European Commission

European SMEs under Pressure

ANNUAL REPORT ON EU SMALL AND MEDIUM-SIZED ENTERPRISES 2009

Directorate–General for Enterprise and Industry

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Preface by DG Enterprise & Industry – The SME Performance Review (SPR)

The purpose of the SME Performance Review (SPR) is to provide information on the situation of SMEs and SME policy in the EU, as a contribution to evidence-based and effective (SME) policy making. It was launched in 2008, the same year as the Small Business Act for Europe (SBA) (1). The SPR follows the logic of the SBA's 10 principles – Entrepreneurship, Second Chance, Think Small First, Responsive Administration, Finance, Public Procurement and State Aid, Single Market, Skills and Innovation, Environment and Internationalisation – which were developed to guide the conception and implementation of policies. As a consequence, the SPR may therefore also facilitate the policy dialogue between Member States and the European Commission as regards the SBA implementation.

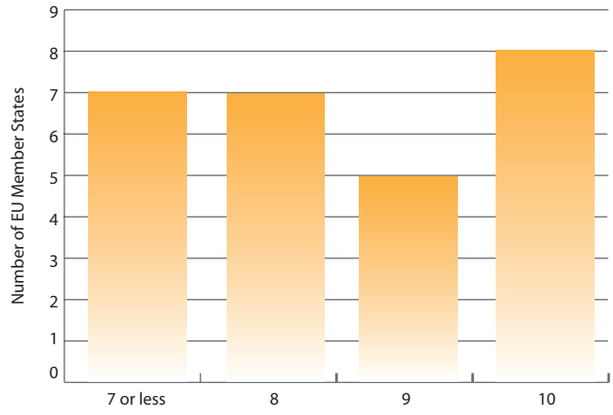
By way of concrete outputs the SPR consists of the annual SME report and the SBA fact sheets, as well as of a series of studies on specific policy issues that are of particular importance to SME policy-making.

The **2009 SME report**, which is the subject of the present publication, strives to provide an aggregated EU-level analysis. Its main conclusions can be found in the executive summary on page 1. The report was developed by EIM Business & Policy Research at the Commission's request and the views expressed in this document are solely those of EIM and do not necessarily reflect those of the Commission.

The **2009 SBA fact sheets**, which are released in parallel to the report, focus on developments on the individual country level. They are snapshot descriptions of countries´ performances in the different SBA areas as per the available statistical information and enriched by an overview of recent policy measures taken in those areas (in the period 2007-2009). The SBA fact sheets are available for all 27 EU-Member States plus an additional 10 non-Member States. They have been produced by the European Commission in cooperation with EIM Business & Policy Research, which has also ensured the compilation of the background statistical data as well as information on national SME policy measures. The key findings can be summarized as follows:

As regards policy developments (2), more than 500 policy measures across all ten SBA principles were implemented in 2007-2009. Almost a third of the Member States were active across the entire range of the 10 SBA principles, while the majority opted for a more selective approach:

SBA PRINCIPLES COVERAGE BY NATIONAL POLICY MEASURES



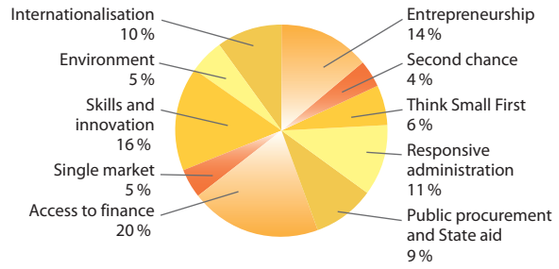
Number of SBA principles in which Member States took policy actions

(1) COM(2008) 394 final.

(2) This information was compiled by EIM through a network of national experts. Hence it might not be exhaustive and the described measures do not necessarily include all the measures that were adopted by countries for the immediate purpose to stimulate the economy (EERP, etc), although there is a certain overlap. Also, it should be noted that the analysis of the cited measures was, at the time this publication went to print, not yet finalised. Hence, potential discrepancies between the figures cited in this report and the final fact sheets may occur due to last minute changes.

An analysis of the number of measures implemented – a rather crude, but still insightful indicator – reveals that on the EU level, one fifth of the activities were launched in the area of 'Access to Finance', not surprisingly making it the most widely implemented SBA principle in the context of the financial crisis. The lion's share of these measures was related to the provision of specific financial instruments (loan guarantee schemes, etc).

Distribution of policy measures by SBA principle: EU Member States ([3])



Graph 1: Distribution of policy measures by SBA principle in the EU-27.

Overall, Member States have been very active over the past years in designing new support measures for SMEs and this is not even taking into account measures implemented by regional or local/municipal authorities which often have the most immediate impact on SMEs' business environment. The future will tell whether these actions are indeed also effective support instruments for SMEs, in particular in times of crisis.

More information on the SPR in general, the annual SME report series, the SBA fact sheets and the policy-relevant studies of the SPR can be found at:
http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/index_en.htm

(3) Ditto.

Summary

This report presents up-to-date data and estimates on the structure and development of small and medium-sized enterprises (SMEs) in the European Union. It is based on an analysis of the available statistical data and of other empirical evidence up to and including 2009. In addition, the report presents forecasts for future years.

During much of the past decade SMEs have seen an impressive growth. Since the onset of the financial crisis this trend seems to have been interrupted, even though there are indications that, at least in the early stages of the crisis, EU SMEs have proven to be comparatively resilient.

Hence, the main findings of the report are the following:

1. Between 2002 and 2008, SMEs in the EU-27 grew strongly and turned out to be the job engine for much of the European Economy. The number of SMEs increased by 2.4 million (or 13 %), whereas the number of large enterprise increased by only 2 000 (or 5 %). This growth was also reflected in employment figures. On average, between 2002 and 2008, the number of jobs in SMEs increased by 1.9 % annually, while the number of jobs in large enterprises increased by only 0.8 % annually. In absolute numbers, 9.4 million jobs were created in the SME-sector between 2002 and 2008.

2. The dynamic development of the SME sector in 2002-2008 was a widespread phenome non across the EU, including old and new Member States. In fact, during that period there was a convergence process between both groups of countries as regards the struc–ture of their SME sectors. The remaining differences between old and new Member States appear to be increasingly less significant than those between individual countries of the EU-15 and EU-12 grouping. In 2008, average enterprise size was 6.5 in the former and 6.0 in the latter region. However, the discrepancy in average enterprise size across countries within both groups is large (varying between 3 and 12 occupied persons per enterprise in EU-15, and between 3 and 18 in EU-12). Overall, though, individual Member States across the whole of the EU-27 have clearly converged in terms of average enterprise size.

3. With the onset of the financial and economic crisis in 2008, there is evidence that the above cited positive developments have – at least – temporarily come to a halt. While 2008 already showed a deceleration, preliminary estimations point at a stagnating development as regards, e.g. the number of SMEs in 2009. Also, the estimates for EU-27 SMEs' production in 2009 hint at a decline by 5.5 % as compared to 2008. In 2009, this happened mostly in large and medium-sized enterprises, while for micro and small enterprises this decline is estimated to be less pronounced and, hence, presumed to be associated with relatively fewer jobs. In 2010, even though production growth is expected to gradually pick up again, lagged adjustment of the workforce to the reduced level of actual production is predicted to cause a relatively large decline of employment in micro and small enterprises. Over 2009 and 2010, the EU-27 SMEs are estimated to shed a total of 3.25 million jobs.

4. Partner countries, however, are hit hard and fast by the crisis, too. In the United States, for instance, the number of businesses is estimated to have declined by 0.6 % in 2008 and by 2.2 % in 2009. While for Japan, no comparable data more recent than 2006 exists, the number of businesses dropped already then by 1.8 % and is unlikely to have recovered during the current crisis. On the back of this evidence the EU´s SME sector looked comparatively resilient – at least in the initial phase of the crisis. However, it remains to be seen whether it will be able to match the rebound pace of the partner countries´ SMEs once the crisis gives way to a recovery.

5. This, in turn, will very much depend on how efficiently the specific challenges SMEs are facing are dealt with. Anecdotal evidence points at insufficient market demand as the prime obstacle faced by SMEs followed by difficulties in accessing finance. Recent ECB-survey data showed the former being cited by 28 % of the responding SMEs, while the latter only by 19 %. There is mixed evidence on the seriousness of the access to finance problem

throughout Europe´s SME population. It does not seem to be an equally pressing issue in all countries, sectors or size-classes. This may change, though, with either the crisis dragging on and further draining businesses´ financial reserves or it giving way to an economic rebound with the ensuing investment requirements as businesses strive for expanding their production. Either way, now is a period when well-timed and calibrated policy interventions matter more than ever so as to ensure that SMEs can as quickly as possible resume their role as job engine of the EU´s economies. This refers not just to the two areas mentioned, but to the whole gamut of measures that SME policies typically comprise of. In this respect, the Small Business Act (SBA), as jointly launched by the European Commission and the Member States in 2008, is intended to become an important tool for supporting SMEs businesses in preserving or regaining their competitiveness. It consists of comprehensive list of concrete measures in some 10 principle areas to be implemented by the Commission and Member States ([1]).

6. Over the long run, underlying structural determinants of the earlier growth trend in the number of enterprises in the EU, including the Internet revolution, the growth of the services sector and institutional developments favouring self-employment, are, nonetheless, expected to remain relevant in the coming years. When economic growth seriously picks up again, the number of SMEs is expected to resume its upward development.

7. Finally, together with an analysis of the crisis and its effects on SMEs, the report also presents a number of interesting updates on structural figures characterising the EU 27 SME sector. These findings complement and round out the above-cited results as regards SMEs importance for the EU economy by demonstrating that they are also battling with some intrinsic challenges: For instance, on average SMEs have a lower labour productivity than large enterprises. In 2008, gross value added at factor cost per occupied person was EUR 39 000 for SMEs and EUR 59 000 for large enterprises. Within the SME sector the corresponding figures are EUR 32 000 for micro enterprises, EUR 42 000 for small enterprises and EUR 49 000 for medium-sized enterprises. Similar differentials can be found in all other years for which data are available (2002-2007), and for almost every individual country in the EU. These differences in labour productivity are explained by differences in sectoral orientation between micro, small, medium-sized and large enterprises, in capital intensity, the degree to which firms can reap scale economies as well as difference in the qualification and skill levels of the personnel of smaller and larger enterprises. In addition, SMEs' on average lower average labour productivity also explains their – on average – lower profitability as compared to large enterprises (especially as regards micro enterprises). The fact that on average SMEs pay lower wages (average labour costs per employee are EUR 29 000 for SMEs and EUR 38 000 for LSEs) does apparently not suffice to compensate for this productivity differential. Differences in sectoral orientation between SMEs and LSEs only play a limited role in this respect. However, there are also areas where SMEs do, even though surprisingly so, outperform LSEs: this is the case as regards the propensity to invest which is – for the EU non-financial business economy as a whole – highest for micro firms. For micro enterprises, gross investment in tangible goods amounts to 24 % of value added, compared to 19 % for all firms. While for a large part, this is due to particular service industries (real estate, leasing, etc), the fact remains that the propensity to invest in micro enterprises overall is still higher than could be expected on the basis of their profitability underlining their importance for the EU-economy.

(1) For more information, see http://ec.europa.eu/enterprise/policies/sme/small-business-act/index_en.htm

[1] Introduction

An increasing body of literature indicates that small and medium-sized enterprises (SMEs) are of major importance for macro-economic growth ([1]). Proportional to their size, small firms create more jobs than large firms do ([2]). Small and new enterprises have an advantage in radical innovation ([3]). The many experiments by these enterprises, even if not successful, facilitate implementation by larger firms ([4]). New enterprises create a higher degree of competition, leading to a positive effect on aggregate employment growth five to eight years later ([5]). Finally, in industries where the SME sector is bigger, large firms are often more efficient because they outsource activities to smaller firms ([6]). These positive structural contributions of SMEs to macro-economic performance more than outweigh the fact that on average, large enterprises outperform SMEs with respect to labour productivity and profitability.

Because of the importance of SMEs to economic development in the EU, this report presents the most up-to-date data and estimates on the structure and development of SMEs in the European Union. It is based on an analysis of statistical data and other empirical evidence. A major source of information is Eurostat's Structural Business Statistics (SBS). These data have been adapted and expanded to present a more recent and complete picture of the European SMEs (see separately published Annex on Methodology).

Given the large impact of the current financial and economic crisis on the SME-sector, estimates of relevant current developments and projections of developments in the near future have been prepared as well. One chapter is fully devoted to the recession while, in addition, various aspects of the crisis are discussed throughout other chapters.

Whenever possible the available data have been interpreted in view of the academic literature on entrepreneurship and small business, explaining interesting differences across sectors, size classes, countries and regions, and analysing notable developments.

Scope of the report

SMEs in this report are defined as enterprises in the non-financial business economy (NACE C-I, K) that employ less than 250 persons ([7]). The complement of the SME-sector – enterprises that employ 250 or more persons are large scale enterprises (LSEs). Within the SME-sector, the following size classes are distinguished: micro enterprises, employing less than 10 persons (including self-employed), small enterprises, employing at least 10 but less than 50 persons (including self-employed), and medium-sized enterprises that employ between 50 and 250 persons (including self-employed).

Most data in this report – inevitably – refer to averages, for instance the average SME in the EU, or the average micro firm in new Member States. This does not do justice to the great variety between enterprises. SMEs range from the self-employed bookkeeper without personnel to the fast growing, innovative, and much internationalised ICT firm with 200 employees, and everything in between.

To the extent that the framework of this study allows, the facts and figures have been analysed and explained by size class, sector of activity and region, i.e. the 15 'old' versus the 12 'new' EU Member States. Some comparisons with partner countries have also been made.

(1) Carree and Thurik (2010), European Commission, DG Enterprise & Industry (2009), Parker (2009) and Van Praag and Versloot (2007) for surveys.
(2) See chapter 4 of this report.
(3) Baumol (2002), Lerner (2010).
(4) Nooteboom (2000).
(5) Fritsch (2008).
(6) Audretsch and Thurik (2010).
(7) This definition is used for statistical reasons. In the European definition of SMEs three additional criteria are added: the economic unit to be more or less autonomous, annual turnover to be less than EUR 50 million, and balance sheet total to be less than EUR 43 million (Commission Recommendation 2003/361/EC). A rough estimate shows about 1 % of the enterprises having less than 250 occupied persons, has in fact over EUR 50 million turnover.

Sources

Through previous publications by Eurostat and the Enterprise and Industry Directorate General of the European Commission, many facts and figures about European SMEs are now well-known and have been disseminated across Europe (8). Most policymakers, business associations, advisors and researchers are aware of these, which are essential in order for them to do their jobs. Although some of the structural data have not greatly changed over the years, it remains useful to recapitulate them, if only to confirm that the messages are still true. In addition, developments in recent years have been extremely volatile and warrant extensive commentary. Finally, new information from other trustworthy sources has been provided as well, as a result of which the analysis could be deepened.

For partner countries (excluding Norway), additional data were collected from national sources. Care has been taken that definitions and metadata are comparable to the ones adhered to in the SBS data. As a result, data for partner countries are (roughly) comparable with data for EU countries. Throughout the report comparisons of the SME-sectors in the EU, Japan and the US have been made. Relevance and topicality have been deemed more important than consistency of definitions when making these comparisons. For the US and Japan data were collected from national sources and from the OECD.

As far as EU countries are concerned, SBS data – which are available for 2002-2006 – do not offer a *complete* picture of the non-financial business economy, due to confidentiality reasons and because of the time required to produce these statistics. Using the available data, estimates have been made for the 'missing' data. In addition, a 'nowcasting' procedure has been performed in order to arrive at figures for 2007 and 2008 as well. Finally, in order to carry out a preliminary analysis of the current recession, estimates of recent developments of production, employment and the number of enterprises were made for 2009, and employment and production forecasts were prepared for 2010 and 2011.

