

Statistics in focus

INDUSTRY, TRADE AND SERVICES

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Innovation as a Factor in Business Success

Main findings

- Product innovation is the most common type of innovation among successful entrepreneurs.
- Product innovation is also the most common type of innovation in industry; marketing innovation was most common in trade.
- Experience in management and in the economic sector play a positive role in innovation.
- Younger entrepreneurs seem to be more innovative and feel more optimistic about the future of their business than older ones.
- Enterprises that are active in product innovation tend to have higher growth in the number of employees than other enterprises.

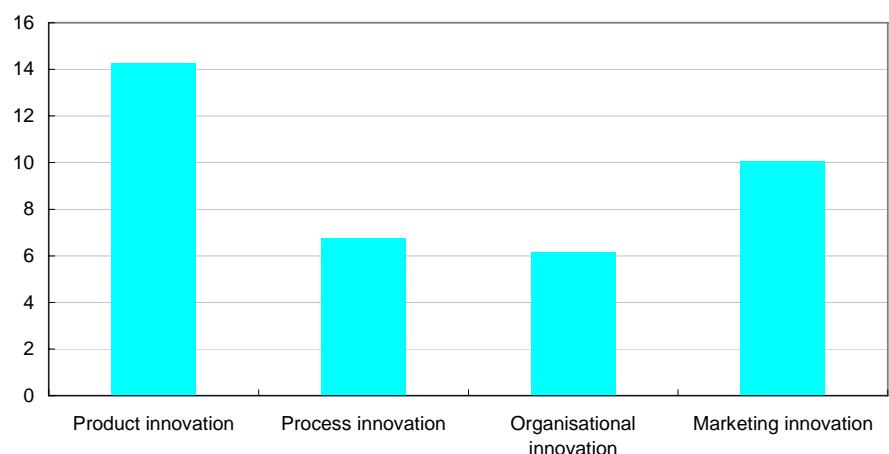
Introduction

The results of the 'Factors of Business Success' (FOBS) survey were used in 2006 in a 'Statistics in Focus' publication¹ to describe the profile of the successful entrepreneur and to determine which factors are vital to their success. This SiF takes a closer look at the link between growth and innovation among newly born enterprises following Schumpeter's theory of creative destruction. This theory is based on a steadily growing, innovation-driven economy where highly innovative enterprises may even replace established, less innovative companies.

It should be pointed out that the population of the FOBS survey is quite different from that of the Fourth Community Innovation Survey (CIS 4). Whereas CIS 4 covers all enterprises with at least 10 employees, the FOBS survey focuses on newly born enterprises which have only a few employees or none at all. In many cases, the entrepreneur is self-employed at the birth of the enterprise. There may be considerable variation between smaller and larger enterprises in terms of the types of innovation most commonly found. That is the main reason why the FOBS results on innovation are self-assessments by the entrepreneurs surveyed.

For the purpose of assessing innovation the entrepreneurs were able to choose up to four types of innovation. As these are interlinked, it is altogether possible that some of the innovative entrepreneurs chose more than one type.

Figure 1: Entrepreneurs who considered themselves innovative, by type of innovation (% of all entrepreneurs)

