potential for the angel to reach an exit event, most likely through an acquisition or sale, after the infusion of additional angel capital. In essence, the opportunistic motive is based on the strategy to both exploit market inefficiencies in the postseed gap and increase the likelihood of an exit event without any additional financing from investors external to the venture.

The necessitous strategy is based, in part, on the current nature of the venture capital market. The venture capital market has experienced an increase in deal size (US\$7.3 million), a decrease in the number of first sequence investments (25 percent of deals), and a move to later stage investing.⁵⁷ These three factors combine to present substantial hurdles to the entrepreneur, and their angel investors, in securing venture capital in the postseed stage range of US\$2–4 million. As a result, angels often find it necessary to provide a second round of funding to their seed investments, without which the venture will likely stagnate in growth or, in the worse case, be unable to continue operations. In this sense, angels may be viewed as providing a form of bridge financing for their investments. However, in this case, the postseed angel financing is often viewed as a necessary, rather than a sufficient, infusion of capital.

The third motivation for the realignment of the angel–venture capital relationship, the protectionist strategy, is based in part on the declining investment returns experienced by the venture capital industry in the post-2000 landscape and possible overvaluation by angels. These two factors have combined to result in the occurrence of significant devaluations of angel investments in later rounds, resulting in cram downs and substantial dilution of the angel investment position in the deal.⁵⁸ To avoid a second round that may be devalued, angels adopt a protectionist strategy and provide additional rounds of financing to reduce the total number of external rounds necessary to achieve exit. Since each subsequent round of capital results in an independent valuation of the firm's value, fewer rounds imply fewer valuations and thus reduce the chance of a decrease in the

value of the firm, especially in light of the fact that valuation is a highly subjective process. In addition, through the infusion of angel capital in a postseed round, angels seek to protect their investment by affording the venture the opportunity to achieve additional growth. This continued growth and expansion of the venture adds value to the investment and places both the entrepreneur and angel investor with increased leverage in the negotiation for a later stage venture capital investment.

To summarize, the business angel and venture capital relationship, while still largely a complementary one in terms of market position in the spectrum of equity financing, has experienced significant changes in recent years. The recognition by both players for the need to develop a two-way relationship, in terms of deal flow, the need for compatible terms and conditions and later stage funding opportunities is a further confirmation of this complementary position. However, a retreat of venture capital to later stage deals, the existence of a postseed funding gap, the desire for angels to achieve exit without venture capital and potential acrimonious angel–venture capital valuation perspectives, has led to significant changes in the strategies adopted by angel investors. This realignment has led angels to follow an opportunistic, a necessitous, and a protectionist strategy to preserve their investment position while remaining the major source of seed and start-up equity capital for high-growth entrepreneurial ventures. It is surmised that these changes have resulted in a realignment of the angel market that is likely to continue in the future.

The Investment Behavior of Angels

The angel market is represented by the collection of individual investors who seek investment opportunities from a variety of sources. These investors are typically cashed-out entrepreneurs—individuals who have successfully started an entrepreneurial venture and have subsequently exited the investment either through a sale, a merger or acquisition, or through an initial public offering. Many have been the recipients of angel investments or venture capital. Thus, angel investors have substantial experience in the start-up and growth of successful ventures. It is important to note that angels invest their own money, usually allocating a prudent portfolio to angel investing. In this context, a prudent portfolio is defined as the amount of risk capital that the angel believes can be lost without a significant impact on their lifestyle. As an individual they decide when and how often to invest. These allocation decisions are often based upon the configuration of their portfolio, the stage of the angel investments they are involved in, their degree of involvement with the investment, and the attractiveness of the opportunity. In contrast, venture capitalists are a bit more constrained in their investment decisions. While a venture capitalist also decides on what ventures are attractive and how much to invest in each venture, as fund managers they have a fixed amount to the investment portfolio and they must invest the entire fund before the fund expires in ten years. As such, large funds result in large and

late stage deals. Thus, while the angel decides on the size of their individual portfolio of angel investments and when to make these investments, the venture capitalist's portfolio is dictated by the size of the fund they manage and the life of the fund.

Business angels are often characterized as patient investors, and this is both out of necessity and a consequence of the investment spectrum within which they invest. Since business angels invest in the seed stage, the venture is often little more than a concept, possibly with limited sales but likely still in the business formation process. Much needs to be accomplished before the concept can grow into a viable business opportunity with the ability to attract additional funds and proceed to the exit event. Thus, since private investors provide early money, business angels have longer exit horizons than their venture capital counterparts and the capital they provide is often termed patient capital.

As a long-term investment, in the evaluation and investment decision phase the private investor market is a relationship-building market. Since the seed and start-up investor is investing predominately in the entrepreneur and this asset is a very mobile commodity, the vision of the entrepreneur must be in congruence with the investment objective of the business angel. Failure to grasp the need for vision alignment and the importance of the angel-entrepreneur relationship often increases the risk of failure, resulting in business closure or severe contraction for the entrepreneur and loss of investment for the investor.

Often angels actively interact with management in their investments and are value-added investors in the traditional sense. With their business start-up experience, angels operate under the assumption that this experience will increase the chance of success for their investments and thus increase the return on the investment. The need and desire for an active role in the investment, combined with limited financial resources, often determines the size of their angel investment portfolio. Since the investment is largely at the seed and start-up stage, the need to add value to the investment is especially acute, since these early stages are marked by the highest risk of survival. As part of this active investing profile, angels derive a type of intrinsic income from their angel investment activity. That is, in addition to the financial return, the investment portfolio provides the individual angel an opportunity to give back something to the entrepreneurial culture from which they derived substantial wealth.

One of the most significant behaviors of angels, and one that has persisted over the three decades during which angels have been researched, is their overwhelming propensity to invest in deals that are located close to their principal residence. By close, it is usually within a half-day's travel from their home. Over 80 percent of angel investments are within this geographic proximity and when angels invest at greater distances, they are often not the lead investor, but rather a passive member of a group that is involved in the deal. This regional nature of the market stems from several important behavioral characteristics of angel investors. As former entrepreneurs, these individuals enjoy the involvement with a start-up venture at the strategic level and since angels are value-added investors, these

factors are more easily available to the venture if the investor lives nearby. Private investors often take bigger risks or accept lower rewards when they are attracted by the nonfinancial characteristics of an entrepreneur's proposal, such as the desire to create jobs in their own communities. In this regard they are investors that seek an attachment and a return, which again is commensurate with a geographic presence. However, it is important to note that return is the major consideration, and since these investments are start-ups, with substantial risk, proximity also affords the investor the opportunity to keep a close watch on the investment.

The yield (acceptance) rate is defined as the percentage of investment opportunities that are brought to the attention of investors that resulted in an investment. Historically, yield rates for angels have averaged close to 10 percent (Figure 5.2), indicating that of every ten proposals reviewed, one results in an investment. In 2000, the yield rates exhibited a significant increase (23 percent) with one in four proposals receiving an angel investment. In the post-2000 market yields retreated to a more sustainable level of 7 to 10 percent. The drop in yield rates in the post-2000 market was the result of pressure from the denominator and increased scrutiny from investors. Specifically, in the 2001–2004 time period, private investors received more proposals for consideration. During this same time period, angels exhibited a more measured approach to angel investing, as indicated by the time spent conducting due diligence, which increased by 25 percent in the post-2000 market. Thus, pressure from both the increase in the demand (denominator) and the more cautious approach to due diligence, contributed to a return of yield rates to their historical levels. As noted in Figure 5.2, yield rates in 2004 spiked to 18.5 percent. Data on yield rates in future years will be needed to determine if this change in yield rate is an anomaly or a systemic change in the angel market.

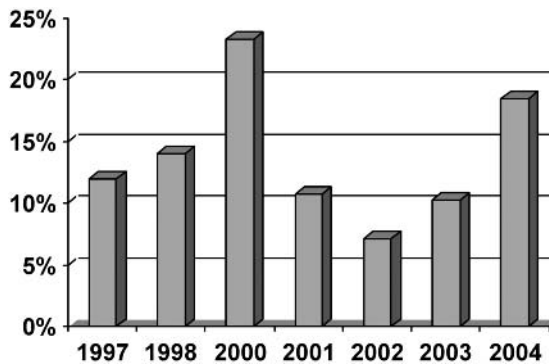


Figure 5.2. Angel yield rates: number of deals funded/ number of proposals presented.

The Institutionalization of the Angel Market

The angel market is essentially a collection of individual investors who actively search for investment opportunities, conduct their own due diligence, and negotiate and decide whether or not to make an equity investment in an early stage entrepreneurial venture. This collection of individuals has organized into several varied portals (mechanisms or organizations that represent how angels conduct business in the market, from search to initial investment). Market inefficiencies and a persistent funding gap have provided the impetus for angels to adopt this portal structure. However, there does not exist, nor is there ever likely to exist, any directories of angels or any public records of their transactions. Business angels, in essence, often operate below the radar screen of the private equity market as a means to protect their anonymity and to assure quality deal flow.

One of the most noticeable trends in the organization of the business angel market has been the proliferation of a myriad of angel portals. In this context, an angel portal is defined as a mechanism for bringing together entrepreneurs seeking capital and angels searching for investment opportunities. Currently, the three largest of these portals, in terms of investment activity, are individual angels, informal angel groups, and formal angel alliances. All of these portals seek to reduce the inefficiency of the early stage equity market, increase quality deal flow to angels and preserve the anonymity of the individual investor. As a sense of scale, there were approximately 225,000 angels in the United States in 2004, who collectively invested US\$22.5 billion.⁵⁹

The collection of individual angels (classified as the individual angel portal) is the largest and oldest segment of the angel market. These individuals make over half of all the angel investments and represent the majority of the dollars invested. They rely on their own referral sources, often lawyers, accountants or other angels, for deal flow. These individuals have the lowest visibility of all the angel portals but appear to attract the highest quality of deal flow, mainly due to their development of a personal referral network. They also have the lowest percentage of latent angels (angels who have the net worth and have entered the market through a portal, but have not made any angel investments).

The informal angel group portal operates in a similar manner as the individual angel portal. The informal angel group typically has a membership of as little as ten investors and may be as large as fifty individuals. These informal angel groups are loosely organized, have a relatively low visibility (but higher than the individual angel), have a very low percentage of latent angels, and also represent a substantial portion of the dollars invested and the number of deals enacted in the angel market. Together, the individual angel and the informal angel group portals comprise close to 75 percent of the angel market activity.

The formal angel alliance is the most recent entrant to the angel market, with its beginnings traced to the formation of the Band of Angels (of Silicon Valley) in 1994. These formal angel alliances now number around 130 alliances scattered across the United States. They are the most highly structured of the angel portals

and often have membership criteria, minimum investment requirements and screening committees. They have the highest visibility in the angel market and as such, often attract a wide range of quality in their deal flow. Formal angel alliances also have the largest percentage of latent angels, with over 50 percent of their members considered to be latent angels. Despite this high visibility, the formal angel alliance accounts for approximately 10 percent of the angel deals and dollars invested.

There has been a growing trend in the angel market to achieve a higher degree of sophistication and organization than was present in past years. More sophistication in the sense that angels are becoming more attentive to terms and conditions of their angel deals, more serious about due diligence, and are monitoring their investments more closely. These trends are both a reaction to the post-2000 market restructuring and the somewhat draconian terms and conditions imposed by later stage investors. Angels are requiring that entrepreneurs use their investment dollars over a longer period of time than in the past, and during this time they seek to add substantial value to the venture. Both of these are an effort to potentially reach an exit event with only angel capital, and at the same time to be in a position to have a reasonable amount of leverage, in terms of firm valuation, if the venture seeks later stage venture capital financing. Certainly all of these developments are signs of a growing and healthy market. As seed investors, this increased sophistication can only add value to the process, in terms of starting companies built on a solid foundation, mentoring these companies to achieve sustainable growth, and contributing substantially to the job generation capacity of the entrepreneurial sector.

Unfortunately, often confused with this sophistication, is the increase in the organizational structure of the angel market, as evidenced by the formation of formal angel alliances. Certain misguided conclusions point to the increased organization as the cause for increased sophistication. This movement to a more organized and structured angel market may result in the unfortunate consequence of the institutionalization of the angel market. As an example, some formal angel alliances have adopted a voting method by members to decide if the alliance will enact the angel investment. Minimum investment activity, also a requirement of some formal angel alliances, requires members to maintain a prescribed dollar level of angel investment for each member over a twelve-month period. Angels invest when they find a good deal with a technology that has the potential to capture a significant portion of a niche and is coupled with an excellent management team. They do not invest to maintain a minimum investment requirement. Business angels certainly do not invest based on the democratic process of voting; rather they make an individual investment decision, sometimes relying on the advice of other angels and trusted associates.

A portion of formal angel alliances are pooling investment capital into a so-called angel fund, with investment decisions made by an investment committee or a fund manager. These angel funds are a misnomer, since in essence they are venture capital funds with wealthy individuals as limited partners, albeit often

without the carried interest requirement of the more traditional venture capital fund. Unfortunately, these angel funds represent a redistribution of business angel capital away from the individual angel investor to a fund structure. In addition, these funds could likely become a victim of their own success. Successful funds attract more investors and larger fund sizes, resulting in a retreat from the seed and start-up stage of financing. Such redistribution would only result in an exacerbation of the persistent, and troublesome, seed financing gap facing entrepreneurs seeking early stage capital. One needs to only look fifteen years in the past, when the venture capital industry consisted of funds in the US\$20 million range and it was still economically feasible to make a seed deal work.

The potential institutionalization of the business angel market, as evidenced by the multifaceted forms of voting, fund creation, and minimum investment requirements that have been adopted by a reasonable number of the formal angel alliances, could present a significant impediment to the viability of the business angel investor as the major provider of seed capital to entrepreneurial ventures. In contrast, angel groups that provide a venue for reviewing business plans, work on generating quality deal flow, maintain individual decision making among members and provide a venue for informal syndication on a per deal basis, are providing a valuable service to the angel community. Groups that adopt these fundamental tenets of a healthy business angel market are assisting in creating a sustainable angel environment where worthy entrepreneurs have access to value-added angel investors. Fortunately, the business angel market tends to be self-correcting over time. Business angel investors are an educated lot and will likely discern the difference between the benefits of an increase in sophistication as opposed to the disadvantages of the movement to institutionalization. Quality deals, returns commensurate with the risk, and the fun and excitement of angel investing are the key drivers for angel investors, and all of these are available in a healthy and sophisticated market that is built on the basic tenets of individual investing.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although angel research has made significant strides in the last decade, there remain many facets of the angel market that require further inquiry. The process of angel investing and the differentiation of these processes within the angel community is a potential avenue of investigation. These process components include the selection and screening of deals, the negotiation of the terms and conditions and the postinvestment relationship. In the selection and screening of deals, the proliferation of organized angel portals has resulted in a potential shift from individual angel selection and screening to investment committees making these decisions. One potential result of this shift is that individual angels, whose investment criteria may differ from that of the screening committee, may never get the opportunity to view deals that may be of interest to them. Research into the

consequences of this relinquishing of the screening function by angels would indicate the extent and the opportunity cost consequences of this shift. In the negotiating of the terms and conditions, angels have traditionally utilized less burdensome terms and conditions than their venture capital counterparts. However, given the changes in the venture capitalists–angel relationship, an investigation of these changes in term sheets would shed light on both the evolving venture capitalists–angel relationship, as manifest in the term sheet, and the increased emphasis on angels with respect to preserving equity positions. With respect to the postinvestment relationship, research on changes in these relationships, in part due to the longer period of use for angel capital and the increase in angel postseed-stage investing needs investigation.

An important research topic is a more detailed analysis of the institutionalization of the angel market. Clearly, the consequences of a potential shift away from traditional angel investing and a potential morphing into the venture capital model poses the potential for significant changes into the angel market as the major source of seed and start-up capital. While this shift is in the early stages of development, examination as to whether the shift represents a basic systemic change in the angel market or is a reactionary to current, and temporary, market changes, needs to be studied.

While the attitudes, behavior, and characteristics of the basic angel market have been studied, there are segments within the angel market spectrum that have not received the attention they deserve. These segments include the minority and women angel market, from both a supply and demand perspective. While some research has been conducted on these segments from the perspective of venture capital, little research has focused on the angel components of these important, and growing, market segments. In addition, cross-cultural differences offer a potentially rich avenue of research, especially in light of the globalization of today's business market and as the angel market develops along this global dimension.

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6

Venture Capital Financing

Andrew Zacharakis and Matthias Eckermann

Venture capital (VC) is the fuel for high potential growth firms, especially in the United States. New venture survival is tenuous at best, but those backed by venture capitalists (VCs) tend to achieve a higher survival rate than non-VC-backed businesses.¹⁻³ Studies find that survival for VC-backed ventures range from around 65 to 85 percent of the VC's portfolio.^{4, 5} VC predominantly focuses on high-technology industries (91 percent of all investments in 2003 in the United States) and U.S. companies receive over 74 percent of all VC disbursed worldwide.⁶ VCs focus on knowledge-based businesses that have the potential to change the way people live. Some examples of businesses that VCs have backed include Genentech, Apple, Google, Amazon, and Federal Express.⁷ Although VC investments have fallen from a peak of US\$100 billion in 2000 to around US\$21 billion in 2004 in the United States, it is still higher than the level of investment in 1998.⁸ Reflecting the overall importance to entrepreneurship, VC has received considerable academic attention. The stream of research can be categorized following the framework of Bygrave and Timmons, and Tyebjee and Bruno (see Figure 6.1).^{9, 10} The basic model of VC starts with the formation of a fund (the predominant form in the United States is a limited partnership). In this mode, the VC acts as an entrepreneur and goes out and sells his fund concept to potential limited partners who provide the capital.¹¹ Once the VC firm has funds, it seeks deal flow and screens for those ventures that seem to have the greatest potential. The next phase is a deeper evaluation of those potential investments that survive the initial screening, often called due diligence. If the VC is still interested after due diligence, he or she will enter negotiations with the entrepreneur outlining the amount to be invested, the form of the investment, and a number of other terms that ideally protect the VC against opportunistic behavior. After the investment is

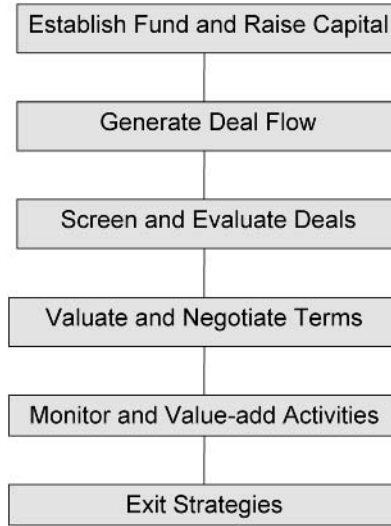


Figure 6.1. The venture capital process.

made, the VC works with the entrepreneur to increase the value of the venture. This phase includes active monitoring and advising to the company on how to grow, working side-by-side to raise follow-on funding, and targeting some kind of liquidity event. The final stage in the VC process is exiting the investment and returning proceeds to limited partners.

This chapter showcases some of the research throughout the VC process outlined in the aforementioned model. We will focus on emerging trends, ideas, and practices in VC. We will make a special point of translating the findings from academic research into practical implications for both VCs and entrepreneurs.

LITERATURE REVIEW

The nature of the VC process involves transactions between two parties; limited partners and VCs, VCs and entrepreneurs, VCs and other VCs (syndicates), and insiders (entrepreneurs/VCs in earlier rounds) and exit vehicles such as initial public offerings (IPOs) and acquisitions. As such, agency theory is a commonly used theoretical lens to examine the process.^{12–15} However, Arthurs and Busenitz assert that agency theory is limited in that it assumes the transacting parties to have different incentives.¹⁶ As such, other theories are also common in examining the VC process, including resource-based theory and cognitive information processing theories.^{17–19}

RAISING A FUND

Potential limited partners (LPs) face agency risks when investing into a VC fund, such as adverse selection and opportunistic behavior.^{20, 21} The research around this topic has primarily focused on these agency risks and how LPs evaluate a potential VC investment a priori, protect themselves ex post of the investment and monitor ongoing performance. It is important to note that LPs do not have the same means at hand for disciplining VCs, as investors in matured corporations have to align management. In their analysis of governance structure in VC partnerships, Gompers and Lerner explicitly highlight the difficulty of dismissing the management of a VC fund owing to the central role of senior VCs in their company as well as the absence of a market for corporate control for most VC firms.²² A priori, an LP's investment in a VC fund is more at risk. To explain investors' selection criteria, Gompers and Lerner use signal theory.²³ They stress that VCs must certify their ability to LPs in order to secure an LP investment. Gompers and Lerner argue that particularly high-quality VCs will have an incentive to release information about their ability to set themselves apart from average VCs and secure above-average financing conditions. Eventually, all VCs are somewhat forced to promote their track records on previous investments when establishing new funds as evidence of their ability to achieve high returns thereby addressing the sorting problem.²⁴

Once LPs decide to invest in VCs, contracts are used to reduce the threat of opportunistic behavior ex post by VCs.²⁵ Gompers and Lerner studied contracts of 140 VC firms in the United States and identify three issues that are typically addressed: fund management, duties of the fund's management, and investment behavior.²⁶ However, they acknowledge that negotiating and monitoring these covenants is costly and investors appear to refrain from it except for situations characterized by severe agency threats, such as fraud.²⁷ Considering the costs of enforcement, agency theory predicts that the contracts will focus on aligning the interests of LPs and VC. Gompers and Lerner establish that both parties agree on a reward scheme that provides incentives for the VC firm to maximize the fund's profitability in the first place.²⁸ While the LP's investment is often returned first, the remaining gains are generally split so that the general partners receive 20 percent and the limited partners 80 percent.^{29, 30}

The VCs also receive a yearly management fee of 2 to 3 percent of funds under management.³¹ As the VC industry has grown, the best VC firms have been oversubscribed in new fund raising, leading them to create mega funds and/or being more selective in which LPs they allow to invest in their funds. Mega funds can create agency problems from the LP's perspective in that the management fee becomes so large that the VC may lose incentive to invest for future gains.³² After the bubble collapsed, many funds voluntarily cut their size and reduced their management fees, yet the problem of alignment is an important one.³³

Even though LPs have numerous ex-post contract provisions, it behooves LPs to monitor VC activities in order to protect and possibly enforce their rights.

However, Robbie, Wright, and Chiplin find that LPs are typically passive in their oversight of VCs, primarily due to the low percentage that VC accounts for in the LP's overall portfolio.³⁴ LPs rely on the VCs to accurately report activity on a quarterly and yearly basis. VCs have considerable latitude in reporting yearly performance of their portfolio companies to LPs, as there is no market validation of a portfolio company's valuation until it achieves some sort of exit.³⁵ Considering that internal rate of return (IRR) is the primary means that LPs use to judge VC performance, the potential volatility between reported and the ultimate actual IRR makes this measure problematic. Yet, Robbie, Wright, and Chiplin find that 66 percent of LPs do no monitoring and for those that take monitoring actions, it mostly consists of asking for more VC reports.³⁶ The IRR reporting problem becomes particularly severe as VC firms' promotion of new funds overlaps with their management of current funds.³⁷ Given illiquidity, no market price can be established for current investments. Objective track records thus suffer from a time lag allowing VCs to overstate their ability not only to current LPs, but to prospective LPs for follow-on funds. In result, VCs may overstate the success of recent activities or, in case of severe fluctuation in the firm, conceal the loss of management skills.

Although there is some research on the LP/VC dyad, it is still underdeveloped. The research by and large assumes that the LP and VC have already come together. Particularly for new firms, the questions arise of how new VCs can establish initial funds without having a track record to advertise? What are the conditions for a new VC firm to successfully raise funds and what factors account for failure at this stage? There is an opportunity to research how LPs identify which VCs they are interested in investing. This research might draw direction from the work on how VCs identify which entrepreneurial ventures they invest in. Whereas when looking at Akerlof's lemon problem, the process of VCs dropping out of the LPs' focus has not been given much attention either.³⁸ Our guess is that research focusing on the lifecycle of VC firms can add significant insights on both LPs' asset allocation strategies and VCs' decision making (as exemplified by Gompers's grandstanding theory).³⁹ On the flip side, there is room to understand how VCs develop their funding strategy and how they identify which LPs to approach. Specifically, what investment criteria do LPs use in evaluating potential VC investments? How do VCs approach LPs and sell them on their fund idea? In the context of selection, the question looms how VCs present their track records to potential LPs? How do VCs use track records to attract funding (i.e., is there a threat of VCs using distorted track records giving rise to a selection bias)? How critical is it to gain that first LP in order to signal quality of the fund? We also know that the VC/LP dyad is a repeated game with most successful VCs raising a succession of funds often giving previous LPs the first opportunity to invest in the current fund. How is this ongoing relationship impacted by a particular fund's performance? This question is appropriate, as many funds suffered greatly during the dot.com bust. Have LPs increased their due diligence and postinvestment monitoring as a result of poor performance since the bust? Have LPs required

greater reporting? Have they been more proactive in defining the scope of the VC fund? As set out earlier, the recent development toward mega funds allowing VCs to select LPs may also put pressure on LPs to relinquish governance covenants. Is there an aggravated agency problem in mega funds? And what are the consequences? In sum, research into the VC/LP dyad has great potential to advance our understanding of the overall VC process.

DEAL FLOW AND SCREENING POTENTIAL INVESTMENTS

Deal flow and screening research also draws heavily on agency theory. Much of the research presupposes that entrepreneurs have an incentive to withhold information and then looks at methods VCs might use to avoid adverse selection. Network theory highlights the value of a strong network not only to increase deal flow but also to drive quality deals to the VC through trusted advisors. The research on decision criteria works to identify those factors that best predict which ventures have the greatest potential. Finally, more recent research looks at the decision biases involved in this process and examines how these biases might be minimized.

Amit, Glosten, and Muller assert that VCs face a lemon problem in that only those entrepreneurs who cannot raise cheaper capital from other sources will seek VCs out.⁴⁰ In fact, agency theory suggests that entrepreneurs possess an information advantage about their own capabilities as well as the true nature of the opportunity due to their involvement in the venture.^{41, 42} Entrepreneurs may withhold negative information or overstate the venture's potential in order to attract investors and secure the cheapest financing available.⁴³⁻⁴⁶ Given that traditional financiers, such as banks or public investors insist on the availability of sufficient information to judge quality, lower quality entrepreneurs will have no other financing option but private equity.⁴⁷ As such, lower-quality entrepreneurs who have no other financing options are inclined to withhold information from VCs, which results in an adverse selection problem. Despite these problems, Amit, Brander, and Zott assert that VCs are better at identifying these agency problems (moral hazard and adverse selection).⁴⁸ Therefore, VCs need to find effective means to identify quality deal flow and to screen out lower-quality entrepreneurs.

Shane and Cable suggest that VC financing is a function of network ties, both direct and indirect.⁴⁹ The stronger the ties between entrepreneurs and investors, the more likely the VCs will fund entrepreneurs. Thus, network theory suggests that VCs generate deal flow by tapping their network. Specifically, better quality entrepreneurs will get warm referrals to VCs by knowing someone in the VC's network whom the VC respects and trusts.^{50, 51} Tyebee and Bruno observe that out of ninety deals, only 23 (26 percent) materialized pursuant to an unsolicited call of the entrepreneur. The majority of deals (65 percent) were recommended to the VC by other VCs (33 percent) or through sources, such as previous investees and personal contacts (roughly 40 percent). Ten percent received endorsement

from investment banks or investment brokers. Social network theory extends economic perspectives, like agency theory, on which ventures receive financing, but VCs need to evaluate other factors in their decision process.⁵²

Many researchers have investigated how VCs make their decisions, focusing heavily on the decision criteria that help distinguish those ventures that have a greater chance of providing strong returns.^{53–62} The underlying justification for these studies is that a better understanding of the VC process may lead to better decisions and thereby more successful ventures. The information derived from these studies appears to fit four categories: (1) entrepreneur/team capabilities, (2) product/service attractiveness, (3) market/competitive conditions, and (4) potential returns if the venture is successful.⁶³

Although insightful, many of these studies suffer from introspection biases since they use ex-post collection methods.^{64–67} For instance, most VCs state that the entrepreneur is the most important factor in making their decision, but studies using real-time data collection methods, such as verbal protocols and policy-capturing experiments find that market-based factors are more important in the screening phase of the decision.^{68, 69} Building upon these real-time methodologies has allowed researchers to investigate several other aspects of the VC decision process, including biases, the effect of experience, and demographics, among others.^{70–73} The net result of these studies points out that VC decision making is at best imperfect and possibly suboptimal.

A main hypothesis derived from the finding that entrepreneurs have difficulty introspecting about their personal decision policies and also understanding that VCs suffer from decision biases, several studies have set out to build actuarial decision aids that can improve the screening process.^{74–77} These studies consistently find that actuarial decision aids are better in screening ventures than are actual VCs themselves due to consistency in applying decision policies and removing decision biases.

This realm of VC research is perhaps the most developed, especially in regards to the screening decision. As such, much of the current work is adding greater depth to understanding how contextual factors influence the process. For example, Shepherd et al. find that VC experience has a curvilinear effect on decision performance.⁷⁸ While more experience is generally better, they find that after fourteen years of experience, VC decision effectiveness declines, possibly due to overreliance on gut feel rather than a concrete examination of all the decision factors. This study illustrates the value of building upon the platform findings of earlier coarser grained research to deepen our understanding of the VC phenomena.

Unlike the decision-screening process, deal flow has been relatively under investigated. While Amit et al. rightly point out the potential lemons problem VCs face, the question becomes what factors mitigate that problem?⁷⁹ Amit et al. assert that VCs have developed skills that help them weed out lemons, but we suspect that this is a matter of degree throughout the industry.⁸⁰ Specifically, we hypothesize that more established VCs would face less of a lemons problem than

newer firms. What factors distinguish more effectively selecting funds and the also-rans? We suspect that the value and power of the VC's network is a fruitful area to start this investigation. For instance, does networking with the right angel investors, the right feeder VC funds, and the like, improve deal flow and thereby return?

DUE DILIGENCE

Due diligence takes a considerable amount of the VC's time; Smart estimates that VCs spend an average of 120 hours just evaluating the human capital potential of the entrepreneur.⁸¹ This does not include the time VCs spend on due diligence of the market, product, or the financial standing of the portfolio company.⁸² That means that due diligence on the entrepreneurial team requires anywhere from one to ten weeks of full time effort; however, VCs rarely spend all that time sequentially, so in calendar terms due diligence can last anywhere from six weeks to six months.⁸³ The level of due diligence is influenced by time constraints, cost of reducing information asymmetries and any number of situational aspects that can make thorough due diligence more difficult.⁸⁴ As such, due diligence is a cost/benefit trade-off; how much effort and time should VCs commit to reduce the adverse selection risk.⁸⁵ Investors will refrain from investing if they foresee an expensive due diligence process.

Due diligence involves evaluating both tangible (e.g., patents, accounts receivable, etc.) and intangible assets (quality of leadership, know how, culture, etc.).⁸⁶ Entrepreneurial firms seeking VC are likely to have more intangible assets, which are much harder to assess (more costly), especially for earlier stage deals.⁸⁷ Smart conducted an exploratory study of VC due diligence on the entrepreneurial team's human capital potential (an intangible asset); basically, VCs must assess the likelihood that the team's behaviors will lead to a desired outcome.⁸⁸ His study of fifty-one VCs finds three primary areas of due diligence effort: (1) work samples where the VC quizzes the entrepreneur on a number of what-if scenarios; (2) reference checks on people who can attest to the entrepreneur's capabilities; and (3) fact-based interviews to assess the entrepreneur's past performance. The emphasis on these avenues changes by stage of the investment. For earlier stage deals, Smart finds that work samples take more of the VC's time whereas for later stage deals, fact-based interviews become more important.⁸⁹ These findings have face validity in that in later stage deals, the VC can gauge the entrepreneur's efforts in the venture in question and assess how likely the entrepreneur is to continue on a successful course. On the other hand, for earlier stage deals, VCs are looking at the entrepreneur's decision-making process to assess whether the entrepreneur will develop a strategy that can lead to success.

Considering the difficulty of accurately measuring human capital capability, Fiet suggests that VCs are more concerned with market risk factors (demand, competition, and so on) than human capital issues because VCs can contract certain

behaviors (term sheets) and take postinvestment action if there are human capital gaps (i.e., hire new team members, fire others).⁹⁰ As such, VCs focus on informants as a means of conducting due diligence. These experts can offer insight to market potential, and are often other VCs who might become coinvestors.⁹¹ In essence, coinvesting (or forming a syndicate) can reduce the costs of due diligence as it brings more minds on the evaluation process.

Syndication is a common practice in financing transactions.^{92–95} Two views of research examining the necessity and benefits of syndication stand out: the resource-based line and the financial economics line. Looking through the resource-base lens, syndication is highly relevant to VCs, for it allows VCs to pool information prior to investment decisions as well as throughout the investment process.^{96, 97} Information on investments is considered a valuable resource as information reduces risk without negatively affecting returns.⁹⁸ Furthermore, two parties are likely to hold different information on the same subject resulting from different backgrounds, experiences, and perspective, so that pooling the knowledge of several parties increases the diversity of information considered.⁹⁹ Sah and Stiglitz show that syndicated investments are superior to those that are based only on the knowledge base of one individual.¹⁰⁰ Scholars thus argue that a selection process for VC investments becomes more effective, the larger the number of VCs who actively participate.^{101, 102} In essence, the pooling of experiences and knowledge eases information asymmetries between VCs and entrepreneurs and reduces the syndicate's exposure to adverse selection risk.

Since VCs can never make due diligence costless, VCs add a discount to their valuation.^{103, 104} Therefore, better-quality entrepreneurs benefit if they can reduce information asymmetries. Busenitz, Fiet, and Moesel suggest that entrepreneurs can reduce the information gap and thereby cut the VC's cost of due diligence by signaling the entrepreneur's personal commitment to the venture.¹⁰⁵ In essence, such signaling reduces the VCs' concern over some agency risks, such as shirking, adverse selection, and hold-ups.¹⁰⁶ However, Busenitz et al. did not find that signaling was correlated to long-term venture success.¹⁰⁷ The lack of findings might suggest that signaling biases VCs in their due diligence process, possibly by encouraging them to take short-cuts (less time devoted to due diligence) or pay more attention to certain factors (such as the team) and less to others (such as the market).

While aspects of due diligence have received attention, more work can be done. Smart finds better due diligence performance by smaller VC firms and speculates that it is because they make fewer deals per partner, but he was unable to test that proposition.¹⁰⁸ A good future study might look at difference in due diligence by VC firm size, stage focus, technology focus, and so forth. Smart also questions whether there is a curvilinear effect on time/effort expended and value of due diligence. Following Kaplan and Stromberg, research might use investment memorandums written by VC to assess the level of due diligence and then see if there is a correlation to ultimate venture performance.¹⁰⁹ We also sense that due diligence research focuses on negative agency issues to the neglect of

other positive outcomes. For instance, Busenitz and Barney assert that entrepreneurs are overoptimistic in their prospect for success.¹¹⁰ Due diligence helps VCs work with entrepreneurs to identify pitfalls and reshape their opportunities so that they can achieve higher performance and thereby greater VC returns. Such preinvestment value-add not only improves the VC's potential return, but also better prepares the entrepreneur to succeed. Examining other positive spillover effects of due diligence would greatly expand our understanding of the value of this process.

NEGOTIATING AND CONTRACTING BETWEEN THE VC AND THE ENTREPRENEUR

If due diligence proves favorable, the VC and the entrepreneur enter negotiations on the investment's specific terms. Several issues are pertinent in this stage, including valuation, contract provisions that provide protection against agency risks, staging of future rounds, and board representation and oversight.¹¹¹

As Wright and Robbie point out, valuation for a new venture is quite different from formal corporate valuation.¹¹² Wright and Robbie underscore the importance of proper valuation models to incorporate the two facets that make VC investments distinctive: relatively high uncertainty compared with investments in matured companies and rapid growth. Techniques anticipating steady future developments and constant earnings on the basis of the company's history cannot entirely capture the potential inherent in such investment. Seppä and Laamanen therefore summarize that in a VC context, the absence of a performance history by which to judge the company and uncertainties about the young business particularly hampers the use of conventional valuation methods, such as benchmark valuations on the basis of price/earnings (P/E) ratios of public companies or calculation of a company's discounted future cash flows (DCF).¹¹³ A young company's earnings may for instance be subject to great jumps at the beginning, which is not predictable on the basis of its previous performance and eventually increasing the error of forecasts. Cornell and Shapiro, Kaplan and Ruback, and Keeley and Punjabi observe that VCs revert to benchmarks more specifically related to the business to assess the potential value an investment can attain given its prospects.¹¹⁴⁻¹¹⁶ Manigart et al. surveyed VCs across five countries including the United States, and finds that the most common valuation techniques were earnings before interest taxes (EBIT) multiples and comparing the venture under consideration to recent transactions in the venture's sector, which is presumed to closely match the future potential of the firm.¹¹⁷ The VCs then derive conclusions about the relative position of the firm and a valuation range instead of deriving a hard and fast value. Only in later stages and in the antecedent of an initial public offering or a trade sale do traditional corporate finance methods, such as DCF gain importance as the company becomes more predictable and uncertainties about the future development resolve.¹¹⁸

Most recently, real option theory has been introduced to the valuation quest in VC finance.^{119, 120} Options may be particularly suitable for deriving a fair value because it depends on future decisions, which can be accounted for in option theory-based models. Such models are able to deal with the uniqueness and dynamic nature of each venture's future development.¹²¹ As an option-based valuation is not derived from past business performances, it is not confounded if static forecasts are frustrated. Furthermore, since the option valuation is not grounded on benchmarks, it does not suffer from limited comparability of innovative businesses. An option approach not only provides the VC with an indicative valuation prior to the entry decision but can also allow for an incremental update every time new information surfaces.¹²² A real option-theory approach however requires the VC to identify the most pertinent issues as well as the impact of an option-based valuation. Eventually, the accuracy of the input in terms of discretionary decisions or rights, the structure of decisions and consequences determines the quality of the valuation calling on research to identify the most important parameters (see McGrath, Ferrier, and Mendelow, for a review of option models in management; for a review on options in VC see Dixit and Pindyck; Lander and Pinches).¹²³⁻¹²⁵

Since valuation is highly susceptible to future performance of the venture, which is impacted by entrepreneur actions, unforeseen conditions, and so forth, VCs often contract to protect themselves from agreeing to an inflated valuation.¹²⁶⁻¹²⁹ One way is to use hybrid financing which allows VCs to alter the financing structure throughout the investment period in reaction to newly emerging information. Norton and Tenenbaum research the preferred financing means of ninety U.S. VC firms and find that preferred convertible equity dominates in general as it allows VCs an effortless use of ratchets.¹³⁰⁻¹³² Cornelli and Yosha demonstrate that in the course of a staged investment, convertible securities afford VCs a strong position to work against window-dressing problems as they can increase their stake (diluting the entrepreneur's stake) in case pre-defined goals are not accomplished.¹³³ Depending on the business and the industry sector, the extent of these measures varies. For instance, high-technology investments with a higher risk for failure generally entail more contract provisions related to milestones than low-technology companies.¹³⁴ There is however some controversy on the sole validity of these findings. In a cross-border comparison, Cumming argues that the dominance of convertible preferred equity only applies to the United States whereas he observes that common equity dominates the Canadian VC industry.¹³⁵ In line with Gilson and Schizer, Cumming underlines factors that further impacts the choice of the capital structure most notably the in-force tax system.¹³⁶ Cumming and Gilson and Schizer argue that significant tax advantages for convertible preferred equity may also motivate U.S. VCs to favor such financing means.^{137, 138}

Besides looking into capital structure related covenants, scholars research the application of other governance means, which are usually stipulated in advance to an investment. Barney et al. look into 270 VC contracts during 1983 and 1985

and observe that VCs occupy a disproportionately high number of board seats either with representatives or affiliates in relation to their actual ownership position.^{139–141} It is argued that stronger board representation of VCs increases the entrepreneur's receptivity to financial, operational, and strategic advice.¹⁴² Rosenstein finds that boards of VC-backed ventures have even greater power than the company's management (e.g., entrepreneur).¹⁴³ VCs use their board presence to supervise the management and initiate strategic changes if necessary.¹⁴⁴ In the long run however, Barney et al. find that VCs forego board seats the more the company's performance improves and the longer the management is in place. Barney et al. add that VCs grow keen to seek covenants protecting proprietary knowledge and impede entrepreneurs from engaging in rivaling activities the more competitive the venture's environment.¹⁴⁵ Kaplan and Strömberg provide an overview on the extent of specific governance methods that are commonly applied in VC finance on the basis of 213 investments in the United States.¹⁴⁶ They show that if companies lack significant turnover, VCs apply staging mechanisms, vesting, voting rights, and board influence in order to supervise the investment effectively. However, VCs tend to release these stringent conditions the more the venture matures and the more uncertainty is resolved.

Control and monitoring may have negative effects. Shepherd and Zacharakis warn that undue reliance on negative covenants, such as ratchets may so diminish entrepreneur motivation that it negatively impacts overall venture performance.¹⁴⁷ As such, Shepherd and Zacharakis propose a model of trust building that recognizes that any VC–entrepreneur relationship is based not only on control (from an agency perspective) but also on trust.¹⁴⁸ They assert that entrepreneurs (as well as VCs) can build trust in the other party by signaling commitment, taking fair and just actions, obtaining a good fit and open and frequent communication. While many scholars have focused on control mechanisms, less work has looked at the interaction of trust and control in the VC–entrepreneurship relationship.^{149–151} One exception is that Sapienza and Korsgaard investigated VCs' responses to the timeliness with which entrepreneurs shared information, and the level of influence the VC had over the strategic direction of the venture.¹⁵² By comparing the relations of two panels of master-level business students on the one hand and experienced VCs on the other hand with management teams of their portfolio companies, Sapienza and Korsgaard unveil that prompt feedback positively impacts the relationship. This turns into greater trust between investors and investees, which eventually softens principal agent concerns and relieves monitoring efforts. It is thus beneficial for VCs to seek timely cooperation with entrepreneurs.

While negotiation and contracting has drawn heavily on the shape of contracts and how the provisions tie to an agency perspective, most of the research seems to view the process from the VC's eyes. There is an opportunity to examine how entrepreneurs enter negotiations and how they improve the valuation through this process. We suspect that the ability of the entrepreneur to negotiate successfully will be contingent upon a number of contextual factors, such as the

entrepreneur's previous experience, the perceived potential of the venture, current economic conditions (e.g., the dot.com boom and bust), and so forth. We also would encourage researchers to take the Shepherd and Zacharakis theoretical model regarding trust, and empirically test it.¹⁵³ Specifically, how does the negotiation process evolve? Does the way the process moves from initial meetings, to term sheets, to final valuation and terms influence the entrepreneur's incentives? In terms of valuation, we believe that research should not only improve methodologies but also relate a broader scope of factors to the venture value. We believe that an option theory approach offers much potential to integrate further factors. How and to what extent does the entrepreneur's initial endowment of skills or the VC's specific industry skills affect the eventual price they fetch for the venture? Research can account for the unique constellation of factors that drive every venture.

MONITORING AND VALUE-ADDED ACTIVITIES

After closing the investment contract and committing the first round of capital, the VC financing period commences. There is a great array of research, which looks into typical problems the venture encounters in the early phases of its life cycle.^{154–156} Depending on the scope of innovation, a venture may be subject to substantial market and technology risks. In emerging markets, early stage ventures come across a multitude of rival products/services whereby the eventual dominant product design remains uncertain.^{157, 158} The consequence is that many early stage firms entering the same industry do not succeed and drop out.^{159, 160} In this demanding environment, Baum and Silverman add that the inexperience of the entrepreneur increases the risk of the early stage venture further.¹⁶¹

Throughout the VC process, the VC works with the entrepreneur to master the upcoming problems and assists on problems where the management may lack direction.^{162, 163} Brander, Amit, and Antweiler refer to the VC's monitoring and assisting as value adding.¹⁶⁴ However, as of yet, much of the research on this topic is descriptive. For instance, scholars observe the scope of the VC's nonfinancial contribution to the venture and find that VCs typically assist on financial and managerial problems.^{165–167} Gorman and Sahlman and Hellmann and Puri add that VCs help in recruiting top management.^{168, 169} Furthermore, VCs offer ventures access to their networks of potential customers, suppliers, or financial service providers.¹⁷⁰

Researchers further dwell on the intensity of the VC's involvement. Gorman and Sahlman find that VCs spend 60 percent of their time on such postinvestment activities.¹⁷¹ On average, a VC commits 110 hours per year to assisting and monitoring one venture investment.¹⁷² Elango et al. find that VCs devote an average of twenty hours per month in monitoring every portfolio company.¹⁷³ Although all VCs work with entrepreneurs postinvestment, the level of interaction

varies. MacMillan et al. surveyed sixty-two VCs to assess their level of postinvestment involvement.¹⁷⁴ They find that there are three categories of involvement that they label (1) *laissez-faire*, (2) moderate, and (3) close tracker. Surprisingly, MacMillan et al. find little difference in VC performance based on the level of involvement.¹⁷⁵ Sapienza and Gupta examine how context impacts the level of VC involvement.¹⁷⁶ VC involvement tends to be lower when the investment is in an earlier stage venture, the VC has less experience, the VC is geographically distant to the venture, and the VC perceives high goal congruence with the entrepreneur.¹⁷⁷ Furthermore, Sapienza, Manigart, and Vermeir find that VC monitoring and value-added activities increase based on the need of the portfolio company moderated by the VC's experience; more experienced VCs provide greater value-added services.¹⁷⁸

The deep involvement of the VC in the venture raises the question of the quality of the relationship between the VC and the entrepreneur.^{179–182} Sapienza and Gupta point out that in joining efforts, the VC and the entrepreneur better address the venture's initial struggles.¹⁸³ Cable and Shane construct a model based on game theory and highlight cooperation of both the VC and the entrepreneur as a prerequisite for well-performing ventures.¹⁸⁴ Gompers indirectly supports this reasoning in his analysis of 794 investments, confirming the positive effect of a healthy VC relationship on the occurrence of IPOs.¹⁸⁵

Yet as outlined earlier, the separation of ownership and management causes agency problems and induces VCs to take a variety of precautions. The ultimate threat to the entrepreneur, however, is his replacement in case of opportunistic and ineffective behavior (e.g., Fiet et al., Fredrickson, Hambrick, and Baumrin, and Sweeting and Wong report that dismissals occur surprisingly often).^{186–188} Counter to management reshuffles in matured companies, dismissals in a VC context represent severe interference with the business's development, given that assets are still highly intangible and tied to the founders.^{189–191} Competencies of managers of matured companies are more easily replaceable. The dismissal mirrors an ultimate decision of the VC to secure and protect its investment and indicates a strongly malfunctioning VC relationship.^{192–195} Bruton, Fried, and Hisrich find that CEO dismissal is by order of priority, most often a function of (1) ability (adverse selection), (2) disagreement in strategic direction, and (3) opportunistic behavior by the entrepreneur.¹⁹⁶ While opportunistic behavior is the least common reason for dismissal, Bruton et al. find that these CEOs tend to have the largest equity stake versus other dismissed CEOs.¹⁹⁷

Even though most of the relevant issues are already covered by scholars, we perceive that much work can still be done. Most studies presume a sequence of events in that management assistance seems to be the VC's ex-ante choice, which then affects performance. This view neglects a feedback process in which a VC notes a growing demand for assistance based on a venture's performance and vice versa. This brings us to the question of the change in the interaction between VCs and entrepreneurs over time in terms of intensity, contents, and the like. Furthermore, research has so far taken a narrow perspective in that assisting and

monitoring activities have mostly been related to performance issues. What else can be won by cooperating closer with entrepreneurs? We believe there may be potential in tapping other areas of interests of the VC. Monitoring and supervising may for instance represent a means to extend insights in certain businesses, which can be transferred to other investments. With regard to the exit, monitoring may as well help the VC establish an overview on potential acquirers.

EXITING THE INVESTMENT

The VC investing process lasts several years and ends with the VC's exit. The exit denotes the process in which the VC converts its illiquid stakes in a venture either into cash or liquid stakes which it can subsequently return to the LPs. Given the nonexistence of interim dividends in early stages, VC investments cannot distribute annual dividends designating the exit the VC's only source of gains.¹⁹⁸ VC research has already recognized the exit's importance and acknowledges that a VC's success is not only driven by its ability to identify and to manage venture investments but also by its capabilities in exiting portfolio companies efficiently.^{199–202} From a company-specific perspective, three conditions end the VC's involvement. First, the company reaches a sufficient size and credibility to replace the VC funds with cheaper follow-on capital.^{203, 204} Second, the duration of the VC investment approaches the end of the VC fund's lifetime forcing the VC to return the fund's resources to LPs. As Gompers and Lerner report, VC funds are limited to ten years effectively setting a deadline for the VC's exit.²⁰⁵ Third, the venture has neither flourished to a point where it can attract follow-on funding nor is the fund running out of capital, but the VC perceives the investment as a so-called living dead. When moving toward exiting living-dead ventures, VCs use specific divestment vehicles to terminate the investment: (1) liquidation events enable the VC to secure some funds; (2) VCs may look for other VCs to take over; or (3) VCs may sell the venture privately to the entrepreneur or other companies.^{206–208}

Scholars have examined the typical issues hampering the VC's exit mainly taking an information asymmetry perspective. The central problem of information asymmetry upon exit is that outside investors cannot risklessly establish a valuation of the venture but encounter an adverse selection problem.²⁰⁹ Adverse selection takes place when VCs cannot distinguish between good and bad ventures due to information asymmetry. As a result, VCs have to bear the opportunity costs of uncertainty and, possibly, end up in investing in the wrong ventures.^{210–212} Adverse selection hence becomes a central problem at exit again. Cumming and MacIntosh find that VCs use partial exits to grant follow-on investors insight into the value of the company in cases of severe information asymmetries as is the case in dynamic high-technology environments.²¹³ Habib and Ljungqvist ask how incumbent investors can reduce friction due to information asymmetry through hiring third-party certification.²¹⁴ Studies of IPOs

show that in cases of severe information asymmetry, enlisting prestigious investment banks can lead to a lower underpricing.^{215, 216}

Not only do scholars tie the VC's exit to the venture's conditions, they emphasize the impact of capital markets on exits as well.²¹⁷⁻²²⁰ Asset prices are not entirely based on objective assessments but also reflect the public markets' optimism about the quality of new issues. In fact, scholars argue that soaring investor optimism can cause price inflation across industries or markets.²²¹⁻²²⁵ Subsequent declines are driven by investors growing skepticism after they have become disappointed from too many lemon issues. Ibbotson and Jaffe refer to the peak of this cycle as a "hot issue market."²²⁶ A hot issue market period is essentially characterized by a reduced impact of information asymmetry on IPOs. Since investors become less concerned about adverse selection, VCs find it easier to bring their companies public and reap above-average capital gains.²²⁷ In support of this, scholars report a strong correlation between the average share price performance in national equity capital markets and the number of VC-backed companies that go public across all countries with established VC markets.²²⁸⁻²³⁰ In the era between 1999 and 2000 when stock markets peaked, successful IPOs appeared virtually independent from the level of development of the issuing company.²³¹

While research on prior steps in the VC process involves a variety of theories, such as network theory, resourced-based view, and the like, the existing research on exits is dominated by the financial economics lens centering on information asymmetry and capital markets explanations. Questions such as how the VC's network can facilitate exits have not yet been examined beyond the general theory on the VC's certification in IPOs. Do network ties and recurring transactions lead to strong ties and a trustful relationship that enables VCs to withdraw in a network environment? If networks with investment bankers, lawyers, and the like can create a deal inflow, can they also generate a deal outflow in terms of exits?

As far as investments are concerned, the gap in existing research on exits can be characterized by two dimensions: the venture's success and the exit's success. Scholars implicitly assume that unsuccessful ventures accomplish unsuccessful exits. Typical findings are that VCs harvest most of their returns from IPOs.²³²⁻²³⁵ In addition, living dead investments are presumed to be failures with only inefficient exits accomplishable. Despite the relatively huge number of failing VC investments, research has not yet examined whether there is any upside potential in the disposals of stalling companies.^{236, 237} If so, how can VCs withdraw best from struggling investments? A closely related question pertains to the dependence of VCs on hot issue markets to transaction's parameters. Future research should examine up to which level can VCs use hot issue markets to dispose of struggling ventures? In this context, we believe that a general literature gap exists on the comparison of the impact of hot issue markets versus the value-added hypothesis on VCs' capital gains. Do VCs sell some ventures only in hot issue markets? Do VCs essentially bet on the occurrence of hot issue markets to cash in on some investments?

GAPS AND FUTURE RESEARCH

VC has received a tremendous amount of research attention due to the power of VCs to help high-potential companies grow quickly and capture value. As we have gone through each of the major VC steps, we have suggested some areas that could use further research. Clearly, our review and suggestions are not exhaustive, but in general, we believe that the parameters of the VC phenomena are well laid out and future research should move toward adding depth. In particular, it appears that the majority of research views VC through the eyes of VCs. New research could shed further light on the topic by taking a look at the research questions from the eyes of the partner in the dyad (e.g., LPs, entrepreneurs, follow-on investors, and so forth). For instance, how do LPs make a decision to invest in a particular VC fund? How do LPs influence VC decisions as they build their portfolios? On the other end, how can entrepreneurs manage the negotiation process? What impact do the entrepreneur's actions have on the valuation and contract terms? How does the power of the parties involved in these transactions shape decision making at each step of the VC process? As we continue to answer these questions and others, our understanding of the VC process should inform the various stakeholders to this equity decision.

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7

Small-Firm Growth Strategies

Johan Wiklund

This chapter focuses on how the strategic choices of small firms influence their growth. The relationship between strategy and growth is of particular importance because strategic choices have direct consequences on whether and by how much a firm expands. By focusing on small firms' strategic choices, this chapter differentiates itself from the bulk of previous studies on small-firm growth.

A number of studies have related the different characteristics of small firms to their growth.^{1, 2} Examples include studying psychological characteristics or human capital aspects of the small business founder, such as personality traits, experience in the industry, or education level, and assessing how these relate to firm growth.^{3–5} However, such variables only have an indirect effect on growth; they must in some way be converted into action in order to influence the firm's development.⁶ Generally, the mechanisms involved in these characteristics getting converted into growth are not explicated. Instead, the researcher assumes, for example, that experienced business owners have developed specific knowledge which they can use in the firm, or that a business owner with high need for achievement works harder and is more goal orientated, and thus this is why their firm grows. However, individuals with similar characteristics in terms of psychological profile and/or human capital choose to operate businesses that vary considerably in terms of the strategies chosen. Therefore, it is not reasonable to assume that empirical studies shall find especially strong relationships between these types of indirect variables and growth. A review of the literature also shows that this is the case—the relationship between these indirect variables and growth is generally weak.⁷

An alternative to studying such general and indirect variables is to instead open up the “black box” and examine what the firm actually does and how this directly influences growth. A suitable way to do this is by relating a firm's strategy

to its growth. Porter holds that a firm is made up of a collection of activities.⁸ A firm's strategy then decides how these activities form and how they fit together. In other words, a firm's strategy directs what it does. This is the reason the relationship between strategy and growth is the main focus of this chapter.

There is another advantage to studying how a firm's strategy influences its growth. A firm's strategy can change through conscious choice. This is, therefore, of significant interest to business owners and consultants, who take an active interest in the growth and performance of these businesses. Although it may be interesting to know how the personality of a business owner or the industry that the firm competes in influences the firm's growth, such aspects can only be influenced by small business owners to a much smaller extent.

Therefore, the logic of this chapter builds on the basic premises of human action theory.⁹ It suggests that while the characteristics of the small business or its manager may affect growth, such characteristics only have an indirect effect. They must be transformed into some type of action and activity in order to affect growth. Strategy is a variable that captures actions and activities. Merely having the goal of expanding the business does not create growth unless appropriate actions are taken. A model is developed and tested, suggesting that, in line with previous research findings, general aspects of the firm indeed affect growth, but that these effects are mediated by the strategy pursued by the small business. This model is tested empirically on a Swedish dataset and the implications of the findings are discussed.

The chapter proceeds as follows. In the next section small firms' strategic options are discussed. With support from previous research it is argued that an entrepreneurial strategic orientation is particularly important to small firm growth. The Research Methods section is then presented. The subsequent section is devoted to the empirical results. The two final sections then discuss the implications of the present study for small business owners and those interested in supporting small business in their growth strategies (i.e., policymakers and consultants). First, I talk about what small businesses can do to influence their growth. Ideas are presented in relation to how small firms can change their strategy to achieve higher levels of growth. Finally, measures to stimulate growth in different types of firms are discussed.

THE IMPORTANCE OF AN ENTREPRENEURIAL STRATEGIC ORIENTATION

Given that strategy is the central concept of this chapter, it is important to identify the strategic dimensions that are reflected in organizational customs, processes, and methods, and decide which of them can be implemented in a small firm and hence can influence a small firm's growth.

Mintzberg developed a typology consisting of five distinctively different types of firms: the *bureaucracy*, the *simple* type, the *adhocracy*, the *professional*

bureaucracy, and the *diversified* type.¹⁰ Others have suggested different typologies much along the same lines, the major difference being the labeling of the different types of firms identified. Small firms are most likely to be found among the adhocracy or simple categories.

Adhocracies are characterized as being flexible, having flexible organizational structures, and a strategy responsive to competitors, customers, and market opportunities. A key strategic element for these types of firms is innovation.¹¹

Simple firms, on the other hand, are dominated by the chief executive, having a simple, informal structure and decision-making style, their competitiveness largely stemming from their flexibility in relation to customer preferences. In particular, the risk taking dimension of strategy is very important for simple firms. Some simple firms show extreme entrepreneurial risk taking, whereas others are extremely conservative and risk-averse.¹¹

Mintzberg's classification, which identifies two types of small firms, appears relevant, and these two types of firms are similar to descriptions in the small business research literature. It also highlights several important characteristics of small firms. Strategic themes that can be extracted from the earlier description of these firms are responsiveness to customers, taking advantage of opportunity, innovativeness, and risk taking. Indeed, this leads the thoughts to entrepreneurship and the importance of an entrepreneurial strategy. Therefore, it seems appropriate to focus on the entrepreneurial dimensions of strategy when conducting research on small firms. Furthermore, it may be more difficult to differentiate small firms according to other strategic dimensions since resource constraints may well prevent small firms from pursuing cost leadership or differentiation strategies.¹²

Firms with an entrepreneurial strategic orientation innovate boldly and regularly while taking considerable risks in their product-market strategies.¹³ Miller proposes that a firm's actions relating to innovation, risk taking, and proactiveness represent the primary dimensions of an entrepreneurial strategic orientation: "An entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch."¹⁴ These firms monitor market changes and respond quickly, thus capitalizing on emerging opportunities. Several researchers have agreed that an entrepreneurial strategic orientation is a combination of three dimensions: innovativeness, proactiveness, and risk taking.¹⁴⁻²¹ The innovativeness dimension of an entrepreneurial strategic orientation reflects a tendency to support new ideas, novelty, experimentation, and creative processes, thereby departing from established practices and technologies.²² Proactiveness refers to a posture of anticipating and acting on future wants and needs in the marketplace, thereby creating a first-mover advantage vis-à-vis competitors. With such a forward-looking perspective, proactive firms have the desire to be pioneers, thereby capitalizing on emerging opportunities. Risk taking is associated with a willingness to commit large amounts of resources to projects where the cost of failure may be high.²³ It also implies committing resources to projects where the

outcomes are unknown. It largely reflects the organization's willingness to break away from the tried-and-true, and venture into the unknown. This suggests that organizations that have an entrepreneurial strategic orientation are more prone to focus attention and effort toward opportunities.

There is reason to believe that an entrepreneurial strategic orientation has positive implications for the growth of small firms. A general tendency in today's business environment is the shortening of product and business model life-cycles.²⁴ Consequently, the future profit streams from existing operations are uncertain and businesses need to constantly seek out new opportunities. An entrepreneurial strategic orientation can assist companies in such a process. Innovative companies, creating and introducing new products and technologies, can generate extraordinary economic performance and have even been described as the engines of economic growth.^{25, 26} A firm with an entrepreneurial strategic orientation identifies market changes and responds quickly to these changes to take advantage of these emerging opportunities. Proactive companies can create first-mover advantages, target premium market segments, charge high prices, and skim the market ahead of competitors.²¹ They can control the market by dominating distribution channels and establish brand recognition. The link between risk taking and performance is less obvious. However, there is research to suggest that while the tried-and-true strategies may lead to high mean performance, risky strategies leading to performance variation may be more profitable in the long run.^{27, 28} Previous empirical results provide support for a positive relationship between an entrepreneurial strategic orientation and performance.^{19, 21, 23, 29, 30}

Those in strategic management are concerned with the performance implications of management processes, decisions, and actions at the level of the firm. Prior theory and research have suggested that an E[ntrepreneurial] O[rientation] is a key ingredient for organizational success. (p. 151)²²

It appears that the relationship between an entrepreneurial strategic orientation and growth is especially strong among smaller firms. Smallness in itself encourages flexibility and innovation, while the limited pool of resources that a small firm has access to, limits its ability to compete using other strategic orientations, such as cost leadership.

This section has established that an entrepreneurial strategic orientation is likely to have a positive impact on the growth of small firms. The introduction of this chapter mentioned the advantages of studying the relationship between strategy and growth, but that there are other variables that are likely to affect growth, mediated through the strategic orientation of the firm, such as the human capital or psychological profile of the small business manager. In order to incorporate such factors, a model is developed that takes into account these factors as well as the strategic orientation of the small firm in explaining growth. Based on a thorough review of the literature on small business growth and performance a model of the relationship between the indirect variables, an entrepreneurial strategic

orientation and growth is developed. This model is presented in Figure 7.1. The model illustrates the most significant variables that have been studied in previous research and shows how these variables influence each other. For a more thorough presentation of the logic underlying the model and how it was developed, see Wiklund.⁷ According to the logic presented, it can be assumed that many variables influence a firm's entrepreneurial strategic orientation. However, only entrepreneurial strategic orientation influences the firm's performance. This model is the base for the empirical study that is presented in this chapter.

RESEARCH METHODS

Design and Sample

The data for the study were collected in multiple waves. In the first year, a telephone interview was followed up by a mail questionnaire concerning the independent variables. One year after the initial study, a shorter telephone interview follow-up was conducted, which makes the study longitudinal and reduces the risk of reverse causality encountered in cross-sectional studies. The data collected during the second year were concerned with outcomes (i.e., growth since the initial data collection).

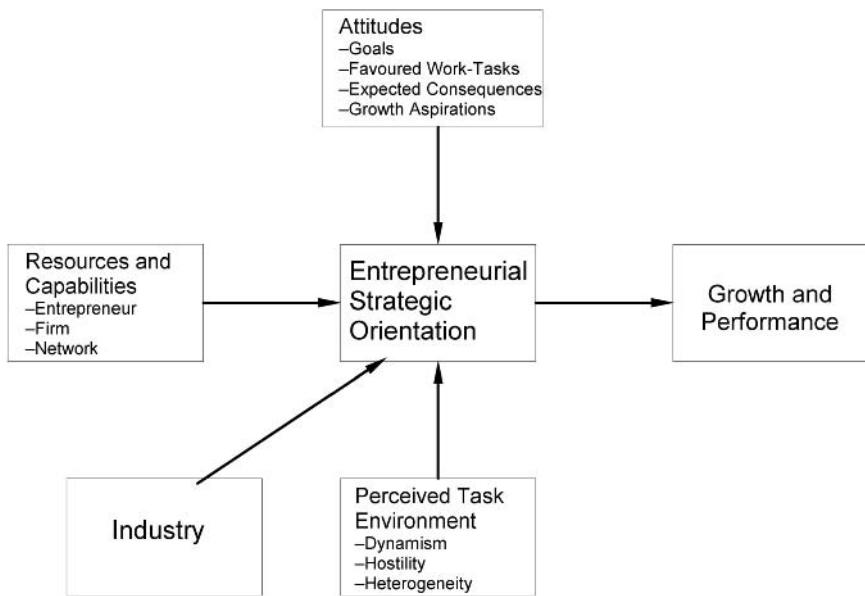


Figure 7.1. Research model predicting an entrepreneurial strategic orientation and growth.

The sample was stratified over the Swedish equivalents of International Standard Industrial Classification (ISIC) codes. Small firms from specific manufacturing, service, and retail industries were selected. The sample was also stratified over the size brackets 10–19 and 20–49 employees. Furthermore, the sample was stratified over the firms' growth rate, so that the share of high-growth firms was overrepresented in the sample for both size brackets and all industries. All data were collected from the managing director. The managing director was explicitly asked for at the beginning of the telephone interviews, and the mail questionnaire was sent directly to the managing director accompanied by a personalized letter.

Out of the 808 firms in the initial sample, 630 were telephone interviewed, which gives a response rate of 78 percent; 465 firms also returned the mail questionnaire (total response rate 58 percent). These 465 firms were approached again for a telephone interview one year later. No less than 447 responded, which equals 96 percent of the remaining firms from the previous year and 55 percent of the original sample. Thirty-four firms, where the managing director had been replaced during the studied year, were excluded from the analyses since it seems perilous to attribute outcomes of a firm to an individual no longer working there.

Variables and Measures

The theoretical constructs in the model presented in Figure 7.1 were measured as follows.

Small Business Growth

Four measures were used to capture small business growth. Growth in terms of sales and employment was calculated as the relative growth between the survey rounds. When assessing performance, comparisons with competing businesses in the market reveal important additional information.³¹ Therefore, respondents were asked to rate their sales and employment growth compared to competitors on five-point scales. Each of the variables were standardized and summed to an index. The Cronbach's alpha value of the scale was 0.91.

Entrepreneurial Strategic Orientation

Miller's original scale consisting of eight items was used.¹⁴ These items are of the forced choice type, with pairs of opposite statements. A seven-point scale divides the two statements.

Environment

A total of six dimensions of the task environment are included. The scales for measuring environmental dynamism, heterogeneity, and hostility were taken from Miller and Friesen.¹³ Changes over the past three years along these three

environmental dimensions have their origin in Miller.³² All items were measured on seven-point opposite statement scales. Association with one of four broad-industry categories was taken from the data register. Specific questions were also asked about other industry characteristics (i.e., customer concentration, supplier concentration, and exports). The theoretical construct of industry is formed by these indicators.

Resources and Capabilities

Resources of the firm consist of size in terms of employees, sales, management team size, number of employees having university degrees, board size, and investment by external owner. To capture a relative measure of size and financial slack, I asked respondents to compare the firm's size and capital availability to that of its competitors. Miller's items were used to operationalize the perceived use of employees and the board in the decision-making process.³² The human capital of the manager was operationalized by various measures of experience and knowledge. Indicators included the type and length of education and training, experience with managing different types of firms (i.e., management, same industry, rapid-growth firm, and maximum number of subordinates), and tenure in present position. We also collected information on age, ethnicity, and gender as well as whether the respondent started, inherited, bought, or is employed by the firm. These measures used to operationalize human capital are taken from Davidsson.³³ To operationalize social capital I asked respondents how important was a particular contact in providing advice on important decisions from a list of nine types of contacts (Delmar and one original item).³³ These nine items were factor analyzed, resulting in three factors and the corresponding indices were constructed. Respondents also indicated the firm's number of external board members.

Motivation

According to Miner's task motivation theory, the work task of managing a small business is likely to involve taking moderate risks, assuming personal responsibility for performance, paying close attention to feedback in terms of costs and profits, and finding new or innovative ways to make a new product or provide a new service.³⁴⁻³⁶ Because motivation consists of several related constructs that affect behavior (see Locke for a review),³⁷ I relied on a number of concepts associated with the small business manager work tasks. The different motives are viewed as attitude objects and the strengths of the motives are tapped by the respondent's attitude toward the object. We build on the tripartite view, according to which attitudes can be broken down into three different classes of evaluative responses: (1) cognitive responses, also known as beliefs, are thoughts that people have about the attitude object; (2) affective responses consist of feelings, moods, or emotions that people have in relation to the attitude object;

and (3) behavioral responses are the overt actions or intentions exhibited by people in relation to the attitude object.³⁸ The goals of the respondent are viewed as affective responses since they have to do with their feelings regarding a number of possible goals (eight items original, ten from Davidsson).³³ These eighteen items were factor analyzed, resulting in six factors, and corresponding indices were constructed. Favored work tasks are also seen as affective responses for the same reason (fifteen items from Delmar).³⁹ These items were factor analyzed, resulting in four factors, and corresponding indices were constructed. Expectations of changes that would occur in the firm as a result of growth refer to the beliefs held by respondents. Thus expected consequences of growth are classified as cognitive responses (two items original, eight from Davidsson).³³ These items were factor analyzed resulting in two factors, and corresponding indices were constructed. The final set of variables concerns growth intentions over the next five years. These variables are viewed as behavioral responses and were calculated based on present size and ideal size five years into the future in terms of employment and sales (two items from Davidsson).³³ This leads to a total of fourteen variables. The theoretical construct of motivation is formed by these fourteen variables, that is, each variable brings some unique information to the construct.⁴⁰

ANALYSIS AND RESULTS

To be able to investigate a model, such as the one present in Figure 7.1, with many latent constructs (i.e., constructs consisting of several manifest indicators) and where a number of variables have an indirect influence on growth, an advanced method of analysis is required. In this study partial least squares (PLS), which was developed by Herman Wold, has been used.^{41, 42} The interpretation of the PLS analysis is principally the same as multiple regression analysis. Explained variance is the best estimation of model fit in PLS analysis, and goodness-of-fit indices are largely irrelevant.⁴³

There are two steps to the analysis. The first step tests the explanatory ability of the model as specified in Figure 7.1. Step two utilizes the information provided by the first step to revise the model in an attempt to increase its explanatory ability. One feature of PLS analysis is that it computes the correlation between all constructs, which can be used as a cue for adding structural relationships in the model.

An assessment of the correlations among the variables suggests some additional direct linkages, not anticipated in Figure 7.1. More precisely, it appears that aspects of the task environment and motivation have direct effects on growth.

Adding these direct effects, model fits is substantially improved. The total explained variance in growth is consistent with, or greater than, many models of small business growth (see Delmar for a review of explained variance in growth

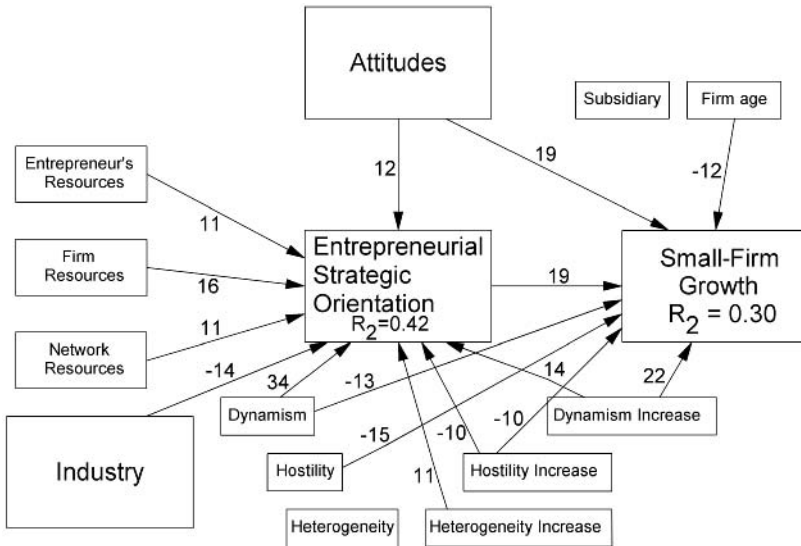


Figure 7.2. Revised research model predicting an entrepreneurial strategic orientation and growth, with path coefficients and explained variance indicated. Path coefficients below 0.10 are suppressed.

models).⁴⁴ The graphical representation of the model is displayed in Figure 7.2 and the results in Table 7.1. Due to space limitations, the regression weights and factor loadings for manifest indicators are not reported. The model explains 42 percent of entrepreneurial strategic orientation and 30 percent of growth. On average, 36 percent of the variance in the two endogenous variables is explained.

In sum, the model depicted in Figure 7.2 demonstrates that motivation and components of the task environment (dynamism, hostility, and heterogeneity increase) have a direct effect on small business growth. Components of resources (resources of the individual, network resources, resources of the firm), motivation, industry, and components of the task environment (dynamism increase, hostility increase, heterogeneity increase) have an indirect effect on small business growth through an entrepreneurial strategic orientation. Most path coefficients are larger in relation to an entrepreneurial strategic orientation than to small business growth (exceptions are motivation, increase in environmental dynamism, and environmental hostility). This highlights the importance of understanding the antecedents of an entrepreneurial strategic orientation, offers a solid basis for an exploration of the indirect effect of constructs on small business growth via an entrepreneurial strategic orientation, and, although an entrepreneurial strategic orientation explains an important amount of the variance in small business growth, there is still a need to explore the direct effect of

Table 7.1. Partial Least Square Results for the Revised Model of Small Business Growth

| <i>Predictor Construct</i> | <i>Predicted Construct</i> | <i>Path Coefficient</i> |
|---|----------------------------|-------------------------|
| Attitudes | EO | 0.12 |
| Industry | EO | -0.14 |
| Dynamism | EO | 0.34 |
| Heterogeneity | EO | 0.07 |
| Hostility | EO | -0.07 |
| Dynamism increase | EO | 0.14 |
| Heterogeneity increase | EO | 0.11 |
| Hostility increase | EO | -0.10 |
| Entrepreneur's resources | EO | 0.11 |
| Firm resources | EO | 0.16 |
| Network resources | EO | 0.11 |
| Firm age | Growth | -0.12 |
| Subsidiary | Growth | -0.01 |
| Attitudes | Growth | 0.19 |
| Dynamism | Growth | -0.13 |
| Hostility | Growth | -0.15 |
| Dynamism increase | Growth | 0.22 |
| Heterogeneity increase | Growth | 0.07 |
| Hostility increase | Growth | -0.10 |
| Entrepreneurial orientation | Growth | 0.19 |
| <i>Explained variance and model fit</i> | | |
| R^2 EO | .42 | |
| R^2 Growth | .30 | |
| RMS Cov (E, U) | .06 | |

Note: EO, extent of entrepreneurial strategic orientation. Path coefficients are equal to standardized regression coefficients in multiple linear regression analysis. RMS Cov (E, U) measures model fit. The closer to zero, the better the model fits the data.

other constructs on growth. The results can be summarized according to the following:

- Growing small firms have an entrepreneurial strategic orientation. It is foremost a strategy with a focus on innovation and being proactive.
- These firms are usually found in relatively stable industries that become substantially more dynamic in later years.
- Industry dynamics have the largest positive effect on entrepreneurial strategic orientation and it has a nonnegligible negative effect on growth. An explanation could be that an industry, which changes quickly and is difficult

to predict, places a lot of strategic pressure on the firm. If the firm does not have the capacity to adopt an entrepreneurial strategic orientation, then it cannot grow in a rapidly changing environment. The negative influence that dynamic has on growth in combination with the large positive influence it has on entrepreneurial strategic orientation shows that an increase in industry dynamics has an overall positive effect; however, the industry should not be too dynamic if the firm does not have at the same time an entrepreneurial strategic orientation. In other words, if a firm wants to benefit from the opportunities in a dynamic industry it requires an entrepreneurial strategic orientation.

- Small business owners' attitudes are important for growth. Attitudes that are especially important for growth are: to have a goal for increased sales; a desire to be creative at work; to enjoy working with strategic tasks; and a preference for not being directly involved in production.
- Younger firms grow more than older firms.
- Firms grow foremost through an increase in demand in their market niche and not through taking market share from their competitors. That is, growing small firms prefer to find new market niches than fight for market share in existing markets.

ADVICE FOR INCREASING GROWTH

A consistent finding is that small business managers themselves and the choices they make are crucial to the development of their firms. The possibility to form the destiny of their firms should be encouraging for small business managers. The growth of their firms is not caused by deterministic forces outside the control of the small firm. On the contrary, growth is largely influenced by conscious decisions made by the small business manager. Hence, it is possible for the small business manager to take actions in order for the company to expand. Moreover, in broad terms, motivation seems more important than personal abilities. It seems that "what I want" has a larger influence on actual outcomes than "what I know."

For a small business manager, survival of potential crises is of course of utmost importance. Therefore, it is important to stress that a common misunderstanding is that a firm that grows and becomes larger could have larger difficulties surviving a crisis. Research indicates the opposite.⁴⁵ Larger firms have buffers and can survive longer during a sales decrease. Also, it is easier for a larger firm to get rid of resources, such as machinery or employees and survive at a smaller scale. Hence, a small business manager who feels that survival is an important goal may consider growth as a suitable survival strategy. Furthermore, factors contributing to growth also contribute to survival, reinforcing that growth and survival go hand in hand. Renewal of customers and products is, for instance, stressed as central for survival as well as growth.⁴⁵ Findings also suggest that financial performance and growth

are closely related and further that larger and expanding firms perform better than smaller firms. As a consequence, a small business manager who wishes to enhance financial performance may consider expanding his or her firm.

These are forceful arguments in favor of why small business managers should strive for growth. Then, if growth is the aim, what actions should be taken to achieve this? Based on the findings, it is possible to provide some concrete advice on suitable strategies in order for a small firm to enhance growth and performance. First of all, it is important to be flexible and have a strategic orientation toward opportunities. Products and customers need to be exchanged and renewed, preferably ahead of competitors. To do this, small business managers need to free themselves from the institutional thinking that tends to develop within an industry.⁴⁶ Ideas, values, and beliefs of an industry tend to streamline organization and management. Companies conform to the expectations of appropriate organization structure and management to gain legitimacy. In order to enhance growth and performance, small business managers need to be strong enough to resist such pressures for conformity and instead search for innovative alternatives.

The firm's environment, possibly as defined by industry or sector, is not a given, and firms within all sectors can achieve high growth. The crux of the matter lies in positioning the firm favorably in relation to competitors and customers. Of particular importance is to move into environments where demand increases and the rate of technological renewal is high. For firms that utilize strengths, weaknesses, opportunities, threats (SWOT) analysis, it may be profitable to mainly focus on the opportunity dimension, matching them with internal capabilities, and more actively search for new opportunities.

The significance of the general development of the firm's market niche and the importance of detecting new business opportunities indicate the importance of external information. Being updated regarding business opportunities does not involve knowledge of all possible sources of information. Instead, the interpretation of available information may be more important. It is a matter of being in a state of mind where information is interpreted from the viewpoint of whether it offers an opportunity or not. The daily newspaper may be a sufficient source of business opportunities for many small firms, provided that it is being read the right way. The important factor is to match these opportunities with the firm's core competencies in order to determine whether it is a suitable opportunity or not. If this is the case, the opportunity should be pursued.

A small, rapidly growing, and profitable small firm that I recently visited may serve as an example of how this could be carried out. This small firm operates in the chemical industry. The entrepreneur realized that the food industry faced an increased demand for a relatively new type of synthetic nonalcoholic beverages. He also realized that their core competencies of mixing chemicals, filling and labeling bottles, and distributing these products to supermarkets were equally well suited for this new opportunity as for their existing products. By starting to produce these new synthetic nonalcoholic beverages, the firm was able to pursue a new business opportunity based on its existing competencies. This can serve as a

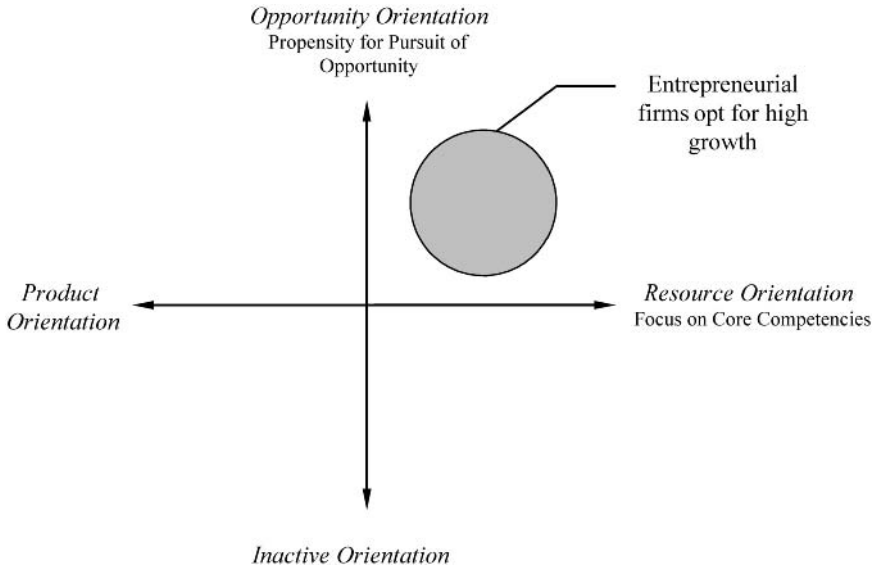


Figure 7.3. Characteristics of a small entrepreneurial growth firm in terms of the firm’s opportunity and resource orientation.

general illustration of some of the key strategic issues determining the success of a small firm. Figure 7.3 is an illustration of how small firms can exploit opportunities based on their core competencies. The figure shows the ideal position for a small entrepreneurial firm that is striving for growth.

Many small business managers have a concern for the qualities associated with small scale, and this concern is justifiable. There is research to suggest that on issues like comradeship, involvement, and job satisfaction, employees and people in general think highly of small firms.⁴⁷ Even more impressive evidence for the advantages of small scale is presented in the classic study by Barker and Gump.⁴⁸ Therefore, the small-firm owner-manager may have a very real reason to be concerned about the atmosphere of the small firm when faced with expansion opportunities. This concern may be a source of an eternal goal conflict for many small business owner-managers. Thus, it is essential that small business managers are able to organize the expanding firm in such a way that these small-scale qualities are not lost on the way.

A CLASSIFICATION OF SMALL FIRMS AND IMPLICATIONS FOR SMALL BUSINESS MANAGERS

Of course, not all firms are alike. It is, however, possible to identify different types of firms and discuss suitable measures for each group. First and foremost, it

| | | | |
|------------------------|-----|--------------------|---------------|
| Resource Opportunities | Yes | Unused Potential | Actual Growth |
| | No | Little Potential | Constrained |
| | | No | Yes |
| | | Growth Aspirations | |

Figure 7.4. Four types of firms in terms of resources and opportunities for growth and growth aspirations.

is important to emphasize that development and growth is, for a large part, dependent on conscious decisions made by the firm leader. An important conclusion is that soft factors, such as the firm's strategic direction and attitude can be more important than hard facts, such as industry or access to capital. Growing firms can be found in all places and in all industries.

In a relative sense, a small business owner's education and experience are of limited importance for growth. The business owner's motivation appears to be more important. The typical growing firm leader could be seen as a combination of a strategist and an inventor. It should also be noted that access to capital does not significantly affect the firm's development. The growing and developing entrepreneurial firm seems to have the ability to find the necessary capital for its development. The important conclusion to take from this is that increased access to capital as a single measure is unlikely to have a significant influence on a firm's development. Nor can it be assumed that a massive emphasis on education can create a large number of new entrepreneurs or growing firms.

Based on the information in this chapter, a categorization is made of small business growth outcomes based on the small business managers' motivation to grow their businesses and the ability to do so. Specifically, Figure 7.4 categorizes small business growth along two dimensions—resources and opportunities for growth provide one dimension and growth aspirations the other. Depending on their position along these two dimensions, four types of small businesses are identified:

1. Starting with the small businesses in the upper right quadrant, which possesses both the necessary opportunities and resources, and the aspiration to grow, I propose that these small businesses are the ones most likely

to exhibit actual growth. To these small businesses, I say good luck. They are pursuing a desired outcome that is within their reach. This is not to say that they will always achieve growth, there are other intervening factors that could lead to less growth than expected or even bankruptcy, but these firms are in the best position to succeed.

2. In the upper left quadrant are the small businesses that have an unused potential since they, if they were motivated, have the ability, resources, and opportunity to expand. A relatively large proportion of all small businesses are probably in this situation. For example, one small business manager commented, "I enjoy doing what I'm doing. The minute I stop enjoying it I'll do something else. I'm not as well off as I'd like to be but I don't have that goal of having so much money in the bank . . . I think I've reached the stage of life where money's not that important. It's about lifestyle, it's being able to do a whole lot of things. You just need enough money to do what you want to do. . . . So success for me is that the business runs at a profit—it doesn't have to be a huge profit, just a profit—that I make enough out of it to keep myself the way I want to be kept and that I get the satisfaction of client feedback saying 'hey you're doing a good job.'"⁴⁹ To these small business managers I say: "If you are happy with the size of the business, then well done and I hope that you continue to enjoy." The only proviso to this congratulatory statement is if there is dispute among the stakeholders of the business in terms of its growth outcomes, then the situation becomes a source of conflict. For example, the small business manager may have a nonactive partner in the business that is looking to grow his investment by increasing the size of the business. In such a situation, the motivations of others may also need to be considered. Although partners often have different objectives for a business, this is less often the case with small businesses where ownership is dominated by one individual or by a family where motivations are often relatively consistent.
3. Small businesses, which strive for growth but lack certain skills, capital, other abilities, resources, and opportunities, I call constrained. These small businesses are situated in the lower right quadrant. Although I have suggested earlier in the chapter that deficiencies in the ability to achieve growth can, to a certain extent, be compensated for by increased motivation (i.e., increase enthusiasm and effort toward achieving the desired goal), the inconsistency between one's aspirations and one's ability is more than likely going to lead to disappointment, and possibly the failure of the business. To these small business managers, I suggest that they move out of this quadrant by changing their classification on either of the dimensions. That is, increase one's ability so that the desired growth outcome becomes more likely. This might occur simply through the passage of time as the manager accumulates more experience, and this experience leads to knowledge and skills that are important in formulating and implementing growth strategies. Although I have focused on the human capital of the small business

manager I suspect that his or her human capital can be complemented by human capital of the small business's other managers. For example, the small business manager's ability might be limited in managing cash flows in a way to effectively fuel growth, but could hire a CFO to undertake these activities. We believe that other members of the management team might be able to increase the ability of the small business to achieve growth, but this should not understate the importance of the human capital of its leader because in the end the leader is the one most responsible for the direction of the firm. The other change that could be made to move a small business out of this quadrant is to adjust the small business manager's motivation in a way that is more consistent with his or her abilities (the next category). For example, rather than being motivated to grow and take the company public, the small business manager with limited abilities might be better off focusing on using the business to generate a good income without the loss of independence that would occur through employment.

4. Small businesses in the fourth category, finally, neither have motivation nor abilities or resources for growth, and thus have little potential for growth. All businesses are not suited for expansion. Due to limited management abilities, these businesses may actually perform better if they remain at a smaller scale. One small business manager commented on his biggest problem with running a small business "Probably for me I struggle with coming up with new ideas. That can be a bit of a problem, and then developing the whole thing to make it pay."⁴⁹ This group still has an important role in society for creating employment. To these small business managers, I use an American saying: "Way to go." We believe they are making an important contribution to society by utilizing their resources to the fullest to generate economic wealth for the nation and themselves, gain utility from other aspects of the business not related to money, but not over-extending themselves that is likely to lead to financial ruin and emotional heartache.

IMPLICATIONS FOR POLICYMAKERS

The practical implications of this chapter for policymakers are numerous. First, I find that small business managers with greater growth aspirations are more likely to realize growth. The importance of motivation has largely been overlooked in policy programs. So far, there has been an overemphasis on implementing support programs that provide small businesses with resources or aim at increasing the ability for small businesses to grow, including training programs for small business managers and tax cuts. Implicit in most supportive programs is the assumption that if only small businesses had these resources and abilities, they would grow. To date there has been a trend to implement programs for the development of small firms that emphasize increasing the firm's access

to resources, such as risk capital, or they strive to increase the firm's ability to expand, through, for example, the education of the firm owner. Built into these types of programs lies the assumption that if only the firm had access to the right resources or knowledge could it develop and grow. Such programs, however, tend to brush aside the important soft qualities, such as motivation. Referring back to Figure 7.4, I am able to develop policy implications for each of the four groups identified in the figure.

1. The small businesses in the upper right quadrant (actual growth) are not in great need of policy programs. They are achieving their desired outcomes and simultaneously create wealth and employment for society. Appropriate policy measures include policies aimed at easing and simplifying government communications and operations, such as reducing bureaucratic red tape, as well as ensuring a flexible labor market such that these businesses are able to recruit the talent needed to maintain their growth trajectory.
2. Small businesses with unused potential, in the upper left quadrant, require different policy measures. The major factor limiting the growth of these small businesses is a lack of growth aspiration. The goals of society (e.g., creation of new jobs) do not necessarily conform to the goals of individual small business managers. In order to align these goals, it might be possible for policymakers to make growth more attractive to small business managers by reducing some of the barriers.
3. Most small business policies are at present designed under the assumption that the majority of small firms belong to the constrained category. Prevalent advice and financial support services are probably most effective in relation to this group, provided they are appropriately designed. In particular, I found that education plays an important role in enabling growth aspirations to be realized. Governments and others wishing to grow an economy need to emphasize the importance of education, which could increase the ability of small business managers to realize their growth aspirations.
4. Small businesses in the fourth category, little potential for growth, still have an important role in society for creating employment and the like. These small businesses are unlikely to benefit greatly from policy changes other than those policies that more broadly improve the macroeconomic environment.

Realizing that the needs of different types of small businesses differ, there are still some policy measures that are generally positive. Considering the influence of dynamic environments on growth, general policies should be aimed at creating more munificent environments. Policy measures can help create more vibrant markets. Keeping in mind that most small firms operate in the private service and retail sector in the domestic market, measures aimed at increasing domestic, consumer demand are likely to be most effective. This could involve measures to

increase the purchasing power of consumers, such as the reduction of income or sales tax.

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8

Going Global

Pat H. Dickson

The phenomenon of entrepreneurial firms internationalizing their operations is not new; however, the academic study of these activities of entrepreneurial firms is relatively young and vigorous. The academic interest in the internationalization of entrepreneurial firms is driven by reports of the growth and extent of activities of such firms as well as an emerging debate as to whether the existing theories of internationalization apply, given the unique nature of these firms.

Competing internationally, long considered to be the province of large multinational firms, is now widely considered to be open to firms of all sizes. Etemad, Wright, and Dana suggest that advances in technology, manufacturing and logistics have created a world in which even the smallest and youngest of firms can compete.¹ This view of an emerging world market accessible to even the most resource constrained and remote nations and organizations has recently been underscored by Thomas Friedman in *The World Is Flat*, in which he traces the convergence of technology and world events and its role in bringing about significant changes in traditional value chains.² The evidence of the involvement of entrepreneurial firms in international trade has been building during the past two decades. Kohn notes that as early as the middle part of the 1980s, smaller firms accounted for more than 50 percent of all U.S. foreign investing firms.³ Reynolds suggests that this involvement in international trade continued to be strong through the early 1990s with more than 10 percent of all small to medium-sized enterprises (SMEs) involved in direct foreign investment and over 20,000 of the estimated 35,000 transnational firms having less than 500 employees.⁴ He further notes that by 2005 an estimated 80 percent of all SMEs would either be affected by or involved in international trade. Shrader, Oviatt, and McDougall support this with their report of estimates that by 2005, one-third of all small manufacturing firms would derive at least 10 percent of their revenues from foreign sources.⁵

The growing internationalization of entrepreneurial firms has been mirrored by growing academic interest. Wright and Ricks, when contemplating the previous twenty-five years of international business research, identified research relating to international entrepreneurship and the internationalization of small business as a key area for future research.⁶ In response to this and other calls for an increased focus on internationalization of entrepreneurial firms, there have been special journal issues devoted to the topic by *Entrepreneurship Theory and Practice*, the *Journal of Business Venturing*, *Small Business Economics*, and the *Academy of Management Journal*. A new journal devoted exclusively to this field of study, the *Journal of International Entrepreneurship*, was founded in 2003. Compilations of international entrepreneurship research have also recently been published including *Globalization and Entrepreneurship*, edited by Hamid Etemad and Richard Wright and *Handbook of Research on International Entrepreneurship*, edited by Léo-Paul Dana.^{7, 8}

Research devoted specifically to understanding the internationalization of entrepreneurial firms has led to a vigorous debate focused on the unique characteristics of entrepreneurial firms, in particular, their resource constraints and the timing of the entry of such firms into the international marketplace, and whether traditional theories of internationalization, developed almost exclusively in respect to larger firms, are applicable to entrepreneurial firms.⁹ In response to this debate, a number of integrated models of the internationalization of entrepreneurial firms have been offered including those developed by Zahra and George, Bell et al., and Oviatt, Shrader, and McDougall.¹⁰⁻¹² Each of these integrative models provides a unique perspective for understanding the internationalization process. The model developed by Oviatt and McDougall has as its primary focus the rapid internationalization of new ventures, while the model proposed by Zahra and George encompasses a broader definition of international entrepreneurship to include established firms that are entrepreneurial in their internationalization process.^{13, 14} Bell et al. suggests a model that includes a consideration of existing firms that may operate domestically for long periods of time before, sometimes very rapidly, internationalizing their operations.¹⁵

These emerging integrated models of internationalization, while providing an overarching framework for understanding the internationalization activities of entrepreneurial firms, tend to place their greatest emphasis on the motives and outcomes for internationalization. Although each acknowledges the critical role of certain firm processes to internationalization, none provides a detailed review of the full range of processes research has identified. Accordingly, the focus of this chapter is neither the motives nor outcomes of going global, but rather the processes through which entrepreneurial firms go global. The focus on processes is not intended as a review or support of the models of internationalization labeled as "process" models, but rather intended to be theoretically agnostic in focusing specifically on research associated with the enabling and enacting processes that entrepreneurial firms utilize in internationalizing their operations. The ultimate goal of the discussion is to provide a review of existing research, a possible bridge

between competing models of the internationalization of entrepreneurial firms by focusing on common processes of internationalization, and to illuminate insight that current research might have for the owners and managers of entrepreneurial firms.

The first section of this chapter will provide a brief review of the debate regarding the applicability of the traditional models of internationalization to entrepreneurial firms and three recently proposed integrative models of international entrepreneurship. The second section of the chapter will provide a review of representative research focused on the enabling processes utilized by entrepreneurial firms in internationalizing as well as the apparent gaps in current knowledge. The third section reviews research specifically focusing on the enacting processes of internationalization by entrepreneurial firms. In addition, in the second and third sections, research questions will be posed with the goal of encouraging the integration of existing models of venture internationalization. Finally, in the conclusion of the chapter, future research areas will be suggested.

A BRIEF HISTORY: GRADUAL GLOBALS, BORN GLOBALS, AND BORN-AGAIN GLOBALS

Oviatt and McDougall in their seminal article put into play a debate that had been simmering for some time.¹⁶ They observed that there was clear evidence that many early stage ventures did not appear to be following the traditional stage or process models of internationalization developed with multinational enterprises (MNEs) in mind but rather internationalized from the very start of operations. This observation has engendered a long-running debate in the entrepreneurship literature as to the applicability of traditional models of internationalization. This debate has centered around three process-based conceptualizations of how entrepreneurial firms globalize. These three processes have been popularly termed as *gradual global*, *born global*, and *born-again global*.

Gradual Globals

International business research is replete with a variety of theories framing the internationalization process of firms, many of which have been utilized in an attempt to understand the internationalization process of entrepreneurial firms.¹⁷ The most widely utilized of these theories, both in the international business literature as well as the entrepreneurial literature are those that have been labeled as the stage theories of internationalization or the Uppsala Internationalization Models.¹⁸ The most influential of the stage models is the one articulated by Johanson and Vahlne.^{19, 20} Johanson and Vahlne suggest that firms internationalize through various processes slowly and incrementally over time. The foundation for the model is the processes of acquisition, integration, and knowledge

development and an ever-increasing commitment of resources to international markets. The underlying assumption is that as the firm learns more about distant markets the risk-reward valuations improve allowing the firm to incrementally increase commitments of resources. For example, the firm may first enter an international market through an export relationship that over time may evolve into a joint-venture marketing or manufacturing relationship and ultimately into an investment in offshore manufacturing. A second component of the process is the successive movement of the firm into what Johanson and Vahlne suggest are “psychically distant” markets.²¹ They suggest that firms will first move into international markets that are most similar to their home markets but with time and knowledge acquisition will take increasingly greater risks by entering markets that are more dissimilar to their home markets.²²

Although the stage models of internationalization seem to appropriately characterize the behavior of larger firms, entrepreneurship scholars have suggested that the unique nature of entrepreneurial firms is not adequately addressed by existing theories. Oviatt and McDougall report that a wide range of case studies of entrepreneurial firms demonstrate that many begin international activities at founding.²³ This combined with a consideration of the typically limited resource base of early-stage ventures, which requires the ventures to rely more on hybrid structures for their international transactions, leads them to conclude that a unique theory of internationalization may be appropriate.²⁴

Born Globals

Oviatt and McDougall, in their review of research pertaining to firms that were international in scope from inception, found that such firms typically had strong networks allowing for the marketing of their products or services—innovative products and services and a tightly managed organization.²⁵ Most important, the founding team had from inception a vision of international operations. Such ventures were termed international new ventures but have come to be more commonly known as born globals in the entrepreneurship literature. Consistent with their observations of these international from inception ventures, Oviatt and McDougall define such a venture as “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.”²⁶ In a concurrent study of twenty-four born-global firms, McDougall, Shane, and Oviatt conclude that the traditional stage models of internationalization fail to provide an explanation as to why and how born-global firms can internationalize without first going through the incremental processes predicted by the stage models.²⁷ Their observations, along with those of others, regarding the applicability of the traditional models has led to a significant body of research in recent years.²⁸

In their 1994 article and in a later study, Oviatt and McDougall provide the basic elements for a process theory of born globals.²⁹ This was followed by the publication of a proposed risk-management model of new venture

internationalization.^{30, 31} The model, focusing on the rapid internationalization of new ventures, describes a set of complex interactions between the venture founders and the general environment of the venture, which are mediated by the industry environment as well as the characteristics of the entrepreneur. The framework, based on the analysis and understanding of the risks involved in internationalization, is consistent with their definitions of international new ventures as those ventures that are from inception international in scope.

Born-Again Globals

Recently a third process of internationalization has been described—that of the born-again venture. Bell and Young describe such entrepreneurial firms as those that are well established in their domestic markets but which suddenly, based on some triggering event, demonstrate rapid and dedicated internationalization.³² This process of internationalization is also described by Madsen and Servais as a “leapfrog” process.³³ Because of their sudden conversion to dedicated internationalization, Bell et al. consider these firms to be born-again international ventures.³⁴ Interestingly, the characteristics of this process, as described by these researchers, closely parallels the attributes of punctuated equilibrium, first described in the biological sciences and later applied in group development and entrepreneurship research.^{35, 36} In order to accommodate the temporal aspects of such internationalization, Bell, McNaughton, Young, and Crick have proposed a model of internationalization that in their estimation recognizes the existence of differing pathways for establishing international operations.³⁷ The proposed model is an effort to accommodate all three processes of internationalization—gradual global, born global, and born-again global. They suggest that the trajectory that an entrepreneurial firm takes is dependent upon the knowledge-based aspects of the firm, the strategic posture of the firm, and the unique attributes of the firm’s internal and external environments.

