GEM

GLOBAL ENTREPRENEURSHIP MONITOR 2013 GLOBAL REPORT

JOSÉ ERNESTO AMORÓS NIELS BOSMA

BABSON

Universidad del Desarrollo

Universiti TUN ABDUL RAZAK

GLOBAL ENTREPRENEURSHIP MONITOR 2013 GLOBAL REPORT

FIFTEEN YEARS OF ASSESSING ENTREPRENEURSHIP ACROSS THE GLOBE

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The usual disclaimer applies.

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GEM SPONSORS

Babson College is a founding institution and lead sponsor of the Global Entrepreneurship Monitor (GEM). Located in Wellesley, Massachusetts, USA, Babson is recognized internationally as a leader in entrepreneurial management education. U.S. News and World Report has ranked Babson #1 in entrepreneurship education for 18 years in a row.

Babson grants B.S. degrees through its innovative undergraduate program, and offers MBA and M.S. degrees through its F. W. Olin Graduate School of Business.

The School of Executive Education offers executive development programs to experienced managers worldwide. Babson's student body is globally diverse, hailing from 45 U.S. states and 57 economies (non-U.S. students comprise more than 20% of undergraduates and 40% of full-time MBA students). Students can choose from over 100 entrepreneurship courses offered each year, taught by 17 tenure or tenure-track faculty, all with entrepreneurship experience, 7 faculty from other divisions around the college, and highly accomplished business leaders serving as adjunct faculty.

Entrepreneurial Thought and Action (ETA) is at the center of the Babson experience, where students are taught to experiment with their ideas in real-life, learning and adapting these as they leverage who and what they know to create valuable opportunities. "Entrepreneurship of All Kinds" emphasizes that entrepreneurship is crucial and applicable to organizations of all types and sizes, whether a new launched independent startup, a multigenerational family business, a social venture, or an established organization. Through an emphasis on Social, Environmental, Economic Responsibility, and Sustainability (SEERS), students learn that economic and social value creation are not mutually exclusive, but integral to each other.

Babson shares its methodology and educational model with other institutions around the world through Babson Global, and in the process brings new knowledge and opportunities back to our campus. Besides GEM, Babson has co-founded and continues to sponsor the Babson College Entrepreneurship Research Conference (BCERC), the largest academic research conference focused exclusively on entrepreneurship and the Successful Transgenerational Entrepreneurship Project (STEP) a global family business research project.

For information, visit www.babson.edu.

True to the spirit and enterprising drive of its founders, the **Universidad del Desarrollo** is today one of the top three private prestigious universities in Chile. The project started 23 years ago in Conception, a southern city of Chile with 100 business administration students. Two decades later, the facts speak for themselves. Its rapid growth has become an expression of the university's main facet: entrepreneurship. The UDD MBA program is rated one of the best in Latin America and also leader in entrepreneurship education, according to America Economia magazine, an achievement that once again represents the "entrepreneurial" seal that is embedded in the spirit of the University. Today the University has more than 13,000 undergraduates, 2,900 postgraduates and over 9.700 graduates from 26 careers that cover all areas of human knowledge. UDD also has 17 research centers in many disciplines. On of this research centers, the Global Entrepreneurship Research Center of the School of Business and Economics is dedicated to coordinate the GEM Chile project and is one of the most important research centers in South America dedicated to entrepreneurship studies.

For more information visit www.udd.cl

Universiti Tun Abdul Razak (UNIRAZAK) was established on 18 December 1997 as one of the first private universities in Malaysia. The University was named after Malaysia's second Prime Minister, the late YAB Tun Abdul Razak bin Dato' Hussein, and was officially launched on 21 December 1998 by Tun Abdul Razak's eldest son, YAB Dato' Seri Mohd Najib bin Tun Abdul Razak, current Prime Minister of Malaysia.

UNIRAZAK recognized the imperative for Malaysia's future entrepreneurs to equip themselves with the proper tools and expertise to survive and flourish in today's modern competitive economic climate.

Thus UNIRAZAK founded The Bank Rakyat School of Business and Entrepreneurship (BRSBE) a unique school, dedicated to providing quality education in entrepreneurial and business leadership in Malaysia. BRSBE was formed with the view that entrepreneurial activity is one of the pillars of a strong and vibrant economy. Although big business is extremely vital for economic health and prosperity, a strong cadre of SMIs and SMEs is also essential to ensure a diverse economy and to provide the required support to big business companies and the community. In fact the dramatic economic development in Asia over the past two decades highlights the importance of understanding entrepreneurship in the region. In this regard UNIRAZAK through BRSBE is ideally poised to play both a national and regional role in developing entrepreneurship and meeting challenges unique to Asia.

For information visit www.unirazak.edu.my

FOREWORDS

The 2013 report marks the 15th anniversary of the Global Entrepreneurship Monitor (GEM). GEM was initially conceived in 1997, and the first report was published in 1999. There have been many changes since we started. First, the initial title of GEM was the World Enterprise Index, subsequently renamed the Global Entrepreneurship Monitor. The first report encompassed 10 countries, all of which were members of the OECD. GEM is now a truly global entity, as originally conceived, and the current report covers approximately three quarters of the world's population and 90% of the world's GDP. Each region in the world is now represented, and GEM, which in 2013 encompassed 70 economies, has since the beginning involved more than 100 countries in total. The second major change is that GEM, originally conceived by London Business School and Babson College, restructured itself in 2004 in recognition of its growth and the key role of national teams – in whose interest the project is now run.

The challenges that we now face are typical of those that would characterize a mature and large organization. These challenges have to do with supporting the national teams in the most effective way possible, including their training and fundraising; secondly keeping GEM fresh and innovative and guarding against the fatigue that might set in in terms of donors and national teams; thirdly addressing the policy dimension and, specifically, what governments can do to improve the entrepreneurial environment within which they operate.
We like to express our sincere gratitude to all the people around the world who have been part of this initiative.

Michel Hay
Chairman, Global Entrepreneurship Research Association
GEM Founder

EXECUTIVE SUMMARY

With this report, the Global Entrepreneurship Monitor (GEM) has completed fifteen annual cycles. GEM generates relevant primary information on entrepreneurship, providing harmonized measures about the attitudes, activities and characteristics of individuals who participate in various phases of entrepreneurship. GEM also analyzes aspirations that these entrepreneurs hold for their businesses, along with other key features of their ventures. In 2013, more than 197,000 individuals have been surveyed and approximately 3,800 national experts on entrepreneurship participated in the study across 70 economies, collectively representing all global regions of the world and a broad range of economic development levels. The samples in the GEM 2013 study represent an estimated 75% of the world's population and 90% of the world's total GDP. In addition to its annual measures of entrepreneurship dynamics, GEM analyzed well-being as a special topic in 2013.

With an increasing number of economies participating in the project, GEM groups them into geographic regions: sub-Saharan Africa, the Middle East and North Africa (MENA), Latin America and the Caribbean, Asia Pacific/ South Asia, Europe (distinguishing economies that are part of the European Union from those outside the EU), and North America. GEM additionally considers the World Economic Forum's Global Competitiveness Report classification into three levels: factor-driven, efficiency-driven, and innovation-driven. By using both groupings, GEM can compare economies across similar development levels and geographic locations. The table below shows the economies involved in the GEM 2013 assessment by these two dimensions.

GEM ECONOMIES BY GEOGRAPHIC REGION AND ECONOMIC DEVELOPMENT LEVEL

Region	Factor- Driven Economies	Efficiency-Driven Economies	Innovation-driven Economies
Latin America & Caribbean		Argentina[2], Brazil[2], Barbados[2], Chile[2], Colombia, Ecuador, Guatemala, Jamaica, Mexico[2], Panama[2], Peru, Suriname, Uruguay[2]	Trinidad and Tobago
Middle East & North Africa	Algeria[1], Iran[1], Libya[1]		Israel
Sub-Saharan Africa	Angola[1], Botswana[1], Ghana, Malawi, Nigeria, Uganda, Zambia	Namibia, South Africa	
Asia Pacific & South Asia	India, Philippines[1], Vietnam	China, Indonesia, Malaysia[2], Thailand	Japan, Republic of Korea, Singapore, Taiwan
Europe – EU28		Croatia[2], Estonia[2], Hungary[2], Latvia[2], Lithuania[2], Poland[2], Romania, Slovak Republic[2]	Belgium, Czech Republic, Finland, France, Germany, Greece, Ireland Italy, Luxembourg, Netherlands, Portugal, Slovenia, Spain, Sweden, United Kingdom
Europe – Non-EU28		Bosnia and Herzegovina, Macedonia, Russian Federation[2], Turkey[2]	Norway, Switzerland
North America			Canada, Puerto Rico*, United States

1) In transition phase between Factor-Driven and Efficiency-Driven
2) In transition phase between Efficiency-Driven and Innovation-Driven
* Puerto Rico is considered to be a part of North America for its status as an associate state to the United States, even though this economy shares many characteristics of Latin American and Caribbean countries.

FIFTEEN YEARS OF GEM: WHAT DO WE KNOW AND WHAT CAN WE EXPECT FOR THE FUTURE?

The main goal of GEM, particularly in its first years of existence, was to measure differences in the level of entrepreneurial activity between economies. This information could help identify factors determining national levels of entrepreneurial activity as well as policies aimed at enhancing entrepreneurial activity. Another key goal of GEM is to help establish the way entrepreneurship relates to economic growth and, in a longer term perspective, economic development. Entrepreneurship is believed to contribute to economic development because entrepreneurs create new businesses, and new businesses create jobs, provide people with a variety of products and services, intensify competition, increase productivity through technological change and positively impact individual lives on multiple levels.

As GEM and other studies have shown, entrepreneurship rates differ among economies at similar stages of economic development. It is also true regions sharing the same level of economic development may not share the same rates of entrepreneurship. Moreover, not all entrepreneurial efforts appear to have the same impact on economic development. The GEM data collection efforts now allow for comparisons across widely varying sets of economies and regions and for making distinctions between several types of entrepreneurship. The GEM adult population survey database has grown to nearly two million observations in 104 economies that have participated in GEM between 1999 and 2013. It has led to a growing body of academic, peer-reviewed research publications. While summarizing the research outcomes goes beyond the scope of this report, a common thread in the findings is that manifestations of entrepreneurship differ depending on the context and that as such the impact of entrepreneurship on growth may also be different.

As the past fifteen years have shown serious ups and downs in the business cycle, the GEM data may also shed new light on the impact of economic crises like those experienced in many parts of the world in recent years. Also here, the GEM findings point to differences in outcomes across the globe, differences that can be related to the (institutional) context. When a crisis looms, some individuals with entrepreneurial intentions may postpone entrepreneurial activities because of an expected decline in demand. Others may actually see new opportunities emerging from a crisis. And, of course, another group may not be driven by opportunity at all but pushed into entrepreneurship as a result of the problems on the job market, especially when social security entitlements are low. The context can therefore influence both increases and declines in entrepreneurship rates. GEM National reports, freely available on the GEM website, make the connection between relevant context factors and entrepreneurial attitudes, activity and aspirations.

In fifteen years, GEM has helped build an understanding of the prevalence, nature and role of entrepreneurship in an economy and society at large. For some of the participating economies, GEM provided the very first useful data on entrepreneurship, crucial for developing evidence-based policy on entrepreneurship. This is an important achievement and has been made possible through the development and rigorous administration of an annual data collection methodology consistently across different economies and over time, involving several hundreds of dedicated scholars across the globe.

INITIAL ASSESSMENT OF ENTREPRENEURSHIP AND WELL-BEING

This year, GEM introduced a novel approach to link entrepreneurship indicators with measures of well-being. New items included in the GEM assessment involve subjective well-being, satisfaction with one's current work and work-life balance. The GEM Consortium will publish a separate report dedicated to this topic during 2014.

Initial results indicate that the prevalence of subjective well-being varies widely across world regions. Sub-Saharan African economies exhibit the lowest rates, whereas the American economies, both Latin and North America, have the highest rates. The "traditional" welfare states like Nordic countries and well-developed economies like Switzerland, Singapore and the Netherlands also exhibit high rates of subjective well-being. Taken together the findings suggest that in each economy, and in world regions with close common heritage, framework conditions such as economic, political, institutional and cultural contexts have a singular influence on the population's perception about its well-being and consequently shapes the entrepreneurship indicators.

One interesting finding is that in all regions, entrepreneurs exhibit relatively higher rates of subjective well-being in comparison to individuals who are not involved in the process of starting a business or owning-managing a business. Even though these results are exploratory, they show initial evidence that involvement in entrepreneurial activity can be linked to higher levels of subjective well-being.

Not surprisingly, necessity-driven entrepreneurs (entrepreneurs that are pushed into starting a business because they have no other options for work), have considerably lower rates of subjective well-being compared to opportunity-driven entrepreneurs. This result was consistent for all three stages of economic development. Necessity-driven entrepreneurs in factor-driven economies have the lowest average of subjective well-being. Opportunity- and necessity-driven entrepreneurs in innovation- and efficiency-driven economies exhibit lower differences on their self-assessment of subjective well-being. Interestingly, female entrepreneurs in innovation-driven economies exhibit on average a higher degree of subjective well-being than males. Another interesting finding is that, in innovation-driven economies, early-stage entrepreneurs generally exhibit the highest levels subjective well-being, but they also tend to report more problems in work-life balance than those in efficiency-driven economies.

KEY OVERALL FINDINGS IN 2013

ENTREPRENEURIAL ATTITUDES

Individuals in factor-driven economies tend to report more positive attitudes on entrepreneurial measures such as perceived opportunities to start a business and perceived skills to start a business, in comparison to those in efficiency-driven and innovation-driven economies. Geographic patterns are also visible: individuals in the Sub-Saharan African economies often see good opportunities to start a business in the region: on average 69% of all respondents. This goes together with a high confidence in their own skills and knowledge required to start a business (74% of the respondents) and limited fear of failure when it comes to starting a business (24%). Sub-Saharan economies also exhibit many individuals having intentions to start businesses; this applies to as much as 47% of the respondents who indicated they were not involved in entrepreneurship during the survey period. By contrast, economies in the European Union mostly show lower perceptions on these measures. The EU primarily hosts innovation-driven economies where the average perception of what a business entails is likely to differ from the what people in factor-driven economies associate with having a business. This could be one explanation of why attitudes about starting a business tend to decline with greater economic development levels.

But also with similar levels of economic development, differences in the prevalence and nature of entrepreneurship become apparent. In the group of efficiency-driven economies for example, Latin America and Caribbean economies reported high rates of perceived opportunities and capabilities, while economies in Eastern Europe and Asia Pacific scored low on these measures. In the group of innovation-driven economies, there is a distinction the levels of capability perception while even when the presence of opportunity is consistently high. The capability perception is high in the Nordic economies (Finland, Sweden and Norway) and lower in southern Europe - for example Greece and Spain. Not only geographic and economic factors impact attitudes toward entrepreneurship, but cultural and social issues also shape these perceptions.

When it comes to beliefs about the attractiveness of being an entrepreneur (starting a business is seen as a good career choice), different patterns emerge based on two factors: does society favor entrepreneurs with high status, and how often and to what degree does the media cover successful entrepreneurs. For example, the 2013 results show that people in the Sub-Saharan, Latin American and Caribbean, and MENA economies often believe that starting a business is considered a good career choice that being a successful entrepreneur results in and high status. Economies in the European Union, however, show lower percentages, particularly in the when it relates to media attention paid to entrepreneurs.

ENTREPRENEURIAL ACTIVITY

Total early-stage Entrepreneurial Activity (TEA) includes individuals in the process of starting a business and those running new businesses less than 3 ½ years old. As a percentage of the adult population, these rates tend to be highest for the factor-driven economies, and decline with increasing levels of GDP. The main reason for this stylized fact is that higher levels of GDP yield more and better job opportunities. At the very highest GDP levels, however, some economies deviate from this trend with higher TEA levels.

Among the factor-driven economies, the sub-Saharan African economies have the highest TEA rates, especially Zambia and Nigeria with 39% of the adult population (18-64 years old) involved in early-stage entrepreneurial activity. In the efficiency-driven group, the highest TEA rates were found in the Latin American and Caribbean economies, while lower levels were reported in MENA and Europe. Trinidad and Tobago and the United States showed the highest TEA rates among the innovation economies. Italy and Japan have the lowest TEA rates in 2013, 3.4% and 3.7% respectively.

While the factor-driven economies have the highest TEA rates, the early-stage entrepreneurs in these economies also have the highest proportion of necessity-driven motives. Economies in the innovation-driven stage of economic development again witnessed the lowest necessity-driven TEA rates and the highest proportion of opportunity-driven motives. In these economies, entrepreneurs recognize and pursue an opportunity that can improve their incomes and also their degree of independence. Among innovation-driven economies, highest proportions of such improvement-driven opportunity motives by were reported in Canada, Finland, Netherlands, Singapore, Switzerland: roughly two out of three early-stage entrepreneurs for each of these economies. Instead, economies like Jamaica, India and Malawi have close to 40% of necessity-driven early-stage entrepreneurs.

Demographic characteristics of early-stage entrepreneurs are also identified annually. A consistent finding is that in each phase of economic development, there are more early-stage entrepreneurs in the 25–34 age group than in any other age range. Women's participation in entrepreneurship relative to men ranges markedly: In MENA economies more than two-thirds of the early-stage entrepreneurs are men, while in Sub-Saharan African economies there are nearly the same number of men and women involved in starting and owning-managing new businesses.

An entrepreneurial sector requires dynamics but also a substantial degree of stability. GEM annually measures the rate of established business ownership (owner-managers in businesses that exist 3 ½ years or more). This rate exhibits large variation across economies. In factor-driven economies, TEA rates tend to be higher than the rates of owner-managers in established businesses. In many

Latin American economies, for example, the rates of established business ownership rates are less than one third of TEA rates. Zambia has less than one-tenth this level of established business owners. These findings underline that in many factor and efficiency-driven economies the limited sustainability of the many start-up attempts is a serious concern. Examples of factor- and efficiency-driven economies where the rate of owner-managers in established businesses exceeds the TEA rate include Ghana, Uganda, Thailand and India.

Economies that see many businesses being started also witness high percentages of individuals abandoning or discontinuing their entrepreneurial activity. The rate of business discontinuance is highest in the factor-driven economies —mainly in Sub-Saharan African economies— citing an unprofitable business, problems getting finance and personal reasons as the most common motive for discontinuing. Financial issues (unprofitable businesses or problems obtaining finance) remain the most important reason mentioned for business discontinuation in the majority of economies, also in other stages of economic development. However, in some (mainly-innovation-driven) economies, a significant share of entrepreneurs who discontinued owning and managing their business did so for "positive" reasons such as being able to sell the business, or the opportunity to get a good job, and for some an improvement in their personal situation.

ENTREPRENEURIAL ASPIRATIONS

Growth expectations and aspirations of early-stage entrepreneurs represent a key dimension of (potential) entrepreneurial impact and may be linked directly to many first-priority policy objectives around the world: to create more jobs. This is an important policy concern for nearly every government, particularly in the aftermath of the global financial crisis and the accompanying upswing in unemployment rates. In many economies, especially those with high TEA rates, the number of early-stage entrepreneurs indicating they expect to employ five employees within the next five years is rather low. In general, MENA and European economies, pair low TEA rates with relatively higher percentages of early-stage entrepreneurs with high-growth expectations. Hence, the GEM results illustrate that if one is interested in linking entrepreneurship to indicators of economic performance (such as job growth) a simple count of start-ups or self-employed is not sufficient.

Measures dealing with innovative orientation of early-stage entrepreneurs show some variation among regions. The average degree to which early-stage entrepreneurs consider their activities to be new for the region increases with the level of economic development. Early-stage entrepreneurs in Asia Pacific and South Asia - with economies that are now characterized for their high degree of innovative products like Japan, Korea and China - report most frequently that their product or service is new, closely followed by entrepreneurs in North America and the European Union. Sub-Saharan economies, however, exhibit lower proportions of innovative orientation, as well as European economies outside the EU. Focusing on emerging economies, early-stage entrepreneurs in Colombia, Chile, Taiwan and South Africa, frequently report offering products or services that are new to their customers and see few local competitors.

As for internationalization, the factor-driven economies revealed the lowest level of international customers, on average. The EU economies generally showed a high level of internationalization. Economies with big territories and relatively big internal markets (for example: Brazil, Russia, China or India) continue to exhibit lower international orientation. Instead, innovation-driven economies with relatively small local markets have a high international orientation. This is the case in Singapore, Luxemburg and Israel.

ENTREPRENEURSHIP FRAMEWORK CONDITIONS

Interviews with national experts revealed insights on factors impacting the environment for entrepreneurship. GEM calls these factors Entrepreneurial Framework Conditions (EFCs). Examples of EFCs include financial support, general government support, specific regulations, market openness, R&D transfer, entrepreneurship education and cultural norms and values related to entrepreneurship. In general, experts in innovation-driven economies (for instance in the EU and North America) gave higher ratings to the EFCs. In contrast, experts in Sub-Saharan African economies gave, on average, low evaluations – particularly related to R&D transfer. Some of the developing and emerging economies around the globe—Argentina and Brazil in Latin America, Malawi and Uganda in Africa, Indonesia and Philippines in Asia Pacific, Bosnia and Herzegovina and Romania in Europe— have, in the opinion of the experts, little support from government regulation. Experts in some more developed economies (Italy, Croatia and Lithuania) were also critical of this EFC (government regulation). The entrepreneurial framework conditions 'physical infrastructure' and 'commercial and legal infrastructure' were, relative to the other EFCs, positively assessed across most of the economies. 'Education and training' in primary and secondary school and regulations impacting new and growing firms were among the most negatively evaluated factors.

IMPLICATIONS FOR POLICY MAKERS

The results emerging from the 2013 GEM results are diverse. Given the importance of local conditions, GEM national reports should be consulted since they provide the most relevant explanations for the entrepreneurial profiles observed in the economy under assessment. From a generic perspective, this report shows that entrepreneurs tend to assess their subjective well-being more favorably than individuals who are not in the process of starting a business, or owning and managing a business. However, in particular, in innovation-driven economies this goes together with a more problematic assessment of work-life balance, especially for early-stage entrepreneurs. Hence, education and training related to entrepreneurship should perhaps pay more attention to these 'softer' aspects that

may get limited attention but could play an important role for entrepreneurs.

While the GEM 2013 results again confirmed that in most economies the female entrepreneurs are outnumbered by males, the results of the special topic suggest that female entrepreneurs are generally more satisfied: on average they exhibit higher scores on subjective well-being and work-life balance. Taking this information, a more even gender-balance in entrepreneurship could imply a better work-life balance for society. For some economies it may therefore be fruitful to convince talented females considering starting a business to take the final hurdle, which for some may be a particularly difficult one. To this end other female entrepreneurs could play an important function, as a role model or mentor.

Finally, the GEM results have made clear that different types of entrepreneurship coexist. Identifying these types provides a better understanding of the entrepreneurial capacity of an economy. Even though GEM originally focused on the early-stage entrepreneurial activity rate (TEA) as the key indicator, accumulated knowledge from empirical GEM-based research, has led to the notion that various types and phases of entrepreneurship should be identified to be able to fully compare the entrepreneurial landscapes between one economy and the other. Examples of these phases include the nascent (pre-startup) phase, but also the phase of opportunity recognition and business discontinuation. Entrepreneurial aspirations are also crucial for assessing the quality of entrepreneurship in terms of potential impact. Additionally, GEM has shown that a behavioral approach to entrepreneurship, meaning for example that entrepreneurial activities by employees are to be considered (outlined in this report), enriches the entrepreneurial profiles from GEM data. It makes clear how entrepreneurship manifests itself in particular economies across the globe and that focusing on increasing the number of start-ups or self-employment is not the same as a focus on stimulating entrepreneurship.

ABOUT GEM

The Global Entrepreneurship Monitor, GEM, is the largest international research initiative that analyzes the propensity of the adult population of a country to participate in entrepreneurial activities and the conditions that enhance these entrepreneurship initiatives. To date GEM is one of the few academic initiatives providing harmonized internationally comparable data systematically and annually. GEM was developed in 1997 by researchers at the London Business School, UK and Babson College, USA, and the first GEM study was formed by a group of 10 economies in 1999. Since then GEM has become a consortium of more than 90 national teams. In 2004, London Business School and Babson College transferred GEM's intellectual capital to the Global Entrepreneurship Research Association, GERA, non-profit organization run by representatives of national teams plus the two founding institutions and the sponsoring institutions.

This effort is accomplished through the collaborative work of a consortium of national teams consisting of dedicated entrepreneurship researchers across the globe. Each GEM national team oversees an annual survey, called Adult Population Survey (APS) that is completed by a representative sample of at least two thousand adults in each economy. In addition, they consult with national experts on 'entrepreneurial framework conditions', factors that can explain the nature and level of entrepreneurship in their economies through the National Expert Survey (NES).

1. INTRODUCTION AND BACKGROUND

Entrepreneurship has become a term that is increasingly widespread around the world. According to a broad spectrum of key players in society, including policymakers, academics, entrepreneurs themselves as well as for the population at large, entrepreneurship tends to be associated with economic development and well-being of society. Since its beginning, GEM has had as one of its core principles, the objective to explore and assess the role of entrepreneurship in national economic growth. This scope is aligned with the "Schumpeterian" view that entrepreneurs are ambitious and spur innovation, speed up structural changes in the economy, introduce new competition and contribute to productivity, job creation and national competitiveness.

However, entrepreneurship has many faces and also includes initiatives that are accompanied by less ambitious business activities leading to limited or no growth. In fact, most entrepreneurial activity (as defined by GEM) falls under this category, as several previous GEM Global Reports have documented. It is important to note that different types of entrepreneurship may all have important implications for socio-economic development. Across the globe, many individuals pursue a business activity because alternative options for work are limited or non-existent; by having the option to engage in self-employment they are able to take care of themselves and their families. They may even be able to set aside some money allowing their children to participate in proper education. This 'face' of entrepreneurship is very prominent in developing economies.

Even though the self-employed contribute to the flexibility and productivity of the overall economy, some could possibly be more productive by working as an employee. Entrepreneurship researchers acknowledge this and argue that studying causes and consequences of entrepreneurship requires going beyond viewing entrepreneurship as an occupation (self-employment; start-up rates). Instead the focus has moved to entrepreneurial behavior, including for example entrepreneurial employee activity (a term that is closely related to "intrapreneurship" or "corporate entrepreneurship", see Bosma et al., 2013). Finally, an emerging body of literature is paying attention to the phenomenon of "social entrepreneurship", which is about people starting and developing new initiatives where the value of the (local, regional) society is put before the value of the individuals leading these initiatives. Policy makers are increasingly attempting to implement policies supporting social entrepreneurship, especially in areas where governments are forced to cut budgets and unemployment has been increasing; hence the idea is that entrepreneurs come up with the solutions to societal challenges. The holistic view of entrepreneurship, identifying several types of entrepreneurship that are relevant to the particular context, is in accordance with the body of literature stemming from 'Austrian economics', stating that entrepreneurship is an omnipresent aspect of human action, but that its manifestation depends upon the institutional environment (Baumol, 1990; Boettke and Coyne, 2003).

GEM has, over its fifteen-years of existence, adopted this holistic view of entrepreneurship that was already encompassing the ambitious and non-ambitions types from the start (1999) and identifying necessity and opportunity-driven motivation early on in the project (2000). Since 2001 the key GEM indicators have been kept the same in order to facilitate comparisons over time. While in the beginning of the project GEM focused on the business creation process, other behavioral types of entrepreneurial activity have followed suit, such as social entrepreneurship (2009) and entrepreneurial employee activity (2011). Accordingly, following the assessment of entrepreneurial

employee activity, GEM defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (Bosma, Wennekers and Amorós, 2012, p. 9).

With this GEM 2013 Global Report we are celebrating GEM's fifteen-years of assessing entrepreneurship across the globe. This report underlines the role that entrepreneurship may play, not only in accelerating economic recovery, but also as a real driver of sustainable development in many economies. In addition, over the past fifteen years, economies across the globe have become more connected; they want to keep up with other economies. At the same time, they appreciate their unique historical and cultural heritages. Therefore it is safe to say that in comparison to 1997, when the first ideas about forming an international entrepreneurship index were exchanged and the GEM project emerged, the need for systemic and encompassing knowledge about entrepreneurship across the globe is even more relevant today.

1.1. THE GEM RESEARCH INITIATIVE

The Global Entrepreneurship Monitor was conceived in September 1997 by Michael Hay of London Business School (LBS) and Bill Bygrave of Babson College. LBS and Babson funded a prototype study that year. Ten national teams (the G7 economies: Canada, France, Germany, Italy, Japan, United Kingdom and United States and three additional economies: Denmark, Finland and Israel) conducted the first GEM study in 1999 with Paul Reynolds as the principal investigator. Under his supervision the project grew to 31 national economies in 2003. In order to govern the interests of the GEM National Teams, the Global Entrepreneurship Research Association (GERA) was formed in 2004 to serve as the oversight body for GEM. GERA is a not-for-profit organization governed by representatives of the national teams, the two founding institutions and sponsoring institutions. Now, fifteen years later, GEM has measured entrepreneurship in 104 economies, and has gained widespread recognition as the most authoritative longitudinal study of entrepreneurship in the world. In 2013, more than 197,000 individuals have been surveyed and approximately 3,800 country experts on entrepreneurship participated in the study across 70 economies, collectively representing all regions of the world and a broad range of economic development levels. The samples in the GEM study covered an estimated 75% of the world's population and 90% of the world's total GDP. In addition to its annual measures of entrepreneurial attitudes and activity, GEM analyzed well-being as a special topic focus in 2013.

GERA's mission is to contribute to global economic development through entrepreneurship. To achieve this, GERA seeks to increase worldwide knowledge about entrepreneurship by conducting and disseminating world-class research that:

1. uncovers and measures factors impacting the level of entrepreneurial dynamics among economies,
2. aids in identifying policies that may lead to appropriate levels of entrepreneurial activity, and
3. increases the influence of education in supporting successful entrepreneurship.

GEM focuses on these main objectives:
- to allow for comparisons with regard to the level and characteristics of entrepreneurial activity among different economies;
- to determine the extent to which entrepreneurial activity influences economic growth within individual economies;
- to identify factors which encourage and/or hinder entrepreneurial activity; and
- to guide the formulation of effective and targeted policies aimed at stimulating entrepreneurship

GEM provides a comprehensive view of entrepreneurship across the globe by measuring the attitudes of a population, and the activities and characteristics of individuals involved in various phases and types of entrepreneurial activity. Research teams in each participating economy administer an Adult Population Survey (APS) of at least 2,000 adults annually. Complementing the APS is a National Expert Survey (NES), which provides in-depth opinions from selected national experts on the factors that impact the nature and level of entrepreneurship in each economy.

GEM is based on the following premises. First, an economy's prosperity is highly dependent on a dynamic entrepreneurship sector. While this is true across all stages of development, the nature of this activity can vary in character and impact. Necessity-driven entrepreneurship, particularly in less developed regions or those experiencing declines in employment, can help an economy benefit from self-employment initiatives when there are fewer work options available. More developed economies, on the other hand, generate entrepreneurial opportunities as a result of their wealth and innovation capacity, yet they also offer more wage employment options to attract those that might otherwise become independent entrepreneurs. If these opportunities for entrepreneurship and innovation are to be captured, such economies need to instill opportunity-based motives and entrepreneurial incentives.

Second, an economy's entrepreneurial capacity is based on individuals with the ability and motivation to start businesses, and may be strengthened by positive societal perceptions about entrepreneurship. Entrepreneurship benefits from participation by all groups in society, including women, disadvantaged minorities and a range of age groups and education levels. Finally, high-growth entrepreneurship is a key contributor to new employment in an economy, and national competitiveness depends on innovative and cross-border entrepreneurial ventures.

1.2 GEM METHODOLOGY: KEY ISSUES

Since its beginning, GEM's focus has been on individuals, men and women who are involved in different stages of the entrepreneurial dynamics, as units of observation. GEM's approach enables a more comprehensive account of new ventures activity compared with measures of formally registered businesses[1] (for example GEM captures both informal and formal activity that encompasses those in the process of starting a business as well as those running new and established businesses). The GEM database allows the exploration of individual or business characteristics, as well as the causes and consequences of new venture creation. This also makes different comparisons particularly interesting; it is not only about "how many" people are involved in entrepreneurship in a country or region; it is also about exploring differences in types and phases of the entrepreneurship process. As a result, GEM has created a wide range of entrepreneurial initiatives, such as a group of high growth-expectation entrepreneurs, demographic issues (like age and gender) or more recently entrepreneurial employee activities. Additionally the GEM project has been producing a series of special topic reports using the richness of the data that can be combined with other secondary sources of data. **Table 1.1** summarizes all the special topics reports produced since 2000.

TABLE 1.1: SPECIAL TOPIC REPORTS BASED ON GEM DATA

GEM 2012 Sub-Saharan Africa Regional Report
GEM Special Report on Entrepreneurial Employee Activity
GEM YBI Youth Report
GEM 2012 Women's Report
GEM 2010 Womens Report
GEM Endeavor 2011 High Impact Entrepreneurship Report
GEM Special Report on Education and Training
GEM 2009 Report on Social Entrepreneurship
The IIIP Innovation Confidence Indexes 2009 Report
The IIIP Innovation Confidence Index 2008 Report
GEM 2007 Report on Women and Entrepreneurship
The IIIP Innovation Confidence Index 2007 Report
GEM 2007 Report on High-Growth Entrepreneurship
GEM 2006 Report on Women and Entrepreneurship
GEM 2006 Financing Report
GEM 2005 Report on Women and Entrepreneurship
GEM 2005 Report on High Expectation Entrepreneurship
GEM 2004 Financing Report

[1] For an explanation about these differences see Bosma et al., 2009, p. 12 "Main distinctions between GEM Adult population Survey Data and Business Registration Data".

THE PHASES OF ENTREPRENEURSHIP

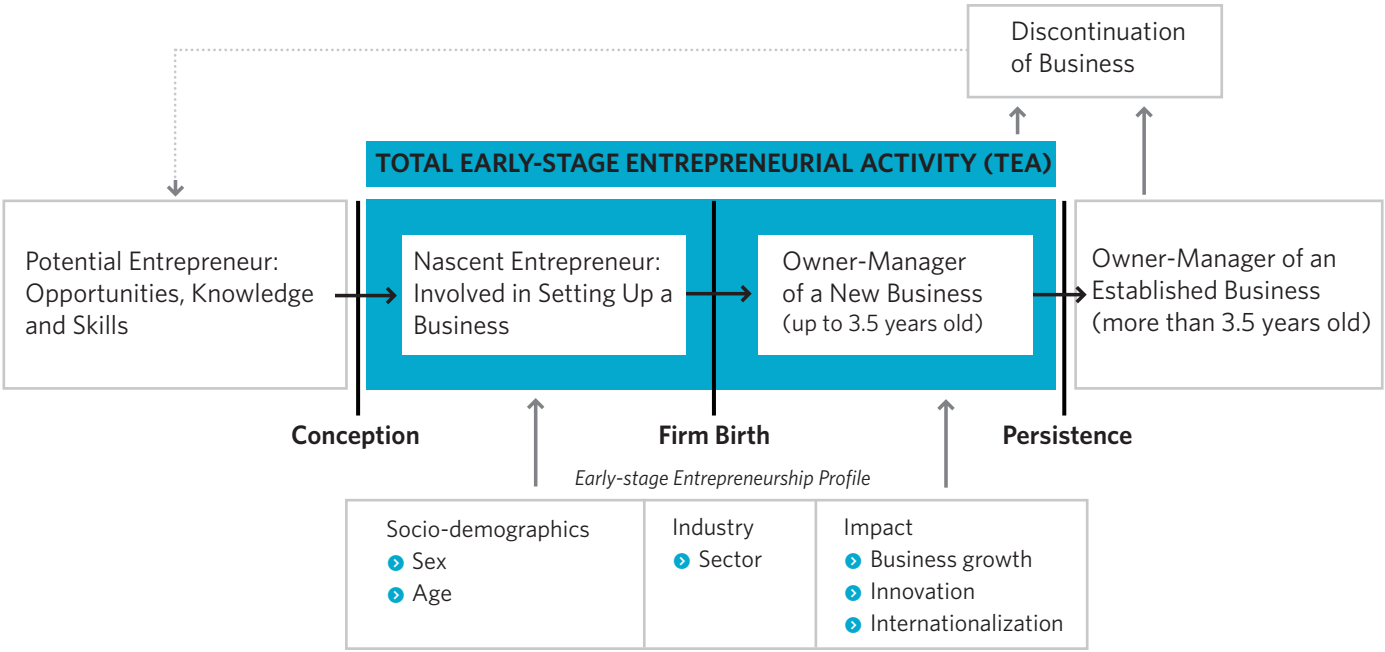
The GEM project has focused on entrepreneurship as a process comprising different phases, from intending to start, to just starting, to running new or established enterprises and even discontinuing a business. Given that the context and conditions that affect entrepreneurship in different economies are diverse and complex, it is not possible to conclude that one phase inevitably leads to the next. For example, an economy may have a large number of potential entrepreneurs but this may not necessarily translate into a high rate of entrepreneurial activity. These categories discerning phases of entrepreneurship are derived from the raw GEM data using different complex filter procedures[2].