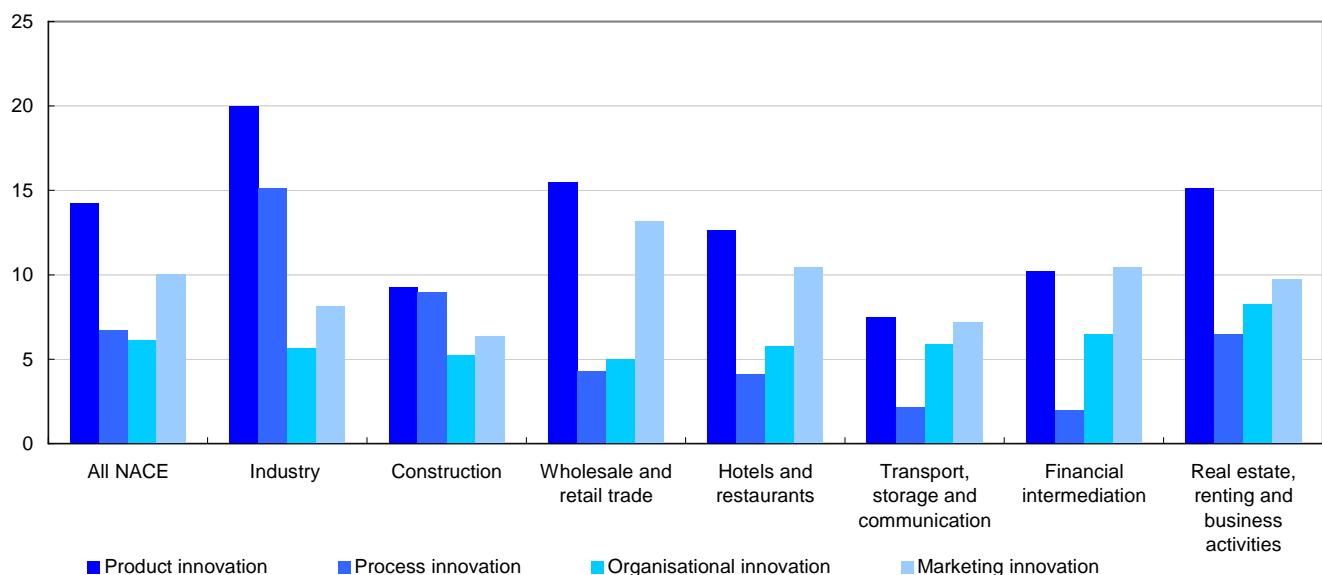


Source: FOBS survey, 2005

¹ Statistics in Focus - The profile of the successful entrepreneur (29/2006)

Economic activities (NACE)

Figure 2: Distribution of innovative entrepreneurs by economic activity and by type of innovation, average available countries, (% of all entrepreneurs)



Source: FOBS survey, 2005

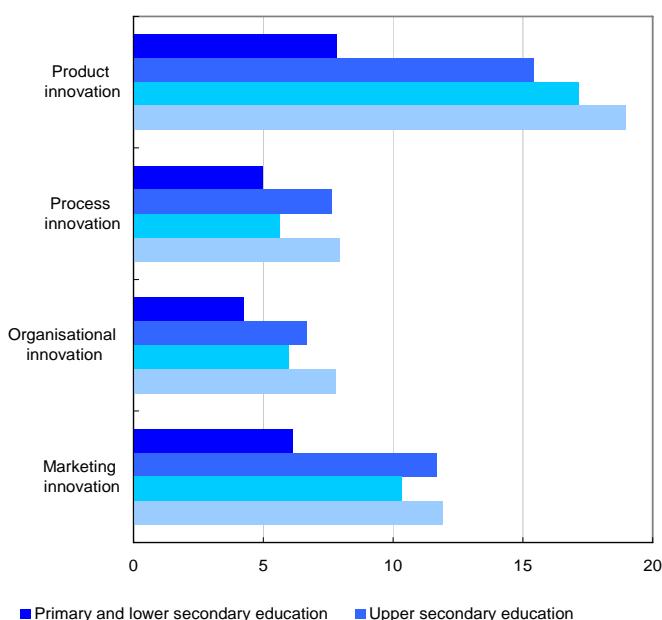
Irrespective of their economic activity, it was the product innovators, with 14% of entrepreneurs, that made up the highest share, followed by the marketing innovators, with 10%. For all types of economic activities except financial intermediation, product innovation was the most strongly represented. Product innovators recorded the highest percentage (20.1%) in industry, whereas the

highest percentage for marketing innovators was in trade activities (13.2 %). While marketing innovation was the main type of innovation in financial intermediation, in most economic sectors it was the second most common type. However, in industry and construction, process innovation ranked second, just behind product innovation.

Education

Figure 3: Types of innovation by education level of the founder, average available countries (% of all entrepreneurs)

Source: FOBS survey, 2005



Does education play a role in the inventiveness of entrepreneurs? Are the more highly educated entrepreneurs more innovative?

At first glance it is clear that the educational background of entrepreneurs varies according to the type of innovation.