Another model of international entrepreneurship has been proposed by Zahra and George.³⁸ Expressing concern that the definition of international entrepreneurship proposed by Oviatt and McDougall does not adequately encompass the international entrepreneurial behavior of established firms, Zahra and George propose a model intended to accommodate such behavior.^{39, 40} They define international entrepreneurship as “the process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in the pursuit of competitive advantage.”⁴¹ The focus of their model is the international activity of established firms and the forces that influence the degree, speed, and geographic scope of international activities. The model describes a complex interaction between firm, environmental, and strategic factors that lead to internationalization and ultimately to establishing a competitive advantage for the firm.

Explicit in each of these models are the processes through which entrepreneurial firms internationalize. Because these models are intended as general models there is little in-depth analysis of the specific processes through which entrepreneurial

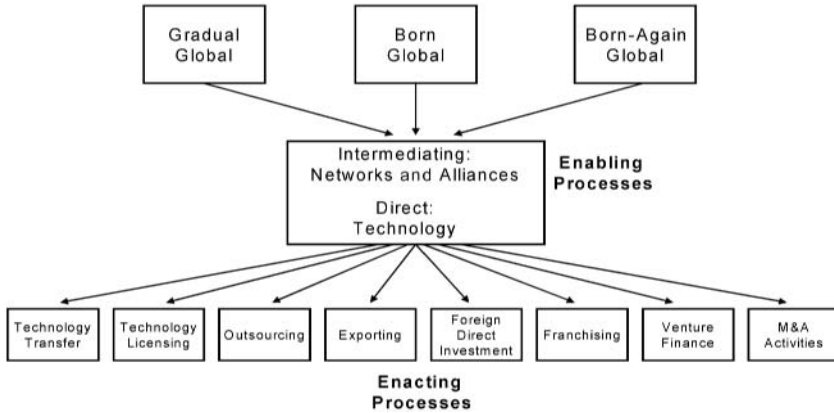


Figure 8.1. Going global: The processes through which entrepreneurial firms internationalize.

firms enter international markets. Following the lead of Wright and Ricks who define international entrepreneurship as a firm-level activity, the following sections of this chapter will provide a brief review of the firm-level processes associated with the internationalization of entrepreneurial firms that have been described in existing research.^{42, 43} Processes are those routes or courses of action undertaken by entrepreneurial firms in crossing national boundaries. Figure 8.1 provides an overview of these firm-level processes, identified in current research, through which entrepreneurial firms internationalize and are characterized as either *enabling* or *enacting* processes. Enabling processes are those processes that permit or facilitate the entrepreneurial firm to extend operations beyond the firm's domestic borders. In some respects, these enabling processes are analogous to the pathways described by Bell et al.⁴⁴ These enabling processes are both intermediating, as in networking and alliance building, and direct, as enabled by emerging technologies. Enacting processes are those processes that allow entrepreneurial firms to enact international behavior. These processes or actions include exporting, outsourcing, and foreign direct investment (FDI); technology licensing and transfer; franchising; and venture financing, and merger and acquisition (M&A) activities.

It would appear that the real contrast between the proposed models of internationalization is not over the processes through which entrepreneurial firms internationalize but rather over the temporal aspects of the processes as well as the combination of enabling and enacting processes. For example, the gradual global perspective would predict that firms would add these processes incrementally over time beginning with those that carry the least risk to the firm. The born-global perspective would suggest that firms internationalize through a combination of processes simultaneously in order to manage risk. Although the

born-again global perspective would also predict a combination of processes attached to international market entry, it would predict that the timing of the entry would be based on some unique triggering event not necessarily occurring at founding. These enabling and enacting processes would also seem to describe the middle ground common to all three models. The current research associated with these models has as its primary focus the “why” of going global. Focusing on the “how” or the processes through which entrepreneurial firms internationalize paints in clear relief the commonalities between the various perspectives of venture internationalization as well as intriguing research questions that may help facilitate the integration of these perspectives. Although the following discussion has as its primary focus research that is associated with entrepreneurial firms, each of the processes has a much broader foundation of research.

ENABLING PROCESSES

The limited resources of entrepreneurial firms require that in order to expand across national boundaries, these firms must utilize a range of resources and processes external to, yet available to the firm. In general these enabling processes have been termed as intermediate and direct. Intermediating processes are those processes that flow through other organizations and that extend the reach of the entrepreneurial firm while minimizing the risk of internationalization. The two most discussed intermediating processes are networking and alliance building.

Intermediating Processes

Networking has long been placed at the core of the entrepreneurial process.⁴⁵ Networks have been so omnipresent in case studies of international ventures that many have called for the application of network theory in explaining the internationalization process.^{46–48} Building upon a rich foundation of theory and research on business networks, entrepreneurship scholars have explored the role of the networking process in the efforts of entrepreneurial firms in expanding beyond their domestic markets. In this research, the internationalization process is seen as being embedded within the social, institutional, and industry webs, which support the firm in the acquisition of market knowledge, operational capabilities, human capital, finances, and other necessary resources. The role of the networking process in terms of enabling the firm is underscored by the findings of Coviello and Munro in a case study analysis of small software firms.⁴⁹ Their findings led them to conclude that the firms in their study made simultaneous use of multiple entry processes, all of which were accessed through the firm’s existing international network. Johanson and Mattsson suggest that a firm’s ability to enter international markets is more dependent upon its network and position in the network than on market attributes.⁵⁰

The range of research focused on the role of networks in the internationalization of entrepreneurial firms is growing. For example, Johanson and Mattsson suggest that success in international market entry is more dependent upon relationships in current markets than within the chosen market.⁵¹ Moen, Gavlen, and Endresen, in a case study of Norwegian software development companies, conclude that the choice of international markets to enter as well as the process of entry is dependent to a great extent upon the firm's existing networks.⁵² Yeoh directly links the firm's external networks with the firm's overall international performance.⁵³ Focusing on network relationships between large and small firms, Etemad, Wright, and Dana argue that small firms, when highly specialized and efficient, can utilize their relationships with large firms to achieve international competitiveness.⁵⁴ Finally, Autio, Yli-Renko, and Salonen provide evidence of a strong linkage between managerial capabilities, the quality of international relationships, and international growth.⁵⁵

A natural outgrowth of the networking process is a second mediating process—alliance formation. Oviatt and McDougall argue that the limited resource base of entrepreneurial firms necessitates the use of hybrid structures in the international process.⁵⁶ García-Canal, Duarte, Criado, and Llana define international alliances as “those formed by firms which aim at coordinating their actions in several markets and/or at gaining access to competencies that can be exploited in different international markets.”⁵⁷ These same researchers, while noting the wide range of alliance research, lament the fact that there is limited research into how firms make use of alliances in order to accelerate international expansion.⁵⁸

Examples of the research focused on the use of alliances for internationalization by entrepreneurial firms include the work of García-Canal et al., which draws on a case analysis of eleven Spanish firms and concludes that firms that utilize alliances for globalization typically develop several independent multicountry alliances for market entry as well as for improving core competences in the markets into which they sell their products.⁵⁹ Kohn in his empirical analysis of U.S. SMEs concludes that many utilize alliances for acquiring capabilities they lack in international markets or to fend off backward-vertical integration by larger customers.⁶⁰ Contrary to other findings, Prater and Ghosh in their study of over 100 small U.S. firms with European operations found a greater use of informal relationships rather than more formal alliance relationships.⁶¹ Finally, in a study of over 1,400 SMEs from five countries, Steensma, Marino, Weaver, and Dickson focused on the relationship between three of Hofstede's dimensions of national culture and technology alliance formation and the use of equity ties.^{62, 63} Specifically their research suggested three relationships. First, in countries with higher levels of uncertainty avoidance, technological uncertainty was found to have a more positive relationship with the propensity to form technology alliances and to utilize equity ties in those alliances. Second, in countries with lower masculinity ratings, technological uncertainty was found to have a more positive relationship with the propensity to form technological alliances. Finally, it was found that the

relationship between technological uncertainty and the use of equity was impacted by the individualistic traits of a country.

The existing networks and alliances of firms are often referred to as the “social capital” of the firm.⁶⁴ Knowledge gleaned from research linking the existence, origins, and levels of social capital, whether connected to the individual entrepreneur or the entrepreneurial firm, would suggest the critical importance of such capital to the owners and managers of entrepreneurial firms interested in internationalization. Unfortunately, existing research is often mute on a number of important issues, including how such social capital is acquired and which types of social capital are most effective and efficient in the internationalization process.

One relatively new and interesting approach to understanding how entrepreneurial firms acquire and utilize social capital in the internationalization process is the use of learning theory.⁶⁵ At first blush, the use of learning theory to explain the acquisition of social capital would seem to support the stage models of internationalization. The clear evidence that some firms are international from inception suggests a number of intriguing avenues for additional inquiry. For example, how do entrepreneurs of born globals acquire the experiential learning necessary for successful international relationships prior to founding? One avenue for such learning has been explored by Bloodgood, Sapienza, and Almeida, who found that prior international work experience was positively linked to internationalization.⁶⁶ Additional questions of seeming importance include: what types of social capital are most important to internationalization at various stages of venture development; for ongoing domestic-only ventures, how might the triggering events driving the need for internationalization interact with existing networks and alliances to determine the timing and success of internationalization; what types of social capital are most critical to internationalization for the born global, the gradual global and the born-again global firm?

Direct Processes

Technology has emerged as both an enabling process as well as an enacting process as will be discussed later. As an enabling process, technology, and in particular the use of the Internet, has allowed direct and instant contact between firms at opposite locations of the world and enabled a wide range of commercial exchanges. Hamill suggests that the emergence of the global information superhighway has had a profound impact on the conduct of international business.^{67, 68} Tetteh and Burn note that the extent to which small firms can benefit from the use of technology in internationalizing their reach is based on the firm’s product offerings, the nature of the market and industry, the nature of the firm’s partnerships and internal arrangements—all of which ultimately impact the information intensity of the firm’s value chain.⁶⁹ They go on to suggest three business models which characterize how the entrepreneurial firm utilizes online technology. The first is an independent business unit with an online presence primarily utilized in advertising its products. The second model involves participation in

a cluster or group of autonomous businesses online and the organization of operations and products around shared resources. The final model is the use of a virtual community that includes an online collection of various stakeholders.

Although this is a relatively new area of research for international entrepreneurship, some representative studies include that of Kotha, Rindova, and Rothaermel, whose survey of 101 top Internet firms resulted in the conclusion that the pursuit of internationalization is not automatic but based on the firm's reputation and Website traffic.⁷⁰ Loane, McNaughton, and Bell conclude that all of the firms in their study, which included forty Internet start-ups from five countries, had undertaken rapid and dedicated internationalization, greatly enabled by the Internet.⁷¹ Some research has shown that the Internet enables entrepreneurial firms to more quickly and easily reach international markets.^{72, 73} Similar studies include those of Khon and Bennett.^{74, 75}

The use of online technology is readily apparent for the managers of ventures providing content and content-related services, where country boundaries have little relevance. For other types of firms, the role of online technologies may be less readily apparent but nonetheless compelling in the internationalization process. For example, such technologies greatly expand the firm managers' ability to manage such activities as marketing and sales, product development, and outsourcing across international boundaries. Research questions, the answers to which have impact for all three perspectives of venture internationalization, include the following: how might technology serve as a substitute for social capital facilitating early entry into international markets; in what ways does technology facilitate the ability of the firm to be born global; in what ways does technology change the temporal aspects of the internationalization process?

ENACTING PROCESSES

At the heart of entrepreneurship is the enactment of opportunities. The following section will provide a brief review of research relating to those processes through which entrepreneurial firms enact internationalization. In reality, these processes are often so intertwined that the boundaries are unintelligible and in fact the premise of both the born-global perspective and the born-again perspective of internationalization is that firms often use unique combinations of these processes for rapid internationalization. The importance of these enacting processes is underscored by the findings of Zahra, Ireland, and Hitt who suggest that the mode of international market entry has significant impact, for example, on the breadth, depth, and speed of technological learning.⁷⁶

Exporting, Outsourcing, and FDI

Lu and Beamish argue that the two most utilized processes for internationalization are exporting and FDI.⁷⁷ Additionally, in recent years, outsourcing has

emerged as a widely utilized process for internationalization.⁷⁸ A significant body of research has been focused on the exporting behavior of entrepreneurial firms and although research has now shifted to a consideration of a broader range of internationalization behaviors, export research continues to be prevalent.⁷⁹ Examples of recent export-focused research includes that of Poutziouris, Soufani, and Michaelas who in a study of UK SMEs determined that exporting companies relied on lower ratios of fixed assets, achieved higher growth rates, and increased sales and turnover.⁸⁰ Interestingly, in a study of Japanese SMEs, Lu and Beamish found that exporting had a negative impact on firm performance, but cautioned that the time period of the study included a period in which the Japanese yen experienced strong appreciation causing exports to lose competitiveness.⁸¹ Dall'i in a study of Italian SMEs determined that the commitment of the firm, in terms of the internal organization in support of exporting, was correlated with the variation in export sales as well as export intensity.⁸² Finally, Yeoh focuses on the use of learning-based theory to explain the relationship between exporting and firm performance.⁸³

The stage models of internationalization often note outsourcing as a logical next step in the gradual internationalization of firms. Dunning suggests that with current technological advances, such as computer-aided design and manufacturing processes, firms can relinquish control over the development and manufacturing of products while still exercising control over the key attributes of those products.⁸⁴ This growing capacity to outsource while maintaining acceptable levels of controls suggests the continued growth of outsourcing in the internationalization process. Given the importance of outsourcing as an internationalization process, there is surprisingly little research specific to the use of outsourcing by entrepreneurial firms. In a study of ten New Zealand firms, Chetty and Campbell-Hunt conclude that entrepreneurial firms tend to internalize the sale and marketing functions in international markets if the product is highly technical and requires long periods of customization prior to sale.⁸⁵ If the product requires extensive after-sale service and customization, the sales and marketing function is typically outsourced. Dahab and Esperança argue that if firm leadership has the goals to expand rapidly or to be able to respond effectively to sudden environmental changes, the firm will tend to rely more on outsourcing as an internationalization strategy.⁸⁶

Stage models of internationalization also prescribe that over time firms may evolve from exporting into international markets and the outsourcing of key process internationally to making investments in infrastructure in those markets. Dunning, in the reappraisal of his eclectic paradigm, suggests that the decision to utilize FDI as a process of internationalization is dependent upon the level of need the firm has to manage risks by internalizing transactions.⁸⁷ It is also dependent upon other firm-specific characteristics, including production and inventory processes and ownership strategies. Ultimately he suggests that all of these internal firm characteristics influencing FDI decisions are impacted by any location-specific advantages that might be accrued from such investments.⁸⁸ The

use of FDI allows entrepreneurial firms to manage risks and leverage location-based advantages, such as competitively priced labor, unique resources, and knowledge. On the other hand, FDI requires greater resource commitment and makes market exit far more difficult.

In a study of 164 Japanese SMEs, Lu and Beamish conclude that FDI is a more competitive way of operating in international markets than exporting.⁸⁹ Their results also suggest that when firms first initiate FDI activities, firm profitability, as measured by return on assets (ROA) and return on sales (ROS), declines, but overtime and with increasing FDI commitments there is a positive relationship between FDI and profitability. They utilized two measures of FDI, looking across all types of investments, which included a total count of FDIs in which the company had a 10 percent or greater equity share and the total number of countries in which the company had FDIs. Coviello and Martin in their study of SME service firms conclude that firms tend to internationalize in a manner that reduces risk and internalizes firm-specific assets, but that certain location-specific advantages do accrue from FDI activity.⁹⁰ Finally, Manalova suggests that FDI tends to be clustered in several industries, particularly those that are technology based.⁹¹

The motives behind the use of each of these enacting processes for internationalization would appear to be driven by the desire to obtain location-specific benefits, while at the same time managing the risks associated with international operations. Although the use of these processes begs a number of interesting research questions, central to this discussion are those that might help to integrate the various models of venture internationalization. The gradual evolution of the firm into exporting, outsourcing, and FDI, as suggested by the stage models would seem logical. How might this gradual evolution be circumvented by the born-global firm? How might the mix of these strategic processes differ between born globals and gradual globals? Finally, since each of the models acknowledge the critical role of the external environment an important question would seem to be how might the external environment influence the temporal aspects of when and how each of these strategic processes are employed by entrepreneurial firms.

Technology Licensing and Transfer

A central decision in the technology commercialization process of firms is whether to profit from the sale of product technology or to seek to self-exploit through internalizing the manufacturing processes.⁹² As Webster and Sugden note, the decision is whether to use or sell.⁹³ When put into an internationalization context, the decision takes on added degrees of risk. Developing production capabilities in distant markets requires FDI and the associated financial risks, while licensing minimizes the firm's international exposure from an operational standpoint, but increases the potential loss of control over the technology being licensed. Arora et al. suggest that licensing is more likely to be the chosen process if the market is distant, when the market share of the licensor is small, and when the

downstream market is highly competitive.⁹⁴ Castellani and Zanfei, in a study involving thirteen European companies and nineteen North American companies, conclude that firms need no specific knowledge of a market in order to commercialize technology through licenses, but in high-velocity industries fewer licensing transactions can be accomplished given the rapid changes in technology.⁹⁵ Given the relative importance of licensing as an internationalization strategy for entrepreneurial firms, either inbound or outbound licensing, it is interesting to note a very limited level of research activity.

Technology transfer, often facilitated through both formal methods such as licensing and alliances as well as through more informal methods, can serve as an enacting process for internationalization by entrepreneurial firms. The technology transfer process, according to Eden, Levita, and Martinez “involves the acquisition, assimilation, diffusion, and development of technology.”⁹⁶ Eden et al. suggest that for SMEs the cost of technology production and transfer are high, resulting in a greater use of alliances and joint ventures and a focus on niche markets.⁹⁷ Ultimately they conclude that while SMEs face unique challenges as a result of their limited resource base their flexibility can allow them to be successful in internationalizing their technology transfer processes. Buckley in his comparison of SME transnationals with all size firms concludes that while SMEs will not be the major suppliers of technology in international market, they can successfully fill important niche roles.⁹⁸ Other research that provides insight into technology transfer as an internationalization process includes that of Crick and Jones, Etemad, and Burgel and Murray.^{99–101}

Research suggests that for entrepreneurial managers who choose to utilize technology-related processes to internationalize the key issues in managing risk are driven by both firm and environmental factors as well as the nature of the technology. Yeoh suggests that one possible factor in the success of internationalization is the imitability of the technology possessed by the entrepreneurial venture. His assumption provides an interesting research question.¹⁰² Does the imitability of the technology possessed by a venture impact the temporal aspects of internationalization?

Franchising

The licensing and transfer of specific technologies often lead entrepreneurial firms into international markets. Franchising is similar in that the desire to license complete operational systems is often both a motive for internationalization and a process through which entrepreneurial firms internationalize. Grünhagen and Mittelstaedt suggest that drives toward globalization accounted for much of the expansion seen in franchising during the thirty-year period beginning in 1960.¹⁰³ Franchising, according to Michael is seen by many as a way of entering international market with relatively low risk.¹⁰⁴ Michael identifies economic, strategic, and cultural factors impacting the rate of franchising as a process for entering international markets.¹⁰⁵ Clarkin, in a study of 1200 North American franchises

found that opportunity recognition was the most important motivator for international expansion.^{106, 107}

It would appear that franchising as an internationalization process would be one open to entrepreneurial ventures from inception. In a broader sense, an interesting question for empirical research relates to the attributes of the enacting processes through which entrepreneurial firms internationalize. Do the attributes of certain processes make those processes more or less likely, or even possible, to be utilized at specific stages of venture development?

Venture Finance and M&A

Venture capital (VC), while a resource, also embodies a process that impacts the firm both financially and strategically. For example, Carpenter, Pollock, and Leary suggest that VC backing is associated with greater risk-taking by the venture and thus a greater willingness to enter international markets, particularly given the expectations for financial returns implicit in VC financing.¹⁰⁸ Surprisingly, the results of their study indicated that the impact of VC financing on internationalization was negative. They speculated that venture capitalists (VCs) are “reasoned” risk-takers and that the positive impact of VC on internationalization would only be evident in the presence of significant international experience held by the management team. Burgel and Murray in their study of 311 British start-ups found an inconclusive relationship between VC involvement and internationalization.¹⁰⁹ At this point, the evidence as to the relationship between the VC process and internationalization is inconclusive, given the limited nature of the research conducted.

Often closely linked with the process through which ventures are financed is the process through which ventures either merge with or are acquired by other firms. The M&A process has long been recognized as important in internationalization. Acs, Morck, Shaver, and Yeung suggest, given that entrepreneurial firms hold a significant place in the development of innovations, the most efficient means through which these innovations might be disseminated into the international marketplace is through their absorption by larger multinationals.¹¹⁰ The ability of firms to expand internationally and the viability of those expansion moves appear to be enhanced, according to Vermeulen and Barkema, by earlier acquisitions—whether those acquisitions are domestic or international.¹¹¹ They speculate that the acquisitions may broaden the firm’s knowledge base and foster the development of new knowledge critical to later expansion. Barkema and Vermeulen note that when firms choose to expand into a foreign market by establishing a local subsidiary, they must choose between starting a new business or acquiring an existing local company.¹¹² Their research with twenty-five Dutch firms suggests to them that the key determinants of the choice of entry processes are the firm’s strategic posture, its multinational diversity, and the diversity of its products. In a similar study with over 2,100 entries into the U.S. market by Anand and Delios, the results suggest that it was the upstream and downstream

capabilities of the entering firm that determined the choice of a new start-up or an acquisition of an existing firm.¹¹³ Finally, Bell et al. noted that an interesting strategy utilized by some small firms, whose resource constraints prevent them from internationalizing, is to make the firm attractive as a takeover target by a larger domestic or foreign multinational firm.¹¹⁴

For venture managers contemplating the acquisition of VC, current research provides little guidance as to the role of VC in either promoting or hindering internationalization. At most, the findings suggest that the relationship may be specific to the VC source. Moving forward, an interesting research question for international scholars is if the timing of VC input has an influence on the temporal aspects of internationalization by the venture. Regarding M&A activity, the research of Vermeulen and Barkema suggests that firms that utilize start-ups for market entry rather than acquisitions tend to have lower survival rates.¹¹⁵ Left unanswered is the question, does this hold true for ventures at all stages of development?

CONCLUSION

The debate engendered by the evidence that some entrepreneurial firms do not follow the traditional stage models of internationalization but rather are born global, has led to much important research in recent years. The primary goal of this discussion has been to review the literature associated with the enabling and enacting processes available to entrepreneurial firms for internationalization that are common to most models of internationalization and to pose research questions that might aid in integrating the born global, gradual global, and born-again global perspectives. Taken in total, existing research suggests that entrepreneurial firms utilize a unique mix of enabling and enacting processes for internationalization. Questions of key interest that span all three internationalization perspectives include: how does the unique mix of processes available to a specific firm influence the timing, extent, and scope of internationalization; how does the firm's unique compliment of processes impact the choice of markets; how does the complement of processes impact the absorptive capacity of the firm to cultivate new markets and capabilities; does the developmental stage of the venture influence the choice and mix of processes utilized for internationalization? Existing research suggests to entrepreneurs that the mode of internationalization needs to be carefully aligned with the stage of development of the firm, the unique internal resources of the firm, and the location-specific external resources and opportunities available. Finally, the focus of this discussion has been primarily at the firm level of analysis. Extending internationalization research to focus on the enabling and enacting processes at the industry and environmental levels may provide important additional information for policymakers interested in understanding and supporting the internationalization of entrepreneurial firms.

NOTES

1. Hamid Etemad, Richard W. Wright, and Léo-Paul Dana, "Symbiotic International Business Networks: Collaboration between Small and Large Firms," *Thunderbird International Business Review* 43, no. 4 (2001): 481–499.
2. Thomas L. Friedman, *The World Is Flat* (New York: Farrar, Straus & Giroux, 2005).
3. Tomas O. Kohn, "Small Firms as International Players," *Small Business Economics* 9, no. 1 (1997): 45–51.
4. Paul D. Reynolds, "New and Small Firms in Expanding Markets," *Small Business Economics* 9, no. 1 (1997): 79–84.
5. Rodney C. Shrader, Benjamin M. Oviatt, and Patricia P. McDougall, "How New Ventures Exploit Trade-offs among International Risk Factors: Lessons for the Accelerated Internationalization of the 21st Century," *Academy of Management Journal* 43, no. 6 (2000): 1227–1247.
6. Richard W. Wright and David A. Ricks, "Trends in International Business Research: Twenty-Five Years Later," *Journal of International Business Studies* 25, no. 4 (1994): 687–701.
7. Hamid Etemad and Richard Wright, eds., *Globalization and Entrepreneurship* (Cheltenham, UK: Edward Elgar, 2003).
8. Léo-Paul Dana, ed., *Handbook of Research on International Entrepreneurship* (Cheltenham, UK: Edward Elgar, 2004).
9. The foundations for this debate can be reviewed for example in Jim Bell, Rod McNaughton, and Stephen Young, "'Born-Again Global' Firms: An Extension to the 'Born Global' Phenomenon," *Journal of International Management* 7 (2001): 173–189; A. Bakr Ibrahim, "Internationalization: Motive and Process," in *Handbook of Research on International Entrepreneurship*, ed. Léo-Paul Dana (Cheltenham, UK: Elgar, 2004), 129–136; Tage Koed Madsen and Per Servais, "The Internationalization of Born Globals: An Evolutionary Process," *International Business Review* 6, no. 6 (1997): 561–583; Benjamin M. Oviatt and Patricia P. McDougall, "Toward a Theory of International New Ventures," *Journal of International Business Studies* 25, no. 1 (1994): 45–64.
10. Shaker Zahra and Gerard George, "International Entrepreneurship: The Current Status of the Field and Future Research Agenda," in *Strategic Entrepreneurship*, eds. Michael A. Hitt, R. Duane Ireland, S. Michael Camp, and Donald L. Sexton (Malden, MA: Blackwell, 2002), 255–288.
11. Jim Bell, Rod McNaughton, Stephen Young, and Dave Crick, "Towards an Integrative Model of Small Firm Internationalization," *Journal of International Entrepreneurship* 1, no. 1 (2003): 339–362.
12. Benjamin M. Oviatt, Rodney C. Shrader, and Patricia P. McDougall, "The Internationalization of New Ventures: A Risk Management Model," in *Theories of the Multinational Enterprise: Diversity, Complexity and Relevance*, eds. Michael A. Hitt and Joseph L. C. Cheng (Amsterdam: Elsevier, 2004), 165–185.
13. Benjamin M. Oviatt and Patricia P. McDougall, "Toward a Theory of International New Ventures," *Journal of International Business Studies* 25, no. 1 (1994): 45–64.
14. Zahra and George, "International Entrepreneurship."
15. Bell, McNaughton, Young, and Crick, "Towards an Integrative Model of Small Firm Internationalization."

16. Oviatt and McDougall, "Toward a Theory of International New Ventures."

17. Some of the more popular theories that have been utilized in attempting to understand the globalization of entrepreneurial firms include innovation-related internationalization models, which can be reviewed in Warren J. Bilkey and George Tesar, "Attempted Integration of the Literature; the Export Behavior of Firms," *Journal of International Business Studies* 9, no. 1 (1977): 33–46; foreign direct investment theory, which can be reviewed in Peter J. Buckley and Mark Casson, "Theory of International Operations," in *The Internationalization of the Firm: A Reader*, eds. P. J. Buckley and P. Ghauri (London: Academic Press, 1993), 45–50; network theory, which can be reviewed in Jan Johanson and Jan-Erik Vahlne, "Business Relationship Learning and Commitment in the Internationalization Process," *Journal of International Entrepreneurship* 1, no. 1 (2003): 83–101. Additionally, such traditional economic theories as transaction cost theory as noted by Andrew L. Zacharakis, "Entrepreneurial Entry into Foreign Markets: A Transaction Cost Perspective," *Entrepreneurship Theory and Practice* 21, no. 3 (1997): 23–39; and resource theory, as reviewed by Patrick C. Woodcock, Paul W. Beamish, and Shige Makino, "Ownership-Based Entry Mode Strategies and International Performance," *Journal of International Business Studies* 25, no. 2 (1994): 253–273, have been applied in explaining the entry of entrepreneurial firms into international markets.

18. For complete reviews of the literature associated with the stage or Uppsala models of internationalization, see Nils-Erik Aaby and Stanley F. Slater, "Management Influences on Export Performance: A Review of the Empirical Literature 1978–1988," *International Marketing Review* 6, no. 4 (1989): 7–26; Bent Petersen and Torben Pedersen, "Twenty Years After—Support and Critique of the Uppsala Internationalization Model," in *The Nature of the International Firm*, eds. Ingmar Björkman and Mats Forsgren (Copenhagen: Copenhagen Business School Press, 1997): 117–134.

19. Jan Johanson and Jan-Erik Vahlne, "The Internationalization Process of the Firm," *Journal of International Business Studies* 8, no. 1 (1977): 23–32.

20. See also Jan Johanson and Jan-Erik Vahlne, "The Mechanism of Internationalization," *International Marketing Review* 7, no. 4 (1990): 11–24; Jan Johanson and F. Wiedersheim-Paul, "The Internationalization of the Firm—Four Swedish Cases," *Journal of Management Studies* 6 (1975): 305–322.

21. Johanson and Vahlne, "The Mechanism of Internationalization."

22. To see how these theories are framed within the context of entrepreneurial firms, see for example, Nicole E. Coviello and Andrew McAuley, "Internationalization and the Smaller Firm: A Review of Contemporary Empirical Research," *Management International Review* 39, no. 3 (1999): 223–256; Tage Koed Madsen and Per Servais, "The Internationalization of Born Globals: An Evolutionary Process," *International Business Review* 6, no. 6 (1997): 561–583; Øystein Moen and Per Servais, "Born Global or Gradual Global? Examining the Export Behavior of Small and Medium-Sized Enterprises," *Journal of International Marketing* 10, no. 3 (2002): 49–72.

23. Oviatt and McDougall, "Toward a Theory of International New Ventures."

24. Not all scholars agree that the Uppsala or stage models are not applicable to entrepreneurial firms. See for example, Tage Koed Madsen and Per Servais, "The Internationalization of Born Globals: An Evolutionary Process," *International Business Review* 6, no. 6 (1997): 561–583, for a defense of the applicability of such models in the entrepreneurial context.

25. Ibid.

26. Ibid, p. 49.
27. Patricia P. McDougall, Scott Shane, and Benjamin M. Oviatt, "Explaining the Formation of International New Ventures: The Limits of the Theories from International Business Research," *Journal of Business Venturing* 9, no. 6 (1994): 469–487.
28. A review of born-global research can be found in Alex Rialp-Criado, Josep Rialp-Criado, and Gary A. Knight, "The Phenomenon of International New Ventures, Global Start-ups, and Born-Globals: What We Know after a Decade (1993–2002) of Exhaustive Scientific Inquiry," Working paper #2002/11 (Dep. D'Economia de l'Empresa, Universitat Autònoma de Barcelona, Barcelona, Spain, 2002). Examples of this research in more recent publications as well as discussions of the born-global concept can be found in Sylvie Chetty and Colin Campbell-Hunt, "A Strategic Approach to Internationalization: A Tradition versus a 'Born-Global' Approach," *Journal of International Marketing* 12, no. 1 (2004): 57–81; Gary Knight, Tage Koed Madsen, and Per Servais, "An Inquiry into Born-Global Firms in Europe and the USA," *International Marketing Review* 21, no. 6 (2004): 645–665; Øystein Moen and Per Servais, "Born Global or Gradual Global? Examining the Export Behavior of Small and Medium-Sized Enterprises," *Journal of International Marketing* 10, no. 3 (2002): 49–72. A review of the impact of Oviatt and McDougall, "Toward a Theory of International New Ventures" can be found in a special edition of the *Journal of International Business Studies* in 2005.
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9

Entrepreneurial Exit

Monica Zimmerman Treichel and David L. Deeds

While much attention has been devoted to the start-up and growth of the entrepreneurial firm, the exit is an important and understudied aspect of the entrepreneurial process. Exit is the point at which the entrepreneur and her investors face the market in an attempt to realize the wealth they believe they have created during the venturing process, and as such, the manner in which the exit is handled can have a profound impact on the wealth realized as well as have ramifications for the future well-being of the venture. For some entrepreneurs, it is an event planned for from the start of the venture. For others it results from factors beyond their control. The exit is a paradox of the entrepreneurial process: “Build a great company but do not forget to harvest.”¹ Few events in the life of the entrepreneur or the business are as important as the exit.² “If the entrepreneur is to take full advantage of an investment opportunity, it is essential not only to evaluate the merits of the opportunity at the outset but also to anticipate the options for exiting the business.”³

An entrepreneurial exit is often referred to as a harvest. A harvest plan defines when and how owners and investors of an entrepreneurial venture will exit and realize an actual return on their investment.^{4, 5} Fry compared the harvesting of a business to an agricultural harvest:

In agriculture, harvesting means reaping the crop at the end of the growing season. Similarly, growing businesses, like growing crops, need to be harvested to collect terminal after-tax cash flows on the investment that was initially “planted.” Unlike agricultural crops, however, when a business is harvested, in most cases it continues to exist, since the entrepreneur or the initial investor may not necessarily leave the company. Instead, through harvesting, the ownership mix of the venture is changing in such a way that harvesting or exiting owners or shareholders extract

tangible value from their investment in the form of money, stock, or other cash flow to be used for other purposes. In the case of parent entrepreneurs passing the business to their children without any financial benefits, the intangible value of succession can be rewarding in itself.⁶

For an entrepreneurial venture to be ultimately successful in the eyes of many entrepreneurs and investors there must be an effective and rewarding end. The presence and effectiveness of an exit strategy determines the economic and emotional value to be realized from a venture.⁷ The exit is “more than simply leaving a company; it is the final piece necessary in creating the ultimate value to all the participants in the venture.”⁸ The motive for the exit, interests of the investors, and interest of the founder will dictate the nature of the buyer and the structure of the transaction.^{9, 10} If the entrepreneurial venture is a lifestyle venture (i.e., designed to maximize the entrepreneur’s life, rather than wealth), the focus of exit strategy maybe on the welfare and future operations of the business, that it be in “the right hands,” rather than on the monetary outcome achieved by the exit. However, if the goal of the entrepreneurial venture is to create a high-growth business, the exit strategy is critical in achieving the financial returns expected by investors in high-growth ventures.¹¹ While the entrepreneur’s exit is typically motivated primarily by financial considerations (i.e., to realize financial returns and create liquidity for investors in the case of good performance or stem losses in the case of poor performance), they also exit for other reasons, including personal motivations such as time, family constraints, age, health, opportunity to move onto the next venture; venture-related reasons such as changes in the industry; future entrepreneurial opportunities; or a combination of all the aforementioned.^{12–14} The exit is critical to investors, since in the short run, they are likely to realize a return on their investment if the venture achieves a liquidity event, otherwise known as an exit.

The venture does not have the same personal significance for investors as it does for the founders, but is simply a means to achieve financial returns, which makes a successful exit a priority for investors.¹⁵ As noted earlier, exit creates liquidity for investors, and in the case of professional investors (venture capitalists, VCs) it allows them to disperse the wealth realized in the exit to their investors and provides the seed and the incentive for additional investments by these investors in future funds and in turn in future ventures. In the realm of high-growth, venture capital (VC)-backed new venture, the ability to exit profitably is one of the keys to a fully functional new venture finance system. Without readily available exits, VC funds and angel investing become substantially less attractive investments since they can only realize returns through payouts from the cash flow generated by the venture. Under these circumstances substantially less investment capital will be made available for new ventures, which will in turn lead to a substantial decrease in new venture activity.

A clearly articulated exit strategy that investors view as reasonable dramatically increases the chance of investment and the terms the entrepreneur can negotiate.

An exit can take on a number of forms including initial public offerings (IPOs), acquisition, merger, reverse merger, direct public offering, employee stock option plans (ESOPs), management buyout (MBO), leveraged buyout (LBO), and liquidation.^{16–18} However, these forms really fall into three broad categories: going public, being acquired, and liquidation. In general, it is the first two categories, going public and acquisitions, that represent a success in the world of venturing, success being defined as creating substantial wealth for entrepreneurs and investors. The other option, liquidation, generally represents a substantially less attractive outcome, particularly for professional venture investors. In the following sections, we review the current research and areas requiring research in these categories of entrepreneurial exits: going public, being acquired, and liquidation.

GOING PUBLIC

Among the means by which entrepreneurs and investors can exit their venture, the one that receives most attention by the press and has been studied most extensively is the IPO. An IPO is the sale of a portion of the company to the public through a stock offering, and is considered by many to be the preferred choice of exiting a firm.¹⁹ For many there is an almost magical sound to “going public.”²⁰ The frequency of dot-com IPOs during the bubble period of 1998 through 2000 made IPO almost a household term. An IPO, if successful, provides higher valuation for the exiting stockholders and at the same time may generate a major infusion of cash for the firm’s future growth.²¹ The higher valuation of the venture provided by IPOs is due to the increased legitimacy and visibility of the venture and the increased liquidity of the company’s equity, making it a less risky and more accessible investment. Finally going public creates a much larger pool of potential investors for the venture, increasing demand for the venture’s equities.

An IPO is an expensive and lengthy process. It requires a significant amount of time, effort, and financial resources to complete the many steps required by the Securities and Exchange Commission (SEC) to register the company; the underwriter to sell the stock; and the stock market to list the stock. In addition, an IPO requires the company to exhibit much greater transparency to the public and to regulators. Such transparency includes annual filings with the SEC containing information on the salaries, strategy, and financial performance of the public firm.

An IPO is a point of transition from the private to the public domain.²² Although firms preparing for an IPO often attract investors’ attention, the attention sometimes does not result in investment because IPO firms lack a publicly available record for their stock price and because IPO firms are riskier than larger more established firms.^{23–25} They have no stock price record available to the public for evaluation, and in some industries, such as biotechnology, the potential of the firm to develop and market products are not clear.²⁶ They often face a “liability of market newness,” meaning that investors may place a discount on

IPO firms because they “have not demonstrated an ability to cope effectively with the demands of public trading (e.g., market fluctuations, meetings with analysts, and so forth).”²⁷ Young firms lacking a history of operations face even greater difficulties going public than do established firms.^{28, 29}

Major Research Questions Studied

IPOs have been the subject of a great deal of research, largely in the field of finance. Because the goal of an IPO is to raise money for the firm and/or the stockholders, the majority of the research focuses on IPO performance. Finance scholars narrowly define IPO performance as the returns to investors over various periods of time, up to and including one year after going public. The question driving this research is what influences the investment performance of IPO equities during the period immediately following the offering.

In contrast, management scholars are especially interested in the antecedents of IPO performance as a means to better understand the determinants of success in entrepreneurial firms. The IPO presents a unique opportunity to management scholars to analyze an objective market evaluation of the performance of an entrepreneurial venture. An IPO presents the management scholar with the financial market’s judgment of the wealth created by the entrepreneurs over the life of the firm prior to the IPO and a detailed disclosure document (the prospectus) that provides a wealth of information on the internal activities of the firm and the entrepreneurs prior to the IPO.³⁰

In order to address the question of venture success and performance, management scholars have used a range of performance measures other than ROI on equities, including capital raised by the firm in the IPO, market valuation of the IPO firm and the market value added by the firm, as measured at the time of the IPO. These are the measures chosen, because the focus of management scholars is on the impact of internal venture characteristics, such as top management team (TMT) demographics, scientific capabilities, product pipeline, and patent stock.

Theoretical Lenses

The most frequently used theory in IPO research is signaling theory, especially by finance scholars.³¹ Signaling theory begins with the assumption that there is information asymmetry between buyer and seller, specifically that it is expensive and difficult for the buyer to determine the quality of the item being sold—in this case, the quality of the venture. Accordingly, IPO firms attempt to signal their quality to potential investors by undertaking specific actions that are more costly or difficult for low-quality ventures than high-quality ones. The classic example is the provision of a warranty in the market for used cars; however, since warranties are unavailable in the new venture market, firms engage in numerous other signaling mechanisms to convince investors that they are a quality firm and an economically rational investment that will perform well in the future.^{32–34} These

signals include board characteristics, underwriter prestige, equity retained in the firm, auditor reputation, firm size, and VC investment.³⁵

Management scholars have generally applied two theoretical lenses to the study of IPOs. The most common is the resource-based view (RBV), which argues that firm-specific resources, including such things as scientific capabilities, management capabilities, patents, products, and the like are the basis of competitive value and in turn the market's valuation of a venture.³⁶ Research in this stream has focused on the activities and outcomes achieved by the firm as indicators of firm resources/capabilities and have been successful in establishing a link between resources and the value of a venture at IPO.³⁷

The second lens that has been applied by management scholars is institutional theory. This theory posits that under conditions of uncertainty, ventures and emerging industries that are able to establish greater legitimacy in the eyes of their constituents will enhance the resource flows into the venture and the industry. Activities and outcomes, such as media coverage, partnerships with high-status organizations, regulatory success, government support, and so on enhance the legitimacy of the firms and industry and the subsequent resource flows into the industry and the firm.³⁸ Institutional theory provides unique insights by focusing the researcher on the relationship between the venture, its key constituencies, and the uncertainty present in new ventures and emerging industries. Enhancing our understanding of the legitimating processes in emerging industries presents an important opportunity for future research on new ventures.

Key Findings

The dominant IPO performance indicator in finance research is underpricing.³⁹ IPO underpricing is the difference between the opening price of the IPO, set by the underwriter, and the closing price of the equity at the end of the first day of trading, set by the market. Underpricing occurs with great regularity in IPOs.⁴⁰ Underpricing is beneficial to new investors purchasing the stock directly from the underwriter (e.g., institutional clients), but not to pre-IPO investors who are selling their stock at the IPO (e.g., founders). Underpricing has been characterized as a risk premium paid to investors willing to buy an unseasoned offering. This premium ensures that there will continue to be a market for unseasoned offerings, by creating a high probability that active IPO investors will receive some returns for their efforts. Empirically the persistence of underpricing in the market for IPOs has been well established. However, there is little consistency in the research predicting the magnitude and extent of underpricing, which may be due to the time periods studied, variation in methodologies used, and differences in the data sets.⁴¹⁻⁴³ Systematic analyses of the correlates of IPO underpricing through meta-analysis can be used to address some of these inconsistencies.⁴⁴

A number of firm characteristics have been found to be related to IPO performance, including financial characteristics, networks, corporate governance,

age, size, and the external environment. Financial characteristics of the firm that have been shown to influence performance include shareholders' equity and assets, profits, and the amount of equity sold through the IPO.⁴⁵⁻⁴⁹ While financial characteristics have been studied, there is some question as to their value.⁵⁰ They tell only part of the story. Nonfinancial firm characteristics may have an equal if not greater influence on the performance of firms issuing an IPO.

One nonfinancial characteristic is the networks of the firm. VC backers, prominent strategic alliance partners, the underwriter and its syndicate, the auditor, and investors in the IPO firm's networks have been studied and shown to influence performance.⁵¹⁻⁵⁵ The interest in the role of networks in firm performance appears to be growing, especially as findings indicate that networks are positively related to several important outcomes for firms issuing an IPO, including time from inception to IPO, the amount of capital raised in the IPO, and the valuation of the firm at IPO. Networks provide resources, including financial and social capital, to IPO firms, which positively influence their performance. High quality and/or reputable network partners provide legitimacy for the firm.⁵⁶

The corporate governance of IPO firms is another characteristic that has been found to be positively related to firm performance.⁵⁷⁻⁵⁹ Corporate governance indicators include the current involvement, ownership position, and background of firm founders, as well as the ownership, background, and demographics of the TMT and board of directors. Corporate governance can be considered to be a secondary information source, and according to signaling theory, secondary information sources are of great importance when uncertainty is high, such as at the time of an IPO.⁶⁰ It is interesting to note that as the firm progresses through the life cycle, a number of corporate governance changes take place. These changes are often quite significant as the firm prepares for an IPO. Two such changes are the role of the founder(s) and the role of the top managers. The founder is often replaced in the preparation of an IPO, and TMT members are often replaced and/or additional members are added to strengthen the team, all in an effort to enhance firm performance.⁶¹

In addition, the influence of the CEO on IPO performance has also been found including the functional background and the role as founder.^{62,63} The presence of a founder-CEO and his/her equity in the firm has been shown to improve the IPO's performance and survival,^{64,65} perhaps because "the symbolic value, psychological commitment, ownership, structural authority, and tenure of founders may directly indicate and indirectly proxy the value of a firm's management to potential investors."⁶⁶ A founder-CEO may also be better able to lead the company through a period of transformation than a nonfounder-CEO.⁶⁷

The board of directors of IPO firms has also been shown to influence performance. The board structure of IPO firms represents important nonfinancial information used by investors to make decision of whether or not to invest in the IPO.⁶⁸ The networks, prestige, background, equity holdings, and independence of the board members as well as the size of the board have been shown to be positively related to IPO performance.⁶⁹⁻⁷³

The age and the size of the IPO firm have also been studied in relationship to performance.^{74–77} They are frequently used as control variables.^{78–80} Age may positively influence performance by enabling the firm to acquire more information, resources, and experience, as well as establish more relationships. Characteristics external to the firm also influence IPO performance. Two external characteristics include “hot markets” and the industry. Given the level of risk and uncertainty surrounding the IPO market, investor’s demand for equities in firms in particular markets (oil and gas, biotechnology, dot-coms, and so on) has been shown to vary dramatically over time. During certain periods, like the recent dot.com bubble, investor demand skyrockets driving prices up, creating a hot market for these IPOs. In contrast, during other periods, frequently following hot markets investor demand can drop off precipitously, tanking prices for these equities and making it nearly impossible to take a venture public. This cyclicity is well documented in the IPO literature and has been shown to significantly influence numerous measures of the performance of a firm’s IPO. Specifically, firms can raise greater amounts of capital during hot markets, achieve higher valuations, as well as lower underpricing.^{81–83} IPO performance has also been linked to conditions of the industry in which the firm operates. For example, firms operating in industries that were in the early stages of the industry life cycle, performed better than those in later stages.⁸⁴ The recent run up of the dot.com market is a classic example of a hot market but they are also well documented in resource industries, biotechnology, and computer hardware and software.

Future Research

There is a wealth of finance-based research, and the management-based IPO research is growing. Yet, much room remains to research IPOs. While we have learned a great deal about IPO performance using underpricing, there are other measures of performance that may be more appropriate. Underpricing, a stock-based performance measure is appropriate when examining investors because investors’ primary reason for investing in IPOs is to make money from the increase in the stock price.⁸⁵ When the focus is on the firm and its ability to access resources, a more appropriate measure is the capital raised at IPO, especially since the most important reason for a company to go public is to infuse capital into the firm.⁸⁶ Capital raised has been used in only a few studies.^{87–89} Researchers and practitioners alike would benefit from the study of the capital raised at IPO, since it has direct implications for raising funds not only in the public market, but in the private equity market as well. Improving our understanding of what enhances a venture’s access to investor capital will have both operational and managerial implications for entrepreneurs and potential policy implications for agencies interested in increasing the flow of capital into entrepreneurial ventures.

Another area in need of research is IPOs in a global economy. While there is a growing body of research on entrepreneurial firms in a global economy, there is much more to learn. Research addressing the level of internationalization of IPO

firms and the access to capital in equity markets across the globe would extend our knowledge of IPO firms. In addition, examining firm and environmental characteristics related to IPO performance across equity markets would be beneficial in understanding the impact of differences in structure and regulation of financial markets across countries and its impact on the rate of formation, survival, and growth of new ventures under these conditions. As the VC industry internationalizes, it is important to understand its impact on where firms are domiciled, where they chose to go public, and the impact of these choices on the performance and survival of ventures across various regions and of the rates of new venture formation in these regions.

Despite the wealth of information on IPOs, and the billions of dollars raised through public offerings, the process by which a privately held firm transforms itself into a publicly traded company is still not well understood.⁹⁰ The research currently provides very little insight into why one firm is able to, or chooses to, issue an IPO and another does not. While there is a wealth of practitioner-oriented material on how to take a company public, there is little empirical evidence to support much of the conjecture about how best to prepare a firm for going public. There is also little information on what type of firm makes a good IPO candidate and which type of firm is better off selecting another mode of exit. In fact, all the research to date begins with a sample bias by selecting firms, which have gone public. In order to better understand the lead up to IPO and who succeeds and who does not in issuing an IPO-mixed sample of firms, which issued an IPO and those that use other means are required.

Much of the IPO research is cross-sectional in nature. Longitudinal research would provide a better understanding of the transformation process over time. For example, we know little about the changes in the TMT over time from start-up through the IPO and post-IPO. We also know little about the operations of firms in this transformation process. Research on the changes in the supply chain, human resource management, and marketing of firms transitioning into the public market would be beneficial to scholars and practitioners alike.

The research on IPOs is beneficial to practitioners for several reasons. First, while there is a great deal of anecdotal information on preparing for an IPO, practitioners have little empirically derived information about the relationship between venture characteristics and the amount of capital raised, the valuation placed on the venture and the long-term performance and survival implications of going public. Recent research is rectifying this situation; it provides insight into the characteristics of the firm that are positively related to IPO performance, which practitioners can then use to prepare their own venture to maximize the benefit they realize from issuing an IPO. For example, using the knowledge that reputable underwriters are related to IPO performance should guide the entrepreneurs and/or top managers to seek a reputable underwriter to take their firm public. Second, practitioners can use knowledge about hot markets to determine the best time for a firm to initially offer its stock. Finally, research on firm characteristics, capabilities, and resources provides practitioners insights into what the

market values and what resource and capability investments will provide significant returns.

So where are the holes in our knowledge of IPOs that provide opportunities for future research? The largest and most important is due to the sample bias of most of the IPO research; we only look at firms that successfully IPO. What we really do not understand that is of critical importance is what determines a firm's suitability for the public markets; at what point in its life and under what conditions should it use an IPO; and when would the prospects for the venture and the owners be enhanced by selecting another exit option? How do we explain the difference between firms that file for an IPO but later withdraw and those that go through the IPO process? What determines the probability of a given firm to IPO? All of these are important questions that require further study and can only be answered by creating either a database of matched pairs—public and non-public firms, or a comprehensive industry database that includes both IPO ventures and ventures that chose to stay private or be acquired.

ACQUISITIONS

A second exit strategy is to sell your firm. Being acquired allows the owner to exit the firm by selling its assets or stock. The firm can be acquired by outsiders: direct competitors, indirect competitors, and noncompetitors; foreign firms that seek a presence in a domestic market or to avoid tariffs; management of the firm through an MBO; employees using an ESOP; family members; and the like.⁹¹

While the concept of going public is for many entrepreneurs the ideal exit strategy because it provides an escape from bootstrapping and offers fame, respect, and a significant amount of cash, there are issues associated with IPOs that may make acquisitions a better option. The combination of the compliance costs of Sarbanes-Oxley for U.S. firms, Wall Street's lack of attention to small cap stocks, and investor distrust heightened by the dot.com bubble has lessened the appeal of an IPO. A small number of companies are "dual tracking"—simultaneously registering to go public and pursuing acquisition.⁹² While costly, the dual strategy of pursuing both an IPO and acquisition expands the market for control/ownership of the firm and allows the firm to drive a harder bargain in negotiations with acquirers. George Rathman, one of the founders of Amgen, has stated that Genetech's IPO is one of the critical events in the history of the biotechnology industry, because it provided biotech firms an alternative source of capital and enhanced their ability to negotiate alliance and acquisition terms with the traditional pharmaceutical companies.⁹³

Major Research Questions

Most of the research on acquisition addresses the question "Is value created by acquisitions and if so under what conditions is it captured by the acquiring

another firm?" While a critical question for strategy scholars, it is only tangentially of interest to entrepreneurship scholars trying to understand exits. It is clear that on the whole, if an acquisition creates value then it is beneficial to society. However, in the case of exits, acquisition is the appropriate strategy only if it allows the investors and entrepreneurs to capture the value that has been created through the venture.⁹⁴ This leads to two important but understudied questions for entrepreneurship scholars; under what conditions does being acquired allow the investors and the entrepreneurs to maximize the wealth that they capture? How can the current owners of a venture prepare a firm for acquisition, such that it maximizes the wealth they realize from the acquisition?

The advantages of acquisitions for the entrepreneur frequently include instant liquidity, enhanced estate planning, and the ability to diversify their wealth. The advantages of being acquired for the venture can include the access to resources to grow the firm, achieving economies of scale and scope, and broader market access. Following an acquisition, the acquiring firm often provides security and resources for the acquired firm and its members. For the acquiring firm, acquisition often facilitates growth.⁹⁵ It can be cheaper, smarter, and faster to buy a firm than to build one.⁹⁶ Opportunities to consolidate the functions of the acquired firm may create cost savings, and acquisitions often provide clout in the marketplace and critical mass (i.e., economies of scale and scope).⁹⁷ Acquisitions also can facilitate the consolidation of highly fragmented industries, such as early on in the automobile industry, increasing the economies of scale in the industry, lowering costs and decreasing the price to the consumer.⁹⁸ Standard Oil provides an example of the benefits of the consolidation of a fragmented entrepreneurial industry to society. By consolidating refining and the production of kerosene, Standard Oil was able to lower the price of kerosene by approximately 90 percent, which is why it is often said that it was Rockefeller, not Edison, that brought light to the country.

Theoretical Lenses

Almost all of the research on acquisitions has focused on the question of the conditions under which acquisitions create value. Most of this literature is grounded in the core theories of strategic management, such as Porter's I/O paradigm, transaction cost economics, the resource-based view of the firm, dynamic capabilities, and the knowledge-based view of the firm. In general, these theories focus on two explanations for value creation through acquisition. The first revolve around economies of scale and scope and market power arguments. These follow traditional economic rationales from industrial organization economics and Porter's five forces theory. The second explanation for the value creation of acquisitions comes from synergies, defined as uniquely valuable combination of resources, created by merging the acquirer and the acquired. While this research is important to managers and informative to entrepreneurs, it provides little guidance on when being acquired is the wealth maximizing choice for the owners of a venture.

Key Findings

Value Creation

Research has found that for the acquiring firm, the best chance for rapid growth through acquisition takes place in fragmented service industries, which do not require a huge investment in plant and equipment, and the most successful acquisitions are those within the acquiring firm's industry.⁹⁹ Evidence indicates that acquirers of young firms prefer public rather than private ones. Research has also found that acquirers prefer young firms when reaching beyond the boundaries of their current industry.¹⁰⁰

Research has also highlighted the disadvantages of acquisitions for the acquirer, including expense, difficulty in valuing the firm, structuring the payment, managing the entrepreneur's emotional investment in their firm and in the sale. While acquisitions are often cheaper, smarter, and faster than building a firm, they often require considerable outlays up front and may, in some cases, be much more costly in the long run.¹⁰¹⁻¹⁰³ Sellers often demand a premium price for their inflated view of the firm they worked hard to build over many years, which may lead buyers to over pay.¹⁰⁴ In the acquisition of a small firm, one of the biggest problems a buyer faces is dealing with the entrepreneur.¹⁰⁵ Entrepreneurs often have difficulty viewing the firm in purely economic terms and perceive their firm as being more valuable and having more potential than it really has.¹⁰⁶ When the entrepreneur continues with the firm after the sale, there is a potential for her disillusionment and/or disappointment with the new firm due to changes in the operations and strategy of the firm, and/or their loss of control over the venture.¹⁰⁷

The timing of the sale appears to be important, based on anecdotal evidence. Many entrepreneurs do not sell until they face financial difficulties at which point, it may be difficult to find a buyer and their negotiating position is substantially weaker. Under these circumstances, the entrepreneur's ability to capture value through an acquisition has declined and in turn the value she is able to get for the firm has probably decreased. There are numerous examples of entrepreneurs who failed to take an offer in hopes of receiving a higher one only to sell later at a lower price. The timing of the sale and the conditions under which the entrepreneurs and owners maximize their returns is an area in need of much greater study and one, which is important for the field of entrepreneurship.

In addition to the aforementioned challenges, acquirers must be aware of the many noneconomic factors not evident, using traditional valuation methods that can influence the value of an entrepreneurial firm.¹⁰⁸ During the process of acquisition, key employees may be lost and key initiatives may be stalled, substantially weakening the competitive position of the acquired firm. In addition, acquisition frequently causes a loss of customers, since the change signals to the customer the potential need to reevaluate the relationship with the acquired firm. This is particularly problematic when the entrepreneur's reputation is difficult to

separate from the venture. In other words, customers view the firm as an extension of the entrepreneur, not as a stand-alone entity.

Acquisition Process

The steps in the process of exiting through acquisition should begin early with a conscious choice of this as an exit strategy. This allows the entrepreneur to prepare the firm for sale and start marketing the firm. Once an acquisition is initiated, a slew of activities is undertaken, including due diligence on the firm being sold, negotiations, signing a letter of intent (i.e., a letter expressing the intention of the parties to sell/buy the firm), and the agreement of sale. Preparing a firm for sale is analogous to preparing a house for sale, but rather than paint, much of the work is done through documenting and cleaning up prior transactions, preparing solid financial statements, and getting accounts receivable, inventory and other documents and in order. A successful acquisition typically involves a number of experts, including a lawyer, accountant, investment banker or business broker, and tax experts such as a tax lawyer and tax accountant. In smaller and simpler transactions, generally, when the value of the firm is less than US\$1 million and the bulk of the assets to be transferred are tangible and well documented, owners may be able to sell the firm with little or no outside assistance. In larger and more complex deals, conventional wisdom is that it is unwise to attempt such a transaction without significant assistance. However, the implications of the use of advisors (amount, type, quality, and so on) during a sale on the wealth realized by the entrepreneur have not been researched, which presents an interesting opportunity for those interested in the area.

In general, owners looking to sell a venture have a choice of engaging some variety of broker or marketing the business themselves. There are a number of ways to identify buyers without using a broker or investment banker. These include advertising in trade journals, Web sites, business papers, and the like; informing those that might have an interest in purchasing the firm (e.g., employees, managers, competitors, strategic partners, and clients); as well as professional sources, such as attorneys, accountants, and consultants. The key to marketing it oneself, appears to be getting the word out to potential acquirers through personal and business networks and the use of selective advertising. There are clear tax advantages to selling the business through an ESOP, but again the implications of this on the owner's wealth is unknown and in need of further study.

Business brokers are typically used in the sale of firms with revenue under US\$10 million. An investment banker is used for larger firms with the minimum size dependent on the size and prestige of the investment bank.¹⁰⁹ Advantages of using a broker or investment banker is their knowledge of potential buyers, means of contacting potential buyers, screening capabilities, and ability to maintain confidentiality of the sale, and negotiating skills.^{110, 111} Fees charged by bankers and brokers are typically a percentage of the sale price. For large firms, the fee is often based on the Lehman formula: 5 percent of the first US\$1 million,

and decreasing percentages on each million above the first. There may also be a fixed consulting fee due whether or not the firm is sold.^{112, 113} However, as mentioned earlier, the implications of employing either brokers or investment bankers on the wealth and satisfaction of the entrepreneur with the process have not been subject to rigorous study and this presents an opportunity for future research.

Valuation

To prepare for the sale of a firm, a valuation is made of the firm. The determination of value is influenced by who is doing the valuation. There are a number of ways to value a firm, including book value, adjusted book value (e.g., tangible and economic), income capitalization, discounted earnings, free cash flows, discounted cash flows, multiple of sales (price/earnings ratio), multiple of earnings, comparable firm method, comparable transaction method, asset accumulation, excess earning, earnings before interest taxes depreciation and amortization (EBITDA), liquidation value, and dividend capitalization.^{114–117}

For firms generating US\$5 million or more, the EBITDA method combined with a comparable transaction analysis is often used. In a firm with no significant earnings, a discounted cash flow method is often used. For smaller firms, say under US\$5 million, a rule-of-thumb formula may be used, but choice of the rule of thumb is industry specific. An example of the use of a rule-of-thumb formula is in the cable TV industry where the number of subscribers is used to value the firm.¹¹⁸ The goal is to get at a metric that actually reflects the underlying value drivers of the business. In the previous example, and in the burglar alarm and cell phone business that is reflected by the size of the network, number of customers is a good metric. In other businesses, it may be something completely different, such as measure of traffic on a Web site. Financial information is often not relied upon as much for small firms as it is for large firms, because of a perception that financial information is not completely reliable due to intermingling of the owner's personal and business expenses and/or because the business model will be changed after acquisition to conform to the acquiring firm's model, thus making the seller's accounting of income irrelevant.¹¹⁹

The most common structures for acquisitions include sale of assets, sale of stock, and mergers (which is the combination of the equity of the two firms). Sellers prefer the sale of stock to sale of assets. In a sale of stock, the seller can generally obtain long-term capital gain treatment on the stock sale. Proceeds from the sale of a private firm usually consist of cash, shares of the acquiring firm, or a combination of cash and shares.¹²⁰ The sellers' advisors argue for a cash sale over an exchange of stock, because the former provides cash up front and is more liquid. An exchange of stock is a tax-free transaction, but it is subject to the volatility and unpredictability of the purchasing firm's stock price. Buyers prefer the sale of assets to sale of stock because they can select the assets (and liabilities, especially those that are undisclosed or even unknown at the time of sale) they

want to acquire. When assets are sold, there may be a premium offered for goodwill often in the form of employment contract.¹²¹

A merger is the combination of two companies and is often used to describe the purchase of all the assets and liabilities of a company by a buyer. In a merger, all of the assets and liabilities of one firm are transferred to that of another. The merged firm may, however, not want all of the assets and liabilities.¹²² A merger provides an alternative to selling the firm or a portion of it.¹²³ It can provide instant product diversification, quick completion of product lines, increased technical expertise, economies of scale, greater executive depth, improved access to financing, vertical integration, entry into otherwise closed markets, and enhanced marketing capabilities.¹²⁴

Employee Stock Option Plans

Many entrepreneurs sell stock to their employees using an ESOP. In closely held companies, ESOPs are often used to create a market for the entrepreneurs' stock.¹²⁵ When the ESOP is used primarily for a retirement plan for the employees, the firm makes an annual contribution to the ESOP; the ESOP purchases stock in the firm, and then uses the money to buy stock from the firm and from stockholders. This is an attractive means of exit for an entrepreneur for a number of reasons including continuation of the business and tax ramifications.¹²⁶ An ESOP provides ownership to employees of their firm and allows the owners to gradually exit the firm. There are ordinary ESOPs, leveraged ESOPs, and transfer of ownership ESOPs.¹²⁷ However, while there is substantial research on the implications of ESOPs for future performance, human resource policies, employee satisfaction, productivity, and the like, there has been no research on the implications of ESOPs on the wealth and satisfaction of the prior owners.

Management Buyout

An MBO is a means by which an entrepreneur can exit by selling to partners or key managers of the firm. One advantage of an MBO is that it aligns the interest of the managers and owners and thus avoids the agency problem.^{128, 129} Disadvantages may relate to the financing of the buyout. When debt is used to finance the buyout (i.e., an LBO), the firm may struggle to cover the debt charges; however, in firms that generate substantial free cash flow, the leverage may lead to improved efficiencies, limit the agency problems and enhanced firm value. When the founder allows the managers to pay a portion of the purchase price upfront and the balance over time, the managers may struggle to pay the founder, thus putting the founder's payout at risk. The use of MBOs as an exit vehicle remains understudied. While substantial research has looked at venture-backed MBOs and the movement of firms via MBO and IPO from public to private and back to public, the condition under which an MBO is the preferred vehicle for exit, the wealth implications of MBOs for founders, and the characteristics of firms that

are well suited to use an MBO as an exit vehicle remain questions for future research.

Future Research

Much of the knowledge we have about acquisitions as a means of entrepreneurial exit is anecdotal and much of the literature is prescriptive in nature. We know relatively little about the relationship of nonfinancial firm characteristics and the value of the acquisition. For example, while we know the importance of networks and governance to IPO performance, we do not know if these things influence the valuation of acquisitions. It would be interesting to learn if networks and governance are important in all types of entrepreneurial exits or only in IPOs. It would appear that governance would influence acquisitions in that the management-team influence on firm performance has been demonstrated, and that firm performance is used to value the firm, then the management team characteristics, directly or indirectly, should be related to the valuation of the acquired firm. The relationship of the founder-CEO to IPO performance suggests the importance of founder-CEOs in the valuation of acquired firms. This may be especially important in valuing privately held companies because the founder is often instrumental in the sale of the firm.

Future research might also address the importance of networks in acquisitions. We know that networks are positively related to IPO performance, and so the same might be true for acquisitions. Networks of the firm, the founder, and the manager, may be called upon to identify potential buyers, may influence the valuation of the firm, and may also influence the success of the acquisition process by screening the acquisition targets. Another area for future research on acquisitions is the entrepreneur. Because an acquisition does not involve the regulation of an IPO, the entrepreneur is often more actively involved in an exit through an acquisition. For many ventures, the exit results in the founder leaving the company, while in other cases the entrepreneur may continue to be involved with the business and may face disappointed following the exit.¹³⁰ Examining the entrepreneur's influence on the selection of a buyer, the completion of the acquisition, the valuation of the firm, and the postacquisition performance of the firm are four areas for future research on the entrepreneur. A third area for future research is the role of investors in the acquisition process. Professional investors (rather than other companies) expect a return on their investment typically within five to seven years, and so they expect a plan for cash liquidity for themselves.¹³¹ This would influence not only investment in a firm but also the exit including the speed with which the firm is sold.

LIQUIDATION

A third exit strategy is liquidation. This exit strategy involves converting the firm's assets (e.g., inventory, accounts receivable, and equipment) into cash to

pay off the firm's debt. There are multiple reasons for liquidation, but the most frequent one is organizational failure. Organizational failure is a significant problem for start-ups. According to the Small Business Administration, one-third of new firms (with employees) survive less than two years. In 2004, there were 580,900 new firms and 576,200 closures.¹³² Many new firms face a liability of newness, which threatens their existence.¹³³

There is a significant body of research addressing organizational failure, including factors that are related to failure. Such factors include crisis recognition, symptoms of failure, TMT credentials, capital structure, industry conditions, and strategy.^{134–142} Moreover, what is considered failure in the literature is broad and often includes all cessation of business activity no matter what the cause is (e.g., insolvency, liquidation, merger, and acquisition).¹⁴³

When organizational failure is due to its inability to meet its financial obligations (i.e., insolvency), a firm may file for bankruptcy protection. Bankruptcy protection is sought if the firm fails to meet its obligations and petitions the court to reorganize (Chapter 11) or to liquidate (Chapter 7). The debtor's property is taken over by a trustee or receiver for the benefit of the creditors.¹⁴⁴ Chapter 7 "may be the best choice when the firm has no future, it has no substantial assets or qualities that cannot be reproduced after bankruptcy, or the debts are so overwhelming that restructuring them is not feasible."¹⁴⁵ Liquidation is especially challenging in that it not only seeks to honor the legal rights of the creditors but also minimize the damage to the founders and employees.¹⁴⁶ Struggling firms can go out of business without filing for bankruptcy (i.e., they liquidate their assets, pay creditors, and cease operations). However, filing for bankruptcy may protect assets from creditors and preserve some assets to pay the taxes and employees.¹⁴⁷

Future Research

As in the case of acquisitions, most of what we understand about liquidation as a means of entrepreneurial exit is anecdotal in nature. A number of studies have examined firm failure and some have addressed failure of entrepreneurial ventures, but little research addresses the liquidation of entrepreneurial ventures. The dearth of research addressing liquidation may be because of the percentage of liquidations that are privately held. Research addressing the factors leading to liquidation, including financial position, governance characteristics, networks, as well as economic conditions would be valuable to researchers and practitioners alike. Based on the finding of IPOs, researchers might consider the importance of governance characteristics, such as the involvement of the founder, the management team, and the board of directors. Because many of the firms that liquidate do so as a result of failure and because many failures take place within the first two years of the firm's inception, one would anticipate that the founder is actively involved in the firm. For small start-ups, the role of the board may not be as well developed as in larger start-ups. In addition, examining the process of liquidation would be informative.

CONCLUSION

This chapter addressed entrepreneurial exit—an inevitable, but underresearched, part of the entrepreneurial process. In addition, in emphasizing the need for an exit plan, three of the more frequently used means of exit were addressed: IPOs, acquisitions, and liquidations. Much more could be written about the exit strategy, including the other means of exit not addressed in this chapter, such as succession plans for family-owned businesses, reverse mergers for businesses seeking a public market for their stock, and direct public offering.

While there has been extensive research on IPOs of entrepreneurial firms, less is known about other means of entrepreneurial exit. While we infer some implications from the research on the exit of established firms (e.g., acquisitions and failure) for entrepreneurial firms, it is clear that research focused on the acquisition and liquidation of entrepreneurial firms among other forms of exit would benefit entrepreneurs and scholars alike.

Exit is frequently the last and most important strategic decision made by the founding entrepreneur, but as it stands today, aside from work on IPOs, the field can provide very limited guidance on the wealth-maximizing, or perhaps better, utility-maximizing choice among the various exit options. Topics, such as the implications of exit using MBOs and ESOPs for the wealth of entrepreneurs, the conditions under which acquisition is preferred to IPO, or the conditions under which different types of liquidation alternative maximize investors wealth (minimize loss) are ripe for further research. While research in the field of entrepreneurship has advanced our understanding of much of the entrepreneurial process, entrepreneurial exit remains to be explored.

NOTES

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Index

- Academy of Management Journal*, 156
- acquisitions, 110, 160; entrepreneurial exit and, 187–93; process, 190–91
- adhocracy, 136–37
- alertness, 26; mindfulness and, 49–52; schematic, 51
- Amazon.com, 12, 109
- Apple, 109
- assets, 115
- Band of Angels (Silicon Valley), 101–2
- behavior: differences, 27–28; of investment angels, 98–100
- Berra, Yogi, 45
- board: seats, 119
- bureaucracy, 136–37
- business angels, 87–107; business angel–venture capitalist relationship, 95–103; directions for future research, 103–4; financing, x, xii; formal group, 101–2; individual angel portal, 101; informal group, 101; institutionalization, 101–3; investment behavior, 98–100; investment process, 90; investment stages, 96; literature review, 89–95; negotiation/contract agreement processes, 90–93; trends, 95–103; yield rates, 100
- business plans, 11–12
- capital, 7, 11–12; covenants and, 118–19; dividend, 191; human, 28; venture financing, 109–34
- capitalists: business angel–venture capitalist relationship, 95–103; new ventures and, 74–75
- cash, 7
- CEO model, 71, 121
- cognition: differences in abilities, 26–27; entrepreneurial, 26; processes, 23
- communication, 11–12
- Compaq Computer, 12
- competition: international, 155
- consciousness, 48
- cousin consortium, 71
- covenants: capital and, 118–19
- cram down, 107 n.58
- creative product, 30–31
- creativity, 11–12; cognitive processes, 23; personal characteristics, 25–30; process, 22–25; search processes, 23–25; stages, 22–23
- Creativity Research Journal*, 20
- customer: initial acceptance, 6
- DCF (discounted future cash flow), 117, 129 n.113
- DCT (dynamic capabilities theory), 44

- deal flow, 113–15
 demography: of team composition, 69
 departmental model, 71
 discounted future cash flow (DCF), 117, 129 n.113
 Doerr, John, 8–9, 12
 due diligence, 8–9; for venture capital financing, 115–17
 dynamic capabilities theory (DCT), 44
- earnings before interest taxes depreciation and amortization (EBITDA), 191
 economics: environment, 31–32
 ecosystem, x. *See also* entrepreneurship
 effectuation, 44
 employee stock option plan (ESOP), 192
 enabling processes, 160, 161–64; direct processes, 163–64; intermediating processes, 161–63
 enacting processes, 164–69; exporting, 164–66; franchising, 167–68; outsourcing, 164–66; technology licensing and transfer, 166–67; venture finance and marketing and acquisitions, 168–69
 entrepreneurial exit, 179–201; acquisitions, 187–93; definition, 179; going public, 181–87; liquidation, 193–94; timing, 189; valuation, 191–92
 entrepreneurship, xv n.2; business angels and, 87–107; the creative person, 25–30; definition, 1; domain, 3; exit, xiv, 179–201; founders, 11–12; growth for survival and success, xiii; idea generation phase, 19–41; international, x, 155–77; knowledge and, 30–31; negotiating and contracting between venture capital and, 117–20; new venture opportunities and, 43–64, 93; overview, ix–xv; small-firm growth strategies, 135–54; successful, 5; timing, 10–11; Timmons model, x–xii, 1–18; venture capital financing, 109–34. *See also* teams
Entrepreneurship Theory and Practice, 156
 environment: economic, 31–32; for small-firm growth strategy, 140–41
 equity financing, xiii
 ESOP (employee stock option plan), 192
 ethnic minorities: new business ventures and, 94–95
 Federal Express, 109
 financial reward, 32
 financing: venture capital, 109–34
 firms: classification, 137; international, 155–77; simple, 137; types, 136–37, 148
 founders, 11–12
 franchising, 167–68
 Friedman, Thomas, 155
 fundamental attribution error, 31–32
- GEM (Global Entrepreneurship Monitor), ix
 Genetech, 12, 109, 187
 Gibson, Kir, 46
 global entrepreneurial firms, 155–77, 171 nn.17, 24; definition, 173 n.43; enabling processes, 161–64; enacting processes, 164–69; history, 157–61; research, 172 n.28
 Global Entrepreneurship Monitor (GEM), ix
 Google, 109
- Handbook of Research on International Entrepreneurship*, 156
 heuristics, 26–27
 human capital, 28
- ideas: business, 19; classification, 30; creative product, 30–31; creative solution, 31–32; creativity, 19–41; future research directions, 33–34; generation of, x, xi, 25; interaction among the elements, 33; versus opportunity, 20–22; personal creativity, 25–30; practical implications, 34–35; process, 22–25; transition, 26
 information: overload, 32; research, 24–25
 initial public offering (IPO), x, 11, 74, 96, 110, 117, 181–82
 insiders, 110
 institutionalizing, 24; of the business angel market, 101–3
 integration, 2

- Internet, 127–28 n.83
 interpretation, 21
 intuiting, 12, 21
 investors, 87–107, 184; due diligence, 89–90; exiting, 122–23; investment activity, 88; investment stages, 96; long-term, 99; preinvestment processes, 89–90; private (*See* business angels); professional, 193; successful, 5
 IPO (initial public offering), x, 74, 96, 110, 117; definition, 181–82
- Japan, 166
 jobs: creation, 87
Journal of Business Venturing, 156
Journal of Creative Behavior, 20
Journal of International Entrepreneurship, 156
- Kirzner, Israel, 4, 50
 Kleiner, Perkins, Caulfield and Byers, 12
 knowledge: differences, 28–29; of entrepreneurs, 30–31; grafting, 77–78
 Kolb's Learning Style Inventory, 28–29
- lawyers, 93
 leadership, 11–12
 learning: differences, 29–30; higher-level, 27; theory, 163
 licensing, 166–67
 limited partner (LP), 111–13
 liquidation, 193–94; value, 191
 Lotus Development Corporation, 12
- management: buyout, 192–93; top management teams, 182
 margin analysis, 7
 market: demand assessment, 6
 merger and acquisition (M&A) activities, 160; definition, 192
 microsystems, 12
 Mindful Attention Awareness Scale (MAAS), 53, 54–55
 mindfulness, 45–49; attributes, 53–56; components, 49; constructs and, 47, 48–49; description, 49; development, 56; as enabler of entrepreneurial alertness, 49–52; entrepreneurial model, 52–61; overview, 45–49; psychology and, 45; schematic, 51; steps to becoming, 56–61
 Minority Business Roundtable Venture Capital Fund, 95
 models, xiv; CEO, 71; departmental, 71; entrepreneurial, 171 n.24; of entrepreneurial mindfulness, 52–61; for entrepreneurial strategic orientation, 139; integrated models of internationalization, 156–57; mental, 50; of small business growth, 144; social network, 69–70
 motivation, 24, 141–42; of business angels, 97
 multinational enterprise (MNE), 157
- networks, 8; alliance formation, 162; in internationalization of entrepreneurial firms, 162; social, 32, 69–70
 New Africa Opportunity Fund, 95
New Venture Creation (Timmons), x
 new ventures: creation of, xi
 New Zealand, 165
- opportunity recognition, x, 22; definition, 44; entrepreneurial alertness, 49–52; exploitation, 4; versus idea, 20–22; identification and evaluation, 5–7; mindfulness, 45–49; model of entrepreneurial mindfulness, 52–61; new ventures, 43–64; size, 6–7
- partial least squares (PLS), 142, 144
 policymakers, 150–52
 protectionism, 97
 psychology: mindfulness and, 45
- research methods, 139–42; born-global, 172 n.28; design and sample, 139–40; entrepreneurial strategic orientation, 140; environment, 140–41; motivation, 141–42; resources and capabilities, 141; small business growth, 140; variables and measures, 140
 resource-based theory (RBT), 44

- resources, 7–8; creative, 8; networks, 8.
See also teams
- return on assets (ROA), 166
- return on sales (ROS), 166
- Sarbanes-Oxley, 187
- scholarship, 56
- Shackle, George, 36
- Silicon Valley, 101–2
- small and medium-sized enterprises (SMEs), xiii, 155
- Small Business Economics*, 156
- small-firm growth strategies, 135–54;
 “black box” and, 135–36; characteristics, 147; classification and implications for small business managers, 147–50; implications for policymakers, 150–52; increasing growth, 145–47; research analysis and results, 142–45; research methods, 139–42; strategic orientation, 136–39; types of firms and, 148
- social network, 32; model, 69–70
- Springboard Enterprises, 95
- Sweden, 73
- swift trust, 105 n.21
- SWOT analysis, 146
- syndicates, 110, 116, 184
- teams, x, xi; cohesiveness, 71; cousin consortium, 71; demography, 69; entrepreneurial, 8–9; formation, 9; functional completeness, 78; grafting, 77–78; influence on emerging firms, 76–77; launch and performance, 75–76; learning and development, 77–78; members, 67, 73; new venture, 65–85; performance, 76–77; size, 76; team-building issues, 68–69; top management, 182
- technology: licensing, 166–67; transfer, 166–67
- Timmons model, x, 1–18; components, 2, 3–9; entrepreneurial team, 8–9; entrepreneurship domain, 3; fit and balance, 9–10; as framework for venture potential, 12; holistic and integrated approach, 9–12; leadership, creativity, and communication, 11–12; opportunity, 5–7; practice and teaching, 12–13; process orientation, 2–3; resources, 7–8; schematic, 2; theoretical constructs, 2; timing, 10–11. *See also* entrepreneurship
- top management team (TMT), 182
- trade sales, x
- United Kingdom, 165
- valuation, 118, 191–92
- value: to the customer, 6
- venture capital (VC): negotiating and contracting, 117–20
- venture capital financing, x, 109–34; deal flow and screening potential investments, 113–15; due diligence, 115–17; exiting the investment, 122–23; fund raising, 111–13; gaps and future research, 124; global, 168–69; literature review, 110; monitoring and value-added activities, 120–22; negotiating and contracting, 117–20; process, 109–10
- venture capitalists (VCs), 109
- ventures, new: business angel–venture capitalist relationship, 95–103; capitalists and, 74–75; description, 66–68; experience and, 93; formation, 68–70; growth strategies, x; launch and performance, 75–76; members, 72–73; mindful practice, 43–64; perception of, 61; postdeal process, 94; process development, 70–72; teams, 65–85
- Wall Street, 187
- well-being, 48
- women: new business ventures and, 94–95
- World Is Flat, The* (Friedman), 155

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Entrepreneurship

ENTREPRENEURSHIP

The Engine of Growth

Volume 3
PLACE

Edited by **Mark P. Rice** and
Timothy G. Habbershon

PRAEGER PERSPECTIVES

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Contents

| | |
|---|-----|
| Preface | vii |
| Introduction | ix |
| <i>Mark P. Rice and Timothy G. Habbershon</i> | |
| 1. Entrepreneurship as Organizing: Emergence, Newness, and Transformation | 1 |
| <i>William B. Gartner and Candida G. Brush</i> | |
| 2. Managing Growth through Corporate Venturing | 21 |
| <i>Ian MacMillan and Rita Gunther McGrath</i> | |
| 3. Assessing the Context for Corporate Entrepreneurship: The Role of Entrepreneurial Orientation | 49 |
| <i>G. T. Lumpkin, William J. Wales, and Michael D. Ensley</i> | |
| 4. The Family as a Distinct Context for Entrepreneurship | 79 |
| <i>Timothy G. Habbershon</i> | |
| 5. Franchising | 99 |
| <i>Stephen Spinelli Jr.</i> | |
| 6. From Intentions to Venture Creation: Planned Entrepreneurial Behavior among Hispanics in the United States | 119 |
| <i>Erick P. C. Chang, Franz W. Kellermanns, and James J. Chrisman</i> | |

| | | |
|------------|---|-----|
| 7. | The Sociology of Entrepreneurship as a Provider of Context <i>Patricia Gene Greene and John Sibley Butler</i> | 147 |
| 8. | New Venture Creation and Economic Transition: The Case of Slovenia <i>Richard T. Bliss and Lidija Polutnik</i> | 163 |
| 9. | Public Policy and Enhancing Entrepreneurial Capitalism <i>Laurence S. Moss</i> | 191 |
| 10. | Why Entrepreneurship Is a Regional Event: Theoretical Arguments, Empirical Evidence, and Policy Consequences <i>Rolf Sternberg and Hector O. Rocha</i> | 215 |
| 11. | Public Policy as an Enabler or Inhibitor of Entrepreneurship: The Case of Sarbanes-Oxley <i>Elaine J. Eisenman, Mark P. Rice, and Paul Severino</i> | 239 |
| 12. | Financing the High-Growth Entrepreneurial Venture: A Public Policy Perspective <i>James Henderson, Benoit Leleux, and Augusto Ruperez Micola</i> | 263 |
| 13. | Technology-Driven Entrepreneurship: Muddling through and Succeeding with the Second Product <i>Scott L. Newbert, Steven T. Walsh, Bruce A. Kirchoff, and Victor A. Chavez</i> | 291 |
| | Index | 313 |
| | About the Set Editors | 321 |
| | About the Contributors | 325 |

Preface

The editors of this three-volume set are pleased to present readers with insight into the field of entrepreneurship by some of the leading scholars around the world. Babson College, the home institution for all the editors, has been a leader in entrepreneurship education for over thirty years and is recognized by many leading publications as the top school for teaching entrepreneurship at both the MBA and undergraduate levels (thirteen years running by *U.S. News and World Report*). Since 1999, Babson College, in conjunction with the London Business School, has led the Global Entrepreneurship Monitor (GEM) research project. GEM assesses the state of entrepreneurship activity across more than forty countries around the world (comprising two-thirds of the world's population and over 90 percent of the world GDP), and has shown that entrepreneurship can be found in all economies and that almost 9 percent of the adult population is actively attempting to launch a new venture at any given time.¹ While the percentages vary by country, GEM illustrates the importance of entrepreneurship and provides context as we try to better understand the entrepreneurial phenomenon.

We have compiled three volumes focusing on entrepreneurship from three different perspectives: people, process, and place. Volume 1, edited by Maria Minniti, looks at the intersection of people and entrepreneurship. Taking a broad view of entrepreneurship as a form of human action, chapters in this volume identify the current state of the art in academic research with respect to cognitive, economic, social, and institutional factors that influence people's behavior with respect to entrepreneurship. Why do people start new businesses? How do people make entrepreneurial decisions? What is the role played by the social and economic environment on individuals' decisions about entrepreneurship? Do institutions matter? Do some groups of people such as immigrants and women face particular issues when deciding to start a business? The volume addresses these

and other questions. Each chapter provides an extensive bibliography and suggestions for further research.

Volume 2, edited by Andrew Zacharakis and Stephen Spinelli, examines the entrepreneurial process. The book proceeds through the lifecycle of a new venture start-up. Chapter authors tackle several key steps in the process, ranging from idea, to opportunity, team building, resource acquisition, managing growth, and entering global markets. These chapters identify the current state of the art in academic research, suggest directions for future research, and draw implications for practicing entrepreneurs. What is clear from this volume is that we have learned a tremendous amount about the entrepreneurial process, especially over the last fifteen years. This deep insight leads us to ask more questions and suggest new research to answer these questions. This learning is also applied in the classroom and shared in this book so that students and entrepreneurs can assess best practices.

Volume 3, edited by Mark Rice and Tim Habbershon, examines place. In this volume and in the literature, *place* refers to a wide and diverse range of contextual factors that influence the entrepreneur and the entrepreneurial process. We represent these contextual factors as a series of concentric circles ranging from environmental and global forces, to national and regional policies, industries and infrastructures, to cultural communities, families, and organizational forms. Chapters in this volume address entrepreneurship in the context of the corporation, family, and franchise. We provide insights on ethnicity and entrepreneurship in the U.S. Hispanic, Slovenian, and German context. We look at the impact of public policy and entrepreneurship support systems at the country and community level, and from an economic and social perspective. We also examine the technology environment and financing support structures for entrepreneurship as context issues. By placing this array of contextual factors into an ecosystem perspective, we show how entrepreneurship is a complex input–output process in which people, process, and place are constantly interacting to generate the entrepreneurial economy.

It is our hope that the chapters spur the reader's interest in entrepreneurship, that the academic who is new to entrepreneurship will see an opportunity to enter this field, and that those who are already studying this phenomenon will see new questions that need investigation. We hope that practitioners and students will glean best practices as they work in entrepreneurial ventures and that the prescriptions within these chapters will help them succeed. We also think that these volumes can help policymakers get a firmer grasp on entrepreneurship and the potential it has to spur economic growth within a country, state/province, and town. Entrepreneurship operates in an ecosystem that is reliant upon all the audiences of these volumes. As we gain better understanding of the ecosystem, we all benefit.

NOTE

1. M. Minniti, W. Bygrave, and E. Autio, *Global Entrepreneurship Monitor: 2005 Executive Report* (Boston, MA: Babson College and London Business School, 2006).

Introduction

Mark P. Rice and Timothy G. Habbershon

The entrepreneur starts and builds a new venture within a particular place. In this opening sentence, we see the inevitable linkage of people, process, and place. While the three volumes in the Praeger series on entrepreneurship recognize different aspects of entrepreneurship, we would not want to connote that they are independent of one another, or that they can be somehow separated. In fact, throughout this volume, reflections on place inevitably reference people and processes, and highlight their reciprocal interaction with place. Adding to the complexity, *place* does not have a singular or static meaning. Within the literature and this volume, place refers to environmental factors, societies and cultures, mode and organizations, communities, arenas, policies, and structures. In order to fully understand the rich phenomenon that we refer to as entrepreneurship, we cannot constrain the definition of place, but rather we must identify the full range of contextual factors that interact with the entrepreneur and entrepreneurial process.¹

PLACE AS AN INPUT–OUTPUT MODEL

Generally the entrepreneur does not start with all the elements for success fully assembled. The place in which the entrepreneur operates is the source from which the entrepreneur accesses or acquires the elements that enable the venture to build the capacity, and to deliver value to its marketplace. Typically, after a start-up and ramp-up period of capacity building, the venture—if it is to survive and succeed—must achieve at least breakeven, with respect to the resources it accesses or acquires from within its place, and the value it delivers to the stake-

holders that provide those resources. The rates of acquisition and value delivery may vary over time, creating periods of decline, stability, or growth in the venture. The place in which the entrepreneur chooses to start his/her endeavor significantly impacts the trajectory of these outcomes.

This idea of the flow of resources—the acquisition of resources by the entrepreneur and the delivery of value to the environment—is fundamental to the entrepreneurial process. It can be characterized as an input–output model. The external environment as well as the venture itself inputs various resources that are transformed through the entrepreneurial process into outputs that are delivered back to the external environment. Typically, during the start-up phase of an entrepreneurial venture, the resources acquired exceed the value of the products or services delivered by the venture to its customers. In the longer run, however, the entrepreneur must establish a business model in which the value created equals or exceeds the resources consumed in order to achieve sustainability. The munificence of the place in which the entrepreneurial process operates can vary substantially, with munificence reflected in the quantity and quality of resources, as well as the relative ease with which they can be accessed. Because it is individual actors that engage in the process (e.g., entrepreneurs, intermediaries, service providers, investors, early adopters, and so forth), the skill level of each of these actors also plays a critical role in determining the rate of entrepreneurial success. Referencing the skill levels of actors also speaks to the educational and support services associated with place, and how they reciprocally function as an enhancer or detractor of inputs and outputs.

This input–output resource model is implicitly or explicitly evident in the descriptions and definitions of entrepreneurship. Schumpeter argued that entrepreneurship is creative destruction, as resources are shifted to points of entrepreneurial value creation. Dynamic disequilibrium, brought on by the entrepreneurial process, rather than equilibrium and optimization, is the norm of a healthy economy, and the central reality of economic theory and practice.² Drucker states that entrepreneurs are the drivers of this disequilibrium, as they search for change, respond to it, and exploit it as an opportunity.³ Howard Stevenson has proposed that “entrepreneurship is the pursuit of opportunity without regard to resources currently controlled.”⁴ He emphasizes that the entrepreneur must be adept at gaining access to and utilizing resources, rather than controlling and allocating them. The Timmons model operationalizes the entrepreneurial process by demonstrating how the interacting elements of the entrepreneur, resources, and opportunity create the input–output system.⁵ Thus, the earlier macro- to microreflections on the concept of entrepreneurship and the allocation of resources further highlight the connections among the entrepreneur, the entrepreneurial process, and the environmental context in which the entrepreneur operates. Place, as entrepreneurial context, is therefore, a significant inhibitor or accelerator of the entrepreneurial process, depending upon the effectiveness and efficiency of the interactions in the input–output model.

IDENTIFYING THE CONTEXTUAL FACTORS

Contextual factors associated with place can be identified as a series of concentric circles, ranging from global forces to national and regional infrastructures, to cultural families and organizational forms. Though often interrelated, contextual factors can be practically viewed from external and internal perspectives.

External Perspective

- Global connectivity
- Governmental infrastructure, public policy and regulations
- Regional and national macroeconomic conditions
- Regional and national education and support systems
- Populations, cultures, and societies of people
- Communities, clusters, and niches of organizations and services
- Sophistication and readiness of customers
- Outside sources and sophistication of risk capital for new venture
- Industry conditions, stage, and globalization
- Product and market life stage.⁶

Internal Perspective

- Organizational forms and modes of doing business
- Organizational processes, systems, and structures
- Business life cycle and stage of development
- Organizational culture and mindset
- Inside sources and sophistication of capital for corporate venture
- Stakeholder relationships and networks
- Market channels and outlets
- Entrepreneur and team experience.

AN ECOSYSTEM PERSPECTIVE

In order to explain how the contextual factors create an input–output model, a number of writers have recognized the concept of the entrepreneurship ecosystem, at all economic levels—from micro to macro.^{7–9} Zacharakis, Shepherd, and Coombs, for example, suggest that industries and subindustry contexts could be characterized as an ecosystem with various relationships of interdependence.¹⁰ Aldrich and Martinez suggest that communities are a “set of coevolving organizational populations” that are joined by ties of commensalisms and symbiosis.¹¹ They describe how new ventures can relate to populations that share

the same niche by competing or cooperating (commensalisms), or if they have different niches they can benefit from each other's presence (symbiosis).¹² A common thread in ecosystem models is that different regions have characteristics that attract resources necessary for innovation and economic development, and their characteristics vary from region to region. Thus, the characteristics of a certain entrepreneurial context may be more supportive of a certain kind of entrepreneurial activity, which in turn attracts entrepreneurs interested in that kind of entrepreneurial activity as well as the resources they need. Systemically, the entrepreneurs and resources that are attracted to a region then become part of the ecosystem, leveraging and enhancing the original context. Lambkin and Day noted that there are a great variety of organizational forms, and that some forms are more favored than others in certain environments.¹³ As in all ecosystem models, the organizational strategies and forms that the entrepreneur employs must match the ecological conditions, if they are going to find an advantage within the ecosystem.¹⁴

The ecosystem model implies that place must be considered to be dynamic rather than static. An evolutionary approach has often been used to describe how the environment for entrepreneurs is constantly changing. Within this biological model, new opportunities are created for expansion and founding of organizations, as a result of the environmental changes. These changes result in new resource sets that are available within the entrepreneurial ecosystem.¹⁵ As entrepreneurs match their strategy with the evolving environment, they add new enterprises and further the overall economic progress of the ecosystem.

DELINEATING CONTEXTUAL CONTRIBUTIONS

In order to more fully understand the importance of place, we will continue to delineate some of the contributions that context makes to the entrepreneur and entrepreneurial process. The chapters in this volume further amplify on many of them. We can outline these contributions as follows:

- Supply of entrepreneurs
- Sources of intellectual property (IP)
- Conditions around failure
- Extent of transaction costs
- Rate of adoption
- Effectiveness of service providers
- Function of intermediaries
- Availability of risk capital
- Posture of public policy
- Opportunity for training and education

Supply of Entrepreneurs

Context is critical to a region's supply of entrepreneurs. When there is an abundance of entrepreneurs in an area, they generate a high level of entrepreneurial energy, as they interact, stimulate, and challenge each other. This, in turn, creates demand for entrepreneurship supporters and intermediaries to provide resources that can support entrepreneurs. This is one of the reasons that the gap between entrepreneurial activity in highly developed regions like Silicon Valley and Boston's Route 128, and entrepreneurial activity in other regions may grow wider over time. In a sense, "the rich get richer." However, the upstarts among entrepreneurial regions can take action to close the gap by:

- Creating the infrastructure conditions that encourage entrepreneurs to move to their regions
- Creating and supporting organizations and programs that develop local entrepreneurs

The first category might include creating locally focused sources of risk capital, such as angel networks and venture capital funds. (If the regions with a high concentration of entrepreneurs have an unfavorable ratio of supply of risk capital to demand, entrepreneurs might be motivated to move to regions with underutilized sources of risk capital.) The second category often includes business schools at local colleges and universities that develop entrepreneurship curricula and programs; incubators and small business development centers; entrepreneur networks; and a wide variety of other economic development activities and organizations.

Trying to create an entrepreneurial ecosystem will simply be a financial black hole for its sponsors if the number of entrepreneurs to take advantage of its resources is not sufficient. In addition, entrepreneurial skill is itself a key variable. Less skillful entrepreneurs will be inefficient in accessing the resources available within the ecosystem, while more skillful entrepreneurs will be efficient in leveraging the resources to accelerate the development of their ventures, thereby enhancing the probability of survival, the rate of growth, and overall financial success. Hence, a mature ecosystem includes mechanisms that attract sophisticated entrepreneurs from outside and those that develop the sophistication of local entrepreneurs.

Sources of Intellectual Property

For technology-intensive entrepreneurial activity, sources of IP may be a key variable to keep a steady flow of entrepreneurial output. Often, technological ventures are started by engineers or scientists, who bring their IP with them. In these cases, there is often the need for infrastructure and resources to turn it into a viable entrepreneurial endeavor. This capacity might include support for

commercialization, the acquisition of additional technical talent to develop that IP further (which creates additional IP), or processes for licensing of IP to or from others. In other cases, the entrepreneurial team is developing IP to which they have gained access. IP and technical talent are often acquired through universities that include engineering, science, or medical schools, from government labs, or through partnering relationships with large, technology-intensive companies. Whether it is IP seeking an entrepreneurial team or an entrepreneurial team seeking IP, the systems, processes, and structures for linking them are critical elements of the entrepreneurial ecosystem.

Conditions around Failure

The national and regional contextual factors are critical to creating the conditions around entrepreneurial failure. Given the extensive number of failure factors implicit in the entrepreneurial process—lack of seed capital, poor delegation, ineffective team, lack of market knowledge, poor planning, competitor aggression, and the like—entrepreneurs often must learn their way to success through failures. The United States has long been recognized for having a relatively entrepreneur-friendly culture. The individual who takes risks, fails, learns from the failure, tries again, and succeeds is highly regarded. The bankruptcy laws are designed to enable creditors, investors, and entrepreneurs to settle up accounts when there is a business failure and to move forward. In many other countries, risk taking and business failure carry a much heavier social stigma or legal penalty, and hence, people are discouraged from pursuing entrepreneurial opportunities. When potential entrepreneurs are inclined to pursue safe and stable employment in established companies, the entrepreneurial pipeline is constrained.¹⁶

Extent of Transaction Costs

Entrepreneurs are resource hungry. As they pursue the resources that they require for start-up and growth, they inevitably encounter transaction costs. In those regions where entrepreneurs must invest a relatively large amount of time, energy, and current resources to overcoming barriers and systemic rigidities, in order to leverage current resources into a larger and more complete resource pool, the probability of failure increases. Conversely, in regions that support fluidity and ease of access to resources, the probability of entrepreneurial success increases. Hamel suggested that the fluidity in the movement of entrepreneurial talent, intellectual property, and risk capital has made Silicon Valley the most successful entrepreneurial region in the world.¹⁷

Rate of Adoption

The adoption rate of new technologies, processes, products, or services is often critical to the survival of the entrepreneurial venture. Entrepreneurs who are

developing new products and services need to be able to test them with prospective customers. Entrepreneurial regions often evolve around the customer adoption mind-set and capabilities. Similarly, a competitive industry drives companies to be alert to emerging innovations that have the potential to change the competitive landscape. If the competitors are relatively healthy from a financial perspective, they will be willing to invest resources in taking on the role of early adopters.¹⁸ The presence of early adopters can serve as an accelerator for the entrepreneur.

