



GLOBAL ENTREPRENEURSHIP MONITOR

*2007 Executive Report*



# Global Entrepreneurship Monitor

## 2007 Executive Report

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

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# Executive Summary

This report constitutes the ninth annual assessment and review of entrepreneurial activity and entrepreneurial perceptions in countries participating in the GEM project. Since the first report was published in 1999 by scholars at Babson College and London Business School, GEM has developed into one of the world's leading research consortia concerned with improving our understanding of the relationships between perceptions of entrepreneurship, entrepreneurial activity, and national economic growth. To this end, the project has, from the start, been designed as a multinational, harmonized research program providing annual assessments of the entrepreneurial sector for a range of countries.

## PARTICIPATING COUNTRIES IN 2007

In 2007, 42 countries participated in the GEM project. As in previous GEM reports, a distinction is made between the high-income countries and the middle- and low-income countries. The second group is further refined by separating Europe and Asia from Latin America and the Caribbean since GEM data has shown that there are pervasive differences in entrepreneurial behavior in these global regions.

### *High-Income Countries*

Austria, Belgium, Denmark, Finland, France, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Netherlands, Norway, Portugal, Puerto Rico, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, and United States

### *Middle- and Low-Income Countries: Europe and Asia*

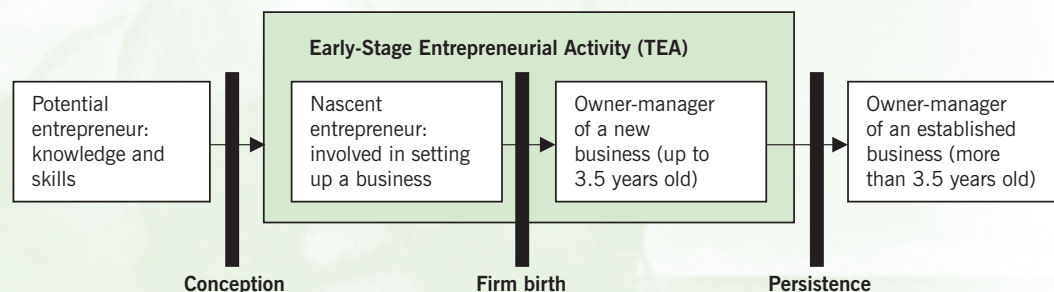
China, Croatia, Hungary, India, Kazakhstan, Latvia, Romania, Russia, Serbia, Thailand, and Turkey

### *Middle-and Low-Income Countries: Latin America and Caribbean*

Argentina, Brazil, Chile, Colombia, Dominican Republic, Peru, Uruguay, and Venezuela

## GEM DATA COLLECTION: THE ADULT POPULATION SURVEY

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. Furthermore, GEM views entrepreneurship as a process and considers people in entrepreneurial activity in different phases: from the very early phase when the business is in gestation to the established phase and possibly discontinuation of the business. A key GEM indicator is the prevalence rate of early-stage entrepreneurial activity (also known as the TEA index), represented by the shaded box in the figure below.



Within this context, GEM provides an umbrella under which a wide variety of entrepreneurial characteristics, such as motivations, innovativeness, competitiveness, and high-growth aspirations, can be systematically and rigorously studied.

## KEY FINDINGS IN 2007

### *Prevalence Rates of Early-Stage Entrepreneurial Activity and Entrepreneurial Perceptions*

Early-stage entrepreneurial activity varies strongly across countries. In addition, change in early-stage entrepreneurial activity over time may differ between middle- and low-income countries and high-income countries.

Many low-income countries exhibit high rates of early-stage entrepreneurial activity. As institutions develop and national welfare progresses, possibly leading to some form of industrialization and economies of scale, average business size may become larger; this is associated with decreasing rates of early-stage entrepreneurial activity. The GEM results point to high and decreasing rates of early-stage entrepreneurial activity in Latin American countries. Some middle- and low-income countries in Eastern Europe and Central Asia, however, have relatively low levels of early-stage entrepreneurial activity. Among middle- and low-income countries, Thailand (26.9%), Peru (25.9%), and Colombia (22.7%) had the highest rates of early-stage entrepreneurial activity. Lowest rates were found in Russia (2.7%), Romania (4.0%), and Latvia (4.5%).

In high-income countries, as per capita income increases and more opportunities for entrepreneurship may arise, the prevalence rate of early-stage entrepreneurship tends to increase. However, cultural, demographic, and institutional influences also shape the picture. For instance, many EU-countries tend to exhibit similar prevalence rates of early-stage entrepreneurial activity. Among high-income countries, Iceland (12.5%), Hong Kong (10.0%), and the United States (9.6%) show the highest levels of early-stage entrepreneurial activity. Lowest rates were found in Austria (2.4%), Puerto Rico (3.1%), and Belgium (3.2%).

The GEM results confirm that early-stage entrepreneurship is more likely to be opportunity-driven in high-income countries than in middle- and low-income countries, where entrepreneurship may in many cases be the only option for making a living. In high-income countries, wider job opportunities and social security provide more alternatives to entrepreneurship. This is also seen when evaluating entrepreneurship as a full-time or part-time occupation. For example, in Norway and Sweden, both countries with high per capita income and generous welfare systems, most early-stage entrepreneurial activity is part-time.

There is great variety in individuals' perceptions of their own capabilities regarding entrepreneurship and of opportunities for starting a business in the area where they live. In general, the higher the perception of capability in the general population (i.e., the more individuals who are not yet entrepreneurs, but believe they have the skills and knowledge to start a business), the higher the level of early-stage entrepreneurial activity, and nascent entrepreneurial activity in particular. It should be born in mind that in some countries the perception of required knowledge and skills may be lower than in other countries because of regulation of entry or the sophistication of the business environment. This may affect the self-assessment on capabilities to start a business.

Other significant indicators of entrepreneurial activity at the national level include the extent to which entrepreneurship is widely believed to be a good career choice and the degree to which entrepreneurship is reported in the media.

### *Characteristics of Early-Stage Entrepreneurial Activity*

Most of the businesses identified in GEM show either no or only limited medium-term growth potential, as measured by job creation expectations. High-growth expectation entrepreneurial activity (HEA) varies widely between countries, as does the relative prevalence of this activity within early-stage entrepreneurial activity as a whole. For example, among high-income countries, there is a 15-fold difference between adult-population prevalence rate of high-growth expectation early-stage entrepreneurship in the United States and Greece. The difference is six-fold between the two largest emerging economies in the world, China and India.

Of high-income countries, the United States, Israel, Iceland, and Canada exhibit the highest adult-population prevalence rates of high-growth expectation entrepreneurship. Among middle- and low-income countries, China has the highest rate, followed by Argentina. High-income countries tend to have a higher ratio of high-growth expectation entrepreneurship to overall entrepreneurship, or relative prevalence of high-growth expectation entrepreneurship, than middle- and low-income countries. The highest relative prevalence of high-growth expectation entrepreneurship is found in Singapore and Israel (high-income countries) and Russia and China (middle- and low-income countries).

The relationship between per capita GDP and both prevalence and relative prevalence of high-growth expectation entrepreneurship suggests that career opportunity costs may be a contributing factor to the high relative prevalence of high-growth expectation entrepreneurs in high-income countries.

In all countries, most businesses offer products or services that are not new to most customers, while only a small fraction claims that what they offer is new to all customers. In addition, most entrepreneurs say that they face many competitors in their market. Early-stage entrepreneurs are more likely than established business owner-managers to claim they offer innovative products and face few competitors.

Both early-stage entrepreneurs and established business owner-managers in the middle-and low-income country cluster are more likely to claim they use technologies that were not available a year ago than their high-income country cluster peers. This result makes perfect sense: starting from a comparatively lower level, middle income countries have more room and opportunities to upgrade and modernize their technologies. Early-stage entrepreneurial activity also tends to be higher in countries whose populations are more receptive to innovation.

The age distribution of people involved in entrepreneurial activity follows an inverted U-shape curve. Early-stage entrepreneurial activity is most prevalent in the age group of individuals 25-34 years old. Men are more likely to start a business than women. This gender gap is present among both younger and older age groups, but appears to be relatively small for countries in Latin America and the Caribbean.

### **Entrepreneurial Activity and Global Economic Institutions**

Entrepreneurship scholars tend to focus on the role of *domestic* political, legal, and economic institutions in creating an environment conducive to innovation and new business development. In an increasingly globalized economy, however, *international* economic institutions such as the World Bank and the World Trade Organization exert a growing influence on entrepreneurs and entrepreneurial opportunities.

International economic institutions affect entrepreneurship both directly and indirectly. Trade and investment agreements provide a direct benefit by expanding markets for growing businesses, and by protecting traders and investors against arbitrary market closure through protectionism. Entrepreneurs need open, global trade and investment markets. Otherwise, global trade and sourcing opportunities could be controlled by larger, more politically powerful firms seeking to protect their domestic markets from foreign competition. International trade agreements provide general rules and frameworks for trade policy that limit the use of tariffs and other trade and investment barriers.

International trade institutions also influence entrepreneurship indirectly by establishing a domestic framework for economic flexibility and adjustment in an open world economy. Countries benefit most from commitments to open trading rules and practices by providing a domestic business environment that encourages innovation, the internal mobility of factors of production, and entrepreneurial activity.

Many of these features are captured in GEM's Entrepreneurial Framework Conditions (EFCs). In some cases, the EFCs are linked directly to international institutions, such as *intellectual property rights protection*, now codified in the World Trade Organization (WTO) rules. Other EFCs have an indirect, although no less important link, with global institutions, such as *internal market openness*, which is an essential component of domestic market adjustment to import competition and export opportunity.

GEM measures EFCs by first asking samples of carefully chosen experts in entrepreneurship in each GEM country to rate each EFC. Then, GEM constructs multi-item indices for each EFC construct. One of these indices relates to regulations for new and growing businesses. To encourage deregulation of new business registration, the World Bank developed a complementary technical survey based on ease of registering a new business in a large sample of countries. While there is a moderate relationship between country rankings on the two survey indices, in a few countries there is wide disagreement between the perceptions of experts and the World Bank ratings.

Both the GEM "red tape" index and the equivalent World Bank index correlate negatively with high-growth expectation entrepreneurial activity. All other things being equal, the more onerous a country's new business regulations, and the more local experts perceive these regulations to be onerous, the lower the level of ambition among a country's entrepreneurs.

The World Bank, and other institutions that are focused on the transfer of aid to developing countries, have the potential to promote entrepreneurship by building up local market institutions, infrastructure, and financing. While their task is fraught with difficulty, there have been a few promising developments that should be encouraged. The International Finance Corporation (IFC), the private sector arm of the World Bank, has had some success in promoting entrepreneurship and financial institutions in countries without well-developed capital markets. In addition, several major World Bank infrastructure aid projects, coordinated with trade negotiations, have resulted in the improved efficiency of port facilities, local infrastructure, and administration in developing countries.

In general, to the extent that foreign aid can promote entrepreneurship in developing countries, new opportunities for entrepreneurs elsewhere in the world will also appear.

As national economies have become globalized, so has entrepreneurship. In some GEM countries, 40% of early-stage entrepreneurs expected 25% or more of their customers to come from outside the country.

Many barriers to trade and investment remain, however, which often block new entrepreneurial opportunities. New and expanded agreements among participants in international economic institutions are needed to sweep away these barriers. The domestic

stakes are also high: Closed markets imply less flexibility in the local economy. Most entrepreneurs therefore have a strong interest in achieving political influence, through lobbying and coordinated policy positions, on their domestic policy makers to liberalize trade and investment.

Similarly, significant progress in the performance of international aid institutions may depend on the influence and example of entrepreneurship. Those with entrepreneurial experience who can assume positions of leadership within these institutions can also provide more effective policies and approaches to promote business growth in the developing world.



## ABOUT GEM

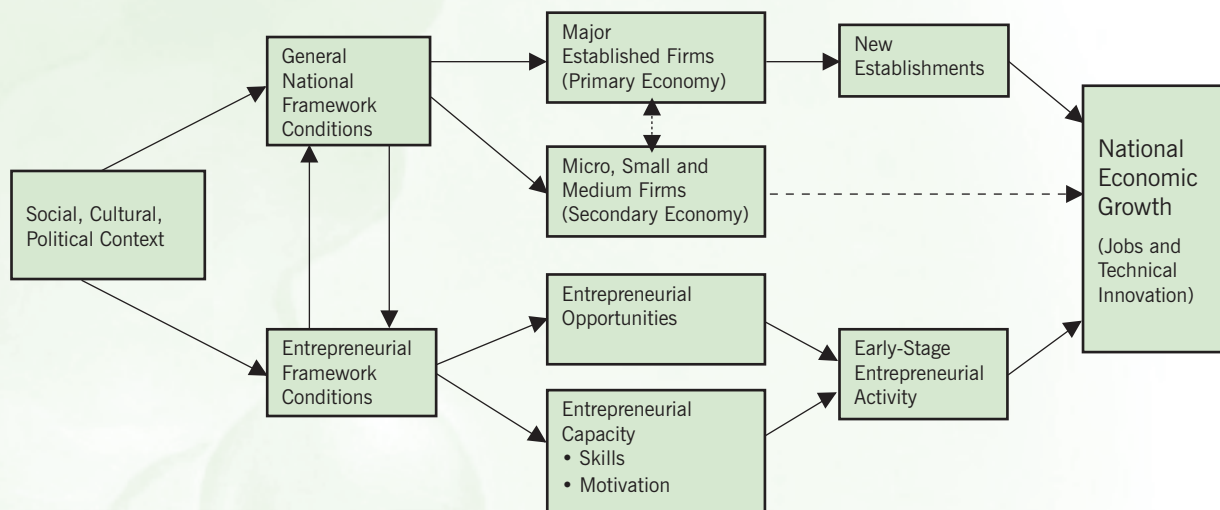
Although it is widely acknowledged that entrepreneurship is one of the most important forces shaping the changes in the economic landscape, the understanding of the relationship between entrepreneurship and national growth is far from complete. There is a lack of cross-national harmonized data sets on entrepreneurship. Since its inception in 1997, the GEM research program has contributed to increasing knowledge in this area by collecting relevant harmonized data on an annual basis. GEM focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors determining national levels of entrepreneurial activity
- To identify policies that may enhance 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 the economy. GEM takes a comprehensive approach and considers the degree

of involvement in entrepreneurial activity within a country. GEM views national economic growth and the aggregate level of economic activity in a country as being associated with newer and smaller firms as well as established firms, but its focus lies in early-stage entrepreneurial activity. Small and newer firms generate innovations, fill market niches, and increase competition, thereby contributing to resource reallocation in economic activity. By considering the complementary nature of economic activity among different groups of firms, GEM links a nation's economic activity to the interplay of established and new and smaller firms, and it allows a clearer understanding of why entrepreneurship is vital to the whole economy. Figure 1 presents the conceptual framework that guides GEM's data collection activity. The GEM model maintains that established business activity at the national level varies with *General National Framework Conditions* (GNFCs), while entrepreneurial activity varies with *Entrepreneurial Framework Conditions* (EFCs). GEM's unique contribution is to produce cross-national data that enables detailed study of the lower half of the conceptual framework. In this framework, EFCs reflect major features of an economy and host society that are expected to impact the entrepreneurial sector but are NOT captured in the General National Framework Conditions<sup>1</sup>.

Figure 1. The GEM Conceptual Model



This report focuses on the mechanisms illustrated in the lower half of Figure 1. The report starts by describing the association between (overall) early-stage entrepreneurial activity and national economic development. This is followed by the presentation of various indices that reflect entrepreneurial activity across countries. Section 3 examines characteristics of entrepreneurial activity such as growth expectations and innovation, as well as gender and age patterns of entrepreneurial individuals. Section 4 discusses perceptions regarding entrepreneurship, including perceived entrepreneurial opportunities and entrepreneurial capabilities. Section 5 discusses the role of global institutions in fostering entrepreneurship and examines how global institutions and international trade impact new firm activity. As a central aspect of global and national institutions, the link between regulation of entrepreneurship and entrepreneurial activity is highlighted using data from GEM National Expert Surveys (NES) and from the World Bank “Doing Business” Initiative.

## DEFINING ENTREPRENEURSHIP

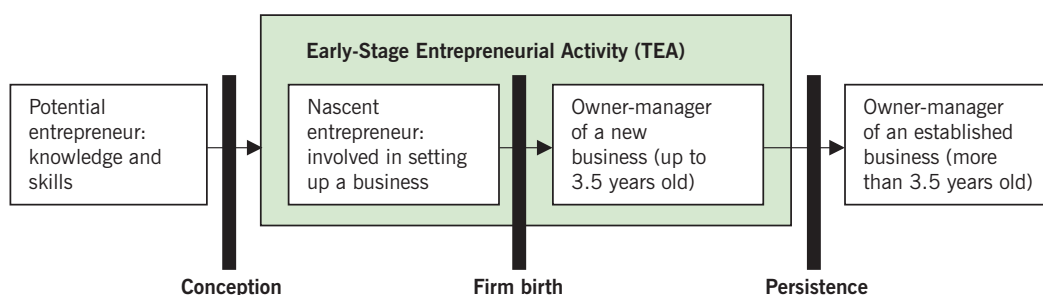
Entrepreneurship is a complex phenomenon that spans a variety of contexts. The varied definitions in entrepreneurship literature reflect this complexity. In line with its objectives, GEM takes a broad view of entrepreneurship and focuses on the role played by individuals in the entrepreneurial process. 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 from other data sets, most of which record firm-level data on (new) firm registrations (see insert on next page). New firms are, most often, started by individuals, and individuals typically determine the entrepreneurial attitude of established businesses, regardless of size. Another important aspect is that, from the start of the project in 1999, GEM views entrepreneurship as a process and considers people in entrepreneurial activity in different phases, from the very early phase when businesses are in gestation to the established phase and possibly discontinuation of the business.

An individual entrepreneur who has succeeded in maintaining a business has gone through a process, and the characteristics of his or her actions are a

very useful way to study entrepreneurial behavior. The entrepreneurial process starts before the firm is operational. Someone who is just starting a venture and trying to make it in a very competitive market is an entrepreneur in spite of not having high-growth aspirations. On the other hand, a person may be an established business owner who has been in business for quite a number of years and still be innovative, competitive, and growth-minded. This person is also an entrepreneur. GEM provides an umbrella under which a wide variety of entrepreneurial characteristics, such as motivations, innovativeness, competitiveness, and high-growth aspirations, can be systematically and rigorously studied.

Within this context, the GEM data collection covers the life cycle of the entrepreneurial process and looks at individuals at the point when they commit resources to start a business they expect to own themselves (nascent entrepreneurs); when they currently own and manage a new business that has paid salaries for more than three months but not more than 42 months (new business owners); and when they own and manage an established business that has been in operation for more than 42 months (established business owners). Figure 2 summarizes the entrepreneurial process and GEM's operational definitions.

Figure 2. The Entrepreneurial Process and GEM Operational Definitions



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. Thus, the distinction between nascent entrepreneurs and new business owners depends on the age of the business. Businesses that have paid salaries and wages for more than three months and not more than 42 months may be considered new. The cut-off point of 42 months has been made on a combination of theoretical and operational grounds<sup>2</sup>. The prevalence rate of nascent entrepreneurs and new business owners taken together may be viewed as an indicator of early-stage entrepreneurial activity in a country. It represents dynamic new firm activity: even if a fair share of nascent entrepreneurs do not succeed in getting the business started, their actions may have

an effect on the economy since they can put pressure on incumbent firms to perform better.

Business owners who have paid salaries and wages for more than 42 months are classified as “established business owners.” Their businesses have survived the liability of newness. High rates of established business ownership may indeed 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 a low degree of early-stage entrepreneurial activity, this indicates a low level of dynamism in entrepreneurial activity.

This year’s GEM report includes 42 countries across the globe. This means that in each of 42 countries a

survey was held among a representative sample of at least 2,000 adults. In sum, over 150,000 adults were interviewed between May and October (outside holiday seasons) with questions on their attitudes toward and involvement in entrepreneurial activity<sup>3</sup>.

### GEM WEBSITE & 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 consists of a unique network building a unique data set. Contact details and national teams' micro-sites can be found on [www.gemconsortium.org](http://www.gemconsortium.org). A selection of GEM data is also made available on this website. The GEM Website provides an updated list of the growing number of peer-reviewed scientific articles based on GEM data.

#### *Main Distinctions between GEM Adult Population Survey Data and Business Registration Data*

GEM is a social survey directed at individuals. In GEM's research perspective, it is individuals who are primary agents in setting up, starting and maintaining new and entrepreneurial businesses. The main distinctions between GEM data and business registrations data are as follows.

- GEM data are obtained using a research design that is harmonized across all participating countries. Despite recent initiatives by Eurostat, OECD and the World Bank, the harmonization of national business registrations has not yet been achieved. GEM data uniquely enables reliable comparisons across countries. The robustness of the GEM method is testified by the stability of year-on-year comparisons at the country level.
- GEM's research design implies statistical uncertainties to the aggregate (country-level) results. This is acknowledged by publishing confidence intervals to the obtained entrepreneurship indices. Business registrations data are "count data" and as such don't require confidence intervals. However, the extent of flawed registrations data is unclear for several countries. For example, some businesses may not be (or not need to be) registered at all, while others may register purely for tax reasons without entrepreneurial activity taking place. The extent to which this happens probably varies greatly amongst countries.
- GEM tracks people who are in the process of setting up a business (nascent entrepreneurs), as well as people who own and manage running businesses. These also include freelancers, or other entrepreneurs who need not register. GEM also measures attitudes and self-perceptions regarding entrepreneurship. Insight about the earliest phase of the start-up process and the entrepreneurial spirit is very relevant for policy makers.
- GEM is *not* about counting the number of businesses and providing startup rates. It is about measuring entrepreneurial spirit and entrepreneurial activity in different phases of the businesses existence. Therefore, GEM data may *not* be the best source for some basic firm-level characteristics. For example, for determining sector distribution of existing firms, registration data are mostly preferable over GEM data (with the possible exception of GEM countries with a large number of respondents, such as Spain and the UK).
- Some business characteristics, which are generally not available from registrations data, can be derived from GEM. Examples are motivations for being self-employed, the degree of innovative activities, and growth expectation. However, these characteristics should always be derived from an adequate sample; to achieve this, one may need to merge the GEM samples over several years.

In the Appendix of the GEM Global Report 2005, measures were derived from GEM data such that they reflected the definitions of self-employment rates and start-up rates as published by the OECD and Eurostat as much as possible. The rates based on GEM data appeared to match the rates on registrations data fairly well. Nevertheless, one should be aware that the GEM data are distinctive.

