



GLOBAL ENTREPRENEURSHIP MONITOR

2009 Global Report

Niels Bosma and Jonathan Levie





Global Entrepreneurship Monitor

2009 Executive Report

Niels Bosma and Jonathan Levie

**With contributions from William D. Bygrave,
Rachida Justo, Jan Lepoutre and Siri Terjesen**

Founding and Sponsoring Institutions

Babson College, Babson Park, MA, United States
Leading Sponsoring Institution and Founding Institution

Universidad del Desarrollo, Santiago, Chile
Sponsoring Institution

Reykjavík University, Háskólinn Reykjavík, Iceland
Sponsoring Institution

London Business School, London, United Kingdom
Founding Institution

Although GEM data were used in the preparation of this report, their interpretation and use are the sole responsibility of the authors.

The authors thank Alicia Coduras, Marcia Cole, Mick Hancock, Yana Litovsky, Jackie Odoch and Jeff Seaman for their various contributions to this report.

The authors would also like to express a big thanks to all participating GEM 2009 national teams.

© 2010 by Niels Bosma, Jonathan Levie and Global Entrepreneurship Research Association (GERA)

Table of Contents

EXECUTIVE SUMMARY	5
1 INTRODUCTION	8
1.1 The GEM Model	8
1.2 How GEM Measures Entrepreneurship	13
1.3 GEM Website, National Reports and Data Availability	14
2 A GLOBAL PERSPECTIVE ON ENTREPRENEURSHIP IN 2009	15
2.1 Entrepreneurial Attitudes and Perceptions	15
2.2 Entrepreneurial Activity	19
2.3 Entrepreneurial Aspirations	26
2.4 Entrepreneurial Framework Conditions – an Assessment of Institutional Quality by National Experts	32
3 ENTREPRENEURSHIP AND THE 2008-2009 RECESSION	35
3.1 The Impact of Recessions on Entrepreneurship: Evidence From GEM Data	35
3.2 The Impact of the Recession on Entrepreneurial Activity According to the Entrepreneurs	40
4 A GLOBAL COMPARISON OF SOCIAL ENTREPRENEURSHIP	44
4.1 Prevalence of Early-Stage Social Entrepreneurial Activity	44
4.2 Comparison Between Total Entrepreneurial Activity and Social Entrepreneurial Activity Levels	45
4.3 Who are Social Entrepreneurs?	47
4.4 What Sectors do Social Entrepreneurs Enter?	48
4.5 A Spectrum of Social Entrepreneurial Activity	48
5 ENTREPRENEURIAL FINANCE IN 2008-2009	52
5.1 Informal Investment	52
5.2 Venture Capital	55
REFERENCES	58
APPENDIX 1: CHARACTERISTICS GEM SURVEYS	60
APPENDIX 2: GLOSSARY OF MAIN MEASURES AND TERMINOLOGY	61
GEM NATIONAL TEAMS 2009	62
ABOUT THE AUTHORS	70
GEM SPONSORS	71
CONTACTS	71
ENDNOTES	72

LIST OF FIGURES

Figure 1	The GEM Model	12
Figure 2	The Entrepreneurial Process and GEM Operational Definitions	14
Figure 3	Fear of Failure Would Prevent You from Starting a Business: Prevalence Rates for those who Perceive New Business Opportunities and Total Working Age Population, GEM 2009	17
Figure 4	Expressed Reasons Behind Discontinuing Businesses, by Country Group, GEM 2009	20
Figure 5	Early-Stage Entrepreneurial Activity (TEA) for 54 Nations in 2009, by Phase of Economic Development, Showing 95 Percent Confidence Intervals	22
Figure 6	Early-Stage Entrepreneurial Activity Rates and per Capita GDP, 2009	23
Figure 7	Sector Distribution Early-Stage Entrepreneurial Activity	24
Figure 8	Sector Distribution Established Business Owner-Managers	24
Figure 9	Early-Stage Entrepreneurial Activity for Separate Age Groups, 2009	25
Figure 10	Early-Stage Entrepreneurial Activity Rates by Gender, 2009	25
Figure 11	High-Growth Expectation Early-Stage Entrepreneurship (HEA), 2004-2009	26
Figure 12	Strictness of Employment Protection (2004) and High-Expectation Early-Stage Entrepreneurship (HEA), 2004-2009	27
Figure 13	Relative Prevalence of High- and Moderate- Growth Expectation Early-Stage Entrepreneurship: Percentages in TEA, 2004-2009	28
Figure 14	Percentage of Early-Stage Entrepreneurial Activity with New Products or New Markets, 2004-2009	29
Figure 15	Percentage of Early-Stage Entrepreneurs with International Orientation, 2004-2009	30
Figure 16	Intrapreneurship Rate (% of Population Aged 18-64) and GDP per Capita, 2008	31
Figure 17	Intrapreneurship Rate and New Business Owner-Manager Rate, 2008	31
Figure 18	Scores on Entrepreneurial Framework Conditions Rated by National Experts, by Stage of Development	33
Figure 19	Entrepreneurial Attitudes in the United States, 2001-2009	36
Figure 20	Entrepreneurial Activity in the United States, 2001-2009	37
Figure 21	Entrepreneurial Aspirations in the United States, 2001-2009	37
Figure 22	Entrepreneurial Attitudes in Argentina, 2001-2009	37
Figure 23	Entrepreneurial Activity in Argentina, 2001-2009	38
Figure 24	Entrepreneurial Aspirations in Argentina, 2001-2009	38
Figure 25	Entrepreneurs' Views on Starting a Business in Comparison to One Year Ago by Phase of Economic Development	40
Figure 26	Entrepreneurs' Views on Growing a Business in Comparison to One Year Ago by Phase of Economic Development	41
Figure 27	Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business, According to the Entrepreneurs	42
Figure 28	Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Age and Country Phase of Economic Development	42
Figure 29	Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Education and Country Phase of Economic Development	43
Figure 30	Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Job Expectation and Country Phase of Economic Development	43
Figure 31	Prevalence of Early-Stage Social Entrepreneurship Activity (SEA) by Country	44
Figure 32	Prevalence of Early-Stage Social Entrepreneurial Activity (SEA) and Early-Stage Entrepreneurial Activity (TEA) by Country	45
Figure 33	Average Entrepreneurial Activity by Economic Development Stage	45
Figure 34	Average Male and Female SEA by Economic Development Stage	47
Figure 35	Early-Stage Social Entrepreneurial Activity (SEA) for Separate Age Groups	47
Figure 36	Early-Stage Social Entrepreneurial Activity (SEA) for Different Education Levels	48
Figure 37	Categories of Social Entrepreneurial Activity, by Phase of Economic Development	51
Figure 38	Informal Investors Prevalence Rates for 54 Nations in 2009, by Phase of Economic Development, Showing 95 Percent Confidence Intervals	52
Figure 39	Amount of Informal Capital, as a Percentage of GDP per Capita, GEM 2009	53
Figure 40	Cost of Starting a Business versus GDP per Capita (PPP), GEM 2009	54
Figure 41	Amount to Start a Business: Percentage Above or Below Trend Line, GEM 2009	54
Figure 42	Venture Capital Investments as a Percentage of GDP, by Stage of the Company	56

LIST OF TABLES

Table 1	Importance of Different Types of National Conditions for Economic Development	10
Table 2	Entrepreneurial Attitudes and Perceptions in the 54 GEM Countries in 2009, by Phase of Economic Development, GEM 2009	18
Table 3	Entrepreneurial Activity in the 54 GEM Countries in 2009, by Phase of Economic Development	21
Table 4	Entrepreneurial Framework Conditions Valued Most Positive (+) and Most Negative (-), per Country	34
Table 5	Entrepreneurial Tendencies in Selected Countries: 2008-2009 Compared to 2006-2007	39
Table 6	Social Entrepreneurial Activity by Firm Entrepreneurial Process Phase and Gender, GEM 2009	46
Table 7	Prevalence of SEA Types by Country	50
Table A1	GEM National Adult Population Surveys: 2009 Sample Size & Procedures	60

Executive Summary

The Global Entrepreneurship Monitor (GEM) is the world's leading research consortium dedicated to understanding the relationship between entrepreneurship and national economic development. For the past ten years GEM reports have been the only source of comparable data across a large variety of countries on attitudes toward entrepreneurship, start-up and established business activities, and aspirations of entrepreneurs for their businesses.

Based on more than 180,000 interviews conducted between May and October in 54 countries, 2009 GEM data show that the global economic downturn reduced the number of people who thought there were good opportunities to start a business in many parts of the world.

Not surprisingly, entrepreneurial activity declined in most GEM countries in 2009; however, about a third of the studied countries showed increased activity. A significant minority of would-be entrepreneurs in the wealthier countries saw the recession as increasing opportunities for their businesses.

The proportion of necessity-driven entrepreneurs—people starting businesses because they felt they had no other choice—increased and attitudes towards entrepreneurship as a career choice improved in half of the wealthier countries in GEM.

This 11th report in the GEM series focuses on the impact of the recession on entrepreneurship and the extent to which entrepreneurship can help reverse a downward economic trend. Also included are:

1) a special report on global perspectives of social entrepreneurship; 2) an analysis of the impact of the recession on funding to support new businesses; and 3) updates on entrepreneurial attitudes and perceptions, entrepreneurial activity, and entrepreneurial aspirations.

The countries in this report are grouped into three stages of economic development as defined by the World Economic Forum's Global Competitiveness Report: factor-driven, efficiency-driven and innovation-driven. This classification in phases of economic development is based on the level of GDP per capita and the extent to which countries are factor-driven in terms of the shares of exports of primary goods in total exports. Factor-driven economies are primarily extractive in nature, while efficiency-driven economies exhibit scale-intensity as a major driver of development. At the innovation-driven stage of development, economies are characterized by their production of new and unique goods and services that are created via sophisticated, and often pioneering, methods. As countries develop economically, they tend to shift from one phase to the next.

The economies included in the 2009 GEM study include:

Factor-Driven Economies

Algeria*, Guatemala*, Jamaica*, Lebanon*, Morocco, Saudi Arabia*, Syria*, Kingdom of Tonga, Uganda Venezuela*, West Bank and Gaza Strip, Yemen

Efficiency-Driven Economies

Argentina, Bosnia and Herzegovina, Brazil, Chile*, China, Colombia, Croatia*, Dominican Republic, Ecuador, Hungary*, Iran, Jordan, Latvia*, Malaysia, Panama, Peru, Romania*, Russia*, Serbia, South Africa, Tunisia, Uruguay*

Innovation-Driven Economies

Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Israel, Italy, Japan, Republic of Korea, Netherlands, Norway, Slovenia, Spain, Switzerland, United Kingdom, United Arab Emirates, United States

*Country in transition to more advanced stage

KEY FINDINGS

Entrepreneurial Attitudes and Perceptions

Attitudes vary widely concerning the desirability of entrepreneurship as a career. Knowledge of these attitudes can help policy makers encourage entrepreneurship. For example, Japan gives media attention to new business, yet entrepreneurship is not considered a good career choice. In Denmark, successful entrepreneurs have high status, but receive little media attention according to the adult population. Fear of failure seems to be holding back exactly those people who see most opportunities for starting a business in Tunisia, Japan, Malaysia and Saudi Arabia.

Entrepreneurial Activity

One of the principal measures in GEM is 'total early-stage entrepreneurial activity' (TEA), the proportion of people who are involved in setting up a business or owners-managers of new businesses. The general picture shows a decline in overall levels of TEA with increasing economic development. However, there

are large variations in early-stage entrepreneurial activity within the three identified phases of economic development. The GEM results confirm that countries have unique sets of economic and social conditions that affect entrepreneurial activity.

GEM also provides information on discontinuations of businesses. Very consistent with previous years, the 2009 results reveal that operational and financial problems are only partial reasons for exits of businesses. In innovation-driven countries, more than half of the entrepreneurs who discontinued a business mentioned a different reason, such as personal reasons, retirement, other job or business opportunities, or even the opportunity to sell the business.

Entrepreneurial Aspirations

Analysis of GEM data over a five-year period confirms that a small number of new firms plan to contribute a disproportionate share of new jobs. About 70% of new start-ups expected some job creation, but only 14% expected to create 20 or more new jobs. GEM also found a clear negative relationship between the strictness of employment protection and the prevalence rate of adults involved in ‘high-aspiration’ entrepreneurship in terms of job growth expectations. In other words, countries with high levels of employment protection also exhibited lower rates of business start-ups that expect to generate large numbers of new jobs. One reason for this may be that entrepreneurs faced with fierce employment protection will perceive this as a barrier to growing their businesses. A second reason may be that individuals with potential for high aspiration entrepreneurship may see employment as a more attractive option than starting their own business.

Institutional Quality Related to Entrepreneurship

Each year, GEM investigates the state of the main conditions for entrepreneurship by interviewing at least 36 experts in each country. The results may help national policy makers in their efforts to alleviate the main bottlenecks in their attempts to foster entrepreneurship. In general, experts in more economically developed countries tend to be more positive on these conditions. This fits with the notion that entrepreneurial conditions are relatively more important in more advanced phases of economic development. In practically every country, entrepreneurship education and training in primary and secondary school is one of the worst-rated conditions.

Impact of the 2009 Economic Downturn

The 2009 report provides an initial analysis of the impact of the 2008-2009 global recession upon entrepreneurship. Across the three country groups, more than half of the entrepreneurs questioned said it was more difficult to start a new business in 2009 than in 2008. A majority of entrepreneurs in factor-driven and efficiency-driven economies saw fewer opportunities for their businesses, even though these countries tended to suffer less economic decline on average than innovation-driven economies. Almost a quarter of early-stage entrepreneurs in innovation-driven countries saw more opportunities for their businesses. More established business owner-managers tended to be the most pessimistic.

Half of the innovation-driven countries show a decrease in the number of people that are trying to start new businesses. Characteristics and sentiments have also changed; in many countries the recession prompted an increase in “necessity driven” start-up entrepreneurs and a decrease in the proportion of people who saw good opportunities for new start-ups. In over one third of the countries, fear of failure associated with starting businesses increased.

Informal Investment Declines in Major Economies

Informal investors are individuals who invest their own money in someone else’s start-up business. The informal investment rate varies significantly across countries. Informal investment activity in 2009 decreased in most G7 countries; but among GEM countries overall, the number with decreased activity was matched by those with increased activity.

Decline in Venture Capital Activity in United States and Europe, Rise in China

A sharp decline in venture capital activity in the United States began in the last quarter of 2008, when funding was down 39% compared with the last quarter of 2007. Overall, in all of 2008, only 15,000 of entrepreneurial businesses received venture capital funding in the GEM countries, compared with tens of millions backed by informal investment. The slump in venture capital investing in the United States continued through the first three quarters of 2009. Outside of the United States, venture capital in China was growing quickly and appeared poised to overtake Europe in the next few years in terms of funds invested.

Social Entrepreneurship: A Special Report

In the 2009 GEM survey, special questions were asked on social entrepreneurship. In this report social entrepreneurship is defined as individuals engaged in entrepreneurial activities with a social goal.

Across the 49 countries that participated, on average 1.8% of the adult population was involved in early-stage entrepreneurial activity, with a range from 0.1% to 4.3%. Social entrepreneurial activity appears to rise slightly with stage of economic development.

More men than women started socially oriented ventures. Social entrepreneurs also tended to be active at younger ages than business entrepreneurs. Better educated individuals were more likely to be social

entrepreneurs. These kinds of ventures were started in a variety of areas, notably education, health, culture, economic development, and the environment. The results also show that the distinction between “social” and “regular” entrepreneurship is sometimes blurred. However, using a more refined spectrum of social enterprises based on innovation and predominant organizational objectives, results suggest that social objectives (not-for-profit and hybrid social enterprises) still prevail over more economic (for-profit social enterprises) and less innovative ones (traditional NGOs).

1 Introduction

The year 2009 will be remembered for an economic recession that shattered the economic landscape in most countries across the world. As national and regional governments search for ways of rebuilding their economies, our understanding of the relationship between entrepreneurship and development remains incomplete. Partly, this is because research in these two fields has tended to run along separate paths. Progress has also been hampered by a lack of cross-national harmonized data sets on entrepreneurship. Since 1997, GEM has sought to address these gaps by collecting relevant harmonized data on an annual basis and by bringing academic experts in entrepreneurship from across the globe to work together on a common research program. GEM focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity among countries
- To uncover factors determining national levels of entrepreneurial activity
- To identify policies that may enhance the national level of entrepreneurial activity

Traditional analyses of economic growth and competitiveness have tended to neglect the role played by new and small firms in national economies. GEM takes a comprehensive approach and considers the degree of involvement in entrepreneurial activity within a country, identifying different types and phases of entrepreneurship.

While the first GEM reports included high-income countries only, the ambition has always been to include as many countries as possible in order to aid policy makers in their efforts to stimulate economic development through entrepreneurial activity. In 2009, the number of countries participating in GEM rose by over 25% to 54 countries. These countries vary greatly in terms of economic development. As an aid to presentation, we categorize them into three groups: factor-driven economies, which are primarily extractive in nature, efficiency-driven economies in which scale-intensity is a major driver of development, and innovation-driven economiesⁱ.

The rest of this chapter is devoted to an explanation of the methodology behind GEM. Section 2 details three dynamic interactive components of entrepreneurship: entrepreneurial attitudes, activity, and aspirations, using the results of the GEM Adult Population Surveys in each participating nation. Section 3 focuses on the impact of the global crisis on entrepreneurship

and discusses the role entrepreneurship plays in getting out of recessions. Each year, the GEM report highlights one aspect of the GEM conceptual model. Section 4 provides the first ever standardized estimates of social entrepreneurship across the globe. Extra questions on this special topic were included in the GEM Adult Population Survey (APS) and the standard National Expert Survey (NES) this year. Finally, Section 5 contrasts the role and extent of informal investment and venture capital in the countries covered by GEM in 2009.

1.1 THE GEM MODEL

There is wide agreement on the importance of entrepreneurship for economic developmentⁱⁱ. Business entrepreneurs drive and shape innovation, they speed up structural changes in the economy, and they introduce new competition, thereby contributing to productivity. Social entrepreneurs perform a similar function in the social economy, filling gaps in social needs that are left unfilled or poorly addressed by both business and governments.

While important, the contribution of entrepreneurs to an economy also varies according to its phase of economic developmentⁱⁱⁱ. This report is framed around a model, introduced in the GEM 2008 report, that includes a distinction among phases of economic development, in line with Porter's typology of "factor-driven economies," "efficiency-driven economies" and "innovation-driven economies" (Porter, Sachs and McArthur, 2002). As previous GEM reports have shown, necessity-driven self-employment activity tends to be higher in less developed economies. Such economies are unable to keep pace with the demand for jobs in high-productivity sectors, and so many people must create their own economic activity. As an economy develops, the level of necessity-driven entrepreneurial activity gradually declines as productive sectors grow and supply more employment opportunities. At the same time, opportunity-driven entrepreneurial activity tends to pick up with improvements in wealth and infrastructure, introducing a qualitative change in overall entrepreneurial activity. Further details on the role of entrepreneurship in different phases of economic development are provided in Box 1.

Box 1 The Role of Entrepreneurship in Different Phases of Economic Development

Entrepreneurship in Factor-Driven Economies

Economic development consists of changes in the quantity and character of economic value added (Lewis, 1954). These changes result in greater productivity and rising per Capita incomes, and they often coincide with migration of labor across different economic sectors in the society, for example from primary and extractive sectors to the manufacturing sector, and eventually, services (Gries and Naude, 2008). Countries with low levels of economic development typically have a large agricultural sector, which provides subsistence for the majority of population who mostly still live in the countryside. This situation changes as industrial activity starts to develop, often around the extraction of natural resources. As extractive industry starts to develop, this triggers economic growth, prompting surplus population from agriculture to migrate toward extractive and emergent scale-intensive sectors, which are often located in specific regions. The resulting oversupply of labor feeds subsistence entrepreneurship in regional agglomerations, as surplus workers seek to create self-employment opportunities in order to make a living.

Entrepreneurship in Efficiency-Driven Economies

As the industrial sector develops further, institutions start to emerge to support further industrialization and the build up of scale in the pursuit of higher productivity through economies of scale. Typically, national economic policies in scale-intensive economies shape their emerging economic and financial institutions to favor large national businesses. As increasing economic productivity

contributes to financial capital formation, niches may open in industrial supply chains that service these national incumbents. This, combined with the opening up of independent supplies of financial capital from the emerging banking sector, would spur opportunities for the development of small-scale and medium-sized manufacturing sectors. Thus, in a scale-intensive economy, one would expect necessity-driven industrial activity to gradually fall and give way to an emerging small-scale manufacturing sector.

Entrepreneurship in Innovation-Driven Economies

As an economy matures and its wealth increases, one may expect the emphasis in industrial activity to gradually shift toward an expanding service sector that caters to the needs of an increasingly affluent population and supplies the services normally expected of a high-income society. The industrial sector evolves and experiences improvements in variety and sophistication. Such a development would be typically associated with increasing research & development and knowledge intensity, as knowledge-generating institutions in the economy gain momentum. This development opens the way for the development of innovative, opportunity-seeking entrepreneurial activity that is not afraid to challenge established incumbents in the economy. Often, small and innovative entrepreneurial firms enjoy an innovation productivity advantage over large incumbents, enabling them to operate as ‘agents of creative destruction.’ To the extent that the economic and financial institutions created during the scale-intensive phase of the economy are able to accommodate and support opportunity-seeking entrepreneurial activity, innovative entrepreneurial firms may emerge as significant drivers of economic growth and wealth creation.

Key Areas of Interest for Policy Makers

Since entrepreneurial activities vary with economic development, national policy makers need to tailor their socio-economic programs to the development context of their country. Table 1 provides a simple guide to likely priorities for each major phase of economic development^{iv}. Whereas enabling entrepreneurship in factor-driven economies may be desirable, more basic requirements such as primary education are necessary and should have priority, as entrepreneurship is unlikely to contribute substantial

improvements in wealth creation if basic requirements are in bad shape. Entrepreneurs with high aspirations fare better in countries with a stable economic and political climate and well-developed institutions (in fact they may migrate to other countries to pursue their ideas). In other words, entrepreneurship should certainly not be discouraged, but improving the entrepreneurial framework conditions should perhaps not attract too many financial resources in this phase of economic development if it is at the expense of basic requirements. The World Bank’s Doing Business project has shown how relatively

low cost interventions can dramatically lower the cost of entry to the formal economy. This is a good example of what poorer countries can do to enhance their entrepreneurial economy without making major sacrifices in important basic programs.

At the other end of the spectrum, policy makers in some of the most advanced countries would do well to enhance entrepreneurial framework conditions, as this should make their economies more dynamic and

innovation-oriented. However, this assumes that they have high quality basic requirements and efficiency-enhancing conditions in place. In some developed countries, there is increasing concern over the effect of deteriorating transportation infrastructure on the economy, while in others, projected shortages of power could do more to impede entrepreneurial activity than policies aimed at promoting entrepreneurship could ever do to enhance it.

Table 1 — Importance of Different Types of National Conditions for Economic Development

	BASIC REQUIREMENTS	EFFICIENCY ENHANCERS	ENTREPRENEURIAL CONDITIONS
FACTOR-DRIVEN ECONOMIES	Key Focus	Develop	Start Enabling
EFFICIENCY-DRIVEN ECONOMIES	Maintain	Key Focus	Develop
INNOVATION-DRIVEN ECONOMIES	Maintain	Maintain	Key Focus

Entrepreneurship: Attitudes, Activity, and Aspirations

Different opinions on, and therefore different definitions of, entrepreneurship can be observed in the academic literature, in policy documents and in the media. The GEM model accepts the multi-faceted nature of entrepreneurship. It recognizes that a range of environmental conditions affect three main components of entrepreneurship: attitudes, activity and aspirations, and that this dynamic mix produces new economic and socially-valuable activity, generating jobs and wealth.

Entrepreneurial attitudes are attitudes toward entrepreneurship. For example, the extent to which people think there are good opportunities for starting a business, or the degree to which they attach high status to entrepreneurs, might be termed entrepreneurial attitudes. Other relevant attitudes might include the level of risk that individuals might be willing to bear and individuals’ perception of their own skills, knowledge, and experience in business creation. Entrepreneurial attitudes can influence entrepreneurial activity but can also be influenced by entrepreneurial activity. For example, the legitimacy of entrepreneurship in a society, as expressed in positive entrepreneurial attitudes, can be influenced by whether people know anyone who has started a business recently. This can be a function of both levels of entrepreneurial activity and social networking activity in the society. Individuals who know other individuals who recently started a business may, through familiarity with the process, be more likely to see it as legitimate.

Entrepreneurial attitudes are important because they express the general feelings of the population toward entrepreneurs and entrepreneurship. Countries need people who can recognize valuable business opportunities, and who perceive they have the required skills to exploit these opportunities. Moreover, if national attitudes toward entrepreneurship are positive, this will generate cultural support, help, financial resources, and networking benefits to those who are already entrepreneurs or want to start a business.

Entrepreneurial activity can take on many forms, but one important aspect is the extent to which people in a population are creating new business activity, both in absolute terms and relative to other economic activities, such as business closure. Within the realm of new business activity, different types of entrepreneurial activity can be distinguished. For example, business creation may vary by industry sector, by the size of the founding team, and by whether the new venture is legally independent of other businesses, and in terms of founder demographics, such as gender, age, or education.

Entrepreneurial activity is best seen as a process rather than an event^v. That is why GEM measures entrepreneurial intentions, nascent, new, and established business activity, and business discontinuation activity (section 1.2 explains how these concepts are measured in GEM). Examining multiple components of entrepreneurial activity also allows us to explore differences among the entrepreneurial processes across the three major phases of national economic development. For example, new business activity is expected to be high in factor-driven economies mainly because much of

it is motivated by economic necessity. In innovation-driven economies, the proportion of opportunity-driven entrepreneurship is expected to be higher than in factor- and efficiency-driven economies.

Entrepreneurial aspiration reflects the qualitative nature of entrepreneurial activity. For example, entrepreneurs differ in their aspirations to introduce new products, new production processes, to engage with foreign markets, to develop a significant organization, and to fund growth with external capital. These aspirations, if they are realized, can significantly affect the economic impact of these entrepreneurial activities. Product and process innovation, internationalization, and ambition for high growth are regarded as hallmarks of ambitious or high-aspiration entrepreneurship. GEM has created measures that capture such aspirations.

Entrepreneurial Framework Conditions

Entrepreneurial Framework Conditions (EFCs) reflect major features of a country's socio-economic milieu that are expected to have a significant impact on the entrepreneurial sector. The GEM model maintains that, at the national level, different framework conditions apply to established business activity and to new business activity. The relevant national conditions for factor-driven economic activity and efficiency-driven economic activity are adopted from the Global Competitiveness Report (GCR) 2009-2010 (Schwab, 2009). With respect to innovation-driven economic activity, the GEM model contributes to the GCR perspective on economic development by identifying framework conditions that are specific to innovation and entrepreneurship (see Levie and Autio, 2008 for a theoretical underpinning). As Acs and Armington (2006), among others, propose, it is the entrepreneurial mechanism that turns innovation into economic output. A lack of entrepreneurship can therefore be seen as a bottleneck for innovation-driven countries in achieving their growth ambitions.

It is important to recognize that all three principal types of economic activity: factor-driven, efficiency-driven, and innovation-driven, are present in all national economies. But their relative prevalence—and their contribution to economic development—varies. The GCR proposition is that each phase of economic development has a different optimal combination of these three activities. The three phases are labeled according to the activity that is most significant for that phase. Thus, the relative importance of entrepreneurial framework conditions to a country's advancement in economic development may vary by phase of economic development.

The GEM model is presented in Figure 1. For factor-driven economies, emphasis is put on basic requirements: development of institutions,

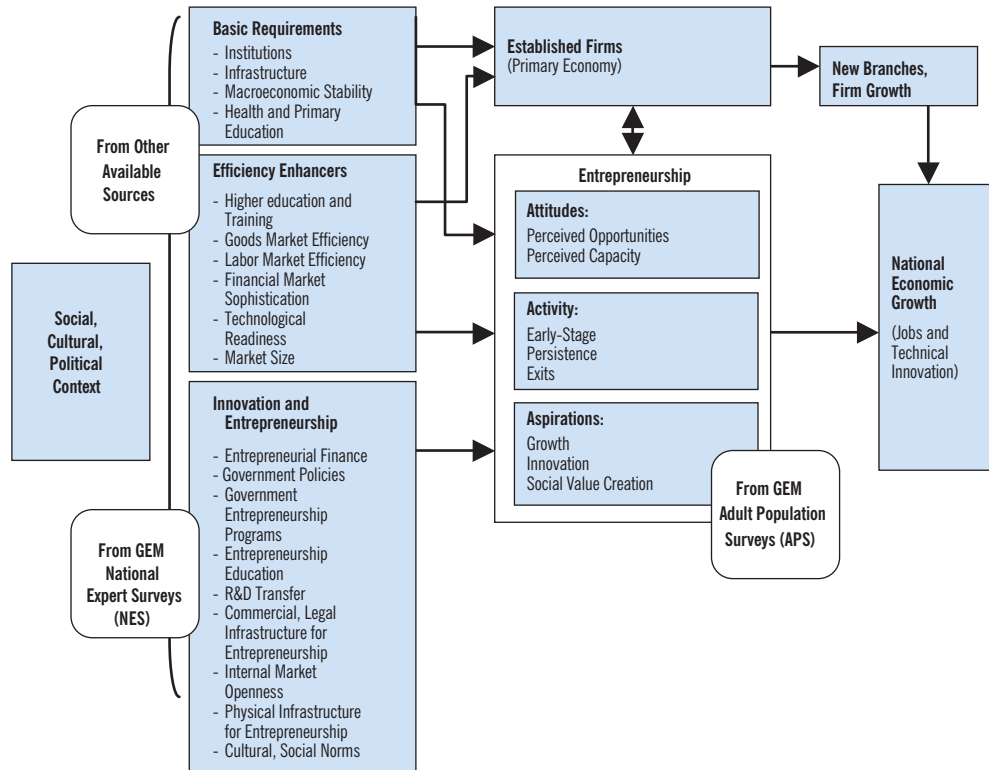
infrastructure, macroeconomic stability, health, and primary education. These basic requirements are necessary, and may be sufficient, to sustain necessity-based entrepreneurship, but may be insufficient to nurture sophisticated forms of opportunity-based entrepreneurship. It is important to realize that the model does not suggest that necessity-based entrepreneurship should be discouraged. For example in countries with a stable political environment, necessity-based entrepreneurs who can make a living for their families could also support their children's education. This could give them a better position on the job market, or better qualifications to become opportunity-based entrepreneurs.

As economies progress and scale economies become more and more relevant, other conditions, which are called efficiency enhancers, ensure a proper functioning of the market, and being an employee may become more economically attractive from an individual perspective than necessity-based entrepreneurship, as well as more efficient from a national perspective. Even though these conditions are not directly related to entrepreneurship in the Schumpeterian sense, they are indirectly related since the development of markets will also attract more opportunity-based entrepreneurship. For wealthy countries with high labor costs whose economic development is primarily innovation-driven, entrepreneurial framework conditions become more important as levers of economic development than basic requirements or efficiency enhancers.

To summarize:

- Entrepreneurship is a key mechanism for economic development in every phase
- The impact of entrepreneurship on development is likely to differ in each phase in terms of time lag and size; and
- The relative emphasis of policy makers on basic requirements, efficiency enhancers, innovation and entrepreneurship is key to development in each phase:
 - a. For factor-driven economies, getting the basic requirements right is key to the generation of sustainable businesses that can contribute not just to local economic activity but to health and education of the next generation
 - b. For efficiency-driven countries, the nurturing of economies of scale attracts more growth- and technology-oriented entrepreneurs, creating more employment opportunities
 - c. For innovation-driven countries the focus lies more on dynamics, and stimulating new combinations of products and markets

Figure 1 — The GEM Model



GEM and the Link Between Entrepreneurship and Economic Development

The GEM model set out above documents how entrepreneurship is affected by national conditions. It also shows that GEM considers three major components of entrepreneurship: attitudes, activity and aspirations. GEM monitors entrepreneurial framework conditions in each country through harmonized surveys of experts in the field of entrepreneurship (see section 2.4). Components of entrepreneurship are tracked using the GEM Adult Population Surveys. Thus, GEM generates original data on the institutional framework for entrepreneurship and entrepreneurial attitudes, activity and aspirations using its own methodology that is harmonized across countries.

In this report, we do not attempt to estimate the effect of entrepreneurship on economic development using GEM data. This relationship is a rather complex one.

Different types and phases of entrepreneurship may impact economic growth differently in different parts of the world (Sternberg and Wennekers, 2005). In addition, in theory the relationship works both ways: entrepreneurship may impact economic development, which in turn may impact entrepreneurship. Disentangling these reinforcing relationships requires a careful time series analysis. This is something that will be possible using the rich GEM dataset in the near future (see Chapter 3) and some initial findings can be found in Van Stel et al. (2005), Acs and Varga (2005), Acs and Amoros (2008), and Koellinger and Thurik (2009).

