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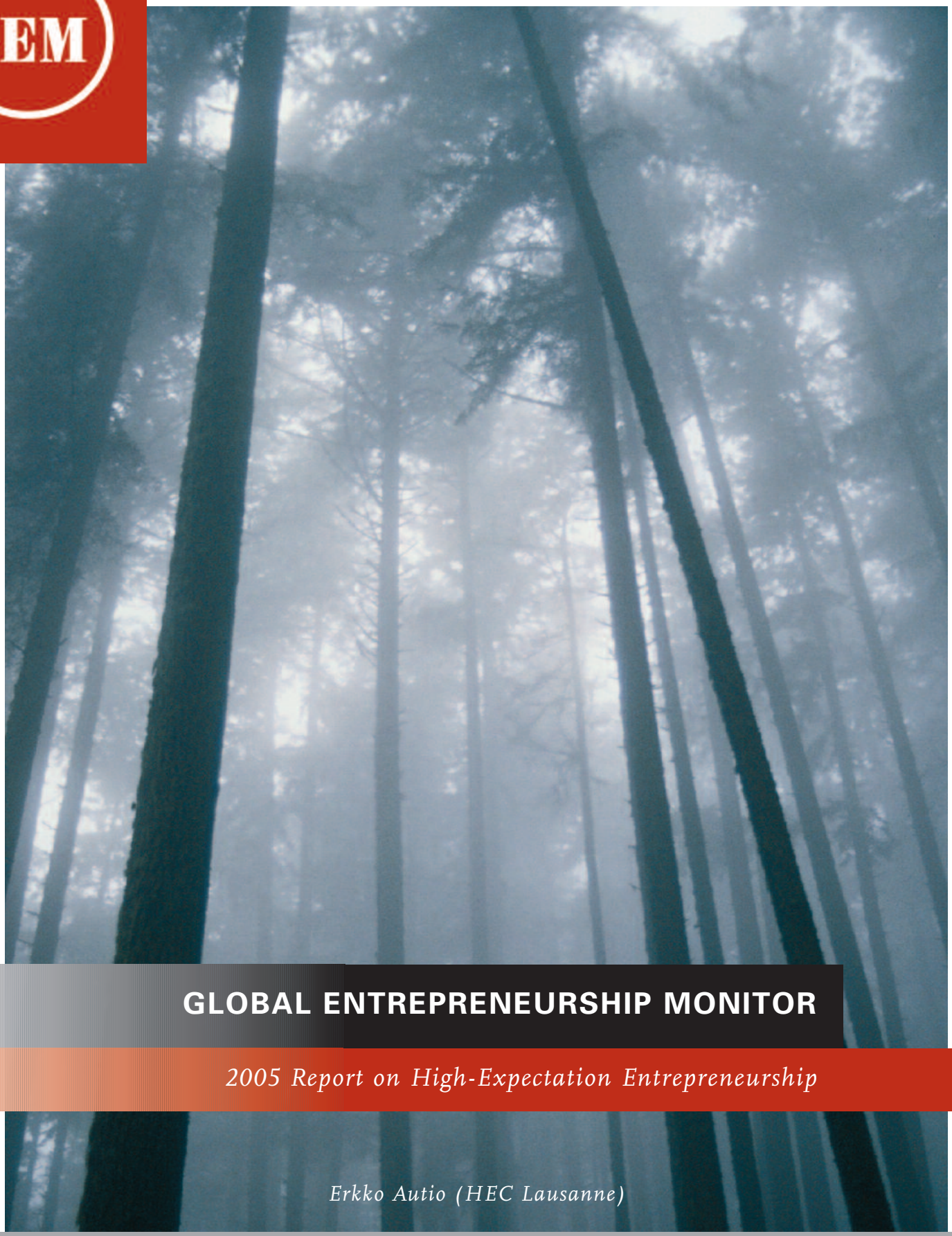

GLOBAL ENTREPRENEURSHIP MONITOR

2005 Report on High-Expectation Entrepreneurship

Erkko Autio (HEC Lausanne)

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MAZARS

BABSON

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Preface

Over the past seven years, research by the Global Entrepreneurship Monitor (GEM) has demonstrated the importance of entrepreneurship to the world economy, but this is the first time an academic study has focused specifically on high-expectation entrepreneurship on a global scale.

Having grown from small foundations into an international organisation itself, Mazars fosters a strong entrepreneurial spirit and recognises the impact of high-expectation entrepreneurs in job creation, innovation, and economic growth. As the findings in this report show, high-expectation entrepreneurs, though relatively few and far between, are responsible for up to 80% of all jobs created by entrepreneurs and their significance should not be underestimated.

Mazars is proud to sponsor and support GEM in this initiative. Our hope is that this research not only provides valuable insight into the phenomenon of high-expectation entrepreneurs, but also contributes to the wider policy imperative of governments and supra-national organisations around the world for whom fostering entrepreneurship and economic growth is of specific importance.

David Chapman
Partner, International Chair of Advisory Services
Mazars

Executive Summary

Key Findings

High-expectation entrepreneurial activity represents only a small proportion of all entrepreneurial activity, yet it explains the bulk of expected new jobs by cohorts of nascent entrepreneurs and baby businesses. Depending on country and world region, only some 3% to 17% of nascent entrepreneurs and baby businesses expect to employ 20 or more employees within five years. Only some 1 % to 7 % of nascent entrepreneurs and baby businesses expect to employ 50 or more employees within five years. However, its economic potential is significant, as high-expectation entrepreneurs are responsible for up to 80% of total expected jobs by all entrepreneurs.

The rate of high-expectation entrepreneurial activity varies significantly among world regions and individual countries. The highest adult-age population-level participation rate in high-expectation entrepreneurial activity is observed for North America (Canada and USA), Anglo-Saxon countries[1] (Australia, Ireland, New Zealand, United Kingdom, and USA), and Oceania (Australia and New Zealand). For these regions, the population-level prevalence rate of high-expectation entrepreneurial activity ranges from approximately 1% to 1.6%. The lowest adult participation rate in high-expectation activity is observed for European and highly developed Asian countries (Hong Kong, Korea, Japan, and Singapore), where this rate is approximately 0.5%. In Spain, adult-age participation in high-expectation entrepreneurial activity (20+ expected jobs) is only approximately 0.2%.

The prevalence rate of high-expectation entrepreneurial activity in Europe and highly developed Asia is worryingly low. There are no differences between European country groups (large EU countries, small European countries, new EU member countries), even though differences can be observed between individual countries. Spain, in particular, stands out because of its low participation rate in high-expectation entrepreneurial activity.

High household income, high education level, and opportunity motivation are most strongly associated with high-growth expectations. The greatest distinguishing elements for high-expectation entrepreneurial activity are observed for income, education, and opportunity motivation. These are suggestive of the individual-level economic trade-offs related to the entrepreneurial decision.

Population cells differ significantly in terms of high-expectation entrepreneurial activity. The highest prevalence observed for a single population cell (a 'population cell' refers to a sub-group of the general population, defined using one or several demographic characteristics such as age category, gender, and education level) is ten times higher than the population-wide participation rate in high-expectation entrepreneurial activity. Of baby business managers, 25-34 year old, high-income and well educated males displayed a 4.4% participation rate in high-expectation activity – meaning that nearly one in twenty individuals in this population cell are actively engaged with high-expectation entrepreneurial start-ups.

The relative prevalence of high-expectation activity appears positively associated with national entrepreneurial framework conditions. The correlation analysis suggests that the anatomy of entrepreneurial activity is more strongly associated with national conditions than is the overall prevalence of high-expectation activity. This may be associated with differential opportunities for entrepreneurship in high- and low-income economies.

Active policy has a role to play in promoting high-expectation entrepreneurial activity. Even though direct causal inferences are not possible from the present analysis, the evidence of differential relationships with national conditions for different forms of entrepreneurial activity suggests that there is room for active entrepreneurship policy interventions.

Governments should be aware of the importance of high-expectation and high-potential entrepreneurial activity and consider introducing highly selective support measures and policies. To the extent to which the goal of government policy is to support job creation through entrepreneurial activity, governments should be aware of the highly skewed distribution of job creation expectations within populations of nascent and baby businesses. They should study who is behind high-potential entrepreneurial activity, and how this kind of activity could be supported. Given the skewness of the distributions reported here, highly selective policy measures could prove more effective for job creation purposes than non-selective ones.

1 We use the term 'Anglo-Saxon' to refer to English-speaking countries that have a strong 'Anglo-Saxon' tradition in terms of how their financial market institutions are structured.

Introduction

According to empirical surveys, new firms create the bulk of new jobs. Studies also show that only a small sub-set of all new firms are responsible for the majority of all new jobs created through the entrepreneurial process. It is thus difficult to over-emphasize the importance of high-expectation entrepreneurial activity[2] for economic and social wellbeing.

High-expectation entrepreneurial activity is also rare, which makes it very difficult to obtain first-hand empirical data on this important phenomenon. Thus far, there have been only a handful of studies of the economic importance of high-growth new firms, and all of these studies have been limited to single countries. So far, there have been no international surveys of high-expectation entrepreneurial activity. Thus, it is not known whether the prevalence of high-expectation entrepreneurial activity varies between countries and world regions, and how high-expectation entrepreneurs differ from the mainstream entrepreneurial phenomenon.

An international comparative analysis of high-expectation entrepreneurial activity is now possible because of the accumulation of GEM adult population survey data. This report presents the first global survey of the high-expectation entrepreneurial phenomenon. This is the first report to provide an overview of the prevalence of high-expectation entrepreneurial activity in different countries and world regions. This is also the first empirical report on the anatomy of the high-expectation entrepreneurial activity in different countries and world regions, as well as on the characteristics of the individuals who report high-expectation entrepreneurial activity. Finally, this is the first report to analyze bivariate relationships between high-expectation prevalence rates and national entrepreneurial framework conditions, as captured by GEMs annual surveys of national experts.

The Global Entrepreneurship Monitor (GEM) was created in 1997 to study the economic impact of, and determinants of, national-level entrepreneurial activity. With its coverage of 44 countries worldwide, GEM is the largest co-ordinated research effort ever undertaken to study population-level entrepreneurial activity. Because of its worldwide reach and rigorous scientific method, GEM has become the world's most influential and authoritative source of empirical data and expertise on the entrepreneurial potential of nations. GEM operates as a not-for-profit international academic research consortium[3] in over 40 countries and produces both annual executive reports for public consumption, special topic reports on selected issues, as well as academic research published in leading academic journals.

Co-founded by London Business School and Babson College in 1997 with the contribution of leading scholars[4], GEM has expanded from a comparison of 10 countries in 1999 to 34 countries in 2004. Over the years, 44 countries have participated in GEMs annual adult population surveys. The participating countries of GEM in different years are listed in Table 1.

Table 1 GEM Participating Countries

	1999	2000	2001	2002	2003	2004
Argentina		✓	✓	✓	✓	✓
Australia		✓	✓	✓	✓	✓
Belgium		✓	✓	✓	✓	✓
Brazil		✓	✓	✓	✓	✓
Canada	✓	✓	✓	✓	✓	✓
Chile				✓	✓	
P.R. China				✓	✓	
Croatia				✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓
Equador						✓
Finland	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓
Greece					✓	✓
Hong Kong				✓	✓	✓
Hungary			✓	✓		✓
Iceland				✓	✓	✓
India		✓	✓	✓		
Ireland		✓	✓	✓	✓	✓
Israel	✓	✓	✓	✓		✓
Italy	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓
Jordan						✓
Korea		✓	✓	✓		
Mexico			✓	✓		
Netherlands			✓	✓	✓	✓
New Zealand			✓	✓	✓	✓
North Ireland					✓	✓
Norway		✓	✓	✓	✓	✓
Peru						✓
Poland						✓
Portugal			✓			✓
Scotland		✓	✓	✓	✓	✓
Singapore		✓	✓	✓	✓	✓
Slovenia				✓	✓	✓
South Africa			✓	✓	✓	✓
Spain		✓	✓	✓	✓	✓
Sweden		✓	✓	✓	✓	✓
Switzerland				✓	✓	
Chinese Taipei				✓		
Thailand				✓		
Uganda					✓	✓
UK	✓	✓	✓	✓	✓	✓
USA	✓	✓	✓	✓	✓	✓
Venezuela					✓	
Wales		✓	✓	✓	✓	✓

2 In this report, 'high-expectation entrepreneurial activity' refers to entrepreneurial firms (nascent and new) that expect to achieve rapid growth in employment size.

3 This consortium operates under an umbrella organization called GERA, or the Global Entrepreneurship Research Association.

4 Actively contributing founding team members of GEM were Professor Michael Hay (currently of London Business School), Professor Bill Bygrave (Babson College), Professor Paul D. Reynolds (Florida International University), Dr Jonathan Levie (University of Strathclyde Hunter Center of Entrepreneurial Management), Professor Erkko Autio (HEC Lausanne), and Professor Harry J. Sapienza (University of Minnesota).

The GEM Method

Sources of Data

GEMs core activity is the annual compilation of primary empirical data from its member countries on the adult-age population's participation in entrepreneurial activity. On the basis of this data, GEM calculates the Total Entrepreneurial Activity (TEA) rate for each participating country. The TEA rate represents the share of working- and adult-age individuals (18 – 64 years old) who are either actively trying to start new entrepreneurial companies, or who are currently acting as owner-managers of new entrepreneurial companies. In each participating country, at least 2,000 randomly selected adult-age individuals are interviewed by professional survey interviewers, either by telephone or in person[5]. In addition to entrepreneurial activities, the interviews also gather data on each person's attitudes and beliefs regarding prevailing social and cultural norms, data on the start-up attempt, as well as demographic data on the respondent[6]. This data enables detailed analysis of the anatomy of entrepreneurial activity in each GEM country; this is analyzed and reported in detail in GEMs country reports.

The adult population survey data is complemented with two additional data collection efforts. First, in each participating country, GEM surveys experts knowledgeable of national conditions for entrepreneurial activity. An extensive mail and interview survey questionnaire is used and circulated among national policy-makers, entrepreneurs, financiers, consultants, representatives of entrepreneurship support initiatives, entrepreneurship academics, and other individuals knowledgeable of the national context for entrepreneurial activity. The data collected by means of this survey is used for calculating indices representative of national entrepreneurial framework conditions, or national conditions that have direct bearing on entrepreneurial activity. Second is the compilation of third-party data on the national economy, demographics, infrastructure, and other factors that describe the country's economic, structural, demographic, and social conditions for entrepreneurship. GEMs data sources are summarized in Table 2.

Typically, GEM annual and special reports are based on a single year of data. Because the focus of the present report is on a small sub-set of the overall entrepreneurial phenomenon, a combined dataset covering years 2000 – 2004 is used. Thus, the findings of the present report are based on a rather sizeable dataset which contains over 505,000 interviews of adult-age individuals in 44 countries during years 2000 to 2004.

Table 2 GEM Method: Sources of Data

Data Source	Description
GEM Adult Population Survey	A telephone and interview survey conducted by a polling organization in each GEM country of a minimum of 2,000 randomly selected respondents. The data is harmonized to be representative of the adult-age (18-64 years old) population of the country.
GEM National Expert Survey	Combined mail questionnaire and interview survey of at least 36 national experts in each GEM country knowledgeable of national framework conditions for entrepreneurial activity. The survey questionnaire collects data on finance, policy, government programs, education and training, technology transfer, physical and business service infrastructure, market openness, social and cultural norms, IPR protection, female entrepreneurship, as well as policies specifically dedicated at high-growth firms.
GEM Secondary Data	Compilation of data from third sources that describe general national conditions: national economy, demographics, society, infrastructure, and institutions. Data is compiled from publicly available sources such as United Nations, World Bank, OECD, and dedicated international surveys.

5 Individual participating countries can collect significantly more data, up to 20,000 – 30,000 interviews.

6 A detailed account of the GEM method is provided in: Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., Lopez-Garcia, P., & Chin, N. (2005). Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998 – 2003. Small Business Economics, 24: 205 – 231.

Definitions and Measurement of Nascent Entrepreneurship and Baby Businesses

Identifying individuals active in starting a new business is not a trivial task in survey interviews. To arrive at an accurate definition which enables meaningful global comparisons over a wide range of countries, the GEM method employs a set of questions which has been refined over several years and tens of thousands of test interviews. For its purposes, GEM distinguishes between two types of entrepreneurial activity:

1 *Nascent entrepreneurs* are individuals who are actively trying to start a new firm, but who have not done so as yet.

2 *Baby business managers* are owner-managers of a new, entrepreneurial firm which is younger than 42 months old[7].

GEMs data on nascent entrepreneurship, or 'entrepreneurs in the making', provides insight into a largely hidden aspect of grass-root level entrepreneurial activity. New firms may have a long gestation period before they are officially incorporated. Many new firm creation processes are never taken to conclusion. Because the gestation period can be lengthy, it is important to study nascent entrepreneurial activity in order to gain a better understanding of what factors drive new firm formation in different countries.

GEMs data on baby business managers provides an overview of national-level entrepreneurial activity in new firms already created. This aspect of the GEM adult population survey thus provides a more traditional perspective to entrepreneurship in new firms.

Several filtering questions are used to correctly identify enterprising individuals. To be classified as a nascent entrepreneur, an individual must meet the following four criteria:

1 The respondent has, during the past 12 months, done something tangible in order to advance his or her new firm project (e.g., draft a business plan, study the opportunity, look for premises, etc).

2 The respondent will own all or part of the new firm to be created.

3 The respondent will actively participate in the day-to-day management of the new firm.

4 The new firm in question has not yet paid salaries to anyone for more than three months.

The first criterion ensures that the project is a serious one, and the individual is not simply toying with an idea or a dream. The second criterion ensures that the individual assumes personal financial risk in the project – an element not present in, for example, many corporate ventures. The third criterion ensures that the person is not merely an investor, but rather, a future entrepreneur in the making. The fourth criterion ensures that this is a new firm creation process and not an already established firm: many individuals have a tendency to provide rather low-key assessments of their own firms, even though the firm might already be an up-and-running operation.

To be classified as a baby business manager, the respondent needs to meet the following criteria:

1 The respondent is currently actively managing a new firm.

2 The new firm in question has been established during the preceding three calendar years (i.e., it is less than 42 months old).

3 The respondent owns all or part of the new firm.

The first criterion ensures that the respondent is not simply an owner of the new firm. The second criterion sorts new entrepreneurial firms from old, established ones. The third criterion ensures that the respondent has a personal stake in the new firm and is not simply a hired manager.

Because of the use of several filtering questions, there is good confidence that the GEM data provides a true and accurate view of new firm creation and start-up processes in different countries.

Definition of High-Expectation Entrepreneurial Activity

GEMs Total Entrepreneurial Activity (TEA) rate indicates the country-level prevalence of both nascent entrepreneurs and baby business managers in the working-age population. The TEA rate thus indicates the share of all working-age individuals active in creating and running new firms, regardless of the ambition level of the new venture. Because the bulk of new firm activity is not very ambitious, the TEA rate effectively reflects the level of low-ambition activity in GEM countries.

In this report, our interest is on a specific facet of entrepreneurial activity – high-expectation entrepreneurship. This is possible using GEMs data on growth expectations. GEM analyzes growth expectations

7 This figure is due to the fact that the GEM adult population surveys are normally carried out in May-June. The survey defines baby businesses as all firms that have been created during the preceding three calendar years. For example, the 2005 GEM survey asks if a given start-up attempt has been created in year 2002 or later. As the question is asked in June, this gives a definition of baby business as younger than 3*12 months + 6 months = 42 months.

of nascent and baby businesses by asking how many employees the identified nascent entrepreneurs and baby business managers expect to employ in five years' time. This estimate represents the new venture's growth expectations and is investigated separately for nascent entrepreneurs and baby businesses.