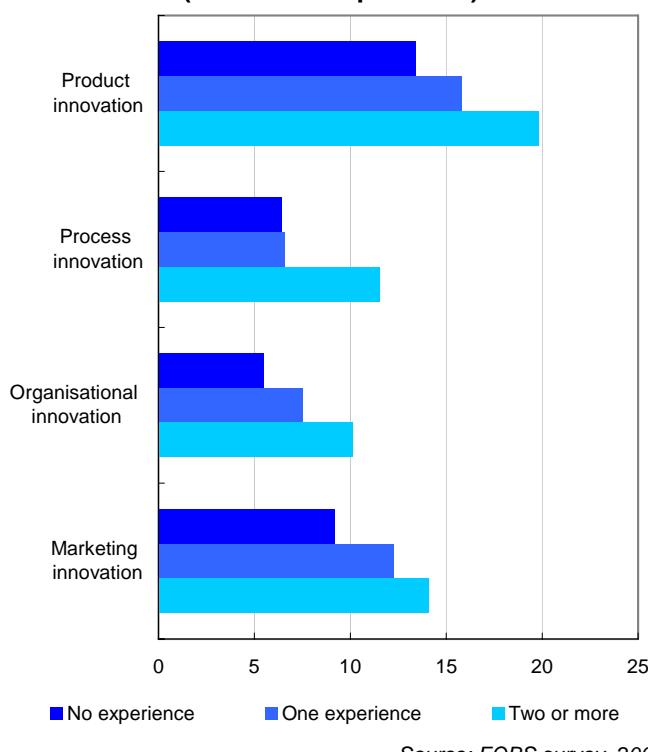
For product innovation, the share of innovative entrepreneurs increases with the increasing level of education, but for other types of innovation the link between innovation and education level is less apparent.

Entrepreneurs with the lowest level of education always account for the smallest share for all types of innovation. However, with the exception of product innovation, the upper secondary level has nearly the same percentage of entrepreneurs as tertiary education for the other three types of innovation.

These observations lead to conclude that education is not an important precondition for becoming an innovative entrepreneur, although a good educational background is always an advantage, especially for product innovators.

Experience in running an enterprise

Figure 4: Types of innovation by experience in running an enterprise, average available countries, (% of all entrepreneurs)



A characteristic of newly born enterprises is that, at birth, they tend to be very small and, in many cases, do not even have any employment apart from the entrepreneur himself.

As some of these enterprises do not survive or are taken over by other enterprises, entrepreneurs often create more than one enterprise in a relatively short period of time. Owing to this fact, 24% of the start-up founders, nearly one in four entrepreneurs, had managerial experience when they created the enterprise in which they were working at the time of the FOBS survey.

The experience of having run one or more enterprises before seems to have a favourable impact especially in the case of product innovation.

For the other three types of innovation, experience in running an enterprise plays quite a positive role, whereas in terms of process innovation a significant difference only becomes apparent when the entrepreneur has already created and run two or more enterprises.

Experience in the economic activity

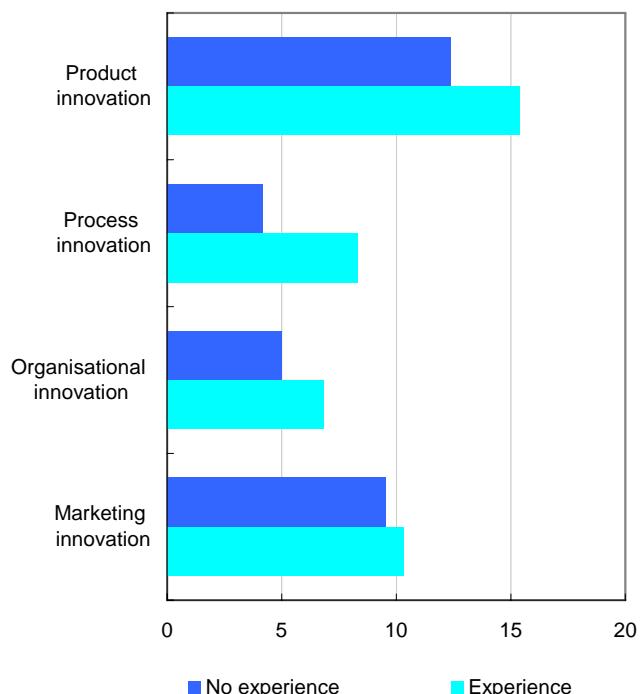
Not only do founders of start-ups frequently create more than one enterprise; in many cases they had already worked in the economic sector in which they founded their own enterprise. Entrepreneurs with experience are in a clear majority, 63% compared with the 37% that had never worked in the activity before creating their enterprise.

