

How to stimulate entrepreneurship in Belgium ?

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Introduction

It is generally acknowledged that entrepreneurship is very important for a country's economic growth. Numerous institutions at both national and international level are therefore conducting research on this subject. This concerns both governmental organisations such as the OECD and the EC, and private initiatives such as the Global Entrepreneurship Monitor (GEM). Among other things, the many studies that these organisations publish quantify the performance of the different countries and list the various factors which may affect the development of entrepreneurship. The list of these potential determinants is generally very long, as there are many factors that influence the decision on whether or not to establish a self-employed activity or a business. It is not only financial and economic factors, but also more sociological issues that are significant here, such as attitudes towards entrepreneurship or the approach to risk.

It is often suggested that Belgium's entrepreneurship performance is mediocre. However, few studies provide convincing evidence of that, let alone investigate the reasons for it.

The purpose of this article is to provide a succinct overview of entrepreneurship in Belgium. In that respect, it analyses the two arguments mentioned above. It also examines the main factors encouraging or inhibiting the establishment of businesses, and Belgium's performance in that regard compared to other countries. By listing the

weaknesses, it is possible to identify the main areas where efforts may be required.

The article comprises four sections. The first section concerns the current entrepreneurship situation in Belgium, comparing it with the situation in other European countries. It deals with both self-employed activity and business creation. The second section looks at the link between entrepreneurship and economic growth, and describes the various forms of entrepreneurial activity. Section 3 sets out the factors which may influence entrepreneurship and analyses Belgium's position in regard to each factor. Finally, the fourth section records a series of recent measures designed to stimulate entrepreneurship in Belgium. The article ends with some conclusions and final remarks.

1. Demography of entrepreneurs

Since it has multiple dimensions, entrepreneurship can be defined in various ways. It is a broad concept that the EC defines as follows: "Entrepreneurship is the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation" (EC, 2012). In that respect, an entrepreneur is therefore not only a self-employed person in the usual sense but is also primarily a developer of innovative activities. Entrepreneurship thus comprises numerous facets and can be analysed from various angles. A first indicator of the scale of entrepreneurship is the proportion of the population of working age pursuing a self-employed activity, with or without staff. The creation of new businesses combined with the rate at which firms close down is also

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a measure of the dynamism of a country's business population. These two concepts are complementary since they each describe a specific dimension of entrepreneurship. Moreover, some more detailed breakdowns are available for only one of the two definitions; by looking at both, it is therefore possible to examine additional dimensions.

However, it must be remembered that these data do not offer a complete picture, notably in regard to the implications for employment. New businesses are often small start-ups generating few jobs in the early stages of their development, while the disappearance of some large companies may entail significant job losses. Nonetheless, this dynamic may also favour economic activity and the optimal functioning of the labour market, as the labour which is "freed up" in this way can be redeployed to new and expanding activities.

1.1 Self-employed workers

Various sources can be used to assess the number of self-employed workers. In the specific case of Belgium, we first have the data collected by the National Institute for the Social Security of the Self-Employed (NISSE), which is responsible for managing social security for the self-employed. These data give the number of self-employed workers who are affiliated to social insurance funds; the data are currently available for the period 1995-2015. Various breakdowns are possible. For instance, a distinction can be made according to whether the self-employed activity is the main job, a second job or a retirement activity. These results can then be further refined according to age, nationality, branch of activity, etc.

The national accounts are a second exhaustive source. These data, which are also available for the period 1995-2015, only concern people who are self-employed in their main job; if those with a self-employed activity as their second job were included, that would lead to overestimation of total employment according to the national accounts, as those people often are already included as employees (in their main job). Use of a harmonised methodology within the EU permits international comparison of the results. However, except for a breakdown by branches of activity, a more detailed analysis is not feasible.

(1) The aggregate results are available on the Eurostat website up to 2015. However, to obtain more detailed data, it is necessary to use the microdata supplied by Eurostat, which are available up to 2014.

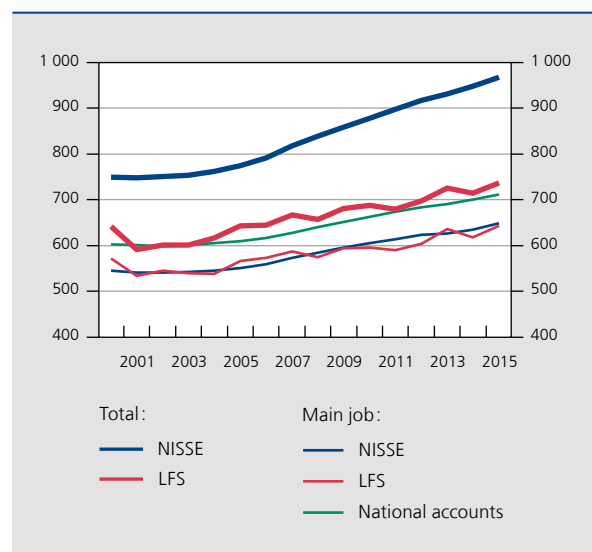
(2) If an employment contract exists, the person concerned is regarded as an employee.

(3) See http://www.inasti.be/sites/rsvz.be/files/publication/brochure_conjoints_aidants_06_2016.pdf.

Finally, the labour force survey (LFS) can also be used. In that survey, the people polled provide information on the occupational status (civil servant, employee, self-employed) that best describes their main job, and their second job if any. These data permit international comparison and detailed breakdowns, and are available for the various countries from the date that they first took part in the LFS; in Belgium's case, that is 1983. The latest results concern 2015⁽¹⁾.

The NISSE and LFS data permit a distinction between the 'genuine' self-employed and their 'helpers' who regularly assist or stand in for self-employed people without being tied by any employment contract⁽²⁾. Examples include assisting spouses. For social security purposes, they are regarded as self-employed workers with the same rights and obligations⁽³⁾, and are therefore registered with the NISSE. Nevertheless, they are excluded from the analysis in this article because in all probability they can not be considered genuine entrepreneurs. However, the national accounts data do not permit that adjustment, since the NAI only publishes the total number of people with a self-employed main occupation, including helpers. In order to compare the number of self-employed people excluding helpers according to the three sources, the number of helpers was therefore estimated for the national accounts and that figure was deducted from the total number.

CHART 1 SELF-EMPLOYED WORKERS⁽¹⁾ IN BELGIUM ACCORDING TO VARIOUS SOURCES (thousands of persons)



Sources: EC (LFS), NAI (NBB estimate), NISSE.

(1) Excluding helpers.

In regard to the various methodologies used, the three sources present divergent figures for the number of self-employed. If only those self-employed in their main occupation are considered, the estimated number based on the national accounts is higher than that for the other two sources. According to the national accounts, there were around 711 000 self-employed people in 2015, whereas the NISSE and LFS figures came to around 648 000 and 643 000. However, since 2000, these three sources have displayed a fairly similar trend in the number of self-employed people: the figures remained stable up to 2004 before rising at a broadly comparable rate.

If we consider not just those self-employed in their main occupation but the total number of self-employed people (still excluding helpers), the divergences between both available sources are even greater. In 2015, the NISSE recorded almost 970 000 self-employed people, including those self-employed in a second job and pensioners taking up this form of activity. The LFS recorded a total of just under 740 000 people pursuing a self-employed activity as their main job or their second job.