(8) Especially the Observatory of European SMEs reports have created much knowledge about SMEs. See http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-observatory/index_en.htm

[2] SMEs and the economic crisis

2.1 The financial and economic crisis

2.1.1 MACRO-ECONOMIC DEVELOPMENT

As is well-known, the present economic malaise started out as a financial crisis, which, in late 2008 culminated in a sudden loss of business confidence and a rapid decline of world trade. In just three months, trade flows collapsed at a speed unprecedented in the post World War II period. Production followed world trade, instantly leading to a steep recession (1). Table 1 summarizes some main statistical annual indicators of the macro-economic development in the EU, the US and Japan since 2007, as published in the European Economic Forecast of Autumn 2009, including projections for 2010 and 2011. Exports have been leading the downturn with a double digit decline. Investment (not shown in the table) also nosedived, while private consumption dwindled more gradually. Most sectors of industry were hit by the recession. This holds particularly for manufacturing, construction, transportation and the automotive industry. Also wholesale trade – a small-scaled sector – was directly hit by the drop in international trade. However, retail sales of non-durable goods as well as personal services experienced a more limited decrease in turnover. Both in the European Union and in the US extensive policy measures were taken to bail out banks, to counteract falling aggregate demand, to support the business sector and to alleviate or at least delay the rise of unemployment. The European Economic Recovery Plan covers a series of initiatives that are especially relevant for SMEs (2).

According to current economic growth indicators (3) the recession has ended in Germany and France since the third quarter of 2009, and in the US and the European Union as a whole since the fourth quarter. In addition, the important Ifo Business Climate index for industry and trade in Germany (4) has improved in every successive month from April 2009 through January 2010, but declined somewhat in February due to a cooling of the business climate in wholesaling and retailing. The available indicators suggest that an outright and deep depression has been averted, and that a deflationary scenario now seems unlikely for both the European Union and the world economy at large. Again, exports are leading the way, but residential building and private consumption are expected to remain sluggish for quite some time and employment is expected to see further decline in 2010.

The last available projections by the OECD (5) predict a somewhat stronger recovery in 2010 and 2011 compared with earlier forecasts, but also pay attention to downward risks. Generally speaking, and based on various sources, it is widely believed that the credit crisis may have negative effects on the economy long after the initial problems with the banks have been solved. Earlier financial crises have often had deep and lasting effects on asset prices, government debt, output and employment (6). There may in fact be several negative structural effects on future economic growth of the European economy. First, assets of enterprises and consumers have strongly decreased in value, but their liabilities have not. This is known as a 'balance sheet recession' (7). For enterprises this may result in a lower propensity to invest. This problem is enhanced by leverage problems causing banks to buy government bonds and to reduce bank lending to businesses. For consumers the balance sheet recession may lead to a sluggish recovery of private consumption expenditures. Also, governments sooner or later are bound to aggravate weak demand because a structural deterioration in their

(1) For an extensive review of the emergence of the crisis see for example CPB (2009).
(2) See section 2.3 for more details.
(3) See for instance OECD (2010), Quarterly National Accounts (http://stats.oecd.org/index.aspx).
(4) http://www.cesifo-group.de/portal/page/portal/ifoHome/a-winfo/d1index/10indexgsk
(5) OECD (2009a), published in November 2009.
(6) Reinhart and Rogoff (2009).
(7) The Economist (2009a).

finances will, in the end, force them to cut government expenditures and/or to raise taxes. This may enhance the risk of a W-shaped, doubledip scenario. Next, a likely reduction in business R&D efforts, as a result of higher capital costs and less favourable prospects for sales and profitability, may lead to a slackening in the pace of technical progress ([8]). Finally, a significantly higher level of unemployment may cause a permanent loss of skills among workers.

TABLE 1 MACRO-ECONOMIC INDICATORS EUROPEAN UNION, US AND JAPAN 2007-2011 (ANNUAL GROWTH RATES IN %)

	2007	2008	2009	2010	2011
Exports (goods and services)					
EU-27	5.5	1.6	-13.8	2.1	4.2
US	8.7	5.4	-10.9	7.7	8.4
Japan	8.4	1.8	-26.6	7.9	3.1
Real GDP					
EU-27	2.9	0.8	-4.1	0.7	1.6
US	2.1	0.4	-2.5	2.2	2.0
Japan	2.3	-0.7	-5.9	1.1	0.4
Employment					
EU-27	1.7	0.9	-2.3	-1.2	0.3
US	1.1	-0.5	-3.5	-0.5	0.3
Japan	0.4	-0.4	-3.0	-1.2	-0.2

Source: European Economic Forecast Autumn 2009, Statistical Annex.

2.2 How does the crisis affect SMEs?

In discussing the possible effects of the crisis for SMEs it is useful to distinguish between the micro level of enterprises and individual entrepreneurs, and the meso level of sectors and size classes ([9]).

2.2.1 IMPACT AT THE MESO LEVEL

Production growth

Table 2 summarizes forecasts of real production growth by size class for the EU-27 in the period 2009-2011 that were prepared in the framework of this report. In all size classes ([10]) the large decline of production in 2009 is probably unprecedented since the 1930s. In the short run the negative impact of the economic crisis on production is even bigger for medium-sized and large businesses than for small and micro enterprises. This reflects among others differences in composition of sales between size classes, in combination with the uneven distribution of the economic downturn across private consumption on the one hand and exports and investments on the other. Micro and small enterprises are most prominent in construction, hotels and restaurants, business services and parts of retail and wholesale trade, and are heavily oriented towards the market for domestic consumption. Medium-sized and particularly large enterprises are prominent in manufacturing and have a relatively large share of exports in total sales. Because exports lead the economic recovery, developments in the medium-term will be more positive for these enterprises.

TABLE 2 FORECASTS OF REAL GROWTH OF GROSS VALUE ADDED AT FACTOR COSTS, BY SIZE CLASS, EU-27, 2009-2011 (ANNUAL GROWTH RATES IN %)

	Micro	Small	Medium-sized	SMEs	Large
2009	-4.6	-5.7	-6.4	-5.5	-6.5
2010	0.9	0.8	1.0	0.9	1.1
2011	1.7	1.9	2.2	1.9	2.4

Source: Forecast EIM, based on European Economic Forecast – Autumn 2009.

(8) CPB (2009).

(9) The aggregate level of sectors and size-classes is known as the meso-economic level between the microeconomic level of individual economic agents and the macroeconomic level of aggregate indicators such as inflation, unemployment and GDP.

(10) No recent figures are available, but in 2003 the share of exports in total sales, non-financial business economy, EU-15, was 12.7 % for SMEs and 28.4 % for large firms (European Commission, 2004).

Labour productivity and employment

Output changes usually do not have an immediate effect on employment. As a consequence average labour productivity in the business sector is procyclical ([1]). This implies that productivity (growth) falls in recessions because firms retain their workers (so-called 'labour hoarding'). Conversely, in an upswing lagged adjustment of employment leads to rising productivity growth. Some major reasons for labour hoarding are adjustment costs, irreversibility of dismissal, limited divisibility of labour, and cooperative team effort. The latter arguments for labour hoarding are specifically valid with respect to micro and small firms. Given the steepness of the recession, lagged adjustment is quite relevant for forecasting employment and productivity growth by size class in the years 2009-2011.

TABLE 3 Forecasts of employment growth, by size class, EU-27, 2009-2011 (annual growth rates in %)

	Micro	Small	Medium-sized	SMEs	Large
2009	-1.0	-2.1	-3.5	-1.9	-3.9
2010	-1.8	-1.8	-1.3	-1.7	-1.0
2011	-0.8	-0.4	0.1	-0.5	0.6

Source: Forecast EIM, based on European Economic Forecast – Autumn 2009.

In 2009, employment is estimated to have dwindled most strongly in large and medium-sized firms, while micro and small enterprises lost relatively fewer jobs in view of the steep decline of production ([11]). Consequently, as can be seen by combining the figures from Table 2 and Table 3, the change in labour productivity in micro and small enterprises in 2009 is more negative than in medium-sized and large businesses. In 2010 and 2011, when real production growth is expected to gradually pick up again, it is expected that the picture for employment growth by size class will reverse. Micro and small enterprises will exhibit postponed job shedding, while large and medium-sized firms will show a slower rate of job shedding in 2010 and some recovery of job growth in 2011.

SME business confidence, profitability and SME finance are negatively affected

According to UEAPME's EU Craft and SME Barometer, the SME Business Climate Index for the European Union has been progressively falling from mid 2007 until the first half of 2009, while business confidence slightly picked up by mid 2009 ([12]).

Obviously business profitability in 2009 was influenced quite negatively by the projected decline of labour productivity, particularly in micro and small enterprises. In addition, access to finance for SMEs was seriously impaired in 2009.

2.2.2 REACTIONS AT THE MICRO LEVEL

Many SMEs follow both retrenchment and entrepreneurial strategies

The majority of enterprises are confronted with declining sales and profits ([13]). In the short run these are the major effects. The crisis also affects the degree of competition in markets and the access to finance. In coping with these challenges, enterprises will choose their own recovery strategy ([14]). One option is to adopt a passive survival orientation and 'to wait and see'. Another option is active retrenchment focussing on cutting costs ([15]), including reducing overhead costs, postponing investments, reducing the level of operations, disinvestments, not filling personnel vacancies and layoffs. A third option is an entrepreneurial recovery strategy, focussing on growth of market share or pursuing new product-market combinations. Measures taken may include price competition, intensified marketing efforts, entering new markets, offering new products, and taking over other businesses. In reality many enterprises choose for a mix of active retrenchment and entrepreneurial strategies ([16]). Finally, the recession inevitably leads to a higher level of business exits, including a higher percentage of bankruptcies.

(11) For 2009, the growth rates in table 3 imply an estimated absolute decline of 2.5 million persons employed in medium-sized and large enterprises, and a decline of just below 1 million persons employed in micro and small enterprises.

(12) UEAPME (2009a).

(13) However, for some enterprises the recession will have little effect or even a positive impact, by removing competitors from the market or by enhancing customer appreciation of their product. See Michael and Robbins (1998).

(14) For a literature review on recovery strategies see Pearce and Robbins (1994).

(15) Michael and Robbins (1998).

(16) A survey carried out in 2009 among nearly 2 000 SMEs in the Netherlands found that 70 % of enterprises focus on cutting costs, 60 % employ offensive strategies, and 51 % do both (EIM, 2009). A survey among SMEs in 19 European countries, held in 2003, also found high percentages for both cost cutting and considering new products/markets (European Commission, 2004).

Negative effect on new business start-ups

The economic crisis is also likely to have a negative effect on the number of business start-ups. This follows from two theoretical views on new enterprise formation, *i.e.* a perspective of occupational choice and a behavioural perspective focussing on how individuals perceive and act on 'entrepreneurial opportunities' ([17]). Viewed from an occupational choice perspective, a recession leads to a less favourable balance of risks and rewards of self-employment. However, a push towards 'self-employment out of necessity' is likely in countries with a flexible labour market and frugal social security. The behavioural perspective focuses on the prevalence of entrepreneurial opportunities and on the psychological aspect of opportunity perception and entrepreneurial behaviour. Foremost, the recession has a negative effect on market demand. However, the crisis also implies new opportunities ([18]), which may act as a countervailing power.

2.3 European policy response

In response to the economic crisis, the European Economic Recovery Plan ([19]) was presented in 2008. This plan proposed a coordinated approach among all Member States and actions at the European level. The recovery plan is anchored in the Stability and Growth Pact and the Lisbon Strategy for Growth and Jobs ([20]). In 2008, the Small Business Act (SBA) for Europe was adopted. On adopting the SBA, an SBA Action Plan ([21]) of measures was agreed upon to better address the needs of SMEs in the economic crisis. With respect to their effects for SMEs, the policy actions by Member States, the European Commission, and Central Banks can be divided into the categories: access to finance, employment, entry/exit and market demand ([22]).

Access to finance

The European Commission simplified state aid rules and introduced new rules on aid intensities for SMEs with the introduction of the new General Block Exemption Regulation. The Commission also adopted a Handbook on State Aid rules for SMEs which includes a framework on temporary state aid measures to support access to finance in the financial and economic crisis. In addition, the Commission made a proposal for a Directive on combating late payment in commercial transactions in 2009. The European Investment Bank also played an important role in the access to finance by reserving EUR 30 billion for loans to SMEs for the period 2008-2011. At the level of Member States, measures were taken, among others to improve SMEs' access to finance through the creation and extension of loan and guarantee schemes for SMEs ([23]), in addition to the introduction of tax credits that not specifically target SMEs.

Employment

The European Commission has proposed to simplify criteria for support from the European Social Fund ([24]) and to step up advance payments from early 2009 so that Member States have earlier access to up to EUR 1.8 billion. The Commission also proposed to revise the rules of the European Globalisation Adjustment Fund in order to be able to intervene more rapidly in key sectors ([25]). At the level of the Member States, actions with a positive effect on SMEs have been taken among others to (1) maintain existing jobs by i.e. subsidising reduction of working time and subsidies for wages and (2) (re-) integrate unemployed or persons at risk into the labour market by e.g. providing specific training programmes ([26]).

Entry/exit

At the European level, the adoption of the European private company statute is accelerated so that from early 2009 it can facilitate cross border business activities of SMEs and allow them to work under a single set of corporate rules across the EU ([27]). At the level of Member States, actions have been taken among others to reduce the average time and cost to start-up a private limited company. Furthermore, some Member States have taken actions enabling completing all legal procedures to wind up a business in case of non-fraudulent bankruptcy within a year (or less) ([28]).

(17) Sternberg and Wennekers (2005) and Shane (2003).

(18) For the impact of the recession on the perception of business opportunities by early-stage entrepreneurs, see Bosma and Levie (2010). Also see EIM (2009).

(19) COM (2008).

(20) In March 2010, Europe 2020, A strategy for smart, sustainable and inclusive growth, was presented. More information can be found via: http://ec.europa.eu/eu2020/index_en.htm

(21) The Council's Action Plan for a Small Business Act for Europe, http://ec.europa.eu/enterprise/policies/sme/files/docs/sba/sba_action_plan_en.pdf

(22) This categorisation links directly to the structure of the present report. 'The EU's response to support the real economy during the economic crisis: an overview of Member States' recovery measure' distinguishes: Labour market (including households purchasing power), Investment, and Business Support (including sectoral support and easing access to finance). See http://ec.europa.eu/economy_finance/publications/publication15666_en.pdf

(23) Report on the implementation of the SBA, http://ec.europa.eu/enterprise/policies/sme/small-business-act/implementation/files/sba_imp_en.pdf

(24) See http://ec.europa.eu/employment_social/esf/news/news/article_7362_en.htm

(25) European Economic Recovery Plan, http://ec.europa.eu/commission_barroso/president/pdf/Comm_20081126.pdf

(26) The EU's response to support the real economy during the economic crisis: an overview of Member States' recovery measure, http://ec.europa.eu/economy_finance/publications/publication15666_en.pdf

(27) European Economic Recovery Plan (op. cit.).

(28) Report on the implementation of the SBA, http://ec.europa.eu/enterprise/policies/sme/small-business-act/implementation/files/sba_imp_en.pdf

Market demand

To stimulate market demand, measures have been taken to support sector-specific demand (i.e. automotive, tourism and construction), to stimulate investments particularly in physical infrastructure, energy efficiency and R&D, and support households purchasing power. The European Commission launched a call for proposals for a transport project where this money would lead to construction ([29]). At the Member States level, sector-specific demand support is provided among others via temporary tax breaks and financial incentives for purchases of sector-specific products, such as subsidies for eco-friendly new cars and easing financing conditions for home owners and first-time buyers ([30]).

2.4 The crisis as an entrepreneurial opportunity

Not only do many SMEs at least partly choose an entrepreneurial strategy to overcome the economic downturn, but also some businesses consider a recession as an outright opportunity to establish an advantage over weaker competitors or embark on new entrepreneurial ventures ([31]). More generally, the economic crisis may cause a trend break in the minds of people, rendering society more open to change. This mental shift will stimulate the development of ideas for new products and production methods, and will inspire entrepreneurs to introduce these ideas in the market. At the same time the recession makes it more difficult for incumbent firms, with vested interests in mature technologies, to block new entry ([32]). It is meaningful anecdotal evidence, that 18 of the 30 companies that presently make up the Dow Jones Industrial Average were launched in recessions or in bear stock markets ([33]). In addition, a recent empirical analysis shows that innovative nascent entrepreneurship leads the business cycle by two years ([34]). Finally, almost all giant businesses originally started out small ([35]).

Business closures also create room for new entrepreneurial initiatives

The recession also leads to an increase in business closures and a growing share of bankruptcies within closures. While business closures create societal costs, particularly in the case of bankruptcies, the opposite side of the coin may be quite positive as exits will concentrate on the least efficient enterprises ([36]). Not only does a shake-out of these enterprises imply an immediate boost of average labour productivity, but it also creates more room in the market for new business start-ups as well as for new business development by incumbent firms. New initiatives may exploit a wide array of entrepreneurial opportunities, ranging from self-created 'new combinations' to perceived opportunities in existing markets ([37]).