Figure 5 gives the impression that experience in the economic activity in general has a positive influence on all types of innovation. In relative terms, the impact is highest for process innovation, followed by organisational and product innovation. For marketing innovation, activity experience clearly makes the smallest difference.

This result is not surprising, as particularly processes are often specific to the economic activity, whereas, at the other end of the scale, marketing aspects are not necessarily linked to the economic sector, but rather to entrepreneurship in general.

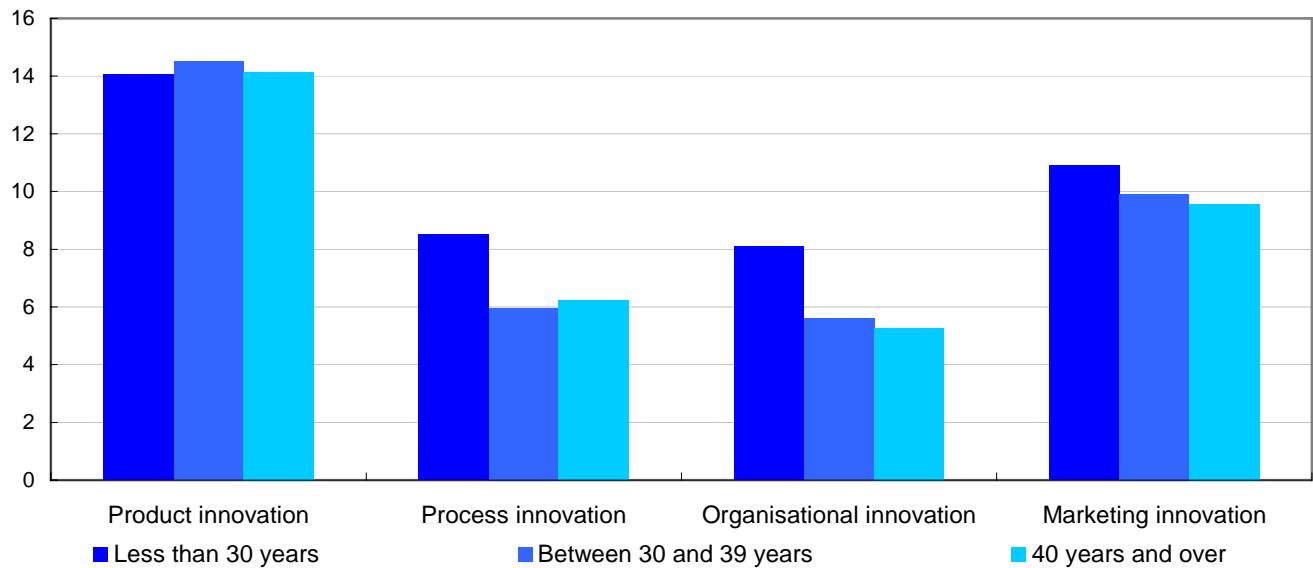
Experience in the economic activity can even be the "trigger" that leads an employee to the idea of creating his own enterprise. An employee who is very familiar with the products of the economic sector and with customers' needs might identify what is missing in the range of products to fulfil the customers' needs. Experience in the activity can help to identify market niches and to find ways to bridge these gaps in the market.

Figure 5: Types of innovation by activity experience, average available countries (% of all entrepreneurs)



Age

Figure 6: Types of innovation by age class, average available countries (% of all entrepreneurs)



Source: FOBS survey, 2005

Figure 6 seems to confirm the commonplace that youth and innovation go together. Even though this seems to be at odds with the positive impact of experience, an entrepreneur can have several years of economic sector experience and still be under 30 years old.

Furthermore, a closer look at the breakdown of types of innovation by age class reveals a more complex picture. The fact of being a young entrepreneur seems to be an advantage in process and organisational innovation, although rather less so for the two other types of innovation.

A young entrepreneur who has recently finished his studies may have innovative ideas owing to his educational background. He may have a newer and fresher slant on the way goods are produced and procedures organised.