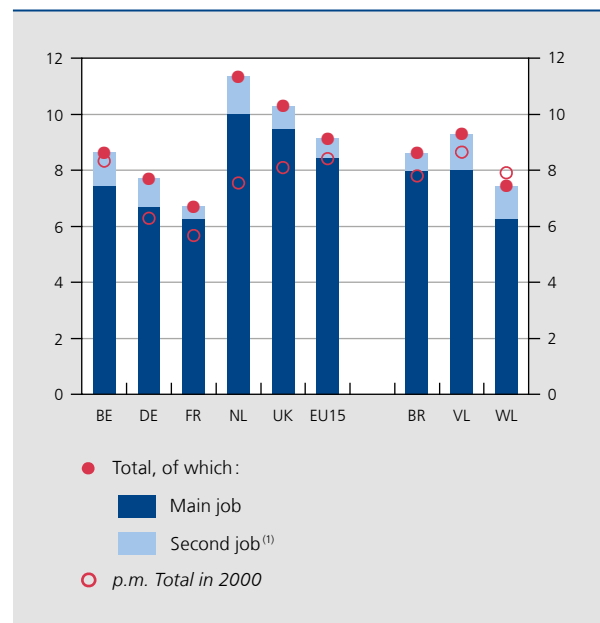
The rest of this sub-section is based on the LFS data. The LFS is a survey, not an exhaustive source, but compared to the NISSE it has the advantage of permitting international comparison of the results. The LFS is based on a broader concept than the national accounts (as it includes secondary self-employed activity) and it permits a very detailed breakdown of the findings from multiple angles.

The roughly 714 000 self-employed people recorded by the LFS in Belgium in 2014 (the latest year for which detailed microdata are available) represented 8.6 % of the total population between 15 and 74 years of age. They were mostly self-employed in their main job (7.5%), but around 1.2% of people from this age group were employees in their main job who were pursuing a self-employed activity as a second job.

That proportion puts Belgium slightly below the EU15 average⁽¹⁾, which stood at 9.1%. The difference in relation to the European average is due exclusively to people self-employed in their main job, as Belgium has a higher proportion of self-employed workers in a second job. Compared to the four main neighbouring countries, Belgium is ahead of Germany and France but behind the United Kingdom, and especially the Netherlands. Within Belgium, Flanders has the highest proportion of self-employed workers (9.3%), followed by Brussels and Wallonia (at 8.6 and 7.4% respectively).

(1) The "new" EU Member States (which joined the EU in 2004 or later) are excluded from the comparison because their economic structure is still too different from that of the other EU Member States. That is why the EU15 is used as the benchmark.

CHART 2 SELF-EMPLOYED WORKERS⁽¹⁾ IN BELGIUM AND IN THE EU15 IN 2014
(in % of the population aged between 15 and 74 years)



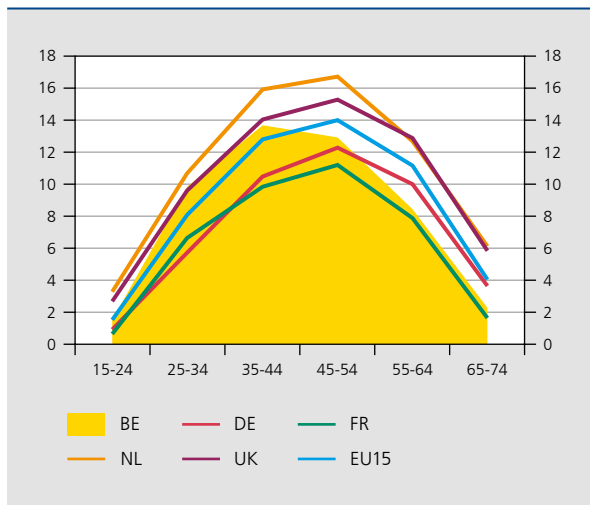
Source: EC (LFS).
(1) Excluding helpers.

But it should be noted that there has been virtually no change in the proportion of self-employed workers in Belgium since 2000, when it stood at 8.3%, whereas that ratio has risen significantly in the four neighbouring countries, especially in the Netherlands, but also in the EU15 in general. In Brussels and Flanders, the percentage of self-employed workers likewise increased over that period, but the rise was largely offset by the decline in Wallonia.

The LFS results can be broken down according to age and nationality, among other things. In most EU countries, the proportion of self-employed workers in the population gradually increases with age, before declining after the age of 55. It is interesting that, up to the 35-44 age group, the percentage of self-employed workers in Belgium exceeds the European average and the figures for the four reference countries (excluding the Netherlands). While that proportion continues to increase up to the 45-54 age group in those four countries and on average in the EU, it already declines for that group in Belgium. From that age group onwards, Belgium has a much lower proportion of self-employed entrepreneurs than most other EU Member States.

As regards the breakdown by nationality, the large proportion of self-employed workers among nationals of countries

CHART 3 SELF-EMPLOYED WORKERS⁽¹⁾ IN BELGIUM AND IN THE EU15 IN 2014, BY AGE GROUP
(in % of the corresponding age group)



Source: EC (LFS).
(1) Self-employed in main and second jobs. Excluding helpers.

which joined the EU after 2003 is particularly striking (15 % of the population concerned). That is doubtless due to the restrictions on taking up salaried employment in Belgium, applicable to citizens of Bulgaria and Romania (joined in 2007) and Croatia (joined in 2013) in the first years following the accession of these countries. Since those restrictions did not apply to self-employed activities, self-employed status was attractive as a legal means of gaining access to the Belgian labour market. For Romanians and Bulgarians, this transitional period continued until the end of 2013, while for Croatians it ran until mid-2015⁽¹⁾.

1.2 Business creation

Three main data sources regarding business creation are available

There are various ways of measuring business creation. For that purpose, this article uses three data sources concerning Belgium. Although some of those data are available monthly, this section only considers annual movements since the aim is to highlight structural trends.

All entities engaging in a commercial activity must register with the Crossroads Bank for Enterprises. That includes not only those subject to VAT but also those which are

(1) For more information, see the FPS ELSD website: <http://www.emploi.belgique.be/defaultTab.aspx?id=4886>.

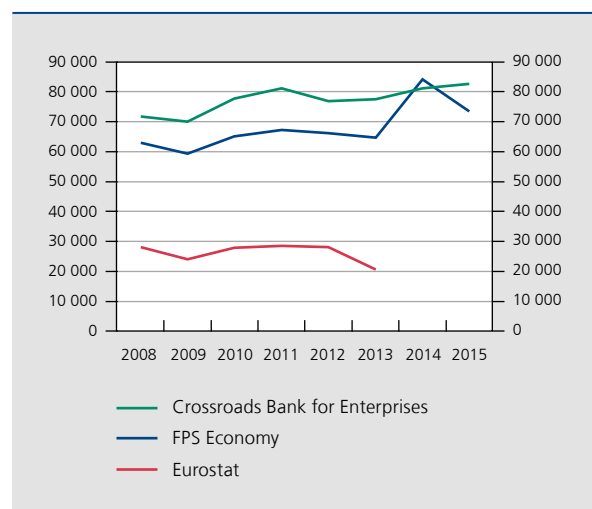
VAT-exempt, associations, self-employed workers, etc. The new business numbers can be extracted from the data in question. Available since 2005, these data show business creation from an administrative angle.

The data compiled by FPS Economy only concern entities registering for VAT. They indicate new registrations (entities subject to VAT for the first time, those coming under the VAT regime again, and changes of registered office). The data cover both the business operators and the legal entities subject to the VAT legislation. Available since 2008, they show business creation from the tax angle.

Since these two sources only provide information on business creation in Belgium, they do not permit international comparisons. For that purpose, it is necessary to use the Eurostat data on business demography. Those data cover all the EU countries. For Belgium, they are based on the statistics concerning entities subject to VAT. They are adjusted and modified to measure business creation from an economic point of view (see below) and to ensure the international comparability of the data. At present, these data are available for the period from 2008 to 2013.

Comparison of the data obtained from the three sources shows that the way in which business creation is determined (from an administrative, tax or economic point of view)

CHART 4 NUMBER OF BUSINESS CREATION IN BELGIUM ACCORDING TO VARIOUS SOURCES⁽¹⁾



Sources: EC, Crossroads Bank for Enterprises, FPS Economy.
(1) The data from the Crossroads Bank for Enterprises identify business creation via new registrations of company numbers. The data from FPS Economy comprise new registrations (entities subject to VAT for the first time, those coming under the VAT regime again, and changes of registered office). The Eurostat data are based in Belgium's case on the statistics for those subject to VAT, but they are adjusted to measure business creation from an economic point of view and to ensure international comparability of the data.

is not neutral. Although the pattern is fairly comparable over time, there are significant differences in the level of business creation depending on the source considered. Figures for business creation in Belgium in 2013 from the economic angle (20 694) were only a third or a quarter as many as those recorded in the tax data (64 610) and the administrative data (77 471).

