1. Introduction

A visitor from another planet who came to earth for the first time would think that entrepreneurship was one of the best-understood subjects examined by business school academics. Almost every explanation for business and, for that matter, capitalism itself, relies on entrepreneurship as a cornerstone. Moreover, huge numbers of people around the world engage in entrepreneurial activity. Estimates of the number of people in the United States who take part in founding a firm every year reach roughly one million people, or 4 per cent of the US labor force (Aldrich, 1999; Reynolds and White, 1997). This number is larger than the number of people having children or getting married in a given year (Reynolds, 1997). As a result, at any given point in time, business owners account for approximately 13 per cent of all non-agricultural employees, a fraction comparable to the percentage of the private sector labor force that is unionized (Hamilton, 2000). Furthermore, entrepreneurship contributes heavily to job growth, with new firm births estimated to account for one quarter of gross job growth in the United States (Reynolds and White, 1997).

The level of interest in entrepreneurship among business school students is also extremely high. Every university campus, it seems, has a wealth of courses about how to start and finance new businesses. Most institutions, if not all, have business plan competitions that provide student and faculty entrepreneurs with prize money to start new companies that, everyone hopes, will revolutionize some industry and make all associated with it fabulously wealthy. Several universities have even started formal venture capital funds to finance the development of student and faculty run businesses, and more still run incubators for new businesses.

On top of all of this is the community of scholars who teach students how to found successful new companies. This field has grown at a prodigious rate in recent years. The academic field of entrepreneurship now supports no fewer than 15 scholarly journals. In the business school field of management alone, approximately 10 per cent of all professors consider entrepreneurship their primary or secondary area of affiliation. As a result, every year, several thousand scholarly articles about entrepreneurship are produced.

Given the level of interest devoted to entrepreneurship in the economy, and among academics at business schools, one would think that researchers would have deep insights into understanding this phenomenon. However, those who
look closely at academic investigations of entrepreneurship realize that scholarly understanding of this field is actually quite limited. Unlike its sister fields of accounting, marketing, finance, organizational behavior and strategic management, entrepreneurship is rather poorly explained by academics. Much of what passes for evidence is often unconvincing. Moreover, the pieces of knowledge are fragmentary, unlinked by an overarching framework or explanation, giving a very descriptive feel to the academic understanding that does exist.

As a result, our collective knowledge about entrepreneurial opportunities; the people who pursue them; the skills and strategies used to organize and exploit opportunities; and the environmental conditions favorable to this activity is so limited that even academics frequently resort to anecdotes as explanation. Simply put, academia has no coherent conceptual framework for entrepreneurship and has offered virtually no systematic efforts to assemble the fragmentary pieces of knowledge about this phenomenon in one place.

THE PROBLEMS WITH PRIOR RESEARCH

A central premise of this book is that the failure of academics to offer a coherent conceptual framework for entrepreneurship has resulted from a tendency of researchers to look at only one part of entrepreneurial process – the characteristics of the entrepreneurs themselves, the opportunities to which they respond, their strategies, their resource acquisition or their organizing processes – without consideration for whether the explanations that they offer have any explanatory power for, or even relationship to, the other parts of the entrepreneurial process examined by other researchers.

Perhaps the largest part of this problem lies with the division of the field of entrepreneurship into two camps: those who want the field of entrepreneurship to focus exclusively on individuals and those who want the field of entrepreneurship to focus exclusively on external forces. A large number of entrepreneurship researchers have sought to explain the entrepreneurial phenomenon by identifying those members of society who could be considered ‘entrepreneurial individuals’. In general, this school of thought has focused on explaining entrepreneurship as a function of core human attributes, such as willingness to bear uncertainty (Khilstrom and Laffont, 1979), tolerance for ambiguity (Schere, 1982), or need for achievement (McClelland, 1961) which differentiate entrepreneurs from the rest of society. Unfortunately, this approach has proved largely unsuccessful (Gartner, 1990), perhaps because entrepreneurial activity is episodic. Because people engage in entrepreneurial behavior only at particular points in time, and in response to specific situations, it is impossible to account for entrepreneurship solely by examining factors that
should influence all human action in the same way all of the time (Carroll and Mosakowski, 1987).