(29) European Economic Recovery Plan (op. cit.).

(30) The EU's response to support the real economy during the economic crisis: an overview of Member States' recovery measure (op. cit.).

(31) Srinivasan, Rangaswamy and Lilien (2005).

(32) There is a vast amount of literature on the various positive effects of new entrants on incumbent firms, see for instance Fritsch (2008), Nooteboom (1999) and Verhoeven (2004).

(33) SBA (2009).

(34) Koellinger and Thurik (2009).

(35) Purrington and Bettcher (2001) tracked the entrepreneurial roots of America's largest corporations and found that out of the *Fortune 200* companies listed in 1997, 197 were either directly (101) or indirectly (96) tracked back to one or more entrepreneurial founders.

(36) Audretsch and Mahmood (1994).

(37) These extremes represent the radical 'Schumpeterian view' (Schumpeter, 1934) and the more incremental 'Kirznerian view' (Kirzner, 1973). Both views on entrepreneurial opportunity pursuit are relevant today (Shane, 2003; De Jong and Marsili, 2010). In addition, The Economist (2009: 18), emphasizes that 'rather than displacing existing products and services, many innovations promote and satisfy new demands'.

[3]
Business demography and business dynamics

3.1 Number of enterprises and average firm size

In 2008, there were over 20 million enterprises in the European Union. Only about 43 000 were large scale enterprises (LSEs). Hence, the vast majority (99.8 %) of enterprises in the EU are SMEs.

3.1.1 DISTRIBUTION OF ENTERPRISES BY SIZE CLASS IN 2008

Within the non-financial business economy enterprise population, almost 92 % are micro enterprises, having a staff headcount of less than 10[1, 2]. The typical European firm is a micro firm. There are about 1.4 million small enterprises, representing 7 % of the stock. About 1 % (226 000) of enterprises are medium-sized. On average, an enterprise in the EU provides work for 6.4 persons; within individual size-classes, average enterprise size varies between only 2 in micro enterprises and about 1 000 in large scale enterprises (LSEs).

TABLE 4 NUMBER OF ENTERPRISES AND OCCUPIED PERSONS PER ENTERPRISE, BY SIZE CLASS, IN THE NON-FINANCIAL BUSINESS ECONOMY, EU-27, 2008 ESTIMATES

	Micro	Small	Medium-sized	SMEs	Large	Total
Enterprises						
Number	19 058 000	1 424 000	226 000	20 709 000	43 000	20 752 000
%	91.8	6.9	1.1	99.8	0.2	100.0
Employment						
Number	39 630 000	27 652 000	22 665 000	89 947 000	43 414 000	133 362 000
%	29.7	20.7	17.0	67.4	32.6	100.0
Occupied persons per enterprise						
	2.1	19.4	100.3	4.3	1 006.1	6.4

Source: Eurostat, as elaborated by EIM.

(1) Enterprises qualify as micro, small and medium-sized enterprises (SMEs) if they fulfil the criteria laid down in Recommendation 2003/361/EC which are summarized in the table below. In addition to the staff headcount ceiling, an enterprise qualifies as an SME if it meets either the turnover ceiling or the balance sheet ceiling, but not necessarily both. If an enterprise does not fulfil the criteria for an SME, it is a large-scale enterprise (LSE). For statistical purposes, enterprises are classified using the headcount criterion only.

Category	Headcount	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ EUR 50 million		≤ EUR 43 million
Small	< 50	≤ EUR 10 million		≤ EUR 10 million
Micro	< 10	≤ EUR 2 million		≤ EUR 2 million

The staff headcount is a crucial initial criterion for determining in which category an SME falls. It covers full-time, part-time and seasonal staff and includes the following: employees, persons working for the enterprise being subordinated to it and considered to be employees under national law, owner-managers, partners engaged in a regular activity in the enterprise and benefiting from financial advantages from the enterprise. Apprentices or students engaged in vocational training with apprenticeship or vocational training contracts are not included in the headcount. Nor do you include maternity or parental leave. The staff headcount is expressed in annual work units (AWU). Anyone who worked full-time within your enterprise, or on its behalf, during the entire reference year counts as one unit. You treat part-time staff, seasonal workers and those who did not work the full year as fractions of one unit.

(2) Roughly one half of these micro enterprises have no employees at all, providing employment and income to self-employed and family workers only. According to Eurostat's Labour Force Survey, almost 70 % of the total number of self-employed are 'own account workers'.

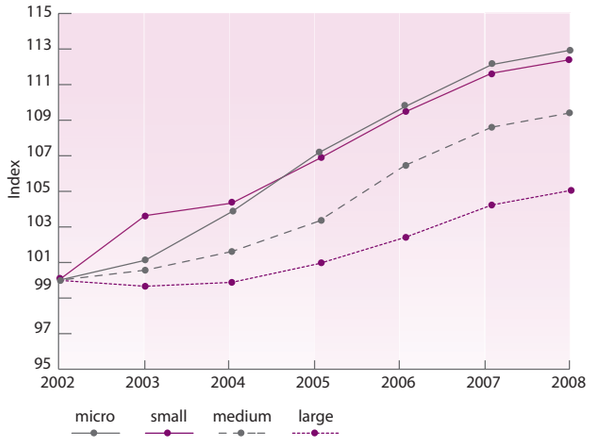
By comparison, the number of occupied persons per enterprise in the US is 5, while it is 11 in Japan ([3]). In the US, the share of micro firms in the total number of enterprises is 94.5 %, while the shares of small, medium-sized and large firms are 3.7 %, 1.5 % and 0.3 % respectively (non-financial business economy; 2006) ([4]). Hence, the US has relatively more micro, medium-sized and large firms, while Europe has comparatively more small firms. The pattern for the US reflects a relatively small entry size ([5]) in combination with strong competition among entrants, and where a minority of highly competitive new firms grow very fast. In Japan there is an inversed pattern: entry size is larger, but the number of start-ups and fast-growing firms is low ([6]).

Number of SMEs grows faster than number of LSEs

Over the period 2002-2008, the number of SMEs in the EU has grown faster than the number of LSEs, with the micro and small enterprises displaying the highest growth rates (see Figure 1). The number of SMEs increased by 2.4 million and the number of large enterprises by 2 000 enterprises. Changes in the number of enterprises are to a large extent due to enterprise birth and death, and their underlying determinants. In addition, mergers and split-ups play a role.

Although size classes for the US and Japan are not quite the same as those used in this report for the EU-27, it is clear from Figure 2 that developments in the US have been similar to the EU, while Figure 3 shows that the number of firms in Japan has decreased over the period 2002-2006 ([7]). In fact, the number of firms in Japan has been decreasing since the 1980s, reflecting a low entry rate and a dominant position of large firms in the Japanese economy.

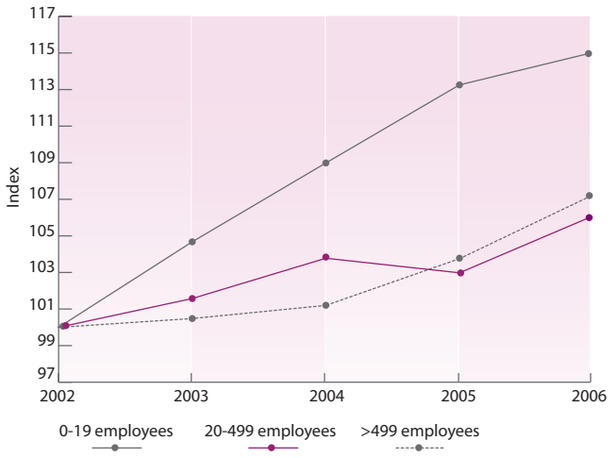
FIGURE 1 Development of number of enterprises, non-financial business economy, by size class, EU-27, 2002-2008 (index 2002 = 100; 2007, 2008 estimates)



Source: Eurostat, as elaborated by EIM.

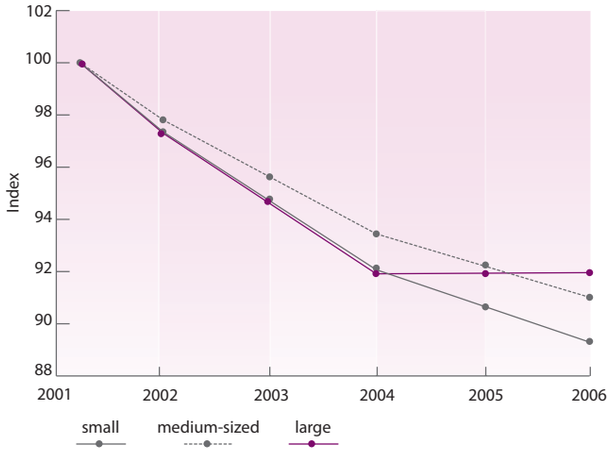
(3) Source: US Bureau of Census, US Small Business Administration, and JSBRI (Japan Small Business Research Institute), as elaborated by EIM.
(4) Source: US Bureau of Census and US Small Business Administration, as elaborated by EIM.
(5) See Bartelsman *et al.* (2003).
(6) Snel *et al.* (2009).
(7) In the Japan White Paper SMEs are defined as firms with up to 300 employees for manufacturing, construction, transport and 'other industries' (small firms: < 20 employees), up to 100 employees for wholesale and services (small firms: < 5), and up to 50 for retailing (small firms: <5).

FIGURE 2 Development of number of enterprises, non-primary economy, by size class, United States, 2002-2006 (index: 2002 = 100)



Source: Eurostat, as elaborated by EIM.

FIGURE 3 Development of number of enterprises, non-primary economy, by size class, Japan, 2001-2006 (index: 2001 = 100)



Source: JSBRI (2009), as elaborated by EIM.

3.1.2 DISTRIBUTION OF ENTERPRISES BY SECTOR OF INDUSTRY

Enterprises in the EU-27 are distributed unevenly over sectors of industry (Table 5). The three sectors of industry with the largest number of enterprises are typical small scaled sectors in terms of average firm size. In some sectors there is a trend of declining enterprise size, as a result of recent privatisations ([8]).

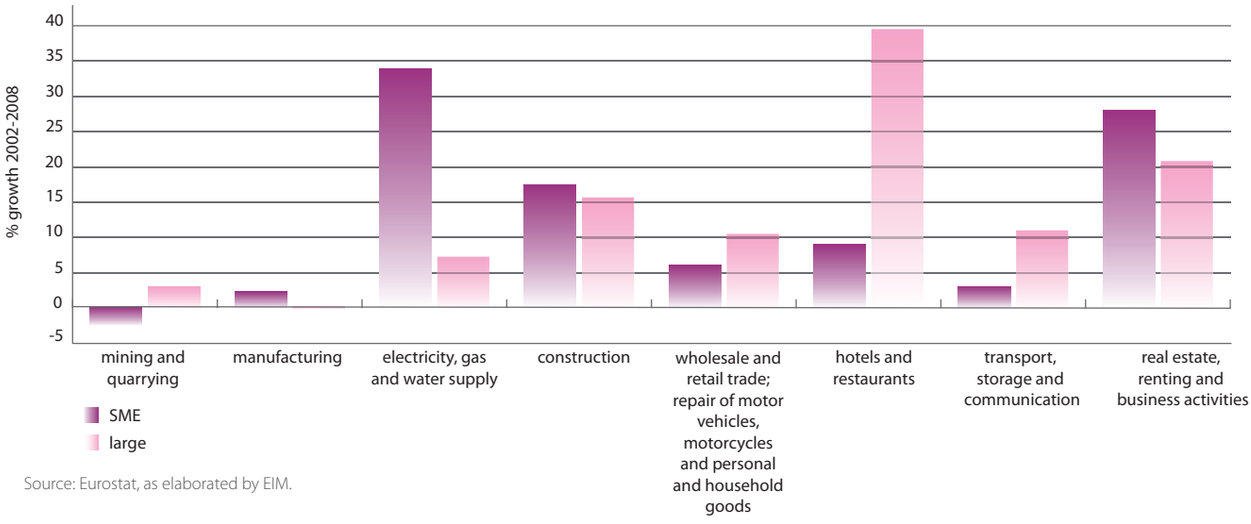
TABLE 5 Number of enterprises and average firm size, by sector of industry, EU-27, 2008 estimates

		Number of enterprises			Occupied persons per enterprise
		SME	Large	Total	
c-i, k	**Total non-financial business economy**	**20 709 000**	**43 000**	**20 752 000**	**6.4**
	By NACE section				
c	Mining and quarrying	21 000	240	21 000	36.0
d	Manufacturing	2 348 000	19 000	2 367 000	14.9
e	Electricity, gas and water supply	31 000	1 000	32 000	51.1
f	Construction	2 993 000	3 000	2 996 000	4.9
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	6 524 000	7 000	6 531 000	5.0
h	Hotels and restaurants	1 724 000	1 000	1 725 000	5.5
i	Transport, storage and communication	1 241 000	4 000	1 245 000	9.8
k	Real estate, renting and business activities	5 827 000	9 000	5 836 000	4.6

Source: Eurostat, as elaborated by EIM.

(8) In the post and communications sector (NACE 64) average enterprise size decreased from 54 in 2002 to 42 in 2008; in electricity, gas and water supply (NACE E) it decreased from 68 to 51.

FIGURE 4 CHANGE IN NUMBER OF SMEs AND LSEs, BY SECTOR OF INDUSTRY, EU-27, 2002-2008 (2007 AND 2008 ESTIMATES)



Source: Eurostat, as elaborated by EIM.

The development of the number of enterprises by size class also differs across sectors of industry (see Figure 4). The highest absolute growth in the number of SMEs occurred in real estate, renting and business activities.

3.1.3 REGIONAL DIFFERENCES IN SME PRESENCE

The old Member States (EU-15) account for 80 % of the total number of enterprises in EU-27 and the new Member States (EU-12) for 20 %. In both regions, SMEs make up the vast majority of enterprises in the non-financial business economy. Differences in the employment share of SMEs and in average enterprise size are quite small (Table 6).

However, across individual countries there is a large diversity in average firm size (section 3.1.5, Figure 7), as well as in the employment share of SMEs. The determinants of this diversity include differences in per capita income , sector structure, outsourcing and off-shoring, and culturally or institutionally based occupational preferences for self-employment.

TABLE 6 NUMBER OF SMEs AND LSEs AND OCCUPIED PERSONS PER ENTERPRISE IN THE NON-FINANCIAL BUSINESS ECONOMY, EU-15 AND EU-12, 2008 ESTIMATES

	EU-15			EU-12		
	SME	Large	Total	SME	Large	Total
Enterprises						
Number	16 508 000	33 000	16 541 000	4 201 000	10 000	4 211 000
%	99.8	0.2	100.0	99.8	0.2	100.0
Employment						
Number	72 746 000	35 557 000	108 303 000	17 202 000	7 857 000	25 059 000
%	67.2	32.8	100.0	68.6	31.4	100.0
Occupied persons per enterprise*						
	4.4	1 062	6.5	4.1	812	6.0

Source: Eurostat, as elaborated by EIM.

*Employment divided by enterprises.

(9) Lucas (1978) and Ghoshal *et al.* (1999).

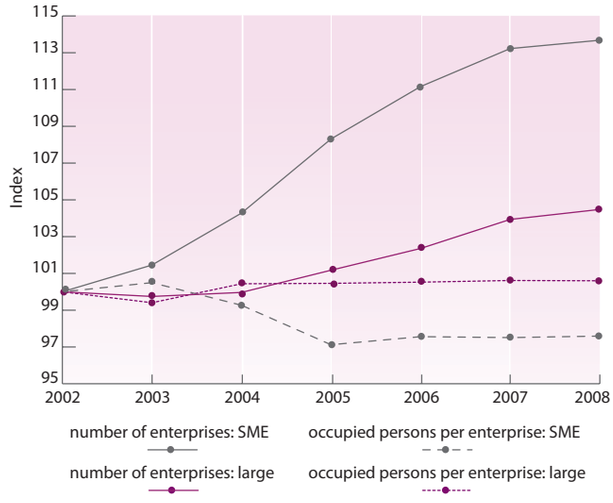
(10) Wennekers *et al.* (2009). Also see Carree *et al.* (2002) for a brief survey on the literature about SME presence.