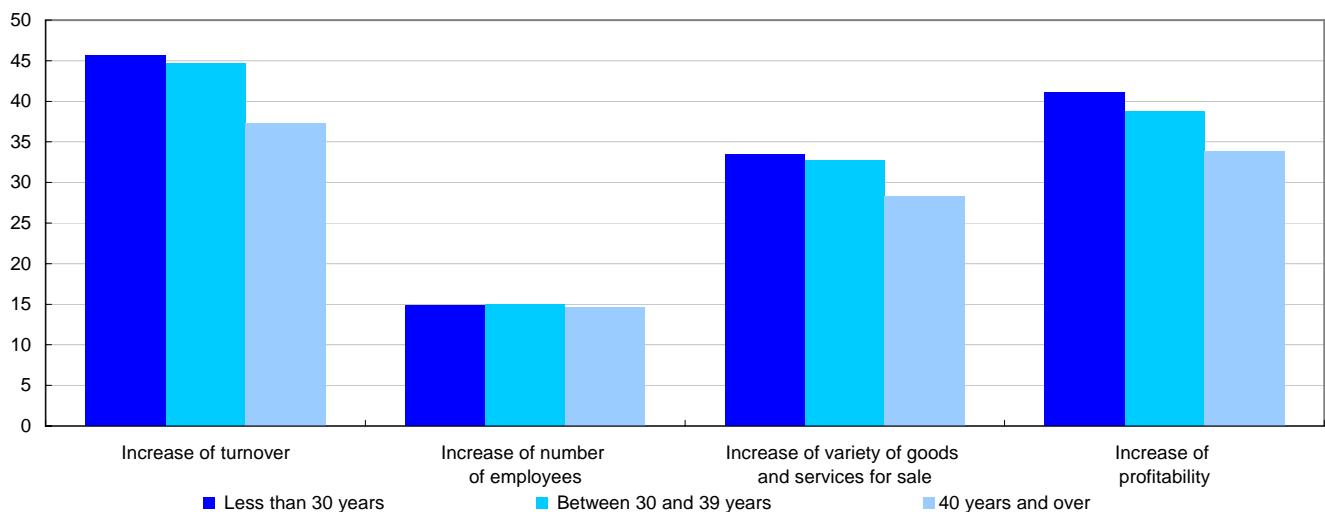
In product innovation, and to a lesser extent in marketing innovation, the experience of older entrepreneurs seems to compensate the dynamism of the younger ones.

It is perhaps also true that experience is one reason why entrepreneurs aged 40 and over view the development of their business activity less optimistically (see Figure 7).

In particular when it comes to increasing turnover and profitability, older business starters account for a significantly lower share than those aged 39 and under.

In contrast, expectations are nearly the same, close to 15%, for all age classes as regards a possible future increase in the number of employees.

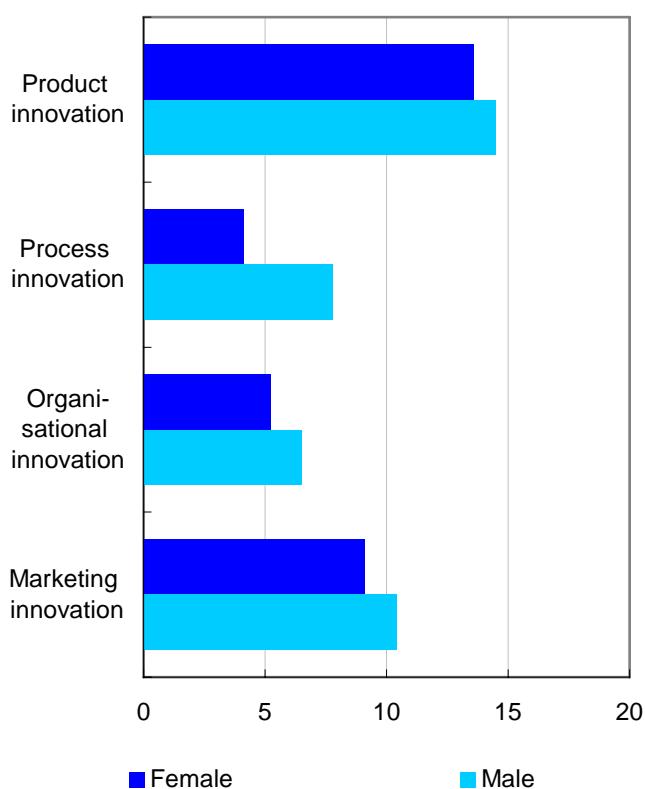
Figure 7: Expected development of business activity by age class, average available countries (%)



Source: FOBS survey, 2005

Gender

Figure 8: Types of innovation by gender, average of available countries, (% of all entrepreneurs)



Source: FOBS survey, 2005

Even if women active in all types of innovation make up a smaller proportion than men, this should not necessarily lead to the conclusion that women are less innovative in general.