Another group of researchers has sought to explain entrepreneurship by reference to the environment in which entrepreneurs have been found. In general, this school of thought has sought to identify situations in which entrepreneurial activity, often measured as new firm formation, is more likely to occur. Key situational factors that have been argued to lead to entrepreneurial activity have included competence-destroying technological change (Tushman and Anderson, 1986), industry dynamics (Hannan and Freeman, 1987), and market structure (Acs and Audretsch, 1990). Unfortunately, this approach, too, has failed to provide an adequate explanation for entrepreneurship, largely because it does not consider human agency (Shane and Khurana, 2001). Entrepreneurship is a self-directed activity that does not occur spontaneously from the presence of technological or industrial change. Rather, it requires the action of individuals who identify and pursue opportunities. No amount of investigation of the environment alone can provide a complete explanation for entrepreneurship.

The division of the field into these different camps has stymied the development of the field of entrepreneurship. By focusing on only one aspect of the entrepreneurial process, most researchers fail to provide a comprehensive explanation of the phenomenon. Not only does this approach hinder the development of a general theoretical framework for entrepreneurship, it also leads to a diversion of scholarly attention away from real questions towards largely academic debates. For example, the field of entrepreneurship has devoted disproportionate attention to scholarly efforts by one set of scholars to show that individual differences have little effect on entrepreneurship, and another set of scholars to defend their focus on individual characteristics. We would know much more about entrepreneurship had both sets of scholars directed their attention toward the investigation of specific hypotheses about entrepreneurial activity rather than toward each other’s intellectual position.

Neither the environment-centric nor the individual-centric approach toward entrepreneurship is more ‘correct’ than the other. Both probably explain equal amounts of the variance in entrepreneurial activity. Moreover, even if scholars were to find that one approach explained slightly more variance than the other, such a discovery would be of little intellectual and practical importance. The phenomenon of entrepreneurship cannot be explained either by environmental forces or by individual factors in the absence of the other. Therefore, the scholarly field of entrepreneurship would be much better off if academics devoted more energy toward the development of a comprehensive framework for entrepreneurship that incorporated the effects of individuals, as well as the effects of opportunities and the institutional and industry environment in which the pursuit of opportunity occurs, than on attempts to prove the superiority of one perspective over another.
THE PURPOSE OF THIS BOOK

The purpose of this book is to offer an overarching conceptual framework for entrepreneurship that explains the different parts of the entrepreneurial process in a coherent way. Rather than focusing on only one part of the entrepreneurial process – such as the characteristics of the entrepreneurs themselves; the opportunities to which they respond; their strategies; their acquisition of resources; or their organizing processes – without consideration for whether the explanations that offered have any explanatory power for, or even relationship to, other parts of the entrepreneurial process, the perspective outlined here provides an overarching framework for the field.

As a general framework for the field of entrepreneurship, I offer the individual–opportunity nexus (Eckhardt and Shane, 2003; Shane and Venkataraman, 2000; Venkataraman, 1997). This framework examines the characteristics of opportunities; the individuals who discover and exploit them; the processes of resource acquisition and organizing; and the strategies used to exploit and protect the profits from those efforts.

In the book, I make a conscious effort to explain the different parts of the entrepreneurial process by adhering to the same basic assumptions of the nexus framework (which I will discuss below). The book also outlines the relationships between the different parts of the entrepreneurial process so that readers can see the process as a related whole, rather than as unrelated fragments.

Lastly, the book provides both the arguments for particular patterns, and the empirical evidence collected to date about that dimension of entrepreneurship, so that readers can judge for themselves what dimensions of the phenomenon have truly been explained and what dimensions have only been suggested. To do this, I review the existing literature on entrepreneurship to show the relationship between the conceptual arguments made in that literature and the parts of the individual–opportunity nexus or to provide empirical evidence that is consistent with one of the propositions that emerge from the nexus perspective.

A Definition of Entrepreneurship

To provide a conceptual framework for something, a researcher must first define it and put some boundaries around it. Therefore, I begin by defining entrepreneurship.

