



Global Entrepreneurship Monitor

2006 Latvia Report

Vyacheslav Dombrovsky, Olga Rastrigina, Andrejs Jakobsons

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RIGAS EKONOMIKAS AUGSTSKOLA
STOCKHOLM SCHOOL OF ECONOMICS IN RIGA

GLOBAL ENTREPRENEURSHIP MONITOR

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Founding and Cooperating Institutions:

TeliaSonera Institute at SSE-Riga
Baltic International Centre for Economic Policy Studies (BICEPS)
Latvijas Fakti

FOREWORD

This is the second Latvian Global Entrepreneurship Monitor (GEM) and this year's theme is innovativeness. GEM is a major international research project aimed at describing and analyzing entrepreneurial process across a wide range of countries. The Latvian country report is based on original data collected in Latvia for GEM. The report has been written by a team of researchers at the TeliaSonera Institute at the Stockholm School of Economics in Riga (SSE Riga), the Baltic International Centre for Economic Policy Studies (BICEPS), and SSE Riga. We are convinced that the Latvian GEM will contribute to the knowledge and understanding of the factors influencing entrepreneurial activity and innovativeness in Latvia.

The Latvian participation in GEM would not have been possible without the generous support of TeliaSonera through the TeliaSonera Institute at the Stockholm School of Economics in Riga.

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ABBREVIATIONS USED IN THE GEM REPORT

BICEPS	Baltic International Centre for Economic Policy Studies
GEM	Global Entrepreneurship Monitor
PSED	Panel Study of Entrepreneurial Dynamics
GDP	Gross Domestic Product
EU	European Union
ISIC	International Standard Industry Classification
R&D	Research and Development
IT	Information Technology
SIBiL	Survey of Innovative Businesses in Latvia
GALES	Global Assessment of Longitudinal Entrepreneurial Studies
CIS	Community Innovation Survey
OECD	Organization for Economic Co-operation and Development
SSE-Riga	Stockholm School of Economics in Riga
NMS	New Member States

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GEM TERMINOLOGY

Nascent entrepreneur

A nascent entrepreneur is an adult individual (18-64 years old) who is trying to start up a new business that he or she will fully or partially own. This new business has already passed the stage of being a plain idea, because the individual has made some active steps over the last 12 months that would help launch this business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money etc. However, the business is not fully operating yet, since it has not paid wages for more than three months to its employees or owners.

Baby business or new firm owner

A baby business or a new firm owner is an adult individual who manages and fully or partially owns a new business that has paid wages to its owners for more than 3 months, but less than for 42 months (3.5 years).

Established business owner

An established business owner is an adult individual who manages and at least partially owns a business that has paid wages to its owners for more than 42 months (3.5 years).

Early-stage entrepreneurs

The term 'early-stage entrepreneurs' refers to nascent entrepreneurs and baby businesses together. This covers entrepreneurs in the beginning of their life cycle: from the first active step taken in order to start up a business till the moment when the enterprise has paid salaries to its owners for 3.5 years.

Overall entrepreneurship

Overall entrepreneurship combines both early-stage entrepreneurs and established entrepreneurs. Therefore, this group covers all entrepreneurs at all stages of business life-cycle.

EXECUTIVE SUMMARY

GEM compiles and provides detailed information about the entrepreneurial activity taking place in Latvia. The information and analysis included in this report is intended to provide unique information about the latest trends in entrepreneurship in the country that are helpful for policy makers, businessmen, and the academic community.

The 2006 data suggest that about 4% of the adult population in Latvia were nascent entrepreneurs (prevalence rate of nascent entrepreneurship), almost unchanged compared to the previous observation in 2005. The prevalence rate of early-stage entrepreneurship was 6.6% of the adult population. Cross-country comparisons rank Latvia higher than most post-socialist countries participating in GEM; however, the level of entrepreneurial activity remains low compared to the US, Australia, and China. The prevalence rate of established businesses can also be considered average in the context of GEM. Finally, the overall business prevalence rate of 12% indicates that in Latvia about 180 thousand individuals were involved in entrepreneurial activity in 2006. Changes in the various activity rates compared to 2005 suggest that the overall situation can be considered healthy. However, the dynamic aspects connected with transitions of entrepreneurs between various stages of activity are better addressed by the forthcoming Panel Study of Entrepreneurial Dynamics (PSED).

Cross-country GEM data suggest a non-linear relationship between entrepreneurial activity and economic development, as the low level of GDP per capita is associated with a large number of small enterprises in the economy. As GDP per capita starts to rise, the economy starts taking advantage of economies of scale, thus reducing average entrepreneurial activity. However, if per capita growth continues, then the role of the

entrepreneurial sector starts becoming more important again. Thus it is not surprising that Latvia and some other countries have higher entrepreneurial rates than the more developed EU15 countries.

The regional distribution of entrepreneurship in Latvia is characterized by substantial disparities. Results for 2006 indicate that activity has increased compared to the previous year in Riga, Latgale, and Kurzeme regions. Disparities between regions increased, while entrepreneurial activity in Riga is now about twice as high as in Zemgale region (the least entrepreneurial region).

The overall pattern of early-stage entrepreneurship in Latvia is broadly similar to observations in other European countries. In 2006, the most common sector for early-stage economic activity in Latvia remained consumer-oriented services. These, however, experienced a marked decrease compared to 2005 (42.8% compared to 37.5%); a decrease has also been observed in business services (22.5% compared to 18.8%). At the same time, the transformation sector has experienced a significant increase (by more than nine percentage points), which can be mostly explained by the continuing construction boom (where the early-stage rate doubled in 2006).

Most of Latvian early-stage entrepreneurs (77 %) are motivated by pursuing a business opportunity, rather than being pushed into entrepreneurship by necessity, i.e. lack of employment options. In terms of composition between necessity and opportunity entrepreneurs, Latvia exhibits a similar pattern to European countries. The need for necessity entrepreneurship in Latvia arises mostly due to the shock of transition to a market economy and mainly concerns older workers.

The portrait of an early-stage entrepreneur in Latvia is a 30 year-old Latvian male with a higher education living in Riga, whose business is most likely in the consumer service or transformation sector. Compared to the previous year, the average entrepreneur has become younger and more educated.

The gender dimension of entrepreneurship in Latvia remains strong. Available data suggest that imbalances between the activity rates of males and females are likely to continue because the magnitude of the differences is roughly the same both for early-stage and established entrepreneurs. At the same time, the skills level of men and women are quite similar (this is a unique observation compared to other European countries), which leads to the conclusion that women represent a significant pool of entrepreneurial potential in Latvia.

Entrepreneurs in Latvia are very young compared to other countries (with more than 60% of early-stage entrepreneurs under the age of 34). Activity rates for older people are much lower, which presents a challenge for Latvia to face in the context of an aging population.

In terms of ethnic composition of entrepreneurial activity, the 2006 data show a marked increase in activity rates among non-Latvians. The most likely explanations are related to the fact that the younger cohorts of non-Latvians find it easier to become entrepreneurs due to their knowledge of the Latvian language. Activity rates have increased among all ethnic groups for established entrepreneurs.

The results of GEM suggest that the percentage of those with at least a bachelor's degree among entrepreneurs is 10 percentage points higher than among employed non-entrepreneurs. Early-stage entrepreneurial activity has increased among individuals with the lowest education (secondary or less). The parental background has also been found to have an impact on entrepreneurial activity rates: 25% of all entrepreneurs have parents who have been involved in "entrepreneurial-type" activities previously, while the same statistic is only 11% among working non-entrepreneurs.

Analysis of financing of business start-ups in Latvia suggests that the costs of starting a business have roughly doubled in 2006 compared to the previous year. Own capital is the most significant source of financing for new ventures (the share of this source has increased from 60% in 2005 to 76% in 2006). Around half of nascent entrepreneurs plan to start up their business using only their own finance. Nascent entrepreneurs also have high expectations about being able to borrow money they require from financial institutions. From those who do rely on external financing sources, about 70% mentioned at least one informal investor (such as relatives, colleagues, and friends) as a potential source of funds. In terms of informal investment, Latvia ranks fourth among the 42 GEM countries, with total informal investment amounting to 2.5% of GDP.

Nearly half of all Latvian entrepreneurs were at least moderately innovative. The most popular way to innovate in 2006 was through new products, rather than using new technologies. Another important finding is that innovative firms are present almost equally in all industrial sectors. This finding contradicts the popular belief that innovation mainly takes place in the information technology sector, as innovations were also reported in more traditional sectors such as agriculture.

Innovative entrepreneurs are found to be more export-oriented. About 33% of all highly innovative entrepreneurs (core innovators) had more than half of their customers living outside Latvia in 2006 (only 16% for non-innovating entrepreneurs). Another interesting feature is that innovative entrepreneurs have a better knowledge of foreign languages. In particular, there is a significant difference in the knowledge of English between innovators and non-innovators. This suggests that entrepreneurs who speak English enjoy better exposure to foreign markets and are more able to absorb innovative practices. In terms of links between education and innovativeness, there is no simple linear relationship. Nearly half of core innovators had been educated in business or engineering (both in 2005 and 2006), suggesting that this type of educational background promotes ability to innovate. Professional education seems to matter more for innovation as compared to academic education.

1. INTRODUCTION TO GEM AND WHAT IT DOES

The Global Entrepreneurship Monitoring (GEM) research programme produces assessment of entrepreneurial activity across the world. Initiated in 1999 with 10 countries, it had expanded to 42 countries in 2006. GEM 2007 will conduct research in 43 countries. GEM's contribution to knowledge and understanding of the entrepreneurial process is unique, since, to date, no other data set exists that can provide consistent cross-country information and measurements of entrepreneurial activity in a global context.

The three main objectives of GEM are:

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

GEM's hallmark is its focus on the role played by individuals in entrepreneurship. After all, people start new firms, and people determine the entrepreneurial attitude of established firms, regardless of size. GEM recognizes that entrepreneurship is a complex phenomenon and can be found in a variety of settings and situations. For example, an individual who is just starting a venture and trying to make it into a highly competitive market is an entrepreneur, even if lacking high growth aspirations. Another individual may be an established business owner who has been operating for some years but remains innovative, competitive, and growth-minded. This individual is also an entrepreneur.

GEM analysis distinguishes entrepreneurs at different stages of their life-cycle. The process of business formation begins with perceiving an opportunity and then taking certain steps towards setting up the venture, such as securing financing, developing a product or service, and locating customers. Then, the new venture is developed and expanded, turning it into a mature, established business. Of course, there is no guarantee that transition from one stage to another will occur or that the business will succeed. Many dangers await entrepreneurs in their path to creating a successful, mature business.

An important advantage of GEM is its reliance on high-quality data, collected via surveys of the adult population in each participating country. Representative samples of randomly selected adults, ranging in size from 1,500 to almost 35,000 individuals, were collected in the 42 countries participating in GEM in 2006. The GEM adult population survey (APS) in Latvia took place in July-August 2006. *Latvijas Fakti*, a professional survey firm, conducted phone interviews with 1,958 adults aged 18-64 years old. In this report we present the findings from this survey, as well as the surveys that took place in all the participating countries.

2. SCOPE OF ENTREPRENEURIAL ACTIVITY IN LATVIA

According to the GEM adult population survey, there were about 60,000 nascent entrepreneurs in Latvia in 2006. This is approximately 4% of adult population - an indicator known as the prevalence rate of nascent entrepreneurship.¹ Nascent entrepreneurs are individuals who took active steps towards fulfilling their business ideas. They are at the earliest stage of business creation. This stage may last from a few weeks to several years until the moment when a viable firm is born.

The prevalence rate of nascent entrepreneurship among the adult population is approximately the same as it was in 2005. However, this does not imply that the same people were nascent entrepreneurs in both 2005 and 2006. Each year, some nascent entrepreneurs succeed in establishing working businesses, some continue their start-up attempts, while others fail and quit entrepreneurship. At the same time, new individuals enter entrepreneurship from the general population. Thus, we find a rather stable turnover of the adult population in the earliest stage of entrepreneurship.

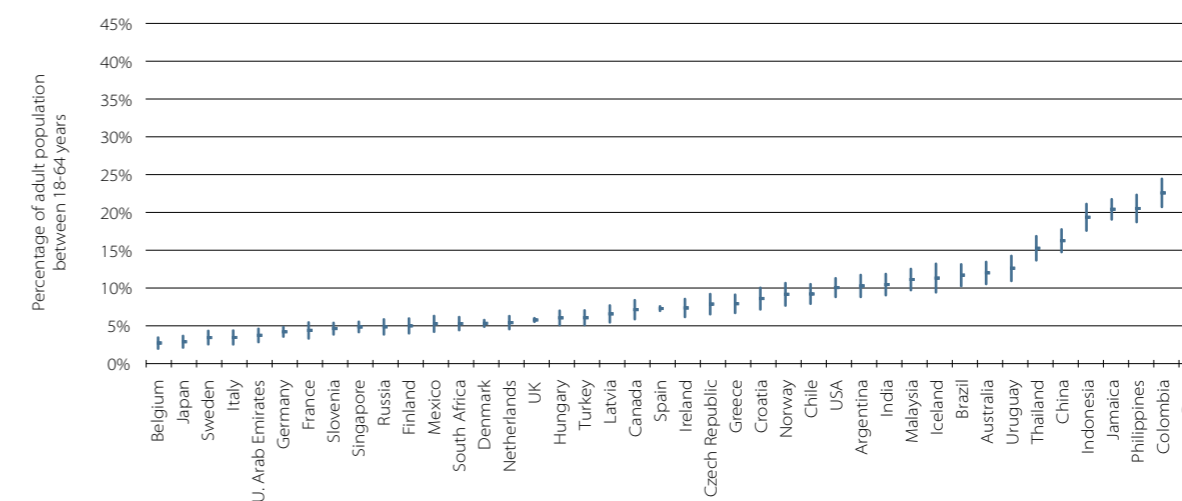
The moment when a nascent business becomes operational in the market marks the birth of a *new business*, which is the next stage of entrepreneurial activity. According to GEM, the event that marks transition from being nascent to a new firm is paying wages or salaries for more than 3 months. Only firms that have paid wages for less than 3.5 years are considered new. Thus, a new business owner is a person who owns (partially or fully) and at the same time manages a new firm. According to the

GEM survey, there were about 40,000 new business owners in 2006, which constituted 2.7 % of the total adult population.