The share of women is lowest in process innovation, but this may in part be explained by the choice of economic activities. As Figure 2 shows, process innovations are

mostly seen in industry and construction; but these are the two of the economic activities with the lowest shares of female entrepreneurs (see SIF 29/2006). The share of women is much higher in hotels and restaurants where, at the same time, the percentage of process innovators is rather low.

The reader should also bear in mind that the results relating to innovation are based on a self-assessment by the entrepreneur.

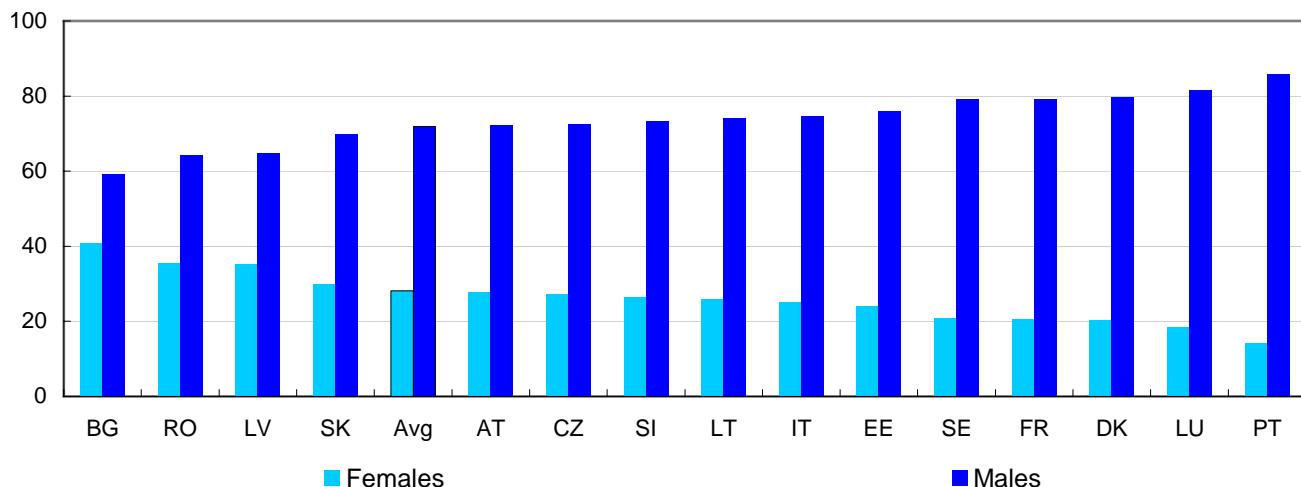
The breakdown by country in Figure 9 reveals big differences in the gender distribution at national level, although women are under-represented as entrepreneurs in all countries.

The percentage of female entrepreneurs ranges from 14% in Portugal to 41% in Bulgaria. Although women do not achieve parity in any of the countries shown in Figure 9, they are better represented among the entrepreneurs of the Eastern countries than those of the Western countries. The four Member States above the 28% European average of available countries, i.e. Bulgaria, Romania, Latvia and Slovakia, all joined the EU in the 2004 or 2007 enlargements.

This result is consistent with statistics on science and technology and higher education, which show higher percentages of women in these sectors in the Eastern European Member States than in the Western European countries.

Figure 9 is slightly biased by the structure of the surveyed population, as may be the case for other figures shown in this publication. It not only shows the national breakdown by gender, but may also reflect the structure of the FOBS population. A comparison of the FOBS population with the working population of the Labour Force survey (LFS) reveals a different gender distribution. While women make up 43% of the working population, they account for only 28% of entrepreneurs according to the FOBS survey.