In that connection, it is worth clarifying the criteria that Eurostat uses to define a business creation. According to Eurostat, a business creation must involve the creation of new production factors. It therefore excludes:

- Enterprises that are created by merging production factors or by splitting them into two (ore more)
- Newly established businesses that take over the activity of pre-existing businesses
- Any change in the legal form of an existing business
- Reactivation of businesses that ceased trading less than two years ago
- Any temporary association or joint venture not involving the creation of new production factors.

The definition of business creation applied by Eurostat therefore includes only some of the new businesses in the

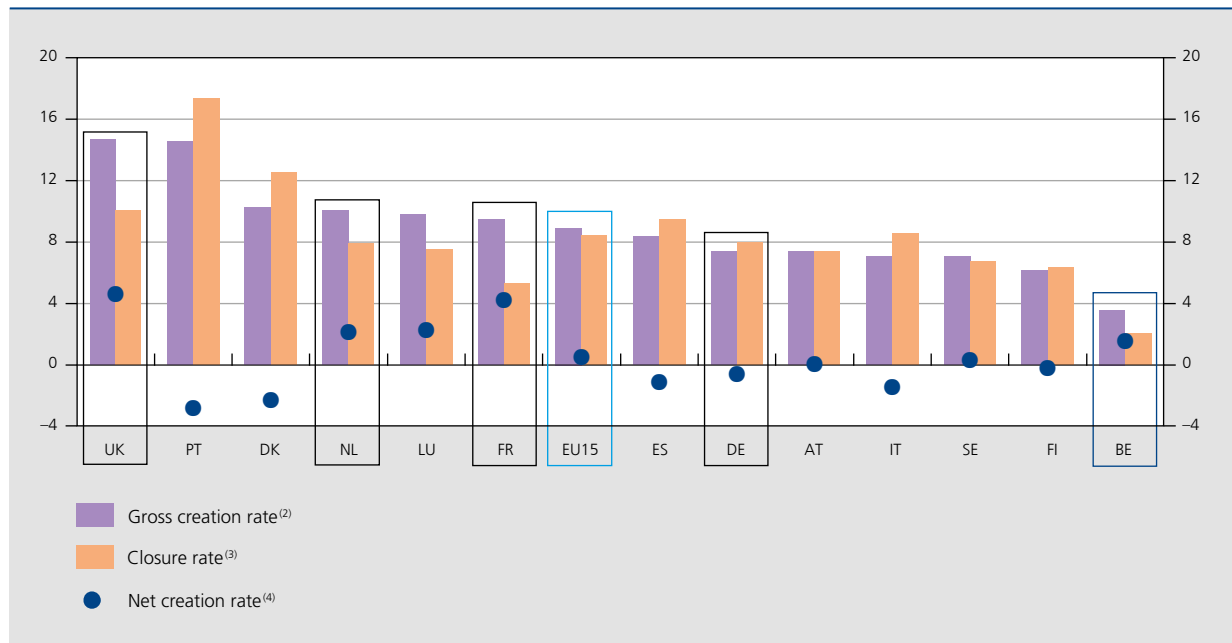
fiscal or administrative sense of the term; that accounts for the significant difference compared to the two other data sources.

The analysis which follows uses the Eurostat data because they permit an economic interpretation. Furthermore, the other sources do not make any international comparisons possible. The data published by Eurostat also have the advantage of being less susceptible to legal changes which may influence business creation from a fiscal or administrative angle. For instance, the abnormally large number of business creations according to the FPS Economy data in 2014 was due to lawyers becoming subject to VAT. The 2014 Eurostat data would not class all those new people subject to VAT as business creations in the economic sense.

Belgium has the lowest gross business creation rate in the EU15

Four indicators can be identified for the purpose of measuring business demography. The first is the gross creation rate. That is equal to the ratio between the number of businesses created during a specified period (year *t*) and

CHART 5 GROSS AND NET BUSINESS CREATION RATES IN BELGIUM AND IN THE EU15⁽¹⁾ IN 2013
(in %)



Source: EC.

(1) EU15 except Ireland and Greece.

(2) Number of business creations in *t* divided by the number of businesses active in *t*.

(3) Number of business closures in *t* divided by the number of businesses active in *t*.

(4) Difference between the gross creation rate in *t* and the closure rate in *t*.

the number of businesses active in t . The second is the closure rate, which indicates the ratio between the number of businesses closing down in t and the number of businesses active in t . The net creation rate corresponds to the difference between the gross creation rate in t and the closure rate in t . Finally, the business churn rate can be determined by adding together the gross creation rate and the closure rate during year t . This last indicator offers information on the general dynamics of a country's economic fabric. To operate at maximum efficiency, an economy requires the least productive businesses to close down in order to free up means of production, and needs new businesses offering good growth prospects to be established and developed.

In 2013, the latest year for which data are available, Belgium's gross creation rate – at 3.6% – was the lowest in the EU15. That result was similar to the findings in the preceding five years and therefore indicates a structural weakness in Belgium's economy in terms of business creation. In neighbouring countries, the situation is quite different. In France and the Netherlands, the gross creation rate exceeded the EU15 average of 8.9%. Conversely, Germany scored below that average, but still had a business creation rate which was twice as high as Belgium's. The United Kingdom and Portugal had the highest gross creation rates in the EU15, at almost 15%.

Although the number of businesses set up in Belgium is small, the number of closures is also low: in structural terms, the business closure rate in Belgium is among the lowest in the EU15. In 2013, 2% of businesses closed down. In the EU15 on average – and in Germany and the Netherlands – the percentage was four times as high. In France, it was almost triple the Belgian figure.

The combination of a gross creation rate and a closure rate which are among the lowest in Europe implies a very low business churn rate. In that respect, the Belgian economy displays a structural shortage of entrepreneurial dynamism. In contrast, the United Kingdom emerges as a country with a highly dynamic production fabric.

Although the level of business creations and closures was very low in Belgium in 2013, the net creation rate was positive and exceeded the EU15 average (1.6% compared to 0.5%). Since 2008, the first year for which data are available, that net creation rate has been positive in each year, indicating that the number of businesses in Belgium is steadily increasing. While three neighbouring countries (France, the Netherlands and the United Kingdom) also recorded a net rise in the number of businesses, Germany has seen a slight decline in the business population each year since 2009.

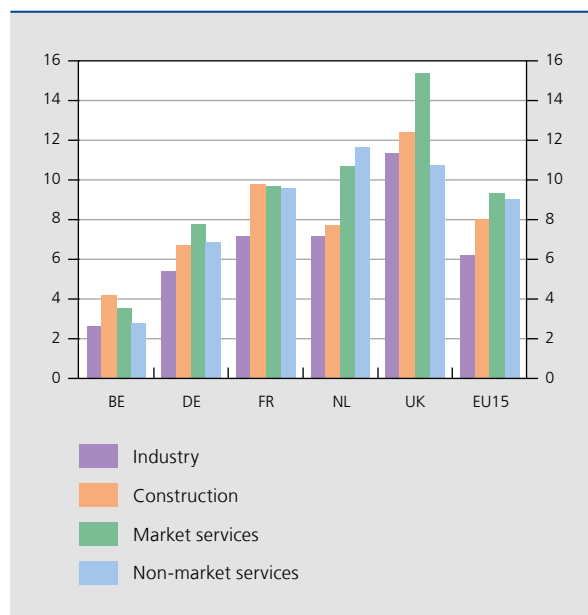
More businesses are created in certain branches of activity

The creation of businesses is not equally dynamic in all branches of the economy. In Belgium, the gross creation rate for all the sectors analysed (industry, construction, and market/non-market services) was lower than in neighbouring countries and was also below the EU15 average. In all those countries, and in the EU15, the gross creation rate is lowest in industry. In contrast, in the services sector – in both market and non-market services – business creation is more dynamic. In 2013, Belgium's highest gross creation rate was in construction. Those findings have remained unchanged since 2008.