Entrepreneurship is an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw materials through organizing efforts that previously had not existed (Venkataraman, 1997; Shane and Venkataraman, 2000). Given this definition, the academic field of entrepreneurship incorporates, in its domain, explanations for why, when and how entrepreneurial
opportunities exist; the sources of those opportunities and the forms that they take; the processes of opportunity discovery and evaluation; the acquisition of resources for the exploitation of these opportunities; the act of opportunity exploitation; why, when, and how some individuals and not others discover, evaluate, gather resources for and exploit opportunities; the strategies used to pursue opportunities; and the organizing efforts to exploit them (Shane and Venkataraman, 2000).

While this definition is a useful conceptual definition for entrepreneurship, it is also very difficult to operationalize in empirical research. Because this book reviews empirical research on the topic of entrepreneurship, I also discuss two major operational definitions of entrepreneurship used in the empirical research reviewed in this book: new firm formation and self employment. To keep the operational definitions clear throughout the book, I refer to the specific operational definition used by the authors when discussing a particular piece of empirical research. I define self employment as performing work for personal profit rather than for wages paid by others (Le, 1999). The studies on self employment reviewed here can include situations in which the self employed person incorporates a business and employs others, as well as situations in which these things do not occur. The second operational definition of entrepreneurship discussed in this book is the founding of a new business, which is defined as the forming of a business venture or not-for-profit organization that previously was not in existence.

This book also examines the relationship between different dimensions of entrepreneurship and several measures of performance at entrepreneurial activities – survival, growth, profitability and experiencing an initial public offering. Therefore, below I define each of the performance measures that are reviewed and explain why they are useful dimensions on which to evaluate efforts to exploit opportunities.

The first operational measure of performance discussed in this book is survival, which I define as the continuation of the entrepreneurial effort. Survival is an important measure of entrepreneurial performance because very few entrepreneurial efforts survive. Aldrich (1999) estimates that half of all entrepreneurs fail to complete their organizing efforts. Moreover, approximately 750,000 new businesses are founded and fail every year in the United States (Bhide, 2000), with 40 per cent of the new businesses failing to survive one year (Taylor, 1999), 64 per cent failing to survive five years (Kirchhoff, 1994), 75 per cent failing to survive eight years (Kirchhoff and Phillips, 1989), and 88 per cent failing to survive 19 years (Kirchhoff, 1994).

The second operational measure of entrepreneurial performance discussed in this book is growth, which I define as an increase in the new venture’s
employment or sales. When I discuss specific empirical research on growth, I define whether the specific measure used in the research was growth in sales or growth in employment.

Growth is an important dimension of new venture performance because it, too, is rare. Fewer than 10 per cent of new organizations ever grow on any dimension, and fewer than 4 per cent of new organizations add more than 100 employees during their lifetimes (Duncan and Handler, 1994). Moreover, growth is important because most new ventures start very small for a variety of reasons that I will explain in Chapter 9. Therefore, to differentiate high and low performing entrepreneurial efforts, one must capture the improvement over time in the effort to exploit the entrepreneurial opportunity, which growth does.

The third operational measure of entrepreneurial performance discussed in this book is profit (or income), which is defined as the surplus of revenues over costs. This operational definition of performance best captures the concept of entrepreneurial profit discussed in the theoretical literature. In addition, profit is a valuable measure of entrepreneurial performance because it is a rare, but desirable, outcome of entrepreneurial activity. For instance, Schiller and Crewson (1997) found that only 8 per cent of self employed women and 21 per cent of self employed men have self employment income above the median for their cohort in any year, and fewer still do this in more than one year.

The fourth operational measure of entrepreneurial performance discussed in this book is the achievement of an initial public offering, which is defined as the sale of stock to the public. While this definition of performance does not map closely on the concept of entrepreneurial profit, or any other measure described in the theoretical literature, it does capture the idea of significant performance of an entrepreneurial venture. As a result, it is useful at measuring the outcome of Schumpeterian (1934) types of entrepreneurial efforts. Therefore, I examine this dimension of entrepreneurial performance along with the other measures.

Some Necessary Conditions

The definition of entrepreneurship presented above imposes several necessary conditions on a conceptual framework to explain the entrepreneurial phenomenon. I present these assumptions here to make them clear to the reader before introducing the conceptual framework underlying the book. First, entrepreneurship requires the existence of opportunities, or situations in which people believe that they can use new means–ends frameworks to recombine resources to generate profit (Shane, 2000). While people’s perceptions influence the discovery, evaluation and exploitation of opportunities, I will argue (in Chapter 2) that opportunities have an objective component that does not exist solely in the minds of entrepreneurs. Therefore, entrepreneurship cannot be only a fixed
attribute of certain people, but rather must involve their reaction to the existence of opportunities for profit.