There is no universally accepted definition of what constitutes a high-growth potential entrepreneurial firm. Some studies have based the definition of high growth on observed distributions in populations of firms, defining, for example, the top 5-10% as 'fast-growing' (e.g., Birch, 1987; Storey, 1996; Davidsson & Delmar, 2002; Almus, 2002). Some studies have classified as 'gazelles' all firms that grow their organizational size (e.g., sales, number of employees) by more than 20% per annum during each of three to four consecutive years (Birch, 1997; Autio, Arenius, & Wallenius, 2000), often using some minimum initial size criterion as a cut-off point. Some studies define as fast-growth firms those who double their employment size within five years and create at least five jobs (Brüderl & Preisendörfer, 2000).

In this study, we define high-expectation activity as all nascent and baby businesses which expect to employ at least 20 employees within five years' time. This criterion is used because achieving the size of 20 employees is not simple. At this size category, firms typically will have developed internal specialization, there is an identifiable management function, and there is usually at least some separation of ownership and employees, in the sense that not all employees are also owners of the company.

In this report, we look at the prevalence of high-growth expectations among both nascent entrepreneurs and baby businesses, as identified in GEMs adult population surveys from the years 2000 to 2004. The following definitions are therefore used throughout the report, unless otherwise stated:

- *High-Expectation Nascent Entrepreneur* is an individual who expects to employ at least 20 employees within five years' time through his or her new firm.
- *High-Expectation Baby Business* is a new firm, up to 42 months old, that aims to employ at least 20 employees within five years' time.

In some of the analyses that follow, we will be using data representing different levels of growth expectations such as the goal of employing 2, 5, 10, and 50 employees in five years' time.

In this report, the term "high-expectation" is used to emphasize the fact that the GEM operationalization is based on expected, rather than realized, job creation.

While not all expectations are materialized, growth aspirations have been shown to be a good predictor of eventual growth (Davidsson, 1989; Liao & Welsch, 2003). However, there may be situations where the growth of the firm may come as a surprise to its owners. The GEM data, therefore, should be read as indicative of reasonable expectations, maybe even of aspirations of individual firms and individuals.

The Importance of High-Expectation Entrepreneurship: Why it matters

Almost no one today would seriously contest the importance of entrepreneurial activity in economic and societal life. New firms are seen as important generators of jobs (e.g., Birch, 1987, 1995; Fölster, 2000; Storey, 1994; Acs 1998). They also smooth the functioning of markets, potentially enhancing economic efficiency and productivity (Baumol, 1990, 2002). Numerous studies suggest that new firms can have an important role to play in innovation in selected sectors (e.g., Acs, 1996; Audretsch, 2002; Michelacci, 2003). New firms may also operate as an important alternative employment mechanism for many subsets of the adult-age population.

From the policy perspective, in addition to their contribution to competition, arguably the most important aspect of new firms concerns their significant contributions to job creation. Two highly significant findings emerge from received empirical studies. First, new firms contribute to a major proportion of all new jobs in many national economies. Second, the greatest potential for job creation appears to be concentrated into a very small sub-group of all new firms.

The job creation potential of new firms has received particular attention among researchers. Perhaps the most influential researcher to underscore the importance of new, entrepreneurial firms for job creation was David Birch (1979) who reported that new firms accounted for the bulk of new job creation in the USA, while large, established firms were net destroyers of jobs. Even though Birch's early findings overstated the importance of new firms in job creation, their job creation potential has subsequently been confirmed by numerous other studies in several (mostly industrialized) countries (e.g., Kirchhoff, 1994; Storey, 1994; Davidsson, Lindmark & Olofsson, 1994; Westhead & Cowling, 1995; Davidsson & Delmar, 2003; Acs, 1998)[8]. According to these studies, and depending on the phase of the economic cycle, new firms may be responsible for anything from one-third up to the totality of net job creation. While a part of job creation by new firms undoubtedly reflects downscaling and restructuring of established firms, and therefore, job migration rather than job creation, economists are in agreement that the genuine job creation potential of new firms is also significant. Moreover, it should be remembered that new firms are highly dynamic: they tend to depict high numbers *both* in terms of job creation *and* in terms of job destruction, as the mortality rate of start-up companies is higher than for older companies (e.g., Acs, 1998; Aghion & Howitt, 1992). Even controlling for the job destruction effect, however, the net effect remains positive. In a rigorously conducted study, Fölster (2000) found that every self-employment decision meant the net creation of 1.3 new jobs in Sweden, after the effects of various intervening mechanisms were controlled. According to the Longitudinal Establishment and Enterprise Microdata (LEEM) database, new establishments created 69% of net new jobs in the US from 1990 to 1995, and new firm start-ups which did not exist prior to 1990 created 22% of new jobs (Acs, 1998; Audretsch, 2002). Thus, the potency of new and small firms to create new jobs as such is not in dispute, even though the contribution of new and small firms to job creation may vary over the economic cycle and in different economic contexts.

There is more, however, to new firms and job creation than their aggregate contribution to job creation. From a policy perspective, it is equally important to recognize that the anatomy of entrepreneurial firms' job creation processes is far from smooth. Several studies suggest that only a relatively small proportion of all new firms end up generating the bulk of new jobs. In this regard, evidence varies according to region. In the United Kingdom, Storey (1994) found that only 4% of new firms born in any given year accounted for 50% of all the jobs created by the surviving firms within that cohort after 10 years had elapsed. Kirchhoff (1994) found that the 10% of fastest-growing firms contributed to three-quarters of new jobs during an eight-year observation period within a cohort of firms started in the US in 1978. According to Birch et al. (1997), the so-called gazelles accounted for more than 70% of the employment growth in the U.S. between 1992 and 1996, while representing only about 3% of the firm population. Autio, Arenius, and Wallenius (2000) found that, within a cohort of Finnish high-growth single-establishment companies, some 1% of top growers created some 40% of the aggregate impact over four years, both in terms of sales and employment growth (Autio, Arenius, & Wallenius, 2000). These studies are all suggestive of a very significant concentration of job creation potential within populations of new, entrepreneurial firms, with only a small percentage of all new firms contributing a disproportionate share of all new jobs within the population. It is noteworthy, however, that most of the received studies reporting significant contributions by a small subset of new firms are from Anglo-Saxon countries. There is some evidence that this effect may vary according to context. Significantly, Davidsson and Henrekson (2002) reported that, while high-growers created a disproportionate share in their panel of Swedish firms from 1987 to 1996, the total contribution of high-growers to job creation was not very significant when all alternative sources of job contribution

8 Early studies on job creation potential overstated the potency of new firms in job creation because of the methods used. Today, the consensus remains, though, that new firms and new units by established firms are an important source of new jobs. For criticism on the methods of early studies see Davis & Haltiwanger (1994).

were considered. Even though Davidsson and Henrekson emphasized that their findings were subject to a number of caveats, their study nevertheless raises the prospect that the level of job creation concentration may vary according to national context.

Overall, therefore, the empirical evidence points to strong job creation contributions by new firms, as well as to a highly uneven distribution of this contribution. Where the empirical evidence of the overall job creation potential is quite broad, studies on how this potential is distributed within populations of entrepreneurial firms are quite rare. This is because of the rarity of the high-growth phenomenon, and because of the lack of datasets suitable for the study of firm-level job creation contributions. The majority of all new companies operate in small market niches and seldom harbor ambitions to grow beyond the size of one to two full-time employees. Entrepreneurship researchers are thus faced with a dilemma: the most interesting aspect of national-level entrepreneurial activity is also the most elusive one. Because only a small fraction of all new companies aim for rapid growth, and because entrepreneurial activity, in general, can be typically observed only in a small subset of adult-age population, observing this phenomenon empirically can be prohibitively difficult. To date, most studies on the phenomenon are ex-post studies, which look at entrepreneurial activity only after the results of this activity are known: we already know whether a given venture grew or not. There is very little empirical research on ex-ante growth aspirations: who aspires for and expects rapid growth, and what factors are associated with such expectations.

From a policy-maker's perspective, the above dilemma is not without consequence. To design effective measures to support job creation through the entrepreneurial process, empirical data is required, pertaining to the time both before and after firm-level growth processes have occurred. The scarcity of received empirical findings, particularly on growth expectations, thus constitutes a serious constraint to the design of effective job creation policies. Data is required both on the overall level of job creation contributions by different entrepreneurial firms, on how these contributions are distributed within populations of entrepreneurial firms, on individuals who start rapidly-growing firms, as well as on which policies are effective. Received datasets enabling the study of such questions are rare and constrained to single country contexts. The limitation of individual datasets to individual countries has precluded any systematic examination of the potential effect of the country environment on the prevalence of high expectations. To date, there have been no datasets to enable meaningful international comparisons of the prevalence of high-expectation entrepreneurial activity. Received studies, such as those reviewed above, suggest that there may be country differences in terms of high-expectation entrepreneurial activity. Given the pertinence of new high-growth firms to job creation and the high priority of employment for government economic policies, more empirical research on the high-expectation entrepreneurial phenomenon is urgently required.

So far, even the GEM consortium has not been able to analyze high-expectation entrepreneurial activity because of the scarcity of the phenomenon. In most GEM countries, the Total Entrepreneurial Activity (TEA) rate, which represents the combined share of nascent entrepreneurs and baby business managers of working-age population (18-64 years), varies from a low of approximately 2% to a high of 10-12%[9]. High-expectation entrepreneurial activity represents only a small sub-set of the total TEA rate. Because of this, very large datasets per country or region are required in order to estimate the prevalence of high-expectation activity with a reasonable degree of accuracy. The standard data collection protocol of GEM requires at least 2,000 interviews annually for each participating country. This is a large enough sample if one is interested in estimating the overall TEA rate[10]. To provide assessments of high-expectation entrepreneurial activity, much larger sample sizes are required – preferably at least 10,000 – 20,000 interviews. The high cost of gathering such large datasets prohibits the estimation of high-expectation activity on an annual basis, and high-growth entrepreneurial activity has not been included in annual GEM reports.

Thanks to the data collection cycle of the GEM consortium, which annually collects new empirical data, it is possible to address the high-expectation phenomenon by combining several years of GEMs adult population survey data[11]. GEM has been collecting data from a growing number of countries since 1998. As the consortium is now in its seventh data collection cycle, sufficient data has now accumulated to enable more fine-grained analyses of country-level entrepreneurial processes.

9 In some developing countries, such as Uganda, the TEA rate is significantly higher – up to 30%.

10 Because of the scarcity of high-expectation entrepreneurial activity the overall TEA rate effectively reflects the prevalence of low-expectation entrepreneurial activity within a given country.

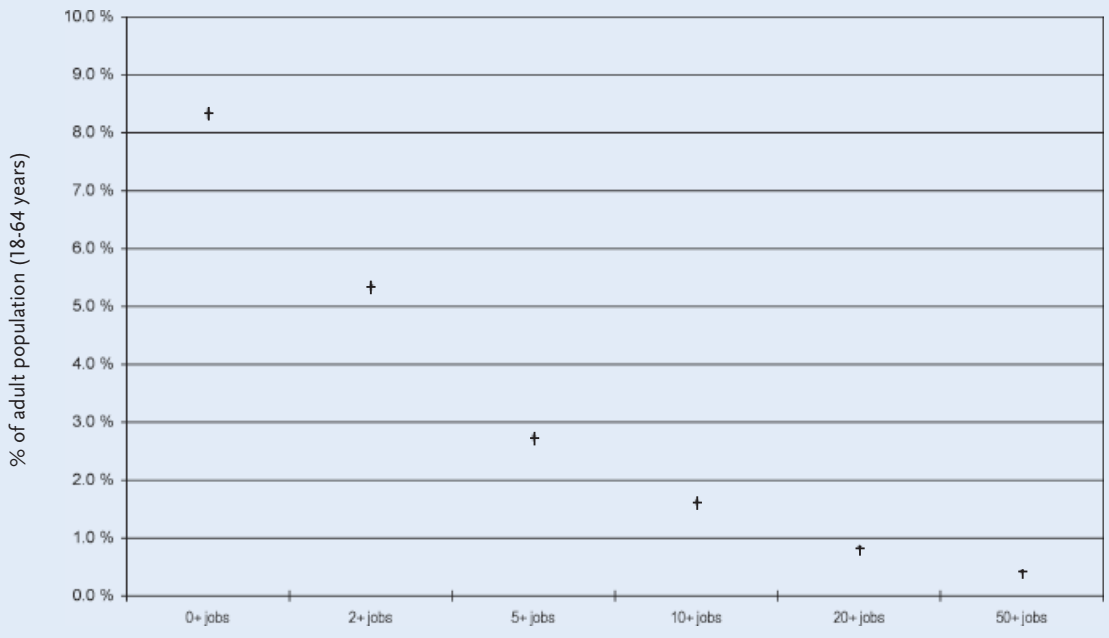
11 An important methodological constraint needs to be recognized. The procedure of combining several years of data carries the important assumption of temporal stability. We are assuming that the prevalence of high-expectation entrepreneurial activity does not fluctuate importantly from one year to another. From previous GEM reports we can see that the country-level TEA index does not vary importantly from year to year, so this assumption should be reasonable. We are also assuming that the prevalence of high-growth expectations among nascent entrepreneurs and baby businesses is stable from one year to another. There is less received data available to check the validity of this assumption, and it may well be that growth expectations of nascent entrepreneurs vary more because of, e.g., prevailing economic conditions than does the overall level of entrepreneurial activity in a given country. Finally, it is assumed that the external conditions affecting the prevalence of high-expectation entrepreneurial activity do not change radically from one year to another, or, alternatively, that high-expectation entrepreneurial activity reacts to changes in external conditions with an important time lag. Based on previous GEM studies, this seems to be the case for overall entrepreneurial activity.

Prevalence of High-Expectation Entrepreneurial Activity in Different World Regions and Countries

At the macro level, there are two fundamental questions concerning high-expectation entrepreneurial activity. The first concerns the prevalence of high-expectation entrepreneurial activity within a given country's or region's adult-age population. The second concerns the relative prevalence of high-expectation entrepreneurs within the sub-population of entrepreneurial firms. The combined GEM dataset for years 2000 to 2004 enables us to address both questions. The data on the overall prevalence of high-expectation entrepreneurial activity makes it possible to compare countries and world regions in this regard, as well as to detect differences between regions and countries. The data on growth expectations among nascent entrepreneurs and baby businesses enables us to check whether the anatomy of the entrepreneurial phenomenon differs from one country and world region to another.

In this chapter, our interest is on the first question: Does the rate of high-expectation entrepreneurial activity vary from one world region and country to another? We analyze the prevalence of nascent and baby business activity with different levels of growth expectation. We use GEMs data on growth expectations to divide the overall dataset into smaller subsets. The distribution of total entrepreneurial activity according to growth expectation is shown in Figure 1. The following categories of growth expectations are used: (1) up to 1 employee in five years; (2) 2 or more employees; (3) 5 or more employees; (4) 10 or more employees; (5) 20 or more employees; and (6) 50 or more employees. The vertical bars indicate the 95% confidence intervals of the means. If the vertical bars of two regions do not overlap, the difference between the regions can be considered as statistically significant.

Figure 1 Total Entrepreneurial Activity by Growth Expectation in the GEM 2000 – 2004 Combined Dataset



Total Entrepreneurial Activity (TEA) represents the share of all adults (18 – 64 year olds) who are either nascent entrepreneurs or baby business owner-managers. In total, for the combined 2000 – 2004 GEM sample, these represented 8.3% of the adult-age population within the countries that participated in GEM during those years.

As can be seen, the TEA index is dominated by entrepreneurial activity that does not have high-growth expectations. Only some 5.4% of the adult-age population in the GEM 2000 – 2004 countries were active in nascent and baby businesses which expected to employ two or more employees in five years' time. Only 2.7% of the adult-age population expected to have five or more employees. For the growth expectations of 10+, 20+, and 50+ employees, the percentages drop to 1.6%, 0.8%, and 0.4%, respectively. In other words, only less than one person out of one hundred is involved with a nascent or baby business which expects to create 20 or more jobs in five years. And, only four out of one thousand expect to create 50 or more jobs. Expectations of rapid growth are thus a rare phenomenon when considered at the level of the adult-age population.

Figure 2 Total Entrepreneurial Activity by Growth Expectation in Different World Regions: High-Expectation Nascent and Baby Businesses which Expect 20 or More Jobs in Five Years

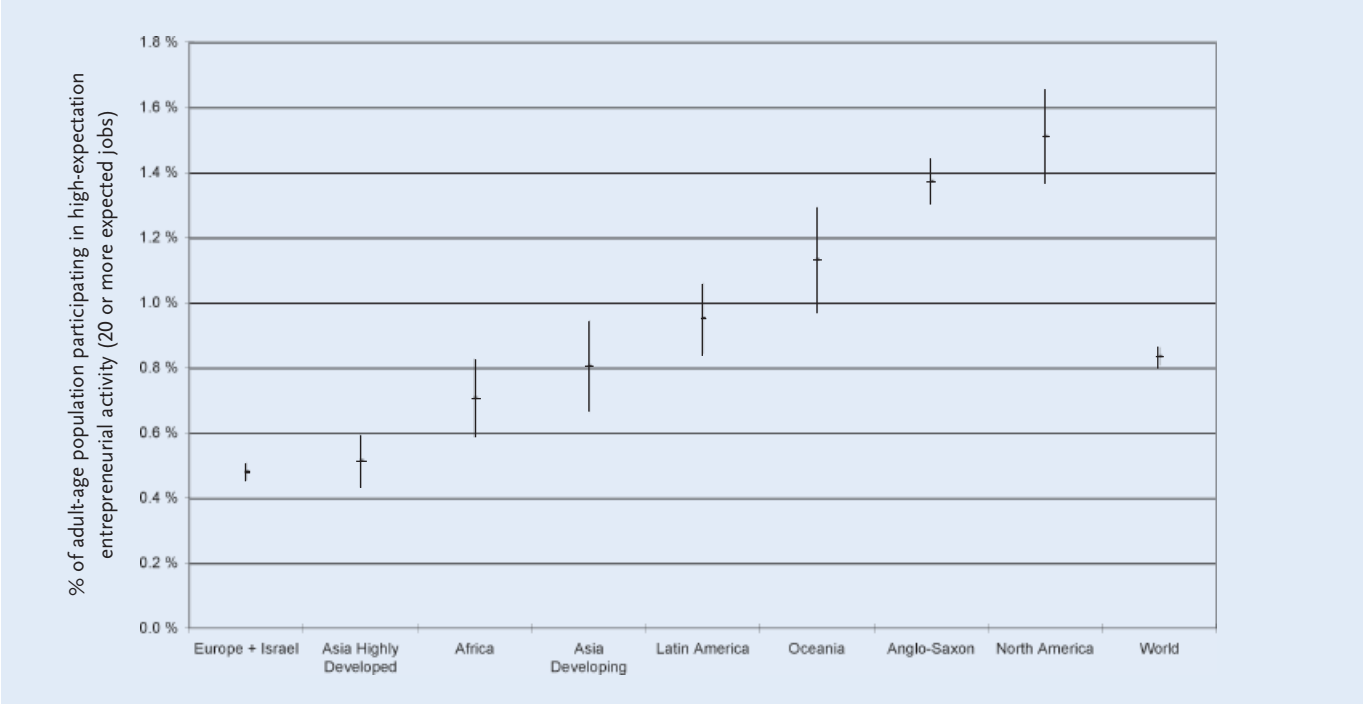


Figure 2 shows the prevalence of high-expectation entrepreneurial activity for different world regions. Here, individual countries are grouped into world regions in an effort to achieve a large enough sample size for meaningful comparisons. In Figure 2, the prevalence of all nascent and baby businesses which expected 20 or more jobs in five years is shown. We can see that the prevalence of high-expectation entrepreneurial activity varies importantly from one world region to another. In this comparison, North America (USA and Canada) stands out as having the highest prevalence of high-growth potential entrepreneurial activity, with approximately 1.5% participation of the adult-age population in this kind of activity. The level of participation is also high for Anglo-Saxon countries[12] (Australia, Canada, Ireland, New Zealand, United Kingdom, and USA), with a 1.4% participation rate. As regions, Oceania (Australia and New Zealand) and Latin America (Argentina, Brazil, Chile, Ecuador, Mexico, Peru, and Venezuela) come next, with 1.1% and 1.0% participation rates, respectively.