Taken together, nascent entrepreneurs and new business owners form early-stage entrepreneurial activity. Combining them², we estimate that around 100,000 adults in Latvia were involved in early-stage entrepreneurial activity in 2006. Thus, one in fifteen adults in Latvia was an early-stage entrepreneur. This is equivalent to 6.6% of the adult population - an indicator known as the prevalence rate of early-stage entrepreneurship. Early-stage entrepreneurship is the hallmark of GEM analysis. This is probably the most crucial period in the life of a new venture, decisive as to whether a business will thrive or perish. Yet official data often do not cover this important group of entrepreneurs so well, since nascent entrepreneurs have generally not yet registered their businesses in the Enterprise Register.

How does the prevalence of early-stage entrepreneurship in Latvia compare with other countries? Figure 1 ranks Latvia relative to the other 42 countries that participated in the GEM 2006 round. As seen from the figure, the level of early-stage entrepreneurial activity is average. It is substantially higher than in some developed European countries such as Belgium, Sweden, Germany, and France. Latvia's population is also more entrepreneurial than other post-socialist countries such as Slovenia, Hungary, and Russia. However, at the same time involvement in early-stage entrepreneurship is significantly below that in countries such as USA, China, and Australia.

Figure 1: Early-stage entrepreneurial activity by country, 2006



Note: The vertical bars in the chart display 95% confidence intervals. If the entire adult population of a country were surveyed, the prevalence rate of early-stage entrepreneurship would fall into this interval with 95% probability.

¹ GEM surveys only adult individuals between the ages of 18 and 64.

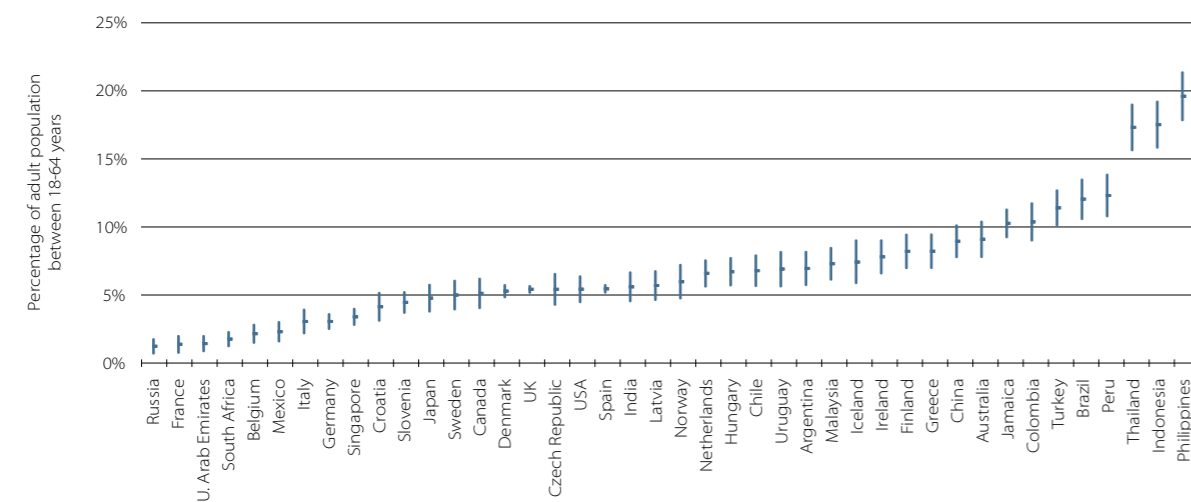
² Those people who are involved in nascent entrepreneurship and, at the same time, own and manage a new firm are counted only once when the number of early-stage entrepreneurs is calculated.

Although the level of early-stage entrepreneurship has remained nearly the same in the last two years, Latvia's relative ranking among GEM countries fell in 2006, as compared with 2005. One of the reasons has been observed growth in early-stage entrepreneurial rates in countries such as Croatia, Greece, and Spain. Another reason is that countries like India, Indonesia, Malaysia, and the Philippines, with relatively high early-stage prevalence rates, entered GEM in 2006.³

The prevalence rate of early-stage entrepreneurs is an indicator of dynamism and future potential of the economy. New firms are typically very small in terms of both revenue and employment. Some young firms manage to grow and attain greater weight in the economy. GEM's concept of *established entrepreneurship* describes businesses that proved to be sustainable. Established entrepreneurs are defined as owners-managers of firms that have paid wages for more than 3.5 years. We find that there were over 85,000 established entrepreneurs in 2006, or 5.8% of the adult population.

Latvia's relative rank in the prevalence rates of established entrepreneurship is shown in Figure 2. As with early-stage entrepreneurship, the level of established business ownership in Latvia can be characterized as average, as compared with other GEM countries. As seen in the figure, there is substantial variation in prevalence rates of established businesses around the world. Latvia's level of established entrepreneurship is four times that of France, or Russia, but is only a third of the level in Thailand.

Figure 2: Established business ownership by country, 2006



Note: The vertical bars in the chart display 95% confidence intervals. If the entire adult population of a country would be surveyed the prevalence rate of established entrepreneurship would fall into this interval with 95% probability.

A broader indicator of entrepreneurial activity is the overall business prevalence rate, which is produced by combining early-stage and established entrepreneurs. We estimate that more than 12 % of Latvia's adult population was involved in entrepreneurial activity at either the nascent, new business, or established business stages. Thus, nearly 180 thousand individuals, or one in eight adults, owned and managed a business or were undertaking steps to set up a business in 2006.

Did Latvia become more entrepreneurial as compared with 2005, when we conducted the first GEM survey? The main indicators of entrepreneurial activity in 2005 and 2006 are presented in Table 1. The overall entrepreneurial activity has increased to 12.2 % in 2006, as compared with 11 % in 2005. This increase took place because of increase in the rate of established business ownership. The level of early-stage entrepreneurship remained unchanged.

Growth in overall entrepreneurial activity may seem quite natural – some new firms pass through the '3.5 years threshold' and, therefore, move into the 'established business' category. However, some business ventures perish because they are not economically viable for one reason or another. According to the GEM survey, around 2 % of the adult population shut down their businesses in 2006. Apparently, there were enough successful transitions from nascent entrepreneurs to new firm owners; and from the latter to established business owners to make up for the loss and even increase the overall number of entrepreneurs. This is certainly a healthy sign for the Latvian economy as we may expect, if current trends continue, that the level of entrepreneurship in 2007 will rise even further.

Table 1: Prevalence rates of entrepreneurial activity in Latvia

	2005	2006
Nascent entrepreneurs	4.2%	4.0%
New business owners	2.8%	2.7%
Early-stage entrepreneurs	6.6%	6.6%
Established business owners	5.0%	5.8%
Overall entrepreneurial activity	11.0%	12.2%

The level of entrepreneurial activity is not set in stone, however. On the contrary, it masks a tremendous amount of churn happening in the economy. Some individuals enter entrepreneurship but, at the same time, others become discouraged and quit. Likewise, some businesses survive and evolve, but some others decay and perish. Take France, for example. Its level of nascent entrepreneurship in both 2005 and 2006 was about the same as in Latvia – about 4 % of the adult population. In contrast to Latvia, only a very few nascent entrepreneurs seem to have made it into the new firm stage – only 0.7 % of adults fell into this category in both 2005 and 2006. As a result, the prevalence rate of established businesses fell to a mere 1.3 % in 2006, against 2.3% a year earlier, with overall entrepreneurial activity declining to 5.7 % from 7.5 %. Clearly, in France's case the problem seems to be that too many nascent entrepreneurs get discouraged and quit, or do not succeed in bringing their business ideas into the marketplace. Why this discussion of France? The lesson is that any policy aiming to promote entrepreneurship must begin with diagnosing where the 'bottleneck' is. Policies that are effective at promoting nascent entrepreneurship would be quite different from policies effective in helping already functioning firms.

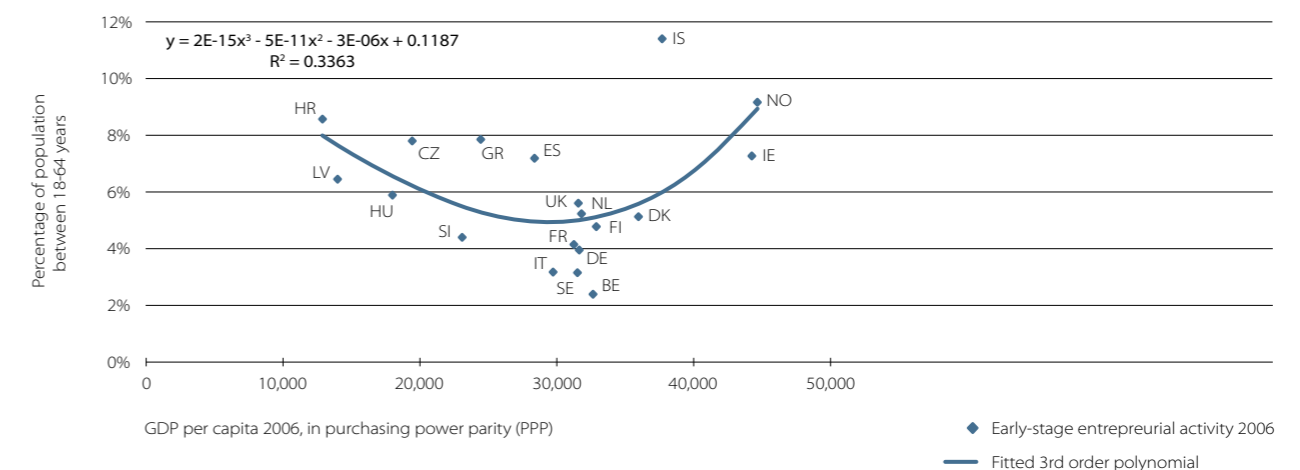
Unfortunately, GEM only provides a snapshot of entrepreneurship at a given point in time. We do not know, for example, what proportion of nascent entrepreneurs succeed in establishing new firms. Nor do we know what factors increase the likelihood

of survival. However, we will address these questions with the Panel Study of Entrepreneurial Dynamics (PSED), which would track development of nascent businesses over time. The PSED survey is discussed in more detail in section 6.

Table 2 provides detailed information on entrepreneurial activity in all the countries that participated in the GEM 2006 round. On the whole, entrepreneurial activity in Latvia stands somewhat below the GEM average, but higher than, on average, in the EU countries.

GEM data suggest a nonlinear relationship between entrepreneurial activity and economic development. Plotting early-stage entrepreneurial activity against GDP per capita reveals a U-shaped relationship (Figure 3). Generally, low levels of GDP per capita are associated with a large number of small enterprises operating in the economy, and therefore high entrepreneurship rates. As GDP per capita grows, more large established firms come into the market, due to industrialization and economies of scale. Simultaneously, employment in large firms increases. However, if income grows further, the role of the entrepreneurial sector becomes important again. Thus, it is not surprising that Latvia and other new member states exhibit entrepreneurial rates higher than in the EU-15. The graph below demonstrates this U-shaped relationship between GDP per capita and the early-stage entrepreneurship index in European countries.

Figure 3: Early-stage entrepreneurial activity and GDP per capita in European countries, 2006



³ A year-on-year comparison of relative standings should be made with caution, since countries-participants change. Austria, New Zealand, Switzerland, and Venezuela discontinued their participation after GEM 2005. Columbia, the Czech Republic, India, Indonesia, Malaysia, Peru, Philippines, Russia, Turkey, the United Arab Emirates, and Uruguay joined GEM 2006 as new members.