## Glossary of Main Measures and Terminology

| MEASURE   | DESCRIPTION  |
|---|--|
| <b>Entrepreneurial activity prevalence rates in adult population</b>                  |  |
| 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 3 months.   |
| New business ownership rate   | Percentage of 18-64 population who are currently an 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  | 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 an 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.   |
| Overall entrepreneurial activity rate   | Percentage of 18-64 population who are either involved in early-stage entrepreneurial activity or owner-managers, of an established business (as defined above).   |
| High-growth expectation early-stage entrepreneurial activity                          | Percentage of 18-64 population who are either nascent entrepreneurs or owner-managers of a new business (as defined above) and expect to employ at least 20 employees five years from now.   |
| 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.   |
| <b>Characteristics of early-stage entrepreneurial activity</b>                        |  |
| Improvement-driven opportunity early-stage entrepreneurial activity                   | Percentage of those involved in early-stage entrepreneurial activity (as defined above) who (1) claim to be driven by opportunity as opposed to finding no other option for work; and (2) who indicate that the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income. |
| 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.   |
| 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.   |
| International-oriented early-stage entrepreneurial activity: relative prevalence      | Percentage of early-stage entrepreneurs (as defined above) who indicate that at least 25% of their customers are from foreign countries.   |
| <b>Entrepreneurial perceptions</b>  |  |
| Perceived opportunities   | Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who see good opportunities to start a firm in the area where they live.  |
| Perceived capabilities  | Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who believe they have the required skills and knowledge to start a business.   |
| Potential entrepreneurial activity rate   | Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who are not involved in entrepreneurial activity, but have a positive perception of their own entrepreneurial capabilities and the entrepreneurial opportunities in the area where they live.  |
| Entrepreneurial intention   | Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and who intend to start a business within three years.  |
| Fear of failure rate  | Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who indicate that fear of failure would prevent them from setting up a business.   |

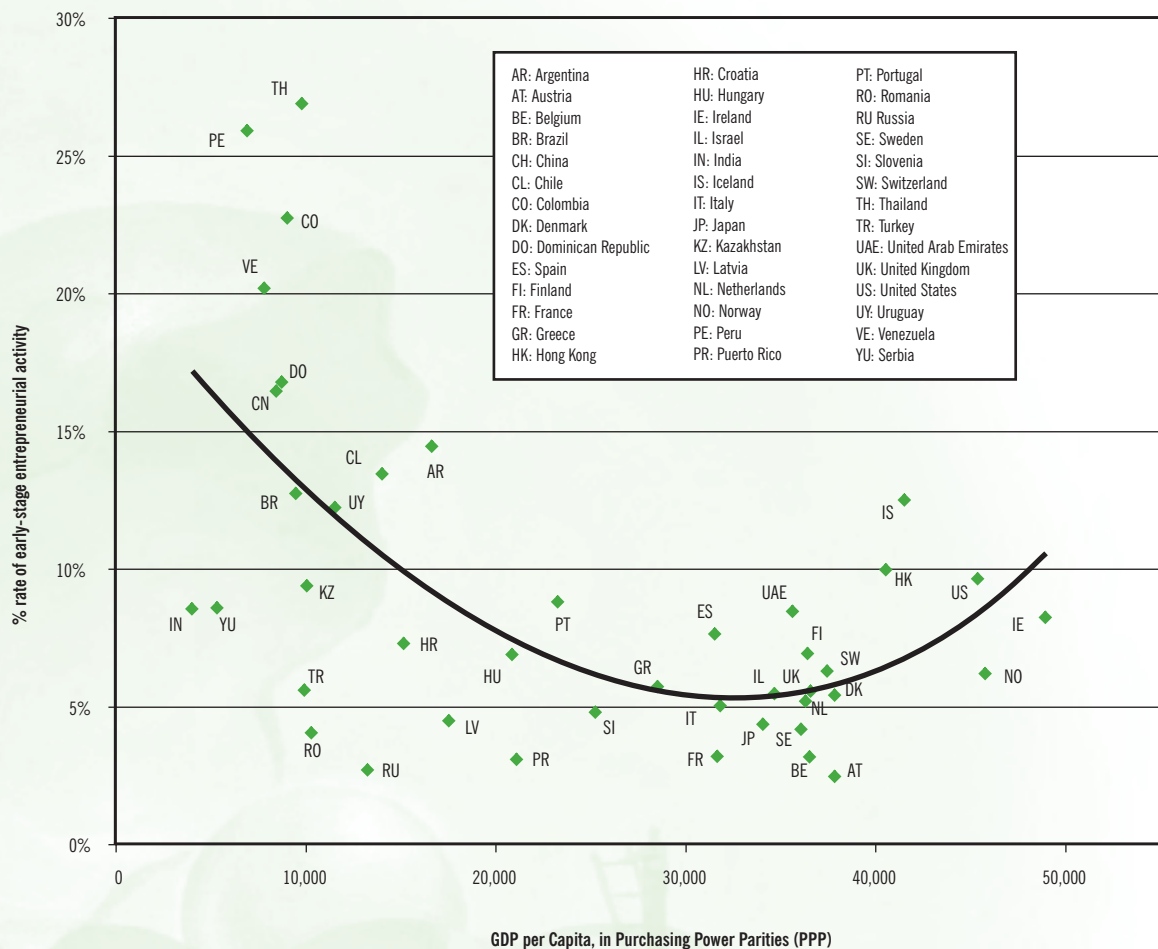
# Entrepreneurial Activity in 2007 Across the Globe

## ENTREPRENEURIAL ACTIVITY AND THE LINK WITH ECONOMIC DEVELOPMENT

Although characteristics of entrepreneurial activity differ across countries, the importance of entrepreneurship for economic development is widely acknowledged. While scientific evidence for this relationship has been accumulating, national, international, and regional institutions have become more and more explicit in their effort to create an entrepreneurial society<sup>4</sup>. Earlier GEM reports demonstrated a systematic, U-shaped relationship

between a country's level of economic development and its level and type of entrepreneurial activity<sup>5</sup>. Figure 3 illustrates this U-shaped relationship between per capita GDP-levels and early-stage entrepreneurial activity. Early-stage entrepreneurial activity rates in 2007 are derived from the annual GEM Adult Population Surveys (APS) administered to representative samples of the national adult population in 42 countries. The measure is described in more detail in the introduction. The U-shaped relationship between per capita GDP-levels and early-stage entrepreneurial activity has been consistent over the years<sup>6</sup>.

Figure 3. Early-Stage Entrepreneurial Activity Rates and Per Capita GDP, 2007



Source: GEM Adult Population Survey (APS) and IMF.

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. The increase in the role of large firms may be accompanied by a reduction in the number of new businesses, since 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 entrepreneurial activity may be a good sign, especially if this is accompanied by economic growth and political stability. As further increases in income are experienced, the role played by the entrepreneurial sector may increase, as more individuals can access the resources to go into business for themselves in an economic environment that allows the exploitation of opportunities. Although the annual “snapshot” of early-stage entrepreneurial activity consistently shows the shape of the fitted line over the years, it does not imply that all countries follow this pattern over time. This is because there are also other important national conditions that determine the rate of early-stage entrepreneurial activity.

Prevalence rates of entrepreneurial activity also depend on demographic, cultural, and institutional characteristics (Swedberg 2000; Verheul et al. 2002; Wennekers 2006). Focusing on geographical features, Figure 3 reflects some of these dimensions. It shows that countries with similar geographic backgrounds and traditions are grouped together. A group of EU-15 countries is situated close together at the lower end of early-stage entrepreneurial activity. Countries in Eastern Europe and Central Asia are situated at the left-hand side, below the fitted curve, and people in these countries are not as much engaged in entrepreneurial activity as Latin American countries with similar levels of per capita GDP. Wealthier countries at the right-hand side are industrialized countries outside the EU—with Ireland as a notable exception. Japan’s rate of early-stage entrepreneurial activity has, over the years, been consistently lower than the fitted curve, but has been increasing in recent years.

## ENTREPRENEURIAL ACTIVITY IN COUNTRY GROUPS

By using a random sample to ask individuals about their perceptions of entrepreneurship and whether or not these individuals are personally involved in entrepreneurial activity, the GEM project can reveal some of the societal differences that affect entrepreneurial activity. Figure 3 demonstrates that entrepreneurship needs to be studied (1) acknowledging the differences in economic development (or welfare) and (2) in the relevant regional context. This is because entrepreneurship is not only an economic event—it is a socio-economic phenomenon.

National societies and their economies are to a large extent shaped by historical developments. Therefore, interpretations of indices on entrepreneurial activity across the globe are generally not straightforward. The rapidly expanding body of entrepreneurship studies, as well as nine years of GEM research, indicates that cultural, institutional, economic, and demographic differences are related to differences in the national entrepreneurial landscape. Setting up a business in Peru can be very different from setting up a business in, say, Turkey, Denmark, or Japan. Motivations, regulations, and enforcement of regulations for setting up a business can be vastly different across the globe.

With this in mind, we categorize the 42 participating GEM countries into three major country groups for analysis in the remainder of this report. The first distinction deals with the degree of economic welfare. As Figure 3 indicates, entrepreneurial activity does not vary much among high-income countries, although there is a slight tendency for increased activity where there is increased wealth. However, entrepreneurial activity varies significantly across middle- and low-income countries. Here, we use the World Bank’s distinction between high-income countries and middle- and low-income countries<sup>7</sup>. Our second distinction introduces a regional dimension; the report separates middle- and low-income countries in Europe and Asia from middle- and low-income countries in Latin America and the Caribbean<sup>8</sup>.

### Country Groups Used in this Report

#### High-Income Countries

Austria, Belgium, Denmark, Finland, France, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Netherlands, Norway, Portugal, Puerto Rico, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, and the United States

#### Middle- and Low-Income Countries: Europe and Asia

China, Croatia, Hungary, India, Kazakhstan, Latvia, Romania, Russia, Serbia, Thailand, and Turkey

#### Middle- and Low-Income Countries: Latin America and the Caribbean

Argentina, Brazil, Chile, Colombia, Dominican Republic, Peru, Uruguay, and Venezuela

To some extent this classification reflects differences in formal institutional characteristics, demography, entrepreneurial culture, and the degree of economic welfare. These are broadly seen as important features underlying a nation's entrepreneurial spirit and are supported by research using GEM data.

- Institutional characteristics involve development of institutions in general (Boettke and Coyne 2006) but also regulation in the sense of (1) how easy it is to start a business, as well as to maintain and grow the business; and (2) whether there is a social security system in place that may deter people from getting involved in entrepreneurial activity (Bosma et al. 2005; Hessels et al. 2007; Van Stel et al. 2007).
- Demographic characteristics play an important role. Countries with an aging population will, all else being equal, have relatively fewer start-ups than countries with a young and growing population. The level of immigration and in-migration (movers across regions, within a country) may also be a relevant demographic factor. This is documented using GEM data for Spain (De la Vega et al. 2005) and the UK (Levie 2007).

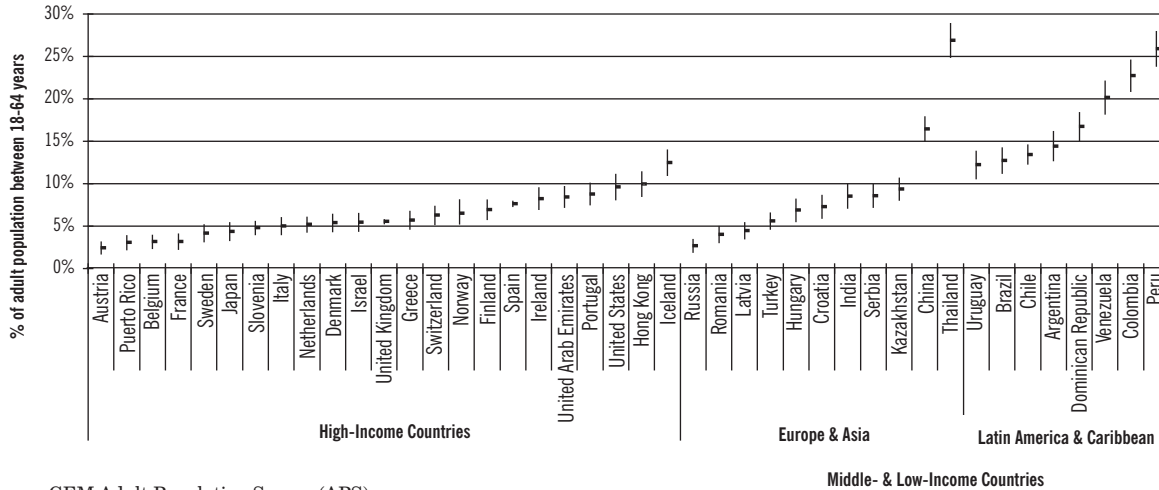
- Entrepreneurial culture has a strong historical component and determines the extent to which setting up or maintaining a business is considered a normal event or a special event, and whether it is an accepted practice or frowned upon (Suddle et al. 2007; Tominc and Rebernik 2007). In the language of North (1990), entrepreneurial culture can be seen as informal institutions related to entrepreneurship.
- The degree of economic welfare determines the existence of job alternatives. In general, countries with better economic performance have more (and better paid) jobs to offer people in the labor force. A more specific aspect of economic welfare is the state of technology. Economies with access to advanced technologies are better equipped to make a transition to an entrepreneurial economy (Wennekers et al. 2005).

The factors of culture, demography, institutions, and economic welfare are linked. For example, national institutions reflect the national culture, since they are designed to formalize norms and values of the country. Also, countries with well-developed institutions generally exhibit higher degrees of welfare. The World Bank makes a strong case for developing national institutions worldwide in order to enhance entrepreneurial activity (Klapper et al. 2007).

Figure 4 presents early-stage entrepreneurial activity (TEA) rates, i.e., the prevalence rate of people who are involved in entrepreneurial activity as a nascent entrepreneur or an owner-manager of a new business. Each country participating in GEM 2007 is grouped by income and region 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 for any two countries do not overlap, they have statistically different TEA rates<sup>9</sup>.

Figure 4 shows that most high-income European countries have relatively low TEA rates. Most middle- and low-income countries in Europe and Asia have comparable rates to high-income countries. However, some of the characteristics of early-stage entrepreneurial activity, such as the main motivation for getting involved with entrepreneurship, are different. Figure 4 also makes clear that there are differences between the two country groups in middle- and low-income countries. The prevalence rates in Europe and Asia are lower than in Latin American and the Caribbean countries, with the exception of China and Thailand.

Figure 4. Early-Stage Entrepreneurial Activity (TEA) for 42 Nations in 2007, by Income/Regional Groups, Showing 95% Confidence Intervals

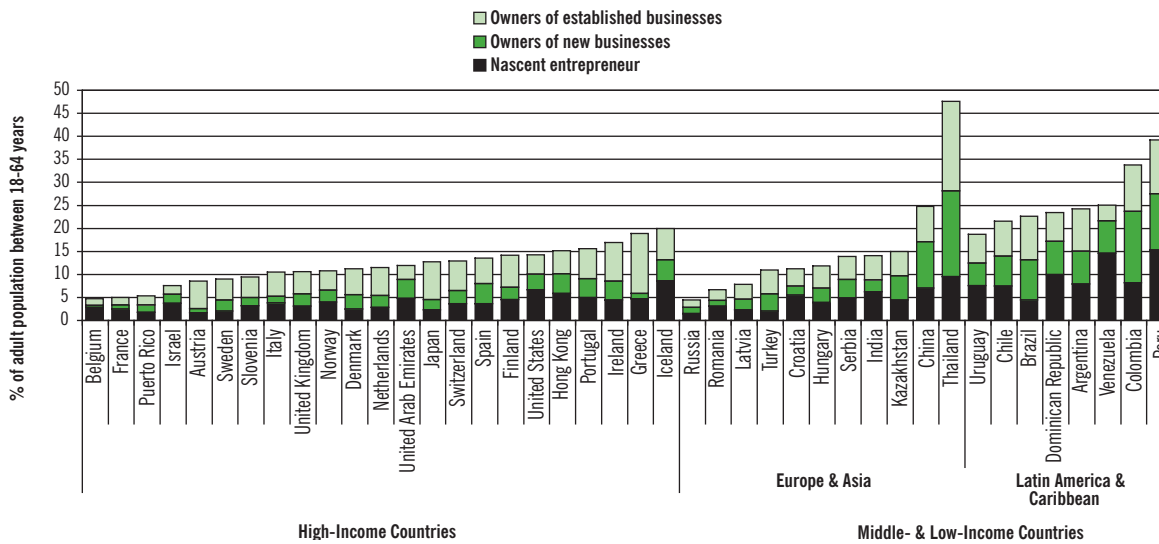


Source: GEM Adult Population Survey (APS).

The percentage of a population engaged in setting up or running their own businesses is another way of gauging a country’s entrepreneurial activity. Figure 5 describes the share of each of the three main stages of owner-managed business engagement as identified by GEM. Latin American and Caribbean countries, China, and Thailand stand out from the

rest on this measure. Also, the share of early-stage entrepreneurial activity (nascent entrepreneurs and new business owners) is significantly larger in Latin American countries than in high-income European countries. Table 1 lists all prevalence rates for different phases of entrepreneurial activity for each of the participating countries in GEM 2007.

Figure 5. Share of Population That Is in Different Stages of Engagement in Owner-Managed Businesses, 2007



Source: GEM Adult Population Survey (APS).



## Entrepreneurial Activity in 2007 Across the Globe

**Table 1. Prevalence Rates of Entrepreneurial Activity and Business Owner-Managers Across Countries 2007, Ages 18-64**

|   | NASCENT<br>ENTREPRENEURIAL<br>ACTIVITY | NEW BUSINESS<br>OWNER-MANAGERS | EARLY-STAGE<br>ENTREPRENEURIAL<br>ACTIVITY (TEA) | ESTABLISHED<br>BUSINESS<br>OWNER-MANAGERS | OVERALL<br>ENTREPRENEURIAL<br>ACTIVITY | NUMBER OF<br>OBSERVATIONS |
|---|--|--------------------------------|--|---|--|---------------------------|
| <b>High-Income Countries</b>                          |  |                                |  |   |  |                           |
| Austria   | 1.5%                                   | 1.0%                           | 2.4%   | 6.0%                                      | 8.4%                                   | 1,996                     |
| Belgium   | 2.7%                                   | 0.4%                           | 3.2%   | 1.4%                                      | 4.6%                                   | 2,028                     |
| Denmark   | 2.3%                                   | 3.1%                           | 5.4%   | 6.0%                                      | 11.1%                                  | 2,001                     |
| Finland   | 4.4%                                   | 2.7%                           | 6.9%   | 7.6%                                      | 14.0%                                  | 2,005                     |
| France  | 2.3%                                   | 0.9%                           | 3.2%   | 1.7%                                      | 4.8%                                   | 1,576                     |
| Greece  | 4.6%                                   | 1.1%                           | 5.7%   | 13.3%                                     | 18.7%                                  | 2,000                     |
| Hong Kong   | 5.7%                                   | 4.3%                           | 10.0%  | 5.6%                                      | 15.0%                                  | 1,701                     |
| Iceland   | 8.5%                                   | 4.5%                           | 12.5%  | 8.8%                                      | 19.8%                                  | 2,001                     |
| Ireland   | 4.2%                                   | 4.2%                           | 8.2%   | 9.0%                                      | 16.8%                                  | 1,897                     |
| Israel  | 3.6%                                   | 2.0%                           | 5.4%   | 2.4%                                      | 7.4%                                   | 1,885                     |
| Italy   | 3.6%                                   | 1.5%                           | 5.0%   | 5.6%                                      | 10.4%                                  | 2,000                     |
| Japan   | 2.2%                                   | 2.2%                           | 4.3%   | 8.7%                                      | 12.6%                                  | 1,569                     |
| Netherlands   | 2.7%                                   | 2.6%                           | 5.2%   | 6.4%                                      | 11.3%                                  | 2,597                     |
| Norway  | 3.9%                                   | 2.8%                           | 6.5%   | 5.9%                                      | 12.0%                                  | 1,503                     |
| Portugal  | 4.8%                                   | 4.1%                           | 8.8%   | 7.1%                                      | 15.4%                                  | 2,023                     |
| Puerto Rico   | 1.6%                                   | 1.7%                           | 3.1%   | 2.4%                                      | 5.2%                                   | 1,830                     |
| Slovenia  | 3.0%                                   | 1.8%                           | 4.8%   | 4.6%                                      | 9.3%                                   | 3,020                     |
| Spain   | 3.5%                                   | 4.3%                           | 7.6%   | 6.4%                                      | 13.4%                                  | 27,880                    |
| Sweden  | 1.9%                                   | 2.4%                           | 4.2%   | 4.7%                                      | 8.8%                                   | 1,712                     |
| Switzerland   | 3.5%                                   | 2.9%                           | 6.3%   | 6.6%                                      | 12.7%                                  | 2,148                     |
| United Arab<br>Emirates                               | 4.6%                                   | 4.1%                           | 8.4%   | 3.4%                                      | 11.8%                                  | 2,097                     |
| United Kingdom  | 2.9%                                   | 2.7%                           | 5.5%   | 5.1%                                      | 10.5%                                  | 39,582                    |
| United States   | 6.5%                                   | 3.4%                           | 9.6%   | 5.0%                                      | 14.1%                                  | 1,583                     |
| <b>Middle- &amp; Low-Europe and Asia</b>              |  |                                |  |   |  |                           |
| China   | 6.9%                                   | 10.0%                          | 16.4%  | 8.4%                                      | 24.6%                                  | 2,666                     |
| Croatia   | 5.3%                                   | 2.0%                           | 7.3%   | 4.2%                                      | 11.1%                                  | 1,541                     |
| Hungary   | 3.8%                                   | 3.1%                           | 6.9%   | 4.8%                                      | 11.7%                                  | 1,500                     |
| India   | 6.0%                                   | 2.6%                           | 8.5%   | 5.5%                                      | 13.9%                                  | 1,601                     |
| Kazakhstan  | 4.3%                                   | 5.3%                           | 9.4%   | 5.8%                                      | 14.8%                                  | 2,000                     |
| Latvia  | 2.2%                                   | 2.3%                           | 4.5%   | 3.4%                                      | 7.7%                                   | 2,000                     |
| Romania   | 2.9%                                   | 1.3%                           | 4.0%   | 2.5%                                      | 6.5%                                   | 1,739                     |
| Russia  | 1.3%                                   | 1.3%                           | 2.7%   | 1.7%                                      | 4.3%                                   | 1,939                     |
| Serbia  | 4.8%                                   | 4.0%                           | 8.6%   | 5.3%                                      | 13.7%                                  | 1,766                     |
| Thailand  | 9.4%                                   | 18.6%                          | 26.9%  | 21.4%                                     | 47.4%                                  | 1,999                     |
| Turkey  | 1.9%                                   | 3.7%                           | 5.6%   | 5.5%                                      | 10.8%                                  | 2,400                     |
| <b>Middle- &amp; Low- Latin America and Caribbean</b> |  |                                |  |   |  |                           |
| Argentina   | 7.8%                                   | 7.1%                           | 14.4%  | 10.0%                                     | 24.1%                                  | 1,719                     |
| Brazil  | 4.3%                                   | 8.7%                           | 12.7%  | 9.9%                                      | 22.4%                                  | 2,000                     |
| Chile   | 7.3%                                   | 6.5%                           | 13.4%  | 8.7%                                      | 21.4%                                  | 3,662                     |
| Colombia  | 8.0%                                   | 15.5%                          | 22.7%  | 11.6%                                     | 33.6%                                  | 2,082                     |
| Dominican<br>Republic                                 | 9.8%                                   | 7.2%                           | 16.8%  | 7.6%                                      | 23.2%                                  | 2,081                     |
| Peru  | 15.1%                                  | 12.2%                          | 25.9%  | 15.3%                                     | 39.0%                                  | 1,861                     |
| Uruguay   | 7.4%                                   | 5.0%                           | 12.2%  | 6.6%                                      | 18.5%                                  | 1,634                     |
| Venezuela   | 14.5%                                  | 7.1%                           | 20.2%  | 5.4%                                      | 24.9%                                  | 1,709                     |

Source: GEM Adult Population Survey (APS).

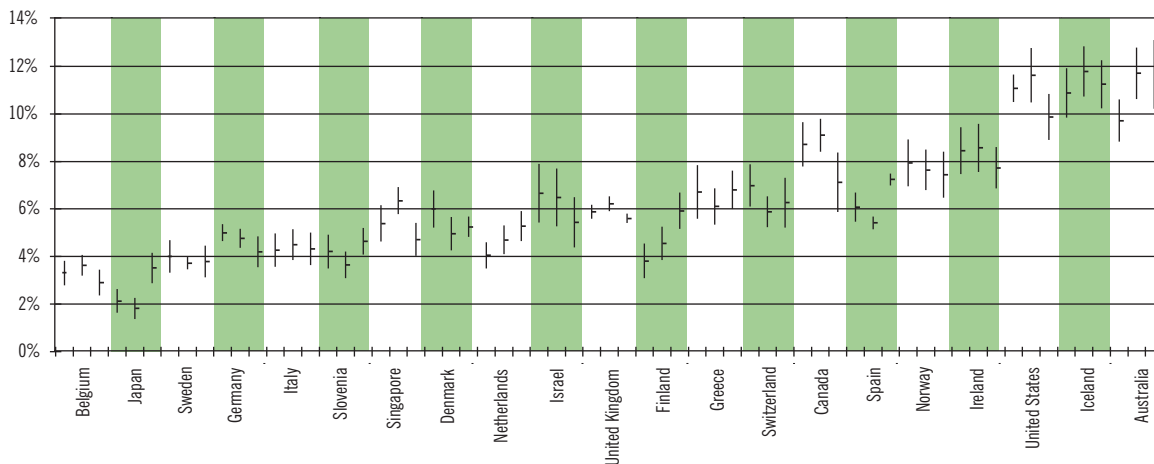
## DEVELOPMENT OF EARLY-STAGE ENTREPRENEURIAL ACTIVITY 2002–2007

In 2008, the GEM project will experience its tenth annual cycle of data collection. While the GEM project was in its formative years in the period 1998-2001, the operational design was continuously improved. After 2001 the main indicators have remained unchanged. This allows trends over time in early-stage entrepreneurial activity to be observed from 2002 to 2007. To illustrate the main indicator trends across time, three two-year periods are identified in Figures

9 and 10 for the periods: 2002-2003, 2004-2005, and 2006-2007. Note that only countries with sufficient sample sizes for all three periods are included.