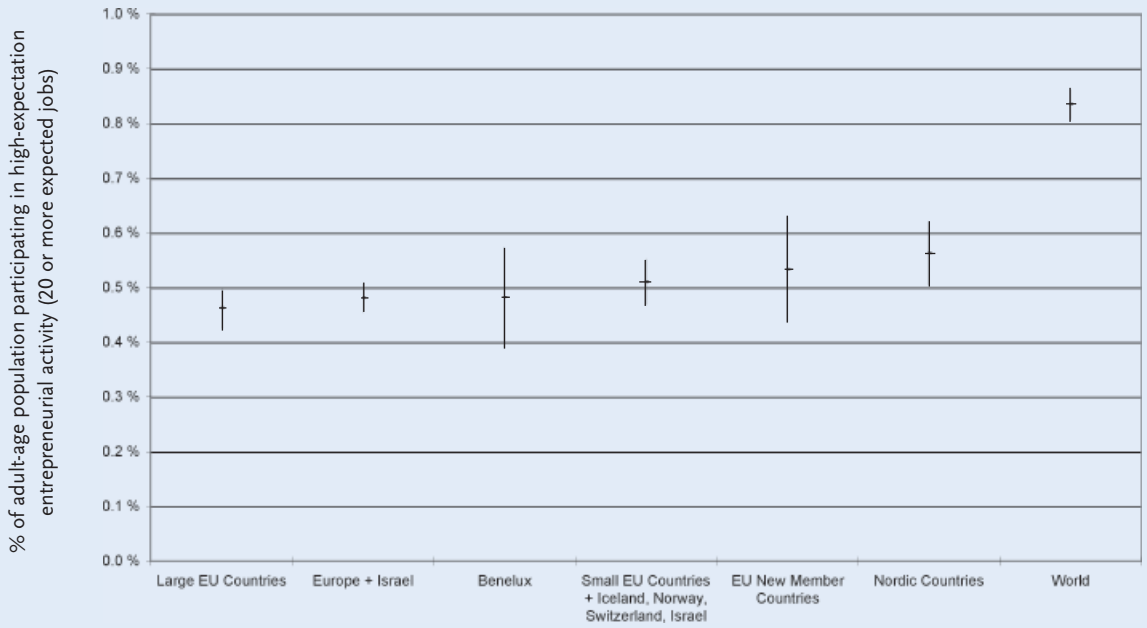
How high are these rates? In 2004, the TEA index for Japan was 1.5%. Thus, in North America, the prevalence rate of high-expectation entrepreneurial activity is equal to Japan's total entrepreneurial activity rate. This is indicative of a significant difference between Japan and North America, given that high-expectation activity represents only a sub-set of the TEA rate. Relatively speaking, as many individuals in North America try to start, or are involved with, high-growth businesses as there are individuals involved with any kind of nascent or baby business in Japan.

Of the world regions, the lowest participation rates in high-expectation entrepreneurial activity were observed for European countries and for highly developed Asian countries (Hong Kong, Japan, Singapore, and South Korea). In these regions, approximately 0.5% of adult-age population participated in high-expectation entrepreneurial activity. There is thus significant variance between world regions in terms of high-expectation entrepreneurial activity participation rates, as the level of North America is three times as high as that of Europe or highly developed Asia.

Because 265,000 interviews in the dataset are from Europe, it is possible to divide Europe into subsets. The findings are shown in Figure 3. No major differences can be observed between EU large countries, small European countries, Nordic countries, Benelux countries (Belgium and Netherlands) and EU's new member countries. The participation rate in high-expectation (20+ expected jobs in five years) is around 0.5% -- significantly smaller than GEMs overall average.

12 We use the term 'Anglo-Saxon' to refer to English-speaking countries that have a strong 'Anglo-Saxon' tradition in terms of how their financial market institutions are structured.

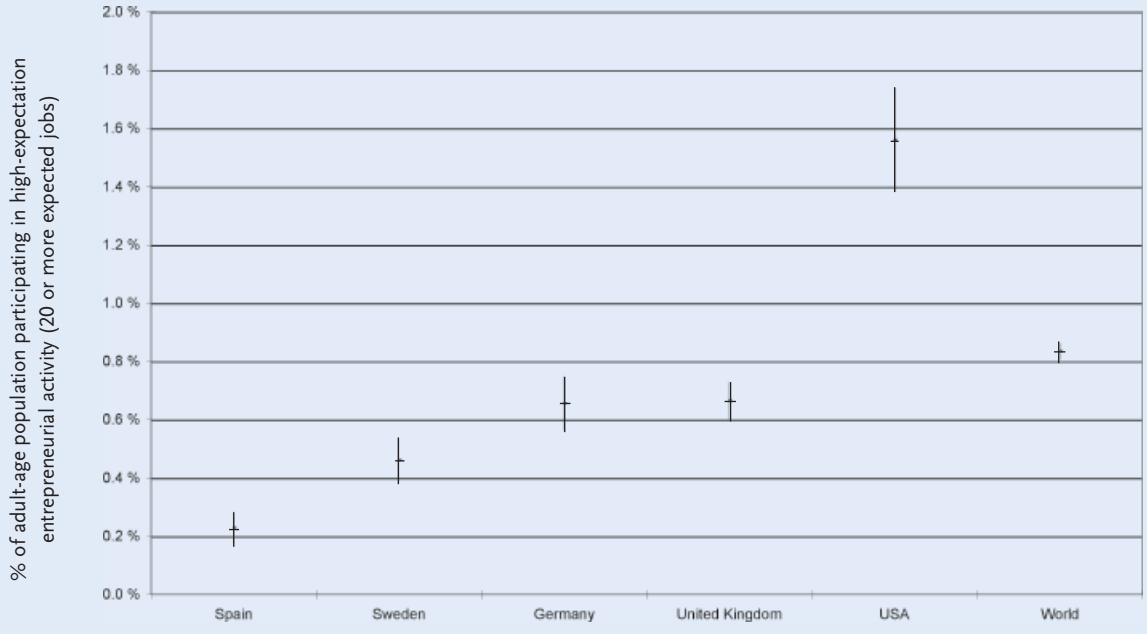
Figure 3 Total Entrepreneurial Activity by Growth Expectation in Different European Areas: High-Expectation Nascent and Baby Businesses which Expect 20 or More Jobs in Five Years



The size of individual country datasets enables us to reasonably estimate the high-expectation participation rate of five countries: Germany, Spain, Sweden, United Kingdom, and USA. The data for these countries is shown in Figure 4. As can be seen, USA has the highest level of participation in high-expectation (20+ expected jobs) entrepreneurial activity, with a participation rate of approximately 1.6%. United Kingdom and Germany come second and third, with participation rates of approximately 0.7%. This is about half of the USA level. At 0.5%, Sweden's participation rate is statistically significantly lower than in the United Kingdom and in Germany, but double that of Spain (0.2%) for which the lowest participation rate is observed.

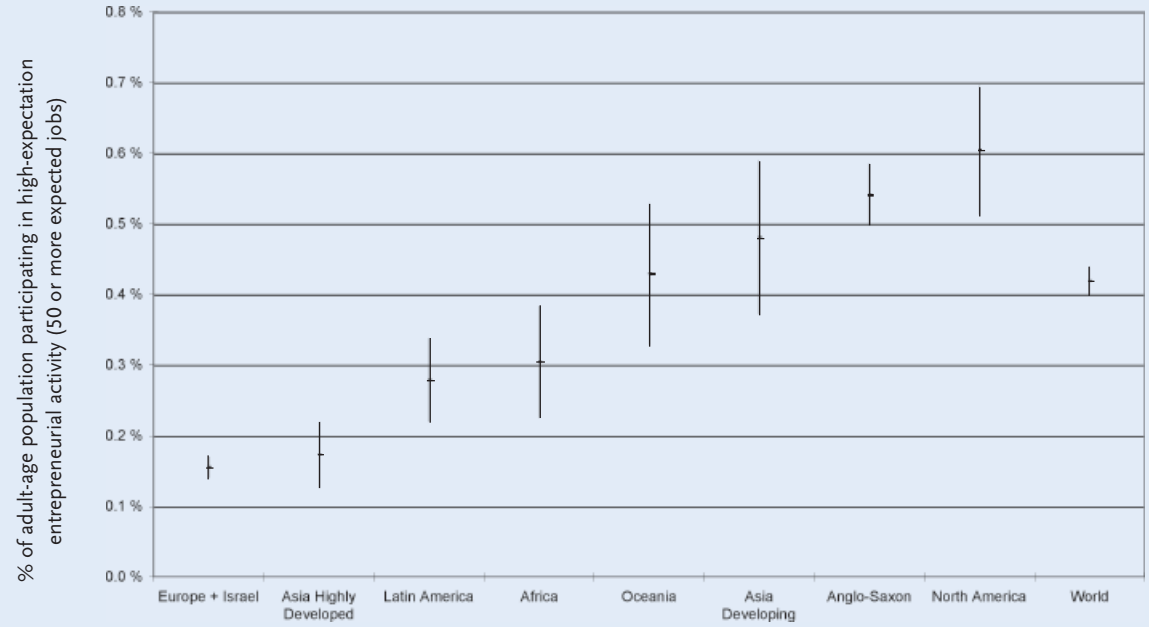
The country data means that whereas in the USA, nearly two persons out of one hundred are involved with high-expectation entrepreneurial activity, the corresponding rate is only two per thousand. The nearly eight-fold difference in the prevalence rates between USA and Spain is indicative of significant variation in high-expectation activity prevalence rates. Even within the EU, the difference between Spain, on the one hand, and United Kingdom and Germany, on the other, is three-fold.

Figure 4 Total Entrepreneurial Activity by Growth Expectation in Five Countries: High-Expectation Nascent and Baby Businesses which Expect 20 or More Jobs in Five Years



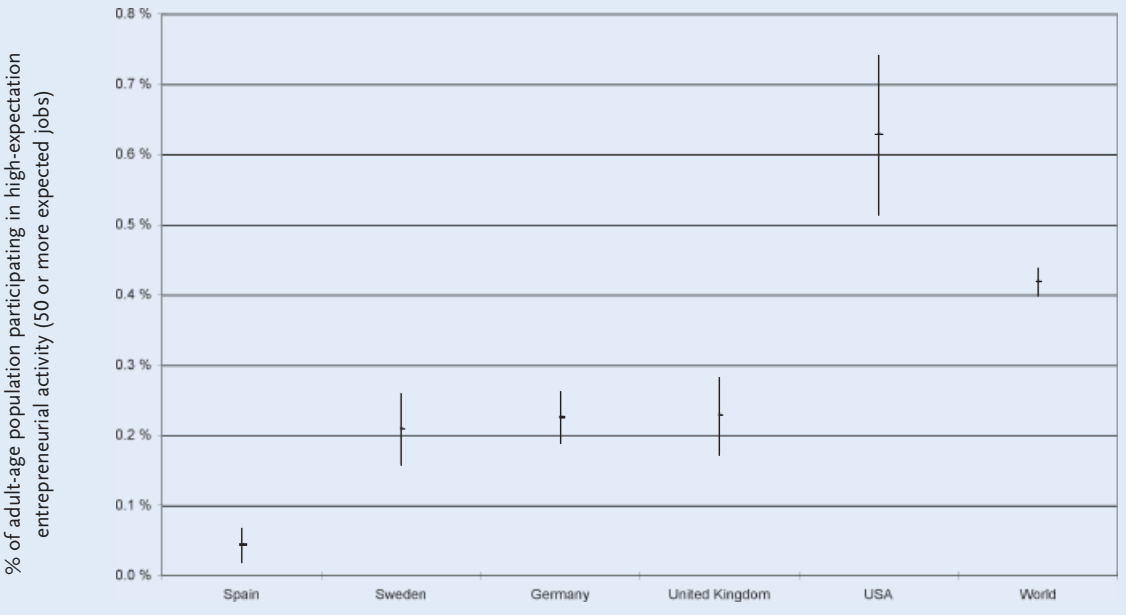
The prevalence rates of higher-growth activity (those nascent entrepreneurs and baby businesses who expect 50 or more jobs in five years) follow similar patterns to those described above. Figure 5 shows the prevalence of 50 or higher job expectations in different world regions. Figure 6 shows the prevalence of 50 or higher job expectations for selected countries.

Figure 5 Total Entrepreneurial Activity by Growth Expectation in Different World Regions: High-Expectation Nascent and Baby Businesses which Expect 50 or More Jobs in Five Years



Overall, the participation levels in "50+ activity" are approximately half the level of "20+ activity". For regions, North America (USA and Canada) depicts the highest participation rate, with a mean participation level of 0.6% among the adult-age population. Note that the 95% confidence interval stretches from 0.5% to 0.7%. The group of Anglo-Saxon countries, developing Asian countries, and Oceania countries depicts similar levels, at approximately 0.5%. The differences between the first four groups are not statistically significant. African and Latin American participation rates are significantly lower than that of North America and Anglo-Saxon countries, at approximately 0.3%. Europe and highly developed Asian countries depict the lowest levels of "50+ activity", with a European participation rate of approximately 0.15%.

Figure 6 Total Entrepreneurial Activity by Growth Expectation in Five Countries: High-Expectation Nascent and Baby Businesses which Expect 50 or More Jobs in Five Years



Of the five individual countries, USA has the highest participation rate in "50+ activity", at approximately 0.6%. Germany, Sweden, and United Kingdom are at the same level, at approximately 0.2-0.25%. Spain again emerges as the country with the smallest participation in high-growth entrepreneurial activity, with a "50+ activity" participation rate of approximately 0.05%. Thus, approximately only one out of two thousand Spaniards is currently engaged in either starting or running a new business which expects to employ 50 or more employees within five years' time.

Conclusions

High-expectation entrepreneurial activity is rare. Depending on world region and country, only approximately 1.5% or less of the adult-age population (18-64 year olds) is involved with nascent or baby businesses that expect to employ 20 or more employees in five years' time.

The rate of high-expectation entrepreneurial activity varies significantly among world regions and individual countries. The highest adult-age participation rate in high-expectation entrepreneurial activity is observed for North America (Canada and USA), Anglo-Saxon countries (Australia, Ireland, New Zealand, United Kingdom, and USA), and Oceania (Australia and New Zealand). For these regions, the rate of high-growth entrepreneurial activity ranges from approximately 1% to 1.6%. The lowest rate of high-expectation activity is observed for European and highly developed Asian countries (Hong Kong, Korea, Japan, and Singapore), where this rate is approximately 0.5%. In Spain, adult-age participation in high-expectation entrepreneurial activity (20+ expected jobs) is only approximately 0.2%.

The prevalence rate of high-expectation entrepreneurial activity in Europe and highly developed Asia is worryingly low. There are no differences between European country groups (large EU countries, small European countries, new EU member countries), even though differences can be observed between individual countries. Spain, in particular, stands out because of its low participation rate in high-expectation entrepreneurial activity. The policy-makers of these regions would be well advised to examine the reasons for this high-expectation deficit.

Job Generation Potential of High-Expectation Firms

The expected job creation by nascent entrepreneurs for the overall sample is shown in Table 3. The job creation data are shown separately for different size categories. The figures represent estimates based on a total sample of 505,000 interviews, of which 410,402 individuals belonged to the adult-age population. The figures below thus represent the job generation expectations of nascent entrepreneurs within a population of 410,402 adult-age individuals. The data has been weighted according to UN estimates for adult-age populations in June 2005 for the 44 countries that participated in GEM from 2000 to 2004. The dataset has also been adjusted according to country sample sizes.

Several interesting patterns can be observed in Table 3. First, in total, there were 18,869 nascent entrepreneurs that reported an expected number of employees within five years. This represents 4.6 % of the sample and provides an idea of the harmonized level of nascent entrepreneurial activity within the 44 GEM countries from 2000 to 2004[13].

Second, the sample is dominated by nascent entrepreneurs that depict very low levels of growth aspiration. Roughly one-third of all nascent entrepreneurs expected to employ, at most, one employee within five years, and only one-third expected to employ five employees or more. Those expecting to employ zero to one employees numbered 5,122 nascent entrepreneurs, representing 29.9% of the total population of nascent entrepreneurs. Only 7,061 nascent entrepreneurs (37.4% of total) expected to employ five or more employees within five years. This pattern is consistent with received statistics which show that the majority of all new firms grow only very modestly or not at all.

Of the total sample, only 20.8% expected to reach the size of 10 or more employees within five years, and only 9.6% expected to reach the size of 20 or more employees. Thus, less then 10% of all nascent entrepreneurial activity can be characterized as high-expectation start-up activity even using quite modest criterion. It is important to observe, however, that the high-expectation nascent entrepreneurs represented over 70% of the total expected job creation within five years. This pattern is consistent with received empirical studies on actual job creation and underlines the importance of high-growth potential entrepreneurial activity for job creation. The distribution of job creation expectations is quite biased, as those expecting to create 50 or more jobs represented only 5.3% of the population of nascent entrepreneurs and promised to create as much as 65.5% of all new jobs.

Table 3 Job Creation Aspirations of Nascent Entrepreneurs by Size Category: Combined GEM 2000 – 2004 Sample (44 Countries)

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	18,869	238,833	100.0 %	100.0 %
2 or more employees	13,230	236,580	70.1 %	99.1 %
5 or more employees	7,061	220,357	37.4 %	92.3 %
10 or more employees	3,930	201,071	20.8 %	84.2 %
20 or more employees	1,820	177,742	9.6 %	74.4 %
50 or more employees	999	156,371	5.3 %	65.5 %

In total, the nascent entrepreneurs expected to create 238,833 new jobs within five years. This represents 12.7 new jobs per each of the 410,402 individuals interviewed. This estimate should be read with some caution, as it represents expectations, not actual job creation. Empirical studies suggest that approximately one-half of nascent entrepreneurial activity never leads to the actual creation of a new firm[14]. Also, even when a new firm is started, the realized job creation may fall short of expectations, particularly among the more ambitious nascent entrepreneurs. Even with these reservations, the statistics reported in Table 3 underline the potential of nascent entrepreneurial activity in general, and high-expectation activity in particular, for job creation.

Another perspective on high-expectation activity can be obtained by looking at baby businesses, or entrepreneurial firms that are less than 42 months old. Unlike nascent entrepreneurs, which represent start-up attempts that are not yet operating new businesses, baby businesses have first-hand experience of business operations. Thus, their growth expectations are likely to be more realistic. Data on the job creation potential of baby businesses is reported in Table 4.

13 Note that this figure is different from GEMs TEA (Total Entrepreneurial Activity) index, which includes both nascent and baby business activity. Also, this average is based on a dataset that combines data from 2000 to 2004 and can thus be best interpreted as an average for that period.

14 Based on data received from the Panel Study of Entrepreneurial Dynamics (PSED) – see http://projects.isr.umich.edu/psed.

Table 4 reveals patterns that are very similar to those observed for nascent entrepreneurial activity. In total, there were 16,485 baby businesses in the GEM 2000 – 2004 combined dataset. This represents 4.0 % of the 410,402 adult-age individuals in the GEM dataset[15]. Of these, 42.0% expected to employ at most one person within five years. Only 27.5 % expected to employ five persons or more. Thus, as expected, the job creation expectations of baby businesses are even more conservative than those of nascent entrepreneurs. Similarly to nascent entrepreneurs, however, the 10.1% of baby businesses, which expected 20 or more jobs, were responsible for 73.6% of the total expected job creation. And, the 4.5% who expected 50 or more employees, were responsible of 57.8% of the total expected job output in five years' time.