Figure 1.1 shows the entrepreneurship process and operational definitions, as conceptualized by the GEM research framework. This multiphase process is useful for assessing the state of entrepreneurship at different points. This process starts with the involvement of potential entrepreneurs—those individuals who manifest entrepreneurial attitudes as potential prerequisites of the entrepreneurial. These individuals believe they possess the capability to start a business, see new business opportunities and would not be dissuaded from doing so for fear of failing. Additionally their intention to start a business is underpinned by the perceptions society holds of entrepreneurs, the status these individuals enjoy in their society and whether the media positively represents entrepreneurs.

The next phase is nascent entrepreneurial activity—individuals starting new enterprises less than three months old. Given the challenges associated with starting a new business, many fledgling businesses fail in the first few months, hence not all nascent entrepreneurs progress to the next stage. New business owners are defined as those former nascent entrepreneurs who have been in business for more than three months, but less than three and a half years (42 months). This period is based on a series of empirical evidence that states that many new ventures fail between their inception and 42 months, so we focus on observing the early stages of entrepreneurial activities. For GEM, the combination of the nascent and the new business owners together account for the total early-stage entrepreneurial activity (TEA), one of the key measures of GEM.

Established businesses are those that have been in existence for more than three and a half years. Discontinuation of activities in owning and managing a business are also important aspects of entrepreneurship. Some recurring GEM survey questions capture discontinuation and the reasons for it. In many cases, the reasons appear to be rather positive. Indeed, many of the individuals who discontinue their business start again, and become serial entrepreneurs (Bosma and Levie, 2010; Hessels et al., 2010) or they may join established companies and enact their entrepreneurial ambitions as employees. It is important to consider both established business owners as well as entrepreneurs who have discontinued or exited businesses because these two categories represent a key resource for other entrepreneurs (for example, by providing financing, mentorship, advice or other types of support).

FIGURE 1.1 THE ENTREPRENEURSHIP PROCESS AND GEM OPERATIONAL DEFINITIONS



[2] For full description of the procedures and variables refer to GEM operation manual available at http://www.gemconsortium.org/docs/2375/gem-manual-design-data-and-quality-control

GEM METHODOLOGY

As explained at the beginning of this introduction, one of the key purposes of GEM is to provide reliable data on entrepreneurship that will be useful in making meaningful comparisons, both internally and between economies, over time. For this reason, all participating economies make use of standard research instruments and methodology. The GEM data are gathered annually and are derived from two main sources: Adult Population Survey and National Experts Survey.

ADULT POPULATION SURVEY (APS)

Each participating economy conducts a survey of a random representative sample of at least 2,000 adults (over 18 years old). Surveys are conducted at the same time of year (generally between April and June), using a standardized questionnaire developed by the GEM consortium. The APS is generally conducted by an independent survey vendor, chosen by each economy's GEM team. The vendor submits a proposal for the GEM data collection, which is reviewed by the GEM coordination team on various criteria. The raw data is sent directly to the GEM data team for review, quality check and uniform statistical calculations before being made available to the participating economies. The most up-to-date information on data collection methodology is available in the GEM Data Manual, available on www.gemconsortium.org.

NATIONAL EXPERTS SURVEY (NES)

The National Experts Survey provides insights into the entrepreneurial start-up environment in each economy with regard to the nine entrepreneurial framework conditions:

- Financing
- Governmental policies
- Governmental programs
- Education and training
- Research and development transfer
- Commercial infrastructure
- Internal market openness
- Physical infrastructure
- Cultural and social norms

The NES sample comprises a minimum of 36 respondents, with four experts drawn from each of the entrepreneurial framework condition categories. Out of this sample, a minimum of 25% must be entrepreneurs or business owners, and 50% must be professionals.

Additional aspects such as geographic distribution, gender, the public versus private sector, and level of experience are also taken into account in selecting the sample. For more detailed information we again refer to the GEM Data Manual, available on www.gemconsortium.org.

1.3 THE GEM CONCEPTUAL FRAMEWORK

Since its inception, GEM has pursued and explored the bi-directional relationship between entrepreneurship and economic development (Wennekers and Thurik, 1999; Carree and Thurik, 2003; Acs, 2006; Audretsch, 2007). To this end, GEM developed a conceptual framework that sets out key elements of the relationship between entrepreneurship and economic growth and the way in which the elements interact. It took as its starting point the recognition that while other scholars had defined the general national framework conditions for established enterprise to thrive (Schwab and Sachs, 1997, 1998), a different set of "entrepreneurial framework conditions" (EFCs) and both entrepreneurial capacities and entrepreneurial opportunities were needed to enable new business activity. This emergent phase of GEM is described by Reynolds et al. (2005) and the first conceptual framework is discussed in detail by Levie and Autio (2008).

Building on that model, the current GEM conceptual framework reflects the complexity of the causal relationships between entrepreneurship and economic development globally (Bosma et al., 2009; Bosma and Levie, 2010). It acknowledges that the contribution of entrepreneurs to an economy varies according to its phase of economic development (Wennekers et al., 2005; Gries and Naude, 2008), which to certain extent drives the institutional setting. It also reflects a nuanced distinction between phases of economic development, in line with Porter's typology of "factor-driven economies", "efficiency-driven economies" and "innovation-driven economies" (Porter et al., 2002), and recognizes that GEM's unique contribution was to describe and measure, in detail, the conditions under which entrepreneurship and innovation can thrive. These categories are based on the World Economic Forum's (WEF) Global Competitiveness Report, which identifies three main phases of economic development based on GDP per capita and the share of exports comprising primary goods.

According to the WEF classification, the factor-driven phase is dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labor and natural resources. The focus of development efforts tends toward building a sufficient foundation of basic requirements.

In the efficiency-driven phase, an economy has become more competitive with further development accompanied by industrialization and an increased reliance on economies of scale, with capital-intensive large organizations more dominant. This phase is generally accompanied by improved (and improving) basic requirements, and attention is then directed toward developing the efficiency enhancers.

As development advances into the innovation-driven phase, businesses are more knowledge-intensive, and the service sector expands. While entrepreneurship and innovation factors are more dominant in this phase, it must be noted that these conditions rely on a healthy set of basic requirements and efficiency enhancers.

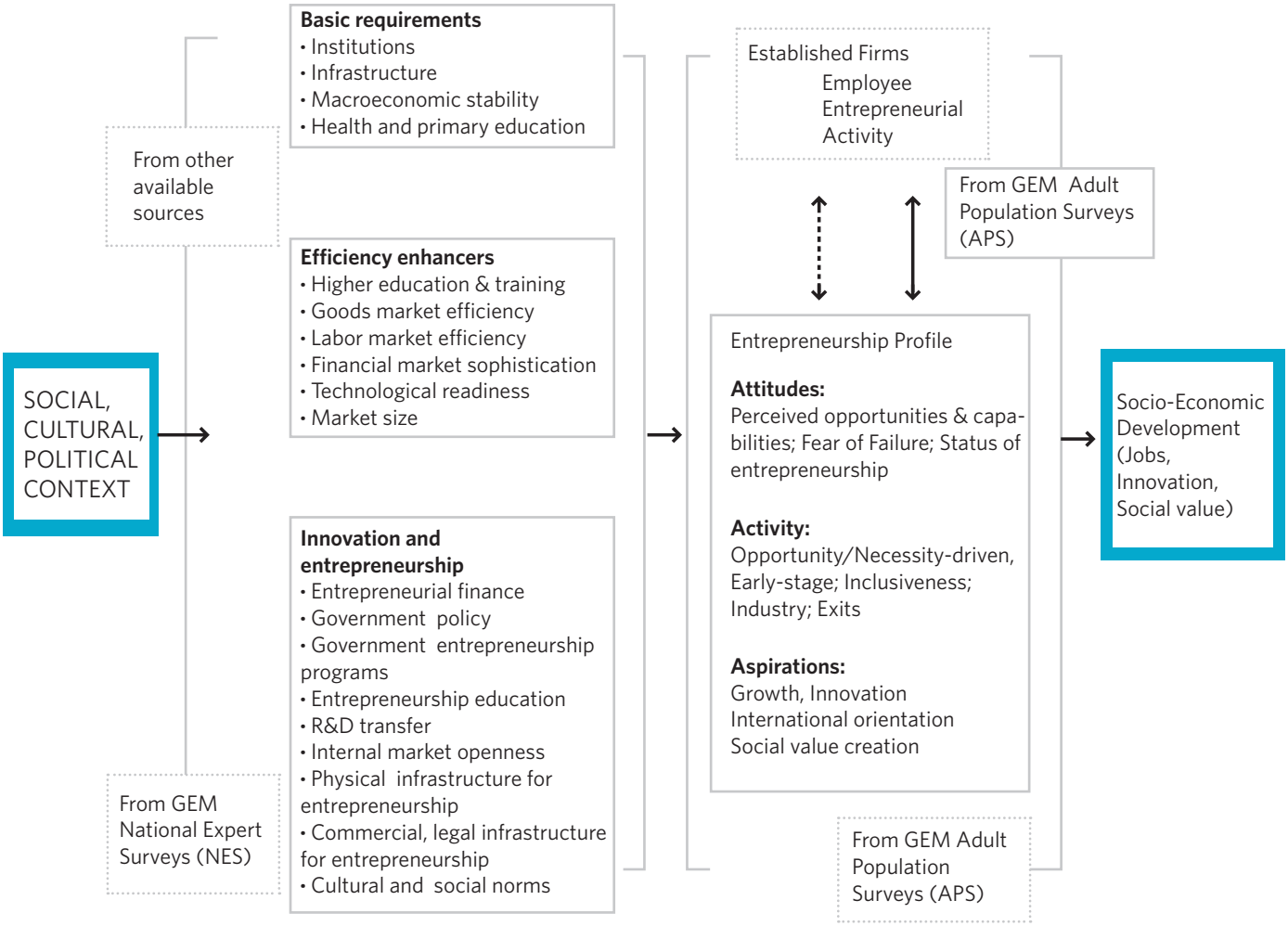
The framework incorporates the three main components that capture the multi-faceted nature of entrepreneurship: entrepreneurial attitudes, entrepreneurial activity, and

entrepreneurial aspirations. These are included as components of a "black box" that produces innovation, economic growth and job creation, without spelling out in detail how they affect and reinforce each other. This ambiguity was deliberate; it reflected the view that all three elements may affect each other rather than being components of a linear process and it was expected that further theoretical and empirical work would open up this black box. Aspiration or ambition is relevant because researchers increasingly realize that all entrepreneurial activity does not equally contribute to development. For example, in many economies, much employment creation comes from a small number of ambitious, fast-growing new businesses (Autio, 2007).

Furthermore, potentially ambitious entrepreneurs react differently to different regulatory and legal regimes than those who are less ambitious (Levie and Autio, 2011). Finally, this revised GEM framework highlights the contributions of entrepreneurial employees as well as their role as potential future independent entrepreneurs. The current GEM conceptual framework is shown in **Figure 1.2.** This figure also shows how GEM measures different components, such as entrepreneurial framework conditions using the national expert survey, and the entrepreneurship profiles, encompassing entrepreneurial attitudes, activity and aspirations using the adult population survey.

After 15 years of systematic measurements of entrepreneurship dynamics, the GEM project continues to support building evidence on the relevance of entrepreneurship for national economic growth, innovation and job creation. The GEM community has continuously worked on the GEM conceptual framework in order to better reflect the insights emerging from the entrepreneurship literature and in particular the multidimensional characteristics of entrepreneurial dynamics. This has led to, for example, incorporating entrepreneurial employee activities and social value creation. In this fifteenth GEM Global Report, Chapter 4 reviews the developments in GEM over the course of time and the results of thirteen years of consistent GEM indicators. Of course, the impact of the economic downturn that has been faced by many economies across the globe since 2008, deserves special attention. The GEM results suggest that there is not a uniform "entrepreneurial response" to an economic crisis, nor is the role entrepreneurship plays for economic recovery similar across economies. Again, causes and consequences very much depend on the local context. For a solid understanding of the relationships that are at play, it is relevant to refer to the various GEM national reports, freely available on the GEM website (www.gemconsortium.org).

FIGURE 1.2 THE GEM CONCEPTUAL FRAMEWORK



GEM Research Exhibit 1

Niels Bosma. **"The Global Entrepreneurship Monitor (GEM) and its impact on entrepreneurship research."** Foundations and Trends© in Entrepreneurship, Volume 9, Number 2, pages 143–248, February 2013.

José Ernesto Amorós, Niels Bosma and Jonathan Levie. **"Ten years of Global Entrepreneurship Monitor: Accomplishments and prospects."** *International Journal of Entrepreneurial Venturing*, Volume 5, Number 2, pages 120–152, May 2013.

Claudia Álvarez, David Urbano and José Ernesto Amorós. **"GEM research: Achievements and challenges."** Small Business Economics, in press DOI 10.1007/s11187-013-9517-5, October 2013.

RESEARCH ISSUE

In 2013, three studies were published that – in varying ways - provide an overview on the development of GEM-based research. Taken together they demonstrate the evolution of the GEM project and the relevance of GEM-based research for both entrepreneurship scholars and policymakers.

Niels Bosma's monographic in Foundations and Trends© in Entrepreneurship and José Ernesto Amorós, Niels Bosma and Jonathan Levie's work in International Journal of Entrepreneurial Venturing share two main objectives and contributions. The first objective is to document the evolution of the Global Entrepreneurship Monitor Project and recognize the relevance of GEM as one of the world's largest cross-national collaborative social science research projects, in terms of methodology and scholarly impact. The second objective is to offer a series of recommendations about how the GEM project might evolve further and make more of an impact on entrepreneurship research, on entrepreneurship policy and practice, and ultimately on economic development. Claudia Álvarez, David Urbano and José Ernesto Amorós' research in Small Business Economics shares the latter objective by analyzing the evolution of GEM-based research and how the GEM could be better positioned in the academic community.

THEORY AND METHOD

These three works are based on a systematic and rigorous search of articles published in journals within the Thomson Reuters' Social Sciences Citation Index through an analysis focused on articles using GEM data. The differences are in the approaches and scopes of the analyses. Bosma distinguishes studies aimed at unraveling factors that determine the level of entrepreneurial activity (micro and macro level) from studies dealing with (economic) consequences of entrepreneurial activity. Álvarez and colleagues base their approach on institutional theory, identifying the topics, units of analysis and statistical techniques used throughout these studies, as well as on the authors and articles with the most impact (measured by citation counts). Finally, Amorós and colleagues map the objectives and research questions of GEM-based papers.

FINDINGS

The three articles all address the evolution of GEM and highlight the tremendous increase in peer-reviewed empirical research that uses GEM data. This demonstrates increasing acceptance of the value of GEM data in academic circles. While considering the importance of the topic and the explicit drive of GEM researchers to better understand the relationship between entrepreneurship and development, the quantity and quality of the academic output so far seem rather limited.

All authors agree on a relative gap in the number of GEM-related papers published in top journals. This issue can be addressed, however, by enhancing the academic prestige of GEM. GEM is now in its 15th year, and the richness of its data and, more importantly, its knowledge capital, is truly relevant. Additionally, the current availability of individual- and country-level data enables academics "outside" national teams to use GEM data in their research. Such researchers could use GEM data to not only increase the quantity of GEM-related publications, but also to add new studies that could include, for example, the global economic crisis of 2008–2010, the Euro crisis, challenges for emerging regions of the world or some specific topics related to institutional and socio-demographic variables. Additionally there is a call for the use of more sophisticated estimation techniques that can not only contribute to the empirical knowledge but also to construct better theoretical frameworks. GEM data involves important dimensions: micro (individuals), context (nations and regions) and time (annual assessment for most economies)[3]. Thus, this data set is appropriate for multilevel modeling and lends itself uniquely to the study of individual, organizational and environmental factors, which combine to provide a more comprehensive analysis than any one aspect in isolation.

IMPLICATIONS

These three articles underline significant progress that has been made in GEM research, positioning the database as one of the most significant reference sources in leading high-impact entrepreneurship journals. With an expanding dataset and growing community of scholars using the data, care needs to be taken to move GEM-based research to a higher level, for the benefit of the wider research community. Care should also be taken to acknowledge limitations of the data. GEM was certainly not set up to answer every question related to entrepreneurship, although sometimes there seems to be an expectation that it should. There are still big challenges ahead. These three works highlight some streams of research where GEM may provide a useful—if not essential—contribution in the near future. Finally, there is also an invitation for the GEM consortium to continually show entrepreneurial behavior and to innovate both in measures and in methods if it is to remain at the forefront of international research in entrepreneurship and economic development.

[3] A limitation is that the GEM Adult Population Survey is not a longitudinal data set. Hence, even though the time dimension is included since the survey is held annually, longitudinal analyses cannot be conducted. At the macro-level, panel data analysis and GMM techniques can be used.

2. A GLOBAL PERSPECTIVE ON ENTREPRENEURSHIP IN 2013

2.1 INTRODUCTION

The GEM data collection offers entrepreneurial profiles of economies along three important dimensions. Entrepreneurial attitudes and perceptions reflect the degree to which individuals in economies tend to appreciate entrepreneurship, both in terms of general attitudes and in terms of self-perceptions: How many individuals recognize business opportunities, how many believe they have the skills and knowledge to exploit such opportunities and how many would refrain from exploiting such opportunities through fear of failure? Entrepreneurial activity measures the observed involvement of individuals in different phases of entrepreneurial activity. It also tracks the degree to which entrepreneurial activities are driven by opportunity and/or necessity. Discontinuations of entrepreneurial activity (and the reasons for doing so) are also estimated from GEM Adult Population Surveys. Finally, entrepreneurial aspirations are of key importance in addressing the (socio) economic impact of entrepreneurial behavior. Entrepreneurs that expect to create jobs, to be involved in international trade and/or to contribute to society by offering new products and services are of particular interest. This chapter deals with each of these components based on the results of the GEM 2013 Adult Population Survey. Since 2008, GEM Global reports have categorized the participating economies by phase of economic development, namely factor-driven, efficiency-driven and innovation-driven economies. Yet as GEM has continued to grow, its geographic coverage has expanded. This gives the opportunity to compare results within and across geographic regions of the world. This report will therefore analyze the findings from the geographic perspective (global regions) and by phase of economic development. **Table 2.1** shows the participating economies by global region and phase of economic development.[4]

2.2 ENTREPRENEURIAL ATTITUDES AND PERCEPTIONS

Fostering entrepreneurial awareness and positive attitudes towards entrepreneurship are high on the policy agenda of several economies.[5] The idea is that, for individuals, evolving attitudes and perceptions towards entrepreneurship could affect those venturing into entrepreneurship. However, the perception of opportunities for startups and that of (matching) personal capabilities do not necessarily represent the key determinant of making the step to entrepreneurial activity. McMullen and Shepherd (2006), for instance, argue that individuals first react to opportunities when they see them – only afterwards are considerations about desirability and feasibility made. Fear of failure when it comes to starting a business (and the consequences of failure) could also deter an individual from exploiting perceived entrepreneurial opportunities. In addition to these individual characteristics, elements of the context, such as the availability of (good) job alternatives in an economy and the perceptions of others can make a difference for those perceiving market opportunities and having confidence in

[4] In 2013, 70 economies participated in the GEM cycle. However, the results from Turkey, Namibia and some Caribbean States are not included in the first release due to technical problems uncovered in the inspection by GEM's central data team. While these problems could not be resolved before the publishing deadline for this report, their information will be published later in a pdf version.
[5] See e.g. OECD (2010, p.76).
[6] Those who prefer to be working as an employee in this setting may particularly be inclined to opt for entrepreneurial employee activity, see Chapter 4.

TABLE 2.1 GEM ECONOMIES BY GEOGRAPHIC REGION AND ECONOMIC DEVELOPMENT LEVEL

Region	*Factor- Driven Economies*	*Efficiency-Driven Economies*	*Innovation-driven Economies*
Latin America & Caribbean		Argentina[2], Brazil[2], Barbados[2], Chile[2], Colombia, Ecuador, Guatemala, Jamaica, Mexico[2], Panama[2], Peru, Suriname, Uruguay[2]	Trinidad and Tobago
Middle East & North Africa	Algeria[1], Iran[1], Libya[1]		Israel
Sub-Saharan Africa	Angola[1], Botswana[1], Ghana, Malawi, Nigeria, Uganda, Zambia	Namibia, South Africa	
Asia Pacific & South Asia	India, Philippines[1], Vietnam	China, Indonesia, Malaysia[2], Thailand	Japan, Republic of Korea, Singapore, Taiwan
Europe – EU28		Croatia[2], Estonia[2], Hungary[2], Latvia[2], Lithuania[2], Poland[2], Romania, Slovak Republic[2]	Belgium, Czech Republic, Finland, France, Germany, Greece, Ireland Italy, Luxembourg, Netherlands, Portugal, Slovenia, Spain, Sweden, United Kingdom
Europe – Non-EU28		Bosnia and Herzegovina, Macedonia, Russian Federation[2], Turkey[2]	Norway, Switzerland
North America			Canada, Puerto Rico*, United States

1) In transition phase between Factor-Driven and Efficiency-Driven
2) In transition phase between Efficiency-Driven and Innovation-Driven
* Puerto Rico is considered to be a part of North America for its status as an associate state to the United States, even though this economy shares many characteristics of Latin American and Caribbean countries.

their own entrepreneurial capabilities to actually engage in independent entrepreneurial activity[6]. This supports the notion that there is much in between attitudes and activities and that a mixture of individual, social and contextual factors impact on the individual decision making process when it comes to venturing into entrepreneurial activity. **Table 2.2** shows how economies compare to each other in terms of entrepreneurial perceptions and attitudes as measured through the GEM 2013 Adult Population Survey. While positive attitudes and perceptions towards entrepreneurship may be instrumental in achieving new (high-value) entrepreneurial activities in some societies, in others they seem to matter less. One reason may be that other alternatives are available to individuals. Appendix 1, **Table A.1** shows the same information but by phase of economic development.

TABLE 2.2 ENTREPRENEURIAL ATTITUDES AND PERCEPTIONS IN THE GEM ECONOMIES IN 2013 BY GEOGRAPHIC REGION (% OF POPULATION AGED 18-64)

REGION	Economies	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions **	Entrepreneurship as a good career choice***	High status to successful entrepreneurs***	Media attention to successful entrepreneurs***
Latin America & Caribbean	Argentina	40.9	61.7	24.9	31.0			
	Brazil	50.9	52.6	38.7	27.2	84.6	82.2	84.1
	Chile	68.4	59.6	28.0	46.5	69.1	67.2	66.3
	Colombia	67.7	57.8	31.8	54.5	90.9	71.4	67.5
	Ecuador	57.3	74.3	34,9	39.9	66.5	67.7	79.1
	Guatemala	58.8	66.4	33.3	39.0	86.8	71.5	55.1
	Jamaica	51.2	79.1	27.0	39.5	79.4	80.9	81.7
	Mexico	53.6	58.5	31.6	16.9	57.8	62.3	50.8
	Panama	58.7	66.4	28.9	27.0	64.4	59.2	70.4
	Peru	61.0	62.2	25,7	33.9	70.4	71.2	71.5
	Suriname	52.7	53.5	24.4	13.1	75.6	79.3	65,9
	Trinidad and Tobago	58.0	75.3	19.8	28.7	79.5	72.0	61.0
	Uruguay	47.9	61.1	26.9	25.3	58.1	56.0	57.5
	Average⁺	**55.9**	**63.7**	**28.9**	**32.5**	**73.6**	**70.1**	**67.6**
Middle East & North Africa	Algeria	61.9	55.5	32.9	36.0	79.6	84.2	47.4
	Iran	37.0	56.5	36.4	30.6	64.1	82.4	59.9
	Israel	46.5	36.2	51.8	24.0	60.6	80.3	49.1
	Libya	52.3	58.6	33.0	62.1	85.2	84.3	38.2
	Average	**49.4**	**51.7**	**38.5**	**38.2**	**72.4**	**82.8**	**48.6**
Sub-Saharan Africa	Angola	56.7	56.3	63.7	38.3	66.8	72.6	62.1
	Botswana	65.9	67.4	18.6	59.2	80.7	83.7	85.6
	Ghana	69.3	85.8	24.6	45.6	81.6	94.1	82.4
	Malawi	78.9	89.5	15.1	66.7			
	Nigeria	84.7	87.0	16.3	46.8	81.2	61.9	76.5
	South Africa	37.9	42.7	27.3	12.8	74.0	74.7	78.4
	Uganda	81.1	83.8	15.0	60.7	88.3	95.3	87.5
	Zambia	76.8	79.6	15.4	44.5	66.5	71.2	69.0
	Average	**68.9**	**74.0**	**24.5**	**46.8**	**77.0**	**79.1**	**77.4**
Asia Pacific & South Asia	China	33.0	36.2	34.3	14.4	69.6	73.5	71.3
	India	41.4	55.7	38.9	22.7	61.4	70.3	61.3
	Indonesia	46.6	62.0	35.1	35.0	70.8	79.8	75.2
	Japan	7.6	12.8	49.3	4.0	31.3	52.7	57.6
	Korea, Republic of	12.7	28.1	42.2	12.0	51.3	67.8	67.5
	Malaysia	40.7	27.9	33.3	11.8	41.8	44.9	62.2
	Philippines	47.9	68.4	36.1	44.1	84.8	79.2	86.7
	Singapore	22.2	24.7	39.7	15.0	50.9	59.3	75.3
	Taiwan	42.0	27.2	40.6	27.8	72.9	64.4	87.0
	Thailand	45.3	44.3	49.3	18.4	74.5	74.8	77.1

REGION	Economies	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions**	Entrepreneurship as a good career choice***	High status to successful entrepreneurs***	Media attention to successful entrepreneurs***
	Vietnam	36.8	48.7	56.7	24.1	81.5	80.5	80.5
	Average	**34.2**	**39.7**	**41.5**	**20.9**	**61.2**	**68.1**	**72.9**
Europe – EU28	Belgium	31.5	33.8	46.6	7.8	54.8	52.2	43.9
	Croatia	17.6	47.2	35.2	19.6	61.5	43.1	42.9
	Czech Republic	23.1	42.6	35.8	13.7		47.8	
	Estonia	46.1	40.0	38.8	19.4	53.2	58.6	40.7
	Finland	43.8	33.3	36.7	8.3	44.3	85.5	68.5
	France	22.9	33.2	41.1	12.6	55.3	70.0	41.4
	Germany	31.3	37.7	38.6	6.8	49.4	75.2	49.9
	Greece	13.5	46.0	49.3	8.8	60.1	65.1	32.4
	Hungary	18.9	37.5	44.8	13.7	45.7	74.1	28.4
	Ireland	28.3	43.1	40.4	12.6	49.6	81.2	59.9
	Italy	17.3	29.1	48.6	9.8	65.6	72.4	48.1
	Latvia	34.8	47.8	41.6	22.7	61.4	59.5	58.6
	Lithuania	28.7	35.4	41.7	22.4	68.6	57.2	47.6
	Luxembourg	45.6	43.3	42.9	14.1	39.4	70.6	36.3
	Netherlands	32.7	42.4	36.8	9.1	79.5	66.2	55.2
	Poland	26.1	51.8	46.7	17.3	66.8	59.9	58.5
	Portugal	20.2	48.7	40.1	13.2			
	Romania	28.9	45.9	37.3	23.7	73.6	72.6	61.3
	Slovakia	16.1	51.0	33.2	16.4	49.2	58.5	51.7
	Slovenia	16.1	51.5	29.6	12.4	57.4	68.1	50.5
	Spain	16.0	48.4	36.3	8.4	54.3	52.3	45.6
	Sweden	64.4	38.8	36.6	9.5	52.0	71.5	58.5
	United Kingdom	35.5	43.8	36.4	7.2	54.1	79.3	49.6
	Average	**28.7**	**42.3**	**39.8**	**13.5**	**56.9**	**65.5**	**49.0**
Europe – Non-EU28	Bosnia and Herzegovina	23.3	50.5	26.1	21.8	82.3	71.9	39.2
	Macedonia	37.2	49.7	35.6	29.1	69.5	67.9	66.8
	Norway	63.7	34.2	35.3	5.2	49.3	75.5	56.9
	Russia	18.2	28.2	29.0	2.6	65.7	68.0	49.0
	Switzerland	41.5	44.7	28.2	9.8	40.5	65.0	47.8
	Average	**36.8**	**41.5**	**30.8**	**13.7**	**61.5**	**69.7**	**51.9**
North America	Canada	57.4	48.5	35.2	13.5	60.6	70.1	69.6
	Puerto Rico	28.3	53.0	24.6	13.1	17.9	50.1	68.8
	United States	47.2	55.7	31.1	12.2			
	Average	**44.3**	**52.4**	**30.3**	**12.9**	**39.3**	**60.1**	**69.2**

* Denominator: 18-64 age group perceiving good opportunities to start a business.

** Respondent expects to start a business within three years. Denominator: 18-64 age group that is currently not involved in entrepreneurial activity (including involvement in early-stage and established entrepreneurship).

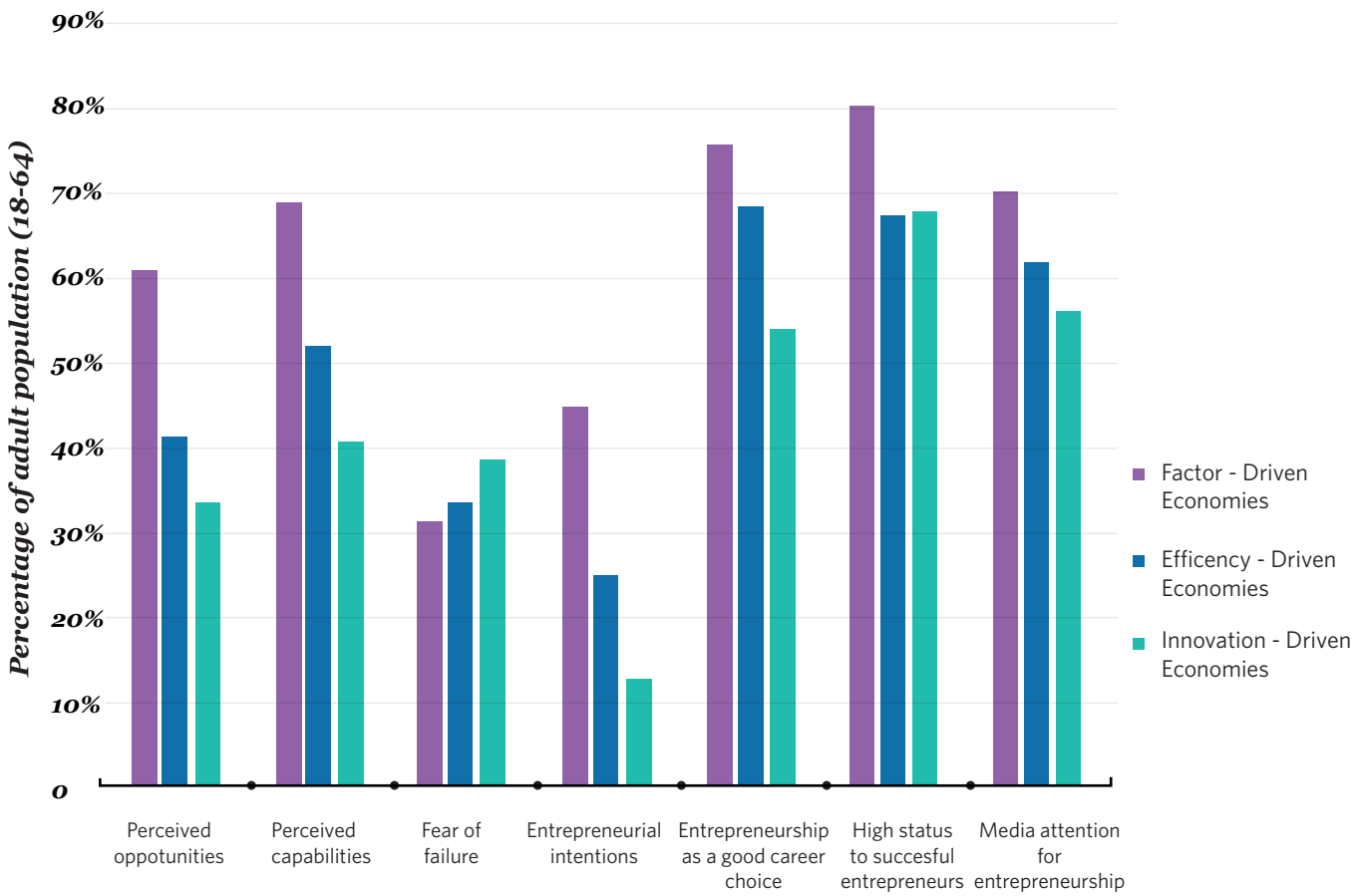
*** This is an optional item in the GEM 2013 Adult Population Survey.

+ Unweighted averages

INDIVIDUALS' PERCEPTIONS: OPPORTUNITIES, CAPABILITIES AND FEAR OF FAILURE

The perception of entrepreneurial opportunities measured in **Table 2.2** reflects the percentage of individuals who believe there are opportunities to start a business in the area they live in. Perceived capabilities reflect the percentages of individuals who believe they have the required skills, knowledge and experience to start a new business. The measure of fear of failure (when it comes to starting your own business) applies to those who perceive opportunities only. For all three measures, individuals in various countries are likely to have different kinds of business in mind. The results show high variations across economies. High prevalence rates of perceived opportunities are not always associated with high prevalence rates of perceived capabilities. It is interesting to note that Sub-Saharan countries exhibit on average the highest evaluation in these three perceptions. In these countries, entrepreneurship rates tend to be high, suggesting that people are willing to act on the opportunities they see and believe they are capable of starting a business. On the other hand, European countries, mainly EU28 countries, show the lowest rates. This pattern is clear in **Figure 2.1** which shows that perceived opportunities and capabilities tend to decline with greater development levels. For example, perceived opportunities and perceived capabilities measures are almost twice as high in factor-driven economies, 60% and 69%, respectively, than in innovation-driven economies, 33% and 40%, respectively. Fear of failure is higher in the Asia Pacific and South Asia region, with Vietnam having the highest rate with 56%, followed by Japan and Thailand with 49%. EU28 countries also exhibit this. It is important to note, however, that these perceptions may reflect different businesses one generally has in mind, showing the value of GEM measures of necessity versus opportunity motives, industry participation, growth orientation and so forth. This measure will be analyzed in further sections.

