Volume Title: International Differences in Entrepreneurship

Volume Author/Editor: Josh Lerner and Antoinette Schoar, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-47309-0; 978-0-226-47309-3

Volume URL: http://www.nber.org/books/lern08-2

Conference Date: February 1-2, 2008

Publication Date: May 2010

Chapter Title: Introduction to "International Differences in Entrepreneurship"

Chapter Author: Josh Lerner, Antoinette Schoar

Chapter URL: http://www.nber.org/chapters/c8216

Chapter pages in book: (1 - 13)

Introduction

Josh Lerner and Antoinette Schoar

Entrepreneurship and self-employment are often pronounced to be the major drivers of growth and development for an economy. Early work by Knight (1921) and Schumpeter (1942), among others, describes the transformational role that entrepreneurs play in the economy by shaping markets, increasing competitive forces, and pushing out unproductive incumbents. At the same time, entrepreneurial firms are credited with accelerating the speed of innovation and the dissemination of new technologies and products in the economy, as, for example, Acs and Audretch (1988) and Kortum and Lerner (2000) show.

To date, most of the research on entrepreneurship has been conducted in developed markets, which have formed the basis for the understanding of academics and policymakers alike about this subject matter. While there are many anecdotes about the importance of entrepreneurs in emerging economies, there is little systematic research to show if entrepreneurship has a similarly transformational role. The dramatic speed with which developing countries like Brazil, China, or India have been transitioning from agricultural societies to modern market economies has highlighted the importance of studying the background and differences in the entrepreneurial dynamics across the world.

In this volume, we bring together a set of chapters that aim to highlight how institutional differences, cultural considerations, and personal charac-

Josh Lerner is the Jacob H. Schiff Professor of Investment Banking at Harvard Business School and codirector of the Entrepreneurship and Innovation Policy Working Groups at the National Bureau of Economic Research. Antoinette Schoar is the Michael Koerner '49 Professor of Entrepreneurial Finance at the Massachusetts Institute of Technology Sloan School of Management and codirector of the Entrepreneurship Group at the National Bureau of Economic Research.

teristics affect the roles that entrepreneurs play in emerging economies. One of the main findings that emerge from the set of chapters is that there are two extremely distinct "flavors" of entrepreneurship—subsistence entrepreneurs and transformational entrepreneurs. The former manage microbusinesses that do not grow beyond providing employment for the owner, or at most, for his or her family. The latter type of entrepreneurship is the real engine of growth for the economy, since these entrepreneurs start firms that grow rapidly and create jobs and innovation in the economy. While there had been some debate of this distinction within the prior literature (e.g., Tokman versus De Soto, Kuznets or Scott Shane, etc.), the chapters in this volume demonstrate that one of the most significant differences across countries is the relative prevalence and salience of each of these types of entrepreneurs.

The findings highlight that remedial and transformational entrepreneurs vary significantly in their risk attitudes, educational backgrounds, IQ, and financial and management knowledge. The gap between these two types of entrepreneurs becomes even more important, since several of the chapters show that there is almost no transition from subsistence to transformational entrepreneurship. Subsistence entrepreneurs are much more likely to transition into (or out of) employment and unemployment, while transformational entrepreneurs almost never tend to come from subsistence entrepreneurship.

These findings have major policy implications, since they highlight that these two types of entrepreneurs emerge in different contexts and vary in their implications for growth. In fact, regulations and government interventions in many cases have the opposite effects on these two groups of entrepreneurs. Many regulations that allow transformational entrepreneurs to grow faster, such as financial market and labor market deregulation, tend to crowd out the survival of subsistence entrepreneurs. By itself, that might be a necessary and often even welcome symptom of economic development. But it is important to understand that these transitional dynamics can often be painful and lead to politically sensitive redistributions, which in turn might threaten the growth of transformational entrepreneurs. Moreover, the chapters in this volume also highlight that it is much more difficult to find examples of successful government programs that directly stimulate the growth of transformational entrepreneurs, as exemplified by the failure of government-subsidized venture capital funds or direct investments in start-up firms. By way of contrast, there is some evidence that programs that target subsistence entrepreneurs can have reasonable impact, such as (partial) collateral guarantees for small businesses or facilitation of the business registration process.