Net creation rates by branch of activity also display a divergent picture. In the EU15, the total number of businesses in industry and construction declined in 2013, while the number of businesses in market and non-market services continued to rise. That trend was also apparent before 2013 and indicates the growing importance of the services sector in European economies.

As in France, the Netherlands and the United Kingdom, all sectors of the Belgian economy recorded a positive net creation rate. Although the creation rate in market services in Belgium is higher than the EU15 average,

CHART 6 GROSS CREATION RATE BY BRANCH OF ACTIVITY IN 2013⁽¹⁾
(in %)



Source: EC.
(1) EU15 except Ireland and Greece.

it was still lower than in neighbouring countries with the exception of Germany, where the number of businesses declined in all branches in 2013, as it had done in each of the preceding years.

Flanders records the largest number of business creations while the Brussels-Capital Region is the most dynamic

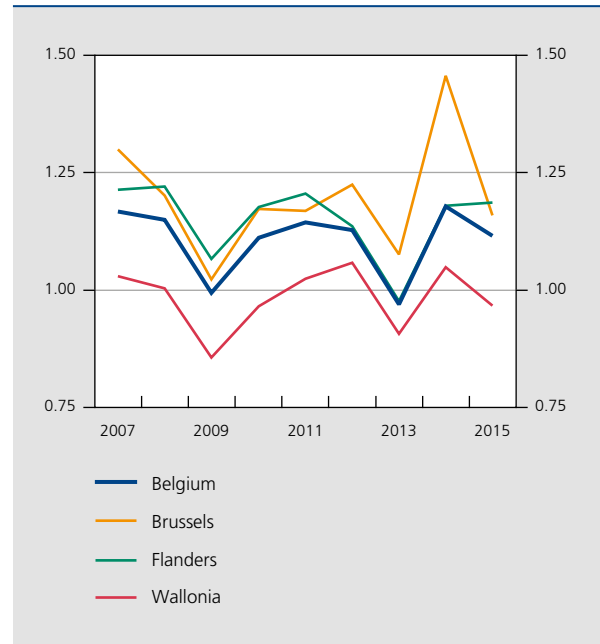
The Eurostat data do not permit analysis of business creation by Region. That analysis is therefore based on the data from FPS Economy. The new VAT registrations were broken down by Region according to the location of the head office. That criterion is not neutral, and could in particular drive up the figures for the Brussels-Capital Region, as many (new) firms opt to locate their head office in the capital while pursuing their economic activities in another part of the country.

The share of the three Belgian Regions in business creation has been fairly constant since 2008. In 2015, of the businesses subject to VAT in Belgium for the first time, around 57 % had their head office in Flanders, 14 % in Brussels, 25 % in Wallonia and, finally, 4 % in another country. If these data are compared with the regional percentage of the total number of VAT-registered businesses, we observe that the proportion of firms with their head office in Brussels has been rising gradually since 2007. In the Walloon Region, the opposite trend is apparent, while Flanders is maintaining its position.

For a more detailed comparison of the business churn rate at regional level, the entrepreneurial dynamics of a Region can be examined on the basis of the ratio between the number of businesses subject to VAT for the first time and the number of closures. The higher that ratio, the greater the extent to which business creations compensate for business closures. Conversely, if that ratio is less than 1, business creations are insufficient to offset business closures in the year in question.

The Walloon Region displays the weakest entrepreneurial dynamism, with a business creation/closure ratio which is regularly less than 1. Consequently, the businesses created there only make up for some of the business closures. Conversely, in Flanders and Brussels, entrepreneurial dynamism is generally more favourable (creation/closure ratio higher than 1).

CHART 7 ENTREPRENEURIAL DYNAMISM⁽¹⁾ IN BELGIUM AND IN THE REGIONS



Sources: FPS Economy, NBB calculations.

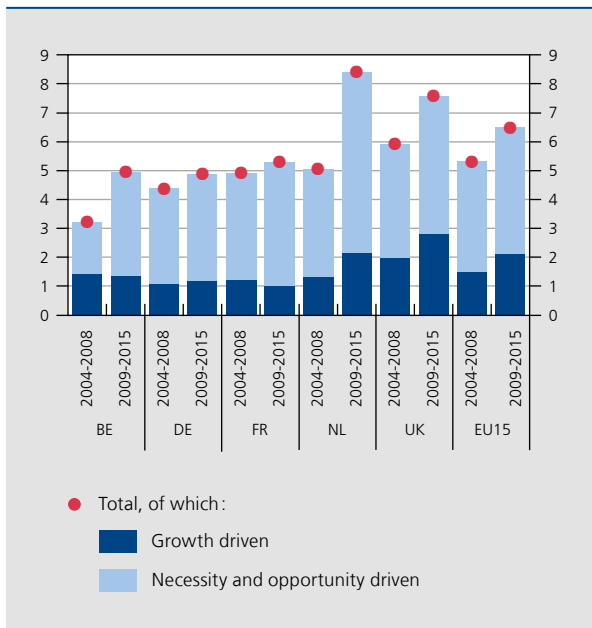
(1) Ratio between the number of businesses subject to VAT for the first time and the number of closures. The regional breakdown is based on the location of the head office. The data on businesses with a head office in another country were disregarded.

2. Forms of entrepreneurship and economic growth

Two major reasons for becoming an entrepreneur...

The means of measurement used in the previous section make no distinction between the various reasons for setting up a business. There are numerous motives, but the literature highlights two in particular. The first type of person setting up a business is interested mainly in making a living or in personal development. Those people set up their own business as an alternative to working as employees. The aim of these entrepreneurs, driven by “necessity” or “opportunity” is therefore either to achieve an income sufficient for themselves and their family, or to increase their income. Such entrepreneurs include, for example, the unemployed who open a small shop, or business executives who set up their own consultancy. The second type of business creator, the “growth-driven” entrepreneurs, mainly wants to seize the opportunity to create and develop an economic project that can generate wealth and jobs, rather than just aiming to make a living or increase their income.

CHART 8 TOTAL EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA)⁽¹⁾ AND REASONS FOR BECOMING AN ENTREPRENEUR
(in %, arithmetical averages in the years in question)



Sources: GEM, NBB calculations.

(1) Percentage of the 18-64 age group establishing a firm or running a business no more than 3 ½ years old.

The data collected and analysed by the Global Entrepreneurship Monitor reveal the contribution of these two motives for setting up a business (see for example GEM, 2016). Those contributions are measured as a percentage of Total early-stage Entrepreneurial Activity (TEA), which indicates the proportion of people aged from 18 to 64 years setting up or running a business which is no more than 3 ½ years old. The analysis considered two periods in order to ascertain the structural trend in these various reasons for becoming an entrepreneur, namely a pre-crisis period (from 2004 to 2008) and a post-crisis period (2009 to 2015).

As in the Netherlands, the United Kingdom and the EU15 in general, the TEA has risen in Belgium since the economic and financial crisis. In this country, that increase – from 3.2 % to 4.9 % – is attributable entirely to necessity-driven or opportunity-driven entrepreneurship. In a period of weak growth with limited job prospects, more people evidently opted to set up their own business.

Conversely, growth-driven entrepreneurship has not expanded in Belgium since the crisis, whereas it did so in other European countries. Between 2009 and 2015, that rate (1.4 %) was below the EU15 average (2.1 %) and

lower than the figures for the United Kingdom (2.8 %) and the Netherlands (2.2 %), though it exceeded the rates in Germany (1.2 %) and France (1.0 %).