Effectiveness of Service Providers

The quantity and quality of service providers are important in determining the relative effectiveness of the entrepreneurial ecosystem. The service providers that are important to entrepreneurs include small business bankers, business attorneys, intellectual property attorneys, accountants, marketing consultants, PR firms, HR consultants, and search firms. These individuals and organizations provide services that the entrepreneur is often not prepared to deliver in-house. In some cases, service providers will work on a pro bono basis or at a reduced rate, either to be seen as a good citizen of the community that is trying to develop a stronger economy, or to promote long-term business development for their firms. Effective and committed service providers can be accelerators for entrepreneurs; ineffective and uncommitted service providers can be inexpensive financially, but in the end, very expensive with respect to the time the entrepreneur must invest. In some cases, the support organizations that are established to stimulate entrepreneurial activity in a given region also play an important role in accelerating the development of effective service providers.^{19, 20}

Function of Intermediaries

Intermediaries play an important lubricating role in any context, increasing the fluidity with which people, intellectual property, and resources come together. Relatively mature entrepreneurial regions may have a ready supply of serial entrepreneurs. Nascent regions, in contrast, may have a limited supply of entrepreneurs, in general, and those that are present tend to be new to the game. Intermediaries can change the entrepreneurial context of a region. Intermediaries are the connectors and the boundary spanners in the entrepreneurial process. Their skills enhance the rate of formation and intensity of linkages between entrepreneurs and resources, and reduce the impact of systemic rigidities. They may also play an important training role, accelerating the rate at which nascent entrepreneurs increase sophistication with respect to resource acquisition and utilization skills.²¹ Intermediaries serve and support both entrepreneurs and know-how experts such as the service providers discussed earlier.²²

Entrepreneurial intermediaries from the government and educational arenas generally serve a portfolio of ventures and seek to have a local, regional, national,

or international impact. At the local and regional levels in the United States, programs designed to create a supportive entrepreneurial context include small business development centers (though they are sponsored by a national program), business incubators, science and technology parks, regional development councils, entrepreneur networks, and a multitude of professional and trade associations. Many states have created programs to support entrepreneurial activity, such as the Massachusetts Technology Development Corporation, the Ben Franklin Partnership in Pennsylvania, and the Centers for Advanced Technology in New York State. At the national level in the United States, the Small Business Administration offers a variety of financing and assistance programs. Also, the Small Business Innovative Research Act has provided significant support for technology and business development for technology-based ventures. Finally, at the global level, the United Nations Development Program and a variety of government, nongovernment, and foundation programs also seek to stimulate and support entrepreneurship through a variety of approaches.

Availability of Risk Capital

Some entrepreneurs start businesses that can achieve breakeven immediately, particularly if they are self-funding the start-up costs through sweat equity or investing their own capital. In start-ups with immediate strong cash flow and substantial assets, it may also be possible to secure debt financing from small business lenders, particularly if the entrepreneur is willing to pledge personal assets as collateral.

For those ventures that do not fit the self-funding capabilities model, the availability of risk capital is a critical success factor. Particularly in high-potential ventures, the participation of equity investors is often necessary to cover the negative cash flows that occur during start-up and ramp up as the venture strives to achieve sustainability. In addition, risk capital may be important for supporting venture growth and competitiveness even after sustainability is achieved. The venture capital industry is well established in the United States, and is emerging in other parts of the world; however, it tends to be focused on the few highly entrepreneurial regions that provide attractive deal flow. In other regions that are striving to become more entrepreneurial, angel investors, angel investor networks, and government-sponsored venture funds are critical for stimulating the growth of a local or regional entrepreneurship ecosystem.

As is the case for service providers and intermediaries, the sophistication of the providers of the risk capital is also a critical issue and is often dependent upon regional contextual factors. Sophisticated investors bring more than money to the table. They also add value through advising and mentoring the entrepreneurial team, and by utilizing their own networks to gain access for the venture to expertise, customers, suppliers, potential employees, and other sources of financial support. Unsophisticated investors may increase the resource acquisition

costs the entrepreneur must bear by providing too little value for the equity they take, thereby diminishing the prospects for entrepreneurial success.

Posture of Public Policy

Public policymakers have a major impact on shaping the local, regional, state, national, or international infrastructure, and dynamics of the entrepreneurial context. At the local, regional, and state levels, public policy can stimulate the development of a variety of programs that establish and sustain the support infrastructure for the entrepreneurial ecosystem: incubators, regional entrepreneur networks, state-supported venture capital funds, economic development agencies, university-based research, and research centers. At the national level, public policy shapes commerce at a macro level in a wide variety of ways: bankruptcy laws; regulations defining processes, procedures, and practices related to venture funding (both private equity and public offerings); laws governing disclosure and reporting requirements (e.g., Sarbanes-Oxley); antitrust legislation; support for the research infrastructure (university, government, and private sector); and education. Public policy may be designed to protect investors; to level the playing field; to protect workers (for example, through the Occupational Safety and Health Administration); to promote job creation; to create a specific social, political, or economic capacity for the common good (defense, telecommunications, transportation, health care); to make the country more competitive in the global marketplace. In many cases, these public policy objectives are in conflict and hence can create a constraining environment for entrepreneurship. Inevitably, public policy can create new opportunities; accelerate or diminish existing economic activity; and deter or eliminate other forms of economic activity; and are, therefore, a critical contextual factor for entrepreneurship.

Opportunity for Training and Education

Training and education are key contextual influences, particularly for regions that are trying to develop nascent entrepreneurs. Entrepreneurs often affiliate with programs, such as incubators, small business development centers, and regional economic development organizations that offer periodic training programs, intended to enhance the knowledge and skills of the entrepreneurs, with respect to critical success factors they must address, if they are ultimately going to be successful. Business plan competitions provide opportunities for entrepreneurial exploration and learning. In some cases, entrepreneurs may start their ventures while they are working on a degree within an entrepreneurship program. For example, Babson College selects students each year for its Entrepreneurship Intensity Track, which supports students pursuing a venture start-up during the second half of the MBA Program. These entrepreneurs are embedded in an ongoing training and education experience that is running in parallel with the

launch of their entrepreneurial venture. Governments and university systems are often the prime mover in training and educational efforts.

OPERATIONALIZING A CONTEXTUAL MODEL

The context in which entrepreneurship occurs is often operationalized by establishing the processes, systems, and organizational structures designed to stimulate and support entrepreneurial activity. One such example over the past twenty-five years is the business incubator. Business incubation has expanded rapidly into a variety of industry sectors (high tech, services, arts, manufacturing) and into a diversity of settings (rural, inner city, industrial park, and university campus). Once primarily the domain of standalone start-up ventures, business incubators now serve as vehicles for technology transfer and economic development for government, university, and corporate research laboratories. The concept of incubation extends beyond the typical form taken by the 5,000 incubators that are tracked by the National Business Incubation Association (NBIA). In fact, the definition offered by the NBIA reinforces this observation. According to the NBIA:

Business incubation is a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services.

This definition can apply equally well to incubators that serve start-up ventures and those that serve corporate ventures. It can also occur in a community context, as suggested by Greene and Butler, who compared the context for entrepreneurship provided by a traditional incubator to the context provided to entrepreneurs in the Pakistani community in Austin, Texas.²³ They observed similarities in business advising, counseling, and providing access to capital.

The traditional standalone incubator exemplifies the input–output model, conceptually discussed earlier in this chapter. The input–output flow can be seen in the diagram in Figure I.1. It considers the relationship between entrepreneurial ventures and the external environment, with the business incubator serving as both an intermediary and a context in which ventures can start, survive, grow, and graduate.²⁴

There are actually two levels of context within this framework. First the incubator itself offers (1) access to resources through shared facilities, equipment, and services; (2) advising and counseling, typically by the incubator staff; and (3) training and education. Second, the incubator also serves as an intermediary between the incubator companies and the economic community in which the incubator resides, connecting its entrepreneurs to human and financial capital; external expertise through service providers; mentors, counselors, and advisers available through partnering organizations and networks; and training and education through affiliation with educational and professional organizations.

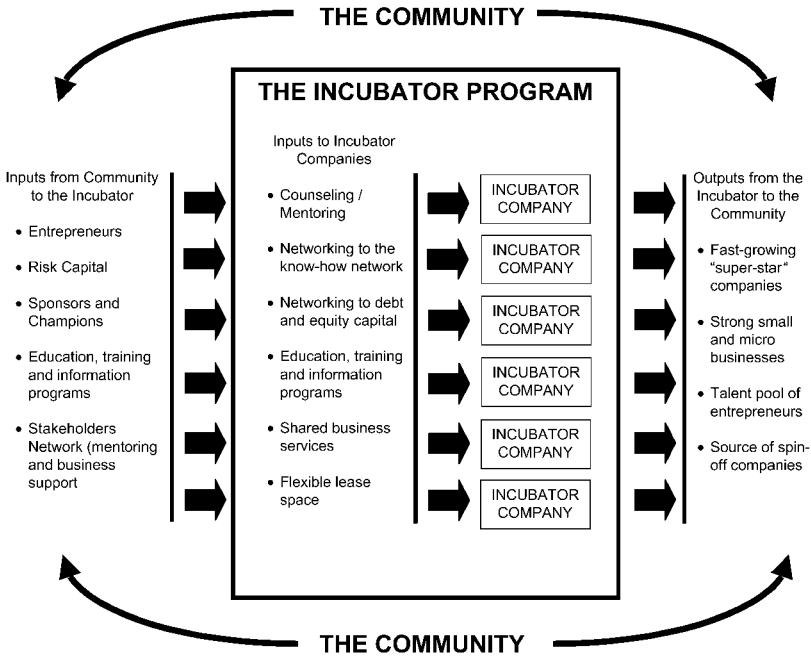


Figure I.1. Input–output model of business incubation.

The network within the incubator and the parallel networks that it can access through its relationship with the community provides access to a variety of other resources, including potential suppliers and customers. In this sense, incubator companies and the economic community in which they reside are engaged in coproduction, in which both the producer of the ventures (the entrepreneur) and the consumer of the ventures and its outputs (products and services, jobs, return on investment)—that is, the community—are engaged in the production process. The incubator, the resource networks, and the know-how networks are thus the means through which the community engages with the entrepreneur in coproduction.²⁵ The concept of the business incubator can, therefore, be generalized to the creation of a context, a system, a structure, and a process for enhancing the start-up, survival, growth, and success of ventures, which in turn can take a variety of forms.

CHAPTERS HIGHLIGHTING CONTEXTUAL FACTORS

Now that we have described the contextual factors associated with place, we can provide an overview of each chapter. The point of the overview is both to introduce the reader to the subject matter, and to discuss how it fulfills its role in

highlighting the contextual factors that are relevant to the entrepreneur and entrepreneurial process. The chapters provide a very diverse perspective on place, in terms of both their content and approaches to the subject. This seems fitting, however, given our presentation of the richness associated with place.

Chapter 1 gives this volume an introduction to the phenomenon of entrepreneurship. Gartner and Brush provide a framework for segmenting entrepreneurship research and practice that focuses on three processes: emergence, newness, and transformation. The authors demonstrate that many of the disparate findings in the entrepreneurship literature are due to differences in the type of organizing phenomena studied. An interesting insight about context presented by the authors is that these processes (emergence, newness, transformation) may occur at levels of analysis beyond the entrepreneurial organization, that is, as part of the context. They suggest that networks, industries, and communities (all examples of entrepreneurial context) also move through sequences of emergence, newness, and transformation.

The organizational form that an entrepreneurial venture takes is a key contextual feature of place. In Chapters 2, 3, 4, and 5, we address a variety of established forms selected by entrepreneurs—venturing within the context of an existing corporation, enterprising through the family business, and entrepreneurship within the franchised organization.

Corporate entrepreneurship encompasses new ventures, innovation, and renewal activities. In the corporate setting, the company acts as the incubator of new business activity. Chapters 2 and 3 examine entrepreneurship in the corporate context. In Chapter 2, MacMillan and McGrath describe the leadership behaviors that are associated with entrepreneurial growth. The insight they provide is that companies that manage to sustain long periods of organically driven growth have in place a set of relatively simple, but consistent, leadership practices that cover an entire life cycle of new businesses. They organize the chapter around five sets of activities that drive entrepreneurial success.²⁶

1. Identification and screening of opportunities
2. Introduction of fruitful opportunities into the market
3. Managing growing businesses
4. Bringing the new business into the corporate core
5. Business termination and exit

Note that the corporation, as business incubator, engages in doing or supporting all five sets of activities, and hence creates the context in which the corporate new venture operates. Certainly, the second and third set of activities may best be accomplished by the corporate venture with the support of the corporate incubator.

Organizations that exhibit a strong entrepreneurial orientation (EO) may have an advantage, when it comes to undertaking corporate entrepreneurship

activities. In Chapter 3, using the framework of EO as a set of processes, methods, and styles that enable organizations to create venture opportunities, Lumpkin, Wales, and Ensley investigate how EO relates to both internal and external contexts. They identify the internal organizational contexts as top management teams, organizational structures, and organizational cultures. Beyond the organization's boundaries, they examine the business environment and national culture as contextual influences on entrepreneurial outcomes.

The family form of a business organization provides a distinct context for entrepreneurship. In Chapter 4, Habbershon describes the contextual conditions for what is referred to as transgenerational entrepreneurship. The context is established through the systemic interaction of the family ownership group and the individual family members with the business entities. Through this interaction, an idiosyncratic bundle of resources and capabilities are developed, which is referred to as the "familiness" of the business. The chapter shows how family businesses can leverage their familiness along a series of enterprising continuums to find a contextual advantage in the entrepreneurial process. It challenges readers to move beyond many of the caricatures about family businesses, and to see them as another form of an incubator with immense resources for entrepreneurship.

In Chapter 5, Spinelli discusses franchising as another contextual approach to enhancing entrepreneurial opportunity and outcomes. Inherent in the entrepreneurial alliance between franchisor and franchisee is a dramatic compression of the long apprenticeship that a franchisee might otherwise need to undertake in order to achieve entrepreneurial success. The franchisor takes advantage of experience in recognizing and pursuing opportunity to design a delivery system that allows other entrepreneurs to exploit the opportunity in a unique way. The franchisor bears the burden of assessing the market; creating the product or service; creating a training program; establishing the brand; building the business plan; and measuring the competition. The franchisee pays one or more fees—upfront and ongoing—to gain access to the value the franchisor has created and leverages that to create additional value for himself or herself and other stakeholders.

Chapters 6 and 7 examine entrepreneurial contexts influenced by social constructs, such as ethnicity, race, and gender, thereby providing another dimension to our exploration of place. In Chapter 6, Chang, Kellermanns, and Chrisman report on an exploratory study of aspiring Hispanic entrepreneurs in the United States. Their purpose is to explore whether context, measured in terms of the prevailing norms in ethnic communities, has the potential to influence in some material way the determinants of entrepreneurial intentions and hence behaviors. They found that subjective community norms were a significant predictor of entrepreneurial intentions among aspiring Hispanic entrepreneurs. This finding suggests that cultural factors are important in new venture creation decisions, and that the model underlying the theory of planned behavior may be robust enough to tap into those fundamental cultural factors. They argue that the

importance of context is culturally determined and that culture is largely rooted in ethnicity.

In Chapter 7, Greene and Butler indicate that economic development projects around the world reflect a growing conviction that entrepreneurship is a means of economic advancement. These projects typically recognize the variability of the contribution of specific groups of people and the need for different approaches to entrepreneurship, that is to say, different resources, needs, and outcomes, according to the differences among groups. Greene and Butler conclude that the contextual issues predicate that these differences are largely based on structure and culture, and are therefore sociological issues.

Continuing on the contextual ethnicity theme, Chapter 8 focuses on public policies designed to support entrepreneurship in the transition economy context, using Slovenia as the case example. Transition economies are an important and rapidly growing segment of the global economy. Bliss and Polutnik examine the financial, legislative, legal, and corporate governance systems and how they facilitate or constrain the allocation of resources and create the environment for new venture development. They highlight the economic and institutional reforms needed to ensure a timely and efficient shift to a market economy.

In Chapter 9, Moss also focuses on contextual factors that enable market economies to thrive. Moss highlights the role of public policy in supporting what he terms entrepreneurial capitalism in any region. He argues that entrepreneurial capitalism provides a context in which economic actors can engage in peaceful competition for the ownership and control of the means of production. Public policy can lead to the creation of several enhancers that serve to shape entrepreneurial capitalism. Because they do not typically arise spontaneously, they require the protection of law and often the imposition of a constitutional structure to maintain them over time. In this way, public policy creates the conditions for economic development, though Moss argues that it should leave the restructuring of the means of production to market mechanisms within the rule of law.

Using Germany as yet another social context, Sternberg and Rocha focus on the role of public policy from a regional perspective in Chapter 10. They present a strong case in favor of local and regional determinants as more relevant contextual factors in comparison to national or supranational framework conditions. This argument is true, both for determinants that have an impact on an individual's decision to start a new business and for determinants that exercise an influence on a start-up's success (survival and growth). The authors illustrate their position through an empirical analysis, based on data from the Global Entrepreneurship Monitor (GEM) and from the Regional Entrepreneurship Monitor (REM), comparing German regions in terms of entrepreneurial activities and attitudes.

In Chapter 11, Eisenman, Rice, and Severino explore in some depth a particular public policy that has garnered intense scrutiny since its adoption in the

United States, namely the Sarbanes-Oxley Act. This chapter provides a timely example of how public policy can significantly change the context for business and entrepreneurship. Originally designed to promote openness and appropriate oversight to protect investors, there has been much concern that the economic benefits have been outweighed by the costs, and hence the impact on the competitiveness of the United States, with respect to innovation and entrepreneurship. Even the most ardent advocates for the act have conceded that it has increased transaction costs, which has created an undue burden on small companies, and may have been a deterrent to initial public offerings.²⁷

Chapter 12 addresses the contextual factors associated with risk capital. Henderson, Leleux, and Micola explore, at the global level, a public perspective on financing entrepreneurial ventures. They suggest that governments have focused their public policy attention overwhelmingly on sources of external entrepreneurial finance (e.g., venture capitalists and business angels) that comprise a relatively small part of total venture financing. This is in contrast to the largest source of capital, namely friends and family, and even the entrepreneurs themselves. Further, it is not clear how to determine the extent to which financing driven by public policy has effectively and efficiently remedied various forms of market failures.

We end the volume with a discussion of technology-driven entrepreneurship—the focus of Newbert, Walsh, Kirchhoff, and Chavez in Chapter 13. On the positive side, technological innovation is a source of differentiation for the entrepreneur. However, this generates an extra dimension of uncertainty, which exacerbates the need to adopt a “muddling through” approach to entrepreneurship, according to the authors. The multiplicity of technical and market uncertainties associated with technological innovation argues for an iterative approach. The authors describe contextual factors by cataloging a wide variety of technical and business assistance programs available to technical entrepreneurs.

SUMMARY

The interconnectedness of people, process, and place—evident throughout the works of the authors showcased in this book—is striking. Further, it is clear that context plays a role in shaping entrepreneurship from the most micro level to the global. Those organizations and individuals who are in positions to influence the context for entrepreneurship can opt to take a *laissez faire* attitude or can proactively accelerate or inhibit entrepreneurship. These actors make decisions that reflect aims that range from narrow (i.e., simply return on investment) to comprehensive (i.e., improving lives worldwide). Understanding the gaps that entrepreneurs must overcome reveals opportunities for shapers of context to increase the rates of new venture start-up, survival, growth, and success.

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1

Entrepreneurship as Organizing

Emergence, Newness, and Transformation

William B. Gartner and Candida G. Brush

Besides a number of comprehensive reviews of the entrepreneurship field, a variety of multidisciplinary perspectives for observing, studying, and understanding entrepreneurship has yielded a large number of views on the nature of the entrepreneurship scholarship.^{1–14} Many of these scholars argue that this growing body of entrepreneurship research is not well synthesized and many research findings appear to be in disagreement with each other.^{15–22} Using an evolutionary framework based on Weick, we categorize research articles used by Busenitz et al., in their survey of the field to show one possible approach to understanding and organizing entrepreneurship scholarship.^{23, 24}

We view entrepreneurship as an organizational phenomenon, and more specifically, as an organizing process. Without belaboring the etymology of the word *entrepreneurship*, its root, *entreprendre* (i.e., go ahead, take in hand, undertake, take a hold of) is fundamentally about organizing (as in a “generic category of assembly rules”).^{25–31} *Organizing* involves planning and coordination of resources, people, ideas, and market mechanisms as well as the establishment of routines, structures, and systems.^{32–35} Organizing processes are accomplished through interactions among people, continually reaccomplished and renewed over time.³⁶ At the same time, organizing in entrepreneurship is socially embedded and context specific, where the entrepreneur (organizer) interacts with internal and external environments.^{37, 38}

The process of organizing is not a singular event, but one that consists of a sequence of activities: enactment, selection, and retention.³⁹ We propose that the phenomenon of entrepreneurship is evident in cycles between the activities of enactment, selection, and retention of this organizing framework. We believe that the phenomenon of entrepreneurship is most often found in the transitional states in the evolution of an organization’s structure and process. A diagram of this

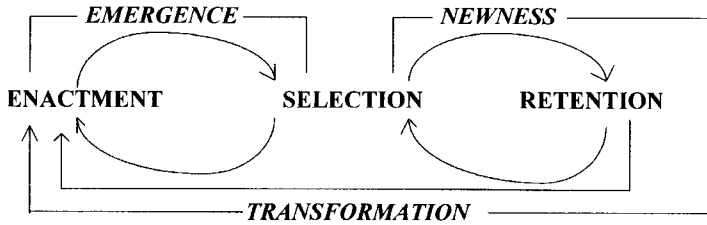


Figure 1.1. Cycles of entrepreneurial activity—emergence, newness, and transformation.

process (Figure 1.1) identifies *emergence*, *newness*, and *transformation* as labels for cycles of these pair-wise organizing activities. Emergence is a cycle of activities between enactment and selection; newness is a cycle of activities between selection and retention; and transformation is a cycle of activities between retention and enactment. This framework has a subtle but significant difference from the organizing model described by Weick, because it includes a feedback loop between enactment and selection.⁴⁰ The labels (*emergence*, *newness*, and *transformation*) are not substitutes for Weick's concepts (*enactment*, *selection*, and *retention*), but an elaboration of this model that suggests where entrepreneurial processes are likely to occur, and where entrepreneurship scholarship has focused its efforts. At the same time, while we recognize that Weick's model is intended to be interpersonal and intraorganizational, the larger context of evolutionary thought about organizations (e.g., Aldrich, 1999) may allow us to imply that this framework of ours would also be applicable to population and macro levels of analysis, as well. Our framework shifts the focus to organizing processes rather than the organization, and therefore is not rooted in age, structure, or size assumptions, such as life cycle or organizational development models.^{41, 42} So, for example, in our view, these processes of *emergence*, *newness*, and *transformation* may occur in a variety of settings that may not have been traditionally seen as entrepreneurial.

The format of the chapter is as follows. The concepts of *emergence*, *newness*, and *transformation* are outlined, and inferences to ideas in the organizational sciences are made. We then provide a way to categorize entrepreneurship research into the three types of organizing processes—*emergence*, *newness*, and *transformation*—and suggest that many of the disparate findings in the entrepreneurship literature are due to differences in the type of organizing phenomena studied. Suggestions are offered for how entrepreneurship research might be influenced through the use of this framework.

EMERGENCE

Organizational *emergence* is the process of organization creation, which is an unfolding of organizing activities involving both *enactment* and *selection*.⁴³

Other terms for this period of time are: the *preorganization*, the *organization in vitro*, *prelaunch*, *launch*, *gestation*, *inception*, and *start-up*.^{44–54}

Organizational emergence involves those events and activities before an organization becomes an organization, that is, organizational emergence includes those factors that lead to, and influence the creation and development of the organization. Organizational emergence is where vision, which connects possibilities, moves from vague to clear in imagery, taking on form and meaning.⁵⁵ Tacit knowledge becomes explicit or shared.⁵⁶ The value associated with the new reality is being discovered and exploited.⁵⁷ This process involves the entrepreneur's perception of opportunity structures, or gaps in the market, that are met by acquisition and the management of resources (land, labor, and capital) and information networks.⁵⁸ In this phase, entrepreneurs perceive and identify relevant resources and opportunities in the environment, then "coordinate activities that involve different markets . . . (that is, they are) an inter-market operator."⁵⁹ Each organizing process is chaotic and disorderly, often including networking, resource borrowing or sharing, boundary establishment, and legitimating activities.^{60–63}

In organizational emergence, there is significant interplay between the processes of enactment and selection. As entrepreneurs undertake the tasks of organization creation, they also recognize and attempt to adapt to various selection mechanisms.⁶⁴ For example, entrepreneurs must convince prospective investors of the viability of their ideas, which requires these entrepreneurs to understand the investor's criteria for investing in new opportunities.^{65, 66} Organizational emergence might, therefore, be viewed as purposeful, though the capabilities of entrepreneurs to comprehend the selection mechanisms operating might also be perceived as limited or nonexistent.^{67, 68}

The process of emergence occurs before the organization exists. It is likely, therefore, that the process of emergence does not always result in an organization. The outcome of organizational emergence could be an organization or a failed attempt at creating an organization, or something else.⁶⁹ Conversely, the existence of a new organization is, therefore, not equivalent to attempts at start-up, or the process of emergence. In particular, the problems of new organizations (e.g., the liability of newness, lack of legitimacy) are not the same problems encountered in the process of becoming a new organization.^{70–73} In emergence, entrepreneurs must craft a vision and set direction where none existed before, identify, attract, and acquire resources, and gain the commitment of participants, developing trust, and engaging them to join the organization.^{74–77} At emergence, knowledge is often tacit and individual, so that making knowledge explicit and shared is a significant challenge. The creation of systems, roles, and responsibilities, where none previously existed is a perplexity for generating an administrative framework of effective procedures and social contracts in the venture.^{78–80}

Observers of ecological analyses of organizational foundings have recognized this dichotomy between the process of starting a business (founding attempts) and the existence of new organizations (organization foundings).^{81–85}

Owing to the dearth of data on preorganizing processes, organizational ecologists rarely distinguish successful events from nonevents in the founding process. Instead, ecological researchers concentrate their attention on the times between the appearance of operational start-ups—that is, successful new entities that begin to produce goods and services. A sample selection bias ensues because many emerging organizations fail before they start operations: some potential founders fail to incorporate, and newly incorporated entities may be unable to commence production.^{86–88}

An organization founding is recognized when there is an appearance of an organizational start-up, such as at the time of incorporation. However, the study of organization foundings fails to recognize attempts at founding that did not result in an operational start-up.⁸⁹

NEWNESS

The circumstances of organizational newness involve the process of facing the pressures of selection and developing established routines. This phase of development is also referred to as: survival and stability, growth and direction, survival and success, survival, founding, and expansion.^{90–96} New organizations have gained some measure of legitimacy through stakeholder exchanges and relationships, control and management of resources, and acceptability or legitimacy.⁹⁷ In newness, an organization's direction is articulated through resource commitments.⁹⁸ Procedures for managing resource deployment are developed.⁹⁹ The individual human and social assets become increasingly institutionalized in the organization.^{100, 101} An organization may add people, requiring incentives for insuring commitment, as well as mechanisms for transferring knowledge.^{102, 103} Internal organizational processes and routines are improved and more formalized procedures and structures are developed.^{104, 105} Some organizing activities are associated with the development of internal policies, knowledge transfer, and specialization of labor, while other activities involve external interactions in implementing product/market strategies, acquiring new resources, and extending networks.¹⁰⁶ The new venture is focused on surviving in the short term, and achieving performance in the longer run, although the organization may become stable or decline.

The challenges of newness are complex. New organizations face difficulties associated with their liability of newness and size, influencing perceived legitimacy in the eyes of external constituents, which may affect a new organization's ability to obtain resources.^{107–111} Competitive threats may challenge a new organization to stick to or modify its vision, while decisions involving resource allocation, combination, and development into unique assets present additional dilemmas.^{112, 113}

Having emerged through the transition from idea to existence, the new organization faces continuing selection problems, as well as opportunities for

substantial growth and success.^{114–117} These distinct sets of challenges reflect two contrasting viewpoints to studying new firms. The ecological approach is, in some respects, a more pessimistic viewpoint on organizational survival, in that, implicit in the name, “the liabilities of newness,” is significant evidence that newer and smaller firms have high rates of failure.¹¹⁸ Strategic approaches that study the differential characteristics of a select number of more or less successful new organizations appear to be more optimistic, in taking a perspective that appears to reflect the optimism of these business owners.^{119, 120} From either perspective, much of this research has had a “disproportionate pre-occupation among contributors with issues of success and failure, survival and death, and the relative economic performance of firms.”¹²¹

TRANSFORMATION

Transformation is the way that an organization changes its established routines through enactment. Transformation involves a metamorphosis from an existing vision that produces changes in the products and services, customers/clients, channels, skills, margins, competitive advantage, and people.¹²² For instance, the organization takes on a new strategic direction or way of carrying out its activities. Organizational transformations are therefore, profound changes in an organization with revitalizing potential that may or may not be realized. The following terms are descriptive of organizational transformation:

- Organizational change—which is a change in the key patterns of the organizational system, or shifts in the way the organization is related to its environment, especially patterns by which the organization imports energy, raw materials, and transforms inputs, or changes in patterns of differentiation, coordination and integration, structures, human resources, and policies and procedures
- Transformative change—which cuts through the mental and organizational barriers
- Punctuated equilibrium—which refers to a nonlinear shift in strategies, structures, and/or processes, such that the current resource configuration is rapidly transformed^{123–126}

In organizational transformation, the challenge is to set a new direction, to abandon an orientation rooted in the present, and adopt a new orientation rooted in the future.¹²⁷ In circumstances where there has been a delegitimization and disengagement of a previous vision, organizational transformation occurs when there is the need to identify new resources and develop new means to acquire and allocate them.¹²⁸ The fixed definition of its structure, patterns of behavior, and cognitive understanding are revised either through endogenous pressures or exogenously generated pressures.¹²⁹ Challenges of transformation may include

structural changes (e.g., mergers, acquisitions, going public), personnel and leadership changes. Adjustments to the loss of some personnel or integration of others, as well as resistance to change means that a transformation challenge can include developing renewed trust and commitment.¹³⁰ The organization is faced with continual dilemmas of how to revise or destroy existing processes, policies, and procedures to make it possible for new knowledge creation.¹³¹

DISCUSSION

By viewing entrepreneurship as different types of organizing, we offer a relatively simple way to categorize entrepreneurship research that crosses a variety of disciplinary perspectives and units of analysis. In Tables 1.1, 1.2, and 1.3, we provide examples of empirical research in entrepreneurship that illustrate differences among the three different cycles of entrepreneurial activity by level of analysis. The examples for these tables were taken from Busenitz, West, Shepherd, Nelson, Zacharakis, and Chandler, who generated, from their perspective, a comprehensive list of ninety-seven top-tier journal articles on the topic of entrepreneurship, based on an evaluation of articles from seven journals: *Academy of Management Journal* (AMJ), *Academy of Management Review* (AMR), *Administrative Science Quarterly* (ASQ), *Journal of Management* (JOM), *Management Science* (MS), *Organization Science* (OS), and *Strategic Management Journal* (SMJ).¹³² We looked at the empirical articles only, of which eighty-eight of the ninety-seven articles analyzed data, either quantitatively or qualitatively. No articles from the AMR or other theoretical articles from the other six journals are included in the tables. Table 1.4 provides a summary of the percentages of empirical articles that could be categorized into the three categories of emergence, newness, and transformation (which were 22, 53, and 25 percent, respectively).

An important implication of this framework, for entrepreneurship scholars, is recognizing the apparent divergence of entrepreneurship research into the study of three very different organizational phenomena. As described in previous sections, the problems and issues of emergence, newness, and transformation are fundamentally different from each other. It might be appropriate, therefore, for entrepreneurship scholars to consider the value of choosing sides; that is, entrepreneurship scholars might find value in identifying with one of the three entrepreneurial types (emergence, newness, and transformation), and speaking to scholars who are doing research on that organizational type. Developing the paradigm of entrepreneurship requires some consensus on the phenomenon studied.¹³³ We believe that entrepreneurship is too broad a topic area for entrepreneurship scholars to meaningfully address all of the core issues in this field.¹³⁴ It is unlikely that scholars, focused on any of these three entrepreneurial phenomena, can, at this point, bridge the inherent differences (research questions, methodologies, problems, etc.) among these three types. The entrepreneurship field might be strengthened if scholars were to narrow their views on the domain

Table 1.1. Empirical Emergence Articles in Busenitz et al. (2003) by Level of Analysis (LOA)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|------------------------------------|----------------|--------------------|-------------|---|
| Arend (1999) | SMJ | NA | Environment | Emergence of entrepreneurs in the technology field |
| Baum and Haverman (1997) | ASQ | 614 | Firm | Transient hotels operating in Manhattan from 1898 to 1990 |
| Begley, Boyd (1987) | JOM | 471 | Individual | Managers and entrepreneurs in New England |
| Boeker (1989) | ASQ | 53 | Firm | Semiconductor industry from 1958 to 1985 |
| Budros (1994) | OS | 62 | Firm | NY life insurance companies from 1894 to 1904 |
| Carroll and Moskowsky (1987) | ASQ | 2172 | Individual | Study of self-employment in Germany |
| Cooper, Dunkelberg (1986) | SMJ | 1756 | Individual | Degrees of entrepreneurship and paths to ownership |
| Day (1994) | OS | 136 | Firm | Championing in internal corporate ventures |
| Dowling and McGee (1994) | MS | 52 | Firm | New ventures in telecommunications equipment |
| Feeser and Williard (1990) | SMJ | 42 | Individual | Founding strategies in computer industry |
| Frese, Kring, Soose, Zempel (1996) | AMJ | 1623 | Individual | Personal initiative in East and West Germany |
| Garud, Van de Ven (1992) | SMJ | 719 | Event | Development of a new venture within a corporation |
| Kazanjian, Drazin (1989) | MS | 71 | Firm | Emergence and growth in computer/electronics firms |
| Louis et al. (1989) | ASQ | 818 | Individual | Academic entrepreneurship in life sciences |
| Luo (1997) | OS | 116 | Firm | International joint ventures in manufacturing, 1988–1991 |
| McDougall et al. (1994) | SMJ | 123 | Firm | New ventures in high-growth industries |
| Morris et al. (1993) | JOM | 84 | Firm | Computer software firms attempting IPOs in 1983–1984 |

(continued)

Table 1.1. (continued)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|-------------------------|----------------|--------------------|-------------|---|
| Naman and Slevin (1993) | SMJ | 122 | Firm | “Fit” in entrepreneurial-style strategic management |
| Sedaitis (1998) | OS | 9 | Environment | Community exchange markets in Russia, 1991–1993 |
| Shane (1996) | JOM | 89 | Environment | Entrepreneurship activity in United States, 1899–1988 |

Academy of Management Journal—AMJ, *Academy of Management Review*—AMR, *Administrative Science Quarterly*—ASQ, *Journal of Management*—JOM, *Management Science*—MS, *Organization Science*—OS, and *Strategic Management Journal*—SMJ.

of their scholarship. For example, the concept of entrepreneurial orientation is essentially strategic in nature, having to do with the “processes, practices, and decision-making activities that lead to new entry.”^{135, 136} Since the ideas of entrepreneurial orientation stem primarily from the strategic management literature, it might be appropriate to view the entrepreneurial orientation construct within the phenomenon of organizational newness, rather than assuming that this construct applies to organizational emergence, and transformation, as well. Furthermore, this should lead to enhanced external validity of studies by bounding the research domain so that it would be possible to replicate studies, achieve convergence, and generalize findings.¹³⁷

We propose that the organizing framework permits application or testing of a variety of theories, rooted either in social sciences or economics.¹³⁸ Each category is comprehensive enough to include relevant factors, and open ended enough to permit debates and competing ideas. By specifying the domain of study, we believe that researchers can study core dimensions of each of the three types of organizational processes but not be limited by their choice of theory.^{139–141}

An aspect of the emergence–newness–transformation categorization of entrepreneurship research is path dependence among these types of organizational phenomena. New firms are the result of the emergence process, but the dependent variable (the new firm) cannot be used to predict the initial process (firm emergence). As Aldrich and Kenworthy suggest, the abundance of studies of new firms and comparative lack of studies of emerging firms, indicate that we know little about the ways the organizations are created, and therefore, little about why new firms are structured and behave as they do.¹⁴² Understanding the struggle of new organizations, as they unfold and seek to survive, is unlikely to provide insights into which and why certain organizational possibilities did not reach viability. Few entrepreneurship studies are longitudinal, hence the circumstances

Table 1.2. Empirical Newness Articles in Busenitz et al. (2003) by Level of Analysis (LOA)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|--------------------------------------|----------------|--------------------|------------|--|
| Ariño and de la Torre (1998) | OS | 2 | Firm | Joint venture case study |
| Barringer and Bluedorn (1999) | SMJ | 169 | Firm | Corporate entrepreneurship in manufacturing |
| Baum and Singh (1994) | OS | 682 | Firm | Day-care centers in Toronto |
| Begley and Boyd (1987) | JOM | 471 | Individual | Members of Smaller Business Association of New England |
| Boeker (1989) | ASQ | 53 | Firm | Semiconductor firms in 1985 |
| Bracker et al. (1986) | SMJ | 555 | Firm | Dry-cleaning businesses |
| Bracker et al. (1988) | SMJ | 217 | Firm | Electronic businesses |
| Bracker and Pearson (1986) | SMJ | 188 | Firm | Dry-cleaning businesses |
| Bracker, Pearson, and Keats (1988) | SMJ | 73 | Firm | Small firms |
| Browning et al. (1995) | AMJ | 54 | Individual | Founding and current leaders of SEMATECH |
| Cooper et al. (1986) | SMJ | 1756 | Firm | National Federation of Independent Business members |
| Covin and Slevin (1989) | SMJ | 161 | Firm | Small manufacturing firms |
| Dean, Brown, and Bamford (1998) | SMJ | 302 | Firm | Small and large manufacturing firms |
| Dess, Lumpkin, and Covin (1997) | SMJ | 96/32 | Individual | Entrepreneurial strategy making within firms |
| Dickson and Weaver (1997) | AMJ | 433 | Firm | Norwegian firms |
| Dodge, Fullerton, and Robbins (1994) | SMJ | 645 | Firm | Small business firms |
| Dollinger and Golden (1992) | JOM | 486 | Firm | Small manufacturing firms |
| Dowling and McGee (1994) | MS | 52 | Firm | New entrants in telecommunications |
| Eisenhardt et al. (1996) | OS | 102 | Firm | Semiconductor firms, 1978–1985 |
| Feeser et. al. (1990) | SMJ | 78 | Firm | High- and low-growth computing firms |

(continued)

Table 1.2. (continued)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|--------------------------------------|----------------|--------------------|------------|--|
| Fiegenbaum and Karnani (1991) | SMJ | 3000 | Firm | Small firms in eighty-three different industries |
| Gersick (1994) | AMJ | 1 | Individual | Temporal pacing in group projects |
| Gimeno et al. (1997) | ASQ | 1547 | Firm | New businesses in the United States |
| Horwitch and Thietart (1987) | MS | 641 | Firm | Business units in consumer and industrial goods |
| Kalleberg et al. (1991) | AMJ | 411 | Firm | Small firms in Indiana |
| Lafuente and Salas (1989) | SMJ | 360 | Individual | Entrepreneurs in small Spanish firms |
| Larson (1992) | ASQ | 4 | Firm | Interfirm alliances |
| Luo (1997) | OS | 116 | Firm | International joint ventures in China |
| McDougall et al. (1994) | SMJ | 123 | Firm | High- and low-growth new ventures |
| McGee (1995) | SMJ | 210 | Firm | High-technology new ventures |
| McGee, Dowling, and Megginson (1995) | SMJ | 210 | Firm | High-technology new ventures |
| Merz and Sauber (1995) | SMJ | 370 | Firm | Small firms |
| Miller (1987) | AMJ | 97 | Firm | Small- and mid-size companies |
| Mosakowski (1991) | SMJ | 122 | Firm | Entrepreneurial firms in computing industry |
| Mosakowski (1993) | JOM | 86 | Firm | Entrepreneurial software firms |
| Naman et al. (1993) | SMJ | 82 | Firm | Small- and medium-sized high-tech firms |
| Roberts and Hauptman (1987) | MS | 26 | Firm | New biomedical firms formed 1968–1975 |
| Robinson et al. (1998) | SMJ | 115 | Firm | New manufacturing ventures |
| Romanelli (1989) | ASQ | 174 | Firm | Mini-computer firms, 1957–1981 |
| Sapienza and Korsgaard (1996) | AMJ | 162 | Individual | Entrepreneurs and venture capitalists (VCs) |
| Schoonhover et al. (1990) | ASQ | 98 | Firm | Semiconductor firms, 1978–1985 |
| Sedaitis (1998) | OS | 293 | Firm | Russian firms in commodities, 1991–1993 |

(continued)

Table 1.2. (continued)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|----------------------|----------------|--------------------|------------|--|
| Segev (1987) | MS | 126 | Firm | Kibbutzes |
| Shan (1990) | SMJ | 278 | Firm | New start-ups |
| Shane and Foo (1999) | MS | 1292 | Firm | New franchisors in United States 1979–1996 |
| Shepherd (1999) | MS | 66 | Individual | VCs in Australia |
| Zahra (1996) | AMJ | 127 | Firm | Entrepreneurial activity in Fortune 500 |

Academy of Management Journal—AMJ, *Academy of Management Review*—AMR, *Administrative Science Quarterly*—ASQ, *Journal of Management*—JOM, *Management Science*—MS, *Organization Science*—OS, and *Strategic Management Journal*—SMJ.

surrounding organizational emergence and development, and associated sequences of activities over time are poorly understood. Cases, qualitative studies, and panel studies are infrequently used to explore ways that firms emerge, survive newness, and move through transition.

As can be seen in Table 1.4, firm-level studies are in the majority for each of the three cycles, and, overall, 75 percent of all studies in Tables 1.1, 1.2, and 1.3 focus on firm-level issues. This finding may be a reflection of the journals selected in the Busenitz et al. study, that is, the seven journals tend to focus on firm-level issues, compared with other disciplinary journals that might tend toward the individual level (e.g., *Journal of Applied Psychology*), or the environment (*American Economic Review* or *American Journal of Sociology*).¹⁴³ Paradoxically, while the emergence–newness–transformation framework describes the entrepreneurship field as three disparate research foci, the earlier sections of this chapter indicate that there are ample connections to other research streams within the organizational sciences. There are also some implicit affinities within the entrepreneurship field where stronger links among researchers can be made. For example, family business, as a topic area, can be viewed, within the emergence–newness–transformation framework as having links to aspects of organizational transition, such as the management and ownership succession from one generation to another.^{144–146} Small business research would have links to organizational newness.¹⁴⁷ Some research topics are likely to span across the three organizational types. Franchising, for example, can be viewed as a way for individuals to organize; as a strategy for growth and survival; and as a way for radical change to occur.^{148–150}

The recognition of levels of analysis in the framework suggests new directions for research beyond the organization.¹⁵¹ Networks, industries, and communities move through sequences of emergence, newness, and transformation. For example, networking can lead to new connections, new patterns of venturing, and commerce in response to perceived opportunities. Challenges to legitimacy

Table 1.3. Empirical Transformation Articles in Busenitz et al. (2003) by Level of Analysis (LOA)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|-------------------------------------|----------------|--------------------|------------|---|
| Barringer et al. (1999) | SMJ | 169 | Firm | Manufacturing firms |
| Birkinshaw (1997) | AMJ | 124 | Firm | Medium- and large-sized U.S.-based businesses in ten industries |
| Boeker (1989) | AMJ | 51 | Firm | Semiconductor firms in Silicon Valley |
| Browning, Beyer, and Shetler (1995) | AMJ | 66 | Individual | Semiconductor industry in the United States |
| Day (1994) | OS | 136 | Firm | Internal corporate ventures, Fortune 1000 |
| Dess et al. (1997) | AMJ | 96 | Individual | Executives from thirty-two diversified firms |
| Dickson et al. (1997) | AMJ | 433 | Firm | Norwegian manufacturing firms, 6–500 employees |
| Drazin, Kazanjian | AMJ | 109 | Individual | CEO succession in tech firms |
| Farjoun (1994) | OS | 12781 | Firm | Firms in 222 industries |
| Galunic and Eisenhardt (1996) | OS | 80 | Individual | Divisions inside high-technology firms |
| Horwitch and Thietart (1987) | MS | 641 | Firm | Businesses with high R&D expenditures |
| Miller (1987) | AMJ | 97 | Firm | Small- and medium-sized firms in Quebec |
| Norburn and Birley (1988) | SMJ | 953 | Individual | Top executives in largest 150 U.S. firms |
| Ocasio (1999) | ASQ | 108 | Firm | Publicly held industrial corporations |
| Pennings, Barkema, and Douma (1994) | AMJ | 462 | Firm | Dutch firms |
| Richardson (1996) | OS | 14 | Firm | Fashion apparel industry |
| Rosenblatt et al. (1993) | OS | 1 | Firm | Small school district |
| Russel and Russel (1992) | JOM | 77 | Firm | Strategic business units |
| Segev (1987) | MS | 252 | Individual | Top two executives of 126 kibbutz-owned enterprises |

(continued)

Table 1.3. (continued)

| <i>Citation</i> | <i>Journal</i> | <i>Sample Size</i> | <i>LOA</i> | <i>Description of Data</i> |
|----------------------------------|----------------|--------------------|------------|--|
| Stopford and Baden-Fuller (1994) | SMJ | 10 | Firm | Firms in four different industries in the United Kingdom |
| Thompson and Horowitz (1993) | MS | 2 | Firm | One cooperative and one entrepreneurial firm |
| Welbourne et al. (1999) | AMJ | 360 | Firm | U.S. firms that went public in 1993 |

Academy of Management Journal—AMJ, Academy of Management Review—AMR, Administrative Science Quarterly—ASQ, Journal of Management—JOM, Management Science—MS, Organization Science—OS, and Strategic Management Journal—SMJ.

confront early entrants as the industry emerges.^{152, 153} From another perspective, industries emerge or are reformed due to technological innovation, shifts in relative cost relationships, new consumer needs, or other economic or social changes that elevate a new product or service to the level of a potentially viable business opportunity.^{154, 155} At this stage, there are no rules of the game, and industry structural factors are uncertain, in contrast with mature or declining industries where barriers to entry and exit, and bases of competition are defined.¹⁵⁶ Yet, current research in the field infrequently examines these more macro units of analysis.

The framework, therefore, is not intended as a way to exclude various types of entrepreneurial research; rather, the framework helps clarify what kind of entrepreneurship research is being conducted, and suggests gaps where new research might be carried out in the future. In addition, the framework offers ways to expand our view of entrepreneurial phenomena at different levels of analysis and as different kinds of organizing processes. We believe that the field of entrepreneurship is more likely to build a distinct body of knowledge, if entrepreneurship scholars can

Table 1.4. Summary of Organizing Type by Level of Analysis for Busenitz et al. (2003)

| <i>Organizing Type —> Level of Analysis</i> | <i>Emergence</i> | <i>Newness</i> | <i>Transformation</i> | <i>Total (percentage)</i> |
|--|------------------|----------------|-----------------------|---------------------------|
| Individual | 6 | 7 | 6 | 19 (22%) |
| Firm | 10 | 40 | 16 | 66 (75%) |
| Environment | 3 | 0 | 0 | 3 (3%) |
| Total (percentage) | 19 (22%) | 47 (53%) | 22 (25%) | 88 (100%) |

link their specific contribution within the wider context of all entrepreneurship research.^{157, 158} This framework may offer such a possibility.

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2

Managing Growth through Corporate Venturing

Ian MacMillan and Rita Gunther McGrath

DYSFUNCTIONS IN THE PURSUIT OF GROWTH

Current corporate attention to growth sometimes borders on the obsessive, as executives are exhorted to grow their businesses and are evaluated on the basis of their success at doing so. Analysts look to companies' track records on growth to assess their value as investments. And a cacophony of voices—from the business press to institutional investors—cheers growing firms and jeers those that do not grow.

The pressure on firms to grow—at any cost—has resulted in a great deal of dysfunctional behavior. Most of this stems from some fundamental misunderstandings of the nature of lasting growth. It is the relatively rare acquisition, for instance, that adds value to the acquiring firm. Thus, the widespread practice of buying top-line growth typically ends up destroying shareholder value.¹ Likewise, excessively ambitious growth targets can cause good, but small, new businesses within a firm to appear to be failures, because they cannot grow quickly enough to feed a voracious corporate appetite.² Furthermore, some firms chase what appear to be huge growth opportunities in a misguided way—by throwing vast resources into “big bet” investments, which means that any failure is an enormous failure (think Webvan, Iridium, or London's Millennium Dome project).³

Although we are not opposed to acquisitions, ambition, or even big bets, we have observed that executives focused on these things tend not to have a good grasp of those powerful but simple, consistent practices that generate continuous growth via expansion of current capabilities into new opportunity spaces.

This is the topic of our chapter, based on research that had its beginnings in a study of thirty-seven successful and failed corporate ventures in a major financial institution. It was followed by a five-company, thirty-five-venture study of the

process through which new ventures lead to new competences for established organizations. It builds on earlier work on the corporate venturing process and our own observations of companies involved in venturing.

Our main insight is that companies that manage to sustain a long period of growth through venturing have in place a set of relatively simple, but consistent, leadership practices that cover an entire life cycle of new businesses. When parts of the process are not handled or mishandled, we observed progress to be slowed. When large parts of the process were missing, ventures often failed.

LEADERSHIP ACTIVITIES IN A COMPREHENSIVE CORPORATE VENTURING PROGRAM

In this chapter, we describe the leadership behaviors we have observed to drive success in an integrated process of driving growth. For the sake of keeping our discussion focused, we break this process up into five major sets of activities, although we are aware that these often do not unfold in an orderly, linear way.⁴

- Identification and screening of opportunities
- Introduction of fruitful opportunities into the market
- Managing growing businesses
- Bringing the new business into the corporate core
- Business termination and exit

We call the first set of activities the process of creating an opportunity pipeline, or register—sort of like an inventory of potential opportunities. Crucial activities here involve creating the conditions for the discovery and recognition of opportunities, together with a disciplined screening process that winnows them for further investment. In the case of technology-based companies, this is often the process through which ideas from the technology development arena are introduced to business development managers for consideration of further development. The goal is to create a rich register or inventory of potential opportunities.⁵

The next set of activities, which we refer to as market entry activities, involve exposing new technologies and business concepts to the market. Sometimes, this exposure is experimental, intended primarily to find out what real and appropriate applications might be. Sometimes, this is a more aggressive and direct business launch, intended to achieve the creation of a substantial new business. In either case, a crucial challenge is managing learning—learning about the market and learning how the firms' offerings perform for that market.⁶

Following market entry, a third set of activities involves investing in and growing those opportunities that are well received. These activities require significant attention to timing and patterns of investment. Here, a key skill is the ability to recognize when growth should be aggressive versus when it should be brought forward in a more moderate way. Given multiple opportunities, focus is

also key, as companies can find their energy and ability to make a substantial impact sapped by pursuing too many attractive alternatives.

Next is the challenge of managing the core business processes, involving assimilation of the new business and incorporation of new ideas. New businesses need to be brought into the core as legitimate contributors. Supporting processes—such as reward and development mechanisms, financial activities, and inbound logistics processes—also need to be designed (and redesigned) in such a way that they align with the emerging core of the company.

Finally, any well-run business development program needs to attend to termination and exit of businesses that have run their course. This involves recognizing that businesses that no longer are able to contribute need to be scaled down and possibly eliminated. Stopping runaway projects, refocusing a corporation that has become unwieldy and making tough decisions to downsize or scale back are just as important to a healthy venturing program as initiating new sets of activities.

ROLES IN A COMPREHENSIVE VENTURING PROGRAM

Within each of these sets of activities, different individuals within an organization assume different roles, which partially reflect the level of their job. We break these roles into three different levels:

- The venturing level
- The change championing level
- The senior leader level

The venturing level roles relate primarily to managing individual ventures. The senior level is mainly responsible for setting context for the overall venturing program, and the championing level is responsible for mediating overall context and individual ventures.

At the venturing level of the organization, people's primary jobs involve those tasks that are needed to do the entrepreneurial work of building new businesses. These people do the job of finding out what customers need and how the company might address those needs in a profitable way. Their goal here is to form a set of stable transactions between the new entity and customers, suppliers, distributors, employees, and others necessary in forming the new unit.

The change championing or middle management level of the organization involves a set of tasks with the purpose of ensuring that the emerging new business is not damaged by other parts of the firm, and likewise that it does not damage the firm. At this level, resources must be allocated to new business development; plans must be established and monitored; rewards must be determined; and the often political and informal process of supporting new businesses must be carried out.⁷

At the senior leadership level, a different set of tasks becomes important. Here, goals are broader. A key task at this level is the establishment of what we call a ballpark, or overall framework for what types of new ventures are desirable and undesirable. A climate that encourages new business development is created and led. At this level, processes that ensure external and internal support for ventures are established. At this level as well, major resource allocations are determined. In addition, this level of the organization establishes company-wide cultural norms, such as how failures are handled, and what gets prioritized.

A FRAMEWORK FOR CORPORATE VENTURING PROGRAMS

Combining the three levels with the five activities yields Table 2.1, which depicts fifteen processes whose presence is a good indicator that a firm is likely to be able to support a sustained business development program leading to growth. Their absence, likewise, is a strong indicator that a venturing program is likely to encounter obstacles or even fail entirely. Each cell in Table 2.1 corresponds to specific activities that we have observed, which needs to be well managed for successful growth through corporate venturing.

PRACTICES THAT CREATE AN OPPORTUNITY PIPELINE

Effective growth corporations are able to create a rich stock of potential opportunities for growth. They are characterized by widespread enthusiasm for identifying opportunities and making them happen, as well as widespread understanding of what to do with a bright idea once it has been articulated. Each

Table 2.1. Major Processes for Accelerating a Sustained Corporate Organic Growth Program

| | <i>Opportunity Pipeline</i> | <i>Market Entry</i> | <i>Growth</i> | <i>Renew the Core</i> | <i>Terminating</i> |
|---------------|-----------------------------|--|-----------------|---------------------------|--|
| Venture | Create options | Redefine: run launches and experiments | Cope | Induction and enhancement | Managing exit |
| Champion | Select and screen | Integrate | Shift resources | Socialize | Decouple |
| Senior leader | Climate and ballpark | Clear paths | Create focus | Incorporate | Pruning decisions and portfolio criteria |

level of management can help this process emerge and be sustained, or can curtail it. At the most senior level, the most important responsibilities are to set overall direction and influence. At the championing level, the most important behaviors are concerned with specifically identifying challenges and clarifying where the new venture fits. And obviously at the venturing level, the key activities are to unearth ideas and get them on the agenda.

Senior Leadership Level: Climate Creation

At the senior level of a company, the ability to affect the entire climate and strategy of the firm is at its greatest. Unfortunately, this responsibility is not necessarily understood or well executed when it comes to driving growth.

We have found that one of the most significant barriers to innovation in firms is ironically that senior managers have left the definition of what kind of innovation is desirable a little too vague. For an innovation message to be invigorating, exciting, and motivating, senior leaders need to establish what we term a “ballpark” or picture of the types of arenas in which the firm seeks to compete. Many senior leaders unfortunately labor under the impression that imposing some rules and structure on the innovation process will interfere with it—we have found that this is not the case.

Before he left for Boeing, Jim McNerney and his team at 3M spent considerable time struggling with the articulation of a new ballpark for a company famous for its approach to innovation. McNerney implemented an alternative to his predecessor’s philosophy of “search for excellence” in which relatively little guidance was given as to which projects and products were desired. Under that regime, 3M systematically spun new products off into their own sales centers with their own staffs and functional departments (though not always their own manufacturing centers). McNerney’s approach toward moving from being a mature diversified technology company to being a premier diversified technology company was accompanied by the implementation of a series of initiatives, including 3M Acceleration, which imposes priorities on R&D investments; Six Sigma, which focuses on improving cost, cash, and growth; e-productivity to speed up customer service and improve customer relationships, and more aggressive management of indirect costs and reducing overlap between businesses.⁸ For the first time, 3M has become explicit about which businesses are to be driven by organic growth and which will enjoy other drivers for success—such as scale. Although change on such a large scale is always disorienting, 3M’s people responded favorably, as did the investment community, which rewarded 3M with a 30+ percent increase in stock price from 2002 to 2004.

It is not enough to simply declare a ballpark, however. At the senior leadership level, executives need to demonstrate visible and sustained commitment to that ballpark over time. Particularly in organizations in which the goal of innovative growth has been an on-again-off-again endeavor, people in the firm will understandably test the senior team to gauge the seriousness of their commitment

to growth. This calls for hard evidence of personal commitment. Such signs are easy to detect once you start looking for them.

Is venturing a priority item on the personal agenda of the senior team? Not just once or twice, but at every meeting, week in and week out, month in and month out? If it is not, there is a high probability that people will make the assumption that venturing is not important, and turn their attention to other, easier things (often with a sigh of relief!). Besides the time commitment that the agenda signals, are venturing initiatives receiving the disproportionate care and feeding that goes beyond their small size? If senior executives pay the most attention and give the most time only to those activities that are well developed, people will read this as a lack of genuine interest in newer fledglings. The allocation of time and attention to new ventures, in other words, is disproportionate to the size of the business. Just as babies need more attention in their early years, so too do new businesses demand more, relative to their size, than grown-up ones. Another signal that growth is important to the senior team is when very good people are allocated to growth initiatives. If the venture group becomes the purgatory from which people's careers never return, good people will quickly figure out that they should avoid such initiatives like the plague.

An observation that is important to make here is that this activity is not carried out with impunity. Allocating disproportionate attention does not come without a cost. Whatever resources ventures get are diverted from the ongoing business. If the base business is not healthy enough to sustain its activities without being weakened by resources going into venturing, it is highly unlikely that venturing alone will be sufficient for organizational renewal. Making the choice to divert such resources is a decision with considerable potential impact. One lesson is that the time to start a venture program is when the base business is healthy and generating solid cash flows, not when it has already begun to falter.

Championing Level: Managing Selection

As a senior executive clearly specifies the playing field of a venturing program, the championing level translates this into specific organizational processes that govern resource allocation and project selection. In successful venturing companies, the presence of uncertainty is recognized, and different management processes are employed under conditions of high versus low uncertainty. This is quite a contrast from companies in which all management resource allocation processes (such as budgeting and planning) are done in a single way, using the same process. The logic is simple: when a business is fairly predictable, one can quite comfortably use conventional heuristics, such as management by exception. When a business is unpredictable by virtue of its novelty or uncertainty, different disciplines are far more beneficial. Although this would seem like sheer common sense, we continue to be astonished by the tendency of companies to apply one-size-fits-all management to both established businesses and new ventures.

The first difference between conventional project selection and selection of projects under uncertainty is that new projects under uncertain conditions are best thought of as real options.⁹ An options orientation implies that you are making investments with substantial future upside, and that you are also preserving the right to discontinue the investment should certain assumptions not be validated.¹⁰ Among the best practices in this area is spending imagination before you allow people to spend money—the theory being that the smaller each investment is, the less you stand to lose in the event that things do not work out. Further, concern yourself far more with how much a potential failure costs than with how many failures you have. After all, you can afford hundreds of failures if each of them is inexpensive. Using options thinking is a mindset that you can easily bring to highly uncertain ventures, since most of their value lies in the future opportunities they open up.

Together with the right mindset, at this level of the organization, it is critical to define what we call gravity. This means being clear about those things that are a given in your organizational environment, and those things that are open to change. At DuPont, for instance, safety is central to every business activity. It would be unthinkable for a venture in DuPont to pursue any area in which safety might be called into question—this is still, therefore, gravity for the company, a bedrock principle from which no venture is allowed to deviate. At the same time, DuPont has moved from a materials-based sensibility to a more knowledge-intensive one, meaning that things that were formerly taken for granted as set in stone—such as measuring success in terms of assets—are now open to change.

The specification of what kinds of ventures are desirable and not desirable can and should be made very crisp at this level of the organization. Among the approaches we have observed to work well are disseminating screening statements, consisting of widely disseminated criteria that will be used to evaluate ideas. The more clearly and widely disseminated these screens are, the more readily they facilitate everyone making intelligent choices about which opportunities to pursue, ideally facilitating both a more focused search for new opportunities and an ability to self-screen. We like to look at screens in two passes: first, a process through which screening out occurs—those criteria that will kill a venture completely if it is not met. Next, we look at criteria that suggest venture attractiveness as they accumulate. So the screen-out criteria are go/no go, while the screen-in criteria are cumulative.

At DuPont, venture teams we are working with have adopted a variation on this idea, specifying first no-go criteria in their screening process, then providing guidance as to what they call “where and how” growth should be built. The DuPont groups have incorporated these principles in scoring documents, which help make the criteria explicit so that they are well understood, and so that different projects can be examined in a consistent way. The DuPont scorecards draw on Six Sigma technology, making a clear distinction between extremely attractive opportunities and those that are less attractive. An example of such a

Table 2.2. A Scorecard for Screening Opportunities

| <i>Dimension</i> | <i>Exceptional If</i> | <i>Acceptable If</i> | <i>Unfavorable If</i> | <i>Score Totals</i> |
|-------------------------------|--|---|--|---------------------|
| Strategic intent | This opportunity takes us exactly where we want to go in terms of our strategy 9 | This opportunity is not inconsistent with our strategy, but offers no engine to drive it 3 | This opportunity, even if we succeed, is inconsistent with our strategy 1 | |
| Builds competitive advantage | The idea builds both short-term revenue streams and long-term competitive advantage 9 | The idea has either long- or short-term benefits, but not both 3 | The idea provides only short-term benefits and may interfere with a long-term opportunity 1 | |
| Builds knowledge capabilities | The opportunity will help us enhance our capabilities significantly 9 | The opportunity will let us build new capabilities, but only in very limited areas 3 | The opportunity will not lead us to extend our capabilities in any meaningful way 1 | |
| Use of existing assets | The opportunity requires no investment in new assets 9 | The opportunity does require some investment but takes advantage of assets in place 3 | The opportunity will require entirely new investment in assets 1 | |

scorecard is in Table 2.2.¹¹ Note that it is not the scorecard that is the magic—it is the thought process lying behind it, the discussion of the ventures' features that it precipitates, and its consistent use that creates results.

Finally, although it is in theory a great idea to develop screening criteria so that everyone understands which ventures are desirable and which are not, an uncomfortable part of this job is informing those proposing or involved in a new project that their project has fallen short of a screen. The wrong way to communicate these decisions is through a subordinate, through a phone call, or (worst of all) through some impersonal medium like e-mail. What is needed here is evidence of a careful, but rapid decision process, coupled with detailed feedback to facilitate learning in the organization. If ideas are rejected, a champion should always explain why, and demonstrate the logic. Doing so is a way of helping the whole organization learn how to pursue better, more strategic, opportunities.

An important mindset requirement is that venture programs should be seen in a portfolio context. Highly uncertain ventures will inevitably have relatively high failure rates, so what matters is whether costs of failure are controlled, and whether the relatively rare successes tend to be big wins. The performance of the individual venture matters less than the performance of the portfolio.

Venturing Level: Executing Launches and Creating Options

At the venturing level of the organization, the main activity in the opportunity pipeline space consists of the creation of options for further business development. Options consist of ideas for new businesses that can be managed in such a way that they create the right, but not necessarily the obligation, for the company to follow through to create a major new project. What matters here is having one or more processes that can be used to systematically uncover, and then explore, new business opportunities. The ways in which this can be done are many—but the core concept is that without signaling to the organization that new opportunities are both wanted and essential, it is far too easy to let the pressing demands of day-to-day activities squeeze out the time for thinking about future ones.

The good news is that we have found that most companies can readily identify considerable numbers of great ideas for new businesses. Contrary to what seems to be presumed in many popular business publications, finding opportunities is seldom the problem. Quite the contrary—for many companies, the real challenge is capturing the ideas in some systematic way, sorting them into different categories with respect to whether and when they might be pursued, and creating the process through which they receive assessment and attention. Practices that seem to be helpful here include having some simple, but powerful tools to identify potential opportunities and a straightforward process through which those with ideas can be heard. The tools are many, each with advantages and drawbacks.¹²

Ironically, at the venturing level of the organization, one of the most important challenges one will face consists of recognizing the uncertainties facing a team and reducing its impact for people. Some call this absorbing uncertainty. If you are running a venture, you need to be telling your people what to focus on and what to ignore, which you can only do by essentially creating an artificial feeling of certainty when in fact you are dealing still with many assumptions. Sometimes this requires a bit of bravado, for instance, when Steve Jobs of Apple Computer declares a particularly uncertain new venture to be an “insanely awesome” product that everyone can throw his or her weight behind. Sometimes, it is more mundane, as when the venture leaders behind P&G’s Spinbrush electric toothbrush venture declared that the target competition for their electric toothbrushes was a \$5 conventional brush, rather than the \$50 versions then dominating the electrical brush market.¹³ In either case, the job of the venture leader is to create a sense of certainty and conviction to free their teams from the paralyzing effects of uncertainty.

Options thinking has implications for the quantity of ideas to be considered. Why? Because the whole concept behind options is to skew the distribution of potential outcomes—limiting the downside risk while uncertainty is still high, and making sure that the potential upside is substantial. One implication is that at the opportunity development stage, you want to be able to consider many options—many more, in fact, than you could possibly develop given the resources that you have. The concept at the venturing stage is to pursue many ideas, recognizing that most of them will be discarded or redirected as resource commitments to them become more substantial. Think of this like a funnel, with many ideas at the beginning that will be winnowed down to a few very robust ideas over time. At 3M, former chief executive officer (CEO) Jim McNerney used this idea as a cornerstone of his venturing strategy, pushing the company to deliver what he calls 2X/3X performance in venturing—twice the number of ideas considered, three times the number pushed through to development. At the venture level, this translates into operationally considering many opportunities.

THE RIGHT WAY TO GET INTO NEW MARKETS

Offering a new product or service to the market is a process rich with new information. The more uncertain your venture is, the more vital it is to take full advantage of this information and use the unfolding insights to improve the concept. Unfortunately, here too we see that companies often take the same approach to launching new ventures as they would to launching line extensions or enhancements to their core business. The reality is that very few projects work out exactly as expected. Most of the time, you would not really know what customers are looking for until you get feedback from them. Moreover, most of the time customers would not really know what they want until they have experienced an offering.

The uncertainty of this process creates several challenges. Senior leaders need to judge when to take action to remove obstacles blocking a venture's path. At the championing level, projects need to be appropriately integrated with other processes in the organization, while at the time the organization needs to benefit from the learning done in the venture. At the venturing level, the process of going from a pipeline of many options to a few focused launches needs to take place. Throughout, the goal is for the company to engage in continuous experimentation to convert assumptions into knowledge at the lowest possible cost. While uncertainty is still high, key objectives are learning and redirecting.

Senior Executive Level: Path-Clearing Processes

A reality of any new venture is that it has the potential to upset the status quo (at least one would hope it has—otherwise why bother doing it to begin with?). Predictable challenges that this creates are the perception of risk on the part

of potential customers; perceptions of threat from those whose jobs might be changed as a consequence of a venture's possible success; wariness on the part of potential supply chain partners, and so on. Overcoming the sources of resistance to a new venture's success is a vitally important obligation of the senior leader; however, ventures often stumble because such path clearing has not taken place.

The first paths that need to be cleared for a venture to enter the market are often internal. Established businesses frequently resist giving time, talent, or resources to launch the new venture, which can result in their failing to gain benefit from their association with the parent company to begin with. Worse, new ventures are often forced to go to market in the same way that existing businesses do, which can completely undermine them. One of our clients, for instance, is attempting to develop a venture that will move the company beyond an established customer base of corporate IT managers who buy specific products from them to a solutions sale at the enterprise level. Among the challenges the venture teams are facing is that the presumption at a corporate level is that they will use the same marketing and distribution channels for the new business as the existing businesses use—a potentially fatal problem, as the new business appeals to a different level in target companies and offers benefits that extend beyond the sphere of a typical IT manager. Someone at a senior level needs to clear away that particular obstacle—by giving the venture team permission to develop an alternative channel and managing the accompanying channel conflict (fortunately, this problem has now been recognized and the appropriate paths are being cleared).

Similar conflicts and obstacles need to be addressed with parties external to the firm. Even great products and services can be met with resistance from customers, who are rightly concerned with the costs versus benefits of trying something new.¹⁴ At a senior leadership level, assurances need to be given that the company is committed to the offering; that it is prepared to support it; and that the risks to customers are manageable. For instance, in the global new elevator construction business, Finland's KONE Corporation developed a radically new elevator technology, which eliminated the need for a separate machine room, creating substantial cost and design advantages for customers. Before this innovation could be converted to growth, however, an enormous amount of external path clearing needed to take place. Not only did the new technology have to run a gamut of demanding regulatory approvals, potential customers needed to be assured of its safety and reliability. KONE management created enormous focus and drive around this activity, with its most senior leaders making sure that the obstacles to the adoption of the new technology (based on a patented innovation called the EcoDisc) were removed, enabling a five-year period of rapid growth based on that innovation.

Convincing customers also requires that other members of the supply chain—distributors, suppliers, joint venture partners, and so forth—are prepared to facilitate the new business launch. All too often, ventures have failed because of either resistance on the part of these essential collaborators or because they were not adequately prepared. The standards battle between Circuit City's Divx

technology and the technology that is now commonplace in DVD players is an interesting example. Suppliers of DVD technology (learning perhaps from the history of technological innovations, such as the VCR player) forged agreements between Hollywood content producers who were eager for long playing time, high image and audio quality, manufacturers such as Toshiba and Sony, and distributors around a common standard. Circuit City's Divx technology was an attempted replacement for the video store rental. Consumers would pay the price of a regular video rental to bring a disk home and view it within forty-eight hours, then either throw it away or pay an additional \$15 to keep it permanently. Circuit City, however, failed to create critical mass around the new technology—only three manufacturers agreed to produce Divx disks (mostly, according to published reports, to avoid annoying the giant distributor). At the same time, other retailers flatly refused to carry the Divx product because of Circuit City's sponsorship, while video store rental outlets accelerated their move to offer DVD rentals because they viewed the success of Divx as a threat to their traffic. Circuit City ended up terminating the Divx venture at a reported loss of US\$375 million.¹⁵ Regardless of the merits of the technology, clearly an inadequate job of aligning key stakeholders was done.

And for publicly traded firms, a final constituency that needs to be attended to are a firm's stockholders and the analysts who assess its prospects. Failure to properly manage expectations, while, at the same time signaling growth potential are both ways in which firms can suffer in the assessment of the market.¹⁶

All this sounds pretty straightforward, and so it is, once a senior executive has decided to make a significant commitment to launching a new venture. The dilemma is that this judgment typically needs to be made before the potential risks and gains from a project are well understood. Waiting to get absolute confirmation of a venture's potential causes paralyzing delays. Jumping in too early can do enormous damage as well—witness the years of disappointing launches for personal digital assistants, which led to ridicule and brand-image damage to the firms leaping too early in the market. The skill here requires making these often difficult decisions, looking for evidence that the potential benefits are worth the risk. Option reasoning is useful in making this judgment, because it mandates limiting downside exposure until the upside potential of a venture is demonstrated.

Championing Level: Integration Processes

As a venture team begins to enter the market, and the senior leadership group becomes engaged in clearing the necessary paths, a subtle but hugely important job is to make sure that the activities of the two are integrated in a holistic way. This implies fitting the venture to the strategy of the firm (however emergent) and also some degree of fitting the strategy to the venture, particularly, if early market entry suggests significant new opportunities that had not been perceived

before. While most people will agree that such integration is important, we often find that the tasks necessary to create real alignment are neglected. This can occur because it is nobody's job; the existing players are too preoccupied with other things; or simply because its importance has not been recognized.

The first challenge of creating alignment is concerned with the resources. Finding the right resources and getting them to the right places involves more than making sure that the budget lines are approved. It has to do with creating venture teams with the right mix of process and content experience, and with providing them with appropriate incentives to grow the ventures in an appropriate way. One of the most difficult challenges is that in aligning new ventures with the organization's strategy, political considerations start to become very noticeable.¹⁷ In particular, if resources going into a new venture are also coveted by managers of established businesses, a champion has to be prepared to engage in the political process of negotiating their release.

A second integration challenge involves negotiating the terms under which the venture must operate. Rules must often be bent to get a new venture going—for instance, rules about job titles or hierarchical position that are perfectly appropriate for a large mainstream business typically make no sense for a small team working on a new venture. When you think about it, most large and complex organizations are chock full of rules that are there for good reasons, but which can choke the momentum of a small venture—everything from building use policies to internal corporate “taxes” to human resource restrictions. It falls to the change champions to decide which rules need to be heeded and which can be subtly bent.

Of particular concern are internal corporate accounting policies that may distort venture performance. In the case of one venture we studied, the leaders continually moaned that they were deeply burdened by internal accounting. This particular venture had its roots in an external acquisition for which, it was widely believed, the parent company had overpaid. The internal accounting rules carried the cost of the acquisition forward from the past into the performance numbers of the business, with the results that (as the venture leader observed), “we have to constantly live with brackets around our numbers,” a sign that the business was making losses. When accounted for without the acquisition cost, however, the venture would have been past the break-even point and been even slightly cash-flow positive at the time of the interview. We persuaded the champion for this venture to permit them to report two numbers: one, the original debt-burdened data, and the other, which we called a “forward-only thinking” number, in which the sunk costs of the excessive acquisition premium were not included. The effect on both the morale and the progress in the venture was remarkable—simply because a modest shift in corporate policy helped their progress and contribution become visible, while previously these were buried amid the bad news of a past corporate pricing decision.

A particular challenge for champions engaged in the integration task is that, to succeed, they must influence processes at the venture level, as well as at the senior

management level, without being in formal control of either. This can be immensely frustrating, as seemingly vast amounts of time are consumed by the delicate processes of negotiating agreements; keeping the necessary parties informed of progress; and making sure that senior leaders are sending the right signals. Managing both up and down in the organization requires some skill, but more so a willingness to dedicate time and thoughtful planning to the task.¹⁸

Venturing Level: Redefinition and Pruning Processes

At the venture management level, market entry can seem paradoxical. On the one hand, venture managers must be ruthlessly determined to drive results, bull-headedly breaking down obstacles to the venture's success. On the other hand, market entry usually reveals lots of new information, which can suggest that a venture's path forward needs to be redirected. We would argue that the first set of behaviors applies when uncertainty has to some extent been reduced, and the goal is to break into a market quickly. The second, involving the capacity to redirect and change the venture, makes sense when uncertainty is high and the clear business model does not yet exist.

In either case, venture launch is facilitated by the extent to which a team can create focus, initially around the first few important customer sets. It is further facilitated by the use of a process that forces assumptions to be tested, and which imposes regular overall checks on the business at key milestones, as well as by the willingness of venture leaders to take in new information and act on it.¹⁹ This is the time to build new competences, which we define as a combination of skills, assets, and systems, which are most powerful when they leverage an insight or discovery that is unique. Competences require the creation of effective teams and an increase in understanding of what the business really is—properties that we have elsewhere called *deftness* and *comprehension* as a new venture develops.²⁰

One of the great dangers of this part of the venturing process is the risk of falling victim to what psychologists call the *confirmation bias*. This is quite simply the natural human tendency not to take in new information that calls into question strongly held assumptions. Thus, if a venture team has formed a set of beliefs, it will be very difficult to shake those beliefs, even in the face of disconfirming evidence, unless the venture leader makes it clear that even cherished assumptions are open for discussion. When one examines great venturing flops, one often sees a pattern in which teams fix early on some guiding assumptions and never look back to reexamine them. The frenzied bidding by telecommunications companies for so-called 3G UMTS spectrum licenses fits this pattern—everyone bidding assumed that spectrum would be scarce and that operators would rapidly move to deploy the new networks. Despite challenges to this assumption and some pointed observations from firms electing to bid, the dominant assumptions about the benefits of these 3G networks were not really questioned until some time after the bidding concluded, leaving many firms, such

as Deutsche Telekom, with expensive assets that, at least in the near term, do not show promise of generating new profits.

IT WORKED! NOW WHAT? MANAGING VENTURING

After all the hard work of finding opportunities and breaking into the market, the joy of participating in a rapidly growing business is considerable. This joy, unfortunately, is often tempered by a host of new problems that were very hard to even conceive of when the venture was in its fledgling stage. Instead of a few tough challenges of learning and decision making, problems appear to pop up everywhere. Nobody is getting any sleep; facilities and people are strained to their limit; and it begins to become difficult to see the longer-term goals in the face of immediate critical problems. Growing ventures can also have unexpected consequences for the rest of the firm—both positive and negative.

Senior Executive Level: Creating Focus

A key task of senior leaders when a venture starts to take off is to make sure that everyone in the organization stays focused, despite the temptations of enormous distractions. This means reinforcing the kinds of messages that were important during the ballparking activities, but even more specifically and operationally. Insisting that quality and safety remain at high levels, for instance, can counterbalance the temptation to shortcut these processes, because they can slow a venture down. Making sure that the firm-level strategy is consistent with the venture—either by reinforcing the existing strategy or by shifting it to reflect the venture's potential contribution—is also critical. Absent focus, a short period of high growth often ends with rapid competitive entry into the same opportunity space, and a defeat snatched from potential victory.

Together with focus, senior leaders need to be prepared to find and release resources—fast—for the growing operations of the new business. Together with the championing level, critical decisions need to be made with respect to reallocating resources to growth. In some cases, the growth of a new venture implies a complete overhaul of a company's budget structure. In the case of a very rapidly growing financial services business we were observing, rapid growth essentially consumed all the available free cash flow in the business. At a corporate level, money had to be found from wherever it could be released—necessitating complete budget reviews with every company division to find ways in which to free resources. That year, the organization nearly imploded as the success of the new business overwhelmed the previous financial structure of the company. Obviously, these decisions are not popular, but they have to be taken at the most senior level of the company and taken decisively, lest the venture strangle from lack of resources to support growth. Such restrictions for a new venture do nothing but create a window of opportunity for competition.

Championing Level: Shifting Resources

While support for shifting resources is essential at the most senior level of the corporation, the tasks needed to make the actual shifts often fall to the championing level of the organization. At this level, leadership involves anticipating a host of problems that are likely to arise and proactively avoiding them. In fact, it is highly likely that the venture-level managers, engaged in growth, will be so distracted that they find being proactive difficult. The task then often is not handled, or falls to the champion to initiate.

Production capacity, for instance, may suddenly become scarce. If the new venture is operating with common capacity with existing businesses, tensions can erupt into deep internal conflict, as different groups battle for their share of the line. Good people become scarcer than ever, creating enormous pressure on staffing plans and heavy workloads for support operations, such as training, customer service, and human resources. In addition, quality can become strained, which creates competitive vulnerability. Somewhat more subtle are the decisions involving who receives deliveries or services and who does not. In the absence of a strategic approach to rationing capacity, distributors or value chain partners can become disgruntled and disenchanted, again creating an opportunity for competition. The wrong way to ration capacity is first-come-first-served. The right way is through some system that customers find fair, but which aligns with the corporation's strategic goals.

One thing to consider carefully is whether and where to outsource capacity. If you anticipate and carefully focus your resources on those parts of the value chain that are strategically important to control, you may be able to save considerable resources by outsourcing the less strategic parts of the chain.

Among the most subtle processes to try to anticipate proactively are the requirements for training. This might include training in the customer service operations; training for people who actually work with the offerings; or even training for customers and outside supply chain partners. Since training is not an instantaneous process, failing to anticipate the need for it can become a huge setback. Similarly, recruitment (ahead of need) of operations and service staff and qualified middle managers is often left to chance, and then managed haphazardly, unless someone is proactively leading the charge.

Companies often also overlook the problem that their rapid growth can put enormous pressure on their suppliers—in which case all the difficulties of proactive anticipation apply to the supply chain as well. A lack of quality or efficiency on the part of suppliers can lead to problems in the offerings that were not anticipated.

Finally, at the championing level it makes sense to put in place processes to anticipate and counteract competitive attack. A golden rule in strategy is that all attractive markets attract competition, and visible, rapid growth markets do so dramatically. At the championing level, someone needs to anticipate the attacks

and figure out how to mount the most effective counterstrategy, without overreacting.

Venturing Level: Coping

Although experiencing rapid growth can be exhilarating, at a venturing level one can feel totally overwhelmed. In an organization in which the championing job is well managed, fortunately the venture manager will be freed from some of the problems of coping with growth.

The time has now come for the emergent venture to start putting into place the processes and systems (or routines) that are necessary for it to become a real business. The more that growth challenges can be addressed by making certain activities routine or systematized, the less has to be invented on the spot and the more effectively the challenge will be met. Thus, at this point one should begin to see standardization of some activities, the development of systems for customer service and production, and the installation of policies and procedures. Standardization, not invention, begins to become important, and the infrastructure on which the later business will be built starts to develop. The process of creating robust company competences begins to unfold, as the essential skills, assets, and systems are put in place that are the essence of corporate capabilities.

One common but often overlooked aspect of this process is that the person with the skills to initiate a new business and launch it into the market may not be the right person to create the processes and systems to smoothly handle rapid growth. The very rule-breaking, innovative qualities that are crucial when the chief task is initiation can become liabilities when the job is trying to bring order to a chaotic situation. At a venture level, this requires the ability to know one's own limitations. Often, the solution is to bring in a different manager or management team to handle the challenges of growth. An alternative, however, is for the venture manager to recognize that the time has come to introduce such skills into the management team and bring in people who have appropriate experience. With many organizations, the reward for starting a venture is to be given the opportunity to run the business that emerges from it; unfortunately, this often means that a person with the skill set to start a business is in the wrong role.

Coping with growth, therefore, often means a transition in the management skills that are most needed and may imply a transition in management. All the techniques of effective change management come into play here, as the entire organization goes through a series of often-wrenching changes in people, processes, and systems.²¹

The goal during this phase of the venturing process is no longer creating something new, but imposing order and bringing discipline to a much better understood context. Effective venture managers thus begin to focus on standardization, quality, and reliability. The right people for this task are able to define a set of core key priorities; manage the details of the business; make sure that loops are

closed; and create the right culture to make the transition from a fledgling business to one that is increasingly mature.

RENEWING THE CORE

The goal of a venturing program is to drive the profitable growth of the parent company. One of the least-understood processes of venturing is the subtle mechanism through which a new venture becomes part of the corporate core, and in fact begins to influence the future of that core. When we review companies that have succeeded at transforming themselves through venturing—companies like 3M, Nokia, Nissan, and DuPont—a distinguishing characteristic is that the corporate center of gravity has shifted over time as a consequence of new business development.

A recent history of Nokia, for instance, notes that Ollila's rise to become company CEO was sparked in part by his success at managing the then-faltering (despite strong growth) Mobile Phones division. "As Ollila saw it, the main problems at Mobile Phones were low morale and a lack of integration with the Nokia organization."²² Ollila took the company through a radical transformation in which it disposed of its traditional businesses and focused efforts almost entirely on telecommunications—a business that had begun as a new venture in the 1960s and had grown at a 30 to 50 percent rate annually.²³ Indeed, the Nokia story might be considered a textbook case of renewal through innovation.

Once a new venture has traveled through its growth phase, its managers must be able to capture positions of influence within the parent company. If they do not, it is highly likely that the long-run strategy of the parent will continue as it did before the venture got started—undermining the whole point of engaging in venturing to begin with. Think of the people who worked on the venture as powerful carriers of the message of necessary change. Evidence that people are moving into positions of influence includes access by leaders in the new entity to the established corridors of power, influence, and resource allocation decisions.

Beware, however, of the danger of assuming that all people who are successful with ventures are automatically good at managing ongoing businesses, or even interested in doing so. Many would do better being "recycled" back into the new start-ups. The point here is that the winners need to be accorded recognition and influence in the corridors of power, not necessarily position in the organization.

As this process unfolds, both old and new businesses come to the point at which decisions—often-difficult decisions—need to be made about the extent of integration. Which decisions should be made in a centralized way? Which can be made at an operating level? How much consistency should there be in measurements and objectives? Does the company have one overarching strategy or a sequence of strategies at operating levels? How are ideas and practices shared (or not)?

Senior Executive Level—Incorporation and Perspective

A key task at the senior level is to symbolically, and in reality, make it clear that the new business is a welcome and valued member of the corporate body. In particular, the people from the venture need to be recognized as a legitimate and welcome part of the corporate center. Symbolic and substantive actions—such as promoting people from the venture team to positions of authority; featuring the venture in publications and in the annual report; mentioning it in discussions with analysts and the media—reinforce the message. In the same sense, neglecting to do these things sends an equally strong message—that the venture, however successful, is not a driver for the company's future.

Mixed messages can happen when the senior leader has grown up in another, different business, and finds it hard to acknowledge that its star has been overshadowed. It takes enormous discipline and insight for a senior executive to realize that the time has come to leave the past behind. We have always admired the way Andy Grove described the transition he personally had to make to shift Intel's strategy from a focus on memory chips to microprocessors:

I remember a time in the middle of 1985, after this aimless wandering had been going on for almost a year. I was in my office with Intel's chairman and CEO, Gordon Moore, and we were discussing our quandary. Our mood was downbeat. I looked out the window at the Ferris wheel of the Great America amusement park revolving in the distance, then I turned back to Gordon and I asked, "If we got kicked out and the board brought in a new CEO, what do you think he would do?" Gordon answered without hesitation, "He would get us out of memories." I stared at him, numb, then said, "Why shouldn't you and I walk out the door, come back and do it ourselves?"²⁴

As the growing business and the previous core businesses begin to come together, senior executives need to revisit the ballpark for the firm—is it still relevant? Does the success of the new business suggest a change in overall strategic direction for the firm? And does this likewise suggest the need to update the ballpark for other new businesses? As of this writing, IBM CEO Sam Palmisano is in the process of reshaping the firm's ballpark to a concept he calls on-demand computing. Part of the underpinnings of this change in direction comes from the success of IBM's software business, a US\$13 billion sales division, which generates 31 percent of its pretax income and 78 percent of its bottom-line growth, according to a recent published report.²⁵

One of the most significant tasks of the senior executive team is to provide perspective on the evolving core of the company. Senior leaders suggest what data are important to a firm, and help interpret vague and ambiguous information in the environment. The best are adept at spotting early warnings of potential threats, as well as of potential opportunities. This task is helped by the development of leading indicators. Unlike much information in business that is a reflection of past activities, leading indicators help focus attention on the future.

Finally senior leaders need to provide guidance on the company's overall resource allocation priorities and competitive positioning, as well as acting in a symbolic capacity as the visible symbol of the firm to outside stakeholders.

Championing Level: Socializing

As a new venture becomes a substantive contributor to the core business, it also needs to become a good citizen. At the championing level, this can feel like the imposition of adult supervision on a rowdy adolescent. The venture has to begin now abiding by the corporate rules it may have flouted earlier. Rules about corporate overhead and transfer payments; rules about human resource policies; and rules about harmonization with centralized systems begin to become important. Budgets need to be done, and done properly. Targets need to begin to be met more consistently, and accountability for performance starts to matter. If a venture had its roots in a skunk works, with an us-versus-them attitude toward the parent company, barriers to cooperation now need to be taken down and the people in the venture need to be acquainted with the social life of the company. In addition, as a venture gets larger, its impact on the parent can grow as well. Missing a target by 5 percent is no big deal when it is a tiny business—once you are talking about a big business, however, the impact can be far more substantial.

Challenges facing senior leaders during this set of activities are very similar to those they face when incorporating acquisitions, and many of the same principles apply: thought needs to be given to the nature of the integration of the business and transition strategies need to be developed for each of the key people.²⁶ The challenge is to create alignment and make the necessary changes without excessive disruption to the business. Fortunately, there are a number of alignment and change management tools that reflect years of excellent research into the process of realigning an organization.²⁷

Venturing Level: Renewal Processes

At the point at which a venture becomes a “grown up,” the venture leaders' most significant obstacle is overcoming complacency and arrogance. With successful growth in vivid recent memory, it is all too easy to underestimate competitive threats and overlook changing customer requirements. When the venture needs to be focusing on making enhancements to its offerings, the team can sometimes lose focus, particularly if it is having a difficult time with the integration of the new venture with the corporate parent. Goals here include building in processes for routine innovation, enhancing, and improving the offering, as well as building a stable and competent team to lead the developing business.

Given an accelerating pace of technological evolution, it is easy to overlook just how quickly things can change. Even Motorola, a leader in many of its industries, missed a major transition from analog to digital platforms in its mobile

phones business and found itself having to struggle back into a leadership position in that industry. Right now, in the United States, the rapidly developing cable television business is showing signs of denial with respect to the threat posed by satellite-based services. A crucial task of the venture leader is thus to keep the organization focused on what it needs to do to maintain customer loyalty and further develop the business.

Managing productivity starts to become important as well. Since success always attracts competitive response, price pressure is an ever-present threat. By the time competitors have caught up with the concept or the technology, it is vital that your business be efficient and running smoothly. It is all too easy to get sloppy when margins are substantial and growth prevalent.

The people challenge during these activities is considerable as well. Sometimes new skills need to be brought on to the team. Sometimes, people with connections to the markets, technologies, or people in the core business are important for the venture's future growth. And some of your teams are highly likely to find the task of running a day-to-day operation with a lot of standard operating procedures boring. They (and you) will be happier if you find them a challenge suited to their talents.

WHEN IT'S CLOSING TIME: THE PROCESS OF TERMINATION

It is a truism that in today's competitive environment, no competitive advantage lasts forever and that companies that do not change and adapt will fall victim to those that do. It is somewhat surprising to us to observe that in comparison with the mountains of ink devoted to innovation and growth, much less attention is given to the equally important process of termination of businesses and ventures (as opposed to a boatload of material on reengineering and downsizing). The two have to go together, not least because most markets are not rapidly growing. Research by Harrigan found, for instance, when looking at industrywide unit shipments of manufactured goods that "75 percent of all industries comprising the economies of Japan, Western Europe and the United States were experiencing slow growth, no growth or negative growth." Only about 12 percent of the industries in her study were rapidly growing.²⁸ Markets that grow slowly or not at all may require consolidation or a shift in the way they are served for companies operating within them to be successful—at the same time, not all companies will be equally suited to make the shift from operating in a rapid growth environment to one that grows more slowly. Exit is, therefore, just as crucial as entry.

Senior Executive Level: Pruning

Among the least comfortable jobs at a senior executive level is initiating activities that will lead to the restructuring of a company and the sale or closure of

some of its lines of business. Several practices are associated with doing this uncomfortable task well.

First is building a clear and compelling case that changes are needed. Typically, this will be the result of poor or worse-than-expected performance, although changes can also be precipitated by looming marketplace threats, competition, changes in regulations, or other circumstances facing a firm. In the absence of a compelling story, efforts to prune businesses can end up demoralizing and angering essential employees and confusing customers rather than providing the energy for renewed focus.

Next, make clear the criteria for what businesses will stay in the corporate portfolio and which will not, and do this as completely and rapidly as possible. Thomas Engibous, who unexpectedly became the president of Texas Instruments in 1996 after the sudden death of previous CEO Jerry Junkins, decided to accelerate the restructuring of the corporate portfolio that had been initiated in a moderate way under his predecessor. Within his first eighteen months in office, Engibous sold TI's defense business to Raytheon, its notebook computer operations to Acer of Taiwan, its printer business to Genicom, and also exited inspection equipment, chemical, telecommunications systems, wireless equipment, and software. Engibous was widely praised for his ability to explain the need for the changes and provide people in the company with a compelling vision for the future—which boiled down to redefining the TI ballpark to becoming the leading player in digital signal processing. As he observed to a reporter, "When somebody says DSP, I want them to think of TI, just like they think of Intel when they say microprocessors."²⁹ Such a major transition does not come without pain, of course. As one former TI executive commented, "some people don't feel part of the mainstream" now that the company has shifted focus.³⁰

Another important element of pruning at a senior level is concerned with addressing the power dynamics that result in coalitions of support for businesses, even if they are not performing well.³¹ At IBM, for instance, Steve Mills, the head of its software group, perceived that IBM's thrust into so-called middleware for computers of all types could be complemented by partnering with providers of application software. Unfortunately, IBM also had many products in the application space that competed directly with potential partners, each of which had a constituency within IBM's power structure. Eventually, after years of persistent effort, Mills and his colleagues were able to persuade the senior team to exit in-house application efforts in 1999. As of 2003, IBM reportedly has cross-marketing agreements with 9,000 application vendors, with partnerships driving US\$12 billion in software sales across the company, compared with US\$3 billion in 2001.³² It is important to remember that you cannot win these kinds of battles on logic alone—political and change management skills are key here. And this is not a task that can easily be delegated—senior leaders have to take a stand.

Finally, be fair. Considerable research suggests that a process perceived as fair, even if its consequences are unpleasant, does less damage to morale and allows changes to proceed more smoothly than a process that generates resentment.

Championing Level: Decoupling

At a change championing level, the actual activity sets that will decouple a business from its parent or result in its closure are initiated. This is particularly problematic for new ventures that need to be terminated. Having encouraged people to leave other kinds of jobs and join a venture, it is really tough to have to inform them that cherished projects are to be ended. The reality however is that a certain level of ruthlessness is essential here. The firm cannot afford to waste its talent on dead projects that are going nowhere. Talented people would be better deployed in a business with a future. Ending a project sooner, rather than later, and in an honorable way can actually create substantial benefits in the long run.

Sometimes, the cause of a venture's failure has nothing to do with the people on the venture. Thus, a technology that is slow to take off, a complex product in which complementary technologies are not yet available, or a venture in which assumptions about price were wrong, are not necessarily a reflection of poor management. One of the judgment calls to make when ending a venture has to do with making the distinction between bad luck and bad management. The goal is to keep people motivated and enthused about venturing, while at the same time removing those who simply do not think in an appropriate way from the venturing process. On occasion, executives will be called into a venture that has fallen into what the academics call an "escalation of commitment" situation.³³ This means that commitment to funding the venture has remained high, while mounting evidence suggests that it is doomed. In such cases, strong interventions may be needed to de-escalate the situation and bring decision makers to the point where they can stop the runaway project. Montealegre and Keil, building on the work of Brockner, Shaw, and Rubin, Heath, and Northcraft and Neale have suggested a list of ways in which the context for de-escalation of commitment can occur, including:

- Changes in top management or project championship
- Publicly stated limits on expenditure
- Availability of alternative internal investments
- Setting minimum target levels for achievement
- Making negative outcomes less threatening
- Engaging in regular evaluation
- Separation of responsibility for initiating and evaluating projects
- Appeals to stakeholders from externally affected parties
- External pressure on the organization
- Unambiguously negative feedback
- Visibility of project costs³⁴⁻³⁷

Montealegre and Keil (2000) observed a four-step process of de-escalation in a study they conducted on the implementation of the baggage handling system at Denver International Airport: step 1, recognition of a problem; step 2,

reevaluation of the prior course of action; step 3, searching for alternative courses of action; and finally step 4, implementing an exit strategy.

Champions here have an enormously important buffering role. They help empathize; explain the need for the change; negotiate with stakeholders; and otherwise try to attend to the personal and emotional side of pruning.

Venturing Level: Managing Exit

In the event of a disappointment, the human and symbolic role of the venture leader cannot be overemphasized. For the organization to benefit from failures and learn from its mistakes, venture leaders must demonstrate their personal accountability for what happens to the venture and their personal determination to learn from and go beyond the setbacks. If people must be fired, tell them personally. If projects must be cancelled, do it in person. If people are angry or upset, be prepared to empathize, explain, and help them adjust. One best practice in this area is to conduct thorough (and frank) postmortems or after-action reviews to facilitate the capture of learning and give people an opportunity to come to grips with the reality of the situation.

It is also crucial at all levels of leadership, particularly at the level of the venture, that fear of failing be reduced.³⁸ In the best-managed companies, a distinction is made between businesses that did not work out—and under uncertainty, there always will be those that do not—and people that are responsible for the failures. At TI, part of Engibous's cultural change efforts involved shifting the way in which disappointments were handled. Those involved with projects that ended up heading down dead ends are encouraged to kill them and are rapidly redeployed to other programs. The company additionally makes explicit investments in retraining its engineers to avoid their becoming technologically obsolete, attending to one source of resistance to leaving a business behind—the fear of one's own skills becoming worthless.

CONCLUSION

To review our argument earlier, we suggested that venturing programs call for the simultaneous management of fifteen discrete processes, each of whose absence can inhibit successful new business growth. It should therefore be clear that a major venturing program is hard, hard work. It calls for determination and persistence—it is not fad of the month stuff. It is like building up momentum on a flywheel—constant, determined energy and attention needs to be poured in until progress becomes inexorable.

As you review your own venturing activities, it can help to ask the extent to which each of the fifteen processes are being appropriately managed in your firm. This diagnosis will help to pinpoint places where you may need to pay extra

attention or put in additional effort. If you can do this, you will be well on the way to creating a firm capable of the continuous renewal needed to survive in these increasingly competitive and challenging times.

NOTES

1. Matthew L. A. Hayward and Donald C. Hambrick, "Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris," *Administrative Science Quarterly* 42, no. 1 (1997): 103–129.

2. Ralph Biggadike, "The Risky Business of Diversification," *Harvard Business Review* 57, no. 3 (1979): 103–111; determined that a typical innovation required seven or more years to achieve market positions.

3. For an alternative way to structure highly uncertain investments, see Ian C. MacMillan and Rita Gunther McGrath, "Crafting R&D Project Portfolios," *Research-Technology Management* 45, no. 5 (2002): 48–59.

4. The characterization of these activity sets draws upon Joseph L. Bower, *Managing the Resource Allocation Process: A Study of Corporate Planning and Investment* (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1970); Robert A. Burgelman, "A Process Model of Internal Corporate Venturing in the Diversified Major Firm," *Administrative Science Quarterly* 28, no. 2 (1983): 223–244.

5. For a more detailed discussion of the process of opportunity recognition and the creation of an opportunity register, see Rita Gunther McGrath and Ian C. MacMillan, *The Entrepreneurial Mindset: Strategies for Continuously Creating Opportunity in an Age of Uncertainty* (Boston: Harvard Business School Press, 2000).

6. See MacMillan and McGrath (2002) for a discussion of different types of approaches to market entry, and Gary Lynn et al., "Marketing and Discontinuous Innovation: The Probe and Learn Process," *California Management Review* 38, no. 3 (1996): 8–37.

7. For a detailed discussion of the resource allocation process for new ventures, see Jennifer A. Starr and Ian C. MacMillan, "Resource Cooptation and Social Contracting: Resource Acquisition Strategies for New Ventures," *Strategic Management Journal* 11, no. 4 (1990): 79–92.

8. Rick Mullin, "3M, or the Tale of an Exiled Prince," *Journal of Business Strategy* 22, no. 5 (2001): 24–26.

9. MacMillan and McGrath (2001, 2002) and McGrath and MacMillan (2000); Avinash K. Dixit and Robert S. Pindyck, *Investment under Uncertainty* (Princeton, NJ: Princeton University Press, 1994).

10. For a planning methodology that uses this philosophy, see McGrath and MacMillan (1995); Rita Gunther McGrath and Ian C. MacMillan, "Discovery Driven Planning," *Harvard Business Review* 73, no. 4 (1995): 44–54.

11. This scoring approach was developed by Robert C. Cooper and the members of DuPont's Knowledge Intensive University, whom we thank for permission to reproduce it here.