Based on the existing evidence on the link between entrepreneurship and economic growth, and ‘projecting’ this evidence on the GEM data, GEM researchers Zoltan Acs and Laszlo Szerb (2009) developed a Global Entrepreneurship Index (GEI). Two main assumptions served as their point of departure: (i) attitudes, activity and aspirations need

to be included in such an index; (ii) the effect of these components on economic development is a function of the presence and level of specific institutional conditions.

Acs and Szerb identify several components for each subindicator. Typically, these components consist of one genuine entrepreneurship indicator (mostly derived from GEM data) and one institutional climate indicator (mostly from sources outside GEM). As an example, Acs and Szerb argue that opportunity-driven entrepreneurial activity makes a bigger contribution to economic development when doing business has been made easier in the country. Thus, they combine the GEM measure of opportunity-driven early-stage entrepreneurial activity with the World Bank's measure of 'ease of doing business' into one measure^{vi}. This measure is in turn combined with five other measures dealing with entrepreneurial activity, forming a subindicator of entrepreneurial activity.

Finally, combining three sub-indicators dealing with entrepreneurial attitudes, activity and aspiration results in an overall index for entrepreneurship: The Global Entrepreneurship Index (GEI). For national and regional policy makers it is possible to track which components score relatively poorly, and which components appear relatively healthy. To this end, a policy tool has been developed which provides an "at a glance" picture of the state of entrepreneurship in a country or region. In conclusion, the Global Entrepreneurship Index and the GEM model are compatible in that they follow the same model. But whereas the monitor (GEM) focuses on giving the results based on primary data collection, the index (GEI) uses these results, assumes certain links with institutions and economic development and combines the measures to form an index. Further information on the GEI is available from the GEM website.

1.2 HOW GEM MEASURES ENTREPRENEURSHIP

The previous section showed that entrepreneurship is a complex phenomenon which spans a variety of contexts. In line with its objectives, GEM takes a broad view of entrepreneurship and focuses on the role played by individuals in the entrepreneurial process. Unlike most entrepreneurship data sets that measure newer and smaller firms, GEM studies the behavior of individuals with respect to starting and managing a business. This differentiates GEM data from other data sets, most of which record firm-level data on (new) firm registrations, as highlighted in the *GEM 2008 Global Executive Report* (see Bosma et al., 2009, p. 12). New firms are, most often, started by individuals. Even in established organizations,

entrepreneurial attitudes, activities, and aspirations differ in each individual.

Another guiding principle of GEM research is that entrepreneurship is a process. Therefore GEM observes the actions of entrepreneurs who are at different stages of the process of creating and sustaining a business. For GEM, the payment of any wages for more than three months to anybody, including the owners, is considered to be the "birth event" of actual businesses. Individuals who are actively committing resources to start a business that they expect to own themselves, but who have not reached this "birth event" are labeled nascent entrepreneurs.

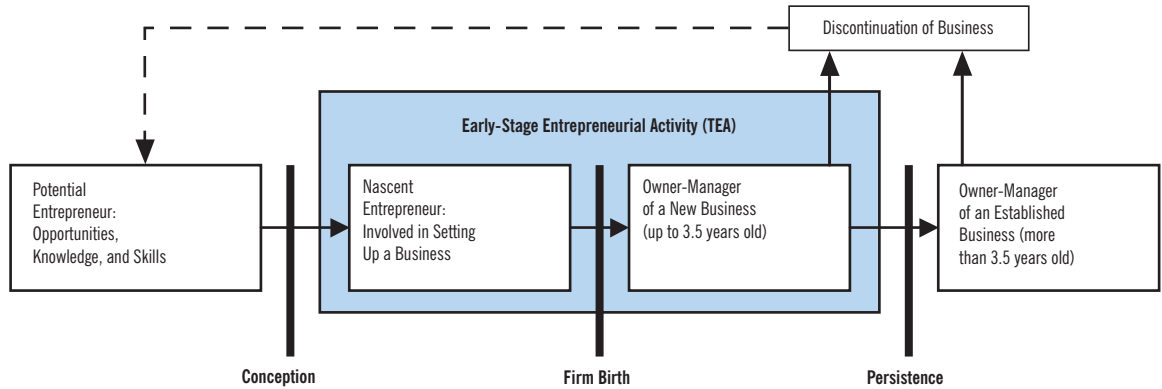
Individuals who currently own and manage a new business that has paid salaries for more than three months but not more than 42 months are known as new business owner-managers. The cut-off point of 42 months has been made on a combination of theoretical and operational grounds^{vii}. The prevalence rate of nascent entrepreneurs and new business owner-managers taken together may be viewed as an indicator of early-stage entrepreneurial activity in a country. It represents dynamic new firm activity—the extent of experimentation in new business models by a national population.

Established business owners own and manage an established business that has been in operation for more than 42 months. Their businesses have survived the liability of newness. High rates of established business ownership may indicate positive conditions for firm survival. However, this is not necessarily the case. If a country exhibits a high degree of established entrepreneurship combined with low degree of early-stage entrepreneurial activity, this indicates a low level of dynamism in entrepreneurial activity.

Finally, GEM identifies individuals who have discontinued a business in the last 12 months. These individuals may enter the entrepreneurial process again.

Figure 2 summarizes the entrepreneurial process and GEM's operational definitions. The GEM 2009 Global Executive Report includes 54 countries across the globe. In each of these 54 countries, a survey was conducted among a representative sample of at least 2,000 adults. More than 180,000 adults were interviewed between May and October (outside holiday seasons) and answered questions on their attitudes toward and involvement in entrepreneurial activity^{viii}. Appendix 2 contains specific definitions of measures of entrepreneurial attitudes, activity and aspirations used in this report. Care should be taken in comparing data provided in this report with previous reports, as definitions of some measures may have changed.

Figure 2 — The Entrepreneurial Process and GEM Operational Definitions



1.3 GEM WEBSITE, NATIONAL REPORTS AND DATA AVAILABILITY

GEM is a consortium of national teams, participating in the Global Entrepreneurship Research Association (GERA—the umbrella organization that hosts the GEM project). Thanks to the effort and dedication of hundreds of entrepreneurship scholars as well as policy advisors across the globe, the GEM consortium

is a unique network building a distinct data set. Contact details, GEM 2009 National Summary Sheets, and national teams’ micro-sites can be found on www.gemconsortium.org. The GEM national reports, produced by the national teams, provide more in-depth information on specific countries. A selection of GEM data is also made available on this website and tables can be downloaded free of charge using drop-down menus. The GEM Website also provides an updated list of the growing number of peer-reviewed scientific articles based on GEM data.

2 A Global Perspective on Entrepreneurship in 2009

This section shows how entrepreneurial attitudes, activity, and aspirations vary in the 54 GEM 2009 countries. The countries included in this assessment are listed in Box 2. The countries are grouped into three phases of economic development as discussed in the Global Competitiveness Report 2009-2010 (Schwab, 2009). This classification in phases of economic development is based on the level of GDP per capita and the extent to which countries are factor-driven in terms of the shares of exports of primary goods in total exports. In section 2.1 and 2.2, the main indices are presented for all 54 countries. Both sections conclude by examining developments over time for a selection of efficiency-driven economies and innovation-driven economies. In section 2.3, we estimate entrepreneurial aspirations such as expected job growth, innovation, and technology orientation in nations with sufficient sample coverage in the 2003-2009 period.

Box 2 Country Groups Used in this Report for the 54 GEM 2009 Countries

Factor-Driven Economies

Algeria*, Guatemala*, Jamaica*, Lebanon*, Morocco, Saudi Arabia*, Syria*, Kingdom of Tonga, Uganda, Venezuela*, West Bank and Gaza Strip, Yemen

Efficiency-Driven Economies

Argentina, Bosnia and Herzegovina, Brazil, Chile*, China, Colombia, Croatia*, Dominican Republic, Ecuador, Hungary*, Iran, Jordan, Latvia*, Malaysia, Panama, Peru, Romania*, Russia*, Serbia, South Africa, Tunisia, Uruguay*

Innovation-Driven Economies

Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Israel, Italy, Japan, Republic of Korea, Netherlands, Norway, Slovenia, Spain, Switzerland, United Kingdom, United Arab Emirates, United States

* Country in transition to next stage

2.1 ENTREPRENEURIAL ATTITUDES AND PERCEPTIONS

For entrepreneurial activity to occur in a country, both opportunities for entrepreneurship and entrepreneurial capabilities need to be present.

However, equally important is that individuals perceive opportunities for starting a business in the area in which they live and that they perceive they possess the capabilities to start a business. The quantity and quality of perceived opportunities and capabilities may be enhanced by national conditions such as economic growth, population growth, culture, and national entrepreneurship policy^{ix}.

There are more factors than these at play. As people see more and more successful entrepreneurs in their area or in the media, this may enhance their perception of their own capabilities without enhancing actual capabilities. This effect may be stronger when the economic climate is favorable. Furthermore, there may be demographic differences in (perceived) entrepreneurial capabilities for historical socio-economic or cultural reasons. Policy programs may explicitly target groups exhibiting low shares of perceived capabilities as well as low shares of actual capabilities. Thus, several distinct national conditions may affect perceived capabilities directly and indirectly.

If an individual exhibits positive perceptions toward entrepreneurship, it is by no means certain that he or she will actually get involved in entrepreneurial activity. There are several assessments to be made, which may or may not be conscious. First, there is the assessment of opportunity costs, which involves comparing the expected returns of entrepreneurship to the expected returns of an alternative occupation^x. The most common alternative is “being employed.” Being employed may be a more attractive option to many, especially in countries where employment opportunities are sparse and entrepreneurial activities are generally not very rewarding.

Then, there is a risk-reward assessment: Even if the expected returns from entrepreneurship are considerably higher than the best alternative, the (perceived) risks involved may be too high for a person who is thinking about starting a business. An individual’s risk-avoidance preference may be a significant factor in the transition from potential (or latent) entrepreneurship to entrepreneurial activity (Khilstrom and Laffont, 1979). At the same time, the individual may also be influenced by demographic characteristics such as age, gender, origin, or ethnicity and also by institutions. For instance, bankruptcy legislation may impact individuals’ attitudes. Older people might include their health and the specifics of the health care system in the risk-reward assessment, while immigrants might perceive fewer alternative options for earning a living.

Intrinsic assessments as described above may ultimately lead to a proclaimed intention (and subsequent action) to start a business with opportunity-related entrepreneurship in mind. As

described in the previous section, this holds for most entrepreneurs in wealthier countries. For many people, especially those in poor countries, being involved in entrepreneurial activity is a necessity; there are simply no other options for earning a living and there is no comparative assessment to be made.

There is no general pattern or sequence in which assessments and decisions are made and steps are taken. Some people may decide to start a business when a very specific business opportunity comes into view unexpectedly. They may act on this even though, before the business opportunity came their way, they did not see opportunities to start a business in their area. These people had not considered setting up a business until the opportunity was presented to them. Thus, for entrepreneurs, the perception of opportunities may come well in advance, or just before setting up the business, or at the same time (Henley, 2007).

Table 2 lists several GEM indicators concerning individuals' own perceptions toward entrepreneurship for each of the 54 GEM 2009 nations. Some countries have favorable perceptions of entrepreneurship combined with low rates of intentional entrepreneurship. This is the case for many innovation-driven economies in Europe. In other words, although attitudes and perceptions toward entrepreneurship are fairly high, the attractiveness of becoming involved in entrepreneurship appears to be low for many Europeans compared to other possible sources of income.

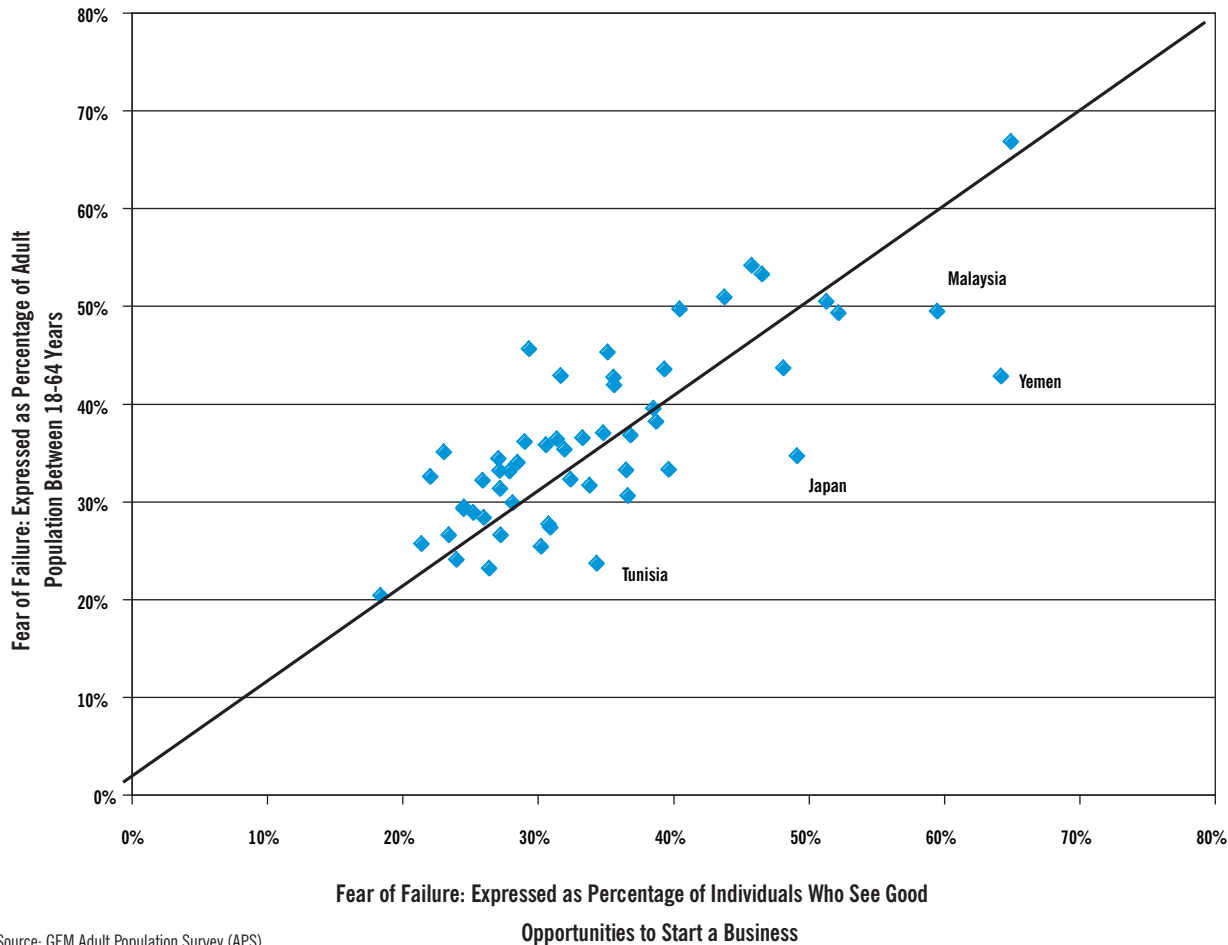
A variety of national characteristics could be underlying this phenomenon. It could be that there is a lot of red tape (administrative burdens) attached

to starting a business, reducing the attractiveness of entrepreneurship. It could also be the case that employment protection is high. This could discourage employees with positive entrepreneurial perceptions from switching to entrepreneurship. A different effect of stringent employment protection is that potential entrepreneurs may think carefully before hiring employees due to the substantial losses they would incur if their employees became unfit for work, or if they had to reduce the number of workers.

For many countries with factor-driven and efficiency-driven economies, we see that the difference between entrepreneurial perceptions and entrepreneurial intentions is relatively small, or even negative. This suggests lower opportunity costs for entrepreneurial activity. It is not surprising therefore that these countries have relatively high proportions of necessity-driven entrepreneurship.

Every year, GEM asks respondents if fear of failure would prevent them from starting up a business. Table 2 shows that in factor-driven and efficiency-driven countries, those with the highest fear of failure rates have the lowest intention rates. In order to grasp the importance of the "fear of failure" effect, it makes sense to examine how prevalent this view is among those who perceive good opportunities for setting up a business. If fear of failure is particularly prevalent among these people, interventions to reduce fear of failure may be justified. In most countries, the fear of failure prevalence rate is lower among those who see good opportunities to start a business than among the population in general. This is shown in Figure 3, where most countries are situated to the left hand side of the 45° diagonal line. Exceptions to the rule include Tunisia, Japan, Yemen, and Malaysia. In these

Figure 3 — Fear of Failure Would Prevent You from Starting a Business: Prevalence Rates for those who Perceive New Business Opportunities and Total Working Age Population, GEM 2009



Source: GEM Adult Population Survey (APS)

countries, fear of failure may be holding back people who see most opportunities.

On the right-hand side of Table 2, we present the results of three indicators measuring national attitudes to entrepreneurship. The first one assesses the percentage of inhabitants who feel that in their country, starting a new business is considered a desirable career choice. This indicator varies widely within each of the three phases of economic development, but on average it is lower with increasing levels of economic development. This makes sense: As economies develop, more employment opportunities open up. The second indicator describes how the inhabitants feel about entrepreneurs that are successful: Do they receive a high status or are they generally not seen as role models within the society? Here, there is also wide variation within country groups, but the extent of the dip with increasing economic development across the three country groups is much smaller. On average, most people (close to three-quarters of working age adults) feel that successful entrepreneurs have high status.

Even though overall there is a mildly positive correlation between these two measures, they do not always match. In some countries, perception of new business creation as a good career choice is accompanied with low status for successful entrepreneurs. This is the case for Croatia and the Kingdom of Tonga. Finland displays the reverse results: Here successful entrepreneurs receive high status but a minority of people would agree that starting a new business is seen as a good career choice.

The third indicator relates to the popularity of entrepreneurship and asks for respondents' opinions on the media coverage for new businesses in the country. In some countries, deliberate media campaigns are underway to promote entrepreneurship, while in others, there appears to be little media activity. Among innovation-driven countries, Belgium and Denmark scored low here in 2009, while Finland, Norway and the United Arab Emirates scored high.

In countries with primarily factor-driven economies, these attitudes should not be the main concern of government (see Figure 1) as entrepreneurship is to large extent necessity-driven and there are other pressing priorities. In countries with mainly efficiency-driven economies, attention should begin to be paid to attitudes, as they may affect the extent of opportunity-driven entrepreneurship. Table 2 shows that Latin American countries and countries in Northern Africa and the Middle East (with Algeria being an exception) have in general quite favorable

attitudes, while Eastern European countries score lower in this respect.

Looking at innovation-driven countries, some anomalies are apparent. These could provide governments with clues as to what they could do to encourage entrepreneurial activity. For example, in Japan most people agree that there is a lot of media attention to entrepreneurship, yet starting a business is still not regarded as a good career choice—and perceived opportunities are very low while fear of

Table 2 — Entrepreneurial Attitudes and Perceptions in the 54 GEM Countries in 2009, by Phase of Economic Development, GEM 2009

	PERCEIVED OPPORTUNITIES	PERCEIVED CAPABILITIES	FEAR OF FAILURE*	ENTREPRENEURIAL INTENTIONS **	ENTREPRENEURSHIP AS A GOOD CAREER CHOICE	HIGH STATUS TO SUCCESSFUL ENTREPRENEURS	MEDIA ATTENTION FOR ENTREPRENEURSHIP
Factor-Driven Economies							
Algeria	48	52	31	22	57	58	39
Guatemala	57	64	24	18	77	69	68
Jamaica	42	77	24	29	76	77	74
Lebanon	54	77	21	22	85	79	65
Morocco	53	78	24	27	82	86	74
Saudi Arabia	69	73	49	34	80	89	78
Syria	54	62	18	54	89	89	55
Kingdom of Tonga	56	53	65	6	91	52	80
Uganda	74	85	29	58	81	85	74
Venezuela	48	59	26	29	76	69	49
West Bank and Gaza Strip	50	56	36	24	88	78	52
Yemen	14	64	65	9	95	97	96
<i>average (unweighted)</i>	52	67	34	28	81	77	67
Efficiency-Driven Economies							
Argentina	44	65	37	14	68	76	80
Bosnia and Herzegovina	35	57	32	17	73	57	51
Brazil	47	53	31	21	81	80	77
Chile	52	66	23	35	87	70	47
China	25	35	32	23	66	77	79
Colombia	50	64	29	57	90	74	82
Croatia	37	59	35	8	68	49	53
Dominican Republic	50	78	27	25	92	88	61
Ecuador	44	73	35	31	78	73	55
Hungary	3	41	33	13	42	72	32
Iran	31	58	32	22	56	78	61
Jordan	44	57	39	25	81	84	70
Latvia	18	50	40	10	59	66	51
Malaysia	45	34	65	5	59	71	80
Panama	45	62	26	11	74	67	50
Peru	61	74	32	32	88	75	85
Romania	14	27	53	6	58	67	47
Russia	17	24	52	2	60	63	42
Serbia	29	72	28	22	69	56	56
South Africa	35	35	31	11	64	64	64
Tunisia	15	40	34	54	87	94	70
Uruguay	46	68	29	21	65	72	62
<i>average (unweighted)</i>	36	54	35	21	71	71	62

Continued →

	PERCEIVED OPPORTUNITIES	PERCEIVED CAPABILITIES	FEAR OF FAILURE*	ENTREPRENEURIAL INTENTIONS **	ENTREPRENEURSHIP AS A GOOD CAREER CHOICE	HIGH STATUS TO SUCCESSFUL ENTREPRENEURS	MEDIA ATTENTION FOR ENTREPRENEURSHIP
Innovation-Driven Economies							
Belgium	15	37	28	5	46	49	33
Denmark	34	35	37	3	47	75	25
Finland	40	35	26	4	45	88	68
France	24	27	47	16	65	70	50
Germany	22	40	37	5	54	75	50
Greece	26	58	45	15	66	68	32
Hong Kong	14	19	37	7	45	55	66
Iceland	44	50	36	15	51	62	72
Israel	29	38	37	14	61	73	50
Italy	25	41	39	4	72	69	44
Japan	8	14	50	3	28	50	61
Republic of Korea	13	53	23	11	65	65	53
Netherlands	36	47	29	5	84	67	64
Norway	49	44	25	8	63	69	67
Slovenia	29	52	30	10	56	78	57
Spain	16	48	45	4	63	55	37
Switzerland	35	49	29	7	66	84	57
United Arab Emirates	45	68	26	36	70	75	69
United Kingdom	24	47	32	4	48	73	44
United States	28	56	27	7	66	75	67
<i>average (unweighted)</i>	28	43	34	9	58	69	53

* Denominator: 18-64 population perceiving good opportunities to start a business

**Denominator: 18-64 population that is not involved in entrepreneurial activity

Source: GEM Adult Population Survey (APS)

Note: the definitions in columns 2-4 differ slightly from the GEM 2008 Global Report, which means that the results cannot be compared directly to the values reported in Bosma et al. (2009)

Corresponding 2008 values (and pre-2008 values) can be obtained from www.gemconsortium.org

failure is very high. In Denmark, the status attached to successful entrepreneurs is high but the media attention is low.

2.2 ENTREPRENEURIAL ACTIVITY

Table 3 summarizes the involvement in entrepreneurial activity over several phases of the entrepreneurial process (see Figure 2 for an overview of these phases) for each of the 54 GEM 2009 countries. Countries are grouped according to the major phases of economic development, consistent with the classification of the Global Competitiveness Report 2009-2010 (Schwab, 2009)^{xi}. Taken together, the numbers in the table provide a picture of the characteristics of overall entrepreneurial activity for each country, i.e., all types of entrepreneurial activity covering the entire economic spectrum.

One of the principal measures in Table 2 is of early-stage entrepreneurial activity, or TEA. The TEA rate is the proportion of people aged 18-64 who are involved in entrepreneurial activity as a nascent

entrepreneur or as an owner-manager of a new business. The average pattern for the three country groups is of a decline in overall levels of early-stage entrepreneurial activity with increasing economic development, and relatively low levels of necessity entrepreneurship in innovation-driven countries. However, there are large variations in entrepreneurial activity within the groups, since each country has a unique set of economic and social conditions which can affect entrepreneurial activity.

Among factor-driven countries, for example, Saudi Arabia, a rich state with a high reliance on income from oil extraction, has a very low TEA rate at 4.7%, and the proportion of necessity-driven entrepreneurship in TEA is also low at 12%. Few Saudis are compelled to create new economic activity out of necessity. Uganda, the poorest country in the sample, has a high TEA rate (34%), a high proportion of necessity entrepreneurship (45%), and a high discontinuation rate (20%).

Among efficiency-driven economies, Latin American countries have early-stage entrepreneurial activity rates that are noticeably higher than countries from

Eastern Europe. This fits with the attitude picture portrayed in the previous section.

Among innovation-driven economies, the United Arab Emirates and Iceland have the highest rates of TEA, with the United States only just making the top quartile, along with Greece and Norway. Japan, Belgium, Denmark, Hong Kong, and Italy were in the lowest quartile. Among innovation-driven nations, Germany, Japan and the Republic of Korea had relatively high proportions of necessity-driven entrepreneurship in TEA of 30% or more.

The ratio of TEA to established business owners also decreases with increasing economic development. This reflects the reduction in the churn rate of new business owners to discontinuances, which is particularly noticeable in innovation-driven economies.

Each respondent who had discontinued a business in the previous 12 months was asked to give the main reason for doing so. The GEM 2009 results, summarized by country group in Figure 4, are remarkably similar to the 2008 results, despite the difference in country samples. Financial problems were cited as the reason for quitting the business by no more than 55% of all respondents; they were cited more often by respondents in the factor-

and efficiency-driven economies (50% and 60%, respectively) than innovation-driven countries (about 40%). The business itself not being profitable was the most reported financial problem. Problems with raising finance were considerably lower in innovation-driven countries where the Entrepreneurial Framework Condition “Entrepreneurial Finance” is generally more developed. “The opportunity to sell” and in particular “retirement,” were mentioned more often in innovation-driven countries as the most important reason to discontinue the business. Personal reasons caused around 20 to 30% of all discontinuations.

Together with the 2008 results, this builds a consistent picture of business discontinuations, and one which fits the GEM model. In factor-driven countries, failure rates are quite high as a proportion of discontinuations, and almost all non-failure discontinuations are for personal reasons. These are likely to be mainly due to illness, bereavement, civil unrest and other reasons associated with relatively unfavorable basic requirements. Failure rates are somewhat higher in efficiency-driven countries as a proportion of discontinuations, reflecting the increasing importance of scale and efficiency in business in these countries. Failure rates, both in absolute terms and in proportion to all discontinuations, are lowest in innovation-driven

Figure 4 — Expressed Reasons Behind Discontinuing Businesses, by Country Group, GEM 2009

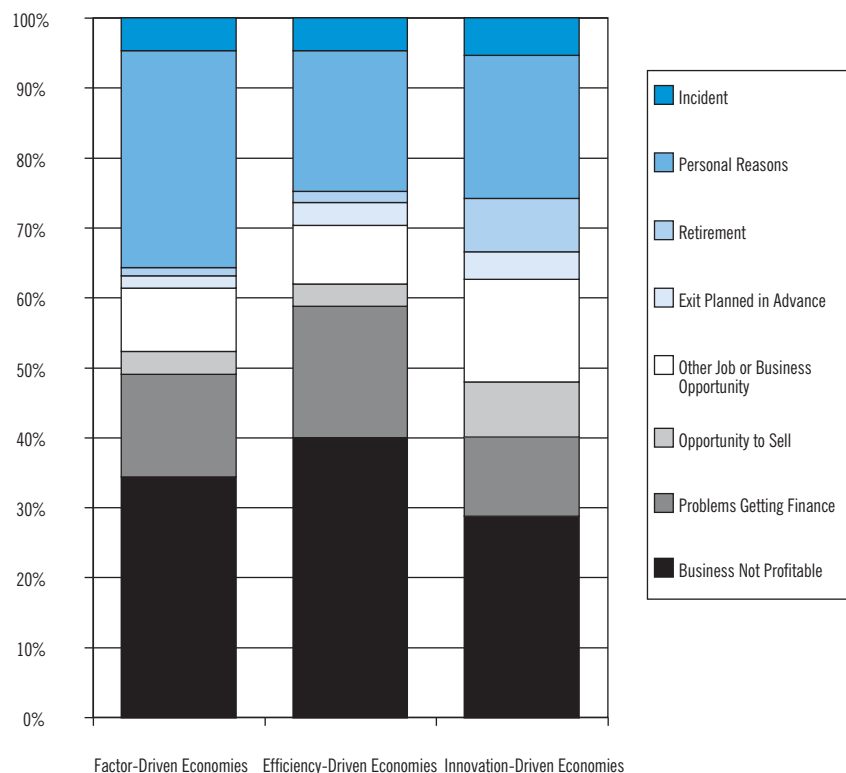


Table 3 — Entrepreneurial Activity in the 54 GEM Countries in 2009, by Phase of Economic Development

	NASCENT ENTREPRENEURSHIP RATE	NEW BUSINESS OWNERSHIP RATE	EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA)	ESTABLISHED BUSINESS OWNERSHIP RATE	DISCONTINUATION OF BUSINESSES	NECESSITY- DRIVEN (% OF TEA)	IMPROVEMENT- DRIVEN OPPORTUNITY (% OF TEA)
Factor-Driven Economies							
Algeria	11.3	5.6	16.7	4.7	7.9	18	51
Guatemala	17.1	12.2	26.8	3.3	6.0	23	30
Jamaica	13.0	10.6	22.7	16.3	10.7	33	45
Lebanon	6.7	8.8	15.0	16.0	4.6	18	60
Morocco	6.9	9.4	15.8	15.2	3.7	25	57
Saudi Arabia	2.9	1.9	4.7	4.1	2.9	12	63
Syria	3.4	5.1	8.5	6.7	7.4	37	43
Kingdom of Tonga	6.5	11.1	17.4	2.3	3.6	33	39
Uganda	12.4	22.7	33.6	21.9	24.2	45	45
Venezuela	13.3	5.4	18.7	6.5	3.0	32	42
West Bank and Gaza Strip	3.0	5.9	8.6	6.9	7.1	37	33
Yemen	22.8	1.2	24.0	2.9	2.0	35	16
<i>average (unweighted)</i>	9.9	8.3	17.7	8.9	6.9	29	44
Efficiency-Driven Economies							
Argentina	6.1	9.3	14.7	13.5	6.2	47	37
Bosnia and Herzegovina	3.1	1.3	4.4	3.9	3.1	39	20
Brazil	5.8	9.8	15.3	11.8	4.0	39	48
Chile	9.6	5.6	14.9	6.7	6.4	25	42
China	7.4	11.8	18.8	17.2	6.6	48	29
Colombia	15.0	8.0	22.4	12.6	7.1	34	45
Croatia	3.5	2.2	5.6	4.8	3.9	37	39
Dominican Republic	8.8	9.2	17.5	11.4	12.9	34	26
Ecuador	6.3	9.7	15.8	16.1	6.0	32	43
Hungary	5.4	3.7	9.1	6.7	3.2	24	45
Iran	8.2	4.1	12.0	6.5	6.0	35	35
Jordan	5.9	4.9	10.2	5.3	6.8	28	35
Latvia	5.3	5.4	10.5	9.0	3.3	32	54
Malaysia	1.7	2.7	4.4	4.3	2.7	25	44
Panama	6.2	3.5	9.6	4.2	1.4	24	59
Peru	16.1	5.1	20.9	7.5	7.1	28	42
Romania	2.8	2.3	5.0	3.4	3.6	34	31
Russia	1.8	2.3	3.9	2.3	2.2	29	37
Serbia	2.2	2.8	4.9	10.1	1.9	41	46
South Africa	3.6	2.5	5.9	1.4	4.2	33	38
Tunisia	2.2	7.2	9.4	10.2	4.8	20	57
Uruguay	8.1	4.2	12.2	5.9	4.9	22	57
<i>average (unweighted)</i>	6.1	5.3	11.2	7.9	4.9	32	41
Innovation-Driven Economies							
Belgium	2.0	1.6	3.5	2.5	1.3	9	55
Denmark	1.6	2.0	3.6	4.7	1.1	7	56
Finland	2.9	2.3	5.2	8.5	2.1	19	62
France	3.1	1.4	4.3	3.2	1.9	14	67
Germany	2.2	2.1	4.1	5.1	1.8	31	43
Greece	4.5	4.7	8.8	15.1	2.6	26	47
Hong Kong	1.6	2.2	3.6	2.9	1.5	19	49
Iceland	7.6	4.2	11.4	8.9	4.0	10	58
Israel	3.4	2.7	6.1	4.3	4.0	25	48
Italy	1.8	1.9	3.7	5.8	1.1	14	57
Japan	1.9	1.3	3.3	7.8	1.4	30	62
Republic of Korea	2.7	4.4	7.0	11.8	3.9	45	37
Netherlands	3.1	4.1	7.2	8.1	2.5	10	57
Norway	5.0	3.9	8.5	8.3	3.7	9	74
Slovenia	3.2	2.1	5.4	5.6	1.3	10	69
Spain	2.3	2.8	5.1	6.4	2.0	16	41
Switzerland	4.3	3.5	7.7	8.4	2.1	7	67
United Arab Emirates	6.5	7.4	13.3	5.7	6.5	9	79
United Kingdom	2.7	3.2	5.7	6.1	2.1	16	43
United States	4.9	3.2	8.0	5.9	3.4	23	55
<i>average (unweighted)</i>	3.4	3.1	6.3	6.8	2.5	17	56

Source: GEM Adult Population Survey (APS)

economies, because entrepreneurs have better skills and environments are more favorable.