Table 4 Job Creation Aspirations of Baby Businesses by Size Category

Baby Businesses	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	16,485	149,406	100.0 %	100.0 %
2 or more employees	9,566	147,278	58.0 %	98.6 %
5 or more employees	4,529	133,564	27.5 %	89.4 %
10 or more employees	2,888	124,108	17.5 %	83.1 %
20 or more employees	1,663	110,002	10.1 %	73.6 %
50 or more employees	742	86,320	4.5 %	57.8 %

The patterns observed for nascent entrepreneurs and baby businesses are consistent with one another and also consistent with received empirical studies on actual job creation. Storey (1994) reported that 4% of a cohort of new firms in the United Kingdom created 50% of all jobs created by the cohort. Birch (1997) reported that more than 70% of the employment growth in the US from 1992 to 1996 came from only 3% of all firms. Thus, even though the data reported here only concerns expectations, rather than actual new jobs, the distributions are very similar to what is known about actual job creation performance among entrepreneurial firms.

Because the GEM data reports expectations rather than actual job output, it is not possible to verify whether those reporting high job creation expectations will eventually deliver, or whether eventual growth will be influenced more by random events than *ex-ante* aspirations. However, there are several studies to suggest a link between growth intent and growth performance. Organizational growth seldom occurs accidentally in entrepreneurial firms, because achieving growth typically requires significant investments, in terms of both resources and management time. Such an investment is not easily made if the intent of the entrepreneurial firm is not to grow. Therefore, at least to the extent that expectations represent intent within the GEM data, expectations should provide a reasonable predictor of eventual performance[16].

Overall, the findings reported above carry important implications for policy. Clearly, it seems that growth intentions, and likely also the eventual growth impact, are not evenly distributed across populations of entrepreneurial firms. Therefore, to the extent that they are not already doing so, policy-makers will be well advised to focus their initiatives on the subset of high-expectation entrepreneurial firms. However, due to absence of data, little is known about who is behind high-expectation entrepreneurial firms. The characteristics of high-expectation entrepreneurs are examined later in this report.

Job Creation Potential by Country and World Region

By combining GEMs adult population survey datasets from 2000 to 2004 we are able to examine the job creation potential by expected size category with a reasonable degree of accuracy. In Table 5, data is shown for Asia and Africa. Using per capita income as criterion, Asia has been further divided into highly developed Asia and developing Asia. Highly developed Asia includes Japan, South Korea, and Hong Kong. Developing Asia includes China, Chinese Taipei, India, Jordan, Malaysia, and Thailand. Africa includes Uganda and South Africa.

The patterns observed for Asia and Africa are quite similar to those reported for the overall GEM dataset. In Africa, high-growth potential nascent entrepreneurs appear less prevalent than in the two Asian regions. Because of this, almost double the number of nascent entrepreneurs is required in Africa for the same expected total of new jobs. The lesser prevalence of high-growth expectations probably reflects the prevailing conditions in countries such as Uganda. On the other hand, expected job creation by African baby businesses follows a similar distribution as in other regions.

15 Figures are based on weighted data.

16 It should be observed that growth intention does not automatically result in growth in entrepreneurial firms, for much the same reasons why it does not happen by accident. Even if an entrepreneurial firm would pursue a growth strategy, achieving employment size growth is not easy.

Table 5 Job Creation Aspirations of Nascent Entrepreneurs and Baby Businesses by Size Category and World Region: Asia and Africa

Descriptive Statistics Asia Emerging

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	691	9,894	100.0 %	100.0 %
2 or more employees	452	9,805	65.4 %	99.1 %
5 or more employees	235	9,266	34.0 %	93.7 %
10 or more employees	129	8,581	18.7 %	86.7 %
20 or more employees	61	7,850	8.9 %	79.3 %
50 or more employees	44	7,353	6.3 %	74.3 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	689	5,557	100.0 %	100.0 %
2 or more employees	363	5,461	52.7 %	98.3 %
5 or more employees	151	4,891	21.9 %	88.0 %
10 or more employees	99	4,596	14.3 %	82.7 %
20 or more employees	65	4,208	9.4 %	75.7 %
50 or more employees	31	3,358	4.5 %	60.4 %

Descriptive Statistics Africa

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	1,156	6,681	100.0 %	100.0 %
2 or more employees	838	6,508	72.5 %	97.4 %
5 or more employees	321	5,109	27.8 %	76.5 %
10 or more employees	153	4,125	13.2 %	61.7 %
20 or more employees	65	3,141	5.6 %	47.0 %
50 or more employees	24	2,199	2.0 %	32.9 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	982	10,030	100.0 %	100.0 %
2 or more employees	692	9,932	70.4 %	99.0 %
5 or more employees	305	8,859	31.0 %	88.3 %
10 or more employees	146	7,915	14.9 %	78.9 %
20 or more employees	71	7,074	7.3 %	70.5 %
50 or more employees	34	6,185	3.4 %	61.7 %

Descriptive Statistics Asia Highly Developed

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	539	6,790	100.0 %	100.0 %
2 or more employees	438	6,751	81.2 %	99.4 %
5 or more employees	293	6,354	54.4 %	93.6 %
10 or more employees	187	5,762	34.6 %	84.9 %
20 or more employees	75	4,549	14.0 %	67.0 %
50 or more employees	21	3,162	4.0 %	46.6 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	692	8,261	100.0 %	100.0 %
2 or more employees	528	8,185	76.3 %	99.1 %
5 or more employees	323	7,643	46.7 %	92.5 %
10 or more employees	201	6,947	29.1 %	84.1 %
20 or more employees	87	5,675	12.5 %	68.7 %
50 or more employees	33	4,204	4.7 %	50.9 %

Asia Developing Countries: China, Chinese Taipei, India, Jordan, Malaysia, Thailand
Asia Highly Developed Countries: Hong Kong, Japan, Singapore, South Korea
Africa: South Africa, Uganda

Table 6 shows the distribution of job creation aspirations by expected size category in North America, Latin America, and Oceania. North America includes Canada and USA. Latin America includes Argentina, Brazil, Chile, Ecuador, Mexico, Peru, and Venezuela. Oceania includes Australia and New Zealand.

A similar pattern can be observed for Latin America as could be observed for Africa in Table 5. In Latin America, a relatively smaller share of nascent entrepreneurs expect to create many jobs, and the share of high-growth potential nascent entrepreneurs of total expected job creation is relatively smaller in comparison with, e.g., North America and Oceania. In the case of Latin America, baby businesses also demonstrate relatively smaller job creation expectations than in North America or in Oceania. Thus, a larger number of nascent entrepreneurs in Latin America expect to create significantly less new jobs than a smaller number of nascent entrepreneurs in North America.

Table 6 Job Creation Aspirations of Nascent Entrepreneurs and Baby Businesses by Size Category and World Region: North America, Latin America, and Oceania

Descriptive Statistics North America

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	1,792	25,502	100.0 %	100.0 %
2 or more jobs	1,276	25,311	71.2 %	99.3 %
5 or more jobs	796	23,969	44.5 %	94.0 %
10 or more jobs	506	22,315	28.2 %	87.5 %
20 or more jobs	251	19,410	14.0 %	76.1 %
50 or more jobs	100	15,630	5.6 %	61.3 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	1,119	15,074	100.0 %	100.0 %
2 or more jobs	707	14,938	63.1 %	99.1 %
5 or more jobs	484	14,341	43.2 %	95.1 %
10 or more jobs	324	13,406	28.9 %	88.9 %
20 or more jobs	189	11,769	16.9 %	78.1 %
50 or more jobs	78	8,792	6.9 %	58.3 %

Descriptive Statistics Latin America

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	2,269	15,613	100.0 %	100.0 %
2 or more jobs	1,765	15,350	77.8 %	98.3 %
5 or more jobs	875	12,828	38.6 %	82.2 %
10 or more jobs	438	10,239	19.3 %	65.6 %
20 or more jobs	177	7,221	7.8 %	46.3 %
50 or more jobs	52	4,130	2.3 %	26.5 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	1,593	12,035	100.0 %	100.0 %
2 or more jobs	1,081	11,887	67.9 %	98.8 %
5 or more jobs	552	10,348	34.6 %	86.0 %
10 or more jobs	329	9,021	20.6 %	75.0 %
20 or more jobs	120	6,596	7.5 %	54.8 %
50 or more jobs	36	4,462	2.2 %	37.1 %

Descriptive Statistics Oceania

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	937	8,663	100.0 %	100.0 %
2 or more jobs	600	8,567	64.1 %	98.9 %
5 or more jobs	363	7,899	38.8 %	91.2 %
10 or more jobs	214	7,031	22.9 %	81.2 %
20 or more jobs	109	5,786	11.7 %	66.8 %
50 or more jobs	39	4,148	4.2 %	47.9 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	787	8,840	100.0 %	100.0 %
2 or more jobs	455	8,712	57.8 %	98.5 %
5 or more jobs	269	8,198	34.2 %	92.7 %
10 or more jobs	164	7,567	20.8 %	85.6 %
20 or more jobs	84	6,629	10.7 %	75.0 %
50 or more jobs	35	5,356	4.5 %	60.6 %

North America: Canada, USA
Latin America: Argentina, Brazil, Chile, Ecuador, Mexico, Peru, Venezuela
Oceania: Australia, New Zealand

The pattern observed for Africa and Latin America may help explain observed anomalies in GEM reports of previous years. In year 2004, Peru was ranked as the most entrepreneurial of participating GEM countries. This ranking was based on the Total Entrepreneurial Activity (TEA) index, which computes the prevalence of nascent entrepreneurs and baby businesses in the adult-age population, but does not control their job creation expectations. If the indices were to include expected job creation, the rankings might be different. At present, however, there is little data to analyze what might be influencing the observed differences. Variation in economic optimism and overconfidence might be one reason. Differences in innovativeness might be another. A third underlying mechanism might be economic and structural conditions that prevail in the economies of the region.

Table 7 shows expected job creation data for European countries. This set includes all European countries that have participated in GEM during any of the years 2000-2004. For convenience, Israel is treated as a European country in this report. European countries are further divided into EU large member countries (France, Germany, Italy, Spain, and United Kingdom) and small European countries (Nordic countries, Belgium, Netherlands, Switzerland, Portugal, and Greece. Israel is also included in this category, even though it is not formally a part of Europe). Data on new EU member countries is also reported.

No major differences can be observed for the different sub-categories of European countries. Overall, European data appears to depict slightly lower growth ambition than the North American data, where nascent entrepreneurs are concerned. For baby businesses, the distributions are quite similar.

Table 7 Job Creation Aspirations of Nascent Entrepreneurs and Baby Businesses by Size Category and World Region: Europe, EU Large Countries, EU Small Countries, and EU New Member Countries

Descriptive Statistics Europe

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	6,531	70,244	100.0 %	100.0 %
2 or more employees	4,834	69,514	74.0 %	99.0 %
5 or more employees	2,710	63,481	41.5 %	90.4 %
10 or more employees	1,620	57,174	24.8 %	81.4 %
20 or more employees	768	47,465	11.8 %	67.6 %
50 or more employees	218	33,785	3.3 %	48.1 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	4,736	55,481	100.0 %	100.0 %
2 or more employees	3,187	54,894	67.3 %	98.9 %
5 or more employees	1,889	51,237	39.9 %	92.3 %
10 or more employees	1,094	46,500	23.1 %	83.8 %
20 or more employees	540	39,825	11.4 %	71.8 %
50 or more employees	207	31,006	4.4 %	55.9 %

Descriptive Statistics EU Large Countries

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	3,311	35,430	100.0 %	100.0 %
2 or more employees	2,489	35,071	75.2 %	99.0 %
5 or more employees	1,374	31,886	41.5 %	90.0 %
10 or more employees	806	28,559	24.3 %	80.6 %
20 or more employees	379	23,757	11.4 %	67.1 %
50 or more employees	101	16,852	3.0 %	47.6 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	2,257	24,652	100.0 %	100.0 %
2 or more employees	1,530	24,395	67.8 %	99.0 %
5 or more employees	909	22,631	40.3 %	91.8 %
10 or more employees	540	20,423	23.9 %	82.8 %
20 or more employees	247	16,905	11.0 %	68.6 %
50 or more employees	96	12,969	4.3 %	52.6 %

Descriptive Statistics EU Small Countries

Nascent Entrepreneurs	N	Total Jobs	N (%)	Jobs (%)
0 to 1 employees	2,504	25,520	100.0 %	100.0 %
2 or more employees	1,752	25,216	70.0 %	98.8 %
5 or more employees	1,048	23,212	41.9 %	91.0 %
10 or more employees	629	20,782	25.1 %	81.4 %
20 or more employees	310	17,080	12.4 %	66.9 %
50 or more employees	111	12,020	4.4 %	47.1 %
Baby Businesses	**N**	**Total Jobs**	**N (%)**	**Jobs (%)**
0 to 1 employees	2,308	22,691	100.0 %	100.0 %
2 or more employees	1,503	22,394	65.1 %	98.7 %
5 or more employees	878	20,701	38.1 %	91.2 %
10 or more employees	509	18,440	22.1 %	81.3 %
20 or more employees	268	15,553	11.6 %	68.5 %
50 or more employees	78	10,430	3.4 %	46.0 %

Europe: Large European countries, small European countries, and EU new member countries, as listed below

Large European Countries: France, Germany, Italy, Spain, UK

Small European Countries: Nordic countries (Denmark, Finland, Iceland, Norway, Sweden), Belgium, Netherlands, Switzerland, Portugal, Greece, Israel

EU New Member Countries: Croatia, Hungary, Poland, Slovenia

For some countries, there is sufficient data to provide country-level comparisons. Table 8 reports data for Germany, Spain, Sweden, United Kingdom, and USA. One interesting observation can be made from this table: in Spain, the prevalence of high-growth activity is significantly smaller than in the other countries listed. Only approximately 1% of all nascent entrepreneurs and baby businesses in Spain expect to create 50 or more jobs in five years. For the other countries, the prevalence of high-growth activity varies between 3.9% and 7% for nascent entrepreneurs and baby businesses. The differences compared to Spain are statistically significant and merit closer attention by Spanish policy-makers.

Table 8 Job Creation Aspirations of Nascent Entrepreneurs and Baby Businesses by Size Category and Country: Germany, Spain, Sweden, United Kingdom, and USA

Descriptive Statistics UK

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	1,620	20,451	100.0 %	100.0 %
2 or more jobs	1,080	20,279	66.7 %	99.2 %
5 or more jobs	700	19,217	43.2 %	94.0 %
10 or more jobs	452	17,762	27.9 %	86.9 %
20 or more jobs	234	15,286	14.4 %	74.7 %
50 or more jobs	64	11,197	3.9 %	54.7 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	1,618	20,686	100.0 %	100.0 %
2 or more jobs	1,000	20,512	61.8 %	99.2 %
5 or more jobs	637	19,517	39.3 %	94.3 %
10 or more jobs	412	18,193	25.5 %	88.0 %
20 or more jobs	200	15,630	12.3 %	75.6 %
50 or more jobs	81	12,649	5.0 %	61.1 %

Descriptive Statistics Sweden

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	534	7,026	100.0 %	100.0 %
2 or more jobs	395	6,972	74.1 %	99.2 %
5 or more jobs	268	6,611	50.2 %	94.1 %
10 or more jobs	158	6,011	29.6 %	85.5 %
20 or more jobs	73	5,012	13.6 %	71.3 %
50 or more jobs	32	4,005	6.0 %	57.0 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	682	8,097	100.0 %	100.0 %
2 or more jobs	374	8,007	54.9 %	98.9 %
5 or more jobs	202	7,521	29.6 %	92.9 %
10 or more jobs	116	7,012	17.0 %	86.6 %
20 or more jobs	78	6,580	11.4 %	81.3 %
50 or more jobs	37	5,454	5.4 %	67.4 %

Descriptive Statistics USA

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	1,238	17,595	100.0 %	100.0 %
2 or more jobs	885	17,466	71.5 %	99.3 %
5 or more jobs	554	16,540	44.8 %	94.0 %
10 or more jobs	353	15,392	28.5 %	87.5 %
20 or more jobs	174	13,359	14.1 %	75.9 %
50 or more jobs	70	10,749	5.6 %	61.1 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	774	10,386	100.0 %	100.0 %
2 or more jobs	486	10,292	62.8 %	99.1 %
5 or more jobs	336	9,892	43.4 %	95.2 %
10 or more jobs	223	9,230	28.8 %	88.9 %
20 or more jobs	130	8,101	16.8 %	78.0 %
50 or more jobs	54	6,073	7.0 %	58.5 %

Descriptive Statistics Germany

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	753	12,326	100.0 %	100.0 %
2 or more jobs	621	12,277	82.4 %	99.6 %
5 or more jobs	386	11,654	51.2 %	94.5 %
10 or more jobs	257	10,901	34.1 %	88.4 %
20 or more jobs	130	9,509	17.2 %	77.1 %
50 or more jobs	43	7,334	5.7 %	59.5 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	436	6,704	100.0 %	100.0 %
2 or more jobs	324	6,642	74.3 %	99.1 %
5 or more jobs	192	6,268	44.0 %	93.5 %
10 or more jobs	119	5,842	27.3 %	87.1 %
20 or more jobs	73	5,315	16.7 %	79.3 %
50 or more jobs	27	4,138	6.3 %	61.7 %

Descriptive Statistics Spain

Nascent Entrepreneurs	N	Total jobs	N(%)	Total jobs(%)
0 or more jobs	732	4,382	100.0 %	100.0 %
2 or more jobs	636	4,333	86.9 %	98.9 %
5 or more jobs	257	3,170	35.1 %	72.4 %
10 or more jobs	101	2,212	13.8 %	50.5 %
20 or more jobs	22	1,322	3.0 %	30.2 %
50 or more jobs	7	945	0.9 %	21.6 %
Baby Businesses	**N**	**Total jobs**	**N(%)**	**Total jobs(%)**
0 or more jobs	763	4,294	100.0 %	100.0 %
2 or more jobs	582	4,213	76.3 %	98.1 %
5 or more jobs	307	3,437	40.2 %	80.0 %
10 or more jobs	146	2,473	19.2 %	57.6 %
20 or more jobs	44	1,239	5.7 %	28.8 %
50 or more jobs	6	300	0.8 %	7.0 %

In summary, different world regions and countries depict different relative contributions of high-expectation entrepreneurial activity to job creation. In Africa and Latin America, nascent entrepreneurs and baby businesses depict smaller job creation expectations than in Asia, Europe, and in North America. In consequence, more nascent entrepreneurs and baby businesses are required in these regions for similar job creation potential as in Asia, Europe, and North America. Of individual countries, Spain stands out as a country where nascent entrepreneurs and baby businesses depict smaller growth expectations than in Germany, Sweden, United Kingdom, and USA. At this point, it is difficult to say what causes the relatively smaller growth expectations of nascent and new entrepreneurs in Africa, Latin America, and Spain.

Conclusions

High-expectation entrepreneurial activity represents only a small proportion of all entrepreneurial activity. Depending on country and world region, only some 3% to 17% of nascent entrepreneurs and baby businesses expect to employ 20 or more employees within five years. Only some 1% to 7% of nascent entrepreneurs and baby businesses expect to employ 50 or more employees within five years. There is no systematic difference between nascent entrepreneurs and baby businesses in terms of how growth expectations are distributed within the population. The observed distributions are also consistent with received studies on the distribution of actual job generation by new firms.

T**hough rare, high-expectation entrepreneurial activity explains the bulk of expected new jobs by cohorts of nascent entrepreneurs and baby businesses.** Even though high-expectation entrepreneurial activity only represents a small subset of all entrepreneurial activity, its potential economic impact is significant, as nascent and baby businesses expecting to employ 20 or more employees are responsible of up to 80% of total expected jobs by all entrepreneurial activity. This is significant, as only some 0.2 % – 1.6% of the adult-age population in different countries and world regions actively participate in high-expectation entrepreneurial activity.