FIGURE 2.1 ENTREPRENEURIAL PERCEPTIONS AND ATTITUDES: AVERAGES BY PHASE OF ECONOMIC DEVELOPMENT



ENTREPRENEURIAL INTENTIONS

The next stage in the entrepreneurship process takes place when a potential entrepreneur expresses the intention to start a new business in the foreseeable future. Entrepreneurial intentions, defined by the percentage of individuals who expect to start a business within the next three years (those who are currently already entrepreneurially active are excluded from this measure presented in **Table 2.2**) also differ widely across the economies in each stage of economic development. On average they tend to be highest in factor-driven economies where fewer good job alternatives are available and more necessity-based entrepreneurship can be expected. In efficiency-driven economies and especially in innovation-driven economies, entrepreneurial intentions are typically lower as is show on **Figure 2.1.** Russia and Japan exhibit the lowest entrepreneurial intention rates, while expectations to start a business are extremely high in some other African economies such as Malawi, Botswana and Uganda, but also in Latin American countries such as Colombia and Chile. For many of these countries, it should be noted that economic disparities are high and that the entrepreneurial intentions cover a wide range from substantial amounts of local, necessity-based self-employment to relatively scarce high aspiration and internationally oriented entrepreneurship

NATIONAL ATTITUDES: CAREER CHOICE, STATUS AND MEDIA ATTENTION

The last three attitude measures assess societal impressions about entrepreneurship as a career choice and whether entrepreneurs are afforded high status and receive positive media attention. These perceptions assess the visibility and attractiveness of entrepreneurship. Positive views on these measures can influence the willingness of individuals to become entrepreneurs, but also the likelihood that others in society will support their efforts, with some possibly becoming stakeholders such as investors, suppliers, customers and advisors.

When asked about their judgment of the degree to which entrepreneurship is accepted as a good career choice, individuals around the globe tend to be overwhelmingly positive, but on average, the percentage of positive assessments is lower in innovation-driven economies than in the other two groups (**Figure 2.1**). With the exception of relative high-income economies like Japan, Singapore, Finland, Norway, Luxemburg, Switzerland and Ireland and some other high-growth emergent economies like Malaysia or Puerto Rico, more than half of the inhabitants believe that entrepreneurship is considered to be a good career choice. When we consider the status of successful entrepreneurs, the average judgment appears to be similar in efficiency-driven economies and innovation-driven economies, while it is higher in factor-driven economies. Again, African countries (including both from North Africa and Sub-Saharan) have the highest rates of high status to successful entrepreneurs.

Finally about attitudes, media attention for entrepreneurship is assessed by asking the individuals whether they believe that there are plenty of reports of new and growing firms in the news and in other communication media. Economies from several global regions and covering all three economic phases score high on this item, including Brazil, Uganda, Taiwan, Finland and Canada. The lowest scores are observed for Greece, Hungary, Luxemburg and Libya, where only around one-third of responses were affirmative. In general, Europe exhibited low levels on all attitude measures. Even during the economic crisis, some countries maintained high economic development, so it is probable that people found other employment alternatives attractive, such as working for corporations, government or other entities, where entrepreneurial activity can also take place (Bosma et al., 2013).

2.3 ENTREPRENEURIAL ACTIVITIES

PHASES OF ENTREPRENEURIAL ACTIVITY

As shown in **Figure 1.1** earlier in this report, GEM conceptualizes entrepreneurship as a continuous process that includes nascent entrepreneurs involved in setting up a business, entrepreneurs who own and manage a new business and entrepreneurs who own and manage an established business. In addition, GEM assesses the rate and nature of business discontinuations. As a result, indicators on several phases of the entrepreneurial process are available. **Table 2.3** shows these entrepreneurial activity prevalence rates per phase of economic development. Taken together, these prevalence rates form a first glance of entrepreneurial dynamics for each of the economies. In the remainder of this section, we elaborate on these phases of entrepreneurial activity. As usual, most attention is paid to the central measure of GEM, the Total Early-Stage Entrepreneurial Activity (TEA) rate, which consists of the percentage of individuals aged 18–64 in an economy who are in the process of starting or are already running new businesses. This is the phase that is crucial for most entrepreneurs. While at the macro level, most dynamism, future job creation and innovation can be expected from this group of entrepreneurs. Appendix 1, **Table A.2** shows the same information but by phase of economic development.

TABLE 2.3 PHASES OF ENTREPRENEURIAL ACTIVITY IN THE GEM COUNTRIES IN 2013, BY GEOGRAPHIC REGION

Region	Economies	Nascent entrepreneur-ship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of businesses	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
Latin America & Caribbean	Argentina	10.5	5.6	15.9	9.6	5.5	29.8	47.4
	Brazil	5.1	12.6	17.3	15.4	4.7	28.6	57.4
	Chile	15.4	9.6	24.3	8.5	7.6	20.1	57.7
	Colombia	13.6	10.3	23.7	5.9	5.4	18.1	26.7
	Ecuador	25.3	13.6	36	18	8.3	33.6	32.1
	Guatemala	7.6	4.9	12.3	5.1	3	31.4	44.2
	Jamaica	8	6	13.8	6.3	7.4	40.6	34.2
	Mexico	11.9	3.3	14.8	4.2	6.6	6.7	26.3
	Panama	15.4	5.2	20.6	3.5	3.4	18.6	39.8
	Peru	17.8	5.9	23.4	5.4	4.2	22.5	54.2
	Suriname	3.9	1.3	5.1	1.7	0.8	17.8	57.6
	Trinidad and Tobago	11.4	8.5	19.5	11.4	4.1	11.2	76
	Uruguay	8.5	5.7	14.1	4.9	3.4	12	36.8
	Average	**11.9**	**7.1**	**18.5**	**7.7**	**4.9**	**22.4**	**45.4**
Middle East & North Africa	Algeria	2.2	2.6	4.9	5.4	3.3	21.3	62.3
	Iran	6.4	6.1	12.3	10.6	5.7	38	35.8
	Israel	5.3	4.8	10	5.9	4.8	17.4	49.2
	Libya	6.6	4.7	11.2	3.4	8.1	8.1	60.3
	Average	**5.1**	**4.6**	**9.6**	**6.4**	**5.5**	**21.2**	**51.9**
Sub-Saharan Africa	Angola	8	14.7	22.2	8.5	24.1	26.1	40.3
	Botswana	11	10.2	20.9	3.4	17.7	26.3	52
	Ghana	8.5	17.7	25.8	25.9	8.3	33.3	44.1
	Malawi	10.1	18.8	28.1	12	30.2	43.7	29.4
	Nigeria	20	20.7	39.9	17.5	7.9	25.4	52.3
	South Africa	6.6	4	10.6	2.9	4.9	30.3	31.5
	Uganda	5.6	20	25.2	36.1	20.1	25.1	47.5
	Zambia	22.6	18	39.9	16.6	19.8	38.8	37.2
	Average	**11.5**	**15.5**	**26.6**	**15.4**	**16.6**	**31.1**	**41.8**
Asia Pacific & South Asia	China	5.2	8.9	14	11	2.7	33.9	35.9
	India	5.1	4.9	9.9	10.7	1.5	38.8	35.9
	Indonesia	5.7	20.4	25.5	21.2	2.4	25.4	43.7
	Japan	2.2	1.5	3.7	5.7	1.5	25	59.6
	Korea Republic of	2.7	4.2	6.9	9	2.5	36.5	51.1
	Malaysia	1.5	5.2	6.6	6	1.5	18.4	64.9
	Philippines	12	6.7	18.5	6.6	12.3	43.6	38
	Singapore	6.4	4.4	10.7	4.2	3.3	8.4	68.8
	Taiwan	3.3	5	8.2	8.3	5	28.7	45.8

Region	Economies	Nascent entrepreneur-ship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of businesses	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
	Thailand	7.9	10.4	17.7	28	3.5	18.7	67.8
	Vietnam	4	11.5	15.4	16.4	4.2	25.1	62.2
	Average	**5.1**	**7.6**	**12.4**	**11.6**	**3.7**	**27.5**	**52.2**
European Union	Belgium	3.1	1.9	4.9	5.9	1.9	29	43.9
	Croatia	6.3	2	8.3	3.3	4.5	37.4	29.8
	Czech Republic	4.9	2.7	7.3	5.3	3.4	22.7	60.3
	Estonia	8.8	4.5	13.1	5	2.1	14.8	50.1
	Finland	2.7	2.7	5.3	6.6	2	17.9	66
	France	2.7	1.8	4.6	4.1	1.9	15.7	60.9
	Germany	3.1	2	5	5.1	1.5	18.7	55.7
	Greece	3.3	2.3	5.5	12.6	5	23.5	35.8
	Hungary	6	3.7	9.7	7.2	2.9	28	38.7
	Ireland	5.5	3.8	9.2	7.5	2.5	18	43.8
	Italy	2.4	1.1	3.4	3.7	1.9	18.7	18.4
	Latvia	8.1	5.3	13.3	8.8	3.5	21.2	52.7
	Lithuania	6.1	6.4	12.4	8.3	3.5	23.3	55.2
	Luxembourg	6	2.8	8.7	2.4	2.8	5.6	56.6
	Netherlands	4.7	4.8	9.3	8.7	2.1	8	67.1
	Poland	5.1	4.3	9.3	6.5	4	47.4	32.7
	Portugal	4.2	4.2	8.2	7.7	2.8	21.4	50.7
	Romania	6.2	4.2	10.1	5.3	4.3	31.6	31.6
	Slovakia	6.1	3.6	9.5	5.4	5.5	40.2	40.2
	Slovenia	3.6	2.9	6.5	5.7	2.6	24.1	53.4
	Spain	3.1	2.2	5.2	8.4	1.9	29.2	33.2
	Sweden	5.9	2.5	8.2	6	2.4	9.7	58.4
	United Kingdom	3.6	3.6	7.1	6.6	1.9	16.1	45.2
	Average	**4.8**	**3.3**	**8.0**	**6.4**	**2.9**	**22.7**	**47.0**
Europe – Non-EU28	Bosnia and Herzegovina	5.8	4.6	10.3	4.5	6.2	58.9	22
	Macedonia	3.4	3.5	6.6	7.3	3.3	61	22.9
	Norway	2.9	3.4	6.3	6.2	1.6	4	60.8
	Russia	3	2.8	5.8	3.4	1.6	35.4	42
	Switzerland	4.5	3.7	8.2	10	2.3	7.5	67.2
	Average	**3.9**	**3.6**	**7.4**	**6.3**	**3**	**33.4**	**43**
North America	Canada	7.8	4.7	12.2	8.4	4.4	15.1	66.9
	Puerto Rico	6.6	1.8	8.3	2	1.8	21.5	42.9
	United States	9.2	3.7	12.7	7.5	3.8	21.2	57.4
	Average	**7.8**	**3.4**	**11.1**	**6**	**3.3**	**19.3**	**55.7**

TOTAL EARLY-STAGE ENTREPRENEURIAL ACTIVITY

An economy's Total Early-stage Entrepreneurial Activity (TEA) rate is defined as the prevalence rate of individuals in the working age population who are actively involved in business start-ups, either in the phase in advance of the birth of the firm (nascent entrepreneurs), or the phase spanning 42 months after the birth of the firm (owner-managers of new firms). As such, GEM takes the payment of any wages for more than three months as the "birth event" of the firm. Several other definitions for what constitutes the birth of a firm have been put forward in the entrepreneurship literature, using different perspectives. The payment of wages proved to be the best approach for making international comparisons. Individuals who are actively committing resources to start a business (that they expect to own or co-own) but for whom the business has not yet yielded wages or salaries are labeled nascent entrepreneurs. The individuals who did pass this "birth event" but are operational for less than 42 months are labeled as owner-managers in new firms. The cut-off point of 42 months has been made on a combination of theoretical and practical considerations[7].

Figure 2.2 shows the point estimates of the TEA rates for each of the 67 economies in 2013 by phase of economic development. The confidence intervals facilitate in interpreting differences between economies. They constitute the range within which the average value of 95 out of 100 replications of the survey would be expected to lie. Economies with large samples, like Spain or Brazil (see Appendix 2), exhibit lower confidence intervals. Thus, where the vertical bars do not overlap, as is the case comparing Chile and Brazil, the TEA rates are statistically different adopting 95% certainty, also denoted as statistically different at the 0.05 level.

From **Figure 2.2** it is clear that higher rates of TEA are not necessarily positively related with economic development. For example, Sub-Saharan economies and Ecuador exhibit the highest TEA rates in 2013. Interestingly, Trinidad and Tobago, recently labeled as an innovation-driven country by the World Economic Forum, presents many characteristics of the Caribbean economies including a high rate of TEA. Indeed, TEA rates should not be linked to economic development directly. What matters more is the particular profile and context of entrepreneurship as indicated in **Figure 1.1**; the profiles and (institutional) contexts are discussed in the remainder of this report. Previous GEM reports have reported TEA rates (in general) to decline with increasing levels of GDP per capita, up to some point (see e.g. Kelley et al., 2011). The decline follows the increasing availability of job opportunities as economies progress and develop institutions accordingly.[8] Chapter 4 analyzes early-stage entrepreneurial activity over time for some economies.

INDIVIDUAL DRIVERS: MOTIVATIONS TO START BUSINESSES

Motivations to start businesses differ vastly across the globe. Individual drivers are traditionally captured within the GEM framework with a simple contrast between necessity-driven motives and opportunity-driven motives. A necessity-driven entrepreneur is one who indicates in the GEM Adult Population Survey that s/he started the business because there were no better options for work, rather than because s/he saw the startup as an opportunity. For those who did see the startup as an opportunity (rather than no other options for work), a further assessment was made on the nature of this opportunity. Improvement-driven opportunity (IDO) entrepreneurs are defined as those opportunity-driven entrepreneurs who sought to either earn more money or be more independent, as opposed to maintain income. As **Figure 2.3** shows, entrepreneurs in factor-driven economies tend to have more entrepreneurs by necessity. With higher economic development levels, necessity gradually falls off as a motivator, while IDO motives increase.

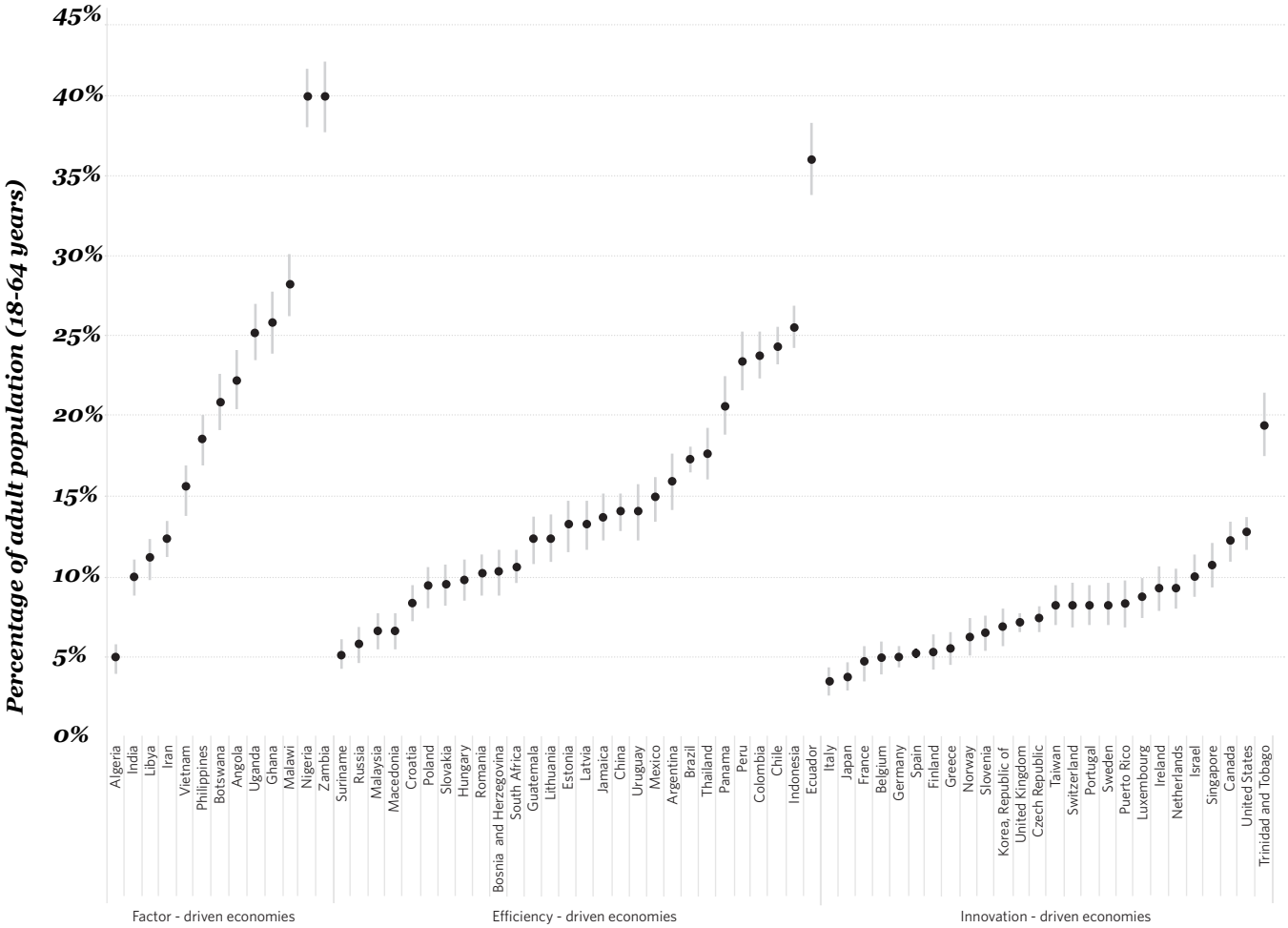
Necessity motives can be impacted by economic conditions. For example, people in early development stage economies may start businesses because there is an insufficient supply of jobs and a low level of social security entitlements, and they are pushed into creating a source of income. As economies develop, the supply of jobs generally increases, so fewer people are pushed into entrepreneurship. **Table 2.3** shows for instance that in 2013 many developing economies exhibited more than 40% of their early-stage entrepreneurs driven by necessity. This is the case of Jamaica, Malawi, Philippines, Poland, Slovakia and Bosnia and Herzegovina, while for Scandinavian economies like Norway and Sweden, or Luxembourg and Switzerland less than 10% are motivated by necessity. Chapter 4 shows that the percentage of necessity-driven early-stage entrepreneurs can also fluctuate considerably over time, mostly in tandem with unemployment rates.

Improvement-driven opportunity motives may be less dependent on the economic environment and of more intrinsic nature, as the individual opts for pursuing an opportunity that is believed to increase income and/or independence. One could question whether this can be stimulated by, for example, greater exposure to entrepreneurial opportunities in one's environment. On average, improvement-driven opportunity motives tend to be more prevalent among early-stage entrepreneurs as the economy develops (**Figure 2.3**), a finding that is consistent with results in previous years. The GEM 2010 Global Report (Kelley et al., 2011) highlights a number of factors which can have a marked impact on the level of improvement-driven opportunity motivation within an economy.

[7] See also Reynolds et al. (2005).

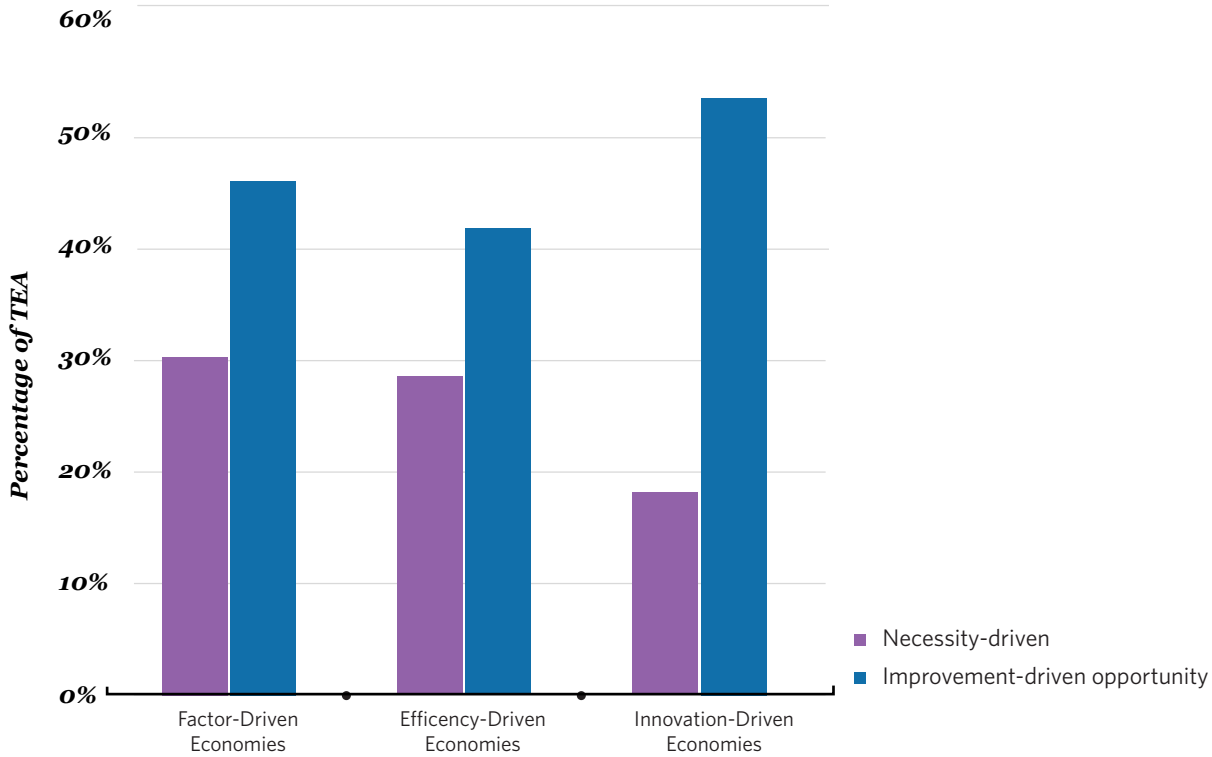
[8] See Bosma et al. (2009) and Acs and Szerb (2011) for a more extensive assessment on the relation between entrepreneurship and stages of economic development.

FIGURE 2.2 TOTAL EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA) 2013, BY PHASE OF ECONOMIC DEVELOPMENT



Note: Vertical bars represent 95% confidence intervals for the point estimates of TEA

FIGURE 2.3 PERCENTAGE OF ENTREPRENEURS MOTIVATED BY NECESSITY AND OPPORTUNITY, BY PHASE OF ECONOMIC DEVELOPMENT, 2013



ESTABLISHED BUSINESS OWNERSHIP

While early-stage entrepreneurs contribute to dynamism and innovation in an economy, established businesses and their owner-managers often provide stable employment and exploit the knowledge and social capital accumulated in past experiences. Established businesses are also an important source of new businesses. Owner-managers of established businesses may contribute greatly to their societies even if they are small or even solo entrepreneurs. As **Table 2.3** shows, there are substantial regional differences in established business ownership rates, particularly when compared with TEA rates. TEA rates tend to be high in emerging economies, but established business activity is often low. The opposite pattern tends to dominate the innovation-driven economies. Two factors may contribute to this result. First, as mentioned previously, there are more employment alternatives in societies where industrialization and institutionalization have taken hold; more people may choose employment over starting businesses in the more developed economies, accounting for lower TEA rates. Second, where there are sophisticated ecosystems for business, people that do start businesses are more able to sustain them because of more favorable conditions, such as access to finance, a highly educated workforce, rule of law and so on.

The European economies outside the EU and the MENA regions have low rates of both TEA and established business ownership, while Sub-Saharan Africa has high rates of both. Latin America, however, along with Sub-Saharan Africa, have far more TEA entrepreneurs – over twice as many – than established business owners. In Asia and the European Union, there are almost about equal numbers in each phase.

The balance between TEA and established business ownership rates may also be unbalanced. For example, in Sub-Saharan Africa, Ghana and Uganda, and also Thailand, have an established business ownership rate higher than their TEA rate. In many Latin American countries such as Panama, Peru and Mexico, and also South Africa, the established business ownership rates are less than a third of their TEA rate, suggesting that even though entrepreneurship is popular the activities have limited sustainability over time. The most extreme case in 2013 concerns Zambia, which has the highest early-stage entrepreneurship rate across the entire sample, yet has less than one-tenth this level of established business owners. This phenomenon could partly reflect the demographic trend in Sub-Saharan Africa: a growth in the youth population facing limited opportunities only on the job market. Hence, high rates of early stage entrepreneurship should not be translated directly into a high number of sustainable established firms. The example for Zambia shows that factors leading to discontinuation of early-stage entrepreneurship activities need particular attention.

ENTREPRENEURIAL EMPLOYEE ACTIVITY

A major distinction in the entrepreneurship domain exists between "independent entrepreneurship" and "entrepreneurship within an existing organization." Both fields are large research areas, employing a wide range of definitions and perspectives. Until 2011 GEM has focused mainly on various aspects related to independent entrepreneurship and the start-up phase in particular. After a pilot was held in 2008, the GEM project has inquired about one particular facet of entrepreneurship within existing organizations, namely entrepreneurial activities of individual employees in 2011 (see Bosma et al., 2012; 2013). As mentioned in the introduction, entrepreneurial employee activity (EEA) is increasingly accepted as a relevant type of entrepreneurship in the sense that it aims at new venture creation and the introduction of new products and services. It also shares many behavioral characteristics with the overall concept of entrepreneurship, such as taking initiative, pursuit of opportunities and innovativeness. GEM operationalizes entrepreneurial employee activity as "employees developing new activities for their main employer, such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary" (Bosma et al., 2012). This definition is wider than new organization creation, but it excludes employee initiatives that mainly aim at optimizing internal work processes.

Some economies continue to measure EEA rates according to the prevalence of entrepreneurial employee activity and according to employees who, in the past three years, were actively involved in and had a leading role in at least one of these phases (i.e., "idea development for a new activity" and/or "preparation and implementation of a new activity")[9]. **Figure 2.4** shows the 2013 economies by phase of economic development which measured the EEA also in 2013. The rates shown refer to the percentage of the population (18-64 years old) involved in EEA. Similar to **Figure 2.2**, the confidence intervals constitute the range within which the average value of 95 out of 100 replications of the survey would be expected to lie.

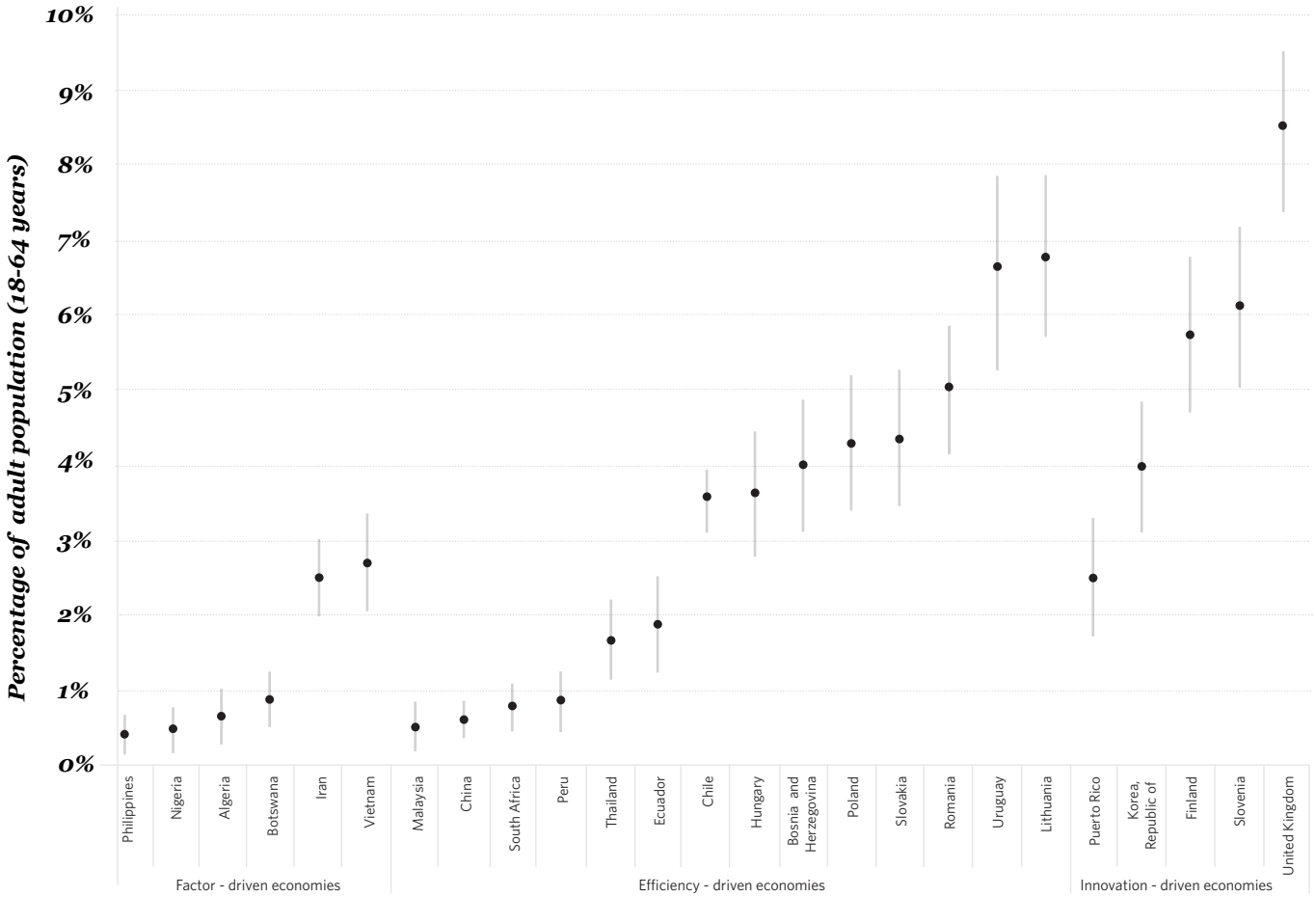
On average the incidence of entrepreneurial employee activity in the employed adult population is by either definition substantially lower than that of total early-stage entrepreneurial activity as presented in **Table 2.2** and **Figure 2.2** of this report. In some, the factor and efficiency-driven economies, entrepreneurial employee activity is extremely scarce, while early-stage self-employment is abundant. In some cases, the differences are smaller, but early-stage entrepreneurial activity is still several times as prevalent as entrepreneurial employee activity. Only in the innovation-driven economies, the incidence of entrepreneurial employee activity in the adult population is in the same order of magnitude as that of total early-stage entrepreneurial activity. The GEM project continues to evaluate the possibility to include of permanently including the EEA rate in order to have a more accurate picture of the entrepreneurship phenomenon across economies.

BUSINESS DISCONTINUATIONS

As new businesses emerge, others close. Those individuals selling or closing their businesses may once again benefit

[10] See http://www.oecd.org/cfe/leed/inclusive-entrepreneurship.htm

FIGURE 2.4 ENTREPRENEURIAL EMPLOYEE ACTIVITY (EEA) IN 2013 PARTICIPANT COUNTRIES, BY PHASE OF ECONOMIC DEVELOPMENT



their societies by re-entering the entrepreneurship process. Recognizing the importance of this measure, GEM tracks the number of individuals who have discontinued a business in the last 12 months. Discontinuance may be considered along with TEA and established businesses as a component of entrepreneurial dynamism in an economy. GEM Survey respondents who had discontinued a business in the previous 12 months were asked to give the main reason for doing so. **Table 2.3** shows the prevalence rates of business discontinuation, and **Figure 2.5** summarizes these reasons by geographic regions.

The rate of business discontinuance generally declines as economic development increases. Factor-driven economies have higher levels of entrepreneurship activity, so it would make sense that this would be accompanied by more discontinuance. However, when the TEA rate is taken into account, there is still a higher discontinuance rate per entrepreneur in the factor-driven economies. In Sub-Saharan Africa, which shows the highest regional TEA rates, there are high rates of discontinuance relative to TEA. Angola and Malawi have a higher business discontinuation rate than TEA. However, in some developed economies that have had economic crises like Spain and Greece, the business discontinuation rate is higher than TEA too.
There are a number of reasons for discontinuing a business; the most prevalent among all geographic regions relate to the business not being profitable and problems obtaining financing. Compared to other regions, problems with financing were less an issue in North America. Not surprisingly, it was identified as the key issue in business stops in Sub-Saharan Africa. In Europe and North America, individuals cited other jobs or business opportunities as a reason for business discontinuance more often than those in other regions – it makes clear that not all business discontinuances by individuals are caused by 'negative' factors, some are actually quite positive.

DEMOGRAPHICS AND EARLY-STAGE ENTREPRENEURIAL ACTIVITY

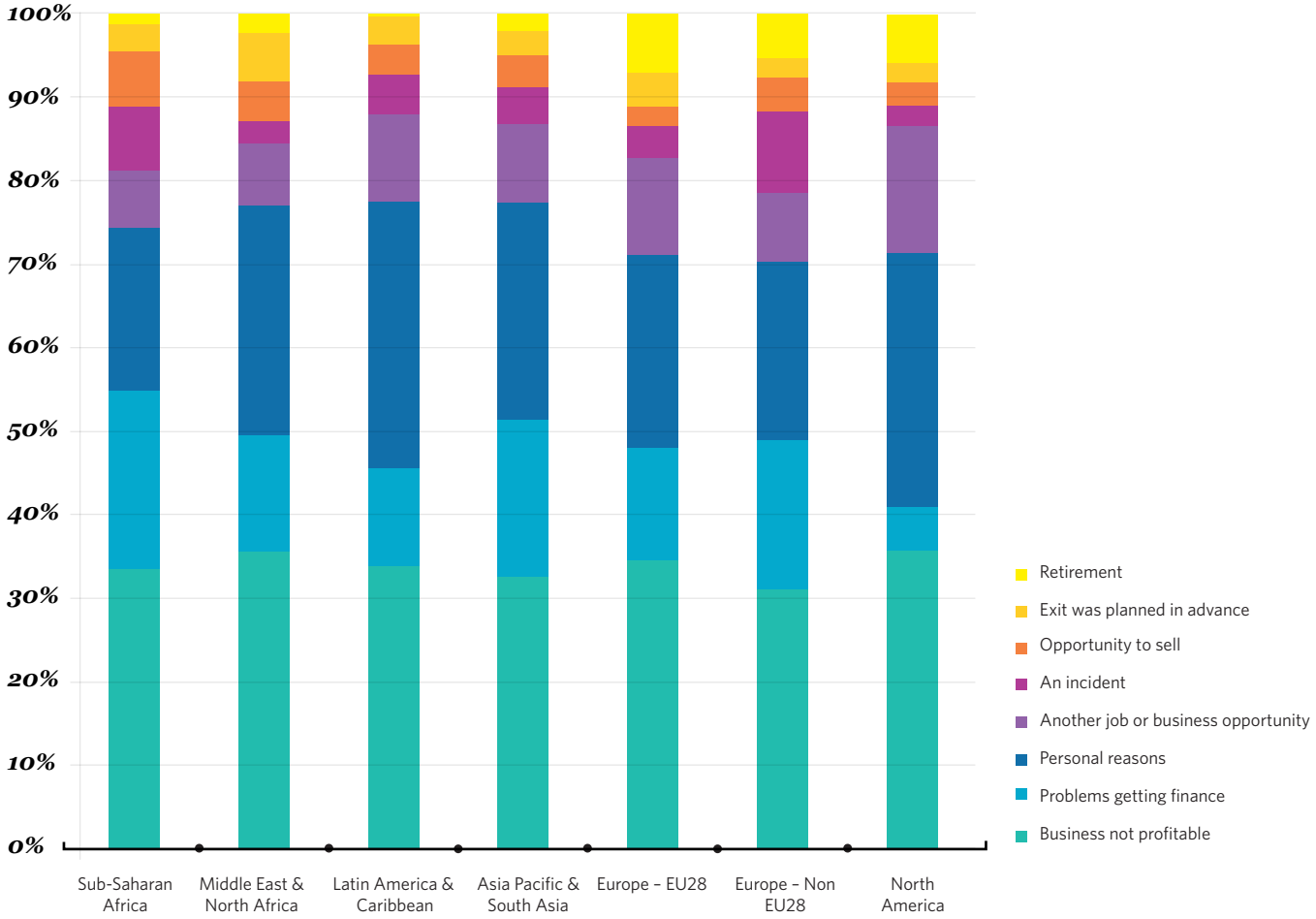
YOUTH AND SENIOR ENTREPRENEURSHIP

A society can benefit from entrepreneurs of all ages. For example, young people are relatively likely to have fresh ideas, to be "born-digitals" and in some societies to have received more education than their parents. They are less likely to have responsibilities like mortgages and families, factors that generally make individuals more cautious and risk-averse. Older people may be less open to new experiences and change but they can capitalize on relevant experience, contacts and financial resources built over long careers. Moreover, the 50+ age group in many economies is now also familiar with information and communication technologies, making home-based start-ups an interesting option for this group. While entrepreneurship is often more

prevalent in the age groups in between, policymakers might look to harness the entrepreneurial potential on either side of these seemingly more likely prospects. GEM also is putting emphasis on young entrepreneurs by publishing a special report on this topic (Kew et al., 2013). In addition, the OECD is publishing a series of reports and seminars related to 'inclusive entrepreneurs', partly using GEM data[10].