Figure 5 presents early-stage entrepreneurial activity (TEA) rates for each GEM 2009 country. The countries are grouped by phase of economic development and ranked within groups in ascending order of the national point estimate for TEA. Note that if the vertical bars on either side of the point estimates for TEA of any two countries do not overlap, this means that they have statistically different TEA rates^{xiii}. This figure serves as a benchmark for countries to see how they compare to other countries in similar phases of economic development.

For example, in 2009, the TEA rate for the United States was not significantly different from TEA estimates for the Republic of Korea, Netherlands, Switzerland, Norway and Greece, but was significantly lower than that of Iceland and the United Arab Emirates.

While the significant reduction in the TEA rate for the United States from 11% in 2008 to 8% in 2009 may be a cause for concern in that country, it is certainly not the case that higher TEA rates are always to be preferred in all countries. TEA rates can vary according to regional economic, demographic, and cultural contexts and may be composed of entrepreneurs who may vary in type and aspiration. In Norway, for example, a relatively high proportion of entrepreneurs work part-time on their businesses, while in the Netherlands, an increasing share of new entrepreneurs only employ themselves.

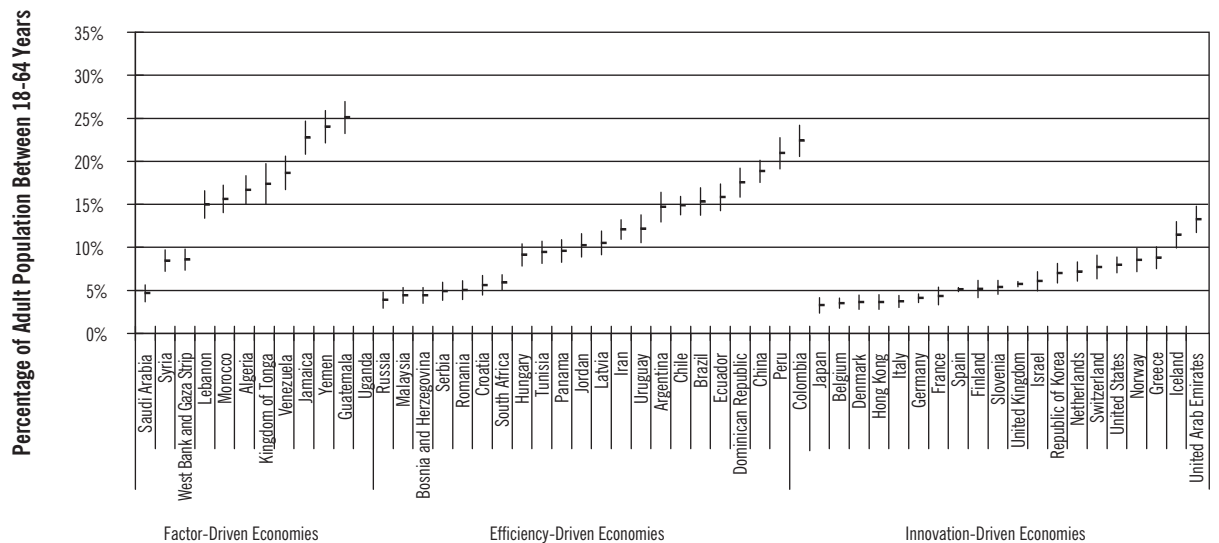
In factor-driven economies, a reduction in the TEA

rate may sometimes be seen as a good sign, and is especially likely when the general economic climate is doing well and job opportunities increase. Such reduction in TEA would typically be due to a decline in the rate of necessity entrepreneurship.

Figure 6 plots the relationship between TEA rates and per Capita GDP levels for 2009^{xiiii}. The pattern in Figure 6 can be explained as follows: In countries with low levels of per Capita income the national economy is characterized by the prevalence of many very small businesses. As per capita income increases, industrialization and economies of scale allow larger and established firms to satisfy the increasing demand of growing markets and to increase their relative role in the economy. An important factor for achieving growth is the presence of macro economic and political stability, which is reflected by the development of strong institutions, from commonly accepted norms of behavior to transparent and respected legal and regulatory systems. The increase in the role of large firms may be accompanied by a reduction in the number of new businesses, as a growing number of people find stable employment in large industrial plants.

Thus, for countries with low levels of per capita income, a decrease in prevalence rates of early-stage entrepreneurial activity may be a good sign of sustainability, especially if this is accompanied by economic growth and political stability. Toward the right-hand side of the figure, the role played by the entrepreneurial sector may increase because more individuals can access the resources necessary to start their own business in knowledge-intensive environments with abundant opportunities.

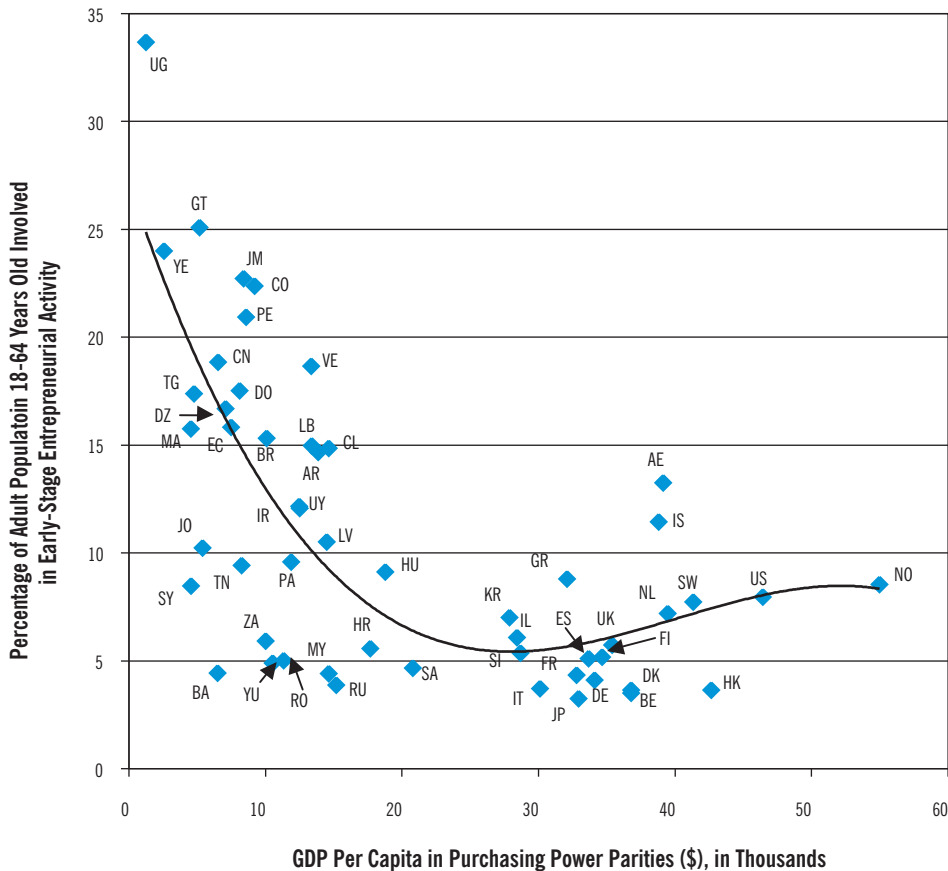
Figure 5 — Early-Stage Entrepreneurial Activity (TEA) for 54 Nations in 2009, by Phase of Economic Development, Showing 95 Percent Confidence Intervals



The dispersion of TEA country estimates around the line of best fit in Figure 6 demonstrates that entrepreneurship rates are not just a function of differences in economic development (or welfare) but also other factors. Examples of such factors might include population growth, which can stimulate demand, and the stock of existing business owner-managers, who serve as role models and who are

more likely to start a business than other individuals. Eastern European countries, with falling populations and a low stock of business owner-managers as a legacy of communism, are clustered below the trend line, while Latin American countries, with healthy population growth rates and a larger stock of business owners, tend to appear above the trend line.

Figure 6 — Early-Stage Entrepreneurial Activity Rates and per Capita GDP, 2009



Source: GEM Adult Population Survey (APS) and IMF: World Economic Outlook (October 2009)

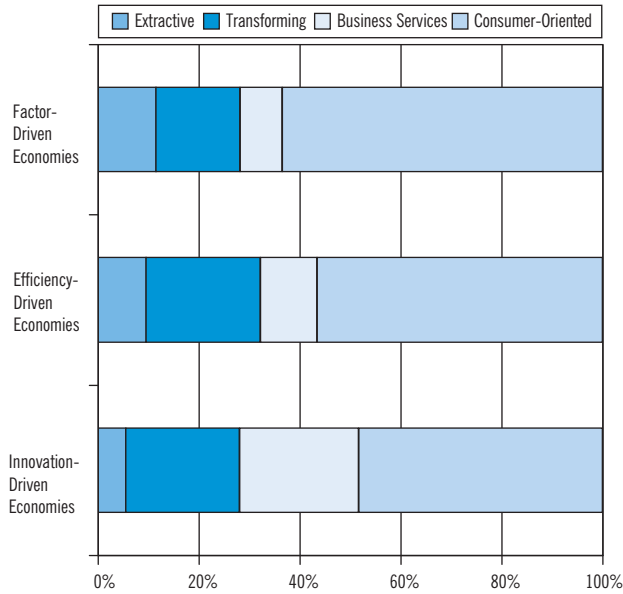
Concluding, the GEM 2009 results again confirm that institutional characteristics, demography, entrepreneurial culture, and the degree of economic welfare shape a country's entrepreneurial landscape. These factors are linked in complex webs. For example, national institutions reflect national culture, since they are designed to formalize norms and values. Countries with well-developed, entrepreneurship-friendly institutions generally exhibit higher degrees of wealth.

Sector Distributions

Figures 7 and 8 show the distribution of early-stage entrepreneurial activity and established business

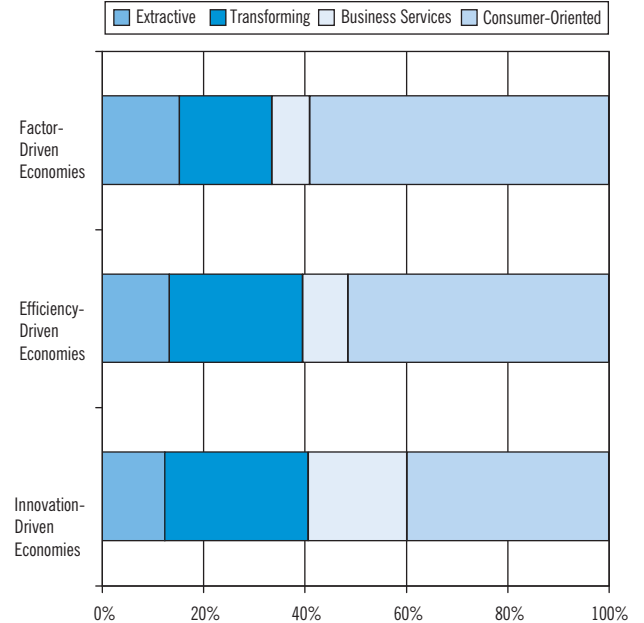
owner-managers by industry sector and phase of economic development. This distribution is different in each of the three major phases of economic development, and is very similar to the 2008 results. Extraction businesses (farming, forestry, fishing and mining) are more prevalent in factor-driven economies, transforming businesses (manufacturing and construction) are more prevalent in efficiency-driven economies, and business services are more prevalent in innovation-driven economies. The reducing prevalence of consumer services across the three major phases is particularly noticeable. Such services tend to have relatively low resource needs and are often local in nature, particularly in countries with poorly developed transportation and commercial infrastructure.

Figure 7 — Sector Distribution Early-Stage Entrepreneurial Activity



Source: GEM Adult Population Survey (APS)

Figure 8 — Sector Distribution Established Businesses



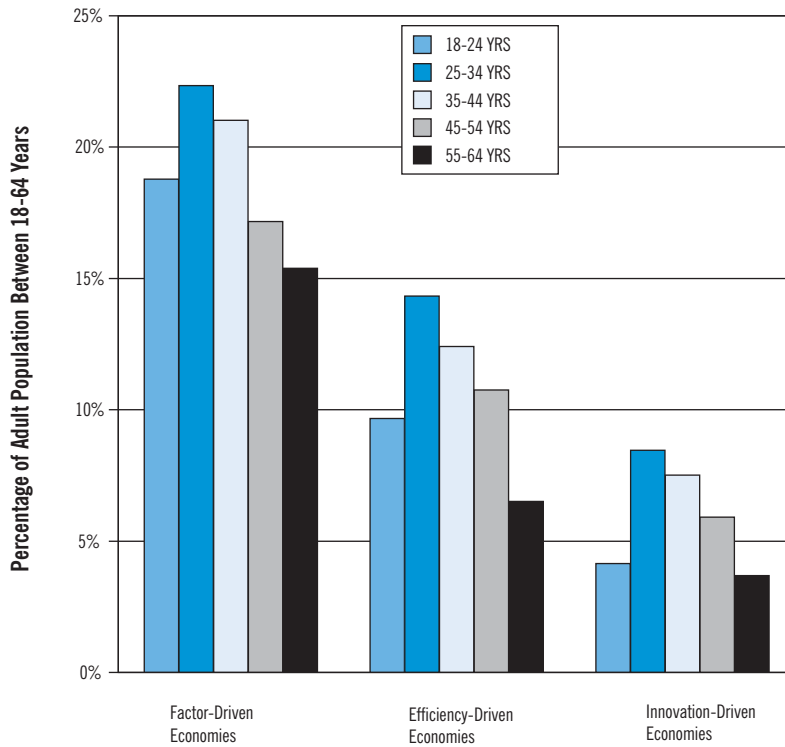
Age and Gender Structure

Figure 9 demonstrates that in each phase of economic development, prevalence rates of early-stage entrepreneurial activity differ across age groups. The shapes of the age distributions are very similar across country groups. The 25-34 age group has the highest prevalence rate in every phase of economic development. Thereafter the prevalence rates decrease as age increases. This inverted U-shape pattern reflects the interaction between desire to start a business, which tends to reduce with age, and perceived skills, which tends to increase with age.

Figure 10 displays the differences in female and male participation for each country in GEM 2009, ordered by major phase of economic development and female participation rate^{xiv}. The ratio of female to male participation varies considerably in each phase,

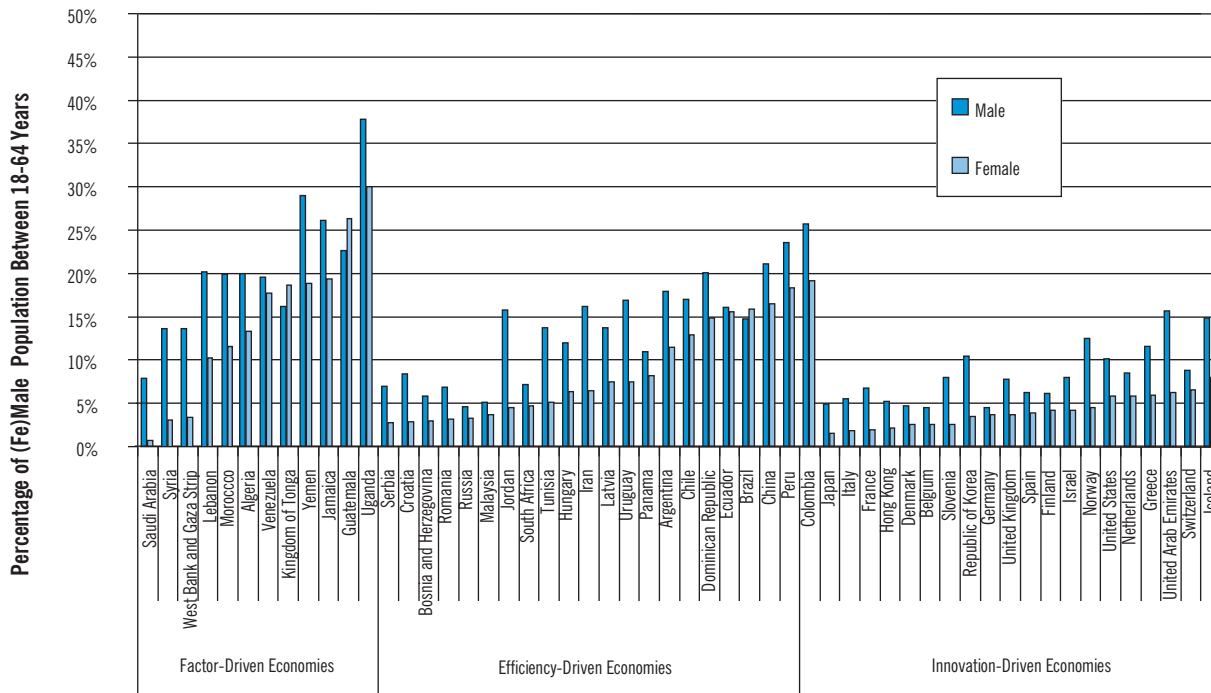
reflecting different culture and customs regarding female participation in economic activity. In some factor-driven economies, for example Venezuela, and Uganda, female TEA rates are just below male TEA rates. In Tonga and Guatemala, women are actually more likely to be involved in early-stage activity as compared to men. The situation is very different for most countries in the Middle East, reflecting different culture and customs. For efficiency-driven economies, the gender gap in TEA rates is quite low in many Latin American countries. In many, but not all, eastern European countries male TEA rates are substantially higher than female TEA rates. In innovation-driven countries, the general rule of thumb is that men are twice as likely to be involved in early-stage entrepreneurial activity than women. However, this gap is lower in Germany, Switzerland and Finland.

Figure 9 — Early-Stage Entrepreneurial Activity for Separate Age Groups, 2009



Source: GEM Adult Population Survey (APS)

Figure 10 — Early-Stage Entrepreneurial Activity Rates by Gender, 2009



Source: GEM Adult Population Survey (APS)

2.3 ENTREPRENEURIAL ASPIRATIONS

In this section, GEM data collected in a five-year period (2004-2009) are combined to take a closer look at how entrepreneurial aspirations differ among early-stage entrepreneurs^{xv}. We present indicators of job-growth expectation, innovation and international orientation in GEM countries for which a sufficient sample size was available, grouped by phases of economic development^{xvi}. These results are an update of the combined 2002-2008 data reported in the 2008 report. While there is little overall difference in results, there is some turnover of countries within country groups.

High-Growth Expectation Entrepreneurship

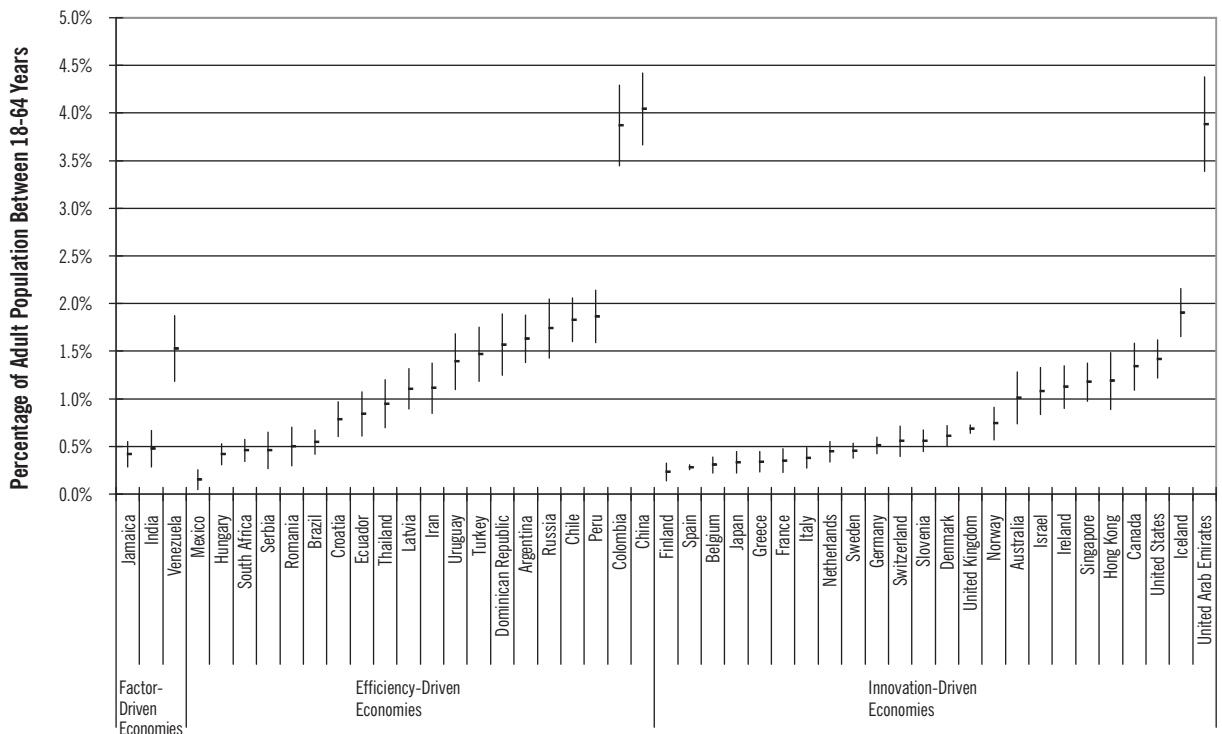
The GEM method enables the categorization of early-stage start-up attempts according to their growth expectation. GEM asks all identified early-stage entrepreneurs how many employees they expect to have (other than the owners) within five years' time. Out of every ten early-stage entrepreneurs, seven expected some job creation. However, expectations of high-growth are rare among nascent and new entrepreneurs. Only 14% of all start-up attempts expected to create 20 or more jobs, while 44% expected to create five or more jobs.

High-growth entrepreneurs, also known as 'gazelles,' receive high attention from policy makers because their firms contribute a disproportionate share of all new jobs created by new firms (Autio, 2007; Acs, 2008). Figure 11 shows the prevalence rates of high-growth expectation early-stage entrepreneurs (HEA) in the working age population.

Focusing on innovation-driven countries, the United Arab Emirates, and Iceland followed by the United States, Canada, Hong Kong, Singapore, Ireland, Israel, and Australia had the highest levels of HEA over this period. The HEA rate for these countries is 1% or more. The lowest levels of HEA, at under 0.5%, occur in Finland, Spain, Belgium and Japan. HEA rates can vary even among broadly similar high-income countries. Among the large E.U. economies, the United Kingdom clearly exhibits higher levels of HEA than France, Italy, and Spain.

Of the factor- and efficiency-driven countries, Colombia, China, Peru, Venezuela and Chile exhibit the highest prevalence rates of high-expectation entrepreneurship^{xviii}. In general, Latin American countries show high levels of HEA. Lowest HEA rates over the 2004-2009 period were observed in Mexico, Hungary, South Africa, Jamaica and India. Zooming in on the BRIC countries, India's HEA rate is slightly below that of Brazil; both of which are approximately one-fifth that of China and one-third that of Russia.

Figure 11 — High-Growth Expectation Early-Stage Entrepreneurship (HEA), 2004-2009

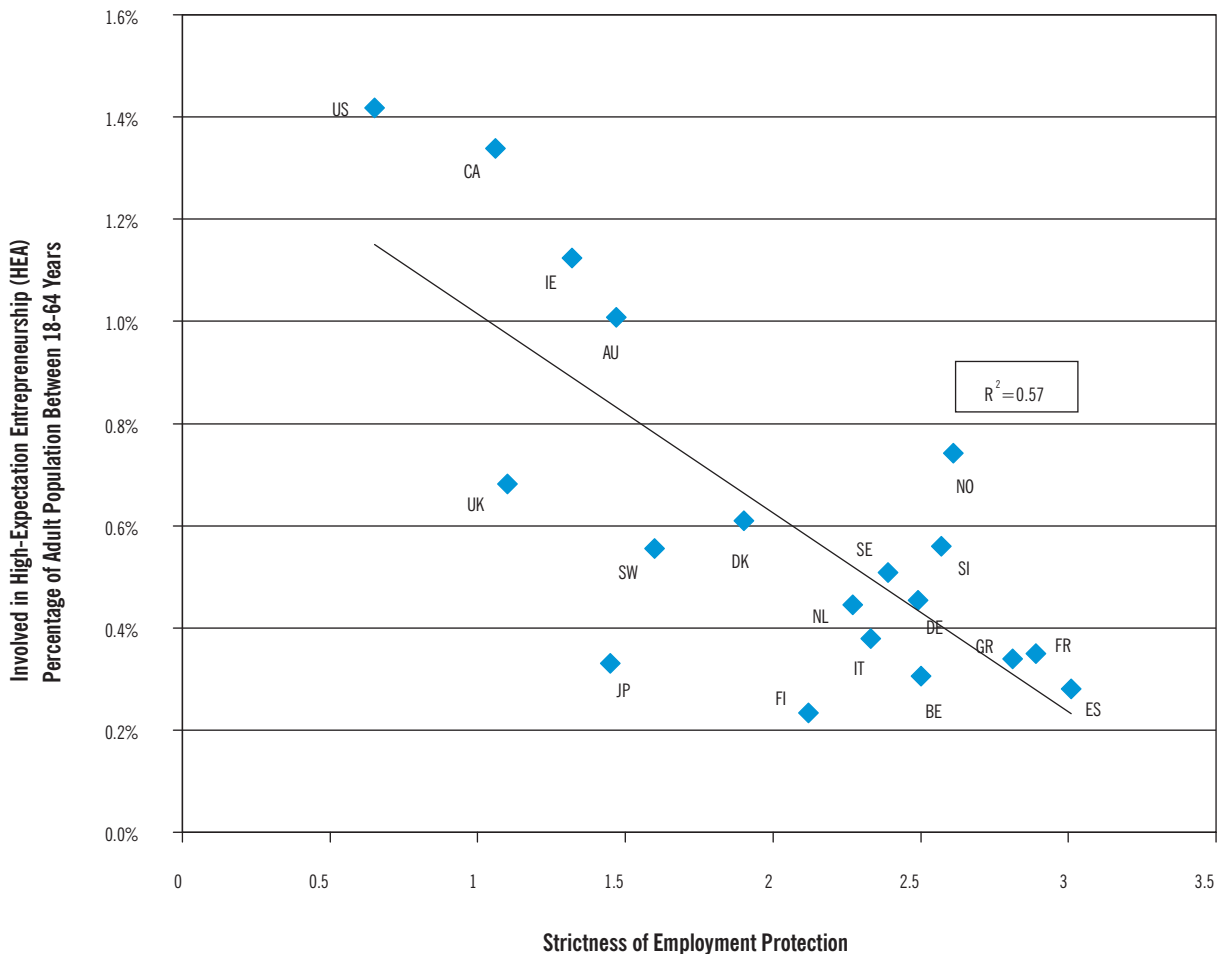


Source: GEM Adult Population Survey (APS)

Figure 12 makes clear how institutions can be important for specific types of entrepreneurship. It shows a clear negative relationship between the strictness of employment protection in 2004 and HEA rates for the years 2004-2009^{xix}. The measure on strictness of employment protection is taken from the OECD and refers to regulations concerning hiring and firing^{xx}. There are two explanations for this finding. First, entrepreneurs faced with fierce employment protection will perceive the barrier to grow their businesses to be high, all else being equal, while entrepreneurs operating where employment is not highly protected will not perceive such

barriers. Second, potential HEA individuals may see employment as a more attractive option: Not only are they more protected, the strictness of employment protection may also reduce the attractiveness of entrepreneurship for these high-potential entrepreneurs. Of course, the optimal balance depends on the specific norms and values in the country. However, the results in Figure 12 suggest that lowering employment protection may have a beneficial consequence for employees in the longer term, because of the possibility more jobs will be created by these high-expectation early-stage entrepreneurs.

Figure 12 — Strictness of Employment Protection (2004) and High-Expectation Early-Stage Entrepreneurship (HEA), 2004-2009

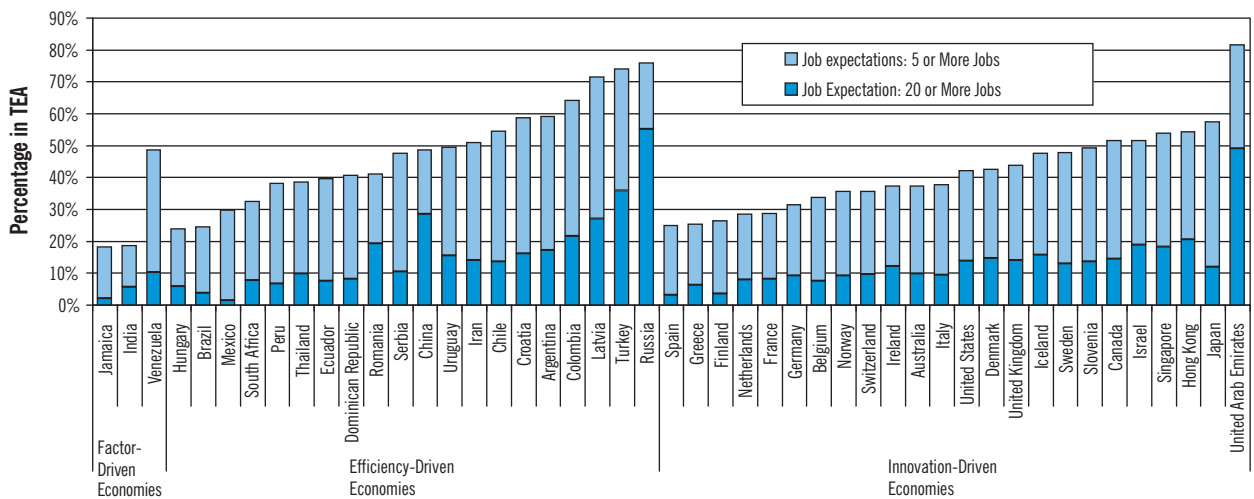


Source: GEM Adult Population Survey (APS) and OECD (www.oecd.org/employment/protection)

Figure 13 displays the distribution of high (20 jobs or more) and moderate (five jobs or more) growth expectation within the population of early-stage entrepreneurs. It shows that during 2004-2009 the countries with the highest prevalence of growth-oriented entrepreneurs (expecting to create 20 or more jobs), in this sample of nations, were Russia, the United Arab Emirates, Turkey and China. Singapore and Hong Kong are examples of small and

highly populated innovation-driven countries with rather low early-stage entrepreneurial activity rates. Figure 16 shows, however, that the contributions of entrepreneurs in these economies may be quite significant^{xxi}. Jamaica, India, Hungary, Brazil, Mexico, Greece, Spain and Finland stand out as countries where very few nascent and new entrepreneurs (around 5% or less) anticipate creating a business of significant size.

Figure 13 — Relative Prevalence of High- and Moderate- Growth Expectation Early-Stage Entrepreneurship: Percentages in TEA, 2004-2009



Source: GEM Adult Population Survey (APS)

Innovation Oriented Entrepreneurial Activity

Innovation and entrepreneurship are closely connected. Schumpeter (1934) argued that entrepreneurs distort the market equilibrium by introducing new product-market combinations or innovations which drive less productive firms out of the market and advance the production frontier. Whether entrepreneurs succeed in this way, or whether their innovations are copied by incumbents, the effect is the same, which is higher productivity and economic growth.

GEM assesses innovation in entrepreneurial businesses by asking early-stage entrepreneurs and established business owner-managers to rate the novelty (or unfamiliarity) of their products or services relative to customers' current experience. Secondly, each entrepreneur is asked to rate the degree of competition in the market that is faced by the business, specifically, whether he or she perceives that "many," "few," or "no other businesses" offer similar products or services.

Figure 14 evaluates GEM countries on two indices that combine the two measures of innovation discussed above (product novelty and degree of competition). The first, stronger measure requires indication of product novelty *and* market newness (i.e., not many other businesses offer the same product). In essence, this index measures the percentage of early-stage entrepreneurs with novel product-market combinations. These entrepreneurs offer a product or service which they believe is new to some or all customers; they also believe that there are few or no businesses offering the same product. The second, weaker measure requires indication of product novelty *or* market newness. In Figure 13, countries are ranked in their country groups on the relative prevalence of the weak measure of innovative early-stage entrepreneurial activity.