3.1.4 RECENT DEVELOPMENTS IN THE EU-15 AND EU-12

Figure 5 and Figure 6, present evolution in the number of SMEs and LSEs, and in the average firm size in these size classes, for the old (EU-15) and new (EU-12) Member State regions. First, for the EU-15 countries a strong increase of the number of SMEs over the period 2002-2008 (more than 13%) can be noted. Furthermore, the average size of SMEs has slightly decreased. On the other hand, the number of large firms has only slightly increased while the average firm size of LSEs has remained stable. Together these developments imply a decrease of total average firm size from 6.8 occupied persons per enterprise in 2002 to 6.5 in 2008. Hence in the EU-15 the importance of small firms slightly increased in 2002-2008 ([11]).

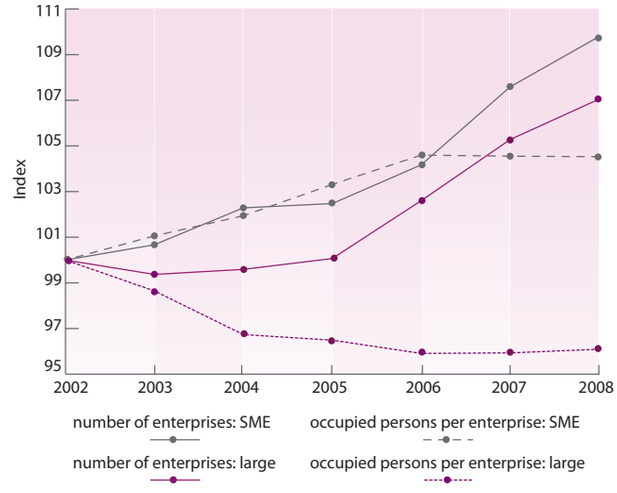
Secondly, Figure 6 shows an increase in the number of large firms in EU-12 of 7% and an increase of average firm size in SMEs of 4.5% over the period 2002-2008. Both developments indicate a larger scale of production, which may be partly due to large firms in EU-15 offshoring production to EU-12. On the other hand, the number of SMEs increases as well and average enterprise size of large firms decreases, signalling a higher importance of small scale. This latter trend is probably related to the rapid transition that most of these economies went through in the past two decades, creating many new market opportunities for emerging entrepreneurs.

FIGURE 5 Development of number of enterprises and average firm size, non-financial business economy, by size class, EU-15, 2002-2008 (index: 2002 = 100; 2007, 2008 estimates)



Source: Eurostat, as elaborated by EIM.

FIGURE 6 Development of number of enterprises and average firm size, non-financial business economy, by size class, EU-12, 2002-2008 (index: 2002 = 100; 2007, 2008 estimates)



Source: Eurostat, as elaborated by EIM.

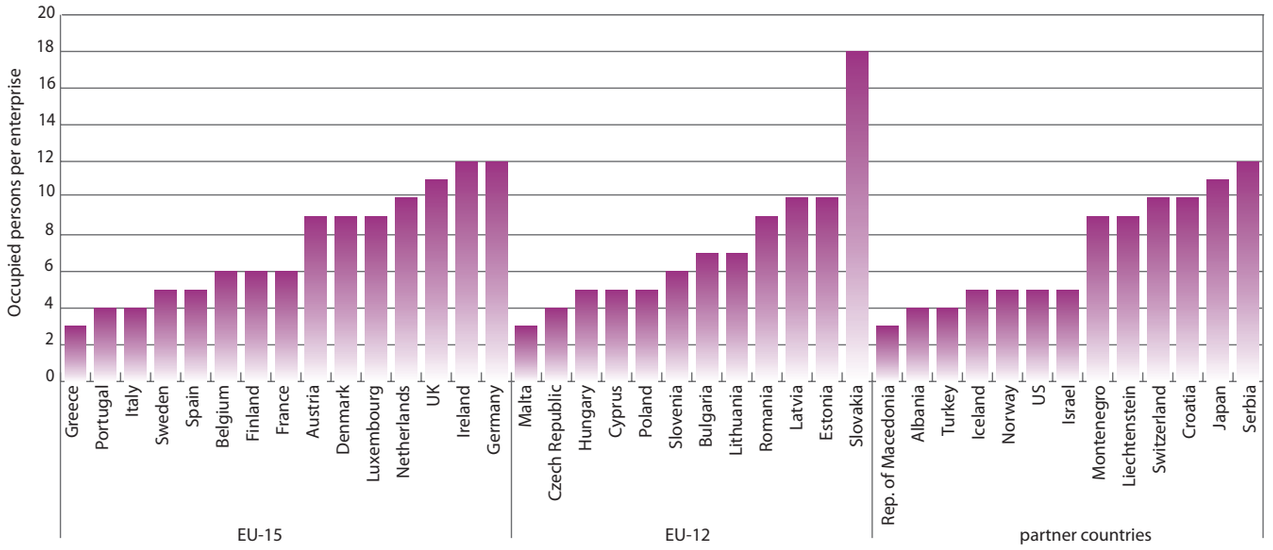
(11) This is consistent with a gradual longer term transition in the most highly developed economies from a 'managed' to an 'entrepreneurial' economy (see Audretsch and Thurik, 2001).

3.1.5 DECLINING DIVERSITY ACROSS INDIVIDUAL COUNTRIES WITHIN THE EU

Figure 7 shows the diversity in average firm size for the 27 EU-countries and 13 partner countries. The variance in average enterprise size among countries within each group is large.

However, the Figure 8 shows that over 2002-2008, individual Member States across the EU-27 have clearly converged with respect to average enterprise size. Countries with initially high average enterprise size in 2002 tend to experience a decrease of average enterprise size in 2002 -2008, while countries with initially low average enterprise size have seen an increase ([12]).

FIGURE 7 ESTIMATED NUMBER OF OCCUPIED PERSONS PER ENTERPRISE IN INDIVIDUAL COUNTRIES, NON-FINANCIAL BUSINESS ECONOMY, 2008 (EU-27) OR MOST RECENT



Note: For some countries (e.g., Slovakia), data published by Eurostat differ from those from national authorities' publications.
Source: Eurostat, INSMES partners, JSBRI and US Bureau of Census and US Small Business Administration, as elaborated by EIM.

FIGURE 8 AVERAGE ENTERPRISE SIZE 2002 VERSUS CHANGE AVERAGE ENTERPRISE SIZE 2002-2008 (2007, 2008: ESTIMATES) IN EU COUNTRIES

Source: Eurostat, as elaborated by EIM.

(12) For instance, enterprises in Romania on average occupied 13 persons in 2002, and this figure decreased by more than 3 between 2002 and 2008.

3.2 Entry and exit

The dynamics of entry and exit

The data in Table 7 demonstrate the volatility of the European enterprise population. On average 1.8 million new enterprises are established annually, corresponding to 9.7 % of the total enterprise population. At the same time 1.5 million enterprises annually cease to exist, corresponding to a death rate of 8.3 % of the stock of enterprises. Business closures may be voluntary or forced.

Two important aspects are the net-entry development and the causal relation between entry and exit. *First*, net-entry (i.e. entry minus exit) determines whether the number of enterprises in an economy increases or decreases. The positive net-entry in EU-27 in the past years appears to be related to the adoption of new technologies, the growth of the services sector, deregulation, and a cultural drift towards more self-employment ([13]). In EU-12 high entry rates may also be related to the emergence of new markets and to a specific tendency towards more flexible labour market regulation over the last five years ([14]). Finally, the profitability of private business and the unemployment rate also have a direct effect on entry and exit ([15]).

Second, as regards the causality between entry and exit, two directions are distinguished: exit causing entry (replacement) and entry causing exit (displacement). In the case of displacement, new enterprises challenge incumbent firms to perform better ([16]) and eventually force the least competitive firms to leave the market. This releases resources that may be reallocated to more efficient (new) firms ([17]). Establishing the extent to which observed entry and exit rates are the result of replacement or displacement effects requires estimation of quite sophisticated econometric models ([18]).

TABLE 7 Enterprise birth and death, EU-27*, 2001-2006

	2001	2002	2003	2004	2005	2006	Average 2001/2006***
Enterprise birth							
x 1 000	1 736	1 669	1 748	1 880	1 930	1 941	1 817
% of enterprise population	9.4	9.1	9.5	10.1	10.1	9.9	9.7
Enterprise death							
x 1 000	1 452	1 449	1 514	1 560	1 738	n/a	1 543
% of enterprise population	7.9	7.9	8.2	8.4	9.1	n/a	8.3
Net enterprise birth**							
x 1 000	284	221	234	320	192	n/a	250
% of enterprise population	1.5	1.2	1.3	1.7	1.0	n/a	1.3

* Based on data for Austria, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, covering 63 % of the total number of enterprises in EU-27.

** Enterprise birth minus enterprise death.

*** 2001/2005 if applicable.

Source: Eurostat, as elaborated by EIM.

(13) Carree *et al.* (2002) and Wennekers (2006).

(14) This specifically but not exclusively refers to Estonia, Hungary, Slovenia, Latvia, Poland and the Slovak Republic (World Bank, 2009). Rigid labour market regulation is negatively associated with entrepreneurship (Ardagna and Lusardi, 2009; Van Stel *et al.* 2007).

(15) Bosma *et al.* (2005).

(16) Fritsch and Mueller (2004).

(17) Henrekson and Johansson (2010).

(18) Burke and Van Stel (2008).

Bankruptcies

Bankruptcy is a special category of exits. In Figure 9 the evolution of the share of bankruptcies in the total number of firm exits is shown for selected EU-countries and the United States. In a recession the share of bankruptcies in total exits typically increases, while during an economic boom the share of bankruptcies decreases. However, the proportion of bankruptcies is relatively low: by and large, bankruptcies represent 20 % or less of total exits ([19]).

Bankruptcy legislation matters, as countries with a more 'forgiving' personal bankruptcy law, in terms of the time to discharge, have higher self-employment rates ([20]). Thus, notwithstanding that bankruptcies cause high costs for society and should be avoided whenever possible, governments can stimulate entrepreneurship by reducing the harshness of the consequences of personal bankruptcy ([21]). This helps giving bankrupt entrepreneurs a second chance to start a business. It also stimulates entrepreneurial activity in general, because risks related to a potential failure are lower ([22]).

FIGURE 9 SHARE OF BANKRUPTCIES IN FIRM EXITS, 1995-2007, SELECTED COUNTRIES

Source: EIM (International Benchmark Entrepreneurship 2009).

The effect of the crisis on entry, exit and the number of enterprises

As a result of the crisis, profitability of SMEs in the EU is under serious pressure. This depresses entry and raises exit. In addition rising unemployment causes necessity self-employment to increase and opportunity entrepreneurship to decrease ([23]). Table 8 presents the share of necessity entrepreneurs, *i.e.* entrepreneurs who (attempt to) start a business because they see no alternative employment options, in Total early-stage Entrepreneurial Activity (TEA). The complementary share refers to opportunity entrepreneurship. Necessity entrepreneurs are a minority, at least in highly developed countries. Hence, even though the share of necessity entrepreneurship has increased considerably in 2009, the negative effect of the recession on total entry is expected to be stronger ([24]).

For 2008 the recession implied a deceleration of the strong growth of the number of enterprises, as shown in Figure 1. For an assessment of developments in 2009, information from several other sources was combined ([25]). The resulting estimates of entry and exit for nine European countries, Japan and the US are presented in Table 9 ([26]). In 2008 and, especially, 2009, entry decreased considerably in almost

(19) An exception is France, where roughly one in three exits is a bankruptcy.

(20) Armour and Cumming (2008).

(21) In response to the current crisis, several EU countries have recently started to reform their bankruptcy legislation, including France, Germany, Latvia, Estonia, Lithuania, and Poland (World Bank, 2009).

(22) The importance of bankruptcy legislation is also recognised by the European Commission. It is argued that bankruptcy regulation which facilitates a fresh start and which reduces the stigma of failure, is particularly important in knowledge-based economies with high levels of risky entrepreneurial experimentation (European Commission, DG Enterprise & Industry, 2009, pp. 78-81).

(23) Thurik *et al.* (2008).

(24) In addition, there is often a time lag involved between the moment of becoming unemployed and the moment of actually deciding to start one's own business. See Thurik *et al.* (2008).

(25) For 2006 and 2007 entry and exit rates were used from EIM's International Benchmark Entrepreneurship data base. Entry is defined inclusive of new subsidiary firms (see Snel *et al.*, 2009). For 2008 and 2009 data on entry and exit *developments* from other sources, including OECD (2009b; pp. 34-37) and national sources, were linked to the entry and exit levels of 2007. More details can be found in separately published Annex on Methodology.

(26) The data in Table 9 are rough approximations and should be interpreted with care.

TABLE 8 Share of necessity entrepreneurs in TEA (%), selected countries, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
Germany	23	25	30	29	38	n/a	27	34
France	3	24	23	44	39	26	11	15
Japan	29	21	14	19	15	34	24	31
UK	14	15	10	13	16	13	15	18
US	11	15	14	12	14	16	13	25

Source: Global Entrepreneurship Monitor.

all countries considered, while exit rates increased. As a result net-entry declined considerably, but remained positive in all countries except three. Overall, it is our estimate that the growth of the number of enterprises in Europe has stalled in 2009 ([27]). In the United States the number of firms even seems to decline ([28]). However, the recent decline in net-entry is expected to be temporary as underlying determinants of the preceding upward trend remain active, such as the Internet revolution, the growth of the services sector and institutional developments favouring self-employment ([29]). When economic growth picks up again, the number of enterprises is expected to resume its upward trend.

TABLE 9 Entry and exit rates, and development of number of enterprises (net-entry rate), selected countries, 2006-2009

		Belgium	Finland	France	Germany	Ireland	Italy	Netherlands	Spain	UK	Japan	US
Entry rates	2006	8.4	11.5	6.6	8.1	14.5	7.6	10.5	10.4	12.1	4.1	9.9
	2007	9.5	11.8	6.9	7.0	11.6	7.9	11.5	10.7	13.2	n/a	9.9
	2008	9.1	11.5	7.0	6.6	n/a	7.3	12.2	10.3	11.4	n/a	9.3
	2009	8.1	9.8	6.5	6.7	n/a	6.4	11.5	8.4	11.5	n/a	8.6
Exit rates	2006	6.3	7.9	5.2	6.8	7.6	6.7	7.9	7.9	9.3	5.9	9.1
	2007	6.4	7.8	4.8	6.4	5.3	7.9	8.2	7.1	9.2	n/a	9.4
	2008	6.8	9.2	5.5	6.4	n/a	8.1	8.1	8.8	10.8	n/a	9.9
	2009	7.4	n/a	6.1	6.1	n/a	9.1	9.5	10.9	11.0	n/a	10.8
Net-entry	2006	2.1	3.6	1.4	1.3	6.9	0.9	2.6	2.5	2.8	-1.8	0.8
	2007	3.1	4.0	2.1	0.6	6.3	0.0	3.3	3.5	4.0	n/a	0.5
	2008	2.3	2.3	1.4	0.2	n/a	-0.8	4.1	1.4	0.6	n/a	-0.6
	2009	0.7	n/a	0.4	0.6	n/a	-2.6	2.1	-2.6	0.5	n/a	-2.2

Source: EIM (International Benchmark Entrepreneurship 2009). Data for 2008 and 2009 are projections based on entry and exit developments reported in OECD (2009b) and information from EC DG Economic & Financial Affairs (2009), IfM Bonn, Barclays, INE and Ruis *et al.* (2010).

(27) Trends from Table 9 are supported by additional information from the Central Statistical Office of Poland (data have not been presented because they are not strictly comparable to those in Table 9) showing that net entry in Poland was approximately zero in 2009. Also, exit in 2009 was considerably higher than in 2008.

(28) The SBA Office of Advocacy (2010) reports that the number of self-employed (of both unincorporated and incorporated businesses) declined from 15.9 million in 2008 to 15.3 million in 2009.

(29) Wennekers (2006).