Because of its potential impact, high-expectation entrepreneurial activity may help balance overall entrepreneurship deficit, as measured by GEMs Total Entrepreneurial Activity (TEA) index. The distributions show, for example, that in highly developed Asian countries, only half the number of nascent entrepreneurs are required to produce a roughly equal number of expected jobs as in Africa. This is because nascent entrepreneurs in highly developed Asian countries have, on average, greater job creation expectations. Thus, in terms of expected job creation, it is not only the overall TEA rate that matters – it is also the quality of the overall entrepreneurial activity, as measured by growth expectations.

Governments should be aware of the importance of high-expectation and high-potential entrepreneurial activity and consider introducing highly selective support measures and policies. To the extent to which the goal of government policy is to support job creation through entrepreneurial activity, governments should be aware of the highly skewed distribution of job creation expectations within populations of nascent and baby businesses. If only a small percentage of all firms promise to deliver the bulk of new jobs, then unfocused measures may not be as effective as measures that are specifically targeted at high-potential ventures. To achieve better selectiveness, governments should study who is behind high-potential entrepreneurial activity, and how this kind of activity could be supported. Given the skewness of the distributions reported here, highly selective policy measures could prove more effective for job creation purposes than non-selective ones.

More research is required to learn who is behind high-expectation entrepreneurial activity. Little is known about who is behind high-expectation nascent and entrepreneurial businesses. Some findings will be reported later in this report. Given the potential importance of this group for job creation, more empirical research on the topic is necessary.

Who is Behind High-Expectation Entrepreneurial Activity?

Who starts high-expectation new firms? In order to understand the implications of high-expectation activity for government policy, it is important to know whether high-expectation entrepreneurial activity differs from mainstream entrepreneurial activity in any way. For policy conclusions, tangible, observable, and meaningful differences between high-expectation and low-expectation entrepreneurial activity needs to be established. In the following, we use both demographic descriptors from GEMs adult population survey, as well as data describing the entrepreneurial activity observed, to study differences between high- and low-expectation entrepreneurs, both globally and within Europe.

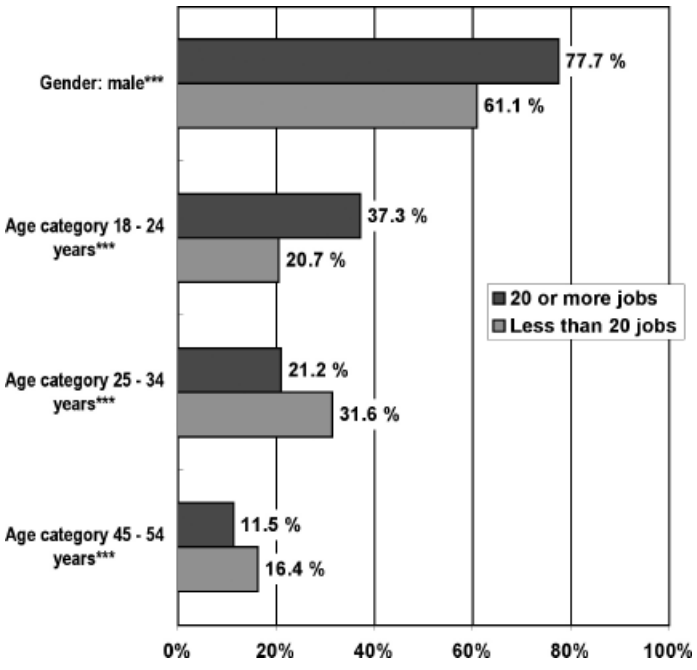
Global Differences Between High-Expectation and Low-Expectation Nascent and Baby Businesses

The GEM dataset contains rich demographic data about individual respondents, including gender, age, education level, household income, and employment status. This data is complemented by interview data on the respondent's motivations, attitudes, and entrepreneurial activities. The dataset also contains industry sector data on the nascent and baby businesses. Statistically significant, and meaningful, differences between high- and low-expectation nascent and baby businesses are shown in figures 7 -18.

Figure 7 shows statistically significant differences between high- and low-expectation nascent entrepreneurs in terms of age and gender in the global GEM sample[17]. High-expectation nascent entrepreneurs are significantly more likely to be male and from 18 to 24 years old than low-expectation nascent entrepreneurs. Two of the older age categories, 25 – 34 years and 45 – 54 years, depict disproportional prevalence of low-expectation entrepreneurs in the global GEM sample.

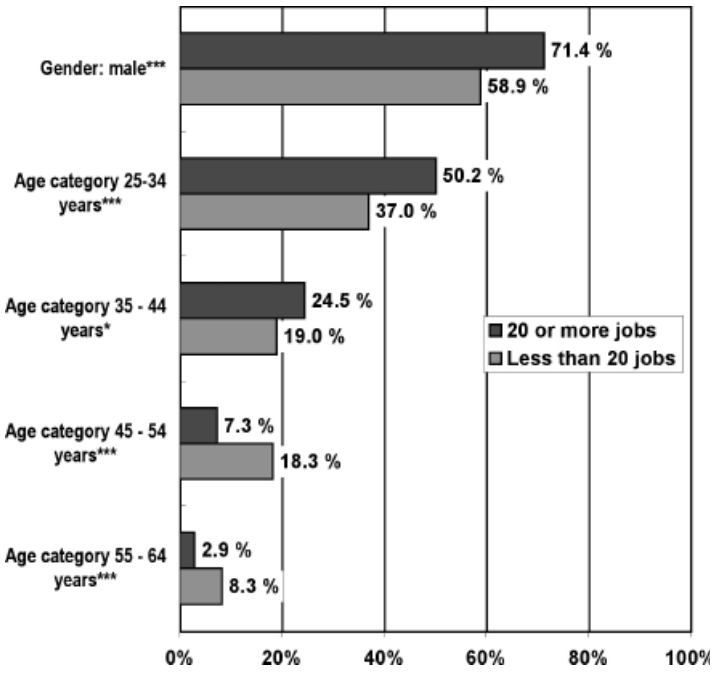
Figure 8 shows demographic differences for baby businesses in the global sample. As in the case of nascent entrepreneurs, young males are over-represented among high-expectation baby businesses: some 50% of high-expectation baby business managers belong to the age category of 25 – 34 years. For ages 45 years and above, low-expectation baby business managers are over-represented. Thus, expectations for rapid growth among baby business managers appear to decline fairly constantly as a function of age.

Figure 7 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Overall Sample – Demographic Characteristics



* p <0.05 ** p <0.01 *** p <0.001

Figure 8 Comparison of High-Expectation and Low-Expectation Baby Businesses: Overall Sample – Demographic Characteristics

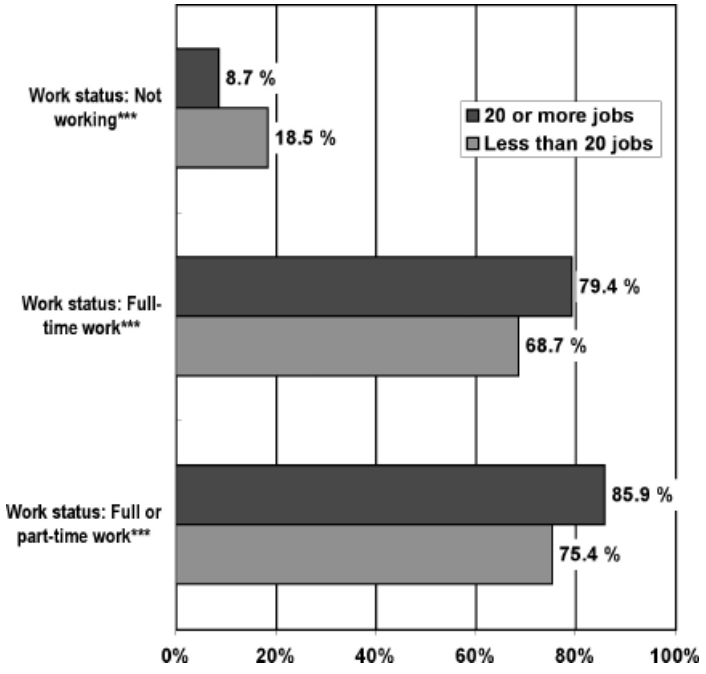


* p <0.05 ** p <0.01 *** p <0.001

17 Note that the global GEM sample has been adjusted according to population size. Because there are two very large countries in the sample, China and India, the global comparison is dominated by these two countries.

Figure 9 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Overall Sample – Employment Status

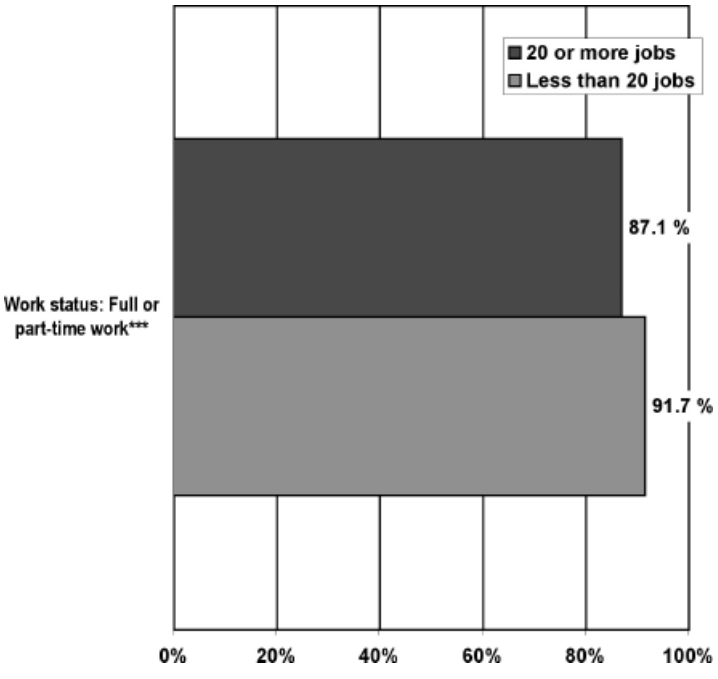
In terms of work status, high-expectation nascent entrepreneurs are over-represented among those who have either full or part-time work (Figure 9). However, the majority of both high- and low-expectation nascent entrepreneurial activity is associated with individuals with a full- or part-time employment status. Among those who are not working, low-expectation activity dominates among nascent entrepreneurs. For baby businesses, only one significant difference is observed: low-expectation baby business managers are more likely to be employed full- or part-time. Note however, that the magnitude of this difference is only four percentage points, so the practical significance of this difference is minor.



* p <0.05 ** p <0.01 *** p <0.001

Figure 10 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Overall Sample – Employment Status

The over-representation of high-expectation activity among nascent entrepreneurs of full- or part-time work status may be due to at least two reasons. First, starting an entrepreneurial firm represents a significant employment trade-off for those who already have a job, in terms of job and income security. A part of the difference between high- and low-expectation activities may thus be caused by the need to compensate for this trade-off with higher earning expectations associated with faster employment growth. Second, individuals in active employment are more likely to develop the skills and social capital necessary to pursue business opportunities. This could also help to explain part of the over-representation of high-expectation activity among those already employed.



* p <0.05 ** p <0.01 *** p <0.001

Figure 11 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Global Sample – Income Level and Education

Differences in terms of income level and education may also be suggestive of the trade-offs involved in choosing a career in entrepreneurship. As shown in Figures 11-12, high-expectation entrepreneurial activity is over-represented in high-income groups as well as among well-educated individuals. Among nascent entrepreneurs, over 72% of high-expectation activity occurs among individuals who belong to the highest third in the household income segment. This percentage is virtually the same for baby business mangers. Of low-expectation nascent entrepreneurs, only 33% belong to this segment, and for baby business managers, this percentage drops to 21.4%. Of low-expectation baby business managers, 40.1% belongs to the lowest third household income category. Similarly, nearly 38% of high-expectation nascent entrepreneurs and 26% of high-expectation baby business managers have completed a post secondary or higher education degree, against 20% of low-expectation entrepreneurs.

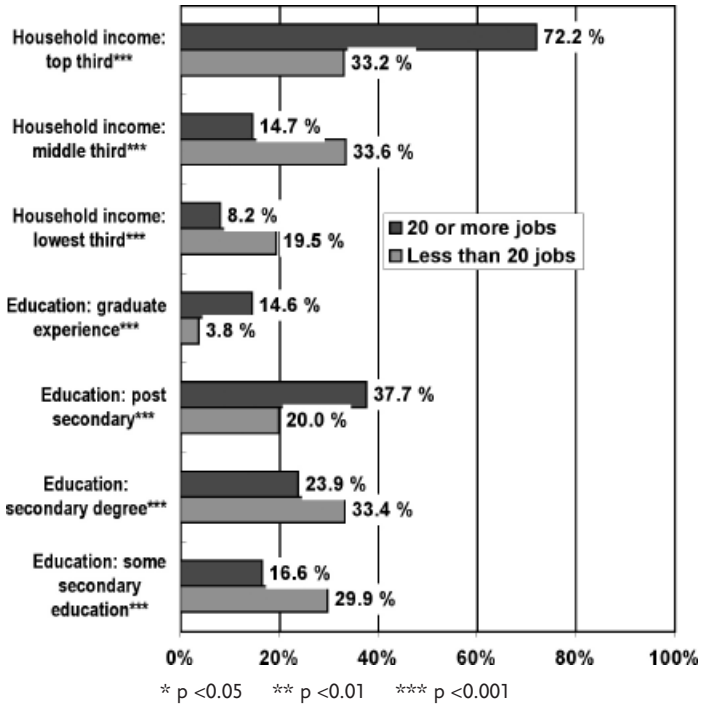


Figure 12 Comparison of High-Expectation and Low-Expectation Baby Businesses: Global Sample – Income Level and Education

These patterns may be suggestive of both trade-offs as well as human and social capital effects. Individuals with a higher income level may not jump on low-expectation entrepreneurial opportunities. It may be that a higher growth expectation is required to make the trade-off between secure high income and more insecure entrepreneurial income attractive for a high-income individual. This explanation could apply more to nascent entrepreneurial activity. Because GEM measures income as household income, it may also be that individuals from high-income families may be exposed to more lucrative opportunities than individuals from low-income families – this would be a social capital effect on opportunity exposure. It is also possible that a high household income and high human capital go hand-in-hand, and the higher human capital of high-income individuals could thus explain part of the observed difference. This would be consistent with the observation that high-expectation entrepreneurial activity is more in evidence among well educated individuals, both for nascent and for baby business entrepreneurial activity. Finally, high human capital itself (enhanced by education) may boost growth expectations because many important entrepreneurial skills (such as visioning, analysis, imagination, search skills) are enhanced by education (Sapienza & Grimm, 1997; Barringer, Jones, & Neubaum, 2005). Because of the multiplicity of potential effects, more research and data is needed to assess the pertinence of these, and other, potential explanations.

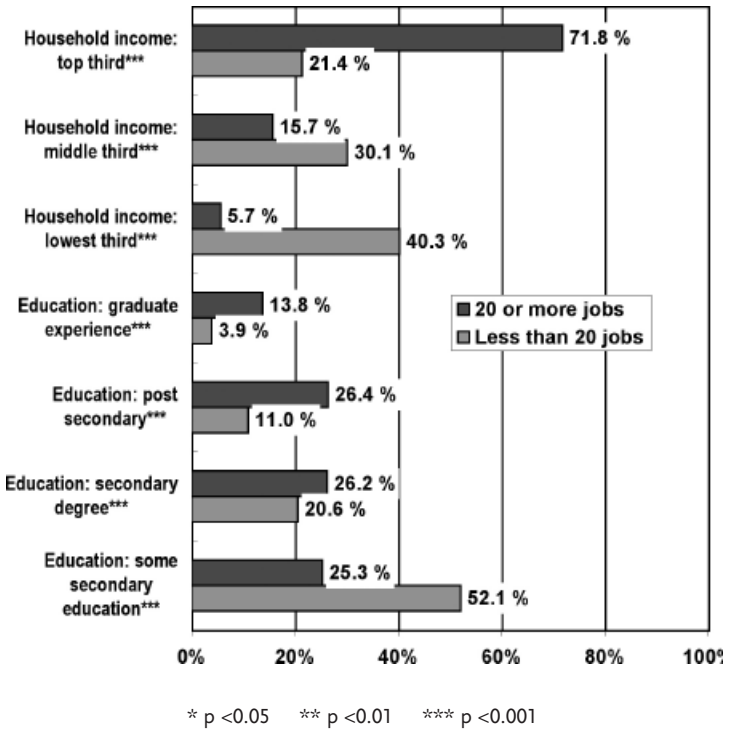
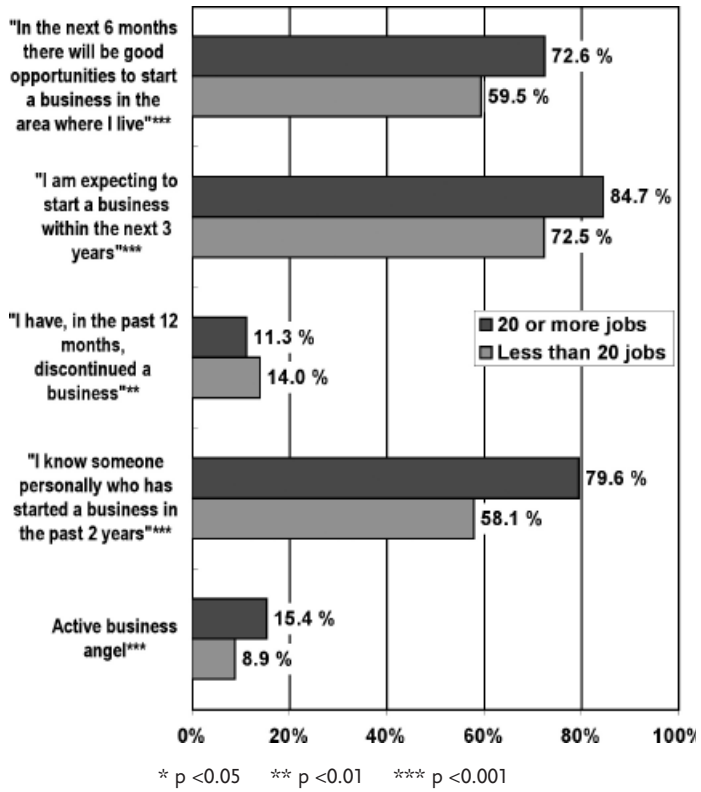


Figure 13 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Global Sample – Entrepreneurial Activities

High-expectation entrepreneurs differ from low-expectation ones also in terms of their entrepreneurial activities and attitudes. As shown in Figure 13, high-expectation nascent entrepreneurs are significantly more likely to perceive good business opportunities, they are more likely to expect to start a business within three years, they are more likely to know people who have started a business, and they are almost twice as likely to have invested in entrepreneurial ventures started by others than are low-expectation nascent entrepreneurs. High-expectation nascent entrepreneurs are less likely to have discontinued a business during the past year, however. Thus, exposure to other entrepreneurs, informal investor activity, and greater entrepreneurial activity in general is associated with higher growth expectations.