These indices work well if both the availability of new products and services and the strength of competition are evenly distributed throughout the world. This is a big assumption to make. By comparing within country groups, we control to some extent for differences in

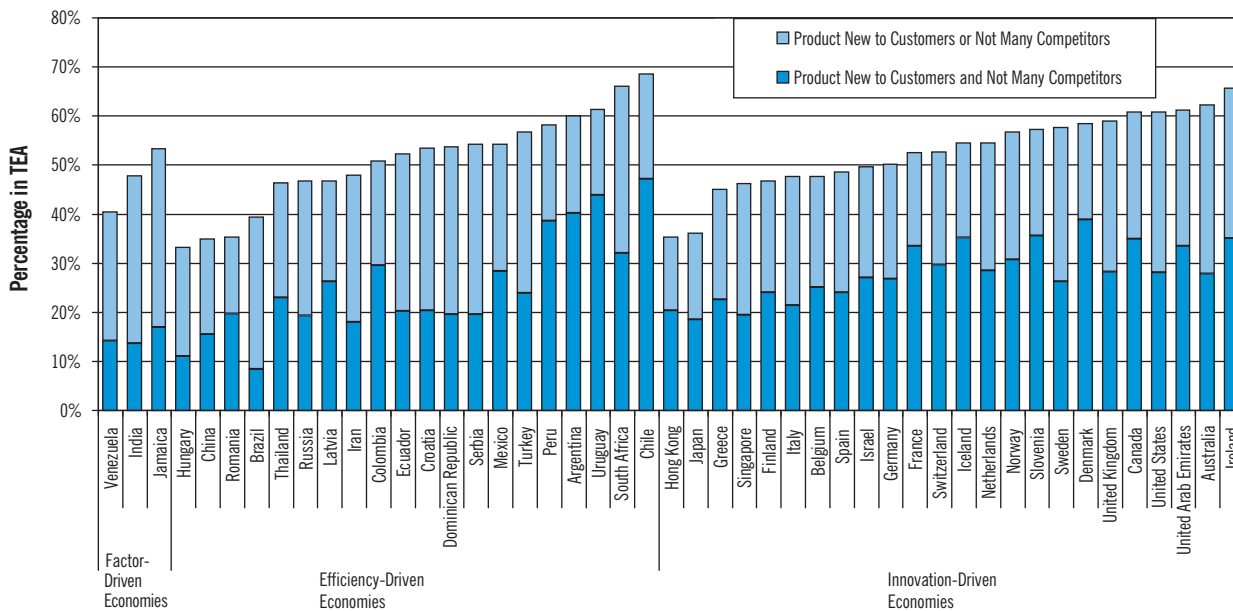
product availability and ferocity of competition. But it may be that some countries score high on these indices merely because relatively few new products are available in them and competition is weak.

Looking at the country groups, it is apparent that in each group there are countries with high and low relative prevalence of innovative early-stage entrepreneurial activity. For example, within the European Union, Greece, Spain, and Italy have relatively few new product-market oriented entrepreneurs in early-stage entrepreneurial activity, whereas Denmark, Slovenia, France, and Ireland have

high rates. Among other innovation-driven countries, it is striking that Asian countries have low relative prevalence.

Turning to factor-driven and efficiency-driven countries, Figure 14 demonstrates that the three factor-driven countries included in this analysis have slightly lower rates of innovative early-stage entrepreneurial activity, and that some efficiency-driven countries in Latin America (Chile, Uruguay, Argentina and Peru) appear to have the highest rates of all countries in the sample of GEM nations, while Brazil has the lowest.

Figure 14 — Percentage of Early-Stage Entrepreneurial Activity with New Products or New Markets, 2004-2009



Source: GEM Adult Population Survey (APS)

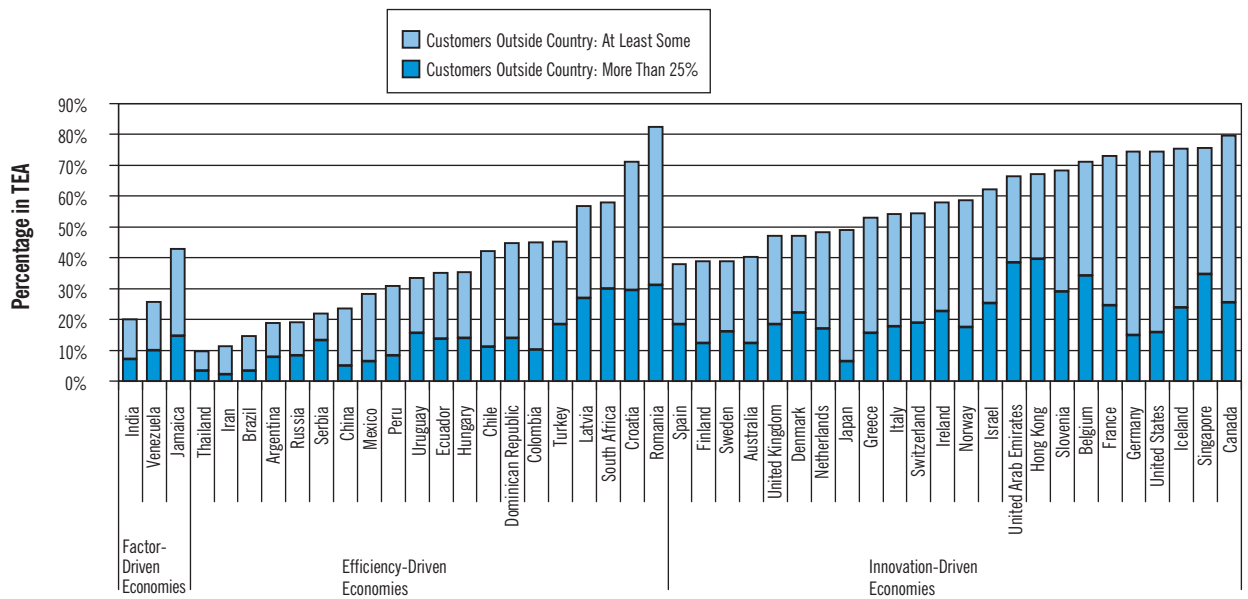
International Orientation

The third measure of entrepreneurial aspirations describes the international orientation of early-stage entrepreneurs. This measure is based on the extent to which customers are from other countries. Thus, it refers to exports as well as to international customers who buy products online, or visit the country as tourists or for work purposes. Figure 15 again shows a broad indicator with two components. The dark colored bars reflect the percentage of early-stage entrepreneurs with a significant international orientation to their businesses; at least 25% of their customers are from a different country. The lighter colored bars reflect the additional percentage of entrepreneurs with any customers from abroad. It can

be seen that for each phase of economic development, countries with greater size (especially in terms of land area) have lower international orientation. This is the case in e.g. India, Iran, Brazil, Russia, China and Australia. The United States also has a low share of early-stage entrepreneurs with a significant international orientation, although three quarters have at least some international orientation.

An interesting result from this figure is the high international orientation from the Eastern European countries. These are relatively small countries with many country borders, and historically they were member states of larger countries, such as the USSR and Yugoslavia, with considerable trade between states.

Figure 15 — Percentage of Early-Stage Entrepreneurs with International Orientation, 2004-2009



Source: GEM Adult Population Survey (APS)

Measuring Intrapreneurship Across Countries

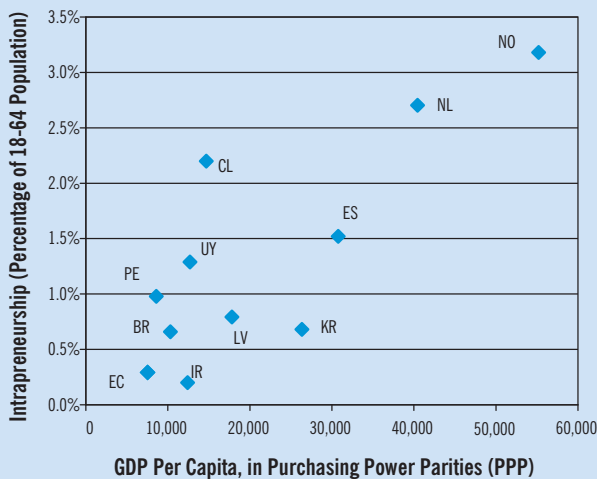
In recent decades, entrepreneurship and management researchers have paid increasing attention to entrepreneurship within existing organizations^{xxii}. This phenomenon is usually called ‘corporate entrepreneurship’, ‘corporate venturing’ or ‘intrapreneurship’. Entrepreneurship in existing organizations can be studied at the individual, organizational and macro level. So far most attempts to study entrepreneurial efforts within organizations have ignored the potentially important effects of the broader macro context on intrapreneurship. Consequently research into the relationship between intrapreneurship and independent entrepreneurship at the macro level is also lacking.

In the GEM 2008 survey, 11 GEM national teams worked together and added questions on intrapreneurship to the adult population survey conducted in their country. They defined an intrapreneur as an employee developing new business activities for his or her employer, including establishing a new outlet or subsidiary and launching new products or product/market combinations^{xxiii}. The results of this novel international comparative study of intrapreneurship have been made available recently (Bosma, Stam and Wennekers, 2010). Some of the main findings are summarized below. Figure 16 shows a tentative

positive correlation between intrapreneurship and GDP per capita. This is opposite to the relationship between early-stage entrepreneurial activity and GDP per capita portrayed in Figure 6. Thus, it appears that entrepreneurial activities by employees are, as predicted by theory, more prevalent in more advanced phases of economic development. Figure 17 suggests that at the macro level, intrapreneurship and new independent firm activity may be substitutes rather than positive correlates. If this is indeed the case, the implications might be far-reaching. Given a ‘supply of entrepreneurial talent,’ then whether individuals exploit entrepreneurial opportunities within a business or choose to start up for themselves might depend on various factors, such as the level of economic development, the institutional framework (e.g. employment protection) and management styles within organizations (possibly related to national culture).

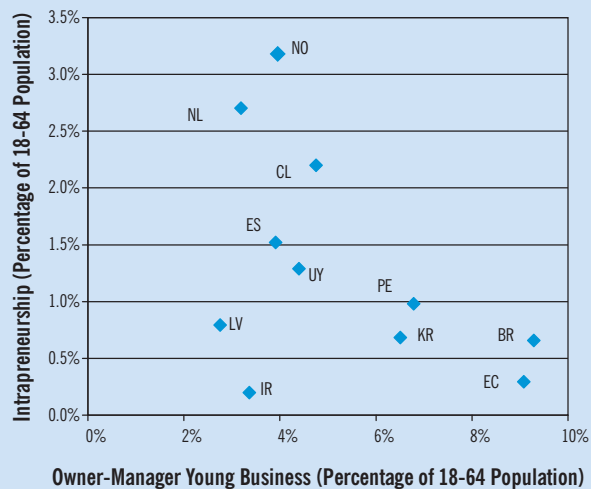
Other findings include that at the individual level, intrapreneurs are more likely to have positive entrepreneurial perceptions and attitudes and show more intentions to engage in independent entrepreneurial activity than other employees. Another interesting finding is that the average intrapreneur’s aspirations, as measured by job-growth expectation and innovation, are clearly higher than the aspirations of the average independent entrepreneur.

Figure 16 — Intrapreneurship Rate (% of Population Aged 18-64) and GDP per Capita, 2008



Source: GEM 2008 and IMF: World Economic Outlook Database (October 2008 edition)

Figure 17 — Intrapreneurship Rate and New Business Owner-Manager Rate, 2008



2.4 ENTREPRENEURIAL FRAMEWORK CONDITIONS – AN ASSESSMENT OF INSTITUTIONAL QUALITY BY NATIONAL EXPERTS

Entrepreneurial Framework Conditions (EFCs) reflect major features of a country's socio-economic milieu that are expected to have a significant impact on the entrepreneurial sector. The GEM model maintains that, at the national level, different framework conditions apply to established business activity and to new business activity. The relevant national conditions for factor-driven economic activity and efficiency-driven economic activity are adopted from the Global Competitiveness Report (GCR) 2009-2010 (Schwab, 2007).

The revised GEM model makes a contribution to the GCR perspective on economic development by identifying framework conditions that are specific to innovation and entrepreneurship. Nine different Entrepreneurial Framework Conditions (EFCs) are described in Box 3. For each of these EFCs, Likert scale items were completed by at least 36 experts in each country^{xxiv}. Based on these results, factors were constructed that summarize the national perceptions of experts for each EFC. For three of the EFCs, it was found that two factors best represented the underlying perceptions of experts.

A general overview of the outcomes of each factor, by phase of economic development, is provided in Figure 18. In general, experts in more economically developed countries awarded higher ratings to EFCs. This is consistent with the GEM model and the notion that EFCs have higher priorities among more economically developed countries. Of course, experts in factor-driven economies may have different points of reference in comparison to their colleagues in innovation-driven economies. This may explain why the observed differences between the three country groups are not very high. Factors that show the most pronounced differences across phases of economic development include national policies, government programs, research and development transfer, commercial and professional infrastructure, openness of internal markets and physical infrastructure. The factor measuring the availability of finance was particularly low in 2009. This may reflect the global financial crisis.

Comparing the scores on each item across countries may not generate strong differences, since national cultures, in general or toward governments, may in

some countries be far more positively disposed to entrepreneurship than in other countries. Table 4 therefore identifies the top three items with lowest and highest scores within each country.

In most countries, the item concerning education and training in primary and secondary school is one of the three worst performing EFCs (exceptions are the Kingdom of Tonga, Bosnia and Herzegovina, Latvia, Russia and Denmark). A Special GEM Report on Entrepreneurship Education and Training will be released in early 2010.

The EFC relating to physical infrastructure gains relatively high marks in almost all countries, except Uganda and Serbia. Research and development transfer is a particular concern of efficiency-driven economies. Commercial infrastructure, on the other hand, was in the top three EFCs of most innovation-driven countries, half of efficiency-driven countries, and only a quarter of factor-driven countries. The Republic of Korea stands out as an innovation-driven country whose experts gave its commercial infrastructure one of their three lowest rankings.

Government programs feature in the top three performing EFCs in four innovation-driven countries, two efficiency-driven countries, and no factor-driven countries, while the pattern is reversed for countries where government programs have been ranked among the worst three performing EFCs. This result is as one would expect; as economies develop, governments should give increasing attention to encouraging entrepreneurship. The picture is not as clear for government policy and regulation. Regulations were in the three worst performing EFCs in half of innovation-countries, but ranked in the top three in only one: Hong Kong, reflecting its traditional low-regulation economy. Other national policies received bottom three status in one third of innovation-driven countries, and were ranked in the top three in only two: Finland and the Republic of Korea.

The relatively poor result for government policies in innovation-driven countries might reflect more advances in other EFCs, relative to government policies. But it might also reflect genuine concern among experts that complex social welfare systems in these countries while designed with good intentions to protect citizens, could have adverse effects on entrepreneurship.

Box 3 The GEM Entrepreneurial Framework Conditions

EFC1: Financial Support

The availability of financial resources, equity, and debt, for new and growing firms including grants and subsidies.

EFC2: Government Policies

The extent to which government policies reflected in taxes or regulations or the application of either are either size-neutral or encourage new and growing firms. Subsequent empirical studies have shown that there are two distinct dimensions, or subdivisions of this EFC. The first covers the extent to which new and growing firms are prioritized in government policy generally. The second is about regulation of new and growing firms.

EFC3: Government Programs

The presence and quality of direct programs to assist new and growing firms at all levels of government (national, regional, municipal).

EFC4: Education and Training

The extent to which training in creating or managing small, new, or growing business is incorporated within the educational and training system at all levels. Subsequent empirical studies have shown that there are two distinct sub-dimensions to this EFC: Primary and secondary school level entrepreneurship education and training, and post-school entrepreneurship education and training.

EFC5: Research and Development Transfer

The extent to which national research and development will lead to new commercial opportunities and whether or not these are available for new, small and growing firms.

EFC6: Commercial, Professional Infrastructure

The presence of commercial, accounting, and other legal services and institutions that allow or promote the emergence of new, small, or growing businesses.

EFC7: Internal Market Openness

The extent to which commercial arrangements undergo constant change and redeployment as new and growing firms compete and replace existing suppliers, subcontractors, and consultants. Subsequent empirical studies have shown that there are two distinct sub-dimensions to this EFC: Market Dynamics, that is the extent to which markets change dramatically from year to year, and Market Openness, or the extent to which new firms are free to enter existing markets.

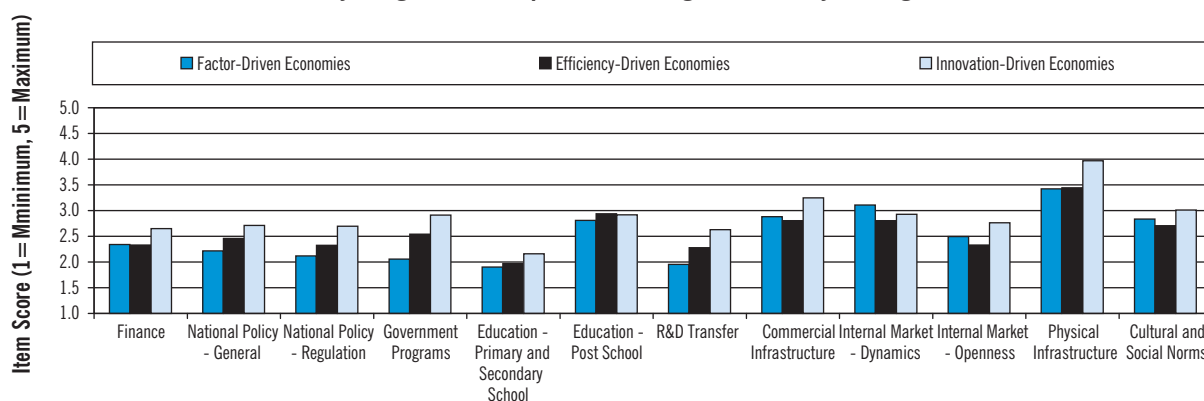
EFC8: Access to Physical Infrastructure

Ease of access to available physical resources—communication, utilities, transportation, land or space—at a price that does not discriminate against new, small or growing firms.

EFC9: Cultural, Social Norms

The extent to which existing social and cultural norms encourage, or do not discourage, individual actions that may lead to new ways of conducting business or economic activities and may, in turn, lead to greater dispersion in personal wealth and income.

Figure 18 — Scores on Entrepreneurial Framework Conditions Rated by National Experts, by Stage of Development (unweighted country averages)



Source: GEM National Expert Survey (NES)

Table 4 — Entrepreneurial Framework Conditions Valued Most Positive (+) and Most Negative (-), per Country

	1 FINANCE 2A NATIONAL POLICY – GENERAL POLICY 2B NATIONAL POLICY – REGULATION 3 GOVERNMENT PROGRAMS			4A EDUCATION – PRIMARY & SECONDARY 4B EDUCATION – POST-SCHOOL 5 R&D TRANSFER 6 COMMERCIAL INFRASTRUCTURE				7A INTERNAL MARKET – DYNAMICS 7B INTERNAL MARKET – OPENNESS 8 PHYSICAL INFRASTRUCTURE 9 CULTURAL & SOCIAL NORMS				
	1	2A	2B	3	4A	4B	5	6	7A	7B	8	9
Factor-Driven Economies												
Guatemala		-		-	-	+		+			+	
Jamaica			-		-	+	-				+	+
Saudi Arabia	+			-	-		-		+		+	
Syria				-	-		-		+		+	+
Kingdom of Tonga	-			-		+	-		+		+	
Uganda			-		-		-	+	+			+
Venezuela		-	-		-	+			+		+	
Efficiency-Driven Economies												
Argentina		-	-		-	+		+			+	
Bosnia and Herzegovina		-	-				-	+	+		+	
Brazil		-	-		-				+		+	+
Chile		+			-		-			-	+	+
Colombia	-				-	+	-				+	+
Croatia			-		-	+			+	-	+	
Dominican Republic	-				-	+	-				+	+
Ecuador	-				-	+	-	+			+	
Hungary		-	-		-	+		+			+	
Iran			-	-	-				+		+	+
Latvia	-	-					-	+		+	+	+
Malaysia			-		-				+	-	+	+
Panama	-		+		-		-	+			+	
Peru			-		-	+	-				+	+
Russia	-		-	-				+	+		+	
Serbia			-		-	+		+	+	-		
South Africa				-	-	+	-	+			+	
Tunisia		+		+	-		-			-	+	
Uruguay				+	-			+	-		+	-
Innovation-Driven Economies												
Belgium			-		-			+	-	+	+	
Denmark	-			+			-	+	-		+	
Finland		+			-		-	+		-	+	
Germany			-	+	-	-		+			+	
Greece			-		-		-	+	+		+	
Hong Kong		-	+		-		-	+			+	
Iceland	-	-			-	+					+	+
Israel		-	-		-			+			+	+
Italy	-		-		-	+			+		+	
Netherlands		-			-	+	-	+			+	
Norway		-		+	-			+		-	+	
Slovenia			-		-			+	+		+	-
Republic of Korea	-	+			-			-	+		+	
Spain	-		-	+	-			+			+	
Switzerland		-			-		+	+	-		+	
United Arab Emirates				-	-		-	+	+		+	
United Kingdom			-		-	-		+		+	+	
United States			-		-		-	+			+	+

Source: GEM National Expert Survey (NES)

3 Entrepreneurship and the 2008-2009 Recession

While the 2008 through 2009 recession was severe in many countries, it was beginning to recede in some of them as this report went to print. In this chapter we use nine years of GEM data plus the answers to special questions asked in the 2009 survey that addresses two questions: First, how is new entrepreneurial activity affected by recessions? Second, to what extent does entrepreneurship serve as a mechanism that reverses the downward trend into an upward trend?

In relation to the first question, on the one hand we may expect fewer start-up activities because of lower perceived opportunities. On the other hand, recessions can free up old markets and resources, and some people may actually see new opportunities to start businesses given the change in their circumstances that the recession has generated. Thus, this question cannot be answered by observing the annual number of start-ups alone. What matters is what types of entrepreneurial activities are being setup, what the underlying motivations are and what kind of aspirations the entrepreneurs have. The GEM 2009 results give insights on this issue because the methodology explicitly considers variation in different types and phases of entrepreneurial activity.

Several theories address the second question. The best innovations have been initiated in times of recession (or depression as in the 1930s), when societies were more open to change. A recent study by Koellinger and Thurik (2009) finds that entrepreneurship is a leading indicator of the business cycle. They show, using GEM data for OECD countries, positive correlations between innovative, opportunity-driven nascent activity and the real GDP cycle measured two years later. This suggests that entrepreneurship is not independent of the cycle. Nor is it a purely procyclical or counter-cyclical phenomenon but it behaves 'precyclically'... The years preceding the recession may already have seen R&D investments in some potentially fruitful areas such as green technology but the prevailing—and considered successful—business models did not allow new introductions to take place on a significant scale yet. In times of recession, as incumbents reel from the shock of change, new entrants can gain footholds, since all the old certainties are under question.

William Baumol, in a seminal article on entrepreneurship and development, argued for a constant 'rate' of entrepreneurship across societies, while institutions, rules and norms in societies determine to what extent entrepreneurship is productive and enhances economic development (Baumol, 1990). If Baumol is correct, one could argue that the recession has caused a shift in the balance of the varied set of entrepreneurial activities rather than a reduction in entrepreneurship itself. For example, individuals who have worked in the financial

sector as an employee (possibly in activities of a fairly entrepreneurial nature) might look for ways to earn their own income, perhaps in a different sector. Others, having considered the entrepreneurship option in good times might opt for employment for the next few years and save their entrepreneurial aspirations for later. Again others may actually see possibilities to start companies because the cost of human and capital resources has dropped. Analyzing the annual number of self-employed or the number of start-ups does not lead to a satisfactory answer to our two questions because some of the self-employed may not be very entrepreneurial and some employees may in fact be very entrepreneurial (see page 31).

The next section uses a time series approach using GEM data over the period from 2001 to 2009 to explore changes in entrepreneurial attitudes, activities and aspirations over the business cycle. In section 3.3, we provide a descriptive analysis based on special questions that have been included in the GEM 2009 APS survey. This shows how entrepreneurs, in different phases of the entrepreneurial process, perceive the consequences of the economic crisis for their own business activities.

3.1 THE IMPACT OF RECESSIONS ON ENTREPRENEURSHIP: EVIDENCE FROM GEM DATA

Now that GEM research has been conducted for more than 10 years, it is possible to observe business cycle patterns. In this section we highlight the evolution of entrepreneurial attitudes, activity and aspiration in two countries that have been involved in GEM every year since 2001: the United States and Argentina. The United States is an interesting example since the crisis started there and its impact on the country was substantial. We also display the results for Argentina as an example of a country in a different stage of economic development that was hit by a severe economic recession in 2000.

Figures 19, 20 and 21 show the evolution of entrepreneurial attitudes, activity, and aspirations in the U.S. working age population from 2001 through 2009^{xxv}. What is remarkable about these time series is that, consistent with the general findings of Koellinger and Thurik (2009), the American population appears to have acted from around 2006 as if it anticipated trouble ahead. From 2006 through 2009, fear of failure rose, as did the share of necessity-driven entrepreneurship, while nascent entrepreneurial activity dropped from a high of 8% in 2005 to 5% in 2009. While new entrepreneurial activity is a smoothed measure, it too showed a decline. The discontinuation rate showed no deviance from the

long term trend in 2009. Four different measures of entrepreneurial aspiration also declined during this period.

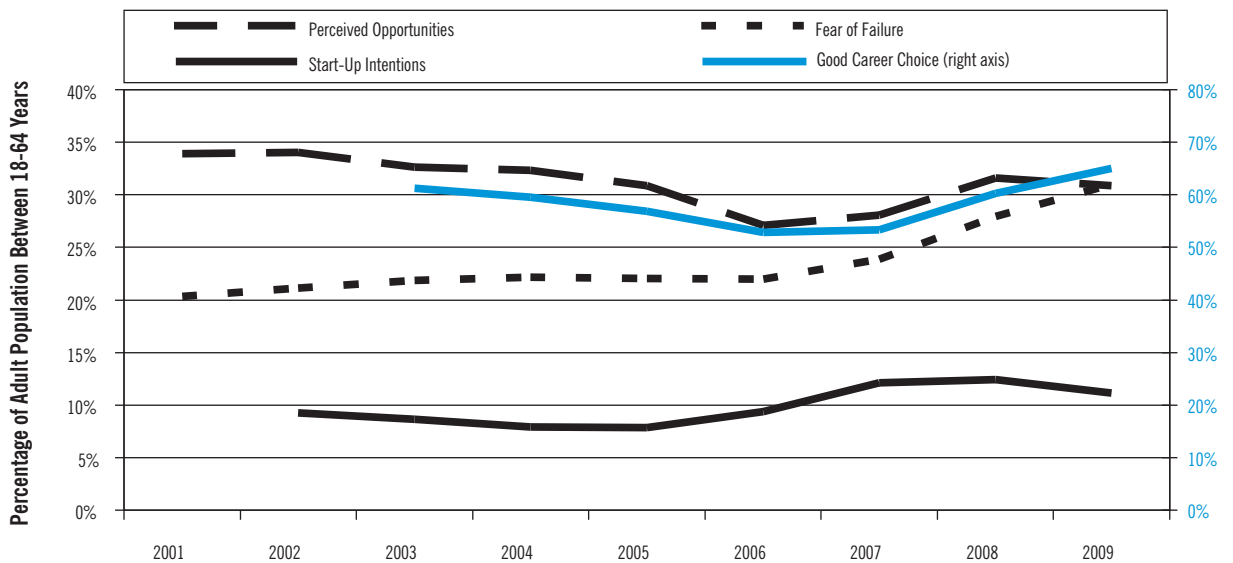
Looking at Figures 22, 23 and 24, we see what happened in Argentina as it recovered from recession. Over the four years 2001 to 2004 following the severe recession of 2000, opportunity perception in Argentina rose steeply, while both nascent and new entrepreneurial activity also rose in the first three years. In 2002, necessity-driven entrepreneurship began to decline steeply as a proportion of overall activity. At the same time, aspirations rose. Fast forwarding to the 2006-2009 period, we see a similar pattern to the United States: a decline in opportunity perception and an increase in the share of entrepreneurial activity that is necessity-driven.

While, at first sight, these patterns seem surprising and even counterintuitive, they do chime with the Schumpeter's view of economic cycles and the role that entrepreneurs play in them. We cannot be sure that the U.S. recovery from recession will show similar patterns to Argentina in 2001 to 2004. But what is clear is that entrepreneurial activity does change over the economic cycle, and, it appears, in systematic ways.

Table 5 shows the trend, upwards (+) or downwards (-) in entrepreneurial attitudes, activity and aspirations in participating GEM countries for the years 2006-2007 and 2008-2009, and the trend in GDP estimates for that period. The relative share of necessity entrepreneurship increased during this period in all innovation-driven countries except the UAE and Switzerland, both of which have substantial temporary immigrant labor forces, and which are therefore able to regulate surplus labor with relative ease. The UAE and Switzerland had slight positive GDP growth between the 2008-2009 period, in contrast to other innovation-driven countries. Opportunity perception declined in most of these countries, and did not increase in any of them. Fear of failure, however, did not increase at anything like the rate in the United States.

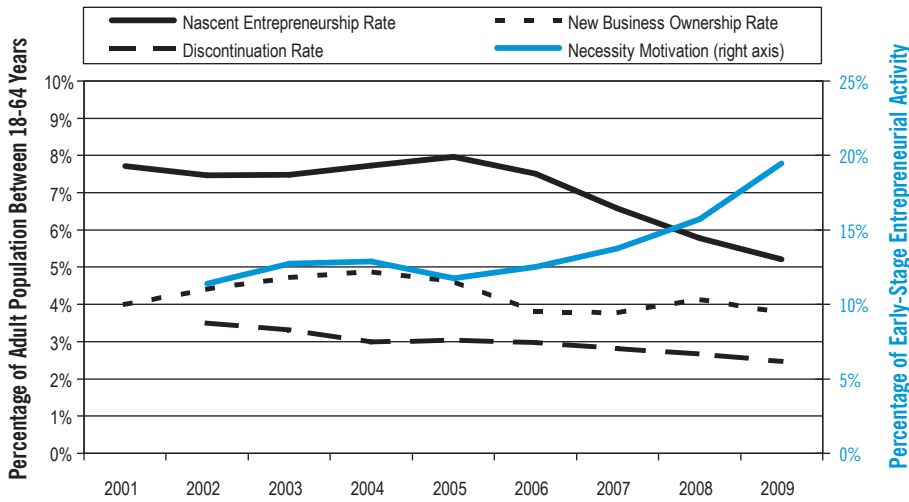
Fewer efficiency-driven countries show declining opportunity perception, but fewer show increasing shares of necessity entrepreneurship coming in to the recession. Those that do, such as Latvia, Romania, and Argentina, are known to have suffered worse than their peers during this period. Some countries that have done fairly well during this period, such as Uruguay, Dominican Republic, Peru and Brazil, show stable or even increasing opportunity perception and no signs of increases in necessity entrepreneurship.