Second, entrepreneurship requires differences between people. Specifically, entrepreneurship requires the preferential access to or ability to recognize information about opportunities, both of which vary across people. The existence of individual differences is central to the approach to entrepreneurship outlined in this book. In the absence of variation across people, everyone would recognize and act upon all opportunities, making it impossible for any one person to gain access to resources at a price at which recombination could yield a profit. Resource owners would recognize the same opportunities as entrepreneurs and simply would be unwilling to sell resources to entrepreneurs at a price that made the opportunity profitable for entrepreneurs.

Moreover, entrepreneurship requires a decision by a person to act upon an opportunity because opportunities themselves lack agency. Unlike many environmentally oriented explanations for entrepreneurship (for example, Aldrich, 1990; Carroll and Hannan, 2000), this book explains that opportunities do not spontaneously result in exploitation. Rather, they are exploited only when a human being acts. Therefore, variation among people in their willingness or ability to act influences the entrepreneurial process.

Third, risk bearing is a necessary part of the entrepreneurial process. The exploitation of opportunity is, by definition, uncertain. The information necessary to determine whether a particular effort to exploit an opportunity will be profitable cannot be known with certainty at the time that the opportunity is identified because that information does not come into existence until the entrepreneur pursues the opportunity. The pursuit of opportunity, itself, determines whether demand exists, whether the entrepreneur can compete with others, whether the value chain can be created, and so on (Arrow, 1974a; Venkataraman, 1997). Therefore, those engaged in the entrepreneurial process cannot know with certainty that their plan for recombining resources will result in a profit and not a loss at the time they make a decision to act, forcing the entrepreneur to bear risk in the entrepreneurial process.

Fourth, the entrepreneurial process requires organizing. By organizing, I do not mean that the entrepreneurial process requires the creation of a new firm. While founding a new firm is one way to organize an opportunity, the use of market mechanisms (for example, licensing) is another.

However, whether the entrepreneurial process results in the founding of a new firm or the use of market mechanisms, it does require the creation of a new way of exploiting the opportunity (organizing) that did not previously exist. When prices fail to allocate resources adequately (for reasons I will discuss in Chapter 3), people cannot make decisions by optimizing within existing means–ends frameworks and must formulate new means–ends frameworks. The new means–ends frameworks lead the entrepreneur to come up with a way
to organize the exploitation of the opportunity that she has identified. The fact that the entrepreneur exploits an opportunity to recombine resources, and attempts to sell that recombination at a profit means that some mechanism for organizing the resources in a way that had not been done before is a necessary condition of entrepreneurship.

Fifth, the entrepreneurial process requires some form of innovation. By innovation, I do not mean that all entrepreneurial efforts require the grand Schumpeterian (1934) innovations that result in new combinations that spur creative destruction. As I explain in Chapter 2, the entrepreneurial process can involve a type of innovation that is much milder, such as placing a restaurant on a different corner of an intersection from existing restaurants, or using different recipes or employees in a new restaurant in the same location as an old one. Researchers (for example, Shane and Venkataraman, 2000; Venkataraman, 1997) have pointed out that this milder form of innovation is often associated with Kirznerian (1997), rather than Schumpeterian, entrepreneurial opportunities.

However, even Kirznerian opportunities involve innovation. By definition, entrepreneurship cannot involve the perfect imitation of what has been done before. The simple fact that it involves the recombination of resources into a new form according to the judgment of the entrepreneur means that entrepreneurship involves some innovative activity.

Some Things Not Assumed

While the framework presented in this book makes several assumptions, it also does not require certain assumptions present in other explanations for entrepreneurship. First, new organizing efforts do not require the creation of new firms to exploit opportunities. A firm is a legal entity, and people do not need to create new legal entities when they organize. Organizing can exist without the formation of a new legal entity, as is the case when a group of traders is formed to smuggle goods into a country. Moreover, the entrepreneur can use market mechanisms, such as licensing, to exploit opportunities; there are times when organizing a market mechanism is a better approach than organizing a firm (Amit, Glosten and Muller, 1993; Casson, 1982; Shane and Venkataraman, 2000). For example, many entrepreneurs in biotechnology license their new technologies to established pharmaceutical firms rather than develop new firms because the pharmaceutical firms' assets in marketing and distribution make licensing to them a much better approach than building the value chain of a new firm from scratch. In Chapter 10, I will address this issue directly when I discuss the process of organizing, and the use of markets as opposed to hierarchies, as a mode of opportunity exploitation.