The trends for high-income countries are shown in Figure 6. Most countries have quite stable TEA rates. Japan, the Netherlands, and Finland show a growth trend, in the sense that the difference between the first and last years in the time series is statistically significant (i.e., the bars indicating 95% confidence intervals do not overlap). However, Japan still has low rates of early-stage entrepreneurial activity. Possible explanations for this low rate include the importance of large family businesses and restrictive practices in retail (Suzuki et al. 2002; Kawai and Urata 2002).

**Figure 6. Early-Stage Entrepreneurial Activity (TEA) Rates for 2002/03, 2004/05, and 2006/07 in High-Income Countries**



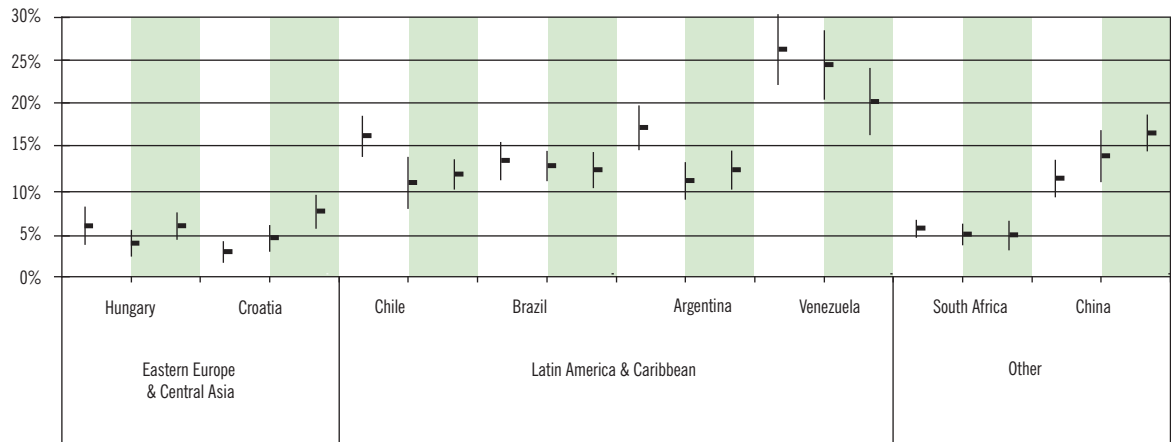
Source: GEM Adult Population Survey (APS).

## Entrepreneurial Activity in 2007 Across the Globe

Figure 7 shows trends in early-stage entrepreneurial activity in middle- and low-income countries. Hungary, Croatia, and South Africa consistently have relatively low TEA rates in comparison to Latin American countries. However, for most Latin American countries the rates tend to drop over time, while in Croatia the rate is rising. This may be natural progression toward higher per capita income and lower associated rates of TEA in Latin America, as well as progression from the relatively low levels of TEA among Eastern European countries in the case of Croatia (see Figure 3). The high rate in

Argentina in the first period related to the financial crisis of 2001 and included a large share of necessity-entrepreneurship. Chile's decline in TEA rates goes together with a positive development in economic growth in recent years<sup>10</sup>. Finally, China's TEA rate has increased over time. The rapid expansion of the Chinese economy has resulted in more opportunities for entrepreneurial activity, especially in the big cities. Further exploration of the Chinese GEM data reveals an increase in opportunity-driven TEA, while necessity-driven TEA has remained stable.

**Figure 7. Early-Stage Entrepreneurial Activity (TEA) Rates for 2002/03, 2004/05, and 2006/07 in Middle- and Low-Income Countries**



Source: GEM Adult Population Survey (APS).

## ENTREPRENEURIAL MOTIVATIONS

Although most individuals are pulled into entrepreneurial activity because of opportunity recognitions, others are pushed into entrepreneurship because they have no other means of making a living. For those who are pulled into entrepreneurship, two major drivers of opportunity entrepreneurship can be identified: those who are pulled primarily because they desire independence, and those who are primarily pulled to entrepreneurship because they want to increase their income as compared to, for instance, being an employee. The remaining share includes people who mention that they have no other way of earning a living (necessity-motivated entrepreneurs) and people who became involved in entrepreneurial activity primarily to maintain their income<sup>11</sup>.

This year, the calculation method for opportunity-driven early-stage entrepreneurial activity

(opportunity-TEA) has been refined, and is not comparable to previous years. It includes only those who are pulled into entrepreneurship by opportunity and because they desire independence or to increase their income, not those who are pushed to entrepreneurship out of necessity or those who sought only to maintain their income. Countries with low and high relative prevalence of improvement-driven opportunity recognition in overall TEA are shown in Table 2. The countries with high relative prevalence of improvement-driven opportunity entrepreneurship are primarily high-income countries. In these countries, opportunities may be expected to be more abundant, and individuals may have more alternatives to make a living. Chile and Uruguay are the only two examples of middle- and low-income countries with relatively high improvement-driven opportunity entrepreneurship, while no high-income country has low relative prevalence of improvement-driven opportunity-TEA.

**Table 2. Share of Improvement-Driven Opportunity Recognition in Early-Stage Entrepreneurial Activity**

| GROUP 1: LESS THAN 50% IMPROVEMENT-DRIVEN OPPORTUNITY |     | GROUP 2: MORE THAN 50% IMPROVEMENT-DRIVEN OPPORTUNITY |     |
|---|-----|---|-----|
| Serbia  | 29% | Israel  | 52% |
| Russia  | 30% | Belgium   | 53% |
| India   | 33% | Uruguay   | 54% |
| Brazil  | 39% | Spain   | 54% |
| Turkey  | 40% | Japan   | 55% |
| Dominican Republic                                    | 40% | France  | 55% |
| Croatia   | 41% | Ireland   | 56% |
| Latvia  | 42% | Portugal  | 56% |
| China   | 44% | United Kingdom  | 59% |
| Colombia  | 44% | Chile   | 62% |
| Argentina   | 44% | United States   | 62% |
| Peru  | 45% | Puerto Rico   | 63% |
| Kazakhstan  | 46% | Greece  | 63% |
| Venezuela   | 47% | Hong Kong   | 64% |
| Romania   | 48% | United Arab Emirates                                  | 65% |
| Hungary   | 48% | Netherlands   | 66% |
| Thailand  | 49% | Norway  | 66% |
|   |     | Austria   | 67% |
|   |     | Switzerland   | 69% |
|   |     | Italy   | 70% |
|   |     | Finland   | 73% |
|   |     | Slovenia  | 77% |
|   |     | Iceland   | 78% |
|   |     | Sweden  | 79% |
|   |     | Denmark   | 81% |

Source: GEM Adult Population Survey (APS).

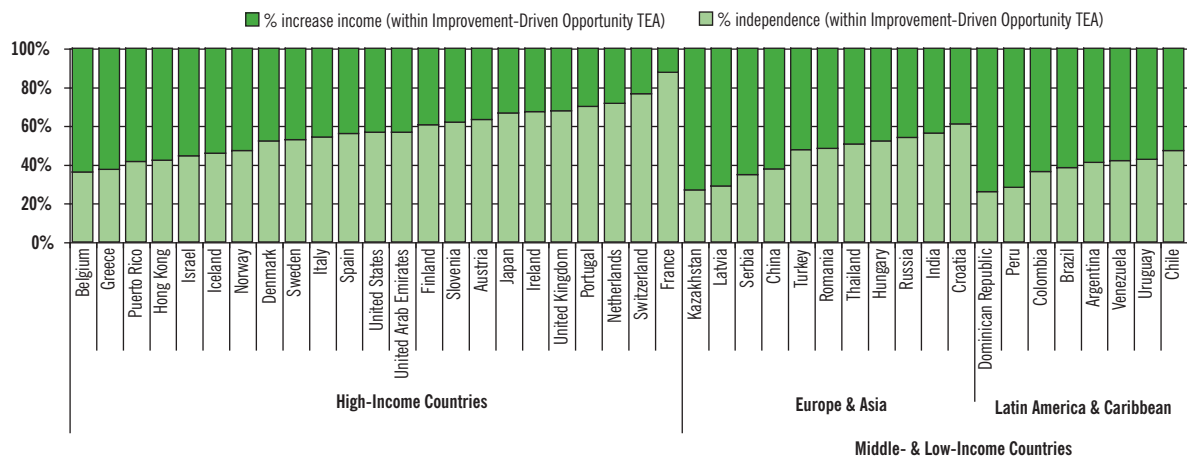
## Entrepreneurial Activity in 2007 Across the Globe

As regards the two types of opportunity motivations within improvement-driven opportunity TEA, Figure 8 shows that in most high-income countries, being independent is the most important motivation. This suggests that in these countries there are alternative ways of generating income. In addition to paid employment, the availability of social security could be an underlying factor (Bosma et al. 2005; Van Stel et al. 2007). However, other reasons may exist for differences in motivation frequency across high-income countries, including differential taxation

of employers and employees, and attitudes toward individual wealth creation and accumulation.

In all Latin America and Caribbean countries in GEM 2007, the number of improvement-driven opportunity early-stage entrepreneurs whose primary aim was to increase their income, was greater than those who were driven by a desire for independence. Middle- and low-income countries in Europe and Asia had both high and low proportions of independence-driven entrepreneurs.

**Figure 8. Balance Between Two Drivers of Opportunity Recognition for Early-Stage Entrepreneurs**

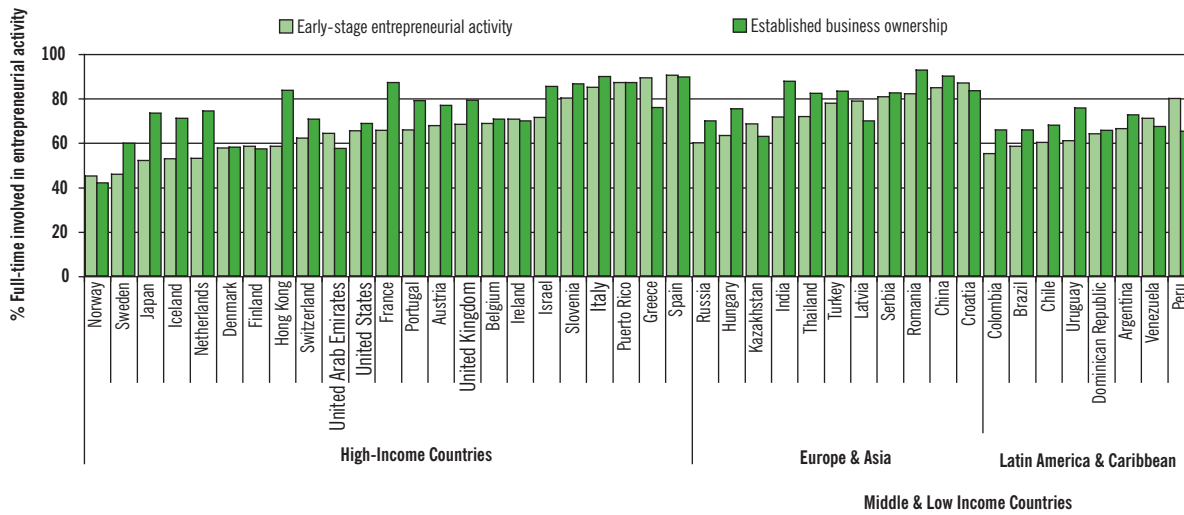


Source: GEM Adult Population Survey (APS).

The extent to which early-stage entrepreneurs are, or will be, fully occupied with their business is also a characteristic of opportunities for entrepreneurship in a country. Figure 9 shows that the rate of full-time involvement in entrepreneurial activity differs extensively across countries. For instance, in Scandinavia, the Netherlands, and Japan, only about half of all early-stage entrepreneurs see their business as a full-time occupation, whereas in

Southern Europe this percentage is more than 80%. Part-time early-stage entrepreneurial activity may complement income from regular employment. It can be an appropriate way to explore involvement in entrepreneurial activity without giving up a second, perhaps more stable, source of income. Indeed, in most countries the established business stage has relatively more full-time entrepreneurs than the early-stage.

Figure 9. Proportion of Early-Stage Entrepreneurs Who Are or Will Be Engaged Full-Time in Their Business, 2007



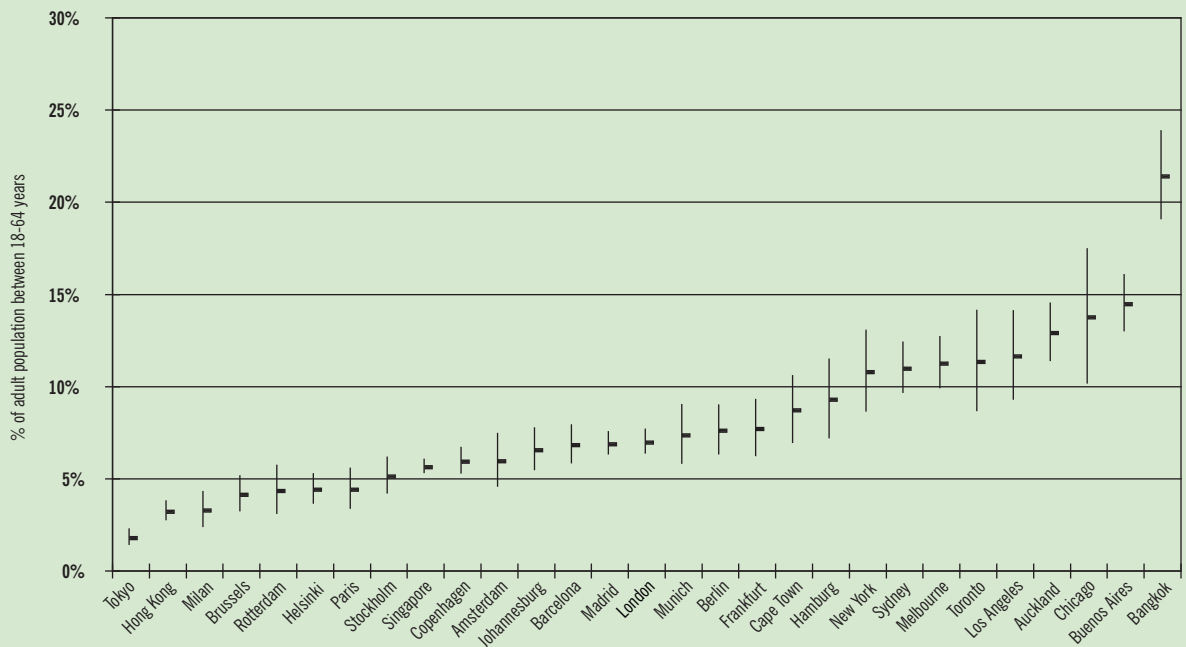
Source: GEM Adult Population Survey (APS).

**Entrepreneurial Activity in Metropolitan Areas: Evidence from GEM 2001–2006 data**

For the first time in human history, more than 50% of the global population was estimated to live in urban areas (United Nations 2007). This emphasizes the general importance of global cities for economic development.

There are several reasons why cities may be particularly conducive to entrepreneurship. These include cultural and economic diversity (Florida 2002; Lee et al. 2004), human capital (Glaeser and Saiz 2003), and externalities, or the social and economic benefits of close proximity to many customers, suppliers, and competitors (Jacobs 1969). Entrepreneurs, in turn, enrich cities through their own diversity, human capital, and ability to tap externalities.

**Figure 10. Early-Stage Entrepreneurial Activity (TEA) Rates in Metropolitan Areas Based on GEM 2001–2006 Data**



Source: GEM Adult Population Survey (APS).

Using the 2001–2006 GEM database, early-stage entrepreneurial activity (TEA) rates were derived from 29 metropolitan areas for which sufficient data was available. These areas include the suburbs and reflect labor market areas. For example, in the case of U.S. cities, the Standard Metropolitan Statistical Area (SMSA) level was applied. For German cities, the planning regions based on commuter fluctuation of employees (Raumordnungsregionen–ROR) were used. Figure 10 presents the TEA rates for these metropolitan areas. Across the sample, metropolitan area TEA rates correlate to a large extent (Pearson correlation coefficient =.936,  $p=.000$ ) with their national rates, but there are notable exceptions to this general rule. In particular, German metropolitan areas and the Cape Town area exhibit higher TEA rates as compared to the national average.

In addition, characteristics of entrepreneurial activity in metropolitan areas differ from those at the country level. For almost every city, the opportunity TEA rates appear to be higher in the metropolitan area than the country average. With due respect to Florida’s book on the creative class (Florida 2002), it is confirmed that creative-sector entrepreneurial activity takes place more often in metropolitan areas.

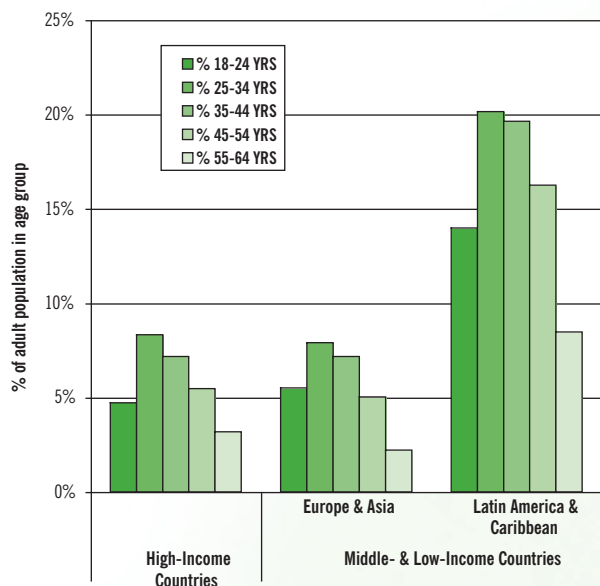
For more details see Acs, Bosma, and Sternberg (2008), available at [www.gemconsortium.org](http://www.gemconsortium.org).

# Characteristics of Entrepreneurial Activity

## AGE AND GENDER STRUCTURE

Who are the early-stage entrepreneurs? Figure 11 clearly shows that in each country group 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 years age group has the highest prevalence rate for every country group. Thereafter, the prevalence rates decrease as age increases.

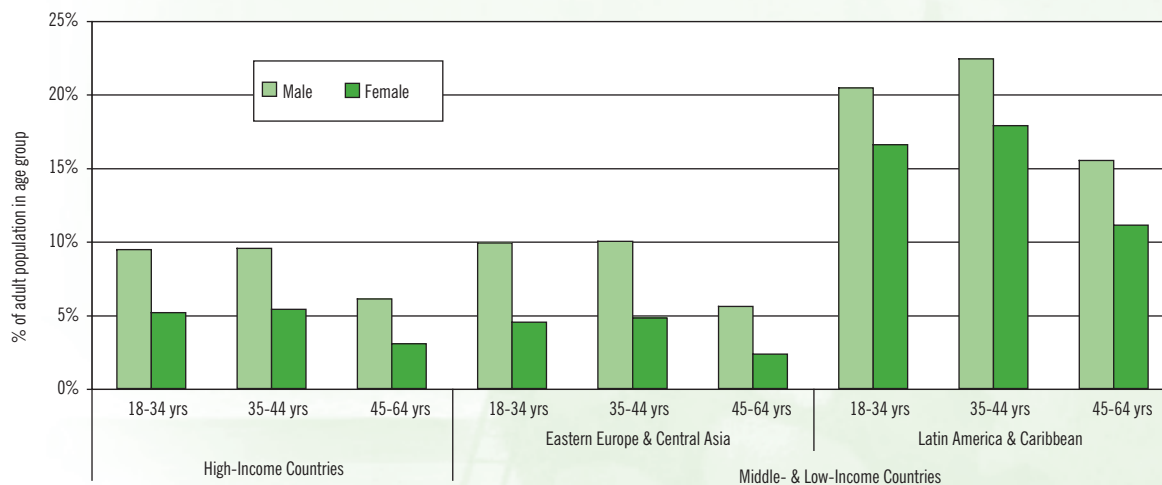
**Figure 11. Early-Stage Entrepreneurial Activity for Separate Age Groups, 2007**



Source: GEM Adult Population Survey (APS).

In Figure 12, we split the sample between 18–34 year olds, 35–44 year olds, and 45–64 year olds, and included gender differences. Here we see that in the Latin America and Caribbean country group, gender differences are relatively small. In high-income countries, men are about twice as likely as women to be involved in early-stage entrepreneurial activity. For countries in Eastern Europe and Central Asia the gender gap is even more pronounced: men are 2.3 times as likely to be early-stage entrepreneurs as women. More detailed information on gender differences is available in the annual GEM Women and Entrepreneurship reports available at [www.gemconsortium.org](http://www.gemconsortium.org).

**Figure 12. Early-Stage Entrepreneurial Activity by Gender for Different Age Groups, 2007**



Note: excludes India, China, and Thailand.

Source: GEM Adult Population Survey (APS).



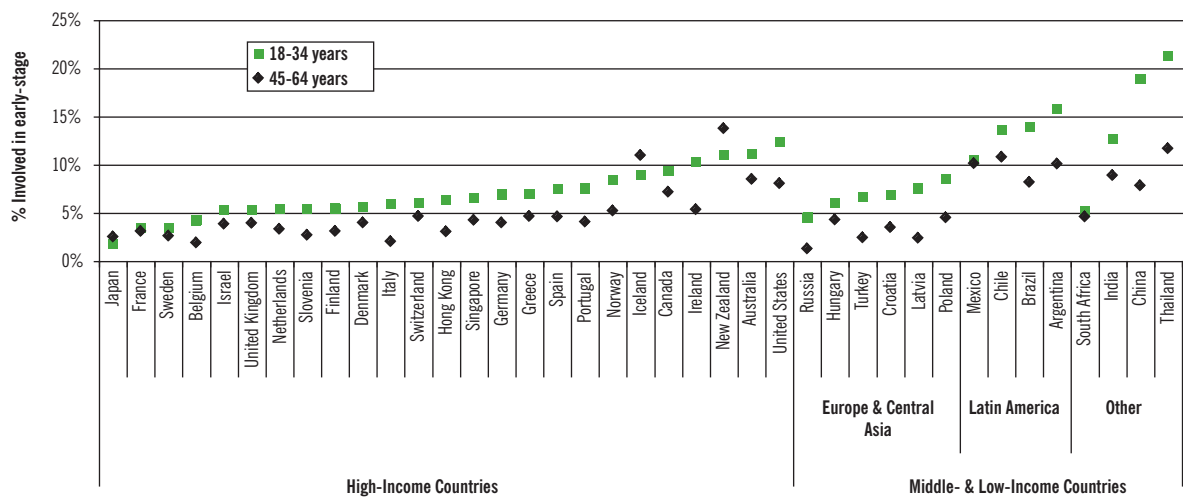
## Characteristics of Entrepreneurial Activity

Moving to the country level, Figure 13 compares early-stage entrepreneurial activity of the younger and older age-groups using combined GEM data for the years 2001 to 2007. Figure 13 distinguishes three country groups rather than the two group categorization used elsewhere in this report. This is to highlight that Eastern European countries have similar prevalence rates. Of the high-income EU countries, only Ireland has rates of early-stage entrepreneurial activity among young adults that are comparable to the highest non-EU high-income countries. In only two countries, New Zealand and Iceland, are TEA rates higher among older adults of working age than among younger adults.

Amongst the middle- and low-income countries, entrepreneurship by young adults in China appears to be much higher than among older adults, while this difference is much less marked in India. TEA rates are particularly low among older adults in Europe and Asian countries that were part of the former Soviet bloc. However, rates among younger people in these countries are on a par with their counterparts in high-income countries.

In summary, early-stage entrepreneurial activity varies by age and gender, and also by country group.

**Figure 13. Early-Stage Entrepreneurial Activity for 18-34 and 45-64 Age Groups, 2001–2007**



Source: GEM Adult Population Survey (APS).

## HIGH-GROWTH EXPECTATION ENTREPRENEURIAL ACTIVITY

Studies show that relatively few early-stage entrepreneurial firms contribute a disproportionate share of all new jobs created by new firms (Autio 2007). In the following analysis, seven years of GEM data (years 2000 to 2006) are combined to take a closer look at how growth ambitions differ among early-stage entrepreneurs<sup>12</sup>. The GEM method enables the categorization of early-stage start-up attempts according to their growth ambition. GEM asks all identified early-stage entrepreneurs how many employees they expect to have within five years. Figure 14 shows nascent and new entrepreneurs in the GEM 2000-2006 data, categorized according to expected job creation<sup>13</sup>. The figure shows the combined population-level prevalence (that is, the percentage of all adults of working age, defined as 18-64 years old) of nascent and new entrepreneurs, at different levels of growth expectation.