The fact that these topics have received only very limited systematic analysis to date can be partially explained by three factors:

- First, there is the conceptual difficulty of the question itself: entrepreneurs do not neatly fit into most economic models, because in many cases, instead of reacting to market forces, entrepreneurs create new demand or new markets altogether. This makes it more difficult to model entrepreneurs as infinitesimal pricetakers acting in efficient markets. Instead, it is important to study the individual characteristics of these individuals and their choices.

- Second, researchers can frequently be faulted as well for not being careful enough in differentiating the types of entrepreneurial firms that they study. Entrepreneurship is often used as a collective term that encompasses a large multitude of different activities and types of firms. The spread runs from the self-employed—with a single individual who serves as owner, manager, and employee—to large-scale enterprises with hundreds of workers. The enormous heterogeneity in what we call entrepreneurship becomes even more complex when comparing entrepreneurs and their activities across countries and industries.
- A final part of the problem might be due to the lack of systematic, high-quality data that allows us to answer detailed questions about entrepreneurship.

The chapters in this volume try to address some of these central issues and problems. We had two primary goals in undertaking the National Bureau of Economic Research conference on which this volume is based and in undertaking the volume itself. The first goal was to bring together a number of chapters from different countries around the world to show the differences and similarities in these questions across regions. The volume showcases a multitude of novel and creative ways of collecting new data sets or using existing data in novel ways. The gamut runs from using large-scale household surveys that ask questions about occupational choices, to collecting novel information on individual venture capital firms and their deals from public sources via a Web-based data crawler that parses text by categories, or to running field experiments with real-world entrepreneurs.

The second central objective of this volume is to bring together a number of chapters from emerging economies that shed light on a few important topics in entrepreneurship: the first question is to understand who selects into entrepreneurship and how to differentiate self-employment from entrepreneurship. For example, what are the origins of entrepreneurs across countries? Are small, self-employed firms stepping stones to larger-scale entrepreneurship, or are they just a form of underemployment and sustenance activity? What are the decisions and constraints that affect entrepreneurs in managing their business in emerging economies? The second set of chapters analyzes how economy-wide environmental factors such as market regulation, government subsidies for banks or venture capital, or entrepreneurial culture affect this industry. Many of these central questions about entrepreneurship remain partially answered if not totally unanswered, especially in emerging economics.

The first set of studies in this volume address a fundamental question in entrepreneurship, which is to understand who the people behind entrepreneurial firms are. Are there systematic patterns in the origins of entrepreneurs and the reasons and career trajectories by which people end up as entrepreneurs? Research in the United States and other developed nations has shown that there are a few systematic predictors of entrepreneurship, such as whether the father was an entrepreneur and the income level of the family and the person, as well as age and life-cycle stages of people (see, for example, Evans and Leighton [1989] and Evans and Jovanovic [1989]). However, the results for personal characteristics like risk aversion, optimism, and educational background seem to be less clear-cut in predicting who ends up as entrepreneurs. While papers like Landier and Thesmar (2009) demonstrate a correlation between the choices that entrepreneurs make in their business and the level of risk tolerance and optimism, they cannot look at selection into entrepreneurship. On the other hand, studies like Holtz-Eakin, Joulfaian, and Rosen (1994) suggest that psychological dimensions such as risk aversion and optimism have no clear predictive power in determining who will become an entrepreneur going forward or will choose to become an employee at a larger firm. Thus, it seems difficult to identify an "entrepreneurial gene" or specific characteristics that predict selection into entrepreneurship.

The first seven chapters in this volume investigate these questions, trying to be significantly more careful than much of the earlier literature about defining different types of entrepreneurial activities. While they tackle the question from very different methodological aspects, the unifying theme is to map the heterogeneity of entrepreneurs in an economy and the differences in how they respond to economic pressures and opportunities.