Figure 19 — Entrepreneurial Attitudes in the United States, 2001-2009



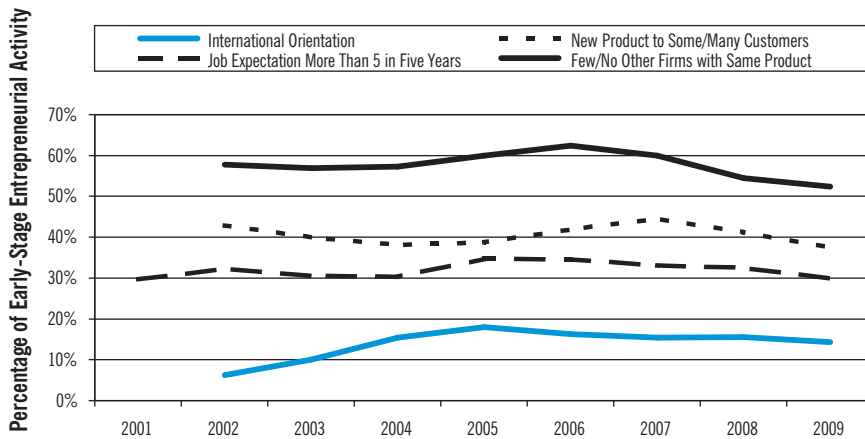
Source: GEM Adult Population Survey (APS)

Figure 20 — Entrepreneurial Activity in the United States 2001-2009



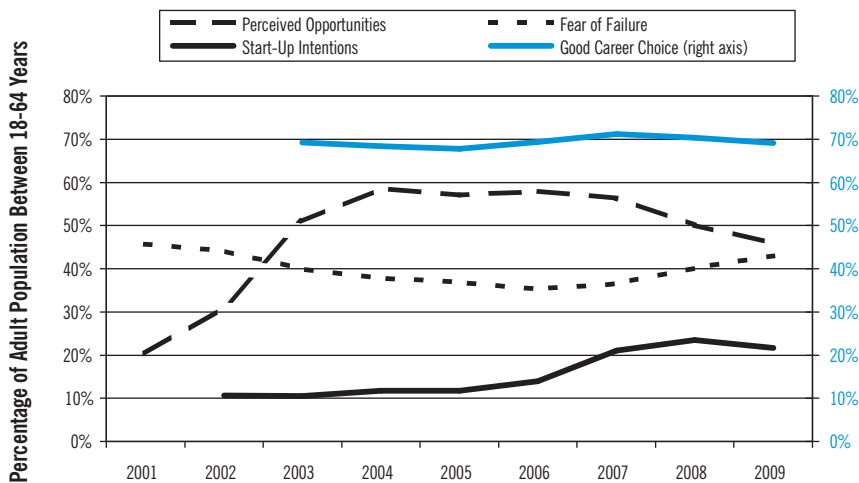
Source: GEM Adult Population Survey (APS)

Figure 21 — Entrepreneurial Aspirations in the United States, 2001-2009



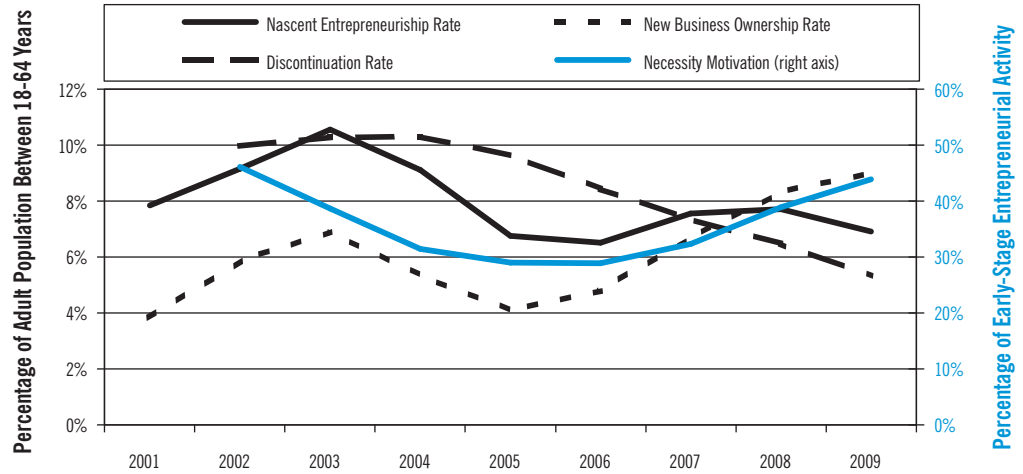
Source: GEM Adult Population Survey (APS)

Figure 22 — Entrepreneurial Attitudes in Argentina, 2001-2009



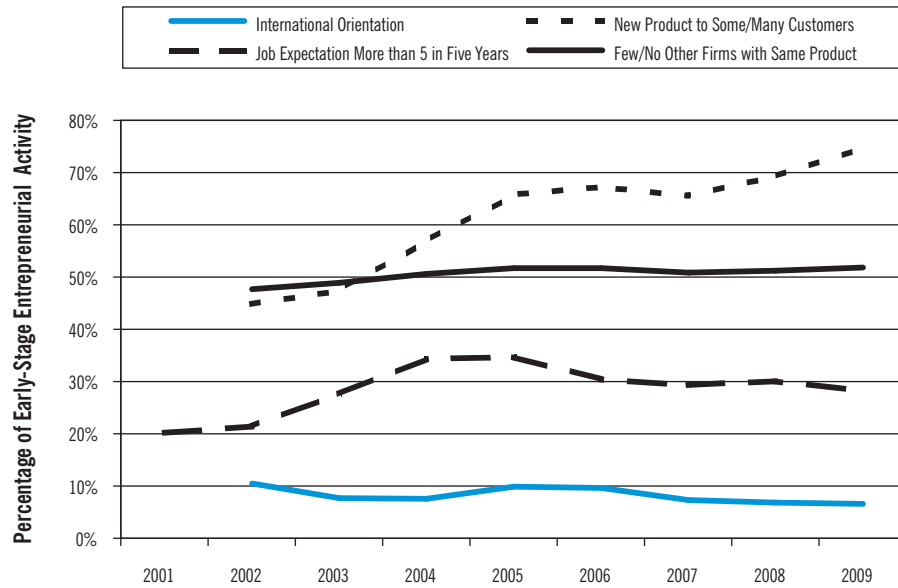
Source: GEM Adult Population Survey (APS)

Figure 23 — Entrepreneurial Activity in Argentina, 2001-2009



Source: GEM Adult Population Survey (APS)

Figure 24 — Entrepreneurial Aspirations in Argentina, 2001-2009



Source: GEM Adult Population Survey (APS)

Table 5 — Entrepreneurial Tendencies in Selected Countries: 2008-2009 Compared to 2006-2007

	CHANGE IN GDP PER CAPITA, ON PREVIOUS YEAR (CURRENT PRICES)		ATTITUDES				ACTIVITY				ASPIRATION (ALL % OF TEA)			
	2008	2009	1. PERCEIVED OPPORTUNITIES	2. FEAR OF FAILURE	3. INTENTIONS	4. GOOD CAREER CHOICE	5. NASCENT ENTREPRENEURSHIP	6. OWNER-MANAGERS NEW FIRMS	7. DISCONTINUATION RATE	8. NECESSITY (% OF TEA)	9. JOB EXPECTATION	10. NEW PRODUCT	11. NEW MARKET	12. INTERNATIONAL ORIENTATION
Factor-and Efficiency-Driven Economies														
Argentina	6.8	-2.5	-	+	-			+	-	+				-
Brazil	5.1	-0.7	+					+	-	-				-
Chile	3.2	-1.7			+	+	+					+		+
China	9.0	8.5	-	+						+				-
Colombia	2.5	-0.3	-				+	-	-	-	+			+
Croatia	2.4	-5.2	-	+	-	-	-		-			-		
Dominican Republic	5.3	0.5		+	-	+								+
Hungary	0.6	-6.7	-	+	+	-	+	+	+		+	+		+
Latvia	-4.6	-18.0	-	-	+		+	+	+	+	-		+	-
Peru	9.8	1.5		+			-	-						+
Romania	7.1	-8.5	-	+	+			+		+	-			
Russia	5.6	-7.5	-			+	-	+				-		+
Serbia	5.4	-4.0	-		-	-	-	-				+		
South Africa	3.1	-2.2	+					-	+	-		+		+
Uruguay	8.9	0.6			+				-	-				
Venezuela	4.8	-2.0			+		-	-	-			+	+	+
Innovation-Driven Economies														
Belgium	1.0	-3.2					-	+						+
Denmark	-1.2	-2.4	-		-	-	-	-	-	+				+
Finland	1.0	-6.4	-		-	+	-			+				
France	0.3	-2.4						+	-		+			
Germany	1.2	-5.3			+		-					-		+
Greece	2.9	-0.8			+		-	+		+	-	+	+	
Iceland	1.3	-8.5	-				-			+		+		
Israel	4.0	-0.1				+			+					
Italy	-1.0	-5.1	-	+	-		-		-		-	-		-
Japan	-0.7	-5.4		+	-				-					-
Netherlands	2.0	-4.2	-	+	+			+	+		-			
Norway	2.1	-1.9		+	+	+	+			+		+	+	
Slovenia	3.5	-4.7	-				+	+						
Spain	0.9	-3.8	-	+	-	-	-	-	+			-		-
Switzerland	1.8	-2.0				+	+			-				-
United Arab Emirates	7.4	-0.2					+	+		-		-	+	
United Kingdom	0.7	-4.4	-		-	-	-	+		+			-	+
United States	0.4	-2.7	-	+	-	+	-			+		-	-	-

Note: + indicates positive trend, - indicates negative trend.
Observed minor increases and decreases have blank entries.

Source: IMF World Economic Indicators (October 2009) and GEM Adult Population Surveys

3.2 THE IMPACT OF THE RECESSION ON ENTREPRENEURIAL ACTIVITY ACCORDING TO THE ENTREPRENEURS'

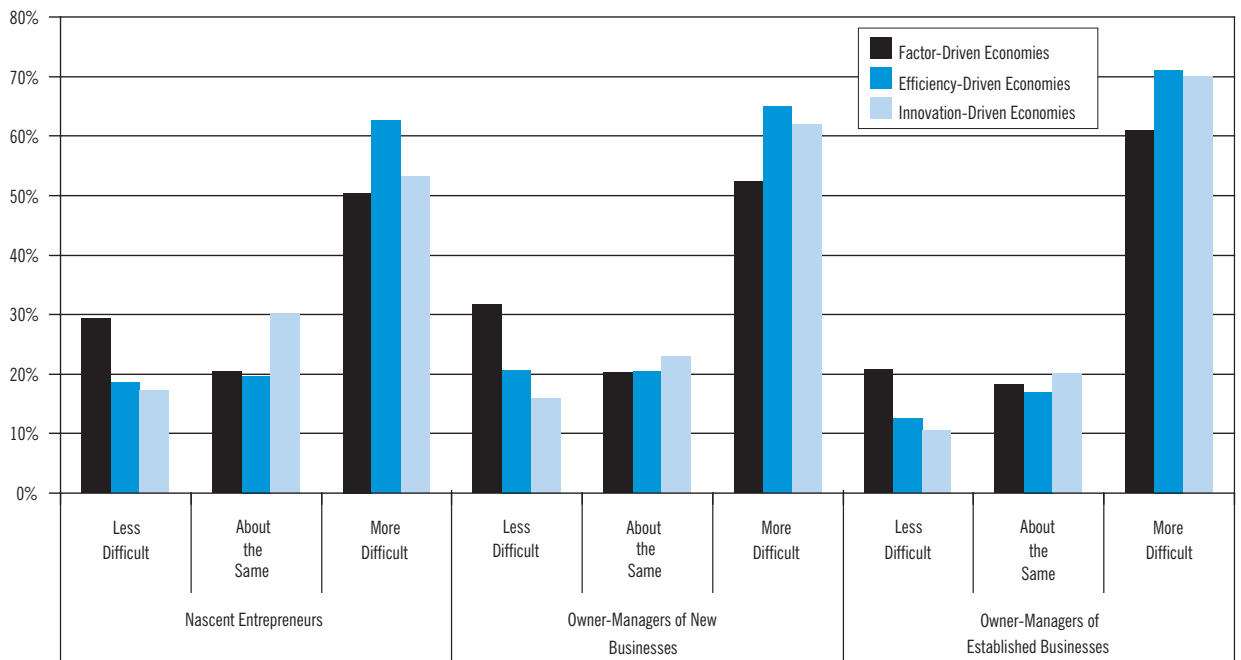
This section shows how entrepreneurs in the three country groups perceived the impact of the global recession for their own business.

Opportunities for Starting and Growing a Business Compared to One Year Ago

In the GEM 2009 survey, two questions were added that allowed for an investigation of entrepreneurs' perceptions of the climate in mid 2009 for starting and growing a business. Figure 25 shows how entrepreneurs, across the three country groups, evaluated the conditions for starting a business in comparison to last year. Not surprisingly, more than

half of the entrepreneurs found it more difficult to start a business. On average more entrepreneurs in factor-driven economies claimed that it was easier to start a business than in other economies. Many entrepreneurs in these countries are necessity-driven and have little contact with global financial markets. In fact, GDP in many of these countries continued to grow through the global recession, albeit from a very low base. Efficiency-driven countries tended to be more linked to global markets, and the opinions of entrepreneurs in these countries were the most negative on average. Entrepreneurs tended to be most positive in Uganda, Lebanon, Syria, Kingdom of Tonga, Tunisia, Malaysia, the United Arab Emirates, Slovenia, and Norway. Countries with highest shares of pessimistic evaluations include Bosnia and Herzegovina, Guatemala, Jamaica, Hungary, Romania, Iran, Latvia, Iceland, Spain, Denmark, and Iceland.

Figure 25 — Entrepreneurs Views on Starting a Business in Comparison to One Year Ago by Phase of Economic Development (Unweighted Country Averages)

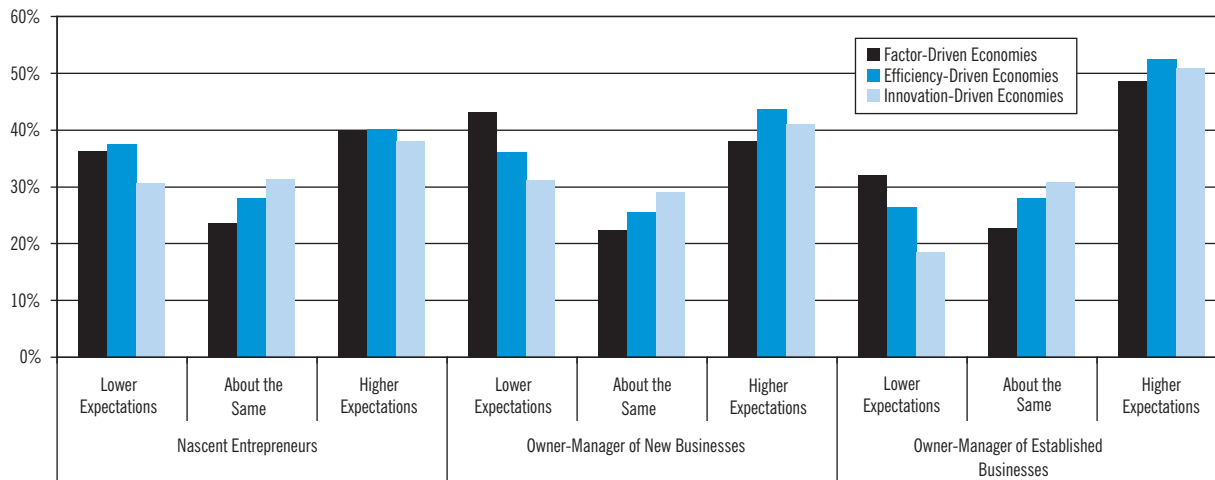


Source: GEM Adult Population Survey (APS)

Figure 26 shows the pattern for evaluations on growing a business. In general, entrepreneurs were more positive about growing a business than about starting a business. However established entrepreneurs were predominantly pessimistic. From a Schumpeterian perspective, this makes sense. Incumbents may face severe tests of their business models which had proved successful during boom times.

Countries with highest shares of optimistic nascent entrepreneurs in terms of growing a business, in country group order, include Kingdom of Tonga, Lebanon, Syria, Tunisia, Panama, Ecuador, the Netherlands, Iceland, Norway and France. Countries with predominantly pessimistic entrepreneurs in terms of growth potential are Guatemala, Yemen, South Africa, Hungary, Romania, Latvia, Germany, Spain, the Republic of Korea and Italy.

Figure 26 — Entrepreneurs Views on Growing a Business in Comparison to One Year Ago by Phase of Economic Development (Unweighted Country Averages)



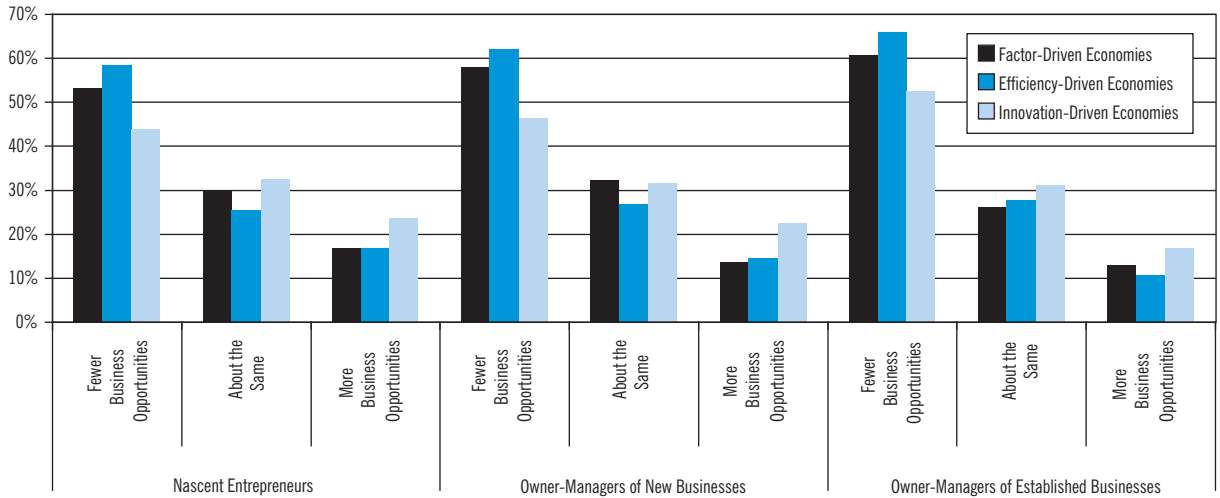
Source: GEM Adult Population Survey (APS)

The Impact of the Recession on Perceived Business Opportunities

In one of the special questions added to the GEM 2009 adult population survey, entrepreneurs were asked for their views on the effect of the “global economic slowdown” on business opportunities for their start-up or existing businesses. Three patterns can be seen in Figure 27, which summarizes the answers to this question by country group and type of entrepreneur. First, a majority of entrepreneurs in factor-driven and efficiency-driven economies see fewer opportunities for their business. Second, almost a quarter of early-stage entrepreneurs in innovation-driven countries see more opportunities for their business. Third, the more established the entrepreneur, the more pessimistic they are likely to be.

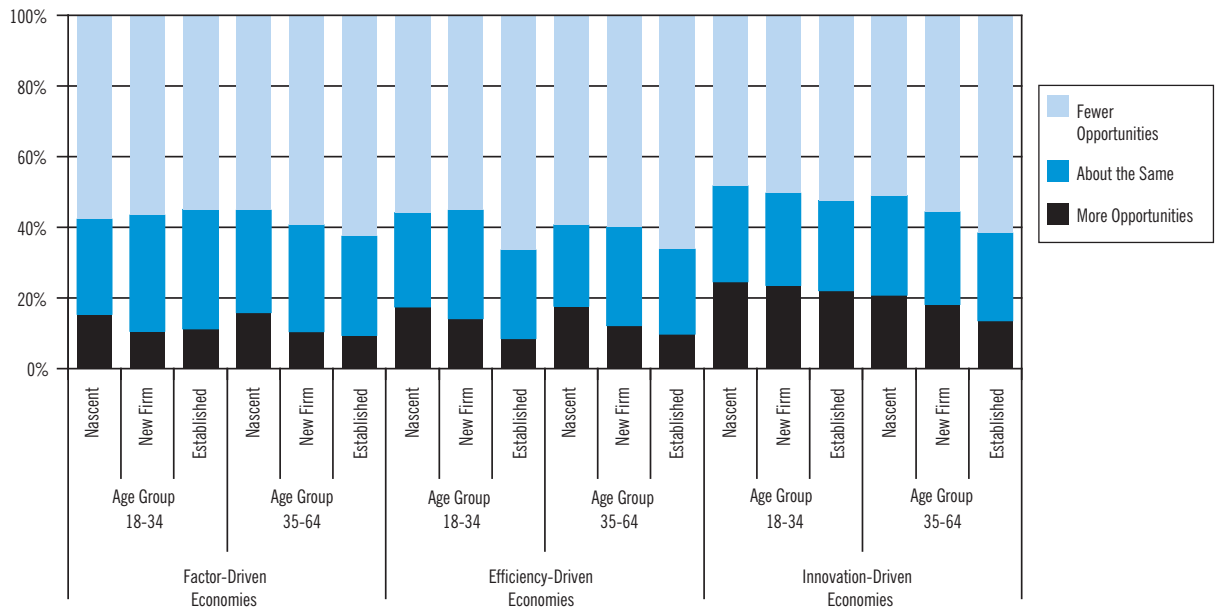
The first result may appear counter-intuitive, since innovation-driven countries appear to have suffered more, in percentage GDP terms, than most of the factor-driven and efficiency-driven countries. But these questions are relative, and in countries which have been relatively unaffected by the global slowdown, entrepreneurs may see little difference from one year to the next. By contrast, in innovation-driven countries, where much has changed, a significant minority of entrepreneurs see opportunity where others see danger. These individuals tended to be younger and better educated, and to have higher aspiration levels in terms of job expectation and innovation, as Figures 28, 29 and 30 show.

Figure 27 — Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business, According to the Entrepreneurs (Unweighted Country Averages)



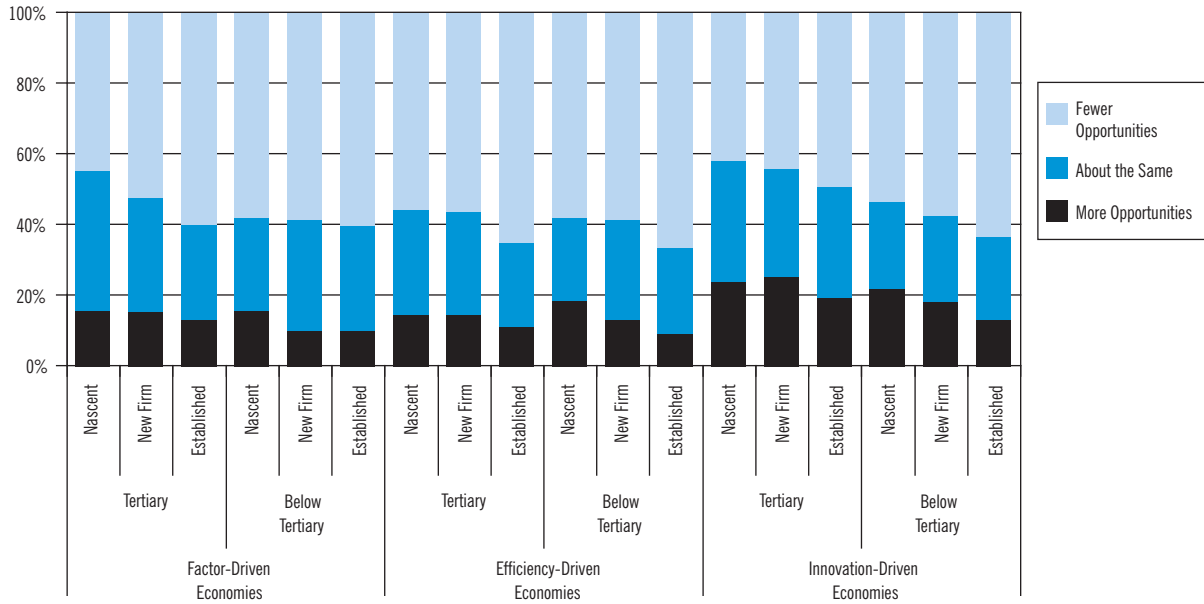
Source: GEM Adult Population Survey (APS)

Figure 28 — Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Age and Country Phase of Economic Development



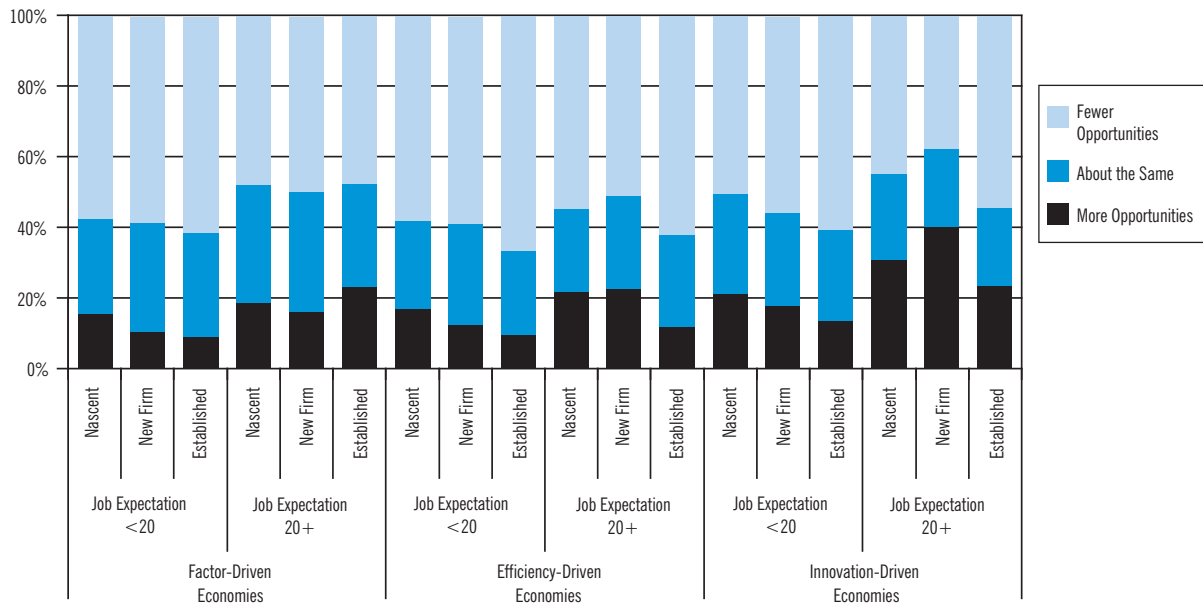
Source: GEM Adult Population Survey (APS)

Figure 29 — Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Education and Country Phase of Economic Development



Source: GEM Adult Population Survey (APS)

Figure 30 — Impact of the Global Economic Slowdown on Entrepreneurs' Perception of Opportunities for their Business by Job Expectation and Country Phase of Economic Development



Source: GEM Adult Population Survey (APS)

4 A Global Comparison of Social Entrepreneurship

In this section, we review the first results from a special section of the GEM 2009 Adult Population Survey that examined the prevalence and nature of entrepreneurship with a social purpose. This is the first time that such an exercise has ever been attempted across so many countries.

Although scholars and practitioners have proposed a plethora of definitions for social entrepreneurship, no generally accepted definition exists in the research community (Brock, 2008; Short, Moss and Lumpkin, 2009). GEM therefore uses a broad definition of social entrepreneurship as concerning individuals or organizations engaged in entrepreneurial activities with a social goal (Mair and Marti, 2006; Van de Ven, Sapienza and Villanueva, 2007; Zahra et al., 2009).

In 2009, 49 national teams collected additional data on a series of questions that were designed to explore social entrepreneurial activity^{xxvii}. The presence of such activity was detected by asking the following question of respondents:

“Are you, alone or with others, currently trying to start or owning and managing any kind of activity, organization or initiative that has a particularly social, environmental or community objective? This might include providing services or training to socially deprived or disabled persons, using profits for socially oriented purposes, organizing self-help groups for community action, etc.”^{xxvii}

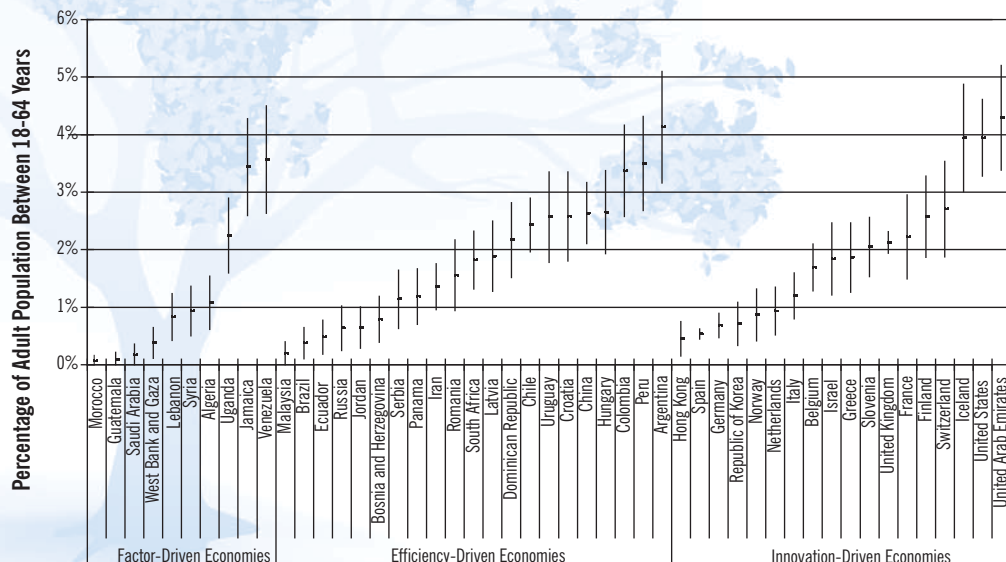
This item covers any and all activity with a social purpose, including social or community work, for profit or non-profit, and incorporated or non-incorporated. An additional question checked whether this activity was the same as or different to business activity

the respondent may have mentioned already in the survey.

4.1 PREVALENCE OF EARLY-STAGE SOCIAL ENTREPRENEURIAL ACTIVITY

Figure 31 depicts the prevalence of early-stage social entrepreneurship activity, the social equivalent of TEA, within the three economic development level peer groups. The average SEA rate across all 49 GEM countries is 1.8%, but it ranges from 0.1% to 4.3%. While the range of SEA is similar for all three economic development stages, the average SEA rate increases slightly with economic development. Individuals in richer countries, having satisfied their own basic needs, may be more likely to turn to the needs of others. In other words, the opportunity cost of social entrepreneurship may be higher in developing countries. On the other hand, social and environmental problems are often more prevalent in developing countries. Another possible reason for this finding is that the definitions of a traditional enterprise and a social enterprise may overlap in developing countries, whereas they may be more distinct in developed countries. Thirdly, William Baumol has suggested that the level of entrepreneurship is the same across countries, but that entrepreneurship is manifested in different ways depending on the institutional context (Baumol, 1990, 1993). In richer countries, social entrepreneurship may replace business entrepreneurship, at least to some extent. To further explore these potential explanations, we compare the levels of TEA and SEA in the next section.

Figure 31 — Prevalence of Early-Stage Social Entrepreneurship Activity (SEA) by Country



Source: GEM Adult Population Survey (APS)

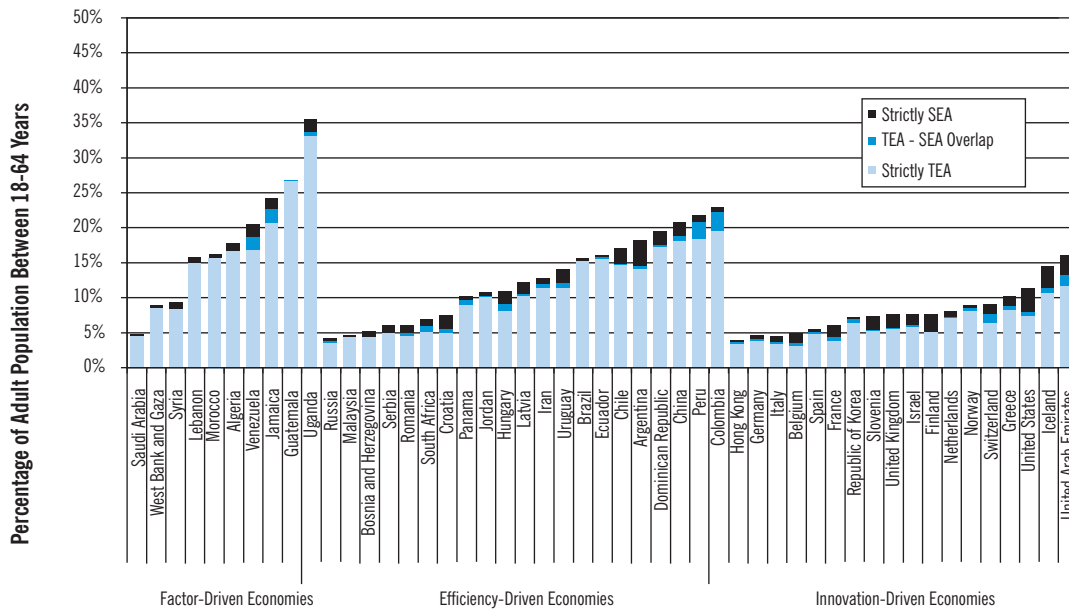
4.2 COMPARISON BETWEEN TOTAL ENTREPRENEURIAL ACTIVITY AND SOCIAL ENTREPRENEURIAL ACTIVITY LEVELS

Figures 32 and 33 compare TEA and SEA rates by country and country type showing that SEA rates are much lower than TEA rates in almost all countries. SEA as a proportion of SEA plus TEA, but not SEA itself, tends to increase with GDP per capita, providing

partial support for Baumol’s hypothesis of substitution of one form of entrepreneurship for another.

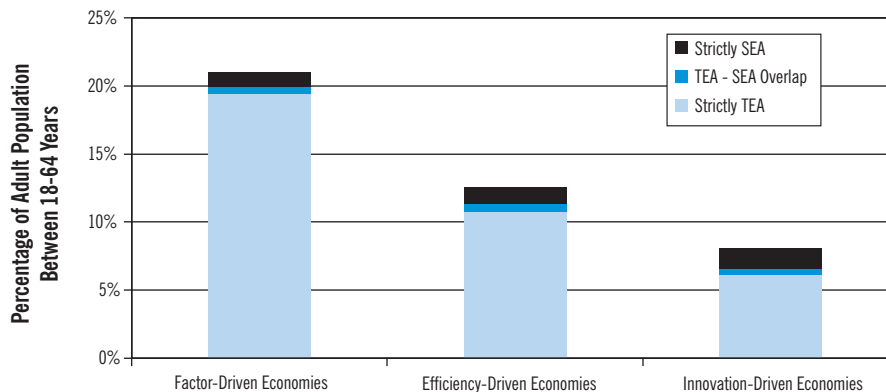
In some countries, the level of overlap of social and business entrepreneurship is quite significant, such as Peru (2.5%), Colombia (2.8%), Venezuela (1.7%) and Jamaica (2.0%). This finding is important, as it indicates that “social” and “business” entrepreneurship categories may be blurred. Earlier reported TEA levels in these countries may have included a small but still considerable level of social entrepreneurs who were running “social businesses”.