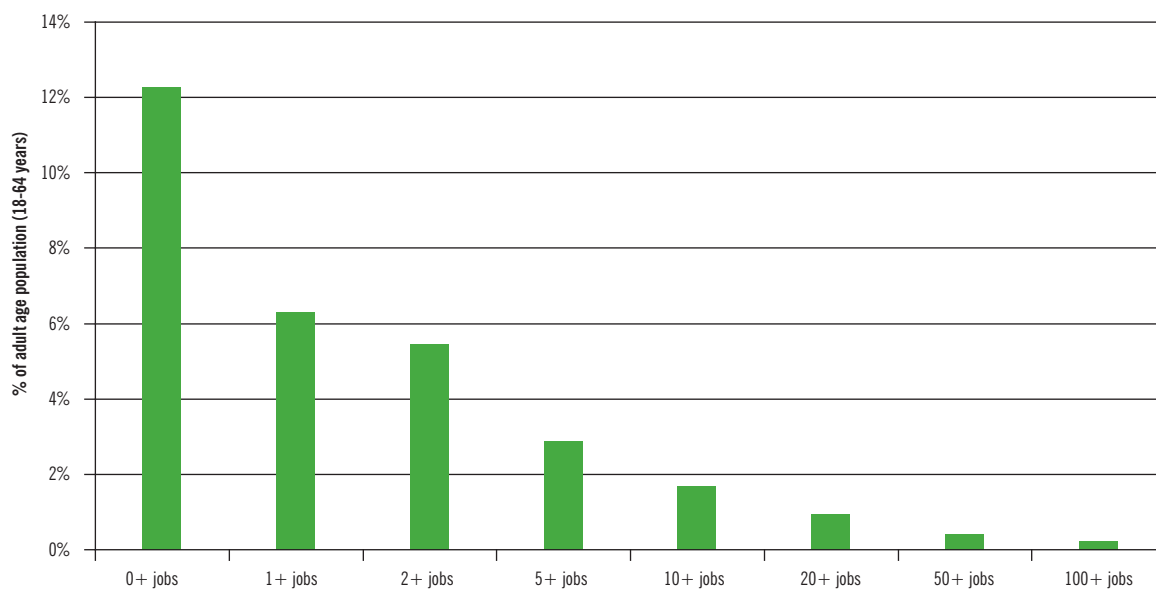
In the GEM 2000–2006 data set, the TEA rate for all participating GEM countries combined was 12.3%<sup>14</sup>. Nearly one-half of all the nascent and new entrepreneurs in the GEM data set did not expect their business to create any jobs within five years. The remainder, some 6.3% of the working age population

in these countries, expected their business would employ at least one person within five years. This percentage falls rapidly as a function of growth expectation. Some 5.5% of the working-age population expected their nascent or new business would employ 2 or more employees within five years. Only 2.9% expected to employ at least five employees, 1.7% expected 10 or more jobs, 0.9% expected 20 or more jobs, and this percentage halved for the “50+” category and again for the “100+” category.

Expectations of high growth are rare among nascent and new entrepreneurs. Only 70% of all start-up attempts expected any job creation at all. Only 8% of all start-up attempts expected to create 20 or more jobs, while only 3% of all start-up attempts expected 50 or more jobs. In the remainder of this section, we focus on the prevalence of new and nascent entrepreneurs who expect their business to employ at least 20 people in five years’ time. This is known as high-growth expectation early-stage entrepreneurial activity, or HEA for short.

Figure 15 presents the HEA rate in GEM countries for which a sufficient sample size was available, grouped on the basis of GDP per capita. The vertical bars indicate the 95% confidence interval. If vertical bars overlap between 2 countries, the difference between those countries is not considered statistically significant.

**Figure 14. Prevalence Rates of Early-Stage Entrepreneurs of All Participating GEM Countries, 2000–2006, Categorized by Growth Expectation**



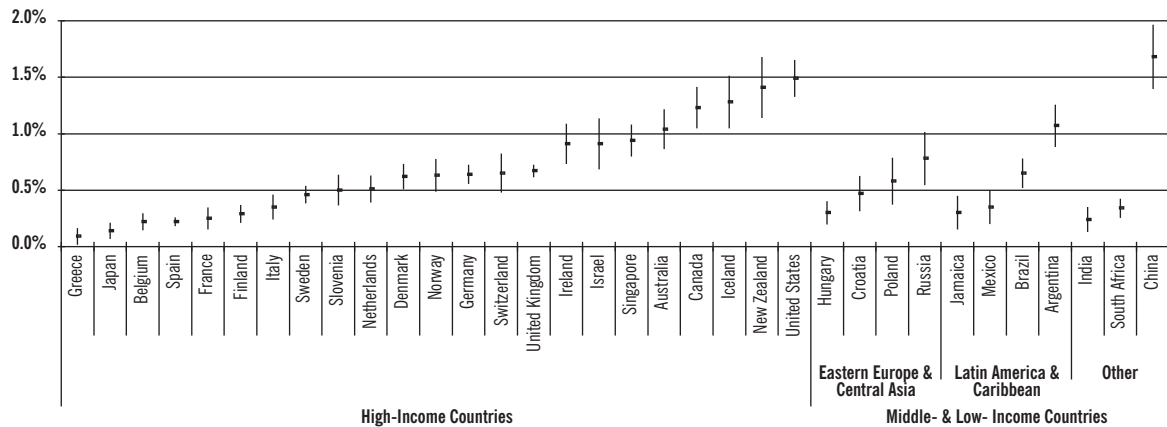
Source: GEM Adult Population Survey (APS).

## Characteristics of Entrepreneurial Activity

Figure 15 is broadly consistent with the notion that national HEA rates vary with economic context. The United States, New Zealand, Iceland, and Canada have higher levels of HEA than other high-income countries. The HEA rate for these countries is over 1%. In the United Kingdom, Switzerland, Germany, Norway, and Denmark, the HEA rate is between

0.5% and 0.8%. The lowest levels of HEA, at under 0.5%, occur in Greece, Japan, Spain, Belgium, France, Finland, and Italy. Within high-income countries, the differences in prevalence rates of HEA are considerable, ranging from the United States mean of 1.5% to approximately 0.1% in Greece.

**Figure 15. Prevalence Rates of High-Growth Expectation Early-Stage Entrepreneurship (HEA) in the Adult Population, 2000–2006**



Source: GEM Adult Population Survey (APS).

HEA rates can vary even among broadly similar high-income countries. Among the large EU economies, the United Kingdom and Germany clearly exhibit higher levels of HEA than France and Italy. In the Benelux countries, the Dutch HEA rate is higher than the Belgian HEA rate. In Scandinavia, the level of HEA in Iceland is four times higher than that of Finland.

Of the middle- and low-income countries, China clearly stands out as a hotbed of high-growth expectation entrepreneurship<sup>15</sup>. The HEA rate for China is the highest of any GEM country, even though it is not statistically different from that of the United States, New Zealand, and Iceland. Most other middle- and low-income countries in the sample exhibit lower HEA rates than most high-income countries. It is notable that India's HEA rate is only one-fifth of that of China.

An analysis of the anatomy of entrepreneurial activity (defined as the relative prevalence of HEA entrepreneurs among all TEA entrepreneurs) reveals a slightly different pattern from that shown in Figure 15.

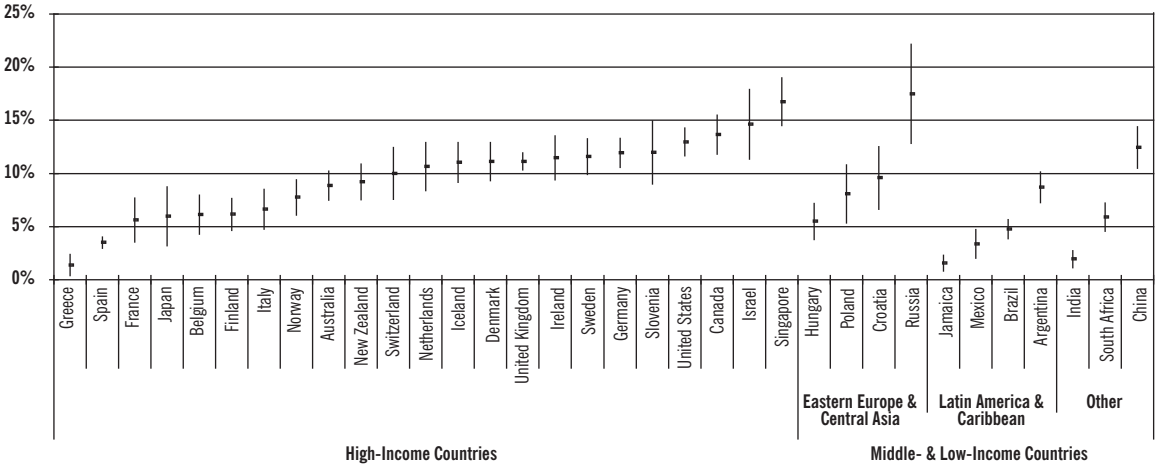
Figure 16 shows that the countries with arguably the "healthiest" entrepreneurial anatomies, in this sample of nations, are Russia, Singapore, Israel, and China. However, the margins of error for both Russia and Israel are large.

In Singapore, over 15% of nascent and new entrepreneurs aspire for rapid growth, the highest relative prevalence of HEA of all high-income countries in the sample. Thus, in spite of its low overall rate of entrepreneurial activity, the contribution of entrepreneurs to the Singaporean economy may be quite significant. Greece and Spain stand out as countries where very few nascent and new entrepreneurs (less than 5%) anticipate creating a business of significant size. Also France, Japan, Belgium, Finland, Italy, and Norway exhibit low levels of entrepreneurial growth ambition, with less than 10% of all start-up attempts expecting high growth.

Among medium- and low-income countries, China's nascent and new entrepreneurs appear to be the most growth-oriented, with more than 10% of them anticipating high growth. Early-stage entrepreneurial activity in India and Jamaica, on the other hand, is marked by low levels of growth expectation. In these countries, growth ambitions are roughly at the same level with Greece.

In summary, high-income countries typically have a higher relative prevalence of HEA than middle- and low-income economies. There are notable exceptions to this overall pattern, however. Some high-income countries have low relative prevalence of HEA, and some middle- and low-income economies have high

Figure 16. Relative Prevalence of High-Growth Expectation in Early-Stage Entrepreneurship, 2000–2006



Source: GEM Adult Population Survey (APS).

relative prevalence.

**INNOVATION-ORIENTED  
ENTREPRENEURIAL ACTIVITY**

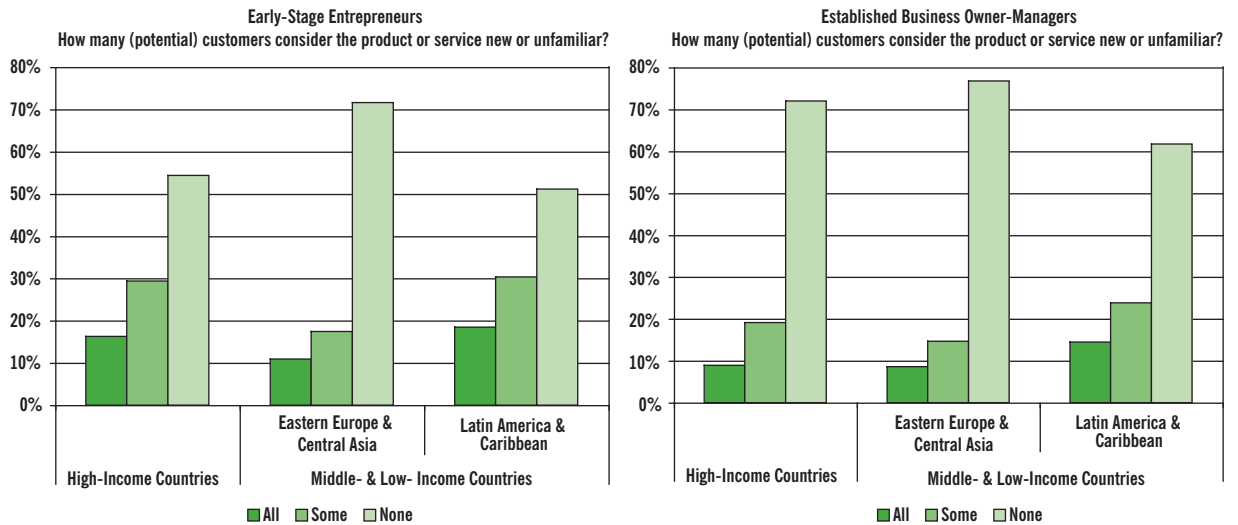
The essence of Schumpeter’s (1934) theory of creative destruction is that entrepreneurs distort the market equilibrium by introducing new product-market combinations or innovations. Sometimes, they use new technologies to do so. By innovating, entrepreneurs drive less productive firms out of the market and advance the production frontier. Innovation is therefore an important means by which entrepreneurial firms contribute to economic growth.

GEM assesses innovation in entrepreneurial businesses in a variety of ways. Figure 17 displays the assessments of early-stage entrepreneurs and established business owner-managers concerning the novelty (or unfamiliarity) of their products or

services relative to customers’ current experience. It shows that for all country groups, some degree of product newness is mentioned more often by early-stage entrepreneurs than by established business owner-managers. Note, though, that the difference is relatively small for middle- and low-income countries in Europe and Asia.

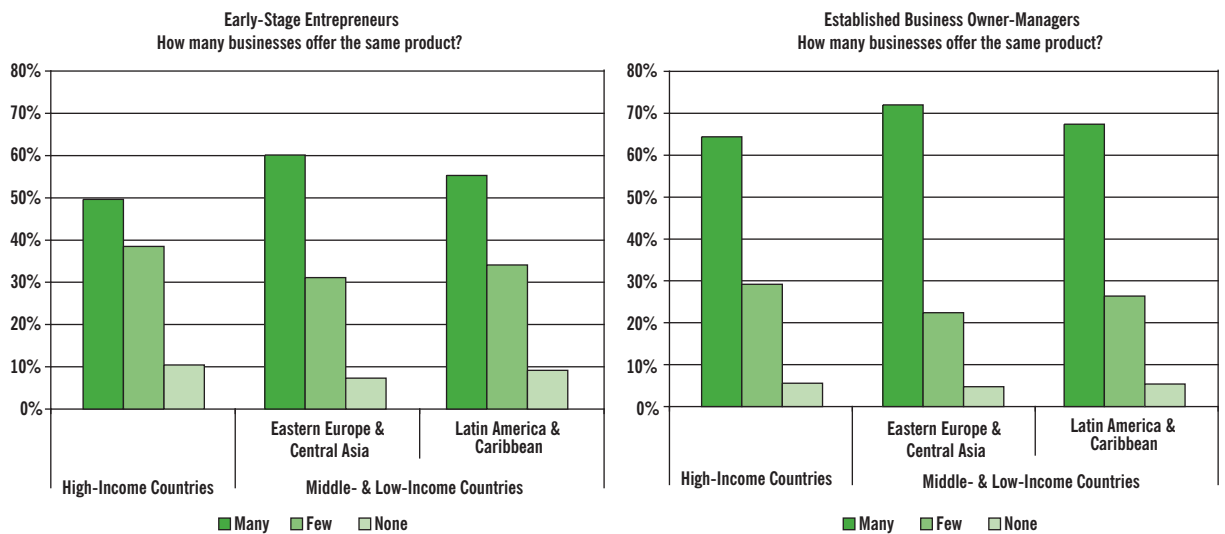
A second way that GEM assesses the innovativeness of entrepreneurial businesses is shown in Figure 18. Here, the issue is the degree of competition faced by the business, or whether the owner-manager perceives that many, few, or no other businesses offer similar products or services. Here we see that early-stage entrepreneurs in high-income countries are more likely to perceive few or no competitors than their peers in middle- and low-income countries. In general, entrepreneurs with new products, and entrepreneurs operating with few or no competitors, are more prevalent among early-stage entrepreneurs than among established businesses.

Figure 17. Novelty of Products as Assessed by Early-Stage Entrepreneurs and Established Business Owner-Managers, 2007



Note: excludes India, China, and Thailand.  
Source: GEM Adult Population Survey (APS).

Figure 18. Number of Competitors as Assessed by Early-Stage Entrepreneurs and Established Business Owner-Managers, 2007



Note: excludes India, China, and Thailand.  
Source: GEM Adult Population Survey (APS).

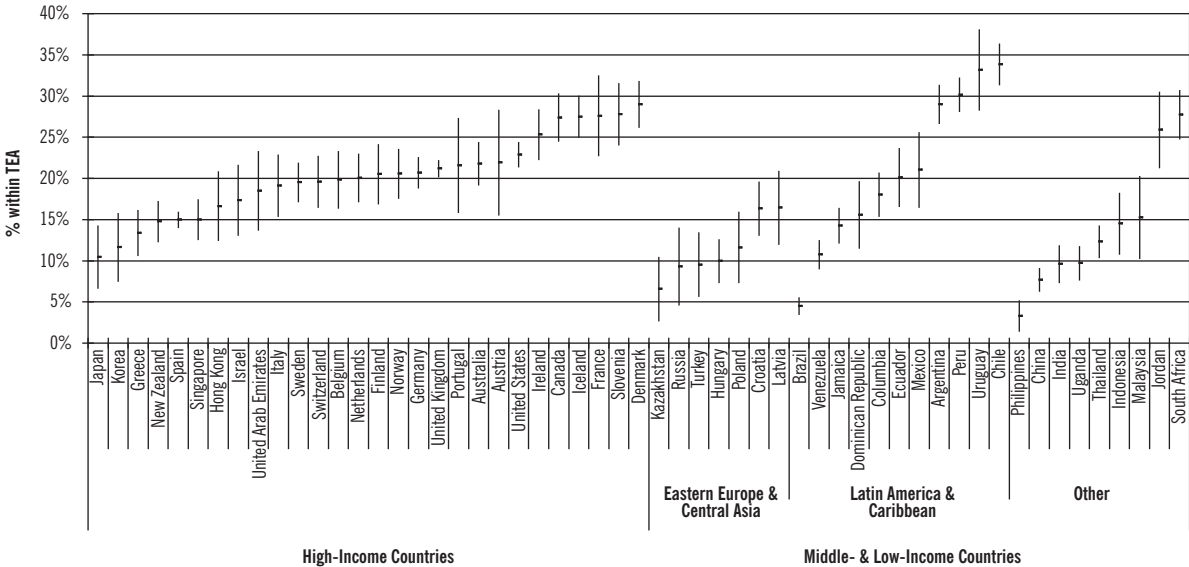
Figure 19 evaluates GEM countries on an index that combines the two measures of innovation discussed above (product novelty and degree of competition), and ranks countries in their country groups on the relative prevalence of innovative early-stage entrepreneurial activity. In essence, this index measures the percentage of early-stage entrepreneurs with novel product-market combinations. These entrepreneurs offer a product or service they believe is new to some or all customers, and they also believe that there are few or no businesses offering the same product. In order to derive more precise estimates, we combined GEM data from 2002–2007.

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. Interestingly, within the high-income country group, the EU-countries emerge as on average having highest relative prevalence. The figure shows, however, a wide variation in relative prevalence, even within the EU bloc. For example, 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 high-income countries, it is striking that Asian countries have low relative prevalence.

Turning to middle- and low-income countries, Figure 19 again distinguishes between three country groups rather than the two-group categorization used elsewhere in this report. This distinction is to highlight that Eastern Europe and Central Asian countries—all members of the former Soviet bloc—have similar, low innovation-relative prevalence. There appears to be a wide variation in relative prevalence in the other two middle- and low-income groups. In Latin America and the Caribbean, Brazil has the lowest rate, while Argentina, Peru, Uruguay, and Chile have six times as many innovative entrepreneurs in their early-stage entrepreneurial population. The final group consists of middle- and low-income countries in the Far East, Middle East, and Africa. Here, South Africa and Jordan have high proportions of innovative entrepreneurs, and the Philippines have the lowest. China and India also score quite low on this measure.

In considering these patterns, it is important to bear in mind that this index works well if both the availability of new products and services and the strength of competition is evenly distributed throughout the world. This is a big assumption to make. By comparing within country groups, we control to some extent differences in product availability and ferocity of competition. But it may be that some countries score high on this index merely because relatively few new products are available in them and competition is weak.

Figure 19. Percentage of Early-Stage Entrepreneurial Activity with New Product-Market Combination, 2002–2007



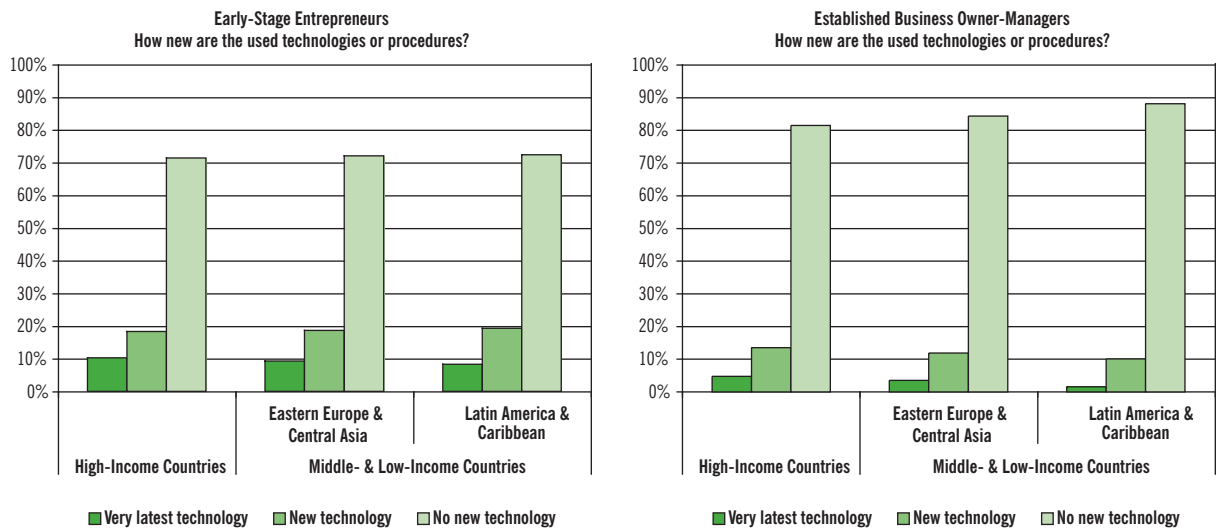
Source: GEM Adult Population Survey (APS).

## Characteristics of Entrepreneurial Activity

Figure 20 shows how entrepreneurs in different country groups differ in the extent to which they use technologies and procedures that were not available earlier than one year ago, or between one and five years ago, or available for longer. Technology should be seen here in the regional context. What is considered as a new technology in one particular country may be considered as

old in other countries. For the three distinguished country groups, the patterns of technology novelty in early-stage entrepreneurial activity are roughly the same<sup>16</sup>. The three participating GEM countries that are not included in Figure 20—India, China and Thailand—demonstrate relatively high degrees of new technology.

**Figure 20. Perception of Technology Novelty Among Early-Stage Entrepreneurs and Established Business Owner-Managers by Country Group, 2007**



Source: GEM Adult Population Survey (APS).  
Note: excludes India, China, and Thailand.



### The IIP Innovation Confidence Index

Bhidé (2006) suggested that one reason for the relative economic success of the United States compared with Europe was the receptivity of American citizens to innovations. This proposition helped spur the creation of an international Innovation Confidence Index, developed by the Institute for Innovation and Information Productivity (IIP) in association with GERA. This year, following a successful pilot in the United States, 12 GEM nations participated in the first cross-country measurement of national innovation confidence.