Chapter 1 in this volume by Ardagna and Lusardi goes back to the question of how personal characteristics correlate with the choice to become an entrepreneur. However, different from earlier papers that mainly bundle different types of entrepreneurial firms together, these authors are able to differentiate between what they term "remedial" entrepreneurs and those that are exploiting growth opportunities. To undertake this differentiation, they rely on data from the Global Entrepreneurship Monitor (GEM), which collects cross-national harmonized data on entrepreneurship across thirty-seven countries. Each year, the project surveys a sample of at least 2,000 randomly selected individuals in each country (the Adult Population Survey). While this data has earlier been shown to have many problems with measurement error, despite the varying quality of the national surveys, it provides a unique opportunity to differentiate the different types of entrepreneurs.

The study shows that individual characteristics correlate with a person's choice to move into entrepreneurship, though the correlation only explains a small part of the variation. This is in line with earlier studies that have found limited predictability of entrepreneurship. Education, work achievement, attitudes toward risk, self-assessed skill levels, and knowing someone else who has started a business are positively correlated with entrepreneurship. However, when looking more closely at these relationships, the correlations are not always unambiguous: for example, educational background is positively correlated with the choice of opportunity entrepreneurship but negatively related to remedial entrepreneurs. The opposite can be observed for unemployment status. The two types of entrepreneurship draw from different parts of the income and talent distribution.

The study also shows that the effect of individual characteristics on the choice of becoming an entrepreneur is greatly diminished in countries that have stricter entry and labor regulations. Specifically, regulation curbs the effects of social networks and business skills, while it strengthens the effects of risk aversion. The regulatory environment affects the ability of people with entrepreneurial skills to be able to express their talents. In more regulated environments, personal characteristics seem to be less important in explaining the selection into entrepreneurship. This is particularly true for opportunity entrepreneurs.

Chapter 2 by De Mel, McKenzie, and Woodruff expands on the idea that people who become entrepreneurs differ systematically from those who become either remedial entrepreneurs or employees. The authors collect a very rich data set of individual characteristics for a sample of over 700 self-employed entrepreneurs, larger business owners, and employees in Sri Lanka. These entrepreneurs have been part of a long-term research study, and the authors were able to observe the growth of these businesses over a two-year period or even longer. Between two-thirds and three-quarters those working for themselves have characteristics that are in line with those of wage workers rather than those of larger firm owners. Interestingly, the authors find that the self-employed differ from the owners of small and medium enterprises mostly along dimensions of ability and attitudes but much less in their family background. But there is a significant minority of self-employed workers (about one-quarter) who look more like business owners than wage workers: these workers are also more likely to expand their business by adding paid employees. Given the large number of the self-employed in low-income countries, these findings suggest that the possibility of job creation from the sector should not be ignored. But the analysis also clearly suggests that finance is not the sole constraint to growth of microenterprises and provides an explanation for the low rates of growth of enterprises supported by microlending.

Some of the most interesting entrepreneurial characteristics that are explored in the chapter are motivation, nexus of power, and optimism. Both business owners and wage workers are more motivated than self-employed workers. With respect to motivation for power, the self-employed are similar to business owners: both have a stronger desire to be in control than wage workers. Similarly, business owners are more willing to put themselves in unfamiliar situations than both own-account and wage workers, who do not differ in this attitude. Self-employed workers are more impulsive and less organized than both small and medium business owners and wage workers. They are, however, more comfortable juggling tasks than wage workers.

In chapter 3, Mondragón-Vélez and Peña build on the idea that the self-employed and entrepreneurs are fundamentally different and thus might react asymmetrically to economic shocks. The authors therefore investigate the transition between the self-employed, entrepreneurs, and employees using a large-scale data set from the Columbian National Household Survey. The panel nature of the data allows the authors to look at the transition across occupations, particularly between self-employment and entrepreneurship. As in the prior studies, the case of Columbia highlights that the self-employed tend to be less educated and poorer than business owners. They also tend to be more likely to be operating in the informal economy and in the service sector.

Colombia has seen some very interesting dynamics over the last two decades: while the relative fraction of entrepreneurs within the labor force has been stable at around 5 percent since the 1980s, the fraction of self-employed individuals as a share of entrepreneurs increased from about 20 percent to 30 percent after the recession of the late 1990s and stayed at this higher level until the end of 2000. When looking at transitions across occupations, the authors find high persistence in the employment status of employees (wage earners), while the self-employed and business owners are more sensitive to the business cycle. Moreover, the majority of the transitions into self-employment and business ownership in Colombia come from the pool of wage earners rather than from the unemployed. In addition, the transitions between self-employment and business ownership (and vice versa) are extremely low.