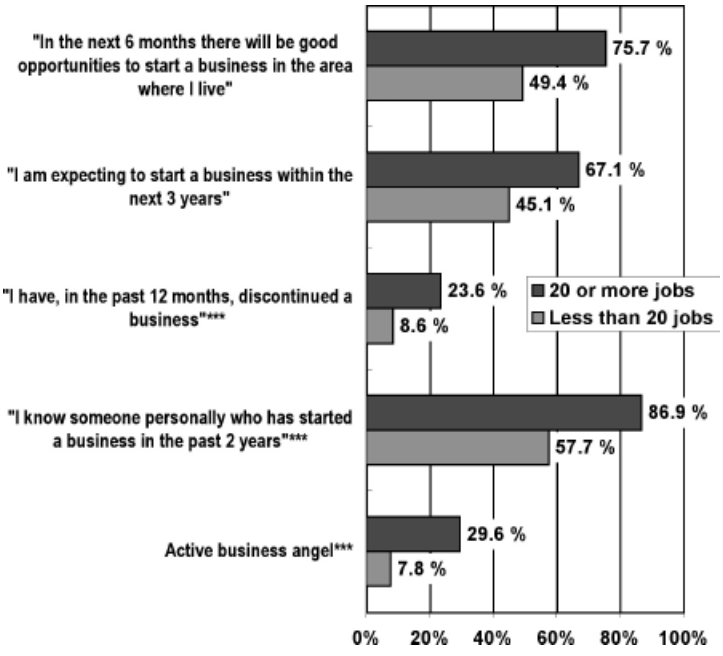


* p <0.05 ** p <0.01 *** p <0.001

Figure 14 Comparison of High-Expectation and Low-Expectation Baby Businesses: Global Sample – Entrepreneurial Activities

Similar patterns can also be observed for baby businesses (Figure 14). In particular, high-expectation baby business managers are more likely to perceive good opportunities, to expect to start new businesses in the future, and to personally know other entrepreneurs than are low-expectation baby business managers. High-expectation baby business managers are nearly four times as likely to have invested in new firms started by others than are low-expectation baby business managers. Contrary to high-expectation nascent entrepreneurs, high-expectation baby business managers are also significantly more likely than low-expectation baby business managers to have discontinued a business in the past 12 months.

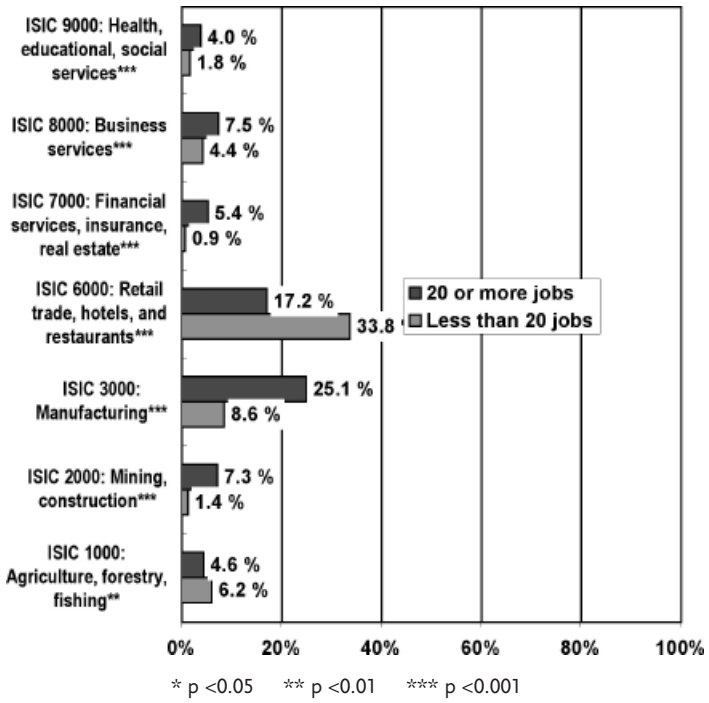
The patterns observed in Figure 13 may be indicative of the importance of general entrepreneurial exposure for high-growth expectations. The more a baby business manager has had exposure to entrepreneurial activities such as informal investor activity, familiarity with other entrepreneurs, or future expectations to act entrepreneurially, the greater the growth expectations they appear to depict. More research is required to confirm the validity of this pattern, but even now, the data suggests that greater exposure to entrepreneurial activity may feed high-growth expectations.



* p <0.05 ** p <0.01 *** p <0.001

Figure 15 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Global Sample – Industry Sectors

High- and low-expectation entrepreneurial activity is also differentially present in different business sectors. As shown in Figure 15, high-expectation nascent entrepreneurial activity is relatively more prevalent in the: manufacturing; mining and construction; business services; financial services; and health, educational, and social services sectors. Low-expectation nascent entrepreneurial activity is relatively more prevalent in the retail trade, hotels, and restaurants; as well as agriculture, forestry, and fishing sectors. It is interesting that the single largest sector for nascent entrepreneurial activity – retail trade, hotels and restaurants – also shows the lowest prevalence of high-growth expectations, as compared to low-expectation activity.

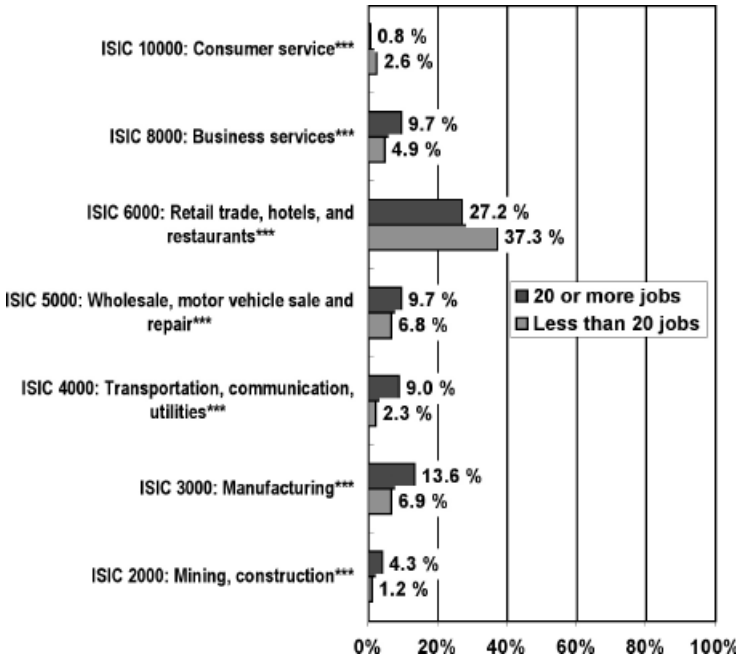


* p <0.05 ** p <0.01 *** p <0.001

Figure 16 Comparison of High-Expectation and Low-Expectation Baby Businesses: Global Sample – Industry Sectors

For baby businesses, the differences are broadly similar. High-expectation baby business activity is more prevalent in the: manufacturing; business services; wholesale and motor vehicle sale; transportation, communication, and utilities; and mining and construction sectors. Similarly to nascent entrepreneurial activity, the sector with a highest overall level of entrepreneurial activity depicts a relative under-representation of high-expectation activity.

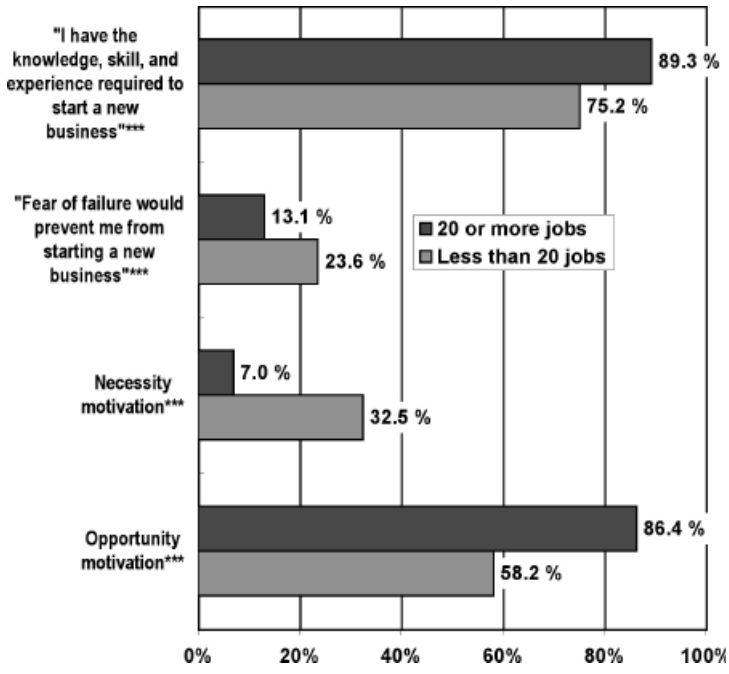
Sector differences such as those reported here might help explain some of the observed differences between countries in terms of Total Entrepreneurial Activity (TEA). In previous years, GEM has reported very high rates of TEA for countries, such as Uganda, that are not generally perceived as highly innovative. It may be that Uganda's economy is dominated by sectors, such as retail trade, hotels, and restaurants; and agriculture, which may offer good opportunities for small firm creation but also experience low levels of high-expectation entrepreneurial activity. For Nordic countries, where very similar institutions such as the social security system exist, Norway and Denmark customarily post higher TEA rates than do Sweden and Finland. Finland and Sweden both have a high emphasis on mechanical engineering sectors, as well as pulp and paper industries, which may not have high levels of entrepreneurial activity due to the existence of high barriers to entry. Clearly, interpreting TEA rates for individual countries requires some attention to the prevalence of different industry sectors in the economy, as well as to the prevalence of high-expectation entrepreneurial activity in different sectors.



* p <0.05 ** p <0.01 *** p <0.001

Figure 17 Comparison of High-Expectation and Low-Expectation Nascent Entrepreneurs: Global Sample – Entrepreneurial Motivation

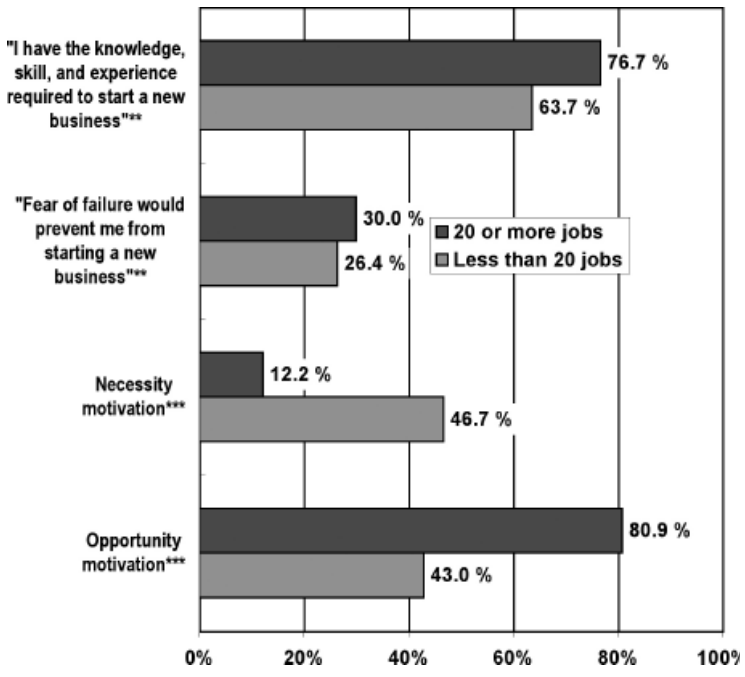
Finally, motivational characteristics of high-expectation and low-expectation entrepreneurial activity were compared. Figure 17 shows the comparison for nascent entrepreneurs. As can be seen, high-expectation nascent entrepreneurs are more likely to believe that they have the necessary skills to start a new business; are more driven by opportnity motivation[18]; and are less likely to be constrained by fear of failure. The difference between high- and low-expectation nascent entrepreneurs is particularly dramatic for necessity motivation: low-expectation nascent entrepreneurs were over four times as likely to indicate a necessity motivation as were high-expectation nascent entrepreneurs.



* p <0.05 ** p <0.01 *** p <0.001

Figure 18 Comparison of High-Expectation and Low-Expectation Baby Businesses: Global Sample – Entrepreneurial Motivation

The motivational characteristics of baby business managers are shown in Figure 18. The pattern is very similar to that observed for nascent entrepreneurs. The differences are particularly important for opportunity and necessity motivations.



* p <0.05 ** p <0.01 *** p <0.001

18 Opportunity and necessity motivation is inquired by GEM with the question: "Are you starting this business to pursue an opportunity or because you have no other way of making a living?". Opportunity pursuit is labelled as opportunity motivation, and 'no other way of making a living' is labelled as necessity motivation.

Differences between High-Expectation and Low-Expectation Nascent and Baby Businesses – Europe

Above, we have reviewed differences between high- and low-expectation nascent and baby businesses using the combined GEM 2000 – 2004 sample as the basis of our analysis. The overall GEM 2000 – 2004 dataset has been harmonized so as to provide a representative picture of all countries included in the overall dataset. The data has thus been adjusted for sample and population size. Because there are two very large countries in the sample – China and India – the global comparison may be said to be more reflective of developing Asian countries than, say, European countries. In the following, we restrict the comparison to European data alone. Meaningful comparisons between high- and low-expectation entrepreneurial activity is possible in the European data because the GEM dataset contains over 265,000 interviews undertaken in various European countries.

Table 9 presents comparisons between high- and low-expectation nascent entrepreneurs in the European data. Only statistically significant, and meaningful, differences are shown[19]. As can be seen, the distributions are broadly similar to the global comparison, with some differences, however. First, the age category of 25 – 34 years witnesses over-representation of low-expectation nascent entrepreneurs, whereas the age category 35 – 44 years witnesses an over-representation of high-expectation nascent entrepreneurs. This difference, while statistically significant, is not very big, however. Second, the highest third in the household income category witnesses an over-representation of high-expectation activity, but this over-representation is not as significant as in the global comparison. Third, education displays a similar pattern as in the global comparison, but the differences are less dramatic. The patterns observed for entrepreneurial activity variables are broadly similar to those observed for the global comparison, as is data concerning entrepreneurial motivations. In Europe, business services represent a greater proportion of both high- and low-expectation entrepreneurial activity than it does in the global comparison.

Table 9 Differences between High-Expectation and Low-Expectation Nascent Entrepreneurs – Europe

Demographic variables	Less than 20 jobs	20 or more jobs
Age category 25 - 34 years**	**30.9 %**	24.5 %
Age category 35 - 44 years*	29.4 %	**34.4 %**
Gender: male***	66.6 %	**80.9 %**
Work status	**Less than 20 jobs**	**20 or more jobs**
Work status: Not working***	**13.3 %**	9.3 %
Education	**Less than 20 jobs**	**20 or more jobs**
Education: some secondary education***	**21.8 %**	14.2 %
Education: post secondary**	23.6 %	**28.8 %**
Education: graduate experience***	9.6 %	**14.8 %**
Income level	**Less than 20 jobs**	**20 or more jobs**
Household income: lowest third***	**21.0 %**	15.0 %
Household income: top third***	26.5 %	**41.4 %**
Entrepreneurial activity	**Less than 20 jobs**	**20 or more jobs**
Active business angel***	8.0 %	**17.8 %**
"I know someone personally who has started a business in the past 2 years"***	63.5 %	**75.5 %**
"I have, in the past 12 months, discontinued a business"*	7.7 %	**10.6 %**
"I am expecting to start a business within the next 3 years"***	57.8 %	**69.2 %**
"In the next 6 months there will be good opportunities to start a business in the area where I live"***	49.3 %	**55.6 %**
Industry sector	**Less than 20 jobs**	**20 or more jobs**
ISIC 2000: Mining, construction***	**3.7 %**	0.8 %
ISIC 4000: Transportation, communication, utilities***	3.5 %	**8.1 %**
ISIC 6000: Retail trade, hotels, and restaurants***	**16.9 %**	12.4 %
ISIC 8000: Business services***	13.6 %	**23.0 %**
Motivation	**Less than 20 jobs**	**20 or more jobs**
Opportunity motivation***	67.4 %	**76.3 %**
Necessity motivation***	**19.4 %**	13.9 %
"I have the knowledge, skill, and experience required to start a new business"***	82.5 %	**89.0 %**
"Fear of failure would prevent me from starting a new business"***	**22.1 %**	13.8 %

* p <0.05
** p <0.01
*** p <0.001

19 Because of the size of the dataset, a difference can be statistically significant without really being meaningful in practice.

European baby business managers depict similar patterns to those above. The age differences between nascent and baby business entrepreneurs are not major. Entrepreneurial activity also depicts similar patterns, except that informal investor activity does not differentiate between European high-expectation and low-expectation baby business managers. As elsewhere, the greatest percentage difference can be seen for household income, with higher-income baby business managers displaying significantly higher growth expectations. Also, opportunity and necessity motivation display similar patterns to those in the global comparison. However, it is noteworthy that necessity motivation is not as significant a differentiator in Europe as it is in the global comparison.

Overall, the patterns displayed for European comparisons are very similar to the global comparison, even though the percentage differences appear, in general, to be smaller in Europe. This holds particularly for income, education, work status, and opportunity motivation variables. One may speculate that the generally smaller percentage differences in Europe may reflect the generally smaller income, educational, and social disparities in Europe than in many other parts of the world. As such disparities are reduced, one may speculate that activity variables (e.g., familiarity with entrepreneurs, informal investor activity) and intrinsic motivations could become more important determinants of high-growth expectations.

Table 10 Differences between High-Expectation and Low-Expectation Baby Businesses – Europe

Demographic variables	**Less than 20 jobs**	**20 or more jobs**
Age category 18 - 24 years*	9.0 %	**12.3 %**
Age category 35 - 44 years*	**31.4 %**	26.4 %
Age category 45 - 54 years*	18.5 %	**23.3 %**
Gender: male***	66.0 %	**79.3 %**
Work status	**Less than 20 jobs**	**20 or more jobs**
Work status: Full-time work***	82.8 %	**87.8 %**
Work status: Full- or part-time work*	87.5 %	**90.7 %**
Work status: Part-time work*	**4.8 %**	2.8 %
Education	**Less than 20 jobs**	**20 or more jobs**
Education: some secondary education***	**25.8 %**	18.7 %
Education: post secondary***	22.4 %	**29.1 %**
Income level	**Less than 20 jobs**	**20 or more jobs**
Household income: lowest third***	**16.5 %**	8.2 %
Household income: middle third***	**27.9 %**	18.2 %
Household income: top third***	30.6 %	**54.7 %**
Entrepreneurial activity	**Less than 20 jobs**	**20 or more jobs**
"I know someone personally who has started a business in the past 2 years"***	62.3 %	**73.2 %**
"I have, in the past 12 months, discontinued a business"*	6.5 %	**11.2 %**
"I am expecting to start a business within the next 3 years"***	27.2 %	**38.4 %**
"In the next 6 months there will be good opportunities to start a business in the area where I live"***	45.1 %	**54.5 %**
Industry sector	**Less than 20 jobs**	**20 or more jobs**
ISIC 10000: Consumer services*	**5.2 %**	3.1 %
ISIC 8000: Business services***	13.8 %	**23.9 %**
ISIC 6000: Retail trade, hotels, and restaurants*	**13.5 %**	9.8 %
ISIC 4000: Transportation, communication, utilities*	4.2 %	**6.5 %**
Motivation	**Less than 20 jobs**	**20 or more jobs**
Opportunity motivation***	67.4 %	**78.0 %**
Necessity motivation***	**17.5 %**	11.5 %
"I have the knowledge, skill, and experience required to start a new business"*	86.6 %	**90.6 %**
"Fear of failure would prevent me from starting a new business"***	**22.2 %**	12.5 %

* p <0.05
** p <0.01
*** p <0.001

Prevalence Rates Among Well Educated, High-Income Males

The data suggests higher prevalence rates in some sub-cells of the adult-age population. Pertinent demographic variables appear to be income, education, gender, and age. Based on our analysis so far, we can expect well educated, high-income males to display particularly high prevalence rates of high-expectation entrepreneurial activity, as compared to the overall population. To examine just how high the rates might be in this cell, we isolated high-income, well educated males from the rest of the population and checked how the high-expectation prevalence rates of these compare with the overall population in different age categories. High income was defined as the individual belonging to the top third household income category. High education was defined as the individual possessing a secondary education or higher degree. We carried out separate analyses for the GEM 2000 – 2004 global sample, as well as for the GEM 2000 – 2004 Europe sample.