Figure 32 — Prevalence of Early-Stage Social Entrepreneurial Activity (SEA) and Early-Stage Entrepreneurial Activity (TEA) by Country



Source: GEM Adult Population Survey (APS)

Figure 33 — Average Entrepreneurship Activity by Economic Development Stage



Source: GEM Adult Population Survey (APS)

Table 6 depicts the prevalence of different phases of social entrepreneurship and SEA rates by gender. SEA rates are slightly lower on average in factor-driven economies (1.6%) than in efficiency-driven (1.8%) and

innovation-driven economies (1.9%). Managers of established social organizations are also more prevalent in innovation-driven economies (average rates are 0.3%, 0.4%, and 0.7% respectively). This may reflect the affordability of social enterprise in the richest countries.

A Global Comparison of Social Entrepreneurship

Table 6 — Social Entrepreneurial Activity by Firm Entrepreneurial Process Phase and Gender, GEM 2009

	NASCENT SOCIAL ENTREPRENEURIAL ACTIVITY	SOCIAL ENTREPRENEURIAL ACTIVITY IN NEW ORGANIZATIONS	SOCIAL ENTREPRENEURIAL ACTIVITY IN ESTABLISHED ORGANIZATIONS	SEA: SOCIAL ENTREPRENEURIAL ACTIVITY IN EARLY-STAGE ORGANIZATIONS	MALE SEA	FEMALE SEA
Factor-Driven Economies						
Algeria	0.8%	0.3%	0.0%	1.1%	0.5%	0.5%
Guatemala	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
Jamaica	1.2%	2.3%	0.6%	3.4%	1.8%	1.6%
Lebanon	0.4%	0.4%	0.4%	0.8%	0.3%	0.5%
Morocco	0.3%	0.3%	0.3%	0.4%	0.4%	0.0%
Saudi Arabia	0.1%	0.1%	0.0%	0.2%	0.2%	0.0%
Syria	0.7%	0.2%	0.0%	0.9%	0.6%	0.3%
Uganda	0.7%	1.6%	0.8%	2.2%	1.2%	1.1%
Venezuela	3.4%	0.1%	0.0%	3.6%	2.1%	1.5%
West Bank and Gaza Strip	0.2%	0.2%	0.1%	0.4%	0.3%	0.0%
<i>Average (unweighted)</i>	0.8%	0.5%	0.2%	1.3%	0.7%	0.6%
Efficiency-Driven Economies						
Argentina	2.2%	1.9%	3.0%	4.1%	2.0%	2.1%
Bosnia and Herzegovina	0.6%	0.2%	0.0%	0.8%	0.7%	0.1%
Brazil	0.2%	0.2%	0.0%	0.4%	0.4%	0.0%
Chile	1.7%	0.8%	0.2%	2.4%	1.4%	1.1%
China	1.4%	1.2%	0.3%	2.6%	1.3%	1.3%
Colombia	2.7%	0.7%	0.1%	3.4%	2.1%	1.3%
Croatia	1.3%	1.3%	1.1%	2.6%	1.7%	0.9%
Dominican Republic	0.8%	1.4%	0.8%	2.2%	1.6%	0.5%
Ecuador	0.4%	0.1%	0.0%	0.5%	0.2%	0.2%
Hungary	2.0%	0.6%	0.1%	2.7%	1.5%	1.2%
Iran	1.0%	0.3%	0.2%	1.4%	1.0%	0.4%
Jordan	0.3%	0.3%	0.1%	0.6%	0.4%	0.2%
Latvia	1.4%	0.5%	0.7%	1.9%	0.9%	1.0%
Malaysia	0.2%	0.0%	0.0%	0.2%	0.1%	0.1%
Panama	0.9%	0.3%	0.1%	1.2%	0.8%	0.3%
Peru	3.4%	0.1%	0.1%	3.5%	1.9%	1.6%
Romania	1.3%	0.3%	0.1%	1.6%	0.9%	0.6%
Russia	0.4%	0.2%	0.1%	0.6%	0.2%	0.4%
Serbia	0.4%	0.7%	0.5%	1.1%	0.7%	0.4%
South Africa	1.2%	0.6%	0.1%	1.8%	1.3%	0.5%
Uruguay	1.9%	0.7%	0.3%	2.6%	1.8%	0.8%
<i>Average (unweighted)</i>	1.2%	0.6%	0.4%	1.8%	1.1%	0.7%
Innovation-Driven Economies						
Belgium	1.0%	0.7%	0.9%	1.7%	1.2%	0.5%
Finland	1.2%	1.4%	1.9%	2.6%	1.4%	1.2%
France	1.6%	0.6%	0.4%	2.2%	1.5%	0.7%
Germany	0.5%	0.2%	0.4%	0.7%	0.5%	0.2%
Greece	1.3%	0.6%	0.8%	1.9%	1.3%	0.6%
Hong Kong	0.2%	0.2%	0.3%	0.5%	0.3%	0.2%
Iceland	2.3%	1.6%	1.5%	3.9%	1.8%	2.1%
Israel	0.9%	0.9%	1.4%	1.8%	1.0%	0.9%
Italy	0.8%	0.4%	0.5%	1.2%	0.7%	0.5%
Republic of Korea	0.4%	0.4%	0.1%	0.7%	0.6%	0.2%
Netherlands	0.5%	0.4%	0.4%	0.9%	0.6%	0.3%
Norway	0.6%	0.3%	0.0%	0.9%	0.7%	0.2%
Slovenia	1.3%	0.7%	1.1%	2.0%	1.3%	0.7%
Spain	0.4%	0.2%	0.2%	0.5%	0.3%	0.2%
Switzerland	2.4%	0.3%	0.1%	2.7%	1.8%	0.9%
United Arab Emirates	2.4%	2.0%	0.4%	4.3%	3.9%	0.4%
United Kingdom	0.8%	1.3%	1.8%	2.1%	1.3%	0.8%
United States	2.9%	1.1%	0.5%	3.9%	2.1%	1.9%
<i>Average (unweighted)</i>	1.2%	0.7%	0.7%	1.9%	1.2%	0.7%

Source: GEM Adult Population Survey (APS)

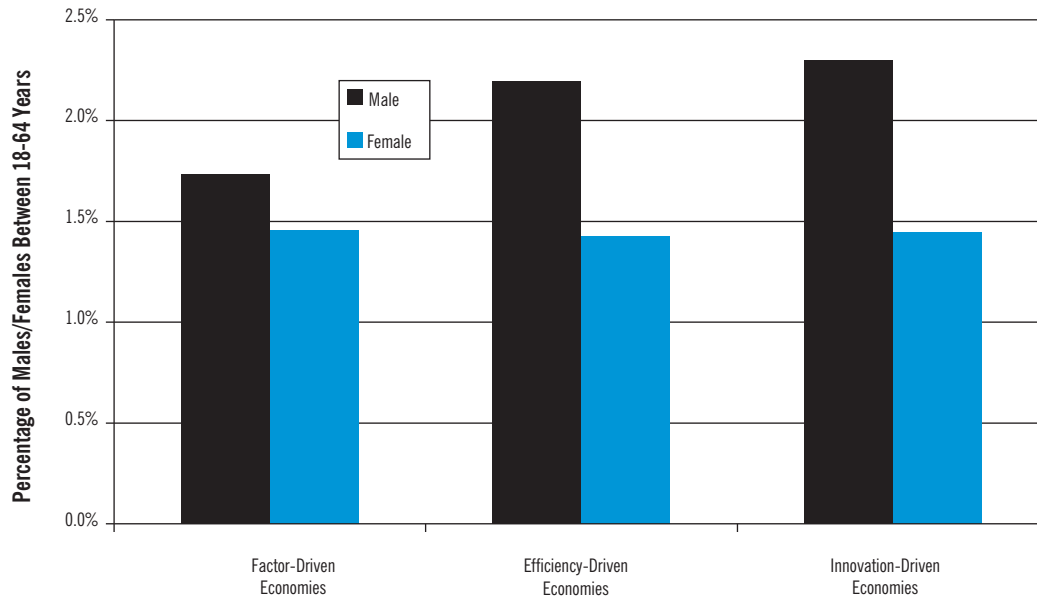
Note: Due to rounding, numbers may not add up to the total.

4.3 WHO ARE SOCIAL ENTREPRENEURS?

To better understand ‘who is a social entrepreneur’, we analyzed characteristics such as gender, age and

education. As depicted in Figures 34, 35 and 36, social enterprises are more likely to be started by men than by women, but the gender gap is not as high as in TEA. The female SEA rate is almost constant across the three economic development stages, while the male SEA rate increases with economic development.

Figure 34 — Average Male and Female SEA by Economic Development Stage

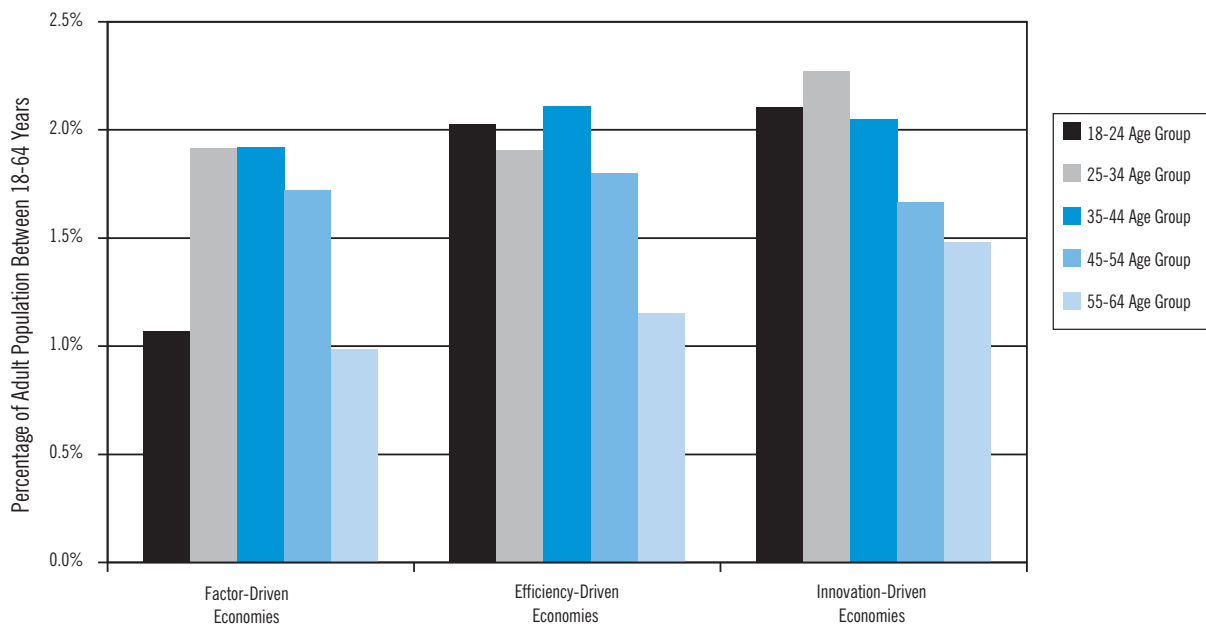


Source: GEM Adult Population Survey (APS)

Figure 35 shows that, in comparison to TEA (see Figure 28), the youngest age group has a relatively higher chance of being involved in SEA, except for factor-driven economies. In other words, social

entrepreneurship peaks at a lower age than not-for-profit-businesses, or non-SEA entrepreneurship for wealthier countries.

Figure 35 — Early-Stage Social Entrepreneurial Activity (SEA) for Separate Age Groups



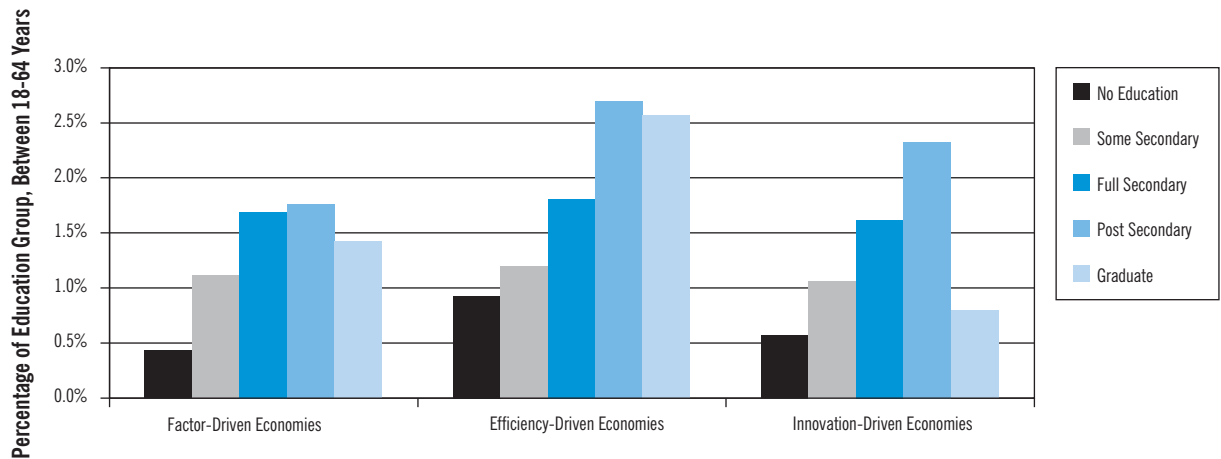
Source: GEM Adult Population Survey (APS)

A Global Comparison of Social Entrepreneurship

Finally, as Figure 36 shows, the education levels of individuals are positively linked to the propensities of being engaged in SEA across all phases of economic development. For factor-driven economies, it should be noted that although the propensities for the higher educated are quite high, the numbers of individuals

that in fact have completed post secondary and graduate education are very low. The relatively low rates for graduates in innovation-driven countries are interesting; however, further analysis will be required before making serious inferences.

Figure 36 — Early-Stage Social Entrepreneurial Activity (SEA) for Different Education Levels



Source: GEM Adult Population Survey (APS)

4.4 WHAT SECTORS DO SOCIAL ENTREPRENEURS ENTER?

Social entrepreneurs differ widely in the type of organizations launched and the kind of social or environmental problem they try to solve. Social enterprises identified in this report span across a wide array of areas such as education, health, culture, economic development and the environment. While sector participation does not vary much by country, there are differences in social issue focus among the three country groups by economic development. Social entrepreneurs in factor-driven economies tend to focus on more elementary issues and pressing needs such as basic health care provision, access to water and sanitation or agricultural activities in rural areas. In innovation-driven economies, individuals are particularly active in launching culture-related organizations, providing services for disabled people, focusing on waste recycling and nature protection or offering open-source activities such as online social networking.

4.5 A SPECTRUM OF SOCIAL ENTREPRENEURIAL ACTIVITY

Given the wide variety of social entrepreneurs uncovered in the survey this year, we developed a typology with four broad groups. The typology is derived from three different features of a social enterprise: 1) prominence of social (or environmental) goals with respect to economic goals; 2) reliance on an earned income strategy and its contribution with respect to total revenues of the organization; and 3) presence of innovation. The four categories are:

1. Traditional NGOs (high levels of social/environmental goals; not-for-profit status),
2. Not-for-profit SE (high levels of social/environmental goals; not-for-profit status; innovation);
3. Hybrid SE (high levels of social/environmental goals; earned income strategy “integrated” or “complementary” to the mission) and;
4. For Profit SE (high but not exclusively social/environmental goals; earned income strategy)

A fifth category, social activity with primarily for-profit motives, captures the overlap or blurring of the boundaries between SEA and TEA discussed above in a different way. Although we include such activities in our spectrum of the total level

of Social Entrepreneurial Activity so as to capture the full extent of such activity, current theoretical perspectives on Social Entrepreneurship would exclude them from this spectrum. Box 4 shows the decision rules for classification.

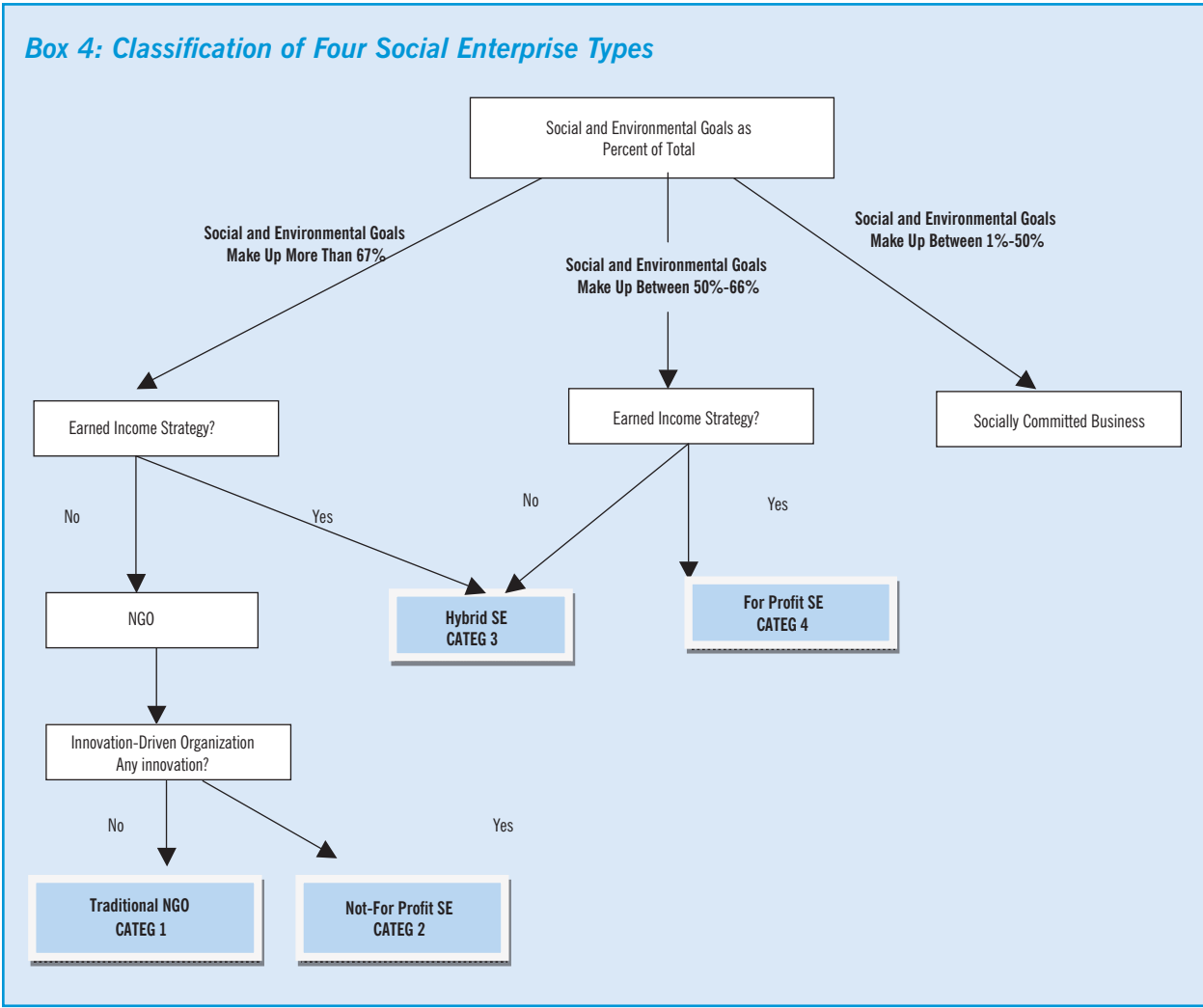


Table 7 shows the distribution of the four general categories of social enterprise (SE) plus the overlap category within SEA for each participating country. Across all countries, the order of prevalence was Not-for-Profit SE (24%), Hybrid SE (23%), For-profit SEs (12%) and traditional NGOs (8%). However, the Hybrid SE was most popular in the Scandinavian countries of Finland and Iceland, as well as in Algeria,

Uganda, Dominican Republic, Hungary, Latvia, Malaysia, Belgium, France, the Netherlands, Slovenia and Switzerland. The For-Profit SE model is most favored by the United Arab Emirates, Venezuela and Romania. Figure 37 depicts the prevalence of types by economic development stage. The pattern of higher prevalence of for-profit types in factor- and efficiency-driven economies can clearly be seen.

A Global Comparison of Social Entrepreneurship

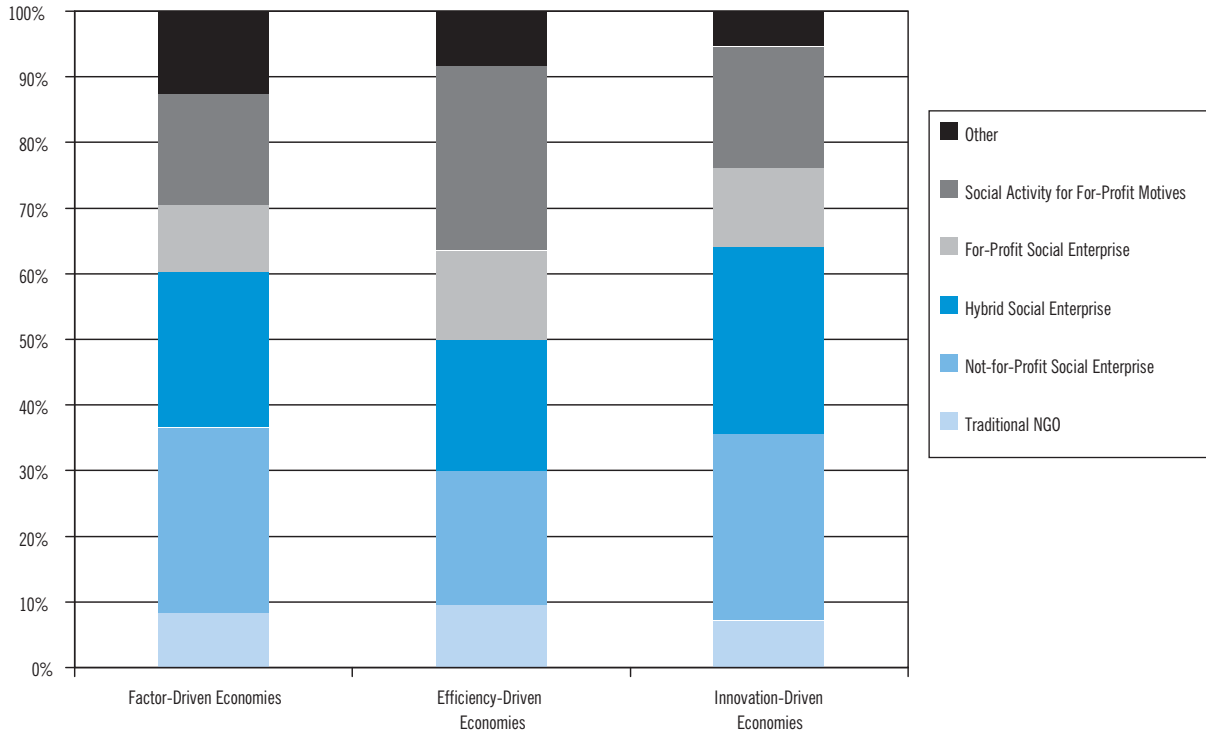
Table 7 — Prevalence of SEA Types by Country

	TRADITIONAL NGO (CAT. 1)	NOT-FOR-PROFIT SOCIAL ENTERPRISE (CAT. 2)	HYBRID SOCIAL ENTERPRISE (CAT. 3)	FOR-PROFIT SOCIAL ENTERPRISE (CAT. 4)	SOCIAL ACTIVITY FOR FOR-PROFIT MOTIVES	OTHER
Factor-Driven Economies						
Algeria	0%	11%	35%	22%	24%	8%
Guatemala	0%	0%	0%	0%	50%	50%
Jamaica	6%	27%	27%	6%	27%	8%
Lebanon	0%	50%	33%	10%	5%	3%
Morocco	25%	42%	33%	0%	0%	0%
Saudi Arabia	8%	46%	8%	8%	17%	13%
Syria	10%	30%	19%	15%	10%	16%
Uganda	17%	17%	38%	12%	10%	7%
Venezuela	13%	19%	19%	25%	16%	9%
West Bank and Gaza Strip	8%	42%	42%	0%	0%	8%
<i>Average (unweighted)</i>	10%	28%	25%	10%	16%	12%
Efficiency- Driven Economies						
Argentina	14%	40%	20%	8%	11%	7%
Bosnia and Herzegovina	0%	35%	32%	15%	12%	6%
Brazil	14%	29%	0%	13%	29%	16%
Chile	1%	29%	25%	15%	30%	0%
China	11%	12%	15%	7%	50%	6%
Colombia	0%	14%	22%	21%	38%	5%
Croatia	6%	29%	20%	17%	23%	5%
Dominican Republic	3%	24%	25%	11%	24%	13%
Ecuador	0%	0%	0%	0%	63%	38%
Hungary	3%	19%	34%	13%	22%	9%
Iran	0%	0%	33%	67%	0%	0%
Jordan	27%	23%	18%	0%	23%	9%
Latvia	19%	21%	36%	15%	8%	2%
Malaysia	33%	22%	45%	0%	0%	0%
Panama	0%	0%	8%	15%	77%	0%
Peru	5%	21%	20%	0%	42%	12%
Romania	6%	0%	16%	24%	44%	10%
Russia	29%	0%	0%	0%	63%	9%
Serbia	21%	64%	7%	5%	0%	2%
South Africa	0%	15%	26%	22%	13%	24%
Uruguay	6%	31%	17%	20%	22%	5%
<i>Average (unweighted)</i>	9%	20%	20%	14%	28%	8%
Innovation-Driven Economies						
Belgium	13%	25%	28%	10%	19%	6%
Finland	7%	19%	43%	16%	9%	6%
France	5%	17%	33%	21%	17%	6%
Germany	19%	17%	29%	14%	22%	0%
Greece	8%	48%	24%	3%	13%	4%
Hong Kong	0%	18%	24%	12%	41%	6%
Iceland	5%	34%	44%	5%	6%	6%
Israel	7%	36%	25%	13%	13%	6%
Italy	13%	25%	25%	22%	11%	3%
Republic of Korea	0%	40%	0%	0%	40%	20%
Netherlands	13%	25%	44%	10%	7%	1%
Norway	3%	38%	32%	12%	15%	0%
Slovenia	12%	28%	34%	14%	12%	1%
Spain	11%	36%	22%	8%	20%	4%
Switzerland	3%	17%	20%	17%	31%	12%
United Kingdom	6%	30%	32%	13%	13%	7%
United Arab Emirates	1%	14%	21%	23%	37%	5%
United States	8%	35%	26%	11%	13%	6%
<i>Average (unweighted)</i>	7%	28%	28%	12%	19%	6%

Source: GEM Adult Population Survey (APS)

Note: includes SEA in nascent, young and established social entrepreneurs; zeros may be due to rounding

Figure 37 — Categories of Social Entrepreneurial Activity, by Economic Development Stage



Source: GEM Adult Population Survey (APS)

To summarize, this chapter has shown the extent of social entrepreneurial activity in 49 countries across the world. While SEA rates are dwarfed by TEA rates in factor- and efficiency-driven countries, they are a significant component of entrepreneurship in many innovation-driven countries. A significant minority of social entrepreneurs, particularly in developing

countries, appear to wish to have a profitable business that at the same time addresses social issues. This demonstrates that for many people, the categories of “social” and “business” entrepreneur are artificial, and more holistic definitions of entrepreneurship are needed if we are to capture the true extent of this phenomenon.

5 Entrepreneurial Finance in 2008-2009

5.1 INFORMAL INVESTMENT

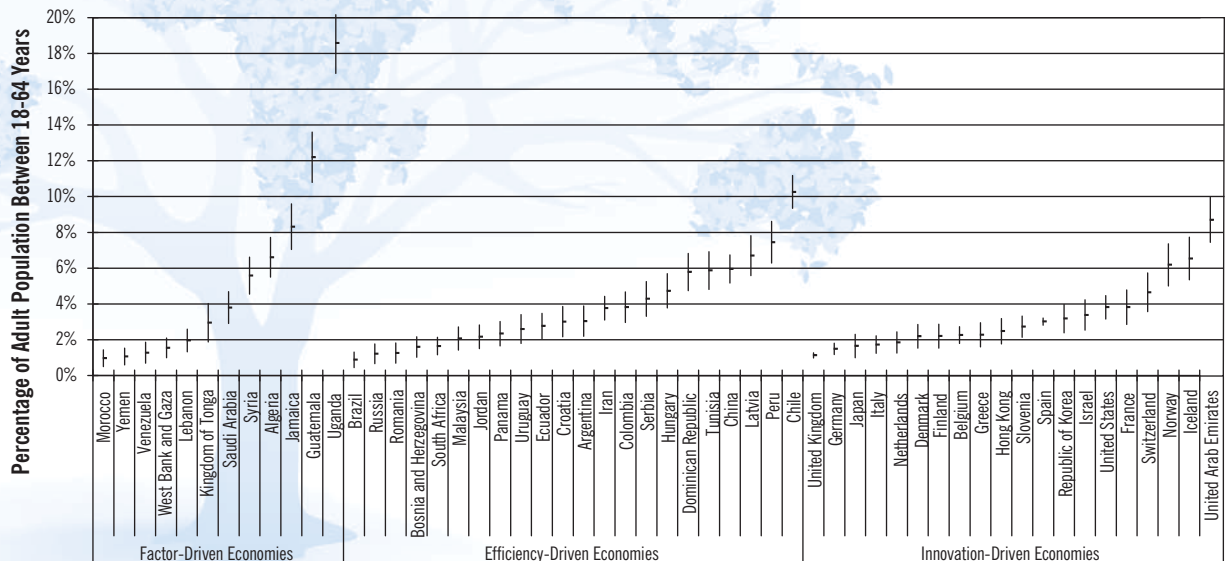
Every new venture, from mom-and-pop convenience stores to Silicon Valley superstars such as Google, starts with an “investment” from the founders themselves or the so-called 3Fs (Family, Friend, or Foolhardy strangers). Those informal investors are vital to the start-up process; if all of them stopped providing money to start-ups, the global economy would immediately feel the effect with a sudden jump in unemployment. What’s more, informal investments flow almost instantaneously into the economy when entrepreneurs spend their investments to buy goods and services for their new ventures. Informal investment therefore supports many more jobs indirectly (the multiplier effect). Informal investors tend to take money from their savings and current income when they invest in entrepreneurs. So when stock markets crashed in the aftermath of the international banking industry meltdown in September-October 2008, it was likely that informal investors, especially those who were connected to the global financial markets, became wary about putting money into risky entrepreneurial ventures.

Because informal investment is relatively rare in most countries, the GEM measure of informal investment asks respondents if they have invested in someone else’s new business in the past three years. It is therefore a smoothed measure; it is not a measure of activity in just one year. Despite this, there is some evidence of a reduction in informal activity in some countries in the results from the 2009 survey. While reported informal investing activity was higher in 16 GEM countries in 2009 compared with 2008, it was

lower in 19 GEM countries, including countries at the center of the meltdown, the United States and the United Kingdom. The U.K.’s prevalence rate was its lowest since GEM began in 1999; and the U.S. rate was its third lowest over the same period. Among the other G7 nations, Germany, Italy, and Japan had lower prevalence rates in 2009, although their year-to-year decline was not as big as in the United States and the United Kingdom. Overall, there was a significant decline in the average informal investor prevalence rate of G7 nations in 2009.

The 2009 informal investor prevalence rates for the 18 to 64 age group are shown in Figure 38. Among the G7 nations, the United States and France had rates of just under 4% while Italy, Germany, Japan, and the United Kingdom all had rates of between 1 and 2%. Russia and Brazil also had low rates of around 1%, while China had a much higher rate of around 6%. Although both Iceland and Latvia suffered more than other European countries from the financial meltdown, their informal investment rates were the highest of the European nations. Uganda’s prevalence rate of 18.6% placed it at the top of the rankings. Uganda’s 2009 rate is consistent with its rates in 2003 and 2004 when it previously participated in GEM. Informal investment in Chile has been steadily rising since it first participated in GEM in 2002, and in 2009 it overtook Peru, which has been falling since 2006 when it first participated. From nations in the Middle East and Northern Africa (MENA) region, the United Arab Emirates, Algeria, Tunisia, Saudi Arabia, Syria, and Iran were in the top half of the country distribution and four, Morocco, Jordan, Yemen, and Lebanon, fell in the bottom half.