12. Among those we have observed to create good results are consumption chain mapping, quizzing and attribute map analysis (see MacMillan and McGrath, 1996, 1997); quality function deployment; design for Six Sigma, and innovation workshops (Hamel, 2000); Ian C. MacMillan and Rita Gunther McGrath, "Discover Your Products' Hidden

Potential,” *Harvard Business Review* 74, no. 3 (1996): 58–68; Ian C. MacMillan and Rita Gunther McGrath, “Discovering New Points of Differentiation,” *Harvard Business Review* 75, no. 4 (1997): 133–145; Gary Hamel, *Leading the Revolution* (Boston: Harvard Business School Press, 2000).

13. “Why P&G’s Smile Is So Bright,” *Business Week* (August 12, 2002).

14. Arthur L. Stinchcombe, “Social Structure and Organizations,” *Handbook of Organizations* (1965): 153–193 pointed out that all new ventures suffer from a “liability of newness.”

15. Steven V. Brull, “DVD and Conquer: Why One Technology Prevailed,” *Business Week* (July 5, 1999): 34.

16. For some good ideas on managing investor expectations, see Amy Hutton, “Four Rules for Taking Your Message to Wall Street,” *Harvard Business Review* 79, no. 5 (2001): 5–11.

17. For a seminal article on the political process of venturing, see Ian C. MacMillan, “The Politics of New Venture Management,” *Harvard Business Review* 61, no. 6 (1983): 8–13.

18. For some excellent ideas on the process of managing “up,” see John J. Gabarro and John P. Kotter, “Managing Your Boss,” *Harvard Business Review* 71, no. 3 (1993): 150–157.

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31. M. Meyer and L. Zucker, *Permanently Failing Organizations* (Thousand Oaks, CA: Sage, 1989).
32. Susan Orenstein et al., "The Toughest Guy in Software," *Business* 2.04, no. 3 (2003): 80–85.
33. Barry M. Staw and Jerry Ross, "Knowing When to Pull the Plug," *Harvard Business Review* 65, no. 2 (1987): 68–75: on the difficulty of stopping once-attractive projects.
34. Mark Keil and Ramiro Montealegre, "Cutting Your Losses: Extricating Your Organization When a Big Project Goes Awry," *Sloan Management Review* no. 3 (2000): 55–69.
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3

Assessing the Context for Corporate Entrepreneurship

The Role of Entrepreneurial Orientation

G. T. Lumpkin, William J. Wales, and Michael D. Ensley

Successful corporate entrepreneurship (CE) is a complex phenomenon that requires multiple talents and competencies.^{1, 2} Organizations that exhibit a strong entrepreneurial orientation (EO) may have an advantage when it comes to undertaking CE activities. EO refers to the processes, methods, and styles that enable organizations to create venture opportunities and pursue strategic entrepreneurial initiatives. The effectiveness of EO depends to a great extent on the contexts in which organizational activity takes place. Within organizations, the efforts of top management teams (TMTs), the culture which such teams and other organizational members foster, and the organizational structures that support CE efforts largely define the internal context of CE. Beyond the organization's boundaries, factors in the business environment and elements of national culture are likely to heavily influence how an organization achieves CE outcomes.

The corporate setting is a key context for entrepreneurship. Entrepreneurship in the corporate context provides a means for firms to launch new ventures and reinvigorate their strategic efforts.^{3, 4} CE typically requires a companywide commitment, as the outcomes of CE initiatives, whether promising or dismal, tend to affect every part of an organization.^{5, 6} Various internal and external contextual factors serve to influence the entrepreneurial process within a corporate context. The efforts of the TMT, the culture which such teams and other organizational members foster, and the organizational structures that support CE efforts largely define the internal context of CE. Beyond the organization's boundaries, factors in the business environment as well as elements of an organization's national culture are likely to heavily influence how an organization achieves CE outcomes.

CE enables firms to build new sources of competitive advantage and renew their value propositions.⁷ To do so, however, firms must be capable of effectively exploring entrepreneurial initiatives through activities such as scanning, experimentation, R&D, and new product development, as well as successfully exploiting newfound possibilities by efficiently deploying resources and organizing work activities.

An EO may be viewed as a firm-level strategy-making process that companies use to enact their organizational purpose, sustain their vision, and create competitive advantages. Many firms that successfully engage in CE attribute their success to an EO.^{8, 9}

The term *entrepreneurial orientation* has been used to describe a fairly consistent set of related activities consisting of five dimensions—autonomy, innovativeness, proactiveness, competitive aggressiveness, and risk taking, which permeate the decision-making styles of organizational members.^{10, 11} *Autonomy* is the independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new venture and seeing it to fruition. *Innovativeness* is the predisposition to engage in creativity and experimentation through the introduction of new products and services as well as technological leadership via R&D in new processes. *Proactiveness* is an opportunity-seeking, forward-looking perspective, characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand. *Competitive aggressiveness* is the intensity of a firm's efforts to outperform rivals and is characterized by a strong offensive posture or aggressive responses to the actions of competitors. *Risk taking* involves taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures in uncertain environments. These dimensions may be considered fundamental aspects of CE; in fact, some scholars regard the terms entrepreneurial orientation and corporate entrepreneurship as interchangeable and measure CE and EO using identical scales.¹²

Given the potential importance of an EO to CE success, the purpose of this chapter is to address how various corporate settings provide a context for entrepreneurial behaviors and processes. Entrepreneurial activity does not occur in a vacuum. Rather, contextual factors play a major role in facilitating or inhibiting CE. Using EO as a research framework, this chapter investigates how EO relates to five different organizational contexts—TMT, organizational structures, organizational culture, environment, and national culture as suggested by Figure 3.1. In the final section, we discuss the implications of our findings and possible future research directions.

EO IN CONTEXT: EO AND TMTS

The relationship between EO and the behavior of organizational teams is a relatively recent addition to the literature on entrepreneurial processes. Although

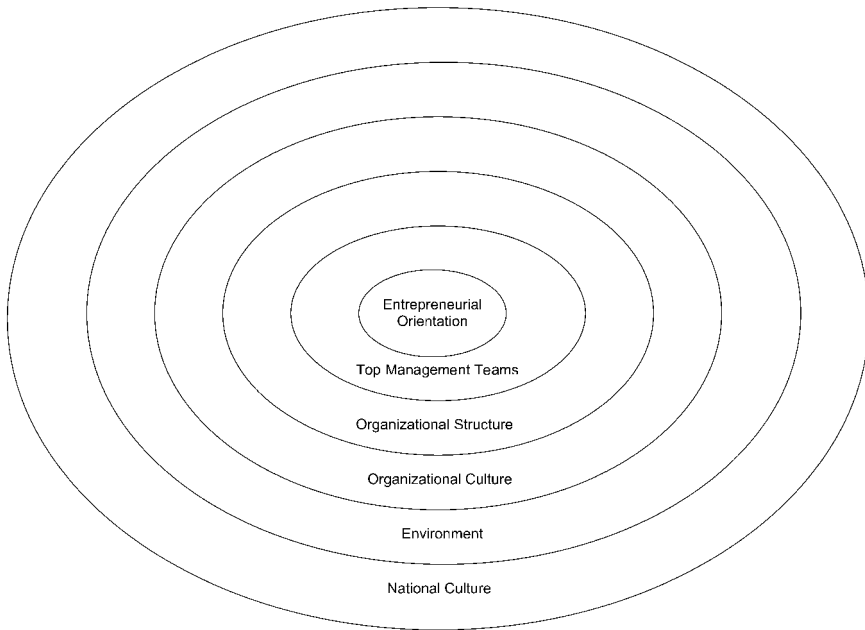


Figure 3.1. Contexts of entrepreneurial orientation.

teams form at many organizational levels to handle issues of task communication, coordination, and integration, studies of EO have largely focused on the TMT.¹³ The values and philosophies held by TMT members represent an important internal organizational influence upon the entrepreneurial behavior of a firm.

Following the strategic choice thesis, executive team members are assumed to command a significant influence over the strategic direction and ultimate success of a firm.¹⁴ This is especially true for organizations and environments which afford the TMT a high level of discretion within their strategy-making activities.¹⁵ As an organizational context, TMTs represent an influence that is indivisible from an organization's EO. That is, the values, decision-making style, and internal functioning of the TMT are intricately involved in the strategy formulation processes from which an EO emerges. Hambrick and Brandon observed that what an executive leadership team values could have a considerable influence upon the behavior of a firm.¹⁶ As a result, survey instruments developed to measure EO are typically administered to executive team members under the assumption that their perceptions best capture firm entrepreneurial behavior. Therefore, this section addresses how the TMT context is associated with the EO developed by a firm.

Covin and Slevin theorized that the EO of an organization increases when the TMT places greater value upon economic gain, market share, product-market

diversification, and being perceived as an economic leader.¹⁷ Their research suggests that the emergence a strong EO over time can be particularly sensitive to the engendered values of TMT members regarding firm operation and strategic direction. Covin and Slevin also recognized the potential for inconsistencies between the values of TMT members and the level of EO exhibited within firm strategy-making processes to be equalized over time as a result of reciprocal influence.¹⁸ Therefore, a bidirectional relationship may best conceptualize the linkage between TMT values and firm entrepreneurial behavior.

The heart of the EO construct is reflected in the entrepreneurial behavior of firm management exhibited during the strategy-making process. In general, executive teams with entrepreneurial management styles support the tenets of EO and are inclined to take risks, favor innovation, and compete proactively in the marketplace. TMTs with conservative management styles are risk-averse, favor stability, and react to market changes. Entrepreneurial firms may be identified by examining the decision-making style of their TMT. The concept of entrepreneurial top management styles has been theorized and empirically shown to have implications for firm performance.^{19–21}

By what means do these entrepreneurial predispositions manifest in organizations? It is principally in the context of a TMT's teamwork. Teams are formed to share the burden associated with accomplishing organizational objectives, including firm growth, profitability, and survival. Executive teams that interact more effectively will be better able to perform their tasks and ultimately will make a greater contribution to organizational advancement.²² A stream of literature on group dynamics provides the field of entrepreneurship with an important set of measurable concepts, which serve as indicators to the internal state of team functioning.²³ Group dynamics provide insight into how well entrepreneurial strategic decision-making processes are likely to be operating within the TMT. Executive team group dynamics represent a potentially strong contextual influence upon the development of an effective EO.

Group dynamics research has developed several constructs potentially relevant to the emergence of an EO within TMT strategic behavior, including potency, cohesion, shared vision, and conflict management. These group dynamics may serve to either directly or indirectly influence the emergence of EO within the firm. Team potency and cohesion are thought to directly foster EO, while shared vision and conflict management serve more to facilitate its development.

Potency describes the collective beliefs of members that their team can be effective independent of any particular task.²⁴ Team potency and performance have been shown to be reciprocally and longitudinally related, suggesting that teams high in either potency or performance will tend to engender the other.²⁵ The confidence enjoyed by potent TMTs increases their likelihood of exhibiting bold strategy-making behaviors that support the tenets of an EO. Potent TMTs may develop a sense of security in taking risks, as a result of past successes. The assertiveness fostered in potent TMTs may influence their strategy-making proclivity toward competitive aggression within existing markets and proactiveness

to exploit emerging market opportunities. However, the past success associated with team potency may decrease strategic innovativeness as firms have been shown to propagate the strategies that made them successful even when change is essential to their survival.²⁶

Cohesion refers to the degree of attraction within social relationships that bond a team together.²⁷ Under conditions of low cohesion, team behavior suffers from a lack of social integration.²⁸ However, extremely high cohesion can lead to group think and adherence to the status quo.²⁹ EO is likely to be hindered in either extreme case. Teams rich in cohesion will be unwilling to take risks that may upset the unity that their team values and enjoys. This complacency, common among highly cohesive TMTs, may decrease their affinity for aggressive, proactive, or innovative behaviors in the strategic decision-making process. The distrust found in teams lacking cohesion makes large resource commitments or innovative changes unlikely without the forging of difficult-to-attain consensus among members. Further, the efficiency of coordination required to preempt competition or sustain competitive aggression in the market may prove exceedingly challenging for teams without cohesion. Therefore, a moderate level of cohesion appears most conducive in stimulating firm EO behaviors.³⁰

Shared vision refers to a common mental model among team members regarding the future state of the team or its tasks. Such vision provides a basis for team action.³¹ A mutual understanding of future direction yields greater team cooperation, coordination, and citizenship behaviors.³² TMT-shared vision represents an important means by which EO is facilitated within firm strategic behavior. Armed with a clear shared direction, TMT members can operate with great autonomy yet maintain the benefits of collective goal-directed effort. TMT members may also feel more comfortable taking risks, experimenting with innovative solutions, and proactively exploring market opportunities when they know their actions are in agreement with the team's shared vision. Shared vision may also help an organization maintain a unified aggressive posture against market rivals.

Conflict management builds upon the conceptualization of conflict as a multi-dimensional construct, comprised of task and relationship components with opposite implications for team performance.³³ TMTs that manage their conflict effectively reap the benefits of task-oriented conflict, while avoiding the detrimental effects of relationship-driven quarrels.³⁴ Effective conflict management yields greater time spent addressing strategically relevant task issues within the TMT, including matters of entrepreneurial relevance, such as how proactive, aggressive, or innovative the firm should be. Conflict management is a necessary but insufficient condition to the development of EO. Though its presence does not imply entrepreneurial behavior, in its absence, affective, emotional, within-group relationship concerns are likely to dominate TMT thought and activity.

Empirically, little work has been done to explore the relationships between TMT group dynamics and EO. Ensley, Carr, and Wales argued that group dynamics influence how well the TMT is able to align an organization's EO, given

the level of environmental uncertainty present in its industry setting.³⁵ Their study demonstrated that TMT conflict management and shared vision possess a significant relationship with the degree to which the executive team was able to achieve alignment between EO and uncertainty. These findings suggest that TMT group dynamics may be key indicators of the effectiveness of a firm's entrepreneurial behavior. Within-TMT relationships may also affect the emergence of EO within the strategy-making processes and practices of organizations. The internal functioning of the executive team represents an important and underresearched contextual influence upon the development of EO within the firm.

EO AND ORGANIZATIONAL STRUCTURE

An organization's structure represents another internal context in which decisions are made and actions are taken. Various approaches have been used to characterize organizational structures. In this section, we will consider several types of structural dimensions, and how the contexts they create might influence entrepreneurial outcomes.

Some authors refer to dimensions of structure, such as centralization, formalization, and complexity.^{36–38} Other researchers have proposed additional dimensions, such as specialization and integration.^{39–41} Mintzberg (1979, 1983) proposed five ideal types of organizational structure: simple structure, machine bureaucracy, professional bureaucracy, divisionalized form, and adhocracy.^{42, 43} Each of these types represented combinations of various structural dimensions, such as those described earlier. A simple structure, for example, consists of low formalization, low specialization, and a high level of centralization. Only a few studies have investigated the relationship of EO to these dimensions. For example, Jennings and Lumpkin found that entrepreneurial firms rely on specialized personnel and tend to be more decentralized than conservative firms.⁴⁴

More common in EO research are studies that investigate organic versus mechanistic organizational structures. Burns and Stalker introduced the idea that organizations are arrayed along a mechanistic–organic continuum, which, they argued, constitutes “two formally contrasted forms of management system.”⁴⁵ Organic organizations are typically decentralized and informal, with an emphasis on lateral interaction and an equal distribution of knowledge throughout the organizational network. Mechanistic organizations, in contrast, tend to be highly centralized and formal, and characterized by a high degree of vertical interaction and specialized differentiation between functions.

Covin and Slevin's model of entrepreneurship as firm behavior suggests that “entrepreneurial posture is more positively related to firm performance among firms with organic structures than among firms with mechanistic structures.”⁴⁶ Research investigating the relationship of EO to structure has tended to confirm the assertion that an organic structure provides a better fit for firms exhibiting high levels of innovativeness, risk taking, and proactiveness.^{47, 48} For example,

Covin and Slevin found that entrepreneurial firms were positively related to performance when their structure was organic; firms with a “conservative strategic posture,” that is, low levels of innovativeness, risk taking, and proactiveness, were most positively associated with performance when their structure was mechanistic.⁴⁹ Miller found that both organic firms and simple firms were positively correlated with EO.^{50, 51} In contrast, Stuart and Abetti found a negative correlation between the initial success of high-tech new ventures and the organicness of structure.⁵²

Specific dimensions of EO have also been related to components of organizational structure. Miller found that innovativeness was positively related to structural organicness and negatively related to formal, bureaucratic structures.⁵³ In a separate study of small firms in Montreal and Quebec, Miller investigated the relationship between proactiveness and risk taking, and the structural dimensions formalization and centralization.⁵⁴ Contrary to his predictions, formalization was not negatively correlated with risk taking and proactiveness—only among unsuccessful firms was there a statistically significant finding: a positive correlation between formalization, risk taking, and proactiveness. Also contrary to his hypothesis, risk taking was found to be negatively correlated with the centralization of high performers.⁵⁵

These equivocal findings suggest that finer-grained analyses may be needed to assess the relationship of organizational structure to the dimensions of EO. With regard to innovativeness and proactiveness, organic structures may enable an organization to develop and introduce products more effectively by facilitating communication and adaptation to changes that emerge as new information is processed.⁵⁶ This is consistent with Dougherty, who found that organizations refine their new product offerings through multiple cycles of information processing.⁵⁷ However, when more individuals across multiple functional areas are exchanging information, as might be the case in high organicity settings, cycle time may actually increase, resulting in more time-consuming interactions. Such increased cycle time may impede rather than facilitate progress.

Competitive aggressiveness may be more effective in contexts that are more mechanistic. An organic firm that is decentralized and informal may have difficulty, relative to a more directive mechanistic firm, focusing the efforts of more loosely coupled organizational members on the level of intensity needed to compete aggressively.⁵⁸ A mechanistic structure can facilitate an aggressive posture by providing the internal control to concentrate efforts on a central goal, especially in settings where technologies are known and R&D expenditures are minimal. Further, prior research indicates that under conditions of adversity and scarcity, firms often become more formal and tend to centralize decision-making processes.⁵⁹ Thus, to enhance performance, a mechanistic structure may be the dominant mode for competitively aggressive organizations.

Autonomy refers to independent action aimed at bringing forth a new venture concept and carrying it through to completion. As a dimension of EO, it suggests decision-making processes and organizational practices that foster and support

such independence.⁶⁰ Autonomy is facilitated in organizations by decentralization that enables autonomous thought and action to occur. Decentralization tends to promote participative decision making, and pushes decision-making authority to lower levels of an organization. When decision making is decentralized, individuals may have more freedom to initiate new actions based on this changed perception. Greater centralization, in contrast, narrows a firm's perspective to that of a few key decision makers, which may increase commitment to past actions and inhibit EO.⁶¹ For example, Duchesneau and Gartner found that entrepreneurs who encouraged participative decision making at the strategic and operational levels and shared command with lower ranking employees were more successful.⁶² Thus, decentralization and other structural arrangements that promote autonomy may enhance an organization's entrepreneurial outcomes.

Structural conditions may also impede an organization's entrepreneurial efforts. Conflicts arising from power relationships and issues of control and authority can limit progress.⁶³ For example, the reporting requirements and/or authority relationships that stem from an organization's structure may impede the flow of information. This, in turn, slows down information processing or prevents entities within an organization from getting information that might be useful to effective decision making.^{64, 65} Bureaucratic rules and outdated procedures can also create conditions that make it difficult for organizations to pursue entrepreneurial goals.^{66, 67} As a result, entrepreneurial activities, which rely on communication flows and interaction across organization boundaries to draw together insights from many domains, may be inhibited even in organizations with a strong impetus to act entrepreneurially.

Creating flexibility within organizational structures and using new forms for organizing work are two solutions companies are implementing to overcome internal barriers to entrepreneurial activity. At the core of both efforts is an attempt to improve information flows through organizations, and enhance the management of knowledge. One way to achieve this is by creating boundaryless organizational contexts.⁶⁸ Within most organizations, vertical boundaries separate hierarchical levels; horizontal boundaries separate functional areas; and external boundaries separate firms from customers, suppliers, and other stakeholders.⁶⁹ Boundarylessness aims to make those boundaries more permeable by emphasizing cross-functional coordination, facilitating the exchange of information, and increasing the depth of employee involvement in planning and decision making.^{70, 71}

New organizational forms are also being used to break down barriers, increase efficiency, and speed the innovation process.⁷² Virtual organizations, increasingly common in the Internet era, allow for rapid communication and knowledge sharing among multiple organizational partners.⁷³ Because they are virtual, such organizations may not be subject to the trappings of power that are often associated with physical locations (e.g., headquarters versus branch; "top floor" versus "shop floor"). Modular or "cellular" organizations, consisting of autonomous

business units that interact around themes of innovation and continuous improvement, have also emerged as a way to organize entrepreneurial efforts more effectively.⁷⁴ Many of these alternative forms are designed to enhance EO by empowering multifunctional teams that can cross functional boundaries and work cohesively to commercialize new knowledge and successfully launch innovative products and services.^{75, 76}

EO AND ORGANIZATIONAL CULTURE

The term organizational culture refers to a diffuse social phenomenon within a firm, which pervades and collectively shapes its actions. A seminal definition of the concept was put forth by Edgar Schein, who defined organizational culture as “a pattern of shared basic assumptions.”⁷⁷ Hofstede referred to organizational culture as a “collective programming of the mind.”⁷⁸ According to his metaphorical line of reasoning, and consistent with Schein’s view, the “mental software” of organizational members is thought to be adjusted through a socialization process, directed by a continuous observation of the organization’s visible practices and underlying attitudes of its members.⁷⁹

The culture of an organization is developed through the give-and-take interaction of its members over time and resides within the organizations: (a) overt creations and artifacts, (b) its underlying shared values, and (c) its taken-for-granted basic assumptions held in common by its constituents.⁸⁰ When these three aspects of an organization’s culture coalesce into a coherent whole, the patterning or integration of behavior associated with a strong culture results. The organizational culture which emerges from this lengthy and causally ambiguous process embodies a powerful influence over the behavior of a firm. Consequently the culture of an organization represents a significant contextual consideration for firm entrepreneurial behavior.

Growing attention in the literature has been directed to the concept of culture and its implications for entrepreneurship.⁸¹ Nevertheless, compared with other contexts addressed in this chapter, there has been relatively little empirical research concerning the EO–culture relationship. This is consistent with Schein’s observation that culture is an often missing or inadequately measured concept in organizational studies.⁸² Tzokas, Carter, and Kyriazopoulos noted that research exploring the EO construct has neglected its ties to organizational culture due in part to a preoccupation with determining associations among top management styles, organizational structural attributes, and performance.⁸³

Such a lack of empirical scrutiny on the relationship between EO and organizational culture may be attributable to the difficulty associated with conceptualizing and measuring organizational culture.⁸⁴ An alternative explanation for the lack of empirical study is that many authors have made an assumption that EO represents an aspect of the organization’s culture. Indeed, the literature suggests that

the two phenomena appear to be so conceptually intertwined that ambiguity has arisen regarding the nature of their relationship. For example, both EO and organizational culture may be viewed as distributed social phenomena, which serve to influence firm behavior. EO has been described as an intangible firm resource, rooted in organizational routines, and dispersed throughout the organization.⁸⁵ While circumscribing the boundaries of the EO construct, Atuahene-Gima and Ko⁸⁶ referred to organizational orientations as:

Social learning and selection mechanisms . . . They shape the way that organizational members process information and react to the environment . . . They create internal environments in which desired behaviors are encouraged and supported.⁸⁷

Clearly, many of the definitional elements of organizational orientation articulated by Atuahene-Gima and Ko are shared by Schein's description of organizational culture as a socially developed set of beliefs held by a group that determines how it perceives, thinks about, and reacts when confronting problems.^{88, 89} This conceptual overlap has led to the two phenomena being described similarly and at times used interchangeably.^{90–92} To illustrate the overlap, Knight conceptualized firm EO as a cultural condition, which both precedes and pervades the development of an organization's marketing strategy.⁹³ Kaya and Seyrek, who argued that EO represents a "competitive cultural orientation" concluded that the effects of EO become more obvious once it is accepted as a culture within the organization.⁹⁴

An alternative conceptualization of the relationship holds that the differences between EO and culture outweigh the similarities. Covin and Slevin's depiction of entrepreneurship as firm-level behavior specifies that any nonbehavioral organizational attribute is incapable of classifying a firm as entrepreneurial, regardless of its form or function.⁹⁵ They went on to argue that culture represents a nonbehavioral attribute of the organization separate from the activities which define it as entrepreneurial. In this view, EO and organizational culture are separate phenomena: EO represents the strategy-making practices and processes of firm management, directed at the creation of venture opportunities and organizational culture is the context within which EO activities occur. This distinction provides a framework for empirically testing the EO–organizational culture relationship.

Even if we accept this distinction, however, the question of whether culture is an antecedent or a consequence of EO remains. Hart argued that firm strategy making should be considered a process which emerges from an organization's culture.⁹⁶ Kemelgor later modeled corporate culture as a preceding influence upon the strategic planning process, which determines the degree of firm commitment to CE.⁹⁷

The most likely explanation is one of reciprocal causality. While EO is primarily the recipient of influence from its organizational cultural context, over time, the recurring entrepreneurial behaviors may transform the prevailing

culture to be more entrepreneurial.⁹⁸ When influence flows in this direction, EO has been conceptualized as a “frame of mind and a perspective about entrepreneurship that are reflected in a firm’s ongoing processes and corporate culture.”⁹⁹ Following this logic to its conclusion, the cultures of highly entrepreneurial organizations should be saturated with the EO perspective. This may help explain why EO is often assumed to indicate the presence of an entrepreneurial organizational culture. According to that view, EO is thought to exist as a part of an organization’s culture; here, EO is a perspective rooted in practice, which must be built into an organization’s prevailing culture over time.

Despite the theoretical ambiguity regarding the relationship between EO and organizational culture, a few notable empirical studies have been undertaken. Zahra demonstrated clearly defined organizational values, either relating to external competitors or internal employees, to be positively associated with CE.¹⁰⁰ Morris et al. found firm entrepreneurial behavior to be most effective when the organizational culture emphasized a balance between individualism and collectivism, suggesting the importance of both autonomy and collaboration to firm entrepreneurial efforts.¹⁰¹ Within family firms, Zahra, Hayton, and Salvato replicated the findings of Morris et al. in addition to investigating several other cultural contexts.^{102, 103} It was found that family firms valuing an external orientation toward the environment, decentralization of control, and a long-term orientation, as proxied by an emphasis on strategic over financial controls tended to engage in a greater degree of firm entrepreneurial behavior.

The positive implications of EO to firm performance become ever more apparent when its ties to the organization’s cultural context are considered. Following the resource-based view of the firm, organizational cultures represent a possible source of sustained competitive advantage stemming from the difficulty associated with their transfer to or imitation by competitors.¹⁰⁴ Lee et al. argued that an EO possesses many of the attributes deemed favorable in the resource-based view (RBV) model, stressing its inimitability and immobility.¹⁰⁵ Organizational cultures that support entrepreneurial behavior also represent a valuable firm resource by facilitating the achievement of competitive advantage.¹⁰⁶ This research suggests that the management of culture is of utmost importance in ensuring the effectiveness of firm entrepreneurial process.

The modest research attention to date addressing the theoretical tension between EO and organizational culture precludes our ability to draw unwavering conclusions. In light of this ambiguity, we have undertaken the simpler task of establishing the relevance of organizational culture as a context within which the corporate entrepreneurial behavior of a firm is embedded. Lumpkin and Dess argued that fine-grained methodologies, such as case studies or field analyses are likely to provide greater insight into the role of culture within the dimensions of EO.¹⁰⁷ Given the conceptual ambiguity surrounding their association, the field is likely to benefit from an in-depth study of the EO–culture relationship more today than ever.

EO AND ENVIRONMENT

All business organizations are embedded within an external context with which they must interact and negotiate in order to achieve their purpose. Often referred to as the task environment, this context encompasses both the resources available within an organization's business environment as well as the information uncertainties facing managers who must navigate such environments.¹⁰⁸ In contingency research, organizational prosperity has been tied to the ability of an organization to effectively confront its external environment through a process of learning about its differing characteristics, predicting the direction of its development, and then effectively aligning firm internal attributes in a manner which best satisfies its demands.

Beyond mere alignment, a substantial stream of research suggests that organizations have considerable choice in how they respond to environmental demands.¹⁰⁹ Some have even argued that organizations have the ability to shape or enact a more favorable environmental context, rather than simply react to recognized contingencies.^{110, 111} As a practical matter, environments are arguably neither fully deterministic nor strictly enactable; instead, a reciprocal relationship is thought to exist between organization and environment. Thus, the EO of a firm is not only constrained or enabled by the environmental conditions in which it operates, but also simultaneously may induce those same conditions in its business context.¹¹² In this section, we will consider various perspectives regarding how environmental context relates to EO.

Prior research has used two broad characteristics to conceptualize the varied aspects of the business environment: (1) as a source of information and (2) as a stock of resources.^{113, 114} Dess and Beard provided theoretical and empirical support for three dimensions of the environment—munificence, complexity, and dynamism—which are consistent with this conceptualization: dynamism and complexity indicate the extent of environmental uncertainty, and munificence reflects the degree of resource abundance in the environment.¹¹⁵ Thus, some environmental contexts manifest in a very complex fashion, while others are simple to comprehend; some are dynamically changing, while others exhibit great stability; and some munificently give freely their resources, while others are oppressively hostile with little to effortlessly offer.^{116, 117} These three well-established environmental dimensions comprise a particularly salient context of firm entrepreneurial activity due to the expressed need articulated by organizational contingency theorists for the entrepreneurial level of a firm to achieve a favorable fit with its varied environmental conditions.

In a summary fashion, Caruana, Ewing, and Ramaseshan, combined elements of the three environmental dimensions articulated by Dess and Beard into an environmentally challenging context, consisting of simultaneously high levels of environmental heterogeneity (complexity), technological turbulence (dynamism), and munificence.¹¹⁸ Their research found a positive link between the level of environmental challenge and the level of EO within a sample of public-sector

firms. A majority of past studies have, however, investigated the linkage between EO and individual environmental dimensions.

Environmental Dynamism

Environmental dynamism reflects the rate of unpredictable change in a firm's environment with regard to changes in customer tastes, technologies, and modes of competition.^{119, 120} The instability and turbulence of dynamic environments impairs managers' ability to predict or estimate the impact of future events on organizations.¹²¹ According to Duncan, dynamism may be the most important environmental dimension for determining organizational uncertainty, because firm decision-makers may learn to effectively cope with challenging environments, which exhibit stability. In stable environments, organizations are able to develop standardized internal routines and procedures, which are likely to do well because change is slow and learning requirements are minimal.¹²² Highly dynamic environments, by contrast, require organizations to be innovative, take a proactive stance, and assume risk because the bases for competitive advantages, industry structure, and product performance standards are short-lived or in a constant state of flux.¹²³

A great deal of research attention has been devoted to how environmental dynamism relates to the entrepreneurial behaviors of organizations. Studies by Covin and Slevin, Karagozoglu and Brown, and others tend to agree that for firms in a dynamic environment, strategy making, which is innovative, risk taking, and proactive will be positively related to performance. Further evidence of a positive relationship is provided by Tan, who found a positive link between the dimensions of EO and the level of environmental dynamism in a study of fifty-three private Chinese enterprises. In a study of ninety-three medium-sized U.S. companies, Davis, Morris, and Allen found CEO perceptions of environmental turbulence—defined as the perceived level of technological change, industry competition level, and industry growth rate—to be significantly and positively related to the strength of their respective organization's EO.¹²⁴ Thus, environmental dynamism seems to stimulate EO in a fashion that increases the positive relationship between EO and an organization's entrepreneurial outcomes.¹²⁵

Environmental Munificence

Environmental munificence is characterized by available resources and opportunities, sufficient to support sustained growth and generate slack resources.^{126, 127} Covin and Slevin, in one of the few studies to address the relationship of EO to such environments, characterized them as benign. While Brown and Kirchoff linked business-owner perceptions of environmental munificence to the level of firm EO, most EO-related studies have addressed the conceptual opposite of munificence—hostility.¹²⁸ In hostile environments, where resources are scarce,

competition is intense, and exploitable opportunities are few and far between, the EO–environment relationship has been examined in terms of how it contributes to or detracts from organizational performance.

In a majority of studies, hostile environments have been shown to foster a positive relationship with EO.^{129–131} Covin and Slevin demonstrated that organizational performance hinged upon firms aligning their entrepreneurial postures with the level of hostility present.¹³² Hostile environments, it seems, force firms to become more aggressive and take risks in the face of intense competition. Firms in hostile environments performed best when they exhibited a high overall entrepreneurial posture, while their counterparts in benign environments found these entrepreneurial activities to be wasteful, adopting a more efficient conservative posture in its place.

Although many studies indicate a positive link between EO and environmental hostility, a few studies have indicated the contrary. For example, Miller and Friesen argued that “Extensive risk taking, forceful proactiveness, and a strong emphasis on novelty can be very hazardous when competitive conditions are more taxing.”¹³³ In the opposite of the hypothesized direction, Miles, Arnold, and Thompson found EO to be significantly negatively correlated with the degree of environmental hostility perceived by a sample of 169 furniture manufacturing firm CEOs.¹³⁴ In a multidimensional study on EO, Kreiser, Marino, and Weaver found innovativeness to be negatively; organizational risk taking curvilinearly; and proactiveness not significantly related to environmental hostility.¹³⁵ Risk taking was found to be highest at moderate levels of hostility. Further research into the strength and direction of the relationships between the individual EO dimensions and environmental hostility would provide useful insights into how these variables interact.

Environmental Complexity

Environmental complexity refers to the heterogeneity and range of an organization’s activities.^{136, 137} Managers facing complex environments will perceive greater uncertainty and have greater information-processing requirements than managers facing simple environments.¹³⁸ As environments become more complex, TMTs and other organization members must monitor many sectors of the environment and engage in proactive behaviors. Greater complexity also suggests more divergent information and greater differences within management teams. Khandwalla found that managers in such environments were more likely to implement multifaceted and comprehensive strategies.¹³⁹

Such strategy making is likely to require higher levels of EO to the extent that organizations seek exploration goals, such as developing new technologies and/or penetrating new product markets. However, with greater environmental complexity, a point of diminishing returns may come into play with regard to such goals, due to limits on an organization’s capacity for assimilating new knowledge.¹⁴⁰ As complexity increases, we believe, an orientation toward innovation

and exploration of new domains may decrease in favor of a greater emphasis on exploitation of select product markets and more familiar technologies. As opposed to novel, innovative strategies, firms will tend to engage in more intense competitive aggressiveness to protect existing domains.

In comparison to the two previous environmental dimensions, complexity has received far less empirical attention. A few studies have investigated complexity in terms of heterogeneity within organizational environments. Consistent with the view that more difficult environmental contexts will stimulate higher levels of EO, Zahra found environmental heterogeneity to be positively related to CE. Across a sample of 439 U.S. firms operating in foreign countries, Dean, Thibodeaux, Beyerlein, Bahman, and Molina found environmental heterogeneity to be positively related to CE.¹⁴¹ Additionally, Tan found complexity to be positively related to innovativeness and risk taking, but not significantly related to proactiveness.¹⁴²

To conclude our discussion of the impact of environmental contingencies on entrepreneurial behavior, it is important to note that many additional characteristics of a firm's external industry setting beyond the environmental conditions discussed are still ripe for research attention. For example, Covin and Slevin investigated the effects of industry life cycle stage upon firm performance.¹⁴³ In emerging industries, EO was found to be strongly positively related to firm performance, but this relationship was observed to reach insignificance for industries in the twilight years of their maturity. Elements of the general environment, such as general economic conditions, the legal and regulatory environment, as well as sociocultural and demographic trends also provide important contextual influences on the performance of entrepreneurial firms.

EO AND NATIONAL CULTURE

In a previous section, culture was investigated as a social phenomenon that occurs within the boundaries of an organization. This section considers the broader national cultural context within which organizations are embedded. While both forms of culture influence the behavior of a firm, they represent conceptually distinct constructs that manifest fundamentally different contextual influences upon the development of a firm's EO. Whereas organizational culture is acquired through socialization, national culture reflects the fundamental, invisible values engendered by a nation's societal members.¹⁴⁴ These enduring assumptions are shared in common by the native citizens within a national cultural context, irrespective of their organizational memberships. Hofstede, Neuijen, Ohayv, and Sanders found differences in national culture to overshadow those attributed to organizational membership upon comparison of two firm samples from dissimilar national contexts.¹⁴⁵ Additional evidence for a strong national effect is the observed inability to universally apply management theories, models, and prescriptions across national cultural contexts.¹⁴⁶⁻¹⁴⁸

Shane posited a mechanism through which societal values may yield a comparative advantage among nations.¹⁴⁹ The values of a national culture may be institutionalized at the organizational level, and thereby influence the entrepreneurial activities of firms residing within their borders. The national cultural context of a firm has been argued to exhibit a potentially strong influence upon its strategy formulation processes, including how the firm interprets and responds to strategic issues and the level of commitment a TMT will generally exhibit toward maintaining the strategic status quo.^{150–152} By influencing organizational strategy-making processes, national culture may shape the corporate entrepreneurial behavior of a firm.¹⁵³

The influence of national culture upon firm behavior is strikingly evident in Hofstede's monolithic study of over 116,000 IBM employees spread across more than sixty countries.¹⁵⁴ The study found that roughly 50 percent of the variation in employee work-related attitudes was explained by national cultural context. Hofstede's seminal study developed the national cultural dimensions of individualism, uncertainty avoidance, power distance, and masculinity. Hofstede and Bond later refined the framework to include a measure of long-term orientation.¹⁵⁵ *Individualism* refers to the extent to which societal members define themselves as individuals rather than as part of a group. *Uncertainty avoidance* is defined as the tolerance for ambiguity, held by societal members. *Power distance* is a measure of the acceptance of inequality within a society. *Masculinity* represents an emphasis on achievement and material success over cooperative efforts to improve quality of life considerations. *Long-term orientation* captures differences in societal focus upon present versus future issues.

Martin, Vaughn, and Lumpkin proposed that family businesses whose members are native to cultures which emphasize individualism, low power distance, low uncertainty avoidance, and masculinity are more likely to possess a strong EO.¹⁵⁶ Although these relationships were hypothesized within the context of family businesses, we believe the underlying logic which associates EO with the national cultural dimensions proposed by Hofstede to be largely transferable to the corporate domain.¹⁵⁷ Supporting such generalizability, the above conceptual linkages are in agreement with the dimensions McGrath, MacMillan, and Scheinberg associated with the global "entrepreneurial individual," with the exception of power distance, which was related in the opposite direction under the assumption that entrepreneurs in general have a high tolerance for inequality.¹⁵⁸

Given that EO emphasizes autonomy, it is reasonable to expect the independence and freedom found in individualistic countries to foster its development. A strong EO should also be more prevalent in countries with low uncertainty avoidance as their members are more likely to be tolerant to the ambiguity and change associated with firm risk-taking behaviors and innovative potential. Further, individuals from cultures exhibiting low power distance will tend to be more accepting of responsibility and may operate more independently. The decentralization of authority associated with a lack of power distance should increase the likelihood of firms displaying characteristics of EO, including autonomy,

proactivity, and innovativeness. Masculine cultures, which tend to value achievement, assertiveness, and material successes, are likely to be conducive to the development of firms with high EO. We would expect these firms to be very aggressive in their competitive actions, attempt to preempt market competition, and tolerate risk levels necessary to achieve above-average prosperity.

Although few studies have investigated the relationship between EO and national culture, empirical evidence has developed in support of the above relations, especially those related to individualism, uncertainty avoidance, and power distance. Morris and Davis found that both high individualism and high collectivism decreased the level of CE exhibited by firms.¹⁵⁹ Organizational entrepreneurship was highest when societal norms encouraged a moderate degree of both autonomous and team-related behavior. In a study of the national rates of innovation in thirty-three countries, Shane found national innovativeness to be positively associated with individualism, acceptance of uncertainty, and a lack of power distance.¹⁶⁰

The EO construct has been used to investigate the entrepreneurial behavior of firms residing within a variety of national contexts, such as Greece, Turkey, Namibia, China, and Vietnam.^{161–165} However, the EO scale was initially developed and validated using samples of either Canadian or U.S.-based firms.^{166, 167} In recognition of the tremendous variability between national societies, several studies have addressed the growing need to validate the EO construct as a suitable instrument for cross-cultural examinations of entrepreneurial processes. Knight observed the EO construct to possess equally high levels of reliability and validity between comparable samples of U.S. and Canadian firms.¹⁶⁸ Kreiser et al. went a step further to show that the EO construct, when modeled using an independent dimensional structure, attains an effective model fit using a sample of data from firms spanning six countries with diverse cultural origins.¹⁶⁹ These studies support the psychometric properties of the EO scale and provide validation to past research endeavors, which have imported the EO construct into differing national cultural contexts.

The question of whether the level of EO exhibited by firms varies with their national cultural context was directly addressed by Kemelgor, who matched a sample of four firms in the Netherlands to four comparable competitors in the United States, to examine the possibility of systematic differences.¹⁷⁰ Their study provided evidence of a link between national culture and the level of EO pursued by firms which reside within it. National cultural differences have also been shown to have a moderating affect upon firm entrepreneurial behavior. Marino, Strandholm, Steensma, and Weaver positively linked EO to the extensiveness of a firm's strategic alliance portfolio and found this relationship to be stronger in countries that exhibited either collectivistic or feministic societal characteristics.¹⁷¹ Thus, more extensive alliances are present in firms that exist in collectivist societies, where members identify with and seek to contribute to the advancement of a group or in feministic societies that value cooperation over confrontation. Additionally, under conditions of technological uncertainty, technology

alliances were found to be pursued more often by entrepreneurial firms in uncertainty avoiding and feministic cultures.¹⁷²

Recent research exploring the influence of national culture upon the entrepreneurial processes of member firms is a highly welcomed development, given the increasing trend toward business globalization. However, several researchers have criticized the assumption that societal culture falls neatly within national boundaries. The basis of this criticism may be summarized as “many nations are multicultural and many cultures are multinational.”¹⁷³ An additional concern is that national environment considerations, such as political, economic, and social differences may confound the influence of national culture upon EO.¹⁷⁴ Tan found these national differences to surpass the effects of national culture upon the entrepreneurial beliefs of Chinese immigrants living in the United States. However, a clear majority of the research presented in this section supports the view that culture matters.^{175, 176} In line with this perspective, Lee and Peterson modeled these national economic, political, and societal environmental factors as important moderators upon the relationship between national culture and EO.¹⁷⁷ As the number of studies linking national culture to various aspects of EO increase in number, the relational picture will become much clearer.

DISCUSSION AND IMPLICATIONS

In this chapter, we have briefly addressed the relationship between the dimensions of EO and five different contexts in which EO-related activities take place—TMT, organizational structures, organizational cultures, environments, and national cultures. In general, we have asked, “How do contextual factors contribute to or detract from the effectiveness of entrepreneurially-oriented organizations?”

Of course, many research questions remain with regard to EO-context issues as well as numerous opportunities for future research. This is especially true among contexts that have received less attention in the literature, such as organizational structure and culture. For example, under what conditions might organizational cultures that would be considered strong cause core rigidities that subsequently erode innovation and discourage risk taking?¹⁷⁸ Another research avenue involves exploring how multiple components of organizational contexts might combine to affect performance. Configuration theory suggests that, to comprehend the internal logic that explains organizational performance, it is important to explore multivariate relationships among elements from multiple domains. Performance will be optimized when there is an appropriate fit or matching of organizational factors, such as strategy making and structure, with external factors, such as environment. Previous research indicates that firms whose alignment of strategy, structure, and environment is consistent with normative contingency literature had stronger performance.^{179, 180} Thus, investigating multivariate combinations on the premise that these complex models

can more accurately predict performance is a promising area of future research.^{181, 182}

Each of the contexts discussed earlier pose challenges to practitioners who seek to enhance their entrepreneurial outcomes. Organizations that want to act entrepreneurially need to focus more intentionally on each of these contextual factors as distinct levers that they can adjust to strengthen their entrepreneurial performance. In contexts where external forces are compelling—such as environmental or national cultural contexts—companies may need to focus primarily on alignment with these conditions to improve their chances of success. The solutions may be both context and company specific.

TMTs are in a position to influence strategy and support initiatives by other organizational members. As we have seen, if a company's leaders do not share an entrepreneurial vision and endorse venturing behaviors, it is unlikely that organization members would be enthusiastic about corporate venturing. Questions to ask about a TMT's support for entrepreneurship include:

- Does the TMT encourage autonomy from middle-level managers and support bottom-up initiatives from employees in key knowledge positions?
- Has the TMT made appropriate commitments to entrepreneurial outcomes by investing in new technology, R&D, and continuous improvement?
- Does the company safeguard investments in R&D during difficult economic periods or are they generally the first area where significant cuts are made?

An organization's structure can either impede or enable entrepreneurial progress. In settings where information is processed slowly or fresh ideas and creative solutions cannot flow freely to various parts of the organization, venturing activity may move forward too slowly or lack the breadth of organizational inputs needed to analyze the implications of a venture initiative. In contrast, organizations that use virtual or modular structures may be so loosely coupled and/or unstructured that the fruits of entrepreneurial efforts go unrealized. Questions to pose about organizational structure include:

- Can the firm benefit from developing autonomous work units that engage primarily in new venture activities? Such efforts to relinquish control are often a key to stimulating innovative concepts and strategic breakthroughs.
- Are the liaison devices set up to facilitate communication between work units functioning smoothly enough to ensure adequate coordination and minimize inefficiencies and duplication of efforts?
- Are highly formalized reporting requirements or centralized decision making inhibiting the organization's ability to make informed decisions and/or move ahead quickly when opportunity knocks?

The values, norms, and shared beliefs that are embedded in an organization's culture can have a strong impact on its entrepreneurial activity. In an

entrepreneurial culture, acting innovatively and seeking venture opportunities are part of the organization's way of life. In organizations that are unaccustomed to corporate venturing, or just starting to act more entrepreneurially, it may take years for the culture to become entrepreneurial. Strong and consistent leadership is needed to create a climate that favors and enacts entrepreneurial venturing. Questions regarding the role of organizational culture include:

- Is the organizational culture supportive of entrepreneurial efforts or does it inhibit EO-related behaviors such as creativity, experimentation, and risk taking?
- Does the organizational culture foster and encourage appropriate levels of business, financial, and personal risk taking? Do the reward systems and management processes support product champions?
- Not all innovations are technological. Is a culture of innovation present throughout the organization such that it stimulates and encourages product market and administrative innovations as well as technological ones?

Organizations often have to adapt their internal practices to match external environmental conditions. The constraints and contingencies presented by the environment typically affect all firms in an industry similarly. Thus organizations must align their venturing activities in ways that preserve their competitive advantages. Questions to ponder when evaluating the environmental context include:

- Does the organization continuously monitor industry trends, identify customers unmet needs, and act in anticipation of future demand conditions?
- What factors in the external environment, such as shifts in technology or changes in general economic conditions, present opportunities for an organization to be more entrepreneurial?
- Does the organization proactively and/or aggressively combat industry trends that may threaten its survival or competitive position?

Organizations often pursue entrepreneurial goals within countries where the political, social, and historical contexts are likely to have a major impact on outcomes. Research indicates that the influence of national cultural characteristics on organizational decisions and behaviors can be quite compelling. Clearly, organizations that launch entrepreneurial initiatives must evaluate such influences when considering how to deploy and align corporate resources. Questions to consider about national cultural context include:

- Can the organization enhance its competitive position by researching and assessing country-level risk factors in order to minimize uncertainty and match its risk-taking activities to its host country's cultural conditions?

- What aspects of a venturing initiative have national cultural implications? Can the impact of these factors be mitigated by hiring from other countries or establishing operations across national borders?
- How might the organization align entrepreneurial efforts, such as innovative initiatives or strategic alliance formation in ways that capitalize on national cultural differences?

A potential limitation of this review relates to the contexts that are not specifically addressed. Clearly, other contexts might be important in understanding the EO–performance relationship. Practitioners might benefit from identifying contextual factors that are unique to their business, such as the role of local geography or the power of industry subgroups in constraining or enabling venturing activity. Researchers could evaluate contextual elements, such as industry structure, learning environments, and knowledge or social networks, to name a few, that might affect the efforts of entrepreneurial firms. International contexts (rather than national culture) could also affect EO outcomes. For example, EO tends to be significantly higher among those firms confronting the difficulty associated with operating within a highly global environment.¹⁸³ Zahra and Garvis introduced the concept of international corporate entrepreneurship (ICE) to explicitly define CE efforts that focus on foreign markets.¹⁸⁴ These researchers view ICE as a logical extension and subset of CE, designed to deal more directly with the entrepreneurial behavior of globalizing businesses. Their empirical study found ICE to exhibit a positive relation with firm performance. Thus, international contexts for entrepreneurial activity provide another potential avenue for exploring how configurations of organizational contexts might explain performance.

In conclusion, it is our hope that this chapter will provide practical insights that aid companies seeking to strengthen their CE efforts. Further, we hope it serves as a catalyst to researchers who might test the relationships posed, and as a building block for future work that addresses the implications of organizational contexts on entrepreneurial outcomes. Such research promises to provide new knowledge into how firms effectively engage in new venture creation and strategic renewal, and to advance the viability of descriptive and normative theories of CE.

NOTES

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4

The Family as a Distinct Context for Entrepreneurship

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The historical association of families with the socioeconomic development of communities and countries is ingrained in the sociology and economics literatures. Indeed, until the emergence of modern management theories, with its emphasis on the rational organization, adding the explanatory adjective of *family* to business was redundant.^{1, 2}

Today, however, the two social institutions of family and business are viewed as distinctly different entities. This bifurcation has more recently created some confusion for scholars and business leaders. On the one hand, family firms are now being reacknowledged as numerically dominant, worldwide, especially in the small business and start-up arena. Their dominance gives people this nagging awareness that the “familial DNA” may somehow be critical in understanding their entrepreneurial and economic role. On the other hand, the family form of business organization is messy and the systemic mix of familial and business cultures and goals does not fit the rational model, or lend itself to easy classification and understanding. Complicating this dilemma is the focus of top academic institutions on public companies and their reliance upon large database variance studies that present neat and clean statistically significant pictures of what a firm should look like. These variance studies are unable to look at the more challenging question of how and why organizations act as they do, which is to say they cannot probe into the familial DNA.

The foundational premise of this chapter is that one cannot assess the full spectrum of business or entrepreneurship without focusing on the family. We propose a family ecosystem model that shows how families are on both the demand and the supply side of the entrepreneurial economy. At the heart of the ecosystem is the interaction of the family and individual family members with the business entities (i.e., the family business), which creates a distinct context for

entrepreneurship. Within this context, families generate an idiosyncratic “familiness” resource profile that offers them potential for advantages in the entrepreneurial process.

The overarching practical driver for this chapter is to empower families to understand the requirements for transgenerational entrepreneurship and wealth creation. The transgenerational concept refers to how families adopt the entrepreneurial mindset and capabilities to generate new economic activity within each generation, which in turn creates continuous streams of wealth across many generations.^{3, 4} We will discuss how families can capture these advantages and minimize the constraints that might otherwise keep them from fulfilling their transgenerational vision.

Overall, the transgenerational concept challenges many of the caricatures about family businesses. In the family business MBA classes at Babson College, and in guest lectures around the world, we always begin with this free association question: “When I say family business, you say?” Not so surprisingly, and yet always with some amazement, we listen as the list is filled with negative descriptions, such as nepotism, conflict, small business, succession, career safety net, unprofessional, lifestyle, slow growth. Seldom do I hear entrepreneurial, high potential, funding entrepreneurship, growth, largest form of business organization in the world, philanthropic, economic engines. While the negative descriptions are not untrue, the positive ones are equally true. It is a goal of this chapter to remind people of the incredibly important role families play in the long-term social and economic health of communities and countries, and to provide a model for better understanding how to enhance their role and overcome many of the conditions that create the caricatures that devalue families as transgenerational entrepreneurs in our societies.

CHANGING THE PERSPECTIVE ON FAMILIES AND ENTREPRENEURSHIP

There is a growing awareness among consumers, business leaders, policymakers, and academic scholars that families play a significant role in generating GDP, creating jobs, providing venture capital, incubating new businesses, giving philanthropically, and on the whole, promoting economic development within communities and countries.⁵ In some regards, it is stunning that the awareness of family as a force in the marketplace and as an entrepreneur has to grow. When one surveys the landscape of U.S. businesses in every economic sector or looks at the names on buildings, they see family. Stay in a Marriott hotel, drive your Ford vehicle, shop in your Walgreens drugstore or Nordstrom’s department store, buy your Tyson food products, Mars candies, or Wrigley chewing gum, listen to the S.C. Johnson Company, Coors or Anheuser Busch beer commercials, walk up to the Arthur M. Blank Center for Entrepreneurship at Babson College (my place of employment) or the Pew dormitories and fine arts center at Grove City College

(my alma mater), and you see the founder of Home Depot and of Sun Oil Company. These big name examples do not even touch on the unknown family companies and small businesses that dominate local economies. Cardone Manufacturing is the largest manufacturer in the city of Philadelphia; Elmer’s Glue is owned by the low-profile Berwind Group; and Termini Bros. bakery, a favorite local spot for a sweet tooth, has been in Philadelphia for more than 80 years.

In an economic impact study in the United States, nearly 90 percent of business tax returns and 60 percent of all public companies had family participation and/or strategic control, which is more than 24 million businesses and represents 64 percent of GDP and 62 percent of the workforce.⁶ If this family dominance is true in the United States, with its large public market sector, it is even more true in other countries around the world. Countries like Italy, Spain, and Brazil report that over 90 percent of their companies are family controlled, for example.⁷

Once we understand the economic relevance of the family form of business organization, we are better able to assess their role in the entrepreneurial economy. Anecdotally it is clear from our montage of family names that families start companies, which grow into significant economic players. The Global Entrepreneurship Monitor (GEM) report indicated that 25 million new family firms were started worldwide in 2002.⁸ More than 63 percent of businesses in the launch stage and up to 80 percent of existing new ventures used family funding. It is estimated that between 30 and 80 percent of all informal funding comes from family.⁹ These are a few of the indicators of the dominance of family in the entrepreneurial process. Further research needs to be conducted to assess the full range of family influence and involvement in the entrepreneurial economy.

In order to conduct the requisite research, Figure 4.1 presents a typological categorization of the possible roles that families can play in the entrepreneurial process. We begin on the horizontal axis with the two broad categories that correspond to the classifications in entrepreneurship: (1) corporate entrepreneurship (CE) or “family legacy operating business” and (2) new venture creation or “no family legacy operating business.” There are two subcategories under each:

| The Role Families Play In Entrepreneurship | Family Legacy Operating Business | | No Family Legacy Operating Business | |
|--|--|--------------------------------------|-------------------------------------|---------------------------------|
| | New Venture Creation out of a Business | Renewal and Innovation in a Business | Start-up with Family Involvement | Capital with Family Influence |
| Formal “Strategic” | Family Portfolios | Family Transformers | Family Partnerships | Family Investors |
| Informal “Autonomous” | One-Off Entrepreneurship | The Next Big Idea | Kitchen Table Business | Friends and Family Money |

Figure 4.1. Family-influenced entrepreneurship typologies.

(1a) new venture creation out of a business and (1b) renewal and innovation in a business, which reflects the threefold definitional outputs for CE; (2a) start-up with family involvement and (2b) capital with family influence, reflect the families role in traditional new venture creation.¹⁰ The vertical axis in the typologies are formed by describing the family's entrepreneurship activities as: (3) formal, connoting a more strategic and intentional approach, and (4) informal, suggesting that family members are acting more autonomously and intuitively. The formal and informal delineations are critical in understanding how families act to find their advantage and neither category should be viewed as more positive than the other. Later in the chapter, we will, however, discuss how the outcomes from the two categories are different and, depending on the entrepreneurship goals of the family, they might need to migrate from one category to the other.

We will provide a brief overview of each of the typology categories. *Family portfolios* describe one of the most significant tactics and contributions of families. Portfolio entrepreneurship is a lateral growth strategy that concentrates on growth, but by starting companies across a wide sector of businesses.¹¹ This approach fits families, because they are often serial entrepreneurs who desire to vertically integrate or diversify. It also allows them to manage their risk profile while leveraging their platform of businesses as entrepreneurial resources. We intend to characterize true portfolio entrepreneurship as a formal strategic decision and process. This is in contrast to an informal approach, which we characterize as one-off entrepreneurship. *One-off entrepreneurship* is similar to portfolio entrepreneurship, but it is much more opportunistic and driven by the personal and somewhat autonomous interests of the family entrepreneur. It is usually more lifestyle oriented, because it serves to provide jobs or businesses to family members. Real estate is often a good example of one-off entrepreneurship, since many families have significant real-estate holdings, but they are generally the hobby or ancillary interests of family entrepreneurs. Families often evidence both the more formal portfolio entrepreneurship and informal one-off entrepreneurship at the same time.

Families can also demonstrate the unique innovation and renewal strategies associated with CE. *Family transformers* are family leaders who are perennial innovators and have built an organization to support and institutionalize their innovation capabilities. Their family culture stimulates renewal and they balance that with the family traditions that are part of their path-dependent legacy. Most importantly, their innovation and renewal is not tied to one individual, but is inculcated through teams of people. In contrast, *the next big idea* represents a more intuitive solo entrepreneur approach where the organization is always waiting on the family leader for that next big idea. Both models can be family centric, but the next big idea model is dependent upon an individual versus a family organization and culture. If autonomous family entrepreneurs have no sense of dependence on others, and/or they are doing it for the fun of it, they probably will not see the need to build an organization and culture that can carry on beyond their personal interests.

In the new venture creation category, families also play a number of different roles depending on whether family members are involved in just influencing. The formal *family partnership* is when two or more family members intentionally determine that they will start a business together. Siblings, spouses, or child–parent partnerships are the most common forms. The distinguishing factor for family partnerships (versus kitchen table businesses) is the intention and professionalization of the entrepreneurial family team. Family partnerships intend to start and grow a business together, and they have gone through some degree of due diligence and planning. The *kitchen table business* just happens. It is usually necessity driven (versus opportunity driven), because family members need a job or income, such as house cleaning or landscaping. In some cases, family hobbies or interests, such as handcrafts or building personalized gold clubs can evolve into kitchen table style businesses. We in no way want to minimize these kitchen table businesses, remembering that Marriot started as a small root beer concession stand.

The final category of family entrepreneurship involves the financing of new ventures. Again, the distinction between formal and informal determines whether it is viewed as an investment or start-up money. As we will discuss later, these two financial categories move on the continuum between market rationalities and family altruism.¹² *Family investors* infuse more market rationalities and investment criteria on the capital provided to the family member start-up. This approach may take the form of an individual family member or business that self-imposes these financial expectations on the start-up investment, in order to have a degree of professionalism in the family relationships and business. Family investor capital might also take an institutional form, such as a family private equity fund or family office. These institutions can make influential investments in family start-up businesses and recapitalization growth situations. The *friends and family* category is intended to reflect the informal “I’ll help you get started” approach. While there are usually return expectations, the “ask” and “terms” tend to be more familial and altruistic rather than professional. This category is far and away the widest source of start-up capital (not necessarily the largest amount) in the entrepreneurial economy, and because it takes so many different forms and is so informal, it is difficult to catalog the full scope and impact.

ESTABLISHING THE FAMILY CONTEXT

There is an upsurge of interest in developing a deeper understanding of the entrepreneurial function of the family in social and economic wealth creation. The fact that families play some role in entrepreneurship has never really been questioned. Early academic literature viewed family business and entrepreneurship as separate but overlapping domains of interest, and noted that there was no integrated theory that explained the relationship between family and entrepreneurship.^{13, 14} We would describe the historical and currently dominant view of family business and entrepreneurship as a common denominator approach. The

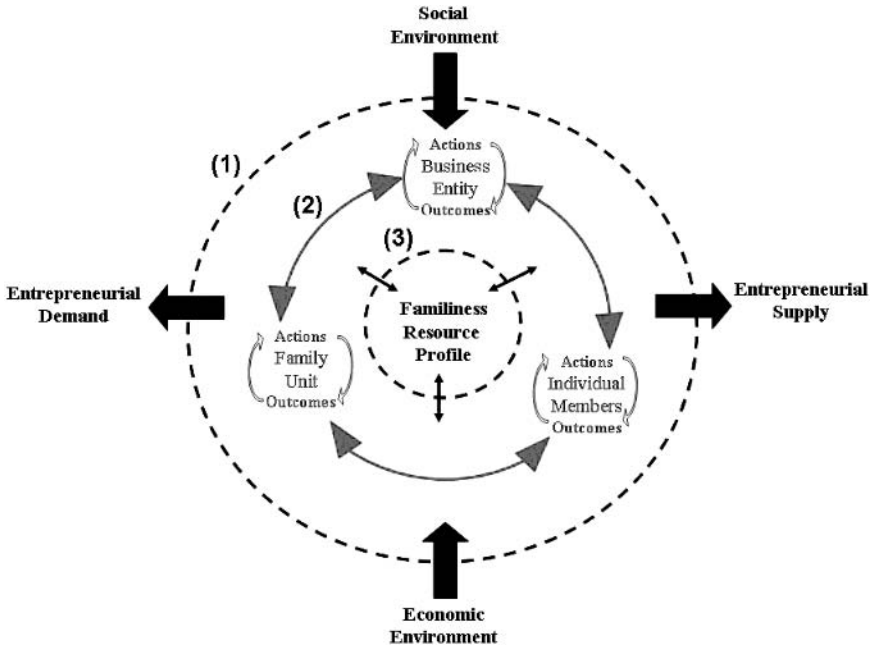


Figure 4.2. The family enterprising ecosystem model.

common denominator attributed to both family business and entrepreneurship covers topics and issues that the two would share. This would include the fact that they are both associated with small businesses; they both have founders and issues, such as a founding culture; because they have founders, they are both interested in succession; they both wrestle between life style and higher potential alternatives; they both have to address managing growing businesses; they both use family capital. Confirming this approach, it has been suggested that the operational definition of entrepreneurship is evolving toward “business owner.”¹⁵ The phenomenon that is not part of the common denominator, but is associated with either family businesses or entrepreneurship is treated as unrelated to one another. Most academic courses and university-based programs that support family businesses and entrepreneurs are housed together and embody this common denominator approach. They make no significant effort to synthesize the two in theory or in practice.

While it is useful to note and understand the similarities, if this is the extent of our interest, we will never explore the broader family contextual factors that might impact the entrepreneur and entrepreneurial process, or visa versa. Recently, however, there have been calls to more closely examine the impact and importance of the family on the entrepreneurial process and in the entrepreneurial

economy.^{16–18} In the remainder of this chapter, we will move beyond the common denominator approach to create a true nexus of thought and practice around the construct of *family enterprising*. We use the concept of enterprising in the “Penrosian” sense to refer to the psychological predisposition of individuals or organizations to allocate resources in the hope of finding entrepreneurial gain.¹⁹ In this regard, family enterprising describes family-based entrepreneurship, and it requires a wholly integrated input–output model, which accounts for the reciprocal interactions between the context, the entrepreneur, and the entrepreneurial process.

The model in Figure 4.2 is an ecosystem view of family enterprising that pictures how family is a distinctive context for entrepreneurship. It shows concentric circles of contextual factors, the reciprocal relationships they have to one another, and the input–output flows that ultimately generate entrepreneurial outcomes.

The outer dotted ring (1) connotes the external environment and its permeable relationship to the family business. At the top and bottom of the circle, we see the social and economic contextual inputs. The social influences include such things as culture, ethnicity, community standards, society values, politics, and the like. Since the family is a social institution, the social environmental factors are particularly relevant in shaping the norms, practices, and goals of the family. Similarly, the economic environmental factors create the context for conducting business. Economic factors include such things as turbulence, industry, local and national economy, public policy, competition, business infrastructure, support entities, and the like. Because the family and business entities are interacting within the ecosystem model, the social and environmental factors have a synergistic effect on the family business.

On both sides of the environmental outer ring, there are arrows indicating outputs to the entrepreneurial economy. This is a unique aspect of the model, showing that families and family businesses have both a supply and demand function. The supply function is seemingly the most obvious. Clearly, families supply individual entrepreneurs, capital, new businesses, innovation, and other inputs into the entrepreneurial economy. Not so obvious on the supply side, however, is the richness and idiosyncratic nature of the familiness resource profile and the input it has into the entrepreneurial process and economy. The resource profile will be a primary focus in the model description. The demand function of the model is most often overlooked when considering the role families play in the entrepreneurial economy. Aldrich and Cliff highlighted the neglect of the family as a social institution in entrepreneurship and the impact the neglect can have on assessing the source of entrepreneurial opportunities.²⁰ They highlight phenomena such as: (1) family demographic and social shifts and the result it has on the business environment and opportunity emergence; (2) family transitions and how they can trigger organizational emergence; (3) founding teams and how the creative process is often rooted in the family and their points of need; (4) personal events and how they can stimulate the recognition of

entrepreneurial opportunities; and (5) the family resource pool and the reciprocal relation it has to the demand and supply interaction.

The middle ring (2) shows the interacting parts of the model that create the family business. Ackoff defined a system as a whole that cannot be divided into parts.²¹ Social systems must show how the outputs of the system are a product of the continuous interaction of the parts. The family business social system is comprised of three subsystems pictured as the controlling family unit (representing the history, traditions, and life cycle of the family); individual family members (representing the interests, skills, and life stage of individual participants); and the business entity (representing the strategies and structures utilized to generate wealth).²² Each of the subsystems has its own systemic actions and outcomes that generate inputs into the family business meta-system. The key to understanding the family business system is to note how each of the subsystems are interacting with each other in a seamless fashion. Any stimulus that enters the system through one of the subsystem parts, or is generated by a subsystem, becomes an input to the whole system.

As the parts of the system interact with one another through a series of inputs and outputs, they generate distinctive resources and capabilities. That is to say, the resources available for enterprising are not isolated to the family, the business, or the individual entrepreneur, but are the synergistic product of the interactions in the metasystem. This systems view significantly changes the discussion about the source and scope of the resource profile in family businesses.

The resources and capabilities that comprise the familiness resource profile of family businesses are pictured as the inner ring (3). Family businesses can be said to have a resource profile with deeply embedded and idiosyncratic characteristics that we refer to as their family factor. The family factor is presented as resources_f and capabilities_f. The sum of the “*f* factor” influences is called the *familiness* of the firm.²³ The familiness influences can be discussed as “*f*+” for influences that lead to an advantage and “*f*-” for influences that constrain competitiveness.

Within the family enterprising ecosystem, the arrows show that familiness resource profile is both an output of the interactions in the family business system, and an input back into the entrepreneurial process. The familiness resource profile is an input back into the ecosystem as the resources_f and capabilities_f that are available for a family to utilize in their entrepreneurial activities. The model thus describes how the family is a distinctive context for entrepreneurship with both the inputs and outputs being unique to the family business context. Each individual family has an additional level of contextualization, as they generate their own idiosyncratic resource profiles. The idiosyncratic nature of a family business’s resources_f and capabilities_f is what creates heterogeneity and the potential for a competitive advantage against other firms. The remainder of this chapter will show how the familiness resource profile relates to the family’s role in the entrepreneurial process.

FINDING A FAMILINESS ADVANTAGE IN ENTREPRENEURSHIP

The resource profile of an organization is a key determinant in the success or failure of their entrepreneurial actions. Organizations establish a competitive advantage when their resource profile is heterogeneous in relation to their competitors. A sustainable competitive advantage requires that heterogeneity is durable and can be preserved over time.²⁴ As noted earlier, the distinctive context of families generates a resource profile that is highly idiosyncratic and thus holds significant potential for providing a heterogeneous advantage for families in the entrepreneurial arena. In this section, we will further explore this familiness advantage by connecting the resources_f and capabilities_f to key components in the entrepreneurial process. It is important to remember that the lines between the component parts in the entrepreneurial process are not clear cut, and thus there is an overlapping of the resources_f and capabilities_f within the entrepreneurial process. Also note that we are only presenting a summary of the potential positive advantages that the familiness resource profile might bring and will only touch briefly on the potential constraints at the end of the chapter. In reality, what we have presented through the matching of resources_f and capabilities_f with the entrepreneurial process is an outline for future exploration and research.

Opportunity Seeking

At the heart of the entrepreneurial process is opportunity—where they come from; how they are discovered; and the processes of evaluating and exploiting them for entrepreneurial gain.²⁵ We put all of this under the heading of “opportunity seeking,” because the spirit of enterprising is about the continuous seeking after opportunities “when expansion is neither pressing nor particularly obvious.”²⁶ The disposition and decision to search for opportunities precedes the economic decision to capture the opportunity.²⁷ Alvarez and Busenitz also suggest that opportunity recognition and the process of combining and organizing resources to capture opportunity is itself a resource.²⁸

Families have strong kinship ties and external networks that are critical resources for opportunity seeking. Both the formal and informal categories of family-based entrepreneurship are rooted in personal connections. Families see opportunities differently as a group, and they are offered opportunities because of their ties and networks. Their ties and networks also give them leverage in securing all or part of an opportunity ahead of the competition. Families have deeply embedded tacit knowledge and longstanding industry relationships that allow them to see opportunities that are knowledge and industry specific. The business portfolio many families have is a distinct resource that can provide them with opportunities associated with scale and strategy. Adding synergy to the portfolio resource is the governance controls and decision making that allows them to effectively leverage the resources of the portfolio. Finally, the multigenerational

teams in families provide a mentoring relationship that fosters many of the intuitive insights and actions that allow next generation entrepreneurs to be adept at opportunity seeking and exploiting at a very young age. The family base also gives these young entrepreneurs the resources to capture opportunities that others in their age group would just have to think about.

Insight Bursting

Closely related to opportunity recognition and exploitation is the construct of “entrepreneurial alertness.”²⁹ Alertness exists when one individual has an insight into the value of a given resource when others do not. These flashes of insight are not necessarily tied to technical knowledge, but to process knowledge that recognizes the value of the insight.³⁰ We call this insight bursting, because it bursts into the entrepreneurial process in a way that often does not follow a predictable pattern.

Families are particularly adept at capitalizing on these bursts. Their organizational governance is reflective of more intuitive and informal processes and they are used in accommodating infused insights and new directions. Their decision-making functions are also reflective of the heuristic processes associated with bursting. In family leaders and organizations, this insight and alertness is often tied to intuitive tacit knowledge and practical experience that comes from a long-term presence in an industry. The tacit knowledge can be particularly deep in multigenerational teams, since children often grow up in the business. Because the manufacturing arena is known to have a high concentration of family businesses, and family leaders are often operators at heart, their tacit knowledge can produce bursts of insights around internal process opportunities. They may have the opportunity to reform and revolutionize the patterns of production through a tacit knowledge-based innovation, for example. The process side of discovery is connected to an intentional and proactive search versus a passive and reactive approach.

Decision Making

Effective and efficient decision making is critical to capturing opportunities. Decision-making capabilities are reflective of both the entrepreneur’s cognition and the organizational systems. Cognition—entrepreneurs tend to use heuristics more extensively than managers. Heuristics refer to “the simplifying strategies that individuals use to make strategic decisions, especially in complex situations where less complete or uncertain information is available.”³¹ Entrepreneurial cognition is thus characterized by the extensive use of heuristics in decision making. Organization—the entrepreneurial organization must keep taut the tension between discipline and spontaneity, that is, the disciplines of evaluating opportunity and the spontaneity to act on the heuristic intuition. An organizational

orientation toward decentralization of control and open decision making has been positively associated with entrepreneurship.³²

Family leaders naturally reflect the heuristic cognition, but their leadership style may or may not foster a decentralized organization. The family entrepreneur is characterized by their intuitive insight and action. Their in-depth tacit knowledge and operational process capabilities become the basis for their simplified strategic thinking. Their family history and traditions, along with their familial mentoring models create path dependencies that are difficult to imitate or replicate by *de novo* entrepreneurs. Family entrepreneurs are known for their on-the-spot decision making. When heuristic thought processes are combined with control of ownership resources, the result is resource-backed decisions versus following a chain of command to match insight with resources. Family entrepreneurs also have a different decision calculus in relation to failure. Because they own the resources, they have a family failure culture that allows them to fail more often and to assimilate a failure without the negative organizational connotations. It is this direct connection of resources and decision making, however, which confuses the question of whether a family business is centralized or decentralized. On the one hand, the intuitive family style and processes create a very informal and decentralized family culture, which lends itself to people having voice and connection to the owner-manager. On the other hand, because so many of the resources and decision-making capabilities are in the hands of the family entrepreneur or ownership group, family organizations can become parentally dependent on an individual or a small group of people to make all the decisions. We generally believe, however, that the family form of organizational governance with its connection to and control over resource allocation provides a positive environment for entrepreneurial decision making.

Bootstrapping

Few entrepreneurs will hit the big idea jackpot and find venture-backed funding out of the chute (less than 1 percent). The vast majority will pull themselves up by their bootstraps, at least in the beginning stages of their venture. Bootstrapping—discovering, mobilizing, or leveraging resources and capabilities currently controlled by the entrepreneur—is a key success factor in the entrepreneurial process. How innovative and parsimonious an entrepreneur can be is often an indicator of their success trajectory. Bootstrapping can be how entrepreneurs learn their way to success. By incrementally finding and mobilizing resources, as they need them, entrepreneurs ask tougher questions about timing; talk to people to see what they can add; explore networks and opportunities; leverage friends and family; scrape together what they can find; and put a lot of personal sweat equity into the business.

The bootstrapping entrepreneurial formula perfectly fits the family context. Family goals are a driver for entrepreneurship. Survival is the first-level goal and driver. We call this necessity-based entrepreneurship and most often, necessity

entrepreneurs are found in or around families. The family is trying to survive or they are helping a family member survive. If the family is beyond survival, the entrepreneurial drivers often become family comfort, longer-term wealth creation, or humanitarianism. The innate altruism and communalism associated with the family as a social institution lends itself to bootstrapping. Families represent a collective pool of human resources and family members generally pitch in to help, often with no expectation for return. Families also represent a pool of capital resources that can be used or leveraged by family members. Because the majority of new ventures are started with US\$1,000–20,000 of capital, most families can collectively support bootstrapping endeavors. Families also represent a pool of social capital through their network of friends and community or business associates. In the name of family, these networks are leveraged for contacts and additional resources. Established family businesses or family portfolios bring another level of existing bootstrapping resources to bear on the entrepreneurial process. They have a ready flow of capital, labor, and support processes that can be allocated or leveraged for new entrepreneurial endeavors. The interaction between family needs and goals with control over the allocation of resources can allow otherwise dedicated resources to be released for entrepreneurial bootstrapping activity.

Venture Financing

Mobilizing the financial resources is one of the most enduring challenges in the entrepreneurial process.³³ In the United States and most other developed nations, venture capital is viewed as the financial driver of entrepreneurship. A consistent finding of the GEM research project is that the fuel for entrepreneurship is coming from the informal investors.³⁴ The 2003 GEM study found that informal investors provided more than US\$100 billion to 3.5 million start-ups and small businesses. Formal venture capitalists, however, invested only US\$304 million in start-up capital.³⁵ GEM also reported that entrepreneurs and small business owners are four times more likely than nonentrepreneurs/small business owners to be informal investors, and that more than 50 percent of all informal investment are made in relatives' businesses.³⁶

The family and family businesses clearly play a critical role in venture financing. As we noted for bootstrapping earlier, family altruism and communalism is a foundational ethic that drives much of a family's funding activities. Steier describes family business investing as lying on a continuum between family altruistic rationalities and open market rationalities.³⁷ This continuum embodies both the selfless altruism of family with the selfish rationalities of the market. Rather than viewing one end of the continuum or the other as the right view on family investing, we contend that values continuums such as these must be seen as tensions to be kept taut. Family dialogue around these tensions allows for a synthesized solution that provides the right mix of altruistic and market rationalities. The fact that this tension continuum exists is actually the basis for advantage in family financing. Family relational contracting based on trust and

altruism is a form of governance control that drives down transaction costs in venture financing.³⁸ The family's long-term value creating orientation with its ensuring strategic versus financial controls has been shown to positively support entrepreneurial activity.³⁹ Similarly, the term *patient capital* has been used to describe the advantage families find through their willingness to make investments in arenas that shorter-term investors could not justify. The reverse side of a financing advantage is how families leverage their social networks to create an advantage in obtaining funding, both through their banking relationships and business associates. While we have already mentioned control over the allocation of resources, owner/manager decision making, and intuitive-based tacit knowledge as advantages in other places in the process, they are also a key part of the advantage families have in their financial decision making.

Team Building

In the Timmons model of entrepreneurship, the team is the foundation of the process.⁴⁰ The model pictures an inverted triangle with a circle on each point of the triangle. "Team" is in the single circle at the bottom of the triangle, while "opportunity" and "resources" are in the top two circles. The visual is stark. The ability to assess and capture opportunities and to allocate resources for entrepreneurial gain is dependent upon the team. The model looks precarious with everything balanced on a ball at the bottom, and it is. While many entrepreneurial endeavors are started by solo entrepreneurs, higher potential ventures and transgenerational wealth creation require a team that can act entrepreneurially.

Families can have an advantage in team-based entrepreneurship, because they are already a collection of individuals living and working together—families are a *de facto* team. Entrepreneurship is found in husband and wife teams (co-preneurs), sibling teams, multigenerational parent-child teams, and in later generations, extended family teams. This is not to say that families are always good teams, but they do have the natural and social inclination to work together, particularly in early stage ventures. Those families who intentionally cultivate the positive relationship capital to be highly effective teams are in an elite category, having both the natural/social inclinations and the disciplined/learned skills. Families also have the potential to become transgenerational teams and continue their entrepreneurial family vision and legacy across many generations.

Habitual Entrepreneurship

A habitual entrepreneur is defined as someone who has experience in multiple business start-ups, and is simultaneously involved in at least two businesses.⁴¹ They may engage in multiple start-ups and exits, grow organically through innovation and start-ups, participate in buy-ins and buy-outs, be serial deal makers through partnerships and alliances, or build portfolios of businesses. A consensus is emerging that habitual entrepreneurs commonly have different motives when adding

each business to their group, but that largely new businesses are added as a result of entrepreneurial activity. This activity is not always formally planned, but can be a serendipitous process.⁴² These habitual entrepreneurship skills can be conceptualized as a form of entrepreneurial capital that is comprised of a cultural mind-set and knowledge–practice learning cycle.⁴³

Families are often habitual entrepreneurs, who build portfolios of businesses. They grow from family entrepreneurs, to family businesses, to family groups. Their family goals and circumstances may influence both their decision to engage in building a portfolio of business and the process by which they do it.⁴⁴ Previous business ownership and experience is a critical learning resource for successful habitual entrepreneurship. Having the support structures of a family portfolio can also enhance the success of next-generation entrepreneurs. We have already noted the important function family capital plays in starting new ventures and this is enhanced in portfolio businesses, since they can move resources between businesses. The family history and mentoring around entrepreneurship and a portfolio of businesses is a powerful learning resource and implicit motivator for next-generation entrepreneurship. Portfolio groups also change the failure culture in the business. Because resources are moved between businesses, the failure of one start-up does not necessarily impact the overall success of the portfolio. Families are able to absorb losses by taking fewer distributions for themselves or not maximizing another business in the portfolio. A family's risk and return expectations associated with a portfolio of business can thus be a stimulant for additional entrepreneurial activities. Finally, the governance and decision-making flexibility of families allow the portfolio to have a flexible and adaptable approach to entrepreneurial opportunity.

Entrepreneurial Reproducing

Aldrich and Martinez make an important distinction between innovators and reproducers.⁴⁵ Many entrepreneurs bring new products, structures, ideas, services, and processes to industries and markets. Nevertheless, because their offerings vary imperceptibly from those provided by existing organizations in other populations, they should not be classified as innovations. This distinction in no way downplays the entrepreneurial contribution of reproducers. While on the one hand, it preserves the role of competency destroying innovators, on the other hand, it highlights the role imitation plays in the entrepreneurial process and economy. Aldrich and Martinez conclude that most nascent entrepreneurs start as reproducers not innovators, and call our attention to the numerically dominant role of reproducers in comparison with innovators.⁴⁶

This process clarification is particularly relevant to the family business arena. We would concur that families are great reproducers and extenders of markets. Their family networks and portfolio business platforms are two critical resources they bring to entrepreneurial reproducing. Families are generally regional players, at least in the early days of their businesses. Their regional networks are

extensive and as they build their businesses, their regional reputations grow with them. They can leverage their family brand and reputation to reproduce new businesses in a region, and their dominance can give them advantage over even larger national players. In this regard, they can create ex post limits to competition just by their enduring presence and power as a family. This dominant family positioning is particularly evident in turbulent or developing economies and countries. Family players can often ride out business cycles because of their portfolio diversification and ability to shift resources and/or defer profits and distributions. Sirmon and Hitt have identified this financial risk profile and adaptability as a component of “survivability capital.”⁴⁷ The family networks and operational process capabilities make families great players in the supply chains of multinational companies. They can find profits in performing distribution functions and manufacturing processes that larger companies must forgo. All these functions fall under the entrepreneurial reproducer category, and once identified, we can more fully understand the entrepreneurial role of families.

CONCLUDING THOUGHTS ON THE FAMILINESS ADVANTAGE

Family entrepreneurs are unique in our society. They not only build businesses, they build enduring legacies in our communities and countries. Their social and economic entrepreneurial contribution is clearly evident in the family names that dominate our companies, products, services, buildings, and even towns. The family entrepreneur and the family as a social institution are critical parts of our economic and entrepreneurial infrastructure.

We have shown that the family context can be viewed as a distinct ecosystem that has both a supply and demand function in the entrepreneurial economy. Within the ecosystem, the interaction of the family and individual family members with the business entities creates an idiosyncratic familiness resource profile. The practical point of the ecosystem analysis is to show how families and family entrepreneurs can leverage their familiness resources_f and capabilities_f to find an advantage in the entrepreneurial process.

There are two concluding thoughts that we must pursue in order to balance the ecosystem model. First, as in any ecosystem, the inputs and outputs are not always positive and productive. While we have presented the potential families have for an advantage in the entrepreneurial process, they can also evidence destructive and value-destroying behavior. Every aspect of their familiness resource profile can have an $f+$ and an $f-$. For example, a family's path-dependent history and traditions can generate deeply embedded and a hard-to-replicate culture and knowledge ($f+$), but it can also create a legacy form of “group think” and recalcitrance to new and adaptive strategies ($f-$). Patient capital and a long-term investment horizon is a risk profile that can allow families to invest where short-term players cannot ($f+$), but it can also keep them from conducting

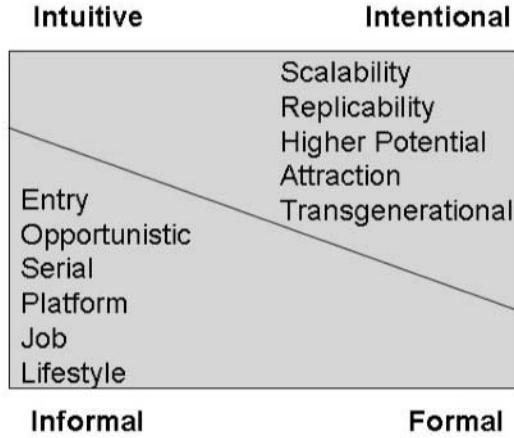


Figure 4.3. Entrepreneurial approaches and outcomes.

adequate financial due diligence or allow them to justify a bad return on an investment for a long period of time (f^-). The operational process capabilities and tacit knowledge of family entrepreneurs can lead to innovation (f^+), but it can also keep them too focused on operations and not enough on planning and strategic thinking (f^-). Family entrepreneurs must apply this type of advantage–constraint analysis in order to ensure that their familiness resource profile enhances their entrepreneurial processes.

Second, as we delineated in the family entrepreneurship typologies, the formal and informal approaches to the entrepreneurial process can lead to very different outcomes. While we have noted that neither approach is right or wrong, families do need to evaluate whether their approach matches their intended outcomes. Figure 4.3 links the informal approach to more intuitive processes and the formal approach to intentional strategic thinking and planning. It then describes the outcomes associated with each approach. The informal intuitive allows for easy entry into the entrepreneurial arena, opportunistic behavior, serial entrepreneurship, the building of a platform for future entrepreneurial activity, job creation especially for family members, and a lifestyle of choice for the entrepreneur and his or her family. The more formal and intentional approach, however, leads to scalability and growth, replicability and expansion, higher potential opportunities and outcomes, more attractive alternative for others to join the business, and greater potential for transgenerational outcomes. We believe that enterprising families who are interested in transgenerational entrepreneurship and wealth creation should consider moving their ecosystem from the intuitive to more intentional entrepreneurial processes.

With these concluding thoughts, the ecosystem model is complete. We believe that families will continue to play a significant role in the entrepreneurial economy, as opposed to becoming obsolete through globalization and consolidation. Our interest in this chapter is to assist both family businesses and academic leaders to better understand the distinct family context for entrepreneurship in order to enhance their potential for making a contribution to the entrepreneurial economy.

NOTES

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5

Franchising

Stephen Spinelli Jr.

Franchising continues to be a major player in the retail economy, accounting for 37 percent of retail sales in the United States, and a growing amount internationally. Even with a prolonged global economic slump (2000–2003), there was an increase in franchise start-ups (IFA, October 2004). Some 4,500 franchise businesses with 600,000 outlets crowd the marketplace. The International Franchise Association expects that franchise businesses will continue to thrive and prosper for the foreseeable future, growing to account for as much as 40 percent of U.S. retail sales in the next decade.

Franchising has been defined as a strategic alliance, a partnership (IFA, 1992), an offspring relationship with a parent company, an interorganizational form, and a hybrid organization.^{1–4} While there is some disagreement about the exact characterization of franchising, most researchers agree that a key aspect of franchising is inducing scale through a share contract between the franchisor (brand owner) and the franchisees (local market license holder). Franchising happens when someone develops a business model and sells the rights to operate it to another entrepreneur, the franchisee; the company selling the rights is the franchisor. The franchisee usually gets the rights to the business model for a specific time period and in a specific geographic area.

Franchising is sometimes referred to as business format franchising or product franchising. McDonald's is the classic business format franchise, and an auto dealership is the classic product franchise. In a business format franchise, the way the product is delivered is as important to the brand as the actual product, for example, golden arches and red-roofed building for McDonald's. Both the specifications of the product and the manner in which the product is delivered are important to the business format franchise.

In a product franchise, the actual product is the focus of the relationship, not the way that it is delivered. An Audi can be sold from a stand-alone single brand store or from a multibranded dealership. While business format franchises tend to form a more rigid relationship, the distinction between business format and product franchises is becoming blurred. The understandings from this chapter can easily be applied to both business format franchises and product franchises.

The key feature of the franchise system is that the ownership of the brand and the *modus operandi* for the delivery of the product are retained by the franchisor, and execution is a franchisee responsibility. A wide range of services and products are delivered through a franchise: some include oil lubrication, gas stations, automotive service, tax advice and preparation, landscaping, cleaning services, and packaging and mail service, as well as the commonly recognized restaurant and fast food industry. Normally, delivery is through a franchise outlet, or store, although there are several franchises that operate essentially without stores, or with reduced real estate constraints. For example, Service Master and Snap-On Tools franchisees operate from a central office and vehicles.

A franchise entrepreneurial alliance is a method for exploiting a business opportunity in a competitive manner. Inherent in the alliance is a dramatic compression of the long apprenticeship often necessary for entrepreneurial success. The would-be franchisor recognizes an opportunity and designs a service delivery system (SDS) to exploit that opportunity in a unique way. The franchisor bears the burden of assessing the market, creating the product or service, establishing the brand, building the business plan, and measuring the competition. The franchisee focuses on the process of cultivating customers and an awareness that incremental changes may be necessary to assure the franchise's ongoing competitive advantage.

The trademark or brand of the franchise creates the bond between franchisor and franchisee. Franchise systems share a mission to maintain and build the brand, which signals a price-value relationship in the minds of customers. The franchisor brings the brand, and the franchisees bring the entrepreneurial instincts to manage the day-to-day management and selling. It takes alliance players to achieve market acceptance of the brand.

This chapter aims to articulate the power and problems in franchising. This entails looking at both the franchisor and the franchisees as entrepreneurs with unique contributions to the relationship. We begin by looking at the theoretical frameworks that inform our understanding. Ultimately, we will look at franchising as an entrepreneurial alliance; one that attempts to both exploit the delivery system advantages and also grow that opportunity. Therefore, this chapter must look at the nature of the relationship between the franchisor and the franchisee owners, via the perceived competencies of the players. We also discuss some aspects of franchise governance.

OVERVIEW OF FRANCHISING

The relationship between the franchisor and the franchisee has been researched by many disciplines, including law, economics, management, marketing, organizational behavior, and strategy. The supporting theory derives principally from economics.⁵ The specific lens through which the relationship is viewed is generally based in efficient capital markets or resource scarcity.⁶ Then, organizational economics explains the use of franchising for the capital-rich companies through agency theory, which has become the dominant theoretical underpinning for much of the research regarding the franchisor–franchisee relationship.^{7, 8}

There are four principal reasons to franchise; the acquisition of human and financial capital; growth to meet market competition; monitoring costs of company operated units; and the need to achieve minimum scale efficiency. However, underlying each of these reasons to franchise is that both the franchisor and franchisee are motivated by profit. There is an intuitively reasoned and theoretically supported expectation by each party that profit can be achieved at greater levels or with more certainty (less risk) through a franchise relationship than without.⁹ A franchise is formed as a result of two legally independent parties signing a contract (in franchising, this is often called a license agreement). This contract calls for a transfer of the business format from the franchisor to the franchisee, in exchange for shared rents of the operating outlets. The franchisee attains its return through operating unit profit. The franchisor gains his share of rents mainly through up-front franchise fees and an ongoing royalty.

The strategy literature cautions that coordination of many of the activities among aligned firms is necessary to assure that quality specifications and brand building occurs.¹⁰ This required pattern of coordination is even more clearly evident in the interorganizational form like franchising. “It is only through purposive inter-organizational coordination that channels can obtain their full potential as systems involved in producing satisfactory outputs for ultimate business and industrial customers.”¹¹ Coordination between the franchisor and the franchisees is dependent on the nature of power and dependence between the parties. The ability of either party to achieve its profit potential is dramatically dependent upon their relative bargaining power in the coordination of interorganizational strategy.¹²

While bargaining power is clearly bounded by the characteristics of the contract, the boundaries are not rigid. Indeed, the litigation common to franchising is both theoretically and practically associated with inflexible adherence to the license agreement.^{13, 14} Inflexibility is recognized in contract law as an impractical way to maintain any relationship.^{15, 16} Neoclassical contract law is particularly relevant to maintaining a productive franchise relationship. “Neoclassical law . . . [applies] to contracts in which the parties to the transaction maintain autonomy but are bilaterally dependent to a nontrivial degree.”¹⁷ Neoclassical law and relational exchange theory propose that a tolerance zone of contractual and relational activity is inherent in rational boundaries that are dynamically played

out in an adaptive manner between the parties.^{18, 19} Some researchers have argued that the franchisor's right to terminate a franchisee's license agreement is an overwhelming advantage.²⁰⁻²² However, individual state legislation has so eroded this right as to render it ineffectual, except in the most clear-cut violations.²³

This chapter looks at the nature of power and dependence and perceived competencies in the relationship, investigating the entrepreneurial effects on governance. We assume no a priori role as commonly assigned in the agency view. That is, the franchisees have the potential to play the role of principal in the relationship and the franchisor can be the agent. We look carefully at the role of each player in the relationship in deciding profit-maximizing competencies for the franchise system.

RESEARCH PERSPECTIVES IN FRANCHISING

Agency Theory

The research perspective has been driven primarily by agency theory, with the franchisor playing the role of principal and the franchisee acting as agent in the operating unit. However, the phenomenon of the multiple-unit franchise owner suggests a need to look at traditional agency roles with an open mind.

Agency theory explains franchising as a team effort in economic activity.²⁴ The team is organized under the owner or monitor who holds the right to profits generated by the activity. This is sometimes called being the residual claimant. The monitor negotiates resource inputs and because the monitor is the residual claimant, has a vested interest in ensuring that the resources are utilized in an economically efficient manner. Those with no claim on the residual or ownership of the resources might sacrifice the economic efficiency of the operation for personal gain. With agency theory, the limit of a firm's growth occurs when monitoring by the residual claimant can no longer be efficiently executed. At this point, the profit maximization desired by the monitor is supplanted by the desire of the managers to maximize their utility. This occurs as control becomes more difficult with firm expansion, particularly when there is geographic expansion and dispersion.

The firm franchises in order to overcome monitoring problems and more closely align management and profit incentives. The franchisee becomes a residual claimant and therefore has a vested interest in efficient unit operations. The franchisees are motivated to manage their operations, because they receive the lion's share of the profits, sending, on average, 5 percent of revenue to the franchisor. In essence, monitoring costs are restructured in a more efficient manner in franchising, because incentives are better aligned. The franchisee has greater operating-unit monitoring responsibility and the franchisor has less manager-monitoring responsibility (but still must monitor the franchisee).

While the incentives are aligned between the players, there are agency costs associated with franchising. Of particular concern is the cost associated with free

riding. Horizontal free riding occurs when franchisees reduce quality within their unit, thereby accruing personal benefits through cost savings, while at the same time the losses caused by diminished quality is diffused through the brand. Vertical free riding can occur when the franchisor saves costs by reducing the quality of their inputs, thus transferring some or all of the costs to the franchisees.

Brown suggests that company ownership is more efficient for the franchise organization, but with clear bargaining, power advantages to the franchisor.²⁵ Michaels suggests that franchisor bargaining power is increased through tapered integration.²⁶ Tapered integration is defined as “some portion (but not all) of the firm’s requirements for an input is supplied in-house or some portion of outputs is sold (consumed) in-house.”²⁷ In franchising, tapered integration is a situation where the franchisor operates some outlets, often called company stores. Theory dictates two advantages to company store ownership by the franchisor; profit and knowledge enhancement.²⁸ By operating stores, the franchisor gains first hand knowledge of market demand and system requirements to fulfill that demand.²⁹ In addition, operating knowledge can be reasonably assumed to enhance the franchisee respect for the franchisor, and provide a better standard of measure for franchisee performance. Additionally, in most license agreements, the franchisor is responsible for at least some training of franchise operations. Store ownership allows for both the accumulation and dissemination of knowledge. More simply stated, owning and operating outlets make it easier and more effective for the franchisor to train new franchisees.

Agency theory assumes role specificity with the franchisor as the principal and the franchisee as the agent. While there is no a priori requirement for these assignments, most academic research adopt this position. This theoretical perspective is mute, regarding the commingling of monitoring requirements between the franchisor and the franchisees, and the possibility that the principal-agent roles could flow among the players. The possibility of the franchisee being the agent is not remote. Because most franchises are based on a long-term contractual alliance (often as long as twenty years), the relationship goes beyond the sum of individual transactions. Both the franchisor and the franchisees must trust each other to perform contractual (and sometimes extracontractual) obligations. For the franchisor, this is more easily understood. The franchisee is held responsible by contract to operate the business format in a manner prescribed by the operating manual. They are the agents of the franchisor in the field. But consider the trust the franchisee must have in the franchisor. For example, most franchisees send contractually obligated money to the franchisor for the purpose of national advertising. The franchisor is therefore the franchisees’ agent, responsible for executing the advertising program for the benefit of the system. The franchisee is rationally motivated to monitor performance.

Abrogating the classic assignment of agency theory roles creates the interesting question, can the franchisee be the principal and the franchisor the agent? This question is not folly. Indeed, neoclassical economics would support the thought that the strength of franchising is founded in the clear competitive advantages of

the players in the interorganizational form and the sharing of the enhanced rents created by distinct role advantages.³⁰ The demand curve is downward sloping and to the left, as a result of the composite differentiation created by the players in the interorganizational form. Take, for example, hiring outlet-level employees. This task is almost exclusively the role of the franchisee. However, training materials are centralized by the franchisor with clear interorganizational input of the factors of training from the franchisees. The franchisor is the agent of the franchisee who entrust in the creation of training materials for franchisee employees. Likewise, most franchise-system advertising and marketing budgets are established by the franchisor in support of the franchisees. The franchisor acts as agent for the franchisees in the creation of advertising and expenditure on media. There is a small amount of literature examining this phenomenon that centers on “reciprocal interdependence.” Reciprocal interdependence acknowledges that roles might be interdependent but does not specifically address the theoretical framework that guides the nature of the relationship. There appears to be a theoretical gap in explaining the phenomenon of reciprocal role playing, and therefore, little empirical evidence of its existence.

Implications of Agency Theory for Practice

The message of agency theory is to “trust but verify.” Understanding agency theory helps us establish sound and reasonable expectations for the franchise relationship. To fulfill monitoring objectives, the franchisor establishes a system to assure that the franchisees perform according to the articulated standards. The high-performing franchise systems also use monitoring to gather data on exceptional performance. When they do that, franchisees can reasonably expect the franchisor to process and disseminate that data to improve the business model and enhance profitability.

Transaction Cost Economics

Further impacting the theoretical perspective in franchising is transaction cost economics. The theoretical perspective states that commercial events occur on a spectrum of governance structures. This spectrum goes from the individual transaction, buying an apple from a street vendor, to the hierarchy inherent in General Motors. Positioned directly between these governance structures, and along a spectrum, is the hybrid organization. Williamson explicitly recognizes franchising as the prototypical transaction cost-hybrid organizational form.³¹ This theoretical perspective proposes that a market advantage can be gained in the interorganizational form. The franchisor adds value primarily with centralized functions that foster economies of scale. The franchisees add value through local entrepreneurial intensity, the onsite functions requiring local knowledge and the intense management of local resources.

Governance is central to transaction cost economics. Transaction cost economics relates the choice of firm governance to the comparative costs of planning, adapting, and monitoring. In the hybrid, governance is framed by a contract between two independently liable organizations.

Bounded rationality and opportunism are two behavioral characteristics central to transaction cost economics. Bounded rationality is derived from the inability to predict all circumstances that may affect an economic relationship (similar to the aforementioned neoclassical law and relational exchange perspectives). Transaction cost economics highlights the investment in transaction-specific assets, which greatly affect the exit or switching costs. The interrelationship among relational asset intensity, bounded rationality, and opportunism is important to the franchisee–franchisor relationship. The parties to the relationship are held hostage because investment in immobile assets would be lost or have far less value if the relationship is irrevocably breached. Therefore, within the bounds of rational calculation, the franchisee and franchisor are compelled to negotiate the relationship in reaction to real or perceived market dynamics. Of course, the relationship is formed and potentially constrained by the license agreement. The contract provides safeguards to protect against opportunism. The franchisor's right to terminate under certain conditions may be interpreted as *ex ante* safeguards. In the transaction cost perspective, the license agreement in franchising is seen as a complex monitoring guide.