Figure 19 Prevalence Rates of Male, Well Educated, High-Income Nascent Entrepreneurs in Different Age Categories – GEM Global Sample

As can be seen, high-income, well educated males display significantly higher prevalence rates of high-expectation nascent entrepreneurial activity than does the overall population. In the global comparison, high-income, well educated males of 25 – 34 years were four times as likely to be involved in high-expectation activity as the adult-age population in general. For the age category of 35 to 44 years, high-income, well educated males were five times as likely as the overall population to be involved in high-expectation nascent entrepreneurial activity.

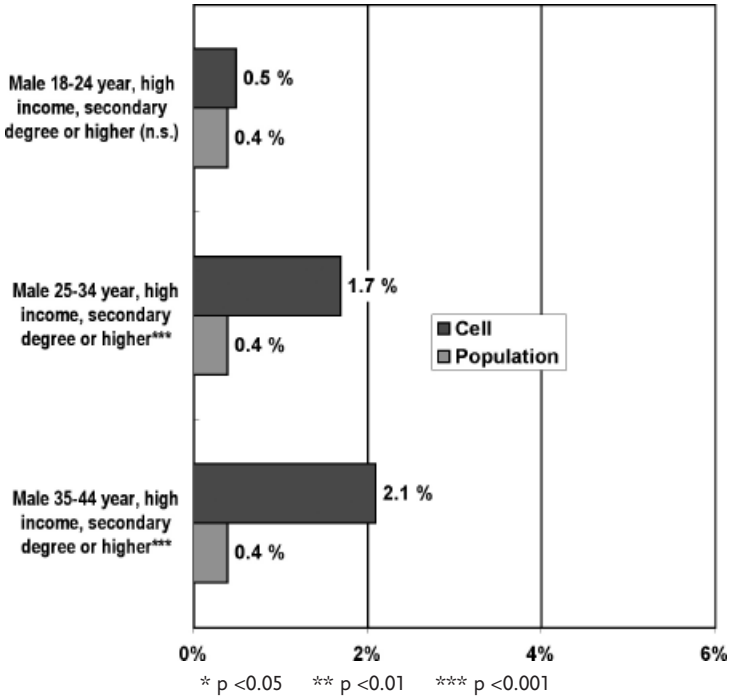


Figure 20 Prevalence Rates of Male, Well Educated, High-Income Baby Business Managers in Different Age Categories – GEM Global Sample

For baby business managers, in the global comparison, equally important prevalence rates for high-expectation activity can be observed (Figure 20). In the age category of 25 to 34 years, high-income, well educated males were ten times more likely than the overall population to be involved in high-expectation activity. The participation rate in high-expectation activity for this cell, 4.4%, is the highest observed for any cell defined using basic demographic variables. In the age category of 35 to 44 years, they were five times more likely than the general population to be involved in high-expectation activity.

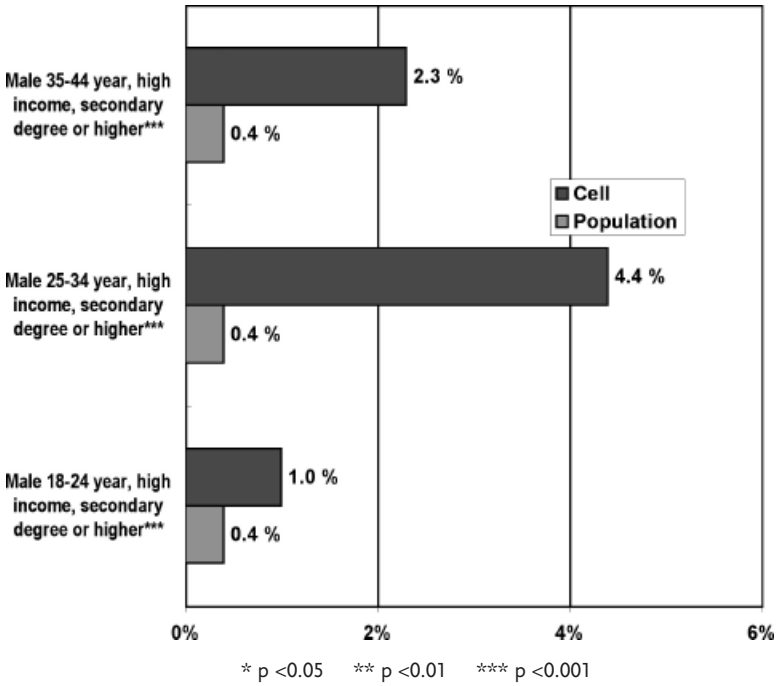
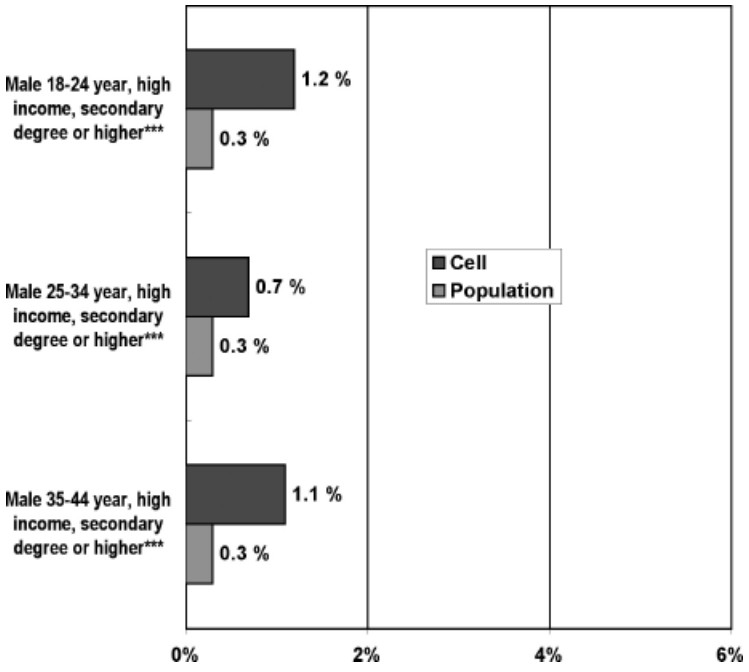


Figure 21 Prevalence Rates of Male, Well Educated, High-Income Nascent Entrepreneurs in Different Age Categories – GEM Europe Sample

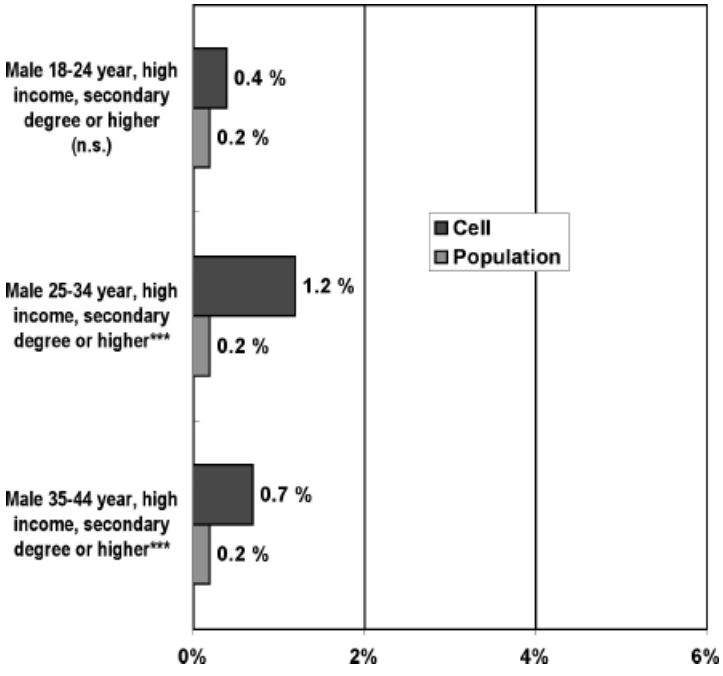
We also carried out the same analysis in the European GEM sample, with similar results. As shown in Figure 21, high-income, well educated males were two to four times as likely as the general population to be involved in high-expectation nascent activity in different age categories. Also, they were two to six times as likely as the general adult-age population to be involved with high-expectation baby businesses. Thus, significant differences exist between different population cells (as defined using basic demographic variables) in terms of participation in high-expectation entrepreneurial activity.



* p <0.05 ** p <0.01 *** p <0.001

Figure 22 Prevalence Rates of Male, Well Educated, High-Income Baby Business Managers in Different Age Categories – GEM Europe Sample

How important are these cells? High-income, well educated males of the 25 – 34 year age category only represent 1.3% of the adult-age population in the GEM countries. Yet, they are responsible for 13.6% of the overall high-expectation baby business activity in the GEM sample. Combined, the three age cells in this education-income-gender category (18 – 44 years) represent 7.7% of the adult-age population and 22% of all high-expectation baby business activity. High-expectation activity is thus not evenly distributed within adult-age population, and a major portion of all expected job creation appears to be concentrated in relatively few high-prevalence population cells. When one combines this information with the finding that only a small proportion of all new firms are responsible for the majority of all new jobs created through the entrepreneurial process, the importance of studying the occurrence of high-expectation activity within sub-cells of the overall population becomes obvious. One has to remember, however, that even this high-prevalence cell leaves nearly 80% of the high-expectation activity unexplained.



* p <0.05 ** p <0.01 *** p <0.001

Conclusions

High-expectation nascent and baby business entrepreneurs differ from the population of low-expectation entrepreneurs in many respects. The analysis shows several important differences between high-expectation and low-expectation nascent entrepreneurs and baby business managers. Most of the differences observed are either based on entrepreneurial attitudes and beliefs, or on objectively observable demographic differences, such as gender, age, education, and income. Our analysis thus provides pointers for policy-makers, as they strive to understand the drivers of high-expectation entrepreneurial activity and design associated support measures.

High household income, high education level, and opportunity motivation are most strongly associated with high-growth expectations. The greatest distinguishing elements for high-expectation entrepreneurial activity could be observed for income, education, and opportunity motivation. These are suggestive of the individual-level economic trade-offs related to the entrepreneurial decision.

Entrepreneurial activity, perhaps even serial entrepreneurial activity, is associated with high-growth expectations. Overall, the more active a given individual was in various kinds of entrepreneurial activity (e.g., making informal investments to start-ups by others, identifying opportunities, knowing other entrepreneurs, or discontinuing a business), the more likely that individual was to be engaged in high-expectation entrepreneurial activity. This suggests that cultivating serial entrepreneurs, as well as increasing the population's general exposure to entrepreneurial activity, might be good ways to foster high-expectation entrepreneurial activity.

High-growth expectations peak at young to middle age. Both young and middle-aged age categories tend to have higher growth expectations than older categories. The highest prevalence rates could be observed for the age category 25 – 34 years.

Population cells differ significantly in terms of high-expectation entrepreneurial activity. The highest prevalence observed for a single population cell (defined using basic demographic characteristics) was ten times higher than the population-wide participation rate in high-expectation entrepreneurial activity. Of baby business managers, 25-34 year olds, high-income and well educated males displayed a 4.4% participation rate in high-expectation activity – meaning that nearly one in twenty individuals in this population cell are actively engaged with high-expectation entrepreneurial start-ups.

Industry sectors differ significantly in terms of the relative prevalence of high-expectation entrepreneurial activity. Highest relative prevalence rates of high-expectation entrepreneurial activity can be seen in manufacturing sectors, as well as in business services. The lowest relative prevalence rates of high-expectation entrepreneurial activity can be seen in retail trade and hotel and restaurant business. Thus, the sector with the highest overall prevalence of entrepreneurial activity also witnessed the highest relative prevalence of low-expectation activity.

While Europe displays similar overall patterns, the percentage differences between high- and low-expectation entrepreneurs tended to be smaller. This may be a sign of the influence of the generally smaller variation in income, education, and economic trade-offs in Europe, as compared with many other parts of the world.

Economic trade-offs may play an important role in explaining high-growth expectations. The analysis suggests that the higher prevalence rate of high-expectation entrepreneurial activity among high-income, well educated individuals may be partly explained by economic trade-offs related to the entrepreneurial decision. From one perspective, the decision to embark upon an entrepreneurial career involves a trade-off between job and income security, on the one hand, and uncertain expectations of higher earnings, on the other. If this is true, then addressing such trade-offs provides an important challenge for entrepreneurship policy.

National Entrepreneurial Framework Conditions and High-Expectation Entrepreneurship

How does high-expectation entrepreneurial activity relate to national entrepreneurial framework conditions? Do relationships exist between favorable conditions and high-expectation entrepreneurial activity? One important aspect of GEM is the annual compilation of survey data from among national experts knowledgeable of the national environment for entrepreneurial activity[20]. Using this data, indicators of national framework conditions are computed. National framework conditions are aspects of the national economic and social environment that directly interact with entrepreneurial activity. GEM distinguishes between 16 such framework conditions. These are: (1) availability of debt and equity funding for new and growing firms; (2) government policy priority given to new and growing firms; (3) functioning of government regulations and institutions; (4) government support programs targeted at new and growing firms; (5) education system support for entrepreneurial skills and attitudes; (6) technology transfer to new and growing firms; (7) availability of business and support services; (8) market change and dynamism; (9) market openness to new and growing firms; (10) quality of physical infrastructure; (11) entrepreneurial aspects of national culture; (12) presence of opportunities to start new and growing firms; (13) prevalence of entrepreneurial skills and competencies within the adult-age population; (14) social respect for entrepreneurs and entrepreneurial success; (15) protection of intellectual property rights; and (16) support for womens entrepreneurial activity[21]. Each of these indicators is computed as a multi-item scale, with higher values indicting better quality of the framework condition[22].

An examination of the relationships between high-expectation entrepreneurial activity and the quality of national framework conditions is interesting from the perspective of identifying national framework conditions that might be associated with high-prevalence entrepreneurial activity. In the following, we report simple bivariate correlations between national entrepreneurial framework conditions and a set of variables that describe the prevalence of various kinds of entrepreneurial activities within the national economy. These variables are: (1) high-expectation entrepreneurial activity (both nascent and baby business activity, with two levels of growth expectations); (2) Total Entrepreneurial Activity (TEA) rate; (3) opportunity-driven TEA rate[23]; (4) necessity-driven TEA rate[24]; (5) prevalence of informal investor activity within the adult-age population[25]; and (6) population-level familiarity with entrepreneurs[26].

Two sets of bivariate correlations are presented. First, we correlate *population-level prevalence* of high-expectation entrepreneurial activity against national entrepreneurial framework conditions. Population-level prevalence indicates the share of adult-age population that is currently involved with high-expectation nascent or baby business activity. Second, we correlate the *share of high-expectation entrepreneurial activity of the total national entrepreneurial activity* against the same variables. The first set of correlations shows how national entrepreneurial framework conditions relate to the overall prevalence rate of high-expectation activity. The second set of correlations shows how the anatomy of entrepreneurial activity relates with national conditions.

In the regressions, pooled data from years 2000 to 2004 is used. Each country and year represents one observation in the dataset.

Table 11 shows the bivariate correlations with population-level high-expectation entrepreneurial activity. Several interesting observations can be made from this simple set of correlations. First, the various aspects of national-level entrepreneurial activity (high-expectation entrepreneurial activity rates, TEA rates, TEA opportunity and necessity, and informal investor activity rate) are positively correlated. Thus, a higher overall prevalence of entrepreneurial activities in a nation in general is associated with a higher overall prevalence of high-expectation activity. As regards informal investor activity,

20 Remember that GEM uses three types of data: (1) annual adult population surveys; (2) annual surveys of national experts; and (3) third-party data describing national economy and demographic and societal conditions. Here we refer to the national expert survey data, which is compiled in order to assess countries' 'national entrepreneurial framework conditions'.

21 The 16 'entrepreneurial framework conditions' have been chosen on the basis of extensive reviews of received research and literature on entrepreneurship, as well as on the basis of extensive discussion and debate within the GEM consortium over several years. They represent the 16 national conditions that are, collectively by GEM consortium teams, considered to be of the greatest direct relevance for national-level entrepreneurial activity.

22 At least five statements are used to assess each framework condition. For each condition, the statement scores load on a single factor, and the internal reliability of each multi-item scale is high. The final indicator of the quality of each framework condition is computed as weighted mean of individual statement scores, using rotated factor loadings of individual statement scores as weights. For detailed account of the GEM method regarding national framework conditions, please refer to Reynolds, Bosma, Autio, et al (2005).

23 Opportunity-driven TEA rate represents the part of Total Entrepreneurial Activity which responds to business opportunities.

24 Necessity-driven TEA rate represents the part of Total Entrepreneurial Activity which is initiated due to the absence of other ways of making a living.

25 The share of adult-age population that have invested in new firms started by others during the past three years.

26 The share of adult-age population indicating that they personally know someone who has started and runs a new firm.

it is noteworthy that the correlations tend to be stronger with the overall TEA rate, as well as with TEA opportunity and necessity, than with high-expectation activity. In the GEM data, an individual is categorized as an informal investor if (s)he has invested his or her own funds, during the past three years, into a new entrepreneurial firm started by someone else. Most of the informal investments in the GEM dataset are made in companies started by relatives and friends; less than 10% are business angel investments.

Another interesting pattern in Table 11 concerns the relationships between high-expectation entrepreneurial activity and national framework conditions, as compared with those depicted by the various TEA rates. Overall, the correlations between high-expectation baby business activity and national framework conditions tend to be neutral or positive, indicating a positive link between the two. Significant positive correlations are indicated for national entrepreneurial culture; respect for entrepreneurs; and government regulations and institutions. The more favorable these were, the higher the prevalence rate of high-expectation baby business activity. For high-expectation nascent activity, some negative correlations can also be observed. Negative, and statistically significant, correlations are observed for availability of funding; government policies; and government programs.

When one looks at the general TEA rates, which consist mainly of low-expectation activity, the pattern of negative correlations is strengthened. The strongest and most consistent negative correlations can be observed for the TEA (necessity) rate and national entrepreneurial framework conditions. These correlations may be a sign of the generally higher prevalence of generic entrepreneurial activity in lower-income countries (see, e.g., Acs et al, 2005). Thus, it may be that both national framework conditions and general prevalence rate of entrepreneurial activity of any kind are higher in low-income countries.

It is also noteworthy that, where the overall pattern of correlations between high-expectation baby business activity and framework conditions tends to be positive, the general pattern of TEA (necessity) is negative. Different forms of entrepreneurial activity, therefore, are differentially related to national framework conditions. This is suggestive of discriminant validity for various GEM indicators of entrepreneurial activity. Because the relationships work in opposite directions, there is a possibility that they may also respond differentially to policy interventions.