Figure 38 — Informal Investors Prevalence Rates for 54 Nations in 2009, by Phase of Economic Development, Showing 95 Percent Confidence Intervals



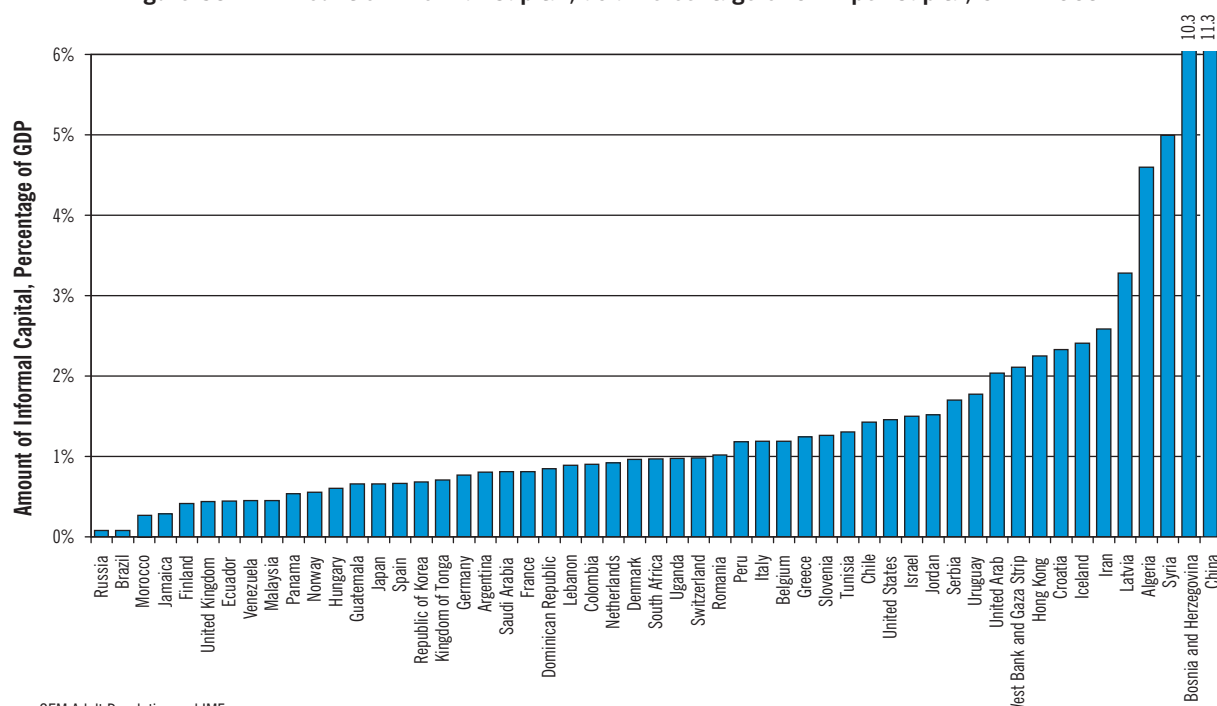
Source: GEM Adult Population Survey (APS)

The total amount of informal investment in a country is estimated using the average amount invested, the prevalence rate, and the population, correcting for the three year investment span. To compare the potential impact on a nation's economy, informal investment is expressed as a percentage of its GDP (2008 values) in Figure 39.^{xxix} At 11.3% of its GDP, China has the highest informal investment amounts of any country in GEM 2009. This is consistent with the GEM results for China in 2006 and 2007. The United States at 1.5% leads the G7 countries followed by Italy (1.2%), France (0.8%), Germany (0.8%), Japan (0.7%), and the United Kingdom (0.4%). Russia and Brazil at 0.1% have the lowest informal investment amounts of any GEM nation.

Informal investment as a percentage of GDP varies widely within some regions and country groups. For example, among countries in North Africa and the

Middle East, it varies from a high of 5.0% (Syria) to a low of 0.8% (Saudi Arabia). In South and Central America and the Caribbean, it varies from 1.8% (Uruguay) to 0.1% (Brazil). In Europe, Bosnia and Herzegovina stands out as having a very high rate (10.3%), followed by Latvia (3.3%), Iceland (2.5%) and Croatia (2.3%), with Hungary, Norway (0.6% each) and Finland (0.4%) at the bottom of the distribution. Interestingly, both Scandinavia and Eastern Europe had countries among those with the highest and the lowest amounts of informal investment in relation to national wealth. The Republic of Korea, Japan and Malaysia all put less than 1% of their GDP into informal investment in 2009, in marked contrast with China's 11%. There were only two GEM nations in southern Africa in 2009: Uganda at 1.0% and South Africa also at 1.0%. Kingdom of Tonga, the sole GEM 2009 nation in the South Pacific, stands at 0.7%.

Figure 39 — Amount of Informal Capital, as a Percentage of GDP per Capita, GEM 2009



Source: GEM Adult Population and IMF

The amount of informal investment in a nation is one side of the start-up funding equation; the other side is the amount of money that entrepreneurs need to start businesses. Entrepreneurs in countries with higher start-up costs need more informal investment, but the purchasing power of a country's currency must also be taken into account in comparing this across countries. Figure 40 plots the average amount to start a new business, as estimated by the GEM 2009 survey of nascent entrepreneurs against GDP (purchasing power parity) per capita in 2008.

It is more expensive to start a business in countries above the trend line in Figure 40 than below it. This is illustrated in Figure 41, where the percentage difference between the cost of starting a business and the trend line measures a nation's degree of costliness for start-up entrepreneurs. The least expensive countries for starting a business are on the far left and the most expensive ones are on the far right. An "overabundant informal investment" country would fall on the far right of Figure 39, which means that it would rank very high on amount of informal investment per GDP, and on the far left of Figure 41,

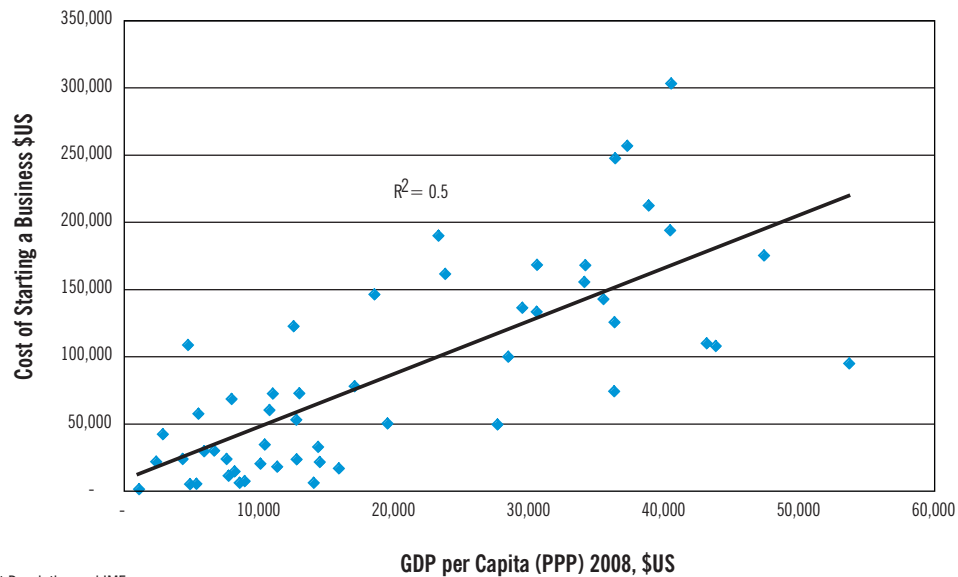
which means that it would be an inexpensive place for starting a business. There are no over-abundant countries in the GEM 2009 data set; however, some countries, Chile and Peru, for instance, which are among the least expensive countries for starting a business but are in the second quartile of GEM countries on informal investment as a percent of GDP, have an abundance of informal investment.

A “scarce informal investment” country would fall on the far right of Figure 41 and the far left of Figure 39. There is no GEM country where informal investment is extremely scarce, but it is relatively scarce in

some countries. Saudi Arabia and the Netherlands, for example, are among the most expensive quartile of countries for starting a business but in the third quartile of countries on informal investment as a percent of GDP.

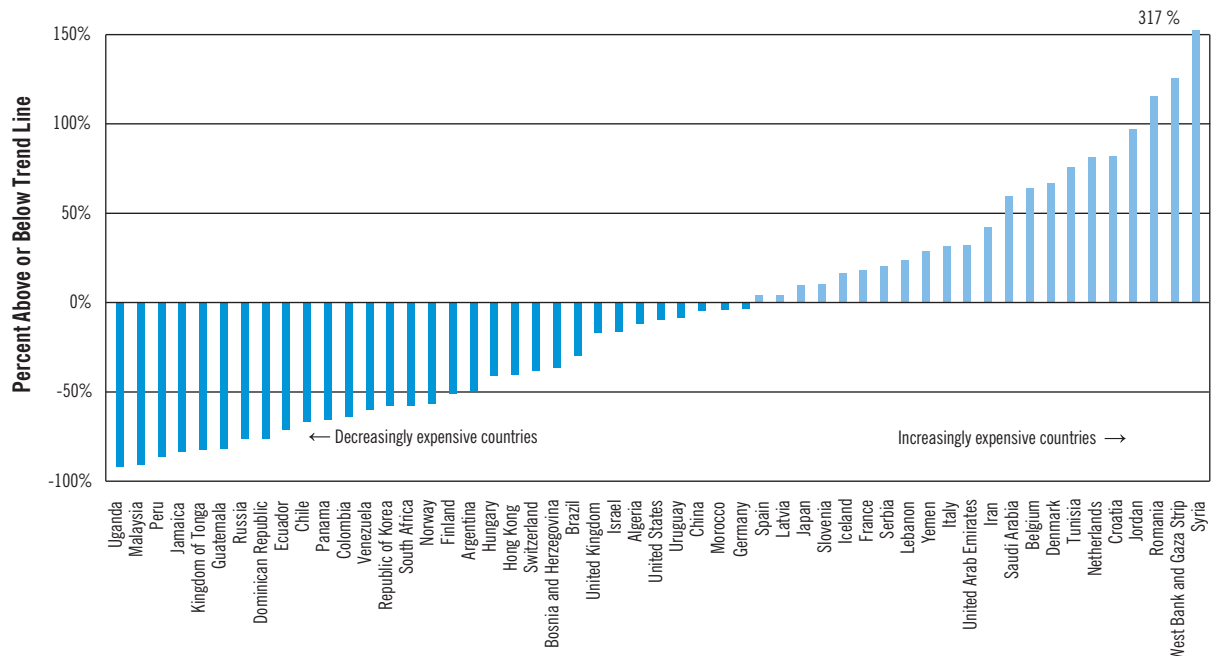
Slovenia and Switzerland could be described as “balanced informal investment” countries, since they are located in the middle of the range of countries on both measures. Another example of a balanced country is the United Arab Emirates, which is the 12th most expensive but ranks 13th on the amount of informal investment.

Figure 40 — Cost of Starting a Business versus GDP per Capita (PPP), GEM 2009



Source: GEM Adult Population and IMF

Figure 41 — Amount to Start a Business: Percentage Above or Below Trend Line, GEM 2009



Source: GEM Adult Population and IMF

5.2 VENTURE CAPITAL

All start-ups get initial financing from the founders themselves and informal investors. A select few in some countries, raise money from venture capital firms; just how select can be seen from the fact that in the United States there are almost 30 million businesses, but in the last 40 years no more than about 30,000, or about one in a thousand, have ever received venture capital. Looked at another way, only 1,179 U.S. companies received their first round of venture capital in 2008, and of those only 330 were seed or start-up stage companies. In the whole of Europe, only 594 seed stage companies received venture capital in 2008. But minute as the number of venture-backed companies may be, their combined contribution to the economies of their countries—and often, the world—is gigantic.

From 1997 through 2004 the employment growth in European venture capital-backed companies was 30.5%.^{xxx} In the United States since the early 1970s, approximately \$456 billion of venture capital has backed 27,000 companies. In 2008, those venture-backed companies employed more than 12 million people, or 11% of the private sector employment; and they generated revenues of \$2.9 trillion, or 21% of the U.S. GDP.^{xxxi}

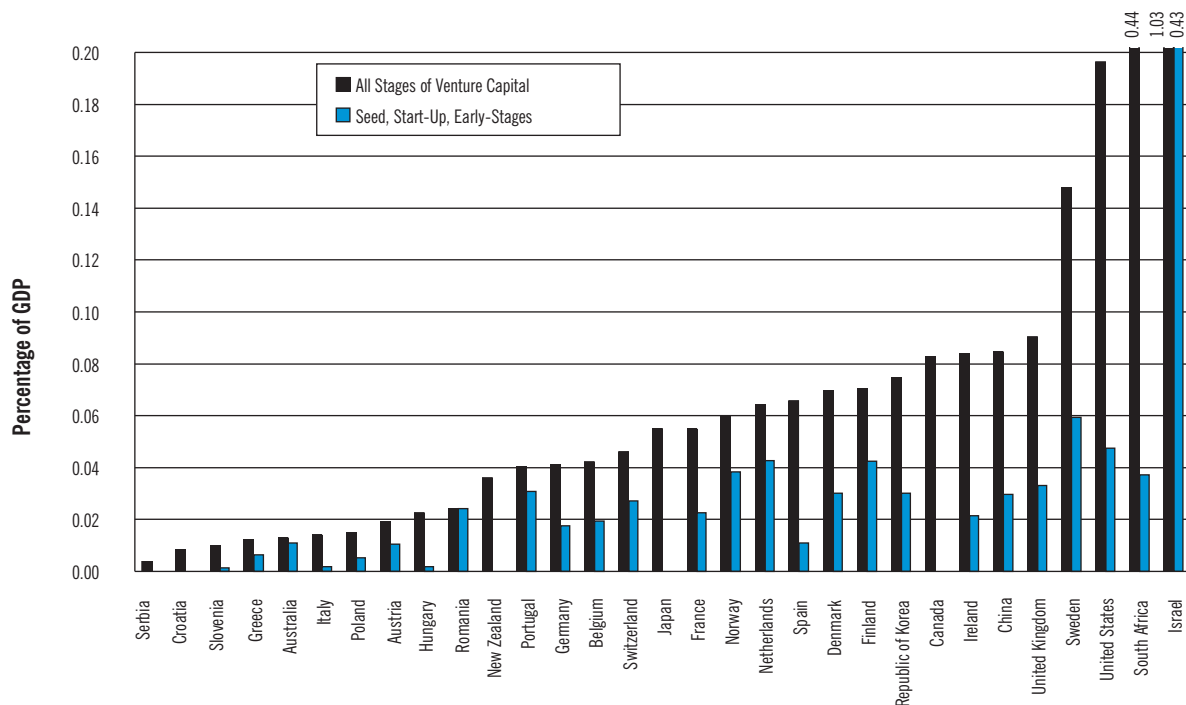
In recent years, around \$25 billion of venture capital, or 0.2% of GDP, has been invested annually in U.S. companies; about €7 billion in European companies, or approximately 0.05% of Europe's GDP; and about ¥250 billion in Japanese companies, or 0.05% of Japan's GDP. The total amount of venture capital investment^{xxxii} as a percentage of GDP in countries for which data are available for 2008 is shown in Figure 42. Israel is the most remarkable country on this chart: Its venture capital investment is slightly more than 1% of GDP. In some ways, venture capital in

Israel and the United States are similar because most of it is invested in high-technology companies; but Israel invests around five times more of its GDP than the United States does. South Africa, with venture investment at 0.44% of GDP, ranks second after Israel, but the bulk of it is invested the industries that are quite different from those in Israel and the United States. For instance, 52% of South African private equity investment in 2008 was in infrastructure, mining and natural resources, and retail sectors.

Venture capital investment amounted to 0.054% of Europe's GDP in 2008 with Sweden in the lead at 0.15% of GDP followed by the United Kingdom (0.090%), and Ireland (0.084%). European countries with the smallest amounts of venture investment in terms of GDP were Serbia (0.004%), Croatia (0.008%), and Slovenia (0.010%). Among the G7 nations, Japan, at 0.055% ranked higher than Italy (0.014%) and Germany (0.041%), equalled France (0.055%), but was lower than Canada (0.083%), the United Kingdom (0.09%), and the United States (0.20%).

Figure 42 shows how Venture Capital investments in various stages are linked to GDP levels. All stages of venture capital include investments in seed, start-up, early, expansion, and later stage ventures. European venture capital investment comprised 39.5% seed and start-up financings and 60.5% later stage ones in 2008; the comparable numbers in the United States were 24.2% seed, start-up, and early stage and 75.8% expansion and later stage. When it came to investments in young (seed, start-up, and early stage) companies in 2008, Israel (0.43% of GDP) led the countries for which we have data. The United States (0.05%) ranked second followed by the Netherlands, Finland, Norway and South Africa (0.04%). For Europe as a whole it was 0.02%, about half that of the United States.

Figure 42 – Venture Capital Investments as a Percentage of GDP, by Stage of the Company



Source: NVCA and EVCA, and national venture capital associations

Note: No data available on seed, start-up, early-stages for Canada, Croatia, Japan, New Zealand and Serbia.

In 2008, more venture capital was invested in seed, start-up, and early stage companies in the United States (\$6.86 million) than in Europe (\$3.95 million), but it was invested in 3,701 companies in Europe compared with only 1,462 in the United States. The explanation is that although U.S. venture capitalists made far fewer investments than their European counterparts in seed, start-up, and early stage companies, the average amount of each U.S. investment was far higher. On average, \$4.7 million was invested in each seed, start-up, and early stage deal in the United States compared with \$1.1 in Europe (nominal dollars). We do not have the amount per deal in Japan, Canada, and China but we have the amount of venture capital invested per company, which was \$0.97 million in Japan, \$3.35 million in Canada, and a whopping \$8.96 million in China. There are more deals than companies because some companies receive multiple rounds of venture capital in the same year, so the amount per deal in Japan, Canada, and China must have been a bit less than the amount per company.

It seems that venture capitalists in the United States are not only more selective than their counterparts in most other countries in picking portfolio companies, but they also invest far more money per deal and per company. This is true not only for seed, start-up,

and early stages of development, but for all stages of development. Perhaps it helps explain why U.S. venture-backed companies such as eBay, Amazon, and Google dominate their global markets.

China’s venture capitalists appear to be following a strategy similar to their U.S. counterparts as they invested mainly in technology companies, with \$8.96 million invested per company. China’s venture capital industry is growing fast. When adjusted for purchasing power, the amount invested in China in 2008 (PPP \$6.71 billion) already had nearly caught up with the amount invested in Europe (PPP \$7.69 billion). In a few years, the total amount invested annually in China will exceed the total invested in Europe because the amount of new venture capital committed in 2008 for future investments put China ahead of Europe and second to the United States, with \$8.62 billion committed in China, \$8.1 billion in Europe, and \$27.9 in the United States, all in nominal U.S. dollars.

Venture capital investment in 2008 was down 8% in the United States and 12.8% in Europe compared with 2007, but both were still higher than in 2006. However, venture capital investment in Japan increased 18.9% in 2008 over 2007; and 2008 was a record year for venture capital invested in China.

After the banking industry melted down, the amount of U.S. venture capital investment slumped 39% in the fourth quarter of 2008 compared with the same period in 2007, and continued to slump in 2009 with investment down 46% and the number of deals down 38% for the first three quarters compared with the same period of 2008. Comparable numbers for Europe, Japan, and China were not available as this report went to press.

Another major factor in the downturn of the U.S. venture capital market in 2008 was the lack of IPOs of venture-backed companies. In the second quarter of 2008 not one venture-backed company went public—the last time that happened was more than 30 years ago! And only six venture-backed companies went public in all of 2008. In general, when the IPO market is hot, venture capitalists are optimistic because they realize big capital gains when their portfolio companies go public; but when the IPO market is cold, venture capitalists are gloomy.

In the panorama of entrepreneurship, informal investment is far more important than venture capital. In all the GEM nations combined only 15,000 or so companies were funded with venture capital in 2008 compared with tens of millions that were funded with informal investment. The likelihood of raising venture capital is extremely remote. To illustrate, in the United States a person has a higher chance of winning a million dollars or more in a state lottery than getting venture capital to launch a new venture. In the short-term, informal investment has far more impact than venture capital on entrepreneurial activity. If all informal investment dried up, the effect on the economy would be immediate and disastrous. In contrast, a drop in venture capital investment has little short-term effect on the nationwide economy. But in the long-term, venture capital is vital for financing superstar companies with the potential to transform existing industries and in some instances launch new ones.

References

- Acs, Z.J. and Armington, C. (2006). *Entrepreneurship, Geography and American Economic Growth*. Cambridge, UK: Cambridge University Press.
- Acs, Z.J. and E. Amorós (2008). "Entrepreneurship and Competitiveness Dynamics in Latin America," *Small Business Economics*, 31(3), 305-322.
- Acs, Z.J. and L. Szerb (2009). "The Global Entrepreneurship Index (GEINDEX)," *Foundations and Trends® in Entrepreneurship*, 5(5), 341-435.
- Acs, Z.J. and A. Varga (2005). "Entrepreneurship, Agglomeration and Technological Change," *Small Business Economics*, 24(3), 323-343.
- Acs, Z.J. (2008). "Foundations of High Impact Entrepreneurship," *Foundations and Trends® in Entrepreneurship*, 4(6), 535-620.
- Acs, Z.J. (2006). "How is Entrepreneurship Good for Economic Growth?" *Innovations*, 1(1), 97-107.
- Audretsch, D.B. (2007). "Entrepreneurship Capital and Economic Growth," *Oxford Review of Economic Policy*, 23(1), 63-78.
- Autio, E. (2007). *Global Entrepreneurship Monitor 2007 Global Report on High Growth Entrepreneurship*. London, UK: London Business School and Babson Park, MA: Babson College.
- Baumol, W.J. (1990). "Entrepreneurship: Productive, Unproductive and Destructive," *Journal of Political Economy*, 98(5), 893-921.
- Baumol, W.J. (1993). *Entrepreneurship, Management, and the Structure of Payoffs*. Cambridge, MA: MIT Press.
- Bergmann, H. and R. Sternberg (2007). "The Changing Face of Entrepreneurship in Germany," *Small Business Economics*, 28(2), 205-221.
- Bosma, N.S. (2009). "*The Geography of Entrepreneurial Activity and Regional Economic Development. Multilevel Analyses for Dutch and European Regions.*" PhD diss., Utrecht University.
- Bosma, N., E. Stam and A.R.M. Wennekers (2010). "Intrapreneurship: An International Study," *EIM Research Report*, forthcoming, Zoetermeer, Netherlands: EIM.
- Bosma, N.S., Z.J. Acs, E. Autio, A. Coduras and J. Levie (2009). *Global Entrepreneurship Monitor 2008 Executive Report*. Babson Park, MA: Babson College, Santiago, Chile: Universidad del Desarrollo and London, UK: London Business School.
- Brock, D.D. (2008). *Social Entrepreneurship Teaching Resources Handbook*, Ashoka.
- Carree, M. and R.A. Thurik (2003). "The Impact of Entrepreneurship on Economic Growth." In *Handbook of Entrepreneurship Research*, edited by Z.J. Acs and D.B. Audretsch, 437-471. Boston, MA: Kluwer Academic Publishers.
- Gartner, W.B. (1985). "A Framework for Describing and Classifying the Phenomenon of New Venture Creation," *Academy of Management Review*, 10(4), 696-706.
- Gries, T. and W. Naude (2008). "Entrepreneurship and Structural Economic Transformation," *UNU-Wider Research Papers*. Helsinki.
- Henley, A. (2007). "Entrepreneurial Aspiration and Transition into Self-Employment: Evidence from British Longitudinal Data," *Entrepreneurship and Regional Development* 19(3), 245-280.
- Kao, J.J. (1991). *The Entrepreneurial Organization*. London, UK: Prentice Hall.
- Kihlstrom, R. E. and J.J. Laffont (1979). "A General Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion," *Journal of Political Economy*, 87, 719-49.
- Koellinger P. and R. Thurik (2009). "Entrepreneurship and the Business Cycle," *Tinbergen Institute Discussion Paper*, TI 2009-032/3, Erasmus School of Economics, Erasmus University Rotterdam, EIM Business and Policy Research, Zoetermeer, The Netherlands, Tinbergen Institute.
- Levie, J. and E. Autio (2008). "A Theoretical Grounding and Test of the GEM Model," *Small Business Economics*, 31(3), 235-263.
- Lucas, R.E., Jr. (1978). "On the Size Distribution of Business Firms," *Bell Journal of Economics*, 9, 508-523.
- Lumpkin, G.T. and G.G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance," *Academy of Management Review*, 21(1), 135-172.
- Mair, J. and I. Marti (2006). "Social Entrepreneurship Research: A Source of Explanation, Prediction and Delight," *Journal of World Business*, 41(1), 36-44.
- Parker, S.C. (2004). *The Economics of Self-Employment and Entrepreneurship*. Cambridge, UK: Cambridge University Press.

- Pinchot, G. (1987). "Innovation through Intrapreneuring," *Research Management* 13 (2), 14-19.
- Porter, M.E., J.J. Sachs and J. McArthur (2002). "Executive Summary: Competitiveness and Stages of Economic Development." In *The Global Competitiveness Report 2001-2002*, edited by M.E. Porter, J.J. Sachs, P.K. Cornelius, J.W. McArthur and K. Schwab, 16-25. New York, NY: Oxford University Press.
- Reynolds, P., N. Bosma, E. Autio, S. Hunt, N. De Bono, I. Servais, P. Lopez-Garcia, and N. Chin (2005). "Global Entrepreneurship Monitor: Data Collection Design and Implementation, 1998-2003," *Small Business Economics*, 24(3), 205-231.
- Schumpeter, J.A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Schumpeter, J.A. (1942). *Capitalism, Socialism and Democracy*. New York, NY: Harper and Row.
- Schwab, K. (2009). *Global Competitiveness Report 2009-2010*. World Economic Forum. Geneva, Switzerland. <http://www.weforum.org/pdf/GCR09/GCR20092010fullreport.pdf>
- Shane, S. (2003). *A General Theory of Entrepreneurship; The Individual-Opportunity Nexus*. Cheltenham, UK: Edward Elgar.
- Shane, S. and S. Venkataraman (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review*, 25, 217-226.
- Short, J.C., T.W. Moss and G.T. Lumpkin (2009). "Research in Social Entrepreneurship: Past Contributions and Future Opportunities," *Strategic Entrepreneurship Journal*, 3, 161-194.
- Sternberg, R. and A.R.M. Wennekers (2005). "The Determinants and Effects of New Business Creation Using Global Entrepreneurship Monitor Data," *Small Business Economics*, 24(3), 193-203.
- Van DeVen, A., H. Sapienza and J. Villanueva (2008). "Entrepreneurial Pursuits of Self- and Collective Interests," *Strategic Entrepreneurship Journal*, 1(3-4), 353-370.
- Van Stel, A.J., M.A. Carree and A.R. Thurik (2005). "The Effect of Entrepreneurial Activity on National Economic Growth," *Small Business Economics*, 24 (3), 311-321.
- Wennekers, A.R.M., A. van Stel, A.R. Thurik and P.D. Reynolds (2005). "Nascent Entrepreneurship and the Level of Economic Development," *Small Business Economics*, 24(3), 293-309.
- Zahra, S.A., E. Gedajlovic, D.O. Neubaum, and J.M. Shulman. 2009. "A Typology of Social Entrepreneurs: Motives, Search Processes and Ethical Challenges," *Journal of Business Venturing*, 24(5), 519-532.

Appendix 1 Characteristics GEM surveys

Table A1 GEM National Adult Population Surveys: 2009 Sample Size and Procedures

COUNTRY	COUNTRY ABBREVIATION	INTERVIEW PROCEDURE	SAMPLING METHOD	SAMPLE COUNT
Algeria	DZ	Face-to-Face	Random Walk Method	2000
Argentina	AR	Fixed-Line Phone	Random Dial from List	2008
Belgium	BE	Fixed-Line Phone and Mobile Phone	Random Digit Dialing (80% of sample) and a panel of exclusive mobile phone users (of which socio-demographics are already known), recruited by random sampling methods (20% of sample)	3989
Bosnia and Herzegovina	BA	Fixed-Line Phone	Random Dial from List	2000
Brazil	BR	Face-to-Face	Random choice of Census Tracts in every city, defined by census	2000
Chile	CL	Fixed-Line and Face-to-Face	Random selection of a phone number from a list; Random Walk Method, multi-staged	5000
China	CN	Face-to-Face	Random Walk Method, multi-staged	3608
Colombia	CO	Fixed-Line and Face-to-Face	Random Dial from List; Random sampling using Cartographic data	2055
Croatia	HR	Fixed-Line Phone	Random Dial from List	2000
Denmark	DK	Fixed-Line Phone and Mobile Phone	Random Dial from List	2012
Dominican Republic	DO	Face-to-Face	Random stratified, multi-staged	2007
Ecuador	EC	Face-to-Face	Cluster sampling using Census	2200
Finland	FI	Fixed-Line Phone and Mobile Phone	The sample is delivered by its supplier, which connects the necessary contact information (phone numbers) to the sample	2004
France	FR	Fixed-Line Phone and Mobile Phone	Random Dial from List	2019
Germany	DE	Fixed-Line Phone	Random Digit Dialing	6032
Greece	GR	Fixed-Line Phone	Random Digit Dialing and Random Dial from List	2000
Guatemala	GT	Face-to-Face	Random Walk Method, multi-staged	2208
Hong Kong	HK	Fixed-Line Phone	Random Dial from List	2000
Hungary	HU	Mobile Phone	Random Dial from List	2000
Iceland	IS	Fixed-Line Phone and Mobile Phone	Random Dial from List	2005
Iran	IR	Face-to-Face	Cluster sampling	3350
Israel	IL	Fixed-Line Phone	Random Dial from List	2073
Italy	IT	Fixed-Line Phone	Random Dial from List	3000
Jamaica	JM	Face-to-Face	Cluster sampling using Census	2012
Japan	JP	Fixed-Line Phone	Random Digit Dialing	1600
Jordan	JO	Face-to-Face	Random Walk Method	2006
Republic of Korea	KR	Fixed-Line Phone	Random Dial from List	2000
Latvia	LV	Fixed-Line Phone and Mobile Phone	Random Digit Dialing and Random Dial from List	2003
Lebanon	LB	Face-to-Face	Random Walk Method	2000
Malaysia	MY	Face-to-Face	Cluster sampling using Census	2002
Morocco	MO	Face-to-Face	Random Walk Method	1500
Netherlands	NL	Fixed-Line Phone	Random Dial from List	3003
Norway	NO	Fixed-Line Phone and Mobile Phone	Random Dial from List	2029
Panama	PA	Face-to-Face	Cluster sampling using Census	2000
Peru	PE	Face-to-Face	Random Sampling from List using jump interval (every 3 houses)	2021
Romania	RO	Face-to-Face	For all voting districts (strata also) - systematic sampling with equal probabilities from the electoral list of a selected voting district.	2093
Russia	RU	Face-to-Face	Random Walk Method	1695
Saudi Arabia	SA	Fixed-Line Phone and Mobile Phone	Random Digit Dialing	2000
Serbia	YU	Fixed-Line Phone	Random Dial from List	2300
Slovenia	SI	Fixed-Line Phone	Random Dial from List	3030
South Africa	ZA	Face-to-Face	Random Walk Method, multi-staged	3135
Spain	ES	Fixed-Line Phone and Mobile Phone	Random Digit Dialing (mobiles); Random Dial from List (fixed-line)	28888
Switzerland	SW	Fixed-Line Phone	Random Dial from List	2024
Syria	SY	Face-to-Face	Random Walk Method	2002
Kingdom of Tonga	TO	Face-to-Face	Cluster sampling	1184
Tunisia	TN	Fixed-Line Phone and Mobile Phone	Random Digit Dialing (mobiles); Random Dial from List (fixed-line)	2000
Uganda	UG	Face-to-Face	Random Walk Method, multi-staged	2095
United Arab Emirates	AE	Fixed-Line Phone and Mobile Phone	Random Dial from List	2056
United Kingdom	UK	Fixed-Line Phone	Random Digit Dialing (within region)	30003
United States	US	Fixed-Line Phone	Random Digit Dialing and Random Dial from List	5002

Appendix 2 Glossary of Main Measures and Terminology

MEASURE	DESCRIPTION
<i>Entrepreneurial Attitudes and Perceptions</i>	
Perceived Opportunities	Percentage of 18-64 who see good opportunities to start a firm in the area where they live
Perceived Capabilities	Percentage of 18-64 population who believe to have the required skills and knowledge to start a business
Fear of Failure Rate	Percentage of 18-64 population with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business
Entrepreneurial Intention	Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years
Entrepreneurship as Desirable Career Choice	Percentage of 18-64 population who agree with the statement that in their country, most people consider starting a business as a desirable career choice
High Status Successful Entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status
Media Attention for Entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, you will often see stories in the public media about successful new businesses
<i>Entrepreneurial Activity</i>	
Nascent Entrepreneurship Rate	Percentage of 18-64 population who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages, or any other payments to the owners for more than three months
New Business Ownership Rate	Percentage of 18-64 population who are currently a owner-manager of a new business, i.e., owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than three months, but not more than 42 months
Early-Stage Entrepreneurial Activity (TEA)	Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business (as defined above)
Established Business Ownership Rate	Percentage of 18-64 population who are currently owner-manager of an established business, i.e., owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months
Business Discontinuation Rate	Percentage of 18-64 population who have, in the past 12 months, discontinued a business, either by selling, shutting down, or otherwise discontinuing an owner/management relationship with the business Note: This is NOT a measure of business failure rates
Necessity-Driven Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in early-stage entrepreneurial activity (as defined above) who are involved in entrepreneurship because they had no other option for work
Improvement-Driven Opportunity Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in early-stage entrepreneurial activity (as defined above) who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income
<i>Entrepreneurial Aspirations</i>	
High-Growth Expectation Early-Stage Entrepreneurial Activity (HEA)	Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business (as defined above) and expect to employ at least 20 employees five years from now
High-Growth Expectation Early-Stage Entrepreneurial Activity: Relative Prevalence	Percentage of early-stage entrepreneurs (as defined above) who expect to employ at least 20 employees five years from now Weak measure: expects at least <i>five</i> employees five years from now
New Product-Market Oriented Early-Stage Entrepreneurial Activity: Relative Prevalence	Percentage of early-stage entrepreneurs (as defined above) who indicate that their product or service is new to at least some customers and indicate that not many businesses offer the same product or service Weak measure: product is new or not many businesses offer the same product or service
International Orientation Entrepreneurial Activity	Percentage of early-stage entrepreneurs (as defined above) with more than 25% of the customers coming from other countries Weak measure: <i>more than 1 percent</i> of customers coming from other countries