Figure 2.6 shows that the distribution of early-stage entrepreneurship is roughly similar for all regions, with highest prevalence rates in the 25-34 and 35-44 age groups. Again, some differences between economies should be noted. For example, younger early-stage entrepreneurs (18-24 year olds) were often observed in EU and North America. The oldest ages (55-64) are observed in Sub-Saharan Africa.

FIGURE 2.5 REASONS FOR BUSINESS DISCONTINUANCE BY GEOGRAPHIC REGION



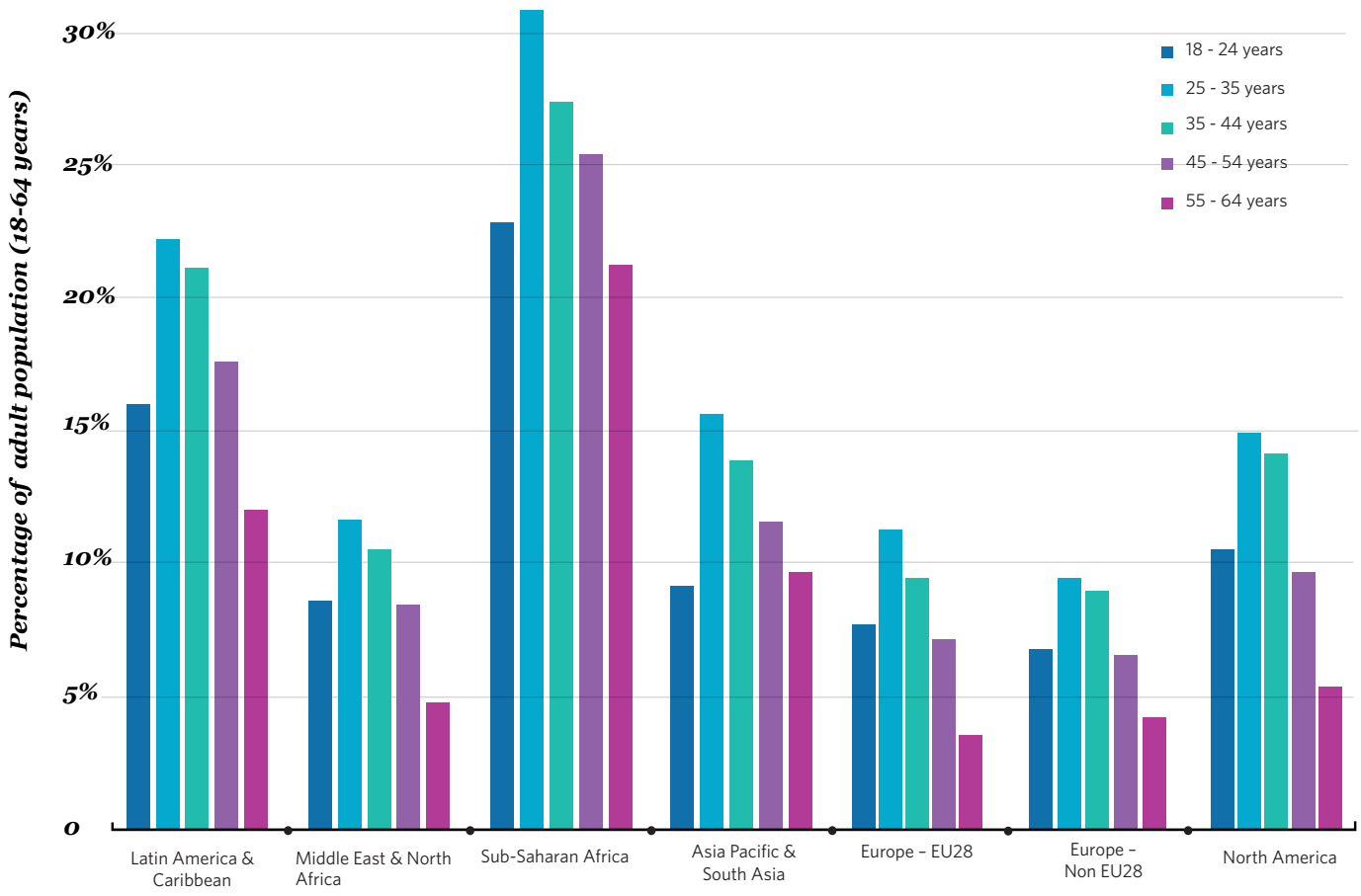
WOMEN AND ENTREPRENEURSHIP

GEM has consistently shown that women's involvement in early-stage entrepreneurship varies greatly across the globe. These differences reflect distinctions in culture and customs regarding women's participation in the economy, for example, societal views about women's role in the labor force and in business more specifically. Women enter entrepreneurship for many of the same reasons as men, such as to support themselves and their families, to enrich their lives with careers as well as to attain financial independence. Yet aside from different participation rates, women show marked differences from men in many characteristics, as the most recent GEM women's report shows (Kelley et al., 2013). Individual results by economy, including the proportion of necessity and opportunity-driven entrepreneurs by gender, can be found in Appendix 1, **Table A.3.**

As can be seen in **Figure 2.7,** Sub-Saharan African rates of female early-stage entrepreneurship are comparable to their male equivalents. Notable cases are Ghana, Nigeria and Zambia which exhibit more participation of women than men. Other economies like Brazil, Indonesia, Philippines, Thailand, Russia and Switzerland that come from various global regions and represent every phase of economic development, also have a similar proportion of women and men entrepreneurs. In the remaining economies participating in the GEM 2013 assessment, entrepreneurship rates are lower among women relative to men. The lowest relative rates of involvement in entrepreneurship by women can be found in several MENA economies and some European economies, where less than 50% of the early-stage entrepreneurs are women.

[10] See http://www.oecd.org/cfe/leed/inclusive-entrepreneurship.htm

FIGURE 2.6 EARLY-STAGE ENTREPRENEURIAL ACTIVITY RATES WITHIN AGE GROUPS, BY GEOGRAPHIC REGIONS



An analysis of opportunity and necessity motives shows that men in Latin America and Sub-Saharan Africa are more likely opportunity-motivated, while women have higher necessity motives. Even though these regions show limited differences in TEA rates by gender, relatively more women are driven by necessity. In contrast, women in the MENA region are proportionately more likely to be opportunity-motivated. Together with the observed low TEA rates among women in this region, it suggests that entrepreneurial activity may be a difficult challenge for women with limited resources and access to the labor market.

2.4 ENTREPRENEURIAL ASPIRATIONS

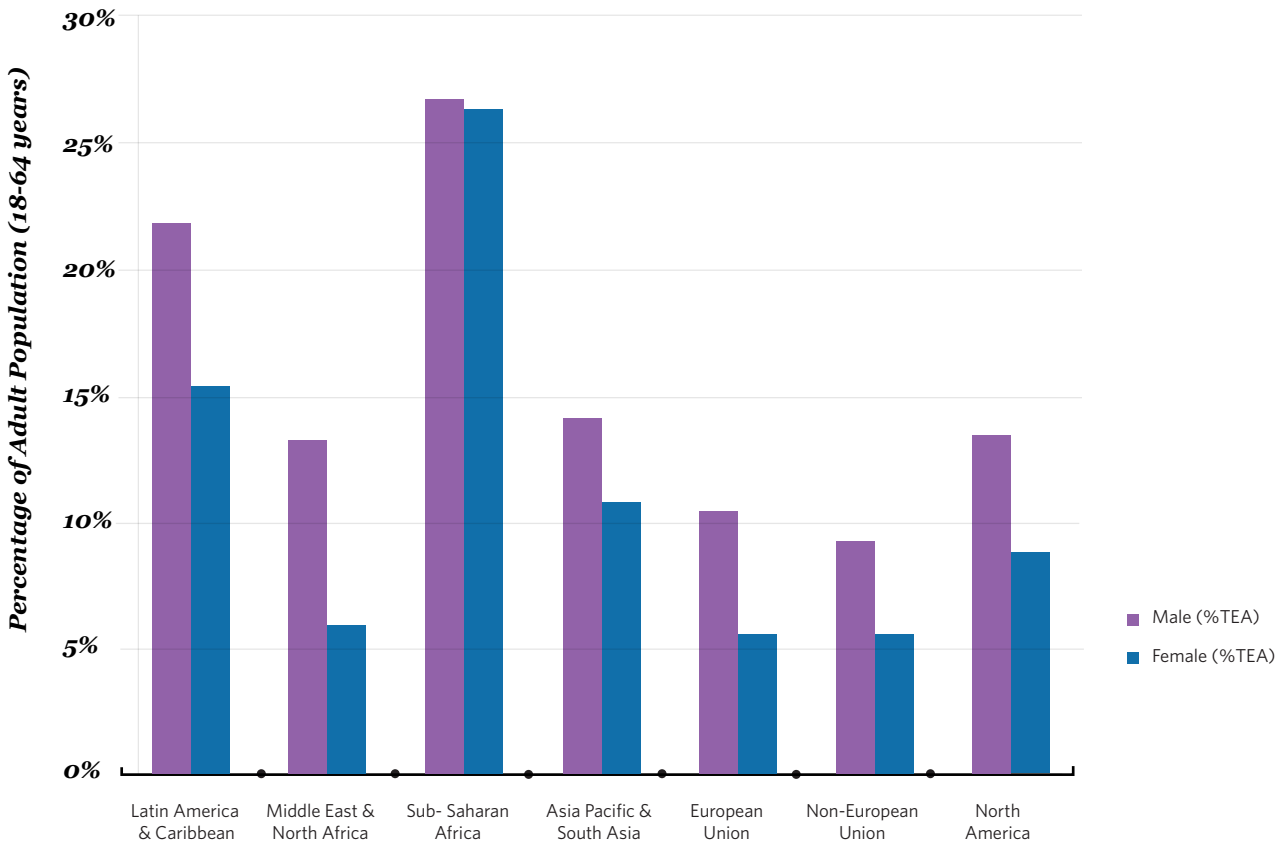
To get an idea about the economic impact of entrepreneurs across the globe, GEM measures the job (growth) expectation, innovation and internationalization profiles of entrepreneurs. These forms of entrepreneurial aspirations have been positively associated with economic development (see e.g. Wong et al., 2005; Wennekers et al., 2010; Bosma, 2011). In this section, these impact profiles are assessed for early-stage entrepreneurs.

GROWTH ORIENTATION

Growth aspirations constitute a key dimension of the impact profiles by early-stage entrepreneurs. It is the clearest manifestation of entrepreneurship that can directly be linked to the number one objective of most governments: to create more jobs. The typical GEM-based measures in the domain of growth aspirations deal with job (growth) expectations. By tracking growth perceptions, GEM enhances the TEA measure of the prevalence of entrepreneurship with an indication of the differential impact entrepreneurs can have on their economies. Second, growth expectations relate to job creation potential, which is an important policy concern for nearly every government, particularly in the aftermath of the global financial crisis and the accompanying upswing in unemployment rates.

GEM asks early-stage entrepreneurs how many employees (other than the owners) they currently have and expect to have in the next five years. This measure relates to the entrepreneurs' expectations about the potential for their businesses, but in most cases this is also reflecting their ambitions to grow their ventures. Stated differently, entrepreneurs may either have solid reasons to believe that their business has high growth potential or they

FIGURE 2.7 MALE AND FEMALE EARLY-STAGE ENTREPRENEURIAL ACTIVITY 2013, BY GEOGRAPHIC REGIONS



simply endeavor to pursue growth. It should therefore be acknowledged that early-stage entrepreneurs may be optimistic in their expectations and that expectations for job creation certainly does not always lead to realizations. At the same time, it is also well established that growth realization is seldom achieved without having expectations or ambitions for growth (Stam et al., 2012). Thus, building on these findings, country variations in the degree of (high) job expectations can be assumed to approximate variations in realized job creation.

Figure 2.8 shows job expectations as a percentage of TEA for each geographic region. Results for individual economies can be found in Appendix 1, **Table A.4**. Three levels of growth are shown here: the proportion of entrepreneurs projecting low (0–5 new employees in five years), medium (6–19 new employees), or high (20+ new employees) growth in their businesses.

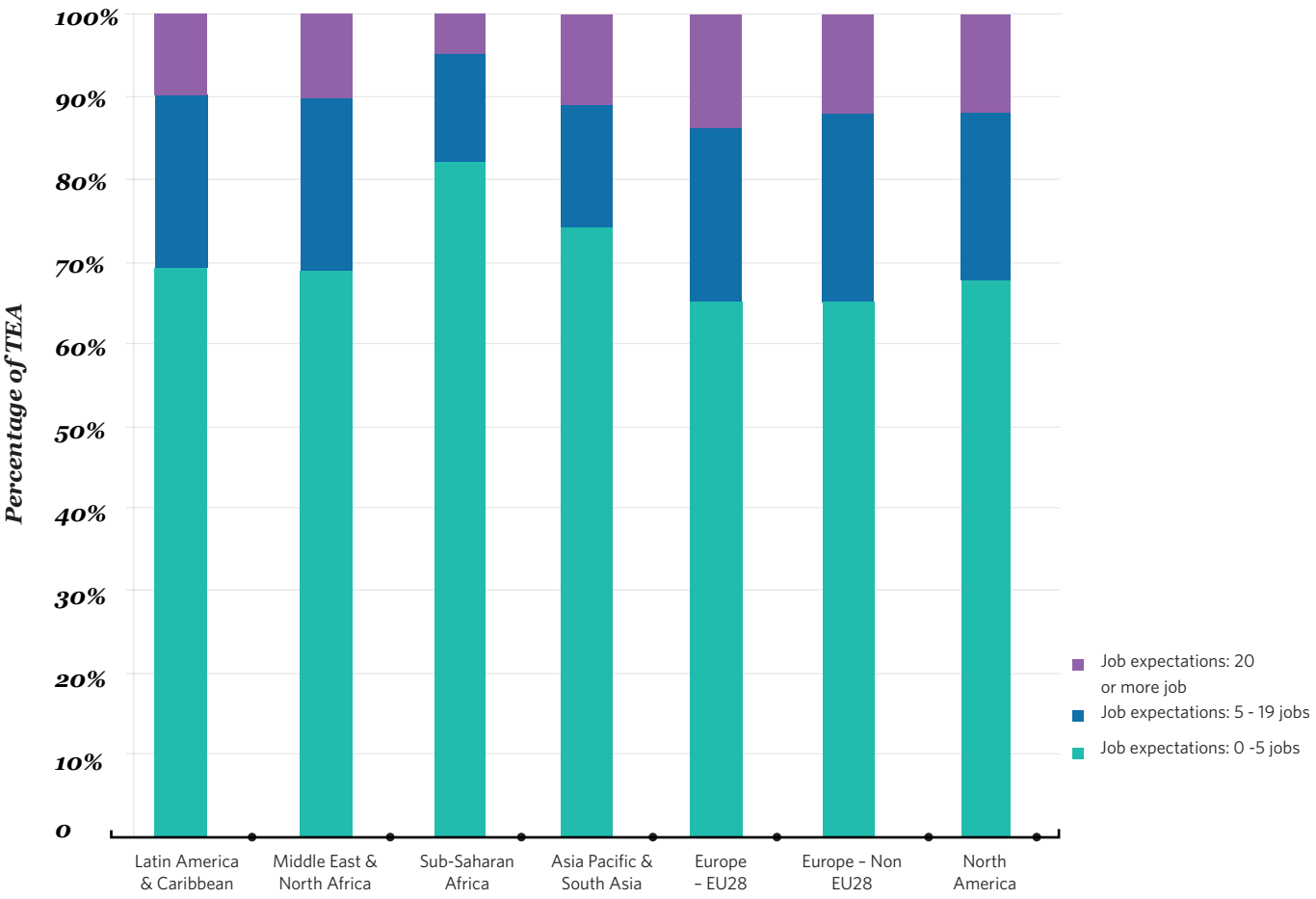
The results show that Sub-Saharan Africa generally exhibits limited growth aspirations, with more than 80% of the entrepreneurs indicating they expect to add less than five employees within the next five years and only 4% projecting 20 or more new jobs. Analyzing the "growth expectation composition" of TEA rates is important, given that there are a high number of entrepreneurs in Africa, and illustrating that a simple count of entrepreneurs does not tell the whole story. In other words, Sub-Saharan African entrepreneurs create a lot of employment based on entrepreneurial new businesses, but the owner-managers of these enterprises have, provided even that they can get the business started and sustained, little prospect for growth.

In contrast, the EU and North American economies, despite their relative low TEA rates, have more than 10% of the entrepreneurs projecting growth of 20 or more employees. With relatively few individuals having low growth projections entering entrepreneurship, perhaps there are conditions or attitudes that make this activity more worthwhile when there is growth potential or ambition – or less worthwhile if one will not, or cannot, pursue growth.

INNOVATIVE ORIENTATION

While job growth expectations and realizations arguably constitute the most visible medium-term impact of entrepreneurship, innovative orientation impacts structural renewal in the long term. Innovation is viewed from

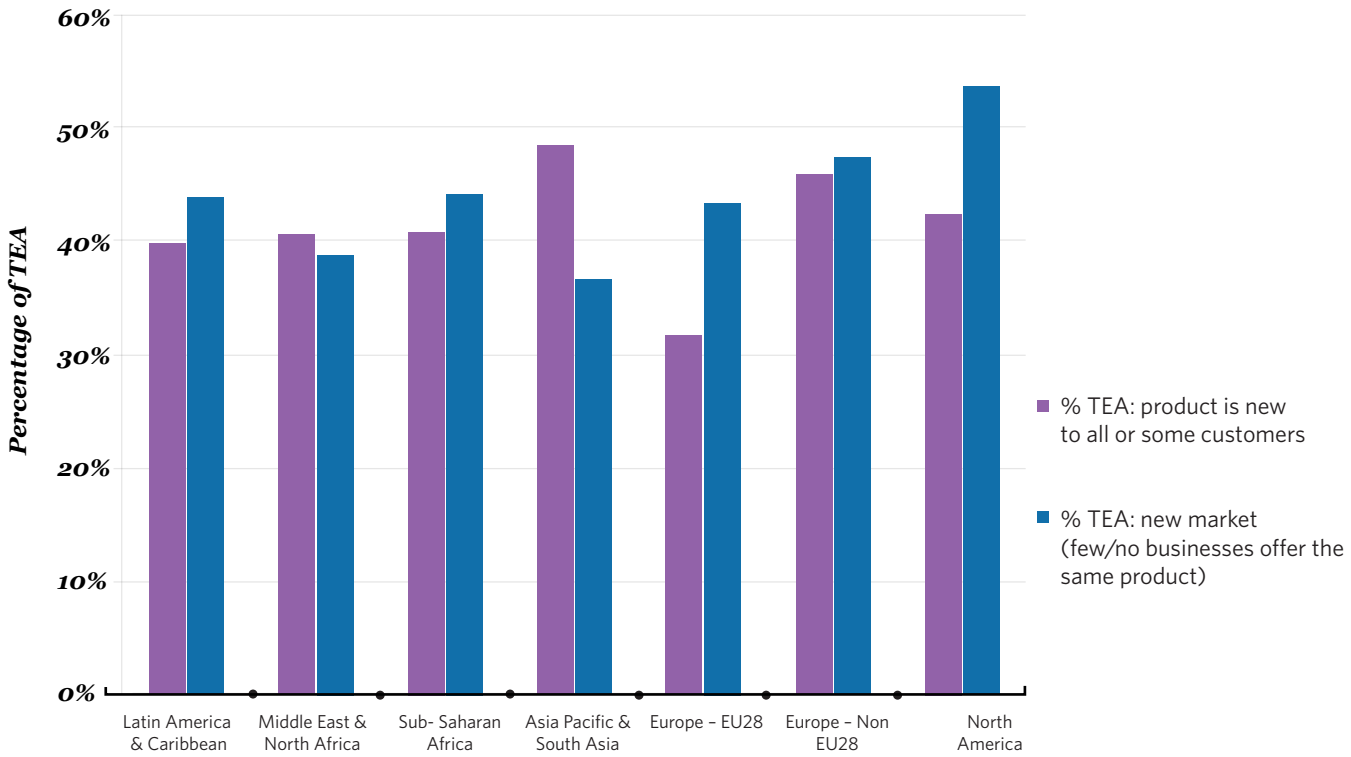
FIGURE 2.8 JOB EXPECTATIONS FOR EARLY-STAGE ENTREPRENEURS, BY GEOGRAPHIC REGIONS



the perspective of the market and industry, in line with Schumpeter's view of innovative entrepreneurship as new product-market combinations destructing older, obsolete products and services and pushing the production frontier forwards (Schumpeter, 1942). It represents the perceived extent to which an entrepreneur's product or service is new to some or all customers and where few or no other businesses offer the same product. When comparing economies, it must be kept in mind that what may seem new to customers in one economy may already be familiar to customers in another. Nevertheless, a high degree of innovative orientation in the former economy is still expected to have a positive impact on economic development. Innovative orientation as measured in the GEM framework is therefore a context-dependent measure.

Figure 2.9 shows the percentage of early-stage entrepreneurs with innovative orientations. We use two measures: the percentage of TEA that declare they have a product or service that is a novelty (new) for all or some or their consumers, and the percentage of TEA that declare they are new in the market with few or no other businesses that offer the same product or service. The average level of innovation in each regional group increases with the level of economic development. North America and European Union exhibit the largest proportion in both indicators. Asia Pacific and South Asia, with economies that are now characterized for their high degree of innovative products like Japan, Korea or China, show the largest proportion of new products. In contrast, Sub-Saharan economies exhibit lower proportions of new product with European economies. Outside the EU. Interestingly, growing emergent economies like Colombia, Chile, Taiwan and South Africa have high rates of new products (over 70%) but also high proportions in new markets (over 50%).

FIGURE 2.9 INNOVATIVE ORIENTATION OF EARLY-STAGE ENTREPRENEURS, BY GEOGRAPHIC REGIONS

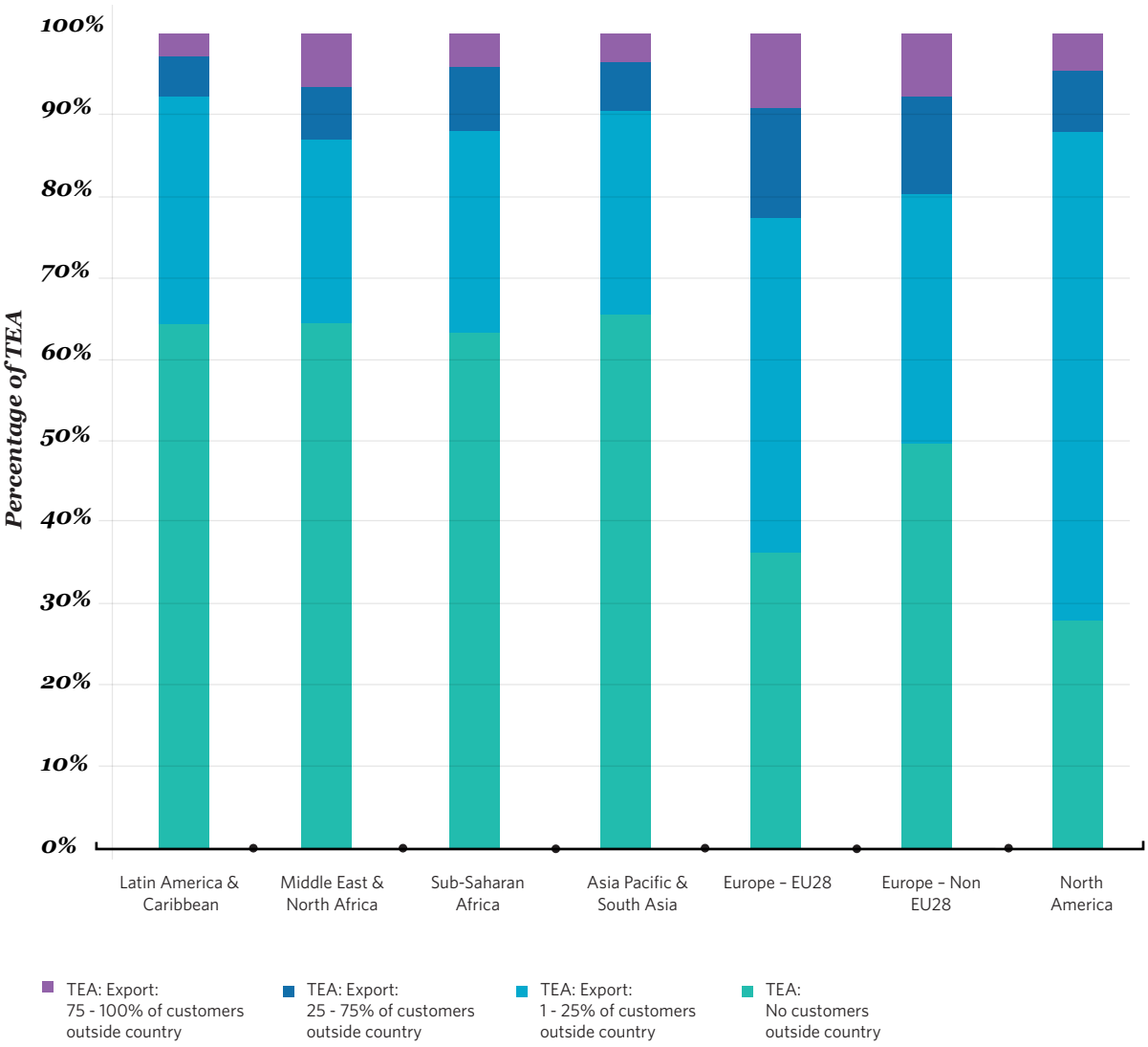


INTERNATIONAL ORIENTATION

In an ever more global economy, countries' global trade becomes increasingly important. Not only multinational enterprises have international orientations; new and smaller firms are – by using the latest technologies – increasingly well equipped to broaden the scope of their business. It is obvious that entrepreneurs in economies with small internal markets place even more emphasis on this than economies with large internal markets such as Brazil, China, Russia, India and the United States. A specific GEM measure assesses the extent to which entrepreneurs sell to customers outside their economies. **Figure 2.10** shows four categories of early-stage entrepreneurs related to the degree of internationalization, from 0% of their customers living outside the origin country, to high degrees of internationalization with 75-100% of the customers living outside the country. As was expected, EU economies, with a large tradition of international commerce and their geographic proximity, exhibit a high proportion of entrepreneurs with at least 25% of their customers living outside of the country. In contrast, Latin American and Sub-Saharan economies show a lower proportion of high international oriented entrepreneurs.

Three key observations related to groups that stand out on either end of the internationalization spectrum, as identified earlier in e.g. Kelley et al. (2012) remain paramount. First, there is a group of economies with large populations and large land mass showing very low rates of internationalization of early-stage entrepreneurial activity: China, India, Indonesia, Thailand, Brazil, Mexico and Russia. Second, the largest market in the world, United States, exhibits medium internationalization rates, although still higher than the large efficiency-driven economies. Entrepreneurs in the U.S. have a large and diverse market with relatively high disposable income, but also high competitive intensity. Third, there are economies that stand out for their high levels of international trade by early-stage entrepreneurs. One of the characteristics is that they have a relatively small local market but they face a high innovative orientation in services and some tech products. This is the case for Singapore, Luxemburg and Israel. Also, some economies from the EU like Croatia, Ireland and Slovenia face high levels of international orientation, because they are relatively small economies with a great need to participate in, and have a history of, international trade.

FIGURE 2.10 INTERNATIONAL ORIENTATION OF EARLY-STAGE ENTREPRENEURS, BY GEOGRAPHIC REGIONS



GEM Research Exhibit 2

Kim Klyver, Suna Løwe Nielsen and Majbritt Rostgaard Evald. **"Women's self-employment: An act of institutional (dis)integration? A multilevel, cross-country study."** *Journal of Business Venturing*, Volume 28, Issue 4, pages 474–488, July 2013.

RESEARCH ISSUE

Intuitively, a nation's gender equality policies, aimed at constructing and maintaining an environment that is both accommodating and supportive of women, are expected to have a positive impact on women's participation in self-employment (Bruton et al., 2010). Paradoxically, anecdotal evidence in women's entrepreneurship literature shows that in economies considering themselves highly egalitarian at an institutional level, only women's employment is integrated, whereas women's self-employment seems to involve acts of institutional disintegration (Nielsen et al., 2010). Seemingly, national-level institutions for gender equality unintentionally lead to lower participation in self-employment among women than among men. The gender equality policies in these economies focus solely on women's employment rights in the labor market, resulting in a preferential situation whereby women's employment options are favored over their self-employment options. However, as this evidence is mainly anecdotal and originates primarily from the Nordic economies with distinctive welfare regimes and gender equality discourses, Klyver, Nielsen and Evald set out to test this proposition beyond the context of the Nordic economies. They further investigate whether this disparity is contingent upon a country's development stage and industries.

THEORY AND METHOD

Klyver, Nielsen and Evald take an institutional reading of Mead's (1934) symbolic interactionism to argue that women's employment choices emerge from dynamic interactions between individual, social and institutional forces. Symbolic interactionism is a social-psychological theory of the self, which is constructed from closely interrelated conversations between the "I" and the "Me." The "I" signifies the creative destructive part of the individual, which provides the woman with the opportunity to raise her self-employment choice "... above the institutionalized individual" (Mead, 1934: p. 211), whereas the "Me" represents the external and socially directed part of the individual, which takes the social gendered institutional discourses of reality into consideration. The authors argue that self-employment is an act of disintegration in cases where individuals do not follow the "Me" and integrate their conduct accordingly to the institutional discourse, but in fact break with that discourse. Based on observations that women might be more fettered by the "Me" compared to men, the authors argue that women are more likely socialized away from self-employment compared to men. Finally, the impact of national-level gender equality on women's self-employment choice compared to that of men is stronger in developed economies and male-oriented industries. An extensive merged GEM-based dataset is used covering 561,164 individuals across 61 economies to test our three hypotheses.

FINDINGS AND CONTRIBUTIONS

The national-level gender equality negatively impacts women's self-employment choice compared to that of men, and this negative impact is stronger in developing economies and male-oriented industries. The authors foremost contribute to the women's entrepreneurship literature by expanding the research object from an individualistic focus, searching for individual and socio-demographic factors that might influence women's self-employment towards accounting for interactive factors outside the individuals. Secondly, the authors attempt to shift the epistemological position in the women's entrepreneurship literature from an objectivist epistemology towards a constructionist epistemology by placing women and men within wider and multiple gendered institutional discourses, allowing both sexes to interpret and react differently thereto. This leads to the third contribution to institutional theory's central ideas of embedded agency. Institutional theory calls for further insight into the micro foundation of embedded agency. The authors advance previous discussions on embedded agency by introducing the interplay between the "I" and "Me" as a way to link individual, social and institutional processes.

IMPLICATIONS

The research takes important steps forward in building and testing a symbolic interactionism institutional perspective on women's self-employment choice. The strength of our research is that it is highly generalizable across various institutional contexts. More detailed and deep knowledge is needed on the psychological and sociological consequences of integrative and disintegrative self-employment choices of women. A likely consequence might be that as long as self-employment is an act of disintegration, women may disguise their entrepreneurial self from their surroundings in order to remain accepted by the institutional environment and miss out on essential networks and resources. This again may be a decisive explanatory factor to understand women's low performance compared to men's.

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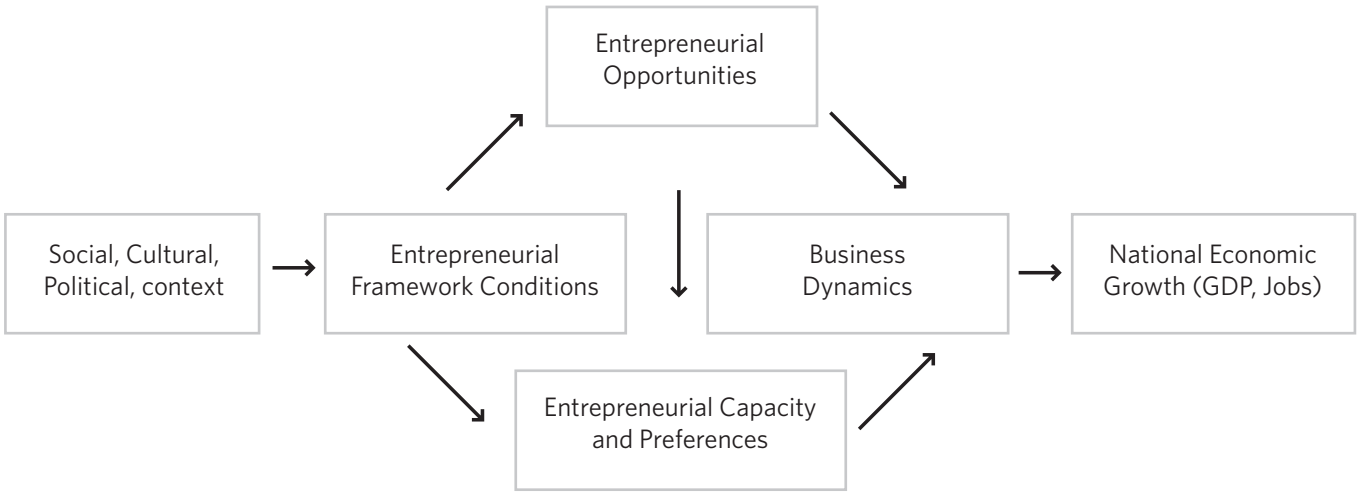
3. CONDITIONS FOR ENTREPRENEURSHIP

3.1 INTRODUCTION

Since its inception, the GEM project has proposed that entrepreneurial activity is shaped by a distinct set of factors called Entrepreneurial Framework Conditions (EFCs). These EFCs are "the necessary oxygen of resources, incentives, markets and supporting institutions to the growth of new firms" (Bosma et al., 2008, p. 40). Hence, it is expected that different countries and regions have different EFCs or different "rules of the game,"[11] and that these affect the inputs and outputs of entrepreneurial activity. The original and revised GEM conceptual frameworks established a clear relationship between the EFCs, entrepreneurship dynamics and economic growth (see **Figure 3.1**). In the 1999 Executive Report, Paul D. Reynolds, Michael Hay and S. Michael Camp stated: "The model captures a number of things ignored in the conventional framework. First is the recognition that entrepreneurial activity is shaped by a distinct set of factors (referred to as Entrepreneurial Framework Conditions). Such factors include training in entrepreneurship and the availability of start-up financing" (p. 10).

FIGURE 3.1 MODEL OF ENTREPRENEURIAL PROCESSES AFFECTING NATIONAL ECONOMY GROWTH



Source: Reynolds, Hay and Camp (1999)

The EFCs can be considered an indispensable part of the puzzle in understanding business creation. The state of these conditions directly influences the existence of entrepreneurial opportunities and entrepreneurial capacity and preferences, which in turn determines business dynamics. That is why, since the beginning, the GEM project needed a source of information to assess the state of EFCs. This source of information is the National Experts Survey.

3.2 THE GEM NATIONAL EXPERTS SURVEY

The National Experts Survey (NES) is part of the standard GEM methodology and it assesses various EFCs as well as other topics related to entrepreneurship. The NES was initiated due to a lack of nationally harmonized measures that could be utilized as indices of specific EFCs (Reynolds et al., 2005). While more recently other sources provide alternative measures for some EFCs[12], the NES remains the sole source of harmonized, internationally comparable data that really addresses the environment for new and growing firms.