Second, an entrepreneurial effort does not have to be undertaken by a single entrepreneur alone. Rather, more than one person can undertake a given entre-
entrepreneurial effort, either simultaneously or sequentially. For example, the person who discovers an opportunity can sell it to another person. In addition, the discoverer of the opportunity can obtain the assistance of other people in the resource assembly or exploitation parts of the entrepreneurial process. The relaxation of the assumption that a single person has to undertake all parts of the entrepreneurial process alone is important because it makes the individual–opportunity nexus approach discussed in this book different from person-centric approaches to entrepreneurship. Person-centric approaches, which explain entrepreneurship by reference to particular types of people, have to assume that those people with key entrepreneurial attributes engage in the entire entrepreneurial process.

Third, successful outcomes are not a necessary condition of entrepreneurship. Although many researchers approach entrepreneurship with a backward lens, searching for the factors that explain success at this activity, success is far from a necessary condition. In fact, the modal outcome of the entrepreneurial process is the founding of a failed firm. As a result, success at entrepreneurship might be explained by actions taken in ways contrary to the norm. This is not to say that there are not performance effects of entrepreneurial actions. Rather, it is to say that entrepreneurship is rarely successfully undertaken.

Fourth, the factors that explain one part of the entrepreneurial process do not have to explain other parts. For example, people who are high in independence may be more likely than those low in independence to exploit entrepreneurial opportunities, but they may not be better at forming strategies that capture the returns to that activity.

In fact, success at entrepreneurial activities may be explained by taking actions that are rare for entrepreneurs to take. For example, Bhide (2000) found that the Inc 500 firms, the fastest growing private firms in the United States, tended not to be started in the most popular industries for start-ups. This pattern suggests that certain industries might be very popular for entrepreneurship, but, because of their popularity, they may not be very good choices for entrepreneurs.

The Central Premise

The central premise of this book is that entrepreneurship can be explained by considering the nexus of enterprising individuals and valuable opportunities (Shane and Venkataraman, 2000; Eckhardt and Shane, forthcoming; Venkataraman, 1997), and by using that nexus to understand the processes of discovery and exploitation of opportunities; the acquisition of resources; entrepreneurial strategy; and the organizing process.
The conceptual framework that underlies this book is quite straightforward. Because the economy operates in a continual state of disequilibrium and change, situations arise in which people can transform resources into a form (new goods and services, new ways of organizing, new methods of production, new markets or new materials) that they believe will have greater value than their cost to create (Venkataraman, 1997). The entrepreneurial process begins with the perception of the existence of opportunities, or situations in which resources can be recombined at a potential profit. Alert individuals, called entrepreneurs, discover these opportunities, and develop ideas for how to pursue them, including the development of a product or service that will be provided to customers. These individuals then obtain resources, design organizations or other modes of opportunity exploitation, and develop strategies to exploit the opportunities.

As Figure 1.1 indicates, the entrepreneurial process involves the identification and evaluation of opportunity; the decision whether or not to exploit it; the efforts to obtain resources; the process for organizing those resources into a new combination; and the development of a strategy for the new venture. These different activities are all influenced by individual-, industry- and institution-level factors.

AN INTERDISCIPLINARY APPROACH

Readers will note that any effort to provide a conceptual framework for entrepreneurship seems to require an interdisciplinary approach. The domains of psychology, sociology and economics all seem to provide insight into a piece of the puzzle, but none seem to explain the phenomenon completely. In fact, many classical researchers of entrepreneurship, like Knight (1921) and Schumpeter (1934), viewed entrepreneurship in just this way. These authors saw the economic framework of entrepreneurship as demanding certain characteristics of entrepreneurs best explained by psychology and sociology.