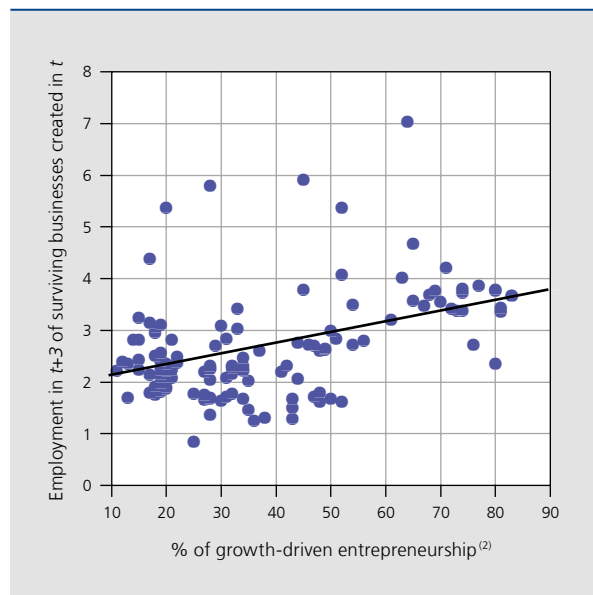
These distinctions between the various forms of entrepreneurship undoubtedly have varying implications for the dynamics of business creation in terms of economic performance and efficient allocation of the means of production.

... with varying growth prospects

The influence of entrepreneurship on economic growth has already been analysed many times, for example in Acs (2006), Naudé (2013) and Kritikos (2014). There appears to be a consensus in the literature concerning the impact of entrepreneurial motivations on economic activity. The various forms of entrepreneurship do not all generate growth. The two categories of entrepreneur therefore have a divergent impact on economic performance. It seems obvious that entrepreneurship driven by necessity or opportunity will generate less economic growth in the long term.

In addition, our analysis reveals that – in the case of the 28 EU countries – a higher proportion of growth-driven

CHART 9 GROWTH-DRIVEN ENTREPRENEURSHIP AND AVERAGE EMPLOYMENT AFTER 3 YEARS IN NEW BUSINESSES⁽¹⁾
(EU, firms created between 2005 and 2010)

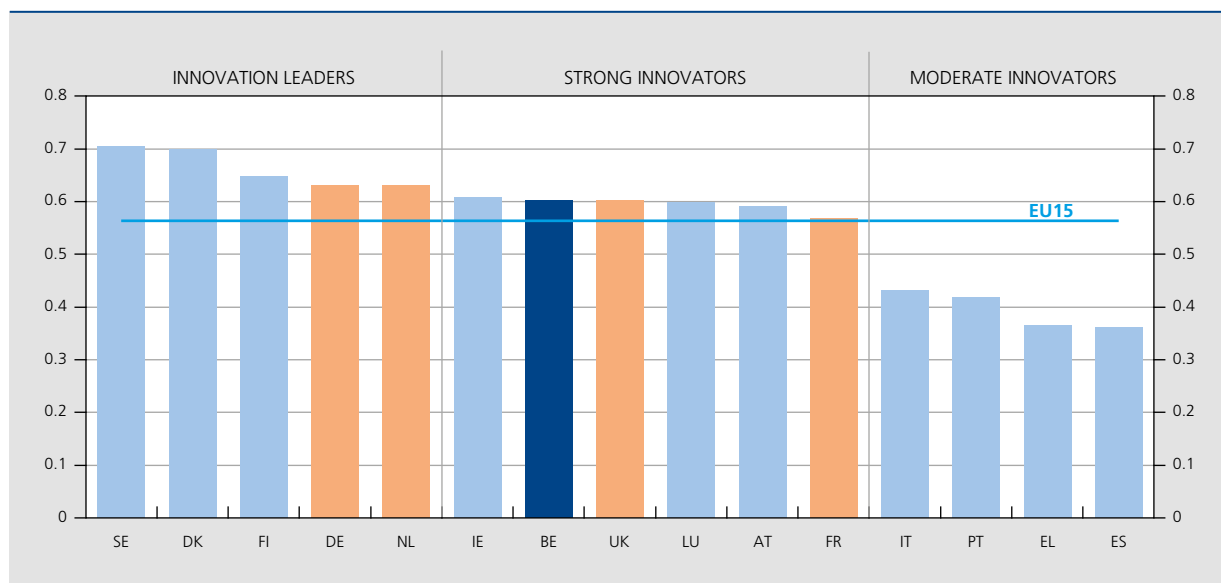


Sources: EC and NBB calculations.

(1) Significant correlation at 1 %. The results are similar for employment in firms surviving for one to five years after being set up.

(2) Proportion of businesses set up as limited companies in the total number of businesses established.

CHART 10 EUROPEAN INNOVATION SCOREBOARD ⁽¹⁾ IN 2015



Source: EC.
 (1) Scale from 0 (not very innovative) to 1 (highly innovative).

entrepreneurs has a significant correlation with stronger growth of the newly created businesses for up to five years after their establishment. That growth is measured on the basis of the average employment in those firms for the years 2008 to 2013; the percentage of growth-driven entrepreneurs is equal to the proportion of businesses set up as a limited liability company.

For instance, examination of the situation after three years shows a positive correlation between the percentage of growth-driven entrepreneurs in t and average employment in the new firms in $t+3$. That positive correlation may indicate a greater likelihood of survival for those businesses, but also stronger growth if they do survive. The first phenomenon is probably less marked because growth-driven entrepreneurs develop potentially riskier projects; the evident correlation is therefore attributable mainly to the second phenomenon.

Apart from encouragement for the creation of businesses, the subsequent development of young enterprises with high potential is therefore also crucial for promoting economic growth.

Growth-driven entrepreneurship is also often presented in the literature as a source of radical innovations. The extent of that type of entrepreneurship could therefore influence the innovative character of an economy. For example, by introducing new products or production processes, innovative entrepreneurs step up the pressure of competition

on existing firms, forcing them to innovate too, or go out of business. It should be noted that while growth-driven entrepreneurship can reinforce the innovative character of an economy, it also develops more readily in an innovative economic environment. By creating and disseminating new knowledge, innovative economies have the highest rates of business creation.

In regard to the innovation ecosystem, Belgium is in a relatively favourable position compared to other European economies and therefore offers a fertile environment for creating businesses. On the basis of the data from the European Innovation Scoreboard (EC, 2016), Belgium in common with the United Kingdom and France is classed as a “Strong Innovator” on the grounds of innovation performance which is better than the EU average, but not as good as that of the top performers in that respect, namely the Nordic countries, Germany and the Netherlands.

3. Entrepreneurship determinants

3.1 Method used

As already mentioned, numerous factors influence entrepreneurship. It is therefore not easy to determine exactly why some countries perform better than others. The various institutions that produce publications on the subject,

such as the Global Entrepreneurship Monitor (GEM), the International Institute for Management Development (IMD), the World Bank, the World Economic Forum (WEF), the OECD and the EC, use their own sets of determinants which also encompass a multiplicity of indicators, some borrowed from other institutions. The choice of determinants from one institution or another is therefore more a question of presentation rather than implying major differences of content.

In this article, we opted to use the classification applied by the OECD and the EC. Those institutions identify six types of determinants. One of them, namely the type concerning the creation and dissemination of knowledge, was disregarded in this section as its causal connection with entrepreneurship may work both ways. That is why innovation and Belgium's performance in that respect were discussed in the previous section. Conversely, in the case of the other five groups of determinants, it is intuitively more evident that they influence entrepreneurship but are not influenced by it.

The five types used relate to the regulatory framework, market conditions, access to finance, entrepreneurial capabilities and the entrepreneurship culture. For each group, the OECD put together a set of relevant indicators reflecting their various facets. For instance, the "regulatory framework" group comprises indicators concerning administrative burdens, taxes and regulations governing the product and labour markets. The "market conditions" group includes, *inter alia*, indicators measuring access to foreign markets and the degree of government interference in the economy. "Access to finance" is ascertained by means of a set of indicators concerning access to debt financing and the stock market, for example. In the case of "entrepreneurial capabilities", the indicators concern the population's level of education and the quality of existing management training. Finally, "entrepreneurship culture" comprises the results of surveys on how society views entrepreneurs, the fear of failure, etc. The full list of these indicators is given in OECD (2015).

For each EU15 country, the data on the various indicators selected by the OECD were first collected in a database. However, some of the series were unavailable or incomplete, and the number of indicators for the "entrepreneurial capabilities" and "entrepreneurship culture" categories was very small. The OECD list was therefore supplemented with fuller and complementary series. Altogether, the database thus comprised around 50 indicators (see annex). Of course, it is impossible to examine them all in a single article. Moreover, some indicators are clearly more relevant than others as determinants of entrepreneurship. We therefore used a method summarising

for each group of determinants the common information contained in different indicators (see below).