Table 2: Prevalence rates of entrepreneurial activity across countries, 2006

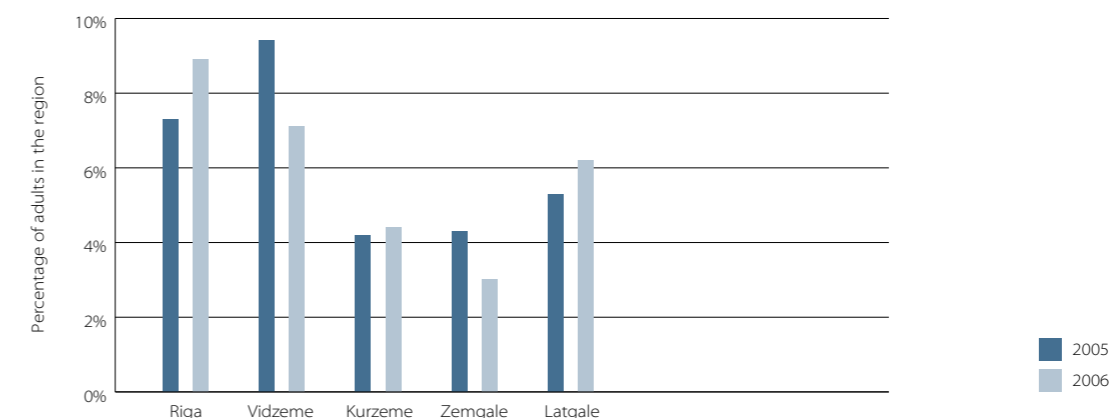
	Nascent Entrepreneurial Activity	New Business Owners	Early-stage Entrepreneurial Activity	Established Business Owners	Overall Business Owners	Number of Observations
Argentina	6.4%	4.1%	10.2%	7.0%	16.4%	1,755
Australia	7.3%	5.7%	12.0%	9.1%	20.6%	1,971
Belgium	1.8%	1.1%	2.7%	2.1%	4.8%	2,001
Brazil	3.5%	8.6%	11.7%	12.1%	23.4%	2,000
Canada	4.1%	3.2%	7.1%	5.1%	12.0%	1,697
Chile	5.7%	3.9%	9.2%	6.8%	15.4%	2,007
China	6.7%	10.5%	16.2%	9.0%	24.7%	2,399
Colombia	10.9%	12.6%	22.5%	10.4%	31.9%	2,000
Croatia	6.4%	2.5%	8.6%	4.1%	12.5%	1,549
Czech Republic	6.4%	2.0%	7.9%	5.4%	12.2%	1,628
Denmark	2.9%	2.8%	5.3%	5.3%	10.3%	10,000
Finland	2.9%	2.4%	5.0%	8.2%	13.0%	2,005
France	3.8%	0.7%	4.4%	1.3%	5.7%	1,519
Germany	2.9%	1.7%	4.2%	3.0%	6.8%	4,049
Greece	5.7%	2.3%	7.9%	8.2%	16.1%	2,000
Hungary	3.2%	3.0%	6.0%	6.7%	12.6%	2,500
Iceland	8.1%	3.8%	11.3%	7.4%	18.2%	2,001
India	5.4%	5.3%	10.4%	5.6%	15.6%	1,916
Indonesia	9.6%	11.5%	19.3%	17.6%	35.2%	1,998
Ireland	4.5%	2.9%	7.4%	7.8%	14.5%	1,961
Italy	2.2%	1.4%	3.5%	3.0%	6.2%	1,626
Jamaica	11.6%	9.2%	20.3%	10.3%	30.1%	3,554
Japan	1.6%	1.4%	2.9%	4.8%	7.5%	1,923
Latvia	4.0%	2.7%	6.6%	5.7%	12.1%	1,958
Malaysia	4.9%	6.2%	11.1%	7.3%	18.4%	2,005
Mexico	4.1%	1.2%	5.3%	2.3%	7.4%	1,839
Netherlands	3.6%	1.9%	5.4%	6.6%	11.9%	2,685
Norway	5.3%	4.3%	9.1%	6.0%	14.4%	1,503
Peru	30.0%	15.1%	40.2%	12.4%	49.6%	1,845
Philippines	5.0%	15.6%	20.4%	19.7%	39.2%	2,000
Russia	3.5%	1.7%	4.9%	1.2%	5.6%	1,894
Singapore	2.7%	2.5%	4.9%	3.4%	7.9%	3,883
Slovenia	2.9%	1.8%	4.6%	4.4%	9.0%	3,008
South Africa	3.6%	1.7%	5.3%	1.7%	6.9%	2,684
Spain	3.0%	4.4%	7.3%	5.5%	12.5%	28,306
Sweden	2.2%	1.4%	3.5%	5.0%	8.4%	1,747
Thailand	4.1%	11.5%	15.2%	17.4%	31.7%	2,000
Turkey	2.2%	4.0%	6.1%	11.5%	17.0%	2,417
Un. Arab Emirates	1.7%	2.2%	3.7%	1.4%	5.0%	1,903
United Kingdom	3.2%	2.8%	5.8%	5.4%	10.9%	34,896
United States	7.5%	3.3%	10.0%	5.4%	14.7%	2,325
Uruguay	8.4%	4.6%	12.6%	6.9%	19.1%	1,618
GEM Average	5.4%	4.6%	9.5%	6.9%	15.9%	156,575
EU Average⁴	3.4%	2.2%	5.5%	5.2%	10.4%	101,889
NMS Average⁵	4.1%	2.4%	6.3%	5.6%	11.5%	9,094

REGIONAL DISTRIBUTION

Latvia is characterized by substantial disparities across its five regions in terms of income, unemployment, and demographic composition. GEM surveys also point to significant differences in early-stage entrepreneurial involvement across regions both in 2006 and 2005 (Figure 4). In both years, Riga and Vidzeme were found to be the most entrepreneurial regions, whereas Kurzeme and Zemgale are the least entrepreneurial. Regional disparity seems to have increased in 2006 as compared with 2005, with the level of early-stage entrepreneurship in the most entrepreneurial region (Riga) being twice as high as in the least entrepreneurial region (Zemgale). However, these results should be viewed with some caution because the sample size is relatively small.⁶

We also find substantial differences in the *composition* of early-stage entrepreneurship across regions in 2006. Nearly half of the early-stage ventures in Riga are nascent entrepreneurs, whereas the corresponding statistics for Vidzeme and Latgale are 70 % and 80 %, respectively. This gives rise to two possible implications. On the one hand, it may imply that entrepreneurship is on the rise in Vidzeme and Latgale. On the other hand, it may point to low survival rates of nascent entrepreneurs in these regions and, therefore, a need for deeper analysis of the underlying reasons.

Figure 4: Early-stage entrepreneurial activity by region, 2005 & 2006



⁴ 16 out of 27 EU countries participated in GEM 2006: Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Slovenia, Spain, Sweden, United Kingdom.

⁵ Only 4 out of 12 new member states participated in GEM 2006: Czech Republic, Hungary, Latvia and Slovenia. All entered EU on 01.05.2004.

⁶ As to regional differences in early-stage entrepreneurship, no statistically significant difference appears in 2006 as compared to 2005. Thus, the results should be viewed as suggestive.

SECTORAL DISTRIBUTION

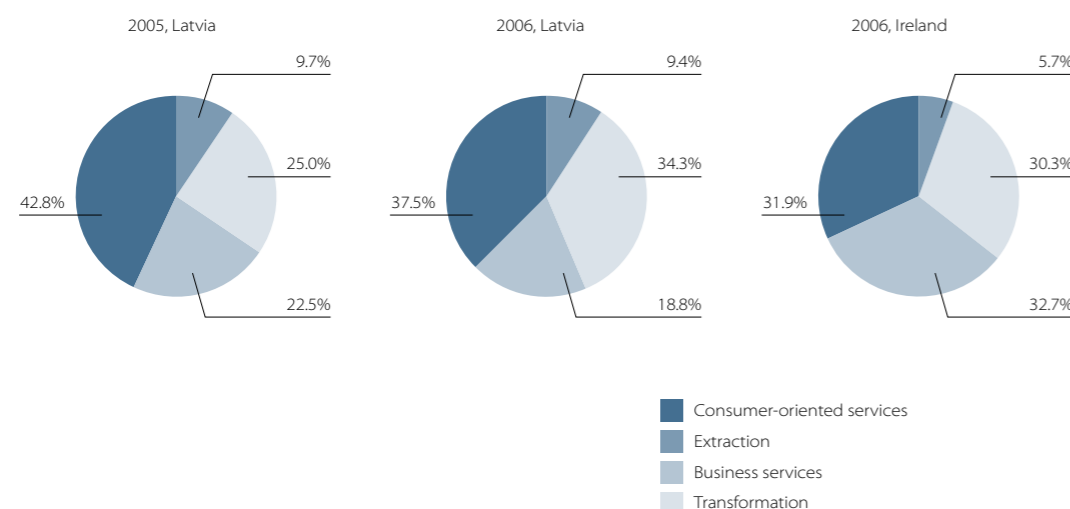
To analyze the sectors in which people attempt to start businesses, GEM codes activity according to International Standard Industry Classification (ISIC). This classification uses more than five hundred different types of activity, which GEM consolidates under four main headings. These sectoral groups are:

- **Extraction:** agriculture, forestry, fishing, and mining (i.e., extraction of products from the natural environment).
- **Transformation:** construction, manufacturing, transportation, and wholesale distribution (physical transformation or relocation of goods and people).
- **Business Services:** where the primary customer is another business.
- **Consumer Oriented Services:** where the primary customer is a physical person (e.g. retail, restaurants and bars, lodging, health, education, social services, recreation).

According to the GEM survey, most early-stage entrepreneurs (nearly 38 %) were active in consumer-oriented services in 2006 (Figure 5). Consumer-oriented services are also by far the most popular business start-up activity in other countries. This is a sector where personal skills are the main factor of production and, with its low investment requirements, attracting a majority of aspiring entrepreneurs around the world.

We observe a sharp increase in early-stage entrepreneurial activity in the transformation sector, with the share of entrepreneurs in this sector growing to 34.3 % in 2006, as compared with 25 % in 2005. However, much of this increase is explained by the ongoing construction boom, which draws resources from other sectors of the economy, including entrepreneurial talent. The share of early-stage entrepreneurs in the construction sector has doubled in a one-year period (from 5.2% in 2005 to 10.6% in 2006).

Figure 5: Early-stage entrepreneurial activity in Latvia, percentage of total by sector



According to GEM data, the pattern of early-stage entrepreneurial activity in Latvia is broadly similar to that observed, on average, in other European countries. Two notable exceptions appear, in the shape of a high share of entrepreneurship in the extraction sector (e.g. agriculture), and a relatively low share of activity in business services. Compared to Ireland, for example, the share of early-stage entrepreneurs in extraction in Latvia is twice as high, whereas the proportion of entrepreneurs in business services is nearly half. GEM research explains such differences by a country's level of economic development. Entrepreneurship in predominantly extractive sectors of the economy is common in less developed countries. In contrast, as the economy develops and becomes more sophisticated, its business sector increases its demand for such services as consulting, and advertising. In turn, emerging opportunities draw young entrepreneurs into the booming sector. Thus, as the Latvian economy continues to develop we expect a gradual decline of early-stage entrepreneurship in the extraction sector, and an increase in the number of business start-ups in business services.

Differences in sectoral distribution of early-stage and established businesses tell a similar story. The share of early-stage entrepreneurs in the extraction sector is smaller than the share of established businesses in this sector. In contrast, the share of early-stage entrepreneurs in business services is substantially greater than the share of established firms. This indicates that entrepreneurs perceive few business opportunities in extraction and plenty of opportunities in business services. Thus, we expect that in the near future the Latvian economy should move away from the extraction sector and towards greater reliance on business services.

ENTREPRENEURIAL MOTIVATION

'Janis' is a single, twenty year-old undergraduate from Riga, who also has a part-time job, is a fluent speaker of English, German, and French, and is setting up a new business in information technologies. He plans to offer a product that all of his customers will find new. About ten per cent of his customers are expected to be outside Latvia. Janis says he wants to achieve greater independence and he is starting his own venture because he perceives a business opportunity.

'Sergejs' is a divorced, fifty-four year old engineer from Daugavpils district. Sergejs is unemployed, with a secondary education, and he does not speak any foreign languages. He is in the process of starting up a business to resell textile products and footwear because he has no better choices for work. Both 'Janis' and 'Sergejs' are real people, but they are given fictional names to ensure anonymity. According to the GEM classification, 'Janis' is an *opportunity* entrepreneur, whereas 'Sergejs' is a *necessity* entrepreneur.⁷

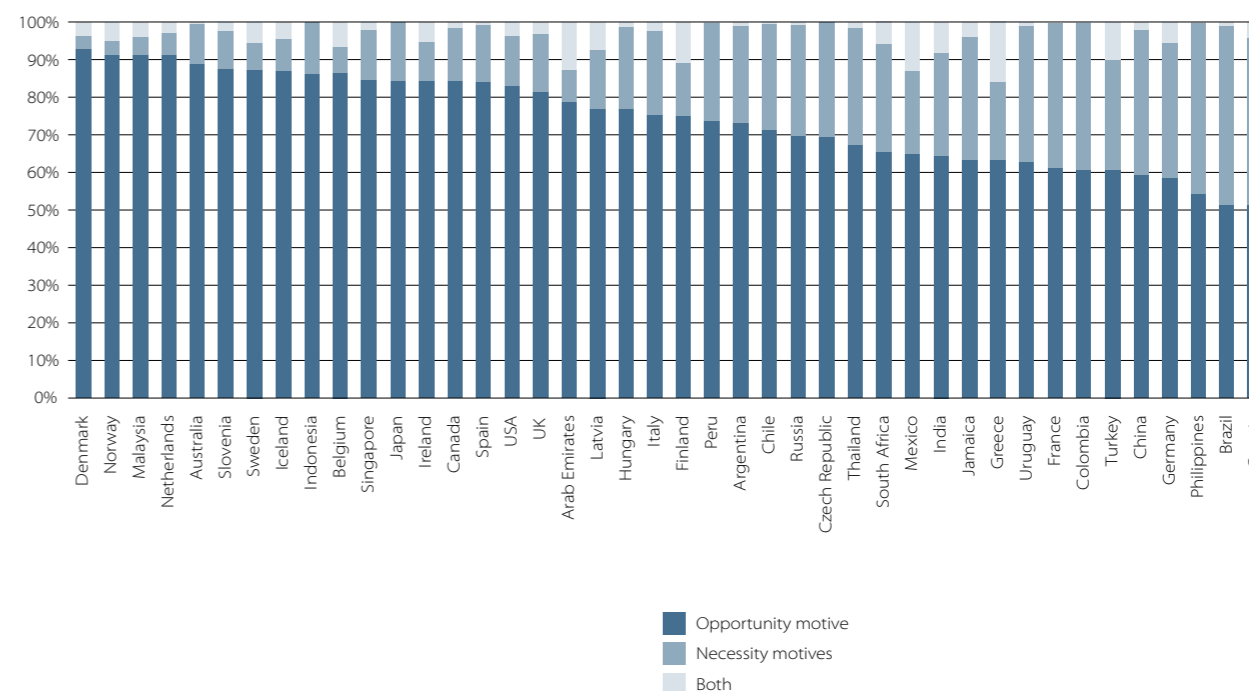
Necessity-entrepreneurs are forced into the market because of lack of employment opportunities. They use business income mostly to support themselves and their families. They are less likely to re-invest and are mostly seen as non-innovative and non-growth-oriented entrepreneurs. Naturally, high rates of necessity-based entrepreneurship signal deficient labour

markets and are often signs of troubled economies. As a rule, entrepreneurship is driven by opportunity motive in developed countries like Denmark, Norway, and Sweden (Figure 6). In contrast, necessity-based entrepreneurship is widespread in developing countries like Brazil, Philippines, and China. There are notable exceptions, however. Relative numbers of necessity entrepreneurs in Germany and France are closer to countries like Colombia and Turkey, than to their counterparts in Western Europe.