No recent indicators on entry and exit are available for Japan, where the number of enterprises steadily decreased from the late 1980s onwards ([30]). This structural downward trend may recently have been inverted. In particular, for the period 2004-2006, JSBRI (2009) reports that, although the exit rate still exceeds the entry rate for the whole population of enterprises (mainly sole proprietorships), net-entry is positive for subsets of enterprises such as corporate enterprises and enterprises in the services sector. This apparent trend break for Japan is also visible in the 'Total early-stage Entrepreneurial Activity rate' (TEA; Table 10). This variable measures the share of the adult population who are either actively involved in starting a business or are the owner/manager of a young business (younger than 3.5 years). For Japan a remarkable trend break in TEA can be observed in 2007 and 2008. However, the current economic crisis again leads to a decrease in entry as well as to an increase in exits ([31]), possibly again resulting in negative net-entry.

TABLE 10 Total early-stage Entrepreneurial Activity rate, selected countries, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
Germany	5.2	5.2	5.1	5.4	4.2	n/a	3.8	4.1
France	3.2	1.6	6.0	5.4	4.4	3.2	5.6	4.3
Japan	1.8	2.8	1.5	2.2	2.9	4.3	5.4	3.3
UK	5.4	6.4	6.2	6.2	5.8	5.5	5.9	5.7
US	10.5	11.9	11.3	12.4	10.0	9.6	10.8	8.0

Source: Global Entrepreneurship Monitor.

Positive impact of business dynamics

Business dynamics have an important impact on the quality and competitiveness of the business sector. New firms are often established by relatively young people (on average between 30 and 40 years old) who have new ideas and are keen to introduce innovations. Firms closing down have a relatively low productivity and are less innovative. Replacement and displacement associated with closures and contractions of less efficient firms imply that resources are reallocated to more efficient (new) firms ([32]). Thus, the turbulence causing a continuous renewal of the enterprise stock may actually be quite favourable to the competitive position of the EU economy ([33]).

Most new firms are micro enterprises and start in services ([34])

Most new businesses are micro enterprises: in 2005 and 2006, the vast majority of start-ups employ less than 4 people, with over 60 % of the new start-ups having no employees at all ([35]). As a result, micro enterprises play a dominant role in the net growth of the enterprise population.

The most 'popular' sectors for founding new enterprises involve services: research and development; computer and related activities; and real estate activities ([36]). Enterprise birth has the highest contribution to employment growth in real estate activities, activities auxiliary to financial mediation, construction, hotels and restaurants, and other business activities (excluding holdings). Two obvious reasons are the strong and growing demand for services, and the fact that starting an enterprise in services often requires limited initial investment. There is long-standing evidence of the positive influence of the service economy on entrepreneurship ([37]).

Regional differences in enterprise birth and death

In the new Member States, enterprise birth rates tend to be above the EU average ([38]). Possibly there is still a 'catching-up' process going on in the new Member States. Both push and pull factors play a role here. On the one hand high unemployment may lead to more start-ups. On the other hand, entrepreneurial opportunities are relatively abundant as several industries in many of the EU-12 economies may still be in an earlier phase of the industry life cycle, as compared to

(30) The Small Business Agency of Japan has been aware of the decreasing number of enterprises since the late 1980s and has also introduced various policy measures to promote business start-ups since the latter half of the 1990s. For the details of promotion policies of business start-ups see the website of the Small Business Agency of Japan: http://www.chusho.meti.go.jp/sme_english/outline/03/01_02.html

(31) JSBRI (2009) reports an increase in SME bankruptcies in the second half of 2008 and the first quarter of 2009.

(32) Henrekson and Johansson (2010).

(33) Empirical evidence on a positive link between turbulence and productivity growth is provided by Bosma *et al.* (2010). Although it is imaginable that there can be too much turbulence in an economy, empirical evidence does not support this possibility (Van Stel and Diephuis, 2004). On the other hand, when considering a static measure of entrepreneurship such as the share of business owners in the labour force, an optimal business ownership rate has been found by Van Praag and Van Stel (2010), suggesting economies may have too few but also too many self-employed.

(34) Based on Schrör (2008).

(35) Schrör (2009). Also see Wennekers *et al.* (2009), who report large increases in so-called solo self-employed in many OECD countries in recent years.

(36) In fact there are two other sectors showing a high percentage of starters: post & telecom, and electricity, gas and water supply. This is a consequence of privatisation processes.

(37) Acs *et al.* (1994).

(38) The average enterprise birth rate over the period 2001/2006 is 9.4 in the EU-15 area and 10.8 in the EU-12 area (the EU-27 average is 9.7, see Table 8).

the EU-15. Not surprisingly, exit rates in the new Member States also tend to be higher than in the old Member States ([39]) ([40]). These differences between old and new Member States tend to be stable over the period under review.

Survival rates

In the period 2001-2005, newly created European enterprises had a 68 % chance of still being in the market after two years ([41]). This percentage is in line with two-year survival rates of a number of OECD countries reported by OECD (2009b). Survival rates are slightly higher in manufacturing compared to services. This is related to the higher entry and exit costs in manufacturing ([42]). OECD (2009b) also reports that survival rates are typically lower for years with relatively many start-ups, consistent with a high correlation between entry and exit ([43]).

3.3 Fast-growing enterprises

In both national and EU policies, fast-growing enterprises receive a lot of attention. These enterprises contribute more than others to production growth and growth of employment. Empirical research systematically finds that rapidly growing firms generate a disproportionately large share of all new net jobs compared with non-high-growth firms ([44]). Henrekson and Johansson (2010) report that the contribution of fast-growing enterprises to net employment growth is especially high during recessions ([45]). Fast-growing enterprises also stimulate growth of production in other enterprises, for instance through subcontracting relations. They are important tools to reach the goals set in the frame of the Lisbon agenda ([46]).

The vast majority of enterprises show no growth or only moderate growth of employment ([47]). Only a small minority of firms decline drastically or grow very fast. The latter group are the high-growth enterprises (HGEs) which Eurostat and OECD define as enterprises with on average at least 20 % annual employment growth over the last three years, and which have at least 10 employees at the start of the observation period. For a group of ten EU countries ([48]), the share of high-growth enterprises in the total number of enterprises with at least 10 employees varied between 1 and 8 % in 2006 ([49]). An important subgroup of HGEs is formed by the so-called gazelles. Eurostat and OECD define gazelles as HGEs younger than five years old. They represent roughly between 10 and 15 % of HGEs. OECD (2009b) reports the share of gazelles to be particularly high in eastern European countries such as Bulgaria, Hungary and Estonia.

The previous analysis relates to all HGEs with at least 10 employees. It turns out that a distinction between small and large HGEs is useful. The group of small HGEs is generally bigger in terms of number of enterprises, but in terms of absolute job creation, a smaller group of large fast-growing enterprises is equally important ([50]). Regarding large high-growth firms, EIM maintains a unique cross-country data base on the number of high-growth firms employing between 50 and 1 000 workers, where high growth is defined as 60 % or more (employment) growth in three years ([51]). Based on this data base, Table 11 presents the most recent rates of large high-growth firms.

(39) The average enterprise death rate over the period 2001/2005 is 7.9 in the EU-15 area and 10.0 in the EU-12 area (the EU-27 average is 8.3, see Table 8).

(40) Since a more or less stable fraction of newly created enterprises will not survive for a long period, death rates are almost by definition higher in countries with high birth rates. In addition, new business start-ups tend to crowd out the less competitive incumbent firms (displacement). Indeed, correlations between entry and exit are typically found to be very high (Geroski, 1995).

(41) Estimate based on data for Bulgaria, Cyprus,Czech Republic, Germany, Estonia, Spain, Finland, France, Hungary, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Portugal, Romania, Sweden, Slovenia, Slovakia and United Kingdom, covering 57 % of total enterprise births in EU-27. Source: EIM, based on Eurostat.

(42) Consequently self-selection before entry is stronger in manufacturing in the sense that potential entrants inform themselves better about the potential of their business before actually incurring the (higher) entry cost, and more low quality entrepreneurs will choose not to enter.

(43) Lithuania, Romania and the Slovak Republic are mentioned as examples of countries where a high birth rate in 2005 was followed by a relatively low survival rate (OECD, 2009b, p. 24).

(44) Henrekson and Johansson (2010).

(45) The contribution to net employment growth should be interpreted with care. For instance, assume that fast-growing firms account for 50 thousand new jobs, slowly growing firms for 100 thousand new jobs, while 100 thousand jobs vanish in declining firms. Hence, net employment growth is 50 thousand, and 100 % of total net employment growth can be contributed to fast-growing firms, while in fact they create only one third of all (gross) jobs.

(46) Nevertheless, there are also alternative routes to achieve economic growth. A small number of fast-growing enterprises in a country may have the same effect as a large number of moderately growing enterprises. In fact, in a recent cross-country study, Stam *et al.* (2009) do not find evidence for a positive relation between the number of fast-growing enterprises and macro-economic growth.

(47) Quite some very small enterprises do not want to grow (Shane, 2008).

(48) Bulgaria, Denmark, Estonia, Italy, Finland, Hungary, Luxembourg, Romania, Spain, Sweden.

(49) OECD (2009b).

(50) Acs *et al.* (2008).

(51) Snel *et al.* (2009).

TABLE 11 PERCENTAGE OF FAST GROWING ENTERPRISES WITH HIGH EMPLOYMENT GROWTH OVER THE PERIOD **2003-2006**, NON-FINANCIAL BUSINESS-ECONOMY

Czech Republic	30.3	Denmark	12.1	Italy	10.7	The Netherlands	7.2
Hungary	27.7	United Kingdom	11.7	Austria	9.9	France	6.6
US	22.8	Sweden	11.6	Germany	7.7	Poland	4.2
Spain	13.7	Finland	11.0	Belgium	7.5	Japan	2.4

Source: EIM, International Benchmark Entrepreneurship. Note: Percentage is measured for the population of firms with 50-1 000 workers. Fast growth is defined as employment growth of 60 % over three years' time (in this case, period 2003-2006).

When bigger-sized HGEs in 8 EU-countries ([52]) are analysed over three periods between 1998-2006 ([53]), the average share of HGEs in the total number of enterprises with 50 to 1 000 persons employed varies between 8 % in The Netherlands to 21 % in Italy. In Japan this figure is 2 % and in the US 18 %. These figures tend to be fairly stable over this period. On average, these HGEs have experienced total employment growth of 104 % between 2003 and 2006. In contrast, non-HGEs have seen their employment decline by 2 % over the same period.

Further research is needed to explain the different results obtained for the two sets of high-growth enterprises presented above.

Enterprises in the financial sector

Beyond the non-financial business economy

In this report, the main focus is on enterprises in the non-financial sector. However, equally important are the developments and the composition of enterprises in the financial business economy, especially given the origin of the global economic crisis. The financial sector includes, above all, credit institutions, insurance companies, and pension funds. From the perspective of the economic crisis, credit institutions are of particular interest. They have played a major role in the start of the economic malaise.

Credit institutions in numbers*…

… trends in the number of enterprises

In 2007, the total number of credit institutions located in Member States of the EU was 6 400. This is a 13 % increase with respect to 2002. The regional differences are strong. Although the development in the number of credit institutions in both EU-15 and EU-12 Member States shows an inverted U-shape, the fall is much stronger in EU-12 countries than in EU-15. In fact, during 2002-2007 the number of credit institutions rose by 17 % in EU-15 countries (with a peak in 2005) while a decrease of over 3 % was observed in the new Member States (with a peak in 2004).

… trends in employment

In total, financial institutions employed over 2.6 million people in the EU-27 in 2007. As far as changes in the number of persons employed in financial enterprises are concerned, EU-12 followed a different evolution pattern from that of old Member States. Whereas EU-15 countries reported an employment growth of 24 % in the period between 2002 and 2007, employment in credit institutions in EU-12 Member States more than quadrupled during the same time.

… trends in number of occupied persons per enterprise

For EU-27, the average enterprise size of credit institutions increased by 19 % in the period 2002-2007. Compared to the non-financial business economy, credit institutions have a significantly higher number of occupied persons per enterprise. Whereas in EU-15 (EU-12) Member States it amounted to 6.5 (6.0) in the non-financial business economy, these figures corresponding to credit institutions equalled 430 (349). In the Netherlands (1 428), Romania (1 388), United Kingdom (1 275), Greece (1 044), and Bulgaria (1 041), large credit institutions have been found. This suggests that this part of the financial sector is dominated by large firms rather than SMEs.

… trends in balance sheet totals

Also regarding the balance sheet total there are quite significant regional differences. Focusing on the time period 2002-2007, the average balance sheet total initially declined in old EU Member States, but from 2005 onwards it started to grow rapidly. Overall, it increased by 52 % (over EUR 36 100 000 million) in these countries in the period considered. In EU-12 Member States the balance sheet totals increased more or less consistently in the period 2002-2007 (with a small decline in 2006) and showed an overall increase of 106 % (over EUR 520 000 million).

… trends in interest receivable and similar income

Interest receivable and similar income – as a measure of turnover – shows a comparable increase in EU-15 and EU-12 countries in the period 2002-2007 (over 50 %). Nevertheless, in absolute terms turnover of financial institutions is much higher in EU-15 countries (EUR 1 600 000 million) than in EU-12 countries (EUR 26 000 million).

(52) Belgium, Germany, Denmark, Finland, France, Italy, the Netherlands and the United Kingdom (accounting for 58% of the total number of medium-sized enterprises in EU-27).
(53) The periods are 1998-2001, 1999-2002, up to and including 2003-2006.
* Eurostat's Structural Business Statistics, Financial services statistics.

[4] Employment impacts of SMEs

4.1 The non-financial business sector's employment structure

4.1.1 OVERVIEW: THE SIZE CLASS STRUCTURE OF EU-27 EMPLOYMENT

Despite their small individual size, the most striking phenomenon of SMEs is perhaps their contribution to employment in the EU economy. No less than two third of employment in the non-financial business economy is found in the SME sector.

As can be seen in Table 12, of the 90 million people employed in SMEs, the micro firms employ 40 million, or 30 % of the total employment in the non-financial business economy. Thus, 92 % of all enterprises provide 30 % of total private employment and are at the same time very small individually (1). From Table 12 it can also be derived that labour costs per employee are positively related to enterprise size. To only a limited extent can this be explained by differences in sectoral structure between smaller and larger enterprises (2). It also suggests that labour productivity is lower in smaller enterprises (also see chapter 5). One explanation may be the fact that in larger enterprises the educational level of employees tends to be higher than in smaller enterprises. Small enterprises also pay lower wages (3).

TABLE 12 EMPLOYMENT INDICATORS OF NON-FINANCIAL BUSINESS ECONOMY, BY SIZE CLASS, EU-27, 2008 ESTIMATES

		Micro	Small	Medium-sized	SME	Large	Total
Levels							
Number of enterprises	x 1 000	19 058	1 424	226	20 709	43	20 752
Number of persons employed	x 1 000	39 630	27 652	22 665	89 947	43 414	133 362
Persons employed per enterprise	occupied person/ entreprise	2	19	100	4	1 006	6
Personnel costs	EUR billion	578	772	713	2 063	1 651	3 714
Labour cost per employee	EUR 1 000	27	29	32	29	38	33
Percent distribution							
Number of enterprises	total = 100 %	92	7	1	100	0	100
Number of persons employed	total = 100 %	30	21	17	67	33	100
Personnel costs	total = 100 %	16	21	19	56	44	100

Source: Eurostat, as elaborated by EIM.

(1) Their average firm size is 2 persons, and about one half of these enterprises have no employees at all, thus only providing employment and income to self-employed and family workers.
(2) For instance, labour costs per employee at the sectoral level are lowest in trade and hotels and restaurants, which typically are small-scaled sectors of industry.
(3) See Van Praag and Versloot (2007) for an overview of empirical evidence.

4.1.2 LARGE DIFFERENCES BETWEEN SECTORS

There are large differences between sectors of industry in the size class structure of employment. Large-scaled sectors are electricity, gas and water supply, in which 78 % of total employment is in large enterprises, (as opposed to 33 % in the total non-financial business economy). Also in mining and quarrying (69 %), transport, storage and communication (53 %), and manufacturing (41 %), the share of large enterprises in total employment is relatively large.