To allow for the use of this technique, the series underwent some adjustments to resolve a number of problems. The annual data relating to a number of indicators – and more particularly those obtained from surveys – proved to be rather volatile. Moreover, the series were expressed in different units, e.g. in percentages of a different variable or on a scale of 0 to 7. Finally, the interpretation of the indicators was not always unequivocal, with conditions more favourable to entrepreneurship having a higher score in some series and a lower score in others⁽¹⁾. For all the indicators, we therefore took the average over the period 2009-2015, and that also resolved the problem of the absence of data for some years. All the series were also normalised around the EU15 average⁽²⁾ and if necessary the data were inverted so that a higher value means a climate more favourable to business creation for all the indicators.

A correlation analysis on the series thus obtained was then conducted per group in order to check whether there was a positive link between the various indicators which were deemed to provide more or less comparable information. Despite the inversion, it emerged that, in each group, some series had a negative correlation with the other indicators, implying that they contained apparently contradictory information. That is unsurprising since the indicators were chosen solely on the basis of their supposed ability to reflect a particular aspect of the group of determinants, whereas in practice – e.g. for the survey results – it is not always clear how the results should be interpreted. The series with a negative correlation were therefore disregarded.

That left a total of 30 series. As regards the regulatory framework, they included, amongst other things, the costs and procedures entailed in setting up a business (–)⁽³⁾, redundancy protection (–) and the protection of property rights. Market conditions were assessed, for example, by means of indicators reflecting the barriers to trade and investment (–) and the governmental share in the economy (–). In the case of access to finance, the country's credit rating and the availability of venture capital were among the indicators used. Entrepreneurial capabilities were assessed on the basis of indicators such as the proportion of people with higher education qualifications and the rate of participation in lifelong learning, or the

(1) This concerns, for example, the costs and procedures involved in setting up a business or the fear of failure, which are used as indicators in the regulatory framework and the entrepreneurship culture respectively.

(2) This implies that, for each indicator on its own, the gross data were standardised. Thus, the scale of all the indicators is comparable, and the EU15 average is systematically equal to zero, facilitating the subsequent interpretation of the results.

(3) A (–) sign after an indicator means that the data in question were inverted.

TABLE 1 ENTREPRENEURSHIP DETERMINANTS USED FOR THE ANALYSIS

Groups	Number of indicators used
Regulatory framework	12
Market conditions	4
Access to finance	6
Entrepreneurial capabilities	4
Entrepreneurship culture	4

Source: NBB.

quality of management schools. Finally, the entrepreneurship culture indicators included, for instance, the status of entrepreneurship and the fear of bankruptcy (-).

A synthetic indicator was then constructed for each group, by applying the ‘principal components’ method which permits amalgamation of the common information contained in a number of series. Since the various indicators were arranged in groups, the first principal component can be considered an aggregate indicator for the group in question⁽¹⁾. This method also has the advantage that a weighting is implicitly assigned to the various basic series in order to calculate the principal component: thus, the series which contain the most information (in the statistical sense) have a higher weighting in the calculation of the synthetic indicator⁽²⁾. By applying the weightings thus obtained to the values of the countries’ basic indicators, we get, for each country and each of the five groups, a single figure which provides a synthetic picture of the country’s position in that group of entrepreneurship determinants. That permits comparisons both between countries and in relation to the EU15 average which, by construction, is always equal to zero.

3.2 Results obtained

Overall, the results show that various sub-groups of countries can be identified within the EU15. The southern Member States (Greece, Italy, Portugal and Spain) are invariably at

the bottom of the ranking. Conversely, the Nordic countries (Denmark, Finland and Sweden) almost always score best. Ireland, the Netherlands and the United Kingdom are also among the best performers in a number of determinant groups. The other countries are in an intermediate position. This general ranking of the countries broadly corresponds to their performance in regard to entrepreneurship.

Nevertheless, the five groups of determinants produce varying results, indicating that they do actually comprise a number of different factors that influence entrepreneurship.

In four of the five determinant groups, Belgium scores above the EU15 average; but that average is dragged down in each case by the southern Member States in particular. It is in the “market conditions” group that Belgium holds the best relative position: it is ranked fourth out of 15, behind the Netherlands, the United Kingdom and Ireland. Given that Belgium is a small open economy, the fairly good score for this determinant is not surprising. In regard to the regulatory framework, access to finance and entrepreneurial capabilities, Belgium ranks sixth or seventh, well behind the best performing countries.

The main obstacle to entrepreneurship in Belgium appears to be the weak entrepreneurship culture. While the differences between most of the EU15 countries are minor in this determinant group, Belgium ranks last of them all.

Closer examination of each of the four indicators used to measure the entrepreneurship culture reveals that, in every case, Belgium is at the bottom of the ranking of the 15 Member States. That is especially true of the series measuring the willingness to start a business if there is a risk of failure (13th) and the indicator for the status of successful entrepreneurs (15th).

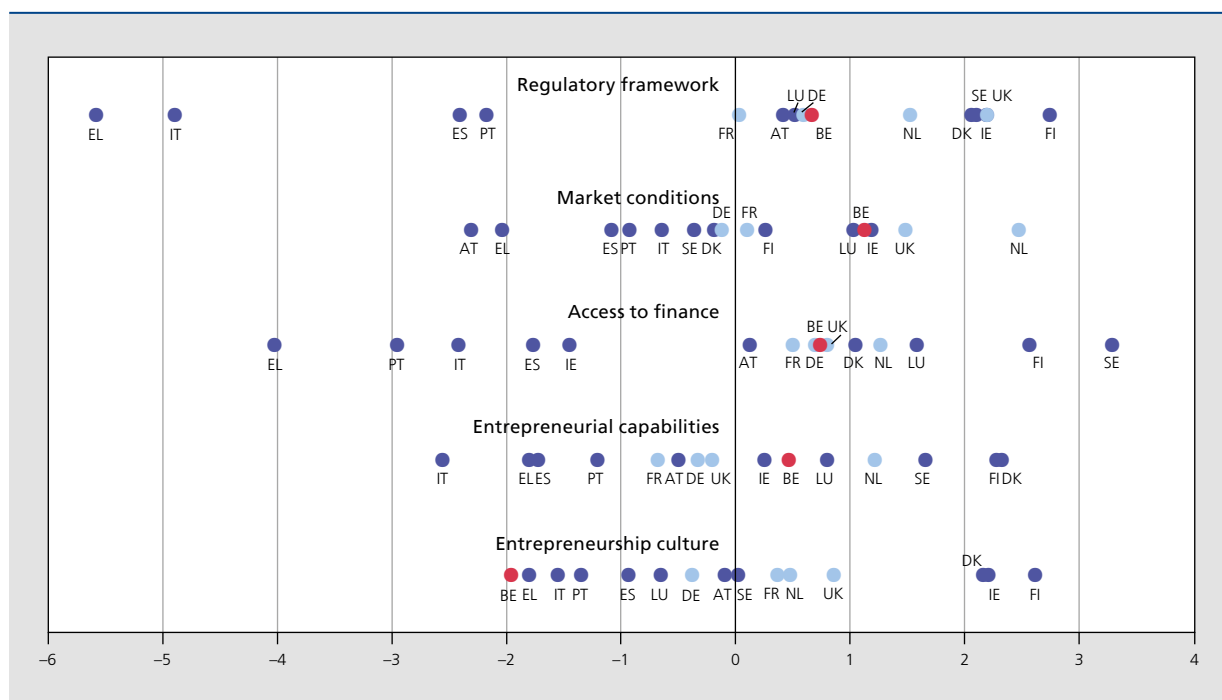
The relatively favorable evaluation of market conditions is mainly linked to the limited barriers to trade and investment. For the other three determinant groups where the synthetic indicators place Belgium in an intermediate position, the basic indicators taken individually provide a fairly mixed picture. As regards access to finance, Belgium is systematically in the middle of the ranking. In terms of the regulatory framework and entrepreneurial capabilities, Belgium is positioned just above the EU15 average, because some factors are considered highly favourable while others score badly. In the first group, the procedure for starting up a business and bankruptcy proceedings are assessed as very positive, but onerous administrative constraints were highlighted in relation to reporting and authorisation, etc. As regards entrepreneurial capabilities, the high quality of Belgian

(1) The principal components analysis aims to summarise the information in a set of mutually correlated variables on the basis of a smaller number of principal components obtained by orthogonal transformations of the original variables. Each of the principal components captures part of the heterogeneity in all the indicators. The method is defined so that the first principal component is the one that captures the largest proportion of the total variance in the original variables. Subject to certain conditions, it can be regarded as the synthetic indicator which best summarises the information contained in the set of indicators.