In 2006, about 16 % of early-stage entrepreneurs in Latvia were classified as motivated by necessity, and about 77 % were opportunity entrepreneurs. The extent of necessity entrepreneurship in Latvia is close to the average in European countries, which was about 17 % in 2006. A likely explanation of necessity entrepreneurship in Latvia is the shock of transition from the Soviet-style planned economy to a Western-style market economy. Many workers, especially the old, found it difficult to be competitive in today's economy.

As shown in Figure 6, substantial variation exists in entrepreneurial motivation across countries. Substantial variation can also exist across a country's regions. In Latvia, for example, almost 95 % of early-stage entrepreneurs in Latgale are opportunity-driven, as opposed to only 60 % in Kurzeme.

Figure 6: Motivation of early-stage entrepreneurs by country, 2006⁸



⁷ A few respondents can not be coded unambiguously into one of these categories since they are involved in business for both reasons.

⁸ Three categories are distinguished in GEM methodology: "opportunity", "necessity" and "both".

3. PORTRAIT OF LATVIAN ENTREPRENEURS

Ultimately, human resources define the entrepreneurial capacity of a country. After all, individuals start up businesses, own and manage them. Knowing the individual backgrounds of entrepreneurs is an important step towards understanding why some individuals choose to become entrepreneurs while others do not. Scholars of entrepreneurship in a variety of disciplines agree that age, gender, education, income, and family background are all significant socio-economic factors in a person's decision to start a business.

The average early-stage Latvian entrepreneur of 2006 was a 30 year-old male living in Riga, ethnically Latvian. He had higher education (bachelor's degree or higher) and his business was in consumer services or in the transformation sector.⁹ As compared with a year before, the average early-stage entrepreneur was younger and more educated. In 2005, the average entrepreneur was a 34 year-old male from Riga, ethnically Latvian, with secondary vocational or professional education, whose business was in consumer services. In what follows, we provide a more detailed picture of the entrepreneur's personal background and also analyze the possible relationship between individual factors and the behaviour of both early-stage and established entrepreneurs in Latvia.

GENDER

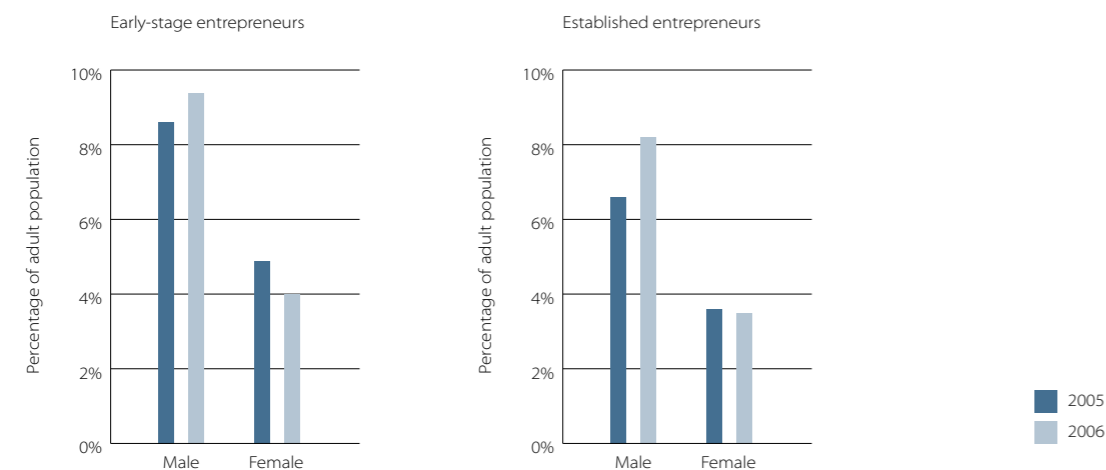
As in many other countries, entrepreneurship in Latvia has a strong gender dimension. Only four out of one hundred women were involved in early-stage entrepreneurship in 2006, as compared with about nine out of one hundred men (Figure 7). Thus, a female was only half as likely to be an early-stage entrepreneur, as compared to a male. Moreover, the gender gap was of about the same magnitude among early-stage entrepreneurs and established entrepreneurs, suggesting that the imbalance is not likely to diminish in the near future.

However, when asked about skills and experience suitable for entrepreneurial activity, answers provided by men and women are quite similar. The percentage of women who claimed that they have good skills and competence to start up a business is almost the same as among men. Latvia is the only country in Europe where this is the case.

Fear of failure is also not a particular characteristic of Latvian women either. Almost the same percentage of women and men answered that fear of failure can prevent them from starting a business. If European countries are compared with respect to answers on this question, only in Belgium and Norway is the difference between male and female attitudes smaller than in Latvia.

Thus, at least from a subjective point of view, there seems to be considerable entrepreneurial potential in the female population of Latvia. That this is not reflected in actual entrepreneurship rates is puzzling and deserves serious investigation.

Figure 7: Early-stage and established entrepreneurial activity, by gender, 2005 & 2006



AGE

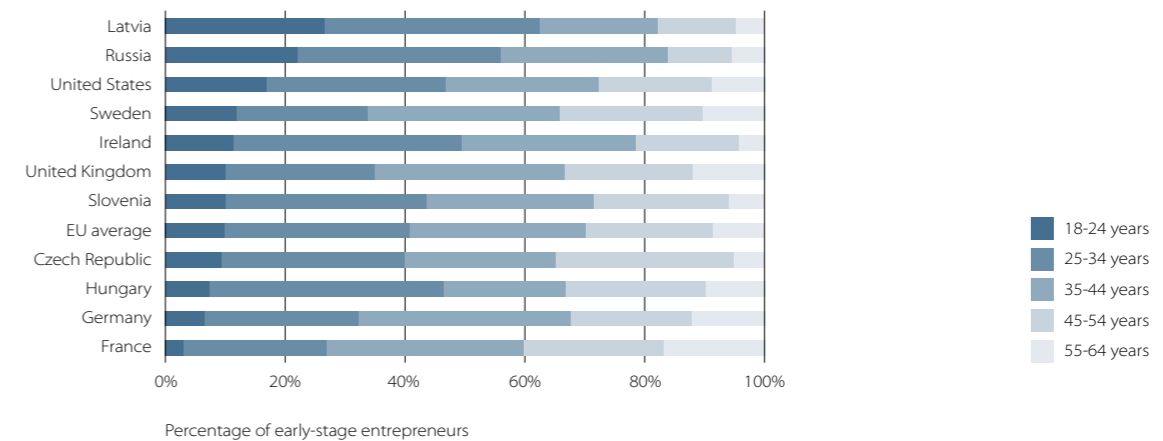
A striking feature of entrepreneurs in Latvia is that they are, on average, very young as compared to non-entrepreneurs, and also to entrepreneurs in other countries. Moreover, more and more young people are becoming involved in entrepreneurship. For example, early-stage entrepreneurs were about ten years younger, on average, than established entrepreneurs in 2006. The percentage of entrepreneurs among those aged 34 years and less rose from about 8 % in 2005 to almost 11 % in 2006.

International comparison of age profiles of early-stage entrepreneurs is provided in Figure 8. Nearly 27 % of early-stage entrepreneurs in Latvia are 18 to 24 years old. This is the highest rate of entrepreneurship among the young in Europe, with the exception of Croatia. In this regard, Latvia is more similar to the US rather than European countries. Interpreting this result is difficult. On the one hand, high rates of entrepreneurship among the young are commendable as they reflect the dynamism, self-confidence, and optimism of young entrepreneurs. On the other hand, lack of experience may have an adverse effect on the long-term viability of these young start-ups. There is a view that acquiring industry experience is crucial

for forming a successful venture. Undoubtedly, the question of optimal time to enter entrepreneurship is very important for entrepreneurship education, for example. Further studies using newly developed PSED data should shed more light on this issue.

In contrast to high involvement rates for the young, entrepreneurship among the old is very rare in Latvia. In the oldest age cohort (55-64 years old), the rate of early-stage entrepreneurship in Latvia is less than five per cent. This is substantially less than, for example, in the United States. One explanation is that people of the older generation, who grew up in the centrally-planned economies, have found it especially difficult to adapt to market economy conditions. Involvement in early-stage entrepreneurship in other post-communist countries such as Hungary, Slovenia, and the Czech Republic are very similar to what we observe in Latvia. However, generally lower rates of entrepreneurial activity among the old are also seen in other European countries. This may suggest that aging populations would have a negative effect on the rate of entrepreneurship in Europe and in Latvia.

Figure 8: Early-stage entrepreneurial activity in selected countries by age cohorts, 2006



⁹ We used medians for gender, age, and ethnicity; modes for region, educational level, and business activity.

ETHNICITY

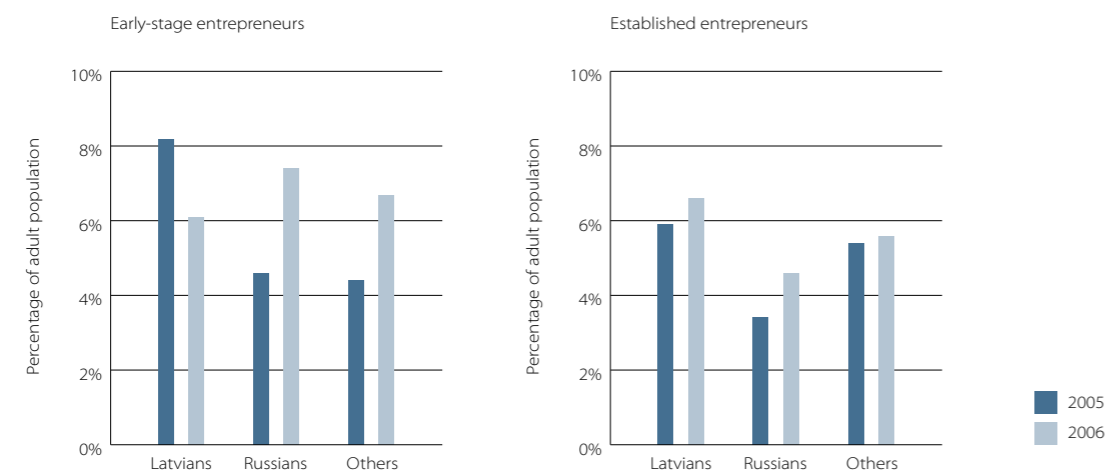
In our 2005 GEM report we destroyed a popular myth from the early nineties, namely that ethnic Latvians are typically farmers and state employees, whereas ethnic Russians are businessmen. On the contrary, the GEM 2005 survey showed that ethnic Russians were underrepresented in the categories of early-stage entrepreneurship and established business ownership.

The results of the 2006 GEM survey are equally startling. We find a marked increase in the prevalence rate of early-stage entrepreneurship among ethnic Russians and people of "other" [than Latvian] nationalities and a decline in entrepreneurship among ethnic Latvians (Figure 9). There is no longer any statistically significant difference in early-stage entrepreneurship among ethnic Russians and Latvians. Inflow of nascent entrepreneurs

accounts for most of the increase in entrepreneurship among ethnic minorities. Although ethnic minorities were more active in early-stage entrepreneurship, the percentage of owners of established businesses was greater among ethnic Latvians.

We have two possible explanations for the greater involvement of ethnic minorities in early-stage entrepreneurship. First, for young people of Russian ethnicity it is easier to integrate in the entrepreneurial environment than for ethnic Russians of the older generation, since the former do not have difficulties with the state language. Secondly, the difference could be explained, at least in part, by changes in sampling design in 2006.¹⁰ If this is the case, then this year's results for ethnic entrepreneurship should be interpreted with some caution.