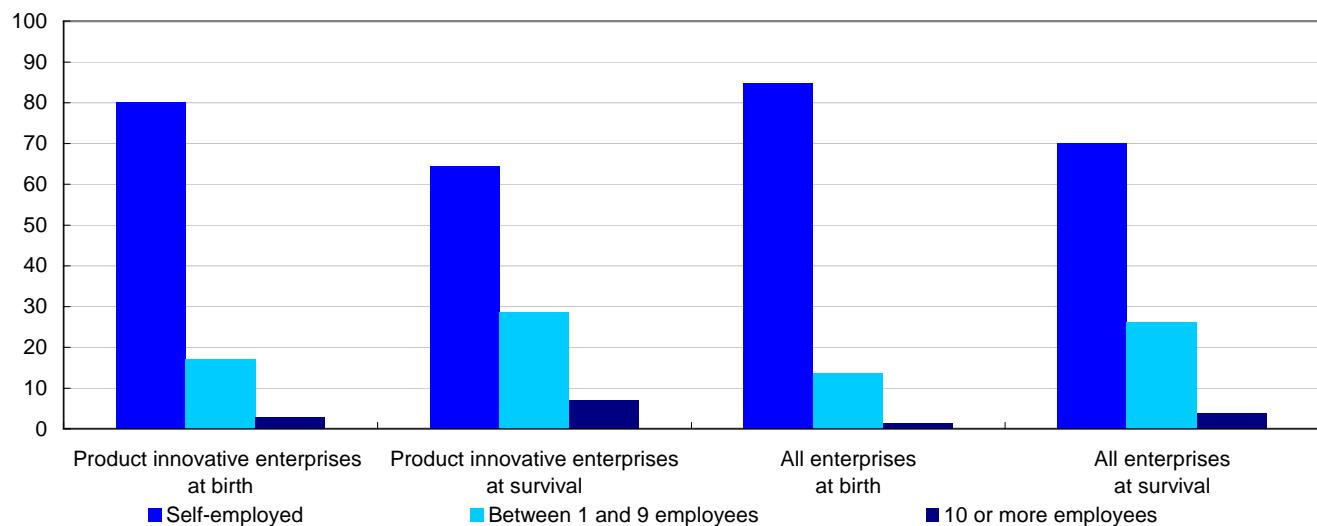
Figure 9: Breakdown of entrepreneurs by gender by country, as a percentage



Source: FOBS survey, 2005

Enterprise growth

Figure 10: Product innovative enterprises vs. all enterprises, at birth (2002) and at survival (2005) by size class, average available countries, as a percentage



Source: FOBS survey, 2005

By far the majority of the enterprises surveyed were very small at birth. On average, more than 80% of entrepreneurs started their business without a single employee. The reader should note that the average values may be biased owing to the fact that the largest economy in the calculation of the average was Italy. The particularity of the Italian economy is that it has a very high percentage of small, often family-owned enterprises.

The innovative enterprises were slightly larger at birth compared to all enterprises. For example, 2.8% of the product innovative enterprises had 10 or more employees at birth, compared to 1.4% of all enterprises.

A comparison of both groups at survival suggests that the product innovative enterprises grew more in terms of number of employees than other enterprises. Whereas the share of the 'self-employed' size class fell from 84.8% to 70.1% for all enterprises, the share of the same size class for product innovative enterprises decreased even more, from 80.2% to 64.4%.

Table 1 gives the same information as Figure 10, but also includes the three other types of innovation.

Growth for enterprises engaged in any type of innovation activity is higher than for all enterprises surveyed.

The enterprises that declared themselves active in organisational innovation were the largest at birth and also increased the most in size compared to the enterprises active in the other types of innovation. The share of the self-employed fell from 78.5% to 60.5%, while at the same time the share of the size class between 1 and 9 employees rose by 11.1 percentage points and the share of the largest enterprises (10 or more employees) added 7 percentage points. However, as already mentioned, an entrepreneur declaring himself to be an organisational innovator may also be active in other types of innovation.