TABLE 13 NUMBER OF PERSONS EMPLOYED, BY SIZE CLASS AND SECTOR OF INDUSTRY, IN THE NON-FINANCIAL BUSINESS ECONOMY, EU-27, 2008 ESTIMATES

c-i, k	Non-financial business economy	x 1 000 total = 100 %	Micro	Small	Medium-sized	SME	Large	Total
			39 630	27 652	22 665	89 947	43 414	133 362
			30	21	17	67	33	100
	By NACE section							
c	Mining and quarrying	total = 100 %	6	13	13	31	69	100
d	Manufacturing	total = 100 %	14	20	25	59	41	100
e	Electricity, gas and water supply	total = 100 %	3	5	14	22	78	100
f	Construction	total = 100 %	42	30	16	88	12	100
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	total = 100 %	40	21	13	74	26	100
h	Hotels and restaurants	total = 100 %	45	27	11	83	17	100
i	Transport, storage and communication	total = 100 %	19	15	13	47	53	100
k	Real estate, renting and business activities	total = 100 %	34	17	16	67	33	100

Source: Eurostat, as elaborated by EIM.

In real estate, renting and business services, the employment share of large enterprises is similar to the non-financial business economy as a whole. The trade sector, hotels and restaurants and especially construction may be considered small-scaled sectors when looking at the employment share of SMEs. The size-class structure of a sector of industry depends to a large extent on its fixed costs, in the form of capital intensity and costs of setting up a business. In sectors where fixed costs are high, the minimum efficient scale of operation is obviously larger than in sectors without high fixed costs. For instance, setting up a consultancy firm is possible at low costs, whereas enterprises in mining and quarrying require huge investments both in the form of licenses and tangible assets.

4.1.3 REGIONAL DIMENSION

As presented in Table 14, 81 % of total employment in the non-financial business economy is in the 'old' Member States (where 65 % of the total EU population resides), and 19 % is in the 'new' Member States (35 % of the EU population). In the old and new Member States almost the same fraction of total employment (two-third) is in SMEs. As expected, given the differences in per capita GDP (4), labour costs per employee differ substantially between old and new Member States. Also the fact that labour costs per employee are lowest in SMEs, and highest in LSEs, is observed in both EU-15 and EU-12.

(4) Average GDP per capita in EU-15 is 92 % higher than in EU-12 (2008: Eurostat, gross domestic product at market prices per capita, in PPS).

TABLE 14 EMPLOYMENT INDICATORS OF NON-FINANCIAL BUSINESS ECONOMY, BY SIZE CLASS, EU-15 AND EU-12, 2008 ESTIMATES

		EU-15			EU-12		
		SME	Large	Total	SME	Large	Total
Number of persons employed	**x 1 000**	**72 746**	**35 557**	**108 303**	**17 202**	**7 857**	**25 059**
% distribution number of persons employed:							
• Region = 100 %	%	67	33	100	69	31	100
• EU-27 = 100 %	%	81	82	81	19	18	19
• EU-27 total = 100 %	%	55	27	81	13	6	19
Labour cost per employee	**EUR 1 000**	**34**	**43**	**38**	**11**	**14**	**12**

Source: Eurostat, as elaborated by EIM.

4.1.4 COMPARISON WITH PARTNER COUNTRIES

In Table 15, data on the size class structure of employment in the non-financial business economy in EU-27 and a number of partner countries are presented. A number of countries can be qualified as having a large-scaled employment structure relative to EU-27, as the share of LSEs in the total non-financial business employment is significantly above the EU-27 average of 33 %. This holds specifically for Iceland, Serbia, Israel and Croatia. Conversely, the Former Yugoslav Republic of Macedonia and Albania can be qualified as having a small-scaled employment structure. The United States also have a large-scaled employment structure. For Japan, no adequate size class breakdown of employment is available; however, an average enterprise size of 11 occupied persons indicates a relatively large-scaled enterprise sector.

TABLE 15 EMPLOYMENT OF ENTERPRISES BY SIZE CLASS IN PARTNER COUNTRIES

		Micro	Small	Medium-sized	SME	Large	Total
				total = 100 %			number
Iceland	2008	25	10	7	41	59	93 900
Switzerland	2005	29	24	20	73	27	2 423 000
Liechtenstein	2007	25	24	16	65	35	24 380
Albania	2007	48	17	17	82	18	222 160
Croatia	2008	15	20	23	57	43	804 900
The Former Yugoslav Republic of Macedonia	2007	54	40	2	96	4	2 111 800
Israel	2008	25	19	14	58	42	1 706 000
Montenegro	2007	20	20	22	62	38	200 700
Serbia	2008	14	19	25	57	43	980 000
United States	2006	22	14	17	53	47	70 198 000
Japan	2006	n/a	n/a	n/a	n/a	n/a	31 249 000
EU	2008	30	21	17	67	33	133 362 000

Source: Eurostat, INSMES partners, JSBRI and US Bureau of Census and US Small Business Administration, as elaborated by EIM.

4.2 Developments 2002-2008 ([5])

4.2.1 OVERVIEW: THE SIZE-CLASS STRUCTURE OF EMPLOYMENT GROWTH IN EU-27

In the period 2002-2008, SMEs' contribution to employment growth (83 %) has been even bigger than could be expected from their share in total employment of the EU non-financial business economy (67 %). As Table 16 demonstrates, the annual employment growth rate of SMEs was more than double that of large enterprises (1.9 % versus 0.8 %). Especially SMEs' employment growth in real estate, renting and business activities (4.0 % annually) and hotels and restaurants (3.2 %) is remarkable. Large enterprises have lost employment in several sectors of industry (mining and quarrying; manufacturing; and electricity, gas and water supply) ([6]) in the period under consideration. In absolute terms, the number of jobs in the EU non-financial business economy increased by 11.3 million in this period. SMEs accounted for an employment growth of 9.4 million jobs, while employment in LSEs increased by 1.9 million.

TABLE 16 DEVELOPMENT OF EMPLOYMENT PER SECTOR OF INDUSTRY, BY SIZE CLASS, EU-27, 2002-2008 (AVERAGE ANNUAL CHANGE IN %; 2007, 2008 ESTIMATES)

		Micro	Small	Medium-sized	SME	Large	Total
c-i, k	**Non-financial business economy**	**2.0**	**1.9**	**1.5**	**1.9**	**0.8**	**1.5**
	By NACE section						
c	Mining and quarrying	-0.5	0.3	-0.7	-0.2	-2.7	-2.0
d	Manufacturing	-0.2	0.0	0.1	0.0	-1.1	-0.5
e	Electricity, gas and water supply	3.0	1.4	0.6	1.0	-1.4	-0.9
f	Construction	2.2	2.5	2.3	2.3	1.8	2.2
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	1.1	1.9	1.8	1.5	2.2	1.7
h	Hotels and restaurants	2.1	5.1	3.4	3.2	1.6	2.9
i	Transport, storage and communication	1.5	2.3	2.3	2.0	-0.3	0.7
k	Real estate, renting and business activities	4.9	3.2	3.1	4.0	3.9	4.0

Source: Eurostat, as elaborated by EIM.

In Table 17, the development of labour costs of SMEs and large enterprises by sector of industry in the period 2002-2008 is depicted. Most strikingly, on average, but particularly in wholesale and retail trade, and in the service sectors, labour costs per employee have increased fastest in micro enterprises. This development implies a partial reduction of the gap between the low 2002 level of labour costs per employee in micro enterprises and the average labour costs in small and medium-sized enterprises.

(5) This section focuses on the medium term developments during 2002-2008. Section 2.2.1 deals with current employment trends and presents a preliminary outlook for 2010 and 2011.
(6) In the latter case, restructuring because of various privatisation programmes has played a role.

TABLE 17 DEVELOPMENT OF LABOUR COSTS PER EMPLOYEE, BY SIZE CLASS AND SECTOR OF INDUSTRY, EU-27, 2002-2008 (AVERAGE ANNUAL CHANGE IN %; 2007, 2008 ESTIMATES)

		Micro	Small	Medium-sized	SME	Large	Total
c-i, k	Non-financial business economy	3.0	1.5	1.8	2.0	1.9	1.9
	By NACE section						
c	Mining and quarrying	0.5	3.3	0.0	1.3	3.3	2.7
d	Manufacturing	1.6	2.5	2.6	2.4	3.2	2.7
e	Electricity, gas and water supply	4.3	4.0	2.8	3.2	4.8	4.5
f	Construction	1.7	1.7	2.2	1.8	2.6	1.9
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	2.6	1.7	1.5	2.0	1.1	1.7
h	Hotels and restaurants	5.8	-3.1	-2.6	1.4	-3.6	0.4
i	Transport, storage and communication	3.6	1.9	2.0	2.4	2.2	2.3
k	Real estate, renting and business activities	3.2	0.8	0.6	1.4	0.0	0.8

Source: Eurostat, as elaborated by EIM.

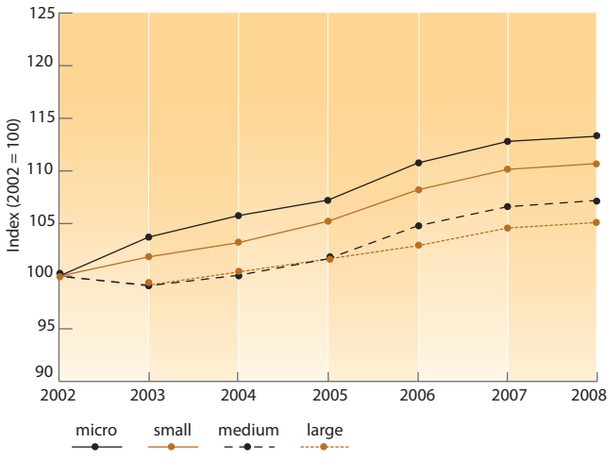
4.2.2 REGIONAL DIFFERENCES

In Figure 10 it is shown that the size class pattern of employment growth differs significantly between old (EU-15) and new (EU-12) Member States. More specifically, in the EU-15 employment grew fastest in micro and small enterprises, with medium-sized and large enterprises showing moderate employment growth during 2002-2008. In EU-12, employment growth was largest in small and medium-sized enterprises, with micro firms lagging somewhat behind. Extremely low profitability of EU-12 micro enterprises during the early years of the decade (see section 6.1) may have hampered employment growth in micro enterprises. The employment growth differentials between SMEs and LSEs in EU-15 versus EU-12 are directly related to the respective underlying developments of numbers of enterprises and average firm size as shown in chapter 3.

The contribution of size class pattern to total employment growth in old and new Member States is shown in Figure 11. In the EU-15, average total employment growth between 2002 and 2008 amounted to 1.4% annually, of which almost half (0.6 percent-point) can be attributed to micro firms. In the EU-12, the contribution of micro enterprises to employment growth amounts to almost the same figure (0.5 percent point). Since small and medium-sized enterprises also contribute to employment growth with about 0.5 percentage point each, total employment growth in EU-12 has been somewhat higher than in EU-15.

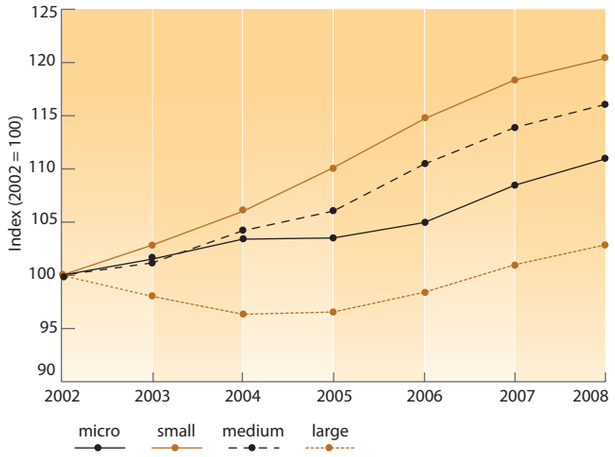
FIGURE 10 DEVELOPMENT OF NUMBER OF PERSONS EMPLOYED, BY SIZE CLASS, EU-15 AND EU-12, 2002-2008 (INDEX: 2002= 100; 2007, 2008 ESTIMATES)

FIGURE 10.A NUMBER OF PERSONS EMPLOYED PER SIZE CLASS, EU-15 (INDEX: 2002 = 100)



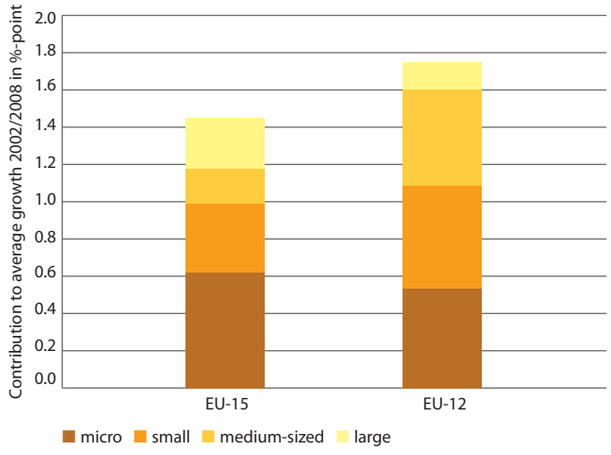
Source: Eurostat, as elaborated by EIM.

FIGURE 10.B NUMBER OF PERSONS EMPLOYED PER SIZE CLASS, EU-12 (INDEX: 2002 = 100)



Source: Eurostat, as elaborated by EIM.

FIGURE 11 AVERAGE ANNUAL TOTAL EMPLOYMENT GROWTH AND CONTRIBUTION OF SIZE CLASSES IN NON-FINANCIAL BUSINESS ECONOMY, 2002-2008 (2007, 2008 ESTIMATES)



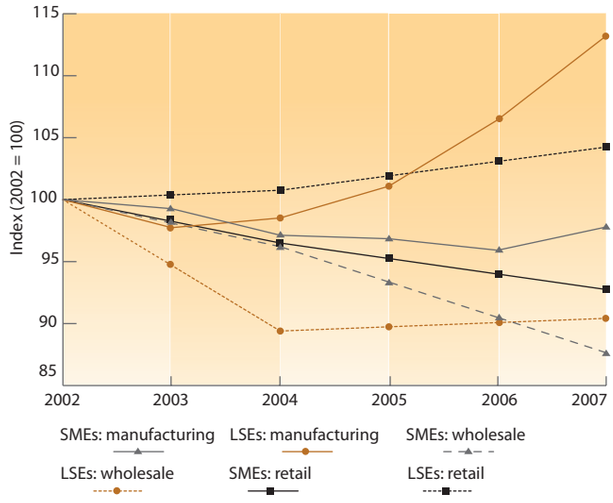
Explanation: Total employment growth in EU-15 was on average 1.4%; average employment growth in micro enterprises was 2.1%. As the share of micro enterprises in total employment is 28%, the contribution of micro enterprises was 0.28*2.1 = 0.6%-point.
Source: Eurostat, as elaborated by EIM.

4.2.3 SIZE-CLASS PATTERN EMPLOYMENT GROWTH IN JAPAN AND THE UNITED STATES

In Figure 12 the development of employment in small and large enterprises in Japan in selected industries between 2002 and 2007 is shown. It appears that in manufacturing and retail, the large enterprise sector experienced employment growth, whereas employment in smaller enterprises declined. On average, wholesale trade saw an employment decline without much difference between small and large enterprises; the development pattern over time, however, strongly differed between small and large firms, with LSEs catching up after a strong decrease between 2002 and 2004. Thus, the size-class pattern of employment growth in Japan significantly differed from the size-class pattern of employment growth in the EU, with the former primarily favourable for LSEs and the latter rather favourable for SMEs.

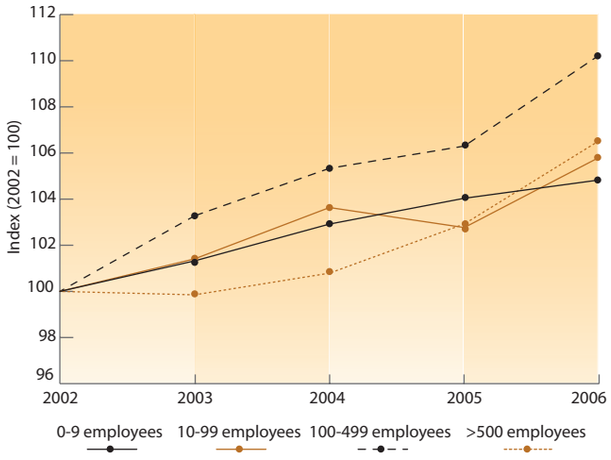
In Figure 13 the size-class pattern of employment growth in the United States over 2002-2006 is presented. In the US, it is especially the size-class 100-499 employees that stands out with respect to employment growth, even though significant employment growth also occurred in other size-classes.