Although the vogue in business schools today seems to be for scholars to explain phenomena from the perspective of a single social science discipline, this book follows in the tradition of classical writers on entrepreneurship and deliberately takes an interdisciplinary perspective. As a result, readers will find this book very different from works written about entrepreneurship by economists, historians, political scientists, psychologists or sociologists. The book’s focus is not on testing theories of entrepreneurship from a particular disciplinary perspective, but instead seeks to use work from the fields of psychology, economics, organization theory, finance, strategy, technology management and public policy to create a conceptual framework for entrepreneurship and provide supporting empirical evidence for that framework.
Figure 1.1 A model of the entrepreneurial process

**Individual Attributes**
- Psychological factors
- Demographic factors

**Entrepreneurial Opportunities**
- Discovery
- Opportunity Exploitation

**Execution**
- Resource assembly
- Organizational design
- Strategy

**Environment**
- Industry
- Macro-environment

**Figure 1.1** A model of the entrepreneurial process
THE STRUCTURE OF THE BOOK

This book has a very simple structure. As Figure 1.2 shows, the book starts with the assumption that entrepreneurial activity is directional and ordered, though it is accepting of the possibility of feedback loops and non-linearity. The order in which entrepreneurial activity occurs is as follows: before opportunities are identified, sources of opportunities must lead them to exist. To be evaluated and a decision made to exploit opportunities, these opportunities must be identified. For resources to be assembled, the decision must have been made to exploit the opportunity. For the resources to be recombined into a new form (the organizing process), the resources must have been assembled. For the entrepreneur's approach to exploitation to be organized into a new entity, the entrepreneur must have a strategy, either implicit or explicit, to exploit the opportunity. For performance to occur, the effort to exploit the opportunity must have been organized into a new entity. For ease of exposition, the chapters of the book follow this directional process.

Chapter 2 provides a detailed explanation of the role of opportunities in entrepreneurship, one of the main components in the perspective described in this book. This chapter examines three important dimensions of entrepreneurial opportunities. First, it summarizes the two major perspectives on the existence of opportunities: The Schumpeterian (1934) and Kirznerian (1973) perspectives. Second, this chapter discusses three major sources of entrepreneurial opportunity: technological change, political/regulatory change and social/demographic change. Third, Chapter 2 discusses the different forms that entrepreneurial opportunities take, including new products or services, new ways of organizing, new raw materials, new markets and new production processes (Schumpeter, 1934).

It is one thing for opportunities to exist and another for them to be discovered. Chapter 3 explores the process of opportunity discovery. It explains why the price system cannot always allocate resources, and shows how entrepreneurial decision-making overcomes limitations to the price system. In addition, Chapter 3 discusses the role of individual-level variation in the discovery process. This chapter explains how idiosyncratic life experiences, search processes and social

![Figure 1.2 The direction of the entrepreneurial process](image-url)
ties provide some people with access to information about opportunities before that information is generally available. The chapter also explains that people differ in their ability to recognize opportunity because they have different prior stocks of knowledge. Prior knowledge provides an absorptive capacity that facilitates the acquisition of additional information about markets, technologies and production processes, which, in turn, enhances the ability to formulate new means–ends frameworks (Cohen and Levinthal, 1990). Finally, this chapter explains how differences in people’s cognitive processes influence their ability to identify the new means–ends frameworks necessary for opportunity discovery.

Chapter 4 discusses non-psychological individual-level differences that influence the tendency of people to exploit entrepreneurial opportunities. This chapter explains that people exploit opportunities when they believe that the value of opportunities exceeds their opportunity cost of alternative activity, plus a premium for bearing illiquidity and uncertainty (Venkataraman, 1997). The person’s education and experience influence the expected value of the outcome of opportunity exploitation and therefore influence the decision to exploit. Moreover, a person’s social ties and social status influence the exploitation process.

Chapter 5 considers the body of research that explores how psychological characteristics influence the likelihood that a person will exploit an entrepreneurial opportunity. Because the value of an opportunity can be non-monetary (desire to be one’s own boss, need to express one’s achievement motive and so on) and because the evaluation of uncertainty or outcomes can be affected by psychological characteristics such as risk preference or optimism, opportunity exploitation is also a function of a person’s psychological make-up.