Innovative entrepreneurs need customers who are willing to buy new products and services and to try products and services that utilize new technology. Consumers who are receptive to such innovations tend to believe that innovations will improve their life. The index captures these three dimensions of innovation confidence: willingness to buy new products or services (innvbuy), willingness to try products or services that involve new technology (innvtry), and belief that new products or services will improve one's life (innvlife). Each dimension is measured using a five-point scale and then combined into an index at the country level<sup>17</sup>. Although many different indices are possible, we use here the average percentage of the sample agreeing to each item. Figure 21 plots the results for each item and

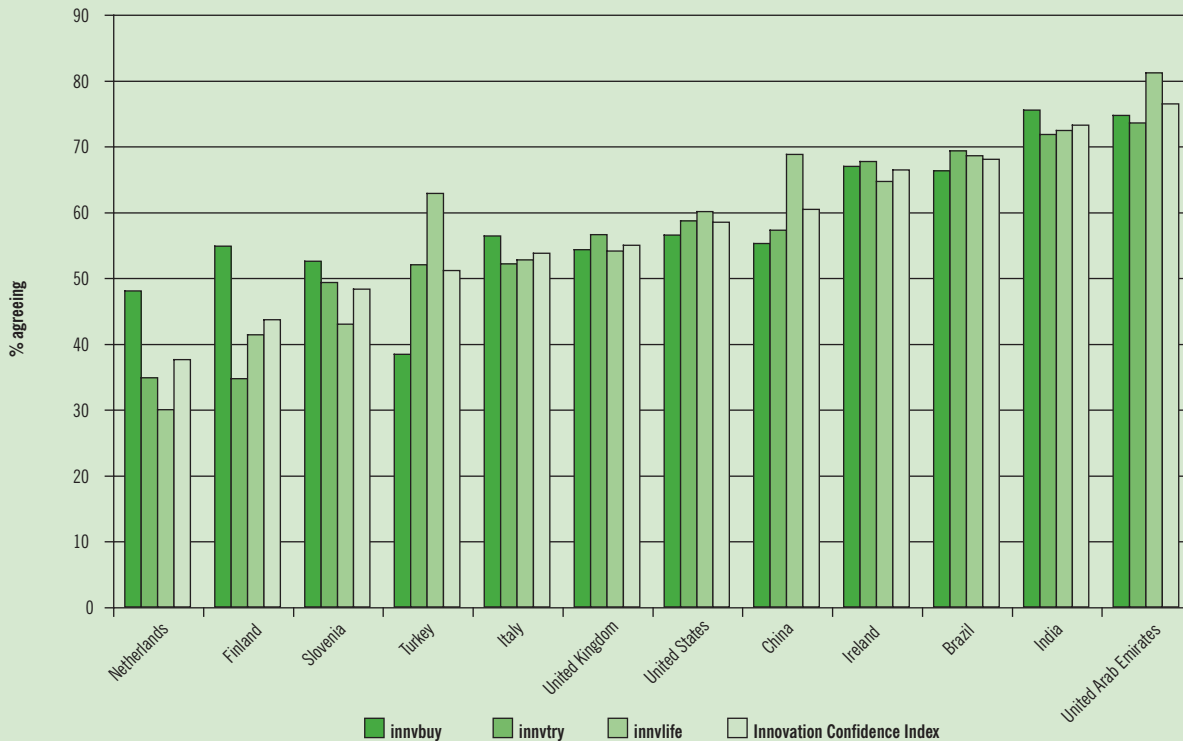
for the index, in rank ascending order of countries on the index.

The results show that innovation confidence varies dramatically between nations, but that both middle- and low-income countries and high-income countries can have high levels of innovation confidence. While, on the whole, they support Bhidé's hypothesis about the United States and Europe, this is not the full picture. The United States lies in the second quartile of the sample of 12 nations, behind the United Arab Emirates, India, Brazil, and Ireland. It appears that countries with young, relatively fast-growing economies tend to exhibit higher innovation confidence than countries undergoing slower growth rates. Mean age of the population correlates quite strongly and negatively (-0.713, p=.009) with the index, and particularly with innvlife. The correlation with IMF estimates for GDP growth over 2006 and 2007 is lower, but still significant .611 (p=.035).

Nascent and new-business entrepreneurs are more likely to be innovation-confident, irrespective of age, gender, education, or working status, and there is a significant correlation between TEA and the innovation confidence index across the 12 participating nations (0.692, p=.000). In this respect, as in others, innovation and entrepreneurship are twins.

For more details on the IIP Innovation Confidence Index, see [www.iii-p.org](http://www.iii-p.org)

Figure 21. Perception of Country Sample Ages 18–64 Agreeing with Three Innovation Confidence Items, and IIP Innovation Confidence Index



Source: GEM Adult Population Survey (APS).

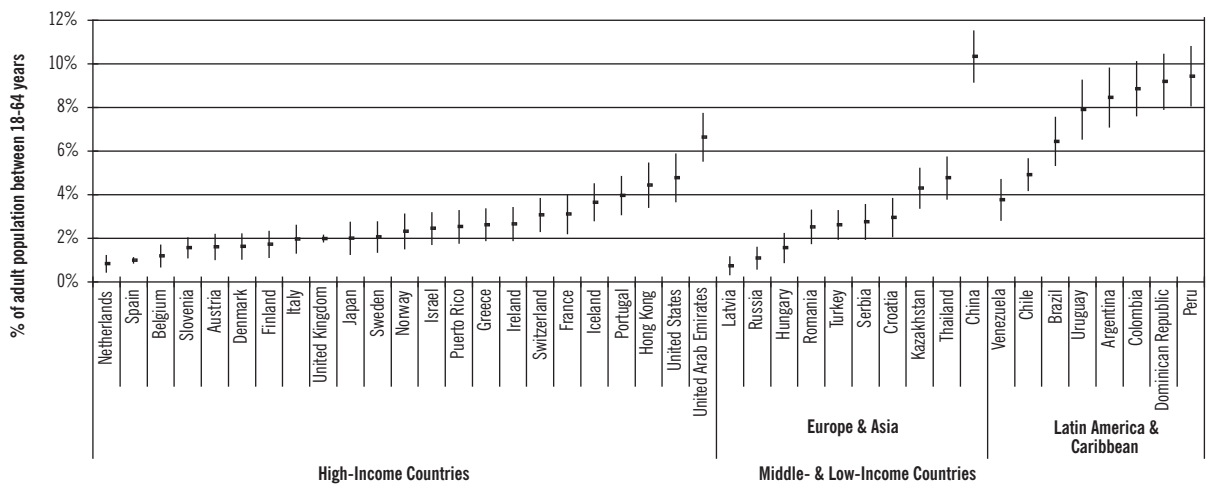


### DISCONTINUING A BUSINESS: HOW MANY ENTREPRENEURS DO IT AND WHY

It is perhaps natural that entrepreneurship scholars should focus on the exciting process of starting a business rather than what happens when entrepreneurs discontinue, sell, or quit their business. But business discontinuation is an important feature of dynamic economies, and entries and exits

of businesses are closely correlated<sup>18</sup>. Figure 22 displays prevalence rates of people who discontinued a business in the twelve months preceding the GEM survey. It can be seen that business discontinuation rates are generally quite low, although in some middle- and low-income countries they approach 10% of the working-age population. Among high-income countries, Hong Kong, the United States, and the United Arab Emirates have the highest rates of business discontinuation. This suggests that in some countries, there is a rapid turnover of business experiments. But should we call these “failures?”

**Figure 22. Prevalence Rate of People Ages 18–64 Who Discontinued, Sold, or Quit a Business in the Past 12 months, All GEM 2007 Countries**



Source: GEM Adult Population Survey (APS).

It is often wrongly assumed that businesses, especially new businesses, have a high failure rate. For example, one study in the United Kingdom suggested that over half of UK adults thought that 50% of all new businesses fail in their first year, when in fact official business sales tax registration data suggests that only 10% of sales-tax registered businesses de-register within one year of registration<sup>19</sup>. The chief statistician of the United States Small Business Administration, Brian Headd, regularly gets asked for the source of the statistic that “90% of new businesses fail in the first year,” and has shown that, for the United States, this is not a statistic – it’s a myth<sup>20</sup>. In a study he conducted on new businesses with any employees in the United States, he found that two-thirds survive at least two years, and about half survive a minimum of four years (Headd 2003). Other researchers, such as Knaup (2005), have found similar results.<sup>21</sup>

One possible source of this new business failure myth is the notion that all businesses that close (that is, do not survive) are failures. In the study by Headd (2003), owners of about one-third of all

firms that closed said their firm was successful at closure. In 2007, GEM respondents who said they had discontinued a business in the last 12 months were asked if their business continued. It appears that, on average, about one-third of the businesses that were discontinued by a GEM respondent continued in another form or with different ownership. The respondents who discontinued a business in the last 12 months were also asked to state the most important reason for doing so. Figure 23 shows that the discontinuation of a business does not necessarily mean the business failed.

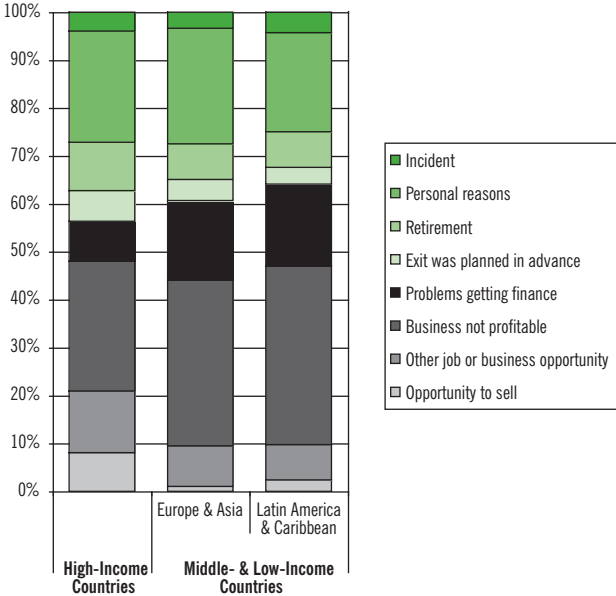
Although financial problems were cited as the reason for quitting the business by no more than 55% of all respondents, it was cited more often by respondents in the middle- and low-income countries than in high-income countries (where the number of respondents citing financial problems dipped to 35%). Among specific financial problems cited by respondents, the two most prevalent were the business itself not being profitable, or the respondent not being able to raise further financing.

The opportunity to sell, another job or business opportunity and retirement were mentioned more often in high-income countries than in middle- and low-income countries as the most important reason to discontinue the business. Personal reasons caused around 20 to 25% of all discontinuations. Such reasons could include sickness, family or business partner bereavement, divorce, the need to finance an event such as a wedding through sale of business assets rather than the business itself, or simply boredom.

Many respondents who had closed a business in the last 12 months were, at the time of the survey, either owner-managers of another business (20%)

or actively trying to start another business (14%). This demonstrates that business discontinuation is a natural—and normal—part of the entrepreneurial process of opportunity recognition and pursuit. It provides innovative businesses for larger firms that have the resources to disseminate the innovation more widely. It provides a liquidity event for entrepreneurs, many of whom have the bulk of their personal wealth tied up in the business. And it provides the release of human and other capital, previously tied up in unproductive assets, for use in more valuable ways.

Figure 23. Expressed Reasons Behind Discontinuing Businesses, by Age, GEM 2007



Source: GEM Adult Population Survey (APS).  
 Note: excludes India, China, and Thailand.

# Perceptions about Entrepreneurship and the Link with Entrepreneurial Activity

An important driver of national entrepreneurial capacity is how people perceive entrepreneurship. Perceptions about entrepreneurship may affect the supply side and the demand side of entrepreneurship. On the supply side, or the “pool” of potential entrepreneurs, important perceptions include both willingness and perceived ability to become an entrepreneur (Davidsson et al. 1991). Education levels and the availability of entrepreneurship training programs are possible determinants of perceived skills.

On the demand side, or “space for” entrepreneurship, there need to be opportunities for entrepreneurship, but equally entrepreneurs need to perceive opportunities to start a business (Kirzner 1973; Shane 2003). The quantity and quality of perceived opportunities may be enhanced by national conditions, such as economic growth, population growth, culture, and national entrepreneurship policy<sup>22</sup>.

But there are more factors than these at play. As people see more and more successful entrepreneurs in their direct environment, this may enhance their perception of their own capabilities without enhancing actual capabilities. This effect will 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.

In Figure 24, adapted from Wennekers (2006), we identify the main components of entrepreneurial attitude. In this model, Entrepreneurial Framework Conditions (EFCs) affect the extent to which people see opportunities to start a business and the extent to which they think they have the required capabilities to start a business. An important issue here is that GEM deals with perceived opportunities and capabilities rather than “real” opportunities and capabilities. It is people’s perception of the environment and themselves that drives them into (or away from) entrepreneurship (Arenius and Minniti 2005; Minniti and Nardone 2007).

It is also possible that people 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 have 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<sup>23</sup>. Shane (2003) describes the process of individual-opportunity nexus where it is given that opportunities exist<sup>24</sup>. In his model these existing opportunities need to be discovered. In this view, national governments could consider ways of increasing the likelihood of discovery as a means of enhancing the entrepreneurial climate.

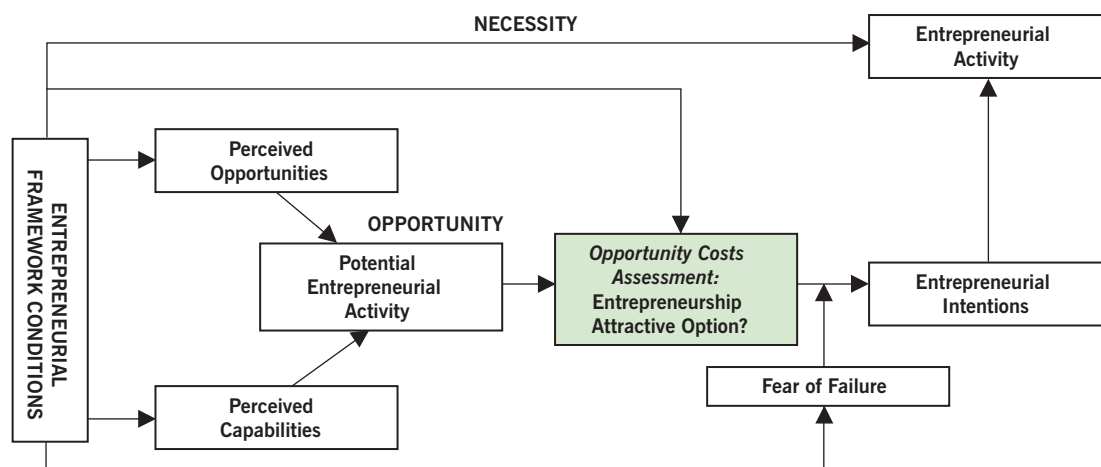
If an individual exhibits positive perceptions towards entrepreneurship, it is by no means certain that he or she will actually get involved in entrepreneurial activity. There are several assessments to be made, which may or may not be conscious. First, there is the assessment of opportunity costs (Lucas 1978; Shane and Venkataraman 2000), which involves comparing the expected returns of entrepreneurship to the expected returns of an alternative occupation. The most common alternative is “being employed.”

Then, there is a risk-reward assessment: even if the expected returns to 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 institutions. For instance, 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.

Figure 24 is a more detailed representation of the lower half of the general GEM framework described in the introduction (and shown in Figure 1). Consistent with the GEM framework, it shows that entrepreneurial framework conditions may impact the entrepreneurial engagement process, and at different levels.

There is no general pattern describing the sequence in which assessments are made and steps are taken. But it is these intrinsic assessments that may ultimately lead to a proclaimed intention (and subsequent action) to start a business. The process described is explored with opportunity-related entrepreneurship in mind. As described in the previous section, this holds for the bulk of entrepreneurs, particularly in high-income countries. For some people, however, being involved in entrepreneurial activity is a necessity: there are simply no other options to earn a living and there is no comparative assessment to be made.

**Figure 24. National and Regional Entrepreneurial Framework Conditions, Perceptions about Entrepreneurship, and Engagement in Entrepreneurial Activity**



Note: Adapted from Wennekers (2006).

Table 3 shows some notable differences between countries, but also between country groups regarding different components of entrepreneurial attitudes<sup>25</sup>. Perceived capabilities and opportunities are fairly high in most Latin American countries. Starting a business in this part of the globe is a common event, unlike in high-income countries. In the United States in 2007, for example, relatively few people perceived opportunities for starting a business.

Some countries have favorable perceptions of entrepreneurship combined with low rates of intentional entrepreneurship. This is the case for many developed countries in Europe. In Table 3, the higher the difference between the rates in the third and fourth columns (perceived opportunities and capabilities) on the one hand and the rates in the final column (entrepreneurial intentions) on the other, the larger the associated opportunity costs for entrepreneurship. This is the case for many high-income European countries. In other words, the attractiveness of 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 (1) discourage employees with positive entrepreneurial perceptions from switching to entrepreneurship and (2) cause potential entrepreneurs to think carefully before hiring employees because they may suffer substantial losses in case their employees would become unfit for work.

Fear of failure is often considered an important cultural component that is detrimental to new firm activity. However, so far this asserted effect has not been fully confirmed. In Table 3 we see, for instance, that Sweden and the Netherlands, both countries with low TEA rates, have fairly low fear of failure rates. On the one hand, both countries' institutional frameworks can be characterized as protecting income, but on the other hand, have, at least until recently, been punishing those who become insolvent through an onerous bankruptcy process. This suggests that the effects of opportunity costs dominate the effects caused by fear of failure.

For many middle- and low-income countries 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 and higher degrees of necessity-driven entrepreneurship.

## Perceptions about Entrepreneurship and the Link with Entrepreneurial Activity

**Table 3. Estimated Prevalence of Perceptions about Entrepreneurship Among the Non-Entrepreneurially Active Population Ages 18-64 in GEM 2007 Nations**

| COUNTRY   | POTENTIAL ENTREPRENEURIAL ACTIVITY | PERCEIVED OPPORTUNITIES | PERCEIVED CAPABILITIES | FEAR OF FAILURE | ENTREPRENEURIAL INTENTIONS |
|---|------------------------------------|-------------------------|------------------------|-----------------|----------------------------|
| <b>High-Income Countries</b>  |                                    |                         |                        |                 |                            |
| Japan   | 2%                                 | 7%                      | 9%                     | 38%             | 2%                         |
| France  | 11%                                | 23%                     | 32%                    | 49%             | 15%                        |
| Belgium   | 14%                                | 15%                     | 35%                    | 24%             | 6%                         |
| United States   | 15%                                | 20%                     | 43%                    | 24%             | 8%                         |
| Israel  | 17%                                | 22%                     | 34%                    | 42%             | 13%                        |
| Switzerland   | 18%                                | 33%                     | 37%                    | 36%             | 7%                         |
| Greece  | 20%                                | 27%                     | 41%                    | 62%             | 12%                        |
| Hong Kong   | 20%                                | 81%                     | 24%                    | 38%             | 10%                        |
| Netherlands   | 21%                                | 41%                     | 33%                    | 21%             | 4%                         |
| Finland   | 21%                                | 52%                     | 31%                    | 37%             | 5%                         |
| Norway  | 21%                                | 44%                     | 31%                    | 18%             | 6%                         |
| Puerto Rico   | 21%                                | 35%                     | 50%                    | 29%             | 14%                        |
| Spain   | 22%                                | 33%                     | 41%                    | 51%             | 4%                         |
| Portugal  | 23%                                | 30%                     | 52%                    | 37%             | 10%                        |
| United Kingdom  | 24%                                | 36%                     | 44%                    | 37%             | 6%                         |
| Italy   | 24%                                | 39%                     | 47%                    | 44%             | 10%                        |
| Ireland   | 25%                                | 44%                     | 43%                    | 40%             | 8%                         |
| Sweden  | 25%                                | 49%                     | 39%                    | 32%             | 9%                         |
| Slovenia  | 26%                                | 47%                     | 43%                    | 31%             | 9%                         |
| Denmark   | 26%                                | 69%                     | 33%                    | 37%             | 6%                         |
| Austria   | 29%                                | 50%                     | 49%                    | 38%             | 5%                         |
| Iceland   | 29%                                | 66%                     | 37%                    | 42%             | 15%                        |
| United Arab Emirates  | 34%                                | 46%                     | 57%                    | 35%             | 35%                        |
| <b>Middle- &amp; Low-Income Countries—Europe and Asia</b>             |                                    |                         |                        |                 |                            |
| Russia  | 4%                                 | 9%                      | 7%                     | 29%             | 3%                         |
| Thailand  | 8%                                 | 11%                     | 28%                    | 56%             | 21%                        |
| Latvia  | 13%                                | 33%                     | 24%                    | 44%             | 4%                         |
| Romania   | 16%                                | 24%                     | 26%                    | 29%             | 12%                        |
| China   | 17%                                | 32%                     | 30%                    | 30%             | 31%                        |
| Hungary   | 19%                                | 25%                     | 39%                    | 30%             | 9%                         |
| Kazakhstan  | 25%                                | 53%                     | 36%                    | 54%             | 13%                        |
| Turkey  | 26%                                | 37%                     | 45%                    | 32%             | 19%                        |
| Croatia   | 30%                                | 41%                     | 56%                    | 37%             | 10%                        |
| Serbia  | 33%                                | 46%                     | 60%                    | 31%             | 33%                        |
| India   | 52%                                | 70%                     | 69%                    | 47%             | 50%                        |
| <b>Middle- &amp; Low-Income Countries—Latin America and Caribbean</b> |                                    |                         |                        |                 |                            |
| Brazil  | 25%                                | 37%                     | 48%                    | 36%             | 21%                        |
| Uruguay   | 26%                                | 37%                     | 51%                    | 33%             | 15%                        |
| Chile   | 31%                                | 45%                     | 58%                    | 35%             | 25%                        |
| Argentina   | 32%                                | 56%                     | 49%                    | 39%             | 20%                        |
| Colombia  | 36%                                | 49%                     | 58%                    | 37%             | 60%                        |
| Venezuela   | 42%                                | 52%                     | 62%                    | 24%             | 21%                        |
| Dominican Republic  | 46%                                | 51%                     | 78%                    | 29%             | 34%                        |
| Peru  | 46%                                | 57%                     | 69%                    | 30%             | 41%                        |

Note: Prevalence rates are relative to 18-64 adult population **excluding people who are already active in entrepreneurial activity**. Data are sorted along potential entrepreneurial activity (i.e., prevalence rates of individuals perceiving both capabilities and opportunities) per country group. Source: GEM Adult Population Survey (APS).

## Perceptions about Entrepreneurship and the Link with Entrepreneurial Activity

From Table 4 it appears that the extent to which people perceive themselves capable (i.e., they believe they have the skills and knowledge to start a business) is linked with the level of early-stage entrepreneurial activity, and nascent entrepreneurial activity in particular. It should be born in mind that in some countries the perception of required knowledge and skills may be lower than in other countries because of regulation of entry or the sophistication of the business environment. This may affect self-assessment of capabilities to start a business.

The adult population survey also provides information on individual perceptions about the national entrepreneurial culture (see the GEM model in the introduction). These perceptions of national attitude towards entrepreneurship are listed in Table 4. Media attention and other positive signals from society, such as entrepreneurship being considered as a good career choice or receiving high status is positively linked to entrepreneurial activity. However, high status for entrepreneurship is only weakly related to entrepreneurial activity. Therefore, the recognition of entrepreneurship as a good career choice and the degree of media attention could be useful indicators of national entrepreneurial culture.

**Table 4. Correlations Between Individual Perceptions, National Conditions and Entrepreneurial Activity**

|   | EARLY-STAGE<br>ENTREPRENEURIAL<br>ACTIVITY | NASCENT<br>ENTREPRENEURSHIP | NEW<br>BUSINESS<br>OWNERSHIP | ESTABLISHED<br>BUSINESS<br>OWNERSHIP |
|---|--|-----------------------------|------------------------------|--------------------------------------|
| <b>Individual Perceptions <sup>A)</sup></b>             |  |                             |                              |                                      |
| Perceived opportunities and capabilities                | 0.43**                                     | 0.57**                      | 0.25                         | 0.15                                 |
| Perceived opportunities                                 | 0.21                                       | 0.32*                       | 0.09                         | 0.06                                 |
| Perceived capabilities                                  | 0.43**                                     | 0.54**                      | 0.27*                        | 0.16                                 |
| Fear of failure   | 0.05                                       | -0.05                       | 0.11                         | 0.38*                                |
| Entrepreneurial intentions                              | 0.66**                                     | 0.58**                      | 0.62**                       | 0.35*                                |
| <b>Perceived National Attitudes <sup>B)</sup></b>       |  |                             |                              |                                      |
| People consider starting business as good career choice | 0.64**                                     | 0.55**                      | 0.60**                       | 0.44**                               |
| People attach high status to successful entrepreneurs   | 0.36*                                      | 0.27                        | 0.37*                        | 0.38*                                |
| There is a lot of media attention for entrepreneurship  | 0.57**                                     | 0.47**                      | 0.55**                       | 0.49**                               |

\*\* Correlation is significant at the 0.05 level (2-tailed).

\* Correlation is significant at the 0.1 level (2-tailed).

A) Prevalence rates are relative to 18-64 adult population, excluding people who are already active in entrepreneurial activity.

B) Source: GEM 2007. The respondents are asked to agree or disagree with statements such as: In <<country>>, people consider starting a business as a good career choice.

What do global institutions, such as the World Trade Organization, the World Bank, and the United Nations agencies, have to do with entrepreneurship? While some World Bank aid, for example, does set out specifically to promote entrepreneurship in developing countries, most of the activities of these international organizations tend to focus on government-to-government negotiations, national economic policies, and transfers of aid from rich to poor countries. Most small businesses and start-ups have little direct contact with, or direct influence on, these organizations. Yet their potential impact on the global environment for entrepreneurship warrants a closer examination, and a consideration of how the interests of entrepreneurs can best be represented in the activities of these institutions.