GEM National Teams 2009

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Argentina	Center for Entrepreneurship, IAE Business School Universidad Austral	Silvia Torres Carbonell Leticia Arcucci Juan Martin Rodriguez	Center for Entrepreneurship, IAE Business School, Universidad Austral Banco Santander Rio Subsecretaría de Desarrollo Económico, Ministerio de Desarrollo Económico - Gobierno de la Ciudad de Buenos Aires Prosperar, Agencia Nacional de Desarrollo de Inversiones	MORI Argentina
Belgium	Vlerick Leuven Gent Management School	Jan Lepoutre Hans Crijns Miguel Meuleman Olivier Tilleuil	Policy Research Centre Entrepreneurship and International Entrepreneurship, Flemish Government	TNS Dimarso
Bosnia and Herzegovina	Entrepreneurship Development Centre Tuzla (in partnership with University of Tuzla)	Bahrija Umihanić Rasim Tulumović Boris Ćurković Senad Fazlović Admir Nuković Esmir Spahić Slaana Simić Mirela Arifović	Municipality of Tuzla Government of Tuzla Canton Foundation of Tuzla Community	PULS BH d.o.o. Sarajevo
Brazil	IBQP - Instituto Brasileiro da Qualidade e Produtividade	Simara Maria S. S. Greco Paulo Alberto Bastos Junior Joana Paula Machado Rodrigo G. M. Silvestre Carlos Artur Krüger Passos Júlio César Felix	Instituto Brasileiro da Qualidade e Produtividade – IBQP Serviço Brasileiro de Apoio às Micro e Pequenas Empresas – SEBRAE Serviço Nacional de Aprendizagem Industrial - SENAI / PR Serviço Social da Indústria - SESI / PR	Bonilha Comunicação e Marketing S/C Ltda.
Chile	Universidad del Desarrollo Universidad Adolfo Ibáñez	José Ernesto Amorós Daniela Ortega Germán Echeopar Carla Bustamante	InnovaChile de CORFO ICARE	Opina S.A.
Regional Teams Arica y Parinacota	Regional Universitos Univ. de Tarapacá	Regional Members Vesna Karmelic Roberto Gamboa Aguilar Hernando Bustos Andreu Dante Choque Cáceres	Área Emprendimiento, Liderazgo y TIC's de la Universidad de Tarapacá	
Antofagasta	Univ. Católica del Norte	Gianni Romaní Miguel Atienza	Universidad Católica del Norte, DGIP Gobierno Regional, Agencia Regional Desarrollo Productivo.	
Coquimbo	Univ. Católica del Norte	Karla Soria	Universidad Católica del Norte, DGIP Gobierno Regional, Agencia Regional Desarrollo Productivo	
Valparaíso	Univ. Técnica Federico Santa María	Cristóbal Fernández Robin Jorge Cea Valencia Juan Tapia	Departamento de Industrias y Centro de Ingeniería de Mercados, CIMER, de la Univ. Técnica Federico Santa María El Mercurio de Valparaíso	
Bío-Bío	Univ. del Desarrollo	Carlos Smith José Ernesto Amorós Daniela Ortega	UDD-Facultad de Economía y Negocios	
Araucanía	Univ. de la Frontera -INCUBATEC	Carlos Isaacs Bornand Claudina Uribe Bórquez Franklin Valdebenito	Dirección de Innovación y Transferencia Tecnológica de la Universidad de La Frontera	

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
China	Tsinghua University SEM	Jian Gao Lan Qin	SEM Tsinghua University	SINOTRUST International Information & Consulting (Beijing) Co., Ltd.
Colombia	Universidad de los Andes	Rafael Vesga Lina Devis Raúl Fernando Quiroga	Universidad de los Andes	Centro Nacional de Consultoría
	Universidad ICESI	Rodrigo Varela V. Luis Miguel Alvarez Alba Tatiana Peña	Universidad ICESI	
	Universidad del Norte	Liyis Gomez Piedad Martinez Carazo	Universidad del Norte	
	Pontificia Universidad Javeriana Cali	Fernando Pereira Alberto Arias	Pontificia Universidad Javeriana Cali Fundacion Corona	
Croatia	J.J. Strossmayer University in Osijek	Slavica Singer Natasa Sarlija Sanja Pfeifer Djula Borozan Suncica Oberman Peterka	Ministry of Economy, Labour and Entrepreneurship SME Policy Centre – CEPOR, Zagreb J.J. Strossmayer University in Osijek – Faculty of Economics, Osijek	Puls, d.o.o., Zagreb
Denmark	University of Southern Denmark	Thomas Schøtt Torben Bager Hannes Ottossen Lars Hulgård Kim Klyver Kent Wickstrøm Jensen Roger Spear Linda Andersen Majbritt Rostgaard Evald Suna Løve Nielsen	IDEA – International Danish Entrepreneurship Academy	Institute for Business Cycle Analysis
			RUC – Roskilde University Centre, Center for Social Entrepreneurship IIP	
Dominican Republic	Pontificia Universidad Católica Madre y Maestra (PUCMM)	Guillermo van der Linde Maribel K. Justo Alina Bello	Grupo Vicini International Financial Centre of the Americas Consejo Nacional de Competitividad	Gallup República Dominicana
Ecuador	Escuela Superior Politécnica del Litoral (ESPOL)- ESPAE Graduate School of Management	Virginia Lasio Ma. Elizabeth Arteaga Guido Caicedo	Escuela Superior Politécnica del Litoral (ESPOL)	Survey Data
Finland	Turku School of Economics	Anne Kovalainen Jarna Heinonen Tommi Pukkinen Pekka Stenholm	Ministry of Employment and the Economy Ministry of Education Turku School of Economics	Taloustutkimus Oy
France	EMLYON Business School	Olivier Torres Danielle Rousson	Caisse des Depots	CSA
Germany	Leibniz University of Hannover Federal Employment Agency (BA) – Institute for Employment Research (IAB)	Rolf Sternberg Udo Brixy Christian Hundt	Federal Employment Agency (BA) – Institute for Employment Research (IAB)	Zentrum fuer Evaluation und Methoden (ZEM), Bonn
Greece	Foundation for Economic and Industrial Research (IOBE)	Stavros Ioannides Aggelos Tsakanikas Stelina Chatzichristou Evaggelia Valavanioti	Foundation for Economic and Industrial Research (IOBE)	Datapower SA

GEM National Teams 2009

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Guatemala	Francisco Marroquín University	Hugo Maul Jershem David Casasola Lisardo Bolaños Georgina Tunarosa	Francisco Marroquín University	Pablo Pastor
Hong Kong	The Chinese University of Hong Kong	Hugh Thomas Kevin Au Louis Leung Mingles Tsoi Bernard Suen Wilton Chau Florence Ho Rosanna Lo Le Zheng Wang Weili	Shenzhen Academy of Social Sciences Hong Kong Business Intermediary Co. Ltd.	Consumer Search
Hungary	University of Pécs, Faculty of Business and Economics	László Szerb Attila Varga József Ulbert Zoltan J. Acs Siri Terjesen Gábor Márkus Péter Szirmai Attila Petheó Katalin Szakács	National Office for Research and Technology George Mason University University of Pécs, Faculty of Business and Economics	Szocio-Gráf Piacés Közvélemény-kutató Intézet
Iceland	Reykjavik University	Rögnvaldur Sæmundsson Silja Björk Baldursdóttir	Reykjavik University	Capacent Gallup
Iran	University of Tehran	Abbas Bazargan Caro Lucas Nezameddin Faghil A. A. Moosavi-Movahedi Leyla Sarfaraz A. Kordnaeij Jahangir Yadollahi Farsi M. Ahamadpour Daryani S. Mostafa Razavi Mohammad Reza Zali Mohammad Reza Sepehri	Iran's Ministry of Labour and Social Affairs Iran's Labour and Social Security Institute (LSSI)	Dr. Mohammad Reza Zali
Israel	The Ira Center of Business, Technology and Society, Ben Gurion University of the Negev	Ehud Menipaz Yoash Avrahami Miri Lerner Yossi Hadad Dov Barak	The Ira Center for Business, Technology & Society, Ben Gurion University of the Negev Sami Shamoon College of Engineering Rotem Park NGO for Entrepreneurship Encouragement	The Brandman Institute
Italy	EntER - Bocconi University	Guido Corbetta Giovanni Valentini	Atradius Ernst & Young	Target Research
Jamaica	University of Technology, Jamaica	Girjanauth Boodraj Mauvalyn Bowen Joan Lawla Marcia McPherson-Edwards Vanetta Skeete Horace Williams	Faculty of Business and Management, University of Technology, Jamaica	Cashmere International Limited
Japan	Keio University Musashi University Shobi University	Takehiko Isobe Noriyuki Takahashi Tsuneo Yahagi	Venture Enterprise Center Ministry of Economy, Trade and Industry	Social Survey Research Information Co., Ltd (SSRI)
Republic of Korea	Jinju National University	Sung-sik Bahn Sang-pyo Kim Kyoung-mo Song Dong-whan Cho Jong-hae Park Min-Seok Cha	Small and Medium Business Administration (SMBA)	Hankook Research Co.

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Latvia	The TeliaSonera Institute at the Stockholm School of Economics in Riga	Olga Rastrigina Alf Vanags Anders Paalzow Vyacheslav Dombrovsky Arnis Sauka	TeliaSonera AB	SKDS
Malaysia	University Tun Abdul Razak	Siri Roland Xavier Dewi Amat Sapuan Ainon Jauhariah Abu Samah Leilanie Mohd Nor Mohar Yusof	University Tun Abdul Razak	Rehanstat
Middle East and North Africa	International Development Research Centre (IDRC)	Lois Stevenson Susan Joeke Edgard Rodriquez Abderrahmane Abedou Ahmed Bouyacoub Hala Hattab Matthias Hühn Tony Feghali Yusuf Sidani Ghassan Omet Adel Bino Mohamed Derrabi Lamia Dandoune Taha Ahmed Al Fusail Abdul Karim Sayaghi Yousef Daoud Tareq Sadeq Alaa Tartir Ruba Adil. Shanti	International Development Research Centre (IDRC)	Nielsen
Netherlands	EIM Business and Policy Research	Jolanda Hessels Sander Wennekers Chantal Hartog Niels Bosma Roy Thurik André van Stel Ingrid Verheul Philipp Koellinger Peter van der Zwan	Dutch Ministry of Economic Affairs	Stratus
Norway	Bodo Graduate School of Business	Lars Kolvereid Erlend Bullvaag Bjorn Willy Aamo Eirik Pedersen Terje Mathisen	Ministry of Trade and Industry Innovation Norway Kunnskapsparken Bodo AS, Center for Innovation and Entrepreneurship Kunnskapsfondet Nordland AS Bodo Graduate School of Business	TNS Gallup
Panama	Acelerador de Empresas de Ciudad del Saber	Federico Fernandez Manuel Lorenzo	Cámara de Comercio e Industrias de Panamá Cable & Wireless Panamá	IPSOS
	IESA Panamá – Fundación de Estudios Avanzados de Gerencia	Manuel Arrocha Michael Penfold	APC - Asociación Panameña de Crédito Almacenajes, S.A. Banco Interamericano de Desarrollo	
Peru	Universidad ESAN	Jaime Serida Oswaldo Morales Keiko Nakamatsu Liliana Uehara	Universidad ESAN	Imasen

GEM National Teams 2009

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Romania	Faculty of Economics and Business Administration, Babeş-Bolyai University	Györfy Lehel-Zoltán Matîş Dumitru Nagy Ágnes Pete Ştefan Szerb László Mircea Comşa Ilieş Liviu Benyovszki Annamária Petru Tünde Petra Juhász Jácint Matîş Eugenia Nagy Zsuzsánna-Ágnes Alina Solovă stru Mircea Solovă stru	Asociația Pro Oeconomica Babeş-Bolyai University, Faculty Of Economics And Business Administration OTP Bank Romania SA East Consulting SRL Lacu Roşu SC Nova Construct SRL Savilcom SRL	Metro Media Transilvania
Russia	Saint Petersburg Team Graduate School of Management, Saint Petersburg Moscow Team State University - Higher School of Economics, Moscow	Olga Verhovskaya Maria Dorokhina Alexander Chepureno Olga Obraztsova Maria Gabelko Tatiana Alimova Julia Filatova Kate Murzacheva	Graduate School of Management at Saint Petersburg State University State University - Higher School of Economics Ministry of Economic Development of Russian Federation	Levada-Center
Saudi Arabia	The National Entrepreneurship Center Alfaisal University	Munira A. Al-Ghamdi Maher Alodan Faisal A. Al-Kadi Norman Wright Sulaiman AL Sakran Mohammad S Khorsheed	The Centennial Fund/National Entrepreneurship Center	IPSOS
Serbia	University of Novi Sad - The Faculty of Economics Subotica	Dusan Bobera Bozidar Lekovic Nenad Vunjak Pere Tumbas Sasa Bosnjak Slobodan Maric	Executive Council of Vojvodina Province - Department for Economy	Marketing Agency "Drdrazen" d.o.o. Subotica
Slovenia	Institute for Entrepreneurship and Small Business Management, Faculty of Economics and Business, University of Maribor	Miroslav Rebernik Polona Tominc Ksenja Pušnik Katja Crnogaj	Ministry of the Economy Slovenian Research Agency Finance – Slovenian Business Daily	RM PLUS
South Africa	The UCT Centre for Innovation and Entrepreneurship, Graduate School of Business, University of Cape Town	Mike Herrington Jacqui Kew Penny Kew	Swiss South African Cooperation Initiative Standard Bank of South Africa Small Enterprise Development Agency	Nielsen South Africa
Spain	Instituto de Empresa	Ignacio de la Vega Alicia Coduras Isabel Gonzalez Cristina Cruz Rachida Justo	DGPYMES Fundación Cultural Banesto Fundación Incyde IE Business School	Instituto Opinómetro S.L.
Regional Teams	Regional Universities	Regional Team Directors		
Andalucía	Cádiz	José Ruiz Navarro	Junta de Andalucía Unicaja	
Asturias	Universidad De Oviedo	Juan Ventura Victoria	Gob. del Principado de Asturias	
Aragón	Universidad de Zaragoza	Lucio Fuentelsaz	Gob. de Aragón Dpto. Industria, Comercio y Turismo Fundación Emprender en Aragón Instituto Aragones Fomento Consejo Aragones Cámaras de Comercio	

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Canary Islands	Las Palmas & La Laguna Universidad	Rosa M. Batista Canino	Caja Canarias Gobierno de Canarias, Promoción Económica y Servicio de Empleo Fondo Social Europeo Cámara Comercio, Industria y Navegación de las Palmas Cabildo de Gran Canaria	
Cantabria	Universidad De Cantabria Cátedra Pyme de la Universidad de Cantabria	Fco. Javier Martínez	Santander Gov. Regional Cantabria Consejería de Economía y Hacienda Grupo Sordecán Fundación UCEIF	
Castilla y Leon	Universidad De León	Mariano Nieto Antolín	Junta Castilla y León ADE Inversiones y Servicios Centro Europeos de Empresas e Innovación de Castilla y León Universidad de León	
Castilla la Mancha	Universidad Castilla la Mancha	Miguel Ángel Galindo	Fundación Rayet Parque Científico de Albacete Caja Castilla La Mancha IMPEFE Ayuntamiento de Albacete Universidad Castilla la Mancha Diputación Provincial Allbacete SEPECAM UGT (Iniciativas Futuro)	
Catalonia	Autónoma de Barcelona	Carlos Guallarte	Diputación de Barcelona Departamento de Trabajo Generalitat de Catalunya	
C. Valenciana	Universidad Miguel Hernández	José M ^a Gómez Gras	Air Nostrum IMPIVA	
Extremadura	Fundación Xavier de Salas Universidad De Extremadura	Ricardo Hernández	Junta Extremadura Universidad Extremadura Central Nuclear Almaraz Sodiex, Sofiex Arram Consultores, CCOO U.R Extremadura, Urvicasa Caja Rural de Extremadura, Palicrisa Fundación Academica Europea de Yuste Grupo Alfonso Gallardo Infostock Europa Extremadura Cámara Comercio Badajoz y Cámara Comercio Cáceres UGT Extremadura, El Periódico Extremadura, Hoy Diario de Extremadura, García Plata y Asociados, Quesería Pérez Andrada, Fomento Emprendedores	
Galicia	CEEI Galicia CEG Grupo de investigación "Métodos y Gestión Empresas" de la Universidad Santiago Compostela Dirección Xeral do Emprego de la Xunta de Galicia	Araceli de Lucas	Confederación Empresarios Galicia (CEG) CEEI Galicia SA (BIC Galicia) Grupo de investigación "Métodos y Gestión Empresas" de la Universidad Santiago Compostela	
Madrid	Autónoma de Madrid	Eduardo Bueno	IMADE Fundación General Universidad Autónoma de Madrid	

GEM National Teams 2009

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	APS VENDOR
Murcia	Universidad de Murcia	Antonio Aragón	Fundación Caja Murcia Consejería de Economía, Empresa e Innovación Instituto Fomento región de Murcia. Centro Europeo de Empresas e innovación de Murcia Universidad Murcia	
Navarra	Universidad Pública de Navarra Centro Europeo de Empresas e Innovación de Navarra Servicio Navarro de Empleo	Miren Sanz	Gob. Navarra, Servicio Navarro de Empleo	
Basque Country	Orkestra Universidad Deusto Universidad Basque Country Universidad Mondragón	Iñaki Peña	Eusko Ikaskuntza SPRI, Gobierno Vasco Diputación Foral Álava Diputación Foral Bizkaia Diputación Foral Gipuzkoa Fundación Emilio Soldevilla	
Ceuta	Fundación Escuela de Negocios de Andalucía	Lázaro Rodríguez	PROCESA Fundación Escuela Negocios Andalucía	
Melilla	Consejería de Economía, Empleo y Turismo Fundación Escuela de Negocios de Andalucía	Lázaro Rodríguez	Consejería de Economía, Empleo y Turismo Fundación Escuela de Negocios Andalucía	
Switzerland	School of Business Administration (SBA Fribourg)	Rico J. Baldegger Andreas A. Brühlhart Mathias J. Rossi Etienne Rumo Patrick E. Schüffel Thomas Straub Muriel Berger	KTI /CTI	DemoSCOPE
Syria	Syria Trust for Development Syrian Young Entrepreneurs Association (SYEA) University of Kalamoun	Majd Haddad Nader Kabbani Yamama Al-Oraibi Leen Al Habash Abdulsalam Haykal Hani Tarabichi	IDRC Syrian Young Entrepreneurs Association (SYEA) Syria Trust for Development	Nielsen / Acumen
Kingdom of Tonga	UNITEC	Robert Davis Malama Solomona Asoka Gunaratne Stephen Cox Judith King Howard Frederick Stephen Haslett Tania Wolfgramm	AusAID	Creatrix International / Kaha'uTonga
Tunisia	Institut des Hautes Etudes Commerciales - Sousse	Faysal Mansouri Lotfi Belkacem	GTZ – Programme d'Appui à l'Entrepreneuriat et à l'Innovation	Optima
Uganda	Makerere University Business School (MUBS)	Arthur Sserwanga Rebecca Namatovu-Dawa Sarah Kyejusa Laura Orobia Peter Rosa Waswa Balunywa	Makerere University Business School Bank of Uganda	Makerere University Business School

TEAM	INSTITUTION	NATIONAL TEAM MEMBERS	FINANCIAL SPONSORS	AFS VENDOR
United Arab Emirates	Zayed University	Declan McCrohan Murat Erogul Nico Vellinga Qingia Tong Maijha Qurwash	Mohammed Bin Rashid Establishment for SME Development Khalifa Fund to Support and Develop Small and Medium Enterprises	IPSOS
United Kingdom	Aston University	Jonathan Levie Mark Hart Erkko Autio Liz Blackford Michael Anyadike-Danes Alpheus Tihomole Aloña Martiarena Mohammed Shamsul Kharim Yasser Bhatti	Department of Business, Innovation and Skills English RDAs Invest NI Welsh Assembly Government Enterprise UK PRIME Birmingham City Council Belfast City Council Enterprise Northern Ireland Hunter Centre for Entrepreneurship, University of Strathclyde	IFF Research Ltd.
United States	Babson College	Julio de Castro Abdul Ali I. Elaine Allen Bill Bygrave Candida Brush Marcia Cole Lisa DiCarlo Julian Lange Monica Dean Joseph Onochie Ivory Phinisee Edward Rogoff Al Suhu	Babson College Baruch College	OpinionSearch Inc.
Uruguay	University of Montevideo	Leonardo Veiga Fernando Borraz Pablo Regent Adrián Edelman Alvaro Cristiani Cecilia Gomeza	University of Montevideo	Equipos Mori
Venezuela	IESA – Centro de Emprendedores	Federico Fernandez Rebeca Vidal Aramis Rodríguez Nunzia Auletta	Mercantil Servicios Financieros Fundacion Iesa Petrobras Energía Venezuela	Datanalisis
GEM Global Coordination Team		Kristie Seawright Niels Bosma Mick Hancock Alicia Coduras Marcia Cole Yana Litovsky Chris Aylett Jackline Odoch Jeff Seaman		

About the Authors

NIELS BOSMA

Niels Bosma is a member of the Urban and Regional research centre Utrecht, section of Economic Geography, Utrecht University. He has been involved in the GEM project since 2001 and is Research Director for GERA, the umbrella organization that hosts the GEM project. He has a PhD in Economic Geography from Utrecht University and a MSc in Econometrics from the University of Groningen. He has published several articles in entrepreneurship and economic geography journals. His new GEM-based book entitled *The Geography of Entrepreneurial Activity and Regional Development; A Multilevel Approach* will be forthcoming by the end of 2010.

JONATHAN LEVIE

Jonathan Levie is a reader at the Hunter Centre for Entrepreneurship at the University of Strathclyde, Glasgow, United Kingdom, where he was Director from 2000 to 2005. He was previously Associate Coordinator of Global Entrepreneurship Monitor, based at London Business School. He has been a member of the United Kingdom GEM team since its inception in 1999. In 2009, he was elected to the board of the Global Entrepreneurship Research Association as a national team representative. He has a PhD from London Business School and a MSc and BSc from the National University of Ireland. He has been teaching and researching entrepreneurship for over 25 years and has had articles accepted for publication in *Entrepreneurship Theory & Practice*, *Small Business Economics*, *Family Business Review*, and *Journal of Economic Issues*, among others.

WILLIAM D. BYGRAVE

William Bygrave, Professor Emeritus and a Trustee at Babson College, is a co-founder of GEM in 1997. He is co-editor/author of *The Portable MBA in Entrepreneurship* (4th Edition, 2009), *Entrepreneurship* (2007), *The Venture Capital Handbook* (1999), *The Portable MBA in Entrepreneurship Case Studies*; and co-editor of *Realizing Enterprise Value*; he was lead editor of *Frontiers of Entrepreneurship Research* for six years; and was an editor of *Entrepreneurship Theory and Practice*. He has served on the review boards of the three leading entrepreneurship journals.

RACHIDA JUSTO

Rachida Justo is an Assistant Professor at Instituto de Empresa Business School, where she teaches entrepreneurial management and social entrepreneurship. Her work has been published in *International Journal of Entrepreneurship and Small Business*, *Journal of Research in Marketing and Entrepreneurship*, *Frontiers of Entrepreneurship Research*, as well as other publications and in several books and book chapters. Her research interests focus currently on women entrepreneurship and social entrepreneurship.

JAN LEPOUTRE

Jan Lepoutre is a post-doctoral researcher at Vlerick Leuven Gent Management School, where he teaches and does research on entrepreneurship and sustainable business. He has published several articles in *Journal of Business Ethics* and *Journal of Cleaner Production*. Current research interests are focused on the psychological and institutional antecedents of entrepreneurial initiatives that promote social and economic development, such as the effects of education on entrepreneurship and the institutional dynamics of environmental strategy development.

SIRI TERJESEN

Siri Terjesen is an Assistant Professor of Management and Entrepreneurship at the Kelley School of Business at Indiana University and Visiting Research Fellow at the Max Planck Institute of Economics. Siri has published in leading journals in entrepreneurship and strategy and is a co-author of *Strategic Management: Logic and Action*. Her research has been featured in *US News & World Report*, *Christian Science Monitor*, *Times* (UK), *CNBC Europe*, *San Francisco Chronicle*, *Entrepreneur.com*, and other leading media.

GEM Sponsors and Contacts



GERA AND GEM

The Global Entrepreneurship Research Association (GERA) is, for formal constitutional and regulatory purposes, the umbrella organization that hosts the GEM project. GERA is an association formed of Babson College, London Business School, and representatives of the Association of GEM national teams.

The GEM program is a major initiative aimed at describing and analyzing entrepreneurial processes within a wide range of countries. The program has three main objectives:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors leading to appropriate levels of entrepreneurship
- To suggest policies that may enhance the national level of entrepreneurial activity.

New developments, and all global, national and special topic reports, as well as data, can be found at www.gemconsortium.org.



BABSON COLLEGE

Babson College in Wellesley, Massachusetts, USA, is recognized internationally as a leader in entrepreneurial management education. Babson College is the Leading Sponsoring Institution and a Founding Institution. Babson grants BS degrees through its innovative undergraduate program, and grants MBA and custom MS and MBA degrees through the F.W. Olin Graduate School of Business at Babson College. Babson Executive Education offers executive development programs to experienced managers worldwide. For information, visit www.babson.edu.



UNIVERSIDAD DEL DESARROLLO

Universidad Del Desarrollo, UDD, Educational project was driven by outstanding leaders of the Chilean public and business scene and is today one of the top three prestigious private universities in Chile. Success came quickly, after just twenty years, its rapid growth has become an expression of the University's main facet: Entrepreneurship. UDD MBA is rated one of the best in Latin America and also one of the best in Entrepreneurship education, according to *AméricaEconomía* magazine, and achievement that once again represents the "entrepreneurial" seal that is embedded in the spirit of the University. For more information visit www.udd.cl.



REYKJAVIK UNIVERSITY

Reykjavik University (RU) is a young and vibrant university located in the heart of Reykjavik, the capital of Iceland. At RU we are building an internationally recognized university known for academic strength in selected areas, innovative teaching methods, and a strong focus on innovation and entrepreneurship. For more information, visit www.reykjavikuniversity.is.

CONTACTS

For more information on this report, contact the GEM Research Director, Niels Bosma at nbosma@gemconsortium.org. To download copies of the GEM Global Report(s), GEM National Team Reports, and to access select data sets, please visit the GEM Web site at www.gemconsortium.org. Nations not currently represented in the GEM Consortium may express interest in joining and request additional information by e-mailing the Executive Director, Kristie Seawright at kseawright@gemconsortium.org.

ⁱ These phases coincide with the classification by the most recent Global Competitiveness Report into factor driven, efficiency-driven and innovation-driven economies. See Schwab (2009).

ⁱⁱ Evidence is documented by e.g. Carree and Thurik (2003), Acs (2006), Audretsch, (2007).

ⁱⁱⁱ See Wennekers, Van Stel, Thurik, and Reynolds (2005), and Gries & Naude (2008).

^{iv} In the construction of the annual Global Competitiveness Index, weights are used in accordance with these notions. Thus, for factor-driven economies the state of basic requirements adds most to the overall index.-

^v See e.g., Gartner (1986) and Shane and Venkataraman (2000).

^{vi} See www.doingbusiness.org.

^{vii} Most new businesses do not survive beyond three or four years. This is the main rationale for the choice of 42 months as the cut-off period. However, the choice of 42 months also reflects operational issues. According to Reynolds et al., “The relevant interview question asked only the year when salary and wage payments were initiated and most surveys occurred in the summer months; so the alternatives for choosing a “new firm age” were 1.5 years, 2.5 years, 3.5 years, etc. The shortest time frame that would provide enough cases for stable prevalence rates with a total sample of 2,000 seemed to occur at 3.5 years. Conceptually, any time period under five years seemed satisfactory so this age was considered an appropriate trade-off between conceptual and operational considerations in the early years of the project. There has been no compelling reason to adjust this criteria and a desire for a stable time series has led to its continued use. It should be considered a procedure to capture existing firms less than three or four years old.” (Reynolds, P.D., N.S. Bosma, E. Autio, et al. (2005))

^{viii} The sample sizes in the GEM 2009 study typically range from 2,000 to 3,500. Notable exceptions are Spain (29,000 respondents) and the United Kingdom (30,000 respondents). For Morocco a survey was administered; the final sample size was 1,500.

^{ix} This report focuses on country comparisons. For many countries, regional differences in entrepreneurial behavior are also significant. This has been documented for Europe, using GEM data, by Bosma (2009) and for Germany by Bergmann and Sternberg (2007). The relationships described in this section are also applicable to regional differences.

^x For literature on opportunity costs of entrepreneurship see e.g., Lucas (1978), Shane and Venkataraman (2000) and Parker (2005).

^{xi} In the Global Competitiveness Reports the countries are classified in three major phases and two ‘transition’ phases. To create three country groups, we assigned countries in a transition phase to the major phase they were emerging from.

^{xii} “Statistical significance” refers to a calculation of where the range within which the average value of 95 out of 100 respondents of the survey would be expected to lie. This range is shown in Figure 4 by vertical bars on either side of each data point. If the ‘confidence intervals’ (denoted by the vertical bars) of two national TEA rates do not overlap, the difference between the TEA rates is not statistically significant at the 0.05 level. Reference in this report to significant differences implies statistically significant difference at the 0.05 level.

^{xiii} The R-squared of the fitted curve (third order polynomial) equals 0.39.

^{xiv} More detailed information can be found in the special GEM reports on Women and Entrepreneurship, available on the GEM website (www.gemconsortium.org)

^{xv} In total, we had 847,033 adult-population interviews for the combined 2004 – 2009 data set.

^{xvi} We required a minimum sample of 5,000 adults between 18-64 years per country over the combined set of 2003-2009 data. An additional requirement was that at least 100 early-stage entrepreneurs were identified in the same period.

^{xvii} It should be noted that Canada and Australia did not participate in 2008 and 2009.

^{xviii} An over-sample for the Shenzhen region was excluded from China’s data because of its anomalous nature.

^{xix} The same relationship has also been found in regression analyses, controlling for individual-level and regional-level determinants of high-expectation entrepreneurship, see Bosma (2009).

^{xx} Examples of regulations to hiring are rules favoring disadvantaged groups, conditions for using temporary or fixed-term contracts and training requirements. Example of regulations that have to do with firing include redundancy procedures, mandated prenotification periods and severance payments, special requirements for collective dismissals and short-time work schemes.

^{xxi} In general world cities exhibit higher aspiration levels in early-stage entrepreneurial activity in Comparison to the rest of the country, see Acs and colleagues 2008.

^{xxii} See e.g. Kao, 1991; Lumpkin and Dess, 1996; Shane, 2003

^{xxiii} This definition is based on e.g., Pinchot, 1987; Lumpkin and Dess, 1996

^{xxiv} The experts were selected according to a strict protocol. Expertise in each EFC was represented by at least one entrepreneur, at least two suppliers of the EFC, and at least one observer, such as an academic or journalist with specific expertise in that area.

^{xxv} To this end the time series have been smoothed, giving the results in year of reference a weight of 50% and the results in (t-1) and (t+1) a weight of 25%.

^{xxvi} Because these questions have been included in 2009 for the first time, comparison with previous years is not possible.

^{xxvii} Data from Denmark, Kingdom of Tonga and Yemen were collected but have not been included. Denmark collected the data using a different approach, making the results insufficiently comparable to other countries. Kingdom of Tonga and Yemen returned high nascent social entrepreneurial activity rate and were clear outliers, probably because of unique socio/political/cultural heritages. These countries were therefore not included in this analysis.

^{xxviii} In some countries, the wording of this definition was changed slightly, for example by omitting the phrase “owning” because this would not make sense in that country context.

^{xxix} GDP per Capita values for 2008 are drawn from the IMF database

^{xxx} EVCA. Public and Regulatory Policy. Key Facts and Figures. www.evca.com

^{xxxi} Venture Impact: The Importance of Venture Capital Backed Companies to the U.S. Economy. 5th Edition, 2009. NVCA. www.nvca.org

^{xxxii} Venture capital data used in this report were gathered from data published in hard copy and online by national venture capital associations. The principal source of U.S. data was National Venture Capital Association Yearbook 2009, which included statistics from the PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report based on data from Thomson Reuters. The principal source of European data was the 2009 EVCA Yearbook: Pan-European Private Equity & Venture Capital Activity Report produced for EVCA by PEREP Analytics.