However, people do not make decisions about the exploitation of opportunities in a vacuum. The industry context influences their willingness and ability to found new firms in order to exploit entrepreneurial opportunities. Chapter 6 discusses the arguments for and empirical evidence in support of five major perspectives on industry-level differences on the exploitation of entrepreneurial opportunities through firm formation: knowledge conditions, demand conditions, industry life cycles, appropriability conditions and industry structure.

Chapter 7 examines the effect of the institutional environment on the decisions of people to exploit opportunities. Focusing on three major dimensions of the institutional environment – the economic environment, the political system and the cultural context – this chapter explores how the context in which the entrepreneur finds herself influences the exploitation of entrepreneurial opportunities.

To exploit her opportunity, an entrepreneur must gather resources from others and recombine them into a new form. Chapter 8 discusses the process of resource acquisition. In particular, this chapter discusses the effect of uncertainty about the value of the entrepreneur’s conjecture and the significant information asymmetry that exists between entrepreneurs and resource providers, both of
which are necessary conditions of the entrepreneurial process (Venkataraman, 1997). The chapter explains how these factors impose several conditions on the resource acquisition process, including self-financing, contract structure, pre- and post-investment tools, the exploitation of social capital, entrepreneurial behavior and signaling efforts.

Chapter 9 examines the strategies used by entrepreneurs to exploit opportunities. If entrepreneurial opportunities are exploited successfully, the profit that ensues is transitory for several reasons. First, the sources of change that triggered the existence of opportunities themselves change, closing up opportunities that once existed. Second, the actions taken by the entrepreneur to exploit the opportunity disseminate information about how to exploit the opportunity successfully. As a result, other people can imitate the entrepreneur’s approach to exploiting the opportunity and capture some of the profit for themselves. Moreover, resource providers re-price the resources that they provide to entrepreneurs to capture some of the value of the opportunity for themselves. As a result, entrepreneurs take actions to preserve the value generated by successful opportunity exploitation. They use secrecy and causal ambiguity to preclude others from knowing about the opportunity and their method of exploiting it. In addition, they use scale, control of resources, legal barriers, reputation and innovation to keep others from exploiting the same opportunity, even if the others understand exactly how to do it. This chapter discusses the use of these tools, as well as strategies used by entrepreneurs to manage the information asymmetry and uncertainty that are fundamental to the entrepreneurial process.

To exploit an opportunity, the entrepreneur must organize the resources that she has acquired into a new combination. Chapter 10 discusses the process of organizing. This chapter examines several important issues. The first is the process by which organizations are designed. The chapter suggests that entrepreneurs design organizations through a dynamic process, not through optimal design mechanisms. The chapter then discusses the role of planning in the organizing process. Third, the chapter turns to the question of what mode of organizing will be used to exploit the opportunity. Contrary to the popular belief that entrepreneurial opportunities are always exploited through the formation of new firms, this chapter explains that entrepreneurs choose between markets and firms as modes of opportunity exploitation. The last portion of this chapter describes the major elements of the organizing process.

Chapter 11 reviews the earlier chapters and provides some tentative conclusions about the individual–opportunity nexus framework on entrepreneurship. This chapter also discusses where future empirical research is necessary to confirm some of the arguments made in the book, that are not very strongly supported by existing evidence.
THE RESEARCH UNDERLYING THE BOOK

This book is the result of over ten years of scholarly research into entrepreneurship that was first initiated when I began the Ph.D. program in Management at the Wharton School of the University of Pennsylvania, and carried on through faculty stints at the DuPree College of Management at Georgia Institute of Technology, the Sloan School of Management at the Massachusetts Institute of Technology, and the Robert H. Smith School of Business at the University of Maryland.

The theory and findings that I describe in the chapters that follow are based on numerous different research projects conducted with many co-authors. One project, conducted with Lars Kolvereid at Bodo University in Norway, and Paul Westhead now at the University of Nottingham in the United Kingdom, sought to explore similarities and differences across countries in the effect of individual and environmental factors on the decisions of people to found firms. It also sought to explore the relationship between new firm strategy and environmental conditions on firm performance using data from a survey administered to a sample of 597 founders of new ventures in Norway, New Zealand and the United Kingdom.