The NES was carefully designed and refined to capture informed judgments of national, and in some cases regional, key informants regarding the status of EFCs in their own economies and/or regions. National and regional experts are selected on the basis of reputation and experience (a convenience sample approach). The NES

[11] These EFCs could be related to Baumol´s concept of "rules of the game" that determine to what extent entrepreneurial activity in a given society is productive (Baumol, 1990).
[12] For NES results and linkage of EFCs with other international measurements, see Bosma et al. (2008).

is similar to other surveys that capture expert judgments to evaluate specific national conditions. For example, the WEF´s GCI uses similar surveys to construct its indices (Sala-i-Martin et al., 2010). In this case, the main methodological difference between the GCI and the NES is that the latter focuses only on EFCs, rather than general economic factors[13].

NES METHODOLOGY

The NES questionnaire obtains the views of experts on a wide range of items, each of which was designed to capture a different dimension of a specific EFC[14]. Each year at least 36 experts[15] are personally interviewed or surveyed in each GEM economy and asked to complete the NES self-administered questionnaire[16]. **Table 3.1** summarizes the main nine EFCs who are the core of the questionnaire. Experts also give valuations on other topics related to additional entrepreneurship conditions fore example women entrepreneurship support, high growth business encouragement and questions related to the special topic included in current GEM cycle.

TABLE 3.1 GEM'S KEY ENTREPRENEURIAL FRAMEWORK CONDITIONS

1.	**Entrepreneurial Finance.** The availability of financial resources-equity and debt-for small and medium enterprises (SMEs) (including grants and subsidies).
2.	**Government Policy.** The extent to which public policies give support to entrepreneurship. This EFC has two components: **2a.** Entrepreneurship as a relevant economic issue and **2b.** Taxes or regulations are either size-neutral or encourage new and SMEs.
3.	**Government Entrepreneurship Programs.** The presence and quality of programs directly assisting SMEs at all levels of government (national, regional, municipal).
4.	**Entrepreneurship Education.** The extent to which training in creating or managing SMEs is incorporated within the education and training system at all levels. This EFC has two components: **4a.** Entrepreneurship Education at basic school (primary and secondary)m and **4b.** Entrepreneurship Education at post-secondary levels (higher education such as vocational, college, business schools, etc.).
5.	**R&D Transfer.** The extent to which national research and development will lead to new commercial opportunities and is available to SMEs.
6.	**Commercial and Legal Infrastructure.** The presence of property rights, commercial, accounting and other legal and assessment services and institutions that support or promote SMEs.
7.	**Entry Regulation.** Contains two components: **7a.** Market Dynamics: the level of change in markets from year to year, and **7b.** Market Openness: the extent to which new firms are free to enter existing markets.
8.	**Physical Infrastructure.** Ease of access to physical resources-communication, utilities, transportation, land or space—at a price that does not discriminate against SMEs.
9.	**Cultural and Social Norms.** The extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income.

[13] As the first GEM theoretical model stated, the general national conditions influence the entrepreneurial conditions, so there is room to argue that these two sources of information are related but not exactly the same.

[14] When all data are collected, the national and regional files are harmonized centrally. The harmonization process includes an internal quality control and the calculation of composite variables that summarize each of the blocks of questions designed to measure a certain aspect of the EFCs. Due to this methodology, individual values are assigned to each expert in each country, so that international comparisons can be made. To illustrate the way each EFC is created, the first condition, "finance for entrepreneurs," is constructed by a block of six items that includes information on access to different sources of finance, including equity, government funding, debt, business angels and IPOs. The same logic is applied to the rest of the EFCs. The responses of the items follow a five-point Likert scale, where 1 means the statement is completely false according to the expert and 5 means the statement is completely true. Experts are also asked to their view about the most important institutional successes and constraints for fostering entrepreneurship in their country in their view. They also provide some key recommendations for fostering entrepreneurship in their country. Finally, some background information on the experts is recorded. NES questionnaires are copyrighted; they are available at the GEM Web site: www.gemconsortium.org

[15] These experts are selected following a strict protocol: National and/or Regional GEM Teams are instructed to select at least four experts considered particularly knowledgeable in each of the general EFCs (9 EFCs x 4 experts = 36 respondents)-at least one entrepreneur, at least two "suppliers" of the EFC (for example, policymakers involved in shaping the EFCs) and at least one observer, such as an academic with specific expertise in the area. The typical rotation is around 25% of new experts each year.

[16] Since 2010, a standardized online survey is available in English and Spanish using the web-based survey tool, Qualtrics®. Some National Teams also implement their own systems in their languages.

3.3 THE STATE OF ENTREPRENEURSHIP INSTITUTIONS IN 2013

Table 3.2 provides a general overview of the results of each EFC for the 69 economies[17] participating in the NES in 2013, by geographic regions adopted in this report. The table shows the main rates for each economy and all EFCs.

TABLE 3.2 ENTREPRENEURSHIP FRAMEWORK CONDITIONS MAIN INDICATORS 2013

REGION	1	2a	2b	3	4a	4b	5	6	7a	7b	8	9
LATINAMERICA & CARIBBEAN												
Argentina	2.2	2.0	1.5	2.8	2.2	3.3	2.7	3.0	3.2	2.6	3.5	3.2
Barbados	2.0	2.8	2.0	2.3	2.0	2.7	1.6	3.0	2.5	2.4	3.4	2.5
Brazil	2.3	2.5	1.7	2.3	1.5	2.4	2.0	2.4	3.0	2.1	3.0	2.7
Chile	2.5	3.4	3.2	3.1	1.7	2.7	2.2	2.7	2.4	2.3	4.2	2.8
Colombia	2.3	2.8	2.6	3.0	2.3	3.2	2.4	2.8	2.9	2.8	3.3	3.1
Ecuador	2.2	2.9	2.1	2.5	2.0	3.2	2.1	2.9	2.3	2.4	4.2	3.1
Guatemala	2,2	2.2	2.1	2.4	1.8	3.2	2.2	3.4	2.4	2.4	3.8	2.6
Jamaica	2.9	2.6	2.2	2.3	2.2	3.5	2.3	3.2	3.8	2.7	3.8	3.5
Mexico	2.4	3.0	2.2	3.1	2.0	3.3	2.6	2.7	2.5	2.4	3.9	3.1
Panama	2.4	2.7	2.8	3.1	1.6	2.8	2.3	2.8	2.8	2.4	3.8	3.0
Peru	2.3	2.0	2.1	2.2	2.1	2.8	1.9	2.7	2.6	2.6	3.4	2.9
Suriname	2.4	2.4	2.2	2.0	2.1	3.3	1.8	2.8	2.7	2.2	3.3	2.8
Trinidad and Tobago	3.1	2.2	2.2	2.4	2.1	3.0	2.0	3.1	2.8	2.0	3.8	3.0
Uruguay	2.2	2.3	2.8	3.2	1.7	3.5	3.0	3.1	2.0	2.8	3.8	2.4
Average	**2.4**	**2.6**	**2.3**	**2.6**	**2.0**	**3.1**	**2.2**	**2.9**	**2.7**	**2.4**	**3.7**	**2.9**
Middle Est & North Africa												
Algeria	3.4	3.2	2.6	2.7	2.4	3.2	2.9	2.9	4.0	3.0	3.5	3.2
Iran	2.0	1.9	1.6	1.5	1.5	2.1	1.9	2.1	3.2	1.8	4.1	2.2
Israel	2.8	2.0	1.7	2.2	2.0	3.0	2.3	3.3	2.7	2.2	4.1	3.8
Libya	2.1	2.0	2.6	1.7	1.4	2.3	1.8	2.9	3.2	2.8	3.0	2.5
Average	**2.6**	**2.3**	**2.1**	**2.1**	**1.8**	**2.7**	**2.2**	**2.8**	**3.3**	**2.4**	**3.6**	**2.9**
Sub-Saharan Africa												
Angola	2.6	2.9	2.2	2.2	1.6	2.1	1.8	2.5	3.1	2.0	2.3	2.8
Botswana	2.7	2.6	2.7	2.6	2.3	3.1	2.1	2.7	3.1	2.8	3.3	2.8
Ghana	2.6	2.7	2.2	2.3	2.1	2.9	2.1	3.0	3.1	3.0	3.0	3.1
Malawi	1.9	2.3	1.9	2.0	2.2	2.9	1.9	2.8	3.4	2.7	2.8	2.4
Namibia	2.6	3.0	2.1	2.4	2.8	3.1	2.0	2.8	3.0	2.6	3.5	3.2
Nigeria	2.1	2.0	1.8	2.2	2.1	2.8	1.7	2.6	3.3	2.3	3.0	3.3
South Africa	3.3	2.9	2.1	2.2	1.8	2.3	2.1	2.7	2.8	3.1	2.8	3.0
Uganda	2.5	2.3	2.0	2.4	2.2	3.1	2.1	3.3	3.8	2.7	3.4	3.1
Zambia	1.9	2.1	2.3	2.1	2.1	2.5	1.7	2.6	3.1	2.7	2.9	2.6
Average	**2.5**	**2.5**	**2.2**	**2.3**	**2.1**	**2.7**	**2.0**	**2.8**	**3.2**	**2.7**	**3.0**	**2.9**
Asia pacific & South Asia												
China	2.5	2.7	2.6	2.6	1.6	2.7	2.5	2.6	3.9	2.6	4.0	3.0
India	2.8	1.9	1.8	2.1	1.5	2.4	1.9	3.0	3.5	2.5	3.7	2.7
Indonesia	3.1	2.7	2.2	2.5	2.5	3.3	2.3	3.2	3.9	2.8	3.5	3.3
Korea, Republic of	2.3	3.4	2,7	3.0	2.1	2.5	2.5	2.3	4.1	2.3	4.0	3,1
Malaysia	3.4	3.1	2,5	3.0	2.3	3.0	2.9	3.2	3.4	2.7	4.1	3.1

[17] As we explained in Chapter 2, some economies did not fully comply with the requirements for the Adult Population Survey but complete the NES data. This was the case for Barbados, Namibia and Turkey. Japan did not conduct the NES survey in 2013.

REGION	1	2a	2b	3	4a	4b	5	6	7a	7b	8	9
Philippines	3.2	3.0	2,3	3.1	3.1	3.4	2.5	3.4	3.8	2.9	3.7	3.5
Singapore	3.5	3.7	4.1	3.7	2.8	3.2	3.2	3.5	3.5	3.4	4.5	3.2
Taiwan	3.7	2.7	2.8	2.3	2.0	2.7	2.5	3.4	3.0	2.8	3.0	3.6
Thailand	3.0	2.5	2.4	2.4	2.3	3.1	2.5	3.4	3.7	2.8	4.1	3.0
Vietnam	2.4	2.9	2.8	2.5	2.0	2.6	2.5	2.9	3.5	2.7	3.6	3.1
Average	**3.0**	**2.8**	**2.6**	**2.7**	**2.2**	**2.9**	**2.6**	**3.1**	**3.6**	**2.7**	**3.8**	**3.2**
Europe – Non EU28												
Bosnia and Herzegovina	2.2	2.0	1.8	2.0	2.0	2.6	1.9	2.7	3.4	2.0	3.3	2.2
Macedonia	2.3	2.6	2.9	2.5	2.3	3.0	2.4	3.0	3.0	2.4	3.5	2.8
Norway	2.8	2.4	2.8	3.0	2.6	2.6	2.9	3.6	2.9	2.6	4.1	2.8
Russia	2.0	1.9	1.9	1.8	2.2	2.7	2.1	3.1	3.2	2.1	3.1	2.5
Switzerland	3.0	3.4	3.7	3.5	2.4	3.4	3.5	3.6	2.7	3.2	4.7	3.3
Romania	2.3	2.4	2.0	2.4	2.3	2.9	2.6	3.0	3.3	2.7	2.9	2.3
Turkey	2.7	2.9	2.7	2.7	2.3	2.9	2.5	3.1	3.2	2.7	3.8	3.2
Average	**2.5**	**2.5**	**2.5**	**2.6**	**2.3**	**2.9**	**2.5**	**3.1**	**3.1**	**2.5**	**3.6**	**2.7**
Europe – EU28												
Belgium	2.6	2.6	2.2	3.3	2.0	3.1	2.6	3.3	2.8	2.7	3.7	2.2
Croatia	2.3	2.2	1.8	2.5	1.9	2.6	2.1	2.7	3.6	2.1	3.5	2.0
Czech Rep	2.5	2.0	2.0	2.3	1.6	2.4	2.2	3.1	2.6	2.6	4.0	2.0
Estonia	2.7	2.5	3.1	3.3	2.3	3.0	2.9	3.0	3.6	2.5	4.3	3.5
Finland	2.8	3.3	3.1	2.9	2.7	2.9	3.0	3.5	2.8	2.9	4.3	2.9
France	2.9	3.3	3.0	3.2	1.7	2.7	2.5	3.0	3.2	2.4	4.2	2.2
Germany	2.8	2.6	2.6	3.4	1.9	2.6	2.8	3.3	3.2	2,8	3.7	2.8
Greece	2.0	2.1	1.8	2.0	1.7	2.6	2.2	3.2	3.2	2.2	3.6	2.3
Hungary	2.8	2.3	1.9	2.3	1.9	2.8	2.5	3.4	3.1	2.7	3.9	2.6
Ireland	2.6	2.9	2.8	3.2	2.0	2.8	2.9	3.4	2.7	2.9	3.9	3.0
Italy	2.5	2.0	1.5	2.1	1.7	2.6	2.5	3.1	3.5	2.5	3.3	2.1
Latvia	2.9	2.9	3.0	3.0	2.7	3.3	2.4	3.4	2.6	3.0	4.1	3.1
Lithuania	2.8	2.4	2.0	2.6	2.4	2.8	2.4	3.5	4.0	2.5	4.2	3.0
Luxembourg	2.6	3.4	3.4	3.6	2.2	2.9	2.8	3.3	3.0	2.9	3.9	2.4
Neteherlands	2.8	3.0	3.2	3.0	3.1	3.3	2.8	3.8	2.9	3.3	4.6	3.1
Poland	2.7	2.6	2.1	2.7	1.8	2.4	2.1	3.0	3.8	2.8	3.6	2,8
Portugal	2.9	2.6	1.8	2.9	2.2	2.9	2.7	3.4	2.4	2.5	4.4	2.6
Slovakia	2.2	1.9	1.9	2.2	1.9	2.8	1.9	2.8	3.0	2.5	3.9	1.9
Slovenia	2.2	1.9	2.1	2.5	2.1	2.8	2.4	2.8	3.1	2.4	3.9	2.2
Spain	1.8	2.3	2.0	3.1	1.4	2.3	2.2	2.5	2.1	2.3	3.9	2.1
Sweden	2.3	2.7	2.5	2.7	2.3	2.4	2.4	3.0	3.4	2.6	4.2	3.2
United Kingdom	2.7	3.0	2.6	2.7	2.2	2.6	2.5	3.1	2.8	2.7	3.9	3.1
Average	**2.6**	**2.6**	**2.4**	**2.8**	**2.1**	**2.8**	**2.5**	**3.2**	**3.1**	**2.6**	**4.0**	**2.6**
North America												
Canada	2.6	2.9	2.3	2.8	2.2	2.7	2.5	3.1	3.0	2.6	3.9	3.2
Puerto Rico	1.9	2.3	1.5	2.5	1.6	3.0	2.1	2.9	3.0	2.2	3.4	2.5
United States	2.6	2.8	2.2	2.6	2.2	3.1	2.4	3.2	3.2	2.9	4.2	3.9
Average	**2.4**	**2.7**	**2.0**	**2.6**	**2.0**	**2.9**	**2.3**	**3.1**	**3.1**	**2.6**	**3.8**	**3.2**

1 Finance
2a Nat. Policy – General Policy
2b Nat. Policy – Regulation
3 Government Programs
4a Education – Prim. & Second.
4b Education – Post-School
5 R&D Transfer
6 Commercial Infrastructure
7a Internal Market – Dynamics
7b Internal Market – Openness
8 Physical Infrastructure
9 Cultural and Social Norms

FIGURE 3.2 COMPOSITE INDICATORS ON ENTREPRENEURSHIP INSTITUTIONS, BY STAGE OF DEVELOPMENT (1/2)

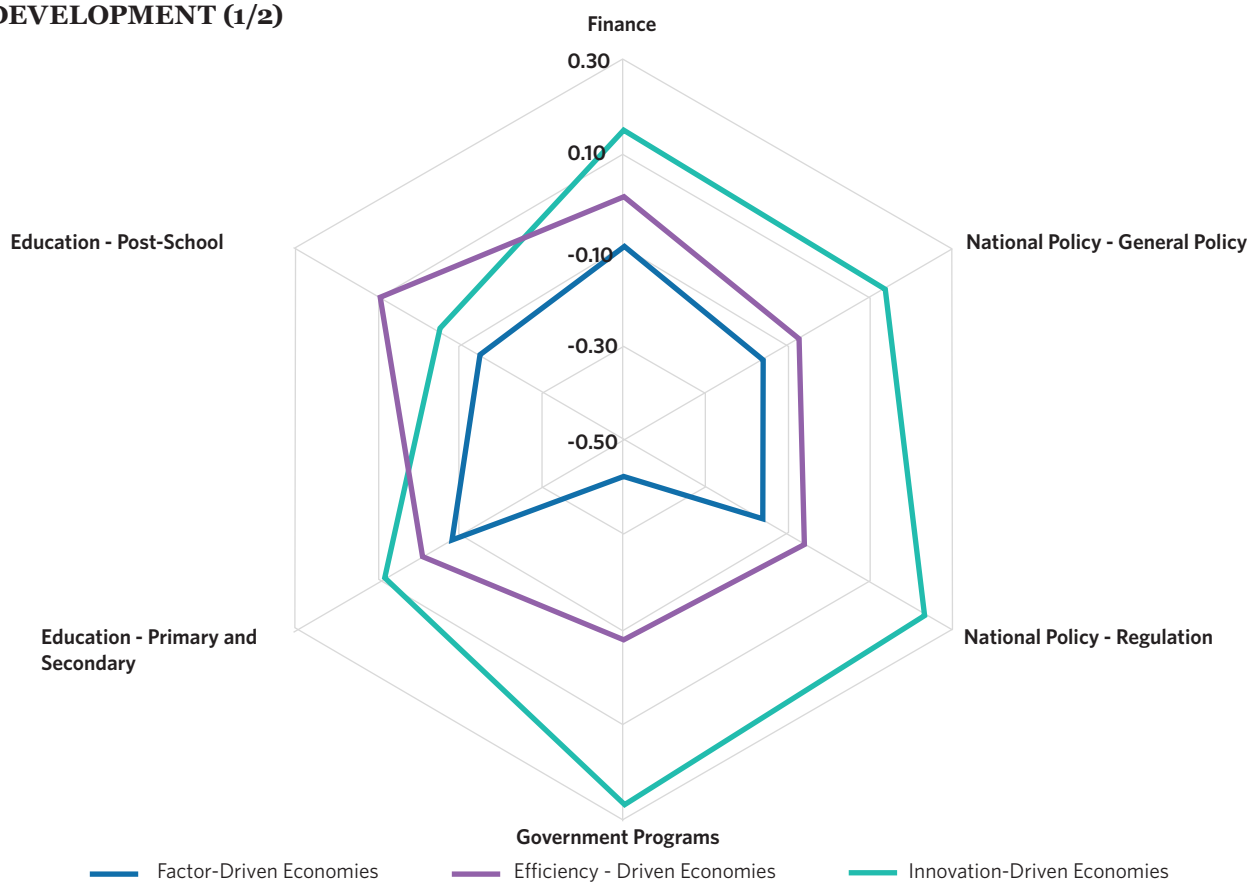


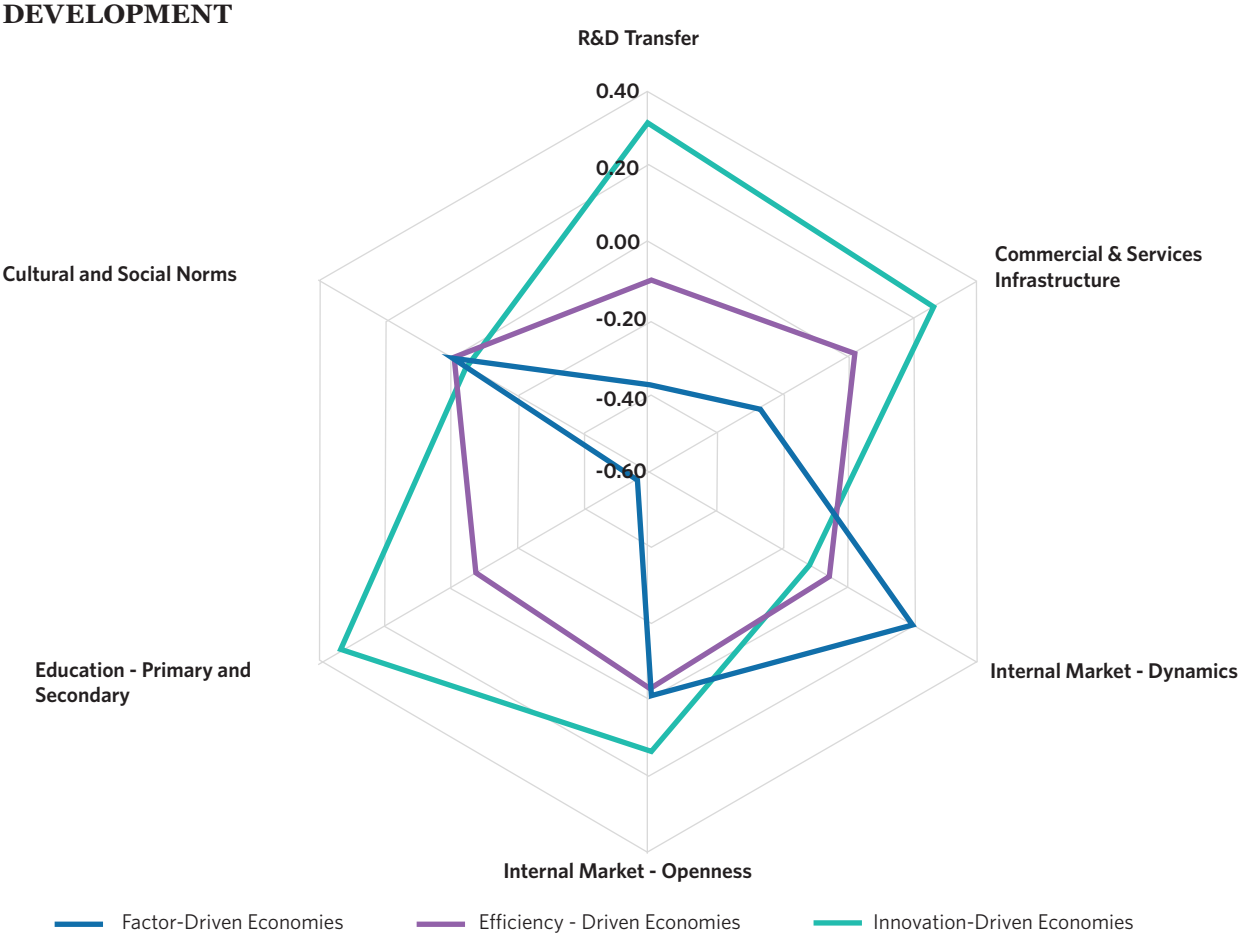
Table 3.2 also shows the highest rated EFCs in each country in green and the lowest rated EFCs in red. Even though clear patterns among country-groups are not easy to discern, the averages presented in the table reflect, for example, that education of entrepreneurship at basic levels (primary and secondary school) is judged rather unfavorably in the majority of the economies. Only The Netherlands has a score above 3 (confirming the pattern that emerged last year). In contrast, physical infrastructure tends to have the highest evaluations in experts' judgments with averages over 4, for example in the EU. Hence it does not seem to be a big constraint in most economies across the globe. Only Sub-Saharan economies have lower evaluation in physical infrastructure to support entrepreneurship.

In general, experts in more economically developed countries (EU and North America) gave higher ratings to the EFCs. In contrast, Sub-Saharan African countries gave, on average, low evaluations mainly in research and development transfer. This pattern is also present in small Caribbean countries and Peru which also evaluated R&D with low rates. Interestingly, some developing and emerging economies around the globe—Argentina and Brazil in Latin America, Malawi and Uganda in Africa, Indonesia and Philippines in Asia Pacific, Bosnia and Herzegovina and Romania in Europe— have, in the opinion of the experts, little support from government policy-related regulation. Experts in the more developed economies (Italy, Croatia and Lithuania) were also critical of this EFC. A more positive evaluation for the internal market dynamics is one of the best-evaluated EFCs in many countries, especially in Europe (EU28 and non-EU28).

To some degree, the observed higher rates in innovation-driven economies are consistent with the GEM conceptual framework and the notion that EFCs have higher priorities among more economically developed countries. At the same time, it should be noted that reference points may differ across economies: What is perceived to be good in one country may be perceived to be poor in others. To visualize the differences that exist, standardized mean Z-scores are shown for each EFC in **Figure 3.2** and **Figure 3.3.** These figures display that many EFCs do differ by economic development phase. The clearest differences in the 2013 NES results are government programs, national policy regulation (**Figure 3.2**) and physical infrastructure and R&D transfer (**Figure 3.3**). However, some other EFCs do not present such clear differences; for example, cultural and social norms. Also, on average, less developed countries show higher rates in post-school entrepreneurship education and in internal market dynamics which is evaluated best by factor-driven economies. For these two examples, the explanation is likely that some markets in innovation-driven economies are mature and consolidated (versus factor-driven) and face a lot of new opportunities for further development in their internal markets. The same could be true at middle- and high-education levels where efficiency-driven economies advance more quickly with relative new programs and efforts to train and better educate people on the value of entrepreneurship, while educational institutions in developed economies might be less quick to adapt and remain stuck in established routines.

Note: Values of indicators are based on averaging the Z-scores (standardized values) for the economies in each of the three phases of economic development.

FIGURE 3.3 COMPOSITE INDICATORS ON ENTREPRENEURSHIP INSTITUTIONS, BY STAGE OF DEVELOPMENT



GEM Research Exhibit 3

Saul Estrin, Julia Korosteleva and Tomasz Mickiewicz. **"Which institutions encourage entrepreneurial growth aspirations?"** *Journal of Business Venturing*, Volume 28, Issue 4, pages 564–580, July 2013.

RESEARCH ISSUE

In this study, which builds upon the entrepreneurship and institutional literature, Estrin, Korosteleva and Mickiewicz investigate how the institutional environment and individual characteristics of entrepreneurs, independently and interactively, explain growth aspirations of young firms across economies. More specifically, they explore the effect of macro-level institutions, notably corruption, security of property rights and government activity, on entrepreneurs' aspirations to increase employment. Moreover, they investigate if and to which extent entrepreneurs' social ties compensate for weaknesses in national institutions. Growth aspirations of entrepreneurs, rather than simply the decision to become an entrepreneur, are important because there is a body of empirical research showing that entrepreneurial aspirations matter for subsequent firm growth. Another reason why it is important to study what determines entrepreneurial aspirations stems from the need to understand expansion as an entrepreneurial decision, defined not just by resource constraints but by managerial attitudes and predispositions, which are in turn shaped by the complexity of the external environment. A decision to grow a business may play a particularly significant role at the stage of entrepreneurial process when young firms already survived the initial period of incubation and their owners and managers face a choice of either preserving status quo or expanding, staying continuously alert to those entrepreneurial opportunities with scope for growth.

THEORY AND METHOD

Authors build both upon Williamson's (2000) hierarchical approach to institutions and on social micro level perspective on institutions developed by Granovetter (1985). Based on the former, they first identify three fundamental institutional dimensions—the level of corruption, the strength of property rights and the scale of government activities—all of which are likely to affect the growth aspirations of entrepreneurs. Second, they employ the sociological perspective to extend Williamson's framework further by exploring whether individual social networks (captured here by "knowing other entrepreneurs"), also play an important role in enhancing entrepreneurs' growth aspirations both directly, and more importantly, through compensating for the macro-level institutional weakness.

The authors test the hypotheses concerning these effects on entrepreneurs' growth aspirations by using GEM data combined with a number of institutional datasets. Their sample covers more than 8,000 individuals in 42 economies worldwide over the period of 2001–2006. The authors employ multilevel modeling to take into account the hierarchical structure of the data in which individuals represent level one, country-years samples represent level two and economies represent level three.

FINDINGS

The authors find that higher levels of corruption, weaker property rights and larger government size (associated with governance and allocative disincentives) all significantly constrain entrepreneurial employment growth aspirations. At the same time, embeddedness in local social networks emerge to play an important role in directly enhancing aspirations of entrepreneurs to grow their businesses, and also through reducing (although, importantly, not fully eliminating), the negative effect of some institutional voids, notably higher levels of corruption and weaker property rights protection.

IMPLICATIONS

These findings have significant policy implications. Although social ties are shown to positively moderate the effect of macro institutions, notably property rights and corruption, they do not fully eliminate the deficiencies of these institutions. Therefore relying on the development of local social networks to substitute for institutional reform would not be an adequate solution to ensure that entrepreneurs create jobs. The higher order institutions remain important for growth aspiration entrepreneurship, even when we account for moderating impact of local social structures. It is important for policymakers to create an environment allowing for the adequate protection of property rights, smaller-scale governments and lower levels of corruption. Moreover, distinctions in institutional features are important. While corruption is harmful, weak property rights (government arbitrariness) create an even more fundamental threat to entrepreneurship.

BAUER

4. FIFTEEN YEARS OF GEM – INDICATORS AND TRENDS

4.1 INTRODUCTION

It is hard to imagine that three decades ago there was only limited attention for the role entrepreneurs play in socio-economic development. By the end of the 1980s however, interest in the role of entrepreneurship in economic development had increased. This was based, arguably, on a rediscovery of Joseph Schumpeter's (1942) seminal work on the role of innovative entrepreneurs for macro-economic performance. He argued that, by introducing new product-market combinations, these entrepreneurs generated new and more efficient ways of production and pushed underperforming firms out of the market: a process of "creative destruction". While several studies underscored the importance of entrepreneurship (starting with Birch, 1979) and a field of entrepreneurship studies emerged and developed rapidly, it also became clear that there was no comparable international data on entrepreneurship and venture creation (Reynolds, Storey and Westhead, 1994). Government databases were primarily based on registrations by new firms. These registration databases, in some economies overseen by the Chambers of Commerce, were based on differing requirements for registration, resulting in different rules for similar entrepreneurs across different sides of national borders - in some economies registration would be mandatory, in others not. Aside from this, in many economies across the globe, data on new venture creation was not systematically collected. It was this situation that led to a group of academic scholars to star GEM in 1997. Its main goal, particularly in its first years of existence, was to measure differences in the level of entrepreneurial activity between economies. With this information, factors determining national levels of entrepreneurial activity could be identified, as well as policies to enhance national levels of entrepreneurial activity.

Achieving this goal would also help establish how entrepreneurship relates to economic growth and, in a longer-term perspective, economic development. Entrepreneurship is believed to contribute to economic development because entrepreneurs create new businesses, and new businesses create jobs, ensure variety, intensify competition, and may even increase productivity through technological change. Some studies argue that in recent decades, several trends such as the development of new technologies have resulted in new business models that suit small and new ventures better than before; hence they see a shift from large corporations to small and new ventures (Blau, 1987; Thurow, 2003) or put it differently: to the rise of an entrepreneurial economy (Thurik et al., 2013).

As GEM and other studies have shown, entrepreneurship rates differ not only among economies at similar or different stages of economic development but also among regions in a single country. Moreover, not all entrepreneurial efforts appear to have the same impact on economic development. The GEM data collection efforts now allow for comparisons across widely varying sets of economies and regions and for making distinctions between several types of entrepreneurship. The GEM adult population survey database has grown to nearly two million observations in 104 economies that have participated in GEM between 1999 and 2013. Future studies exploiting the GEM data may therefore be of tremendous help in substantiating the impact of (specific types of) entrepreneurship on economic growth and economic development.

4.2 AN OVERVIEW OF GEM INDICATORS AND OUTCOMES

In the fifteen years of existence, GEM has evolved considerably (Bosma, 2013). While keeping an eye on the original objectives of GEM, related to providing international comparative measures of entrepreneurship activities, several modifications and additions have been implemented, based on new knowledge offered by the research field of entrepreneurship as well as from accumulating evidence that emerged from GEM-based research. Next to implementing these academic contributions into the project, GEM has also contributed to academia itself. The remainder of this section discusses two key developments highlighting the development GEM has seen throughout the past fifteen years, namely (i) moving from a focus on one indicator to a more encompassing view of entrepreneurial profiles; and (ii) broadening the scope of GEM indicators by introducing special topics. To demonstrate the value of in-depth analysis of special topics related to entrepreneurship, the example of 'entrepreneurial employee activity' is highlighted. This section concludes by assessing the rapidly emerging research output from the GEM data.

FROM 'TEA' TO ENTREPRENEURIAL PROFILES

Since its founding, GEM has focused on the phase that combines the stage in advance of the start of a new firm (nascent entrepreneurship) and the stage directly after the start of a new firm (owning-managing a new firm). Taken together this phase is denoted as "early-stage entrepreneurial activity" (TEA, see Chapter 2). In addition, individuals involved as owner-managers in established firms are identified. It is important to realize that the TEA rate is a participation rate – of individuals involved in the early-stage of venture creation - and as such does not reflect a linear relationship between entrepreneurship and economic development (Acs, 2006). Neither does it reflect any entrepreneurial activity taking place in established, more mature businesses, other than new business spinoffs sponsored by parent companies. The GEM studies found that developing economies often exhibited much higher TEA rates than developed economies, however with more necessity-driven motivations. An important policy implication from these results, and mirrored by findings from other studies, was to not measure the entrepreneurial climate on the number of start-ups (or TEA rates) only, but to really appreciate the nature of entrepreneurial activity (Shane, 2009)[18].

Indeed, as shown by the revised GEM conceptual framework (see Figure 1.2) with its focus on a dynamic interaction between the 'three entrepreneurial A's (attitudes, activity and aspirations), the relationship between entrepreneurship and development is not straightforward, and TEA should therefore not be used as a simple ranking of entrepreneurship among nations. In factor-driven economies, for example, a reduction in the TEA rate may be seen as a good sign. If a modest share of entrepreneurs managed to create good jobs for others, this means more individuals have been provided with alternatives to earn a living. For many a paid job will be preferred over an uncertain spell of necessity-driven entrepreneurship. Hence, more entrepreneurial opportunities would here induce a lower rate of new venture creation: fewer numbers of new startups but with a higher impact on the economy.