Relational Exchange Theory

A small body of literature looks at relational exchange as a theoretical framework to understand the franchise relationship.³² This theory suggests the norms that govern commercial exchange behavior in discrete transactions, and are markedly different from those in relational exchange. When parties to commercial exchange become involved in a conflict episode, it might be expected that the types of norms which govern their relationship will affect the characterization of each other's behavior. Franchise actors cooperate to create a surplus and are in conflict over the division of that surplus, as is common among all exchange partners.³³ There is a continuum of exchanges from the discrete transaction to the long term, continuous, and complex relationship in which the individual transactions are relatively less important compared with the relationship itself. Macneil argues that relational exchange is manifest in three general contracting norms: solidarity, role integrity, and mutuality.³⁴ Solidarity is generally characterized by an understanding of the relational imperatives (in franchising, this is indicated by the franchisee understanding the need for local entrepreneurial activities and the franchisor focusing on central economies of scale). Role integrity is the mutual execution of that understanding. Mutuality recognizes the benefits of the relationship. Kauffman and Stern specifically note franchising as the prototypical relational exchange.³⁵ This theory is inspired by research involving the legal

relationship between entities and posits that strict interpretation of long-term contracts is untenable and unavoidably leads to litigation. Therefore, parties to a contract push contractual boundaries and establish informal tolerance zones regarding the rights and behavior of players. Even unacceptable conduct can be ameliorated, if the parties have stored enough trust in the other partner. This interaction is time sensitive and difficult to assess. However, it does establish the theoretical framework for a set of informal rules to trump the contractual relationship in a long-term contract. Therefore, even in the explicitly (contractually or otherwise documented) stated roles between the franchisor and the franchisees, there is an important need to understand the informal interaction over time that underpins the governance of the interorganization entity. While there is no theoretical guidance to empirically test the seemingly contradictory “contractual informality,” we have asked franchisees and franchisors what they believed were the key transactions between them that defined the relationship.

Resource Scarcity

Some researchers argue that the principal reason a firm franchises is to raise capital from franchisees. Most franchisees pay an up-front fee called the franchise fee and an ongoing payment (usually calculated as a percentage of revenue). Additionally, franchisees often pay advertising fees, lease expenses, and mortgage amortization. Some researchers have criticized resource scarcity as a motivation for franchising.³⁶ They argue that if resource scarcity motivates a franchisor, it should discourage a franchisee. Why would an individual concentrate a large portion of their net worth in one single investment? Wouldn't it be more rational to buy shares in a portfolio of franchisors or even in one franchisor that has a number of franchisees and therefore diversify risk? There is little research to support such criticism.³⁷

DEFINING THE TRANSACTIONAL IMPERATIVES IN THE FRANCHISE RELATIONSHIP

Franchisee-defined transactional priorities in the relationship with the franchisor include:

- Accounting
- Credit
- Equipment
- Financial management assistance
- Inventory assistance
- Local advertising
- Management systems
- Market information

- National advertising
- New product development
- Support in operations
- Problem-solving assistance
- Promotions
- Purchasing
- Training

Factor analysis bundles these transactions as operations, marketing, supply, real estate, MIS, and product innovation, shown as follows:

Coding

MIS

accounting
 management systems
 financial management assist

Supply

inventory assistance
 credit
 equipment
 purchasing

Marketing

local advertising
 market information
 national advertising
 promotions

Real Estate

new store development

Product Innovation

new product development

Operations

support in operations
 problem-solving assistance
 training

This coding chart tells us what transactions have a similar impact on the perception of the parties to the franchise relationship. For example, franchisees see support in operations, problem-solving assistance, and training embodied in their operational needs. Therefore franchisees establish an expectation for operational support that is defined by their actions in these three areas.

THE FRANCHISE RELATIONSHIP FRAMEWORK

An important objective of this chapter is to use theory in a manner that informs practice. To that end, we have created a framework that builds from the

theoretical concepts. In 1986, Pizza Hut was struggling with upstart competitor Domino's. Franchisor management was convinced that pizza delivery was a real threat and that they needed to respond with their own delivery offering. But they had over a thousand franchises with territory rights that were highly successful sit-down restaurants. "Why fix what isn't broken," was a common franchisee refrain. The delivery system added costs to the franchise operation with uncertain revenue. It also affected the way franchisees operated the sit-down business. Tension grew as the franchisor began to experiment with the Pizza Hut business model with centralized phone ordering and special procedures for home delivery orders. Pizza Hut teetered on the brink of massive litigation.

Eventually, the franchisor negotiated with franchisees and the firm embraced delivery. But why did the friction between the franchisees and franchisor rise to this level in what now seems an obvious need to respond to the competition? The complexity of the franchisor/franchisee relationship suggests that if you do not pay attention to key aspects of this partnership, then the system will fray.

We make these details understandable through the franchise relationship framework (FRF). The FRF incorporates specific processes that are embedded in franchising. It provides a blueprint for developing and analyzing all aspects of the franchise format, from the physical building to the monitoring and control aspects. It asks the questions that become pertinent when designing the most ideal SDS for any given franchise. It anticipates practical breakdowns in the franchise relationship and suggests avenues for appropriate modifications for both the franchisor and franchisees.

Franchising is a powerful tool, because it has the potential to create wealth for a large number of entrepreneurs. The FRF illustrates both how a potential franchisor can most efficiently construct a franchising company and how a prospective franchisee can determine which system to join. Among other things, the FRF also helps to distinguish between those tasks best executed under a corporate umbrella and those best done by the individual franchisee. The problems at Pizza Hut, for instance, began when they started tinkering with the business format that franchisees were comfortable with. The changes disrupted the security of their revenue and franchisees naturally became concerned about their financial futures. Confusion equals conflict in franchising. This confusion not only pertains to the financial results, but can also manifest in role responsibilities. When the franchisor experimented with taking orders centrally versus directly to the restaurants, the franchisees became confused about who was responsible for delivery tasks.

Figure 5.1 is our first look at the FRF. This model depicts a series of franchise principles, each of which interacts with the others to form a powerful interlocking business concept that solidifies itself as the linkages are implemented more efficiently. The process starts in the center with the customer and moves to the SDS. Any changes in the target customer or their needs, or, any changes in the SDS, have consequences that affect the franchise alliance. The FRF enables you

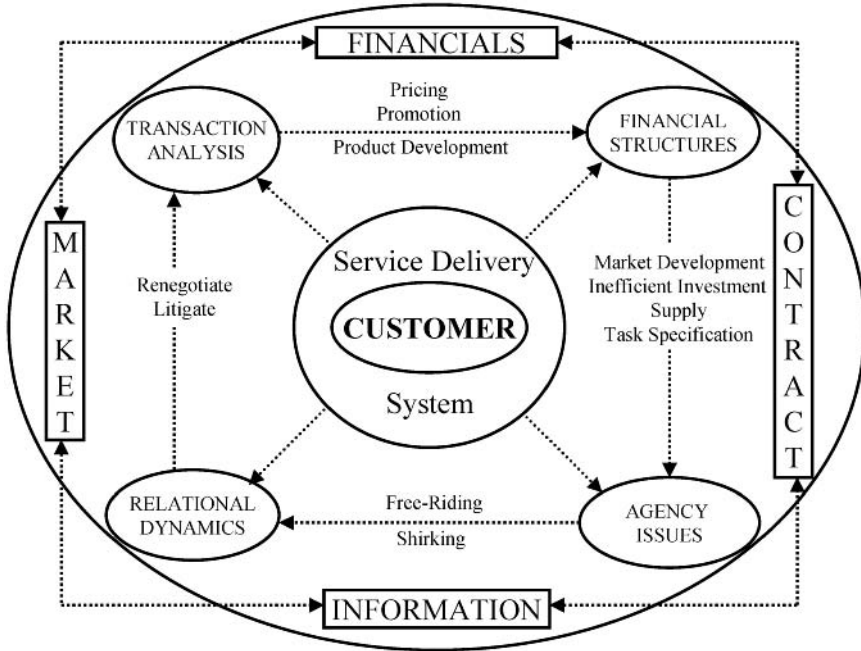


Figure 5.1. The franchise relationship model.

to identify the nature of these consequences. Once the causes are identified, the franchise can be improved by realigning transaction responsibility and reassessing the financial well-being and reliance on each partner. The dynamics of answering these questions, however, can often cause conflict in the relationship, because changes to the relationship have to be agreed on between the franchisee and the franchisor.

The FRF suggests a series of questions. Both potential franchisors and franchisees can use the franchise relationship model as a roadmap to success by asking the questions, which we pose throughout the chapter. The answers will offer a perspective that can help determine the entrepreneur’s success. It is extremely important to understand the goals and objectives of both players in the franchise company for a healthy franchise relationship to develop. One should consider each piece of the FRF; the model as a whole; and how the pieces interact. To best illustrate each of the pieces of the FRF, it is evaluated from the perspective of a prospective franchisor, because the franchisor must deal with these issues first, when developing the franchise. As mentioned earlier, though, the following discussion will also be beneficial to prospective franchisees, as it will illustrate how a franchise and the resulting FRF are developed, thus enabling franchisees the ability to evaluate different franchise systems.

THE CUSTOMER

The customer is literally at the center of the FRF. The job of the franchisor is to develop a business format that will meet the needs of the customer in a way that makes money for you, the operator of the franchise (the franchisee). The SDS surrounds the customer in an attempt to meet the demands of the customer. This will be discussed later on.

Franchisees and franchisors should assess and reassess often. The problems at Pizza Hut started when Domino's exposed pizza delivery as a customer need that Pizza Hut was not meeting. The Domino's 30-minute guarantee (later changed, but by then the brand had been established) changed the rules about how people could eat pizza in the United States. Clearly, a segment of the population wanted a pizza delivery option.

Accurately assessing customer demand is the first step in projecting revenue. With this projected annual revenue amount in mind, then forecast the costs and expenses of the proposed franchise by developing the appropriate SDS. The FRF leads us to this next step.

ESTABLISHING THE SDS

Why is the SDS, often called the franchise business format, often a proprietary design? Because it is not only the fundamental means by which customers' needs will be served, but it is also the way in which resources are arrayed to create competitive advantage in the marketplace. Highly successful and visible examples of business format innovations are the drive-through windows in fast food restaurants and bilevel facilities in quick-oil-change facilities. Every franchise has a well-defined SDS, however overt or transparent it may seem to an outside observer.

Franchising tends to a high level of refinement and detail orientation, if not obsession. Unless you examine it under a high-powered microscope, you might miss essential components. This detail is needed for an SDS to deliver both values to the customer and cost efficiencies to the concept operator. Every franchise company bets the future of the company on having a better understanding of how to meet consumer needs through their business format. Eastman Kodak and the founder of Mail Boxes Etc. teamed to develop the Image Arts Etc. franchise. They believed that by combining technology and retail service, they were putting the company "on the cutting edge of the digital imaging revolution and the first company to offer wide format printing and digital photography to the public in retail shopping center locations."³⁸

It is important to note here the interrelationship between the SDS and the customer. As the customer is at the center of the Franchise Relationship Model, addressing customers' needs should be at the center of the SDS. Take Wendy's as an example. Dave Thomas saw customer needs that were not being met by the market and developed an SDS accordingly. The large front windows allow grill

personnel to cook the number of hamburgers that are indicated by the number of customers driving onto the lot. This grill placement also allows customers to watch hamburgers being freshly cooked. The more natural, seamless, or transparent the delivery of the product is to the customer, the more confident you can be that you have achieved the ideal business format.

TRANSACTION ANALYSIS

In the franchise relationship, how are responsibilities of the franchisor and franchisee allocated?

There can be no viable franchise until you have a financially sound business model for the single outlet. Franchising creates sound single store operations and economics in a unique way. The tasks and responsibilities necessary to deliver the product to the customer are documented in the contract and allocated between the franchisee and franchisor, based on their respective capabilities and efficiencies (Table 5.1). The sum of the transactions constitutes the brand equity shared by the parties to the license agreement. Those issues that stand outside the realm of foreseeable and definitive actions, but that will play an ongoing role in the operation of the franchise, will be documented and continually updated in an extracontractual franchise operations manual. This manual gives both parties the opportunity to update rules, regulations, and procedures that will come to bear over time.

Ask, what are all the individual transactions necessary to deliver the prescribed business format or service delivery system? These tasks must then be allocated between the franchisor or franchisee on the basis of whether the task is best executed at a national (franchisor) level or at a local (franchisee) level. As a

Table 5.1. Sample Transaction List

| <i>Franchisor</i> | <i>Franchisee</i> |
|--|---|
| <i>Centralized Economies of Scale</i> | <i>Local Entrepreneurial Intensity</i> |
| <ol style="list-style-type: none"> 1. Establish site acquisition criteria 2. Design building blueprint specifications 3. National contracts for inventory and equipment specification and purchasing 4. Centralized training of franchisee management 5. Detail marketing plan template for radio, print media, and TV promotions | <ol style="list-style-type: none"> 1. Locate site that fits criteria 2. Initiate local contractor bidding 3. On-site installation of equipment and inventory management 4. On-site training of franchise employees 5. Placement of promotions in local media |

general guide, the franchisor tasks are those with economies of scale. This usually implies a size or bulk requirement in the task, such as management training or bulk purchase of equipment. Franchisee responsibilities are based on the task being executed on site in the local market; these include local sourcing of raw materials or the hiring of employees. Critical to local entrepreneurial intensity is customer contact and local market knowledge. Some tasks are shared. For example, the franchisor has a national role in marketing and the franchisee is responsible for local interpretation and execution of advertising and promotion.

Once you allocate the tasks associated with the SDS, then the franchisee can continue to assess costs and revenues through the use of pro forma financial statements that incorporate the information already gleaned by determining the market demand.

As we saw in Figure 5.1, the linkage between the transaction analysis and financial structure is very direct. Each transaction incurs a cost or requires investment. The costs and investment are put in place to make sales. The sales are “revenue” on the income statement. The costs are “expenses” incurred to generate the revenue. Investment in property, plant, and equipment to set up your SDS are the assets on the balance sheet. Therefore, the transaction analysis defines the financial status of both the franchisor and franchisee.

FINANCIAL STRUCTURE

What is the financial model of the franchise concept? The customer definition provides the basic understanding of revenue. Marshalling the resources to establish the SDS allows you to understand the costs involved in meeting market demand; the SDS defines the costs of acquiring the revenue. The known revenue and known costs bring you directly to a clear understanding of your project’s net revenue. Pro forma financial statements allow you to better understand the viability of the franchise system’s business model prior to launch. (Pro forma—a projection or estimate of what may result in the future from actions in the present. A pro forma financial statement is one that shows how the actual operations of the business will turn out if certain assumptions are achieved.)

Although the financial statements are constructed from the results of the individual transactions, understanding the impact of the fully integrated system is equally important. The successful combination of these parts is paramount to establishing the competitive advantages of a franchise’s business format—the key ingredient that will lead to the franchise’s competitiveness in the market. The phenomenon of the whole being greater than the sum of the parts is indicated by the delineation of tasks between the franchisor and the franchisees, and is reflected in the value that is created through this cooperative synergy. The principal linkage between the franchise’s proposed financial structure and the principal–agent relationship with the franchisor is the contract. Through the contract, the details of market development, task specification, and investment supply are addressed.

AGENCY ISSUES

Franchising assumes an urgency to grow. The need to generate capital from franchisees and then to build new outlets can sometimes overwhelm a franchisor's long-term planning concept and deteriorate the working relationships that have been developed with new franchisees. Haste can result in relaxed standards for choosing franchisees, but even when the franchisor is rigorous about franchisee selection, it is impossible to get perfect information about how a person will act as an entrepreneur and partner. To alleviate some of these selection problems, many franchisors have an intensive screening program for prospective entrepreneurs; the largest companies require significant work time in an operating outlet prior to becoming a franchisee. For example, Dunkin Donuts conducts extensive personality profiling of prospective franchisees to ensure the appropriate match between the demands of the franchise and the skill set of the enthusiastic entrepreneur.

Various agency issues benefit from the free flow of information and open communication. In particular, without communication, free riding and shirking tend to manifest. A free-riding franchisee benefits from association with the franchise brand, but neglects to pay for this benefit. The franchisee may for example agree to accept co-op advertising funds from a vendor in exchange for an endorsement, but then neglect to do as promised. The weight of the entire franchise system's advertising may still generate incremental customer flow to the individual franchisee even though they did not contribute their fair share to the advertising effort. The nonparticipating franchisee is said to be getting a free ride, because they benefit from the system's advertising efforts without contributing their own part. However, the system is negatively affected by the omission.

A shirking franchisee neglects a specific task or duty as outlined in the franchise agreement. A typical example is substituting less expensive, lower quality ingredients for one of the core ingredients of the franchise's products—such as using slightly less dough in the bagels or a lower grade of beef in hamburgers. Shirking is most prevalent in tourist areas with nonrepeat customers, but it has also been known to occur at local franchisees too. For example, a franchisee in a tourist area might use slightly less beef to make a hamburger and still get the customer's money, but is shirking a contractual responsibility. Not only are these individual actions unethical, but they also erode the brand equity of the entire franchise system.

RELATIONAL DYNAMICS

The process of managing the relationship is both formal and informal. The reality is that if the franchisee or franchisor insists on a very strict interpretation of the license agreement, then conflict is almost assured and it is likely to result in

litigation. As expectations evolve, the partners need to monitor the activities of each other to make sure they are met.

Franchising embodies reciprocal interdependence—a dynamic relationship with the role of principal and agent being filled by both parties under different circumstances. For the franchisor and franchisee to understand their respective roles in any given situation, the parties must allocate tasks in the SDS to the partner best suited to execute them. After the tasks have been allocated, both parties have to make sure they are accomplished. Relational dynamics is the process of making sure the other guys do their job and discuss the implications of both successes and failures of execution. It also deals with communicating changes in the system. The objective is to monitor the activities to ensure compliance and to maintain, and enhance, the trademark value. The most sophisticated franchise system incorporates both a monitoring and a feedback system. The formal key is not only to monitor negative behavior, but also to examine exceptional performance and “feedback” this performance dynamic to the rest of the franchise operators.

Of course, it is impossible to monitor all the activities of a partner. Not only is that cost prohibitive, but it would also erode confidence in the relationship. Tasks should be prioritized by franchisors and franchisees according to their potential impact on brand equity. Formal monitoring should also occur according to priority.

INFORMATION SYSTEMS

The key to building and maintaining a flow of tracking information between franchisee and franchisor is that the flow must (a) adequately police the operational standards of the system, and (b) provide feedback of exceptional performance to the franchisor for review and possible system wide implementation. Franchise companies provide perfect organizations for accomplishing these objectives. The franchisor must know the sales of the franchisees to collect royalties. Franchisees need access to centralized systems like supply arrangements, training materials, R&D results, and marketing materials from the franchisor. Many franchises have information systems that monitor franchisee sales and tie them to supply requirements. However, a few have learned how to share information among franchisees to solve problems and exploit opportunities.

SUMMARY

Franchising has played an important yet shadowy role in economic development, especially in the United States. Practitioners and academics alike seem to struggle in defining this phenomenon. Is franchising a way for middle managers to create their own job, or their own business? Is it an organizational hierarchy or an alliance of equals? The academic literature is equally ambivalent about

franchising's place in business education. As an area of intellectual investigation, it can be found in marketing, strategy, organizational behavior, finance, and, with increasing popularity, entrepreneurship.

Clearly, in the present volumes, we take the view that franchising is important to economic development, especially scale. We also believe that both franchisor and franchisee activities constitute entrepreneurial behavior. We argue that opportunity recognition, holistic perspectives, and value creation, essential to the entrepreneurial process, are consistent in franchising. The multiple theoretical lenses through which we view this phenomenon only add to the richness of the academic investigation.

We also identify areas that need further investigation by the academic world. The evolving roles of the franchisor and franchisees stress the theoretical prisms through which they have been researched. The traditional agency perspective, while a robust tool, may need rethinking in regard to its application to franchising. Specifically, we ask if the franchisee may play the role of principal and consequently the franchisor as agent.

We delve more deeply into the complexity of the franchisee–franchisor relationship as a unit of analysis for the construction of a complex interorganizational form that can thrive upon well-conceived strategic advantages in the varying roles of the players.

Franchising will also play an increasingly important role internationally. While franchising accounts for more than one-third of the U.S. retailing economy, it is barely 10 percent of the next most intense franchising economies.

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6

From Intentions to Venture Creation

Planned Entrepreneurial Behavior among Hispanics in the United States

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Understanding the factors that influence entrepreneurial intentions and behavior is important because the creation of new ventures is essential for economic development.¹ In this chapter, we present the results of a study focused on Hispanic entrepreneurs. Our purpose was to see if context, measured in terms of the prevailing norms in ethnic communities, has the potential to influence in some material way the determinants of entrepreneurial intentions, and hence, behaviors. We selected Hispanics for our study because they have surpassed African Americans to become the largest minority group in the United States with about 40 million people, or 13.7 percent of the entire population.² Prior research in Hispanic entrepreneurs has concentrated on studying their activities in particular locations or making inferences from archival sources.^{3, 4} Other entrepreneurship researchers have placed Hispanics as one demographic group among others to study outside assistance, regional culture, or business characteristics and community involvement.⁵⁻⁷ However, little is known about how Hispanics develop their propensities to start new ventures and how their attitudes and perceptions may vary from those of the majority population. Our premises are that the attitudes and perceptions of Hispanics do vary from those of the majority population in nontrivial ways, and that a primary source of this variation has to do with the greater importance context plays in determining attitudes, perceptions, and ultimately entrepreneurial behaviors. We further argue that the importance of context is culturally determined, and that culture is largely rooted in ethnicity.

The conceptual foundation for our study is Ajzen's theory of planned behavior.^{8, 9} The theory suggests that intentions are the best predictors of behaviors for which people have less-than-perfect control. In turn, Ajzen's theory suggests

that intentions are determined by a person's attitudes about the desirability of a behavior, the subjective norms associated with a behavior in a given community or society, and the extent to which a person perceives that the behavior is within his or her control. Importantly, this theory has been extended and applied in an attempt to gain a better understanding of entrepreneurial intentions. A study by Krueger, Reilly, and Carsrud yielded results suggesting that the theory of planned behavior offers a promising model for explaining entrepreneurial intentions toward venture creation.¹⁰

Despite acknowledging the importance of cultural factors in determining the specific relationships between attitudes and perceptions, intentions, and new venture creation, empirical studies have focused primarily or exclusively on entrepreneurship among whites, who constitute the majority population in the United States.¹¹⁻¹⁴ This limitation in the scope of previous research could be particularly acute in assessing the importance of contextual factors, such as subjective community norms. For example, Krueger et al.'s study of university students (who appeared to be predominately white) did not find a significant relationship between subjective community norms and entrepreneurial intentions.¹⁵ Although we expect that, for the most part, entrepreneurial perceptions would operate similarly among ethnic entrepreneurs and entrepreneurs who are members of the majority population, we also suggest that there may be differences in the manner in which contextual factors affect the intentions and behavior of ethnic entrepreneurs.

Potential ethnic entrepreneurs are more likely to live in enclaves among people of similar backgrounds, and develop strong bonds of trust and solidarity with their neighbors.^{16, 17} Consequently, the general perceptions of members of an ethnic community about the acceptability of entrepreneurial behavior are likely to carry considerable weight in the decisions of individual entrepreneurs on whether to start businesses or not. In other words, a community's cultural context in general, and the amount of entrepreneurship in a community, in particular, may affect the decisions of would-be ethnic entrepreneurs to take the plunge.^{18, 19} Accordingly, we propose that the relationship between context (as measured by perceived community norms) and the intention to start a new venture may be stronger among ethnic entrepreneurs than prior research among nonethnic entrepreneurs would suggest.

Apart from this primary purpose, our research provided an opportunity to conduct a fuller test of Azjen's theory of planned behavior.²⁰ Thus, the principal application of Azjen's work has been in exploring how attitudes and perceptions influence entrepreneurial intentions. We are unaware of any test of the theory of planned behavior, in its entirety, as related to entrepreneurship.

Nevertheless, other researchers have explored the relationships between intentions and entrepreneurial behavior, as manifested in the creation of new ventures. While the theoretical work of Bird and Katz and Gartner, and the empirical work of Carter, Gartner, and Reynolds and Chrisman, are supportive of the basic precepts of Azjen's theory, measuring the relationship between entrepreneurial

intentions and behaviors is fraught with difficulties.^{21–24} Intentions, as well as the attitudes and perceptions that determine intentions, may change over time.²⁵ For example, Katz's study of self-employment decisions implies that only a small portion of entrepreneurs may exhibit start-up intentions, prior to some precipitating event, which may occur only a short time before a decision to engage in entrepreneurial behavior becomes visible.²⁶

Given the importance of entrepreneurship to the U.S. economy, the general failure of trait research to predict entrepreneurial behaviors, and the proven predictive power of Ajzen's theory of planned behavior, we set out to test Ajzen's model in its entirety.^{27–29} Furthermore, as we have already suggested, since the model permits an investigation of how contextual factors influence decisions about new venture creation, this exploratory study is able to address important gaps in our knowledge of entrepreneurship in general, and ethnic entrepreneurship in particular.

Our findings support our contentions. The intentions of ethnic entrepreneurs appear to be influenced by the norms that prevail in their communities. Furthermore, these intentions are related to the venture creation behaviors of ethnic entrepreneurs. These findings have important practical implications. First, they imply that fostering ethnic entrepreneurship must be particularly mindful of the interrelationship between the perceptions and goals of both a community and its members. Individuals are less likely to start businesses if such behaviors run counter to what they perceive to be the prevailing attitudes of their neighbors. And this relationship seems stronger in ethnic communities than in nonethnic (white) communities. Second, the theory of planned behavior offers a powerful yet parsimonious framework for further investigations and comparisons of the determinants of entrepreneurial behavior.

In the remainder of this chapter, we present our theoretical framework and hypotheses. Next, we discuss the methodology and results. Finally, we conclude with implications for future research and practice.

THEORETICAL FRAMEWORK

As an expansion of the theory of reasoned action, the theory of planned behavior has dominated social psychology research.^{30,31} As noted earlier, the theory of planned behavior suggests that behavior is affected by intentions, and intentions to perform a behavior are jointly determined by a person's (1) attitudes with regard to the desirability or attractiveness of the behavior; (2) perceptions on self-efficacy, or in other words, whether the behavior is controllable and consistent with his or her competencies; and (3) perceptions on whether the behavior is consistent with the norms of the community or society in which he or she is embedded.^{32–34}

Before turning to a discussion of the specific literature and the hypotheses flowing from this study, it is worthwhile to briefly describe two major alternative

conceptualizations of how individuals make start-up decisions. Although both of these alternative theories are highly consistent with the theory of planned behavior, they place different emphases on different variables and in some cases add other variables as predictors of new venture creation.

First, the Shapero and Sokol model, as discussed and operationalized by Krueger and colleagues is, with two major exceptions, consistent with Ajzen's model, in that the perceptions of the desirability and feasibility of entrepreneurial behavior are primary drivers of an individual's decision to start a new venture.³⁵⁻³⁸ The first exception is that subjective community norms are seen as a determinant of desirability, rather than as a separate variable influencing decision making. In fact, some tests of the Shapero and Sokol model do not explicitly include community norms as a component of desirability.³⁹ The second major difference is the inclusion of "propensity to act" as a primary independent variable to measure an individual's disposition to implement decisions. Internal locus of control, learned optimism, and desirability of control are among the concepts recommended to measure propensity to act.^{40, 41} Taken as a whole, it can be concluded that the Shapero and Sokol model places somewhat more emphasis on an individual's self-interest and self-assessment and less emphasis on contextual factors in determining entrepreneurial intentions and behavior than does Ajzen's model, which tends to provide a more balanced set of influences.⁴²

Second, a later but independently derived model of the determinants of entrepreneurial behavior has been offered by Minniti and Bygrave and Bygrave and Minniti.^{43, 44} These authors explain that venture creation decisions are determined by an individual's assessment of the "subjective relative returns to entrepreneurship" and includes three components: "(1) the subjective initial endowment, which is personal; (2) the institutional and economic circumstances of the economy, which are objective and community specific; and (3) the existing level of entrepreneurial activity in that community as perceived and evaluated by the individual."⁴⁵

Although not as closely congruent to the Ajzen model as the Shapero and Sokol model, it is clear that the Minniti and Bygrave's model accounts for factors that influence the perceived desirability and feasibility of entrepreneurial behaviors.^{46, 47} Most importantly, Minniti and Bygrave focus specifically on the importance of the amount of entrepreneurship in a given locale as a key determinant of individual venture creation decisions.⁴⁸ Put differently, in their two articles, they emphasize the importance of the entrepreneurial history of a community as a means by which cultural dispositions about entrepreneurship are communicated and transmitted. Moreover, they argue that the equilibrium level of entrepreneurship can be altered only by concentrating on changing the structure of incentives of entrepreneurship in a community, so as to make start-up behaviors a self-reinforcing norm of behavior.^{49, 50} Thus, Minniti and Bygrave's model is more consistent with the Ajzen model than the Shapero and Sokol model in highlighting the prominence of contextual determinants of entrepreneurship.⁵¹⁻⁵³ In fact, Minniti and Bygrave focus more on the incidence of

entrepreneurship in a region than on individual decisions, recognizing that the entrepreneurial decisions of members of a community are interrelated, and that contextual levers must be used to permanently alter entrepreneurial propensities.

Empirical Studies

Despite the apparent utility of the theory of planned behavior and its variants, few researchers have empirically applied it to the study of venture creation. In an initial study, Krueger used a sample of 126 upper-division business students to test the Shapero and Sokol model.^{54, 55} Using path analysis, Krueger found, as expected, that the perceived desirability and feasibility of entrepreneurial behavior and propensity to act, fully mediated the relationship between entrepreneurial intentions and the antecedent variables measuring the breadth and positiveness of previous entrepreneurial experiences. Krueger's model explained approximately 50 percent of the variation in intentions. However, he was not able to test if entrepreneurial intentions were later translated into venture creation.

A later study by Krueger et al. used a similar student sample to test the relationship between antecedents, attitudes, and perceptions, and entrepreneurial intentions.⁵⁶ Again, no attempt was made to test the relationship between intentions and subsequent venture creation. In that study, the authors sought to compare the predictive power of the Ajzen and Shapero and Sokol models.^{57, 58} Both models performed quite well with the Shapero and Sokol model ($R^2 = 0.41$), explaining slightly more variance in intentions than the Ajzen model ($R^2 = 0.35$). Since the two models are quite similar in other respects, the difference in explanatory power of the two models appeared to be largely a function of the fact that subjective community norms were not significantly related to intentions in the test of the Ajzen model, whereas propensity to act was a significant predictor in the test of the Shapero and Sokol model.^{59, 60} Speculating on the reasons for this difference, Krueger et al. state, after noting earlier that their sample was ethnically homogenous: "It is possible that social norms may only be important in ethnic groups who have strong traditions of entrepreneurship."⁶¹ As noted earlier, this supposition concerning the importance of context in ethnic entrepreneurship is consistent with the arguments of Minniti and Bygrave and Bygrave and Minniti, and forms a central thesis of our current research.^{62, 63}

There have also been a handful of studies that have investigated the relationship between the intentions to start a business and actual start-up behavior. The first of these was conducted by Katz, who examined self-employment decisions.⁶⁴ His research cast some doubts on whether tracking intentions was a panacea for the study of venture creation. Katz found that about 33 percent of those who expressed intentions to engage in self-employment in 1968, actually did so within one to four years. In contrast, about 26 percent of the individuals, who did not express intentions in 1968, became self-employed sometime between 1969 and 1972. More significantly, those who expressed intentions during the base year accounted for only 0.5 percent of the individuals who subsequently

pursued self-employment. This argues for the importance of precipitating events in venture creation decisions, and lends a cautionary note to placing too much reliance on intentions as a predictor. Even so, determining intentions is useful for identifying aspiring entrepreneurs prior to decisions to launch a venture.

However, later studies of venture creation have a better record. Carter et al. studied, longitudinally, seventy-one nascent entrepreneurs taken from a random sample of individuals in the general population, who had earlier indicated that they were trying to start a business.⁶⁵ Although the main purpose of their study was to track start-up activities, Carter et al. found that 48 percent of individuals with start-up intentions had created a business within five years; another 32 percent were still trying, and the remaining 20 percent had given up.⁶⁶ Their data indicate that those who actually started businesses were more aggressive; acted with a greater level of intensity; engaged in more start-up activities; and moved more quickly toward the actual start-up event than individuals who did not start businesses.

Building on the work of Katz and Gartner, Krueger and Carsrud, and Carter et al., Chrisman tested the relationship between intentions and venture creation using a sample of nascent entrepreneurs, who had exhibited more active intentions.⁶⁷⁻⁷⁰ Taking a sample from the clients of the Small Business Development Center (SBDC) program in the United States, Chrisman argued that individuals who had obtained “long-term” (five or more hours) assistance from SBDC counselors exhibited stronger intentions through their actions than the individuals analyzed in previous studies, who only stated their intentions. Chrisman used three different measures of start-up to conform to Katz and Gartner’s boundary, resources, and exchange properties of emerging organizations.⁷¹ He found that between 60 and 78 percent of the sample did start a business, depending on the definition of start-up used. Chrisman attributed the difference between the results of his study and those of Carter et al. to the knowledge resources of the SBDC program.^{72, 73} Put differently, one might interpret Chrisman’s findings as an indication of the importance of intervening factors between intentions and entrepreneurship behavior, which strengthen both the perceived and actual self-efficacies of nascent entrepreneurs.⁷⁴

In sum, the set of empirical studies presented earlier lead to several conclusions pertinent to our current study. First, the few studies that have tested the relationship between attitudes and perceptions and entrepreneurial intentions suggest that both the Ajzen and Shapero and Sokol models have high levels of predictive power, and are consequently useful in explaining why some people become entrepreneurs and others do not.⁷⁵⁻⁷⁷ Second, the fact that subjective community norms were not significantly related to intentions in the Krueger et al. study indicates that further research is necessary to determine if contextual factors are useful in studying entrepreneurial decisions or if their utility is limited to understanding entrepreneurial decisions among certain populations where networks of social relationships are particularly important and collectivist cultures predominate.⁷⁸⁻⁸¹ Third, although there is empirical evidence that

intentions lead to venture creation, there is as yet no direct evidence that the operationalization of the theory of planned behavior, or the complementary theories discussed so far, are useful in predicting or explaining start-up behavior. As set forth in the introduction, we use the precepts of the theory of planned behavior to fill the gaps in the literature discussed earlier. In the following section, we shall proceed to specify our hypotheses.

Hypotheses

As explained by the Ajzen's theory of planned behavior, entrepreneurial intentions (i.e., the propensity to start a business) mediate between a set of perceptual and attitudinal antecedents and the future target behavior of venture creation.⁸² Based on this theory, we first propose that an individual's attitudes about the desirability of the behavior will affect his or her intentions to engage in that behavior. It is difficult to believe that many people who do not view entrepreneurship as a desirable career alternative would attempt to initiate a venture, although we fully recognize that such attitudes may change over time, and that this change may be a function of precipitating events.^{83, 84} As discussed, research has shown that desirability has a significant influence on intentions.

Hypothesis 1: Perceived desirability of venture creation has a positive influence on venture creation intentions.

The theory of planned behavior also predicts that perceptions of feasibility will be associated with venture creation intentions. Again, the argument is straightforward. People who think their chances of being successful entrepreneurs are good are more likely to seriously consider entrepreneurial careers than people who discount their probability of success. Two additional points should be made here. First, perceptions of self-efficacy or potential for success are not necessarily in accord with the actual potential of a would-be entrepreneur.⁸⁵ In fact, this is part of the fundamental arguments of the theory of planned behavior, and helps explain why traits and demographic indicators have generally proved to be poor predictors of entrepreneurial behavior.^{86, 87} Put differently, a variety of antecedent conditions, traits, and experiences influence perceptions, which in turn influence intentions, and, through intentions, behavior. Second, perceptions of feasibility can also change over time. As noted earlier, we interpret Chrisman's findings regarding the development of knowledge through outsider assistance, as supportive of this conclusion.⁸⁸

Hypothesis 2: Perceived feasibility of venture creation has a positive influence on venture creation intentions.

The theory of planned suggested that subjective norms in a community or society create a credible perception toward developing entrepreneurial intentions. As we have argued earlier, we believe that contextual factors, such as community norms, may be particularly strong among minority and ethnic populations, such as Hispanics in the United States.

Research has suggested that members of ethnic minorities, many of whom are recent immigrants, may suffer from disadvantages, such as lower education levels, language difficulties, and exclusion vis-a-vis the majority population.⁸⁹ As a consequence of the disadvantages in the subjective personal endowments of individuals in minority communities, access to resources and support mechanisms within those communities should be relatively more important.^{90, 91} Studies have supported this premise. For example, Waldinger, Aldrich, and Ward suggest that the essence of ethnic entrepreneurship is “a set of connections and regular patterns of interaction among people sharing common national background or migration experiences.”⁹² Other studies have reported that ethnic communities provide a sense of mutual solidarity and trust that creates a bond between entrepreneurs and the rest of the population.⁹³ Moreover, these interactions provide a context where information and resources that are critical for the survival of these businesses are more readily available.⁹⁴ For example, a study conducted in Toronto reported that Portuguese immigrants tend to rely on their communities to gather information to open, operate, and grow their businesses as well as recruit their ethnic friends and relatives.⁹⁵ Moreover, Tienda and Rajam suggest that community involvement and behaviors that are consistent with community norms are important for Hispanics, because they tend to rely on community support for any kind of activity that they wish to engage in, such as entrepreneurship.⁹⁶

Consequently, it can be argued that would-be ethnic entrepreneurs are more closely aligned and dependent upon their communities than would perhaps be the case for entrepreneurs who are part of the majority population. This alignment and dependence, in turn, suggests that subjective community norms toward entrepreneurship will be an extremely important contextual determinant of entrepreneurial intentions among ethnic minorities. Two points are again worth noting here. First, this conjecture is in contrast with the evidence obtained by Krueger et al. in their recent operationalization of the theory of planned behavior. Second, those authors allude to the possibility that their findings might have been a function of the nature of their sample and specifically suggest that the importance of community norms might be culturally determined.

Hypothesis 3: Subjective community norms that are consistent with venture creation will have a positive influence on venture creation intentions.

Following the Ajzen model, the intentions of an individual to engage in venture creation behaviors will ultimately influence the likelihood of that behavior occurring.⁹⁷ As discussed earlier, there have been no direct tests of the entire theory of planned behavior in the entrepreneurship literature. However, the evidence that intentions influence behavior is persuasive, even though not all start-up activity is predictable by measuring stated intentions, and a temporal element must be considered.⁹⁸⁻¹⁰² Thus, in keeping with theory, we propose that the intention to initiate a venture, which is determined by both contextual and individual factors, is related to venture creation.

Hypothesis 4: Venture creation intentions increase the likelihood of venture creation.

THE STUDY

Our research design consisted of a questionnaire that was prepared for a series of studies aimed at aspiring Hispanic entrepreneurs. The sample was selected from participants of a Small Business Management course designed for Hispanic entrepreneurs and administered by an SBDC in a New England state. Since the participants took the course to obtain knowledge about small-business management, their completion of the course represents a propensity to act.^{103, 104}

The questionnaire contained dichotomous questions as well as items in five- and seven-point Likert scales (from “strongly disagree” to “strongly agree”) and open-ended questions. Three mailings were sent over a four-month period to 383 participants. The mailing included a cover letter to inform the participants about the nature of the survey. Both the cover letter and the questionnaire were mailed in English and Spanish. We assured the participants anonymity and confidentiality in their responses.

To increase participation, in the second and third mailing, we placed the Spanish versions on top of the English ones. Four weeks after the third mailing was sent out, we had received eighty-six questionnaires. This resulted in a 22.5 percent response rate, which is in line with that achieved in other studies of minority entrepreneurs.^{105, 106}

Fifty-one percent of the respondents were male. Ages ranged from twenty-two to sixty-nine years (average = 42.4, $SD = 9.32$ years). Sixty-two participants answered the Spanish version of the questionnaire. The high proportion of responses to the Spanish version of the questionnaire suggests that the respondents had not yet been fully assimilated into the mainstream society, and therefore the ethnic community remained highly important to them.

ANOVA tests indicated that there were no significant differences among the responses in the three mailings. Since later responders could be expected to be more similar to nonrespondents than earlier respondents, these tests suggest that there is no reason to suspect bias along any of the variables used in this study.^{107, 108} In addition, ANOVA tests indicated no significant differences among respondents who completed the English or Spanish versions of the questionnaire.

Measures

The variables used in the study are described in the following sections. The appendix contains the descriptions, sources, and Cronbach alphas of the items used to construct the variables.

Venture creation was a binary variable coded as 1 when participants created a venture and 0 when no venture was created.

Intention to start a business is comprised of the summation of four items, using a seven-point Likert-type scale. We designed this continuous measure to reflect earlier operationalizations of the Ajzen model.^{109, 110} We adapted the items from Gould.¹¹¹ These included questions, indicative of intentions about decision making, objectives, strategy, and business planning. The Cronbach alpha of the scale was 0.85.

Subjective community norms is a scale comprised of the summation of two items using a seven-point Likert-type scale. We attempted to capture the perceptions that the community or the neighborhood had about entrepreneurship and the individual's idea of becoming an entrepreneur. We adapted the items from Hartwick and Barki.¹¹² The Cronbach alpha was 0.93.

Perceived desirability is comprised of the summation of three items using a seven-point Likert-type scale. These questions sought to capture how an individual viewed entrepreneurship in terms of providing meaningful and fulfilling work, as well as financial security. We adapted the items from Chau.¹¹³ The Cronbach alpha was 0.87.

Perceived feasibility is comprised of the summation of twelve items using a five-point Likert-type scale. We constructed this measure to consider the level of business expertise that the participants believed they obtained by taking the course. This conversion of feasibility as a knowledge-related measure is considered appropriate as an indication of perceived self-efficacy. We created the items in coordination with staff members of the SBDC to assess twelve areas of expertise that represented topics covered by the course (e.g., business planning, marketing and sales, networking, communications, human resource management, finance, and accounting). Put differently, the items used to measure perceived feasibility capture the changing perceptions of self-efficacy of Hispanic entrepreneurs, who had already demonstrated some level of intentionality and propensity to act by enrolling in the small business management course. The items were consistent with those used in previous research of the SBDC program.¹¹⁴ The Cronbach alpha was 0.95.

Control variables were used to identify the year when the participants took the course, in order to account for the time element in entrepreneurial intentions.^{115, 116} We used two categorical variables to indicate respondents who took the course in 2003 or 2004. Zeros for both of the categorical year variables denoted respondents who took the course before 2003.

Data Analysis

A dual approach was taken for the data analysis. We tested the first part of the model via hierarchical ordinary least squares (OLS) regression. To test the second part of the model, predicting actual venture creation, we relied on logistic regression, since our dependent variable was binary. Because logistic regression uses maximum likelihood instead of least squares, we relied on the goodness-of-fit test

suggested by Hosmer and Lemeshow in order to determine how well the predicted model fits the observed data.¹¹⁷

It is important to note that all data for this study were obtained from a single source. Therefore, it was necessary to conduct a test for common method bias. As suggested by Podsakoff and Organ, we entered the items corresponding to all the variables used in the study into a factor analysis.¹¹⁸ A six-factor solution was obtained that accounted for 74.67 percent of the variance, with the first factor accounting for 38.49 percent. We thus concluded that common method bias was not a strong concern in the current study, since no single method factor emerged and the individual factors separated cleanly.

Results

Correlations, means, and standard deviations are displayed in Table 6.1. Table 6.2 presents the results of the hierarchical regression designed to test hypotheses 1 through 3. In the first step, we entered the timing controls. Neither control variable was significant, nor was the overall model. Thus, the explained variance of this model was very low (adjusted $R^2 = 0.01$).

We entered perceived desirability and perceived feasibility in the second step (model 2). As shown in Table 6.2, the explanatory power increased substantially when those two variables were added (adjusted $R^2 = 0.26$; $\Delta R^2 = 0.27$) and the overall regression equation was significant ($p < 0.001$). Most importantly, both perceived desirability and perceived feasibility were related to start-up intentions at the 1 percent level of significance, thus supporting hypotheses 1 and 2.

Table 6.1. Descriptive Statistics and Correlations

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------------------|-------|------|----------|-------|-------------------|-------------------|---------|-------|
| 1. Year 2004 | 0.23 | 0.42 | | | | | | |
| 2. Year 2003 | 0.33 | 0.47 | -0.38*** | | | | | |
| 3. Subjective community norms | 9.32 | 3.54 | 0.10 | -0.05 | | | | |
| 4. Perceived desirability | 15.51 | 4.63 | 0.00 | -0.08 | 0.40*** | | | |
| 5. Perceived feasibility | 48.13 | 9.29 | 0.24* | -0.14 | 0.23* | 0.33** | | |
| 6. Intentions to start a business | 20.92 | 5.56 | 0.16 | -0.11 | 0.41*** | 0.43*** | 0.45*** | |
| 7. New venture creation | 0.33 | 0.47 | -0.03 | -0.17 | 0.18 [†] | 0.20 [†] | 0.03 | 0.27* |

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
 Sample size: $N = 86$.

Table 6.2. Results of Ordinary Least Squares Regression (Beta Weights)

| | <i>Dependent Variable: Intentions to Start a Business</i> | | |
|----------------------------|---|----------------|----------------|
| | <i>Model 1</i> | <i>Model 2</i> | <i>Model 3</i> |
| Year 2004 | 0.13 | 0.08 | 0.06 |
| Year 2003 | -0.06 | -0.01 | -0.01 |
| Perceived desirability | | 0.33** | 0.24* |
| Perceived feasibility | | 0.32** | 0.30** |
| Subjective community norms | | | 0.24* |
| R^2 | 0.03 | 0.30 | 0.35 |
| Change in R^2 | 0.03 | 0.27*** | 0.05* |
| Adj- R^2 | 0.01 | 0.26 | 0.30 |
| F-value | 1.171 | 8.544*** | 8.413*** |

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

In model 3, as a third step, we added subjective community norms. We saved this variable for the third step, in order to better judge the importance of this contextual factor in influencing the start-up intentions of Hispanics, since previous studies of whites showed it had little impact and since we have posited that this variable may be of particular importance to ethnic entrepreneurs.¹¹⁹ Again, the overall regression equation was significant ($p < 0.001$). The adjusted R^2 improved to 0.30 and the change in R^2 was significant ($\Delta R^2 = 0.05$; $p < 0.05$). Likewise, hypothesis 3, which stated that subjective community norms were related to intentions, was supported ($p < 0.05$). Perceived desirability ($p < 0.05$) and perceived feasibility ($p < 0.01$) remained significantly related to start-up intentions. It is also important to note that the standardized betas for the three variables were very similar. Thus, not only do our results confirm our contention that subjective community norms are of importance for ethnic entrepreneurs, but also suggest that contextual factors, such as community norms, might be just as important as in shaping entrepreneurial intentions as individual desires and perceptions of feasibility.

Table 6.3 presents the results of the logistic regression analysis that tested hypothesis 4 concerning the likelihood of starting a venture. Model 4 is the baseline model, where we entered the control variables. Again, this model was not significant. In model 5, we entered the three determinants of intentions to start a business. However, neither the overall model nor any of the individual variables were significant.

Model 6 adds the intentions variable. The pseudo (Nagelkerke) R^2 increased to 0.19, the χ^2 test of the coefficients was significant at the 10 percent level ($p = 0.052$), and the Hosmer and Lemeshow test indicated that the predicted model fit the data. Most importantly, hypothesis 4 was supported, indicating that

Table 6.3. Results of Logistic Regression (Beta Coefficients)

| | <i>Dependent Variable: New Venture Creation</i> | | | |
|---------------------------------------|---|--------------------|--------------------|----------------|
| | <i>Model 4</i> | <i>Model 5</i> | <i>Model 6</i> | <i>Model 7</i> |
| Constant | -1.83* | -3.19 [†] | -3.86*** | -4.47*** |
| Year 2004 | 0.53 | 0.53 | 0.65 | 0.75 |
| Year 2003 | 0.98 | 0.95 | 0.95 | 0.93 |
| Subjective community norms | | 0.08 | 0.04 | |
| Perceived desirability | | 0.08 | 0.06 | |
| Perceived feasibility | | -0.01 | -0.04 | |
| Intentions to start a business | | | 0.12* | 0.12* |
| χ^2 | 3.27 | 7.90 | 12.47 [†] | 9.97* |
| Log likelihood | 105.26 | 100.63 | 96.06 | 98.56 |
| Correct classification | 67.4% | 67.4% | 70.9% | 68.6% |
| Nagelkerke R^2 | 0.05 | 0.12 | 0.19 | 0.15 |
| Hosmer and Lemeshow test (χ^2) | 0.00*** | 3.12 | 6.44 | 5.97 |

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

the intention to start a business increases the likelihood that a new venture will be created ($p < 0.05$).

In model 7, we ran the logistic regression with the intentions variable and the control variables only in order to determine the importance of the intentions variable without the noise of the three perceptual variables. The pseudo R^2 for model 7 is 0.15, which compares favorably with the base model (model 5), where the pseudo R^2 was 0.05. Furthermore, in model 7, the χ^2 test of the coefficients is significant at $p < 0.05$ level and the Hosmer and Lemeshow test again indicated that the predicted model fit the data. As was the case with model 6, the intentions variable is a significant predictor of actual start-up behavior ($p < 0.05$).

Discussion

The results of the regression analyses supported the relationship between perceived desirability and feasibility and intentions of Hispanics to start a business. This finding is in line with earlier studies, which showed that feasibility and desirability were significant predictors of intentions for prospective student entrepreneurs from the majority population.^{120, 121} More importantly, we found that the subjective norms of a community toward entrepreneurship significantly predict entrepreneurial intentions. Our results are in contrast with the findings of Krueger et al., who did not find a relationship between subjective community norms and intentions.¹²² However, our findings support their suggestion that

community norms may be important, primarily among members of close-knit ethnic groups. Put differently, cultural context appears to be more important to the intentions and decisions of ethnic entrepreneurs than the intentions and decisions of entrepreneurs from the white majority population.

We interpret this finding as follows. The cultural context of nonwhite ethnic groups in the United States may tend to be more collectivist in nature than those of whites. This collectivist bent causes a greater awareness of the opinions and previous experiences among members of an ethnic group. Furthermore, because members of nonwhite ethnic groups may be at a disadvantage relative to the majority population, they are more dependent upon the goodwill of their neighbors and, consequently, more sensitive to the norms that prevail in the community. The upshot of all this is that, unlike members of the majority population, whose entrepreneurial decisions appear to be driven largely by individualistic assessments, the entrepreneurial decisions of ethnic group members are swayed as much by their neighbors' decisions and attitudes as their own dispositions. This suggests that the importance of role models, networks, and other community-based variables need to be more fully considered when analyzing start-up processes among ethnic entrepreneurs. For example, we need to know more about how people select their role models, and how to encourage such individuals to become entrepreneurs or at least become advocates of entrepreneurship. As Minniti and Bygrave and Bygrave and Minniti argue, (1) historical levels of entrepreneurship and their cultural determinants will have a large influence on future entrepreneurship; (2) start-ups breed more start-ups; and (3) a lack of start-ups in the past virtually ensures few start-ups in the future.^{123, 124} This appears to apply especially to entrepreneurship in ethnic communities, and particularly to the Hispanics in our present study. The issue we face, therefore, is how to alter the cycle toward an upward spiral of entrepreneurship.

One potential solution for closely knit communities with collectivist cultures is community-based enterprise, where the community takes on characteristics of both an entrepreneur and an entrepreneurial venture.¹²⁵ Although not new, this phenomenon has only recently started to gain attention as an economic development solution for depressed communities. However, examples of community-based enterprise appear to be increasing, and seem to act upon the primary cultural obstacles to entrepreneurship in ethnic communities by involving a large portion of the population in the enterprise simultaneously. Furthermore, anecdotal evidence suggests that when it does occur, it not only serves to inspire more traditional venture creation activities by individuals in a given community, but also serves to inspire similar community enterprises in contiguous regions.¹²⁶

Although cross-sectional in nature, our results also suggest that Ajzen's theory of planned behavior has considerable potential to predict not only intentions, but also actual entrepreneurial behavior.¹²⁷ Whereas previous research has tested one aspect of the theory or another, we consider the model in its entirety and find considerable, albeit imperfect, support for it. Again, we would note that an

attractive feature of Ajzen's theory is its balanced attention to the contextual and individual factors that might influence entrepreneurial intentions.

Finally, it is important to emphasize that we found relationships between attitudes and perceptions, and intentions on the one hand, and intentions and venture creation on the other. But we did *not* find a relationship between attitudes and perceptions and venture creation. Apparently, taking the theory of planned behavior as a whole and considering the results of previous studies, traits and background characteristics only serve to influence venture creation indirectly through perceptions and intentions.^{128, 129} Even perceptions have no direct impact on venture creation. However, intentions do appear to be related to venture creation, even though precipitating events, a propensity to act, and the element of time serve to complicate the ability of researchers to predict it in advance.^{130–133}

Taken together, our observations suggest that considerable insight might be gained by attempts to combine the unique features of the models proposed by Ajzen, Minniti and Bygrave, and Shapero and Sokol.^{134–137}

CONCLUSION AND IMPLICATIONS

This study contributes to entrepreneurship research in two important ways. First, using a sample of Hispanics, we have uncovered a significant deviation in the perceptions that lead to entrepreneurial intentions among this group of ethnic entrepreneurs and groups of students from the majority white population in the United States. Our findings show that the entrepreneurial intentions of Hispanics are heavily influenced by the subjective norms toward entrepreneurship in their communities, whereas this factor was not significant in the only comparable study done to date.¹³⁸ We have, therefore, isolated a contextual difference between the determinants of ethnic and nonethnic entrepreneurship that is of practical and theoretical importance.

Second, this is the only study thus far to test the major components of the full model implied by Ajzen's theory of planned behavior.^{139, 140} We found evidence of the efficacy of the model. This should encourage researchers to apply it to other samples, as well as to adapt, refine, and expand it to increase its already impressive predictive ability.

Implications for Policy and Practice

Our study provides several important implications for policy and practice. First, the SBDC's educational programs, which are equally available to all would-be entrepreneurs, regardless of ethnicity, can have a positive impact on the creation of new businesses among ethnic entrepreneurs.^{141, 142} Similar results were observed in this study, as the participants showed a positive predisposition to entrepreneurial activity. These results indicate that additional investments in SBDCs that serve ethnic communities could have substantial benefits.

Second, the importance attached to community norms suggest that SBDC assistance for ethnic entrepreneurs should perhaps focus as much on assisting clients develop and strengthen networks of relationships as on building basic entrepreneurial skills. Introducing clients to role models, resource providers, and other community members who support and admire entrepreneurial initiative, may help increase the number of start-ups in ethnic communities.¹⁴³ This is not to say, however, that counseling and skill building are not needed. Rather, our findings suggest that counselors must also help shape how clients perceive their entrepreneurial context if the full benefits of the basic and experiential knowledge gained from the interventions are to be utilized by ethnic entrepreneurs in actually creating new enterprises. Put differently, SBDCs may need to act as promoters as well as counselors when dealing with ethnic entrepreneurs.

Third, given the importance of contextual factors to ethnic entrepreneurship and the virtuous cycles that entrepreneurial activity in a community can foster, innovative approaches to gaining community acceptance for entrepreneurship, such as community-based enterprise, should be investigated.¹⁴⁴⁻¹⁴⁶ This does not mean that the role of policy is to provide money or heavy-handed but well-meaning interventions. For community-based enterprise to work there must be real ownership of the idea and the enterprise by the people. In that regard, policies that remove bureaucratic obstacles; provide assistance when it is asked for (as does the SBDC program which provides assistance upon demand); and facilitate communication of successes and strategies in other locales, appear to have the most potential to be productive.

Fourth, based on the results of our study, Hispanics already seem to be cognizant of the importance of social networks to their success as entrepreneurs. However, this study does reinforce that message as well as potentially communicate that insight to others who may not have fully considered the resources and psychological support that could be forthcoming from their communities in pursuit of venturing.

Research Implications

Apart from its implications for policy and practice, our study also provides implications for future research and theory development. First, the success we experienced in the testing of our cross-sectional model should hopefully encourage longitudinal tests of the theory of planned behavior on populations of both majority and ethnic entrepreneurs. Future research also could contribute to knowledge by fully exploring the temporal element. For example, it would be useful to know how great the predictive power of the theory of planned behavior is over different periods of time.

Second, in the current study, we relied on self-reported data that came from one source, one location, and one ethnic group. Although our analysis suggested

no common method variance, there is an opportunity to improve upon this study by collecting data from multiple sources.¹⁴⁷ In addition, it is not certain whether our results are applicable to all minority groups, specific to Hispanics in general, or specific to Hispanics in New England. Future research on Hispanics in other regions of the United States, of other ethnic groups in a variety of regions, and, indeed of ethnic and nonethnic entrepreneurs in other countries are needed. It would be particularly interesting to see if the importance of community norms really taps just a contextual determinant of entrepreneurship among members of an ethnic group, or a contextual determinant of entrepreneurship among people of any background that happen to live in communities that are isolated or resource poor. Thus, one might fruitfully use the theory of planned behavior to investigate the determinants of entrepreneurial intentions and venture creation in rural areas, which tend to be both isolated (albeit perhaps more in terms of geography than culture) and resource poor, as well as heavily reliant on relational networks.^{148, 149}

Apart from these direct opportunities to expand upon our research, the primary theoretical implication of this study is that the motivations of ethnic entrepreneurs appear to be more heavily influenced by context than the motivations of nonethnic entrepreneurs, and this should be reflected in future research efforts. Although emphasizing the importance of cultural ties and networks to ethnic entrepreneurs is nothing new, the direction comparison of our study with that of Krueger et al.'s suggests that the importance of contextual factors may be greater than one would have expected previously, and that the entrepreneurial process in ethnic communities may be very different from the entrepreneurial process in nonethnic communities in the United States.¹⁵⁰ Ethnic entrepreneurs appear much more sensitive to context than nonethnic entrepreneurs. This suggests that if the community does not respect and support entrepreneurs, few individuals will take the plunge, even if they have the ability to do so or even if their situations are such that entrepreneurship is the only method open for advancement.^{151, 152} This opens the door for a host of studies to better understand the reasons why this might be true, as well as to understand how the norms of the community can be changed, or further directed, so as to increase entrepreneurial behavior.

Furthermore, while this study dealt with norms in a community, future studies should also consider the influence of family members on entrepreneurial behavior, both in terms of support mechanisms and in terms of human and financial resources that might be made available through family connections. For example, Hispanics tend to consider their families in making business decisions.^{153, 154} More generally, research has suggested that most new ventures tend to be created as family firms, and ethnic entrepreneurs certainly seem to be at least as susceptible to family pressures.^{155, 156} Thus, there seems to be considerable potential for studying families' influences and family involvement as another contextual factor that influences the intentions and decisions of potential entrepreneurs in ethnic communities.

Summary

In conclusion, our study tested the full model of the theory on planned behavior—from attitudes and perceptions to intentions to venture creation—on a sample of aspiring Hispanic entrepreneurs, the largest minority group in the United States. Unlike studies of the general majority population, we found that the intentions of Hispanics to engage in entrepreneurship are significantly related to community and cultural contexts. We believe that this study provides evidence that generally supports the theoretical direction proposed by Minniti and Bygrave on the contextual determinants of entrepreneurial behavior.¹⁵⁷ We further speculate that these theoretical arguments might apply most specifically to ethnic entrepreneurs, and indeed perhaps to any other potentially isolated, resource-poor population, with possibly homogenous cultural attributes.

Our results also confirmed the primary hypotheses of the theory of planned behavior. Thus, attitudes and perceptions about entrepreneurship are related to intentions to engage in the behavior, but are not related to the behavior itself. Intentions, however, are related to entrepreneurial behavior, as measured by venture creation.

Simply put, these results suggest that the theory of planned behavior is a useful approach for studying entrepreneurship in ethnic communities, and that this theory is amenable to extensions and additions that could increase its already impressive ability to predict intentions and behaviors.

APPENDIX: INDICATORS USED FOR VARIABLES IN THE MODEL

Subjects were asked to indicate the extent of accuracy of the following statements. For all the variables, except perceived feasibility, we used a seven-point Likert scale, ranging from “strongly disagree” to “strongly agree.” Cronbach alphas are in parenthesis.

Intentions to Start a Business (alpha = 0.85)

1. I had a strategy for achieving my business's goals.
2. I knew how to create a business plan for my firm.
3. I had decided what my business objective should be.
4. I could make a better decision about starting a business.

Subjective Community Norms (alpha = 0.93)

1. My community/neighborhood thought that I should become an entrepreneur.
2. My community/neighborhood thought that becoming an entrepreneur was a good idea.

Perceived Desirability (alpha = 0.86)

1. I thought that becoming an entrepreneur would increase the opportunity for more meaningful work.

2. I thought that becoming an entrepreneur would increase the opportunity for a more fulfilled work life.
3. I thought that becoming an entrepreneur would lead to financial security.

Perceived Feasibility (alpha = 0.95)

Using a five-point Likert scale, ranging from “strongly disagree” to “strongly agree,” we asked the participants how the Small Business Management Course helped them gain knowledge in:

1. Creating a business plan
2. Creating contacts and connections (networking)
3. Logistic-related activities
4. Operation-related activities
5. Marketing and sales
6. Service-related activities
7. Record keeping
8. Communication skills
9. Financial aspects of the business
10. Legal aspects of the business
11. Human resource management
12. Accounting-related activities.

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7

The Sociology of Entrepreneurship as a Provider of Context

Patricia Gene Greene and John Sibley Butler

The sociology of entrepreneurship traces its intellectual roots to scholars who were trying to understand the context, or structure, in which new ventures developed. Like all scientific disciplines, the emphasis has been on discovering the factors, or variables, which explain the variation in entrepreneurship between individuals, groups, cities, and regions. Although the entrepreneurship process, which dominates a certain part of entrepreneurial studies, is not its major concern, that process is embedded in literature which is called the sociology of entrepreneurship. Also, although revenues and business growth are a part of this area of inquiry, the major concern has been understanding the structural context which makes entrepreneurship blossom under certain conditions. Because of this approach, the theory, data, and explanations allow for comparisons over time and space and ultimately predictions as to where entrepreneurship and wealth creation will flourish. Scholars can test theories by using data from Silicon Valley, California in the 1990s as well as data from ancient Assyria 2000 years BC. Because of this timelessness, the resultant ability to compare data over time, and the development of models that allow prediction, the sociology of entrepreneurship has also been called the science of entrepreneurship.¹

To be sure, the sociology of entrepreneurship shares with the intellectual stage a number of approaches to understanding new venture development. Different disciplines have developed paradigms that guide their approach to explaining and understanding the nature of entrepreneurship. The work of David McClelland, *The Achieving Society*,² became one of the paradigm shifting books that prompted literature that examined the relationship between psychological variables and entrepreneurship.³⁻⁷ The earlier work of scholars such as Max Weber, Joseph Schumpeter, and Georg Simmel produced scholarship that utilized a structural approach to understand the development of new ventures.⁸⁻¹⁰ This

approach was designed to show and predict when entrepreneurial behavior would occur in societies.

The sociology of entrepreneurship, while a very early entry in the field, is less often used because the emphasis is not primarily on the entrepreneurial individual or the entrepreneurial process. It provides, however, a comprehensive framework for investigating the context of entrepreneurial behaviors. This context is the realization of the socially embedded nature of the motivations, values, behaviors, opportunities, and the resultant outcomes.¹¹ As noted previously, theories that guide the sociology of entrepreneurship are predictive and can cut across historical time and space.

Why is context important? The most basic definition of context is “the circumstances in which an event occurs” and can be expanded to consider “explanatory words and ideas.”¹² From this approach, context can be considered as providing answers to the “why” question. Context is the framework that helps us guide and organize our assumptions about any particular phenomena in the search for understanding.

The first part of this chapter develops the theoretical tradition of the sociology of entrepreneurship, from both a present day and historical context, showing how parts of the theory were concerned with how the structure of society produced entrepreneurs. The theory utilized the experiences of different ethnic groups as data, thus making it an excellent context for what is called today the study of minority entrepreneurship. However, it is necessary to first clarify the concepts. Today, “minority” entrepreneurship is a particular subset of the entrepreneurship literature which does acknowledge its roots in sociology, but has its application largely in the business literature.^{13, 14} The literature is rife with examples in which minority entrepreneurship was used to organize discussions on race and ethnicity, sex/gender, religion, and immigrant entrepreneurship. It is these categorizations that need the contextual assessment given that they can be seen as related or overlapping, but they actually are not the same thing. Each has a different set of theoretical assumptions complete with conceptualizations and relationships between those conceptualizations (Table 7.1). For instance, immigrant entrepreneurship includes an element of movement and ethnic entrepreneurship includes a community interaction. However, minority entrepreneurship refers solely to the demographic character of the group under discussion.

CONCEPTUAL CLARITY OF DEFINITIONS

More recently, the term *minority entrepreneurship* has moved away from any meaningful explanatory power to being solely a government data category. It is indeed important to be able to separate groups of people in order to study significant differences and similarities to understand variation. However, the category is most often used to represent everyone who is not Caucasian and sometimes

Table 7.1. Categories of Entrepreneurship

| <i>Concept</i> | <i>Definition</i> |
|------------------------|--|
| Immigrant entrepreneur | An individual who as a recent arrival in the country starts a business as a means of economic survival. This group may involve a migration network linking migrants, former migrants, and nonmigrants with a common origin and destination. ^a |
| Ethnic entrepreneur | “... a set of connections and regular patterns of interaction among people sharing common national background or migration experiences.” ^b |
| Minority entrepreneur | Business ownership by any individual who is not of the majority population. U.S. federal categories include blacks, persons of Hispanic or Latin American ancestry, and persons of Asian, Pacific Islander, American Indian, or Alaska Native descent. This group occasionally includes women. |

^aJ. S. Butler and P. G. Greene, “Ethnic Entrepreneurship: The Continuous Rebirth of American Enterprise,” in *Entrepreneurship 2000*, eds. D. L. Sexton and R. W. Smilor (Chicago: Upstart Publishing, 1997).

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 Source: R. Chaganti and P. G. Greene, “Who Are Ethnic Entrepreneurs? A Study of Entrepreneur’s Ethnic Involvement and Business Characteristics,” *Journal of Small Business Management* 40, no. 2 (2002): 126–143. Table derived from Butler and Greene (1997); Waldinger, Aldrich, and Ward (1990); U.S. Department of Commerce *The State of Small Business: A Report of the President* (Washington, DC: U.S. Government Printing Office, 1997).

Caucasian male. Given the remaining variation within the category, the value of the term is highly questionable and can lead to conclusions and decisions that are less than helpful, if not outright misleading.

For the purposes of this chapter, we will consider the impact of race/ethnicity, religion, and sex as grounding our contextual boundaries for the understanding of entrepreneurial behaviors. In order to understand the overarching framework we will first briefly review the importance of definitions related to entrepreneurship and then critically evaluate the theoretical approaches to the entrepreneurial behaviors of the specific populations (defined by race/ethnicity, religion, or sex). We will conclude with some thoughts on the practitioner and policy implications pertaining to categorizations of business owners.

Definitions abound in the field and feature attributes of the term such as risk taking, profit generating, innovation, and so forth. One way to organize approaches to entrepreneurship education is to use a continuum to explain which concepts and relationships are included and which are not. One endpoint of the continuum represents the entrepreneurial mind-set, primarily emphasizing features such as opportunity obsession, holistic nature, and leadership balance.¹⁵

This is a specific approach that can be applied in any type of organization. The other end of the continuum equates entrepreneurship as the launch of a small business and emphasizes the steps taken to start such a business. Overall, one of the important contextual elements for the continuum is the level of analysis. In the mind-set version, it starts with the individual. While the mind-set might be instilled through the organization and the entrepreneurship might be done in teams, it is still necessary to have individuals with the mind-set. In the small-business version, entrepreneurship produces the emergence of a new organization. This approach is far more constrained but easier to grasp and to assess specific outcomes. Because of the nature of the historic research in this area, this chapter will adopt the latter definition.

THEORETICAL FOUNDATIONS OF THE SOCIOLOGY OF ENTREPRENEURSHIP

Emile Durkheim's *The Rules of Sociological Method* had as its primary focus the separation of sociology from psychology and other related disciplines.¹⁶ Basically he noted that social facts, not the psychological makeup of individuals, should be the major variables that could explain human behavior. Social facts were things that were over and above the individual and exerted a particular force on the individual. These include, for example, norms, values, expectations, and education. More importantly, these social facts were not correlated with traditional psychological variables that were developing in the discipline of psychology. Thus Durkheim reasoned that sociology should be separated from psychology as a discipline because there were no correlations between the two. One must remember that the first name of sociology was social physics. Social facts are outside of the individual and may be thought of rather like gravity; no one has ever seen gravity but the theory is that the force certainly has an effect. The same is true of, for example, norms and expectations. They cannot be modeled in the laboratory, but like the variables of physics, they can be modeled and assessed from a theoretical point of view.

The context of the sociology of entrepreneurship also provides a framework to examine the introduction and understanding of other variables critical to parsing entrepreneurial outcomes. Examples include the importance of the education of children, maintaining a value structure, preserving a way of life, and of course serving as a tool for economic stability. In this sense, the measurement of entrepreneurship is not just about revenues, but rather about how entrepreneurship and the revenues generated have the potential to launch children into institutions of higher education and how the second generation is more likely to be highly educated and move into professional occupations (either within their communities or within the large society) rather than enter the life of the self-employed. The outcomes are also potentially predicated upon and potentially moderated by

other macro factors such as the local economic structures, and individual level attributes of the people involved. These variables suggest variability inside the phenomena under study. However, from the inception of this line of study, scholars within sociology have concentrated on: (1) the development of business communities within cities, which are sometimes called business enclaves; (2) the entrepreneurial process, with an emphasis on funding the enterprise; and (3) the decline or maintenance of the enclave over successive generations.

When early sociologists examined the development of new ventures or entrepreneurship, psychological variables were absent and the emphasis was on context and structure. One of the first scholars to account for entrepreneurship was Georg Simmel, whose work has become central to understanding “minority” entrepreneurship today.^{17–20} When Simmel looked at the workforce of Germany in the late 1800s, he made the observation that entrepreneurs were “strangers” in different countries and this phenomenon had a structural explanation.

To Simmel, who was trying to understand the development of markets and the movement of products for profit in traditional agricultural societies, entrepreneurs were emerging from groups of people who had been excluded from opportunities in established societies. Other founding thinkers such as Weber, Toennies, and Marx addressed this issue.²¹ As noted by Bonacich and Model in *The Economic Basis of Ethnic Solidarity*, this theoretical approach to understanding what we call entrepreneurship disappeared from the literature until Blalock’s major work, *Toward a Theory of Minority Group Relations*, was published.²² The basic idea is that in different societies, members of certain racial and ethnic minorities have come to occupy a middle position in the social structure rather than at the bottom of the economic structure. These “middle-man” minorities will not be found at the bottom of the economic scale, but utilize business enterprise to create wealth and economic stability. They are forced into the middleman position, from a historical point of view, because of discrimination based on religion, race, or ethnicity. Thus to Simmel, entrepreneurs were strangers who for different reasons had been denied opportunities in established societies, and became catalysts for entrepreneurial development in the western world.²³

RACE AND ENTREPRENEURSHIP

The predictive nature of the theory of the sociology of entrepreneurship, especially as related to discrimination and the denial of opportunities has been put to its greatest test with race as the major variable; the theory has withstood the test. In *Entrepreneurship and Self-Help among Black Americans*, it has been shown that within the context of black America, those who adjusted to America through entrepreneurship (as opposed to working in factories and working for others) have enjoyed a degree of economic stability and were also responsible for educating the first four generations of college graduates.²⁴ Matching historical

data with data from more recent studies on immigrant entrepreneurship, the data are clear that the entrepreneurial mode of adjustment among black Americans can be traced from the inception of the country.

The early documentation of the relationship between business activity and discrimination can be found in a paper presented before the American Historical Society titled "A Register of Trades of Colored People in the City of Philadelphia and Districts."²⁵ This work recreates the business creation of free blacks that started prior to the Revolutionary War, delineates enterprises by type and frequency. The research also shows that savings were the major method for starting and funding enterprises. As noted by Butler, there were both service and manufacturing enterprises, many of them quite successful.^{26, 27} For one example, the entrepreneur James Forten manufactured sails for large and small ships and employed over forty people.

The development of business enterprise by blacks prior to the Civil War has been documented as America grew as a country.²⁸⁻³¹ As predicted by Simmel's theory, these free blacks prior to the Civil War: (1) were denied opportunities, (2) created enterprises, and (3) also created community and educational institutions. Their greatest educational creation was Wilberforce University, founded in 1856.³²

This tradition of creating enterprises picked up steam in the old south after slavery (the opposite adjustment to America for blacks was to go into factories of the north). This is a different tradition with different historical results.³³ Ground-breaking scholarship which reflects this period include Booker T. Washington's *The Negro in Business* (1907, 1911), W. E. B. Du Bois' *Economic Co-operation among Negro Americans* (1907), Joseph Pierce's *Negro Business and Business Education* (1947), and Abram L. Harris' *The Negro as Capitalist* (1936).³⁴⁻³⁸ In addition to the enterprises that were found in communities all over the old hostile racial south, this business leadership also created over 100 private black colleges and universities (and enhanced the public ones) that produced most of the civil and business leadership of communities.³⁹ It is also instructive that blacks in this tradition, which places an emphasis on business and education, are more successful than the black population who turned to factories for economic stability during the massive industrialization of America.⁴⁰ This mode of adjustment has created, through the years, major differences between the entrepreneurial traditions of black Americans and the nonentrepreneurial traditions. Importantly, the impact of educational institutions continues today. Well-known leaders such as Martin Luther King Jr. (Morehouse), Spike Lee (Morehouse), and Oprah Winfrey (Tennessee State University) are all in this educational tradition.⁴¹

More recent scholarship on this period is enhancing our understanding of the relationship between black enterprise and businesses development during the segregated era in America. Given Simmel's theory, it is not surprising that the segregated period was also the golden period of black enterprise. In Margaret Levenstein's "African American Entrepreneurship: The View from the 1910 Census," she found that "[o]ne of the most striking findings . . . is that, in 1910,

African Americans were more likely than white Americans to be employers, and almost as likely as whites to be self-employed. This contrasts with the mid-1990s when African Americans were only one-third as likely as whites to work in their own businesses.”⁴²

The entrepreneurship process, the interrelationships between start-up, fund raising, and general success of black enterprises have followed the same formula as other enterprises in America. As noted by Bates in *Race, Self-Employment and Upward Mobility*, “Among people who choose self-employment without appropriate education, skills, and financial resources, business failure and self-employment exit rates are high. These patterns typify black, Asian, and white Americans, men and women, immigrants and the native born.”^{43, 44}

The massive historical documentation that places the experiences of black Americans in the predictive model of Georg Simmel has been extrapolated to what is called ethnic entrepreneurship in the literature. As noted by Butler, most of the theoretical models that were applied to ethnic entrepreneurship had already been developed by scholars of black enterprise and business at the turn of the last century (e.g., see Dubois, 1907).^{45, 46} The power of Simmel’s predictive paradigm can be seen as ethnic Europeans and racially different Asians, also with different ethnic groups, entered America for economic stability.

ETHNICITY AND ENTREPRENEURSHIP

It is within the category of ethnic entrepreneurship that conceptual clarity is most needed. As mentioned earlier, ethnic entrepreneurship connotes connections based upon some common attribute. It is these connections that provide the infrastructure for the identification of opportunities and the exchange of resources. It is critical to note that these exchanges are based upon trust predicated on their common attributes. First-generation ethnic entrepreneurs are generally also immigrant entrepreneurs; however, subsequent generations are frequently native born in the host country. Chaganti and Greene presented a series of vignettes on ethnic entrepreneurs to illustrate potential differences.⁴⁷ One example focused upon a Hispanic family that had been in the state of Colorado for 350 years. While the family’s cultural context remained strongly Hispanic, the factor of new arrival, or stranger, was long past. The conceptualization goes beyond any self-identification with an ethnic group or assignment based upon an ethnically identified surname, to recognize actual theoretical dimensions.

The body of literature building our understanding of ethnic entrepreneurship is strong and growing, revealing the patterns of relationships and exchanges.⁴⁸⁻⁵¹ In *Latin Journey: Cuban and Mexican Immigrants in the United States*, Portes and Bach make the important distinction between groups that came to America as entrepreneurs versus those who came as a source of labor supply.⁵² In speaking of Jewish and Japanese immigrants they note that “[b]oth groups were non-Christian, but they were different in religion, language, and race. They disembarked

at opposite ends of the continent and never met in sizable numbers at any point. Yet, Jews and Japanese developed patterns of economic and social adaptation that were remarkably similar. What both groups had in common was their collective resistance to serving as a mere source of labor power. From the start, their economic conduct was oriented toward two goals: (1) the acquisition of property, and (2) the search for entrepreneurial opportunities that would give them an edge in the American market.”⁵³

In terms of the importance of context, Portes and Bach transform Simmel’s scholarship in the American context. These authors also advanced the idea of the ethnic enclave as a geographically bounded nature of the community. The enclave provided the source of clientele and labor.^{54–56} However, not all ethnic entrepreneurship is geographically bounded or relies strictly on co-ethnic markets, but instead locates where necessary to meet a broader demand.^{57, 58}

RELIGION AND ENTREPRENEURSHIP

Nested within the ethnic literature is the importance of religion. Max Weber’s early work on the work ethic in *The Protestant Ethic and the Spirit of Capitalism* builds on Simmel and his focus on the idea of the excluded group as well as the additional unifying dimension of the shared experience.⁵⁹ Weber was fascinated by the development of capitalist economic activities within different groups, in this case differentiated by religion. However, even at this time Weber notes (and references Sombart) that there is a difference between economic activities directed toward the satisfaction of needs and those directed toward acquisition.⁶⁰ Weber uses Benjamin Franklin to illustrate, saying that Franklin was “filled with the spirit of capitalism at a time when his printing business did not differ in form from any handicraft enterprise.”⁶¹ In this way Weber was laying the groundwork for differentiating between his economic traditionalism and the acquisitive economy. This is a differentiation that has largely been lost in any context of stranger or minority entrepreneurship and generally reduces all in the group to the assumption that any business undertaken by members of the group must be a result of being pushed into the situation for survival and therefore entrepreneurial outcomes will be limited.

The work of Weber (and Sombart soon after him) was grounded in the discussion of religious ideas, but also recognized the impact of movement and oppression. Weber puzzled over what he saw in his contemporary society:

The smaller participation of Catholics in the modern business life of Germany is all the more striking because it runs counter to a tendency which has been observed at all times, including the present. National or religious minorities which are in a position of subordination to a group of rulers are likely, through their voluntary or involuntary exclusion from positions of political influence, to be driven with peculiar force into economic activity. Their ablest members seek to satisfy the desire

for recognition of their abilities in this field, since there is no opportunity in the service of the State. This has undoubtedly been true of the Poles in Russia and Eastern Prussia, who have without question been undergoing a more rapid advance than in Galicia, where they have been in the ascendant. It has in earlier times been true of the Huguenots in France under Louis XIV, the Nonconformists and Quakers in England, and, last but not least, the Jews for two thousand years.⁶²

Religion provided the context for these early studies of economic behaviors. While far less is examined in contemporary research, religion continues to be related to economic, now interpreted as entrepreneurial, behaviors. However, most often the concept of religion is subsumed in a consideration of ethnicity. One exception is found in the work of Greene and Butler in their analysis of Pakistani/Ismaili immigrants, represented as a double minority.⁶³ In this case study, religion was recognized as a basis for exclusion from the larger society, but also the underlying basis for the unifying dimension. In this case religion served as one of the primary drivers of the bounded solidarity and enforceable trust necessary for a community economic approach. However, as with the earlier work by Weber and Sombart, it also recognized the importance of the individual level of analysis. The protagonist of the case is described as saying that his business philosophy “is strongly based on his Islamic religion and his entrepreneurial behavior stems largely from his belief that if a person does not manage his own destiny, someone else will manage it for him.”⁶⁴

The Pakistani-Ismaili group described here also includes the element of movement, or immigration. However, within certain groups who have been in their communities for an extended period of time, religion may continue to be a prime explanatory factor in the study of entrepreneurial behaviors. A vivid example can be seen in the examination of the Amish and Mennonite societies.^{65, 66} Religion is used to anchor a rich cultural analysis, examining how and why these micro-enterprises are emerging at this time, what makes them distinctive, and perhaps most importantly, what impact will they have on the future of these societies. The authors describe the work as “a cultural study of the formation and regulation of entrepreneurship in a traditional community. We are particularly interested in exploring the ways in which the resources of a religious subculture have been used to both bolster and restrain economic pursuits.”⁶⁷

For the Amish and the Mennonites, their religious tenets guided the boundaries of their economic behaviors. Microenterprises arose because Amish life requires that families remain geographically near yet there was no more land to use for farming. Amish culture regulated what types of businesses could be created and how they could operate given religious prohibitions against certain types of technology. The enterprises are generally known for high-quality craftsmanship and often command a premium price. And yet, if applying Weber’s distinction between economic traditionalism and acquisition, these businesses would fall strongly into the traditionalist mode. In this case the religious beliefs largely define what economic success may look like.

SEX/GENDER AND ENTREPRENEURSHIP

The question of economic success is also a defining point of research on entrepreneurship by sex. It should first be noted that the discussion of women entrepreneurs is more often described as one of gender. However, this practice has two primary flaws. First, while the actual differentiation is made by the perception and reporting of biological category (sex), the discussion is almost always described as gendered, which more properly refers to socially constructed attributes. Second, “gender” does not equal “women” and yet the research concept is often presented as including only women as opposed to being an actual gendered discussion.

The study of women entrepreneurs also begins in a way in which the consideration of the stranger seems to fit. Early works recognized an increasing participation by women in the entrepreneurial economy, but these works also recognized that all previous studies, including the measures and instruments used in those studies, were designed and conducted solely on men.^{68, 69} Years of research focused on investigating how women entrepreneurs differ from men and suggested what they need to do differently to be more like men entrepreneurs. Much of this approach was driven by a goal of economic success, generally defined as the size of revenues or the number of employees. Data show that almost half (48%) of the privately held businesses in the United States are owned at least 50 percent by one or more women. Using this base, women-owned businesses employ 19.1 million people and generate almost \$2.5 trillion in sales.⁷⁰

However, using these same metrics, women-owned businesses generally do look different than those owned by men. As individual businesses they generate smaller revenues and hire fewer people. Most of the research explored questions such as these through theories and perspectives drawn from business disciplines. However, the questions behind the numbers are becoming increasingly perspicacious, recognizing the critical nature of varying contexts.

One set of theoretical tools that has proven useful draws from feminist theory, primarily social feminist theory.^{71–74} These theories include more structural aspects of socialization and the environment and their impact on things such as women’s aspirations and motivations for their businesses and any entrepreneurial outcomes. Greer and Greene summarized the foundational work in this area:⁷⁵

These works include Brush’s “integrated perspective” which focuses on the woman business owner as embedded in an environment of networked work, family, and society relationships (1992), Hurley’s epistemological review of the collection of entrepreneurial knowledge (1991), and Fisher, Reuber, and Dyke’s use of social feminism to better understand discrimination against women business owners (1993).^{76–79}

A primary purpose of the application of new and different theories was to capture the importance of context. A model that explicitly included both internal and external dimensions is used by the Diana Project in its research agenda

on women and growth businesses. This project quickly became international with two explicit objectives. First, to provide a platform from which to develop, conduct, and share a global research agenda. Second, to create an international community of scholars dedicated to answering the questions about women entrepreneurs and growth-oriented businesses.⁸⁰ The model applied in this study combines a variety of theoretical approaches to connect the individual and the enterprise with a consideration of resources and external environmental attributes. Early findings from both this project and the GEM studies show that gender variations exist across countries. The Diana Project finds particular differences regarding pathways to growth.^{81, 82} The GEM studies report variations in motivations and business sector.⁸³ The most recent GEM report documented gender differences in role models, perception of individual entrepreneurial skills, and the fear of failure.⁸⁴ Findings from both sets of studies support gender differences, but what is needed is additional theoretical explanation that continues to explore the structure and context of those differences.

IMPLICATIONS FOR PRACTITIONERS AND POLICYMAKERS

Greene and Chaganti propose five reasons supporting the importance of this topic described as minority entrepreneurship:⁸⁵

- Potential impact of immigrants as related to their acculturation to host societies and their effect on the host economies
- Entrepreneurial tools such as rotating credit systems used as models to support entrepreneurial development in nonethnically based environments
- Discussions of ethnic entrepreneurship have been confounded with discussions of minority entrepreneurship in planning and implementing urban development projects
- Positive values of community perceived in ethnic communities sometimes neglect consideration of potential social costs as well
- Necessity of understanding the separation of different group and individual behaviors as they relate to entrepreneurship

Projects around the world are increasingly looking at entrepreneurship as a means of economic advancement.^{86, 87} Each includes the call for the recognition of the contribution of specific groups of people and the potential of different approaches to entrepreneurship, and therefore different resource needs and outcomes. The contextual issues that predicate these differences are largely based upon structure and culture, and therefore sociological issues. Too often these issues are lost in translation for policy work. Between 1997 and 2002 in the United States, the number of black-owned businesses increased by 45 percent, the number of Hispanic-owned businesses increased by 31 percent, and the number

of businesses owned by women increased by 20 percent (2002 Survey of Business Owners. U.S. Census Bureau, Company Statistics Division, Economic Census Branch, www.census.gov). These businesses represent all types of industries, strategies, and expectations.

Numbers such as those presented for the United States represent an emerging trend around the world. However, the most important aspect revealed by those numbers is the need for the theoretical understanding of the context, or the sociology of entrepreneurship. Policies and/or practices which prove successful in one context or community may not translate well to another. In the instance of ethnic entrepreneurship, it is community attachment that acts as a source of resources and opportunities. This attachment, or bounded solidarity, is not necessarily transferable to an artificially created community within a prescribed regional cluster. Understanding the variation in entrepreneurial behaviors and patterns that is attributable to group membership is a pathway to the development of policy and practices with a greater likelihood of success.

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8

New Venture Creation and Economic Transition

The Case of Slovenia

Richard T. Bliss and Lidija Polutnik

The concept of transition economies is a recent but significant global innovation. Clague notes, “no country prior to 1989 had ever abandoned the communist political and economic system.”¹ It is an important issue, affecting not only countries defined as transition economies, but the developed world as well, as shown by the recent ascension of several formerly socialist Central and Eastern European (CEE) countries to the European Union (EU). Transition economies are also among the world’s fastest growing and account for almost 30 percent of the world’s population.² They present a unique and historical contextual background for the study of economic growth and the factors that encourage or dampen entrepreneurial activity and new venture creation.

While transition countries differ greatly in their geography, history, and culture, and therefore the starting point for the move to a market economy—they face common challenges and problems. And while there is no one-size-fits-all formula for transition, one inescapable conclusion emerges: success hinges on the ability to shift economic activity from the state to the private sector. This shift can occur in two basic ways. The first is through privatization of existing state-owned enterprises (SOEs), and the second via the *de novo* creation of new firms. In practice, both contribute to private sector growth, but there is considerable evidence that new venture creation—that is, the introduction and facilitation of entrepreneurship—is a key success factor in economic transition. We believe this to be the case and will use the rest of this chapter to develop and support our claim.

The steps necessary to effect transition are clear, and economists seem to agree on the logic—if not the sequence—of the process, regardless of the starting point. Summers notes this “broad agreement among economists about what needs to be done”³ and suggests four categories for the actions that will determine the pace and trajectory of the transition:

1. Macroeconomic stabilization
2. Price and market reform
3. Enterprise reform and restructuring
4. Institutional reform

There is honest and genuine debate about the order of these steps, often driven by the unique circumstances facing a specific transition economy. This chapter does not endeavor to resolve these questions, and will not address the first two items. Instead, we focus on the third and fourth steps, enterprise restructuring and institutional reform. Why these two? Because we believe they are the most powerful tools to rapidly and efficiently foster private sector economic growth, and more specifically, new venture creation. Thus, the rest of this chapter focuses on the enterprise restructuring and institutional reform most relevant to efficient private sector growth and new venture creation within the context of transitioning economies. We provide an illustration of these two types of reforms in Slovenia, which due to its level of development, history, education, and macroeconomic stability entered transition well positioned to engage in enterprise restructuring and institutional reform.

The next section provides a general overview of the transition process, followed by a discussion of institutional reforms to the financial, legal, and corporate governance systems. We then address one method of creating a private sector; the privatization, and subsequent restructuring of SOEs. The following section focuses on new venture creation and its importance in the transition process. Then we chronicle the economic transition of Slovenia from socialism to EU membership, highlighting the institutional reforms and private sector growth factors we presented in the second and third sections. The final section summarizes and offers suggestions for continued research in this important area.

TRANSITION ECONOMICS

The Transition Process

The operational details of a socialist economy are less important than the resultant characteristics that initially confront transition policymakers.^{4, 5} These include state ownership of most property and assets and central planning and control of production and distribution. The result is an economy focused on large, vertically integrated monopolies concentrated in heavy industry. Wholesale and retail prices—also set by central planners—bear little relation to scarcity of or demand for goods, resulting in frequent queues.⁶ Most socialist economists will admit markets are better at allocative efficiency; their defense of central planning is usually premised on socialism's potential for a more equitable distribution of income.⁷ And, the relative value to society of equity and allocative efficiency is a legitimate debate, but not for here. Volumes have been written on the pros and

cons of both systems, but the path of history suggests that the shortcomings of socialism in practice outweighed its benefits. This leaves us with the question of how countries operating for decades with planned economies can be transformed to a market-based system. The following analogy illustrates the challenge:

[T]he socialist economies are at the top of a small hill (the planned economy), and they want to get to the top of a larger hill (the market economy). But in between the two hills is a valley, which may be both deep and wide.⁸

At the most basic level, the transition process involves creating an environment that fosters and facilitates private enterprise and ultimately raises the standard of living. Fifteen years of trial and tribulation—with mixed success—makes clear that the actual implementation is substantially more complicated. Why? Tanzi suggests that even if the transition ultimately benefits most members of society, in the short run, there will be groups affected negatively, and they will resist.

For example, pensioners and many others will oppose the removal of food subsidies. Workers and managers will oppose privatization of their enterprises for fear of losing their jobs or power. Those who have benefited from free, or almost free, housing will oppose privatization of the housing stock. In short, existing institutions have constituencies and lobbies that, although they may welcome the change to a market economy in the abstract in the belief that it will generate Western standards of living, will oppose the immediate negative costs of the change.⁹

We believe the key to crossing this valley lies in developing a thriving private sector—specifically, one dominated by entrepreneurial activity and new venture creation. This focus on entrepreneurship is needed precisely because transition economies initially lack the institutions that foster private sector growth in successful market-based systems. It was recognized long ago that individuals acting in their own economic self-interest can produce unexpected societal benefits.

Every individual endeavors to employ his capital so that its product may be of greatest value. He generally neither intends to promote the public interest, nor knows how much he is promoting it. He intends only his own security, only his own gain. And he is in this led by an invisible hand to promote an end which was not part of his intentions. By pursuing his own interest, he frequently promotes that of society more effectively than when he really intends to promote it.¹⁰

Entrepreneurs bent on nothing more than becoming wealthy for themselves create jobs, fulfill consumer demand, innovate product markets, and restrain market power of larger competitors. By releasing individuals to selfishly pursue their business ideas and opportunities, new venture creation in the context of economic transition can benefit large segments of the population. Transition economies provide a unique and valuable setting in which to evaluate this hypothesis.

We previously noted that the tasks of transition fall broadly into four categories, but this greatly simplifies the enormity of the job. The appendix provides a more detailed list of the required steps which clearly shows the complexity of the challenge. Our discussion focuses on institutional reform and enterprise reform and restructuring and we consider the requisite legal, financial, and corporate governance mechanisms that provide the foundation for growth in the private sector. We compare two methods of growing the private sector in transition: privatization of SOEs and de novo creation of new enterprises, arguing that the latter is the preferred path.

Institutional Reforms

Legal

The magnitude and difficulty of legal reform cannot be underestimated and becomes clear when one considers that even imperfect Western legal systems are based on decades, even centuries, of history and precedent and have taken years to refine. The first principle of a free market is the right to own property. Kennett notes that the right of ownership consists of three separate rights.

The first of these is the right to use the property as the owner sees fit; the second is the right of the owner to enjoy income from that property; and the third is the right of the owner to exchange or sell that property at a price accepted as fair by the seller.¹¹

Ownership rights must not only be clearly defined. There also must be the will and power in the legal system to enforce these rights to prevent private property from being stolen or appropriated by individuals or the state.¹² There is considerable evidence linking secure property rights to investment and economic growth and Johnson et al. find such rights more important for growth than the availability of financing.^{13–17} Finally, a system to allow the tracking and transfer of property claims is needed for economic efficiency.

The establishment of property rights is just the beginning. Additional legal reforms and structure are needed to achieve the goal of efficient allocation of scarce resources. This includes the right to choose one's profession, and relatively free entry (and exit) to markets.¹⁸ Contract law is needed to create binding economic relationships and enforcement mechanisms must be in place to efficiently compensate parties economically damaged by nonperformance. Intellectual property law must be created to reward innovation and risk-taking. Legal form must be given to various corporate structures and the markets and participants that ultimately allow their ownership to be traded. Implicit in any public ownership of corporations is a codified accounting and financial disclosure system that provides accurate and timely information to investors.

Underlying all of these reforms must be a tax code—both individual and corporate—that accomplishes three goals: (1) raising sufficient revenue to fund the appropriate level of state budget, (2) effecting the redistribution necessary to create a safety net for those harmed by transition, and (3) providing incentives for appropriate risk-taking in the creation of new, private ventures. In addition, the tax code needs to be perceived as fair and likely to be enforced. Finally, a bankruptcy code and system must be in place to efficiently handle the ultimate failure and subsequent restructuring or liquidation of both business and personal ventures.¹⁹

All of the legal reforms discussed here affect both privatized SOEs and newly established enterprises. However, there are legal hurdles unique to entrepreneurs and new ventures, or that impact them differentially. Property rights are fundamental to entrepreneurs, who will not invest unless they are confident in being able to keep the fruits of their investment of time, energy, and money.²⁰ The World Economic Forum creates an index of “start-up conditions,” which include administrative barriers and the availability of funding. They provide clear evidence that these factors have a significant impact on the pace of economic growth in transition countries.²¹ Winiecki (2003) uses the term *ease of entry* to rank countries in both developed and transition economies based on the required number of procedures, time spent in registering, and costs facing start-ups.²² New ventures should face legal requirements, including some that their established counterparts avoid. However, to ensure rapid development of the entrepreneurial private sector, these regulations and their costs should be minimized.

Financial

To understand the role of the financial system in transition, we start with the functions capital markets provide in market economies.

1. *Transferring resources (capital) from those who have it (savers) to those who can make use of it (borrowers, or investors):* In any capitalist economy, there is never a perfect coincidence between those who have funds and those who can make use of those funds.
2. *Agglomerating capital:* Many projects require more capital than that of any one saver or any small set of savers.
3. *Selecting projects:* There are always more individuals who claim they have good uses for resources than there are funds available.
4. *Monitoring:* Ensuring that funds are used in the way promised.
5. *Enforcing contracts:* Making sure that those who have borrowed repay the funds.
6. *Transferring, sharing, and pooling risks:* Capital markets not only raise funds, but the rules which determine repayment determine who bears what risks.

7. *Diversification*: By pooling a large number of investment projects together, the total risk is reduced.
8. *Recording transactions*: Generally running the medium of exchange.^{23, 24}

In developed economies, these functions are provided by several types of institutions, including banks, commercial lenders, venture capital funds, brokerage houses, exchanges, and custodial firms. Insurance and credit card companies interact with the capital markets and provide valuable services to businesses and consumers. Underlying the entire financial system are a central bank and layers of government regulation and oversight meant to protect consumers and investors, ensure solvency, and maintain macroeconomic stability. This entire system needs to be created from scratch as part of the transition.

When we compare SOEs to new ventures, there is a clear difference in their demands on the financial system. Large SOEs (even when privatized) require more capital and more monitoring by lenders. Both imply a larger and more sophisticated financial system than what entrepreneurs typically need. Most new ventures in transition economies are small and have meager capital needs, at least initially, and these needs can typically be met through savings and investments by family and friends, that is, just like entrepreneurs elsewhere.

The problem of monitoring by the financial system is mitigated since entrepreneurs—as significant owners of the business—are much less likely than SOE managers to shirk or expropriate company funds. The reporting requirements between entrepreneurs and their investors are less onerous and costly than for large SOEs or large public companies.²⁵ The World Economic Forum's financial system index, which includes information on the sophistication of financial markets and the ease of raising equity capital, is significantly correlated with growth in transition economies.²⁶ Pissarides et al. report constraints on external financing are particularly problematic to Russian and Bulgarian CEOs of small and medium enterprises (SMEs), but Johnson et al. find no such difficulty in raising capital.^{27, 28}

The reality of economic transition is that new ventures demand different things from the financial system than privatizing SOEs. The good news is that entrepreneurs do not require fully a developed banking sector or capital markets to fund new venture creation. Even a low level of financial reform can facilitate the capital flows necessary to foster entrepreneurial activity—assuming that the other institutional reforms discussed in this section occur simultaneously.

Corporate Governance

We begin with this definition from the OECD:

Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as,

the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs.²⁹

In developed economies, the quality and effectiveness of corporate governance is typically measured by a firm's ability to create value for its owners, the shareholders. This metric is closely aligned with the *raison d'être* for capitalist corporations and is also easily measured. A frequent criticism is that such a narrow definition excludes the firm's other stakeholders, including employees, creditors, customers, suppliers, and the surrounding community. The counterargument is that the quality of the firm's relationships with these groups will ultimately be reflected in its revenues, profits, and share price. The roots of governance mechanisms—the principal (shareholder)/agent (manager) conflicts resulting from the separation of ownership and control of assets—can be found in early research on the theory of the firm.³⁰

The concept of corporate governance is simple: shareholders have neither the time nor the expertise to run the firm, so professional management is hired. These managers who may have a small ownership stake, but get most of their utility from salary-based compensation and benefits, sometimes have interests that conflict with the shareholders. An example is the excessive consumption of corporate perquisites, which are owned disproportionately by shareholders. To check these instances of principal/agent conflict, shareholders elect a board of directors to represent their interests and oversee management's decisions and activities. Additional monitoring is provided by creditors, securities exchanges, and regulatory bodies.