Figure 9: Early-stage entrepreneurial activity in Latvia by ethnicity, 2006



EDUCATION

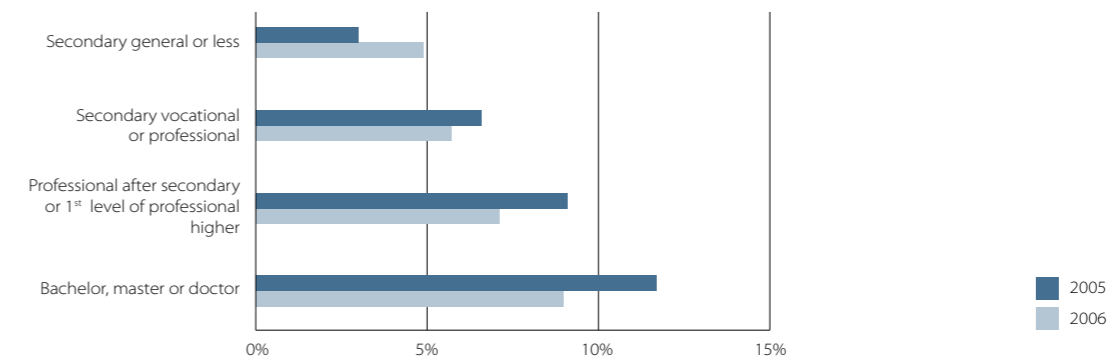
Empirical evidence from the GEM project shows that education is important for entrepreneurship. Better educated individuals are more likely to start new businesses and also more likely to be owners of established businesses. Prevalence of early-stage entrepreneurship among adults with higher education was 9 % in 2006, as compared with only 4.9 % among adults with secondary or less than secondary education (Figure 10). On average, therefore, entrepreneurs are better educated, as compared with non-entrepreneurs.

However, as seen from Figure 10 the relationship between the level of educational attainment and entrepreneurship has not been stable over time. The percentage of early-stage entrepreneurs increased in the group with relatively low educational attainment and decreased among adults with higher education. Theoretically, the effect of educational attainment on entrepreneurship is ambiguous. On the one hand, better-educated individuals are well rewarded in the labour markets and, therefore, may have little incentive to enter entrepreneurship. On the other hand, education may impart skills that would increase the chances of being a successful entrepreneur. A decrease in the rates of early-stage entrepreneurship among the better-educated may signal that the labour market offered better opportunities to these individuals in 2006, as compared with 2005.

Interestingly, the best performers in secondary schools were more likely to be entrepreneurs, but this was not the case for the best performers in universities. When asked about performance in secondary school 50 % of early-stage entrepreneurs reported being in the top 10 % of students, as compared with about 35 % among non-entrepreneurs.¹¹ However, self-reported assessment of performance in higher educational establishments was not significantly different for entrepreneurs and non-entrepreneurs. This is not surprising, as the best performing university graduates are likely to get better offers in the labour market and, therefore, starting their own businesses is less attractive to them. Talented individuals make better entrepreneurs, but talent is also demanded by large firms in the marketplace. As the Latvian economy continues to develop, greater competition will arise between the rewards offered by large businesses, on the one hand, and independent entrepreneurship, on the other hand.

In general, GEM research documents a strong correlation between level of educational attainment and involvement in entrepreneurship. As shown in Table 3, all around the world adults with higher education (bachelor's degree or higher) are significantly more likely to be early-stage entrepreneurs than adults with some secondary degree.¹² In the EU, on average, the former group are nearly twice as likely to be early-stage entrepreneurs as compared with individuals in the latter group.

Figure 10: Early-stage entrepreneurial activity, by education level, 2005 & 2006



¹⁰ The GEM 2005 survey was conducted via face-to-face interviews, whereas the GEM 2006 survey employed phone interviews. There could be systematic differences in fixed line penetration rates for ethnic Latvians and ethnic Russians. For example, many ethnic Latvians live in the countryside, where fixed line penetration rates are low. This could create sample selection bias and underestimate entrepreneurship rates among ethnic Latvians.

¹¹ Clearly, it is hard to believe that more than a third of all adults were among the top ten per cent of students in secondary school. There is definitely some optimism on the part of respondents as regards their performance in school. Nevertheless, differences in perception among entrepreneurs and non-entrepreneurs can still be interpreted.

¹² Any secondary education but not completed highest level of secondary education.

Table 3: Early-stage entrepreneurial activity in education groups, selected countries, 2006

Country	Prevalence of early-stage entrepreneurs among:	
	Adults with some secondary degree	Adults with higher education
Croatia	7.7	13.6
Latvia	4.7	9.0
United kingdom	2.8	7.4
France	3.1	4.2
Sweden	1.6	4.8
Ireland	3.7	11.1
EU average	3.7	7.1
United states	7.9	10.3
Russia	1.4	7.3

PARENTAL BACKGROUND

Many studies documented that, in many countries, children of parents-entrepreneurs were also more likely to be involved in entrepreneurship, as compared with children of non-entrepreneurial parents.¹³ We find the same pattern in Latvia, in 2006 and in 2005. According to the GEM survey, about 25 % of all entrepreneurs have or had parents who themselves were involved in entrepreneurship at some point in their lives.¹⁴ By comparison, only 11 % of non-entrepreneurs have or had entrepreneurial

parents. Several theories were put forward to account for the role of parental background. The first, and the most trivial, explanation is that children simply inherited their parents' businesses. According to the second explanation, children of entrepreneurial parents have better access to capital for their business start-ups, if parents own a successful business. The third explanation points to transfer of tacit skills, knowledge, and attitudes that take place within an entrepreneurial family.

4. FINANCING OF NEW BUSINESSES

The information compiled in GEM 2006 regarding the financing of business start-ups in Latvia presents a picture that shows a potential threat of more difficult access to starting entrepreneurial activities. In particular, start-up costs have been on the rise in absolute terms in Latvia comparing to the previous year. At the same time, a more detailed analysis of the sources of finance shows that in Latvia the prevalence rate of informal investors as a source of finance is higher than in GEM peer countries. GEM 2006 also indicates that shares of start-up financing obtained from relatives in Latvia are considerably higher than elsewhere. This situation suggests that, in order to start entrepreneurial activities, family connections are important; moreover, that those who lack access to this source of funds might have a much harder time to become entrepreneurs. Finally, the share of governmental programs as a share of start-up financing in Latvia remains very low compared to the other countries involved in GEM.

START-UP COST

The average cost of starting-up a business in Latvia has doubled since 2005. The rapid increase of start-up costs has been fuelled by rising inflation, the construction boom, and shortages in the labour market. While the average start-up cost for nascent entrepreneurs was around 36,000 EUR in 2005, in 2006 the estimated average is as high as 73,500 EUR¹⁵. While in 2005 half of the businesses in Latvia were established with capital below 9,960 EUR, in as little as a year later time half of the start-ups required at least 21,300 EUR. The increasing cost of starting up business presents a puzzle as to whether it stems from overall increases in labour force costs, rental of premises, and other expenses, or from firms trying to move up the technology ladder so that new start-ups are focusing on more advanced activities that require a more significant initial investment. In the latter case, certainly the situation is promising; however, GEM 2006 does not provide a concrete answer to this claim.

Indeed, the available evidence shows that starting an innovative business is more costly. However, while in 2005 a significant difference between start-up costs in innovative enterprises and regular businesses could be observed (in the former the cost was more than four times higher than in the latter)¹⁶, in 2006 start-up costs grew for both innovative and non-innovative businesses. Ultimately, the disparity between innovative and non-innovative start-up costs narrowed and became statistically insignificant due to the relatively small sample size.

¹³ See, for example, Djankov et al (2006), Laferre (2001), Dunn and Holtz-Eakin (2000), Dombrovsky and Welter (2006).

¹⁴ This could be entrepreneurship after restoration of independence or "entrepreneurial-type" activities in Soviet times.

¹⁵ This is higher than the average amount needed to start a business in 2006 for all GEM nations combined (50,900 EUR).

¹⁶ In 2005 the start-up cost for an innovative business was nearly 54,000 EUR, while for a regular business only about 12,000 EUR. The difference is significant at 10% level.

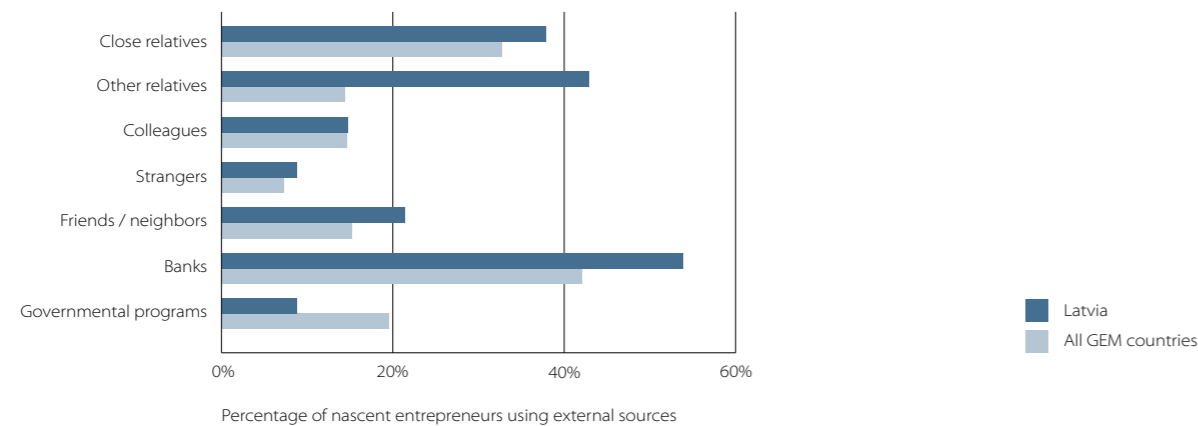
SOURCES OF FINANCE

Own capital is a highly important source of financing for new ventures in Latvia. On average, 60% of start-up capital in 2005 and 76% in 2006 is provided by the owners themselves¹⁷. The survey in 2005 revealed that own resources are particularly important for small businesses (with a start-up capital of less than 9,960 EUR). These entrepreneurs provided almost 80% of the financing themselves. In contrast, those with higher financial requirements (more than 9,960 EUR) planned to provide only about 40% themselves¹⁸. Larger projects were more successful in attracting funding from external sources, probably because these projects had better chances of obtaining bank loans. The 2006 data do not demonstrate a similar pattern. Larger projects rely on self-financing to a similar extent to smaller ones.

According to the GEM 2006 survey, around half of nascent entrepreneurs in Latvia plan to start-up a business using only their own finance. The other half who rely on external resources were asked to specify what sources of finance they are likely to use. The results are summarized in Figure 11.

The percentage of entrepreneurs who expect to obtain some of their start-up financing from banks or financial institutions is high. Indeed, it ranks the highest among all sources mentioned in GEM. More than half of the start-ups in Latvia (53.9% compared to 42.2% of start-ups in GEM countries) rely on banks and financial institutions as a source of finance. However, these figures may be regarded as overoptimistic. Many nascent entrepreneurs are only in the process of starting up a business and they are likely to be naive about their chances of obtaining a bank loan.

Figure 11: Sources of start-up financing, 2006



Note: Total is more than 100% as entrepreneurs cited multiple sources of finance.

As shown in the figure above, reliance by Latvian entrepreneurs on informal investors (such as relatives, colleagues, and friends) is higher than in GEM peer countries. Approximately 70% of start-ups in Latvia mentioned at least one informal investor as a source of money for a new business. The difference between Latvia and GEM average figures is particularly evident for such informal investors as relatives. While only 14.5% of start-ups in GEM countries mentioned "other relatives" as one source to finance the business, in Latvia 43% of nascent entrepreneurs did so. This indicates that family ties when starting a business in Latvia remain very important and may pose a threat of more difficult entry for those not in a position to obtain financial support from relatives. This process may support stratification of the population of Latvia into two classes: a class of entrepreneurs possessing financial resources for starting up a business, and a class of non-entrepreneurs lacking such resources.

In terms of financing sources, the only source that is less popular in Latvia as compared to the GEM average is governmental programs. Only 9% of start-ups in Latvia named governmental programs as a possible source of finance (the GEM average was 19.7%), which clearly indicates that potential entrepreneurs rely very little on government to provide financial support during their start-up phase. Perhaps this could be an important aspect to be considered by policy-makers in Latvia.

INFORMAL INVESTMENT

One of the remarkable discoveries of the GEM project is the extent of informal investing taking place. GEM specifically focuses on exploring the incidence of informal investment across countries. Respondents were asked whether they have personally provided funds for a new business started by someone else in the past 3 years. In 2006, 5.3% of the adult population in Latvia said they had done it¹⁹. The prevalence rate of informal investors was significantly smaller a year ago. Among the EU countries participating in GEM 2006, Latvia ranks highest according to the prevalence rate of informal investors.

Informal investment in Latvia not only became more widespread, but also seems to have increased in absolute terms. In 2005, half of this type of investment was below 2,130 EUR. In 2006, half of business angels invested more than 3,500 EUR.

Cross-country evidence shows that the amounts of informal investment in Latvia are higher than in other countries. To compare the amount of informal investment across GEM countries,

the total amount of informal investment is measured as a percentage of GDP in each country. The values of this indicator range from 0.1% in Brazil to 13% in Indonesia. Informal investment altogether represents 1.5% of the combined GDP of GEM countries. Latvia ranks fourth among the 42 GEM nations with its informal investment equal to 2.5% of GDP.