When looking at the earnings distribution of the different groups, the chapter shows that business owners and employees on average have higher mean and median incomes than the self-employed. But the earnings distribution of the business owners shows more right skewness than either the employees or the self-employed. This suggests that self-employment is a temporary activity that is carried out for subsistence purposes for those who fail in the search for a paid job. Only a small fraction of these people who go into self-employment after losing their jobs become true entrepreneurs. However, it seems that self-employment serves a very important macroeconomic adjustment function for people who do not have any other income opportunities.

Ideally, one would like to see detailed country-level analyses of the macroeconomic trends in entrepreneurship and business starts across many countries, but these are generally quite difficult to conduct, since only a few emerging-market countries have in-depth census data, such as in Colombia. Chapter 4 by Klapper, Amit, and Guillén uses a different approach to get at measuring entrepreneurial trends by measuring the formalization of businesses. The authors are able to collect a time series of the number of total and newly registered businesses across countries, which they call the World Bank Group Entrepreneurship Survey. The information is obtained by surveying business registries and other government sources via surveys and follow-up phone calls across a sample of eighty-four countries. The results allow the authors to shed light on the dynamics of firm registration as a function of the economic and financial development of a country and its regulatory environment.

First, they show that across countries, business formalization (registration) increases when countries experience economic growth. These results can be explained by two forces. At one level, it provides support for the idea that growth is fueled by small business activity. In most countries, periods of development and growth are associated with expansion in the number of small businesses and new entrants rather than a growth process that is dominated by a few larger firms. These trends support the idea that small businesses are at the core of economic development. But in addition, we can infer that an increase in a country's growth opportunities leads to a heightened willingness of firms to register and move out of the informal sector. These results are very important for policy considerations: they could mean that in periods of faster growth, the formal economy provides more opportunities that unregistered firms are unable to access; therefore, economic growth itself causally leads to a reduction in the formal economy. An alternative interpretation might suggest that faster growth is associated with an improvement in the quality of the regulatory framework, which in turn makes it less costly for firms to be registered.

While it is not possible to fully differentiate these two channels in the current chapter, the analysis also shows that the business environment—in particular, factors such as the ease of starting a business and political corruption—are important in explaining total firm registrations, even after controlling for the level of economic development. Most importantly, administrative barriers to starting a business as well as the cost of registering a business are significantly and negatively correlated with business density and the entry rate. These results confirm the earlier studies that show an association of the regulatory and legal environment on firm entry (for example, Botero et al. [2004] or the World Bank Doing Business reports). Interestingly, the chapter documents that even administrative factors such as the electronic registration procedures might play an important role in encouraging greater business registration.

Chapter 5 in this volume by Mullainathan and Schnabl pursues a related question to understand the microdynamics of business formalization in Lima, Peru. The authors investigate a business licensing reform that simplified and removed many of the licensing procedures for businesses in the municipality. The idea is to show how regulatory steps, such as changes in the time and cost it takes to register a business, can affect the choice of businesses to enter the formal sector. The reform significantly reduced the median licensing time from forty to fifteen days and lowered the average licensing cost by 42 percent. As a result, the number of newly licensed firms increased four-fold in the year after the reform. Of these newly registered firms, three-quarters were operating informally prior to the reform, while one-quarter were new start-ups. Thus, initially, the largest impact of the reforms was in encouraging existing businesses to change their registration status.

Interviews with participating businesses show that the foremost motivation for obtaining a license before and after the reforms is to avoid having to pay fines and bribes. Other reasons, such as access to credit or the ability to enforce contracts, are far less important. Revealed preferences seem to suggest that after the reforms, business owners feel more assured that obtaining a license is a preferred way of protecting themselves against fines and bribes, while before registration, their businesses were exposed to such demands. These results highlight the importance that regulatory changes can have on the incentives and ability of local bureaucrats to engage in rent extraction. The suggestion is that simplifying government regulation—in this case, registration procedures—reduces the opportunities of bureaucrats and government officials to engage in rent extraction and thus reduces the barriers to entry.