(2) This is an important advantage over other methods. Another possibility, for example, would have been to consider a simple average of the series. However, in that case, all the series get the same weighting and aspects covered by more than one series implicitly get a higher weighting than other dimensions.

CHART 11 POSITION OF BELGIUM AND THE EU15 COUNTRIES IN THE FIVE DETERMINANT GROUPS

(countries ranked from left to right according to whether the determinants are less or more favourable to the development of entrepreneurship; EU15 average = 0; averages 2009-2015)



Sources: EC, ECB, GEM, IMD, IMF, OECD, WEF, World Bank, NBB calculations.

management schools was mentioned, and the education system is recognised as meeting the needs of a competitive economy; conversely, the rate of participation in lifelong learning is still rather low.

4. Recent measures

The various levels of government in Belgium have taken a number of measures to encourage the establishment of businesses. On the basis of information obtained from sources such as the National Reform Programme 2016, we can list some of the recent initiatives designed to promote entrepreneurship.

Administrative simplification and improvement in self-employed status

There have been various reforms aimed at simplifying the regulatory framework. For example, at federal level, the SME Plan launched in February 2015 aims not only to improve the social security status of self-employed workers and encourage business creation but also to offer SMEs the optimum regulatory framework. As regards the social security status of self-employed workers, the

plan includes an assessment of the reform of social contributions for the self-employed and gradually bringing the minimum pension for the self-employed into line with that for employees. The harmonisation of these two forms of social security status could encourage individuals to consider setting up a business as an alternative to paid employment.

The Regions have also taken various initiatives

In 2015, the business support programmes in the Brussels Region were streamlined to reinforce the synergies between the various bodies and offer a single point of access to support services and assistance for business creation and innovation. In Brussels, there were also initiatives concerning support for job-seekers to help them set up their own business.

In Flanders, the *Agentschap Innoveren & Ondernemen*⁽¹⁾ was set up in 2009. Here, too, the aim was to group together all the business support services and instruments. There were also administrative simplification measures concerning such matters as obtaining environmental permits.

(1) <http://www.vlaio.be/>

Better access to finance for new businesses

In 2015, the federal government introduced a measure to facilitate access to finance for SMEs and innovative firms. The tax shelter for that type of business is a personal income tax credit for individuals wishing to invest in a new firm. Subject to certain conditions, this tax credit may amount to 45% of the sum invested. This new opportunity forms part of a radically altered system of funding for young, innovative companies. This initiative could provide a rapid response to the new funding needs of such businesses. The tax shelter forms part of the Start-up Plan established by the federal government, which also includes other measures (new tax rules for crowdfunding, reduction in labour costs for firms hiring staff, etc.) aimed at young entrepreneurs.

In the Walloon Region, a draft Decree was approved in 2015, providing tax incentives aimed at mobilising household savings in favour of young SMEs. In Flanders, the *Participatiemaatschappij Vlaanderen* (PMV) offers a single formula designed to facilitate firms' access to finance.

Fostering the entrepreneurship culture

Measures have also been taken – including in education – with the aim of encouraging the entrepreneurship culture in Belgium.

In Wallonia, entrepreneurship is one of the four aspects of the SME Plan for the period 2015-2020. A *Générations entrepreneurs 2015-2020* programme was adopted in that connection, scheduling a range of measures aimed at promoting entrepreneurship in schools. Examples include the promotion of entrepreneurship schools, entrepreneurship training for teachers, and the introduction of schemes providing guidance and monitoring for student-entrepreneurs (sponsorship and incubator systems).

Similar initiatives also exist in Flanders. In 2015, building on earlier initiatives, the Flemish Region launched an educational action plan aimed at encouraging entrepreneurship and entrepreneurial spirit. The objective is to activate entrepreneurial potential among students and job-seekers.

Conclusions and closing remarks

There are myriad ways of defining and assessing entrepreneurship. Measures include not only business creation but also the proportion of self-employed workers in the

population of working age. Various sources can be used to quantify these two concepts. In order to allow for an economic interpretation and to permit international comparison, this article is based on data from Eurostat and the LFS.

In 2013, new firms accounted for 3.6% of the total number of businesses in Belgium; this was the lowest gross creation rate in the EU15, where the average was more than twice as high at 8.9%. Gross creations were below par in all the main branches of activity. These findings are valid since 2008, the first year for which the relevant data are available. The relative number of business closures also appears to be very low compared to levels in Europe. That implies a lack of dynamism in the population of Belgian firms. The “creative destruction” process – i.e. the continuous creation of new businesses and the closure of the least productive firms, optimising the allocation of the existing production factors and boosting potential growth – is therefore poorly developed in Belgium.

In 2014, 8.6% of the population aged between 15 and 74 years pursued a self-employed activity, putting Belgium in a middle position among the EU15 Member States – where the average came to 9.1% – and among the neighbouring countries. The Belgian figures are driven up slightly by a large proportion of self-employed workers who are nationals of one of the new EU Member States. In comparison with other European countries, Belgium has fewer self-employed workers in the 45+ age group. While a marked rise has been recorded elsewhere in Europe since 2000, Belgium has seen hardly any increase.

The meagre rise in the number of self-employed workers in Belgium is due partly to divergences between the Regions. Both the data on business creation and those on the percentage of self-employed workers indicate that Flanders and Brussels are the principal drivers of entrepreneurship in Belgium, while Wallonia is lagging behind in relative terms.

Entrepreneurship may take various forms, with a varying impact on economic growth. Entrepreneurs acting out of necessity or opportunity generate less economic activity than growth-driven entrepreneurs. Innovation is one of the routes whereby growth-driven entrepreneurship can influence economic activity. That is therefore the form of enterprise which must be stimulated the most. In the period 2009-2015, roughly 28% of young Belgian firms belonged to this last category, a figure slightly below the EU15 average (33%).

Entrepreneurship has many dimensions, and is therefore influenced by numerous factors. After the example of the

OECD and the EC, the article identifies five main groups of determinants. Various indicators are combined for each group to describe their different aspects. The 'principal component' analysis makes it possible to calculate for each of the five groups of determinants a synthetic indicator which ranks all the EU15 Member States.

The analysis shows that Belgium does relatively well among the EU15 as regards market conditions, and has an average score for the regulatory framework, access to finance and entrepreneurial capabilities. Conversely, as regards the entrepreneurship culture, Belgium ranked lowest among the EU15 between 2009 and 2015.

There is scope for improvement in all the groups of determinants. In recent years, the various governments have introduced a number of measures concerning several aspects, such as a tax shelter for start-ups and a reduction in some of the administrative burdens. It is good that an effort is being made to improve the determinants of entrepreneurship. However, two comments are called for.

First, the measures concerning such a broad range of determinants need to be mutually complementary, and the actions taken at the various levels of government must be properly coordinated.

It is also necessary to establish the right priorities. Since the very weak entrepreneurship culture in Belgium appears to be the major impediment to the creation of businesses, it is vital to promote a positive image of 'becoming an entrepreneur', reducing the fear of failure and the associated stigma, and encouraging creativity and risk-taking so that starting a business is seen as a very attractive and worthwhile choice of occupation. However, that is undoubtedly the determinant over which the government has least control; moreover, changing the culture is a long-term process. Stimulating entrepreneurship therefore requires a determined approach via various channels, including the media and the schools, where some initiatives have already been taken. Such a change of culture can do much to safeguard and enhance the future prosperity of Belgium.