FIGURE 12 DEVELOPMENT OF EMPLOYMENT IN MANUFACTURING, WHOLESALE, AND RETAIL, BY SIZE-CLASS, JAPAN, 2002-2007 (INDEX: 2002 = 100)



Source: JSBRI (2009), as elaborated by EIM. Note: Employment refers to number of workers. Definition SME: manufacturing: 4-299 workers; wholesale: 1-99; retail: 1-49. Graphs for manufacturing based on annual data, graphs for wholesale and retail based on 2002, 2004, 2007 (remaining years interpolated).

FIGURE 13 DEVELOPMENT OF EMPLOYMENT OF EMPLOYEES, BY SIZE CLASS, NON-PRIMARY ECONOMY, UNITED STATES, 2002-2006 (INDEX: 2002 = 100)



Source: US Small Business Administration, as elaborated by EIM.

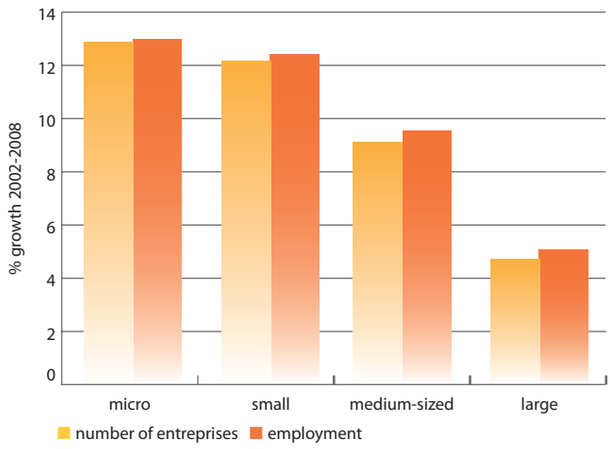
4.2.4 DETERMINANTS OF EMPLOYMENT GROWTH

There are two views on the employment creation in SMEs and large enterprises. The first focuses on business dynamics: changes in the number of enterprises and employment growth per enterprise. The second approach follows the reasoning that employment growth results from production growth and the change in labour productivity, and incorporates the influence of technological development and other underlying determinants. Both views will be discussed.

Business dynamics

Figure 14 shows that the numbers of enterprises and employment by size class have moved in parallel, implying that in each size class, the average number of occupied persons per enterprise remained roughly constant. This simple observation also suggests that it requires new enterprises to create jobs. It is another way of again underscoring the importance of business dynamics for the European economy. As reported by Eurostat, newly born enterprises (almost all being micro enterprises) in the EU (7), accounted for on average 3.3 % of total employment in 2005. This outweighed the employment losses due to death of enterprises at the EU-level. At the sectoral level, this holds in particular for construction, and real estate, renting and other business activities.

FIGURE 14 EMPLOYMENT GROWTH AND CHANGE IN THE NUMBER OF ENTERPRISES, BY SIZE CLASS, NON-FINANCIAL BUSINESS ECONOMY, EU-27, 2002-2008 (2007, 2008: ESTIMATES)



Source: Eurostat, as elaborated by EIM.

However, even when aggregated data show that average enterprise size is more or less constant, at the level of individual enterprises developments are quite diverse. In particular, while most firms show no growth or moderate growth, a small percentage of high growth enterprises (HGEs) grows very fast.

(7) Eurostat, Statistics in Focus, 44/2008; based on available data in 17 Member States.

Growth of production minus productivity growth

Employment growth by definition equals growth of production (value added) minus productivity growth. During 2002-2008, SMEs witnessed, on average, a value added growth ([8]) of 4.2 % annually, as opposed to 3.9 % in LSEs (Table 18). This in itself implies a somewhat larger employment growth in SMEs than in LSEs. This effect is reinforced as apparent labour productivity ([9]) grew by only 2.3 % annually in SMEs, compared to 3.1 % in large enterprises. Lagging productivity development has therefore also contributed to the favourable employment growth in SMEs, especially in micro and small enterprises ([10]).

TABLE 18 DEVELOPMENT OF NOMINAL VALUE ADDED, APPARENT LABOUR PRODUCTIVITY AND EMPLOYMENT IN THE NON-FINANCIAL BUSINESS ECONOMY, EU-27, 2002-2008 (AVERAGE ANNUAL CHANGE IN %; 2007, 2008 ESTIMATES)

	Value added at factor cost	Apparent labour	Number of persons employed
Micro	4.4	2.3	2.0
small	4.2	2.2	1.9
Medium-sized	4.0	2.5	1.5
SME	4.2	2.3	1.9
Large	3.9	3.1	0.8
Total	4.1	2.5	1.5

Source: Eurostat, as elaborated by EIM.

(8) Value added growth is in nominal terms, i.e. not adjusted for inflation, because price indices for value added by enterprise size class are not available.

(9) Value added per occupied person (again, value added growth is in nominal terms).

(10) Schmiemann (2009), using a similar methodology, shows apparent labour productivity growth to be largest in SMEs instead of LSEs during 2004-2006. However both in 2002-2004 and 2006-2008, apparent labour productivity growth has been greatest in large enterprises.

[5]
SMEs' contribution to production and labour productivity

5.1 Structure of production and labour productivity

5.1.1 PRODUCTION

In 2008, the total turnover (1) in the non-financial business economy in EU-27 amounted to EUR 24 thousand billion, corresponding to an average of EUR 1.2 million per enterprise (see Table 19). In the same year, the total production represented about two-thirds of turnover. The main distinction between the two concepts is the inclusion of the purchase value of merchandise in turnover, but not in the production value. The share of SMEs in total turnover is 58 %, while their share in the total production value of 54 %. This difference is mainly attributable to the strong presence of SMEs in trade, where the purchase value of merchandise obviously plays an important role.

When value added (2) is used as a measure of production – thus removing all double counting from the aggregate figures – the total production in EU-27 non-financial business economy amounts to more than EUR 6 thousand billion. SMEs' contribution to value added is 58 %, while LSEs contribute 42 %. The fact that the share of large enterprises in value added is lower than their share in gross production (46 %) is attributable to the inclusion of the value of intermediate goods and services in gross production specifically in industrial sectors which generally are large-scaled.

(1) One way to measure the direct contribution of SMEs to economic wealth is through their contribution to turn-over. The turnover represents the value of the total sales of an enterprise. The production value equals turn-over minus the purchase value of merchandise, plus increases in stocks. At the macro level, the turnover and production value include double counting as they include many transactions between enterprises. The value added concept does not include such double counting, and is therefore more appropriate in aggregated analysis.

(2) The gross value added at factor cost is the gross income from operating activities after adjusting for operating subsidies and including indirect taxes. Value adjustments (such as depreciation) are not subtracted. This is equivalent to gross domestic product in macro-economic analysis.

TABLE 19 Turnover and value added of the non-financial business economy, by size class, EU-27, 2008 estimates

		Micro	Small	Medium-sized	SME	Large	Total
Levels							
Turnover or gross premiums written	EUR billion	4548	4659	4828	14035	10231	24266
(ditto, per enterprise)	(EUR 1000)	(239)	(3271)	(21369)	(678)	(237098)	(1169)
Production value	EUR billion	3019	2934	3209	9163	7959	17122
Value added at factor cost	EUR billion	1287	1158	1101	3547	2579	6126
Number of persons employed	x 1000	39630	27652	22665	89947	43414	133362
Number of enterprises	x 1000	19058	1424	226	20709	43	20752
Labour productivity	EUR 1000/ occupied person	32	42	49	39	59	46
Total = 100%							
Turnover or gross premiums written	%	19	19	20	58	42	100
Production value	%	18	17	19	54	46	100
Value added at factor cost	%	21	19	18	58	42	100
Number of persons employed	%	30	21	17	67	33	100
Number of enterprises	%	92	7	1	100	0	100

Source: Eurostat, as elaborated by EIM.

5.1.2 LABOUR PRODUCTIVITY

The direct contribution of SMEs to value added is lower than their contribution to employment, suggesting a positive correlation between labour productivity and enterprise size class. This is confirmed by the data in Table 19. These labour productivity differences across size-classes are a structural characteristic of the non-financial business economy: they appear in all other years for which data are available (2002-2007) ([3]), for almost every individual country in the EU.

These size class differences in labour productivity are only to some extent explained by differences in sector structure. For instance, the sectors with a strong representation of SMEs such as construction, wholesale and retail trade, and hotels and restaurants report the lowest labour productivity within the non-financial business economy (Table 20). The fact that differences in the sectoral structure only partially explain size class differences in labour productivity at the aggregate level suggests that lower-than-average labour productivity is an inherent characteristic of SMEs. This evidence suggests that many SMEs have a lesser ability to reap economies of scale, are less capital-intensive, and/or have relatively large fixed labour costs. Another reason is the use of less qualified labour force in SMEs, as apparent from the lower labour cost per employee (chapter 4).

5.1.3 REGIONAL DIFFERENCES

Table 21 compares the contribution of SMEs to value added and employment in the 'old' (EU-15) and the 'new' (EU-12) Member States. It appears that even though SMEs' employment shares do not differ much between EU-15 and EU-12, SMEs' contribution to value added is lower in EU-12 (53%) than in EU-15 (58%). This implies that the SME/LSE labour productivity differential is larger in the new than in the old Member States.

(3) Also see European Commission, Enterprise Directorate-General (2004), for similar results for 1988-2002.

TABLE 20 Value added and employment by size-class and sector of industry, EU-27, 2008 estimates

		Employment (total = 100 %)			Gross value added at factor costs (total = 100 %)			Labour productivity: value added per occupied person (EUR 1 000/occupied person)		
		SME	Large	Total	SME	Large	Total	SME	Large	Total
c-i, k	**Non-financial business economy**	**67**	**33**	**100**	**58**	**42**	**100**	**39**	**59**	**46**
	By NACE section									
c	Mining and quarrying	31	69	100	30	70	100	148	155	153
d	Manufacturing	59	41	100	45	55	100	40	70	52
e	Electricity, gas and water supply	22	78	100	22	78	100	137	135	135
f	Construction	88	12	100	83	17	100	35	53	38
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	74	26	100	70	30	100	34	41	36
h	Hotels and restaurants	83	17	100	77	23	100	19	27	20
i	Transport, storage and communication	47	53	100	35	65	100	42	71	57
k	Real estate, renting and business activities	67	33	100	72	28	100	53	42	49

Source: Eurostat, as elaborated by EIM.

TABLE 21 Value added and employment in the non-financial business economy in old (EU-15) and new (EU-12) Member States by size-class, 2008 estimates

	Employment (total = 100 %)			Gross value added at factor costs (total = 100 %)			Labour productivity: value added per occupied person (EUR 1 000/occupied person)		
	SME	Large	Total	SME	Large	Total	SME	Large	Total
EU-15	67	33	100	58	42	100	87	127	100
EU-12	69	31	100	53	47	100	77	151	100

Source: Eurostat, as elaborated by EIM.

5.2 Developments 2002-2008

5.2.1 OVERVIEW AT EU LEVEL

As Figure 15 clearly shows, SMEs significantly outperformed LSEs as regards employment growth in 2002-2008. In what regards (nominal) labour productivity growth however, LSEs show the highest growth rate. The fact that SMEs are concentrated in sectors of industry that traditionally experience low productivity growth (trade, services; see Table 22) does not fully explain the relatively low productivity growth of SMEs at aggregate level. Taking these considerations into account, the evidence suggests that labour-augmenting technical progress has been strongest in LSEs. One possible explanation is that a large part of SMEs' – and specifically micro enterprises' – labour is fixed costs, associated with administrative thresholds, and a lower divisibility of labour. Also, there may be several restrictions for SMEs to adopt innovations from other segments of the business sector (for instance: in the past small enterprises have been rather slow in introducing PC's and Internet into their operations) ([4]). As a result of the high productivity growth, (nominal) value added growth rate of LSEs is only slightly lower than in SMEs.

FIGURE 15 KEY INDICATORS OF THE NON-FINANCIAL BUSINESS ECONOMY, BY SIZE CLASS, EU-27, AVERAGE ANNUAL GROWTH RATE 2002-2008 (FIGURES FOR 2007& 2008 ARE ESTIMATES)

* In nominal terms.
** Value added at factor cost per occupied person.
Source: Eurostat, as elaborated by EIM.

5.2.2 SECTORAL DIFFERENCES

Table 22 shows the size-class pattern of the average annual growth rate of the value added and labour productivity at sectoral level in EU-27 for the period between 2002 and 2008. SMEs outperform large enterprises with respect to value added growth in electricity, gas and water supply, construction, hotels and restaurants, and transport, storage and communication.

However, in these sectors as in most, productivity growth was higher in LSEs.

5.2.3 REGIONAL DIFFERENCES

Table 23 shows that groups of SMEs and LSEs have contributed equally to value added growth in EU-12, whereas value added growth was highest in the SME sector in EU-15. The productivity differential between SMEs and LSEs has increased both in EU-15 and EU-12, but in EU-12 even more than in EU-15.

(4) See for instance Arendt (2008) for an analysis of the barriers of ICT adaptation in SMEs. Also see the Fourth Annual Report of The European Observatory for SMEs (1996; http://ec.europa.eu/enterprise/policies/sme/files/analysis/doc/eurob4en_en.pdf) for an early inventory of the main problems SMEs face in the use of IT.

TABLE 22 Development of value added and labour productivity, non-financial business economy, by size-class and sectors, EU-27, 2002-2008 (average annual change in %; 2007, 2008: estimates)

		Value added		Labour productivity	
		SME	Large	SME	Large
c-i, k	**Non-financial business economy**	**4.2**	**3.9**	**2.3**	**3.1**
	By NACE section				
c	Mining and quarrying	2.5	4.7	2.7	7.6
d	Manufacturing	2.9	3.1	3.0	4.2
e	Electricity, gas and water supply	6.4	4.5	5.3	6.0
f	Construction	5.0	4.5	2.7	2.7
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	4.1	4.1	2.6	1.8
h	Hotels and restaurants	3.9	3.1	0.7	1.4
i	Transport, storage and communication	4.2	3.7	2.2	4.0
k	Real estate, renting and business activities	5.1	5.6	1.1	1.7

Note: Value added growth in current prices; labour productivity: value added per occupied person.
Source: Eurostat, as elaborated by EIM.

TABLE 23 Development of value added and labour productivity, EU-15 and EU-12, by size-class, 2002-2008 (average annual change in %; 2007, 2008: estimates)

	Value added		Labour productivity	
	SME	Large	SME	Large
EU-15	3.7	3.2	1.9	2.4
EU-12	12.4	12.3	9.9	11.8

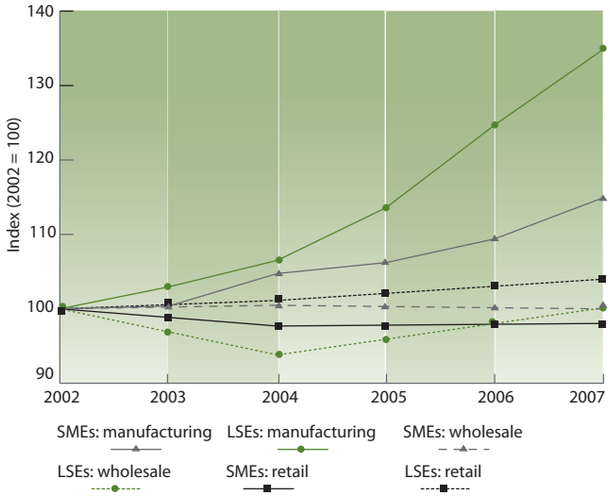
Note: Value added growth in current prices; labour productivity: value added per occupied person.
Source: Eurostat, as elaborated by EIM.

5.2.4 DEVELOPMENTS IN JAPAN (5)

In Japan growth differences between small and large enterprises are rather small in wholesale and retail trade (Figure 16). The manufacturing sector stands out as in this sector LSEs show a much stronger sales growth than SMEs.