The last two chapters in this section look at the impact of entrepreneurial culture. Chapter 6 by Fairlie, Zissimopoulos, and Krashinsky uses the flow of Asian immigrants to Canada, the United Kingdom, and the United States to analyze the selection into entrepreneurship and success in running the business. Using microdata from the censuses of the three countries enables the authors to compare differences across the ethnic backgrounds that entrepreneurs come from—in particular, Chinese, Indian, and other Asian immigrant groups. A few striking facts emerge from the research. Asian immigrants to all three countries have education levels that are higher than the national average, and in the United States, the education levels of Asian immigrants are particularly high relative to the entire population. Some of the variation in the education of Asian immigrants across the United States, Canada, and the United Kingdom is likely due to immigration policy. Business ownership rates of Asian immigrants in the United States and Canada are similar to the national average, and in the United Kingdom, they are substantially higher than the national average and the highest among all three countries. On average, business income of Asian immigrant business owners is only slightly above the national average (in the United States) or below the national average (in Canada) and is thus not the broad picture of success that is often portrayed.

In particular, higher education is found to be a positive, although not strong, determinant of business ownership in the United States and Canada but not in the United Kingdom. There are also large, positive effects of education on business income in the United States and Canada. In the United Kingdom, the authors find smaller positive effects of high education. These findings imply that the relatively high levels of education among some Asian immigrant groups do not have a large influence on business ownership rates for the groups but have a large effect on business performance, at least in the United States and Canada.

Businesses owned by the various immigrant groups are found to concentrate in different industries, which may be related to their relative skills and selection. Examining the same immigrant groups in different countries reveals interesting patterns. More immigrant groups can be found in lower-skill industries in the United Kingdom than in the United States. For example, Chinese or Indian immigrants are heavily concentrated in hotel and retail businesses in the United Kingdom but are much less concentrated in these industries in the United States and Canada. The heavy concentrations of these immigrants in low-skill sectors in the United Kingdom may reflect more limited opportunities for these immigrants.

Chapter 7 by Iyer and Schoar explores the role of entrepreneurial culture in determining contractual outcomes between entrepreneurs in countries where the legal environment makes contracts very difficult to enforce. Does entrepreneurial culture act as a coordination or trust-building device and as such facilitate market interactions? In a field experiment in India, entrepreneurs enter contracts with wholesalers in the stationary industry. The entrepreneurs are either matched with wholesalers from their own community or from different communities. Entrepreneurs from different communities vary in how they conduct business and negotiate contracts. Wholesalers from the Marwari community, which is considered the most entrepreneurial community in India, offer lower prices and smaller up-front payments from the start than wholesalers from other communities but are not willing to be negotiated further down. Thus, culture is an important factor in explaining how people from different backgrounds negotiate business deals. The chapter also finds that across all communities, prices are lower when there is a match between the entrepreneur and wholesaler. But there is no difference in the level of up-front payment, which suggests that community affiliation does not seem to function as a trust-building device but seems to invoke social norms for "fairer treatment."

The discussion of the previous research suggests that there is a lot of variation in the types of individuals who start businesses, and it might not be easy to predict who among these will be successful and how their transition from self-employment to larger businesses will proceed. While the underlying challenge for every investment decision is to differentiate the good from the bad projects, the difficulties might be especially increased for small businesses. A concern that is often voiced in policy circles is that individual lenders are not willing or equipped to bear the risk associated with these types of firms. If there are externalities from entrepreneurship for the rest of society, they might lead to underinvestment in this sector. The opposing view suggests that governments might be even less equipped to fulfill the screening or monitoring function for these very risky investments and thus can lead to market distortions when trying to intervene in the sector.

A number of chapters in this volume investigate the results associated with government intervention in financing small businesses. The results from this analysis are mixed but provide very interesting insights in how the specific design of these programs is related to the impact that they have on entrepreneurial firms.