A second project, which was my doctoral dissertation, was conducted with Ian MacMillan of the University of Pennsylvania and S. Venkataraman, now at the University of Virginia. This project explored the similarities and differences in how people from different national cultures championed new ventures, based on a survey of 4405 individuals from 43 organizations, from 68 nations.

A third project was conducted in part alone, and in part with my colleague Bill Gartner from the University of Southern California. This project looked at macro-level economic, social and psychological factors that influenced the rate of entrepreneurial activity in the United States from 1899 to 1988, using archival data.

A fourth project used data from the Franchise Annual and Entrepreneur magazine to track 138 new business format franchisors established in 1983 over the first ten years of their lives; data from the Sourcebook of Franchise Opportunities to follow 157 new franchise systems established between 1981 and 1983 from 1984 to 1995; data from The Sourcebook of Franchise Opportunities on 2997 business format franchise systems operating in the United States between 1984 and 1996; data from Entrepreneur magazine on the survival of 1292 new franchise systems established in the United States from 1979 to 1996; and data on the franchise offering circulars of 170 new franchise systems established in the early 1990s. This project, conducted in part alone and in part with Maw-Der Foo of the National University of Singapore and Pierre Azoulay of Columbia University, resulted in a series of articles that
explained the effect of organization design and new venture strategy on the development of new firms.

A fifth project, conducted with Dan Cable of the University of North Carolina at Chapel Hill, examined a survey of 202 seed stage venture capitalists and business angels, as well as in-depth interviews with the entrepreneurs and financiers of 50 spin-offs from the Massachusetts Institute of Technology. This project sought to understand the venture finance decisions of early stage investors in new firms.

A sixth project, conducted both alone and with Rakesh Khurana of Harvard University, Toby Stuart of Columbia University and Riitta Katila of Stanford University, examined in-depth case studies of eight new ventures founded to exploit a single invention assigned to the Massachusetts Institute of Technology; explored the firm founding patents among the population of 1397 inventions assigned to the Massachusetts Institute of Technology between 1980 and 1996; examined the life histories of 134 companies founded to exploit inventions assigned to the Massachusetts Institute of Technology from 1980 to 1997; and examined efforts by new and established firms to commercialize 966 inventions licensed by the Massachusetts Institute of Technology from 1980 to 1996. The purpose of this project was to understand the opportunity discovery process; to explore individual differences that influence opportunity exploitation; to examine the effect of social relationships and business strategy on new venture finance and development; and to investigate the effect of industry conditions on the exploitation of opportunities through new firm formation.

A seventh project, conducted with Dante DiGregorio of the University of New Mexico and Wesley Sine of the University of Maryland examined the licensing and new firm formation activity out of the university technology licensing offices of 101 US universities from 1994 to 1998. This study examined the role of the external environment on opportunity exploitation.

An eighth project, conducted with Jon Eckhardt of the University of Wisconsin and Frederic Delmar of the Stockholm School of Economics, tracked 223 new Swedish ventures established in 1998 through the first 30 months of life. The purpose of this project was to explore the role of business planning in venture finance and organization design.

In addition to my empirical research projects, this book draws on my prior efforts to develop conceptual models of different aspects of the entrepreneurship process. One such project to explain entrepreneurial finance was conducted with Dan Cable of the University of North Carolina. Another project, conducted with S. Venkataraman of the University of Virginia, and extended with Jon Eckhardt, of the University of Wisconsin, sought to develop the general conceptual framework for entrepreneurship that provided the basis for this book. A third project sought to explain the psychological aspects of opportunity
exploitation, and was conducted with Ed Locke of the University of Maryland and Chris Collins of Cornell University.

The book also draws heavily on the work of other scholars in the field of entrepreneurship. I make significant use of numerous published papers that I have read in scholarly journals or conference proceedings, as well as unpublished research that I have reviewed or have seen presented at conferences. Lastly, there is no doubt that the ideas in this book were spurred by discussions with Ph.D. students from a variety of universities who participated in the University of Maryland’s intensive Ph.D. Seminar in Entrepreneurship, my academic colleagues, venture capitalists, angel investors, technology transfer officers and entrepreneurs.

In the next chapter, I explore the first piece of the puzzle that underlies the individual–opportunity nexus perspective on entrepreneurship. In that chapter, I explore the role of opportunities in a conceptual framework for entrepreneurship.