The discussion thus far relates primarily to corporate governance in established, large, and public firms. When we consider transition economies, and especially new venture creation within them, circumstances mandate that the discussion be widened. In developed economies, there is no shortage of managerial talent for both executive (CEO) and functional (CFO, VP of Sales and Marketing, and so forth) positions. Corporate directors typically bring decades of experience to bear on the firm's managers, who themselves have extensive business training, years of experience, and have risen through the corporate ranks in a competitive environment. Because of this, the main role of corporate governance is to select the best managers from a large, qualified pool of candidates, structure the appropriate incentives, and then monitor performance. Firms in transition economies—even well-established companies—often face a dearth of managerial experience and skills in the early stages of transition. The skills found at the top levels of SOEs, especially in the early stages of economic transition, are more political than business. Functional expertise irrelevant in a planned economy, for example, in finance and sales and marketing, is rarely found. The result is that even if the will exists—and that is by no means a given—the tools of implementation are scarce.

This has implications for both restructuring SOEs and the creation of *de novo* private sector growth. For both, the rapid development of educational and

training programs that provide the basic skills needed operate in a competitive, market-based economy is critical. This training can be provided by the country's existing educational system, but often comes from new and entrepreneurial institutions.³¹ Early in transition, expatriates often provide such expertise for multinational firms, but expats are rarely found in SOEs or entrepreneurial start-ups. Corporate governance can address this lack of functional talent in several ways. One is for directors to have a hands-on role in the day-to-day operations of the business making up for the entrepreneur's missing skills. The second is through the use of shared expertise through organizations such as incubators or providers of business development services. Bateman describes the creation of business support centers (BSCs) throughout CEE after 1990 meant to spur SME development and highlights their poor track record.³²

On the positive side, structuring incentives and monitoring entrepreneurs is significantly easier than for large corporations. Most have significant financial investment in the new venture and even when their dollar investment is small, their "sweat equity" contribution is usually large. Casson says, "the firm is essentially an institutionalized extension of the personality of the entrepreneur," and then continues to show that even start-ups benefit from additional governance, for example, an effective management team and larger board, as they grow.³³ The traditional mechanisms of corporate governance will ultimately be needed, but entrepreneurial new ventures have different requirements.

Privatization and Enterprise Restructuring

The underlying rationale for institutional reform is the creation of an environment conducive to private economic activity. This private sector growth comes from two sources: the privatization and restructuring of SOEs and the creation of new private firms. We discuss the former here and the latter in the next section. Volumes have been written on privatization, and Winiecki notes that early in the transition process, it received the most attention, calling it one of the "Holy Trinity" of transition: stabilization, liberalization, and privatization:

[T]his bias is easy to understand. At the time of the collapse of the communist system, the public sector (or as it was then called, the "socialized" sector) accounted for 80 to 100 percent of aggregate output and employed similar shares of the labor force. . . . Perhaps it is because politicians, trade unionists, pundits, and employees all tied their hope of a successful systemic change to the transformation of state-owned enterprises.³⁴

In hindsight, and with considerable input from Western academics and consultants, the difficulties of effective privatization appear to have been underestimated. Most analysis focused on the logistics, speed, and fairness of the process, paying insufficient attention to the feasibility of the fundamental restructuring firms would require after their ownership changed hands. Brada provides

a comprehensive overview of the privatization schemes used in CEE countries and Oppen uses European Bank for Reconstruction and Development (EBRD) data to assess their effectiveness.^{35, 36}

Once firms are privatized—by whatever means—the difficult task of enterprise restructuring must begin. A planned economy is comprised of firms very different from those found in a market economy. Johnson and Loveman summarize the main differences in enterprise characteristics as shown in Table 8.1.³⁷

Djankov and Murrell define enterprise restructuring as “the whole process undertaken by enterprises as they adapt for survival and success in a market economy.”³⁸ That is, firms must move from the first column to the second in Table 8.1. It is important to benchmark the magnitude of this task. In Western companies, a restructuring might involve a change in capital structure, an acquisition, write-down or abandonment of unprofitable product lines, or a realignment of business units—in rare instances, perhaps more than one of these activities. But SOEs have to restructure all aspects of their business simultaneously.

Johnson and Loveman provide evidence of the inferior product quality and technological obsolescence at Eastern European SOEs before transition began.³⁹ Murrell considers three aspects of the firm—sector specialization, production technology, and market orientation—and notes that SOEs “will have to make changes of all three types during the restructuring process.”⁴⁰ Amsden et al. suggest that even promising SOEs, that is, those with cost and skill advantages, would struggle to survive. They cite the example of Uniontex, a Polish textile company, which faced financial, product, and managerial restructuring simultaneously.⁴¹ The company went bankrupt in 1992.

Privatization received significant attention and resources early in the transition process of CEE. As Winiecki suggests, this was a case of dealing with the devil we know.⁴² That is, policymakers, international advisors, and workers—from top management to the shop floor—were first inclined to attempt the restructuring of SOEs. And these efforts were not without successes. Djankov and Murrell

Table 8.1. Characteristics of State-Owned Enterprises and Market-Driven Businesses

| <i>State-Owned Enterprises</i> | <i>Market-Driven Businesses</i> |
|---|--|
| <ul style="list-style-type: none"> • Pervasive monopoly power • Output targets • Input allocations and hoarding • Vertical integration • Customers provided by the state • Broad, fixed product offerings • State financing • Workers and ministries as clients | <ul style="list-style-type: none"> • Competition • Profit • Cost minimization • Choice among suppliers • Marketing and sales • Focused, flexible product offerings • Private financing • Shareholders as key clients |

Source: Reproduced from Johnson and Loveman (1995: 35).

provide evidence that restructuring by outsiders and new management both have significant, positive impact on performance.⁴³ But, there is also a wealth of evidence—some of it discussed earlier—that makes clear the magnitude of the challenge in creating a vibrant and competitive private sector primarily by restructuring existing SOEs. In the next section, we argue that the better path for transition is the encouragement and facilitation of entrepreneurship and new venture creation.

ENTREPRENEURSHIP AND NEW VENTURE CREATION

Privatization and enterprise restructuring and new venture creation are not mutually exclusive in economic transition. However, there are limited resources available and they should be put into initiatives that most efficiently achieve the desired goals of the transition. In this section, we argue for more focus on the *de novo* creation of private sector growth. Consider the Shumpeterian view that capitalism's greatest advantage over a planned economy is not its allocative efficiency, but rather its ability to foster change and innovation. Kolodko goes so far as to state

One may claim that the main purpose of the whole transition exercise is the creation of entrepreneurship . . . and it is equally true that the development of sound entrepreneurship depends on the appropriate design of certain other processes, firstly, institution building.⁴⁴

Even before institution building, we might consider a population's proclivity for entrepreneurial activities. Blanchflower et al. surveyed 25,000 people across twenty-three countries to assess the "entrepreneurial spirit across nations." They call this latent entrepreneurship, and at the top of the list is Poland (80 percent preference for self-employment), with Slovenia, Bulgaria, and Hungary also in the top half. And while the paper makes clear "that this kind of empirical work does not prove governments should be handing out capital to those who wish to go into business," the authors do suggest that making capital more available may be one way to transform latent entrepreneurship into action.⁴⁵

Johnson and Loveman suggest "the best policy to promote starting over is to create a stable, liberal environment in which entrepreneurs are willing to invest."⁴⁶ The institutions Kolodko envisions—he calls for the formation of a "growth lobby"—are those that foster new venture creation, for example, incubators, venture capitalists, business development services, and the like.⁴⁷ As we discussed in the second section, these are not the same institutions and reforms needed by privatizing SOEs. Winiecki identifies the comparative advantage of start-ups in comparison to existing firms in the transition process:

New private firms typically enter the economic game with well-established *de jure* and *de facto* property rights and with industrial relations based on market economy

rules. Unlike the public sector or privatized firms, the labor force of these firms is not demoralized by the change to market economy rules.⁴⁸

He calls the transformation of SOEs “privatization from above” and new venture creation—which occurs not with direct state intervention, but rather through enabling conditions—“privatization from below.” Winiński considers SMEs in Poland, the Czech Republic, and Hungary and concludes that a “thriving sector of *de novo* private firms seems to shorten the duration of transformational recession and adds to the strength of subsequent recovery.”⁴⁹ Havrylyshyn and McGettigan review the privatization literature and find that across transition countries, new ventures perform best.⁵⁰ Privatized firms do better than SOEs, and outside-owned privatized firms do better than those with inside ownership, but none compare to firms started from scratch. McMillan and Woodruff examine a variety of metrics comparing the two routes to a private sector and conclude that the importance of entrepreneurship was underestimated by both those inside transition countries and Western analysts. They go on to argue “that the success or failure of a transition economy can be traced in large part to the performance of its entrepreneurs.”⁵¹

We have presented a case for *de novo* creation of the private sector in transition economies using both theoretical and empirical research. It seems clear—admittedly in hindsight—that the facilitation of entrepreneurial activity is the clearest path to success. In the next section, we consider the path of one of CEE’s transitioning countries, Slovenia. We compare the theoretical aspects of transition discussed in this section with the historic starting place of Slovenia and the practical challenges of implementing effective change.

TRANSITION IN SLOVENIA

The previous section highlighted the importance of historical factors in determining conditions that form the springboard for economic transition. Slovenia formally seceded from Yugoslavia at the end of 1991. It benefited from the legacy of the Yugoslavian regime which maintained active trade with Western economies and was politically less restrictive than what was experienced by the rest of the CEE. Slovenia was the richest and most productive of the Yugoslav republics, and was very quickly considered a prime candidate to become a transition success story. Slovenia enjoyed a homogeneous and highly educated population, an enviable geographic position, export-oriented markets, and continues to enjoy the highest GDP per capita in CEE as shown in Figure 8.1.

Unlike most CEE countries where economic activity was centrally planned, the Yugoslavian economy was heavily regulated, but in principle market-based, and in practice, self-managed by workers. In Yugoslavia resources were socially, that is, workers’-owned, and not state-owned like in the rest of CEE. Enterprises employing less than five workers were legally exempted from social ownership

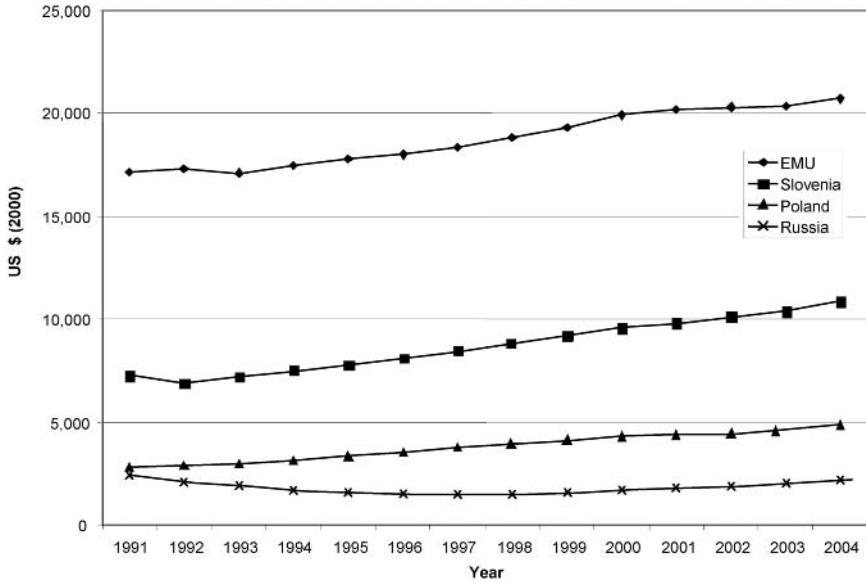


Figure 8.1. Real per capita GDP. *Source:* <http://devdata.worldbank.org/dataonline/>.

and were allowed to privately retain their profits. As a result, a rich tradition of very small business and private ownership not only survived but, indeed, was given incentives to prosper.⁵² Private enterprise was specifically allowed in the crafts sector which was defined very loosely and until 1988 included everything from retail to import/export enterprises. Through these small enterprises Slovenia preserved intangible human capital and maintained and fostered a strong entrepreneurial tradition and an appreciation for small business ownership. These factors left the newly independent Slovenia well positioned for a successful transition at the start of the 1990s.

On the other hand, Slovenia never existed as a country and therefore did not possess its own constitution or legislative tradition. The new political infrastructure had to be created from scratch under the scrutiny of public and private international bodies. In summary, while Slovenia benefited from the former Yugoslavia's benign form of socialism, and was in general more open to the West, it faced comparatively greater challenges in building its legislative and political structure.⁵³

Slovenia adopted a gradualist approach to economic reform especially with respect to liberalization and privatization. This decision was partially based on its favorable initial conditions and the high degree of development in the early 1990s compared to other CEE countries. It was also a result of extensive discussions in the Slovenian government where advocates of this approach saw major benefits

in providing society ample time to deliberate pros and cons of various policy proposals and transform and amend systems in place to the new economic and political realities rather than start from scratch.

In the next section we describe the specific legal, financial, and corporate governance reforms that were part of this plan, focusing on their impact for private sector growth and venture creation. We then address the Slovenian experience with privatization and its impact on enterprise restructuring. We conclude with an overall assessment of the transition to date, including the remaining challenges.

Legal Reform

Steps taken prior to Slovenia's independence laid the groundwork for the economic transition of the 1990s. In 1987, in order to stop hyperinflation, improve financial discipline, and provide new economic incentives, the Yugoslavian government introduced a package of economic reforms.⁵⁴ These reforms were intended to eliminate social ownership of nonfinancial enterprises, restructure large enterprises, reform taxation, and create a new credit distribution role for the National Bank of Yugoslavia. In the spirit of these reforms, the Law of Enterprise in 1988 lowered the amount of capital required to start a business, while the Law on Crafts eliminated restrictions on the maximum number of employees in the crafts sector. This law permitted the transfer of social capital to private firms but left the decision to privatize to workers' councils and company managers.

The late 1980s economic reforms were not successful because the Yugoslavian federal government did not possess the political will or leverage necessary to guide the transition from a socialist to a market economy. However, Slovenia benefited from the efforts of Yugoslav economic and legal reformers and ultimately chose to adopt many of the proposed Yugoslav solutions after declaring its independence.

In June of 1991, before reaching complete independence, Slovenia adopted the Law of the Bank of Slovenia, which created and empowered the central bank. The Bank of Slovenia replaced the National Bank of Yugoslavia as the lender of last resort and was successful in breaking the Yugoslavian hyperinflation cycle. Most important, the new central bank introduced the macroeconomic stabilization policies necessary for the start of a successful transition.

Corporate Governance

The Law on Commercial Companies was enacted in 1993 to better promote the transition into a market economy.⁵⁵ This legislation was a continuation of the 1988 Law of Enterprises and it established a uniform set of legal rules for all private companies, improving financial transparency and providing better protection for investors.

The Slovenian legislature also approved the Law of Restructuring, Bankruptcy, and Liquidation (LRBL) in 1993, defining the conditions under which an

enterprise would be obligated to file for bankruptcy or restructuring. However, this law was not properly enforced and in the late 1990s, there was a significant increase in the number of inactive companies as well as evidence of pervasive liquidity problems of enterprises. Supplements to the LRBL were adopted in 1997. They defined but did not enforce the minimum capitalization level of enterprises.⁵⁶ The 1997 LRBL also defined nonfunctioning enterprises as those that showed no payment activity for the last twelve months and paid no wages for three months. It mandated these nonfunctioning enterprises file for bankruptcy (Paras. 2 and 3 of Art. 3). Sinkovec and Skerget estimate that the number of enterprises which would satisfy this provision to be around 6500.⁵⁷ In the period between 1996 and 2002, the number of bankruptcies increased from 224 to 764 (court data, various years). The number of reorganizations in the same period went from 38 to 136. Sinkovec and Skerget conclude that the reason for lack of enforcement of bankruptcy laws (Art. 3 of LRBL) was due to overextended courts and a lack of legislative and business resources to make this portion of the law effective in practice.⁵⁸

Payment discipline and the number of inactive companies in Slovenia continued to worsen in the late 1990s.⁵⁹ The number of companies whose accounts were blocked increased from 793 to 9,312 in the period from 1991 to 1999 (and then decreased to 5690 in the year 2000) as shown in Table 8.2. In the same period the average annual amount blocked increased from \$74 million to almost \$500 million.

According to Agency of Payments of Slovenia reports, the number of companies not able to meet their financial obligations increased almost tenfold between 1991 and 2000, and the amount of unpaid claims increased by a factor of fifteen in the same time period.

Table 8.2. Firms with Blocked Accounts for More Than Five Days from 1991 to 2000

| <i>Year</i> | <i>Average Number of Blocks</i> | <i>Average Blocked Amount (in billions of tolar)</i> | <i>Average Blocked Amount (in millions of USD)</i> | <i>Average Number Employed</i> |
|-------------|---------------------------------|--|--|--------------------------------|
| 1991 | 793 | 6.02 | 74.3 | 192,279 |
| 1992 | 1,568 | 25.73 | 260.7 | 176,166 |
| 1993 | 2,458 | 37.57 | 285.0 | 149,969 |
| 1994 | 3,563 | 45.28 | 358.1 | 118,116 |
| 1995 | 5,146 | 58.96 | 468.0 | 114,800 |
| 1996 | 6,490 | 67.83 | 479.4 | 107,791 |
| 1997 | 7,697 | 76.16 | 450.1 | 82,638 |
| 1998 | 8,537 | 78.57 | 487.4 | 57,281 |
| 1999 | 9,312 | 96.98 | 492.8 | 41,555 |
| 2000 | 5,690 | 31.37 | 140.2 | 19,544 |

Source: Tekoci Gospodarski Pregled, Agency for Payments, Department of Statistics and Information (August/September 2001), 16–21.

It became obvious that while a legal framework for insolvency resolution was provided, it was not pursued in the courts in any significant numbers. As a result, the Law about Financial Management of Enterprises (LFME) became effective in January 2000.⁶⁰ The law provided the basis for enforcement of the 1993 Law of Commercial Companies and its 1994, 1995, 1998, and 1999 amendments. It also provided support for the 1993 LRBL and the 1997 supplements to the LRBL.

The new law aimed to address a fundamental principal-agent problem where management of the firm may delay filing for bankruptcy while at the same time undertaking risky activities in a desperate attempt to revive the enterprise. The goal was also to ensure sufficient assets are available to cover creditors' claims in bankruptcy filings. The expected consequence of the law was that as a result firms would start to operate more efficiently and prudently, which can be assessed by the improvement in their profitability and better liquidity and measured by the ability to pay. In this sense it was intended to protect creditors and indirectly work on creating confidence between creditors and borrowers. The systematic intent of the law was to improve financial discipline of enterprises in Slovenian economy.

Section 2 of the new law extended responsibilities to the management board of the enterprise that were beyond existing legal definitions. The management board in Slovenia, contrary to the U.S. corporate governance concept, makes all business decisions and consists of only full-time employees of the enterprise.⁶¹ On the other hand, the supervisory board was created in Slovenian practice as a body between assembly of shareholders and the management board.

The new law specified how the management board must react when it becomes clear that assets became insufficient for normal functioning of the enterprise. This entity becomes directly responsible for financial soundness of an enterprise. If capitalization became inadequate, the board had to find out why this happened and within a two-month period propose a plan to the supervisory board. It also had to immediately start taking steps to improve the existing situation. The shareholder assembly had to be called, informed, and their feedback on the proposed plan had to be solicited. The law required the supervisory board to comment on the adequacy of the report of the management board. When and if liquidity of the enterprise did not improve, the management board was mandated to apply for liquidation/reorganization at the appropriate court. The new law imposed a two-month deadline between the first reported insolvency and activation of the court proceedings in case causes of illiquidity have not been resolved.

The new law managers become personally liable when not reacting to information about nonpayment in accordance with the law. Specifically, Article 21 of the law defines the penalties for noncompliance, ranging from the maximum individual liability of \$185,185 to the minimum of \$61,728 depending on the size of the enterprise. The new law requires that the management of the company provide for adequate capitalization ratios without specifying exact numbers. It allows for variation in ratios by industry and economic situation. The

management of companies that find themselves with significantly different proportions of financing of short-term assets with long-term liabilities must react as prescribed here. As a result of the new law, the management of enterprises that find themselves in financial difficulties has an immediate interest to take steps to improve their payment ability.

Statistics in bankruptcy and reorganization procedures show that after the initial change in the year 2000, trends are moving toward the 1998–1999 levels. While the Slovenian legal and regulatory systems are well developed and transparent, the judicial system is overstretched and the courts experience significant backlogs (court data, various years).

Privatization/Enterprise Restructuring

This section examines the role of privatization and subsequent restructuring of firms in economic transition. Although the Entrepreneurship and New Venture Creation section makes it clear that *de novo* venture creation is preferred, privatization is part of every country's transition. The first stage of privatization began in November 1992 with the Law on Ownership Transformation. This law ignited an intense political struggle and privatization consisted of a mix of management and employee buyouts, voucher privatization through investment funds, and direct sales.^{62, 63}

Under the new privatization rules in Slovenia, 60 percent of the shares of the company are to be allocated by the choice of the company.⁶⁴ Small and medium-sized companies have mostly chosen a combination of employee and management buyouts in their privatization strategies and some of the larger companies have been privatized through buyouts and public share issues. Privatization in Slovenia proceeded slowly and on a case-by-case basis, resulting in a dispersion of ownership between various state institutions (i.e., pension, compensation, and development funds), passive investment funds, and most important, managers and employees. According to the European Commission, about 75 percent of all enterprises were controlled by insiders in 1998. As of 2005 the state continued to control almost half of the economy either directly (through majority ownership of banks, insurance companies, investment funds, utilities, and so on) or indirectly by holding the largest share of the company and thereby influencing the management.⁶⁵

The Slovenian experience with enterprise restructuring has been disappointing and the management and performance of enterprises has not improved significantly after privatization. Dubey and Vodopivec studied the impact of changes in ownership on economic efficiency and showed that the efficiency of the newly privatized companies in their sample has not changed significantly with ownership changes.⁶⁶ Very few privatized Slovenian companies made any investments since the early 1990s, and as a consequence, the process of reorganization and recapitalization after initial privatization was found to be insignificant.

Bojnec employs a unique sample of 100 Slovenian firms to analyze ownership and restructuring/adjustment after privatization at firm level.⁶⁷ In his sample half of the firms were *de novo*, and the other half were traditionally privatized, but still socially owned. Internal buy-outs were the most common method of ownership transfer in Slovenia and the performance of these enterprises after buy-outs has been hindered by access to external sources of financing, lack of efficiency pressures, passive behavior of investment funds, and overall problems with restructuring, new investment, and limited management know-how. Bojnec also suggests that the dominance of insiders and lack of foreign and private competition has adversely affected the modernization of production and structural changes in enterprises in Slovenia. According to Bojnec, “the original expectations that privatization would bring needed capital for investments are vanishing because of the prolonged privatization process and the preferential purchase of shares by employees.”⁶⁸ Some firms have not replaced machinery in over a decade with private *de novo* companies having a better record on updating their assets (9 percent of machinery in *de novo* firms is more than ten years old versus 46 percent for socially owned). Bojnec finds that the process of restructuring and efficiency gains has been more successful for *de novo* enterprises that tend to face more competition than traditional firms.⁶⁹ Most importantly, “*de novo* enterprises are on average smaller but more dynamic than traditional enterprises and invest more in new equipment and machinery.”⁷⁰

Prasnikar et al. study 127 large and medium-sized firms to see if insider or outsider ownership brought about a difference in restructuring.⁷¹ They differentiate between defensive restructuring (employee reductions, financial rehabilitation) and strategic restructuring (investments in products, markets, people, and physical equipment) and find that firms in which the share of employee representatives on the supervisory board is below 50 percent have been more successful in their overall defensive restructuring. Specifically these firms have changed the proportion of their full-time versus part-time employment, decreased the number of employees overall, and engaged in financial rehabilitation. However, Prasnikar et al. do not find any major differences between firms that have insider or outsider ownership in strategic restructuring.⁷²

Several studies use the total factor productivity (TFP) growth model to analyze TFP for Slovenian economy. Mrkaic asserts that “if the Slovenian economy is to grow rapidly and on a sustained basis, policy makers have to focus on policies which promote economic efficiency, that is, they have to stimulate total factor (TFP) growth.”⁷³ He finds that Slovenian economy suffers from low competition among firms, barriers to trade and foreign investment, shielded labor markets—especially in certain sectors—and a deficient knowledge base and/or potential for innovation. Foreign direct investment was not encouraged in Slovenia and most Slovenian enterprises did not adopt measures to increase efficiency and competitiveness that usually result from strategic foreign ownership.

Simoneti et al. also employ TFP model to study whether the efficiency of Slovenian enterprises improved after the mass privatization when temporary owners

sold to new owners.⁷⁴ These secondary sales of Slovenian enterprises between 1995 and 1999 did not, in fact, lead to better productivity or improved efficiency. However, Simoneti et al. find that the performance of publicly quoted companies in the sample strongly dominates that of nonpublic companies. This finding suggests that the capital market institutions may play a critical role in performance improvements of publicly quoted companies where “dominant owners of publicly quoted companies face higher costs of minority shareholders’ expropriation and that imply better performance.”⁷⁵

Smith, Cin, and Vodopivec test the efficiency effects of employee and foreign ownership effects at the onset of transition in Slovenia between 1989 and 1992.⁷⁶ During this period, firms were privatized in a decentralized and unregulated manner (“spontaneous privatization”) while the majority of socially owned firms remained unprivatized.⁷⁷ They find that firms with higher revenues, profits, and exports were more likely to show employee and foreign ownership in the early stages of transition. Firms with higher foreign credit are more likely to be at least partially foreign-owned presumably to assure access to credit markets. They show positive and significant effects of employee and foreign ownership although these effects dissipate over time.

Earlier sections highlight the challenges of privatization as a path to free-market economics. This section makes clear the difficulty of the privatization/restructuring task in the context of Slovenia, and we believe, provides support for the argument that fostering new venture creation and entrepreneurship are the preferred ways to facilitate economic transition.

Financial Reform

As mentioned earlier, financial sector reform is one of the most critical tasks in the privatization and restructuring process in transition economies. It has been one of the most controversial pieces of reform in Slovenia and the government resisted pressures to open the financial sector to foreign ownership throughout the 1990s. The 1999 Foreign Exchange Law freed most capital and foreign direct investment transactions, and all remaining entry restrictions were eliminated in 2004 when Slovenia entered the EU. The Slovenian government continues to hold a significant ownership stake in the banking sector, and only recently (and under pressure from the EU) agreed to sell a significant stake (34 percent) in Nova Ljubljanska Banka, the largest Slovenian bank, to KBC Bank, a leading Belgium banking-insurance group. Nova Kreditna Banka Maribor, the second largest bank, is still completely state-owned.

The Ljubljana stock exchange came to existence at the end of 1989, but has not established itself as an alternative source of funding to banks. It took almost ten years for a broad range of Slovenian companies to get listed. The stock market development has also been restrained by the imposition of capital controls in 1997 by the Bank of Slovenia which mandated that foreign portfolio investors hold shares for at least seven years. These controls were abolished in 2001.

Pension plan reform allowed for supplementary contributions to the mandatory state insurance, a further boost to strengthen the stock market. Additionally Slovenia's citizens have since been permitted to invest in foreign capital markets, and in May 2001, the Bank of Slovenia eliminated restrictions on the types of foreign funds that could be purchased.

Bukvic and Bartlett survey 200 Slovenian firms in 2000–2001 to study financial barriers to SME growth.⁷⁸ Their results suggest the financial barriers facing SMEs in this period include high collateral requirements, high cost of capital, and bureaucratic procedures at banks. In summary, SMEs have been at the mercy of poorly developed financial services, historically high interest rates, and in general limited capital resources due to the delayed and very uneven pace of financial reform.

FURTHER CHALLENGES FOR SLOVENIAN TRANSITION

Winiiecki ranked Slovenia as the top among all transition countries in terms of ease of entry computed as an aggregate of number of procedures, time spent registering, and cost as a percent of annual GDP per capita.⁷⁹ However, the World Economic Forum (WEF) ranked 117 countries and placed Slovenian economy in the 32nd place in 2005. According to the WEF report, the main obstacles for greater competitiveness in the Slovenian economy are its complex tax system, high tax rates, inefficient and ineffective public administration, and a rigid labor market. Finally, at about the same time, World Bank rankings on “ease of doing business” in 2005 were released. The World Bank assessment, which focuses more narrowly on the regulatory framework and efficiency of bureaucracy, ranked Slovenia 63rd out of 155 countries, citing Slovenia's rigid rules for hiring and firing workers and lengthy and complex procedures of enforcing contracts and registering property (as shown in Tables 8.1 and 8.2). The European Commission Report (2003) identified continuing weaknesses in Slovenian structural reforms, in promotion of competition, in its protection of intellectual property rights but found the country to be best prepared for EU membership of all ten accession countries.

The World Bank and IFC (2004) found that while Slovenia ranks well in costs of starting and closing the business (Table 8.3) and in contract enforcement costs (Table 8.4) against other CEE countries, it is significantly less well positioned against the EU-15 or U.S. benchmark. While the required minimum start-up cost in Slovenia is relatively low compared to the EU-15 and the other new members on average, Slovenian entrepreneurs have to comply with more procedures and devote more time to a start-up. The opposite is true for closing of business; while time necessary for closure is in line with the EU-15 average, the cost is significantly higher.

As discussed in the Entrepreneurship and New Venture Creation section, extensive literature suggests that speedy creation of new private firms promotes

Table 8.3. Costs of Starting and Closing a Business, 2003

| | <i>Starting a Business</i> | | | | <i>Closing a Business</i> | |
|-------------------|-----------------------------|---------------------------|---|--|----------------------------|--|
| | <i>Number of Procedures</i> | <i>Duration (in days)</i> | <i>Cost (percent of GNI per capita)^a</i> | <i>Minimum Capital (percent of GNI per capita)^b</i> | <i>Actual Time (years)</i> | <i>Actual Cost (percent of estate)</i> |
| Slovenia | 10 | 61 | 12 | 20 | 2 | 18 |
| Germany | 9 | 45 | 6 | 49 | NA | NA |
| Italy | 9 | 13 | 23 | 12 | 1 | 18 |
| Spain | 6 | 108 | 17 | 18 | 2 | 18 |
| United Kingdom | 6 | 18 | 1 | 0 | 3 | 4 |
| Czech Republic | 10 | 88 | 11 | 47 | 9 | 38 |
| Hungary | 6 | 52 | 23 | 96 | 11 | 8 |
| Poland | 10 | 31 | 21 | 247 | 3 | 8 |
| EU-15 | 7 | 32 | 9 | 30 | 1.9 | 8 |
| New member states | 9 | 44 | 17 | 160 | 3.5 | 11 |
| EU-25 | 8 | 34 | 11 | 52 | 2.2 | 8 |
| United States | 5 | 5 | 1 | 0 | 4 | 8 |

Notes: ^aCost to start up a business, as a percentage of GNI per capita.

^bStart-up capital required to start a business, as a percentage of GNI per capita.

Source: World Bank and International Finance Corporation (2004), selected countries.

faster restructuring of economies in transition. The creation of SMEs in Slovenia was enhanced by minimum start-up capital but hindered by cumbersome and extensive bureaucratic procedures. While Slovenia scores below average on all indicators of competitive environment, Drnovsek et al. are more concerned with the impact of “Slovenia’s individual scores on technological learning and regulatory support factors” for Slovenia’s further growth and successful transition.⁸⁰

Potential contributions of SMEs to the process of economic transformation in Slovenia will continue to depend on legal and institutional frameworks and their enabling and/or constraining impact on businesses creation and growth. The Slovenian constitution stresses the economic importance of ownership rights, promises freedom of entrepreneurship, and forbids restrictions to competition and unfair competition. Surveys and data show that despite these efforts, Slovenia’s growth and development lag due to the uncertain and fluid legal system, and inadequate foreign direct investment legislation.

Table 8.4. Contract Enforcement Costs and Credit Facilities, 2003

| | <i>Number of Procedures</i> | <i>Duration (in days)</i> | <i>Cost (percent of GNI per capita)^a</i> | <i>Procedural Complexity Index</i> | <i>Public Credit Registry Coverage (%)^b</i> | <i>Private Bureau Coverage (%)^c</i> | <i>Creditor Rights Index</i> |
|-------------------|-----------------------------|---------------------------|---|------------------------------------|--|--|------------------------------|
| Slovenia | 22 | 1003 | 4 | 65 | 1 | 0 | 3 |
| Germany | 26 | 154 | 6 | 61 | 1 | 69 | 3 |
| Italy | 16 | 645 | 4 | 64 | 6 | 42 | 1 |
| Spain | 20 | 147 | 11 | 83 | 31 | 5 | 2 |
| United Kingdom | 12 | 101 | 1 | 36 | 0 | 65 | 4 |
| Czech Republic | 16 | 270 | 19 | 65 | 1 | 14 | 3 |
| Hungary | 17 | 365 | 5 | 57 | 0 | 2 | 2 |
| Poland | 18 | 1000 | 11 | 65 | 0 | 54 | 2 |
| EU-15 | 20 | 238 | 5 | 61 | 6 | 38 | 2.0 |
| New member states | 18 | 692 | 11 | 61 | 0 | 31 | 2.2 |
| EU-25 | 19 | 311 | 6 | 61 | 5 | 37 | 2.1 |
| United States | 17 | 365 | 0 | 46 | 0 | 81 | 1 |

Notes: ^aCost as a percentage of GNI per capita.

^bPercentage of borrowers relative to population registered at public registry.

^cPercentage of borrowers relative to population registered at private registry.

Source: World Bank and International Finance Corporation (2004), selected countries. The averages for the EU-15, new member states, and EU-25 are weighted averages using the population of Groningen Growth and Development Center (2004) as weights.

SUMMARY AND FUTURE RESEARCH

We have attempted to chronicle both the theoretical and practical aspects of the transition from a socialist to a free-market economy. While a significant portion of the global economy has already or will undertake economic transition, the process can vary dramatically from country to country. Different transition trajectories are a result of different economic and political conditions at the onset of transition as well as historical differences and experiences. The necessary institutional reforms require both persistence and sacrifice in the context of a dynamic political environment. Unfortunately, in some countries, the path of least resistance, that is, the privatization of existing SOEs, is also the least likely to produce an efficient and competitive economy. We provide significant evidence

that the preferred route to transition is through the facilitation of new venture creation. We argue that this process is faster and more efficient than the privatization/restructuring path, albeit more challenging politically. There is a tremendous inertia in political and economic systems that make the status quo difficult to leave behind. The inevitable corruption and self-serving dealings that come with the move from socialism to democratic free markets only make the process more difficult.

There is no question that *de novo* venture creation is preferable. Research shows that the development of private enterprises and SMEs was quicker in the countries where economic and political reforms preceded quickly, where some form of private enterprise existed during the socialist era, and/or where there was a strong presocialist industrial transition.⁸¹ Since agents of change have little control over the starting point of a transition economy, their efforts should be focused on the institutional reforms most likely to foster private enterprise.

Slovenia was well positioned at the onset of its transition in terms of relatively high level of economic development, good geographic position, and its traditional Western orientation. Slovenia chose a gradualist approach to transition and benefited from overall economic, political, and social stability as a result of this choice. However, as indicated in this chapter, significant institutional and structural weaknesses continue to exist in the Slovenian economy and constrain its ability for future growth by limiting opportunities for entrepreneurship and *de novo* enterprise creation—factors critical for an efficient transition. These factors suggest that Slovenia and other countries in transition who find themselves in similar situation need to accelerate the pace of reforms.

Future research in this area should continue to address the importance of creating competitive organizations in transition economies. A wealth of evidence suggests the best way to do this is by fostering entrepreneurship and new private enterprises. Ongoing research that analyzes the institutional reforms needed to create an environment conducive to the *de novo* creation of private sector growth is especially valuable. It is also clear that transition countries—primarily for political stability—must attempt to salvage the most efficient SOEs. Thus, continued research on the importance of institutions on enterprise restructuring is needed. Since transition started it became clear that former socialist enterprises operate quite differently from enterprises operating in market economies and also differently from each other depending on the types of ownership that have developed as a result of a variety of privatization processes. For example, Slovenia faces the challenges of instituting a more effective corporate governance system, a more competitive financial sector, and more aggressive privatization of a still very large state sector. Continued study in Slovenia and other CEE of institutions that support a vibrant market economy is going to be critical in the ability of these countries to develop entrepreneurial culture and promote new venture creation.

APPENDIX: THE TASKS OF THE TRANSITION

First, there is a group of activities related to creating a new set of rules:

1. *Setting up the legal infrastructure for the private sector:* commercial and contract law, antitrust and labor law, environmental and health regulations, rules regarding foreign partnerships and wholly foreign-owned companies; courts to settle disputes and enforce the laws.
2. *Devising a system of taxation of the new private sector:* defining the accounting rules for taxation purposes, organizing an Internal Revenue Service to collect taxes from the private sector.
3. *Devising the rules for the new financial sector:* defining accounting rules for reporting business results to banks and investors; setting up a system of bank regulation.
4. *Determining ownership rights to existing real property:* devising laws related to the transfer of property, and laws affecting landlord–tenant relations; resolving the vexatious issue of restitution of property confiscated by communist governments.
5. *Foreign exchange:* (a) setting the rules under which private firms and individuals may acquire and sell foreign exchange and foreign goods; (b) setting the rules in the same area for the not-yet-privatized enterprises.

Next, there are some tasks related to managing the economy:

6. *Reforming prices:* enterprises that have been privatized will presumably be largely free to set their own prices, but early on in the process, the demands of the government budget will require raising prices on many consumer goods that have been provided at prices far below cost.
7. *Creating a safety net:* setting up an emergency unemployment compensation scheme; targeting aid in kind or in cash to those threatened with severe hardship by the reforms.
8. *Stabilizing the macroeconomy:* managing the government budget to avoid an excessive fiscal deficit and managing the total credit provided by the banking system.

Finally, there are tasks related to privatization:

9. *Small-scale privatization:* releasing to the private sector trucks and buses, retail shops, restaurants, repair shops, warehouses, and other building space for the economic activities; establishing the private right to purchase services from railroads, ports, and other enterprises that may remain in the public sector.
10. *Large-scale privatization:* transferring medium- and large-scale enterprises to the private sector managing the enterprises that have not yet been privatized.
11. *Financial reorganization:* clearing the existing state banks of uncollectible debts and recapitalizing these banks; privatizing these banks; managing these banks before they are privatized, including arrangements for new loans to businesses.

Source: Clague (1992: 5).

NOTES

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1. Christopher Clague, "The Journey to a Market Economy," in *The Emergence of Market Economies in Eastern Europe*, eds. Christopher Clague and Gordon C. Rausser (Cambridge, UK: Blackwell, 1992).

2. The International Monetary Fund (IMF) (2000) classifies transition countries into four groups: (1) CEE—Albania, Bulgaria, Croatia, Czech Republic, FYR Macedonia, Hungary, Poland, Romania, Slovak Republic, Slovenia; (2) Baltics—Estonia, Latvia, Lithuania; (3) Commonwealth of Independent States (CIS)—Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan; (4) Asia—Cambodia, China, Laos, Vietnam. Population data from *The World Factbook 2005*, Central Intelligence Agency.

3. Lawrence Summers, "The Next Decade in Central and Eastern Europe," in *The Emergence of Market Economies in Eastern Europe*, eds. Christopher Clague and Gordon C. Rausser (Cambridge, UK: Blackwell, 1992).

4. A description of the planning process in the former Soviet Union can be found in Heinz Kohler, "Soviet Central Planning," in *The Road to Capitalism*, eds. David Kennet and Marc Lieberman (New York: Dryden Press, 1992).

5. Estrin discusses the differential application of central planning across various countries of the former Soviet bloc: Saul Estrin, "Competition and Corporate Governance in Transition," *Journal of Economic Perspectives* (Winter 2002): 101–124.

6. For a more comprehensive discussion of the consequences of socialist economics, see David Lipton and Jeffrey Sachs, "The Consequences of Central Planning in Eastern Europe," in *The Road to Capitalism*, eds. David Kennet and Marc Lieberman. (New York: Dryden Press, 1992).

7. Henderson et al. argue the purported equality of socialism was anything but: David R Henderson, Robert M. McNab, and Tamas Rozsas, "The Hidden Inequality in Socialism," *Independent Review* 9, no. 3 (2005): 389–412.

8. Vladimir Benachek in *The Emergence of Market Economies in Eastern Europe*, eds. Christopher Clague and Gordon C. Rausser (Cambridge, UK: Blackwell, 1992): 4.

9. Vito Tanzi, "Fiscal Issues in Economies in Transition," in *Reforming Central and Eastern European Economies*, eds. Vittorio Corbo, Fabrizio Coricelli, and Jan Bossak (World Bank, 1991).

10. Adam Smith, *The Wealth of Nations*, Vol. 1 (London: Methuen, 1776), 477–478.

11. David Kennet, "The Role of Law in a Market Economy," in *The Road to Capitalism*, eds. David Kennet and Marc Lieberman (New York: Dryden Press, 1992).

12. Smallbone and Welter cite property appropriation from Belarusian entrepreneurs that were "too successful": David Smallbone and Friederike Welter, "The Distinctiveness of Entrepreneurship in Transition Economies," *Small Business Economics* 16, no. 4 (2001): 249–262.

13. Stephen Knack and Philip Keefer, "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures," *Economics and Politics* 7, no. 3 (1995): 206–227.

14. Paolo Mauro, "Corruption and Growth," *Quarterly Journal of Economics* 110, no. 3 (1995): 681.

15. Jakob Svensson, "Investment, Property Rights and Political Instability: Theory and Evidence," *European Economic Review* 42, no. 7 (1998): 1317–1341.

16. Daron Acemoglu, Simon Johnson, and James A. Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91 (December 2001): 649–661.

17. Simon Johnson, John McMillan, and Christopher Woodruff, "Property Rights and Finance," *American Economic Review* 92, no. 5 (2002): 1335–1356.

18. Certain barriers to entry, for example, professional licenses, are justified to protect consumers or guarantee a certain level of competency.

19. It is important to note that failure is a natural and desired outcome of capitalism, which Schumpeter calls a "gale of creative destruction": Joseph A. Schumpeter, "Creative Destruction," *From Capitalism, Socialism and Democracy* (New York: Harper, 1975 [orig. pub. 1942]), 82–85.

20. See Johnson et al. (2002) for evidence on the link between property rights and financing decisions for private sector firms in transition economies.

21. See Andrew M. Warner, ed., "The European Competitiveness and Transition Report 2001–2002," World Economic Forum (Geneva, Switzerland: Oxford University Press).

22. Jan Winięcki, "The Role of the New, Entrepreneurial Private Sector in Transition and Economic Performance in Light of the Successes in Poland, the Czech Republic, and Hungary," *Problems of Economic Transition* 45, no. 11 (2003): 6–38.

23. Joseph E. Stiglitz, "The Design of Financial Systems for the Newly Emerging Democracies of Eastern Europe," in *The Emergence of Market Economies in Eastern Europe*, eds. Christopher Clague and Gordon C. Rausser (Cambridge, UK: Blackwell, 1992), 23.

24. For a more extensive discussion of each function see, for example, Stiglitz (1985), Stiglitz and Weiss (1991), and Greenwald and Stiglitz (1991); Joseph E. Stiglitz and B. Greenwald, "Toward a Reformulation of Monetary Theory: Competitive Banking," *Economic and Social Review* 23, no. 1 (1991): 1–34.

25. The SOEs did have the advantage of existing relationships with banks when the transitions began. Even inefficient and financially failing state banks continued to provide credits to SOEs long after they were economically justified.

26. World Economic Forum, 2002, p. 18.

27. Francesca Pissarides, Miroslav Singer, and Jan Svejnar, "Objectives and Constraints of Entrepreneurs: Evidence from Small and Medium Size Enterprises in Russia and Bulgaria," *Journal of Comparative Economics* 31, no. 3 (2003): 503–531.

28. This discrepancy may be due to the larger number of countries considered by Johnson et al. (2002), or size differences in the two samples. Brown et al. (2005) considers the financial barriers to firms attempting to move from micro (more than ten employees) to SME status (10–249 employees) in Romania. David J. Brown, John S. Earle, and Dana Lup, "What Makes Small Firms Grow? Finance, Human Capital, Technical Assistance, and the Business Environment in Romania," *Economic Development and Cultural Change* 54, no. 1 (2005).

29. OECD, April 1999.

30. Michael Jensen and William Meckling, "Theory of the Firm, Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3 (1976): 305–360.

31. The version of socialist economics taught in pretransition countries provided none of the skills/training found in Western business education. Often what was taught was not just wrong, but counterproductive.

32. Milford Bateman, "Neo-Liberalism, SME Development and the Role of Business Support Centers in the Transition Economies of Central and Eastern Europe," *Small Business Economics* 14, no. 4 (2000): 275–298.

33. Mark Casson, "The Comparative Organization of Large and Small Firms: An Information Cost Approach," *Small Business Economics* 8 (October 1996): 329.

34. Winiecki, 2003.

35. Josef C. Brada, "Privatization Is Transition—or Is It?," *Journal of Economic Perspectives* 10, no. 2 (1996): 67.

36. Sonja Opper, "The Political Economy of Privatization: Empirical Evidence from Transition Economies," *Kyklos* 57, no. 4 (2004): 559.

37. Simon Johnson and Gary Loveman, *Starting Over in Eastern Europe: Entrepreneurship and Economic Renewal* (Boston: Harvard Business School Press, 1995).

38. Simeon Djankov and Peter Murrell, "Enterprise Restructuring in Transition: A Quantitative Survey," *Journal of Economic Literature* 40, no. 3 (2002): 739–792.

39. Johnson and Loveman, 1995.

40. Peter Murrell, "Evolution in Economics and in the Economic Reform of the Centrally Planned Economies," in *The Emergence of Market Economies in Eastern Europe*, eds. Christopher Clague and Gordon C. Rausser (Cambridge, UK: Blackwell, 1992).

41. Alice H. Amsden, Jacek Kochanowicz, and Lance Taylor, *The Market Meets Its Match* (Cambridge, MA: Harvard University Press, 1998).

42. Winiecki, 2003.

43. Djankov and Murrell, 2002.

44. Grzegorz W. Kolodko, *Post-Communist Transition: The Thorny Road* (Rochester, MN: University of Rochester Press, 2000).

45. David G. Blanchflower, Andrew Oswald, and Alois Stutzer, "Latent Entrepreneurship across Nations," *European Economic Review* 45, no. 4–6 (2001): 680.

46. Johnson and Loveman, 1995, 218.

47. Kolodko, 2000.

48. Winiecki, 2003.

49. Winiecki concedes that some SMEs may be spin-offs from large SOEs, but offers numerous connections between SMEs and entrepreneurial activity in the sample countries.

50. Oleh Havrylyshyn and Donal McGettigan, "Privatization in Transition Countries," *Post-Soviet Affairs* 16, no. 3 (2000): 257.

51. John McMillan and Christopher Woodruff, "The Central Role of Entrepreneurs in Transition Economies," *Journal of Economic Perspectives* 16, no. 3 (2002): 153.

52. In Poland agriculture remained in private hands during the communist era, and a number of private craft enterprises were allowed to exist. Enterprise reforms in the 1980s in Hungary allowed for private entrepreneurship initiatives. This is in stark contrast to the experience in U.S.S.R.

53. This is in contrast to a country such as Poland, which had a long tradition of constitutional rule, and a rich legislative tradition.

54. These reforms were proposed in 1987 and 1988 by the Mikulic's government. At that time, a monetary system committee was set up and led by Ivan Ribnikar. Two years later, Ribnikar, an economist who had always strongly advocated monetary stability and private ownership, joined Velimir Bole and Jose Mencinger in advising Arhar, the newly appointed governor of the Bank of Slovenia. In 1991 and 1992, the four men were to become the architects of the monetary reform in Slovenia.

55. Maria Minniti and Lidija Polutnik, "Financial Development and Small Firms Financing in Slovenia," *Comparative Economic Studies*, 2–3 (1999): 111–133.

56. Official Gazette of Republic of Slovenia, No. 54/99.

57. Janez Sinkovec and Drago Skerget, *Law about Financial Management of Enterprises with Introductory Interpretation and Law about Restructuring, Bankruptcy and Liquidation with Comments* (in Slovene). Zakon o finančnem poslovanju z uvodnimi pojasnili in Zakon o prisilni poravnavi, stečaju in likvidaciji s komentarjem (Ljubljana: Primath, 1999).

58. Ibid.

59. In Slovenia, the intercompany payments were not made through banks but were governed by the Agency of Payments (AOP), a government agency with complete authority over all enterprises. As a result of this system liquidity and payment problems of Slovenian companies were very transparent. While each company physically had its own bank account, these accounts were under the direct supervision of the AOP until July 2002 when they were transferred to their commercial banks (*source*: Bank of Slovenia—www.bsi.si). Intercompany payment system mandated that companies could not overdraft their accounts held for them by AOP, that is, the account balances could not fall below zero. If requests for payment from the firm's creditors exceeded the account balance on any given day, the AOP blocked the account until cash was deposited. Once this occurred, the account was unblocked. The AOP tracked both the number and size of blocks for all Slovenian enterprises.

60. *Official Gazette of Republic of Slovenia*, No. 54/99.

61. Rado Bohinc and Stephen M. Bainbridge, "Corporate Governance in Post-Privatized Slovenia," *American Journal of Comparative Law* 49, no. 1 (2001): 49–77.

62. Jean O. Blanchard, Kenneth A. Froot, and Jeffrey D. Sachs, *The Transition in Eastern Europe: Restructuring* (Chicago: University of Chicago Press, 1994).

63. From late 1992 to late 1994 there was virtually no privatization until the new law started to be very slowly implemented.

64. Under the privatization rules, 40 percent of the shares were transferred to financial institutions: 10 percent to a pension fund, 10 percent to a restitution fund, and 20 percent were distributed through auctions to voucher privatization funds. The fate of the remaining 60 percent of the shares was to be decided by the companies themselves.

65. Mateja Peternej, "Slow Is Beautiful? Slovenia's Approach to Transition," *ECFIN Country Focus* 2, no. 10 (2005).

66. Ashutosh Dubey and Milan Vodopivec, "Privatization and Efficiency during Slovenia's Transition: A Frontier Production Function," *IB Revija* 29, no. 4–5 (Ljubljana: UMAR, 1995).

67. Stefan Bojnec, "Restructuring and Marketing Strategies at Macro and Micro Levels: The Case of Slovenia," *Europe-Asia Studies* 52, no. 7 (2000): 1331–1348.

68. Ibid.

69. Ibid., 1341–1342. Seventy percent of the de novo sample faces more than five competitors, 30 percent face two to four, and none are dominant in their product markets. For traditional firms, 64 percent face more than five competitors, 20 percent face two to four, and 16 percent continue to be dominant in their product markets.

70. Ibid.

71. Janez Prasnikar, Jan Svejnar, and Polona Domadenik, "Enterprises in the Post-Privatization Period: Firm-Level Evidence for Slovenia," Working Paper (February 2000).

72. Ibid.
73. Mico Mrkaic, "The Growth of Total Factor Productivity in Slovenia," *Post-Communist Economies* 14, no. 4 (2002).
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9

Public Policy and Enhancing Entrepreneurial Capitalism

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At the end of World War II and for more than a quarter of a century after, the conventional wisdom was that capitalism and (central planning) socialism were two entirely different but equally viable economic systems. In addition, there was a “middle way” economic system. The middle way limited wealth accumulation by taxing estates; it redistributed income by providing the poor with safety nets; in some versions the middle way provided cradle-to-the-grave medical care; and most important of all, it empowered the state to limit monopoly behavior so that capitalism did not collapse all at once into cronyism and protectionism.¹

During the 1960s, the celebrated Soviet physicist Andrei Sakharov took the middle-way approach one step further and argued that capitalism and socialism were coming together to create a new safer world in which a nuclear exchange would be avoided.² But the two systems were not coming together at all. Central-planning socialism was on the way out. Clearly, Russia (and some of the other members of the Russian Federation) was adopting entrepreneurial capitalism as a clear alternative to central-planning socialism.

Much the same was happening in China, especially after 1978. The Chinese Communist Party leader Deng Xiaoping analogized an economic system as “a cat that catches mice.” Deng famously remarked in early 1962 that “it doesn’t matter whether it’s a yellow cat or a black cat, as long as it catches mice.”^{3, 4} The only cat in town capable of catching such large mice was entrepreneurial capitalism, or at least some version of capitalism that would guarantee a dynamic restructuring of agriculture and industry. With this stated, Deng led the entire mainland of China on the road toward radical reform. According to Huang, during the 1990s about 26.3 percent of FDI that went to the developing world economies went to China.⁵ And living standards did indeed rise—dramatically so.

My thesis is that entrepreneurial capitalism, wherever it has been implemented or enhanced, is the main reason that living standards rise. Entrepreneurial capitalism is not just another humdrum middle-way capitalism; rather, it is a radical type of reform and the principal direction in which public policy should go if public policy experts wish to encourage investment and productivity gains in their regions of the world. This advice is valuable not only for Russia and China but for most other regions of the world as well.

Entrepreneurial capitalism thrives in certain well-defined institutional settings rather than in others. The purpose of this chapter is to identify these institutional settings. I shall identify four enhancers of entrepreneurial capitalism that are available to most regions of the world and, when used in combination are calculated to help raise living standards. Let us begin with a more thorough discussion of entrepreneurial capitalism and how important it is not to confuse it with its favorite namesake cousin, crony capitalism.

ENTREPRENEURIAL CAPITALISM

Entrepreneurial capitalism is a system of private ownership of the means of production but one in which the current owners or new prospective owners compete with each other to retain or gain control of the means of production and related legal rights. By *control* I mean both (1) a large degree of autonomous decision making about how the means of production are to be utilized and (2) decisions about how any “residual cash flow” claims associated with those productive combinations are to be distributed and spent. The reshuffling of the means of production into novel combinations is often designed to serve the most urgent needs of the consumers.⁶

There are many interesting cases where the investors must educate the potential customers about the product and its characteristics before they recognize its value. Think of Cyrus McCormick’s efforts to educate farmers about the value of his harvesting inventions, or Elisha G. Otis’s brilliant and dramatic demonstrations of the safety features of his elevator invention at the 1854 Crystal Palace Exposition in New York City.⁷

It is difficult to reduce the entrepreneurial function to a simple definition, and is certainly more treacherous to characterize an entire economic system as entrepreneurial. I shall try to at least offer only a working definition: Entrepreneurial capitalism is about a dynamic churning and restructuring of the means of production by way of a competitive process that itself is constrained by a rule of law.

Under entrepreneurial capitalism, it is ultimately the consumer who plays an important (but not always an exclusive) part in determining how scarce property rights and other resources get allocated.⁸ It is difficult to domesticate consumer sovereignty, especially in a world with open markets and middlemen entrepreneurs.

This capitalist restructuring process is especially dramatic when a group of investors operating within a capitalist economy with a viable stock market and a reliable body of securities law discovers a publicly traded corporation where the managers are not performing well. This group of investors may stage a takeover of this corporation and, once gaining control, vote out the older board of directors (and the crony managers) and vote in a new group of managers to restructure the organization. In extreme cases and especially when the takeover involves huge conglomerates, the break-up value of the mix of businesses may even exceed the capitalized value of the existing gigantic organization.

This radical struggle for ownership and control of corporate property is often condemned as antisocial and destructive of social harmony. Still, the empirical evidence is strongly consistent with my claim that entrepreneurial capitalism creates valuable jobs and raises living standards. Corporate takeovers and radical restructurings of corporate assets are an important part of the process by which incumbent corporate managers are prevented from keeping their jobs “at the expense of stockholder wealth and economic efficiency.”⁹

The processes centering about the radical restructuring of the means of production can be summarized neatly in the words of one of the greatest economists of the twentieth century, Joseph A. Schumpeter, who described capitalism as consisting of an evolutionary process that he termed *creative destruction*. In Schumpeter’s seminal work, *Capitalism, Socialism and Democracy*, he emphasized how “Creative Destruction is the essential fact about capitalism.”¹⁰ Such processes are carried on both large and small scales and consist of a reshuffling of much of what already exists. Those production processes that are disassembled free up the property rights and other assets for the new combinations now created.

The modern research paradigm of the field termed “small business economics” owes something to Schumpeter’s insights.¹¹ There is a huge turbulence about capitalism that is often hidden from view. New businesses are created, and others wither and die. Workers move from one job to the next. But the aggregates hide the turbulence. The aggregate measures of job creation (or job losses) report only net gains or net losses and completely disguise the radical turbulence that underlies these aggregates. The rise and fall of businesses is a reflection of the experimentation about how best to combine the means of production in order to satisfy the market demand.^{12, 13}

Unfortunately, the reputation of the capitalist process is badly damaged every day by the shocking news reports of job losses and restructurings under way. The creative destruction process often falls flat in the popularity polls when a more enlightened public might indicate its approval. Capitalism’s successes become its own worst enemy, as Schumpeter and others recognized so eloquently in the last century.¹⁴

Ideas about entrepreneurial capitalism have spread in influence, especially in modern Russia and China. Russia has now finally abandoned the central planning and centralized output targeting system. China is catching up from a position of poverty (c. 1960) to the industrial nations’ modes of life, which appear to be

within its reach sometime during this twenty-first century. For that reason and others, many political leaders now welcome foreign direct investment (FDI) in any one of its forms.¹⁵ FDI—where foreign nationals purchase assets in another region—often means job creation and the transfer of technology.¹⁶ It all means more competitive market structures that work to raise the quality of products and services and/or lower their prices. Economic growth occurs within a huge sea of ideas, and the “stock of ideas is proportional to worldwide research effort, which in turn is proportional to the total population of the innovating countries.”^{17, 18}

The privatization process involved de-politicizing the control of the means of production. Between 1991 and 1992, a historic privatization effort took place in Russia, some of the other independent republics of the former U.S.S.R., and in Poland and the Czech Republic. In Russia, the first step in the process was to convert the large state-owned enterprises (SOE) into joint-stock companies. Next came the auctioning-off of the shares in these joint-stock companies to private investors and private investment funds.¹⁹ Their shares could now be traded, and the investors might now control the management of the corporations through corporate elections. Stock markets have returned to Russia, Poland, Czech Republic, and several other former U.S.S.R. countries.

These transitions to capitalist institutions require a rule of law to protect property rights, contract enforcement and, most importantly, the successful exercise of corporate governance. A creditor-rights bankruptcy system is also needed to reshuffle the means of production when the privatization process has been corrupted and placed crony apparatchiks in control of the means of production.²⁰ Mauro’s evidence suggests that “there is a negative and significant association between corruption and the investment rate.”²¹ Cronyism often redistributes income from the general population to the target group of beneficiaries—the cronies—who we may also term “monopolists.”^{22, 23}

Crony capitalism is a shorthand label that I give to a common set of policy practices. It is always possible to reshuffle property rights and other resources into combinations that make particular markets no longer contestable. By “non-contestable markets,” I follow the work of William Baumol.²⁴ He and others have modeled markets where dynamic entrepreneurship becomes virtually impossible and often illegal.²⁵

Market-restricting behavior consumes resources and requires periodic funding and additional sympathetic legislation to keep these monopolies going. A portion of the GDP gets burned up in protecting and maintaining monopoly profits. Certain groups or families get wealthier, but at the same time the entire GDP rises less quickly and may even get smaller.²⁶ In many developed regions of the world, crony protectionism receives intellectual backing and support under the rubric of “import substitution” policies to protect local industries.²⁷

According to Hernando De Soto, often in third-world economies the benefits of entrepreneurial capitalism tend to cluster in small nooks and crannies of the economy, and the majority of the people do not benefit from entrepreneurial

capitalism at all.²⁸ De Soto offered two different reasons for this anomaly. First, the ostensible licensing and bureaucratic hurdles placed on fledgling entrepreneurs is onerous, expensive, unreliable, and simply unbearable.²⁹ Second, whatever property is acquired in the extralegal sector cannot be easily used as collateral to back promises to repay loans. Without an alternative source of financial capital, many poor city dwellers scratch out a meager living in severe poverty. This incompleteness in the third-world private property systems has produced a “legal apartheid between those who can create capital and those who cannot.”³⁰

But entrepreneurial capitalism should not be defined so simply as the absence of cronyism. In its starkest terms, it is the steady and unceasing competition for the means of production within a framework of stable money, transparent governance by way of financial intermediaries, and a rule of law.

Competition for FDI puts pressure on countries’ administrations to adopt institutional arrangements that global investors recognize as desirable. The European Bank for Reconstruction and Development (EBRD) surveys companies doing business in various regions of the world. They complain about and report all types of problems, especially those involving the lack of objectivity on the part of the courts, rampant crime, customs house abuses and protectionist trade rules, excessive permit requirements necessitating bribes, labor regulations, and capricious taxation. These surveys help the EBRD decide how the business environment is changing in different parts of the world and influences the regional patterns of FDI.

And it is not only economists who have tried to digest the full dimensions of the cronyism problem. The world community is aware and is constantly in conversation about business conditions in one region or another. The corruption index business has become important in guiding the size and direction for coveted FDI. There is a genuine global consensus that the best way to attract FDI to a region is to minimize the perception of corruption, and that mostly means creating a professional civil service that performs its duties without soliciting bribes and negotiation kickbacks.^{31–33}

A number of studies indicate that in places in the world where entrepreneurial capitalism has been allowed to root, real wages have risen, often dramatically so.^{34, 35} In a world of open markets and transparent capital markets (of which I shall have more to say later), a “Kuznets-Baumol convergence” of living standards effectuated mostly by the sharing of commercial technology is evident on a global scale.^{36, 37} Other measures of human development in regions where FDI is evident, such as those measures systematically recorded by the United Nations Development Program, also tend to show a dramatic and historically unprecedented rise, such as the average duration of life spans, the percentage of newborns surviving their first few years of life, and the number of women who recover in good health from childbirth.³⁸

Now let us turn our attention to the several enhancers of entrepreneurial capitalism that are within the reach of most regions of the world.

THE FIRST ENHANCER: A STABLE CURRENCY

The first enhancer of entrepreneurial capitalism is a stable and secure currency. By stable and secure currency, I mean an arrangement where the size and rate of growth of the money supply is kept out of the hands not only of demagogues and zealots but of normal democratic processes as well. This provisioning will not be enough to keep the purchasing power of the currency absolutely stable—a dubious policy objective in any case—but it will be enough to avoid the seven or eight huge hyperinflations that we experienced in the twentieth century.³⁹

By stable and secure currency, I also mean a set of financial institutions where decisions as to the size of the money supply and its rate of change are completely removed from the day-to-day political processes of winning over the financial support of special-interest groups. As a result, the level of prices remains mostly stable (or changes slowly) without producing radical surprises and massive short-term redistributions in purchasing power. Entrepreneurial capitalism flourishes best when the absolute price level does not rise or fall with sudden spikes and dramatic troughs. Despite the repeated claim that deflation is damaging to entrepreneurs and inflation is favorable to entrepreneurs, the evidence “fail[s] to support [the] conclusion that business firms gain through inflation.”^{40–42}

Under stable money, entrepreneurs are better able to distinguish relative changes in particular prices from changes in the overall purchasing power of the monetary unit. These relative price changes communicate important information about markets and the changing availability of resources, intermediate goods, and other goods and services. By reacting to these changes, entrepreneurs are better able to reshuffle resources and associated legal rights in response to the consumers’ preferences. Stable money removes one single source of confusion facing the myriad sorts of calculations that entrepreneurial groups need to perform.⁴³ Entrepreneurs also need information about changing relative prices in order to make mid-course corrections to their on-going business strategies and to engage in “capital budgeting.”

As long as the world’s population remains wedded to a currency that serves as both the medium of exchange and the unit of account and results from the loan-making activities of banks of deposit, some wise regulation of the money supply is needed for economic stability.⁴⁴ Such control amounts to removing decisions about both the size of the money supply and its changes from everyday party politics, perhaps through enactment of a constitutional amendment that cannot be easily avoided by simple majority voting.⁴⁵ In short, our first enhancer of entrepreneurial capitalism is a central-banking arrangement in which professionals maintain a tight rein over the currency.

In the twentieth century, the leaders of many Latin American, African, and other third-world countries engaged in political practices that have resulted in occasional hyperinflations but mostly high or chronic inflations. High inflation episodes are defined as inflation rates above 100 percent over a twelve-month period. Such episodes have occurred at least forty-five times in more than

twenty-five countries during the period after World War II.⁴⁶ The twentieth century is filled with case studies of third-world countries puffing up the money supply as a way of funding government programs in the absence of real gains in productivity. Some groups get wealthier while others get poorer. As a general rule, inflationary episodes in which the purchasing power of the currency plummets are typically caused by government budget deficits, followed by the accommodations provided by the local central bank to the political authorities.

Arthur Lewis suggested that under special circumstances when there is what he called unlimited labor, price inflations can have the beneficial effect of creating productive capital. In later writings, Lewis recanted. He warned that "a big inflation is a horrible experience and [the inflation] is too heavy a price to pay for achieving in five to ten years changes which could be achieved in fifteen to twenty years with only a moderate increase in prices."⁴⁷

I adopt the recent conclusion of Stanley Fischer and others that there is abundant evidence that high inflation is bad for growth. While the debate over the mechanisms and causality are far from being resolved, the negative correlation between high inflation and macroeconomic performance is clearly there. So at the very least, the old idea that in some sense inflation may be good for growth or is perhaps an inevitable part of the growth process should remain buried in the cemetery of harmful policy ideas.⁴⁸

Not surprisingly, entrepreneurial capitalism has *not* gained a secure footing in many third-world nations. Democracy and popular voting often create formidable barriers to entrepreneurial capitalism. The popular political party that has been elected typically promises some impossible program of subsidies to households and businesses while it is at the same time committed to lowering both taxes and the tax rate. The result is a burgeoning government budget deficit that somehow must be financed.

The typical inflationary scenario plays itself out more or less as I now describe. The government budget deficit is financed by selling bonds to the general public, to foreign investors, and to the depository banks themselves. The banks value the government bonds not only for the interest income that they are expected to provide but also because they provide lawful backing for new loans and credits to private borrowers. This is the familiar fractional-reserve banking principle. The increased lending of the banks in the aftermath of large bouts of government budget deficits contributes to a surge in the cash balances held by the nonbanking public. As the public seeks to reduce these cash balances, product prices and the prices of stocks and bonds rise. This is the beginning of an inflationary process. With higher prices, the creation of new money and bank deposits start to accelerate further as investors realize that now they genuinely need more bank credits in order to complete their projects. The familiar accelerating inflationary spiral is underway.⁴⁹

When foreign governments or international banks purchase the bonds, they are actually helping the desperate government slow down an inflation process already underway, but they do so by obtaining assets denominated in

a deteriorating currency. When the inflationary process comes to a halt, the debtor-government reevaluates the currency (downward). This helps the country rid itself of the debt, but makes the international lending community recover only a fraction of the real purchasing power that they originally provided as loans. A disgruntled group of foreign investors is much less likely to engage in the FDI that is so important to rising living standards in a region with a deteriorating currency.

The recent efforts of international lending agencies such as the International Monetary Fund (IMF) to tie the needed loans of foreign exchange to the fulfillment of promises on the part of the governments to follow a more prudent balanced budget course is a logical response to the dangers of democratic politics as I have described them here.⁵⁰ These conditionality loans are a strategic device to take the heat off the budget-minded politicians and especially the tough-minded central banker.⁵¹ When the political parties clamor for easier credit and inflationary finance, the central banker need only point to the IMF and complain about how the IMF's tough love has tied his hands, making excessive bouts of burgeoning inflation now all but impossible.

Such austerity requirements are immensely unpopular among many groups of people, including many economists who object to putting the requirements of entrepreneurial capitalism ahead of the short-term interests of workers and the poor.⁵²⁻⁵⁴ It is never quite the right time to end a severe inflation by stopping the money supply process "cold turkey," but that is what must be done.^{55, 56}

The breakdown of the Russian currency in 1998-1999 is a case in point. During the "shock therapy" days of the early 1990s, the Russian government was supposed to cut the subsidies to the SOEs. But these so-called shock therapy recommendations placed the local politicians and the managers of the SOEs in positions that were impossible to sustain. The state subsidies continued. The Russian money supply grew at an accelerating rate as these monetary credits were provided. The state budget doubled and tripled, and an inflationary process was underway. In 1998-1999, the Russian currency collapsed. By January 1999, the ruble lost over 45 percent of the purchasing power it had over global currencies only six months earlier.^{57, 58}

Time and time again, historical examples of inflationary processes suggest that the resort to inflation can "band-aid" structural problems in the economy only for short periods of time. International borrowing and credits are short-run (mostly) foreign policy expedients by which the world economy tries to stabilize the existing government for a variety of important strategic reasons.

We may lay it down as a rule subject to few exceptions that the first enhancer of entrepreneurial capitalism is a monetary system that separates the Central Bank policy about the management of the money supply from the political vicissitudes of democratic parties and government policies designed to reward special interests.

After countless episodes of high inflations and some hyperinflations in the twentieth century, there is a genuine consensus among political leaders and a

large number of economists that regional banking systems with a framework that permits multiple expansions in the money supply, broadly defined, need to be managed by independent central bankers.

According to John B. Taylor—who is widely praised for his Taylor rules of monetary policy—“a good monetary policy rule is one in which the fluctuations of actual inflation around a target inflation rate are small.”⁵⁹ That result will enhance entrepreneurial capitalism.

THE SECOND ENHANCER: A TRANSPARENT AND EFFECTIVE FINANCIAL SYSTEM

The second enhancer of entrepreneurial capitalism is a strong and largely transparent financial sector. On an international or global basis, foreign investors compete with each other and also domestic venturers to retain control and/or obtain control of the means of production. Once in control, they often use these resources and other assets to satisfy the most urgent preferences of buyers, as communicated to them by market prices.

A financial sector helps facilitate these transactions and make them profitable, especially when foreign investors have access to equity markets and the equity markets are reliable in providing liquidity and transparency about the underlying investments. In its simplest terms, financial intermediation is about middlemen who bring together borrowers and lenders. In areas that allow private property and the formation of firms, it is about starting businesses and monitoring their operations. Financial intermediation aids in a more efficient allocation of financial capital. According to Khan, raising a region’s level of financial development (as indicated by the ratio of the sum of total market capitalization and bank credit divided by the GDP) can raise the per-capita GDP growth rate by as much as 2 percent.⁶⁰ That would mean a doubling of the per-capita GDP every thirty-six years. Other empirical studies corroborate Khan’s findings.⁶¹

But the financial intermediaries do more than broker deals between lenders and borrowers. They clear and settle payments between regions, and this is especially important when the regions employ different currencies that are themselves bought and sold on international markets. In addition, the financial intermediaries provide devices to help managers manage risk and therefore indirectly help protect investor returns. Financial institutions authenticate financial information and provide information to the owners that they need to keep managers honest and their interests strictly aligned with those of the business owners. When the owners wish to exercise their rights and replace the existing managers with another group of managers, financial intermediaries commandeer that governance process as well. Finally, a global financial system provides investors with reliable information about assets and companies that they manage assets so that the much coveted FDI can proceed seamlessly from one international location to the next.⁶²

How can a trading system be transparent about financial matters without a reliable and sensible financial reporting system? Here is where the auditors, accountants, business consultants, lawyers, expatriate agents on location in distant regions of the world and other analysts make their substantial and important contributions. They are an essential and important part of any financial system that monitors investment projects at great distances away from the owners. In order to induce investors to purchase shares in companies that carry on their principal activities in offices that are in some cases thousands of miles from where the investors themselves work and live, the investors need to have access to timely, reliable and especially truthful information.

Of course, there is one major drawback toward liberalizing financial markets. Sudden panic selloffs and herd-like efforts to dump one region's currency (and financial assets) promote a level of currency volatility that some have found to be quite intolerable.⁶³ The spate of financial crises and capital flights during the second part of the twentieth century wreaked havoc in many developing regions. Financial panics such the ones that plagued Thailand during the 1990s, Latin America in the 1980s, and Russia in the 1990s have become a worrisome feature of globalization and a frequent source of discussion among the world's political leaders. A sudden collapse in asset valuations leads almost immediately to an erosion in the value of the collateral on which most access to foreign capital depends.⁶⁴ The declining value of collateral snowballs into a genuine business crisis with massive hardship and a loss of jobs.

There are major costs associated with liberalizing financial markets but the only sure way to avoid those costs is itself "more costly still." A region like North Korea can withdraw completely from the international financial network. North Korea is a region that has largely managed to accomplish just that.

But North Korea is also without to the benefits of FDI, and its miserable living standards rival those of the failed states in Africa and elsewhere.⁶⁵ The benefits associated with the liberalization of financial markets far exceed the costs. According to Eichengreen, "[t]here is overwhelming evidence of the positive association of financial development with productivity growth."⁶⁶

Certainly, Russian reformer Anatol Chubais understood the importance of FDI to the future of the Russian economy when he embarked upon the massive voucher privatization of more than 3000 SOEs in 1991–1992. Vouchers were sold through the banks for the nominal payment of 25 rubles, and each citizen was given 10,000 rubles worth of vouchers to bid at the auctions that were planned for later that year. Millions of Russians participated in the privatization scheme, although most of the common people purchased their vouchers and quickly resold them to investment groups that intended to buy into these newly privatized companies.⁶⁷ The vouchers were used to compete for the common voting shares in the former SOEs. Privatization was completed in less than two years and was not without its intrigues and abuses.⁶⁸ The privatization effort in Russia was quite dramatic despite the fact that the hard-line mayor of Moscow and his cronies refused to participate in the voucher privatization scheme, preferring cash sales of SOEs.⁶⁹

The spontaneous privatizations and cronyism of the Gorbachev and Yeltsin eras are constant reminders of how privatization can make the unscrupulous wealthy (Goldman 2003).⁷⁰ But now that many SOEs are in the hands of what some call a “kleptocracy,” it is not very clear what can be done. To try to reverse the privatizations and conduct investigations about the past has its uses, but it is terribly bad for business. If the whole point of the privatizations is to raise living standards, then it is best to look toward the future. Those in control of the means of production either know how to create value or do not. Strengthening financial intermediation and reforming the bankruptcy system in Russia to protect the rights of creditors are two checks on kleptocratic behavior. If the oligarchs cannot manage their prizes then it is time to remove them as managers and owners through the operation of the law.

Part of the solution to what is termed a corporate governance problem is a transparent financial system that provides accurate information about management’s salary packages and their business accomplishments, and helps set up an independent board of directors that is responsive to the investors.⁷¹ Managers in transition economies need to be reminded that they no longer work for politicians and ministries but now owe a fiduciary duty to their owners (the shareholders). Under entrepreneurial capitalism, managers must manage the assets in the best interests of the owners of the company.

Financial intermediation promotes economic growth and development. This is an old established but important idea in political economy. Extolling the virtues of the middleman banker is something economists do, but they are largely alone when they do this.⁷² According to Amy Chua, in many parts of the contemporary world economy, ethnic minorities specialize and supply these same middlemen services. The Chinese in Indonesia, the Lebanese in West Africa, and the Jews in certain parts of Eastern Europe are discussed in Chua’s lively account of what she calls free market democracy.⁷³ Unfortunately, it is still the common view that middlemen are despised on the false grounds that they “do not produce anything real at all.”

This genuine hatred of the middleman has a long and complex history and would be just history were it not that the flaring up of similar rebellions against middlemen minorities in other places such as Southeast Asia and Africa suggest that we are dealing with a deeply rooted manner of thinking that must be rooted out if entrepreneurial capitalism is to someday become commonplace in the world.⁷⁴ Deng’s mouse-catching cat is not likely to make its home in regions that ignorantly condemn speculators and despise middlemen and the profits they make.

In China itself, FDI has played an amazing role in raising living standards. The many factories in China are owned by Chinese nationals but managed by curious combinations of local managers and foreign investors brought together by financial intermediaries. Commenting on the sensational record of international investment in China, Huang argued:

by any measure, China’s record of attracting FDI is impressive. During many years in the 1990s, China claimed to be the world’s second largest recipient of FDI, after

only the United States. Between 1992 and 1999, FDI flows into China accounted for 8.2 percent of worldwide FDI and 26.3 percent of FDI going to developing countries.⁷⁵

Huang explains that these hybrid enterprises account for up to 10 percent of all of China's exports. That, coupled with another nearly 20 percent of exports due to FDI, makes capitalist China a major player in world trade and helps explain the region's amazing march from a less developed to a rapidly developing economy.⁷⁶

Global financial intermediation facilitates a huge and finely wrought division of labor. By participating in a virtual global division of labor, and enjoying the benefits of specialization and industrial districting, living standards rise.⁷⁷ These patterns of specialization and exchange are often greatly influenced by interregional or what is more commonly referred to as international trade. It is now time to turn to our third enhancer of entrepreneurial capitalism: free trade and the removal of trade barriers.

THE THIRD ENHANCER: FREE TRADE AND THE REMOVAL OF TRADE BARRIERS

The third enhancer of entrepreneurial capitalism is trade liberalization and the removal of trade barriers. The word *free* means free of tariffs, other kinds of border taxes, subsidies, and special interest regulations, especially regulations about labeling, product design, and health and safety. Despite the positive language used to describe many of the health and safety regulations, some are purposively designed to protect local industry from foreign competition. They are often defensive devices employed by crony politicians and their patrons to redistribute income and perpetuate special interests, rather than promote the creation of new wealth.

Common markets and free-trade areas are enjoying increased recognition and support, but maintaining these arrangements requires an elaborate system of court proceedings and negotiation. The World Trade Organization (WTO) was set up in 1994 to continue the liberalizing efforts of the older GATT Agreement and help negotiate successive rounds of tariff reductions, the removal of many trade barriers and a continuation of the trend since World War II of "forging a more open trading system."⁷⁸ While hailed as a qualified success by many experts, the WTO has run up against the roadblocks created by special interests who wish to saddle this well-regarded trade negotiation organization with a vast agenda of ill-considered social reforms.⁷⁹

The mutuality of exchange is a profound reason why men and women seek society and generally avoid isolation. People plan their actions so as to substitute a more satisfactory for a less satisfactory state of affairs, and trading has long been a powerful and universal feature of social life.⁸⁰ The shared idea of mutual gain

through trade inspired a cosmopolitan belief in a world of open markets, commerce and peaceful exchange. These ideas are so powerful that many of those economists who have carved out exceptions to the free trade principle—those who have advocated protectionism over free trade—have advocated these exceptions to the free trade principle for only short periods of time.⁸¹ Again, even for many avowed protectionists, free trade and the removal of trade barriers remain a distant but desired goal.

When imports substitute for domestic goods, jobs in the domestic import-substitute industry are indeed lost. By specializing and devoting resources towards the production of some other product or service in which the region has a comparative advantage, the traders in both regions obtain more goods and services than would otherwise be obtained had they avoided international trade completely. This result is termed the principle of comparative advantage or the law of human association.⁸² The latter terminology highlights the ubiquitous presence of trade in our global economy both past, present and future. According to Jones:

[T]he arguments in favor of trade are compelling. Trade means more choice and better-quality goods and services; trade means economic progress, access to new technologies, and higher incomes. Trade means more international investment and more stable relations with other countries, as they become more independent. . . . Most government leaders know in their hearts that trade is good.⁸³

Still, when the gains from trade are framed in terms of fewer inputs producing a given level of output, the free trade argument suggests that the opening of markets will produce some job loss. This fuels a clamor from protectionists to save those jobs.

Protectionism tragedies include the experiences of Mohandas Gandhi's ideas about economic development in India, in which textile machines were literally banned in favor of traditional handlooms and household handicrafts. Gandhi's palliatives are surpassed only by Mao's delusional shift toward self-sufficiency. Mao's self-sufficient communes, which made worthless steel and backyard roasting pits during the Great Leap Forward of the 1950s, testify to the severe economic hardship and deprivation that results from trying to preserve jobs and perpetuate community practices by depriving any group of people of the benefits of trade and specialization.⁸⁴

The opening of markets, trade, and specialization not only promotes what are termed static gains from trade but also spark a dynamic entrepreneurial energy that is associated with the great variety of the cultural and scientific exchanges that often accompany trade on a global basis. It also provides a channel by which new ideas and cultural innovations become diffused around the world.^{85, 86}

Frankel and Romer investigated whether the statistical evidence is consistent with the claim that trade causes economic growth and development. Their conclusion was that trade does promote economic development. According to the Frankel and Romer study, a 1 percent increase in the ratio of traded goods and

services to the GDP causes the per-capita GDP to rise from anywhere from half a percent to as much as 2 percent.⁸⁷ Absence of any reason for believing that this dynamic connection between trade and the growth of living standards has ended for the world, the only responsible policy position is to advocate and promote free trade and the removal of trade barriers.

Of course, statistical correlation is not causation. It makes sense to figure out by what channels trade affects economic growth. Grossman and Helpman have famously carved out an exception to the free trade principle for regions that engage in research and development.⁸⁸ If a country were to have a comparative advantage in undertaking R&D and its government were to interfere with free trade by providing a subsidy, its “growth rate would accelerate.”⁸⁹ Aside from this theoretical possibility, it can be laid down as a general rule that “economies that commit to less market intervention tend to attract more investment funds.”⁹⁰ It is also the case that more open economies tend to be more innovative, because of greater trade in intellectual capital (information, ideas and technologies, sometimes but not only in the form of purchasable intellectual property, and so on). Trade liberalization can thereby lead not just to a larger capital stock and a one-off increase in productivity but also to higher rates of capital accumulation and productivity growth in the reforming economy because of the way reform energizes entrepreneurs.⁹¹ This is the third of the great enhancers of entrepreneurial capitalism.

THE FOURTH ENHANCER: RULE OF LAW

The fourth enhancer of entrepreneurial capitalism is a viable and functioning rule of law. By rule of law, I mean a body of norms and institutions that (1) are widely known in advance to the inhabitant of any region, (2) are adhered to in practice and reinforced by custom, peer pressure, and the force of law, and (3) provide the bedrock for an entrepreneurial capitalism in which private property and other legal rights are reshuffled constantly in new and more valuable combinations.⁹² Furthermore, these rules and norms must be replicated through the mechanisms associated with family and schooling. In regions that encourage entrepreneurial capitalism, the rule of law typically protects individuals against the demands of religion or the commands of the patriarchal family clan. Some balance must be maintained between the important notion of individual autonomy and the importance of the family. This tension between patriarchy and individual autonomy remains difficult today. The call for human rights challenges traditional societies, especially third-world countries where patriarchal norms and rules dominate and place women in constant jeopardy.⁹³

A case can be made that regions that protect individual autonomy and protect individuals against the coercive edicts of the family also tend to encourage precisely those sorts of business activities that we identify with rising living standards. Mobilizing the “other half” of the work force by education and job

training operates exactly as if a massive discovery of a new resource were found within a region.

With individual autonomy must also come a clear and transparent property rights system. The right to exclude others from land or from staking claim to some vital resources such as oil or diamonds is justified when it produces beneficial consequences for countless numbers. This point is an important part of the classical liberal tradition in political economy. The private ownership of natural resources is conditional on the effects it has on the economy as a whole and perhaps on humankind as a whole.⁹⁴

In addition to land and other natural resources, there can be property rights in machines and other industrial assets, trademarks, service marks, and inventions of all kinds, even including new forms of life such as microorganisms.⁹⁵ Many of these property right arrangements encourage creativity, experimentation, and entrepreneurial venturing. When the dynamic forms of capitalism produce products and services on a massive scale, it is the great masses of the civilian population that enjoy the benefits.

Consider the patent system used in the United States. This patent system is an examination system designed to award legal monopolies to genuine inventors of useful and nonobvious inventions. In early modern times, patent systems such as the one adopted by Venice in the fifteenth century were simply used to attract industry to a region. The owner of the patent did not have to be the inventor. In modern times, patent systems are designed to encourage research, development, and product safety testing and design. To some it appears as if patenting is just another variant of that crony capitalism. Why should inventors be awarded such a privilege by the state when other businesspeople find their markets challenged by competitors with related products and services?

As a matter of law, the patent system provides that an inventor will be awarded with a patent (1) because his invention falls within the subject matter of the local patent system and (2) because he publishes and reveals how his invention works to an educated segment of the general public. These legal criteria make no mention of the applicant's skin color, gender, religious preferences or country of origin.

With minor exceptions (having to do with military research and the like), inventors must publicly disclose their inventions on a level that can be understood by others in the industry or trade. If the inventor does his part, he or she will be given an exclusive right to use that invention in the region over which the patent authorities have legal authority. In the case of the United States, the patent monopoly will be upheld in all fifty states and all U.S. territories for twenty years from the date of filing for the patent.

With a patent, the inventor (or his assigns) can stop others from using this invention. This is the right to exclude, and with this monopoly power he can hope to make larger profits. His patent monopoly allows him to exclude those who wish to use the invention without his knowledge or authorization. The larger-than-normal profits are needed to reimburse the pioneer innovator for his costs involved in making the invention practical and in some cases commercial.

Each patent owner faces the risk that others will work around his original patent and come up with alternative solutions to the same problems that the patent invention helps to solve. Some inventions are naturally protected from substitute inventions. One example is a drug compound with a definite molecular structure. Some drug compounds are so unique in their impact on the human body that their owners worry very little about competition during the life of the patent.

Once an innovation is brought to market, it would be in the consumers' short-term interest if the patent itself could be declared invalid and the invention could be used free of charge by all who choose to do so. Other competitors could compete and keep the price down to a minimum competitive price. Unfortunately, such an abrupt repudiation of the patent would, like all confiscation systems orchestrated by government, send an ominous signal to future investors. Should they invent something enormously useful and profitable, they run the risk that the public authorities will renege on the patent promise and completely eliminate their property rights to the invention.

This issue has fueled a heated debate between what are sometimes called the North countries (by which are meant developed nations) and the South (by which are meant the developing regions of the world). The extension of patent rights from one region to the next is often greeted by hysterical calls for social justice and the end of "multinational profit-mongering." Since the southern regions are often poorer regions, the patent owner should price lower in those regions, especially when an important drug compound is being sold that is calculated to ease human pain and prolong life.

The Herculean difficulties with this differential pricing are many and great. First, it requires that the manufacturer sell the same product for two different prices in two different markets. Immediately entrepreneurial middlemen arbitrage the markets and bring the prices into balance. Again, differential pricing may interfere with the profits and capital gains that were originally counted on when making the initial investments.

Trademark protection is another property rights issue that helps buyers identify the source or company that initially produced the object on the market is eligible for monopolization. The owner of the mark can work hard to make the mark more valuable by improving the quality of the product itself. A valuable mark can be leased to others by way of a franchise contract. A property rights system that is all about self-interested entrepreneurs competing for a good reputation among their buyers not only raises the value of the mark but also raises the level of competition.

Property rights are important for other reasons as well, as Ronald Coase's revolutionary Coase theorem made clear.^{96, 97} When property rights are well defined and clear and the costs of entering into, monitoring and enforcing contracts are tiny, it is possible for traders to contract around and eliminate "negative externalities." Coasean bargains are struck, and the allocation of resources is improved. Economic efficiency is improved. But something can be possible and not profitable. It is more likely to be both possible and profitable when a rich

body of contract law exists to keep the transaction costs of entering into, monitoring, and enforcing contracts low. When contract law is weak and transaction costs are high and technological monitoring is too rudimentary or expensive to use, then a more forceful government solution may be required.

In many third-world countries, especially in Latin America, the poorest people own property. They own their houses, furnishings, and plots of land. The great inhibitor of entrepreneurship is that there is no public registry anywhere that makes these definitions public and available to creditors in a usable form.⁹⁸ Consider the small fledgling entrepreneur who is trying to finance a business but cannot use his property as collateral because there is no registry of deeds institutions and credit rights laws that would make such a lien-creating system possible. This entrepreneur will fail to move much beyond the conceptualization stage of the business plan. Financial intermediation cannot develop to its fullest extent in these regions because the property rights arrangements are still too primitive.

Of course, such an information system and the technology to retrieve that information is costly to set up and maintain. Still, it is De Soto's claim that it is more costly to try to make do without such a system. In Peru and other places, the absence of a titling and recording system of property has condemned most of the community to poverty and costly off-the-books commerce. Whatever entrepreneurial capitalism flourishes in these regions, it is confined to tiny areas and leaves the great masses of the people out in the cold. It is as if capitalism only exists "under a bell jar" while the poor and downtrodden watch all that is happening with envy and regret.⁹⁹

In Lima, De Soto and his group of investigators counted that it took 289 six-hour days to obtain the licenses and permits needed to start a garment workshop. There are, however, grounds for optimism. There are readily available lists of nations that rank regions according to the degree of transparency in that region. In the "Corruption Perceptions Index" for 2003, Peru ranked in the middle, 59th from the top. The most corrupt region for investors were ranked 132 (Nigeria) and 133 (Bangladesh), respectively.¹⁰⁰ Places where bribes must be paid on a daily basis and nothing can be accomplished quickly and decisively earn the reputation as nontransparent places in which to conduct business.¹⁰¹ Those who might otherwise consider FDI get frightened and turn away from these areas. Living standards rise slowly in these regions and perhaps not much at all.

According to Pranab Bardhan in his much-cited survey article on corruption and its impact on economic development, "rewards to entrepreneurship and productive investment relative to [monopoly]-seeking investment rise when there is sustained [economic] growth."¹⁰² The great challenge then is attract the FDI that helps jump-start genuine economic growth in any region. It is a genuine chicken-and-egg problem for policymakers.

Slowly but progressively, the politicians, desperate for FDI, look for ways to improve the business environment in their regions. The rule-of-law idea consists of impersonal laws that are not enforced selectively by the government to serve their own purposes or pacify special interest groups.¹⁰³

Bankruptcy law regimes range from those that protect creditors to those that do almost the opposite by keeping insolvent debtors in possession of the business assets and away from the otherwise rightful claims of the creditors. In regions where business is subject to sudden and unexpected downturns that can be financially devastating but fundamentally short-lived, special interests lobby for these debtor-rights bankruptcy systems as a means of stabilizing jobs and maintain ongoing communities.

I have argued that debtor-rights bankruptcy systems are not appropriate for economies making the transition from central-planning socialism to entrepreneurial capitalism.¹⁰⁴ If, after privatization, the wrong kleptomaniac managers are in control of the means of production and able to get control of the revenues associated with these assets, the owners must take precautions that the managers do not steal away company assets any more than they already have by overpaying themselves or by selling the moveable assets to shell companies under their control. It is critically important that the creditor (and shareholders) has reliable and powerful mechanisms to get control of the company assets that they nominally own and replace the corrupt managers with more trustworthy people.¹⁰⁵⁻¹⁰⁷

In Russia, for example, a stricter creditor-rights system is vital so that the new shareholders do not lose their investments. Creditors constantly complain about the impossibility of enforcing court judgments in Russia and the tragic consequences of their inability to shut down corrupt privatized firms in order to auction off their valuable assets and restore to creditors what is owed.¹⁰⁸ In transitional economies, the financial intermediaries need the backdrop of an intelligible bankruptcy law to prevent mismanagement and worse. Such a bankruptcy system must err on the side of creditor rights, giving the creditors possession of the means of production so they can preserve their asset property and appoint more faithful and responsible managers.

Certainly, the existence and continual maintenance of a rule of law that protects the autonomy of individuals and defines and clarifies property rights in ways that allow property to serve as collateral and makes rent seeking difficult is an important and valuable collection of cultural assets in any region of the world seeking to raise the living standards of great numbers of people. Such a rule of law must be more than a bunch of words on paper; it must be reality, and not a trunk full of rhetorical stratagems that politicians can pull out to punish political dissenters under the pretense of law. A rule of law expanded and properly understood is another enhancer of entrepreneurial capitalism that is well within the reach of many regions of the world.

CONCLUSION

This chapter has advocated a variant of capitalism that I have named entrepreneurial capitalism. Entrepreneurial capitalism is about a peaceful competition for the ownership and control of the means of production that avoids the excesses

and human rights abuses of central-planning socialism. Entrepreneurial capitalism takes shape when several enhancers of entrepreneurship are present. Many of these enhancers do not arise spontaneously, and even if and when they do, they still require the protection of law and often the imposition of a constitutional structure to maintain them over time. Here the state does have a definite responsibility to play in creating the conditions for economic development but has also a duty to leave the restructuring of the means of production to the market mechanisms within the framework of a rule of law.

Entrepreneurial capitalism is a radical economic system because it civilizes and legitimizes the radical struggle for the ownership and control of the means of production on almost an hourly basis, but always within a legal framework, in order to make possible the large-scale production of goods and services. These goods and services are both massively produced and massively distributed. That is how living standards rise. Many of these innovations have the dramatic effect of altering the manner in which we work and live.

Although ideological orientation will always play some part in inspiring scientific investigation and scholarship, it is important to point out that my policy recommendations are not only the result of my personal ideological commitment to individual liberty and human rights. There is substantial empirical support for the causal connections I refer to here. Most importantly, there is an ethical component to the entrepreneurial capitalist program, because many of these enhancers are largely consistent with the broader Western commitments to individual autonomy—the idea that individuals are competent to make moral choices without being ordered to do so by authority—and also to the important norm of individual economic liberty. Stated simply, the idea is that individuals should be protected to pursue their own programs and agendas as long as they are respectful of the rights and privacies of other individuals doing much the same thing.

I write in the shadow of large crowds gathering on the streets, bad-mouthing globalization and often making the case that somehow it is FDI that impoverishes people, degrades women and children, and promotes gender violence. The evidence suggests that the opposite is the case. Traditional society practices that place the family and the interests of the family patriarch above those of the individual are the worst offenders against individual autonomy and human rights. The antiglobalization demonstrators hoot and holler but mostly fail to persuade.^{109, 110} All the hoots and hollering have not produced any learned arguments or reliable statistical evidence in support of their arguments. Lacking a credible case, entrepreneurial capitalism still remains the best cat for catching the poverty mouse.

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10

Why Entrepreneurship Is a Regional Event

Theoretical Arguments, Empirical Evidence, and Policy Consequences

Rolf Sternberg and Hector O. Rocha

Entrepreneurship and new firm formation processes have become en vogue in economics, in regional science, and in economic geography since about ten years, as well as in many applications of local economic development policy. Despite recent studies on regional variations in entrepreneurship, the contextual approach to entrepreneurship has long been discussed primarily from the perspective of the national economy.¹ This chapter offers theoretical arguments and empirical evidence to support the hypothesis that entrepreneurial activities are to a large extent a “regional event,” with especial emphasis on a sectoral–regional cluster perspective.² We argue that subnational or regional determinants are much more relevant than national or supranational framework conditions for both the determinants that have an impact on an individual’s decision to start a new business and the determinants that exercise an influence on a start-up’s success (i.e., survival and growth). In particular, we argue that entrepreneurship is a local phenomenon, because people usually start businesses where they were born, have worked, or already reside, which explains why nascent entrepreneurs are very well established in their careers, life, and communities.^{3–6} Therefore, a region, especially if defined at the substate level, rather than a nation, seems to be a better unit to understand the most proximate factors affecting entrepreneurship.⁷

This chapter begins with theoretical arguments, stressing the regional relevance of entrepreneurship. In the next section, some empirical analysis, based on data from the Global Entrepreneurship Monitor (GEM) and from the Regional Entrepreneurship Monitor (REM), compares German regions in terms of entrepreneurial activities and attitudes. Finally, it will be discussed what might be the role of regional policy in terms of (regional) entrepreneurial activities. Again,

entrepreneurship is discussed in relation to the cluster approach, a highly popular policy measure in numerous German and European regions.

THEORETICAL ARGUMENTS FROM A REGIONAL CONTEXT PERSPECTIVE

There is currently a range of theories and approaches which attempt to explain start-up activities and their success (or otherwise). The analysis of start-up activities and the propensity to launch new firms was for a long time dominated by approaches concentrating on the supply side and personal factors relating to the entrepreneur, with the emphasis, in particular, on the motivation and motives for launching a company.⁸ Those factors only stood up to empirical analysis to a limited extent, which is one of the reasons why demand and environmental factors (including regional factors) have gained in significance in recent times. This is indicative of the fact that personal factors are not enough to explain the entrepreneurship event; a wide range of contextual factors are becoming more relevant. In effect, the consideration of environmental factors in a broad sense, including spatial proximity and features of the regional environment, is becoming evermore prevalent and popular. Entrepreneurship is a “generically social, a collective phenomenon influenced by, among other determinants, the regional environment.”⁹ From a theoretical standpoint, the analysis of the contextual determinants of entrepreneurship, defined as the creation of organizations, is captured in the context- or demand-side approach to entrepreneurship.¹⁰

Of course, contextual factors are not restricted to the regional level. However, despite recent studies on regional variations in entrepreneurship, most studies offering theoretical arguments are developed for the national level of analysis, ignoring factors explaining the interregional differences within a particular nation. With respect to Germany, the dimensions of a regional environment lie clearly below the level of the sixteen federal states, and clearly above the level of the living or work space of a potential entrepreneur (see also the third section for some figures). Some initial research is showing that there is an impact of different regional levels on entrepreneurship.^{11, 12} This demarcation of a region is in concordance with the understanding of a regional environment, in which the majority of potential entrepreneurs ponder and execute start-up plans. The high degree of spatial immobility of entrepreneurs has been documented in numerous empirical studies and is evidence for the influence of the regional environment (which also includes the majority of personal affiliations) on start-ups.

The relationships between entrepreneurship (defined as activities to create new small firms) and the region is an interdependent one, and it can be described by a system of causes and effects (see Figure 10.1).