Chapter 8 by Lelarge, Sraer, and Thesmar evaluates the introduction and expansion of a loan guarantee program in France in the mid-1990s. This is an indirect subsidy program that provides (partial) insurance to banks against default risk when making loans to start-ups and small businesses that have low levels of collateral. The often-subsidized insurance premium is paid for by the borrower, but the screening and loan origination function is fulfilled by the banks. To maintain incentives for the banks, the government only insures part of the loans. Many countries have introduced versions of the loan guarantee schemes, including the United States and the United Kingdom.

To test the causal impact of loan guarantee schemes, the chapter exploits a quasi-natural experiment in the French program that led to an expansion of the program to new industries such as construction, retail and wholesale trade, transportation, hotels and restaurants, and personal services in 1995. Therefore, the chapter is able to use the expansion of coverage to these newly eligible sectors to conduct difference-in-difference estimates of the program that compares the change in the newly eligible industries after the regulatory change to those industries for which the loan guarantee scheme did not change. Firms that are included in this program are able to raise more external finance, pay lower interest rates, and enjoy higher growth rates. This suggests that the program has the intended effect of alleviating credit constraints for small businesses. However, the study does not find any evidence that the program increased new entry into entrepreneurship; rather, it helped existing small firms to grow. One might argue that this result is an indicator that the program is well designed to discourage ex ante riskier firms to enter the market. However, the chapter also shows that the program is not free of all perverse effects. Greater access to the loan guarantee scheme seems to induce firms to take on riskier projects, which manifests itself in a higher likelihood of firms going bankrupt. Yet overall, the growth-enhancing gains far outstrip the cost.

A very different government program that aims to provide access to finance for start-up firms is discussed in chapter 9 by Brander, Egan, and Hellmann. The authors conduct an in-depth, almost forensic analysis of government-sponsored public venture capital programs in Canada. This study provides unique and very detailed information on the different government programs to support venture capital and their outcomes and compares them to private venture funds. Since the stated goals of the public venture capitalists is to focus on a broader set of policy variables apart from financial returns, the chapter also includes measures of value creation (measured by the likelihood of engaging in initial public offerings or merger-and-acquisition transactions), innovation (measured by patents), and competition. The authors show that firms financed by government-sponsored venture capitalists on average underperform private funds, not only on the dimensions of financial returns and value creation but even on the broader policy dimensions such as innovation. Is this difference in the average performance of government- and privately sponsored funds driven by differences in the quality of the start-ups they invest in? One might argue that government-sponsored funds target lower-quality entrepreneurs who would otherwise not get funding through the private venture capital funds.

The chapter shows that this is not the case. Instead, subsidized venture capitalists tend to draw from a pool of ex ante very similar firms and seem to crowd out private investment. The authors also show that the lower average performance of these funds seems to be explained by the fact that government-sponsored venture funds on average provide less effective mentoring and other value added services. To differentiate these potential selection effects from treatment effects (e.g., public venture capitalists provide less value added services), the chapter identifies an interesting instrument that uses the exogenous variation in the political leadership of provincial governments. Funding by government-sponsored venture capitalists is related to having left-leaning provincial governments. The negative effect of government funding on various outcome measures becomes even stronger in the instrumental variable specifications. While the data does not allow for a definitive welfare analysis, the effectiveness of these very direct government interventions in the venture capital market is questionable.

Chapter 10 by Huang and Qian discusses the example of an even more wide-ranging government intervention aimed at structuring access to finance for large and small firms. The authors discuss the example of Shanghai, a city that has gone through a massive economic transformation over the last decade. The hypothesis put forth by the authors is that industrial policy de facto suppressed entrepreneurship in Shanghai by targeting subsidies to established firms, providing incentives for foreign direct investment to flow to high-technology sectors that were dominated by established firms, and restricting entry for new firms. The authors argue that these policy choices are a result of the personal preferences of the leading policymakers in the city government of Shanghai, who come out of a tradition of economic centralization.