As supported by the facts above, it seems that informal financing in Latvia is becoming more important. Explanations could be linked to the fact that the amounts of financial resources available to individuals for investment purposes have increased, while the option of simply depositing money in a bank account may no longer seem optimal because of low or even negative real interest rates. Therefore, informal investment provides an alternative opportunity for individuals holding excess cash. This is further supported by the fact that 42% of business angels in 2006 reported that in the next ten years they plan to recover more money than they have invested in a business. By contrast, in 2005 only 25% of investors expected the same to happen.

Figure 12. Prevalence rate of informal investors in selected countries, 2005 & 2006

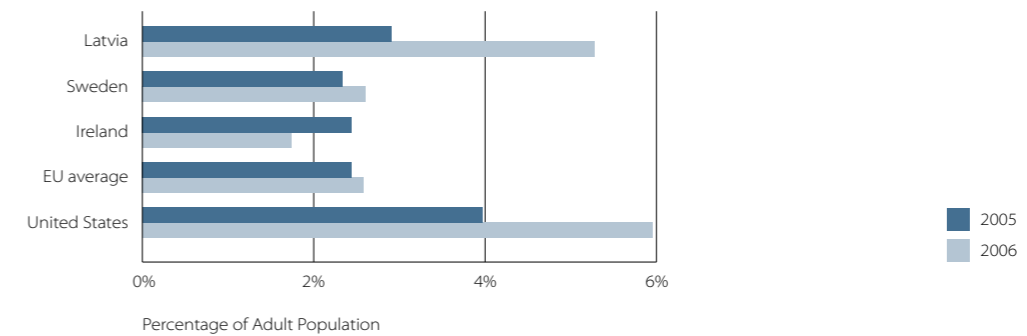
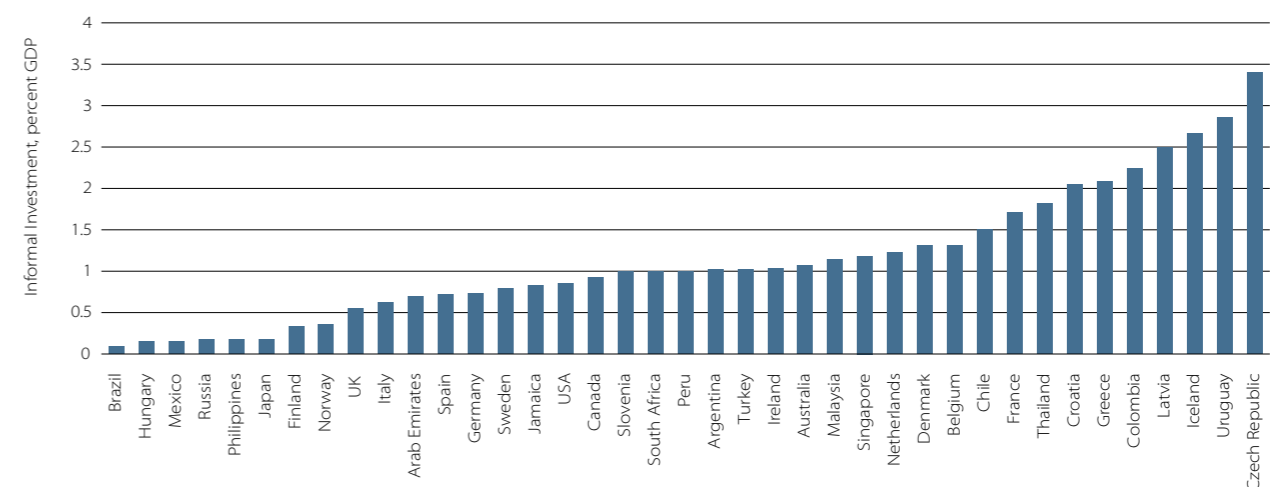


Figure 13. Total informal investment as percent of GDP, 2006



¹⁷ In 2006 in all GEM countries' combined entrepreneurs provided 62% of start-up capital themselves.

¹⁸ The difference is significant at 5% level.

¹⁹ According to GEM methodology, those who hesitate about the answer to this question are also considered informal investors. Therefore, the estimate reflects the upper band of the prevalence rate of informal investing.

5. INNOVATIVE ENTREPRENEURSHIP

“Without innovations, no entrepreneurs; without entrepreneurial achievement, no capitalist returns and no capitalist propulsion,” wrote Joseph Schumpeter, a Nobel Laureate and famous scholar of entrepreneurship, almost seventy years ago (Schumpeter 1939, p. 104).²⁰ Unfortunately, Latvia’s performance in the area of innovativeness has not shone as brightly as its recent economic growth rates. According to the EU rating of innovativeness in 2005, Latvia was the second worst performer after Malta.²¹ The World Economic Forum’s Global Competitiveness Report 2006-2007 also characterized Latvia’s ability to innovate and compete globally as mediocre ranking it 36th among the participating countries. According to Eurostat, gross domestic expenditure on Research and Development (R&D) in 2005 was a mere 0.57 % of GDP. By comparison, R&D expenditure was 0.94% of GDP in Estonia, and 3.86% in Sweden. Clearly, a need exists for effective public policy in the area of innovativeness, if Latvia is to catch up with its neighbours and ensure sustainable growth.

Most R&D takes place in established large firms, which often serve as *incubators* of new ideas and technologies. However, some scholars argue that an entrepreneurial free-market environment is crucial to *elaboration* of these ideas. For example, it is remarkable how any history of innovations describes a long list of talented people leaving large firms with novel ideas. Many innovations had been originally developed in large firms, but independent entrepreneurs, often former employees in large companies, were best in developing these innovations into successful products. This points to the key role played by innovative entrepreneurs in determining a country’s comparative advantage in the global marketplace. GEM data provide a unique opportunity to assess the magnitude of innovative entrepreneurship in Latvia, as well as to look at individuals at the centre of this process. After all, today’s young but innovative entrepreneurs might be the ones who will establish the giants of tomorrow.

By common definition, a business is innovative if it either offers a *new product (service)*, or employs *new technology* that allows more efficient production of traditional products.²² The former is often referred to as product innovation, and the latter as process innovation. In the GEM survey, business owners were asked whether customers see the product or service as “new and unfamiliar”, as well as whether they are using new technologies for the production process. Thus, we construct two measures of innovativeness. First, there are businesses that either offer a product that is new to all customers, or that use a technology

available for less than one year. We refer to this group as *core innovators*. Second, there are businesses that offer a product that is “new to some buyers” or that use relatively new technologies available for less than 5 years but more than a year. We refer to this group as *moderate innovators*.²³ We classify the remaining businesses as ‘regular’; these form the ‘bricks-and-mortar’ of the economy. Measures of innovativeness are summarized in Figure 14.

We find that about 2 % of the adult population in Latvia (28,770 adults) were core innovators, and a further 4.3 % were moderate innovators in 2006 (Figure 15).²⁴ Thus, our estimate is that nearly half (48%) of all Latvian businesses are at least moderately innovative. A similar proportion (46%) of early-stage entrepreneurs is at least moderately innovative. The data suggest a slight increase in the prevalence rate of core innovators in 2006, as compared with 2005, but the difference is not statistically significant. Thus, the amount of innovation in the small business sector was substantial in both 2005 and 2006.

The most popular way to innovate in 2006 was through offering new products. The percentage of core and moderate innovators who reported product innovation is 91 % and 80 %, respectively. Process innovations are less widespread. Only about 18% of (core) innovators reported using new technologies less than one year old. A further 36% of (moderate) innovators reported using relatively new technologies less than five years old. Curiously, the mode of innovation for the core group was quite different in 2005, as compared with 2006. According to the GEM 2005 survey, 62% of core innovators reported using new technologies in 2005, three times as many as in 2006. Patterns of innovations in 2005 and 2006 are summarized in Figure 16.

Another remarkable finding is that innovating firms seem to be present in many sectors of the economy. We could not identify any clear concentration of innovators in any particular industrial sector. This finding seems to contradict popular belief that most innovations happen in ‘high-tech’ sectors such as Information Technology (IT), or biochemistry. Business activities of core innovators range from high-tech sectors such as telecommunications and IT to more ‘ordinary’ sectors like agriculture, wood delivery, and retail trade. This applies to data from both 2005 and 2006 GEM surveys. Our finding suggests that substantial potential exists for innovation throughout the economy, not only in a few ‘high-tech’ sectors.

No statistically significant difference in age exists between innovators and non-innovators. However, a greater ‘gender gap’ appears among innovators. Only about 24 % of all innovating firms (core and moderate) consist of women. By comparison, the percentage of women among non-innovating entrepreneurs stands at 37 %. We have qualitatively similar findings

for 2005. Women are even less likely to be represented among innovative entrepreneurs. Additionally, distribution of innovative entrepreneurs by regions does not differ from that for non-innovators in any statistically significant way. About a third of innovators are in Riga and only about tenth of them reside in Latgale.

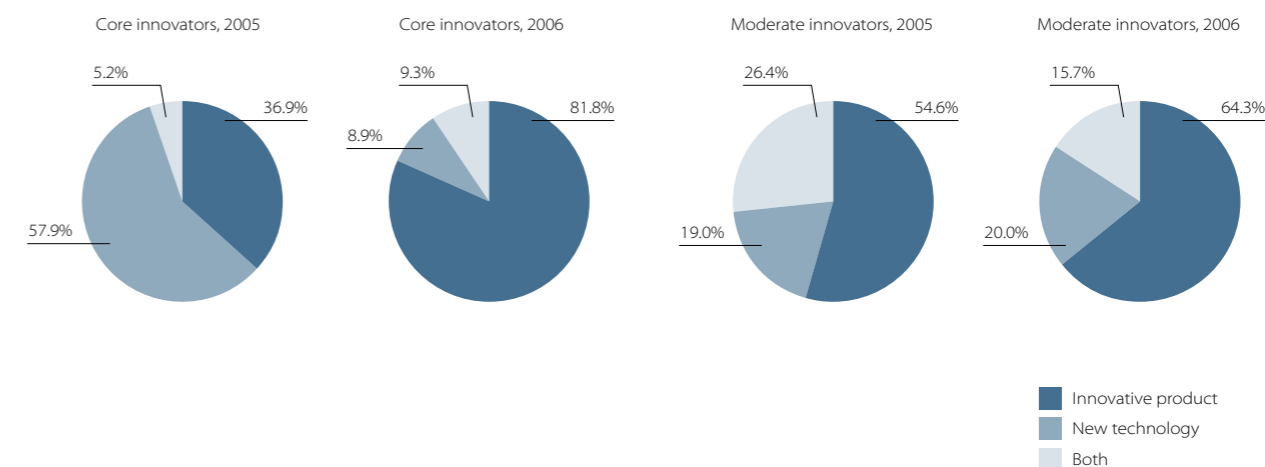
Figure 14: Definitions of innovative entrepreneurs.

	Technology available for		
Any customers view product as new?	less than 1 year	less than 5 years	more than 5 years
All	Core innovators		
Some	Moderate		
None	Regular businesses		

Figure 15: Innovative entrepreneurship, 2005 and 2006



Figure 16: Product and process innovations among innovators, 2005 and 2006



²⁰ Schumpeter, Joseph A. (1939). *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process*, New York: McGraw Hill.

²¹ <http://www.trendcharts.org/>

²² See Oslo Manual (2005) for detailed discussion of the definitions of product and process innovations used by Eurostat and OECD.

²³ Our definitions of innovativeness are consistent with those used in most other studies. However, considerable caution should be exercised in making direct comparisons with other studies. For example, Eurostat’s Community Innovation Survey focuses on product or process innovations that are new to the firm, rather than new to the market. Our definition covers innovations that are new to the market.

²⁴ It has to be borne in mind that, because of the sample size, the sampling error is relatively large. For example, the 95% confidence interval for the percentage of core innovators in the adult population ranges from about 1 % to 3 %.

EXPORT ORIENTATION AND INNOVATIVENESS

We also find that innovative entrepreneurs are more likely to be export-oriented, as compared with more 'usual' businesses. In the GEM survey, all entrepreneurs were asked to evaluate the proportion of their customers living outside Latvia. The results are presented in Figure 17 for years 2006 and 2005. Thus, about 33 % of all core innovators had, or expected to have, more than half their customers living outside Latvia in 2006. By comparison, only 16 % of non-innovating entrepreneurs had more than half their customers outside the country. Nevertheless, roughly a third of all entrepreneurs, whether innovative or not, are oriented towards the domestic market only, i.e. they have no customers outside Latvia.

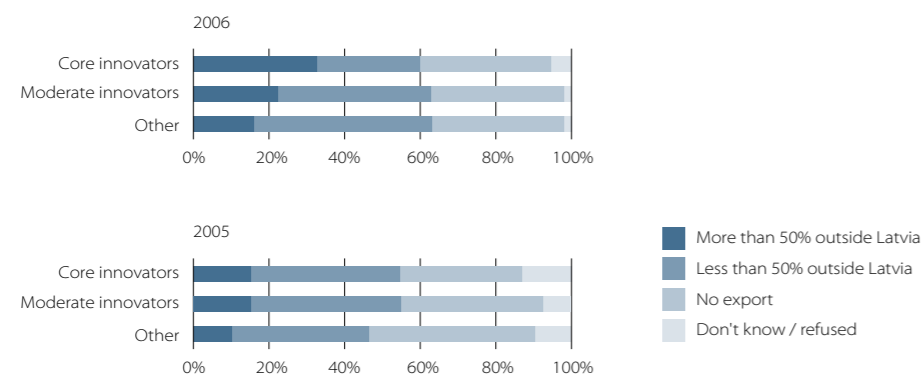
Figure 17 also shows a substantial increase in the degree of export orientation. The proportion of core entrepreneurs with strong export orientation (more than half of customers outside Latvia) doubled in 2006, as compared with 2005. Moderate innovators and non-innovating businesses also became more export-oriented in 2006. These findings broadly support the notion that innovative firms are more oriented towards international markets and, therefore, are the engine of export-led growth. This lends additional empirical support to the policy emphasis of promoting innovativeness in order to ensure more sustainable growth.