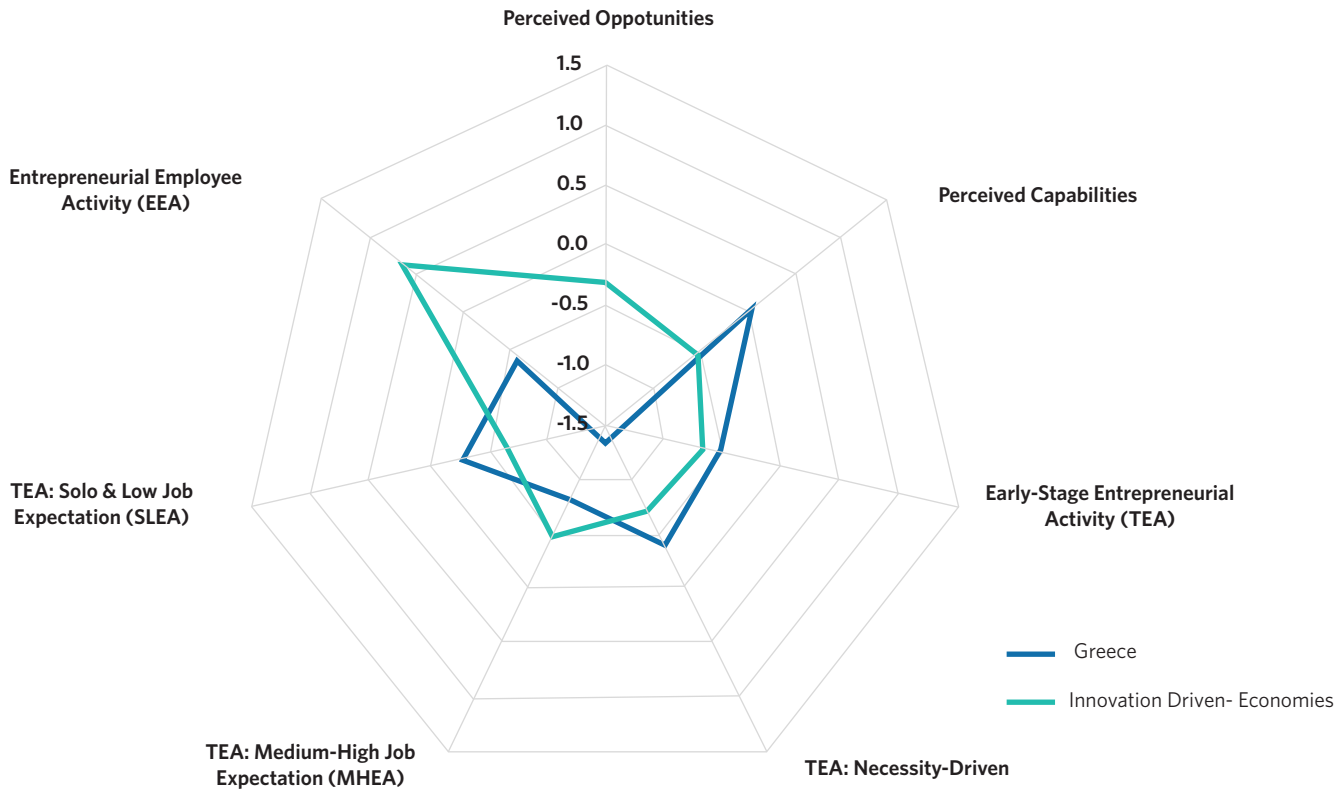
Increases in the TEA rate may also occur when the general economic climate is on a cyclical growth trend and market opportunities are growing. A high TEA rate may be specific to regional economic, demographic and cultural contexts. The same TEA rate in two nations or regions may mask differences in type and aspiration of entrepreneurs between these locations.

Figure 4.1 demonstrates that the entrepreneurial profile of Greece differs quite a lot from the 'average' profile of an innovation-driven economy. The profile is based on the most recent GEM results; in order to get more statistical precision the indicators on job expectations were based on the merged 2011-2013 data. To make for a better comparison among indicators, each indicator has been adjusted in such way that the average across all economies is set at zero and the standard deviation across all economies equals one. This implies that differences of one (from zero or from the average of 'innovation-driven economies') can be considered substantial. Even though Greece's TEA rate is slightly higher than (but still comparable to) other economies, other indicators tell a more nuanced picture. First, it is apparent that due to the crisis in Greece, perceived opportunities to start a business are dramatically low, even though perceived capabilities are quite high. Second, the nature of entrepreneurial activities tends to be one of low ambition and relatively driven by necessity. Also, entrepreneurial employee activity, as measured by the GEM 2011 assessment (see the next section and Bosma et al., 2013) is quite low in Greece.

The entrepreneurial profile in **Figure 4.2** shows that Chile outperforms the "average" efficiency-driven economy (according to the classification by the Global Competitiveness Report) on every single indicator. Thus, not only entrepreneurial activity but also entrepreneurial attitudes and perceptions are high. It should be pointed out that this also includes necessity-driven entrepreneurship. However, ambitious types of early-entrepreneurship (in terms of job expectations) are perhaps the most striking feature of the entrepreneurial profile of Chile. Thus, the overall picture is one of a high entrepreneurial spirit and ambitions. Even though Chile is also developing entrepreneurial employee activity, the rates appeared to be lower than in most innovation-driven economies. Stimulating corporate entrepreneurship and entrepreneurial behavior among employees –requiring an appropriate, enabling institutional setting - is perhaps a key ingredient for Chile in making the next step in terms of economic development.

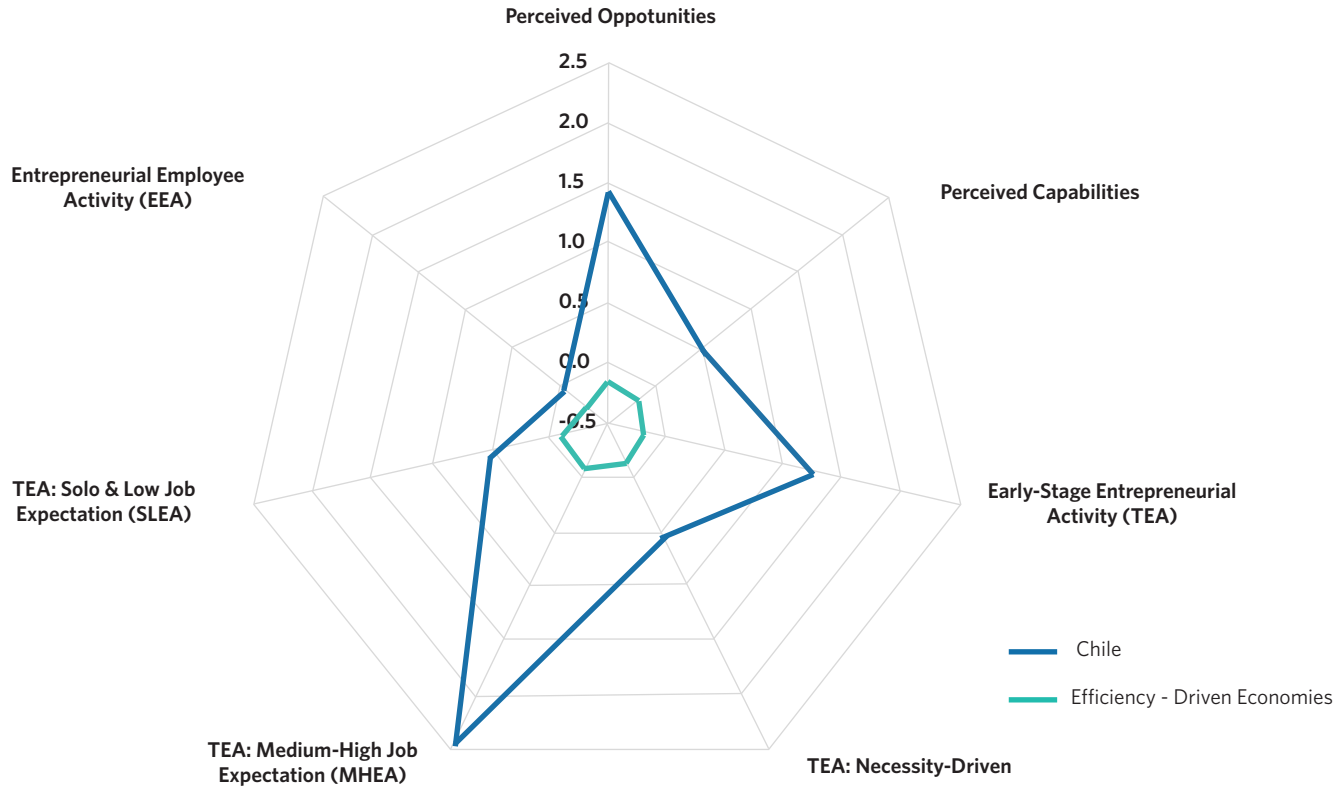
[18] Necessity-driven does not exclude high-impact entrepreneurship, even though the odds of making a substantial positive impact are considerably lower among necessity-driven entrepreneurs.

FIGURE 4.1 ENTREPRENEURIAL PROFILE: GREECE



Note: All indicators refer to 2013 data, except for EEA (2011), MHEA and SLEA (2011-2013)

FIGURE 4.2 ENTREPRENEURIAL PROFILE: CHILE



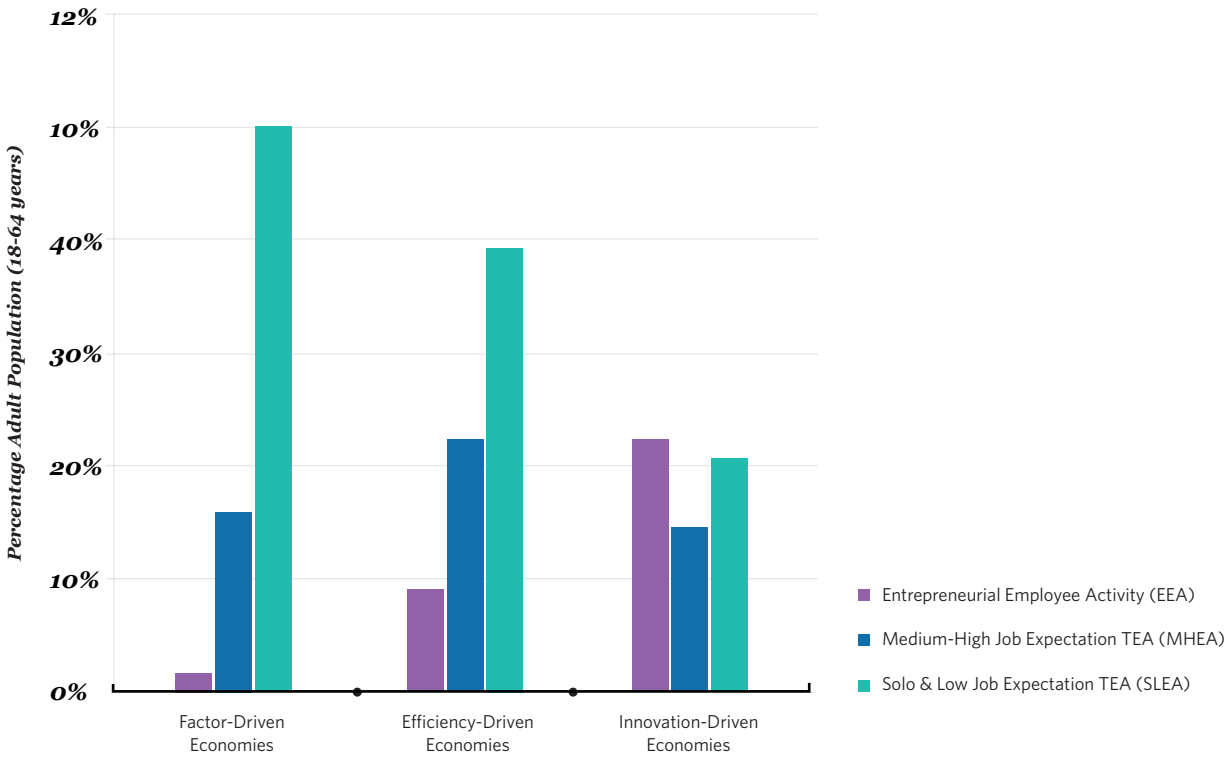
BROADENING THE SCOPE OF ENTREPRENEURSHIP: GEM SPECIAL TOPICS

Entrepreneurship is a multifaceted phenomenon. Even though the monitoring of entrepreneurial attitudes, activity and aspirations following a tested procedure across economies and over time has many benefits, several important aspects of entrepreneurship remain underexplored in an international context. By 2009 GEM had positioned itself as the world largest data collection initiative on entrepreneurship indicators, involving more than 50 economies each year, and efforts were made to simplify the adult population survey questionnaire and create space for assessing "special topics".

Special topics involved a set of dedicated questions in both the adult population survey and the expert survey, for all participating economies. Special topics are selected on several criteria, the main one being that the cross-country results that will be generated should bring new information to the entrepreneurship research community and could as such help exploration of new research questions. The key advantage is that existing GEM procedures can be exploited to generate a wealth of data at the individual level (including entrepreneurs, potential entrepreneurs and other individuals) and across economies (allowing for an assessment of specific country contexts). Special topics conducted so far included for example an assessment of education and training for entrepreneurs, social entrepreneurship, entrepreneurial employee activity, immigrant entrepreneurship. This report introduces linkages between entrepreneurship and well-being in Chapter 5. In addition to these topics, the regular GEM data collection also resulted in GEM special reports on women entrepreneurship, entrepreneurial finance, high-growth entrepreneurship and youth entrepreneurship. A full list of the special reports published by GEM is provided in the Introduction.

While each of these special reports, freely available on the GEM website, have important findings and implications, it is useful to highlight here some of the main findings on the recent study comparing Entrepreneurial Employee Activity (EEA) across economies, since the information is very much complementary to what is presented elsewhere in this report. As stated earlier, the general pattern that emerged from the GEM data showed a negative association between phases of economic development and involvement in TEA (i.e., active involvement in the early-phase of the start-up process), the expectation was that developed economies host more 'entrepreneurial employees': employees who are, on their own initiative or that of their employer, actively involved in entrepreneurial activities such as developing a new product, entering new markets with existing products, or setting up new establishments. Indeed, **Figure 4.3** confirms that, unlike TEA (and in particular the component with limited ambitions for job creation), EEA tends to increase by phase of economic development. Developed economies tend to provide better jobs, while still offering individuals the opportunity to take initiative and some risks within their role as an employee.

FIGURE 4.3 GEM 2013 EEA & MHEA & SLEA BY ECONOMIC PHASE



Source: Bosma et al. (2012)

However, the second important result was that even though this general pattern emerges when putting all economies within three major stages of economic development together, significant differences within these three groups remain. This is shown in **Table 4.1**, where a classification emerges based on just two relatively simple indicators from GEM: the percentage of individuals involved in independent entrepreneurship with medium-to-high job expectations for the next five years on the horizontal axis and their 'counterparts' who function as an employee (EEA-MH) on the vertical axis. While there may be some outliers in this single-shot study, the overall pattern makes a lot of sense intuitively[19]. Type A (high EEA-MH and low TEA-MH) is prevakent in five small open economies in North-West Europe, that have a high score on the World Values Survey index of secular-rational values and a high level of social security for employees. In some of these economies the EEA rate actually exceeded the TEA rate.

Type B (high rates of both types of entrepreneurship) is active in of three Anglo-Saxon heritage economies with relatively traditional cultural values and a high degree of income inequality. In addition, Types A and B share a high level of self-expression values (from the World Values Survey), suggesting a relatively high degree of autonomy for employees, and a relatively high rate of employers' support for employees who come up with new ideas. Type C (low rates of both types of entrepreneurship) is exhibited in eight other European economies plus Japan that on average have a relatively low average per capita income, a relatively low percentage of employees with post-secondary and higher education, and a low emphasis in the education system on innovative and pro-active behavior. Finally, Type D (low EEA-MH and high TEA-MH) includes four 'Asian tigers' plus the Czech Republic. These economies share a low level of self-expression values and the GEM Adult Population Survey results point at a relatively low rate of employers' support for employees who come up with new ideas.

Bosma et al. (2013) suggest several implications of these findings for researchers, policy makers and the business community. Importantly, the findings provide support for the notion that entrepreneurship goes beyond starting new, independent firms. A significant share of entrepreneurial activity is happening within existing firms. While this is not a new observation in itself, the initial international comparison provided by GEM allows for a more complete picture when drawing entrepreneurial profiles for economies across the globe.

TABLE 4.1 TYPES OF ECONOMIES BASED ON LOW VERSUS HIGH RATES* FOR TWO DIMENSIONS OF AMBITIOUS ENTREPRENEURIAL ACTIVITY (TEA-MH AND EEA-MH) IN 2011; INNOVATION-DRIVEN ECONOMIES

	TEA-MH: LOW	TEA-MH: HIGH
EEA-MH: HIGH	**Type A** Belgium Denmark Finland Netherlands Sweden	**Type B** Australia Ireland United States
EEA-MH: LOW	**Type C** France Germany Greece Japan Portugal Slovenia Spain Switzerland United Kingdom	**Type D** Czech Republic Korea, Republic of Singapore Taiwan UAE

*Note: Below versus above the unweighted average for innovation-driven economies in 2011

[19] Some economies have continued to measure EEA, see Chapter 2. A second complete assessment is scheduled for 2014 and more are expected to follow.

OUTCOMES IN DIFFERENT WAVES OF GEM RESEARCH
As more and more data became available, the topics explored using GEM data, as well as the methodologies used, underwent considerable changes. Consequently several 'waves' of GEM-based research emerged after the first GEM Global report was published in 1999. The first wave merely provides country-level information, based on the questionnaires to adult individuals and experts in the participating economies, and is primarily captured in GEM Global and National reports. These benchmarking exercises led to some refinements in the survey instruments; almost all GEM-based articles to appear later on are based on data from 2001 onwards.

The second wave saw the first peer-reviewed GEM-based articles in international peer-reviewed academic journals. In 2005, nine papers presented at the very first GEM Research Conference in Berlin, 2004, were bundled in a special issue of Small Business Economics, edited by Rolf Sternberg and Sander Wennekers. Examining these articles, it gives – in hindsight – a good taste of what was to be offered later on. The introduction article in that special issue makes the critical point that manifestations of entrepreneurship can differ depending on the context and that as such the impact of entrepreneurship on growth may be different (Sternberg and Wennekers, 2005). The collection of papers in this special issue reflected a variety of topics and summarized the academic contributions emerging from GEM data up to that date. Each of these papers has been cited widely, indicating that the set of papers provided for a new and relevant contribution to the existing body of knowledge.

The third important wave of GEM research has set in more recently: it is characterized by adopting more advanced methods next to (and because of) the increasing time observations and numbers of economies. Grasping policy effects (GEM's third objective) have therefore become increasingly possible. In addition, more scholars from outside the GEM network have been using its data. The academic contributions are also characterized by an increasing amount of regional differentiation and providing more reliable links with economic development. Increasingly, GEM-based studies reach a wider academic audience, witness the list of more than 20 journals that are listed in the 'Social Science Citation Index' and have published GEM-based papers (Bosma, 2013; Alvarez, Urbano and Amorós, 2013).

4.3 ENTREPRENEURSHIP AND THE BUSINESS CYCLE: EVIDENCE FROM GEM

The recent economic crisis is regarded as the worst since the Great Depression, with significant parts of the world economy still struggling to recover. Policymakers, business leaders, and academics have been – and still are - extremely concerned about the crises' impact on economic activity (e.g., Agarwal et al., 2009; Hausman and Johnston, 2014; OECD, 2009; Parker, 2012). However most attention tends to focus on the downfall of large established multinationals (e.g., Lehman Brothers, Saab Automobile) and state financial systems (e.g., Greece, Iceland). Compared to multinationals, small and new firms may be considered individually more vulnerable due to their size, lack of diversification, and weak financial structure (OECD, 2009). A growing body of research indicates that new, small firms may react differently to large, established firms in a recession (Moscarini and Postel-Vinay, 2012). This is an important observation, as entrepreneurial firms are the backbone of local, regional, and national economies, traditionally providing the majority of employment and innovation (Acs and Audretsch, 2000). Furthermore, recent work suggests that entrepreneurial activity can play a key role in aiding recovery from recessions (Koellinger and Thurik, 2012). According to Parker (2011:xi) more knowledge is required as regards the "real-world manifestations" of the phenomenon of entrepreneurship and the recession. This section elaborates on this using evidence from GEM, however without claiming to provide definite answers as different situations call for different interpretations. GEM national reports, carefully drafted by GEM national teams, should be consulted as these offer more relevant information on the national contexts.

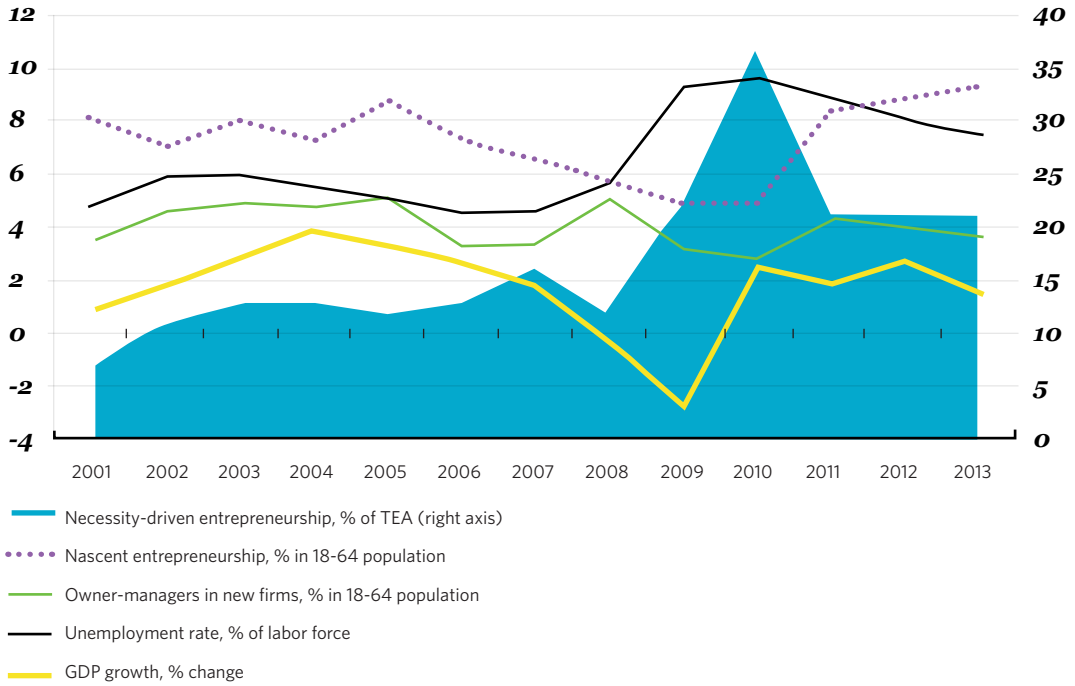
As has become clear earlier in this report, the local context shapes the nature of entrepreneurial activity - the way in which entrepreneurship manifests itself. Even though in the sophisticated econometric analysis of Koellinger and Thurik (2012) it appeared that indicators of (nascent) entrepreneurship rates fell before GDP indicators did, leading them to conclude that entrepreneurship may be a procyclical indicator, it should be stressed that this is a general effect found across a set of developed economies. For specific, individual economies, the pattern may look very different, as responses in opposite directions may be in action at the same time, in the same region or country. In some economies, entrepreneurs may indeed act as visionary individuals, spotting and acting on opportunities. When a crisis looms on the horizon some individuals with entrepreneurial intentions may postpone entrepreneurial activities because of the expected decline in demand. Others may actually see new opportunities emerging from a crisis (see Bosma and Terjesen, 2014 for an initial analysis). And, of course, another group may not at all be driven by opportunity but pushed into entrepreneurship as a result of the problems on the job market, especially when social security entitlements are low. The overall response for the economy will then depend on how the context influences the balance to go either direction.

For example, combining GEM data with economic indicators published by IMF, **Figure 4.4** shows that for the United States, nascent entrepreneurship rates (the purple, dashed lines) tend to follow rather than to announce annual rates of GDP growth, while entrepreneurial activity represented by owner-managers in new firms seems to be affected less. The blue surface indicates the percentage of early-stage entrepreneurs whom are necessity-driven. It is clear that, while the number of early-stage entrepreneurs (in particular nascent entrepreneurs) decreased between 2005 and 2010, these were driven more frequently out of necessity. Whereas in 2001 one in ten early-stage

entrepreneurs reported to have no better option for work, this amounted to as much as one in three in 2010. In 2013 it has dropped to one in five early-stage entrepreneurs reporting to be driven out of necessity, still twice as many as in 2001. It is no coincidence that the peak of necessity-driven entrepreneurship occurs in the same year as the peak in the unemployment rate, one year after GDP rates picked up.

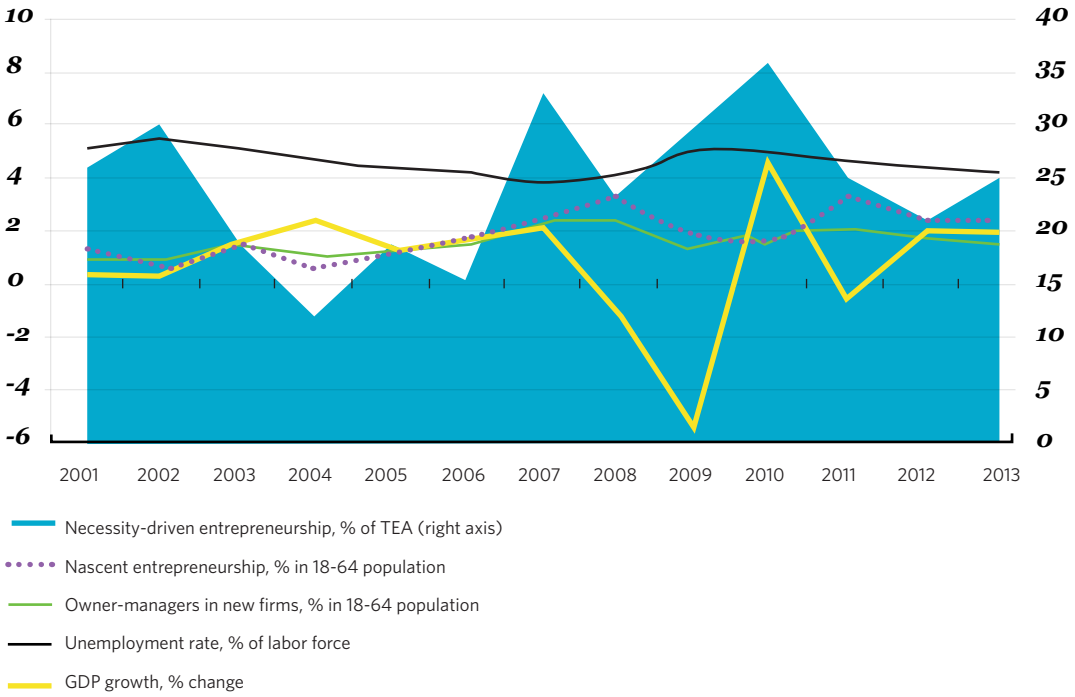
A similar pattern can be observed for Japan, even though important differences are also notable. **Figure 4.5** shows that also for Japan, peaks in unemployment go together with peaks in necessity-driven entrepreneurship. These peaks can be observed in 2002, when the Asian crisis was at its height, and in 2010. Dramatic changes in GDP are, in comparison to the United States, accompanied by less dramatic changes in both unemployment rates and entrepreneurial activity rates. The rates of nascent

FIGURE 4.4 GEM INDICATORS AND ECONOMIC INDICATORS FOR THE UNITED STATES, 2001-2013



Sources: GEM Adult Population Surveys and IMF World Economic Outlook, October 2013

FIGURE 4.5 GEM INDICATORS AND ECONOMIC INDICATORS FOR JAPAN, 2001-2013



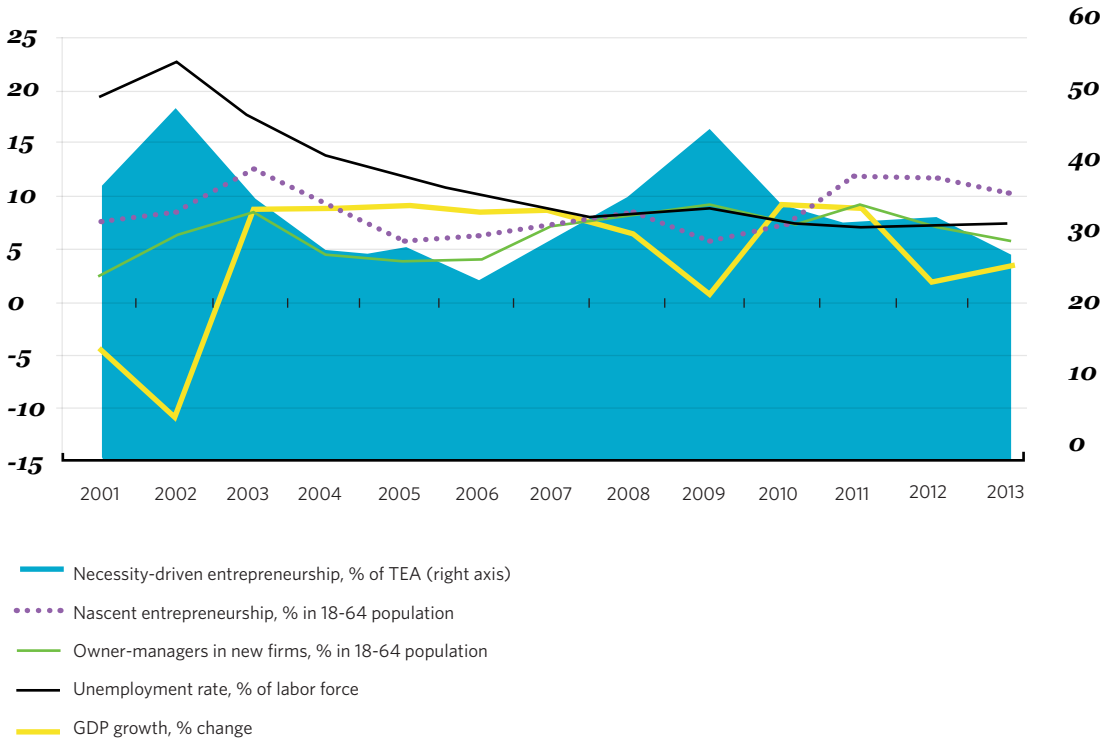
Sources: GEM Adult Population Surveys and IMF World Economic Outlook, October 2013

entrepreneurial activity and owner-managers in new firms have been consistently low throughout 2001-2013. It reflects the relatively rigid institutional setting and the emphasis on large, established firms, even though the overall trend does point at an increasing rate of early-stage entrepreneurial activity.

Having assessed indicators over time for two major innovation-driven economies, we now consider economies that are classified in the efficiency-driven phase by the World Economic Forum. An interesting example is Argentina, which has been struggling with several economic setbacks in the past fifteen years. As **Figure 4.6** indicates, the major crisis during 2000-2002 had a significant impact on entrepreneurial activity. Both nascent and new firm activity grew, at the same time almost half of the early-stage entrepreneurs were involved in this activity because they had no other options for work. Thus, the decrease in TEA rates after 2003 actually signaled a period of economic recovery. Confidence in the institutional setting increased, creating opportunities for entrepreneurs to create jobs and reducing the need for many to earn a living as self-employed while they fare better working as an employee. The global crisis also affected Argentina even though unemployment rates were kept under ten percent, much lower than the soaring 22 percent in 2002. Necessity-driven entrepreneurship is still prevalent in Argentina, like in many other efficiency-driven economies.

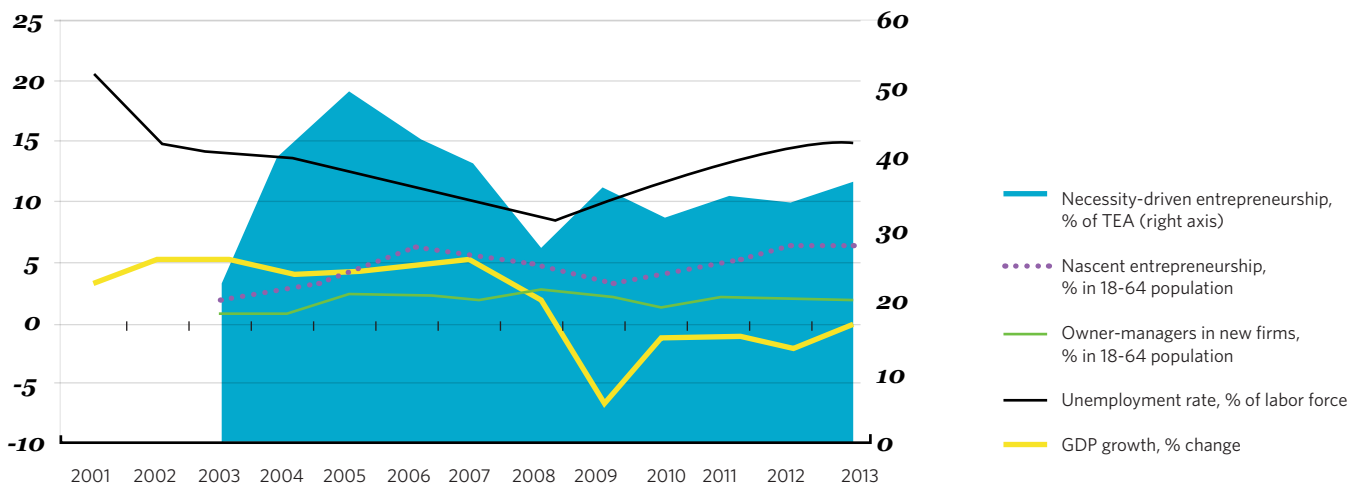
The final example refers to another country that has faced significant changes in the past fifteen years. Croatia has experienced several major reforms since it declared independence from the former socialist state Yugoslavia in 1991. War devastations in the period of 1991-1995 slowed down many planned reforms and had long-term impact on high proportion of the necessity based entrepreneurs even in the period up to 2005. From 2000 the focus was on joining the European Union and to this end investments were made in terms of human development, infrastructure and education, while also supporting culture through several institutions. The prospect of joining the EU boosted the economy as can be seen from the economic indicators in **Figure 4.6** Annual GDP growth was steady at five percent and unemployment rates decreased from 20.5 percent to 8.4 percent between 2001 and 2008. After 2008 the financial crisis hit several EU economies particularly hard and Croatia also faced the consequences. Hence, when Croatia formally became the 28th EU Member State on 1 July 2013, this was still an important event but accompanied with a less positive atmosphere than was hoped for in the beginning of the negotiations. From **Figure 4.7** it can be seen that increasing unemployment rates from 2008 were accompanied by higher percentages of necessity-driven early-stage entrepreneurial activity. The pattern also shows a widening gap between nascent entrepreneurship and rates of owner-managers in new firms, suggesting that it is rather difficult for nascent entrepreneurs to get their ventures up and running.

FIGURE 4.6 GEM INDICATORS AND ECONOMIC INDICATORS FOR ARGENTINA, 2001- 2013



Sources: GEM Adult Population Surveys and IMF World Economic Outlook, October 2013

FIGURE 4.7 GEM INDICATORS AND ECONOMIC INDICATORS FOR CROATIA, 2001-2013



Sources: GEM Adult Population Surveys and IMF World Economic Outlook, October 2013
Note: Croatia participated in GEM since 2003

4.4 DISCUSSION AND OUTLOOK[20]

At this point, looking back at a significant but still relatively short period of fifteen years of GEM data collection, a fair number of observations have been done that now seem trivial, but were basically unknown before the project started. Before the start of this century, leading scholars had no information that discredited the view that "average new firm birth rates are roughly similar across economies" (cf. Reynolds et al., 1994, p. 443.). GEM has shown that early-stage entrepreneurial activity rates can vary by a factor of ten across economies. Before GEM started, there were basically two opposing views on whether entrepreneurship made an important contribution to economic growth or not. Partly thanks to GEM-based research, now it is known that the link is much more complex and interesting than the "all or nothing" arguments of the past; the two groups have in fact moved towards the middle and are collaborating increasingly.

GEM also underlined that not all entrepreneurship is about the pursuit of opportunity, especially in developing economies, and the ratio of necessity to opportunity entrepreneurship seems to be systematically linked to a country's stage of economic development (Acs, 2006, Acs and Amorós, 2008). It is perhaps these contributions – uncovering the vastly different quantity and quality of new business activity across nations, and fuelling study of the links between entrepreneurship and economic growth – that are GEM's main achievements to date.

There are still big challenges ahead. The advantage of GEM data is that different types of entrepreneurial activity as practiced by individuals can be examined, across economies or regions and over time. Different types of entrepreneurship may prove to have different effects on economic growth, at different stages of economic development. This chapter only showed a sneak preview of evidence on how economic crises may affect entrepreneurship in different institutional settings. More research in this area is to be expected, and important policy implications are likely to be derived from this. In turn this will also shed more light on the role of entrepreneurial activity in overcoming crises. For example, Bosma and Terjesen (2014) document initial evidence on how entrepreneurs respond to economic downturns. They show that owner-managers in new firms report to see additional opportunities resulting from the crisis, especially in national contexts characterized by lower performance on economic growth, higher unemployment rates (i.e., when the crisis is more severe) and less regulation in term of the number of procedures required to start a business. These entrepreneurs also tend to be opportunity-driven and ambitious in terms of job creation, innovativeness and international orientation. This information adds to the finding by Klapper and Love (2009), who found that in economies that were struck by the crisis, fewer new entries of firms have been observed.