Table 1: Breakdown of enterprises by type of innovation, all enterprises, at birth and at survival by size class, average available countries, as a percentage

		Product innovation	Process innovation	Organisational innovation	Marketing innovation	All enterprises
At birth	Self-employed	80.2	81.8	78.5	80.6	84.8
	Between 1 and 9 employees	17.0	15.3	18.6	16.8	13.8
	10 or more employees	2.8	2.9	2.9	2.6	1.4
At survival	Self-employed	64.4	65.8	60.5	66.3	70.1
	Between 1 and 9 employees	28.6	24.4	29.7	25.9	26.1
	10 or more employees	7.0	9.8	9.8	7.6	3.9

Source: FOBS survey, 2005

➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

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Coverage

The survey on the 'Factors of Business Success' was carried out by 15 Member States (BG, CZ, DK, EE, FR, IT, LV, LT, LU, AT, PT, RO, SI, SK and SE).

The results of this survey give an insight into the factors that determine the success and growth of newly born enterprises, notably by looking into motivations for starting up one's own business, the barriers and risks encountered during the first years of existence, the current situation of the enterprise, and business plans for future development.

Average

Throughout the disseminated dataset, the weighted average consists of 10 countries whose data are most consistently available. These are CZ, DK, IT, LT, LU, AT, SK, SE, BG and RO. EE, PT, LV and SI are not included because data are partly confidential and thus many aggregates would have to be hidden. French data are not included because they were taken from a similar survey conducted independently (SINE), which overlaps only partially with the FOBS survey.

Characteristics

The dataset focuses on the following subjects related to newly born enterprises:

- The start-up conditions of the enterprise, e.g. its financing, support and difficulties encountered during the start-up phase.
- The profile of the entrepreneur who founded the enterprise, such as the age, gender, educational background, previous experience and motivation for the start-up.
- The current situation of the enterprise, for instance in terms of its market position, its potential for growth, its employment and turnover.
- The future prospects of the enterprise as assessed by the entrepreneur.

Target population

The target population of the survey was defined according to the concepts of the Business Demography data collection as the newly born enterprises of the year 2002, which had survived to 2005 and which were still managed by the original entrepreneur, or founder.

Statistical units

The statistical unit is the enterprise. In practice, many countries report data on the legal units which in most cases coincide with the enterprises.

Data source

The data were generally collected by the National Statistical Institutes (NSI) by means of a survey among enterprises. Sample sizes ranged from 2000 to 4000 enterprises in most countries.

Some differences in the coverage at country level may occur. Different administrative sources depending on national law, as well as surveys, are used to update the business registers.

Definitions

Product innovation

Introduction of new and significantly improved goods and/or services with respect to their fundamental characteristics, technical specifications, incorporated software or other immaterial components, intended uses, or user friendliness.

Process innovation

Implementation of new and significantly improved production technologies or new and significantly improved methods of supplying services and delivering products.

Organisational innovation

Launch of a new and significantly improved organisation of management.

Marketing innovation

Introduction of a new and significantly improved way of selling goods or services.

Enterprise birth

A birth amounts to the creation of a combination of production factors with the restriction that no other enterprises are involved in the event.

Enterprise survival

An enterprise survival occurs if an enterprise is active in terms of employment and/or turnover in the year of birth and the following year(s).

International Standard Classification of Education - ISCED

ISCED 1-2:	Primary and lower secondary level of education
ISCED 3:	Upper secondary level of education
ISCED 4:	Post-secondary non-tertiary
ISCED 5-6:	First and second stage of tertiary education

Economic activities - NACE

The datasets are broken down into 9 aggregates of NACE Rev. 1.1 activities

C to E	Industry
C to K excluding 74.15	Industry and services excluding public administration and management activities of holding companies
F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
G to K excluding 74.15	Services excluding public administration and management activities of holding companies
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial intermediation
K excluding 74.15	Real estate, renting and business activities excluding management activities of holding companies

Abbreviations

CIS 4 Fourth Community Innovation Survey

FOBS Factors of Business Success

Further information:

Data:

Industry, trade and services

-   **Industry, trade and services - horizontal view**
-   **Special topics of structural business statistics**
-   **Factors of Business Success**

-  Enterprises managed by the founder - broken down by entrepreneur age class
-  Enterprises managed by the founder - broken down by branch experience
-  Enterprises managed by the founder - broken down by education of the entrepreneur
-  Enterprises managed by the founder - broken down by experience managing an enterprise
-  Enterprises managed by the founder - broken down by gender of the entrepreneur
-  Enterprises managed by the founder - broken down by birth size class (number of employees)
-  Enterprises managed by the founder - broken down by survival size class (number of employees)

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