Interestingly, innovative entrepreneurs also report better knowledge of foreign languages.²⁵ About 63 % of both core and moderate innovators reported having good knowledge of at least one foreign language in 2006.²⁶ By comparison, the corresponding statistic for non-innovators was only 40 %. As compared with 2005, knowledge of foreign languages remained approximately

the same for both innovative and non-innovative entrepreneurs. English is by far the most popular language and substantial differences exist in command of English as between innovators and non-innovators. Only one-fourth of all innovators (core and moderate) do not know any English, while 54 % of them enjoy a good command of the language. By comparison, nearly half of non-innovators do not know any English, while 30 % of them enjoy a good command of the language. Moreover, evidence exists that both innovating and non-innovating entrepreneurs have upgraded their knowledge of English since 2005. English is the only foreign language that distinguishes innovators from non-innovators. For example, we find no significant differences in knowledge of German between innovating and non-innovating entrepreneurs.

What is the significance of knowing foreign languages, and especially English? Clearly, this correlates well with greater export orientation of innovators. Knowing foreign languages facilitates finding business partners abroad and communicating with them. Thus, it might be plausible that innovators learned foreign languages because they wanted to penetrate foreign export markets. However, knowing foreign languages has a more important implication. Entrepreneurs with a good command of English are more likely to find themselves exposed to, and to absorb, innovative practices developed outside Latvia. This may suggest that innovating entrepreneurs became innovators because they knew foreign languages, and, therefore, were more exposed to the circulation of new ideas in the international community. It is probably no coincidence that most Swedes, who regularly occupy top positions in innovation ratings, have excellent command of English from early childhood.

Figure 17: Export orientation of businesses, 2005 and 2006



EDUCATION FOR INNOVATIVENESS?

Any discussion of innovation implicitly views education as one of the main determinants of innovative behaviour. For example, the National Innovation Programme 2003-2006 aims to promote innovation by, among other things, increasing the share of students studying natural sciences. However, the role of education in the making of innovative entrepreneurs is far from clear. Are innovators all 'scientific types' with academic degrees in natural sciences, who try to profit from their own ideas and innovations? Or, are they more 'business types' with some minimum education that enables them to absorb and bring to the market ideas developed by others? An important advantage of GEM is that it allows a detailed look at the educational background of innovators and non-innovators alike.

Our findings with regard to the amount of education, measured in years, are mixed (see Figure 18). On the one hand, the percentage of innovating entrepreneurs with secondary general education or less is rather small, as compared with non-entrepreneurs. On the other hand, the proportion of core innovators with higher education (bachelor's degree or higher) was much smaller as compared with moderate innovators, or even non-innovating entrepreneurs in 2006. Moreover, we see that more than 60 % of core innovators received a professional education either at secondary or post-secondary level. By comparison, the corresponding statistic is only 29 % and 42 % for moderate innovators and non-innovators, respectively.

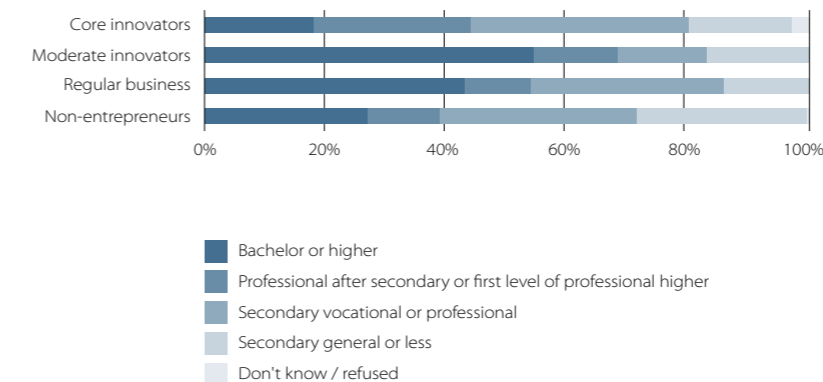
GEM survey respondents were also asked about the field in which they received their education.²⁷ Interestingly, the educational backgrounds of innovating entrepreneurs are highly diverse, ranging from teacher education and humanities to engineering and agriculture. Nearly half of core innovators in both 2006 and 2005 were educated in business or engineering. A similar pattern emerges for moderate innovators in both 2006

and 2005. No core innovator in either 2005 or 2006 had an educational background in the natural sciences, chemistry, physics, or medicine. Such educational backgrounds were also extremely rare among moderate innovators.

Our findings indicate that no simple linear relationship exists between an entrepreneur's education and innovativeness. Although little education is associated with a small likelihood of being innovative, a high level of educational attainment may not necessarily result in more innovativeness. Professional education seems to influence innovativeness more than academic education. We find no evidence that highly educated individuals with backgrounds in the 'hard sciences' became innovative entrepreneurs in 2005-2006. Rather, innovative entrepreneurship seems to be driven by well-educated individuals who received a professional or business education.

To summarize, we document important differences between innovating and non-innovating entrepreneurs, which may be of interest to policy-makers. To the best of our knowledge, this is the first systematic effort to analyze differences between innovators and non-innovators in Latvia using data from high-quality nationally representative surveys. Unfortunately, the amount of policy-relevant information that can be extracted from our data is rather limited because analysis of innovative entrepreneurship is not one of the foremost priorities of data collection with the GEM project.²⁸ However, innovative entrepreneurship occupies one of the top places in the research agenda of the TeliaSonera Institute. The Panel Study of Entrepreneurial Dynamics in Latvia (PSED-Latvia) and the Survey of Innovative Businesses in Latvia (SIBiL) are more powerful state-of-the-art surveys initiated and implemented by the Institute. These surveys will shed more light on the characteristics and dynamics of innovative entrepreneurship in Latvia.

Figure 18: Educational achievement of entrepreneurs and non-entrepreneurs, 2006



²⁷ To be more precise, respondents are asked to classify the field of their highest educational attainment into one of fifteen categories.

²⁸ This also means that sample sizes are rather small when it comes to innovative entrepreneurs, so that findings are often not statistically significant.

²⁵ For the purposes of tractability, our definition of foreign languages here excludes Russian for ethnic Latvians and Latvian for ethnic Russians.

²⁶ Respondents were asked to evaluate their knowledge of foreign languages on a three-point scale ranging from "not very good", to "rather good" and "very good". We define respondents with a good knowledge of the language as those whose self-evaluation was at least "rather good".

6. DATA COLLECTION INITIATIVES AT THE TELIASONERA INSTITUTE

GEM is an empirically-based research project as it is based on high quality nationally-representative adult population surveys of about 2,000 individuals in each participating country. Thus, GEM findings can be reliably generalized to the whole of Latvia's population and are highly credible. GEM is part of the broader research programme at the TeliaSonera Institute, which aims to inform the public about the causes and consequences of entrepreneurship in Latvia. Collection of state-of-the-art datasets on entrepreneurship in Latvia is the cornerstone of this research programme. These datasets are (i) GEM Adult Population Surveys; (ii) Panel Study of Entrepreneurial Dynamics (PSED) in Latvia; and (iii) Survey of Innovative Businesses in Latvia (SIBiL). Substantial progress has been made since inception of the Institute in 2005. Two GEM surveys were conducted in 2005 and 2006, and the third is under way in 2007. However, PSED and SIBiL initiatives represent even more ambitious data collection efforts and are briefly described below.

PANEL STUDY OF ENTREPRENEURIAL DYNAMICS IN LATVIA

According to GEM research, every year about 60,000 adults try to start their own businesses in Latvia. However, only a fraction of these ventures succeed in establishing viable businesses. Apparently, some sets of business activities increase the likelihood of successful start-up. Understanding the factors leading to successful business creation would be informative to aspiring entrepreneurs and policy-makers alike. Most surveys of businesses in Latvia to date have focused mainly on barriers to operating already established firms. However, this practice resulted in selection bias, as information was gathered only on start-up efforts that actually resulted in up-and-running businesses. Little, if anything, is known about very young and small start-up efforts.

Those who take active steps to start a new business, but whose business is not yet established, are considered nascent entre-

preneurs. A group of entrepreneurship scholars in the United States, led by Professor Paul Reynolds, developed a methodology to identify and study nascent entrepreneurship. This resulted in the well-known Panel Study of Entrepreneurial Dynamics (PSED) study, which began in 1998 and continues to this day. PSED surveys have taken place in the United States, Australia, and Sweden. PSED studies are also being set up in Belgium, Denmark, Germany, Hong Kong, Iceland, Ireland, Netherlands, Singapore, Slovenia, Sweden, and Wales (UK). These efforts also resulted in creation of the Global Assessment of Longitudinal Entrepreneurial Studies (GALES) Initiative in 2006, with the aim of standardizing research design of PSED studies across the world, facilitating quality of data collection, and developing empirically-based policy recommendations to promote new firm creation.

Latvia's own PSED study was conceived and set up in 2006 by researchers at the TeliaSonera Institute. The survey design is based on PSED II, the latest version of the study of entrepreneurial dynamics in the U.S., developed in 2005. Close adherence to this well-tested methodology ensures cross-country comparability of Latvian PSED with similar studies in the U.S., Australia, Sweden, and elsewhere. The TeliaSonera Institute is also part of the GALES Initiative, which seeks to facilitate and coordinate panel studies of entrepreneurship around the world.

Screening and interviewing nascent entrepreneurs is a very costly enterprise because they form a tiny proportion of the population.²⁹ Actual data collection for the Latvian PSED began in November 2006 and is expected to be finished in the summer of 2007. The survey is conducted by *Latvijas Fakti*, a premier market survey firm. Our data collection activities will result in a random and nationally representative sample of about 400 nascent entrepreneurs. Each venture will then be tracked across time through a set of recurring phone interviews over a period of three years. PSED will be the first nationally-representative dataset to offer systematic and reliable data on the process of business formation in Latvia.

SURVEY OF INNOVATIVE BUSINESSES IN LATVIA

It is widely recognized now that Latvia's competitiveness in the global economy may depend on the ability of its businesses to innovate and move into more knowledge-intensive areas of production. It is also well-known that too many firms in Latvia have not been very successful in this area. Unfortunately, our knowledge about the driving forces of business innovativeness remains very limited. Why are some businesses more likely to offer new products and services, as well as to use new production technologies? How are new ideas channelled into marketable products? As researchers, we are challenged to seek explanations for the causes and consequences of innovations and provide empirically-based policy advice.

The Survey of Innovative Businesses in Latvia (SIBiL), designed by researchers at the TeliaSonera Institute, will address these questions (and many others). Our survey instrument is based on, and is consistent with, the Community Innovation Survey (CIS), which is conducted in all countries of the European Union according to guidelines developed by EuroStat and the OECD.³⁰ However, SIBiL enjoys a number of important advantages as compared to

the CIS. First, our questionnaire is much larger than that used in the CIS. Thus, we are also able to include a number of important questions from other well-established surveys, such as PSED and the U.S. Survey of Small Business Finance. Second, business owners will be interviewed using face-to-face interviews, and not mailed questionnaires, as is done in the CIS. Together with a carefully thought-through sampling strategy, this will ensure greater accuracy of data. Third, we cover small firms (employing fewer than 10 workers), which are left out by conventional CIS methodology. Finally, a large portion of our survey focuses explicitly on firms in sectors that EuroStat defines as knowledge-intensive high-technology services and high-technology manufacturing.

SIBiL is being created through close cooperation with *Lursoft* and *Latvijas Fakti*. It is planned that a random sample of about 1,400 firms will be produced by September 2007. Furthermore, each firm will be tracked across time through a set of recurring phone interviews over a period of three years. We expect that SIBiL will deepen our understanding of the processes underlying innovative activity in Latvian businesses.

²⁹ According to GEM surveys, only about 4 % of the adult population are nascent entrepreneurs.

³⁰ These guidelines are summarized in the so-called *Oslo Manual*.

7. CONCLUSIONS AND POLICY IMPLICATIONS

This year's GEM research provides some good news for the public and policy makers in Latvia. A healthy amount of entrepreneurship is taking place in this country and, compared to other countries, Latvia makes a good showing. Although much credit goes to the actual entrepreneurs, policy-makers can pat themselves on the back. We would not see the levels of entrepreneurial activity that we see today if it were not for the business climate created in the years following regaining of independence. At the same time, GEM shows there is substantial room for improvement. Rates of entrepreneurial activity in countries like USA, Norway, and Ireland are still substantially higher than they are in Latvia.

What are our predictions concerning the level of entrepreneurship in the future? In the absence of economic cataclysms the level of entrepreneurial activity in Latvia looks set to increase in the near future. The rates of nascent and new firm entrepreneurial activities have been rather stable over the last two years, and the prevalence rate of established business owners increased in 2006. However, as the Latvian economy moves to higher stages of economic development, growth in entrepreneurship may slow down. As shown by GEM research, countries with a high level of GDP per capita generally have lower levels of entrepreneurship, as compared with developing economies. As large established firms become more ubiquitous, their demand for talented and well-educated individuals increases, and the rewards offered by these large firms compete with the opportunities offered by entrepreneurship.