In an increasingly globalized world economy, global economic institutions in trade, finance, and development are increasingly affecting entrepreneurs in significant ways. The most direct reason for this impact is that the globalization of markets has led to the globalization of entrepreneurship. Opportunities for new business ventures, innovation, and expansion come increasingly from international market access, and challenges and threats to new businesses come increasingly from foreign competition. The internet enables foreign sales and sourcing. Emerging markets are growing more rapidly than the “rich” industrialized world, and will play an increasingly important role in the world economy. Technology spreads through international investment and trade in new products. In a globalized economy, domestic markets must be flexible in order to adjust to changing world market trends, affecting nearly all firms, even purely domestic entrepreneurs. These trends are the natural consequences of the growing interconnectedness of people and business opportunities within the global economy, fueled by the activities of individuals and firms with a global view seeking to create new value in the marketplace. Many global economic institutions play a large role in these evolving influences on the world economy.

This section will offer a brief introduction to the link between entrepreneurship, trade, and the activities of economic institutions in the global economy. In

general, the institutional element of this linkage has two parts: 1) the deregulation and integration of national markets into a global market, and 2) the “capacity-building” or “gap-filling” aid and assistance designed to promote business ventures and market reforms in developing countries and to integrate these countries into the world economy.

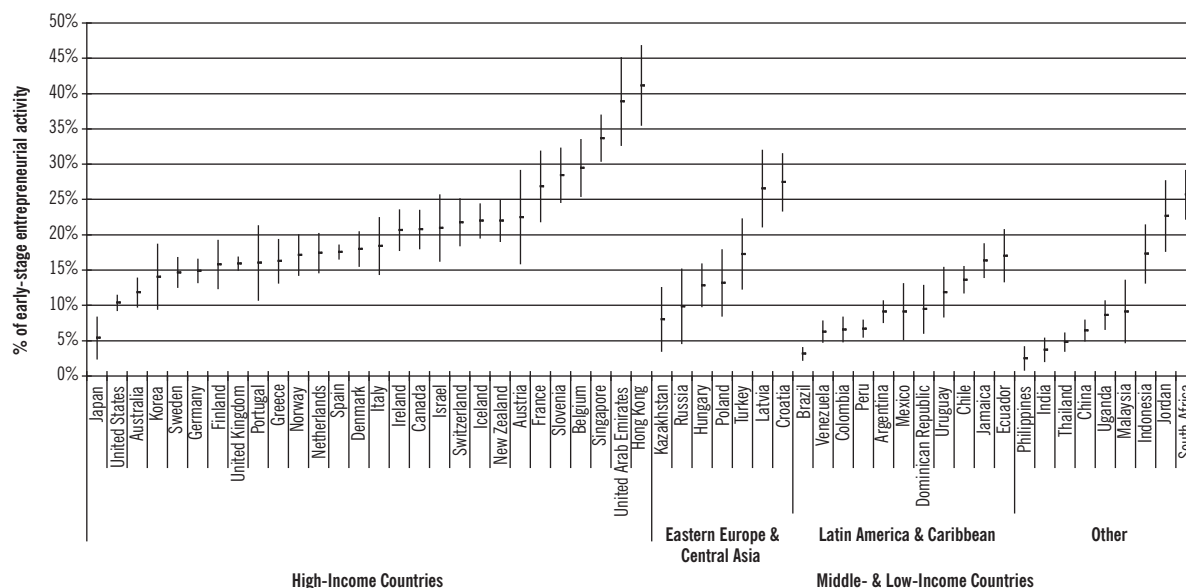
## WHAT'S AT STAKE

The institutional issue of trade policy is of increasing importance to entrepreneurs because, in a growing and interconnected world economy, market signals communicate entrepreneurial opportunities and market forces provide the best framework for a sustainable and profitable enterprise.

Figure 25 presents GEM survey results regarding the role of external markets in the sales of people involved in early-stage entrepreneurial activity. Entrepreneurs in small countries with lucrative nearby or accessible foreign markets tend to have larger numbers of export customers. Singapore, and Hong Kong, for example, are small “open” economies with strong exporting traditions, while Latvia, Croatia, and Slovenia are rapidly growing emerging markets located near large European markets. A large proportion of entrepreneurs in Canada, Israel, New Zealand, Jordan, South Africa, the United Arab Emirates, Belgium, and several other European countries also report a strong reliance on export sales, based on their access to lucrative foreign markets. Entrepreneurs in larger countries, such as the US, Japan, Brazil, China, India, and Russia, on the other hand, tend to focus, at least initially, more on their larger home markets.

Acs and Preston (1997) note the growing importance of small and medium enterprises (SME's) in international trade, investment, and technological diffusion.<sup>26</sup> SME's have been increasing their role in international trade, and by the mid-1990's contributed 25-35% of world exports (OECD 1997, p. 29). The issue of international market access is therefore of increasing importance to entrepreneurs, particularly those from high-income and smaller countries.

Figure 25. Relative Prevalence Rates of International Orientation of Early-Stage Entrepreneurs by Country and Country Group, 2002–2007



Response “25% or higher” to question: how many of your customers are in other countries?  
 Simple average of reported responses by country; vertical bars indicate 95% confidence intervals.  
 Source: GEM Adult Population Survey (APS).

Most governments realize that protectionism imposes costs on their economies, mainly because they see their exporters losing foreign sales due to trade restrictions of other countries. They may also realize the possible benefits to their economies of larger, integrated international markets in terms of economies of scale, specialization, and increased exports. In other words, their view towards trade is generally driven by a mercantilist mentality, focused on the supposed benefits of maximizing exports and minimizing imports. At the same time, it is clear that other countries are unlikely to lower their tariffs unilaterally. This has acted as the institutional impulse for governments to seek ways to negotiate trade agreements with other countries to lower tariffs on a reciprocal basis.

Many governments have pursued such agreements bilaterally or on a regional scale, in the form of free trade agreements and customs unions. There are currently more than 200 such agreements currently in force.<sup>27</sup> Typically, two or more countries agree to lower or eliminate tariffs and other trade barriers on most goods, as the United States, Canada, and Mexico have done in the North American Free Trade Agreement (NAFTA), or as Brazil, Argentina, Paraguay, and Uruguay have done in the Mercosur agreement.<sup>28</sup> A further step that deepens the economic integration of trading partners with each other is forming a customs union, in which all member countries have a common external trade policy, as the European Union countries have done.

As an institutional development in the world economy, preferential trade agreements have indeed promoted more economic integration among countries, and have thereby increased business opportunities for entrepreneurs. Larger, integrated markets, greater economic efficiencies, the spread of technologies, and greater cross-border investment provide economies of scale and new markets for differentiated products among the members of such agreements. However, there is a potential downside to limited integration based on preferential trade agreements. While such agreements create new trade, they may also divert trade because the agreement’s coverage is not universal. Different tariffs and trade rules apply to different trading partners, complicating a firm’s international distribution and supply chain management.

While international economic liberalization is easier to negotiate among a few countries, the ultimate integration of global markets requires global agreements on trade.<sup>29</sup> The WTO is a global economic institution that promotes multilateral trade liberalization by providing a forum for negotiations on the basis of nondiscrimination, embodied in the so-called “most favored nation” clause.<sup>30</sup> In WTO negotiations, any reduction in tariffs and other trade restrictions by any member country must in principle apply across the board to all other members. In this way, trade-liberalizing measures are “locked in” and spread throughout the entire membership. In addition, trade negotiations are made more efficient because the results will apply universally, so that each country needs only to participate in one multilateral



round of talks, rather than hundreds of bilateral talks. A dispute settlement process allows members to bring cases when other countries impair the benefits they negotiated as WTO members. The WTO currently has 152 countries, covering 95% of world trade, with 27 more countries waiting to join.

The WTO sets up a global trading system, with rules of market access that all member countries must honor. Consider the implications of this arrangement for entrepreneurs engaged in international trade as exporters, importers, or investors. Entrepreneurs often face considerable uncertainty in entering or sourcing from foreign markets, not knowing if market access might be arbitrarily closed by the foreign or domestic governments. The denial of access, or the unexpected shift of access rights to other countries' exporters, would result in a loss of the value of investment in production capacity, foreign distribution, supplier relations, and other trade-related activities.<sup>31</sup> As a result, investment in trade-related activities and participation in international markets would be discouraged. The role of the WTO has been to establish an agreement on rules of reciprocal and non-discriminatory market access, and in so doing to facilitate an environment of certainty regarding trade and investment in the world economy.<sup>32</sup> Insofar as entrepreneurial activity is linked with trade and its expansion, WTO rules thereby improve the global environment for entrepreneurs through the reduction of political risk and uncertainty regarding foreign market access.

Global trade rules and processes are important to entrepreneurs because they promote market-based outcomes in an increasingly integrated world economy. The alternative is to be left to the not-so-tender mercies of the domestic political process of trade regulation in each country. Large, politically influential firms tend to dominate policy making, often resulting in protectionist trade barriers, in the absence of an “anchor” of international rules to maintain open market access. Entrepreneurs, by the nature of their market activities, usually start small, and are therefore politically disadvantaged. While there are strong and vociferous lobbies for large, existing firms—often regarded as “national champions”—there is often no offsetting lobby for keeping markets free for investments in innovation and future jobs. Institutional rules for maintaining open markets among countries are therefore of utmost importance for the smooth functioning of the global economy and for validating entrepreneurial effort.

Aside from negotiations to lower tariffs, the WTO includes provisions to reduce subsidies and national regulations that discriminate against imports and, by implication, entrepreneurial activity. As markets become more integrated and tariffs are negotiated to lower levels, these more subtle “behind the

border” measures play a larger role in restricting imports. There are also efforts, still at early stages, in WTO negotiations to liberalize the rules of direct foreign investment and in services, areas in which government regulations often impose subtle but highly protectionist barriers to foreign access to domestic markets. Progress in liberalizing these policies will be difficult, but if successful will yield substantial gains for global economic welfare, and for those engaged in new business ventures in these sectors.

### DOMESTIC ENTREPRENEURIAL FRAMEWORK CONDITIONS AND GLOBAL INSTITUTIONS

Entrepreneurs with significant sales to other countries typically benefit directly from international trade agreements and rules, as described above. For entrepreneurs whose focus is largely or even purely domestic, the benefits of a global trading system and international development institutions are less visible. However, entrepreneurial activity takes place within a broader economic system that must provide the necessary “oxygen” of resources, incentives, markets, and supporting institutions to the growth of new firms, and global economic institutions play an important role. Within the GEM conceptual model, this is captured by the Entrepreneurial Framework Conditions (EFCs)—see box on next page. Table 5 shows links between the EFCs and entrepreneurship and international economic institutions. Some of these links are direct: the protection of intellectual property in the global economy, for example, is now subject to WTO discipline, through its Trade Related Intellectual Property (TRIPs) agreement. All WTO members must now abide by common standards of protection against piracy, counterfeiting, copyright infringement and other violations of intellectual property, enforceable through a system of dispute settlement and possible sanctions.

International trade institutions also play a significant supporting and complementary role in the EFCs. Government policies and programs that benefit or support new and growing businesses, along with embedded entrepreneurship education in schools and colleges, all contribute to a country's national “endowment” of entrepreneurship, which tends to make the economy more competitive in world markets. By facilitating access to foreign markets, trade agreements and rules thereby provide incentives for entrepreneurs to take advantage of opportunities for innovation and new market development on a global scale, thus, in many cases, validating the policy, program, and educational support that contributed to the entrepreneurial activity in the first place.

### *GEM Entrepreneurial Framework Conditions*

Ten different Entrepreneurial Framework Conditions (EFCs) were recognised by the GEM Consortium Research Design Committee, and these are briefly outlined below<sup>33</sup>. Subsequent empirical studies of the perceptions of experts conducted by the GEM consortium showed that four of these EFCs could each be subdivided into two sub-EFCs. The EFCs are not listed in assumed order of importance. They are:

**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 sub-divisions 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, and municipal).

**EFC4: Education and Training**

The extent to which training in creating or managing small, new, or growing businesses 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. (The relative level of R&D and estimates of the stock of accumulated knowledge is covered under “Technology” as a General National Framework Condition.)

**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 Change, 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. (Presence and quality of these physical resources are covered as a General National Framework Condition.)

**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 of personal wealth and income. Subsequent empirical studies have shown that there are two distinct sub-dimensions to this EFC: National Entrepreneurial Culture, or the extent to which the national culture encourages entrepreneurship, and Respect for Entrepreneurs, or the extent to which entrepreneurs have high status.

**EFC10: Intellectual Property Rights Protection**

The extent to which the intellectual property of new and growing firms is protected and enforced under the law.

Similarly, the development of commercial institutions (EFC 6) enhances the potential entrepreneurship endowment of a country, by creating a network of entrepreneurial “capacity” that can potentially increase the scope and volume of new business development, commercialization of technology, and trade. In addition, the associated development of organized entrepreneurial political representation, through small business associations and other lobbying groups, can help to promote not only a domestic political agenda, but also potentially an international entrepreneurship platform for trade negotiations.

An even more important link to the trading system occurs with the EFCs regarding internal market openness and domestic R&D transfer. Openness to trade imposes an internal, as well as external, discipline on its participants. In addition to following external rules of trade policy regulation, trade agreements typically require countries to adjust

their internal economies in order to gain from trade. In other words, international specialization and import-export trade require a reallocation of domestic resources, so that less globally efficient activities can give way to more productive activities.

Yet this is exactly the same requirement that a growing domestic economy has in promoting entrepreneurship. Start-up and growing firms, with their new products, innovative production processes, cost savings, and superior business plans, need room to grow, which requires an economic system that allows for change and does not protect existing firms with special-interest regulations and provisions. The crucial role of global trade institutions in this regard lies in their ability to “lock in” a system of domestic flexibility by integrating participating countries into the world economy. A similar benefit accrues in the form of international access to and commercialization of R&D through trade and international investment.

**Table 5. GEM Entrepreneurial Framework Conditions and the Link with Global Institutions**

| EFC                                  | LINK WITH TRADE/INSTITUTIONS   |
|--------------------------------------|--|
| 1. Financial Support                 | World Bank: IFC programs; UNDP; other foreign aid  |
| 2. Government Policies               | Foreign market access, ease of exporting/importing   |
| 3. Government Programs               | Build endowment of national entrepreneurship for global competition                            |
| 4. Education/Training                | Global component of entrepreneurship opportunity set   |
| 5. R&D Transfer                      | R&D transfer through trade, international investment   |
| 6. Commercial Infrastructure         | Build entrepreneurship endowment, gain political voice in trade policy; World Bank project aid |
| 7. Internal Market Openness          | Key component of adjustment to international trade/globalization                               |
| 8. Access to Physical Infrastructure | Inputs, location are key elements of global competitive advantage                              |
| 9. Cultural, Social Norms            | Technological/business innovation on global markets; trade links                               |
| 10. IPR Protection                   | Protection under WTO (TRIPs); WIPO   |

Therefore, while entrepreneurial ventures focused on import and export trade and foreign investment benefit most directly from adjustment to global market forces, many more domestically oriented start-ups do, as well. A flexible economy capable of trade-related adjustment establishes and reinforces the market discipline of internal market openness for all new and potential entrepreneurs. A globally open economy facilitates access to the most efficient and least costly inputs, for example, whether they are sourced domestically or from abroad. Capital and workers of all skill levels are available to all potential start-ups and established firms on an equal basis when they are not diverted to industries protected by tariffs or other government policies. World Bank measures of trade openness tend to support the link between trade institutions and entrepreneurship.<sup>34</sup>

### EFC FOCUS: REGULATIONS FOR NEW AND GROWING BUSINESSES

Regulations for new and growing businesses, which is a sub-division of the Government Policies EFC, will now be examined in more detail. This topic is relevant in a discussion of entrepreneurship and international institutions because the World Bank monitors it annually in almost every country on the planet, and is actively encouraging countries with onerous new business regulations to remove or reduce them.

In this section, results are presented on the perceptions of experts on regulations for new and growing businesses in each GEM nation for the past five years (2003 to 2007). These perceptions are compared with a measure of regulations for starting a business developed by the World Bank, which used a different, complementary methodology, and with actual entrepreneurship activity in all participating GEM nations. This enables a well-rounded picture of regulations as they actually are and as they are perceived to affect entrepreneurship in each GEM nation.

Regulations for new businesses, a major theme of the World Bank annual Doing Business Report,<sup>35</sup> which contains an index of “ease of starting a business”—or more accurately, ease of registering a new business. The World Bank measures the number of procedures, time, and costs to register a business and minimum capital subscription in each nation in a comparable way. Then it creates a percentile index from 0 to 1 for almost all nations where the nation with the most onerous regulations in each year scores 1 and the nation with the least onerous scores 0. This index has sensitized governments to the wide differences that exist between nations on regulations for new business registration and has encouraged swifter, cheaper, and

easier registration. It serves to illustrate the positive influence that global economic institutions can have on national EFCs.

From the outset, the GEM consortium chose a methodology to measure EFCs that would complement “hard” measures, such as that created by the World Bank for ease of registering a business. To illustrate this methodology with the example of regulations, each year GEM national teams ask a carefully selected group of experts (37 experts on average per nation in both 2006 and 2007) to rate five different aspects of regulations for new and growing firms on a five-point scale. The experts are chosen for their expertise in at least one EFC and range from policy-makers to entrepreneurs to resource providers to active observers, such as academics and business journalists. Their responses are combined using factor analysis to create an index that has over the years shown high and rising reliability<sup>36</sup> and is comparable across GEM nations.

It is important to understand that, although both data sets are collected by the GEM national teams, the expert data collection involves an entirely different methodology and sample from the random samples of the adult population that are used to derive the measures of entrepreneurial activity described in earlier sections of this report.

In Table 6, we show two Red Tape indices. The first is calculated from the World Bank’s “ease of starting a business” index raw data and uses a similar calculation methodology to create a percentile index that positions each nation that participated in GEM at least once between from 2003 and 2007. The second is calculated from the expert survey ratings for the items on regulation of new and growing firms for all the GEM nations for which data is available. Note that the World Bank index as calculated is a comparative index from 0 to 1. By contrast, the GEM index is an absolute index. Experts are not asked to rate their nation against other nations, but rather to rate the extent to which regulations are onerous or not onerous along five different dimensions.

Table 6 shows that some nations have improved their relative position considerably in the World Bank survey between 2003 and 2007, including France, Belgium, Portugal, Turkey, and Japan. Another notable feature of Table 6 is how lightly regulated the countries with a British legal heritage are in relation to countries with other legal heritages. The ten lightest-regulated countries in 2007 were Australia, Canada, Singapore, New Zealand, United States, Ireland, France, United Kingdom, Puerto Rico, and Hong Kong. Of these, only France does not have an Anglo-Saxon legal heritage. France simplified its regulations considerably between 2003 and 2004, cutting the number of days to register the World Bank

“standard” new business from 41 days to 7 days, and cutting the minimum capital required from 29% of average per capita income to nil. This propelled it from the 43<sup>rd</sup> percentile in 2003 into the 9<sup>th</sup> percentile in 2004.

Table 6 shows that relatively few countries received favorable scores for regulation from experts (a favorable score would be lower than 3.0). Some continental European countries showed improving scores over time, for example Belgium, Germany, Denmark, Norway, and the Netherlands, where indeed there have been some improvements in red tape to register new business enterprises, according to the World Bank, but in most cases not enough to alter these countries’ relative positions in the ease of starting a business index.

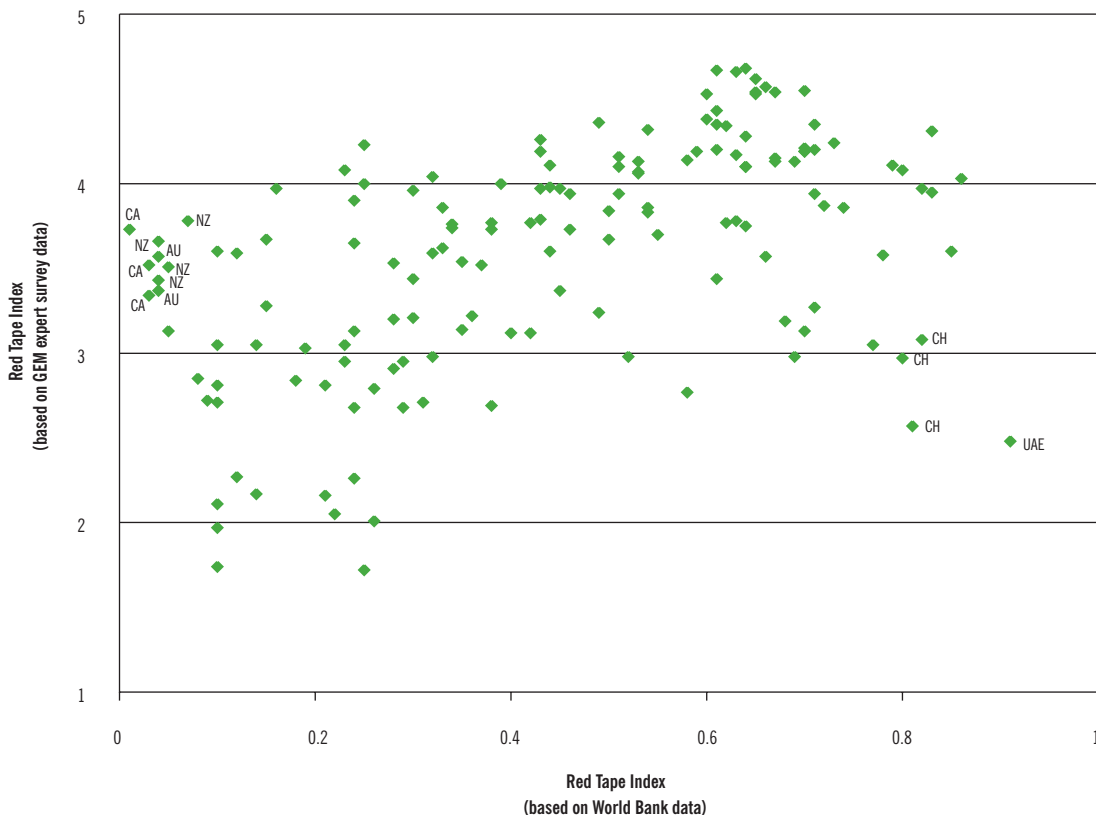
While there is a moderate relationship between country rankings on the two indices<sup>37</sup>, there are some striking anomalies that reduce the strength of this relationship. For example, the experts in China and the United Arab Emirates considered their regulatory regime to be positive, whereas these two countries had high levels of red tape on the World Bank measure. On the other hand, experts in Canada, New Zealand, and Australia considered their regulatory regimes to be negative, even though they were among the nations with the lightest red tape according to the World Bank. In Figure 25 we plot these two indices against each other, and show the anomalous position of these five countries.