The importance of (1) macro, (2) micro, and (3) regional determinants of regional start-up activities varies from factor to factor. As for macro or supraregional factors, most important among these are the cultural, social, political, and

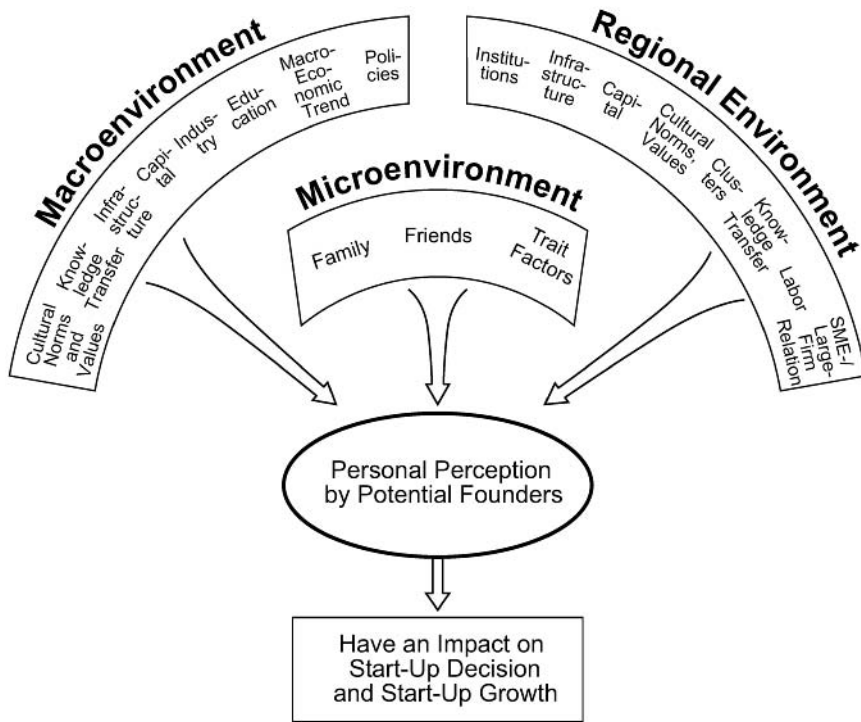


Figure 10.1. Causes and effects of start-up activities in regions. *Source:* Adapted with minor changes from Sternberg (2004a), p. 22.

financial conditions as well as the system of education and research, the infrastructure, and the economic structure. An explicit component of the macrostructure is the existence and dominance of individual industries within the relevant regions.¹³ Empirical evidence for the high relevance of this macroenvironment can be found for several U.S. regions.¹⁴⁻¹⁶ As for the micro level, social environmental factors include, in particular, the social and professional backgrounds and the egocentric networks of the potential entrepreneurs. These elements can also be shaped by primarily regional (e.g., private networks) or primarily supraregional (e.g., a large number of professional networks) influences. In addition, person-related factors include entrepreneurial motivation (push versus pull factors), demographic factors (age and sex), as well as personality traits (e.g., efficiency and the willingness to take risks).

Each individual filters the environmental signals he or she receives. The totality of individual entrepreneurial activities in a particular region determines the entrepreneurial activity of the region. As a matter of principle, macro and micro factors are operative in all nations and in all regions of a nation. They have a clear regional dimension, however, because they come into play to varying degrees and

thus operate differently in different regions. The high degree of spatial immobility of entrepreneurs in academia is correctly interpreted as one piece of evidence for the importance of the regional environment for start-ups (see for entrepreneurial differences in German regions).^{17, 18} More generally, people usually start businesses where they were born, have worked (Boswell, 1973), or already reside.^{19, 20} In addition, nascent entrepreneurs are very well established in their careers, life, and communities, which foster the starting of new business anchored in a local environment.²¹

Regional–sectoral clusters (clusters from now on) are a special configuration of contextual factors within regions, which together with entrepreneurship, face high visibility among academics and policymakers, given their common historical resurgence and potential to retain and increase employment.²² Clusters are proximate groups of firms and associated institutions in related industries, linked by economic and social interdependences.²³

It is argued that clusters have a positive impact on entrepreneurial attitudes and entrepreneurial activities. Following the argumentation of Sternberg and Litzenger (2004), the probability that a person will start a firm within a certain region increases as a function of the number and size of incubator organizations within the region whose fertility is sufficient for the emergence of start-ups.²⁴ The development of already-existing start-ups also profits from a positive regional environment, which, in addition to the incubators (availability and attitude to spin-offs), hinges necessarily on an equally positive entrepreneurial climate. Within the scope of a self-augmenting process, for example, via role model effects of successful start-ups, and their interregional networking, clusters of start-ups may form regions, in which the creation and development of start-ups is economically more favorable than outside these clusters.²⁵ In general, the favorable climate on start-ups is a result of agglomeration economies and other positive external effects associated with spatial proximity, and can lead to a regionally caused self-propelling cumulative process.

The impact of clusters on entrepreneurial activity has been extensively documented elsewhere^{26–28} It is argued that clusters foster entrepreneurship by multiple factors, such as:

- Providing established relationships and better information about opportunities
- Lowering barriers to entry and exit
- Opening up niches of specialization due to the low degree of vertical integration
- Fostering a competitive climate and intense rivalry among firms that creates pressure to innovate due to the presence of direct competitors
- Providing role models and the presence of other local firms that have “made it”
- Capturing important linkages, complementarities, and spillovers from technology, skills, information, marketing, and customer needs that cut across

firms and industries, which is key to the direction and pace of new business formation and innovation

- Providing access to physical, financial, and commercial infrastructure
- Facilitating the spin-off of new companies from existing ones
- Reducing risk and uncertainty for aspiring entrepreneurs
- Providing a cultural environment, where establishing one's own business is normal and failure is not a social stigma.^{29–33}

Taking a more dynamic view, some authors argue that the start-up rate increases during the initial stage of a cluster and then decreases in a more mature stage. The reasons behind this process are different, though. Schumpeter (1934) argues that successful pioneering entrepreneurs remove the obstacles faced by entrepreneurial activity in its early stages.³⁴ This produces the “clustering of the followers” up to the point of eliminating entrepreneurial profit. Pouder and St. John (1996), referring to high-growth clusters in their origination phase of evolution, argue that clusters may be viewed as an incubator for start-ups and spin-offs.³⁵ At a later stage, congestion effects, mimetic behavior, and homogeneity in managers' mental models stabilize entry. Finally, organizational ecological theory argues that at low levels of organizational density, legitimization processes dominate, and therefore the net founding rate is positive. However, at high levels of density, competition processes dominate and therefore the net founding rate decreases.³⁶ Despite the strong initial empirical support for this argument, results differ according to the level of analysis at which the model is specified.^{37, 38}

It is important to note that the major arguments of the dynamic view of clusters analyzed earlier have been developed for only one industry, and taking into account only one dimension of clusters—that is, industrial agglomeration of economic activity.^{39, 40} The interindustrial, interorganizational, and network dimensions of clusters could produce different patterns of start-up evolution, which do not necessarily correspond to those described by organizational ecological approaches. In particular, it is important to distinguish clusters from industrial agglomerations, this latter defined as “proximate groups of firms belonging to the same industry or closely related industries that could potentially, but not necessarily, interact.”⁴¹ In effect, a review of the literature shows that different arguments underlying the impact of clusters on entrepreneurship could be put forward to make that distinction.⁴² If one distinguishes between clusters and industrial agglomerations, it is possible to argue that the former are better regional contexts than industrial agglomerations for fostering entrepreneurship.^{43, 44} The reason is that firms neither operate in an atomistic fashion nor interact with others based only on business network considerations. Any business activity is embedded in a broader socioinstitutional context, and therefore the economic dimensions or relationships cannot be separated from the socioinstitutional ones. When these socioinstitutional dimensions are not present, economic activity recedes. Interaction within clusters is driven not only by price

signals, but also by interpersonal and associational relationships among people and firms within the cluster. This interaction provides established relationships and complementary linkages, two differential mechanisms to start businesses that are not present in industrial agglomerations. Economic–sociological perspectives, such as the industrial district school, and the innovation and cultural–institutional approaches to clusters suggest that cluster effects are based on the intrinsic socioeconomic nature of clusters.

Summing up, determinants of regional start-up activities can be found at the macro, micro, and regional levels. We have argued that the most important factors are found at the regional level, given that most entrepreneurs start their business in their local communities, which makes entrepreneurial activity spatially immobile. Clusters make entrepreneurship an even more regionally based event, given their provision of a set of interrelated socioeconomic conditions that foster entrepreneurship at the local level. In particular, the geographically dense and bounded interfirm and institutional networks within clusters foster entrepreneurship, providing external economies, a competitive business environment, established relationships, legitimation processes, and complementary linkages that contribute to overcoming the liability of newness that new firms face.^{45, 46}

EMPIRICAL EVIDENCE FROM A REGIONAL CONTEXT PERSPECTIVE

The following argumentation is primarily based on data derived from two comprehensive research projects dedicated to entrepreneurship in regions (in Germany) and nations, and it supports the conclusion that the regional context is important to new venture creation.

The REM is a joint research project of the Institute of Economic and Social Geography, University of Cologne, and the Institute of Economics, University of Lüneburg, and is led by Rolf Sternberg and Joachim Wagner. It was funded by the German Research Foundation between 2000 and 2004; for further methodological information about REM, see Lückgen and Oberschachtsiek (2004).⁴⁷ The aim of REM is to present empirically based evidence for two questions:

1. How much does the level of entrepreneurial activity vary between ten German regions?
2. What makes a region “entrepreneurial”? What regional characteristics are related to differences in entrepreneurial activity?

The answers to both questions are crucial for understanding the value of regional context for entrepreneurial activities and entrepreneurial attitudes of individuals. The first question deals with the impact of the regional context on entrepreneurship: if levels of entrepreneurial activity differ significantly between

subnational regions, then region-specific contexts are important factors fostering entrepreneurship. The second question more deeply analyzes selected elements of the region as context: regions may differ in terms of economic attributes (e.g., the relative and absolute number of small and medium-sized enterprises [SMEs], the GDP per capita, the unemployment rate), but also in terms of social attributes (e.g., social attitudes of the inhabitants, norms and values related to entrepreneurship) and in terms of policies (do specific programs aiming at entrepreneurs exist?). All of them are theoretically able to influence the entrepreneurial attitudes and entrepreneurial activities of the individuals living in this very region.

Spatially, REM examined ten out of ninety-seven German planning regions, for which the results may be taken as representative. Within REM, three measures of entrepreneurial activity for each region are distinguished, calculated on the basis of the eighteen to sixty-four-year old inhabitants: the proportion of nascent entrepreneurs, the proportion of young entrepreneurs (or new businesses), and the total entrepreneurial activity rate (TEA). An individual may be considered a nascent entrepreneur based on three conditions: first, if he or she has done something—taken some action—to create a new business in the past year; second, if he or she expects to share ownership of the new firm; and, third, if the firm has not yet paid salaries and wages for more than three months. In cases where the firm already exists and the interviewee is the owner and he or she has paid salaries and wages for more than three but less than forty-two months, it is classified as a new business and the individual is classified as a young entrepreneur. The TEA rate is the sum of the two previous measures; those persons who qualify as both a nascent entrepreneur and a new business are counted only once, however.

In each of the REM regions and for both reference years (2001 and 2003), comprehensive population surveys and expert surveys were conducted. A random sample of 1,000 inhabitants was interviewed in the summer of both years, leading to a data set with 10,000 cases for each year. This questionnaire asked, beside other aspects, about a number of items related to entrepreneurial activities (e.g., whether the interviewee is the owner of a firm that is currently actively run by her or him, and whether she/he is currently engaged in starting an own business) and entrepreneurial attitudes and motivations. Second, detailed personal interviews were conducted with regional experts in each of the REM regions, followed by standardized questionnaires distributed to these and other regional experts.

REM is the regional (and German-specific) adoption of the concept of GEM.⁴⁸ The GEM is a research program that focuses on entrepreneurship as a major driver of economic growth. Before GEM was born, a fundamental understanding of the mechanism between entrepreneurship and national growth was far from complete. This was primarily due to a lack of cross-national harmonized datasets on entrepreneurship. The GEM research program, initiated in 1998, provides the required fundamental knowledge by assembling relevant harmonized data on an annual basis. The data has been assembled to facilitate cross-national comparisons in the level of national entrepreneurial activity; estimate the role of entrepreneurial

activity in national economic growth; determining the factors that account for national differences in the level of entrepreneurship; and facilitating policies that may be effecting in enhancing entrepreneurship.⁴⁹ Thirty-four countries were involved in the 2003 study (see www.gemconsortium.org for details and all country reports and global reports). Four types of data have been assembled for the GEM since 1999:

- Representative surveys of at least 2,000 persons between eighteen and sixty-four years of age in each GEM country per year (but at least 7,500 per year in Germany since 2001)
- Detailed personal interviews with national experts on entrepreneurial framework conditions in the respective country
- Standardized questionnaires completed by national experts in the GEM countries
- Standardized data from secondary sources assembled on each country

There are many parallels and differences of REM and GEM.⁵⁰ Both in GEM and REM research questions, methodological approach and aims, and the four types of data assembled for the assessments each year are similar. Although there are many parallels between GEM and REM, REM compares subnational regions instead of countries and provides more reliable information on German regions than GEM due to the larger sample groups used.⁵¹

In recent years, a large number of scientific publications on entrepreneurial activities in Germany and its regions have been published based on GEM and/or REM data.^{52–54} For the purpose of this chapter, it seems to be important first to describe the regional distribution of entrepreneurial activities in Germany, based on GEM data. Due to the large sample sizes, this is possible in Germany, when data from several years are pooled. Despite GEM primarily being a project comparing complete countries (not single regions), the pooling of data for various years enables us, at least for Germany, to compare subnational regions as well. Thus, region as a context can be investigated with GEM data too. Once sample size is large enough, GEM in contrast to REM has the advantage that all German regions are covered. Figure 10.2 focuses not on entrepreneurial activities in general (TEA) but on those activities that occurred due to a certain kind of motivation of the individuals. People become involved in business start-ups for a number of reasons, but the primary motives are related to opportunities or out of necessity. Opportunity entrepreneurship reflects the desire to take advantage of a business opportunity by creating a new firm or new venture focused on a particular market opportunity. Necessity entrepreneurship reflects the absence of work opportunities, which leads the individual to develop a new business out of necessity. In the adult population surveys, all those reporting business activity, including start-ups, were asked if they were involved to pursue a business opportunity or because they had “no better options for work.” The presence of these motives in the population is reflected in motive-specific TEA rates; that is, the

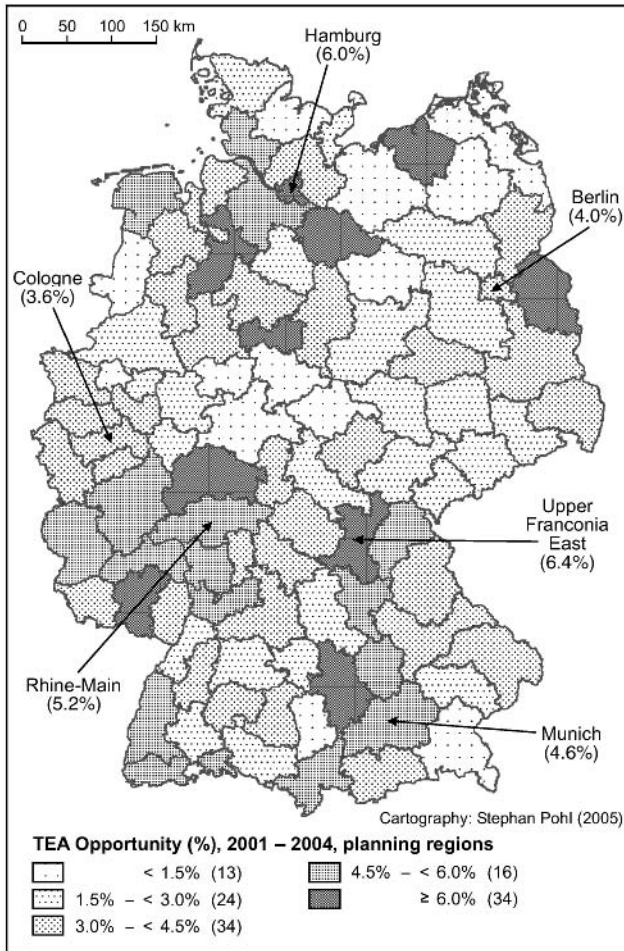


Figure 10.2. Opportunity entrepreneurship (TEA rate) in German planning regions, average percentages 2001–2004. *Source:* Global Entrepreneurship Monitor (GEM) Germany, population surveys 2001–2004.

number of persons per hundred involved pursuing opportunities among those eighteen to sixty-four years of age. The TEA patterns across the ninety-seven German planning regions (four-year averages 2001–2004) are presented in Figure 10.2. Obviously, the disparities between German regions are significant, although this country is characterized by relatively low interregional disparities compared, for example, with France, the United Kingdom or the United States, if other economic indicators are considered. There is clear empirical evidence that even

choices between opportunity and necessity are contextual from a regional perspective. The value of the region with the highest rate (8.46 percent) is twenty-three times higher than for the region at the bottom of the ranking (0.36 percent). Large agglomerations, like Hamburg, Stuttgart, or Frankfurt/M. perform much better than most of the smaller and/or rural regions. Given the fact that opportunity entrepreneurship is more closely related to regional economic growth than entrepreneurial activities in general, this observation has important consequences for regional economic development (for the most recent GEM Global report; www.gemconsortium.org).

According to GEM, entrepreneurial activities are determined, beside other factors, by entrepreneurial attitudes. The fear of failure belongs to these attitudes. An individual who sees good entrepreneurial opportunities in the near future, will still not start a company if he or she harbors a considerable fear of failure in the venture. This fear of failure is widespread in Germany compared with most of the other GEM countries: 41 percent of all respondents confirmed that the fear of failure would prevent them from starting a business in 2003 and 2004. As Figure 10.3 shows, again, large interregional disparities exist within regions (between cities and the surrounding less-densely populated districts) and between West Germany and East Germany. This last aspect is especially relevant: all East German federal states show a mean value of the fear of failure variable higher than the German average. (see Figure 10.4). Thus, overall TEA rates in the east are lower than in the west. Again, this empirical evidence shows that different regional contexts, this time between East and West Germany, result in different entrepreneurial attitudes and, consequently, in different levels of entrepreneurial activity. People who grew up in the former German Democratic Republic (GDR) have been socialized completely different from West German citizens—and this is especially true in terms of entrepreneurial attitudes, which have almost not existed in the GDR.

Due to a significantly increased sample size, German GEM data allows interregional comparisons. In general, however, GEM is appropriate to compare whole nations, not subnational regions. REM, on the other hand, was designed with the explicit aim to compare (ten) German regions. Empirical research with REM data has linked two stylized facts that emerged from a number of studies for Germany and other countries.⁵⁵ Entry rates differ between regions, and the propensity to become an entrepreneur is influenced by sociodemographic variables and attitudes. If one tests whether for a person of a given age, degree of schooling, attitude toward risk, and the like, regional context variables do matter for the decision to start a new business *ceteris paribus*, econometric studies using probit models show that the propensity to step into self-employment is, among others,

- Higher for males, unemployed, people with contacts to a role model, and with past entrepreneurial experience, who live in more densely populated and faster growing regions with higher rates of new firm formation
- While risk aversion and high prices of land have the opposite impact.

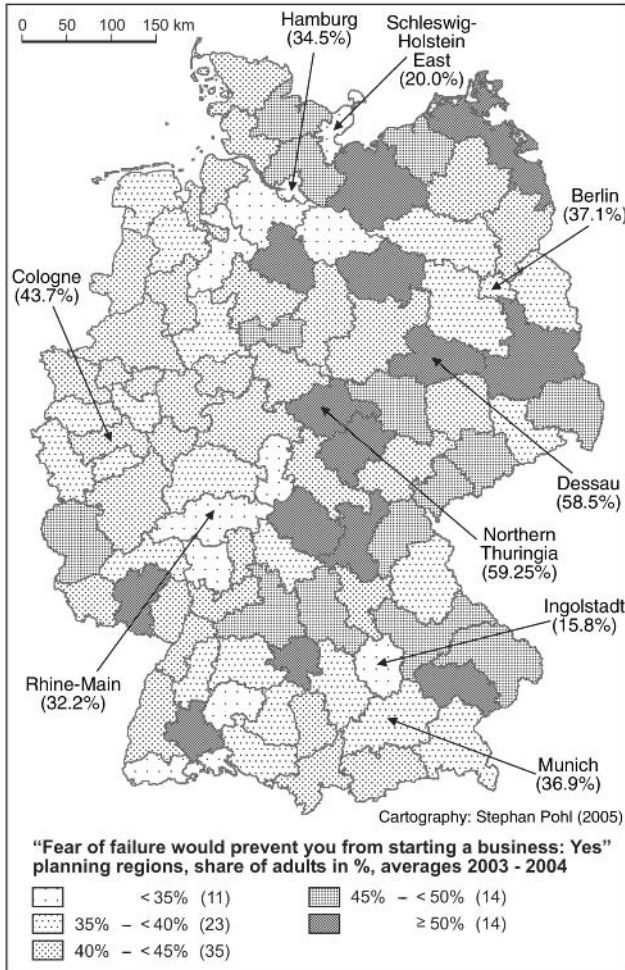


Figure 10.3. “Fear of failure would prevent you from starting a business” (percentages “yes”) in German planning regions, averages 2003–2004. *Source:* Global Entrepreneurship Monitor (GEM) Germany, population surveys 2003–2004.

Thus the decision of the individual to start a new business or not depends on both personal characteristics and attitudes, and on regional context characteristics, which influence the discounted expected life-time utility from self-employment and paid employment by increasing or decreasing costs and benefits.

The results of separate analyses of the same authors and with same REM data offers plausible arguments for the hypothesis that other entrepreneurial framework conditions, such as financing or the availability and quality of political

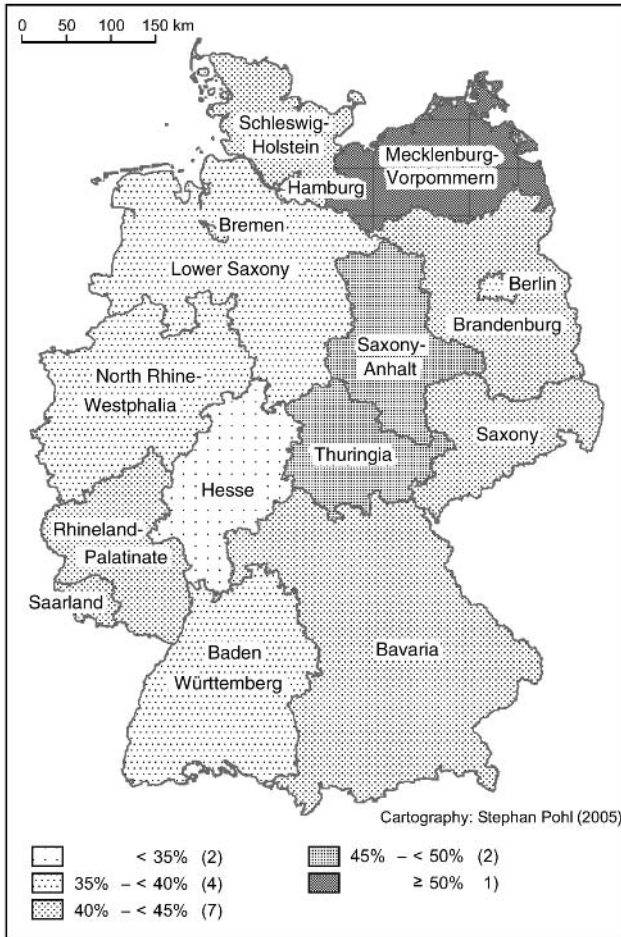


Figure 10.4. “Fear of failure would prevent you from starting a business” (percentages “yes”) in German federal states (Länder), averages 2003–2004. *Data source:* Global Entrepreneurship Monitor Germany, population surveys 2003–2004.

programs, depend on the corresponding factors in the region, where the respondent lives (e.g., the planning region) and in the whole state.⁵⁶ Some of these numerous factors can be influenced by public policy, and others not, or only to a slight extent. Government policies, and more evidently, government programs, can therefore, more or less be controlled directly by politics. Personal entrepreneurial attitudes, on the other hand, are more difficult to influence and, in particular, cannot be influenced in the short term by political measures (see the section Policy Dimension of Regional Entrepreneurship).

As for the impact of clusters on entrepreneurship, empirical evidence shows the importance of distinguishing between clusters and industrial agglomerations, an important distinction from a regional contextual perspective that is generally omitted in the literature.^{57, 58} As noted in the theory section, clusters include many industries, interfirm networks, and interorganizational networks, which are not present in industrial agglomerations. Empirical studies on clusters tend to measure them in terms of industrial agglomerations, given data restrictions.⁵⁹ However, when the multiple industries and network dimensions of clusters are measured, the different impact of clusters and industrial agglomerations on entrepreneurship hypothesized in the theory section can be empirically shown. In fact, the insights provided by both the review of the literature and the theoretical arguments regarding the distinction between clusters and industrial agglomerations have been proved by some empirical evidence.

In effect, without making that distinction, results from descriptive and regression analyses have shown that there is a positive relationship between the number of clusters and the number of employees in clusters in German regions and entrepreneurial activities and—even stronger—entrepreneurial attitudes, such as the perception of good start-up opportunities and the fear of failure with a start-up.⁶⁰ Despite the fact that cluster characteristics have been shown to be less important in explaining entrepreneurship in German regions than the east–west divide within the country or the size of the regional economies, their impact should not be underestimated.

However, when the distinction between clusters and industrial agglomerations is done, a test of the theoretical hypotheses on their differential impact on entrepreneurship shows that from statistical and economic standpoints, clusters have an impact on entrepreneurship at the regional level, but industrial agglomerations do not.⁶¹ In effect, taking the ninety-seven German planning regions as a unit of analysis, this study shows that industrial agglomerations have no statistically significant effect on entrepreneurship, while clusters show a positive and statistically significant impact on entrepreneurship. This latter impact is not only significant statistically, but also economically, given that comparing regions with at least three clusters with those with less than three clusters shows an increase in the entrepreneurship rate equal to 22 percent of the average entrepreneurship rate for the whole Germany.⁶² Similar, but more attenuated results are found in Latin America and could be expected in other countries.^{63–65}

POLICY IMPLICATIONS FROM A REGIONAL CONTEXT PERSPECTIVE

One of the main arguments for policy intervention to foster entrepreneurship is the assumed positive impact of entrepreneurship on the economy, even taking into account some potential negative impacts, such as displacement effects.^{66–68} This argument is even true for different development paradigms, such as the

neoclassical and competitiveness ones, even though each one defines development and the links between entrepreneurship and development in a different way.⁶⁹ However, this argument is not enough to justify public policies on entrepreneurship. In effect, if market factors alone are shown to be a necessary and sufficient condition for the creation of new firms, entrepreneurship policies would not be necessary. Therefore, assuming that entrepreneurship is a positive factor in fostering economic growth and development, the arguments to justify policy intervention should relate to some kind of market imperfections that inhibit the creation of new firms.⁷⁰ One of the main arguments put forward for justifying entrepreneurship policies based on market failures is the liability of newness faced by new firms.^{71–73} Liability of newness refers to the relative limitations new firms face as compared to established firms, due to new roles to be learnt, unknown work force, lack of ties with customers and suppliers, and lack of other resources when compared to established firms.⁷⁴

With the economic rationale for general policies on entrepreneurship established, a key question to be answered is: what is the rationale for justifying entrepreneurship policies at the local level? The answer to this question is important for our purposes, given that it would provide the contextual rationale for entrepreneurship policies. The basic argument put forward in this section is that local entrepreneurship policies are justified based on the local nature of entrepreneurship. If, as theoretically argued and empirically shown in the previous sections, entrepreneurship is a regional event, and if an important rationale for entrepreneurship policies is the liability of newness faced by new firms, then the creation of conditions by governments for overcoming this liability should be found mainly at the local level. Therefore, this section focuses on the policy implications of considering entrepreneurship as a regional event (for a different approach and international comparisons, see Verheul et al., 2002).^{75, 76}

The entrepreneur is part of—predominantly—regional, personal networks; he or she acts under the influence of the regional entrepreneurial context, and feels most directly the effects of regional policy measures to promote start-ups, while measures introduced by the federal government or even the government of the European community are perceived to a considerably lesser extent. At the same time, the majority of the effects of successful start-ups are initially felt at regional level (e.g., effects on the level of employment).

Thus, regional policies dedicated to entrepreneurship and new ventures are an important element of the regional context in itself (cf. Figure 10.1), given their impact on the entrepreneur's behavior and given the empirically well-proven spatial immobility of start-ups.⁷⁷ More specifically, regional policies play a facilitating role, either providing or enhancing existing factors directly related to the liability of newness issue. In particular, local policies such as:

- Minimizing the burden of local regulations on new enterprises
- Working with financial intermediates to facilitate access to finance
- Fostering the promotion of mutual credit guarantee associations

- Encouraging the creation of team-based firms
- Promoting trade fairs and other networking events
- Facilitating information, technical support, and financial assistance to support feasibility work and network brokerage
- Subsidizing private research
- Promoting successful local entrepreneurs as role models
- Building local institutional thickness
- Strengthening interfirm collaboration

and the like aim at overcoming the components of the liability of newness faced by new firms.^{78–83}

The previous considerations are not limited to new firms in general. In effect, as discussed by Wagner and Sternberg (2004), political measures should promote both start-ups in general and, explicitly, those with considerable growth prospects, as derived from opportunity entrepreneurship.⁸⁴ Given the fact, at least in Germany, there is a negative correlation between the proportion of start-ups and the survival ratios at the level of planning regions; many start-ups in highly entrepreneurial regions disappear from the market comparatively rapidly.⁸⁵ As this correlation varies from one industry to another, the political emphasis should be on setting sector-specific directions, which should be oriented toward the prevailing conditions in the respective regions. Generally speaking, not every start-up has the same macro and regional economic relevance. The competitive situation, the general environment in the industry, and also the individual goals of the entrepreneurs (not every entrepreneur has the express intention to grow) influence the economic success of the start-up and should therefore be taken into consideration in the implementation of political measures. In that sense generic policies supporting start-ups, according to Verheul, Leonardo, Schüller, and Spronsen could help to permanently create a critical mass of start-ups at the regional level, so that even a low survival rate would not be that problematic from a regional perspective.⁸⁶ The adequate mixture of generic policies and policies focusing on high-growth start-ups depends on the regional context, that is, on the strengths and weaknesses of each region in terms of those context factors that are especially important for entrepreneurial activities, and an individual's propensity to start a company. It is important to notice that no policy instruments exist, which are successful in all regions—politicians in the region have to develop specific instruments for their own region. Policy itself is context dependent!

The REM shows that politics, in general, and policies to promote start-ups, in particular, should aim to influence the public's attitudes toward start-ups; these attitudes are in clear correlation with entrepreneurial activities.⁸⁷ Further effort should be made to contribute to the development of a culture which is friendly toward entrepreneurship.⁸⁸ Action needs to be taken at regional level in the area of financing, the structure of the promotional infrastructure, and the transfer of research and development, as well as in the area of education and training relating to entrepreneurship.

These suggestions seem to contradict some preliminary results on the impact of public policy on entrepreneurial activities. In effect, no evidence can be found whatsoever of statistically significant correlations with the start-up rates at the level of the ten German planning regions investigated in the context of the REM project. However, a positive correlation can be found for the attitude variables “fear of failure as a reason not to start a business” and “start-up opportunities.” This result can be interpreted in many ways. First, it is possible that political measures do have an effect, but that it takes many years (an unknown number of years) before these effects are felt. Second, it is conceivable that political measures alone do not lead to an increase in start-up rates, but only in combination with favorable characteristics among the other entrepreneurial framework conditions (which can only be directly controlled by policies to a limited extent).

As for clusters, the arguments advanced to support cluster-oriented policies are also related to their assumed positive impact on the regional economy. In particular, the endogenous growth theory, the endogenous development theory, and the New Economic Geography advance complementary arguments that show the positive impact of clusters on regional economic growth and development.^{89–92} Given the assumed positive impacts of entrepreneurship and clusters on the regional economy and the empirical support for the impact of clusters on entrepreneurship, clusters and entrepreneurship policies should be conceived together rather than in an isolated fashion.^{93–95} The basic rationale for a combined cluster and entrepreneurship policy is that there is a strong synergy between the liability of newness faced by new firms and the provision of external economies by clusters.⁹⁶ For example, clusters provide economies of specialization, labor supply, and specialized skills that help to overcome liabilities of newness, such as unknown workforce, the learning of new roles, and the availability of resources. Therefore, fostering combined cluster-entrepreneurship policies would not only be more efficient in terms of the use of public funds, but also more effective in fostering entrepreneurship.^{97, 98}

However, expectations should not be too optimistic, given the time period necessary for any economically significant impact and the potential negative intra and interregional effects of cluster policies.^{99, 100} As for the time lag, the emergence and development of Silicon Valley serves as an example: it took decades for a cluster to develop out of a small number of technological innovative start-ups (some of which were not even a part of the later Silicon Valley). The cluster that emerged had a noticeable positive influence on the regional labor market without the efforts of any real regional cluster policy (though national defense policy was crucial). Taking small steps and setting achievable and clear goals in order to boost the cluster members’ identification with the cluster—this must be the guiding principle. Taking time should not mean, however, that political measures should be permanent. Where industry-specific clusters spring up in a country and its regions is decided early on in the evolution of an industry. As Fornahl and Brenner have shown for German regions, the spatial distribution of a cluster remains quite stable, and politics have little influence after cluster formation.¹⁰¹

Given the aim of this chapter, this section has focused on policies at the regional level. However, it has to be mentioned that regional and cluster policies alone are not enough; they have to be complemented with policies at the national level.^{102, 103} In particular, coordinated policies at both levels not only enhance local factors, but also avoid some negative effects of exclusive focus on regional policies, such as interregional displacement effects and social divides.^{104–106}

CONCLUSION

This chapter has shown that theoretical arguments as well as empirical evidence support the hypothesis that the regional context influences both an individual's propensity to start a company and the growth of the new venture, emphasizing the role of clusters as a special configuration of contextual factors.

From a theoretical point of view we have argued that:

- Entrepreneurship is a local phenomenon, because people usually start business, have worked or already reside, which explains why nascent entrepreneurs are very well established in their careers, life and communities. Therefore, a region, especially if defined at the substate level, rather than a nation, seems to be a better unit to understand the most proximate factors affecting entrepreneurship.
- The relationship between entrepreneurship (defined as activities to create new small firms) and the region is an interdependent one that can be described as a system of causes and effects.
- The importance of the supraregional and regional determinants of regional start-up activities varies from factor to factor; the most important among these are the cultural, social, political, and financial conditions of a region, as well as the system of education and research, the infrastructure, and the economic structure.
- Clusters are a special configuration of factors within a region, which enhance entrepreneurial activity. This is done through the strong synergy between the liability of newness faced by new firms and the external economies and complementary linkages provided by clusters.

Empirical evidence stems mainly from two leading research projects on national entrepreneurship and regional entrepreneurship—the GEM and the REM projects, respectively. Data makes clear that:

- Even in a country like Germany with relatively low interregional disparities in economic terms, statistical differences between regional contexts are obvious when entrepreneurship aspects (activities, attitudes) are considered;
- There is clear empirical evidence that even choices between opportunity and necessity are contextual from a regional perspective;

- The decision of the individual to start a new business or not depends on both personal characteristics and attitudes, and on regional context characteristics that shape those personal traits;
- As for the impact of clusters on entrepreneurship, empirical evidence shows the importance of distinguishing between clusters and industrial agglomerations, an important distinction from a regional contextual perspective that is generally omitted in the literature. Empirical results for Germany show that while clusters have a positive impact on entrepreneurship, industrial agglomerations do not. Similar, but more attenuated results are found in Latin America and could be expected in other countries.

As for entrepreneurship policies, a distinction between the context at the macro (or national) level, at the meso (or regional) level and at the personal level is helpful.

- All of the annual Global Reports of GEM since 1999 have shown that statistically significant differences exist between various (complete) countries in terms of entrepreneurial attitudes and activities. However, entrepreneurship policies at the national level are not that different between countries, especially between OECD countries.
- Much more variance exists between subnational regions within the same country. At this meso level, policy instruments vary, and they do so due to the comparative strengths and weaknesses in terms of entrepreneurial determinants of the respective regions. Thus, there are no one-size-fits-all policy instruments which are successful in all regions—politicians in the region have to develop specific instruments for their own region. Policy itself is context dependent.
- In the specific case of clusters, given the positive impacts of entrepreneurship and clusters on the regional economy and the empirical support for the impact of clusters on entrepreneurship, clusters and entrepreneurship policies should be conceived together rather than in an isolated fashion.
- Finally, person-related factors, like entrepreneurial motivation (push versus pull factors), demographic factors (age and sex), as well as personality traits may also influence an individual's propensity to start a company and the success of the new venture. While demographic factors and personal traits are hardly reachable by policies, entrepreneurial motivation could be influenced by policies, at least in the very long run. Policy should not only help to improve the image of successful entrepreneurs, but also of failed entrepreneurs. Media and education institutions play an important role in this process, because younger people (i.e., potential entrepreneurs) create and design images, norms, and values that are communicated to other people. For example, at least in several countries, including Germany, we need a culture that accepts failure in order to reduce the fear of failure, which is a crucial barrier for potential entrepreneurs. However, expectations should

not be too optimistic, given the time period necessary for any economically significant impact of entrepreneurship-support policies.

Of course, many research questions about entrepreneurship and the regional context are still unanswered. The following research questions could be advanced from an economic geographer's perspective:¹⁰⁷

- What regional economic effects may realistically be expected from start-ups?
- What measures of economic and technological policy might increase regional start-up and survival rates?
- What are the conclusions of ex-post evaluations of existing programmes for promoting start-ups, with particular consideration of regional economic aspects?
- How can the contextuality of entrepreneurial activities and entrepreneurial attitudes be better operationalized at the regional level in order to design a research project covering different subnational regions from different countries?

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11

Public Policy as an Enabler or Inhibitor of Entrepreneurship

The Case of Sarbanes-Oxley

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Government policy plays a significant role in setting the context for entrepreneurship—with both positive and negative consequences. On the positive side, local, state, and federal governments enhance the entrepreneurial context by providing public funding for a wide range of entrepreneurial assistance programs—business incubators, training programs, support for regional networks and clusters, small business development centers, Service Core of Retired Executives (SCORE), Small Business Innovative Research Programs, and so on. Government regulations also enable direct investment through programs like the various SBA loan programs, small business investment corporations, and state-operated venture funds (e.g., Massachusetts Technology Development Corporation). Bankruptcy laws encourage risk-taking by entrepreneurs and investors through establishment of a clear and orderly process for dealing with business failure. SEC regulations provide a defined and orderly environment in which entrepreneurs can raise private equity, and investors can make rational decisions about investment opportunities. Government regulations also specify a variety of legal forms for establishing a business that reflect the varying needs of entrepreneurs (and their investors).

To illustrate the role that government plays in setting the entrepreneurial context, this chapter explores in depth a particular case study—the recent adoption of the Sarbanes-Oxley (SOX) Act, which is having a profound effect on the context of entrepreneurship in the United States, and to some extent, by extension to the rest of the world. We explore the positive and negative impacts of this act.

INTRODUCTION AND PARAMETERS OF SARBANES-OXLEY

In the frenzied 1990s, initial public offerings (IPOs) comprised the primary growth strategy for capital hungry companies. Young companies were in the unique position of ignoring the ever-increasing demands of private equity investors, and going public as a means to gain more capital. At that time, IPOs had an extraordinarily low hurdle—a great idea and eager investors blinded by visions of wealth—and, as a result, the relative cost of capital to fuel growth was extremely inexpensive.

With the advent of SOX, however, the stakes have changed. Sarbanes may well be the most significant reform in the increasing role of government in regulating business. Hardesty, in the introduction to *Corporate Governance and Accounting under the Sarbanes-Oxley Act of 2002*, notes that the act aims to correct structural weaknesses affecting the capital markets with the goal of investor protection.¹ To this end, the act both builds on and goes beyond a number of rules and proposals made by the SEC and the national securities exchanges. It does so through six primary targets for correction:

1. Pressure on management to certify that financial information is correct with criminal penalties for false certification
2. Increased responsibility, independence, and skill requirements for audit committees
3. Auditor independence
4. Additional disclosures in the areas of material adjustments, off-balance sheet transactions, pro forma earnings, insider trading, internal control assessments, real-time disclosure of important transactions
5. Expanded penalties for failure to comply
6. Increased objectivity and independence of security analysts

This chapter will provide a review of the current articles on the impact of Sarbanes, while also integrating the results of interviews and questionnaires as to the impact. For this research, twenty-six entrepreneurs and board members responded to a questionnaire on the impact of SOX on entrepreneurial companies. Their responses provide an excellent perspective on the early reactions to the impact of SOX. Framing a discussion based not only the intent but also the early impact of SOX will provide a platform for improved understanding and further debate of a critically important factor for the future growth of entrepreneurial companies: government policy. Additionally, this chapter will seek to reframe the question, as the question is far too complex to be answered by a simple “Yes, it is an inhibitor or an enabler.” Instead, the chapter will look at the implications of SOX for entrepreneurial growth and the ways in which it may change our definitional view of the meaning of both growth and exit strategies.

IMPLICATIONS FOR PUBLIC COMPANIES

John Shalam, chairperson and CEO of Audiovox, identified the core issue of concern regarding the impact of Sarbanes with his comment: “But I’m concerned that with all of our efforts to regulate, and with all these different rules, we are going to stifle entrepreneurship.”² That said, if the goal of Sarbanes is merely to ensure greater protection for shareholders, why would it inhibit entrepreneurial activity?

To understand the potential inhibiting effect of Sarbanes, it is first necessary to view its impact as a case of unintended consequences. Can regulation actually serve the public good by protecting investors, yet hurt the public good by inhibiting growth, thereby reducing the return on investment for investors, and in turn perhaps discouraging investment? The focus of SOX was large companies—the Enrons, Worldcoms, Tycos, and the public auditing firms, whose practices were found to be complicit with the fraudulent behaviors of their clients. In its explicit goal of protecting the investor, SOX did not anticipate that there would be significantly different impacts on companies as a function of size, yet small companies are actually placed in a more difficult and tenuous situation than large companies.

FINANCIAL CHALLENGES

Is this potential outcome a legitimate and wise one? Whether a small company is public or private, SOX has created significant strategic headaches, and has been described by Ron Kinghorn as “death by a thousand paper cuts.”³ It was adopted in a political climate with a political timeline rather than letting the SEC go after the bad guys. “A cost-effectiveness assessment should have been done . . . but . . . the attitude was, ‘let’s see how it goes.’ Past reforms have been more disciplined and less far-reaching. For example, the Securities Act of 1933 made the auditing of financial statements a rule, but such audits had existed in the private realm for years and the costs were well known.”⁴

Although the toll of managing, and ultimately, minimizing investor risk may well be one of mindset; the most significant burden of SOX is, at base, a financial one, and, as such, falls heaviest on companies with revenues between US\$100 and US\$250 million. Compliance with the requirements of SOX is expensive. Ensuring that all seven targets are met is extremely costly. A Foley and Lardner study indicates that the cost of being public and in compliance for companies with revenues less than US\$1 billion has increased by 130 percent.⁵ It is important to note here that compliance costs come out of the bottom line and can easily erode the profit margins of small companies. In this study of 115 companies from 2001 to 2003, more than 16 percent of earnings were spent on compliance-related activities. A recent PWC study found that 46 percent of IT departments in public companies reported that meeting regulations today is a greater burden than

preparing systems for Y2K. Indeed, 8.3 percent of an average IT budget goes to compliance.⁶ This rate is expected to increase significantly once Section 404 compliance—completed for the first time in 2004 for large companies and in 2006 for companies with market caps of US\$75 million or less—is fully enforced. They note the ripple effect of regulation and compliance that includes an estimated 158 percent increase in Directors' and Officers' insurance alone; 192 percent increase in board compensation, reflecting increased meetings for both the full board and committees; 120 percent increase in legal fees; 57 percent increase in accounting fees; and an extraordinary increase of 247 percent in the cost of lost productivity due to the staff attention paid to ensuring compliance.

Recent research by Mark Crain for the Small Business Association Office of Advocacy confirms Foley and Lardner's earlier work. Crain demonstrates that small businesses bear a disproportionate share of federal regulatory burdens, as much as 45 percent more than their larger counterparts.

The fact that these costs have significant impact is confirmed by 77 percent of the respondents in our survey, who believe that the cost of SOX falls more heavily on entrepreneurial versus large companies. In recognizing this, however, they also identify a quandary, in that 65 percent of our respondents noted that with SOX, outside accounting firms are less likely to provide guidance into accounting or regulatory issues to young companies.

LEADERSHIP CHALLENGES

Because regulation has sought to eliminate risk and increase scrutiny and caution, the question turns to the type of leadership required to maintain an inward focus, while also meeting shareholder expectations of growth. This need for increased scrutiny will have a significant impact on the mindset of an entrepreneurial CEO. As a rule, entrepreneurs tend to be visionaries rather than operations managers. John Shalam, CEO of Audiovox worries "that with every CEO so busy right now trying to cover his tail, signing affidavits and things like that, nobody's out there creating enterprises. We're all too afraid to do anything."⁷ In the service of the goal to protect investors, CEOs and boards are now essentially asked to insure financial results. In order to do so, however, these same CEOs and boards must also ensure that all risks are not only in service of the company and its shareholders, but that virtually no risk would meet failure. Since this is an impossible task, the outcome may well be at the expense of discouraging risk-taking, which is the fundamental and unavoidable aspect of creating and growing entrepreneurial ventures. As a result, accounting rules under Sarbanes may force companies to avoid those very opportunities that are in the best long-term interest of the company and its shareholders. In the PWC study cited earlier, 65 percent of IT professionals view compliance as a distraction from their real work, with 37 percent arguing that SOX has no business value. This caveat also applies to senior staff in both the finance and legal groups, who now must

manage both the outside audit firms and respond to increased board inquiries, instead of focusing on external growth opportunities.

Eisenman has noted that the other impact of SOX on leadership is perhaps more subtle and is a function of changing requirements about the role of the board. In the past, early boards tended to be comprised of the private equity firm partner and many friends and family members who were instrumental in going public. Although board members did not actually work for the company, they tended to be involved from its early development through its IPO. Under SOX, however, all board members must pass the test of true independence. With true independence comes a different relationship between the CEO and chairperson and the board.

As a means of insuring that power is balanced and open dialog and feedback are encouraged, NYSE has recommended that each board elect a lead director who will preside over the now-mandated executive sessions of the independent directors. This lead director will also serve as the conduit of information between board members and the executive chairperson. With a boardroom filled with individuals who feel under constant scrutiny, underlined by fear of being personally sued by shareholders, it is no wonder that the reactions are characterized by increasing defensiveness on both sides of the table.

On the face of it, although this mandate should increase trust and openness, it can often lead to distrust and defensiveness. Although the chairperson and CEO are held legally responsible for the performance of the company, the board now has a lead director, who takes the independent directors off for a private meeting after every board meeting. At this meeting, they discuss issues that impact the company, but the CEO is not included in this discussion. It is this “time-out” period that speaks, as do no other actions, to the shift in power.

The consequences of this shift are both perceptual and real. In these difficult times of change, often the chairperson and CEO no longer feel that they run the company, as they no longer hold full decision control over the future of that company. Although the board was always required to approve substantial financial endeavors, the approval process is now all about mitigating risk with growth taking a secondary role.

At its heart, independence is no longer sole independence from financial interest and involvement in the company, but independence from the will of the chairperson and management. For the directors, the challenge of proving their independence is fraught with pressure and it is too early for the emergence of strong models of the behaviors underlying effective independence under the new regulations.⁸ The fact that this set of expectations may be too high a hurdle is seen in a 2004 Board of Directors study by the search firm KornFerry, which shows a decline from 13 percent in 2002 to 29 percent in 2004 in potential directors accepting board seats.⁹ A reason for this may be seen in the fact that the majority of our respondents not only agree that there is increased liability risk to private equity partners who sit on portfolio boards, but also that being the director of a fast-growing entrepreneurial company is more difficult than being

a director in a mature company. If this is the case, entrepreneurial companies are in deep difficulty, as a recent Fortune study has found that 50 percent of outside directors at Fortune1000 companies have resigned and 51 percent of companies restrict their CEOs to no more than two boards.¹⁰ There is no lack of support for the fact that SOX has made it more difficult to find qualified directors for growth companies.

The concept of a limited pool of directors has many implications, all challenging to both imagine and manage. Indeed, if, as indicated earlier, growth companies are seen as more difficult and, hence, raise liability risk for directors, it will be harder to find qualified independent directors for growth companies, potentially raising issues about potential penalties for companies, who may lack the number of independent directors required by the exchanges.

A further leadership issue brought about by the new regulatory control environment of SOX involves the attraction and retention of talent. Young, rapidly growing companies built on investor capital cannot offer the stability, structure, and compensation packages of more mature companies. In the past, in the absence of cash, options were used as an attractive alternative for bringing in talent at all levels of the company, administrative staff through the executive ranks. Options also served as very effective golden handcuffs for retaining talent. Now, due to FASB's 123R rule requiring the expensing of options, there will be far less gold in those handcuffs and far more difficulty raising the necessary cash to become and remain competitive in a talent war environment.

Indeed, in our survey 50 percent of respondents agreed that expensing options would limit the potential of entrepreneurial companies to recruit top talent, while only 23 percent disagreed. The National Venture Capital Association's campaign to stop the enactment of FASB's option rule focused on just this issue with their statement:

We believe the FASB proposal fails on multiple levels. From a purely accounting perspective, the valuation methods proscribed will not result in a better depiction of a company's economic health or more transparent financial statements. On a macroeconomic level, we do not believe that FASB has given any consideration to the negative impact an expensing rule will have on the nation's economy. Further, we believe that the cost of implementing these inaccurate valuation methods will be a much greater burden on startups and nonpublic entities. We believe FASB's proposal if enacted as proposed will ultimately undermine stock options as a tool that has successfully aligned the interests of shareholders with employees and which has been critical in our ability to foster the companies that have driven the nation's economic growth. . . . The proposed rule will most seriously hamper the start-up business community, which may be forced to choose between using a tool that has made our entrepreneurial activity the envy of the world or wasting significant resources to produce reports that essentially misrepresent a company's financial health.

FASB has repeatedly stated in recent Congressional hearings that they do not believe stock options expensing will be a critical issue for small business. In fact, FASB claims that only 3% of all small businesses use stock options. Of course, what

they have failed to mention is that within that 3% are the venture-backed companies that are responsible for creating 10 million jobs and over 11% of annual US GDP.¹¹

IMPACT ON GROWTH AND EXIT STRATEGY CHALLENGES

In light of all the aforementioned issues, is SOX truly a constraint to both becoming and staying public as well as a constraint to growth? Our respondents fully agree that these concerns are realistic. In fact, 62 percent of our respondents agree that many new firms will not even be able to go public, because they cannot raise enough capital due to compliance costs. And, even if they are ultimately able to go public, the majority of our sample believes that companies will go public much later in their life cycle, and will be significantly larger and more established than was true ten years ago.

A study by Doll Capital estimates that the cost of going public under SOX has increased by 50 percent with pre-IPO compliance costs in the range of US\$2–3 million for a company with US\$100 million in revenues.¹² Taking this to the extreme, our respondents believe that SOX will choke off access to capital markets for emerging businesses, because venture and private equity partners will be overwhelmed by the regulatory responsibility that they assume through investment in early stage companies. Rarely are there sufficient resources at early stage companies to create the internal controls necessary for the new regulatory hurdles. Indeed, the majority of our samples believe that if an early stage company was staffed and funded to provide the necessary resources to meet the demands of SOX compliance, then they would quickly go out of business, as there would be little left to fund new ventures necessary for market growth.

These hurdles, however, will increasingly apply whether the company is seen as an equity investment, a potential acquisition target, or, more and more frequently, chooses to remain private. Since late 2004, all acquisitions by public companies must meet the same compliance standards as the acquirer to insure that they do not taint the acquirer. Unfortunately, it is often the most troubled assets in today's markets that represent the greatest acquisition opportunities. This change has also been seen by our sample, the majority of whom not only see a heavy impact on private companies, with 96 percent agreeing that private companies are under increased compliance scrutiny by potential buyers. They anticipate that this additional hurdle for compliance will lead to significant changes in choosing viable exit strategies. The compliance hurdle may well result in more companies choosing to stay private rather than make the changes necessary to become an acquisition target by a public company. But how do companies grow without IPO-based capital? They grow through private financing, mergers with strategic partners, or acquisition by a larger company.¹³ Rarely is this larger company private, but in the current environment, this may well need

to change. But even private financing may ultimately require SOX compliance, as bank loan covenants will increasingly require compliance. As a result, many companies are currently engaging in “dual tracking,” as they prepare IPO data, and, in parallel, also circulate the possibility that they are open to acquisition inquiries. A recent *Wall Street Journal* article notes that “companies putting the final touches on their IPO are increasingly calling a sudden halt in order to entertain acquisition offers from potential suitors. They note further that by mid-2005, 33 percent of the eighteen withdrawn stock offerings were halted because the issuers began acquisition discussions. In 2004, this percentage was 18 percent of ninety-seven deals and in 2003, it was 16 percent of sixty-seven deals. If companies in the pre-filing stage are added in 2005, the percentage would be increased by 10 percent. The fact that the SOX burden falls most heavily on companies with revenues between US\$100–250 million is not surprising in light of the cost of compliance. Other factors also work against these small and midcap companies. These factors include the fundamental shifts in analyst coverage, as valuations of greater than US\$500 million have become necessary in order to satisfy the bulk trading requirements of hedge funds and mutual funds. This outcome has far-reaching implications for the capital markets and the investor communities who will now be cut off from investing in high-growth companies.

Paul Severino, a pioneer in computer networking and currently chairperson of the Massachusetts Technology Development Council, notes, in a private correspondence, “a view which I believe is at the heart of the corporate regulatory issue and why it is so damaging to entrepreneurship. We have experienced a confluence of factors, which together have formed a perfect storm of excessive regulation. The elements of this storm are SOX and FASB in the areas of revenue recognition and stock option accounting. When you layer the legal environment where plaintiff’s lawyers’ jump on a company reporting any news which is not perfectly aligned with street expectations you can see the reason that this situation is as bad as it is.”¹⁴ This phenomenon is compelling, and a recent *Wall Street Journal* article, titled “Class Action Sarbox,” confirms that it may have already begun. Here, the recognition that a 2005 study by Stanford University and Cornerstone Research indicates that class action suits in 2005 have decreased by 17 percent from 213 to 176. But they note that even this small number of suits bodes poorly for the future, as “it appears that the tort bar is now using Sarbanes’ strict financial reporting requirements as its latest excuse to sue. A whopping 89% of the suits alleged misrepresentation in legal documents, while 82% claimed false forward-looking statements . . . the uptick in these cases suggests that the tort bar has found a whole new line of business . . . we have only begun to discover the ways in which Sarbox will be a trial bar bonanza.”¹⁵

Severino continues, “The FASB issue is particularly bad since the revenue recognition rules are orthogonal to the ways companies and their customers do business. This has to do with the standard way complex software based products are developed, installed and utilized by the customer. The effect of all this is that

companies and their management will look for a better environment to build their business. Fewer companies will choose the IPO route. If they do, they will find markets which are not so penal.”

Severino is not alone in suggesting that another impact of SOX will be for companies and their managements to look for a better environment to build their businesses, namely environments outside the United States. The limiting factor with this proposed avoidance strategy, however, is the regulatory environment of Europe, which in its current state has been blamed for the lack of entrepreneurial activity in Europe. Indeed, as per the demonstration of the constraints posed by European laws as compared with the previously unconstrained U.S. marketplace, 40 percent of the largest U.S. companies did not exist ten years ago, while none of Europe’s hundred largest companies was founded within the past decade.¹⁶ Further, there is the belief that governance standards in Europe will match those of the United States within five years, a belief confirmed by a survey of 143 European companies, whereby 48 percent of the respondents agreed and only 4 percent expect them to remain very different. A feature story in the March 2005 *Corporate Board Member Journal* sees that there is indeed a “race to stay ahead of the regulators in Europe,” noting:

Across Europe, companies are jumping on the governance bandwagon—adopting serious reforms and bragging about them to anyone who will listen. Annual reports now typically contain lengthy sections on improved governance, and executives are quick to trumpet those efforts in speeches and media appearances. The company is committed to high standards of corporate governance, says a typical 2004 annual report, this one from the British supermarket chain J. Sainsbury. The document also describes in exhaustive detail how its board makes decisions and who’s responsible for what. According to Deminor Rating, a shareholder-rights consulting firm in Brussels, 77% of Europe’s 300 largest companies had corporate governance mission statements in 2003, up from 53% in 2002, and 74% had corporate ethics codes, up from 44%. Concludes Jean-Nicolas Caprasse, Deminor’s managing partner: “Companies are keen on demonstrating their integrity.” They don’t have much choice in the matter. The shadow of America’s Sarbanes-Oxley Act—with its explicit requirements for disclosure and accountability, as well as its bracing penalties for noncompliance—hangs heavy over Europe these days, especially for the 300 or so European companies that are also listed on U.S. markets. In addition, most European countries now have their own codes of corporate governance. The majority of those are voluntary, unlike Sarbanes-Oxley in the U.S., and companies need only explain to shareholders each year why they aren’t complying with one provision or another. But as many European executives are starting to realize, voluntary is inexorably becoming mandatory.¹⁷

The likelihood of the EU requiring annual governance statements is highlighted by the EU’s 2003 Action Plan, expected to be phased in over the next few years.

SILVER LININGS

Despite the many significant constraints that have been documented throughout this chapter, it is possible to consider several silver linings to the cloud of SOX. As Marshall Sonenshine, chairperson of investment bank Sonenshine Partners, observes, “We’re seeing the changed climate as a disciplining process. It doesn’t stop good deals from getting done, but it does create a greater level of accountability and confidence.”¹⁸ This higher level of scrutiny may well be the most significantly positive outcome of SOX. Despite the general lack of awareness of the issue (80 percent of our respondents were neutral on this topic), 75 percent of companies subject to fraud allegations from 1998 to 2003 had market caps less than US\$700 million and 40 percent had market caps less than US\$100 million. Similarly, proxy advisory firm Glass Lewis found that companies with annual revenues less than US\$100 million restated earnings in 2004 at more than twice the rate of the largest companies.¹⁹ Consistent with this response, 42 percent of our respondents believed that SOX would result in more companies being de-listed (versus 46 percent neutral) due to fraudulent reporting. If this occurs, the protective value of SOX compliance will have achieved its initial goals. Additionally, the majority of our sample agrees that the SOX compliance requirements provide companies the opportunity to look for existing weaknesses and shore up for new growth. In contrast, however, a slight majority does not see this process of internal scrutiny as a factor in keeping operations nimble and flexible. Despite all the negative reactions, at base, there is a perhaps grudging level of agreement that SOX-mandated improvements in systems and processes will introduce a higher level of discipline, which in turn, will provide growing companies more options, whether they choose to go public, stay private, or seek to become acquired. That there may be a silver lining is growing in awareness, at least among big company CEOs, as a recent *Wall Street Journal* article notes, “But get them away from the locker room and many big company CEOs will admit the law has done more good than harm. Some will even admit that the much maligned 404 has led them to make needed improvement in internal controls.”²⁰

CONCLUSION AND OPPORTUNITIES

We are at a time of unusual congruence of political risk, legal risk, and business risk, fraught with multiple levels of regulations at the federal, exchange, and ultimately, the state levels. It is this confluence of SOX, FASB, the litigation environment, and the attitude of the SEC, which make the situation untenable as applied to companies of all sizes. Here too, a majority of our respondents identified concerns that SOX would expand beyond its original intent into state and local regulations. If this were to happen, the acquisition process would become even more fraught with risk, as a company would have multiple compliance

regulations, depending on the states in which it both conducted business and in which its acquisitions reside.

Indeed, the expansion of SOX to state-level regulations may ultimately be a more “complicated patchwork of mandates that will be more difficult to navigate than federal codes.”²¹ In addition to these new risks, there is the additional set of risks from both the plaintiff’s bar and politicians, where the risk centers around the “crafting of further obstacles to the future success of enterprises at a time when the world markets are increasingly demanding economic success at any cost.”²² The concerns about risk are also shared by our respondents. When asked to rate the extent of risks to the ongoing vitality and access to capital of entrepreneurial companies, perceived risk levels were ranked in order of highest risk:

1. SOX compliance
2. Creation of internal controls to meet section 404 requirements
3. Enforcement litigation
4. Ability to attract and retain qualified board members
5. Federal securities litigation

The overwhelming majority of our respondents believe that there should be different rules for different companies, because large company control systems are untenable in small companies, and the new rules are both too vague and too rigid for small companies. There is, however, a dangerous and slippery slope in creating a two-tiered approach with lower compliance standards for companies with less than US\$75–100 million in revenue. When standards are lowered, what is the message to investors? Will this double standard increase investor opportunities or increase investor risk with a resultant decrease to investor confidence, leading to a decreased willingness to invest? Clearly, one message that will continue is that of caveat emptor, that investors should be sophisticated enough to protect themselves through intelligent due diligence. In addition to the need for a high level of financial sophistication necessary for such due diligence, there is some measure of protection in the existing regulations, which require that only qualified investors can invest, where *qualified* is defined by the SEC as an investor who is “financially sophisticated and therefore not in need of protection by state registration when they are offered or sold securities.”²³

As the “Spencer Stuart Board Index Review” notes, governance issues have significant impact on stock price. Ultimately, governance is not a compliance issue, but a cost of capital issue.²⁴ The fact that this is a valid concern has been recently addressed by a subcommittee of the SEC, which has recommended that microcap companies be exempted from Section 404. They have done so in response to their recognition that the present law will make our smaller companies less competitive and our capital markets less important against other global capital markets. Perhaps, then, the challenge is not simply the creation of a two-tiered compliance system, but rather the removal of ambiguity and unrealistic expectations from SOX taken as a whole. If resources were focused on clarifying

the requirements and identifying and eliminating the sections that have a disproportionately negative impact on smaller companies, then the positive aspects of SOX could benefit the markets.

Scott Gibson, a member of the board of directors for five small public companies, in a private correspondence, provides an important closing perspective and cautionary note, observing that “Sarbox, like many new laws, has its strengths and weaknesses. It is good that the law pushes companies into a higher control environment for purposes of financial reporting. The issue is: Has this reliance on controls and reporting of material weaknesses gone too far? To this I must answer yes, from the perspective of a director of five small public companies. The same could be said for fraud reduction or elimination, which was a major objective of the bill. This law has given us all some tools to detect this sort of activity at an earlier stage (whistle blower statute; attestation of CFO which has been asked for down the line from key managers, etc.). But, this law will not eliminate fraud; unethical people will always search for ways to game the system.”²⁵

The momentum is mounting against the application of Section 404 to microcap companies, based on the findings of the internal controls subcommittee to the Advisory Committee on Smaller Public Companies (Dolan). The subcommittee’s research resulted in a firm recognition that “The US economy depends on smaller companies, particularly for innovation and jobs.”²⁶ Yet the cost burden and management time commitment required for smaller companies to comply with S404 adversely impacts these companies’ ability to compete, which in turn may discourage smaller companies and foreign issuers from becoming public. Any resultant decline in going public will weaken our capital markets relative to foreign exchanges. Despite this, however, the subcommittee does acknowledge that “microcap and smaller public companies (representing only 7% of all US public companies total capitalization) proportionately do represent lower risk to the capital markets than large public companies.”²⁷ This small representation, however, does not diminish the fact that the subcommittee determined that “the regulatory burden of S404 on smaller companies is currently decreasing competitiveness through higher operating costs and management distraction from business opportunities and risks. The ability to respond and adapt quickly to business opportunity and risk is a key aspect of the ability of small companies to compete . . . and this regulatory burden is disproportionately higher on microcap and smaller public companies (<US\$700 million).” These significant concerns have led to the recommendation that S404 compliance requirements be triggered by company size, with microcap revenues (<US\$125 million) held to less stringent requirements than small public companies (revenues <US\$700 million) and small public companies exempt from external audit requirements, but not from internal control audits.

In sum, then, as observed through a private note from Brian Mandell-Rice, Audit Partner and National Director of the Manufacturing and Distribution Practice in the accounting firm of Hein & Associates, “Public companies and to a certain extent, private companies, have benefited from SOX as it has promoted

better financial statement transparency and other best practice practices. However, small companies, if ultimately required to adopt SOX 404, may find the cost/benefit analysis to be so negatively impacted that going private or non-reporting will have to be seriously considered. Capital formation through initial public offerings for smaller private companies will likely be substantially reduced if SOX 404 in its current form is not changed.”

And so we come full circle. Is SOX a force for good governance or will its unanticipated consequences lead to a negative return on this investment? The jury is still out on this question and the verdict may well take years to determine.

APPENDIX

The complete survey and results are as follows. All respondents serve on public boards and were enlisted through a number of personal contacts and an e-mail list of public board members. Response rate to this survey was 30 percent.

1. Survey

1. Outside accounting firms are less willing to provide guidance, assistance, or insight into accounting or regulatory issues.

| | <i>Response Percent</i> | <i>Response Total</i> |
|------------------------------------|-----------------------------|---------------------------|
| Disagree completely | 11.1 | 3 |
| Disagree somewhat | 11.1 | 3 |
| Neutral—neither agree nor disagree | 14.8 | 4 |
| Agree somewhat | 29.6 | 8 |
| Agree completely | 33.3 | 9 |
| Total Respondents | | 27 |
| (skipped this question) | | 0 |

2. The cost of Sarbox required for corporate governance reforms will fall more heavily on smaller and more entrepreneurial companies than on large companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|------------------------------------|-----------------------------|---------------------------|
| Disagree completely | 7.4 | 2 |
| Disagree somewhat | 11.1 | 3 |
| Neutral—neither agree nor disagree | 7.4 | 2 |
| Agree somewhat | 14.8 | 4 |
| Agree completely | 59.3 | 16 |
| Total Respondents | | 27 |
| (skipped this question) | | 0 |

3. Many new firms cannot go public to raise the capital necessary for growth because of the compliance costs of Sarbox.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.4 | 2 |
| Disagree somewhat | 14.8 | 4 |
| Neutral—neither agree nor disagree | 18.5 | 5 |
| Agree somewhat | 44.4 | 12 |
| Agree completely | 14.8 | 4 |
| Total Respondents (skipped this question) | | 27 0 |

4. The process of ensuring Sarbox compliance provides an opportunity to keep operations nimble and flexible.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 33.3 | 9 |
| Disagree somewhat | 29.6 | 8 |
| Neutral—neither agree nor disagree | 29.6 | 8 |
| Agree somewhat | 3.7 | 1 |
| Agree completely | 3.7 | 1 |
| Total Respondents (skipped this question) | | 27 0 |

5. A Sarbox review provides an opportunity to look for existing weakness and shore up for new growth.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.4 | 2 |
| Disagree somewhat | 25.9 | 7 |
| Neutral—neither agree nor disagree | 14.8 | 4 |
| Agree somewhat | 44.4 | 12 |
| Agree completely | 7.4 | 2 |
| Total Respondents (skipped this question) | | 27 0 |

6. Being a director in a fast-growing young company is more difficult than being a director in a mature company.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.7 | 1 |
| Disagree somewhat | 18.5 | 5 |
| Neutral—neither agree nor disagree | 25.9 | 7 |
| Agree somewhat | 29.6 | 8 |
| Agree completely | 22.2 | 6 |
| Total Respondents (skipped this question) | | 27 0 |

7. Some form of Sarbox was necessary, but the new rules are too vague and their implementation is too rigid for small companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 18.5 | 5 |
| Agree somewhat | 33.3 | 9 |
| Agree completely | 48.1 | 13 |
| Total Respondents (skipped this question) | | 27 0 |

8. I support a two-tier approach to Sarbox implementation so that small companies (less than \$100 million) are held to an easier standard than large companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.7 | 1 |
| Disagree somewhat | 3.7 | 1 |
| Neutral—neither agree nor disagree | 18.5 | 5 |
| Agree somewhat | 29.6 | 8 |
| Agree completely | 44.4 | 12 |
| Total Respondents (skipped this question) | | 27 0 |

9. Sarbox compliance is expanding beyond its original intent into state and local regulations.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 3.7 | 1 |
| Neutral—neither agree nor disagree | 40.7 | 11 |
| Agree somewhat | 33.3 | 9 |
| Agree completely | 22.2 | 6 |
| Total Respondents (skipped this question) | | 27 0 |

10. Companies planning IPOs require much longer lead times due to Sarbox.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 25.9 | 7 |
| Agree somewhat | 37 | 10 |
| Agree completely | 37 | 10 |
| Total Respondents (skipped this question) | | 27 0 |

11. Private companies are also heavily impacted by Sarbox.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 3.8 | 1 |
| Neutral—neither agree nor disagree | 23.1 | 6 |
| Agree somewhat | 38.5 | 10 |
| Agree completely | 34.6 | 9 |
| Total Respondents (skipped this question) | | 26 1 |

12. If a start-up company was built around the premise of being Sarbox-compliant, it would quickly go out of business.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.7 | 2 |
| Disagree somewhat | 26.9 | 7 |
| Neutral—neither agree nor disagree | 23.1 | 6 |
| Agree somewhat | 34.6 | 9 |
| Agree completely | 7.7 | 2 |
| Total Respondents (skipped this question) | | 26 1 |

13. Sarbox has led to increased difficulty in finding qualified independent board members for growth companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 3.8 | 1 |
| Neutral—neither agree nor disagree | 0 | 0 |
| Agree somewhat | 53.8 | 14 |
| Agree completely | 38.5 | 10 |
| Total Respondents (skipped this question) | | 26 1 |

14. I am less likely to join the board of an entrepreneurial company than that of a more established and mature company.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 15.4 | 4 |
| Disagree somewhat | 26.9 | 7 |
| Neutral—neither agree nor disagree | 30.8 | 8 |
| Agree somewhat | 19.2 | 5 |
| Agree completely | 7.7 | 2 |
| Total Respondents (skipped this question) | | 26 1 |

15. There should be different rules for companies of different sizes.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.7 | 2 |
| Disagree somewhat | 11.5 | 3 |
| Neutral—neither agree nor disagree | 3.8 | 1 |
| Agree somewhat | 46.2 | 12 |
| Agree completely | 30.8 | 8 |
| Total Respondents (skipped this question) | | 26 1 |

16. A control system used by a large company may be untenable in a small company.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 3.8 | 1 |
| Agree somewhat | 30.8 | 8 |
| Agree completely | 61.5 | 16 |
| Total Respondents (skipped this question) | | 26 1 |

17. The added costs of Sarbox are the reason that many IPO-ready companies are now larger and more established than they would have been ten years ago.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 7.7 | 2 |
| Neutral—neither agree nor disagree | 30.8 | 8 |
| Agree somewhat | 38.5 | 10 |
| Agree completely | 19.2 | 5 |
| Total Respondents (skipped this question) | | 26 1 |

18. Sarbox will result in companies going public later in their growth cycle.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 11.5 | 3 |
| Agree somewhat | 61.5 | 16 |
| Agree completely | 23.1 | 6 |
| Total Respondents (skipped this question) | | 26 1 |

19. Sarbox will result in choking off access to capital markets for emerging businesses.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 19.2 | 5 |
| Neutral—neither agree nor disagree | 23.1 | 6 |
| Agree somewhat | 34.6 | 9 |
| Agree completely | 19.2 | 5 |
| Total Respondents (skipped this question) | | 26 1 |

20. Sarbox will result in more companies becoming de-listed.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 3.8 | 1 |
| Disagree somewhat | 7.7 | 2 |
| Neutral—neither agree nor disagree | 46.2 | 12 |
| Agree somewhat | 38.5 | 10 |
| Agree completely | 3.8 | 1 |
| Total Respondents (skipped this question) | | 26 1 |

21. There are more small companies (below \$20 million in assets) that are subject to fraud allegations by the SEC than large companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 11.5 | 3 |
| Neutral—neither agree nor disagree | 76.9 | 20 |
| Agree somewhat | 3.8 | 1 |
| Agree completely | 7.7 | 2 |
| Total Respondents (skipped this question) | | 26 1 |

22. More small companies restated earnings than large companies over the past three years.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.7 | 2 |
| Disagree somewhat | 15.4 | 4 |
| Neutral—neither agree nor disagree | 69.2 | 18 |
| Agree somewhat | 0 | 0 |
| Agree completely | 7.7 | 2 |
| Total Respondents (skipped this question) | | 26 1 |

23. There is increased liability risk to private equity partners who sit on portfolio boards.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 7.7 | 2 |
| Disagree somewhat | 3.8 | 1 |
| Neutral—neither agree nor disagree | 15.4 | 4 |
| Agree somewhat | 61.5 | 16 |
| Agree completely | 11.5 | 3 |
| Total Respondents (skipped this question) | | 26 1 |

24. Staying private or being bought versus going public and tackling SOX is becoming more attractive in planning exit strategies of young companies.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 3.8 | 1 |
| Neutral—neither agree nor disagree | 3.8 | 1 |
| Agree somewhat | 42.3 | 11 |
| Agree completely | 50 | 13 |
| Total Respondents (skipped this question) | | 26 1 |

25. Private companies are under increased scrutiny of corporate governance practices by potential buyers.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 3.8 | 1 |
| Agree somewhat | 69.2 | 18 |
| Agree completely | 26.9 | 7 |
| Total Respondents (skipped this question) | | 26 1 |

26. Sarbox compliance takes capital away from its potential to enhance shareholder value and expand business models into new markets.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Disagree completely | 0 | 0 |
| Disagree somewhat | 0 | 0 |
| Neutral—neither agree nor disagree | 15.4 | 4 |
| Agree somewhat | 57.7 | 15 |
| Agree completely | 26.9 | 7 |
| Total Respondents (skipped this question) | | 26 1 |

27. Please rate the extent of risk to the on-going vitality and access to capital of entrepreneurial companies.

| | <i>No Risk</i> | <i>Some Risk</i> | <i>Significant Risk</i> | <i>Response Total</i> |
|--|----------------|--|-------------------------|-----------------------|
| Federal securities litigation | 15% (4) | 65% (17) | 19% (5) | 26 |
| Sarbox compliance | 4% (1) | 58% (15) | 38% (10) | 26 |
| Creation of internal controls to meet Section 404 requirements | 19% (5) | 46% (12) | 35% (9) | 26 |
| Ability to attract and retain independent board members | 8% (2) | 65% (17) | 27% (7) | 26 |
| Enforcement litigation | 12% (3) | 58% (15) | 31% (8) | 26 |
| | | Total Respondents (skipped this question) | | 26 1 |

28. Sarbox serves as a catalyst to taking a proactive approach to succession planning.

| | <i>Response Percent</i> | <i>Response Total</i> |
|------------------------------------|--|-----------------------|
| Disagree completely | 7.7 | 2 |
| Disagree somewhat | 23.1 | 6 |
| Neutral—neither agree nor disagree | 30.8 | 8 |
| Agree somewhat | 34.6 | 9 |
| Agree completely | 3.8 | 1 |
| | Total Respondents (skipped this question) | 26 1 |

29. Expensing options will limit the potential of entrepreneurial companies to recruit top talent.

| | <i>Response Percent</i> | <i>Response Total</i> |
|------------------------------------|--|-----------------------|
| Disagree completely | 11.5 | 3 |
| Disagree somewhat | 11.5 | 3 |
| Neutral—neither agree nor disagree | 26.9 | 7 |
| Agree somewhat | 34.6 | 9 |
| Agree completely | 15.4 | 4 |
| | Total Respondents (skipped this question) | 26 1 |

30. Who are you? Please check all that apply.

| | <i>Response Percent</i> | <i>Response Total</i> |
|--|-----------------------------|---------------------------|
| Venture capital investor | 28 | 7 |
| Angel investor | 24 | 6 |
| Entrepreneur | 48 | 12 |
| Entrepreneurial company board member | 48 | 12 |
| Portfolio company board member | 32 | 8 |
| Senior executive of public entrepreneurial company | 8 | 2 |
| Senior executive of private entrepreneurial company | 28 | 7 |
| Others—please list below | 24 | 6 |
| Total Respondents (skipped this question) | | 25 2 |

31. If you selected Others above, please write in.

| | |
|--------------------------|----------|
| Total Respondents | 6 |
|--------------------------|----------|

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12

Financing the High-Growth Entrepreneurial Venture

A Public Policy Perspective

James Henderson, Benoit Leleux, and Augusto Ruperez Micola

Entrepreneurial activity is increasingly considered a critical driver of a country's economic performance. Governments have recognized entrepreneurship as a mechanism to create employment, to boost national industry competitiveness, to reduce poverty and increase wealth distribution. These objectives, the argument goes, may be undersupplied if left to pure market forces. This is because individual actors would not internalize the social benefits of their individual decisions. Hence, the "entrepreneurship" market would fail. This line of thinking drives public policy development, with the goal to develop intervention mechanisms to aid entrepreneurship and the creation of an entrepreneurial economy. The scope, number, and growth of these programs have been striking. For example, the UK government spent approximately 0.08 percent of GDP in 2001 on supporting small businesses and entrepreneurial start-ups across a number of ministries and departments.¹ However, we have scant evidence whether any of this government intervention works in reality. For example, based on Global Entrepreneurship Monitor (GEM) data for 2003, national experts considered government policies and programs to support the creation of opportunity-based entrepreneurship as ineffective.² Furthermore, many of the comments pointed to a central element of an entrepreneurial economy: the supply of entrepreneurial finance. Refer to Figure 12.1, which provides this data for most of the OECD countries.

The need for entrepreneurship public policy, combined with the lack of understanding of what really works, create a real opportunity to make a contribution. The focus of this chapter is on public policy and entrepreneurial finance for high-expectation entrepreneurs. It will start with a macro review of the theory of market and government failures, and its application to entrepreneurship. It will then gradually narrow its scope to the sources of entrepreneurial

Percent of Expert Comments

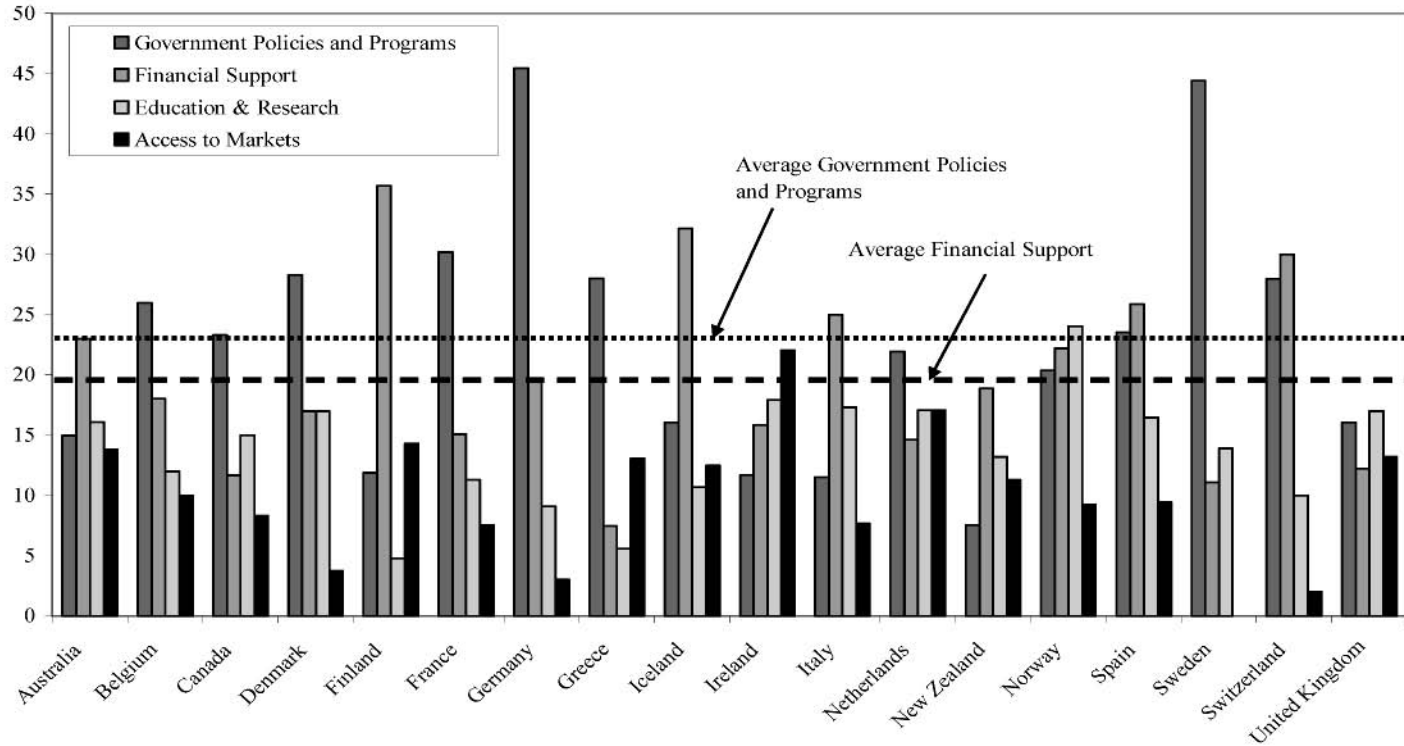


Figure 12.1. Survey of national experts on entrepreneurship. *Source:* Global Enterprise Monitor (2003).

finance available to entrepreneurs and issues regarding government intervention. The chapter will then conclude by posing research questions regarding policy evaluation and organization.

BOUNDARIES

Before proceeding, we must specify boundaries around the meaning of entrepreneurship, the intended realms of public policy and entrepreneurial finance issues to be addressed and the geographic scope of the analysis.

Definitions of entrepreneurship abound. The prevalent view of entrepreneurship concerns the harnessing of new opportunities and the introduction of new ideas in the market.³ Indeed, the OECD, a major forum for public policy discussions regarding entrepreneurship, defines entrepreneurs as “agents of change and growth in a market economy that can act to accelerate the generation, dissemination and application of innovative ideas. Entrepreneurs not only seek out and identify potentially profitable economic opportunities but are also willing to take risks to see if their hunches are right.”⁴ This definition singles out a certain subset of start-up enterprises—those that have high expectations for growth.⁵ While this entrepreneurial activity is but a very small proportion of all businesses that are started (3–17 percent of all nascent and start-up businesses), the potential for job creation, competitiveness, and potential wealth creation is the largest in that subset. High-expectation entrepreneurs may be responsible for up to 80 percent of total job creations through entrepreneurial activity. Furthermore, certain factors can discriminate high-expectation entrepreneurs from other entrepreneurial activity, including higher income, higher education, and opportunity motivation.⁶ Finally, governments may have a better chance of impacting the relative prevalence of high-expectation entrepreneurship than entrepreneurship in general.

Second, entrepreneurship policy is covering ever larger territories, cutting across numerous government ministries, including education and health, small and medium-sized enterprises (SMEs), R&D support, financial systems, anti-trust, regulation, taxation, immigration, regional development, etc. We adopt a narrow policy domain definition, focusing on those that affect the supply and demand of finance for high-expectation entrepreneurs. In other words, we focus on whether and how governments can help increase the relative prevalence of high-expectation entrepreneurs (which represent on average 10 percent of the population of entrepreneurs, but ranging from a low of 3 percent [Spain] to a high of 17 percent [Canada, United States]).

Third, entrepreneurial finance itself is a very broad topic, ranging from personal financing, credit cards, microfinance, leasing, trade credit, etc. For the sake of simplicity, we limit the focus to equity financing for nascent and recently started businesses of less than three years of age with high expectations for growth. For start-up ventures, debt financing may not be optimal. Nascent businesses

have few tangible assets and even fewer positive cash flows, and are thus not bankable. Furthermore, high-expectation start-ups are those requiring the largest amounts of capital in their early stages, and hence the least likely to see debt as a key source of financing.⁷ We thus focus on the four most common sources of entrepreneurial finance for high expectation ventures: personal funds, family and friends, business angel funding, and venture capital (VC).⁸

Finally, we define the geographic scope of the analysis to developed OECD economies. Many of the questions for public policy discussed in this chapter may increasingly be applied to the developing world; however, many more institutional, long-term factors may have to be established before these measures can really make an impact. Finally, entrepreneurial activity is inherently local/regional. Thus, the geographic slant will be focused on this geographic dimension.

THEORY OF MARKET AND GOVERNMENT FAILURES AND APPLICATION TO ENTREPRENEURIAL FINANCE

Government intervention is grounded on the theory of market divergences or market failures.⁹ Under the theory, if the market were left to itself, the true cost or benefit of an output in a particular sector may not be fully internalized. As such, the social supply or demand curve will diverge from the private curves, and hence be inefficient. Thus, government intervention would seek to correct the source of the divergence, whether it is in production, R&D, financing, or elsewhere. Government intervention can indeed be seen as industrial policy, where public resources are funneled toward particular firms or industries. Yet, governments may fail as much or more than markets. Removing government interventions and artificially created distortions may in fact make the industry much better off. Thus, market and government failures should be seen from two sides of a time scale: pre-policy structuring (market failure) and post-policy implementation and outcomes (potential government failure). Each will be discussed in more detail.

Market Failure and Entrepreneurial Finance

There is broad agreement in the entrepreneurship literature that the market for entrepreneurial finance is not socially optimal. Adverse selection, or the inefficiencies and discrepancies that arise via and during the exchange of information, and externalities, or the wider impact and effect on other businesses that are not internalized by the focal firm, have been cited as the major culprits. However, markets also fail because of the existence of public goods or goods/services that are not being provided by the private sector, because no returns can be made from them, or mixed goods—services that are not provided because insufficient returns are made from them.

Adverse Selection

Adverse selection is defined as making suboptimal decisions as a consequence of imperfect information, which can be asymmetric, incomplete, or inaccurate regarding the risks or quality of a transaction.¹⁰ Asymmetric information occurs where one side of a market transaction has information that the other side does not have. Asymmetric information originated in Akerlof's article regarding the market for "lemons," that is, poor-quality used cars: the seller knows more than the buyer but will hide the information.¹¹ Inaccurate information due to errors made in research may occur on the buyer or seller side, which may result in adverse selection, depending on the severity of the inaccuracies. Finally, incomplete information occurs when there are significant holes or gaps in the total information set being used to make the transaction.¹²

Extant entrepreneurship literature has focused on adverse selection as the major culprit on both sides of entrepreneurial finance: the investor seeking to employ capital profitably and the entrepreneur seeking finance to support his/her venture. On the supply side, the traditional view has been that entrepreneurial ventures are risky, uncertain, and are subject to significant information asymmetry, inaccuracy, and incompleteness. Investors see very difficult starting conditions, valuation problems, forecasting issues, and entrepreneurial opportunism, leading to an undersupply of risk capital for entrepreneurs.

However, suppliers of finance often lament that there is plenty of capital to invest in good entrepreneurial ventures. The problem is not with the supply of finance, but with the quality of the demand for financing.¹³ Business plans contain insufficient information; business concepts require further development; growth prospects are dramatically overoptimistic, reducing any entrepreneur credibility. Hence, from a public policy perspective, the market still fails, not because of a lack of funding, but because of a lack of good-quality entrepreneurs.

Public Goods/Mixed Goods

Pure public goods are items that have the characteristics of nonexcludability (no property rights assigned to them) and nonrivalry (access by one party does not preclude access by another). Since they are nonexcludable, any company providing them will have a hard time making money on them since consumers can use the goods/services without paying for them. Fundamental research for example has been described as a pure public good, since it is accessible to all (once it is published) and one's use of it does not take from another.¹⁴

Mixed goods are slightly different from public goods. They can exhibit rivalry (use by one party takes away from another, immediately or eventually) or excludability (access can be controlled), or a little of both.¹⁵ Property resources, such as fisheries, irrigation systems, common forests, and the like, exhibit the first form of mixed goods. Protected generic brands, such as Champagne, Bordeaux,

and the like, would be examples of nonrivalry (anyone in those regions can use the brand), but excludability (only those in the region can use it). Clubs, such as local swimming pools and libraries would be examples which exhibit a little of both rivalry and excludability, but not enough for the organization to make any money from them.

Many entrepreneurs depend on public/mixed goods they can freely access or use for their ventures. These goods and services, such as entrepreneurship education programs, information disclosure rules, fundamental research dissemination journals, licensing rules, incubators, science parks, to name a few, all suffer from public and mixed goods characteristics. Why would anyone step up to provide any of these services when the returns are completely appropriated (public goods) or significantly appropriated (mixed goods), such that the private returns would be far less than the social returns?

Externalities

The concept of externalities is very much related to public and mixed goods; yet, in this case, rather than not being supplied at all, the market under or overproduces, because the spillovers (negative or positive) are not internalized by the private decision makers. Numerous externalities have been documented, including pollution, noise, complementarities, and the like.¹⁶ More specifically to entrepreneurship, three externalities are particularly potent: learning, knowledge, and complementarities.

Learning externalities emanate from the observation of entrepreneurial activity.¹⁷ Start-up businesses are clearly fraught with a high risk of failure. However, failure can be construed as learning for the entrepreneur's next potential venture. Indeed, experiencing the running of a new venture, regardless of whether it fails, typically increases the likelihood of doing it again or becoming a "renascent entrepreneur."¹⁸ This learning by doing, however, may not be internalized by the investors, who may be unwilling to part with their money on untested entrepreneurs for the sake of learning. However, from the government's point of view, this learning-by-doing has a social benefit (especially if one of the ventures turns out to be successful). Other people within the community will learn that entrepreneurship is a viable option for a career, especially in areas where it may not have been even considered: for example, inner cities, depressed regions, and the like. In other words, entrepreneurship exhibits some learning externalities that are not internalized by the private investor nor the individual entrepreneur.

Knowledge externality emanates from the public benefit of the generation of new R&D. These spillover benefits also tend to have the highest impact within a local proximity or geographic region and can range between 50 and 100 percent of the private rate of return.¹⁹ Furthermore, anecdotal evidence suggests that knowledge spillovers are particularly important for small firms.²⁰ For example, ideas generated in one start-up may indeed spill over to others within the same

region, as these ideas are passed through local networks. Furthermore, these ideas will spill over regardless of whether the start-up succeeds or not, leading to new ideas and potentially new companies. Thus, what is beneficial to the community and the development of the cluster may not be fully internalized by the entrepreneur or the investors. Whereas investors are interested in returns, governments are interested in the positive externalities that the successful or failed firms provide to the success of other firms within the cluster.

Finally, as a cluster develops through learning and knowledge externalities, a set of firms with complementary assets and skills may develop as well, where they are mutually supporting each other. Thus the value of the entrepreneurial venture (or mature business) is greater in the presence of other complementary firms within the cluster. This additional value is not only due to knowledge spillovers, but also due to complementarities created from the network of firms.

Government Failure

Government intervention, by definition, is discriminatory: there will always be another sector made worse off because of the government intervention. Thus, even if the government determined that the direct benefits of an intervention outweighed the costs of intervention, it may fail to take into consideration the distortions caused in other sectors of the economy. Even if market failures in entrepreneurial finance are solved, there may still be a lack of high-growth entrepreneurs. The traditional role of public policy toward large and small businesses may provide an answer. Until the mid-1980s, large corporations were the engines of economic growth; they were more efficient, were growing, and provided higher paying jobs than small businesses.²¹ The government response was to aid the growth of large business, but at the same time, hamper their power through strong antitrust and regulatory legislations and heavy corporate taxes. Yet, many of these government interventions may in fact have unintentionally impeded a larger development of high-expectation entrepreneurs.²²

In summary, market failures are very likely to exist in entrepreneurial finance, generating divergences between the demand and supply for entrepreneurial finance and levels that public policymakers would see as socially optimal. There would clearly be a role for a party able to close the divergence gap. Closing the gap would theoretically increase the probability (1) that promising start-ups are created that otherwise would not have been founded, and (2) that some of those start-ups would achieve significant growth.²³ Indeed, there are some spectacularly successful clusters built up because of government intervention due to perceived market failures. For example, Taiwan's semiconductor industry boasts some of the most successful companies in the world. However, little would have probably happened without the heavy-handed, enlightened government-sponsored interventions through R&D support, technology transfers, the creation of science parks, and so on.²⁴ Boston's biotechnology cluster emerged due in part to the government-sponsored R&D through local universities.²⁵ Ultimately, these

interventions could lead to increased employment, national competitiveness, and wealth creation and redistribution. However, a reduction on government intervention may result in greater short-term benefits. It is an empirical question as to which one should take precedence. Yet, given the trends toward privatization and deregulation, removing previous government interventions may be winning out.²⁶ With these criteria in mind, we seek to determine which government interventions may be required for specific sources of entrepreneurial finance.

MARKET/GOVERNMENT FAILURES AND SOURCES OF ENTREPRENEURIAL FINANCE

A number of approaches have been used to map the sources of entrepreneurial finance with a venture stage of development. Conceptually, most are offsprings of Myers and Majluf's pecking-order hypothesis.²⁷ Due to the presence of uncertainty and imperfect information, some financial markets may be closed to the entrepreneur. Several variables have been used to proxy for information imperfections. For example, Carey et al. use firm size as a proxy for information availability and map the sources of capital with respect to this dimension.²⁸ Timmons incorporates five dimensions in his model of financing life cycles: the type of firm (high potential, foundation, lifestyle firms), sales levels, stages of development (R&D, start-up, early growth, rapid growth, exit), risk, and the cost of capital.²⁹ Shulman brings the sources of funding back to two dimensions, firm maturity and levels of funding to be expected from each source.³⁰ For the sake of simplicity, Figure 12.2 illustrates a model of financing according to the firm's stage of development.

The stages of development used in this model correspond to a typical high-expectation entrepreneurial venture. Seed-stage financing represents generally a small amount of capital provided to an inventor or entrepreneur to determine whether an idea deserves further consideration and investment. This stage usually does not involve production or sales. Start-up stage financing entails the commitment of more significant funds to an organization that uses the money for product development, prototype testing, test marketing, studying market penetration potential, and/or management team recruitment. Companies at this stage may be in the process of being set up, or may have been in business for a short time, but have not sold their product commercially. First-stage financing is provided to an ongoing business that is not yet profitable, but has demonstrated products and markets, with a modest manufacturing process and shipping in commercial quantities. Also known as early development capital, it often goes to finance the first major marketing effort. Second-stage financing, or expansion round, would support working capital and fixed-asset investments needed for growth in a firm with established sales and market feedback, possibly demonstrated profitability. Third-stage financing provides additional financing to fast-growth firms with established profit margins, which are insufficient to cover

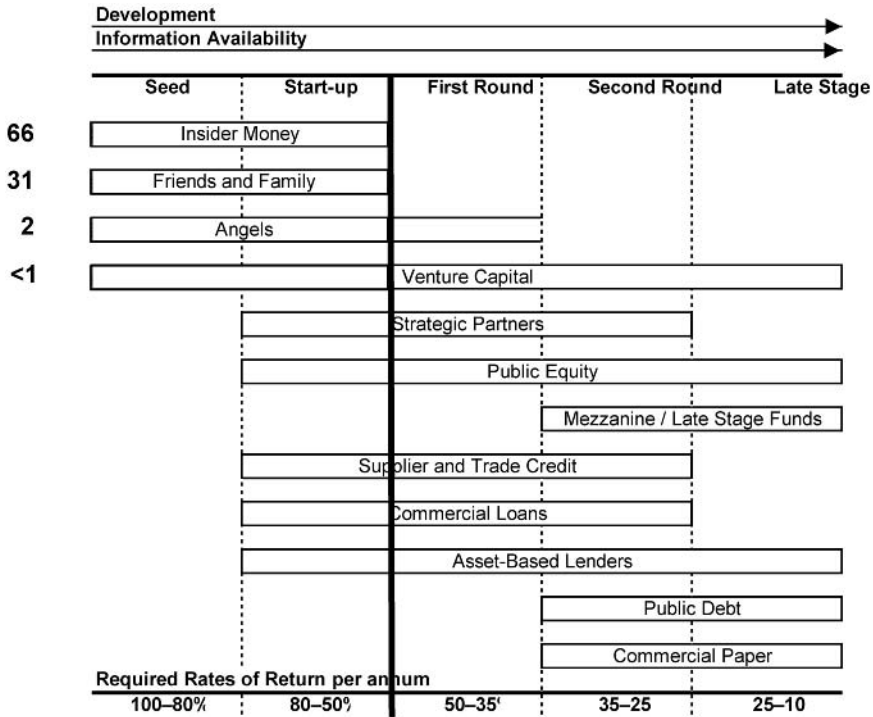


Figure 12.2. Sources of entrepreneurial finance. Approximately \$1,100 billion has been spent worldwide on seed/start-up funding. *Source:* Global Entrepreneurship Monitor (2003).

growth needs. Finally, late-stage financing, including management buy-ins and buy-outs, bridge, mezzanine, and replacement financing provide resources for restructuring activities of well-established entities, including preparation of a cash-out or exit.

Figure 12.2 not only illustrates the entrepreneurial venture stages, but also the financing sources available. Financing sources overlap within each major stage of development of the venture. For example, seed financing is shown to be available alternatively from the entrepreneur’s own personal resources, friends and family, angels, high net worth individuals, or even VC. With the money used essentially to build a proof of concept of the product or service opportunity, there is indeed little chance of sourcing debt capital: the level of risk is too high, the cash flows are virtually non-existent, and the firm lacks marketable collaterals. Financing will have to come from equity-type capital from less risk-averse sources. With a proof of concept and solid business plan in hand, a start-up round of financing faces a significantly enlarged pool of capital suppliers, adding a number of debt suppliers to the seed-stage equity providers.

Figure 12.2 also shows the size of the funding provided during the initial stages of the business life cycle. The vast majority of seed financing comes from informal sources, including the founder, friends, and family. According to the GEM 2003 study, which focuses on start-ups less than three years of age, approximately 66 percent of all financing comes from the investor himself, 31 percent from family and friends, 2 percent from angel investors, and less than 1 percent from venture capitalists (VCs).^{31, 32} Interestingly, a very small percentage of total start-up financing comes from the traditionally heavily researched areas in entrepreneurship and public policy: business angels and VC. While there are substantial differences across countries on these two sources of financing, they still remain very small in comparison with the other sources.

Market/Government Failures and the Entrepreneur

The decision to become self-employed and start a company is complex and can be viewed from a variety of perspectives.³³ It typically arises with the convergence of outside opportunities in conjunction with the willingness to start a new company. That willingness is either correlated with an inheritance or some windfall or from a decrease in job market security or career advancement potential.^{34, 35} As a result, becoming self-employed is clearly a local phenomenon.

Adverse Selection

Self-financing is clearly the easiest way to resolve the asymmetric information/adverse selection problems. Beyond satisfying the financial needs, insider money is also used to demonstrate commitment by the entrepreneur, or to “walk the talk.” Indeed, initial self-financing, whether from personal savings, credit cards, mortgaging the house, and the like, has been shown to increase the likelihood of survival and success of the start-up.³⁶ As well, contrary to previous studies showing no relation between personal income and nascent entrepreneurship, Autio found that the vast majority of high-expectation entrepreneurs (approximately 71 percent) come from the top-third household income bracket.^{37, 38} Furthermore, a host of evidence shows that self-employment propensities increase with wealth (after controlling for entrepreneurial willingness).³⁹ Thus, in the vast majority of the high-expectation entrepreneurial ventures, initial self-financing can go a long way in solving the adverse selection problem.