In spite of a generally healthy business climate, policy makers should pay attention to persistent regional and gender imbalances in entrepreneurship. The gender gap in particular increased in 2006, as compared with 2005, with women being much less likely to be involved in entrepreneurship.

An important area that the policy-makers should pay attention to is the financing of business start-ups. GEM research demonstrates that vast majority of nascent entrepreneurs rely on their own funds, and financing from their family members or relatives. Not all nascent entrepreneurs may have access to affluent relatives, however. Moreover, the GEM 2006 survey suggests that the projected costs of starting a new business have doubled, as compared with 2005. Financing of business start-ups is a highly controversial issue, however. GEM research shows that there is substantial amount of churn in the small business sector. New businesses are constantly being born, but many business ideas do not pass the test of the market place. Therefore, massive and indiscriminate use of taxpayers money to help fund business ventures could be misguided. Careful and well thought-through policy initiatives are wanted in this area.

GEM's other important finding is that innovative entrepreneurship is not as scarce as is commonly thought. Nearly half of all Latvian businesses are innovative in some way. Contrary to conventional wisdom, innovative entrepreneurship is not confined to the few so-called high-tech sectors like pharmaceuticals, but can be found in many sectors of the economy. Innovative entrepreneurs are generally well-educated, they know foreign languages, and are more likely to export their production. What can governments do to promote innovation? Unfortunately, our knowledge of the factors that trigger innovation is very limited. There are many puzzles. For example, GEM research shows that education matters, but innovators are not necessarily highly educated. Most innovators are business-oriented or 'engineers', very few actually have educational background in natural sciences. We expect that our further data collection initiatives, especially the SIBiL project, will shed more light on the processes that generate innovations in Latvian businesses.

Some of the big questions faced by the policy-makers are: "How do we increase the amount of entrepreneurship in Latvia?" Or, "how do we promote innovations in the business sector?" GEM is mostly an 'entrepreneurship-meter', and its usefulness in addressing more specific policy questions is limited. However, our other data collection initiatives, such as PSED-Latvia and SIBiL datasets, are better suited to meet the needs of policy-makers in the areas of entrepreneurship and innovations. Providing solutions to well-formulated policy problems requires research, which is often time-consuming and expensive. One example of such research using PSED-Latvia data is the work done by BICEPS researchers in cooperation with *SIA FACTUM* for the Ministry of Welfare within the National Programme "Labour Market Research" in 2007.³¹

Based on the work done for the Ministry of Welfare project, BICEPS researchers recommended introducing a presumptive tax for business start-ups. Such a tax would replace corporate income tax and value-added tax with a fixed percentage payable on the firm's turnover, with minimum paperwork. Any person starting her own business could apply for a presumptive tax regime for a period not exceeding two years in that person's lifetime. A presumptive tax would effectively remove the burden of complying with the tax regulations from shoulders of a new entrepreneur and let her focus on the survival of her business in the first two years of its operation. In effect, a presumptive tax regime could be viewed as a *ticket to entrepreneurship* for any individual.³² The recommendation to introduce a presumptive tax was based on the results from a special module specifically introduced to the PSED-Latvia survey. It was found that most nascent entrepreneurs had great difficulty understanding the effect of taxes (e.g. corporate tax and the VAT) on their businesses and expressed their support for a presumptive tax regime.

APPENDIX A: DATA COLLECTION IN THE GEM PROJECT

THE GEM PROJECT EXPLAINED

The Global Entrepreneurship Monitor (GEM) is a research program whose co-ordination centre is hosted jointly by London Business School and Babson College in the USA. Research also involves a consortium of national teams from each of the countries involved in the study. The aim of GEM is to create an annual assessment of levels of entrepreneurial activity across countries. The research also explores a variety of factors both within and across countries that might give rise to systematic differences in entrepreneurship rates. Through a greater understanding of these factors, policies to enhance the level of entrepreneurial activity can be based on solid research, while the role of entrepreneurship in contributing to a positive economic environment can be better understood. GEM was initiated in 1999 with 10 countries. 42 countries participated in the 2006 research cycle and more than 150 scholars from the various national teams collaborated with the coordination team in collecting data and developing the project.

ADULT POPULATION SURVEY

Representative samples of randomly selected adults, ranging in size from 1,500 to almost 35,000 individuals, were surveyed in 42 countries participating in GEM in 2006. Similar to previous rounds of GEM, the interview schedule consisted of a set of core questions used to derive entrepreneurial activity rates and additional questions concerning the attributes and characteristics of the respondents. An extensive description of the GEM methodology may be found in Reynolds *et al.* (2005).

In Latvia GEM was conducted by a professional survey firm "Latvijas Fakti". Via telephone³³ interviews a total of 1,958 adults aged 18-64 years old were surveyed during July-August 2006. Two-stage stratified random sampling procedure was used to gather the sample data. Stratification by region (Riga, Vidzeme, Kurzeme, Zemgale, Latgale), type of settlement (Riga, big cities, cities, towns, rural areas) and nationality (Latvians and non-Latvians) ensured representativeness of all social-demographic groups in the sample. A telephone belonging to a household was randomly dialled from the residential telephone directory provided by Lattelekom. The household member with the next birthday was selected as a respondent. The response rate depending on the location was 70-80%. Observations were weighted by age, gender, and geographical region.

³¹ The project title is "Optimal employment-promoting tax and benefit system". The project was financed by the European Structural Funds and the Ministry of Welfare, Nr. VPD1/ESF/NVA/04/NP/3.1.5.1./0001/0003

³² Please refer to the original research for more details.

³³ 65% of households in Riga and 50% of households in other Latvian regions have fixed-line phones.

APPENDIX B: GEM NATIONAL TEAMS 2006

Team	Institution	National Team Members	Financial Sponsor	APS Vendor
Argentina	Center for Entrepreneurship IAE Management and Business School Universidad Austral	Silvia Torres Carbonell Hector Rocha Natalia Weisz	IAE Management and Business School Banco Rio	MORI Argentina
Australia	Australian Graduate School of Entrepreneurship, Swinburne University of Technology and Education, Centre for Innovation and Commercialisation The University of Adelaide	Kevin Hindle Kim Klyver Gary Hancock Noel Lindsay	Australian Graduate School of Entrepreneurship, Swinburne University of Technology and Education, Centre for Innovation and Commercialisation The University of Adelaide	Australian Centre for Emerging Technologies and Society
Belgium	Vlerick Leuven Gent Management School Ghent University	Hans Crijns Mirjam Knockaert Sophie Manigart Miguel Meuleman Tom van Acker Sabine Vermeulen	Flemish Ministry of Economic Affairs (Steunpunt Ondernemerschap, Ondernemingen en Innovatie)	TNS Dimarso
Brazil	IBQP - Instituto Brasileiro da Qualidade e Produtividade	Simara Maria S. S. Greco Paulo Alberto Bastos Junior Joana Paula Machado Solange Krupa Carlos Artur Krüger Passos Júlio César Felix Marcos Mueller Schlemm	IBQP - Instituto Brasileiro da Qualidade e Produtividade SEBRAE- Serviço Brasileiro de Apoio às Micro e Pequenas Empresas Sistema Federação das Indústrias do Estado do Paraná (FIEP, SESI, SENAI e IEL)	Instituto Bonilha
Canada	HEC-Montréal Sauder School of Business, The University of British Columbia	Nathaly Riverin Louis-Jacques Fillion Victor Cui Qianqian Du Aviad Pe'er Daniel Muzyka Ilan Vertinsky	Gouvernement du Québec Chaire d'entrepreneuriat Rogers-J.A.Bombardier, HEC Montréal The W. Maurice Young Entrepreneurship and Venture Capital Research The Social Sciences and Humanities of Canada	BIP
Chile	Universidad Adolfo Ibáñez Universidad del Desarrollo	Germán Echeopar José Ernesto Amorós	Centro de Entrepreneurship Grupo Santander Universidad Adolfo Ibáñez Centro para el Emprendimiento y la Innovación Universidad del Desarrollo	Benchmark
China	National Entrepreneurship Centre, Tsinghua University	Jian Gao Yuan Cheng Xibiao Li Yanfu Jiang Wei Zhang Lan Qin Shude Shi	Beijing Municipal Science & Technology Commission	Synovate
Colombia	Coordination Team Universidad del Norte Pontificia Universidad Javeriana Cali Universidad ICESI Universidad de los Andes	Liyis Gómez Jorge Jiménez Rodrigo Varela Juan Pablo Corrales Luis Javier Sánchez Alberto Ibarra Alberto Arias Fernando Pereira Luis Miguel Alvarez Ana Carolina Martínez Camilo Martínez Rafael Vesga	Comfenalco Valle	Centro Nacional de Consultoría

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Croatia	J.J. Strossmayer University in Osijek	Slavica Singer Natasa Sarlija Sanja Pfeifer Djula Borozan Suncica Oberman Peterka	Ministry of Economy, Labour and Entrepreneurship SME Policy Centre - CEPOR, Zagreb J.J. Strossmayer University in Osijek - Faculty of Economics, Osijek	Puls, d.o.o., Zagreb
Denmark	Centre for Small Business Studies, University of Southern Denmark	Thomas Schøtt Torben Bager Hannes Ottosson Lone Toftild	IDEA - International Danish Entrepreneurship Academy Karl Petersen og Hustrus Fond University of Southern Denmark National Agency for Enterprise and Construction Vækstfonden Ernst & Young Ringkøbing Amt Fyns Amt Viborg Amt Sønderjyllands Amt Vestsjællands Amt Århus Amt Vejle Amt	Institut for Konjunkturanalyse
Finland	Turku School of Economics Imperial College	Anne Kovalainen Tommi Pukkinen Jarna Heinonen Pekka Stenholm Erkko Autio	Tekes - Finnish Funding Agency for Technology and Innovation Turku School of Economics	TNS Gallup Oy
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Greece	Foundation for Economic and Industrial Research (IOBE)	Stavros Ioannides Aggelos Tsakanikas Takis Politis	Hellenic Bank Association	Datapower SA
Hungary	University of Pécs George Mason University Corvinus University of Budapest Max Planck Institute of Economics	László Szerb Zoltan J. Acz József Ulbert Siri Terjesen Attila Varga Judit Károly Krisztián Csapó Gábor Kerékgyártó	Ministry of Economy and Transport University of Pécs, Faculty of Business and Economics Ohio University	Szocio-Graf Piac-es Közvélemény-kutató Intézet
Iceland	Reykjavik University	Rögnvaldur Sæmundsson Silja Björk Baldursdóttir	Reykjavik University The Confederation of Icelandic Employers New Business Venture Fund Prime Minister's Office	Capacent (formerly known as Gallup)
Ireland	University College, Dublin	Paula Fitzsimons Colm O'Gorman Pia Arenius	Enterprise Ireland Forfás NDP Gender Equality Unit, Department of Justice, Equality and Law Reform	Behaviour and Attitudes

Italy	Bocconi University	Guido Corbetta Alexandra Dawson	Ernst & Young	Target Research
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Japan	Kobe University Keio University Musashi University	Takehiko Isobe Tsuneo Yahagi Noriyuki Takahashi	Venture Enterprise Center	SSRI
Latvia	TeliaSonera Institute at Stockholm School of Economics in Riga	Vyacheslav Dombrovsky Olga Rastrigina Andrejs Jakobsons Karlis Kreslins	TeliaSonera AB	Latvijas Fakti
Malaysia	Technopreneur Develop- ment Division, Multime- dia Development Corp. Sdn Bhd	Dato' Dr. Abu Talib Bachik Wilson Tay Chuan Hui Fahiza Basir Amran Yusoff Syed Azizi Wafa Syed Khalid Wafa Tengku Farith Ritthaud- dean	Economic Planning Unit, Prime Ministers Depart- ment Multimedia Development Corporation Sdn Bhd Technopreneurs Associa- tion of Malaysia Universiti Malaysia Sabah	Rehanstat Sdn Bhd
Mexico	Tecnológico de Monter- rey, Business Develop- ment Centre Tecnológico de Monter- rey, EGAP, Strategic Stud- ies Centre	Arturo Torres Marcia Campos Elvira Naranjo	Tecnológico de Monter- rey	Profesionales en Estudios de Mercado y Cultura, S.C.
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Norway	Bodø Graduate School of Business	Lars Kolvereid Bjørn Willy Åmo Erlend Bullvaag	Innovation Norway Ministry of Trade and Industry Ministry of Local Govern- ment and Regional Devel- opment Kunnskapsparke Bodø AS, Center for Innovation and Entrepreneurship Kunnskapsfondet Nord- land AS Bodø Graduate School of Business	TNS
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Singapore	National University of Singapore (NUS) Entrepreneurship Centre	Poh Kam Wong Lena Lee Ho Yuen Ping	Standards, Productivity and Innovation Board (SPRING) Singapore and National University of Singapore (NUS) Enterprise	Joshua Research Con- sultants
Slovenia	Institute for Entrepreneu- ship and Small Business Management, Faculty of Economics & Business, University of Maribor	Miroslav Rebernik Polona Tominc Ksenja Pusnik	Slovenian Research Agency Ministry of the Economy Smart Com Finance – Slovenian Busi- ness Daily	RM PLUS
South Africa	UCT Centre for Innova- tion and Entrepreneu- ship, Graduate School of Business, University of Cape Town	Mike Herrington Gideon Maas	Liberty Life, Standard Bank, South African Brew- eries and the National Research Foundation	AC Nielsen ZA
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