**Table 6. Regulations for Starting a Business in GEM Nations, as Calculated by World Bank's "Doing Business" Project and GEM National Expert Survey (NES)**  
(High figures and rankings imply high red tape.)

| NATION<br>(IN ORDER OF WORLD<br>BANK INDEX RANK) | WORLD BANK RED TAPE INDEX BASED ON WORLD BANK<br>ESTIMATES OF EASE OF REGISTERING A BUSINESS<br>(PERCENTILE INDEX <sup>1</sup> ) |      |      |      |      |               | GEM RED TAPE INDEX BASED ON GEM EXPERT SURVEY<br>RATINGS OF REGULATIONS FOR STARTING A BUSINESS<br>(REVERSED EXPERT RATINGS PER COUNTRY ON A 1-5 SCALE) |      |      |      |      |               |
|--|--|------|------|------|------|---------------|---|------|------|------|------|---------------|
|  | 2003   | 2004 | 2005 | 2006 | 2007 | RANK<br>03-07 | 2003  | 2004 | 2005 | 2006 | 2007 | RANK<br>03-07 |
| Canada   | 0.01   | 0.03 | 0.03 | 0.04 | 0.04 | 1             | 3.73  | 3.52 | 3.34 | .    | .    | 21            |
| Australia  | 0.04   | 0.04 | 0.04 | 0.05 | 0.02 | 2             | 3.43  | 3.57 | 3.37 | 3.13 | .    | 15            |
| New Zealand                                      | 0.04   | 0.05 | 0.07 | 0.07 | 0.07 | 3             | 3.66  | 3.51 | 3.78 | .    | .    | 23            |
| United States                                    | 0.08   | 0.09 | 0.10 | 0.10 | 0.10 | 4             | 2.85  | 2.72 | 2.71 | 2.81 | 3.05 | 5             |
| Singapore  | 0.12   | 0.14 | 0.10 | 0.10 | 0.07 | 5             | 2.27  | 2.17 | 1.97 | 2.11 | .    | 3             |
| Hong Kong  | 0.1  | 0.13 | 0.14 | 0.16 | 0.17 | 6             | 1.74  | .    | .    | .    | .    | 1             |
| United Kingdom                                   | 0.12   | 0.14 | 0.14 | 0.15 | 0.15 | 7             | 3.59  | .    | 3.05 | 3.67 | 3.28 | 17            |
| Puerto Rico                                      | 0.11   | 0.13 | 0.16 | 0.15 | 0.16 | 8             | .   | .    | .    | .    | 3.97 | 36            |
| Ireland  | 0.18   | 0.21 | 0.19 | 0.10 | 0.11 | 9             | 2.84  | 2.81 | 3.03 | 3.60 | .    | 10            |
| France   | 0.43   | 0.09 | 0.10 | 0.10 | 0.12 | 10            | 3.79  | .    | .    | .    | .    | 28            |
| Denmark  | 0.24   | 0.24 | 0.23 | 0.23 | 0.24 | 11            | 3.65  | 3.13 | 3.05 | 2.95 | 2.68 | 11            |
| Iceland  | 0.21   | 0.22 | 0.24 | 0.25 | 0.26 | 12            | 2.16  | 2.05 | 2.26 | 1.72 | 2.01 | 2             |
| Israel   | 0.21   | 0.23 | 0.26 | 0.30 | 0.32 | 13            | .   | 4.08 | .    | .    | 4.04 | 40            |
| Sweden   | 0.25   | 0.26 | 0.28 | 0.29 | 0.30 | 14            | 4.00  | .    | .    | .    | .    | 38            |
| Jamaica  | 0.33   | 0.37 | 0.24 | 0.25 | 0.25 | 15            | .   | .    | 3.90 | 4.23 | .    | 41            |
| Finland  | 0.30   | 0.28 | 0.29 | 0.31 | 0.26 | 16            | 3.21  | 2.91 | 2.68 | 2.71 | 2.79 | 6             |
| Romania  | 0.35   | 0.31 | 0.25 | 0.28 | 0.34 | 17            | .   | .    | .    | .    | 3.76 | 25            |
| Norway   | 0.30   | 0.32 | 0.28 | 0.30 | 0.35 | 18            | 3.96  | 3.59 | 3.20 | 3.44 | 3.14 | 19            |
| Thailand   | 0.29   | 0.32 | 0.34 | 0.38 | 0.40 | 19            | 2.95  | .    | 3.74 | 3.73 | .    | 20            |
| Latvia   | 0.35   | 0.37 | 0.35 | 0.37 | 0.37 | 20            | .   | .    | 3.54 | 3.52 | .    | 22            |
| Switzerland                                      | 0.32   | 0.36 | 0.40 | 0.36 | 0.38 | 21            | 2.98  | .    | 3.12 | .    | 2.69 | 9             |
| Chile  | 0.33   | 0.32 | 0.36 | 0.42 | 0.44 | 22            | 3.62  | .    | 3.22 | 3.12 | 3.6  | 16            |
| South Africa                                     | 0.33   | 0.38 | 0.39 | 0.43 | 0.40 | 23            | 3.86  | 3.77 | 4.00 | 3.97 | .    | 33            |
| Belgium  | 0.51   | 0.43 | 0.46 | 0.42 | 0.28 | 24            | 4.16  | 4.26 | 3.94 | 3.77 | 3.53 | 34            |
| Malaysia   | 0.41   | 0.43 | 0.44 | 0.49 | 0.48 | 25            | .   | .    | .    | 3.24 | .    | 13            |
| Netherlands                                      | 0.45   | 0.46 | 0.50 | 0.45 | 0.43 | 26            | 3.97  | 3.73 | 3.67 | 3.37 | .    | 24            |
| Russia   | 0.58   | 0.51 | 0.47 | 0.44 | 0.46 | 27            | .   | .    | .    | 3.98 | .    | 37            |
| Turkey   | 0.71   | 0.44 | 0.44 | 0.44 | 0.43 | 28            | .   | .    | .    | 4.11 | 4.19 | 44            |
| Italy  | 0.49   | 0.48 | 0.51 | 0.53 | 0.54 | 29            | 4.36  | .    | 4.10 | 4.07 | 4.32 | 49            |
| Kazakstan  | 0.51   | 0.53 | 0.49 | 0.50 | 0.53 | 30            | .   | .    | .    | .    | 4.13 | 43            |
| Austria  | 0.45   | 0.47 | 0.52 | 0.56 | 0.58 | 31            | .   | .    | 2.98 | .    | 2.77 | 7             |
| Japan  | 0.59   | 0.63 | 0.65 | 0.35 | 0.37 | 32            | .   | 4.17 | .    | .    | .    | 46            |
| Germany  | 0.53   | 0.54 | 0.50 | 0.55 | 0.57 | 33            | 4.06  | 3.86 | 3.84 | 3.70 | .    | 30            |
| Dominican Republic                               | 0.53   | 0.54 | 0.58 | 0.60 | 0.51 | 34            | .   | .    | 4.14 | .    | 3.94 | 39            |
| Mexico   | 0.60   | 0.61 | 0.63 | 0.54 | 0.57 | 35            | .   | .    | .    | 3.83 | .    | 29            |
| Portugal   | 0.69   | 0.72 | 0.74 | 0.41 | 0.39 | 36            | .   | 3.87 | .    | .    | .    | 32            |
| Chinese Taipei                                   | 0.57   | 0.59 | 0.60 | 0.64 | 0.64 | 37            | .   | .    | .    | .    | .    | n.r.          |
| Czech Republic                                   | 0.57   | 0.63 | 0.64 | 0.61 | 0.64 | 38            | .   | .    | .    | 4.20 | .    | 48            |
| Peru   | 0.60   | 0.61 | 0.63 | 0.64 | 0.64 | 39            | .   | 4.35 | .    | 4.28 | 4.10 | 50            |
| Brazil   | 0.64   | 0.63 | 0.61 | 0.65 | 0.65 | 40            | 4.68  | 4.66 | 4.67 | 4.62 | 4.54 | 56            |
| Argentina  | 0.67   | 0.60 | 0.61 | 0.66 | 0.66 | 41            | 4.54  | 4.53 | 4.43 | 4.57 | .    | 55            |
| Uganda   | 0.62   | 0.64 | 0.65 | 0.64 | 0.65 | 42            | 3.77  | 3.75 | .    | .    | .    | 26            |
| Hungary  | 0.66   | 0.67 | 0.65 | 0.67 | 0.56 | 43            | .   | 4.13 | 4.53 | 4.15 | .    | 52            |
| India  | 0.64   | 0.65 | 0.66 | 0.63 | 0.64 | 44            | .   | .    | .    | 3.78 | .    | 27            |
| Slovenia   | 0.59   | 0.60 | 0.62 | 0.71 | 0.71 | 45            | 4.19  | 4.38 | 4.34 | 4.35 | 3.94 | 51            |
| Serbia   | 0.75   | 0.78 | 0.54 | 0.59 | 0.61 | 46            | .   | .    | .    | .    | 3.44 | 18            |
| Korea  | 0.62   | 0.65 | 0.67 | 0.69 | 0.71 | 47            | .   | .    | .    | .    | .    | n.r.          |
| Spain  | 0.68   | 0.70 | 0.66 | 0.69 | 0.71 | 48            | 3.19  | 3.13 | 3.57 | 2.98 | 3.27 | 12            |
| Croatia  | 0.69   | 0.70 | 0.73 | 0.70 | 0.64 | 49            | 4.13  | 4.19 | 4.24 | .    | 4.10 | 45            |
| Venezuela  | 0.71   | 0.71 | 0.70 | 0.70 | 0.70 | 50            | 4.20  | .    | 4.21 | .    | 4.55 | 54            |
| Poland   | 0.67   | 0.70 | 0.72 | 0.77 | 0.78 | 51            | .   | 4.19 | .    | .    | .    | 47            |
| Philippines                                      | 0.71   | 0.72 | 0.74 | 0.74 | 0.78 | 52            | .   | .    | .    | 3.86 | .    | 31            |
| China  | 0.80   | 0.81 | 0.82 | 0.77 | 0.78 | 53            | 2.97  | 2.57 | 3.08 | .    | .    | 8             |
| Ecuador  | 0.80   | 0.80 | 0.80 | 0.80 | 0.80 | 54            | .   | 4.08 | .    | .    | .    | 42            |
| Jordan   | 0.93   | 0.78 | 0.77 | 0.79 | 0.75 | 55            | .   | 3.58 | 3.05 | .    | .    | 14            |
| Uruguay  | 0.79   | 0.82 | 0.82 | 0.83 | 0.88 | 56            | .   | .    | .    | 4.31 | .    | 53            |
| Greece   | 0.79   | 0.82 | 0.83 | 0.85 | 0.86 | 57            | 4.11  | 3.97 | 3.95 | 3.6  | 4.03 | 35            |
| United Arab Emirates                             | 0.85   | 0.87 | 0.89 | 0.91 | 0.91 | 58            | .   | .    | .    | 2.48 | .    | 4             |

1 The estimates for Iceland for 2003 and 2004 were made by taking the 2005 hard measures and adjusting for change in per capita income. World bank measures were available for all other countries and years. Raw data available at the World Bank's "Doing Business" website: [www.doingbusiness.org](http://www.doingbusiness.org)

Figure 26. GEM Red Tape Index Based on National Expert Perceptions of Regulation of New and Growing Businesses Compared with World Bank Red Tape Index



Note: Both measures are described in Table 6.

Table 7 shows correlations between the GEM National Expert and World Bank measures of red tape and national measures of entrepreneurial activity for participating GEM nations between 2003 and 2006.<sup>38</sup> It shows that neither measure of regulation correlates significantly with general measures of early-stage entrepreneurial activity, but that both correlate negatively and with statistical significance with measures of ambitious, or high-growth expectation.

The strongest correlations are with the proportion of new high-growth expectation business owner-managers in a country and with the relative prevalence of high-growth expectation entrepreneurial activity. This suggests that, all else being equal, the more onerous the regulations, and the more experts

perceive regulations to be onerous, the less people will set up ambitious enterprises. This makes sense: in many countries it is not necessary to register as a self-employed individual with no or few employees, but as business size increases, it becomes more difficult not to register. If the regulations are sufficiently onerous, or perceived to be, individuals may be tempted to reduce their ambitions in order to avoid the regulations. Previous studies have suggested that the link between high-potential entrepreneurship and subsequent economic growth may be stronger than between new business activity in general and economic growth<sup>39</sup>. Thus, reducing the burden of red tape for new and growing firms could pay dividends to governments by releasing latent ambition among entrepreneurs.

**Table 7. Correlation of Measures of Regulation of New Businesses with Measures of Entrepreneurial Activity, All Participating GEM Nations from 2003 to 2006**

| MEASURE FROM GEM ADULT POPULATION SURVEYS   | MEASURE FROM GEM EXPERTS QUESTIONNAIRE: NEW BUSINESS RED TAPE INDEX (N=119) | WORLD BANK NEW BUSINESS RED TAPE INDEX (N=137) |
|---|---|--|
| TEA: early-stage entrepreneurial activity   | -0.111  | -0.024   |
| HEA (TEA, expects to employ at least 20 people in 5 years)                          | <b><i>-0.262</i></b>  | <b><i>-0.289</i></b>                           |
| Established business owner-managers   | -0.055  | 0.144  |
| Established business owner-managers, expect to employ at least 20 people in 5 years | <b><i>-0.326</i></b>  | <b><i>-0.196</i></b>                           |
| HEA/TEA (relative prevalence of HEA in TEA)   | <b><i>-0.273</i></b>  | <b><i>-0.409</i></b>                           |

Note: Spearman rank correlation coefficients in bold and italicised are significant at the .01 level. Spearman rank correlation coefficients in bold are significant at the .05 level.

## ENTREPRENEURIAL ACTIVITY AND GLOBAL AID INSTITUTIONS

So far, the discussion of global institutions has focused on their deregulatory function—removing government barriers to international transactions and thereby clearing the way for markets to provide the proper signals and incentives for new start-ups, firm expansion, and increased gains from trade. The more visible role of global economic institutions, however, is to provide aid and technical assistance, transferring or loaning funds from wealthier countries to poorer countries, mainly for large public works and infrastructure projects. Aid therefore contributes to the Capacity-Building EFCs of developing countries.

There is a wide range of institutional arrangements for delivering foreign aid, including the unilateral actions of individual countries, such as the US Agency for International Development (USAID); specialized programs of non-governmental organizations such as Oxfam and Doctors Without Borders; and multilateral lending and grant activities of the World Bank, the International Monetary Fund, regional development banks, and various United Nations agencies, particularly the UN Development Program (UNDP). Table 8 provides a brief summary of some of the economic institutions that can have an impact on entrepreneurship.

The link between institutional aid and entrepreneurship lies in the potential contribution of funds, advice, assistance and policy coordination, and influence to the creation of an economic environment conducive to innovation, informed risk-taking, and new business ventures in poor countries. Entrepreneurship is therefore recognized as one of the key components of economic development (Klapper et al. 2007). Foreign aid also potentially creates new market opportunities for import/export trade and foreign investment, benefiting entrepreneurs in other countries as well.

Foreign aid's contributions to entrepreneurship include: 1) programs such as those of the World Bank's International Finance Corporation (IFC) and UNDP to develop and fund small business ventures in developing countries; 2) programs to develop physical and economic infrastructure, including health care, clean water, communications, roads and transportation facilities, and education; 3) macroeconomic stability, including International Monetary Fund loans for debt relief; 4) technical assistance and funding for domestic policy and institution building, administrative and legal capacity and market-based structural reforms, and policy regimes; and 5) emergency humanitarian aid to combat disease and provide relief from natural disasters. Aid can thereby contribute to several domestic EFCs, especially those related to financial support, government policies and programs, and education and training.

As this list suggests, the economic concept behind foreign aid is that poor countries lack certain ingredients for development, and that foreign aid will fill the gaps. This undertaking is, however, fraught with difficulty, as shown by the failure of most countries receiving such aid to grow and develop economically. Easterly (2007), for example, has noted that \$568 billion in foreign aid to Africa from 1964-2006 apparently did not increase real per capita income on the continent. While one could argue in response that Africa would perhaps have been even worse off without the aid, the fact remains that aid appears not to have promoted a sustainable development process there. For countries over the last 50 years that have successfully transformed their economies and achieved self-sustaining development and growth, such as Korea, Taiwan, Singapore, and Chile, foreign aid appears to have played a relatively minor role. Recent examples of rapid growth in China and India appear to be the result more of foreign investment and policy reforms than foreign aid projects.



**Table 8. Global Economic Institutions and Entrepreneurship**

| INSTITUTION                               | MANDATE   | ORGANIZATIONAL FOCUS   | (POTENTIAL) LINK TO ENTREPRENEURSHIP   |
|---|---|--|--|
| WTO                                       | Trade liberalization  | Trade negotiations on goods and services; trade rules; and dispute settlement  | Market access, TRIP's, and non-discrimination; trade negotiations to open markets; and domestic adjustment/flexibility       |
| IMF                                       | Program aid for external financing                          | Conditional loans to stabilize external payments, monitor countries' macroeconomic policy, and provide advice          | Macroeconomic stability and external payments; country surveillance and technical assistance for stable business environment |
| World Bank                                | Development project aid, including private sector (IFC)     | Project loans for development; structural economic reforms; and private arm provides commercial loans to private firms | Development projects and IFC loans to private ventures, technical assistance and financial infrastructure                    |
| United Nations Development Program (UNDP) | Advocacy for economic and social development                | Aid coordination to build development capacity, technical assistance, and training                                     | Promotion of business-friendly domestic policies and stimulation of private sector in developing countries                   |
| Regional Development Banks                | Regional development projects; poverty reduction            | Loans, grants, technical assistance and equity investments to reduce regional poverty                                  | Development and infrastructure projects and technical assistance to promote growing and stable markets                       |
| Government Aid Programs                   | Pursue trade and related strategies for national government | Domestic agenda of donor country's aid programs  | Institution building, consultation, and technical assistance   |
| NGO's                                     | Specific issue or goal and quality of technical expertise   | Specific goal based on motivation and expertise of staff and constituents  | Specialized technical assistance and analysis and emergency aid coordination and delivery                                    |

Sources: Prowse (2002), [www.wto.org/](http://www.wto.org/); [www.adb.org/](http://www.adb.org/) (Asian Development Bank); [www.worldbank.org/](http://www.worldbank.org/); [www.undp.org/](http://www.undp.org/); [www.imf.org/](http://www.imf.org/).

Furthermore, war, chronic political instability, natural disasters, epidemics, and historical and cultural factors often complicate the development situation. Corruption is often endemic to the governments of poor countries. Market reforms and policies may not take root if they do not resonate with the local political and cultural environment. While humanitarian aid is often essential for the mere survival of large portions of the population, the overall record of foreign aid in stimulating economic growth and the development process has been spotty, at best. In view of the growing consensus regarding the importance of entrepreneurship to economic growth, the role of foreign aid in creating conditions conducive to innovation and risk-taking remains problematic.

Many development aid programs provide or support the missing components of development, such as education, irrigation systems, and roads, without necessarily stimulating the process of transformation needed to build domestic institutions promoting productive risk-taking, capital accumulation, innovation, and growth. Stimulating entrepreneurship in developing countries comes down, again, to building the necessary domestic political, legal, and economic institutions, as identified earlier in the literature associated with Baumol and others. The institutional process of economic development is not well understood, and progress in making aid more effective in transforming institutions will be the key to stimulating entrepreneurship and self-sustaining growth.

In the meantime, the most promising instances of direct institutional aid to entrepreneurship in the

developing world have come from programs that bypass government involvement and rest on market-driven criteria. For example, the International Finance Corporation (IFC), the private sector arm of the World Bank Group, invested \$50 billion in developing country private enterprises through its loan and equity operations from 1991–2006, representing about 4% of all private capital to developing countries during this period.<sup>40</sup> In contrast to traditional aid provided by the World Bank and other aid institutions to governments, the IFC evaluates investment opportunities based on commercial criteria, with additional consideration given to the business project's development impact as well as its social and environmental sustainability. What the IFC does that regular private capital does not do is push the envelope of investment in new and growing private ventures in so-called frontier countries of higher risk. To complement these loan activities, the IFC has been instrumental in developing local, financial institutional infrastructure, and in supporting microlending activities.<sup>41</sup> The IFC also provides technical assistance and advice to small and medium-size businesses (SME's), and promotes improvements in government business policies.

The most recent World Bank evaluation of IFC effectiveness found that half of the 627 IFC projects during the 1991–2006 period had high development ratings as well as acceptable investment returns, while approximately one-third had low development and low investment results (IEG 2007, p. xviii). It appears that the IFC makes a relatively small but positive contribution to global entrepreneurship by bridging the gap in information and expertise

for business ventures that are risky but otherwise promising by commercial standards, and also through its positive influence on local and domestic business regulation reform. By design, the IFC seeks out the more promising business opportunities in the developing world, rather than trying to jump start entrepreneurship in the poorest regions. For example, it devoted just 7% of its investment in 2005 to sub-Saharan Africa, where half of the population lives in extreme poverty (O'Brien 2006), and the IFC's effectiveness and investment performance in that region has been poor (IEG 2007, p. xix). Notwithstanding these problems, it appears that systematic efforts to expand entrepreneurship in the developing world through institutionally supported commercial investment shows promise, particularly if the process involves developing domestic financial institutions, supportive government policies, and stability.

Making foreign aid projects in public goods infrastructure successful remains a more elusive goal. There are signs, however, that a better coordination of the various institutional components of global economic development can improve the results. One particularly noteworthy example is the coupling of WTO negotiations over trade facilitation reforms in developing countries with World Bank funding for critical infrastructure to support these reforms. The benefits of negotiated agreements to improve efficiencies in the processing of imports and exports at developing country ports would have been extremely difficult without the provision of aid to build better port facilities, communications, and transportation links. The combination of trade reforms and supporting aid will help not only trade-oriented entrepreneurs in the recipient countries (and in their trading-partner countries), but also local entrepreneurs, who will have better access to imported inputs and upgraded national infrastructure.

### ENTREPRENEURS AS AGENTS OF CHANGE IN THE GLOBAL ECONOMY

The world economy is becoming more integrated, and entrepreneurial opportunities increasingly have an international dimension. Pursuing these opportunities will require market access, a framework of rules to provide a predictable global business environment, a robust and flexible environment for domestic resource allocation, entrepreneurial expansion, and continuing economic growth in developing and emerging markets. It is important that entrepreneurial interests are well represented in the institutional structures that will shape the world economy.

The most direct contributions to entrepreneurship by international economic institutions lie in their

ability to remove market-access barriers among sovereign nations, and there is much left to be done in this area. Aside from removing the remaining tariffs, there are many non-tariff barriers whose dismantlement would provide new entrepreneurial opportunities, including subsidies, anti-dumping regulations, government procurement practices, and discriminatory foreign investment rules. Furthermore, a myriad of complicated laws and regulations prevent or discourage international services trade and investment, and global negotiations have not progressed very far to liberalize these markets.

Entrepreneurs as a group tend to benefit most from the deregulation of market access and improved domestic resource adjustment, and therefore should make sure that this view has a strong voice in national trade policy debates. Shaffer (2003) has emphasized the critical role of business representation in trade policy negotiations, through lobbying groups and other forms of influence on the political process. At times, large corporations and multinational enterprises will represent the entrepreneurs' interest, but the danger is that interests of large firms may override the broader interests of trade liberalization. A broad-based effort by domestic entrepreneurs to rally support for trade-liberalizing measures could play a decisive role in their countries' negotiating positions and legislative votes on trade agreements.<sup>42</sup>

Through their contribution to EFCs, trade institutions also provide major benefits to purely domestic entrepreneurs. Trade agreements contribute to more flexible domestic resource allocation, economic efficiency, the availability of inputs for domestic production, and access to the global pool of technology and investment funds. Nearly all entrepreneurs, therefore, stand to gain from globalized market adjustment.

Finally, entrepreneurs in both developed and developing countries stand to gain from the harnessing of foreign aid to promote development and associated business opportunities. The experience of the IFC suggests that more aid resources should be devoted to the financing of private, commercial ventures and complementary policy reform, as well as financial institution building in developing countries. Larger aid projects should focus on supporting the economic reforms, laws, and policies that will stimulate development from the bottom up. It is therefore in the interest of entrepreneurs that aid organizations themselves take a more entrepreneurial approach to development, especially through the presence of workers and officials with entrepreneurial experience. Working through the national governments that support global economic institutions, organized entrepreneurial interests may find it possible to influence the direction of aid activities that will help spur future economic growth.