Table 11 Correlations between National Entrepreneurial Framework Conditions and the Population Prevalence of High-Expectation Entrepreneurial Activity

	Baby business 20+	Baby business 50+	Nascent entrepreneur 20+	Nascent entrepreneur 50+	TEA rate	TEA (opportunity) rate	TEA (necessity) rate	Business angel activity	Familiarity with entrepreneurs
Baby business 50+	0.920***								
Nascent entrepreneur 20+	0.701***	0.624***							
Nascent entrepreneur 50+	0.718***	0.710***	0.853***						
TEA rate	0.509***	0.417***	0.674***	0.567***					
TEA (opportunity) rate	0.454***	0.374***	0.657***	0.575***	0.947***				
TEA (necessity) rate	0.443***	0.365***	0.540***	0.424***	0.870***	0.675***			
Business angel activity	0.260**	0.234**	0.345***	0.276**	0.535***	0.583***	0.450***		
Familiarity with entrepreneurs	0.127	0.131	0.185*	0.173*	0.209*	0.304***	0.215*	0.777***	
Availability of funding	0.015	0.020	-0.188*	-0.092	-0.366***	-0.223*	-0.499***	-0.297***	-0269**
Government policies	0.021	0.064	-0.224**	-0.111	-0.346***	-0.216*	-0.431***	-0.161	-0.156
Government regulations and institutions	0.226**	0.230**	0.051	0.087	-0.128	0.005	-0.274**	0.103	0.062
Government programs	0.013	0.030	-0.230**	-0.159	-0.407***	-0.273**	-0.537***	-0.138	-0.065
Education systems	0.205*	0.140	0.154	0.091	-0.088	-0.014	-0.243**	0.030	0.069
Technology transfer	0.086	0.085	-0.155	-0.062	-0.375***	-0.252**	-0.488***	-0.082	-0.010
Business services	0.047	0.001	0.024	-0.039	-0.174*	-0.004	-0.330***	0.023	0.083
Market change	0.081	0.162	0.027	0.147	0.046	-0.056	0.171	-0.013	-0.030
Market openness	0.215*	0.197*	0.044	0.028	-0.157	0.024	-0.305***	0.010	0.012
Physical infrastructure	0.161	0.115	0.143	0.075	-0.157	-0.082	-0.357***	0.059	0.041
National entrepreneurial culture	0.320***	0.290***	0.186*	0.241**	0.146	0.181	-0.037	0.030	-0.109
Availability of opportunities	0.198*	0.160	-0.027	-0.017	0.053	0.202*	-0.097	0.128	0.062
Population entrepreneurial competence	0.239**	0.198*	0.167*	0.170*	0.119	0.188*	-0.038	0.089	0.080
Respect for entrepreneurs	0.359***	0.317***	0.087	0.123	0.134	0.157	0.125	0.130	0.026
Intellectual property protection	0.011	0.083	-0.122	-0.084	-0.436***	-0.243**	-0.632***	-0.141	-0.048
Support for women entrepreneurship	0.180	0.206	0.113	0.172	-0.049	0.052	-0.187	0.132	0.210*

*** Correlation is significant at the 0.001 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)

Table 12 Correlations between National Entrepreneurial Framework Conditions and the Relative Prevalence of High-Expectation Entrepreneurial Activity

	Baby business 20+	Baby business 50+	Nascent entrepreneur 20+	Nascent entrepreneur 50+	TEA rate	TEA (opportunity) rate	TEA (necessity) rate	Business angel activity	Familiarity with entrepreneurs
Baby business 50+	0.782***								
Nascent entrepreneur 20+	0.651***	0.631***							
Nascent entrepreneur 50+	0.512***	0.558***	0.840***						
TEA rate	-0.141	-0.116	-0.151	-0.107					
TEA (opportunity) rate	-0.169	-0.113	-0.159	-0.088	0.947***				
TEA (necessity) rate	-0.232*	-0.162	-0.190*	-0.133	0.870***	0.675***			
Business angel activity	-0.095	-0.054	-0.022	0.013	0.535***	0.583***	0.450***		
Familiarity with entrepreneurs	-0.064	-0.047	0.013	0.071	0.209*	0.304***	0.215*	0.777***	
Availability of funding	0.332***	0.281***	0.211*	0.202*	-0.366***	-0.223*	-0.499***	-0.297***	-0.269**
Government policies	0.242**	0.189*	0.082	0.146	-0.346***	-0.216*	-0.431***	-0.161	-0.156
Government regulations and institutions	0.318***	0.271**	0.323***	0.266**	-0.128	0.005	-0.274**	0.103	0.062
Government programs	0.320***	0.232**	0.238**	0.206*	-0.407***	-0.273**	-0.537***	-0.138	-0.065
DSU10004	0.452***	0.322**	0.291**	0.215*	-0.132	-0.016	-0.283**	0.011	0.097
DSU20004	0.346***	0.218*	0.239*	0.124	-0.104	-0.045	-0.189	-0.127	-0.154
dsum0004	0.557***	0.434**	0.376**	0.174	-0.127	-0.010	-0.298	0.170	0.167
Education systems	0.488***	0.349***	0.341***	0.202*	-0.088	-0.014	-0.243**	0.030	0.069
Technology transfer	0.298***	0.212*	0.187*	0.223**	-0.375***	-0.252**	-0.488***	-0.082	-0.010
Business services	0.326***	0.221**	0.241**	0.170*	-0.174*	-0.004	-0.330***	0.023	0.083
Market change	-0.110	0.034	0.072	0.170*	0.046	-0.056	0.171	-0.013	-0.030
Market openness	0.318***	0.273**	0.210*	0.200*	-0.157	0.024	-0.305***	0.010	0.012
Physical infrastructure	0.375***	0.264**	0.368***	0.212*	-0.157	-0.082	-0.357***	0.059	0.041
National entrepreneurial culture	0.280***	0.291***	0.211*	0.231**	0.146	0.181	-0.037	0.030	-0.109
Availability of opportunities	0.185*	0.124	0.043	0.098	0.053	0.202*	-0.097	0.128	0.062
Population entrepreneurial competence	0.186*	0.209*	0.135	0.157	0.119	0.188*	-0.038	0.089	0.080
Respect for entrepreneurs	0.302***	0.270**	0.126	0.134	0.134	0.157	0.125	0.130	0.026
Intellectual property protection	0.427***	0.382***	0.313***	0.246**	-0.436***	0.243**	-0.632***	-0.141	-0.048
Support for women entrepreneurship	0.243*	0.248*	0.333**	0.305**	-0.049	0.052	-0.187	0.132	0.210*

*** Correlation is significant at the 0.001 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)

Overall, however, the correlations in Table 11 for high-expectation entrepreneurial activity and national conditions appear rather neutral. If the national entrepreneurial framework conditions are to have an influence on the prevalence of high-expectation activity, stronger and more consistent correlations would have been expected[27]. Also, the overall negative correlation pattern observed for the generic forms of entrepreneurial activity may raise questions among policy-makers.

27 More sophisticated tests than are possible to report here, using cross-sectional panel regression techniques and strong theory, are needed to sort out the relationships.

Some additional light to the observed patterns can be found in Table 12, which reports correlations for the *relative prevalence* of high-expectation entrepreneurial activity. The difference to Table 11 is that in Table 12, the prevalence of high-expectation activity is indicated relative to the overall rate of entrepreneurial activity. Table 12 thus provides data for the question: what percentage of all entrepreneurial activity will be characterized as high-expectation activity in different settings? Thus, Table 12 looks at the *anatomy* of entrepreneurial activity, rather than the adult-population prevalence rate of high-expectation activity.

Interestingly, the patterns shown in Table 12 are very different from those observed in Table 11. Strong and consistent positive correlations can be observed for all forms of high-expectation entrepreneurial activity and national entrepreneurial framework conditions. Again, the correlations appear stronger for high-expectation baby business activity than for high-expectation nascent entrepreneurial activity. Importantly, the patterns are very different than what can be observed for the various TEA rates, for which the correlations tend to be either negative or neutral.

Because the tables report bivariate correlations, one should not make too far-reaching conclusions on the basis of the tables alone. Also, it is advisable not to look at individual correlations in too much detail, but rather, look at the overall patterns. With these reservations in mind, the patterns in Table 12 may suggest that national entrepreneurial framework conditions may have more to do with the anatomy of entrepreneurial activity, rather than the overall prevalence of it. The 2004 GEM report suggested that the drivers of entrepreneurial activity may be different in high- and low-income countries. The highest overall prevalence rates of entrepreneurial activity can be observed for low-income countries, such as Uganda or Thailand. Earlier in this report, we have seen that the relative prevalence of high-expectation activity varies in different world regions, with the lowest relative prevalence rates displayed for Africa and Latin America. The 2004 GEM report suggested that in low-income economies, the prevalence of entrepreneurial activity may have more to do with the absence of high-quality jobs in the established corporate sector. This would be consistent with a relatively higher prevalence rate of low-expectation entrepreneurial activity, as well as necessity-driven activity. As the economy is better able to supply high-quality jobs, the prevalence rate of such activity might drop, and the locus of forces driving entrepreneurial activity might move elsewhere, for example, toward innovation. Thus, high-income countries would witness lower overall prevalence rates of entrepreneurial activity but higher relative prevalence rates of high-expectation activity. While this hypothesis remains to be properly tested, the correlation patterns reported above are not inconsistent with it.

Finally, it is noteworthy that, in Table 12, the correlations between relative prevalence of high-expectation activity and the overall prevalence of generic entrepreneurial activity are negative and neutral, suggesting that, as the overall prevalence of entrepreneurial activity changes, the anatomy of this activity changes, too, with the relative prevalence of high-expectation activity increasing as the overall rate of entrepreneurial activity drops.

Conclusions

High-expectation entrepreneurial activity is different from low-expectation activity. The analysis above, as well as recent GEM analyses, suggests that high-expectation entrepreneurial activity may respond to different structural conditions in the economy than does low-expectation entrepreneurial activity. It may thus represent a distinct facet of entrepreneurial activity.

Overall, high-expectation entrepreneurial activity tends to be either positively or neutrally associated with national entrepreneurial framework conditions, whereas low-expectation entrepreneurial activity appears negatively associated with national entrepreneurial framework conditions. Even though no causal inferences can be drawn from the above analysis, the correlation patterns suggest that different facets of entrepreneurial activity may be differentially related to national entrepreneurial framework conditions.

The relative prevalence of high-expectation activity appears positively associated with national entrepreneurial framework conditions. The analysis above suggests that the anatomy of entrepreneurial activity is more strongly associated with national conditions than is the overall prevalence of high-expectation activity. This may be associated with differential opportunities for entrepreneurship in high- and low-income economies.

The anatomy of entrepreneurial activity appears to change as the overall level of entrepreneurial activity changes. In the data, lower overall levels of entrepreneurial activity were generally associated with higher relative levels of high-expectation activity. This, too, is suggestive of differential responses of different forms of entrepreneurial activity to economic conditions.

Active policy has a role to play in promoting high-expectation entrepreneurial activity. Even though direct causal inferences are not possible from the present analysis, the evidence of differential relationships with national conditions for different forms of entrepreneurial activity suggest that there is room for active entrepreneurship policy interventions.

It should be possible to design policy interventions that selectively target high-expectation entrepreneurial activity. If different forms of entrepreneurial activity are differentially associated with structural conditions, then the design of selective policy measures should be possible. This is an interesting avenue for further research.

Encouraging High-Expectation Entrepreneurship – Implications for Policy

The findings reported here confirm the economic importance of high-potential entrepreneurial activity in job creation. Regardless of economic context, high-expectation entrepreneurial ventures promise to create a disproportionate share of new jobs. Studies show that the same is true for realized job creation data. Our analysis also shows that the anatomy of the job creation phenomenon varies, with high-income countries generally depicting lower overall levels of entrepreneurial activity, but higher relative levels of high-expectation activity. Further, our analysis revealed an uneven distribution of high-expectation entrepreneurial activity across industry sectors, selected behavioral data, as well as across basic demographic variables. These findings suggest important implications for government policy.

General Policy Implications

Our analysis of national entrepreneurial framework conditions and high-expectation entrepreneurial activity suggests that active policy has a role to play in promoting high-expectation and high-growth entrepreneurial activity. This conclusion is also supported by the significant differences observed between individual countries, and, in particular, the high prevalence rates of high-expectation entrepreneurial activity in the Anglo-Saxon countries. The prevalence rate of high-expectation entrepreneurial activity does vary significantly between countries and world regions, and this prevalence rate appears linked with national entrepreneurial framework conditions. Therefore, we emphasize the need for an active policy and suggest three general policy implications from our analysis, applicable in all economic contexts. First, policy-makers should ***recognize*** the importance of high-expectation and high-potential entrepreneurial activity and adjust their policy priorities accordingly. Second, policy-makers should introduce an element of ***selectiveness*** in entrepreneurship policy, to account for the uneven contributions of types of entrepreneurial activity to job creation. Third, policy-makers should develop ***sophisticated*** support measures to deal with the specific support needs of high-expectation entrepreneurial ventures.

It is important for policy-makers to **recognize** that not all entrepreneurial ventures contribute equally to the economy. High-expectation entrepreneurial activity provides a particularly potent source of new job creation. Awareness of this aspect should be actively promoted within policy-making and policy-implementing communities so as to enhance the responsiveness of these toward high-expectation new ventures. Policy-makers should also promote research to identify conditions favoring high-expectation activity in their specific country contexts. Data on country-specific high-expectation activity is important for developing targeted policy initiatives. Also, the awareness of the general public regarding the importance of high-expectation entrepreneurial activity should be enhanced, in order to promote favorable societal attitudes toward high-expectation and high-growth entrepreneurial activity.

The skewed distribution of potential contributions underlines the need for **selectiveness** in policy design and implementation. If a disproportionate job creation effect is generated by a small sub-set of all entrepreneurial activity, it is important to develop selective and well-targeted support initiatives, as this is likely to enhance the effectiveness of support policy[28]. A policy that provides a little support for all new ventures is likely to be less effective than a policy that attempts to target support at high-potential ventures. Our analysis suggests that such targeting could be possible, for example, by using behavioral, demographic, and industry sector criteria. Concerning behavioral criteria, we have observed that high-expectation activity appears to be associated with individual-level informal investor activity, self-efficacy (belief in one's own ability to successfully start a new venture), familiarity with entrepreneurs, belief in good opportunities, as well as opportunity motivation. Such variables could, potentially, be used in targeting policy initiatives. Similarly, our analyses show that high-expectation activity is considerably more prevalent in some demographic cells, as opposed to others, with gender, education, income level, and age appearing as particularly potent influences. Policy measures could be designed, for example, to address economic and career choice trade-offs within selected demographic cells. Also, addressing high-prevalence demographic cells might, in the short term at least, yield greater results than more generic measures. Finally, our analysis suggests that some industry sectors (e.g., manufacturing) see greater prevalence of high-expectation activity than others. Thus, sector-specific policy initiatives might be designed to address high-expectation entrepreneurial activity.

As regards to the **sophistication** of policy measures, research suggests that high-expectation entrepreneurial activity has distinctive, and often demanding, support needs. In general, providing value-adding support for high-growth entrepreneurial ventures tends to be more demanding than in the case of low-growth entrepreneurial ventures. This is because of the high degree of organizational complexity, as well as the general dynamism of high-potential and high-growth ventures. Effecting organizational growth, as well as managing it, is difficult and often also painful. Rapidly growing

28 Some countries, such as Ireland and Israel, are already implementing highly selective support measures.

organizations need to manage rapidly increasing complexity, as the growing organization needs to constantly develop new organizational structures and co-ordination mechanisms to cope with new demands. Often, frequent changes in management are necessary, as the skills required for managing different growth stages are seldom possessed by the same management team. Rapidly growing ventures are likely to experience greater and more pressing resource needs, concerning both funding and human resources. An early internationalization is often necessary, particularly if the new venture operates in a technology-intensive industry sector. Because of their highly dynamic character, high-growth new ventures tend to be much more volatile than low-growth ventures, and spectacular successes are therefore likely to be accompanied by equally spectacular failures.

The special character and needs of high-expectation and high-growth new entrepreneurial ventures place particular demands for support services. It is unlikely that public sector agencies alone would possess the skills necessary to provide competent services for high-growth ventures. Rather, policy-makers should attempt to catalyze private sector provision of such services, either on a stand-alone basis or through public-private partnerships. Overall, a well-functioning business service infrastructure appears important to cater to the demands of high-growth new ventures. Experience in Canada, the USA, and Israel suggests that classic venture capital is important in fostering high-growth, innovative entrepreneurial activity.

Policy-makers should also accept that over-emphasis on survival may deduct from experimentation and risk-taking. Predicting growth is difficult, and the true potential of new opportunities can only be tested through experimentation. Therefore, policy-makers should consider ways of reducing the costs and stigma associated with entrepreneurial failure, provided that such failure follows an honest attempt to pursue perceived business opportunity.

As regards to the delivery of support services and advice, there is some research to suggest that high-growth new ventures value information and experience-based advice received from their peers. This emphasizes the need to promote professional links between high-expectation entrepreneurs, perhaps by implementing networking initiatives targeted specifically at high-expectation ventures (Fischer and Reuber, 2003).

Conclusions for High-Income Countries

Our analysis suggests that, rather than addressing the overall level of entrepreneurial activity, policy-makers might want to focus on policies that address the anatomy of entrepreneurial activity. While several high-income countries might want to see a greater overall level of entrepreneurial activity, important progress could also be achieved by focusing specifically on facilitating the occurrence of high-expectation entrepreneurs. In Europe and in highly developed Asian economies, such policies would likely entail addressing the economic trade-offs related to the entrepreneurial career choice, particularly among well-educated and reasonably high-income demographic groups (Davidsson & Henrekson, 2002). European and highly developed Asian countries might also benefit from a more entrepreneurial culture and of a higher societal respect for successful high-growth entrepreneurs.

The great majority of high-expectation entrepreneurs already have a job, which underlines the potential importance of spin-offs (e.g., from established private sector companies as well as from public sector institutions) as a mechanism for generating high-expectation entrepreneurial ventures. Policy initiatives designed to facilitate spin-off formation, particularly from knowledge-intensive companies and research institutions, might prove useful in facilitating high-expectation entrepreneurial activity in high-income countries.

In high-income countries that have small domestic markets, high-growth entrepreneurial ventures are likely to face the need to internationalize their activities at an early stage of their life cycles. Internationalization tends to exacerbate the resource needs of high-growth ventures. Therefore, policies designed to facilitate early and rapid internationalization, particularly in technology-intensive sectors, may prove to be an important mechanism for encouraging high-growth entrepreneurial activity. This policy emphasis may prove useful particularly for many European economies.

Finally, an important policy priority for high-income countries should be to address and, if feasible, remove dis-incentives for entrepreneurial growth. Various studies have suggested that, e.g., greater compliance requirements as a function of organizational size, if improperly introduced, may deter some entrepreneurial companies from bypassing a certain threshold size. Similarly, some studies have suggested that small entrepreneurial ventures have a greater need for flexible employment relationships, as they have less slack resources to use as buffer during periods of weak demand. This may be a particular concern in many European countries, where it can be difficult and time-consuming to terminate employment relationships.

Conclusions for Low-Income Countries

Low-income countries, in general, do not appear to be experiencing shortages in general entrepreneurial activity. Indeed, the highest overall prevalence rates of entrepreneurial activity tend to be observed for low-income countries such as Peru, Uganda, and Thailand. As suggested by the 2004 GEM Executive Report, the challenge for low-income countries may therefore not be increasing the overall level of entrepreneurial activity, but rather, the supply of high-quality jobs, as well as improving the overall infrastructure for business (Acs, Arenius, Hay, & Minniti, 2004). For low-income countries, therefore, achieving economies of scale may be the first priority, and achieving this calls for attention to general national framework conditions, instead of framework conditions specific to entrepreneurial activity. It is the general framework conditions that are important for achieving economies of scale. As the institutional framework for any business activity is enhanced, greater emphasis may be given to conditions specific for high-expectation entrepreneurial activity.

Even though low-income countries may have a lower relative prevalence rate of high-expectation activity, this does not necessarily mean that the importance of low-expectation and necessity-driven entrepreneurial activity should be overlooked. In many situations, necessity-driven and low-expectation entrepreneurial activity provides an important source of income for poorly educated individuals. As the overall education level and the supply of high-quality jobs increase, the rate of necessity-driven entrepreneurial activity is likely to fall, and the anatomy of entrepreneurial activity may shift toward high-expectation activity.

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London Business School's Vision is to be the pre-eminent global business school, nurturing talent and advancing knowledge in a multinational, multi-cultural environment. Founded in 1965, the School graduated over 800 MBAs, Executive MBAs, Masters in Finance, Sloan Fellows and PhDs from over 70 countries last year. The School's executive education department serves 6,000 executives and 60 corporate clients on its programmes every year. London Business School is based in the most accessible and international city in the world and is one of only two business schools in the UK to be awarded a six-star (6*) rating by the Higher Education Funding Council for England (HEFCE), confirming the School as a centre of world-class research in business and management. For information, visit www.london.edu

Babson College

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

GERA & GEM

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

Beginning in 1999 with 10 participating countries, the GEM project has expanded to include 34 countries in 2004-05, representing a total labour force of 784 million individuals.

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

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

New developments, and all global, national and special topic reports, can be found at www.gemconsortium.org. The programme is sponsored by London Business School and Babson College.

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