The empirical findings are based on the Chinese Industry Census, which is compiled by the National Bureau of Statistics. This census provides information on industrial firms across all ownership types that have sales value above 5 million yuan. This is an important caveat, since it does not allow the authors to measure how entrepreneurship in the service sector has performed during the same time period. The authors find that median incomes and employment levels are low compared to other Chinese cities of similar characteristics, while at the same time, private business density is among the lowest in the country. While China as a whole has seen an enormous surge in entrepreneurship, the authors propose that the level of entrepreneurship in Shanghai is conspicuously low. It appears that Shanghai has low levels of de novo private businesses; that is, those that were set up by new entrepreneurs during the transformation and did not emerge from existing state-owned enterprises (SOEs). In sum, the authors argue that while Shanghai has seen enormous growth and wealth creation over the last decade, the preferential treatment of former SOEs has come at a staggering social cost by actively discouraging self-employment as a means of remedial income generation. These results point to the potential role of entrepreneurship in affecting the wealth distribution within the economy.

Thus, the chapters in this volume make two important contributions. First, they highlight how the important issue of international differences in entrepreneurship—especially those between developed and emerging economies—can be studied with the development of novel data sets. Second, the chapters' explorations of important questions generate a variety of important insights, particularly in regard to the differing nature of entrepreneurs, the impact of cultural considerations on venture activity, and the impact of government efforts to promote entrepreneurial ventures.

It is our hope that these chapters will stimulate further work on this important topic, for many questions remain to be understood about the impact of entrepreneurship in developing nations. In our eyes, three challenges are most pressing:

- *The development of national and cross-national data sets that would allow careful and unbiased comparisons across nations.* While it is easy to point out the limitations of early efforts like the Global Entrepreneurship Monitor, developing consistent data sets is no trivial challenge. Hopefully, the combination of efforts to build (a) detailed data sets of entrepreneurs within countries, as, for example, in chapter 2 and chapter 7 in this volume; and (b) consistent cross-country data sets, as in chapter 4, will only be the first in a series of new efforts to address this important challenge.
- *Building a richer understanding of the factors that sustain entrepreneurship across different economies.* While the earlier cross-sectional analyses and the panel and experimental studies presented here highlight the importance of public policy as a barrier or a spur to entrepreneurship, it is likely that many other factors are at work. Understanding the relative importance of other potential contributors—such as active public

equity markets and financial intermediaries, such as venture capitalists—remains an important challenge.

- *Developing a better understanding of the consequences of different classes of entrepreneurs.* One of the clearest themes emerging from the chapters in this volume is the complexity of the entrepreneurial phenomenon. It would be natural to assume that what Ardagna and Lusardi term "remedial" entrepreneurs would have a very different social impact than "opportunity" entrepreneurs. While deciphering the impact of entrepreneurship on society as a whole is not easy, it is critical in designing policy responses.

As a final note, we want to express our gratitude to the National Bureau of Economic Research for their support of this endeavor, especially its CEOs, Martin Feldstein and James Poterba. We would also like to thank Carl Schramm, Bob Litan, and Bob Strom of the Erwin Marion Kauffman Foundation, who were generous in supporting the project.

References

Acs, Z. J., and D. B. Audretsch. 1988. Innovation in large and small firms: An empirical analysis. *American Economic Review* 78 (4): 678–90.

Botero, J., S. Djankov, R. La Porta, F. Lopez-De-Silanes, and A. Shleifer. 2004. The regulation of labor. *Quarterly Journal of Economics* 119 (4): 1339–82.

Evans, D. S., and B. Jovanovic. 1989. An estimated model of entrepreneurial choice under liquidity constraints. *Journal of Political Economy* 97 (4): 808–27.

Evans, D. S., and L. S. Leighton. 1989. Some empirical aspects of entrepreneurship. *American Economic Review* 79 (3): 519–35.

Holtz-Eakin, D., D. Joulfaian, and H. S. Rosen. 1994. Sticking it out: Entrepreneurial survival and liquidity constraints. *Journal of Political Economy* 102 (1): 53–75.

Knight, F. 1921. *Risk, uncertainty, and profit.* Boston: Houghton Mifflin.

Kortum, S., and J. Lerner. 2000. Assessing the contribution of venture capital to innovation. *RAND Journal of Economics* 31 (4): 674–92.

Landier, A., and D. Thesmar. 2009. Financial contracting with optimistic entrepreneurs. *Review of Financial Studies* 22 (1): 117–50.

Schumpeter, J. A. 1942. *Capitalism, socialism, and democracy.* New York: Harper Brothers.