The above makes clear that GEM has helped in understanding the prevalence, nature and role of entrepreneurship in the economy and the society at large. This is an important achievement and has been

[20] This section draws partly on overview articles by Bosma (2013) and Alvarez et al. (2013) and reflects the personal opinions of the authors of this report. It should be stressed that these does not necessarily coincide with the point of view of the Global Entrepreneurship Research Association, the formal entity that hosts GEM.

made possible by applying an annual data collection methodology consistently across different economies and over time, by in sum several hundreds of dedicated scholars across the globe. For some of the participating economies, GEM enabled evidence-based policy on entrepreneurship for the first time.

It is definitely worth looking to the future and enabling "dynamic capabilities" within GEM to respond to important changes that the world has seen in these fifteen years. GEM was initiated in a time when email was still a novelty, the possibilities of the Internet were highly underestimated and social media were basically non-existent. In the near future, new forms of data collection may be explored and adopted, recognizing opportunities offered by new (digital) technologies, capitalizing on the professional expertise and hands-on knowledge on entrepreneurship that exists with the national team members. Without a doubt there will be plenty of opportunities for enhancing our understanding of the economic and social impact of entrepreneurs across the globe.

5. ENTREPRENEURSHIP AND WELL-BEING

5.1 INTRODUCTION

Economic development has traditionally been measured using strictly finance-oriented indicators like GDP per capita. However, this material component of economic development represents only one dimension. As economics is a social science, it is quite surprising that the social component has, until recently, not been regarded as a key indicator for scholars and policy makers. It is exemplary that a different term is being used for this: well-being . The topic of well-being[21] has been gaining presence rapidly in social sciences and economics. The promotion of factors that could increase well-being of the population—for example, how people are satisfied with their lives and their jobs—is progressively seen as essential objectives of policy. Since the Kingdom of Bhutan introduced the notion of "gross national happiness," many measures have been developed to provide additional elements to the traditional economic-oriented measures of development (Angner, 2010). Stiglitz, Sen and Fitoussi (2009) suggest exploring the use of indicators of well-being to develop better policies: "The time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people's well-being."[22] "Happiness" can now be wisely compared across economies. Some recent examples are the World Happiness Report (Helliwell et al., 2013), edited under the endorsement of the United Nations, or the OECD measures of subjective well-being (OECD, 2013).

Considering GEM's objectives, some questions that emerge intuitively from this topic are the following: Do entrepreneurs (self-employed) experience more personal well-being than employees? Is personal well-being a driver to be an entrepreneur? Are opportunity-driven entrepreneurs experiencing higher levels of well-being than necessity-driven entrepreneurs? And what about ambitious versus non-ambitious entrepreneurs? And to what extent are differences, if any, contingent on the regional or national context? Surprisingly, there is not much literature and empirical evidence about the relationship between well-being (happiness or satisfaction) and entrepreneurial activities on an individual level (Cooper and Artz, 1995; Carree and Verheul, 2012). Specifically, there is a lack of evidence to consider whether and how entrepreneurship may matter for happiness and how happiness may matter for entrepreneurship (Naude et al., 2011).

As GEM data shows, in several economies, between 10% and 30% of a country's labor force could be considered early-stage entrepreneurs or business owners (see Chapter 2 in this report). If entrepreneurs generally experience higher levels of well-being, they can significantly raise aggregate well-being scores. Some empirical evidence shows that entrepreneurs do indeed experience higher levels of job satisfaction than employees. Empirical research suggests that this is because they value the independence and lifestyle flexibility of running their own business (Benz and Frey, 2004; Blanchflower, 2004; Lange, 2012; Moskowitz and Vissing-Jorgensen, 2002; Ajayi-Obe and Parker, 2005; Taylor, 2004). Furthermore, entrepreneurs experience "procedural utility," that the process of being an entrepreneur provides enjoyment over and above the material success of being an entrepreneur (Block and Koellinger, 2009). However, this initial evidence is still based on samples in a limited set of economies.

The main objective of this special topic is to measure different aspects of well-being of the individuals that participate in the GEM Project and to correlate these measures with entrepreneurship dynamics across

[21] GEM was not an exception in this. Even though the social context has always played a critical role in the GEM conceptual framework as an input factor, the social component as an output was only introduced in the GEM 2009 assessment (Bosma and Levie, 2010)
[22] The Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al., 2009).

economies. Following the scope and methodology of the GEM project, this special topic has produced relevant information at the country level as well as primary data from individuals about their own perception of well-being and entrepreneurial activities. This approach with large samples is unique and one of the first attempts to study the relationship between well-being and entrepreneurship at the individual level.

In 2013, the GEM surveys (APS and NES) included a special set of questions that provided evidence of the entrepreneurial activities and motivations in relation to well-being measures from the 2013 participant economies. One set of APS questions and NES questions related to Subjective Well-being were compulsory. The rest of the questions were optional. The general analysis contrasts the well-being indicators of the different stages of entrepreneurial activity with the population not involved in entrepreneurship. The motivation to become entrepreneurs was also analyzed.

5.2 DEFINITIONS AND OPERATIONALIZATION

Well-being is a complex construct, and there is not a clear consensus about how to measure well-being (Conceição and Bandura, 2008). This special topic adopts a set of tested constructs related to subjective well-being (life satisfaction), work-life balance and satisfaction with the job. These measures were included as a module in the GEM Adult Population Survey for 2013. Additionally four questions were developed to assess the framework conditions related to well-being within a country (or region) and included in the NES survey.

SUBJECTIVE WELL-BEING

Subjective well-being is related to the manner in which people experience the quality of their lives, and it comprises both emotional reactions and cognitive judgments (Diener, 1984). To measure subjective well-being, the Satisfaction With Life Scale SWLS (Pavot and Diener, 2008), a five-item instrument designed to measure global cognitive judgments of satisfaction with one's life, was adopted[23]. The scale is in the public domain (not copyrighted). Credit is given to the authors of the scale: Ed Diener, Robert A. Emmons, Randy J. Larsen and Sharon Griffin as noted in the 1985 article in the *Journal of Personality Assessment*[24]. These are the questions using five-point Likert scales, from 1 "Strongly Disagree" to 5 "Strong Agree":

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have obtained the important things I want in life.
5. If I could live my life again, I would not change anything.

These questions were posed to all employed and self-employed individuals in every country. Single indicators for each participant economies were calculated using similar procedures as described in Chapter 3 to calculate summarized variables for NES constructs.

WORK CONDITIONS AND WORK-LIFE BALANCE

An additional set of questions that relates to work conditions and work-life balance was included as an optional section, and included by 54 economies. Work conditions questions were designed to identify similarities and differences in current working conditions among employees and the self-employed, including self-determination and meaning, which are important elements of empowerment (Spreitzer et al., 1997), and stress at work[25]. The latter is an important component to measure psychological well-being (Blustein, 2008). Satisfaction with the work-life balance is defined as "an overall level of contentment resulting from an assessment of one's degree of success at meeting work and family role demands" (Valcour 2007, p. 1512). By focusing on overall satisfaction with the way work and personal life are managed, the fact that the significance of work or family life differs between individuals and that private life encompasses more than the family role alone is taken into account (Abendroth and den Dulk, 2011)[26].

ENTREPRENEURSHIP FRAMEWORK CONDITIONS AND WELL-BEING

To corroborate the opinions provided by the adult population, NES included four questions that inquire whether the national (or regional) conditions help the work-life balance of individuals and measure the perception that entrepreneurs have, in general, more work and life satisfaction:

1. In my country, the general conditions (economic, social, political, cultural) allow people to perfectly harmonize personal and working (professional/labor) life.
2. In my country, existing regulations allow people to perfectly harmonize personal and working (professional/labor) life.
3. In my country, entrepreneurs are more satisfied with their working (professional/labor) life than non-entrepreneurs.
4. In my country, entrepreneurs are more satisfied with their personal life than non-entrepreneurs.

This report provides an initial assessment based mainly on compulsory indicators of subjective well-being. These indicators will be related to early-stage entrepreneurial activity (TEA) and established business owners. Additionally some analyzes about the motivation to become an entrepreneur are shown. Motivations are strongly linked to well-being, so this initial assessment will highlight these

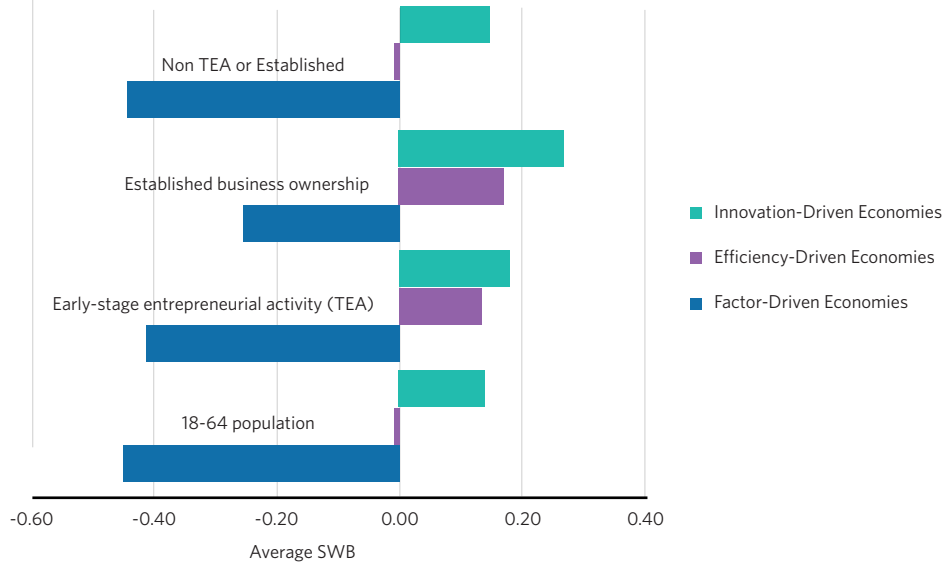
[23] For example, UNDP adopted this scale to measure life satisfaction in some countries. The Coca-Cola Happiness Institute (created in Spain in 2008 to provide credible scientific information to support the link between happiness and wellness) also uses the SWLS.
[24] A set of translations in the most common languages is available at http://internal.psychology.illinois.edu/~ediener/SWLS.html.
[25] These questions were adapted from the additional set of questions required by the EU Commission to the GEM project since 2011. These questions also have a five-point Likert scale: (1) I can decide on my own how I go about doing my work; (2) The work I do is meaningful to me; (3) At my work, I am not exposed to excessive stress; (4) I am satisfied with my current work; (5) I am satisfied with my current income from work. Income includes both salary and non-salary income such as payments in kind and other benefits.
[26] We adapted Valcour (2007) original scale to three items, using the five-point Likert scale: (1) I am satisfied with the way my time is divided between work and private life; (2) I am satisfied with my ability to balance the needs of my work with those of my personal or family life; (3) I am satisfied with the opportunity to perform well at work and to substantially contribute to home-related responsibilities at the same time.

relationships. Further analyzes with more detail will be produced in a full special topic report.

5.3 SUBJECTIVE WELL-BEING INDICATORS AND ENTREPRENEURIAL ACTIVITY ACROSS DIFFERENT GROUPS OF ECONOMIES

Table 5.1 presents the prevalence indicators of the standardized scale[27] of SWLS. This scale has the hypothetical range of -1.7 (less subjective well-being at country-level) to 1.7 (higher rate of subjective well-being). Each column deals with the scores for individuals involved in typical phases and types of entrepreneurship GEM discerns (such as TEA and owner-managers of established businesses, motivation and gender; see also Chapter 2) and those of employees who are not involved in such entrepreneurship activities. One first observation is that the prevalence of subjective well-being indicators varies widely across world regions. Sub-Saharan African economies exhibit the lowest rates, whereas Latin and North Americans have the highest rates. Single country analysis shows that the "traditional" welfare states like Nordic economies and well-developed economies like Netherlands, Switzerland and Singapore also exhibit high rates of subjective well-being, confirming the results of other studies adopting similar studies (Helliwell et al., 2013; OECD, 2013). These differences suggest that in each country and in world regions with close common heritage, framework conditions such as economic, political, institutional and cultural contexts have singular influence on the population perception about their well-being and by consequences that shape the indicators of entrepreneurship activities.

FIGURE 5.1 SUBJETIVE WELL-BEING, BY PHASE OF ENTREPRENEURSHIP AND STAGES OF ECONOMIC DEVELOPMENT



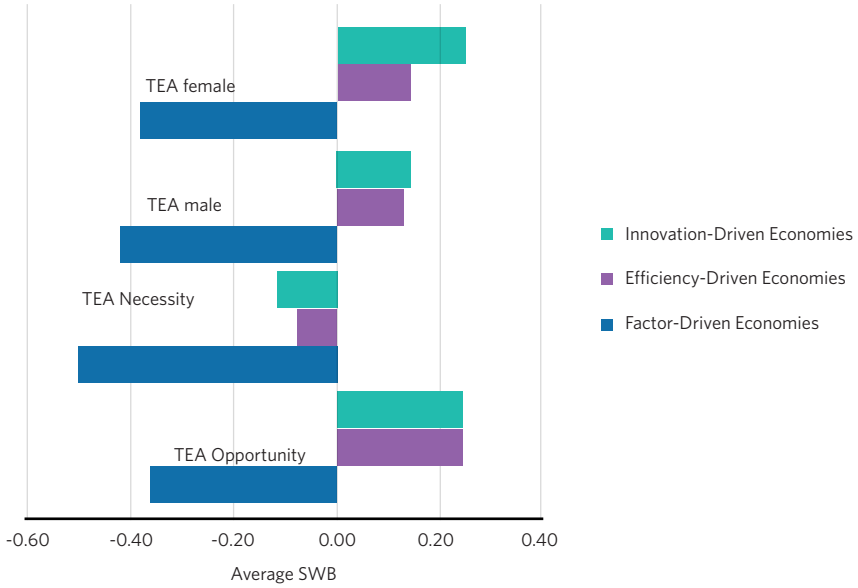
One interesting finding is that in all regions, the average of both TEA and established entrepreneurs exhibit relatively higher rates of subjective well-being contrasted with all populations and individuals not involved in entrepreneurship activities. In addition, owner-managers in established firms tend to rate their level of subjective well-being higher than early-stage entrepreneurs, who may have to deal with more uncertainty and pressure to develop the firm into a sustainable situation. **Figure 5.1** shows the differences by phase of economic development. As was commented, less-developed economies, mainly in Sub-Saharan Africa, have the lowest rates of subjective well-being. Efficiency-driven and innovation-driven economies do not differ substantially related to TEA population. Established entrepreneurs exhibit the highest rates of subjective well-being on the three development stages. Even though these results are exploratory in nature and need to be treated in this manner, they show initial evidence that involvement in entrepreneurial activities, both in the early-stage and established phases, is related to personal evaluation of higher subjective well-being[28]. Additional analyses will be presented in a forthcoming report dedicated to this topic.

An analysis of opportunity-based versus necessity-motivated entrepreneurship, confirms that necessity-based entrepreneurs across the three development stages have considerably lower rates of subjective well-being (**Figure 5.2**). Necessity-based entrepreneurs in factor-driven economies have the lowest average of subjective well-being (-0.5). Innovation- and efficiency-driven economies do not exhibit great differences in scores on subjective well-being for both opportunity- and necessity-based entrepreneurs. The extreme cases involve Zambia, with a rate of -1.26 on necessity-driven entrepreneurs (and also exhibiting a low score on opportunity-based TEA with -1.31) and Switzerland with 0.78 on opportunity-based entrepreneurs. **Figure 5.2** also shows the well-being indicators for early-

[27] This scale has mean=0

[28] For example, it should be noted that the category 'employees' includes those individuals who can be identified as 'entrepreneurial employees'. Therefore, if these would have been singled out a better comparison between entrepreneurial active individuals in the labor force and their counterparts would be achieved and differences may actually be more pronounced for economies exhibiting a large number of entrepreneurial employees (for example in Scandinavia, see Bosma et al., 2013).

FIGURE 5.2 SUBJETIVE WELL-BEING AND ENTREPRENEURSHIP MOTIVATIONS AND GENDER, STAGES OF ECONOMIC DEVELOPMENT



stage entrepreneurs by gender. Interestingly, female entrepreneurs in innovation-driven economies exhibit on average a higher degree of subjective well-being (0.25). At country level, Puerto Rican male entrepreneurs (on average) exhibit a higher degree of subjective-well-being with 0.9; the highest rate across all the groups identified in **Table 5.1.** In counterpart, Zambia's women entrepreneurs exhibit the lowest degrees of subjective well-being (-1.3). As was highlighted, these results are exploratory but show initial evidence that for women, being an entrepreneur is correlated with more subjective well-being. It should be stressed that this is not a cause-effect conclusion, and further analyses will be required inferring causality. For example, women in many developed economies have been increasing their education, have more egalitarian environments and by consequence have more active participation not only in the labor force but also in other spheres such as politics and social issues. Conditions that support the well-being of women, that could also shape women entrepreneurs.

One interesting finding is that in all regions, the average of both TEA and established entrepreneurs exhibit relatively higher rates of subjective well-being contrasted with all populations and individuals not involved in entrepreneurship activities. In addition, owner-managers in established firms tend to rate their level of subjective well-being higher than early-stage entrepreneurs, who may have to deal with more uncertainty and pressure to develop the firm into a sustainable situation. **Figure 5.1** shows the differences by phase of economic development. As was commented, less-developed economies, mainly in Sub-Saharan Africa, have the lowest rates of subjective well-being. Efficiency-driven and innovation-driven economies do not differ substantially related to TEA population. Established entrepreneurs exhibit the highest rates of subjective well-being on the three development stages. Even though these results are exploratory in nature and need to be treated in this manner, they show initial evidence that involvement in entrepreneurial activities, both in the early-stage and established phases, is related to personal evaluation of higher subjective well-being[28]. Additional analyses will be presented in a forthcoming report dedicated to this topic.

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TABLE 5.1 SUBJECTIVE WELL-BEING GENERAL RESULTS BY GEOGRAPHIC REGION

REGION / Economies	18-64 population	Early-stage entrepreneurial activity (TEA)	Established business ownership	Non TEA or Established	TEA Opportunity	TEA Necessity	TEA Male	TEA Female
LATIN AMERICA & CARIBBEAN								
Argentina	0.41	0.39	0.52	0.41	0.46	0.20	0.40	0.38
Brazil	0.17	0.14	0.22	0.17	0.28	-0.21	0.23	0.05
Chile	0.58	0.65	0.76	0.57	0.73	0.30	0.67	0.61
Colombia	0.17	0.27	0.31	0.17	0.33	0.03	0.30	0.24
Ecuador	0.54	0.62	0.56	0.54	0.68	0.49	0.69	0.54
Guatemala	0.37	0.44	0.40	0.37	0.49	0.32	0.46	0.41
Jamaica	-0.53	-0.42	-0.44	-0.54	-0.44	-0.37	-0.23	-0.63
Mexico	0.21	0.22	0.39	0.21	0.37	0.07	0.18	0.28
Panama	0.72	0.66	0.73	0.72	0.67	0.61	0.73	0.55
Peru	0.46	0.71	0.42	0.46	0.77	0.51	0.75	0.66
Suriname	0.01	0.39	0.02	0.01	0.50	-0.01	0.42	0.34
Uruguay	0.29	0.34	0.43	0.28	0.34	0.33	0.33	0.35
Trinidad and Tobago	0.38	0.37	0.70	0.38	0.37	0.38	0.36	0.39
Average	0.29	0.37	0.39	0.29	0.43	0.20	0.41	0.32
Average	**0.29**	**0.37**	**0.39**	**0.29**	**0.43**	**0.20**	**0.41**	**0.32**
MIDDLE EAST & NORTH AFRICA								
Algeria	-0.43	-0.33	-0.31	-0.43	-0.29	-0.44	-0.34	-0.32
Iran	-0.15	-0.11	-0.09	-0.15	0.01	-0.31	-0.19	0.14
Israel	0.07	0.16	0.24	0.08	0.23	-0.08	0.04	0.41
Libya	-0.42	-0.31	-0.21	-0.42	-0.28	-0.49	-0.24	-0.44
Average	**-0.23**	**-0.15**	**-0.09**	**-0.23**	**-0.08**	**-0.33**	**-0.18**	**-0.05**
SUB-SAHARAN AFRICA								
Angola	-0.31	-0.02	0.38	-0.31	0.15	-0.45	0.13	-0.18
Botswana	-1.06	-0.96	-0.73	-1.06	-0.90	-1.12	-0.88	-1,05
Ghana	-0.55	-0.55	-0.37	-0.55	-0.41	-0.80	-0.48	-0.61
Malawi	-0.70	-0.65	-0.61	-0.70	-0.57	-0.75	-0.64	-0.66
Nigeria	-0.22	-0.24	-0.05	-0.22	-0.26	-0.18	-0.31	-0.17
South Africa	-0.49	-0.11	-0.07	-0.49	-0.06	-0.20	-0.16	-0.04
Uganda	-0.47	-0.55	-0.66	-0.46	-0.68	-0.13	-0.63	-0.47
Zambia	-1.26	-1.29	-1.23	-1.26	-1.31	-1.26	-1.28	-1.30
Average	**-0.63**	**-0.55**	**-0.42**	**-0.63**	**-0.51**	**-0.61**	**-0.53**	**-0.56**
ASIA PACIFIC & SOUTH ASIA								
China	-0.32	-0.28	-0.09	-0.32	-0.25	-0.34	-0.25	-0.32
India	0.27	-0.01	0.52	0.26	0.03	-0.10	-0.07	0.13
Indonesia	-0.05	-0.02	0.02	-0.05	-0.01	-0.07	-0.04	-0.01
Japan	-0.23	-0.31	-0.08	-0.23	-0.26	-0.43	-0.55	0.14
Korea, Republic of	-0.42	-0.42	-0.47	-0.42	-0.27	-0.69	-0.49	-0.24
Malaysia	-0.04	-0.01	0.31	-0.04	0.15	-0.70	-0.11	0.15
Philippines	-0.23	-0.03	0.00	-0.23	0.01	-0.11	-0.24	0.18
Singapore	0.18	0.25	0.23	0.18	0.25	0.26	0.17	0.39
Taiwan	-0.12	-0.08	-0.05	-0.12	0.01	-0.31	-0.11	-0.03

REGION / Economies	18-64 population	Early-stage entrepreneurial activity (TEA)	Established business ownership	Non TEA or Established	TEA Opportunity	TEA Necessity	TEA Male	TEA Female
Thailand	-0.01	0.06	0.17	-0.02	0.07	-0.03	0.02	0.09
Vietnam	-0.26	-0.27	0.07	-0.27	-0.23	-0.41	-0.32	-0.22
Average	**-0.11**	**-0.10**	**0.06**	**-0.11**	**-0.05**	**-0.27**	**-0.18**	**0.02**
EUROPE- EU28								
Belgium	0.16	0.16	0.27	0.16	0.18	0.17	0.12	0.25
Croatia	-0.31	-0.05	-0.14	-0.32	0.12	-0.35	-0.08	0.03
Czech Republic	-0.03	0.00	0.10	-0.03	0.05	-0.15	-0.02	0.05
Estonia	-0.12	0.20	0.07	-0.12	0.21	-0.04	0.07	0.41
Finland	0.40	0.39	0.58	0.40	0.42	0.21	0.36	0.44
France	-0.03	0.09	0.08	-0.03	0.17	-0.62	-0.01	0.30
Germany	0.12	0.06	0.27	0.12	0.18	-0.40	-0.04	0.22
Greece	-0.50	-0.30	-0.48	-0.50	-0.25	-0.46	-0.23	-0.50
Hungary	-0.29	-0.19	-0.06	-0.29	0.03	-0.77	-0.27	-0.06
Ireland	0.24	0.31	0.43	0.24	0.31	0.36	0.30	0.34
Italy	0.02	-0.01	0.19	0.02	0.13	-0.64	0.01	-0.06
Latvia	-0.20	0.02	-0.13	-0.20	0.12	-0.34	-0.01	0.08
Lithuania	-0.08	0.11	0.18	-0.08	0.15	-0.06	0.13	0.05
Luxembourg	0.36	0.23	0.08	0.36	0.21	-0.51	0.16	0.37
Netherlands	0.29	0.47	0.42	0.28	0.50	0.26	0.55	0.35
Poland	-0.16	0.00	-0.03	-0.16	0.13	-0.12	-0.05	0.11
Portugal	-0.14	0.11	0.07	-0.14	0.20	-0.13	0.10	0.13
Romania	-0.11	0.17	0.19	-0.12	0.27	-0.06	0,18	0.15
Slovakia	-0.21	-0.09	0.04	-0.21	0.13	-0.41	-0.16	0.02
Slovenia	0.08	0.16	0.19	0.08	0.23	-0.09	0.16	0.16
Spain	0.08	0.15	0,15	0.08	0.23	0.01	0,13	0.19
Sweden	0.24	0.31	0.30	0.24	0.40	-0.34	0.15	0.59
United Kingdom	0.30	0,11	0.32	0.29	0.22	-0.45	0.22	-0.03
Average	**0.00**	**0.10**	**0.13**	**0.00**	**0.19**	**-0.21**	**0.08**	**0.16**
EUROPE- NON EU28								
Bosnia and Herzegovina	-0.14	0.11	0.10	-0.14	0.34	-0.06	0.13	0.06
Macedonia	-0.11	0.04	0.17	-0.12	0.23	-0.05	-0.05	0.24
Norway	0.61	0.53	0.70	0.61	0.51	0.44	0.49	0.63
Russia	-0.81	-0.60	-0.27	-0.81	-0.46	-0.83	-0.55	-0.64
Switzerland	0.62	0.74	0.85	0.62	0.78	0.06	0.63	0.85
Average	**0.03**	**0.16**	**0.31**	**0.03**	**0.28**	**-0.09**	**0.13**	**0.23**
NORTH AMERICA								
Canada	0.33	0.32	0.51	0.33	0.41	-0.22	0.22	0.46
Puerto Rico	0.49	0.79	0.91	0.49	0.78	0.75	0.90	0.60
United States	0.22	0.14	0.54	0.22	0.26	-0.38	0.14	0.14
Average	**0.35**	**0.42**	**0.65**	**0.35**	**0.48**	**0.05**	**0.42**	**0.40**

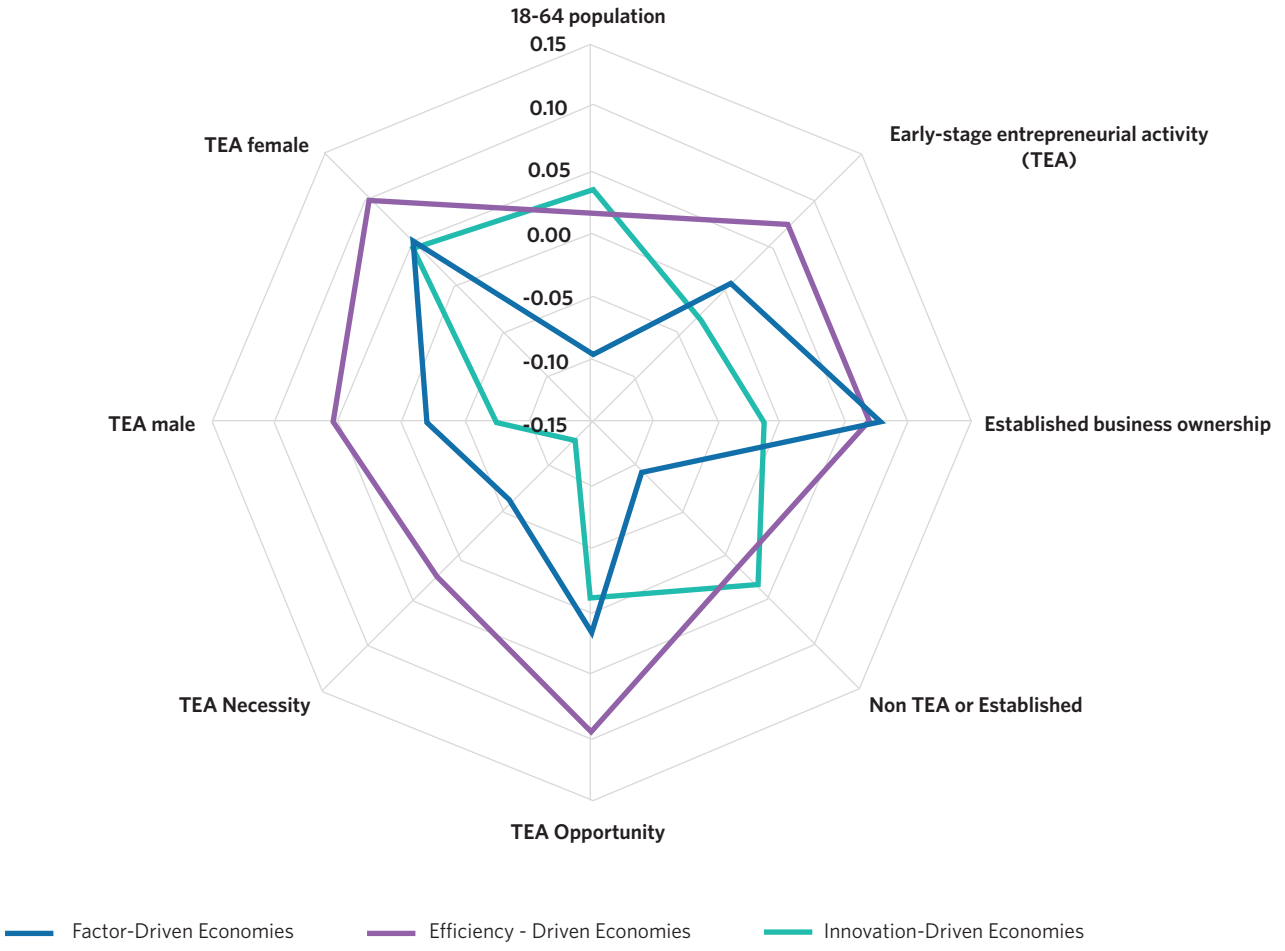
Note: In green are the most satisfied populations, and in red are the less satisfied populations.

5.4 WORK SATISFACTION AND WORK-LIFE BALANCE INDICATORS, AND ENTREPRENEURSHIP ACTIVITY ACROSS DIFFERENT GROUPS OF ECONOMIES

Fifty-four economies[29] agreed to participate in the non-compulsory questions of the special topic module. A very brief analysis shown in **Figure 5.3** relates to the scale of work-life balance[30]. It is interesting that, for the three stages, entrepreneurs exhibit more work-life balance satisfaction than people not involved in entrepreneurial activities. Highest rates among developing economies are observed in Malawi, Philippines, Algeria and Ecuador, and among developed economies in Italy and Puerto Rico. The lowest rates are in Uganda and Mexico. Some developed economies also exhibit fairly low work-life balance assessments, including Korea and Belgium. Women entrepreneurs are also more satisfied with their work-life balance than men. Highest evaluations from women entrepreneurs are from Ecuador and Trinidad and Tobago. Lowest rates are from Mexico and Uganda. On average, the entrepreneurs in efficiency-driven economies exhibit higher degrees of satisfaction with their work-life balance. Necessity-based entrepreneurs in innovation driven economies, have the lowest degrees of work-life balance. One possible explanation, which will require more analysis, is that several necessity-based entrepreneurs in innovation-driven economies that are living the economic downturn were displaced from the job market compared to employees, losing many of their privileges.

Figure 5.4 shows one indicator related to general work satisfaction. This indicator is the average value of the single question: "I am satisfied with my current work." The scale is 1 to 5[31]. The indicators exhibit similar behaviors to other indicators of well-being: entrepreneurs in factor-driven economies have less satisfaction with their activities. This is accentuated on necessity-based entrepreneurs. Opportunity-based entrepreneurs average

FIGURE 5.3 SATISFACTION WITH BALANCE BETWEEN PERSONAL AND PROFESSIONAL LIFE, AND ENTREPRENEURSHIP INDICATORS, BY STAGES OF ECONOMIC DEVELOPMENT



[29] Algeria, Angola, Belgium, Bosnia and Herzegovina, Botswana, Canada, Chile, China, Colombia, Croatia, Ecuador, Estonia, Finland, France, Ghana, Greece, Hungary, India, Indonesia, Iran, Israel, Italy, Jamaica, Japan, Korea, Latvia, Libya, Lithuania, Luxembourg, Macedonia, Malawi, Malaysia, Mexico, Netherlands, Nigeria, Panama, Peru, Philippines, Portugal, Puerto Rico, Romania, Russia, Slovakia, Slovenia, South Africa, Spain, Suriname, Sweden, Trinidad and Tobago, Uganda, United Kingdom, Uruguay, Vietnam and Zambia.

[30] Principal component analyzes standardized scale adapted from Valcour (2007) original scale to three items and was described on footnote 26 in this chapter.

[31] Because the figure is not using a normalized scale, in order to show clear difference among the three stages, the scale only shows values from 3 to 4.5.

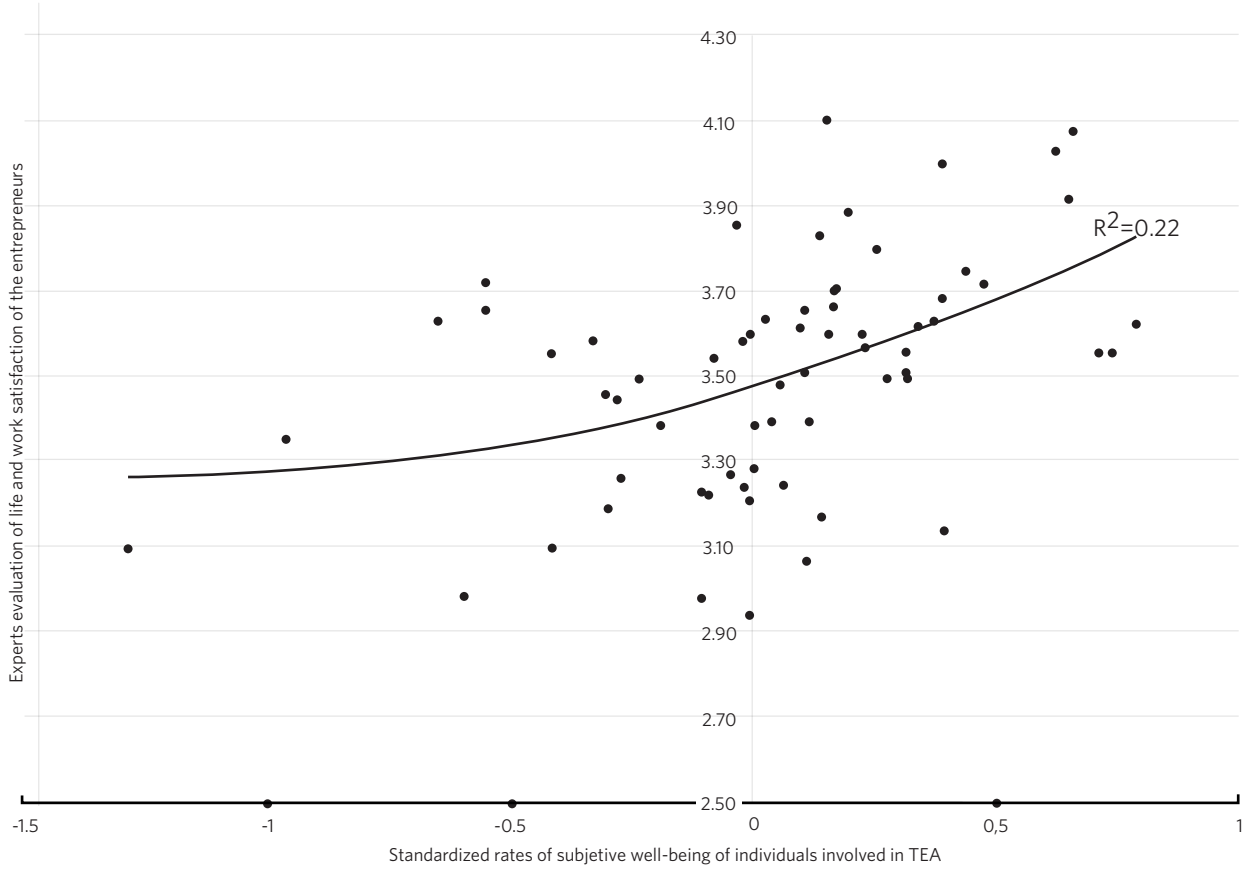
FIGURE 5.4 SATISFACTION WITH WORK AND ENTREPRENEURSHIP INDICATORS BY STAGES OF ECONOMIC DEVELOPMENT

a little more work satisfaction than people not involved in entrepreneurship activities. Again it is important to emphasize that these results are exploratory and need to be treated in this manner. Additional analysis with all the variables included in the well-being special topic and more detail of the economies will be presented in a further specific report.