Annex

LIST OF INDICATORS OF ENTREPRENEURSHIP DETERMINANTS (BASED ON OECD, 2015)

Regulatory framework		
Burden of government regulation	Survey responses to the question : for businesses, complying with administrative requirements (permits, regulations, reporting) issued by the government in your country is (1 = burdensome, 7 = not burdensome).	World Economic Forum, <i>Global Competitiveness Report</i>
Costs required for starting a business	The official cost of each procedure in percentage of gross national income (GNI) per capita based on formal legislation and standard assumptions about business and procedure.	World Bank, <i>Doing Business</i>
Number of procedures for starting a business	All generic procedures that are officially required to register a firm.	World Bank, <i>Doing Business</i>
Procedures time and costs to build a warehouse	Corresponds to an average of three measurements: 1) Average time spent during each procedure, 2) Official cost of each procedure, and 3) Number of procedures to build a warehouse.	World Bank, <i>Doing Business</i>
Time for paying taxes	Time it takes to prepare, file and pay the corporate income tax, VAT and social contributions. Time is measured in hours per year.	World Bank, <i>Doing Business</i>
Cost – Average cost of bankruptcy proceedings	The cost of the proceedings is recorded as a percentage of the estate's value.	World Bank, <i>Doing Business</i>
Time – Average duration of bankruptcy proceedings	Time is recorded in calendar years. It includes appeals and delays.	World Bank, <i>Doing Business</i>
Recovery rate	The recovery rate estimates the percentage that claimants (creditors, tax authorities and employees) recover from an insolvent firm.	World Bank, <i>Doing Business</i>
Enforcing contracts – Time	Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between.	World Bank, <i>Doing Business</i>
Difficulty of hiring	Measures whether laws or other regulations make it difficult for firms to use temporary labour (fixed-term contract and agency workers) (0 = no restrictions at all, 6 = severe restrictions).	OECD, <i>Employment protection indicators</i>
Intellectual property protection	Survey responses to the question : in your country, how strong is the protection of intellectual property, including anti-counterfeiting measures (1 = extremely weak, 7 = extremely strong)?	World Economic Forum, <i>Global Competitiveness Report</i>
Property rights	Survey responses to the question : property rights, including over financial assets, (1 = are poorly defined and not protected by law, 7 = are clearly defined and well protected by law).	World Economic Forum, <i>Global Competitiveness Report</i>

LIST OF INDICATORS OF ENTREPRENEURSHIP DETERMINANTS (continued 1)

Market conditions

Barriers to trade and investment	This indicator measures explicit barriers and other barriers to trade and investment. It is based on qualitative information on laws and regulations collected periodically and turned into quantitative indicators.	OECD, <i>Product Market Regulation Indicators</i>
Services Trade Restrictiveness Index (STRI)	This indicator is calculated on the basis of a standardised database on policies relevant to trade and investment in force in each country.	OECD, <i>Services Trade Restrictiveness Index Regulatory Database</i>
Government enterprises and investment	The data reflect the number, composition and share of output supplied by state-run enterprises and government investment as a share of total investment.	IMF, World Bank, UN National Accounts and World Economic Forum
Buyer sophistication	Survey responses to: purchasing decisions are (1 = based solely on price, 7 = based on a sophisticated analysis of performance)?	World Economic Forum, <i>Global Competitiveness Report</i>

Access to finance

Country credit rating	The indicator is based on an assessment by the <i>Institutional Investor Magazine Ranking</i> .	IMD, <i>World Competitiveness Yearbook</i>
Ease of access to loans	Survey responses to: how easy is it to obtain a bank loan in your country with only a good business plan and no collateral (1 = extremely difficult, 7 = extremely easy)?	World Economic Forum, <i>Global Competitiveness Report</i>
Lending margin	The lending rate minus the deposit rate (based on an average of annual rates for each country).	ECB
Venture capital availability	Survey responses to: how easy is it for entrepreneurs with innovative but risky projects to find venture capital in your country (1 = extremely difficult, 7 = extremely easy)?	World Economic Forum, <i>Global Competitiveness Report</i>
Venture capital	Private equity investment.	OECD, <i>Entrepreneurship Finance Database</i>
Capitalisation of secondary stock	An assessment of the efficiency of stock markets providing finance to companies (1 = worst, 10 = best).	IMD, <i>World Competitiveness Yearbook</i>

Entrepreneurial capabilities

Population with tertiary education	Percentage of the population aged between 30 and 34 years with university degrees or higher education qualifications (ISCED 1997 level 5-6).	Eurostat
Quality of management schools	Survey responses to: the quality of national business schools is (1 = extremely poor, 7 = excellent, among the best in the world)?	World Economic Forum, <i>Global Competitiveness Report</i>
Participation in education and training	Percentage of the population aged 25 to 64 that took part in education or training in the past four weeks.	Eurostat
Education system	The education system meets the needs of a competitive economy (IMD WCY executive survey based on an index from 0 to 10).	IMD, <i>World Competitiveness Yearbook</i>

LIST OF INDICATORS OF ENTREPRENEURSHIP DETERMINANTS (continued 2)

Entrepreneurship culture

High status successful entrepreneurship	Percentage of persons in the 18-64 age group who agree with the statement that in their country successful entrepreneurs have high status.	Global Entrepreneurship Monitor (GEM)
Opinion about entrepreneurs	Survey responses to: overall opinion about entrepreneurs (self-employed, business owners), ranked against managers in large companies and professionals.	EC, Flash Eurobarometer
Fear of failure	Percentage of 18-64 age group who see good opportunities but state that fear of failure would prevent them from setting up a business.	Global Entrepreneurship Monitor (GEM)
Risk for business failure	Survey responses to: willingness to start a business if there is a risk that it might fail.	EC, Flash Eurobarometer

Bibliography

Acs Z. J. (2006), "How Is Entrepreneurship Good for Economic Growth?", *Innovations: Technology, Governance, Globalization*, 1(1), 97-107.

Belgian National Reform Programme (2016).

EC (2007), *Eurostat-OECD Manual on Business Demography Statistics*.

EC (2012), *Entrepreneurship determinants: culture and capabilities*.

EC (2016), *European Innovation Scoreboard 2016*.

GEM (2010), *A Global Perspective on Entrepreneurship Education and Training*.

GEM (2016), *2015/2016 Global Report*.

Hellmann T. (2007), "When Do Employees Become Entrepreneurs?", *Management Science*, 53(6), 919-933.

Kauffman Foundation (2015), *Measuring an Entrepreneurial Ecosystem*.

Kritikos A. (2014), *Entrepreneurs and their impact on jobs and economic growth*, IZA World of Labor, 8.

Naudé W. (2013), *Entrepreneurship and Economic Development: Theory, Evidence and Policy*, Forschungsinstitut zur Zukunft der Arbeit – Institute for the Study of Labor, Discussion Paper 7507.

NBB (2016), *Annual Report 2015*.

OECD (2015), *Entrepreneurship at a Glance 2015*, OECD Publishing, Paris.

OECD/European Commission (2014), *The Missing Entrepreneurs: Policies for Inclusive Entrepreneurship in Europe*, OECD Publishing, Paris.

OECD (2016), *Inclusive Business Creation: Good Practice Compendium*, OECD Publishing, Paris.

UCM (2016), *Atlas du créateur*.

Verduyn F. (2013), "Business demography", NBB, *Economic Review*, June, 43-60.

World Bank (2016), *Doing Business 2016: Measuring Regulatory Quality and Efficiency: Economy Profile 2016 – Belgium*.

World Economic Forum (2013), *Entrepreneurial Ecosystems Around the Globe and Company Growth Dynamics*.

World Economic Forum (2014), *Entrepreneurial Ecosystem Around the Globe and Early-Stage Company Growth Dynamics*.

World Economic Forum (2015), *Leveraging Entrepreneurial Ambition and Innovation: a Global Perspective on Entrepreneurship Competitiveness and Development*.