Public Goods/Mixed Goods Problems

Yet, a problem may still exist in the initial supply of high-expectation/high-quality entrepreneurs. First, those with the available money may still not be capable of starting a business due to a lack of (1) access to innovation; (2) technology-transfer capabilities; (3) support knowledge; or (4) business skills. Yet, these are the very knowledge sources that suffer from public goods/mixed

goods characteristics. Who will then step up to provide the necessary knowledge, business skills, and support that many would-be entrepreneurs require? Governments and/or public/private initiatives could play a role in providing a whole host of public/mixed goods—initially basic research funding, science park infrastructure, incubation services, and entrepreneurship training. Table 12.1 provides examples of some of those programs that help individual entrepreneurs in getting started and in evaluation of their success.

Several observations can be made from this exhibit. With the rising interest in entrepreneurship policy, government programs have dramatically increased, mostly through imitation of other countries' programs, more specifically the United States. However, evaluation of these programs has not kept up with the pace of their development. Thus, while we can track the plethora of government programs supporting the supply of high-expectation entrepreneurs, we have little knowledge of whether or not any of them are successful.

Externalities

Even if the public/mixed goods were provided, there still may be, from the government's perspective, an underproduction of high-quality entrepreneurs, due to the learning externalities gained from it. Entrepreneurship is inherently local, where a "spark" or "discontinuity" must be present. Once lit, the learning externalities may kick in. Failed entrepreneurs may restart businesses, or reluctant entrepreneurs may take the initial plunge. Yet, the genesis of entrepreneurship and local cluster development tends to be a random confluence of events, hardly foreseen by government officials.⁴⁰ For example, the development of the Washington area biotechnology and ICT clusters originated from government downsizing and outsourcing contracts, rather than any formal cluster development policy.⁴¹

Yet, this randomness has not stopped governments from at least trying, either by providing initial seed financing, supplying grants through competitive tenders, guaranteeing salaries, and/or partial loan guarantees. For example, Scottish Enterprise, Scotland Economic Development Board, created Enterprise Fellowships targeting researchers in optoelectronics and biotechnology, sectors identified as strong research areas in the Scottish universities. These fellowships covered one year's salary and expenses, along with training, coaching, and mentoring required to establish a new business. Clearly, Scottish Enterprise's intention was to kick start learning and knowledge externalities through the development of clusters around Scottish universities. Yet, evaluation has been limited to the companies actually hatched through this program, rather than the learning and knowledge externalities generated out of them.

Government Failures

Even if the government invested in local public/mixed goods and provided funding to start new businesses, there still may be barriers based on previous

Table 12.1. Example of Government Programs to Solve Public Goods/Mixed Goods Problems for Individual Entrepreneur

| <i>Problem</i> | <i>Example Programs</i> | <i>Description</i> | <i>Country</i> | <i>Evaluation</i> |
|----------------------------|--|---|------------------------|---|
| Basic research | National Science Foundation Grants Edison Technology Program, Thomas Edison Centers in Ohio Advanced Technology Centres in New Jersey | Promotion of basic research, but tied to the needs of industry | Worldwide | Success of basic level research grants has been based on institutional environment created between large enterprises, the government, and universities (anecdotal support). ^a |
| R&D knowledge transfer | Science parks, property-based developments close to universities | Promote technology transfer from university to the science park. To facilitate university spin-offs | Worldwide | Mixed. Countries with science parks do not create any additional employment than those that do not. ^b The more successful parks have a profound impact on the region, such as Research Triangle Park. ^c |
| Small business R&D support | Small Business Innovation Research Program, Advanced Technology Program | US\$1 billion per year is allocated via a competition to small firms to stimulate additional R&D activity | USA | SBIR enhances small business performance, but not known whether it enhances social benefits. ^d |
| Support services | Business incubators or office space and services to assist new firms | Often located within science parks, provide office space and services on easy terms. Services can include strategy, business plans, presentation skills, IP licensing, matching services with existing entrepreneurs. | Increasingly worldwide | Only little is in fact known about the overall impact of business incubation services. Some support from Finnish government supported incubation services. ^e |

| | | | | |
|---------------------------|--|--|------------------------|---|
| Support services | Online portals | Providing information regarding whom to contact, market research, and what to do to steer nascent entrepreneurs to the one-stop shops | Increasingly worldwide | Little is known about its impact. |
| Entrepreneurship skills | Small business development corporations, One-stop shops provided by development agencies | Counseling provided by development agencies to entrepreneurs who may be starting a business or who have already started | Increasingly worldwide | SBDC (U.S.) clients have higher rates of survival and growth than might be expected. ^f |
| Entrepreneurial awareness | Entrepreneurship education | Increasing the awareness of entrepreneurial spirit by incorporating entrepreneurship in the primary, secondary, and postsecondary curriculum | Increasingly worldwide | Assessment is difficult because of long lead times. |

^aLehrer and Asakawa, 2004, op. cit.

^bScott Wallsten, "Do Science Parks Generate Regional Economic Growth? An Empirical Analysis of Their Effects on Job Growth and Venture Capital," American Enterprise-Brookings Joint Center Working Paper (2004).

^cM. Lugar, "Science and Technology Parks in the Millennium: Concept, History and Metrics," in *A Review of the New Initiatives at the NASDA Ames Research Center*, ed. C. Wessner (Washington, DC: National Academy Press, 2001).

^dJosh Lerner, "The Government as Venture Capitalist," National Bureau of Economic Research Working Paper 5753 (1998).

^ePier Abetti, "Government Supported Incubators in the Helsinki Region, Finland: Infrastructure, Results and Best Practices," *Journal of Technology Transfer* 29, no. 1 (2004): 19–40.

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Source: Adapted from D. Storey, "Entrepreneurship, Small and Medium Sized Enterprises and Public Policy," in *International Handbook of Entrepreneurship Research*, eds. Z. Acs and D. Audretsch (Dordrecht: Kluwer Academic, 2003), 473–511.

public policies. Administrative burdens, tax regimes, and bankruptcy policies may indeed make the costs of starting, and failing, simply prohibitive.

Administrative burdens are seen as a major hindrance to starting a new business.⁴² Indeed, the number and length of procedures for starting a new business can range from as little as two procedures and three days for Canada to six procedures and 108 days for Spain. Similarly, the costs of these procedures range from 1 percent of GDP per capita for Canada to 20 percent for Poland (Table 12.2). Furthermore, these administrative burdens have a significant negative impact on the rate of opportunity entrepreneurship.⁴³ Clearly, a simple and straightforward answer to this issue is to remove unnecessary burdens placed on entrepreneurs.

Tax systems are often biased against starting and running entrepreneurial ventures. For example, corporate tax policy often supports debt rather than equity financing, the preferred method of financing for start-ups. Overly progressive

Table 12.2. Regulatory Costs of Establishing a Business in OECD Countries

| Country | Regulatory Cost of Business | | | |
|-------------|-----------------------------|----------------------|--|---|
| | Number of Procedures | Length of Procedures | Cost of Procedures (percent of GDP/capita) | Minimum Capital (percent of GDP/capita) |
| Australia | 2 | 2 | 2.1 | 0 |
| Belgium | 4 | 34 | 11.3 | 14.1 |
| Canada | 2 | 3 | 1 | 0 |
| Denmark | 4 | 4 | 0 | 28.8 |
| Finland | 3 | 14 | 1.2 | 29.3 |
| France | 7 | 8 | 1.1 | 0 |
| Germany | 9 | 45 | 5.9 | 48.8 |
| Ireland | 4 | 24 | 10.3 | 0 |
| Italy | 9 | 13 | 16.2 | 11.2 |
| Japan | 11 | 31 | 10.6 | 74.9 |
| Korea | 12 | 22 | 17.7 | 332 |
| Mexico | 8 | 58 | 16.7 | 15.5 |
| New Zealand | 2 | 12 | 0.2 | 0 |
| Netherlands | 7 | 11 | 13.2 | 66.2 |
| Norway | 4 | 23 | 2.9 | 28.9 |
| Poland | 10 | 31 | 20.6 | 237.9 |
| Spain | 6 | 108 | 16.5 | 16.9 |
| Sweden | 3 | 16 | 0.7 | 36.9 |
| Switzerland | 6 | 20 | 8.6 | 33.2 |
| UK | 6 | 18 | 0.9 | 0 |
| USA | 5 | 5 | 0.6 | 0 |

Source: World Bank Doing Business Database, 2004.

income tax schedules and capital gain taxes penalize successful entrepreneurs and potentially decrease risk-taking. Unequal treatment of losses and profits is not favorable for high-growth ventures, which may not become profitable very soon. Burdensome social security and health care payments simply increase the cost of doing business overall. Clearly, a change in any one of these policies would unleash more entrepreneurial activity.

Finally, stringent bankruptcy laws discourage risk taking; failed entrepreneurs may be inhibited from starting another business. Furthermore, stringent bankruptcy laws also can create an additional stigma of failure. Several remedies have been suggested, including rescue policies, revising bankruptcy rules, reduction of restrictions on bankrupt entrepreneurs who want to restart after failure, and so on.

In summary, a vast number of market and government failures can be cited regarding the initiation of an entrepreneurial activity, not necessarily related to the direct financing of it (see the venture capital section). Failures to launch are often not due to a lack of finance (many high-expectation entrepreneurs tend to come from wealthier backgrounds) but from a lack of supply of knowledge developed either about the technology or the running of the venture. An increasing number of government programs have been introduced worldwide to address these problems; however, again, little is known whether they are successful or not.

Market/Government Failures and Friends and Family

Adverse Selection

To counter the limitations of self-finance by the entrepreneur, the closest circle of potential investors includes friends and family. These investors rely primarily on trust to counter the adverse selection problem. While limited in the amount of resources available (money, skills, networks, industry knowledge), friends and family provide the bulk of outside financing for entrepreneurial ventures (approximately 31 percent based on the GEM 2003 study) (Figure 12.2). Furthermore, there is growing evidence that the size of the informal investments has a direct impact (even greater than regulatory burdens) on the prevalence of new opportunity-driven and high-expectation businesses. In addition, friends and family often claim lower required rates of returns to proceed than other investor groups.⁴⁴ They are not funding only to get a return on investment, but rather to (1) share the excitement or (2) altruistically support the entrepreneur. Finally, Bygrave and Hunt, showed that there is, on average, ample funding from friends and family to support the typical entrepreneurial venture.⁴⁵ However, it is likely that a funding gap may remain in some countries between the money provided by friends and family and the requirements of valid entrepreneurial ventures. Given that the vast majority of start-ups are funded by friends and family—even the high-expectation entrepreneurs—government attention should clearly be paid to this area.

Public Goods/Mixed Goods Problems

The focus of entrepreneurship policy and research has been on the supply of entrepreneurs, not necessarily their immediate social networks. For example, the majority of funding from family and friends comes from individuals who had also started a business. For them, clearly, there is no knowledge gap. However, for the rest of the family and friends, knowledge about entrepreneurship, in general, may be lacking. Furthermore, a cultural blockage against asking for money (from the entrepreneur's side) or offering money (from the family and friends' side) may persist. These mental models are difficult, but not impossible to overcome. Entrepreneurial education that is provided for entrepreneurs could in fact be developed for family and friends as well, and supported by government funding.

Community-led funds could also be used to plug the financing gap for seed-stage high-expectation entrepreneurs.⁴⁶ However, who would step up to provide the service, when the returns from the service would benefit all the members of the community? This could become a mandate for a local government/economic development agency. Yet, the trust link between family member/friend and the entrepreneur may be broken, and the lack of supervision may result in poor performance over time.⁴⁷

Externalities

Even if family and friends have knowledge about entrepreneurship, they may still not be willing to part with their money. Given both the learning-by-doing and learning-from-observation benefits of entrepreneurship at a local level, coupled with friends' and families' low-return requirements, government incentives to increase this activity should be strongly considered. However, there are few examples of programs directed at this population. In Japan, bonds are issued to family and friends so that they do not have to complete additional procedures for security registration.⁴⁸ Additional tax incentives, such as tax credits/charitable donations could be instituted.

Government Failures

Similarly, for personal financing, existing tax regimes and regulatory barriers may create distortions that lower the optimal amount of financing from family and friends. For example, capital gain taxes may deter friends and family from investing. Furthermore, barriers may also exist regarding the provision of financial gifts from family and friends.

In summary, family and friends are the most important external sources of finance for budding entrepreneurs, but are also the most overlooked from a government policy perspective. Given their low expected return on investment, kick-starting this funding mechanism as a basis of generating learning externalities should rank high on the government's entrepreneurship policy agenda.

Market/Government Failures and Angel Investors

Beyond the immediate social network, it is also possible to raise money from individuals willing and able to invest in entrepreneurial companies. These individuals—known as angels, informal private equity investors or sometimes simply high net worth individuals—include former or current entrepreneurs, professionals (lawyers, doctors, consultants, etc.), or wealthy families and invest in local start-ups.⁴⁹ These individuals invest on a variety of grounds, such as (1) identification to the entrepreneur (“I remember these early days in my career . . .”); (2) the need to find a proxy for the entrepreneurial thrills (“I can’t do it myself but at least I will be part of it”); or (3) as an extra layer of diversification in an investment portfolio. They also bring very different resources to the table, including at times industry knowledge, a risk taking culture, and extensive networks. On the whole, angel investors are but a very small percentage of the total financing for seed-stage/start-up investments, representing on an average, approximately 2 percent of total start-up investments.⁵⁰

Adverse Selection

While they have more limited resources than VCs, they typically negotiate larger ownership stakes to counter the adverse selection problem. They will closely monitor the investment, which is why most investments are within a day’s drive from the business angel’s home. According to GEM 2003, their required rates of return are 1.5–2.0 times their investment in two years, which is high, compared to friends and family, but certainly in line with those required by professional investors for early stages of development. Their view is that lack of financing is not the problem for developing entrepreneurship, but the quality of the entrepreneurs seeking finance.^{51, 52}

Public Goods/Mixed Goods

While the high-quality entrepreneur problem may be solved through education, support, R&D transfer programs, the links between the entrepreneur and angel community remain relatively weak. Search costs are high on both sides.⁵³ As a result, a coordination problem may arise in linking the dispersed angel community with the entrepreneurs: who will step up to create a business angel network when the returns to the network benefit all the members? Who will pay for the development? Start-up entrepreneurs are not able or willing to cover the angel network organization fees. While the Internet has certainly helped in lowering the cost of spontaneously emerging networks, most are still under-funded and not profitable.⁵⁴ Thus, local angel networking designed around emerging clusters has been an area of government support and/or corporate sponsorship.⁵⁵

Not all business angels are experienced investors in start-ups. A knowledge gap on their side may also exist. Thus, a business angel network could have, in

fact, an additional role of connecting serial with inexperienced investors, such that a transfer of knowledge can take place. For example, the national business angel network in France has organized a “School of Business Angels” to train these investors.

Externalities

Despite the existence of business angels and angel networks, from a learning externalities point of view, there still may be an underproduction of angel financing for new entrepreneurial ventures. While more investments in entrepreneurial ventures by business angels may be socially desired, government incentives may not have much of an impact. Angels still expect a significant return on their investment; increasing the incentives to fund may increase their funding for each investment, but may not change the number of companies they invest in. For example, in the United Kingdom, tax relief is provided to individuals or business angels who invest in ordinary shares of qualifying companies through their Enterprise Investment Scheme (EIS). Indeed it has been shown that the investors made larger investments than they would otherwise have done in the absence of tax relief; however, the EIS scheme was not considered critical to the angel’s investment decision.^{56, 57} Thus, achieving learning externalities from a business angel source will likely be small.

Government Failures

A number of regulations unnecessarily burden angel investors, but these are dwarfed compared with the difficulties of becoming an entrepreneur. There have been some concerns, for example, that investor protection legislation, designed to help business angels, could in fact deter them from making investments due to the significant costs associated with legal and accountancy fees. Furthermore, existing capital gain tax regimes may not be particularly favorable. Removing capital gain taxes increases the rewards business angels receive, but does not remove their downside risk.

In summary, angel investors are a viable and important financing source for the seed and start-up stages of an entrepreneurial venture. However, they are restrained for lack of good investment opportunities. Thus, improving the local coordination between angels and entrepreneurs through the support of business angel networks is clearly the main way to bridge this gap.

Market/Government Failures and VC

VC firms, as professional risk equity investors, raise money from institutions and individuals, and invest it in firms at all stages of development. As a group, the industry presents a very heterogeneous profile, with funds specializing by stage of development, industries and industrial subgroups, and geography.

However, they focus strictly on the super-deals, that is, they effectively represent only a very small percentage in seed/start-up stages.

Adverse Selection

In order to overcome the adverse selection problem due to asymmetric, inaccurate, or imperfect information, VCs first run extensive due diligences, using internal and external expertise when needed. However, the cost of due diligence and monitoring is primarily size-independent, and varies little by stage of development. Thus, VCs tend to shy away from seed/start-up stage investments, except in cases where an entrepreneur already has a track record, is surrounded by an excellent management team and is embedded in an innovative, vibrant cluster from which the start-up can immediately benefit.

Second, known for their hard-nosed approach to projects, they are also willing and able to take on risk and provide management expertise.⁵⁸⁻⁶⁴ They will build sophisticated risk management tools to increase their potential returns, demanding for example preferred stock with numerous restrictive covenants and representation on the board of directors, as conditions for investment. They will stage their investments to match the key milestones in the ventures, never exposing more capital than is absolutely needed and keeping entrepreneurs on a short (capital) leash. Staging creates options to refinance or abandon the project at regular intervals and controls the capital at play at each point in time. The reputation of some very long-standing VCs is second to none, and their presence in the capital structure sends a very strong signal to others investors and stakeholders. Their extensive experience breeding and educating high-growth companies can make them exceptional partners in this strenuous process and can result in very successful initial public offerings (IPOs). Examples abound. Sun Microsystems, AOL, Amazon, e-Bay, Genentech, and Google were all funded at one time by VCs.

Public Goods/Mixed Goods

However, a few fundamental public good/mixed good assumptions need to be satisfied to make the VC industry function smoothly. First, the costs of the due diligence can be lowered if specific disclosure rules and accounting standards (either supplied by the government watchdogs or accounting profession) are established. With good accounting information, the VCs can spend less time in gathering information and in monitoring their investments once made.⁶⁵ In other words, if start-up ventures have to abide by certain disclosure rules to increase their transparency, there may be a greater willingness for VCs to invest. While Jeng and Wells show that accounting standards did not significantly affect the level of VC investing, Bottazzi and Da Rin did find that disclosure rules significantly increase the level of IPO activity—the favored exit mechanism for VCs.^{66, 67}

A second assumption concerns whether they can successfully liquidate the company through well-functioning stock markets. Stock markets have been increasingly recognized as being crucial to the development of a VC industry. Most developed economies have already responded. Viable stock markets for high-growth technology companies have been established in many countries, ranging from the well-known NASDAQ, opened in 1971, to the lesser known Neuer Markt (Germany), Nouveau Marché (France), Canadian Venture Exchange (Canada), Alternative Investment Market (UK), just to name a few. However, the majority of these institutions were established as private initiatives, not government-sponsored ones.

The development of a VC industry depends also on the availability of highly skilled venture capitalists who can not only assess the risks and commercial potential of new technologies but effectively nurture these companies into successful businesses. However, the government may be limited in what it can do as venture capital skills are developed through years of experience in the industry, rather than through any specific training.⁶⁸

Externalities

When private sources are absent, governments often step in to provide seed stage/start-up capital with the intention of spurring the development of entrepreneurship and VC learning externalities and ultimately clusters. They have intervened in many different ways, including directly run programs, indirect investments, VC grants, and guarantees.

Government-run VC operations have generally had mixed reviews. First, government VC funds typically follow cluster developments, not precede them—the original intention of government-sponsored VC.⁶⁹ Second, public fund managers are often civil servants, and therefore may not have the necessary experience in selecting, supporting, or monitoring their investments. Third, they face very different incentive mechanisms than classic VCs, where partners share in the profits through a predefined formula. Fourth, if public funds forego some expected returns for the sake of policy objectives, they may end up attracting the best projects, leaving only the lemons for private VCs to fund, resulting in a smaller, not larger, VC industry. However, in their favor, government-run VC programs seem ultimately to encourage further private VC funding.⁷⁰

Governments have also intervened by injecting capital indirectly into the VC industry. For example, the European Investment Fund, established in 1994, provides matching capital into venture capital funds. Other programs, such as I-tec, launched in the United Kingdom in 1997, provide grants to cover VCs' due diligence costs. The idea is that this support would motivate VCs in financing more seed/early stage ventures. However, this sort of financing requires heavy administrative and control arrangements to ensure compliance.

Guarantee schemes have also been deployed to attract new investors into the venture capital activities. They can range from guaranteed returns after a

specified period, to a full or partial absorption of losses. Whatever the incentives to attract new investors, care certainly has to be taken to mitigate any moral hazard risk, such as, attracting investors not providing the level of investment care needed to generate returns since they would not bear the negative consequences of poor decisions.⁷¹

Regardless of the specific mechanisms through which the interventions are effected, there is a clear need to evaluate government-sponsored VC programs. Positive anecdotal evidence exists. For example, in Israel, the Yozma government-sponsored VC programs were initiated in the early 1990s, with the intention of promoting the nascent VC industry, consisting of two venture capital funds at the time. The original US\$100 million in government funding resulted in an additional US\$150 contributions from the private sector. By 2004, the total sums managed by the ten Yozma-sponsored venture capital firms topped US\$5 billion.⁷² Anecdotal evidence though is insufficient to evaluate such programs.

Government Failures

A number of regulations, including institutional investor regulations, and lack of investor protection laws, have stifled the full development of the venture capital industry. Venture capital is by nature a long-term investment activity. Accordingly, it is most appropriate for investors with a very long investment horizon. Not surprisingly, leading institutional investors in venture capital in the United States include pension funds, life insurance companies and university endowments. Clarification of the Employee Retirement Income Security Act (ERISA) in 1979 led to a flood of new money into venture capital.⁷³ However, simply lifting these regulations certainly does not guarantee a rush of inflows into the industry. For example, in Denmark, regulatory reforms on investment ceilings in VC funds by insurance companies and pension funds have been disappointing.⁷⁴ In Switzerland, antiquated rules on liquidity requirements for pension funds have prevented much inflows into venture capital, despite the elimination of formal restrictions on such investments.

Second, the legal environment can also impede the development of the industry. For example, common law countries such as the United Kingdom and the United States generally have much stronger investor protection for outside investors than French civil law countries. German civil law and Scandinavian countries are somewhere in between.⁷⁵ Cumming et al. showed that countries with a higher legality index (which comprises civil versus common law systems, efficiency of the judicial system, the rule of law, corruption, risk of expropriation, risk of contract repudiation, and shareholder rights) develop more competitive VC industries.⁷⁶ In short, a stronger, more predictable investor-supportive legal framework supports the development of a stronger VC industry.

In summary, governments have established programs to improve their domestic VC industry, whether through (1) the provision of direct or indirect funding to the industry; (2) the establishment of stock markets for high growth, technology

companies; (3) the improvement of disclosure requirements; (4) the facilitation of VC funding regulations; and (5) the improvement of the overall legal environment for venture funding. Of these five areas, direct and indirect funding are the most controversial. While a number of government programs have been established to spur learning externalities in entrepreneurship and the VC industry, but little evidence exists as to their effectiveness.

GROPING FOR AN ENTREPRENEURSHIP POLICY FOR ENTREPRENEURIAL FINANCE

We have covered only four of the myriad of sources of financing available to the entrepreneur; however, these four sources account for the vast majority of financing for the seed and early stages of a business ventures. We documented numerous sources of market failures, including adverse selection, public goods/mixed goods, externalities, and government failures for each type of financing, whether it is from the entrepreneur, family and friends, business angels, or VCs. We also found that the majority of public policy attention has been focused on the least representative sources of entrepreneurial financing, namely business angels and venture capital. To increase the overall impact of policies, we suggest they should partly be redirected toward the most significant sources of financing for emerging enterprises, namely the entrepreneur self-funding and family and friends.

Despite the incredible variety of public programs encountered to boost entrepreneurial activity, we still have a very patchy understanding of their actual contributions. Numerous questions come to mind pre-implementation, including burden of proof, necessity and scope of government involvement, likelihood of success based on other required endowments, and an evaluation of the discriminated firms or sectors.

Before a program is initiated, what is the burden of proof that policymakers must satisfy? Can the market failure be demonstrated? Where in the industry value chain is it happening? Where is the intervention pressure point, i.e., where do you obtain the largest return per unit of public capital injected? While more entrepreneurship at a local level is probably a good thing, which part of the entrepreneurial venture should the government (or another actor) support? The government still faces the burden of identifying and properly measuring the gap, applying the correct intervention mechanisms, whether it is through taxes, regulation, subsidies, grants, information provision, consulting, and the like. For example, we do not know the size of learning, knowledge, and complementarity externalities that exist in entrepreneurship. Sizing up these market failures, in fact, would go a long way in determining what the government should in fact be supporting (i.e., research and development only, venture funding, venture support, etc.).

If the government does correctly identify and measure the sources of market failures, and applies the appropriate interventions, it still has to question whether

it should be the correcting mechanisms in the first place. Would there not be an equally capable and lower cost/more knowledgeable actor in society that might step up to correct the market failure, such as public/mixed goods? Numerous examples in the cluster development literature have been cited, where cluster members organized themselves to establish the rules, regulations, subsidies, contributions, and so on, in order to internalize the cost of the public or mixed good. For example, in Champagne, all members contribute a levy to the interprofessional association, which represents the interests of the growers and producers, to fund common advertising campaigns (on Champagne, not specific brands), help organize trade fairs, and engage in R&D initiatives for the benefit of all members of the cluster.⁷⁷ The French government, in this case, simply allowed them to self-regulate.

If the government is the most appropriate actor to effect the changes, it would still have to monitor interfering factors, such as inconsistencies in programs, inappropriate time horizons, insufficient complementary measures, etc. For example, government subsidies for basic research may not be very successful in transferring to high-technology start-ups, if other interventions are not in place (such as increasing business understanding, incubators, knowledge-transfer mechanisms, and the like). Clearly, this criterion suggests that government program coordination around entrepreneurship policy is required. However, in most regions, entrepreneurship policy is merely a collection of disparate programs, located in a number of different ministries/departments, lacking any coherence or logic.

Finally, since all of these programs to overcome market failures are by essence discriminatory (money and resources are being funneled into certain sectors or functional areas instead of others), an assessment of the size of the distortions on others sectors has to be made. For example, just as governments historically made enterprise policy decisions to support larger corporations, to the detriment of small businesses, in their headlong rush to create an entrepreneurial economy, governments may make entrepreneurship policy decisions that are detrimental to larger businesses.

Even if on paper the programs make sense both individually and collectively, and hence appear to constitute a coherent entrepreneurship policy, they still may not be successful during implementation. Numerous assumptions are made about the implementation abilities of governments and their officials, some of which may be unsupported.

First of all, it is implicitly assumed often that the government is a costless, benevolent, all-knowing resource allocation agency. The reality can be very different. How would public bodies know what resources should be optimally allocated across the sources of entrepreneurial finance on the demand and supply sides? The answer to this question may be a tall order, given government policy-making is structured to respond to political pressure rather than to plot ideal courses of economic activity. Furthermore, Economic Development Agencies, such as the Scottish Enterprise or the Small Business Administration in the

United States, which are typically the main implementers of entrepreneurship policy, are groping with how to achieve the most effective outcomes within constrained budgets. Should they provide targeted intervention on high-expectation entrepreneurs or more general intervention on all forms of entrepreneurship? Should they focus on fast-developing, high-performance clusters or on less-developed economically disadvantaged areas? Should they provide centralized versus highly decentralized services/funding to entrepreneurs?

Second, once the resources are allocated to the various departments, government officials may not have the right knowledge and skills to make the right decisions. Or they may use questionable criteria to select which firms require support or not. Indeed, officials may seek to target firms based on their likely success, regardless of whether the firms need the support or the funding. They then can later claim success of the program, even if the contribution of the support was particularly low.⁷⁸

Third, even if officials used the right criteria for support, they may use questionable evaluation criteria to continue to support an intervention, because it is in their best interests to maintain a program rather than highlight its deficiencies. For example, they may show how many firms had participated in their program; what sectors they were in; what locations they came from; how much money was spent; whether the firms liked the program; how fast the procedures were; or possibly provide a critical report of problems that have emerged. Positive outcomes in these types of evaluations may be construed as intervention success. However, these types of evaluations are partial at best. In order to observe a program's efficacy, counterfactual tests with matched firms, which did not get the intervention (taking into consideration any sample selection bias), must be conducted, preferably by external unbiased third parties. Yet, very few government programs on entrepreneurship have been tested this way.

Finally, market failures may dissolve over time, either because public-private institutes may step in to take over the responsibility of the "public good" nature of the industry, or because the externality has hit a natural limit. Many cluster-based initiatives have seen the emergence of institutes for collaboration from the industry itself after being nudged by the government. For example, business angel networks and VCs typically emerge after the development of a vibrant cluster. Furthermore, some externalities may only be a temporary phenomenon. For example, the industry structure will determine a natural limit of successful entrepreneurial activity. Once the limit is reached, further government support, because of learning externalities, would only be adding to the industry's exit rates. For these reasons, many government programs should be considered temporary; knowledge of when to cut the cord may be a critical factor of success.

On the whole, entrepreneurship public policy is a nascent area that has developed out of the increasing recognition of the importance of entrepreneurship as a key driver of economic activity. As a result, many governments are still struggling to develop a coherent policy toward entrepreneurship in general, and entrepreneurial finance in particular. This chapter should be seen as an early

contribution to that needed reflection, highlighting both the opportunities for government support/simplification and documenting the implementation challenges.

NOTES

1. Organization for Economic Cooperation and Development (OECD), 2004. "Financing Innovative SMEs in a Global Economy," Second OECD Conference of Ministers Responsible for Small and Medium-Sized Enterprises (SMEs).

2. Erkki Autio (Erkki Autio, "Report on High Expectation Entrepreneurs," GEM 2005) did find that the relative prevalence of high-expectation entrepreneurs was very much positively associated with government policies and programs. However, we do not know the direction of the causality.

3. See, for example, David B. Audretsch, *Industry and Industry Evolution* (Cambridge, MA: MIT Press, 1995).

4. See, for example, p. 11 in: "Organization for Economic Cooperation and Development (OECD)," *Fostering Entrepreneurship* (Paris: OECD, 1998).

5. Erkki Autio, 2005, op. cit.

6. Ibid.

7. See, for example, L. Jeng and P. Wells, "The Determinants of Venture Capital Funding: Evidence across Countries," *Journal of Corporate Finance* 6 (2000): 241–289.

8. Equity capital can also come from strategic investors, such as large corporations; however, the size of these investments are particularly small compared with the others, and public policy would have very limited, if any, role to play.

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11. George A. Akerlof, "The Market for Lemons: Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84, no. 3 (1970): 488–500.

12. Philips, 1998, op. cit.

13. See, for example, C. Mason and R. Harrison, "Public Policy and the Development of the Informal Venture Capital Market: UK Experience and Lessons for Europe," in *Industrial Policy in Europe*, ed. Keith Cowling (London: Routledge, 1999), 199–223.

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15. See, for example, Todd Sandler and John Tschirhart, "Club Theory: Thirty Years Later," *Public Choice* (1997): 93, 335–355.

16. Eric Maskin, "The Invisible Hand and Externalities," *American Economic Review* 84, no. 2 (1994): 333–337.

17. For example, the Global Entrepreneurship Monitor consistently shows that those who start businesses typically know others who have started businesses. See, for example, Erkki Autio, 2005, op. cit.

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20. Edwin Mansfield et al., "Social and Private Rates of Return from Industrial Innovations," *Quarterly Journal of Economics* 91 (1977): 221–240.
21. See Brett Anitra Gilbert et al., "The Emergence of Entrepreneurship Policy," *Small Business Economics* 22, no. 3 (2004): 313–323.
22. See Ho Yuen-Ping and Wong Poh-Kam, "Availability of Financing, Regulatory Business Costs and National Entrepreneurial Propensity," National University of Singapore Working Paper (2005).
23. Alison F. Graham, "Scottish Enterprise/Royal Society of Edinburgh Enterprise Fellowships: Stimulation Innovation and Entrepreneurship," *Scottish Economic Report* (2002): 12–20.
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25. Martin Kenney and U. von Burg, "Technology, Entrepreneurship and Path Dependence: Industrial Clustering in Silicon Valley and Route 128," *Industrial and Corporate Change* 8 (1999): 67–103.
26. See Gilbert et al., 2004, op. cit.
27. Stewart Myers and Nicholas Majluf, "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have," *Journal of Financial Economics* 13 (1984): 187–221.
28. Mark Carey et al., "The Economics of the Private Placement Market," Board of Governors of the Federal Reserve System Working Paper 166 (1993).
29. Jeffrey Timmons et al., *New Venture Creation: Entrepreneurship in the 1990s* (Boston, MA: Irwin, 1997).
30. Joel Shulman, "Debt and Other Forms of Financing," in *The Portable MBA in Entrepreneurship*, ed. William D. Bygrave (New York: John Wiley and Sons, 1997), 210–241.
31. William Bygrave and Stephen Hunt, "Global Entrepreneurship Monitor: 2004 Financing Report," *Global Entrepreneurship Monitor (GEM)* (London Business School and Babson College, 2004).
32. Note that those companies that are older than three years would typically turn to other sources of equity and debt financing, including business angels and venture capitalists. Indeed, a total of US\$27.5 billion of venture capital was provided worldwide in 2003, but the vast majority of it was for first round and later stages. Total business angel funding is roughly the same size as venture capital funding; however, most of it is directed toward start-up and first round financing. It is estimated that angels finance eight times more ventures than venture capitalists (see Mason and Harrison, 1999, op. cit.).
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34. Douglas Holtz-Eakin et al., "Entrepreneurial Decisions and Liquidity Constraints," *Rand Journal of Economics* 25, no. 2 (1994): 334–347.
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37. Phillip Kim et al., "If I Were Rich? The Impact of Financial and Human Capital on Becoming a Nascent Entrepreneur," University of North Carolina Working Paper 147 (2003).
38. Erkkö Autio, 2005, *op. cit.*
39. See, for example, David Blanchflower and Andrew Oswald, "What Makes an Entrepreneur?" *Journal of Labour Economics* 16 (1998): 26–60; and Holtz-Eakin et al., 1994, *op. cit.*
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52. C. Mason and R. Harrison, "Informal Venture Capital in the UK," in *Financing Small Firms*, eds. A. Hughes and David Storey (London: Routledge, 1994), 64–111.
53. C. Mason and R. Harrison, "The Size of the Informal Venture Capital Market in the UK," *Small Business Economics* 15, no. 2 (2000): 137–148.
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13

Technology-Driven Entrepreneurship

Muddling through and Succeeding with the Second Product

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Much has been written about opportunity identification, or the matching of a market need with a product that can fulfill it, as the key to entrepreneurial success. Yet, there are distinct paths by which opportunities are identified and those paths result in markedly different entrepreneurial contexts. For example, whereas many nontechnologically intensive business founders begin their entrepreneurial efforts with the discovery of a market need and then search for a means to exploit it, many technologists who form new high-tech companies typically consider the identification of a market need as secondary to technology development and only consider commercialization once the new science has been developed.

Thus, while consumer market research methods designed to identify demand of potential buyers may be helpful to the former group of entrepreneurs, they may not be relevant to the latter. Indeed, what is most challenging to high-tech entrepreneurs is that the more radical the technology, the less likely it is that potential buyers will even know that the technology exists or how it may yield cost savings, quality improvements, and performance improvement characteristics that will be of significant benefit to them. This phenomenon renders the commercialization process exceedingly difficult for these entrepreneurs and typically results in a trial and error product development process, which we characterize as “muddling through.” In our experience, we have found that most founders of technology-intensive start-ups willingly acknowledge that no one bought their first product because there was no market for it. Of those that were able to learn from this initial failure and garner sufficient resources to modify the faulty product or replace it all together (i.e., those that muddled through), many

experienced some degree of success with their second product and in turn greatly improved their fledgling businesses' chances for success. Those that did not muddle through (either because they lacked the resources or wherewithal to do so), typically failed to create a viable business. Of course, entrepreneurs who found a business based on a specific market need are certainly not immune from muddling through. However, because in such cases, demand, consumer preferences, and the like are known (or at least predictable), the number and magnitude of product changes are considerably smaller for this group.

In this chapter, we endeavor to address the unique differences that exist between market-driven and technology-driven forms of entrepreneurship and how those differences result in unique contexts for both types of entrepreneurs. We then discuss the various support mechanisms that are designed to facilitate the development and commercialization of new products based on existing, evolutionary, and disruptive technologies. Finally, we conclude by presenting two cases that illustrate the nuances inherent in each of these models.

ENTREPRENEURIAL OPPORTUNITY

Since Cantillion first wrote about the entrepreneur as a risk-taker in the mid-1700s, many scholars have offered their own unique interpretations of what constitutes entrepreneurship. Of the more contemporary definitions, the earliest is Schumpeter's notion that entrepreneurship is "the carrying out of new combinations."¹ Years later, Penrose argued that entrepreneurship embodied "contributions to the operations of the firm which relate to the introduction and acceptance on behalf of the firm of new ideas, particularly with respect to products, locations, and significant changes in technology."² More recently, Stevenson and Jarillo have argued that entrepreneurship is "a process by which individuals—either on their own or inside organizations—pursue opportunities without regard to the resources they control"³ whereas Bull and Willard suggest that entrepreneurship results when new combinations result in discontinuity. They contend that discontinuity, or the creation of value previously unavailable to society, is in fact, "the essence of entrepreneurship."⁴

As is clear from these definitions, prior to the turn of the twenty-first century (roughly 250 years after Cantillion's time), little agreement existed with regard to what constitutes entrepreneurship. This became especially problematic as scholarly interest in the field of entrepreneurship has grown over the past two decades; for, without a unified definition of the field a uniform approach to its scholarly analysis is impossible.⁵ In fact, Bruyat and Julien lament that unless entrepreneurship develops a definition that is distinct from other fields and upon which consensus can be reached, "the field of entrepreneurship could actually disappear."⁶

In response, Shane and Venkataraman, define "entrepreneurship as the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited."⁷ Drawing

primarily on work by contemporary economists, Shane and Venkataraman conceptualize entrepreneurial opportunities as the identification of new means-ends relationships that yield returns that are greater than the cost of production.⁸⁻¹⁰ This definition is an important step in the field of entrepreneurship in that it incorporates many of the theoretical elements from prior definitions as well as the findings from seminal empirical research. As such, it represents an important step toward unifying the field.

Of course, because of its inclusiveness, this definition is somewhat vague (perhaps necessarily so) with respect to the nuances inherent in the opportunity identification process. Specifically, by simply referring to entrepreneurial opportunities as the identification of new means-ends relationships, this definition does not address the fact that whether it is the means (technologies) or the ends (market needs) that serves as the genesis of the entrepreneurial efforts has significant implications on the entrepreneurial context. For example, an entrepreneur who first identifies a market need and then seeks a technology with which to exploit it operates in a markedly different milieu than an entrepreneur who first identifies a technology and then seeks a market need toward which it can be exploited. Whereas the former typically seeks to match known demand with known technologies, the latter typically seeks to match unknown demand with unknown technologies. As is clear, the degrees of risk, resource commitment, and the like are substantially greater in cases where the entrepreneurial process is stimulated by a technology than where it is stimulated by a market need.

TWO DISTINCT MODELS OF ENTREPRENEURSHIP

Market-Driven Entrepreneurship

For individuals whose entrepreneurial efforts are stimulated by the identification of a specific market need, customer expectations are known (or at the very least predictable). Because customers can only demand what they understand, the technologies to which market need is matched must be well accepted. Therefore, market-driven entrepreneurs typically search for existing technologies that provide the desired functionality in order to develop a commercializable product. In cases where an improved version of an existing product is desired, entrepreneurs may develop evolutionary technologies to satisfy potential customers. Evolutionary technologies, also referred to as incremental, sustaining, competence enhancing, or “nuts and bolts” technologies, build off of the existing body of knowledge with respect to production capabilities and manufacturing or processing practices and as such have known performance levels and forms of application.^{11, 12}

Consider, for example, the science of placing programmable systems on silicon chips. This technology was developed in 1971 by Intel and was initially used to supplement the processors in main frame computers in order to handle input

and output functions so as to free the main memory from focusing on these relatively slow activities. Since that time, the power of such silicon-based programmable systems on a single chip has grown to computing capacities thousands of times greater as a result of a myriad of evolutionary innovations. With this combination of increasing computing power and decreasing size have come entrepreneurial opportunities for a myriad of products, such as laptop computers, cellular phones, and MP3 players. Predecessors to these products existed before (the main frame and mini computer, the telephone, the transistor radio), so the demand for smaller, lighter, more efficient versions of them certainly existed and was reasonably predictable. Because these products were ultimately based (at least in part) on the existing microprocessor technology, they owe their existence to the evolutionary changes that occurred in microprocessing technology since 1971.¹³

Technology-Driven Entrepreneurship

According to Schumpeter, entrepreneurship is often stimulated by an individual's intrinsic drive to innovate and such a phenomenon results in the perennial introduction of new, differentiated products and services into the marketplace, some of which fail and some of which succeed.¹⁴ It is the successes that oftentimes render existing products obsolete, and in so doing, create new markets and destroy old ones, a process Schumpeter referred to as "creative destruction."¹⁵

Of course, Schumpeter's description of creative destruction appears to be primarily concerned with disruptive technologies, also referred to as radical, competence destroying, emergent or step-function technologies. Such technologies are built upon new knowledge and/or new manufacturing practices and are applied to create entirely new product-market paradigms that are often opaque to potential buyers.¹⁶ As such, disruptive technologies often require that buyers change their behavior and/or thinking to be able to use the products to which they are applied effectively.¹⁷ Interestingly, although disruptive technologies often initially underperform existing technologies, they tend to have superior performance trajectories compared to existing technologies.^{18, 19}

Consider, for example, the arc light, invented by Charles Brush in 1876. Clearly prior to the development of the electric light, no market need for such product could have possibly existed. Thus, Brush essentially created the need for electric-powered lights. Though within a few years of their development, arc lights were installed in Wanamaker's Department Store in Philadelphia and downtown Cleveland, among other places, these lamps required an excessive amount of maintenance and power and were therefore deemed to be unfeasible for household use.²⁰ Like most disruptive technologies, the arc light's substandard performance rendered its acceptance to limited applications.²¹

Of course, because disruptive technologies are often pursued without regard to market needs, it might seem that by definition market needs must always be

created in order to successfully commercialize disruptive technologies. Yet, it is important to note that entrepreneurs who develop disruptive technologies are not uniformly relegated to creating markets for them. On the contrary, many entrepreneurs choose to apply disruptive technologies to fulfill existing demand.

Consider again the electric light. Though Brush's arc lamps were the first electric light product, they failed to succeed in the marketplace due to their high cost and power requirements. Nevertheless, by the late 1870s consumers in the northeastern United States had seen the potential of the electric light and began to demand one that required less power so that it could be used indoors.

Around the same time Brush was developing the arc light technology, Thomas Edison was developing a competing electric light technology and in 1879 Edison invented the incandescent light bulb. Though Edison's light bulb was far less powerful than the arc light, its other characteristics, such as price, power, and maintenance requirements were of greater value to potential buyers. First used on a commercial basis to light Menlo Park, New Jersey in 1880, by the mid-1880s the demand for incandescent lights was palpable and has remained strong ever since.²²

When the arc light and incandescent light examples are viewed together, it becomes clear that entrepreneurial opportunities can begin from the development of technology. Equally important, it seems that opportunities for the commercialization of disruptive technologies can be both created and discovered. Whereas Brush created the market need for the electric light in general, it was Edison who discovered the demand for a less powerful, although more useful electric light.

Muddling Through

It is widely argued that most new products fail.^{23, 24} Therefore, entrepreneurship does not end with the development of the first product. As noted above, in their definition of entrepreneurship, Shane and Venkataraman emphasize not only the creation or discovery of the opportunity to develop new products, but also the exploitation of that opportunity.²⁵ Thus, for an entrepreneur to succeed, s/he must not only develop a new product but also successfully commercialize it.

To begin, it is important to note that the failure of a specific product need not necessarily culminate in a failure of the entrepreneur or of the technology in general. In fact, it is widely accepted that many products based on disruptive technologies in particular "have become major commercial successes even though no major customers or mass-market applications were identified initially."²⁶ Indeed, such product failures may actually prove beneficial to the extent that feedback regarding a given product's inability to meet a customer's demands can be garnered from the experience. It is often the case that the new knowledge garnered from customer reactions to the first product introduced with the new technology can be used to either refine the entrepreneur's perception of the opportunity he or she intended to create or alert the entrepreneur to an entirely new opportunity. For example, Dickey Riegel, CEO for Airstream, a high-performing

aluminum trailer company, reflects on a past product failure: "I expect all Air-stream associates and managers to make plenty of mistakes, myself included. But, obviously we need to learn from them."²⁷

In a sense, the information provided by this feedback loop is a source by which the "real" opportunity (whether related to the market need the entrepreneur intended to exploit in the first place or not) may be discovered. Fortunately for the entrepreneur, because the technology has already been developed, the entrepreneur need not begin anew. Rather, the entrepreneur will often develop a second product (either a modified version of the original product or an entirely new product based on the underlying technology), in an attempt to exploit the newly defined market need that s/he has discovered *post facto*.

This iterative feedback-laden process has its earliest theoretical roots in the public administration literature. In 1959, Lindblom challenged traditional decision-making theory by suggesting that most decisions are not made (nor can they be made) in the presence of perfect information regarding objectives and the means by which they will be achieved.²⁸ Rather, because information is limited, as is our ability to comprehend it, in reality decisions are often made by making educated guesses regarding the best alternative with the knowledge that the solution will not serve as the final solution to the problem.²⁹ Lindblom continues by arguing that decision-makers must therefore be prepared to modify the solution in order to achieve the intended results, a process he refers to as "muddling through."³⁰

Almost half a century later, Lindblom's ideas have been brought to bear in the R&D departments of some of today's most innovative firms. In one of the most rigorous studies of disruptive technologies, a multidisciplinary team of researchers has followed the progress of twelve radical innovation projects at ten large R&D-intensive member companies of the Industrial Research Institute (IRI). From this series of case studies, O'Connor and Rice have found that "given the high degree of technical and market uncertainty associated with breakthrough innovation, the understanding of the opportunity often changes over the course of the project—sometimes in dramatic, and even discontinuous, fashion—requiring a repeat of the opportunity recognition process that may result in a new or substantially redefined opportunity."³¹

From this same set of case studies, Rice, Leifer, and O'Connor have found that during the transition from a prototype to a commercializable product, "technical development often restarts or is redirected as a result of new learning from initial market entry and as the product is customized for specific application."³² The authors continue by noting that successful applications of radically new technology generally do not happen on the first try. Because the technology is not familiar to the market, early adopters will not immediately perceive how the technology can be used to effectively meet their needs. Thus, only by talking to early adopters about their experience with the first incarnation of the technology (in the form of an actual product) can firms gain an understanding of what level of performance, functionality, and the like the product must deliver in order to

be commercializable. Rice, Leifer, and O'Connor refer to this "cycle in which the firm learns about the market, chooses an initial entry application, and continues to learn" as "application migration."³³

In another study, Lynne, Morone, and Paulson examine four such cases: the introduction of optical fibers by Corning, CT scanners by General Electric, cellular phones by Motorola, and NutraSweet by Monsanto (formerly Searle) and find that in each case, the technology, not a well-defined market need, served as the impetus for the development of the first product, which (not surprisingly) was unsuccessful. Consider the following quote from a development engineer at General Electric regarding its failed breast scanner: "Whether or not the breast machine would be a success was a minor point. We were committed to the fan beam [a new scanning technology], and knew it [the market for CT] would develop."³⁴ In this and the remaining three cases, it was only by probing the customers to which the initial products were first marketed that these firms were able to determine exactly what the opportunity was and create new products that met that demand.

It should come as no surprise that muddling through requires a significant amount of time and money. In fact, Thomke argues that this process, "trial, failure, learning, correction, and retrial," represents one of the most formidable aspects of the innovation process.³⁵ Unfortunately for high-tech entrepreneurs, the muddling through process is often more difficult and more costly in the case of technology-driven entrepreneurship. Yet, at the same time, Rice, Leifer, and O'Connor found that firms often underestimate these investment requirements when developing products based on disruptive technologies. These researchers found that while "project teams understood the necessity for dedicating time and effort to deal with technical uncertainty in discontinuous innovation . . . they were less aware of and prepared for the efforts required for market development."³⁶

The reason financial and time requirements are so high, according to Rice, Leifer, and O'Connor, is that "a product based on a discontinuous innovation represents a significant departure from current products, [and] customers are naturally wary."³⁷ Consider the fact that because market-driven entrepreneurship starts with the identification of known demand and then applies known technologies to that demand, the likelihood of arriving at a successful match (i.e., producing a commercializable product) is high, relatively speaking. In such cases, there will likely be little muddling through. And, even in those cases where entrepreneurs do get it wrong and need to muddle through, the investment requirements will be less, because they are likely already close to a market need.

However, because products based on disruptive technologies often do not "make sense" when they are first introduced, the products they are used to develop are often resisted initially by potential buyers.³⁸ Not surprisingly, the hazard rate for the introduction of such products is much higher than average. With disruptive technologies, because the demands of the market and the performance trajectory of the technology are unknown and unpredictable, the likelihood of aligning these means and ends in a commercializable manner on the

first try is unlikely (if not improbable). Thus, entrepreneurs will almost always have to muddle through before they find the right market need or educate potential users about what the technology (and product) can do for them and/or convince them that they have a previously unknown need that the disruptive technology can fulfill.

The propensity for high-tech entrepreneurs (as compared to low- or no-tech entrepreneurs) to muddle through after the product has been developed is well documented. In a study of eight radical innovation projects at IRI member firms, O'Connor finds that entrepreneurs developing new products based on evolutionary technologies tend to pay much closer attention to market information than those developing new products based on discontinuous technologies. She suggests that the reason customer feedback is less helpful in the development of products based on disruptive technologies is that because potential buyers are not familiar with the functionality, applications, and performance of the new technology, they will be unable to elaborate on their wants and needs that the technology might fill.³⁹ Similarly, in a study of seven firms developing disruptive innovations, Verryer finds that little customer feedback was solicited until the commercialization phase. He reasons that the timing of customer interaction is a function of the fact that without a frame of reference with which to compare a product based on a novel technology, customers would be unable to evaluate the technology.⁴⁰

Summary

Given this discussion, we propose that in discovering, evaluating, and exploiting opportunities to create new means-ends relationships, individuals may engage in two distinct forms of entrepreneurship. In the first (Figure 13.1), entrepreneurs first identify an existing market need and then seek out technologies that might fulfill those needs. Because there is no assurance that the match the entrepreneur has created will be a commercial success, it is likely that the entrepreneur will need to evaluate feedback from actual and potential customers in order to better understand the market need and make the necessary technological adjustments. However, because the opportunity originated with a known market need, the extent of and costs associated with this feedback loop are likely to be lower than average.

In the second (Figure 13.2), entrepreneurs begin by pursuing a radically new technology and only seek out a market need to which it can be applied after the technology has been developed. Like the market-driven entrepreneur, the technology-driven entrepreneur faces a risk of failing to match the market need with the technology. However, because of the novelty and uncertainty associated with the technology developed in such cases, the muddling through process will likely be higher than average.

So why do so many products based on disruptive technologies fail to succeed in the marketplace? To begin, such products are typically introduced by new and

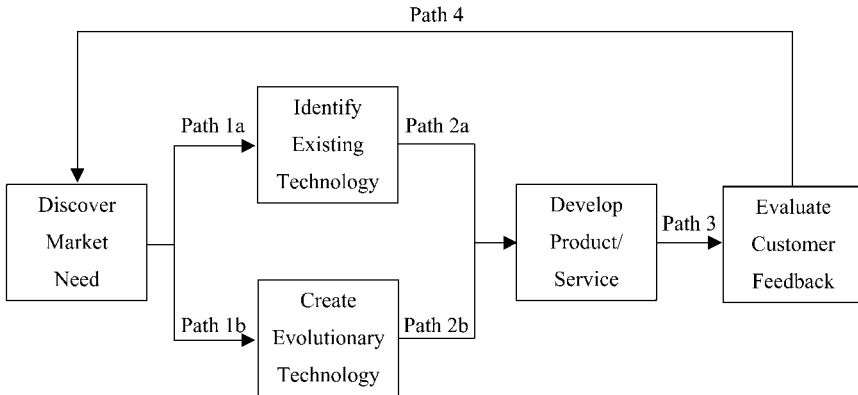


Figure 13.1. Market-driven model of entrepreneurship.

small firms due to the fact that they (1) tend to have fewer existing customers who they might alienate by pursuing a new technology, (2) are less invested in older technologies, and (3) are less constrained by organizational inertia than large incumbent firms.^{41, 42} Thus, although new and small firms are freer to experiment with radically new technologies, they at the same time have limited resource endowments with respect to time, money, raw materials, human capital, and the like. Such a resource portfolio generally cannot support the muddling-through process over the long haul. Because it is not a one-time event, but rather iterative, an idea may make several passes through the model portrayed in

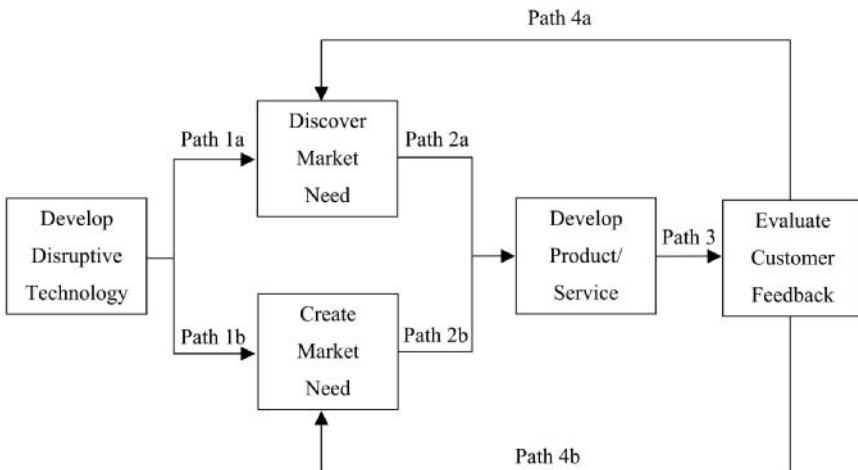


Figure 13.2. Technology-driven model of entrepreneurship.

Figure 13.2 before a successful product emerges, which is simply unsustainable for most resource constrained new and small firms. Indeed, it is for this reason that we title this chapter “Succeeding with the Second” (not the third, fourth, fifth) “Product.” Of course, this is not to suggest that third product successes do not exist for new and small firms (and as the Genentech case that follows will show, they do), but simply that the more iterations the process requires, the less likely that the start-up will be able to gain and/or maintain access to the resources necessary to survive.

THE ENTREPRENEURIAL CONTEXT

The phenomenon of muddling through is well known as successful innovations create economic growth while failures contribute nothing. Thus, both public and private sector organizations exist to assist entrepreneurs with the process toward successful innovations so as to improve economic growth. The public assistance organizations have grown rapidly in the last ten years with federal, state, local, and regional agencies established to provide financial and other assistance for new, technology-intensive businesses. These public agencies along with some additional private sector activities have made the current environment in most industrialized nations much more attractive for the technology entrepreneur.

The politics of the government-funded agencies hold them responsible to contribute to economic growth that is measured by the creation of new jobs. Clearly, new jobs mean more employment for workers, a more satisfied indigent labor force, and thus, more votes in the next election for those who contributed to the creation of the entrepreneur assistance agencies.⁴³

For this reason, many more publicly sponsored organizations have been set up to provide the assistance/support context for the ambitious entrepreneur. And the entrepreneurs on whom such support is most often focused is the new technology start-up firm. Economic development specialists recognize the potential economic benefits from forming another Silicon Valley in their city, county, state, province, or even overlapping political divisions loosely referred to as regions.

There is an overwhelming number of such support organizations in the economically developed world. They seem to be everywhere. These can be divided into two segments: first, suppliers of financial resources; second, suppliers of other resources, especially technical assistance.

Venture Capital

Perhaps the earliest of organized efforts to assist entrepreneurial start-up firms was the establishment of the venture capitalist industry. Today, there are hundreds of venture capital firms around the world.⁴⁴ Their methods of operation and behavioral traits are well documented in the academic literature and it seems

unnecessary to repeat that here.⁴⁵ However, within the context of technology entrepreneurship, especially disruptive technologies, venture capital funding has become less prevalent in terms of the assistance offered in the development and muddling-through phases. As noted, technology-driven firms seeking to develop and commercialize disruptive technologies tend to have a relatively long period of muddling through and therefore have greater need for early-stage capital. Unfortunately, over the last ten to twenty years, venture capital organizations in the United States and elsewhere have lost interest in funding newly formed high-tech firms in what is termed the “seed phase” of development. In response, two dominant sources of early-stage funding have emerged: angel investor organizations and government-supported programs.

Angel Investor Organizations

The angel investor is an individual with the interest and means to invest in a variety of opportunities. Some angels choose to invest in new firm formations. There are more than 23,000 angel investors in the United States alone.⁴⁶ Information is readily available on the Web and can be found at many sites. Primary among these in the authors’ opinions are <http://www.vfinance.com/> and <http://www.angel-investor-news.com/index.htm>. Because these sources are geared toward angel investors in the United States, for international assistance, entrepreneurs can simply search the Internet for angel investor organizations in the country of choice.

Within the last ten years, angel investors have become organized into associations where knowledge of past, present, and future investment experiences can be shared. A directory to many of these associations in the United States can be found at http://www.angelcapitalassociation.org/dir_directory/directory.aspx. For international assistance, entrepreneurs can search the Internet for angel capital associations in the country of choice.

Government-Supported Programs

Many government agencies have been formed to assist in funding of new firms who are unable to find funding from any other sources. This is especially true of technology-intensive firms. Most state, county, city, and regional economic development agencies in the United States have established such agencies. Indeed, contact with a local community-based economic development agency is frequently the starting point for finding the sources of investment funds for a business.

A list of local community development organizations can be found at <http://www.coscda.org/>. Of course, it is important to note that the list of public investment agencies is very long and it requires considerable effort to find and work with the right organization.

Since 1982, the federal government has had a program for funding small, independent firms’ R&D called the Small Business Innovation Research (SBIR)

program. Since 1994, this has been supplemented with the Small Business Technology Transfer Research (STTR) program. These programs are specifically designed to foster development and commercialization of new technologies by providing seed funding to entrepreneurs developing technologies in the areas of agriculture, defense, education, energy, medicine, transportation, environmental protection, space, and others.⁴⁷ These programs have been so successful that similar government-sponsored assistance programs for technology-intensive start-ups are found in many industrially developed nations worldwide.

Business Incubators

Business incubators “encourage entrepreneurship and minimize obstacles to new business formation and growth, including for high technology firms, by housing in one facility a number of new enterprises which share an array of services. These shared services may include: meeting areas, secretarial, accounting, round table discussions, fax/copy machines, research/library, on-site financial and management counseling, and computer/word processing facilities all to lower costs.”⁴⁸ The first business incubator opened in the United States in 1959, though the idea of supporting fledgling business in this way was not well received at the time. Even by 1980, only twelve existed. However, this form of entrepreneurial assistance has grown since then and today there are roughly 1000 business incubators in North America and roughly 4000 worldwide.⁴⁹ According to the National Business Incubation Association (NBIA), the world’s leading organization advancing business incubation and entrepreneurship with a membership of more than 1450 (most of which are incubator managers and developers) from fifty nations, 47 percent focus on mixed-use (combination of light industrial, technology, and service) firms and an additional 37 percent focus on technology businesses.⁵⁰ Such statistics suggest that the overwhelming majority of incubators are specifically designed to facilitate the early-stage development of technology-intensive firms.

Two generic types of business incubators exist and accordingly serve two primary roles in the development of new businesses. The first type (nonprofit incubators), which make up an overwhelming majority of North American business incubators (roughly 90 percent), focuses on economic development. A large portion of these incubators, roughly 25 percent, are sponsored by academic institutions and can be found on their campuses. Those specializing in the development and commercialization of technologies can most often be found at large, public universities that have schools or colleges of engineering or science. For example, the Enterprise Development Center is supported by and is located adjacent to the New Jersey Institute of Technology (NJIT). NJIT also sponsors the New Jersey Business Incubation Network, an association of New Jersey-based incubators. The second type (for-profit incubators) is usually set up to obtain returns on shareholder investments.⁵¹

Of course, the most important factor for high-tech entrepreneurs considering aligning with a business incubator is the likelihood that such a relationship will prove beneficial to the success of the nascent firm. Historically, NBIA member incubators have reported that 87 percent of all firms that have graduated from their incubators are still in business.⁵² Such evidence suggests that entrepreneurs pursuing technology would be wise to consider working closely with a business incubator.⁵³

Summary

In summary, the economic environment has never been more supportive and friendly for the ambitious technology entrepreneur. Currently, biological research into pharmaceuticals and stem cells is receiving much publicity and in return has caused some governments around the world to initiate direct funding into organizations carrying out or assisting this research. California has authorized \$6 billion of public money to be invested in stem-cell research. Legislation to provide public money for a stem-cell research center is on the docket in New Jersey. Korea has provided funding for stem-cell research within its universities. Other countries have undoubtedly done the same, all with the anticipation of reaping economic growth from the emerging technology. However, such enthusiasm may be misplaced given the long period of development and commercialization associated with disruptive technologies. Indeed, as the cases that follow illustrate, payoff of the invested capital may not occur for ten or more years.

CASE EXAMPLES

Though we have relied on a variety of examples to substantiate various portions of the two modes of entrepreneurship, it is perhaps most helpful to illustrate these competing processes and contexts with more lengthy case examples. Thus, in this section we will present two examples in an effort to make salient the differences between market-driven and technology-driven entrepreneurship.

Market-Driven Entrepreneurship: Smart Bug Corporation

The original idea for the Smart Bug was conceived by Dean, a high school teacher and former owner of a sound system installation and consulting company. At the Centrium, home of the Red Deer Rebels, a Western Canada Junior Hockey club, Dean noted that due to the poor quality of the venue's sound system, it was difficult to hear the public address announcer during the games. Furthermore, he found that radio broadcasts were insufficient due to the poor reception quality associated with AM frequencies, which tended to carry sporting

events, as well as the fact that radio broadcasts are designed for those not at the event. As such, Dean found it difficult to follow the action.

Interestingly, Dean noted a similar problem while attending a conference held by the Promise Keepers, a religious organization that holds conventions across the United States. While sitting in a remote seat at the conference, Dean again found himself disengaged from the action in front of him.

These experiences led Dean to believe that a market might exist for a new product that could provide attendees at large public gatherings and spectators at sporting events a more enriching and informative experience. Dean soon enlisted the help of his brother-in-law, Neil, a high school teacher and former owner of a welding company, and together they founded Cornerstone Wireless, Inc. in 1988. The two raised a small amount of cash through personal investment as well as from investments by friends and family members. They used the cash to design a prototype that met these specifications and several iterations later the Smart Bug was born. The Smart Bug is a small, lightweight wireless audio receiver powered by two AAA batteries that receives a one-way communication from a central transmitter at any one of more than 100 preset frequencies between 76.2 and 87.5 megahertz.

By operating in the upper end of the VHF frequency spectrum, Smart Bug broadcasts avoid real and potential overlaps with licensed radio stations. In addition, broadcasts within these frequencies are technically superior to AM broadcasts, which are susceptible to a range of interference, audio quality, or other technical problems. Further, AM-based products require larger, more cumbersome, less mobile broadcast equipment and antennas. They are also less efficient and therefore require more power resulting in a much shorter battery life than is experienced with a Smart Bug. Incidentally, Cornerstone Wireless, Inc. subsequently applied for a patent for the Smart Bug in 2000 that was eventually granted in 2004.

Dean then test marketed the Smart Bug with Major League Baseball (MLB), National Hockey League (NHL), American Hockey League (AHL), and National Football League (NFL) teams as well as the Promise Keepers. From these tests, Cornerstone Wireless, Inc. sold the Smart Bug to the Atlanta Thrashers of the NHL, the Grand Rapid Griffins of the AHL, and Promise Keepers.

At this point, Cornerstone Wireless, Inc. had exhausted much of its start-up funding and believed that to continue to grow, they needed to seek external financing. In 2001, Dean put together a business plan to raise \$500,000 in equity and/or debt financing and sent it to Swancorp Equities, Inc., an Alberta-based broker that assisted start-ups and small emerging business raise capital. After several months of negotiations with potential investors, Smart Bug Corporation, with Jack (equity investor) as president and CEO, Dick (equity investor) as executive vice president and treasurer, and Dean as board member and chief technology officer, was founded.

Beginning in late 2002, Smart Bug Corporation began an aggressive marketing campaign. Through several contacts in the sports industry, nearly 300 senior decision-makers from the world of sports, facilities owners, and other nonsporting

organizations were contacted, many of whom agreed to follow-up meetings. In addition, a number of pilot or demonstration programs were successfully run at the U.S. Figure Skating Championships, U.S. Track and Field Championships, Professional Bull Riders events, the Houston Washington Mutual Thanksgiving Day parade, the ADT LPGA Tournament, Texas and Florida large high school state championships, the 2005 Breeder's Cup, several conventions, and other events. While the results of all of these pilot programs have been extremely positive, implementation programs have lagged due to a lack of allocated funding on the part of prospective customers as well as due to the timing of their individual events or seasons.

In 2004, Smart Bug Corporation earned its first nonresidual revenues in the form of a \$20,000 sale in 2004 to BearCom, one of the world's largest distributors of wireless and audio communication systems. Smart Bug Corporation now boasts U.S. Figure Skating, U.S. Swimming and Diving Association, the National Congress of State Games, the National Foundation Quarter Horse Association, the National Cutting Horse Association, and Promise Keepers, among others as customers. Additionally, Smart Bug Corporation is working closely with more than fifty other organizations, including various NFL teams, the U.S. Tennis Association, the Davis Cup organizing committee, several collegiate football bowl games, the Mountain West collegiate athletics conference, and the Tournament of Roses, who have indicated serious interest in purchasing the Smart Bug.⁵⁴

A Case of Technology-Driven Entrepreneurship: Genentech

In 2004, Genentech earned revenues of \$4.6 billion, \$3.7 million of which came from product sales, and was ranked among the world's 500 largest companies.⁵⁵ But it was not always that way for the world's first biotechnology company. The genesis of Genentech was the discovery of a new science: recombinant DNA technology. In 1973, Dr. Herbert Boyer, a biochemist at the University of California, and Stanford University scientist Stanley Cohen, discovered that genes could be taken from two distinct organisms and combined to produce something entirely new.⁵⁶

When Robert Swanson, a venture capitalist with a San Francisco firm who had earned an undergraduate degree in chemistry and a master of business administration from MIT, heard of the discovery in 1976, he contacted Boyer, who agreed to meet with him for ten minutes in his office. Inspired by Swanson's interest and excitement, the meeting soon adjourned to a local San Francisco tavern. Three hours and several drinks later, the idea for Genentech was born. Both Boyer and Swanson invested nominal amounts of cash while Swanson's firm added \$200,000.⁵⁷

Within a year, Genentech had successfully developed the first human protein, somatostatin, a hormone in the brain, in a microorganism (*E. coli* bacteria).⁵⁸ Although somatostatin had no commercial application, Genentech's ability to synthesize it demonstrated the company's potential to would-be investors. As

a result, money from venture capitalists and corporations such as Fluor, Lubrizol, Hewlett-Packard, Travenol, and Corning Glass soon poured in.⁵⁹

It was not until 1978 that Genentech cloned its first commercial product, human insulin, which Genentech licensed to Eli Lilly Co. Unfortunately, since the product demonstrated little advantage over insulin made from less technologically sophisticated methods (i.e., from the pancreas glands of cows and pigs), royalties from the product once it received FDA approval in 1982 were small.⁶⁰

One year later, Genentech cloned human growth hormone (hGH). However, due to the arduous length of the FDA approval process, Genentech could not expect to see any returns from the drug for years to come. Because of the lack of success of Genentech's first two products, coupled with the then uncertain future of its hGH drug, the company went public in 1980 in an effort to raise the cash necessary to stay afloat and fund additional projects. Due to the technological prowess Genentech had shown in the lab, the stock soared from an offering price of \$35 to \$88 per share in twenty minutes before closing at \$71¼ per share, netting Genentech \$35 million.

It was not until 1985 that things began to change for Genentech. After receiving FDA approval on October 26 of that year for hGH, which it marketed as Protropin, Genentech earned \$5.2 million in fourth quarter sales from this product, a figure which increased substantially to \$43.6 million the following year.⁶¹ This represented the first drug taken from discovery to market by a biotechnology firm and the first sizable product-driven revenues for Genentech, as the majority of Genentech's revenues to date had come from R&D contracts and interest on its cash reserves.⁶²

The following year, Activase, a tissue-plasminogen activator, was approved by the FDA on November 13, culminating a \$150 million R&D effort. Despite the fact that it was, at \$2200 per dose, eleven times more expensive than streptokinase, the leading alternative, sales were propelled by reports that it was almost twice as effective.⁶³ Genentech earned \$55.8 million from Activase sales in the remaining six weeks of 1987. When added to the \$85.6 million in sales of Protropin for that same year, the majority of Genentech's \$230.5 million in revenues were finally from the sale of products as opposed to contract research and interest revenue. The next year, Genentech earned almost 80 percent of its \$334.8 million in revenues from sales, a trend that has continued every year since.⁶⁴

Summary

While all start-ups follow unique paths of emergence, the two examples described illustrate the various modes of entrepreneurship described herein. In the Smart Bug Corporation case, both the ends and the means were known with some degree of certainty: a specific market need was discovered, an existing technology was then identified with which it could be exploited, and finally a product embodying that technology was created. Although the Smart Bug's features have changed slightly from the prototype (it now includes an LED light, two additional

channels, and a higher bandwidth of 216–217 megahertz), the product itself has remained virtually unchanged. Success has come for Smart Bug Corporation from interacting with and learning from actual and potential customers who recognize the same need its founder did almost two decades ago.

Referring back to Figure 13.1, it seems that Smart Bug Corporation proceeded along paths 1a and 2a in matching a known market need with a known technology and developing the first Smart Bug. Given the less than favorable reception of this product by consumers, Smart Bug Corporation then proceeded along paths 3 and 4 in order to better understand where the product failed to meet demand and how it might be improved to better meet the wants and needs of potential customers. Smart Bug Corporation then proceeded along paths 1a and 2a in developing the second version of the Smart Bug, which included new features. Indeed, each new feature on the Smart Bug reflects the results of yet another trip through this feedback loop.

Unlike Smart Bug Corporation, Genentech's entrepreneurial beginnings were stimulated by new science. Prior to 1973, gene splicing technology did not exist and, as follows, no known market application existed for it. In other words, when Genentech's founders initiated their entrepreneurial efforts, they did so with full knowledge that no market need existed. Not surprisingly, Genentech's first product, somatostatin, was a failure in a commercialization sense. Yet, what its founders learned from this experience was that gene splicing could render radically innovative products—the key was to develop one that consumers demanded. Bolstered by this awareness along with an influx of financial capital, Genentech's founders pressed on and created a second product, which did exploit an existing market need—because type 1 diabetics do not make insulin naturally, they often require insulin shots to avoid becoming ill. Yet, despite the discovery of a known market need to which gene splicing technology could be applied, this product experienced only marginal success due to unavoidably high costs without any improvement in performance. In response, Genentech muddled on and discovered a second known market need—children afflicted with various medical conditions such as hormone deficiency, kidney disease, Prader-Willi syndrome, and Turner's syndrome, among others, require growth hormones to treat growth failure. It then applied its gene splicing technology to its third product, Protropin, from which it earned sizable profits. Due to the lag in commercialization time, Genentech muddled on again and identified a third known market need—heart attack, stroke, and pulmonary embolism victims often require the activation of the enzyme plasminogen so that they can dissolve blood clots in the coronary arteries. With this knowledge, Genentech scientists applied its technical knowledge to and created its fourth product, Activase, a tissue-plasminogen activator, which was also a commercial success.

Referring back to Figure 13.2, it seems that Genentech proceeded along paths 1b and 2b in developing recombinant DNA technology and its first product, somatostatin. Given the somatostatin was uncommercializable, Genentech then proceeded along paths 3 and 4a in order to understand how this radically new

technology might be successfully applied to products demanded by the market. With this new knowledge, Genentech proceeded along path 2a in developing its second product, Protropin. Genentech then repeated the cycle. It proceeded along paths 3 and 4a again in order to identify another market need that recombinant DNA technology might help fulfill and then proceeded along path 2a in developing its third product, Activase.

CONCLUSION

Of the many successful technology-driven entrepreneurs we have known, many admit that they initially created a product that no one wanted, but their efforts to sell the product resulted in feedback that allowed the production of a subsequent product that buyers did want (in other words, a product for which a market need did exist). Because entrepreneurs and consumers frequently do not understand the means-ends relationship between a new technology and consumer needs, a priori consumer market research, focus groups, interviews and surveys, often fail to provide adequate information on real market needs. As a senior manager at General Electric's Medical Systems division articulates, "As far as I'm concerned, this [the history of the CT] is an indictment of marketing in that it was not able to appreciate the value of the product. And it did not get any help from the customer, who didn't realize . . . just how important this was going to be."⁶⁵ It is often the case that only after buyers are shown a finished, working example of the technology are they able to understand and then communicate back to the entrepreneur what need the technology can actually exploit. Indeed, even large firms such as Microsoft frequently watch how their customers use their products in an effort to determine which customer needs they are meeting (those they intended to meet or otherwise) and how well they are meeting them.⁶⁶

Unfortunately, the ability to apply a disruptive technology in such a way that it fulfills some market need is no easy task. Indeed, it often takes a great deal of time and effort to find the right match. We have found that because new and small firms typically lack the resources necessary to sustain multiple iterations of this process, they often cannot muddle through and succeed. Of course, this phenomenon has not gone unnoticed, as thousands of public and private organizations provide various forms of support to new and small firms, particularly those pursuing the development and commercialization of new technologies.

The present research has implications for academics and practitioners. From an academic perspective, because many entrepreneurs invent for the sake of inventing and often (though not always) seek to create market needs only once the technology is discovered, entrepreneurs are often necessarily forced to muddle around until they figure out what needs the disruptive technology fulfills. Of course, as noted, muddling through is not limited to disruptive innovations; however, this approach is substantially less common with evolutionary innovations. As with the former functionality and applicability are less transparent to the

consumer and producer than with the latter and evolutionary technologies generally stem from assessing customer demand. Nonetheless, given the inevitability of this iterative process of muddling through, academics may wish to focus more time on informing entrepreneurs as to how they can manage this process by alerting them to the resource gatekeepers that might keep their fledgling businesses afloat until they find a commercializable match between the market need and the technology.

From a practitioner's perspective, our model may offer some solace to those who have failed in their initial attempts to commercialize what may otherwise be a technology with seemingly endless potential. Indeed, as we have suggested herein, the initial failure of a product is common where technology has served as the impetus for entrepreneurship. However, this awareness should not imply that all technology-driven entrepreneurs have a license to fail.⁶⁷ On the contrary, it should alert technologically savvy entrepreneurs to prepare for what lies ahead. It is often the case that muddling through is the price to be paid (in terms of time and money) for success. Thus, these entrepreneurs must acknowledge and learn from their early failed efforts at commercializing their new technologies in order to maximize the potential for success for their second product. Fortunately, there are resources available to entrepreneurs (especially those pursuing the development and commercialization of disruptive technologies) that can help sustain them through these difficult times. In short, despite its obvious challenges, we do not suggest that entrepreneurs should ignore developing a new technology despite the lack of a clear opportunity for its commercialization as current wisdom suggests. We simply wish to alert them to the fact that once the technology is discovered, the discovery or creation of a commercializable opportunity may not be readily apparent, and may only be realized by muddling through.

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Index

- Academy of Management Journal* (AMJ), 6
Academy of Management Review (AMR), 6
Acer of Taiwan, 42
Achieving Society, The (McClelland), 147
Administrative Science Quarterly (ASQ), 6
Advisory Committee on Smaller Public Companies, 250
“African American Entrepreneurship: The View from the 1910 Census” (Levenstein), 152–53
African Americans, 151–53
Agency of Payments of Slovenia, 176
Airstream, 295–96
Ajzen, Icek: theory of planned behavior, 119–20
American Economic Review, 11
American Historical Society, 152
American Hockey League, 304
American Journal of Sociology, 11
Amish society, 155
angel investor organizations, 301; “School of Business Angels,” 280
ANOVA tests, 127
AOL, 281
Apple Computer, 29
Arthur M. Blank Center for Entrepreneurship, 80–81
Atlanta Thrashers, 304
Audi, 100
Audiovox, 241, 242
Australia, 264, 276
Autonomy, 50, 55–56
Bank of Slovenia, 180
bankruptcy, 177–78; creditor-rights system, 194; debtor-rights system, 208; law, 208. *See also* Sarbanes-Oxley Act
Bardhan, Pranab, 207
Bates, T., 153
behavior: bounded rationality and opportunism, 105; in corporate entrepreneurship, 50; entrepreneurial, among Hispanics, 119–45; individualism, 64; leadership, xx, 49–77; long-term orientation, 64; masculinity, 64; power distance, 64; uncertainty avoidance, 64
Belgium, 264, 276
Ben Franklin Partnership, xvi
Berwind Group, 81
Blalock, H., 151
Boeing, 25
bonds, 197–98
bootstrapping, 89–90
Boyer, Dr. Herbert, 305
brand, 100

- Brazil, 81
 Brush, Charles, 294
 Bulgaria, 168
 business: contract enforcement costs and credit facilities, 183; costs of starting and closing, 182; development prior to the Civil War, 152; fear of failure, 225, 226; franchising format, 110–11; intention to start, 128, 136; regulatory costs of establishing a business in OECD countries, 276
 business support centers (BSCs), 170
 Butler, J. S., 151–52
- Canada, 55, 264, 265, 276, 282; Smart Bug Corporation, 303–5
 Canadian Venture Exchange, 282
 capital: availability of risk capital, xvi–xvii; creative destruction, 193; patient, 91; risks, xxiii. *See also* risk capital
 capitalism: crony, 194; entrepreneurial, xxii; public policy and, 191–214; restructuring process, 193
Capitalism, Socialism and Democracy (Schumpeter), 193
 Cardone Manufacturing, 81
 Catholics, 154–55
 CE. *See* corporate entrepreneurship
 Centers for Advanced Technology Administration, xvi
 China, 66, 191, 201
 Chua, Amy, 201
 Chubais, Anatol, 200
 Circuit City, 31–32
 Coase, Ronald, 206
 cognition, 88
 cohesion, 53
 collectivist cultures, 132–33
 commensalisms, xii
 competitive aggressiveness, 50, 55
 conflict management, 53
 contract law, 166; contract enforcement costs and credit facilities, 183
 control variables, 128
 Coors, 80
 Cornerstone Wireless, Inc., 304
 Corning, 297
 corporate entrepreneurship (CE), xx, 21–47, 81; autonomy, 55–56; climate creation at the senior leadership level, 25–26; competitive aggressiveness, 50, 55; coping, 37–38; entrepreneurial orientation, 49–77; framework, 24; governance, 168–70, 175–78; growth, 21–22, 24, 37; incorporation and perspective, 39–40; international, 69; launches and options, 29–30; leadership activities, 22–23; leadership behavior, 49–77; managing venturing, 35–38; new markets, 30–35; practices for opportunity, 24–30; roles in a comprehensive venturing program, 23–24; screening, 28; selection management, 26–29; shifting resources, 36–37; socialization, 40; termination process, 41–44
 costs: of start-up and growth, xiv
 Crain, Mark, 242
 creditor-rights bankruptcy system, 194
 crony capitalism, 194
 Crystal Palace Exposition, 192
 culture: collectivist, 132; differences, 65; influence of, 65; national, 63–66; organizational, 57–59
 currency: stability, 196–99
 customer: franchising and, 110
 Czech Republic: privatization process, 194; small and medium enterprises in, 173
- debtor-rights bankruptcy system, 208
 decision making, 88–89
 democracy, 197
 Deng Xiaoping, 191
 Denmark, 264, 276, 283
 Denver International Airport, 43–44
 De Soto, Hernando, 194–95, 207
 Diana Project, 156–57
 diversification, 168
 Doll Capital, 245
 Domino's, 108, 110
 Du Bois, W. E. B., 152
 DuPont, 27–28, 38
 Durkheim, Emile, 150
 dynamic equilibrium, x

- ease of entry, 167
- Eastman Kodak, 110
- e-Bay, 281
- Economic Basis of Ethnic Solidarity, The* (Bonacich and Model), 151
- Economic Co-operation among Negro Americans* (Dubois), 152
- economic development: global, xxii
- economics: post-Keynesian, 212 n.54; socialist, 187 n.31; success, 156; transaction cost, 104; transition of new venture creation, 163–90
- Edison, Thomas, 295
- education and training, xvii–xviii
- Elmer's Glue, 81
- Employee Retirement Income Security Act (ERISA), 283
- Engibous, Thomas, 42, 44
- Enterprise Development Center, 302
- Enterprise Investment Scheme (EIS), 280
- entrepreneurial alliance, 100
- entrepreneurial capitalism, xxii, 191–214; effective financial system and, 199–202; free trade and removal of trade barriers, 202–4; market system and, 210 n.8; post-Keynesians and, 212 n.54; restructuring process, 193; risk-taking, 210 n.7; rule of law and, 204–8; stable currency and, 196–99
- entrepreneurial orientation (EO), xx–xxi; competitive aggressiveness, 50, 55; context, 50–54; description, 50; environment, 60–63; implications, 66–69; national culture and, 63–66; organizational culture, 57–59; organizational structure, 54–57; performance relationship, 69; resource-based view, 59
- entrepreneurial reproducing, 92–93
- entrepreneurship: bootstrapping, 89–90; corporate, xx; cycles of entrepreneurial activity, 2; effectiveness of service providers, xv; etymology, 1; extent of transaction costs, xiv; failure conditions, xiv; family and, 79–97; financing the high-growth entrepreneurial venture, 263–90; franchising, 99–117; function of intermediaries, xv–xvi; habitual, 91–92; Hispanic entrepreneurial behavior, 11–145; market-driven, 293–94; minority, 148–49; new venture creation and economic transition, 163–90; one-off, 82; operationalizing a contextual model, xviii–xix; opportunity, 223; organizing, 1–20; overview, xx; place, ix–xxv; programs to solve public good/mixed good problems for individual entrepreneur, 274–75; public policy and entrepreneurial capitalism, 191–214; rate of adoption, xiv–xv; regional, 215–37; risk capital, xvi–xvii, 263–90; seeking opportunities, 87–88; sociology of, 147–61; supply of entrepreneurs, xiii; survey of national experts, 264; technology-driven, xxiii, 291–312; typologies, 81; women, 156
- Entrepreneurship and Self-Help among Black Americans* (Butler), 151–52
- Entrepreneurship Intensity Track, xvii
- environment: complexity, 62–63; dynamism, 61; entrepreneurial orientation and, 60–63; hostile, 61–62; munificence, 61–62
- EO. *See* entrepreneurial orientation
- ERISA (Employee Retirement Income Security Act), 283
- ethnicity: of entrepreneurs, 120, 149; sociology of entrepreneurship and, 153–54. *See also* Hispanic entrepreneurs
- Europe: Central, 163; Eastern, 163, 201; Western, 41. *See also* individual country names
- European Bank for Reconstruction and Development (EBRD), 171, 195
- European Union (EU), 163
- executives: role in corporate entrepreneurship, 41–42
- failure: conditions of, xiv
- family, xxi, 79–97; context of entrepreneurial function of, 83–87; enterprising ecosystem model, 84, 85; entrepreneurship typologies, 81; familiness advantage in

- entrepreneurship, 87–93, 93–95;
 familiness described, 86; Hispanic, 153;
 investors, 83; kitchen table business, 83;
 partnerships, 83; perspective on
 entrepreneurship and, 80–83; portfolios,
 82; transformers, 82
 FASB 123R rule, 244–5
 financing, 288 n.32; entrepreneurship
 policy for entrepreneurial finance,
 24–28, 288 n.32; financial reform,
 180–81; first-stage, 270–71; sources,
 271; in transition, 167–68; venture,
 90–91
 Finland, 31, 264, 276
 Fischer, Stanley, 197
 Ford, 80
 Foreign Exchange Law, 180
 France, 264, 276, 280, 282, 285
 franchise relationship framework (FRF),
 108–9
 franchising, xxi, 99–117; agency issues, 113;
 bounded rationality and opportunism,
 105; business format, 110–11; the
 customer, 110; definition, 99; financial
 structure, 112; framework, 107–10;
 franchise relationship model, 109;
 governance, 105; information systems,
 114; overview, 99–102; priorities, 106–7;
 “reciprocal interdependence,” 104, 114;
 relational dynamics, 113–14; research
 perspectives, 102–6; transactional
 imperatives, 106–7; transaction analysis,
 111–12
 free trade: removal of trade barriers,
 22–24
 Gandhi, Mohandas, 203
 GATT Agreement, 202
 GEM (Global Entrepreneurship
 Monitor), xxii, 81, 90, 157, 215–16,
 221–22, 263
 Genentech, 281, 305–8
 General Electric Company, 297
 Genicom, 42
 German Research Foundation, 220
 Germany, xxii, 154–55, 264, 276, 282;
 regional entrepreneurship, 215–37
 gestation. *See* organizational
 entrepreneurship
 Gibson, Scott, 250
 Glass Lewis, 248
 Global Entrepreneurship Monitor (GEM),
 xxii, 81, 90, 157, 215–16, 221–22, 263
 Google, 281
 Gorbachev, Mikhail, 201
 government: failure and entrepreneurial
 finance, 269–84; policy, 239; programs
 for technology-driven entrepreneurship,
 301–2; programs to solve public goods/
 mixed goods problems for individual
 entrepreneur, 274–75. *See also* public
 policy
 Grand Rapid Griffins, 304
 Greece, 264
 group dynamics. *See* top management
 teams
 Grove, Andy, 39
 Grove City College, 8–81
 habitual entrepreneuring, 91–92
 Harris, Abram L., 152
 Hein & Associates, 250
 heuristics, 88–89
 Hispanic entrepreneurs, xxi–xxii;
 indicators used for variables in the
 model, 136–37; planned behavior,
 119–45; study of, 127–33; theoretical
 framework, 121–27
 Home Depot, 81
 Hungary: small and medium enterprises
 in, 173
 IBM, 39, 42
 Iceland, 264
 Image Arts Etc., 110
 immigrants, 153–54; Chinese, 66; as
 entrepreneurs, 149
 inception. *See* organizational
 entrepreneurship
 individualism, 64
 Indonesia, 201
 Industrial Research Institute (IRI), 296
 inflation, 197
 information systems: franchising and, 114

- initial public offerings (IPOs), 240
 innovativeness, 50
 Institute of Economic and Social Geography, 220
 Intel, 39
 intellectual property (IP): sources, xiii–xiv
 intermediaries: function, xv–xvi
 international corporate entrepreneurship (ICE), 69
 International Monetary Fund (IMF), 186
 n.2, 198
 Internet, 279
 investors: family, 83
 Ireland, 264, 276
 Israel, 283
 Italy, 81, 264, 276
- Japan, 41, 276
 Jews, 201
 Jobs, Steve, 29
Journal of Applied Psychology, 11
Journal of Management (JOM), 6
 Junkins, Jerry, 42
- KBC Bank, 180
 King, Martin Luther, Jr., 152
 kleptocracy, 201
 KONE Corporation, 31
 KornFerry, 243–44
 Kuznets-Baumol convergence, 195
- Latin Journey: Cuban and Mexican Immigrants in the United States* (Portes and Bach), 153
 launch. *See* organizational entrepreneurship
 Law about Financial Management of Enterprises (LFME), 177
 Law of Commercial Companies, 177
 Law of Restructuring, Bankruptcy, and Liquidation (LRBL), 175–76
 Law of the Bank of Slovenia, 175
 Law on Commercial Companies, 175
 leadership: behavior, 49–77; challenges, 242–45; impact of Sarbanes-Oxley Act, 243
 Lebanese, 201
- Lee, Spike, 152
 legislation: Foreign Exchange Law, 180; Law about Financial Management of Enterprises (LFME), 177; Law of Commercial Companies, 177; Law of Restructuring, Bankruptcy, and Liquidation (LRBL), 175–76; Law on Commercial Companies, 175; legal reforms, 166–67; Securities Act of 1933, 241; Small Business Innovative Research Act, xvi. *See also* Sarbanes-Oxley Act
 Levenstein, Margaret, 152–53
 Lewis, Arthur, 197
 Likert scales, 127
 Ljubljana stock exchange, 180
 logistic regression, 131
- Mail Boxes Etc., 110
 Major League Baseball, 304
 management: conflict, 53
Management Science (MS), 6
 Mandell-Rice, Brian, 250–51
 markets: entrepreneurial capitalism and, 210 n.8; failure and entrepreneurial finance, 266–69; integration, 32–34; market-driven entrepreneurship, 293–94; new, 30–35; redefining, 34–35
 Marriot Hotels, 80, 83
 Mars Candies, 80
 masculinity: achievement and, 64
 Massachusetts Technology Development Corporation, xvi, 239, 246
 McClelland, David, 147
 McCormick, Cyrus, 192
 McDonald's, 99
 McNERNEY, Jim, 25, 30
 Mennonite society, 155
 Mexico, 276
 Mills, Steve, 42
 minority entrepreneurship, 148–49
 models: ecosystem, xii; family enterprising ecosystem, 84, 85; franchise relationship, 109; of Hispanic entrepreneurial behavior, 122–23, 136–37, 139 n.35; place as an input-output model, ix–x; of technology-driven entrepreneurship, 293–300

- Monsanto, 297
 Motorola, 297
- NASDAQ, 282
 National Bank of Yugoslavia, 175
 National Business Incubation Association (NBIA), xviii, 302, 311 n.53
 National Football League, 304
 National Hockey League, 304
 National Venture Capital Association, 244–45
Negro as Capitalist, The (Harris), 152
Negro Business and Business Education (Pierce), 152
Negro in Business, The (Washington), 152
 Netherlands, 264, 276
 networks: regional, 92–93
 Neuer Markt, 282
 New Jersey Business Incubation Network, 302
 New Jersey Institute of Technology (NJIT), 302
 New Zealand, 264, 276
 Nissan, 38
 Nokia, 38
 Nordstrom's, 80
 North Korea, 200, 276
 Norway, 264, 276
 Nouveau Marché, 282
 Nova Kreditna Banka Maribor, 180
 Nova Ljubljanska Banka, 180
 NutraSweet, 297
- Occupational Safety and Health Administration, xvii
 one-off entrepreneurship, 82
 opportunities: decision making, 88–89; identification, 291; insight bursting, 88; seeking, 87–88
 opportunity entrepreneurship: TEA rate, 223
 ordinary least squares (OLS) regression, 128–29, 130
 organizational entrepreneurship, 1–20, 88–89; challenges, 4; cycles of entrepreneurial activity, 2; emergence, 2–4; emergence-newness-transformation categorization, 8, 11; empirical emergence articles, 7–8; empirical newness articles, 9–11; empirical transformation articles, 12–13; framework, 8; literature review, 7–13; newness, 4–5; organizational change, 5; organizational foundings, 3; organizing type by level of analysis, 13; process, 1–2; punctuated equilibrium, 5; transformation, 5–6
Organization Science (OS), 6
 orientation: long-term, 64
 Otis, Elisha G., 192, 210 n.7
 ownership rights, 166
- Pakistani-Ismailis, 155
 Palmisano, Sam, 39
 partnerships: family, 83
 patents, 205–6
 patient capital, 91
 pensions: reform, 181
 perceived desirability, 128, 136–37
 perceived feasibility, 128, 137
 Pierce, Joseph, 152
 Pizza Hut, 108
 place, ix–xxv; as an input-output model, ix–x; contextual factors identification, xi; delineating contextual contributions, xii–xviii; ecosystem perspective, xi–xii
 Poland, 188 nn.52, 53, 276; small and medium enterprises in, 173
 policymakers: sociology of entrepreneurship and, 157–58
 potency, 52–53
 power distance, 64
 prelaunch. *See* organizational entrepreneurship
 preorganization. *See* organizational entrepreneurship
 privatization: enterprise restructuring and, 170–72, 178–80; entrepreneurial capitalism and, 194
 proactiveness, 50
 Promise Keepers, 304
 property rights, 166, 206
Protestant Ethic and the Spirit of Capitalism, The (Weber), 154

- public policy, xxii, 163–90; entrepreneurial capitalism and, 191–214; posture of public policy, xvii; regional entrepreneurship, xxii, 215–37. *See also* risk capital; Sarbanes-Oxley
- race: sociology of entrepreneurship and, 151–53
- Race, Self-Employment and Upward Mobility* (Bates), 153
- Raytheon, 42
- regional entrepreneurship, 215–37; causes and effects of start-up activities, 217; empirical evidence, 220–27; policy implications, 227–31; regional-sectoral clusters, 218–19, 227; theoretical arguments, 216–20
- Regional Entrepreneurship Monitor (REM), xxii, 215–16, 220
- regional-sectoral clusters, 218–19, 227
- relational exchange theory, 105–6
- religion: sociology of entrepreneurship and, 154–55
- resource-based view (RBV), 59
- Riegel, Dickey, 295–96
- risk capital, xvi–xvii, xxiii, 263–90; boundaries, 265–66; entrepreneurship policy for entrepreneurial finance, 284–87, 288 n.32; market/government failures and sources of entrepreneurial finance, 270–84; theory of market and government failures and application to entrepreneurial finance, 266–70. *See also* public policy
- risks: availability of risk capital, xvi–xvii; capital, xxii. *See also* risk capital
- risk-taking: in entrepreneurial capitalism, 210 n.7
- rule of law, 204–8
- Rules of Sociological Method, The* (Durkheim), 150
- Russia, 168, 191, 208
- S. C. Johnson Company, 80
- Sakharov, Andrei, 191
- Sarbanes-Oxley (SOX) Act, xvii, xxiii; advantages, 248; Class Action Sarbox, 246; financial challenges, 241–42; impact on growth and exit strategy challenges, 245–47; implications for public companies, 241; leadership challenges, 242–45; opportunities, 248–51; parameters, 240; survey, 251–61. *See also* public policy
- Schumpeter, Joseph A., 147–48, 193, 294
- Scottish Enterprise, Scotland Economic Development Board, 273
- Searle, 297
- SEC regulations, 239
- Securities Act of 1933, 241
- Service Core of Retired Executives (SCORE), 239
- service delivery system (SDS), 100; establishing, 110–11; financial structure, 112
- Service Master, 100
- service providers: effectiveness, xv
- sex/gender: sociology of entrepreneurship and, 156–57
- Shalam, John, 241, 242
- shared vision, 53
- Silicon Valley, xiii, 230
- Simmel, Georg, 147–48, 153
- Six Sigma, 25
- Slovenia, xxii, 163–90; banking practices, 175–76; independence, 175; intercompany payments, 189 n.59; legal reforms, 175, 188 n.54
- small and medium enterprises (SMEs), 168
- Small Business Administration, xvi
- Small Business Association Office of Advocacy, 242
- Small Business Development Center (SBDC), 124, 128
- Small Business Innovation Research (SBIR), 301–2
- Small Business Innovative Research Act, xvi
- Small Business Innovative Research Programs, 239
- Small Business Technology Transfer Research (STTR), 302
- Smart Bug Corporation, 303–5
- Snap-On Tools, 100
- socialization, 40

- sociology, of entrepreneurship, 147–61;
 categories, 149; definitions, 148–50;
 ethnicity and, 153–54; implications for
 practitioners and policymakers, 157–58;
 race and, 151–53; religion and, 154–55;
 sex/gender and, 156–57; theoretical
 foundations, 150–51
- solidarity, 105–6
- SOX. *See* Sarbanes-Oxley Act
- Spain, 81, 264, 265, 276
- Spencer Stuart Board Index Review,
 249–50
- start-up. *See* organizational
 entrepreneurship
- state-owned enterprises (SOEs), 163, 194;
 characteristics, 171
- Sternberg, Rolf, 220
- Strategic Management Journal* (SMJ), 6
- subjective community norms, 128, 136
- Sun Microsystems, 281
- Sun Oil Company, 81
- Swanson, Robert, 305
- Sweden, 264, 276
- Switzerland, 264, 276
- tax code, 167
- Taylor, John B., 199
- teams: team building, 91. *See also* top
 management teams
- technology-driven entrepreneurship, xxiii,
 291–312, 311 n.53; case examples, 303–8;
 context, 300–303; models, 293–300;
 opportunity, 292–93
- termination, 41–44
- Termini Bros. bakery, 81
- Texas Instruments, 42
- third-world countries, 196–97, 207. *See also*
 individual country names
- Thomas, Dave, 110–11
- 3M, 25, 30, 38
- top management team (TMT), 49, 67;
 autonomy, 50; cohesion, 53; competitive
 aggressiveness, 50; conflict management,
 53; context, 50–54; innovativeness, 50;
 potency, 52–53; proactiveness, 50; shared
 vision, 53
- total entrepreneurial activity rate (TEA),
 221–27
- total factor productivity (TFP), 179–80
- Toward a Theory of Minority Group
 Relations* (Blalock), 151
- trademark, 100; protection, 206
- transaction analysis: franchising and,
 111–12; sample list, 111
- transition economics, 164–72; corporate
 governance, 168–70; institutional
 reforms, 166–68; privatization and
 enterprise restructuring, 170–72; tasks,
 185; transition process, 164–66
- Tyson Food, 80
- uncertainty avoidance, 64
- United Kingdom, 264, 276, 283
- United Nations Development
 Program, xvi
- University of Cologne, 220
- University of Lüneburg, 220
- venture capital (VC), 266; for technology-
 driven entrepreneurship, 300–301
- venture financing, 90–91
- ventures: coping, 37–38; creation, 125–27,
 163–90; focus, 335; managing, 35–38;
 new, 81; renewal processes, 40–41
- voting, 197
- Wagner, Joachim, 220
- Walgreen, 80
- Wall Street Journal*, 246
- Washington, Booker T., 152
- Weber, Max, 147–48, 154
- West Africa, 201
- Winfrey, Oprah, 152
- women: as entrepreneurs, 156
- World Bank, 181
- World Economic Forum (WEF), 181
- World Trade Organization (WTO), 202
- Wrigley, 80
- Yeltsin, Boris, 201
- Yozma government, 283
- Yugoslav Republics, 173

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