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# GEM National Teams 2007

| TEAM                                     | INSTITUTION   | NATIONAL TEAM MEMBERS  | FINANCIAL SPONSORS   | APS VENDOR  |
|--|---|--|--|---|
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| Austria                                  | FH JOANNEUM<br>(University of Applied Sciences)<br><br>University of Graz                   | Gerhard Apfelthaler<br>Ursula Schneider<br>Martin Neubauer<br>Eva Maria Tusini<br>Thomas Schmalzer   | FH JOANNEUM GesmbH<br>– University of Applied Sciences<br>Wirtschaftskammer Österreich<br>– Austrian Federal Economic<br>Chamber<br>Federal Ministry of Economics<br>and Labour<br>AWO – Außenwirtschaft<br>Österreich – Austrian Foreign<br>Trade Promotion Organisation<br>AWS – Austria Wirtschaftsservice<br>Land Steiermark   | OGM -Österreichische<br>Gesellschaft für<br>Marketing |
| Belgium                                  | Vlerick Leuven Gent Management<br>School  | Hans Crijns<br>Miguel Meuleman<br>Sabine Vermeulen   | Flemish Government<br>(Steunpunt Ondernemerschap,<br>Ondernemingen, en Innovatie)  | TNS Dimarso   |
| Brazil                                   | IBQP - Instituto Brasileiro da<br>Qualidade e Produtividade                                 | Simara Maria S. S. Greco<br>Paulo Alberto Bastos Junior<br>Joana Paula Machado<br>Rodrigo G. M. Silvestre<br>Carlos Artur Krüger Passos<br>Júlio César Felix<br>Marcos Mueller Schlemm | IBQP - Instituto Brasileiro da<br>Qualidade e Produtividade<br>SEBRAE- Serviço Brasileiro<br>de Apoio às Micro e Pequenas<br>Empresas<br>Sistema Federação das Indústrias<br>do Estado do Paraná (FIEP, SESI,<br>SENAI e IEL)<br>MCT - Ministério da Ciência e<br>Tecnologia   | Instituto Bonilha                                     |
| Chile                                    | Universidad Adolfo Ibáñez<br><br>Universidad del Desarrollo                                 | Jorge Miguel Carrillo<br>Germán Echeopar<br>José Ernesto Amorós<br>Massiel Guerra  | Santander Universidades (Grupo<br>Santander)<br>Universidad Adolfo Ibáñez- Centro<br>de Entrepreneurship<br>Universidad del Desarrollo-<br>Facultad de Economía y Negocios.  |   |
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| Región del<br>Bío-Bío                    | Universidad del Desarrollo  | Olga Pizarro Stjepovic<br>José Ernesto Amorós<br>Christian Felzensztein  |  |   |
| Región de los<br>Ríos                    | Universidad Austral de Chile  | Pablo Díaz Madariaga   |  |   |
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| Croatia            | J.J. Strossmayer University in Osijek  | Slavica Singer<br>Natasa Sarlija<br>Sanja Pfeifer<br>Djula Borozan<br>Suncica Oberman Peterka                           | Ministry of Economy, Labour and Entrepreneurship<br>CEPOR – SME Policy Centre, Zagreb<br>J.J. Strossmayer University in Osijek – Faculty of Economics  | Puls, d.o.o., Zagreb  |
| Denmark            | University of Southern Denmark   | Thomas Schøtt<br>Torben Bager<br>Kim Klyver<br>Hannes Ottosson<br>Kent Wickstrøm  | International Danish Entrepreneurship Academy (IDEA)<br><br>National Agency for Enterprise and Construction  | Institut for Konjunkturanalyse  |
| Dominican Republic | Pontificia Universidad Católica Madre y Maestra (PUCMM)  | Guillermo van der Linde<br>Maribel Justo<br>Alina Bello<br>José Rafael Pérez<br>Tania Canaán                            | Grupo Vicini<br>Independent Financial Center of the Americas<br>Consejo Nacional de Competitividad<br>Centro de Exportación e Inversión de la República Dominicana<br>Cámara de Diputados de la República Dominicana | Gallup República Dominicana   |
| Finland            | Turku School of Economics<br><br>Imperial College, London  | Anne Kovalainen<br>Tommi Pukkinen<br>Jarna Heinonen<br>Pekka Stenholm<br>Pia Arenius<br>Erkko Autio                     | Ministry of Trade and Industry   | TNS Gallup Oy   |
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| Greece             | Foundation for Economic and Industrial Research (IOBE)   | Stavros Ioannides<br>Takis Politis<br>Aggelos Tsakanikas  | Hellenic Bank Association  | Datapower SA  |
| Hong Kong          | The Chinese University of Hong Kong Center for Entrepreneurship                                      | Hugh Thomas<br>Kevin Au<br>Louis Leung<br>Bernard Suen<br>Sandy Yip<br>Rosanna Lo                                       | The Chinese University of Hong Kong The Asia-Pacific Institute of Business   | The Chinese University of Hong Kong Center for Communication Research |
| Hungary            | University of Pécs, Faculty of Business and Economics  | László Szerb<br>Zoltan J. Acs<br>Attila Varga<br>József Ulbert<br>Siri Terjesen<br>Krisztián Csapó<br>Gábor Kerékgyártó | Ministry of Economy and Transport<br>University of Pécs, Faculty of Business and Economics<br>Ohio University (USA)  | Szocio-Gráf Piac-és Közvélemény-kutató Intézet                        |
| Iceland            | RU Centre for Research on Innovation and Entrepreneurship (Reykjavik University)                     | Rögnvaldur Sæmundsson<br>Silja Björk Baldursdóttir  | Reykjavik University,<br>The Confederation of Icelandic Employers,<br>New Business Venture Fund,<br>Prime Minister's Office  | Capacent Gallup   |

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| Ireland     | Dublin City University   | Paula Fitzsimons<br>Colm O'Gorman   | Enterprise Ireland<br>Forfás<br>NDP Gender Equality Unit of the<br>Department of Justice, Equality<br>and Law Reform   | IFF   |
| Israel      | The Ira Center of Business,<br>Technology & Society, Ben Gurion<br>University of the Negev | Ehud Menipaz<br>Yoash Avrahami<br>Miri Lerner   | The Ira Center of Business,<br>Technology & Society, Ben Gurion<br>University of the Negev   | The Brandman<br>Institute                               |
| Italy       | Bocconi University   | Guido Corbetta<br>Alexandra Dawson<br>Anna Canato   | Ernst & Young  | Target Research   |
| Japan       | Keio University<br>Musashi University<br>Shobi University                                  | Takehiko Isobe<br>Noriyuki Takahashi<br>Tsuneo Yahagi   | Venture Enterprise Center  | Social Survey<br>Research Information<br>Co.,Ltd (SSRI) |
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| Netherlands | EIM Business and Policy Research   | Jolanda Hessels<br>Sander Wennekers<br>Kashifa Suddle<br>André van Stel<br>Niels Bosma<br>Roy Thurik<br>Ingrid Verheul      | Dutch Ministry of Economic<br>Affairs  | Stratus<br>marktonderzoek bv                            |
| Norway      | Bodoe Graduate School of Business  | Lars Kolvereid<br>Erlend Bullvaag<br>Bjoern Willy Aamo<br>Erik Pedersen   | Ministry of Local Government and<br>Regional Development<br>Ministry of Trade and Industry<br>Innovation Norway<br>The Knowledge Fund, at Bodoe<br>Knowledge Park Ltd. | TNS Gallup  |
| Peru        | Centro de Desarrollo Emprendedor,<br>Universidad ESAN                                      | Jaime Serida Nishimura<br>Keiko Nakamatsu Yonamine<br>Armando Borda Reyes<br>Liliana Uehara Uehara<br>Jessica Alzamora Ruiz | Universidad ESAN   | SAMIMP Research   |
| Portugal    | Sociedade Portuguesa de Inovação,<br>S.A.  | Augusto Medina<br>Douglas Thompson<br>Sara Medina<br>Anders Hyttel<br>Miguel Taborda<br>Inês Luis<br>António Vieira         | IAPMEI (Apoio às Pequenas e<br>Médias Empresas e à Inovação)<br><br>FLAD (Fundação Luso-Americana<br>para o Desenvolvimento)<br><br>BES (Banco Espírito Santo)         | GFK Metris  |



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| TEAM        | INSTITUTION  | NATIONAL TEAM MEMBERS   | FINANCIAL SPONSORS  | APS VENDOR                                     |
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| Romania     | Faculty of Economics and Business Administration, Babes-Bolyai University  | Agnes Nagy<br>Laszlo Szerb<br>Lehel-Zoltan Györfy<br>Matis Dumitru<br>Stefan Pete<br>Mircea Comsa<br>Annamaria Benyovszki<br>Tunde Petra Petru<br>Mircea Solovastru,<br>Mustatã Rãzvan<br>Nagy Zsuzsãna-Ágnes                 | Ministry of Education and Research, National Program Management Center(CEEX)<br>Új Kézfogás Közalapítvány/<br>Foundation<br>Pro Oeconomica Association<br>Babes-Bolyai University, Faculty of Economics and Business Administration<br>Metro Media Transilvania | Metro Media Transilvania                       |
| Russia      | Saint Petersburg Team<br>Graduate School of Management, Saint Petersburg<br><br>Moscow Team<br>State University - Higher School of Economics, Moscow | Olga Verhovskaya<br>Vassily Dermanov<br>Valery Katkalo<br>Maria Dorokhina<br>Alexander Chepurenko<br>Olga Obraztsova<br>Tatiana Alimova<br>Maria Gabelko  | Graduate School of Management at Saint Petersburg State University<br><br>State University - Higher School of Economics   | O+K Marketing & Consulting<br>Levada-Center    |
| Serbia      | The Faculty of Economics Subotica  | Dusan Bobera<br>Bozidar Lekovic<br>Stevan Vasiljev<br>Pere Tumbas<br>Sasa Bosnjak<br>Slobodan Maric   | Executive Council of Vojvodina Province - Department for privatization, entrepreneurship and small and medium enterprises, NoviSad<br>Chamber of Commerce of Serbia, Belgrade<br>Chamber of Commerce of Vojvodina, Novi Sad                                     | Marketing Agency "Drdrazen" d.o.o.<br>Subotica |
| Slovenia    | Institute for Entrepreneurship and Small Business Management, Faculty of Economics & Business, University of Maribor                                 | Miroslav Rebernik<br>Polona Tominc<br>Ksenja Pušnik   | Ministry of the Economy<br>Slovenian Research Agency<br>Smart Com<br>Finance – Slovenian Business Daily   | RM PLUS  |

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| Regional Teams:<br>Andalucía<br>Asturias<br>Canary I.<br>Castille Leon<br>Castille la<br>Mancha<br>Catalonia<br>C. Valenciana<br>Extremadura<br>Galicia<br>Madrid<br>Murcia<br>Navarra<br>Basque Country<br>Ceuta<br>Melilla | Regional Universities:<br>Cádiz<br>Oviedo<br>Las Palmas & La Laguna<br>León<br>Castille la Mancha<br>Autónoma de Barcelona<br>Miguel Hernández<br>Fundación Xavier de Salas<br>Santiago de Compostela<br>Autónoma de Madrid<br>Murcia<br>Pública de Navarra<br>Deusto & Basque Country<br>Granada<br>Granada | Regional Team Directors:<br>José Ruiz Navarro<br>Juan Ventura Victoria<br>Rosa M. Batista Canino<br>Mariano Nieto Antolín<br>Miguel Ángel Galindo Martín<br>Carlos Guallarte<br>José M <sup>o</sup> Gómez Gras<br>Ricardo Hernández Mogollón<br>J. Alberto Díez de Castro<br>Eduardo Bueno Campos<br>Antonio Aragón Sánchez<br>Iñaki Mas Erice<br>Iñaki Peña Legazkue<br>Lázaro Rodríguez Ariza<br>María del Mar Fuentes | Generalitat de Catalunya<br>Junta de Extremadura<br>Air Nostrum, CEG, BIC Galicia<br>IMADE, FGUAM<br>Fundación Caja Murcia<br>Eusko Ikaskuntza<br>Instituto Vasco de Competitividad<br>FESNA<br>Universidad de Granada and<br>others                            |   |
| Sweden   | ESBRI – Entrepreneurship and Small<br>Business Research Institute  | Magnus Aronsson<br>Mikael Samuelsson   | Confederation of Swedish<br>Enterprise (Svenskt Näringsliv)<br>NUTEK – Swedish Agency for<br>Economic and Regional Growth<br>VINNOVA – Swedish<br>Governmental Agency for<br>Innovation Systems   | SKOP  |
| Switzerland  | University of St. Gallen<br>IMD<br>EPFL  | Thierry Volery<br>Heiko Bergmann<br>Benoit Leleux<br>Georges Haour<br>Marc Gruber  | CTI / KTI<br>Seco   | gfs.bern                                    |
| Thailand   | College of Management, Mahidol<br>University   | Thanaphol Virasa<br>Kelvin Willoughby<br>Tang Zhi Min  | Office of Small and Medium<br>Enterprises Promotion<br>College of Management, Mahidol<br>University   | Taylor Nelson Sofres<br>(Thailand) Ltd.     |
| Turkey   | Yeditepe University  | Nilüfer Erican<br>Esra Karadeniz   | Endeavor, Turkey Country Office<br>Akbank   | Akademetre Research<br>& Strategic Planning |
| United Arab<br>Emirates  | Zayed University   | Kenneth J Preiss<br>Declan McCrohan<br>Raed Daoudi   | Mohammed Bin Rashid<br>Establishment for Young Business<br>Leaders  | IPSOS-STAT<br>(Emirates)                    |

## GEM National Teams 2007

| TEAM                               | INSTITUTION   | NATIONAL TEAM MEMBERS   | FINANCIAL SPONSORS  | APS VENDOR                            |
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|                                    | Northern Ireland Unit:<br>Small Business Research Centre,<br>Kingston University                                    | Mark Hart   | InvestNI<br>Department of Enterprise, Trade<br>and Investment (NI)<br>Belfast City Council  |                                       |
|                                    | Scotland Unit:<br>Hunter Center for Entrepreneurship,<br>University of Strathclyde                                  | Jonathan Levie  | Hunter Centre for<br>Entrepreneurship, University of<br>Strathclyde<br>Scottish Enterprise  |                                       |
|                                    | Wales Unit:<br>National Entrepreneurship<br>Observatory for Wales<br>Cardiff University,<br>University of Glamorgan | David Brooksbank<br>Dylan Jones-Evans   | Wales European Funding Office<br>Welsh Assembly Government  |                                       |
| United States                      | Babson College  | I.Elaine Allen<br>William D. Bygrave<br>Marcia Cole                             | Babson College  | Opinion Research<br>Corporation (ORC) |
|                                    | George Mason University<br>Bodo Graduate School of Business   | Zoltan Acs<br>Erlend Bullvaag   |   |                                       |
| Uruguay                            | IEEM Business School - Universidad<br>de Montevideo   | Jorge Pablo Regent Vitale<br>Leonardo Veiga<br>Adrián Edelman<br>Cecilia Gomeza | IEEM Business School -<br>Universidad de Montevideo   | Mori, Uruguay                         |
| Venezuela                          | IESA – Centro de Emprendedores  | Federico Fernandez Dupouy<br>Rebeca Vidal<br>Aramis Rodriguez                   | Mercantil Servicios Financieros<br>Fundacion Iesa<br>Petrobras Energía Venezuela  | Datanalisis                           |
| GEM Global<br>Coordination<br>Team | London Business School  | Michael Hay<br>Mark Quill<br>Chris Aylett<br>Jackline Odoch<br>Mick Hancock     | London Business School<br>Babson College  | N/A                                   |
|                                    | Babson College  | William D. Bygrave<br>Maria Minniti<br>Marcia Cole<br>Jeff Seaman               |   |                                       |
|                                    | Utrecht University<br>Imperial College  | Niels Bosma<br>Erkko Autio  |   |                                       |

## About the Authors

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### KENT JONES

Kent Jones is professor and former chair of the Economics Division at Babson College. He studied at the Fletcher School (Tufts University) and completed his doctorate at the Graduate Institute HEI at the University of Geneva. He is the author of three books and numerous articles on international trade policy. He lives in the United States.

### ERKKO AUTIO

Erkko Autio is QinetiQ-EPSRC Chair Professor of technology transfer and entrepreneurship at the Imperial College Business School in London. He has published widely in high-growth entrepreneurship, international entrepreneurship, and technology-based venturing. He has served on the boards of several technology-based ventures and VC funds and advised several governments on entrepreneurship policy. Currently chairing EU DG Innovation's advisory panel on high-growth entrepreneurship policy, he is a founding coordination team member of the Global Entrepreneurship Monitor.

### JONATHAN LEVIE

Jonathan Levie is a senior lecturer at the Hunter Centre for Entrepreneurship in the University of Strathclyde, Glasgow, UK, where he was Director from 2000 to 2005. He was previously Associate Coordinator of Global Entrepreneurship Monitor, based at London Business School. He has a PhD from London Business School and MSc and BSc from the National University of Ireland. He has been teaching and researching entrepreneurship for more than 25 years.

## 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, can be found at [www.gemconsortium.org](http://www.gemconsortium.org). The program is sponsored by Babson College and London Business School.

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<sup>i</sup>Reynolds, P.D. with Autio, E., Levie, J. and others (1998). Babson College-London Business School Global Entrepreneurship Monitor Data Collection-Analysis Strategies Operations Manual. London Business School: mimeo. P.6.

<sup>ii</sup>A fair share of new businesses do not continue their activities for more than 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 reflects also 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 timeframe 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., Bosma, N.S., Autio, E. et al. (2005)].

<sup>iii</sup>The sample sizes in the GEM 2007 study typically range from 2,000 to 3,500. Notable exceptions are Spain (28,000 respondents) and the UK (42,000 respondents).

<sup>iv</sup>See for example Carree and Thurik (2003), Acs et al (2003), Audretsch et al. (2006).

<sup>v</sup>See the Global Entrepreneurship Monitor reports from 2004–2006 available at [www.gemconsortium.org](http://www.gemconsortium.org).

<sup>vi</sup>Carree et al (2002) describe the theoretical underpinnings in detail. They establish this U-shaped curve also for self-employment rates across OECD countries, over the period 1974-2002. In an update (see Carree et al. 2008) the empirical evidence for a U-shape viz. a viz. an L-shape is weakened. Wennekers et al (2005) establish the U-shaped curve controlling for other determinants when explaining nascent entrepreneurship rates using GEM data.

<sup>vii</sup>In terms of Figure 3, Hungary is closest to the group of high income countries.

<sup>viii</sup>The combined group of Europe and Asia results from a limited coverage of GEM 2007 countries in South Asia and South-East Asia; otherwise Europe and Central Asia and South-East Asia would have formed a separate group.

<sup>ix</sup>“Statistical significance” refers to a calculation of where the range within which the average value of 95 out of 100 replications 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 differences at the 0.05 level.

<sup>x</sup>Amorós, J.E. and O. Christi (2007), Longitudinal Analysis of Entrepreneurship and Competitiveness Dynamics in Latin America, Conference Proceedings 4th ASGE Entrepreneurship Exchange, Swinburne University, Brisbane.

<sup>xi</sup>The calculation of opportunity driven-early stage differs somewhat from previous years. GEM identifies these different motivations in two stages. First, respondents involved in early-stage entrepreneurial activity are asked whether they are involved because they recognized an opportunity, or because they had no better options for work. Recognizing that this question is polyvalent and that people operating somewhere in between these extremes tend to answer the first option, those who chose recognition of an opportunity were asked whether the main driver behind pursuing this opportunity was (i) to increase their own income, (ii) to be independent or (iii) to maintain their income. The latter category was not considered as a genuine opportunity for the measures shown in Table 2.

<sup>xii</sup>In total, we had 678,714 adult-population interviews for the combined 2000–2006 data set.

<sup>xiii</sup>Methodological note: All records of nascent and new businesses, for which the data concerning expected jobs in 5 years was missing, were set as expecting 0 jobs in 5 years. Figure 14 thus represents a conservative estimate.

<sup>xiv</sup>Methodological note: Weighted according to population and sample size.

<sup>xv</sup>An over-sample for the Shenzhen region was excluded from China's data because of its anomalous nature.

<sup>xvi</sup>As regards High Income countries, there appear to be differences between EU-members and non-EU countries: the non-EU countries have higher degrees of technology in both early-stage and established entrepreneurship.

<sup>xvii</sup>Factor analysis was conducted on the total sample and country by country. Across the 12 nations, the three items loaded onto one factor with acceptable reliability (0.76) and sampling adequacy (.681). Country level reliability and sampling adequacy were similar. This suggests that these three items are capturing different dimensions of one underlying construct. Because the Innovation Confidence index is intended to be trackable, rather than specific to a sample, it was decided not to create a country-based index from the factor scores, but instead one based simply on the average of the percentage of people of working age (18-64) in each nation agreeing to each item statement. The correlation between a country level index created from mean factor scores and the "average percentage agree" index was .909 ( $p=.000$ ).

<sup>xviii</sup>Robinson, C., O'Leary, B. and Rincon, A (2006). Business start-ups, closures, and economic churn: A review of the literature. Final report prepared for the Small Business Service, 23 August. London: National Institute of Economic and Social Research.

<sup>xix</sup>Allinson, G., Braidford, P., Houston, M. and Stone, I. (2005) Myths Surrounding Starting and Running a Business. London: Small Business Service.

<sup>xx</sup>Headd, Brian, email communication with J. Levie, 16 August 2005.

<sup>xxi</sup>Headd, B. (2003). Redefining Business Success: Distinguishing between closure and failure. *Small Business Economics* 21:51-61. Knaup, Amy (2005). Survival and longevity in the Business Employment Dynamics data. *Monthly Labor Review* May, 50-56.

<sup>xxii</sup>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 and Schutjens (2007) and for Germany by Bergmann and Sternberg (2007). The relationships described in this section are also applicable to regional differences.

<sup>xxiii</sup>Hills and Singh (2004) report that among 472 US nascent entrepreneurs in 1998, for 37% the opportunity discovery came before the desire to start a business, while for 42% the desire to start came before the recognition of an opportunity. For the remaining 21% opportunity recognition and desire to start came at about the same time.

<sup>xxiv</sup>The model proposed by Shane focuses on entrepreneurial behavior without necessarily linking to owning and managing a business.

<sup>xxv</sup>Statistical tests show the between group variation in all components to be significant at the 5% level.

<sup>xxvi</sup>Acs and Preston (1997) introduce and summarize a series of papers devoted to this topic in *Small Business Economics*. See also OECD (1997).

<sup>xxvii</sup>According to WTO statistics, 380 PTA's had been registered under GATT/WTO trade rules from 1948 to July 2007, of which 264 had begun since the founding of the WTO in 1995. Of the total of 380, 205 were still in force in July 2007. See [www.wto.org](http://www.wto.org), Regional Trade Agreements gateway. Pomfret (2007) offers an evaluation of the impact of RTA's on the world economy.

<sup>xxviii</sup>Bolivia, Chile, Colombia, Ecuador, and Peru have associate member status in Mercosur.

<sup>xxix</sup>Economists tend to judge PTA's according to traditional welfare criteria, based on analysis of trade creation, trade diversion, economies of scale, and other market effects. See Lipsey (1961) for a survey. A broader analysis of trade policy would focus on the politically constrained choices of governments in liberalizing trade, and the transaction costs of doing so, which may favor "partial" free trade, as in a PTA. See Fratianni and Patterson (2001).



<sup>xxx</sup>Non-discrimination is not an absolute rule in the WTO, as countries can form free-trade areas and customs unions under the provisions of GATT article 24. However, the rules are designed to ensure that such arrangements do not restrict particular imports from efficient supplier countries. See Hoekman and Kostecki, *op cit*, chapter 10.

<sup>xxxj</sup>Anderson and Van Wincoop (2004) have calculated the additional costs of exporting to be approximately 140% of those associated with domestic sales.

<sup>xxxii</sup>See Jan Tumlir, *Protectionism: Trade Policy in Democratic Societies* (Washington, D.C: American Enterprise Institute, 1985).

<sup>xxxiii</sup>For a theoretical derivation of each of the EFCs, see Levie, J. and E. Autio (2007), *Entrepreneurial Framework Conditions and National-Level Entrepreneurial Activity: Seven-Year Panel Study*. Paper presented at 3rd GEM Research Conference, Washington, October.

<sup>xxxiv</sup>The World Bank Doing Business study ranks countries according to policies related to starting and exiting a business, contract enforcement, tax policy, investor protection, getting credit, registering property, employment regulations, and importing/exporting. A comparison of the country rankings of the “ease of importing and exporting” with each of the other categories showed significant correlations, based on Spearman and Kendall tests.

<sup>xxxv</sup>See: [www.doingbusiness.org](http://www.doingbusiness.org)

<sup>xxxvi</sup>Chronbach alpha for the GEM Regulations index between 2003 and 2007 has been as follows: 0.70, 0.70, 0.76, 0.78, 0.79.

<sup>xxxvii</sup>The Spearman rank correlation coefficient was 0.514,  $p=.000$ ,  $n=153$ .

<sup>xxxviii</sup>Note: Spearman rank correlation coefficients in bold and italicized are significant at the .01 level. Spearman rank correlation coefficients in bold are significant at the .05 level.

<sup>xxxix</sup>(Arzeni 1998; Autio 2005; Davidsson et al. 1994; Kirchoff 1994; Picot and Dupuy 1998; Wong et al., 2005)

<sup>xl</sup>Executive Summary, Independent Evaluation Group, International Finance Corporation, “Independent Evaluation of IFC’s Development Results, 2007,” p. xvii.

<sup>xli</sup>See, for example, the IFC website information on its support for a number of micro-lending institutions at [www.ifc.org/ifcext/home.nsf/Content/IFCHighImpactProjects](http://www.ifc.org/ifcext/home.nsf/Content/IFCHighImpactProjects).

<sup>xlii</sup>In the European Union, SME’s have systematic access to the trade policy process through the Trade Barrier Regulation process; see Shaffer (2003), pp. 74-101. In the United States, entrepreneurship lobbies include the National Federation of Independent Business, the Small Business Survival Committee, and National Small Business United. While generally supporting open markets, constituents of these lobbies have not always been united in favoring trade liberalization, since trade provides both import competition as well as export opportunity.