5.5 ENTREPRENEURSHIP FRAMEWORK CONDITIONS AND WELL-BEING

Finally, this section makes a brief analysis that correlates with the NES´ variables related to well-being, as was defined previously in this chapter. The analysis compares the prevalence rate of subjective well-being among individuals involved in TEA (from the GEM APS) against similar evaluations made by experts in each participating economy (from the GEM NES). This latest variable was calculated in the similar way of NES EFCs (see Chapter 3) summarizing the two questions related to the life and work satisfaction of entrepreneurs within a country. **Figure 5.5** shows that there is a weak but positive relationship between both variables. As was highlighted in Section 5.3, the perceived subjective well-being increases with the degree of development. The counterpart of experts' opinions also reflects this phenomenon: Experts from more developed countries evaluate the general satisfaction with the work and life of the entrepreneur with higher rates.

FIGURE 5.5 SATISFACTION WITH WORK AND LIFE (EXPERTS' OPINIONS) VERSUS SUBJECTIVE WELL-BEING INDICATORS OF INDIVIDUALS INVOLVED IN TEA.



This preliminary assessment of entrepreneurship and well-being opens the possibility to explore the role of the women and men entrepreneurs beyond the traditional notion of development generally associated with economic indicators. As Layard (2003:3) claimed: "GDP is a hopeless measure of welfare." Therefore, the relationship between GDP and entrepreneurship can explain only part of the role of entrepreneurship in human development (Naude, Amorós and Cristi, 2013).

GEM Research Exhibit 4

Dirk De Clercq, Dominic S.K. Lim and Chang Hoon Oh. **"Individual-level resources and new business activity: The contingent role of institutional context."** Entrepreneurship Theory and Practice, Volume 37, Issue 2, pages 303–330, March 2013.

RESEARCH ISSUE

The new business creation process occurs across multiple levels of society, influenced by individual-level factors such as a person's resources as well as country-level institutions. Thus, the allocation of individual resources to the exploitation of new business opportunities cannot be considered in isolation from the broader institutional context in which such opportunity exploitation takes place. However, few studies have considered how the combination of individual- and country-level factors drives new business activity. This oversight has great significance, in that individual resource endowments may matter for new business creation, but so does whether and how people share and complement their resources effectively with those of other members of society. In this study, Dirk De Clercq, Dominic Lim and Chang Hoon Oh address this gap by investigating whether and how a country's institutional context is instrumental in channeling individual-level resources from its members toward new business activities.

THEORY AND METHOD

The researchers investigate the contingency effects of a country's formal and informal institutions on the instrumentality of individual-level resources in people's engagement in new business activity. They theorize that while formal institutions (entrepreneurship-friendly financial and educational systems) increase the extent to which individuals can complement their personal resources (financial, human and social capital) with relevant resources that reside in their institutional environment, informal institutions (trust, lack of hierarchy and lack of conservatism) increase the extent to which individual resources are easily shared and distributed across actors. The study combines data from GEM's Adult Population Survey and National Expert Survey with data from the World Values Survey and Schwartz' work on cultural values. The analyses apply multilevel hierarchical logit regression to a panel data set consisting of 181,450 observations from 32 economies spanning the 2003–2007 period.

FINDINGS

The study highlights that people's access to financial capital (household income), human capital (entrepreneurship-specific knowledge) and social capital (exposure to other entrepreneurs) enhances the likelihood to start a new business. Further, a country's institutions significantly influence individuals' leverage of both their human and social capital. However, the effect of their financial capital on the likelihood to start a new business does not vary across different institutional settings.

IMPLICATIONS

The study suggests that policymakers should take a targeted approach to stimulate and sustain new business activity by implementing specific policy tools to promote new businesses, depending on the individual resource they want to exploit the most. For example, when the emphasis is on leveraging networks of entrepreneurs who live in close proximity (for example social capital), the customization of both the financial and educational systems to support entrepreneurship and the promotion of trust-based relationships appears most effective. In cultures characterized by high levels of hierarchy and conservatism, government should focus not just on providing people with easier access to different capital types but also to ensure that external resources can be combined effectively with the skills and experiences that aspiring entrepreneurs already possess. Otherwise, their knowledge, even if inherently useful for entrepreneurship, may be channeled toward alternative activities that demand less effort and confront less uncertainty.

CLOSING WORDS BY BILL BYGRAVE*

GEM itself is a great example of social entrepreneurship. It is the largest entrepreneurship research organization anywhere in the world. It surely must be one of the largest multi-national research projects in the business sciences and probably the social sciences. Looking back at its first few years, GEM was fortunate that it was started in 1997 when the world was gripped with entrepreneurial fever because of the astounding things that Internet entrepreneurs were doing. We were blessed to have the Internet for facilitating our email communications; for enabling us to use the Web for our research; and for disseminating the results of our research. Also we were fortunate that GEM was started when the Kauffman Foundation was in its infancy and was looking for big entrepreneurship projects that it could support; that the Foundation was already a substantial benefactor of Babson College; and that I and my late Babson colleague Jeff Timmons were closely connected with the leaders of the Foundation. GEM could not have been started at a better time. As I like to say, there is no luck in entrepreneurship except in the timing.

What turned out to be a major turning point occurred in the late spring/early summer of 1998. Tony Blair became the UK prime minister in 1997 and was keen to stimulate British competitiveness. Michael Hay had good connections with Tony Blair's new administration, including connections to Tony Blair himself. Michael arranged for LBS and Babson to make a presentation on the preliminary GEM results to a UK government seminar entitled "Enterprising Nation: Building an Entrepreneurial Culture." The seminar was sponsored by the Chancellor of the Exchequer and the President of the Board of Trade. It was attended by about 30 British opinion makers including three members of Blair's cabinet. The GEM delegation comprised Michael Hay, Paul Reynolds, David Potter (Psion/Symbian), and me. Our presentation and subsequent discussion were well-received by the policy makers. It gave us confidence that GEM had potential—lots of potential. Equally important, it was a boost to our raising money and recruiting additional teams.

I want to thank everyone who has ever been involved with GEM for building such an enduring organization. GEM has published 15 Annual Global Reports and many special reports. National teams have published almost 1000 national reports. Countries comprising about 95% of the world's GDP and more than two-thirds of its population have participated in GEM. It's amazing.

As GEM looks some things to consider are:

Quality of entrepreneurship. As the USA and many other nations struggle to pull out of the slumping economies that resulted from the banking collapse in 2008, there is more and more concern about the quality of the jobs being created—or perhaps I should say lack of quality. In the USA for example, the unemployment rate has dropped to its lowest level in 5 years. Unfortunately, the majority of the new jobs are "low quality" because they are part-time and/or low paying. I wonder if the same applies to entrepreneurship. What percent of new businesses are part-time and/or in industries where wages and profits are low? For example, about half of all the 29 million businesses in the USA are part-time undertakings and half are full-time. Only 6 million of them are employer companies with one or more employees in addition to the self-employed owner.

Internet and the Web. The Internet and the Web have transformed entrepreneurship by creating new opportunities and facilitating the way in which entrepreneurs run their businesses. For example, almost 750,000 Americans reported that selling things on eBay was their primary or secondary source of income in 2005.

Financing entrepreneurship. GEM in recent years has not paid enough attention to the financing aspects of entrepreneurship. It's time to address this deficiency in the APS, and to be bold and add topics such as microfinance and crowdfinancing. The Venture Capital Journal, for instance, recently devoted an entire edition to crowdfinancing.

Vision. Bill Gates said that the vision thing is easy; it's the implementation that's so hard. Michael Hay and I found that out with GEM. Our early vision was to use GEM as the basis for what I will call a "World Entrepreneurship Forum" modeled along the lines of the World Economic Forum, but not nearly as grand. So far our vision remains just that... nothing but a vision. Now that GEM is well-established and recognized worldwide, it would be wonderful if it could move towards that vision.

* William D. Bygrave, B.A., Boston University; M.A., B.A., D.Phil., Oxford University; M.B.A., Northeastern University; Ph.D. (hon), University of Ghent; Ph.D. (hon), Glasgow Caledonian University. Dr. Bygrave joined Babson College in 1993. He spent the 1992-1993 academic year at INSEAD where he introduced an MBA course in Entrepreneurial Finance and led a pan-European team from eight nations that studied entrepreneurs' attitudes toward realizing value and harvesting their companies. One of the outcomes of that research was the initiative that led to the founding of EASDAQ (the European equivalent of NASDAQ). Dr. Bygrave has founded a venture-capital-backed high-tech company, managed a division of a NYSE-listed high-tech company, co-founded a pharmaceutical database company, and was a member of the investment committee of a venture capital firm. He has written more than 50 papers on topics that include venture capital, entrepreneurship, nuclear physics, hospital pharmaceuticals, and philosophy of science. He is co-editor of **Entrepreneurship** (2007); The Venture Capital Handbook (1999); **The Portable MBA in Entrepreneurship** (third edition, 2003); among other books, as serving as an editor of **Entrepreneurship Theory and Practice.**

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AQUI

TABLE A.1 ENTREPRENEURIAL ATTITUDES AND PERCEPTIONS IN THE GEM ECONOMIES IN 2013 BY ECONOMIC DEVELOPMENT

	Economies	*Perceived opportunities*	*Perceived capabilities*	*Fear of failure**	*Entrepreneurial intentions **	*Entrepreneurship as a good career choice*	*High status to successful entre-preneurs*	*Media attention for entrepreneurship*
Stage 1: factor-driven (includes transition economies to phase 2)	Algeria	61.9	55.5	32.9	36.0	79.6	84.2	47.4
	Angola	56.7	56.3	63.7	38.3	66.8	72.6	62.1
	Botswana	65.9	67.4	18.6	59.2	80.7	83.7	85.6
	Ghana	69.3	85.8	24.6	45.6	81.6	94.1	82.4
	India	41.4	55.8	38.9	22.8	61.5	70.4	61.4
	Iran	37.0	56.5	36.4	30.6	64.1	82.4	59.9
	Libya	52.3	58.6	33.0	62.1	85.2	84.3	38.2
	Malawi	78.9	89.5	15.1	66.7			
	Nigeria	84.7	87.0	16.3	46.8	81.2	61.9	76.5
	Philippines	47.9	68.4	36.2	44.1	84.9	79.3	86.8
	Uganda	81.1	83.8	15.0	60.7	88.3	95.3	87.5
	Vietnam	36.8	48.7	56.7	24.1	63.4	81.5	80.5
	Zambia	76.8	79.6	15.4	44.5	66.5	71.2	69.0
	Average (unweighted)	**60.8**	**68.7**	**31.0**	**44.7**	**75.3**	**80.1**	**69.8**
Stage 2: efficiency-driven (includes transition economies to phase 3)	Argentina	40.9	61.7	24.9	31.0			
	Bosnia and Herzegovina	23.3	50.5	26.1	21.8	82.3	71.9	39.2
	Brazil	50.9	52.6	38.7	27.2	84.6	82.2	84.1
	Chile	68.4	59.6	28.0	46.5	69.1	67.2	66.3
	China	33.1	36.3	34.3	14.4	69.6	73.5	71.3
	Colombia	67.7	57.8	31.8	54.5	90.9	71.4	67.5
	Croatia	17.6	47.2	35.2	19.6	61.5	43.1	42.9
	Ecuador	57.3	74.3	34.9	39.9	66.5	67.7	79.1
	Estonia	46.1	40.0	38.8	19.4	53.2	58.6	40.7
	Guatemala	58.8	66.4	33.3	39.0	86.8	71.5	55.1
	Hungary	18.9	37.5	44.8	13.7	45.7	74.1	28.4
	Indonesia	46.7	62.0	35.2	35.1	70.8	79.8	75.3
	Jamaica	51.2	79.1	27.0	39.5	79.4	80.9	81.7
	Latvia	34.8	47.8	41.6	22.7	61.4	59.5	58.6
	Lithuania	28.7	35.4	41.7	22.4	68.6	57.2	47.6
	Macedonia	37.2	49.7	35.6	29.1	69.5	67.9	66.8
	Malaysia	40.7	28.0	33.3	11.8	41.8	45.0	62.2
	Mexico	53.6	58.5	31.6	16.9	57.8	62.3	50.8
	Panama	58.7	66.4	28.9	27.0	64.4	59.2	70.4
	Peru	61.0	62.2	25.7	33.9	70.4	71.2	71.5

	Economies	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions **	Entrepreneurship as a good career choice	High status to successful entre-preneurs	Media attention for entrepreneurship
	Poland	26.1	51.8	46.7	17.3	66.8	59.9	58.5
	Romania	28.9	45.9	37.3	23.7	73.6	72.6	61.3
	Russia	18.2	28.2	29.0	2.6	65.7	68.0	49.0
	Slovakia	16.1	51.0	33.2	16.4	49.2	58.5	51.7
	South Africa	37.9	42.7	27.3	12.8	74.0	74.7	78.4
	Suriname	52.7	53.5	24.4	13.1	75.6	79.3	65.9
	Thailand	45.3	44.4	49.3	18.5	74.5	74.8	77.2
	Uruguay	47.9	61.1	26.9	25.3	58.1	56.0	57.5
	Average (unweighted)	**41.7**	**51.8**	**33.8**	**24.8**	**67.8**	**67.0**	**61.4**
Stage 3: innovation-driven	Belgium	31.5	33.8	46.6	7.8	54.8	52.2	43.9
	Canada	57.4	48.5	35.2	13.5	60.6	70.1	69.6
	Czech Republic	23.1	42.6	35.8	13.7		47.8	
	Finland	43.8	33.3	36.7	8.3	44.3	85.5	68.5
	France	22.9	33.2	41.1	12.6	55.3	70.0	41.4
	Germany	31.3	37.7	38.6	6.8	49.4	75.2	49.9
	Greece	13.5	46.0	49.3	8.8	60.1	65.1	32.4
	Ireland	28.3	43.1	40.4	12.6	49.6	81.2	59.9
	Israel	46.5	36.2	51.8	24.0	60.6	80.3	49.1
	Italy	17.3	29.1	48.6	9.8	65.6	72.4	48.1
	Japan	7.7	12.9	49.4	4.1	31.3	52.8	57.6
	Korea, Republic of	12.7	28.1	42.3	12.1	51.3	67.8	67.6
	Luxembourg	45.6	43.3	42.9	14.1	39.4	70.6	36.3
	Netherlands	32.7	42.4	36.8	9.1	79.5	66.2	55.2
	Norway	63.7	34.2	35.3	5.2	49.3	75.5	56.9
	Portugal	20.2	48.7	40.1	13.2			
	Puerto Rico	28.3	53.0	24.6	13.1	17.9	50.1	68.8
	Singapore	22.2	24.8	39.8	15.1	50.9	59.4	75.3
	Slovenia	16.1	51.5	29.6	12.4	57.4	68.1	50.5
	Spain	16.0	48.4	36.3	8.4	54.3	52.3	45.6
	Sweden	64.4	38.8	36.6	9.5	52.0	71.5	58.5
	Switzerland	41.5	44.7	28.2	9.8	40.5	65.0	47.8
	Taiwan	42.0	27.2	40.7	27.8	73.0	64.5	87.1
	Trinidad and Tobago	58.0	75.3	19.8	28.7	79.5	72.0	61.0
	United Kingdom	35.5	43.8	36.4	7.2	54.1	79.3	49.6
	United States	47.2	55.7	31.1	12.2			
	Average (unweighted)	**33.4**	**40.6**	**38.2**	**12.3**	**53.5**	**67.3**	**55.7**

TABLE A.2 ENTREPRENEURIAL ACTIVITY AND PERCEPTIONS IN THE GEM ECONOMIES IN 2013 BY ECONOMIC DEVELOPMENT

	Economies	*Nascent Entrepreneurship rate*	*New Business ownership rate*	*Early-stage Entrepreneurial activity (TEA)*	*Established business ownership rate*	*Discontinuation of Business*	*Necessity-driven (% of TEA)*	*Improvement-driven opportunity (% of TEA)*
Stage 1: factor-driven (includes transition economies to phase 2)	Algeria	2.2	2.6	4.9	5.4	3.3	21.3	62.3
	Angola	8.0	14.7	22.2	8.5	24.1	26.1	40.3
	Botswana	11.0	10.2	20.9	3.4	17.7	26.3	52.0
	Ghana	8.5	17.7	25.8	25.9	8.3	33.3	44.1
	India	5.1	4.9	9.9	10.7	1.5	38.8	35.9
	Iran	6.4	6.1	12.3	10.6	5.7	38.0	35.8
	Libya	6.6	4.7	11.2	3.4	8.1	8.1	60.3
	Malawi	10.1	18.8	28.1	12.0	30.2	43.7	29.4
	Nigeria	20.0	20.7	39.9	17.5	7.9	25.4	52.3
	Philippines	12.0	6.7	18.5	6.6	12.3	43.6	38.0
	Uganda	5.6	20.0	25.2	36.1	20.1	25.1	47.5
	Vietnam	4.0	11.5	15.4	16.4	4.2	25.1	62.2
	Zambia	22.6	18.0	39.9	16.6	19.8	38.8	37.2
	Total	**9.4**	**12.0**	**21.1**	**13.3**	**12.6**	**30.3**	**46.0**
Stage 2: efficiency-driven (includes transition economies to phase 3)	Argentina	10.5	5.6	15.9	9.6	5.5	29.8	47.4
	Bosnia and Herzegovina	5.8	4.6	10.3	4.5	6.2	58.9	22.0
	Brazil	5.1	12.6	17.3	15.4	4.7	28.6	57.4
	Chile	15.4	9.6	24.3	8.5	7.6	20.1	57.7
	China	5.2	8.9	14.0	11.0	2.7	33.9	35.9
	Colombia	13.6	10.3	23.7	5.9	5.4	18.1	26.7
	Croatia	6.3	2.0	8.3	3.3	4.5	37.4	29.8
	Ecuador	25.3	13.6	36.0	18.0	8.3	33.6	32.1
	Estonia	8.8	4.5	13.1	5.0	2.1	14.8	50.1
	Guatemala	7.6	4.9	12.3	5.1	3.0	31.4	44.2
	Hungary	6.0	3.7	9.7	7.2	2.9	28.0	38.7
	Indonesia	5.7	20.4	25.5	21.2	2.4	25.4	43.7
	Jamaica	8.0	6.0	13.8	6.3	7.4	40.6	34.2
	Latvia	8.1	5.3	13.3	8.8	3.5	21.2	52.7
	Lithuania	6.1	6.4	12.4	8.3	3.5	23.3	55.2
	Macedonia	3.4	3.5	6.6	7.3	3.3	61.0	22.9
	Malaysia	1.5	5.2	6.6	6.0	1.5	18.4	64.9
	Mexico	11.9	3.3	14.8	4.2	6.6	6.7	26.3
	Panama	15.4	5.2	20.6	3.5	3.4	18.6	39.8
	Peru	17.8	5.9	23.4	5.4	4.2	22.5	54.2

	Economies	Nascent Entrepreneurship rate	New Business ownership rate	Early-stage Entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of Business	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
	Poland	5.1	4.3	9.3	6.5	4.0	47.4	32.7
	Romania	6.2	4.2	10.1	5.3	4.3	31.6	31.6
	Russia	3.0	2.8	5.8	3.4	1.6	35.4	42.0
	Slovakia	6.1	3.6	9.5	5.4	5.5	40.2	40.2
	South Africa	6.6	4.0	10.6	2.9	4.9	30.3	31.5
	Suriname	3.9	1.3	5.1	1.7	0.8	17.8	57.6
	Thailand	7.9	10.4	17.7	28.0	3.5	18.7	67.8
	Uruguay	8.5	5.7	14.1	4.9	3.4	12.0	36.8
	Total	**8.4**	**6.4**	**14.4**	**8.0**	**4.2**	**28.8**	**42.0**
Stage 3: innovation-driven	Belgium	3.1	1.9	4.9	5.9	1.9	29.0	43.9
	Canada	7.8	4.7	12.2	8.4	4.4	15.1	66.9
	Czech Republic	4.9	2.7	7.3	5.3	3.4	22.7	60.3
	Finland	2.7	2.7	5.3	6.6	2.0	17.9	66.0
	France	2.7	1.8	4.6	4.1	1.9	15.7	60.9
	Germany	3.1	2.0	5.0	5.1	1.5	18.7	55.7
	Greece	3.3	2.3	5.5	12.6	5.0	23.5	35.8
	Ireland	5.5	3.8	9.2	7.5	2.5	18.0	43.8
	Israel	5.3	4.8	10.0	5.9	4.8	17.4	49.2
	Italy	2.4	1.1	3.4	3.7	1.9	18.7	18.4
	Japan	2.2	1.5	3.7	5.7	1.5	25.0	59.6
	Korea, Republic of	2.7	4.2	6.9	9.0	2.5	36.5	51.1
	Luxembourg	6.0	2.8	8.7	2.4	2.8	5.6	56.6
	Netherlands	4.7	4.8	9.3	8.7	2.1	8.0	67.1
	Norway	2.9	3.4	6.3	6.2	1.6	4.0	60.8
	Portugal	4.2	4.2	8.2	7.7	2.8	21.4	50.7
	Puerto Rico	6.6	1.8	8.3	2.0	1.8	21.5	42.9
	Singapore	6.4	4.4	10.7	4.2	3.3	8.4	68.8
	Slovenia	3.6	2.9	6.5	5.7	2.6	24.1	53.4
	Spain	3.1	2.2	5.2	8.4	1.9	29.2	33.2
	Sweden	5.9	2.5	8.2	6.0	2.4	9.7	58.4
	Switzerland	4.5	3.7	8.2	10.0	2.3	7.5	67.2
	Taiwan	3.3	5.0	8.2	8.3	5.0	28.7	45.8
	Trinidad and Tobago	11.4	8.5	19.5	11.4	4.1	11.2	76.0
	United Kingdom	3.6	3.6	7.1	6.6	1.9	16.1	45.2
	United States	9.2	3.7	12.7	7.5	3.8	21.2	57.4
	TOTAL	**4.7**	**3.3**	**7.9**	**6.7**	**2.8**	**18.3**	**53.7**

TABLE A.3 GENDER DISTRIBUTION OF EARLY-STAGE ENTREPRENEURS (TEA) AND NECESSITY VS OPPORTUNITY ENTREPRENEURSHIP BY GEPGRAPHIC REGION, 2013

REGION	Economies	MALE TEA (% of adult male population)	FEMALE TEA (% of adult female population)	MALE TEA Opportunity (% of TEA males)	FEMALE TEA Opportunity (% of TEA females)	MALE TEA Necessity (% of TEA males)	FEMALE TEA Necessity (% of TEA females)
Latin America & Caribbean	Argentina	19%	13%	76%	60%	24%	38%
	Brazil	17%	17%	76%	66%	23%	34%
	Chile	30%	19%	82%	68%	15%	28%
	Colombia	30%	17%	86%	71%	13%	27%
	Ecuador	39%	33%	69%	56%	28%	41%
	Guatemala	14%	11%	73%	63%	27%	36%
	Jamaica	15%	12%	63%	42%	32%	51%
	Mexico	17%	13%	50%	50%	8%	6%
	Panama	24%	17%	83%	76%	15%	23%
	Peru	27%	20%	80%	69%	19%	27%
	Suriname	7%	3%	76%	86%	21%	11%
	Trinidad and Tobago	23%	16%	88%	88%	12%	11%
	Uruguay	20%	9%	90%	78%	8%	20%
	Average (unweighted)	**22%**	**15%**	**76%**	**67%**	**19%**	**27%**
Middle East & North Africa	Algeria	6%	3%	68%	73%	22%	20%
	Iran	18%	6%	62%	60%	37%	39%
	Israel	14%	7%	76%	79%	18%	16%
	Libya	15%	7%	90%	95%	9%	5%
	Average (unweighted)	**13%**	**6%**	**74%**	**76%**	**22%**	**20%**
Sub-Saharan Africa	Angola	24%	20%	72%	70%	24%	28%
	Botswana	22%	20%	78%	65%	18%	34%
	Ghana	23%	28%	74%	59%	24%	40%
	Malawi	29%	27%	64%	48%	36%	51%
	Nigeria	39%	41%	74%	74%	26%	25%
	South Africa	12%	9%	72%	65%	27%	35%
	Uganda	25%	25%	79%	70%	20%	30%
	Zambia	39%	41%	59%	55%	37%	41%
	Average (unweighted)	**27%**	**26%**	**71%**	**63%**	**27%**	**35%**
Asia Pacific & South Asia	China	16%	12%	70%	58%	28%	41%
	India	13%	6%	58%	58%	40%	37%
	Indonesia	26%	25%	76%	73%	24%	27%
	Japan	5%	3%	73%	63%	20%	34%
	Korea, Republic of	10%	4%	60%	63%	37%	34%
	Malaysia	8%	5%	78%	87%	22%	13%
	Philippines	19%	18%	60%	52%	40%	48%
	Singapore	13%	8%	89%	91%	9%	8%
	Taiwan	11%	5%	72%	71%	28%	29%

REGION		MALE TEA (% of adult male population)	FEMALE TEA (% of adult female population)	MALE TEA Opportunity (% of TEA males)	FEMALE TEA Opportunity (% of TEA females)	MALE TEA Necessity (% of TEA males)	FEMALE TEA Necessity (% of TEA females)
	Thailand	18%	17%	83%	74%	14%	24%
	Vietnam	17%	14%	75%	75%	25%	25%
	Average (unweighted)	**14%**	**11%**	**72%**	**69%**	**26%**	**29%**
Europe – EU28	Belgium	6%	3%	63%	54%	28%	31%
	Croatia	11%	5%	63%	54%	34%	44%
	Czech Republic	10%	4%	78%	71%	21%	27%
	Estonia	17%	9%	81%	75%	13%	18%
	Finland	7%	4%	70%	78%	21%	12%
	France	6%	3%	82%	76%	16%	14%
	Germany	6%	4%	78%	74%	19%	18%
	Greece	8%	3%	78%	68%	22%	27%
	Hungary	12%	7%	79%	54%	20%	42%
	Ireland	12%	6%	79%	78%	19%	17%
	Italy	5%	2%	80%	62%	16%	26%
	Latvia	17%	10%	77%	78%	21%	22%
	Lithuania	17%	8%	77%	71%	21%	28%
	Luxembourg	12%	6%	80%	71%	5%	7%
	Netherlands	12%	7%	89%	83%	7%	9%
	Poland	12%	6%	50%	46%	46%	51%
	Portugal	11%	6%	77%	72%	21%	22%
	Romania	12%	8%	67%	67%	33%	30%
	Slovakia	12%	7%	52%	70%	47%	29%
	Slovenia	9%	4%	75%	65%	23%	25%
	Spain	6%	4%	69%	64%	27%	33%
	Sweden	10%	6%	82%	83%	9%	10%
	United Kingdom	9%	6%	82%	77%	14%	20%
	Average (unweighted)	**10%**	**6%**	**74%**	**69%**	**22%**	**24%**
Europe – Non EU28	Bosnia and Herzegovina	13%	7%	46%	31%	54%	69%
	Macedonia	9%	4%	36%	31%	61%	61%
	Norway	9%	4%	92%	86%	6%	0%
	Russia	6%	5%	63%	59%	37%	34%
	Switzerland	8%	8%	85%	89%	10%	4%
	Average (unweighted)	**9%**	**6%**	**64%**	**59%**	**33%**	**34%**
North America	Canada	15%	10%	83%	78%	13%	18%
	Puerto Rico	11%	6%	77%	77%	22%	21%
	United States	15%	10%	73%	74%	23%	18%
	Average (unweighted)	**13%**	**9%**	**77%**	**76%**	**19%**	**19%**

TABLE A.4 JOB GROWTH EXPECTATIONS FOR EARLY-STAGE ENTREPRENEURSHIP ACTIVITY BY GEOGRAPHIC REGION, 2013

REGION	Economies	0 - 5 jobs (% adult population)	5 - 19 jobs (% adult population)	20 or more jobs (% adult population)
Latin America & Caribbean	Argentina	9.6	2.7	1.4
	Brazil	12.7	1.3	0.4
	Chile	13.2	5.6	3.1
	Colombia	8.0	7.1	6.6
	Ecuador	25.5	5.3	1.3
	Guatemala	4.0	0.4	0.1
	Jamaica	4.3	0.6	0.3
	Mexico	4.3	3.2	0.1
	Panama	16.2	2.2	0.6
	Peru	12.8	4.2	0.7
	Suriname	1.9	0.3	0.0
	Trinidad and Tobago	10.4	4.2	2.0
	Uruguay	6.7	2.3	1.6
	Average (unweighted)	**10.0**	**3.0**	**1.4**
Middle East & North Africa	Algeria	2.4	0.1	0.5
	Iran	5.5	2.0	1.4
	Israel	4.5	1.6	1.4
	Libya	4.1	2.1	1.6
	Average (unweighted)	**4.1**	**1.5**	**1.2**
Sub-Saharan Africa	Angola	5.0	3.3	0.8
	Botswana	10.8	4.2	2.7
	Ghana	20.2	2.1	0.7
	Malawi	24.7	0.2	0.1
	Nigeria	19.0	7.9	2.4
	South Africa	6.4	1.8	1.1
	Uganda	23.4	1.4	0.4
	Zambia	33.5	1.8	0.0
	Average (unweighted)	**17.9**	**2.8**	**1.0**
Asia Pacific & South Asia	China	7.0	2.1	1.7
	India	4.4	0.7	0.1
	Indonesia	12.6	0.9	0.2
	Japan	1.7	0.6	1.0
	Korea, Republic of	4.3	1.1	0.8
	Malaysia	5.6	0.9	0.1
	Philippines	15.2	0.8	0.3
	Singapore	4.6	2.9	2.5
	Taiwan	3.3	1.8	2.5

REGION	Economies	0 - 5 jobs (% adult population)	5 - 19 jobs (% adult population)	20 or more jobs (% adult population)
	Thailand	12.9	2.2	0.7
	Vietnam	9.5	2.4	2.0
	Average (unweighted)	**7.4**	**1.5**	**1.1**
Europe – EU28	Belgium	3.5	0.7	0.4
	Croatia	3.2	1.5	1.0
	Czech Republic	3.5	1.2	0.9
	Estonia	6.5	2.7	0.8
	Finland	3.9	0.7	0.4
	France	3.0	0.7	0.2
	Germany	3.0	0.6	0.5
	Greece	2.8	0.2	0.2
	Hungary	6.0	1.2	1.4
	Ireland	5.0	2.1	1.1
	Italy	2.5	0.2	0.2
	Latvia	4.5	2.8	2.8
	Lithuania	4.5	2.7	1.7
	Luxembourg	4.0	1.2	0.5
	Netherlands	6.9	0.8	0.5
	Poland	3.9	2.4	1.2
	Portugal	4.5	1.4	0.8
	Romania	3.4	2.7	1.8
	Slovakia	4.4	1.6	1.2
	Slovenia	2.8	1.5	0.7
	Spain	3.6	0.5	0.2
	Sweden	6.1	0.5	0.7
	United Kingdom	4.2	0.9	0.8
	Average (unweighted)	**4.2**	**1.3**	**0.9**
Europe – Non EU28	Bosnia and Herzegovina	3.8	2.6	1.0
	Macedonia	2.9	1.1	0.9
	Norway	4.2	0.7	0.5
	Russia	2.0	1.0	0.5
	Switzerland	5.2	1.0	0.3
	Average (unweighted)	**3.6**	**1.3**	**0.7**
North America	Canada	6.4	2.5	1.6
	Puerto Rico	6.1	1.1	0.0
	United State	6.6	2.2	1.7
	Average (unweighted)	**6.4**	**1.9**	**1.1**

APPENDIX 2: CHARACTERISTICS OF GEM APS SURVEYS

Team	*Interview Procedure*	*Sample size*
Algeria	Face-to-face Interviews	2500
Angola	Face-to-face Interviews	2146
Argentina	Fixed Line Telephone	2200
Belgium	Fixed Line and Mobile Telephone	2001
Bosnia and Herzegovina	Fixed Line Telephone	2004
Botswana	Face-to-face Interviews	2204
Brazil	Face-to-face Interviews	10000
Canada	Fixed Line and Mobile Telephone	3286
Chile	Face-to-face and Fixed Line and Mobile Telephone	6703
China	Face-to-face Interviews	3634
Colombia	Fixed Line Telephone	3400
Croatia	Fixed Line Telephone	2000
Czech Republic	Mobile Telephone	5009
Ecuador	Face-to-face Interviews	2030
Estonia	Fixed Line and Mobile Telephone	2004
Finland	Mobile Telephone	2005
France	Fixed Line Telephone	2002
Germany	Mobile Telephone	5996
Ghana	Face-to-face Interviews	2100
Greece	Fixed Line Telephone	2000
Guatemala	Face-to-face Interviews	2142
Hungary	Mobile Telephone	2000
India	Face-to-face Interviews	3000
Indonesia	Face-to-face Interviews	4500
Iran	Face-to-face Interviews	3637
Ireland	Fixed Line and Mobile Telephone	2002
Israel	Fixed Line and Mobile Telephone	2039
Italy	Fixed Line Telephone	2052
Jamaica	Face-to-face Interviews	2246
Japan	Fixed Line Telephone	2000
Korea, Republic of	Fixed Line Telephone	2000
Latvia	Mobile Telephone	2000
Libya	Face-to-face Interviews	2246
Lithuania	Fixed Line and Mobile Telephone	2000
Luxembourg	Fixed Line and Online Panel	2005
Macedonia	Fixed Line and Mobile Telephone	2000
Malawi	Face-to-face Interviews	2094
Malaysia	Face-to-face Interviews	2000
Mexico	Face-to-face Interviews	2801
Netherlands	Fixed Line and Mobile Telephone	3005
Nigeria	Face-to-face Interviews	2604
Norway	Fixed Line and Mobile Telephone	2000
Panama	Face-to-face Interviews	2004
Peru	Face-to-face Interviews	2075

Team	*Interview Procedure*	*Sample size*
Philippines	Face-to-face Interviews	2500
Poland	Fixed Line and Mobile Telephone	2000
Portugal	Fixed Line and Mobile Telephone	2003
Puerto Rico	Face-to-face Interviews	2000
Romania	Fixed Line and Mobile Telephone	2021
Russia	Face-to-face Interviews	2029
Singapore	Fixed Line Telephone	2000
Slovakia	Mobile Telephone	2007
Slovenia	Fixed Line and Mobile Telephone	2002
South Africa	Face-to-face Interviews	3450
Spain	Fixed Line Telephone	24600
Suriname	Face-to-face Interviews	2290
Sweden	Fixed Line and Mobile Telephone and Online Panel	2506
Switzerland	Fixed Line and Mobile Telephone	2003
Taiwan	Fixed Line Telephone	2007
Thailand	Face-to-face and Fixed Line Telephone	2362
Trinidad and Tobago	Face-to-face Interviews	2036
Turkey	Fixed Line and Mobile Telephone	
Uganda	Face-to-face Interviews	2513
United Kingdom	Fixed Line and Mobile Telephone	11017
United States	Fixed Line and Mobile Telephone	5698
Uruguay	Fixed Line Telephone	2010
Vietnam	Face-to-face Interviews	2000
Zambia	Face-to-face Interviews	2099

GEM NATIONAL TEAMS 2013

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