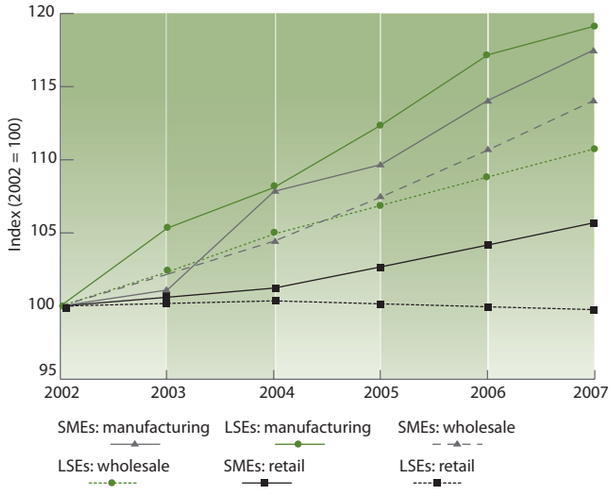
Regarding labour productivity growth – as measured by sales per worker instead of by value added per worker as for the EU – the size class pattern in the Japanese economy is more diverse than in the EU. In wholesale and retail trade, sales per worker have increased most in smaller enterprises (less than 100 workers in wholesale trade, less than 50 in retail trade). In manufacturing industries, Japanese LSEs have a slight advantage over SMEs regarding labour productivity growth.

FIGURE 16 DEVELOPMENT OF TOTAL SALES IN MANUFACTURING, WHOLESALE, AND RETAIL, BY SIZE-CLASS, JAPAN, 2002-2007 (INDEX: 2002 = 100)



Source: JSBRI (2009), as elaborated by EIM. Note: Data for manufacturing refer to value-of-shipments. SME definition: manufacturing: 4-299 workers; wholesale: 1-99; retail: 1-49. The graphs for manufacturing are based on annual data, while the graphs for wholesale and retail are based on figures for 2002, 2004, 2007 (remaining years interpolated).

FIGURE 17 DEVELOPMENT OF TOTAL SALES PER WORKER BY SIZE-CLASS, JAPAN, 2002-2007



Source: JSBRI (2009), as elaborated by EIM. Note: Data for manufacturing refer to value-of-shipments per worker. SME definition: manufacturing: 4-299 workers; wholesale: 1-99; retail: 1-49. The graphs for manufacturing are based on annual data, while the graphs for wholesale and retail are based on figures for 2002, 2004, 2007 (remaining years interpolated).

(5) Unfortunately, no production-related data are available for the United States so a comparison between the EU and the USA regarding production and labour productivity can not be made.

[6] Profitability, investment, and finance

6.1 Profitability

Profitability, measured as the gross operating surplus adjusted for the imputed wage of self-employed individuals, as a percentage of gross value added (1), is affected positively by labour productivity and negatively by labour costs per employee. In Table 24 it is shown that for the total EU-27 non-financial business economy, this profitability measure amounts to 30 % of total value added. On average, the smaller the enterprise, the lower the resulting profitability. It appears that the size class differentials in labour cost per employee do not fully offset higher labour productivity in larger firms. Even when an adjustment for the sector structure of SMEs is made, micro enterprises still have the lowest profitability (2).

Notwithstanding the overall size-class differentials shown in Table 24, in some sectors of industry, SMEs and particularly micro firms are more profitable (in the definition adhered to in this report) than LSEs. This can be seen in Table 25. For instance, in the sector real estate, renting and business activities, SMEs are more profitable than LSEs. High profitability for smaller firms also occurs in the large-scaled sectors electricity, gas and water supply, and mining and quarrying. In the other sectors of industry, SMEs' – and specifically micro enterprises' – profitability is below that of LSEs. Furthermore, typically small-scaled sectors of industry (construction; wholesale and retail trade; hotels and restaurants; real estate, renting and business activities) have overall profitability measures below the non-financial business economy average.

In Figure 18 it is shown how the profitability measure of enterprises has developed between 2002 and 2008. In small, medium-sized and large enterprises, profitability has improved; in micro enterprises it has declined. The figure suggests that in particular micro enterprises' profits are vulnerable to downturns, as 2003 and particularly 2008 are years with low economic growth in many EU-countries. During the initial phase of economic downturns labour hoarding plays a bigger role in smaller firms (compared to large firms), which negatively impacts profitability. Micro firms also have fewer possibilities to influence output and input prices.

(1) No direct data on enterprises' profits exist. Therefore, the share of the operating surplus in value added is used as a proxy. Two qualifications are in order. First, a large share of the labour input of SMEs is provided by self-employed and unpaid family workers. 20 % of the workforce in SMEs consists of self-employed and unpaid family workers. In micro enterprises, this percentage is 41 %. These workers do not receive wages and they are not included in labour costs. A correction was made by using an imputed wage for their labour input, calculated as the number of self-employed and unpaid family workers times the corresponding sectoral labour cost per employee. Second, preferably net operating surplus should be used, but at the disaggregated level of enterprise size classes, only data on gross operating surplus (including depreciation) are available.

(2) To some extent the disturbing impact of including depreciation on the profitability measure can be eliminated by adjusting for differences in sectoral structure as well. The sector adjustment was made to make sure observed size-class differences in the gross operating surplus adjusted for the imputed wage of self-employed do not simply result from differences in sector structure.

TABLE 24 Estimated profitability of enterprises, non-financial business economy, by size class, EU-27, 2008

	Micro	Small	Medium-sized	SME	Large	Total
Profitability (% gross value added)						
Labour costs	45	67	65	58	64	61
Imputed wage self-employed	42	4	1	17	0	10
Gross operating surplus adjusted for imputed wage self-employed	13	30	35	25	36	30
Ditto, adjusted for differences in sectoral structure	16	32	34	27	32	30
Memorandum items (EUR 1 000)						
Labour productivity: value added per occupied person	32	42	49	39	59	46
Labour cost per employee	27	29	32	29	38	33

Source: Eurostat, as elaborated by EIM.

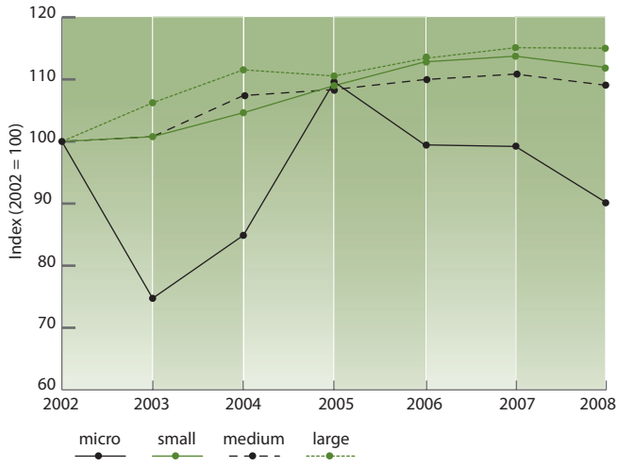
TABLE 25 Estimated profitability (gross operating surplus adjusted for imputed wage of self-employed) of SMEs, by NACE section, EU-27, 2008 (% of gross value added)

		Micro	Small	Medium-sized	SME	Large	Total
c-i, k	**Non-financial business economy**	**13**	**30**	**35**	**25**	**36**	**30**
	By NACE section						
c	Mining and quarrying	88	67	73	76	78	78
d	Manufacturing	13	31	33	29	38	34
e	Electricity, gas and water supply	84	75	69	74	64	67
f	Construction	14	27	30	22	25	23
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	1	34	47	25	28	25
h	Hotels and restaurants	-78	8	29	-28	32	-14
i	Transport, storage and communication	-2	16	23	12	46	35
k	Real estate, renting and business activities	34	31	26	31	6	24

Source: Eurostat, as elaborated by EIM.

In contrast with the EU, profit developments in 2008 in the US and Japan have been better for small enterprises compared to large ones. In the US, corporate profits in 2008 were 10.7 % lower compared to 2007. The largest part of the decrease occurred in the fourth quarter. In contrast, proprietorship income, being a rough indicator of small firm profitability, increased 1.6 % between 2007 and 2008 (3). Japan shows a larger decrease in the profit to sales ratio for large firms compared to small firms in 2008, particularly in the fourth quarter (4).

FIGURE 18 Development of profitability (gross operating surplus adjusted for imputed wage of self-employed) by size class in the non-financial business economy, EU-27, 2002-2008 (index: 2002 = 100; 2007, 2008: estimates)



Source: Eurostat, as elaborated by EIM.

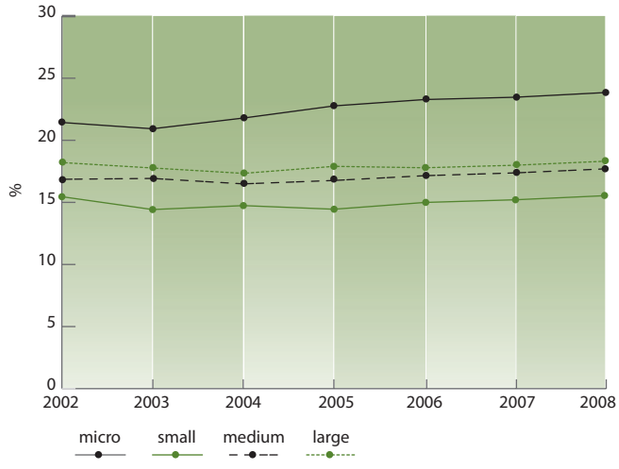
6.2 The propensity to invest

6.2.1 INVESTMENTS BY SIZE CLASS

The propensity to invest in tangible goods as a percentage of gross value added does not differ greatly between SMEs and LSEs. However, micro enterprises show a propensity to invest well above average (24 % versus 19 %), while the investment propensity is below average in the other size classes (see Figure 19).

This is mainly a sector effect. In particular for real estate, renting and business activities the micro enterprises' propensity to invest is well above the sector average (see Table 26) (5).

FIGURE 19 Propensity to invest (gross investment in tangibles as percent of value added) by size-class, EU-27, 2002-2008 (%; 2007, 2008: estimates)



Source: Eurostat, as elaborated by EIM.

(3) SBA, United States, Office of Advocacy (2009).
(4) JSBRI (2009).
(5) The sector is comprised of real estate activities; renting of machinery and equipment; computer and related activities; research and development; and other business activities.

TABLE 26 ESTIMATED PROPENSITY TO INVEST (GROSS INVESTMENT IN TANGIBLES AS PERCENT OF VALUE ADDED), BY SIZE CLASS AND SECTOR OF INDUSTRY, EU-27, 2008

		Micro	Small	Medium-sized	SME	Large	Total
c-i, k	**Non-financial business economy**	**24**	**16**	**18**	**19**	**18**	**19**
	By NACE section						
c	Mining and quarrying	15	24	33	25	28	27
d	Manufacturing	14	14	14	14	14	14
e	Electricity, gas and water supply	44	37	32	36	37	37
f	Construction	11	11	12	11	10	11
g	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	13	12	13	12	15	13
h	Hotels and restaurants	22	19	23	21	16	20
i	Transport, storage and communication	25	23	26	25	25	25
k	Real estate, renting and business activities	39	20	25	30	15	26
	(of which real estate activities)	(76)	(51)	(62)	(69)	(47)	(66)

Source: Eurostat, as elaborated by EIM.

Since, within the group of micro firms, real estate, renting and business activities make up a large part (37 %) of total value added, the high investment propensity of micro firms in this sector has a relatively big impact on the investment propensity of micro firms in the total non-financial business economy. Within the real estate, renting and business activities sector, the propensity to invest is particularly high (76 %) in real estate activities. The high investment propensity of micro firms in real estate activities is closely related to the relatively high levels of profitability and labour productivity of micro firms in this sector, reflecting the high capital intensity of this sector. In the non-financial business economy excluding real estate activities, the propensity to invest by micro enterprises does not differ much from average, notwithstanding relatively low profitability. A reason for this may be the upfront investment associated with enterprise birth, compensating the negative impact of below-average profitability.

6.2.2 CURRENT AND FUTURE DEVELOPMENTS

At the macro-economic level, investments have decreased dramatically in 2009, and according to the European Autumn 2009 Economic Forecast, they will a further decline in 2010. The negative trend in investments in 2009 in Europe is confirmed by the ECB Bank Lending Survey (October 2009) where, for the euro area, it was found that 'fixed investment' contributed most strongly to *decreases* in demand for loans, much more strongly than 'inventories and working capital'. This holds for all four quarters between the fourth quarter of 2008 and the third quarter of 2009. On the other hand, 'debt restructuring' contributes positively to demand for loans, suggesting that firms are facing problems with their daily cash flows.

Regarding size classes in the EU, the continued decrease in investment levels in 2010 applies both to large and small firms. However, the negative trend may be strongest for micro firms. Estimates suggest that profitability of particularly micro firms has decreased in 2008, suggesting that the typical strategy of many owner-managers of micro firms to rely on internal finance for their investments will no longer be sustainable ([6]). However, external finance is not readily available due to increased tightening of credit conditions by banks ([7]). In particular micro firms increasingly face problems obtaining bank loans, which negatively influences investments.

(6) Cassar (2004), Kitching *et al.* (2009), Michaelas *et al.* (1999).
(7) ECB (2009a).

6.3 Trends and issues in SME financing

6.3.1 STRUCTURAL CHARACTERISTICS

Enterprises have a number of options to finance their business. The pecking-order theory, originally developed by Myers (1984) and Myers and Majluf (1984) says that, due to information asymmetries between firms and their (potential) investors regarding the firms' current operations and future prospects, the investors will ask a return on the capital that is lent – in case of debt finance or invested – in case of equity finance. As a result, firms find external finance (debt or equity) less attractive than internal finance (personal savings or retained earnings) ([8]). And because information asymmetries are the highest for small and new firms, leading potential financiers to ask even greater returns on capital, the preference for internal finance is greatest among these firms ([9]).

Even though internal finance is the preferred form of finance among smaller firms, external finance is often required, for instance because internal resources are too limited to finance new investments ([10]). Bank lending is the largest source of external SME finance, and is used for financing investments, working capital and stock financing ([11]). As SMEs have fewer financing options than LSEs, small firms in need of external finance are very much dependent on banks, SMEs are particularly vulnerable to the credit crunch ([12]). For instance, the information asymmetries mentioned above may lead banks to ask higher interest rates to small firms, or even refuse a loan altogether. Banks may also refuse loans when security is inadequate ([13]).

A second available source of external finance, in particular for micro firms, is formed by micro-credits. On July 2, 2009, the European Commission proposed to set up a new micro-finance facility providing micro credit to small and micro businesses and to people who have lost their jobs and want to start their own businesses. The initial budget is EUR 100 million. EU micro credits are loans under EUR 25 000, tailored to micro-enterprises employing less than 10 people, and unemployed or inactive people who want to get involved in self-employment but do not have access to traditional banking services ([14]).

Formal venture capital by institutional investors has – so far – been only an option for a very small minority of SMEs ([15]); particularly those with high growth potential and with a feasible exit route for investors. Even if SMEs have this profile, venture capital is an extremely scarce and expensive form of finance for SMEs at the start-up stage of their life cycle. Besides, the supply of venture capital funding is currently declining as well ([16]).

Therefore, business angel finance and informal investment from friends and family members comprise the main source of equity finance for early stage SMEs ([17]). These forms of finance have become even more important given that the availability of loan finance (even secured on personal rather than business assets) for SMEs has been radically reduced since the onset of the credit crunch in 2008. In the current financial crisis, given the difficulties to obtain bank loans, the demand for informal investments may be expected to increase, particularly when demand in the product market increases again. However, the supply of informal investment is likely to remain tight for a number of years as the credit crunch has reduced the liquidity of personal assets (particularly the ability to leverage finance against equity in private property) and hence will limit funds available for informal investors. Bosma and Levie (2010) report that in 2009 'there was a significant decline in the average informal investor prevalence rate of G7 nations in 2009'.

Summarizing, cyclicality is a structural characteristic of SME finance. Ruis *et al*. (2009) find that economic cycles have a significant impact on bank lending to SMEs, in particular on medium-sized enterprises. Michaelas *et al.* (1999) find that during recessions the relative use of short-term debt (used to finance possible cash flow shortages) increases while the relative use of long-term debt (used to finance investments) slows down.

6.3.2 ACCESS TO FINANCE FOR SMES SERIOUSLY IMPAIRED IN 2009

The current financial and economic crisis has an adverse effect on SMEs' access to bank financing. Based on a survey of firms in the euro area between June and July 2009, the European Central Bank reports that in the first half of 2009, SMEs' access to finance deteriorated ([18]). The ECB survey also reveals that in particular non-price terms and

(8) Cassar (2004, p. 264) even concludes that 'these exposures will lead to the firm preferring inside finance to debt, short-term debt over long-term debt, and any debt over outside equity'.

(9) The empirical evidence supporting the pecking-order theory is abundant; see Klapper *et al.* (2006) for empirical evidence on SME financing in Poland, Mac an Bhaird and Lucey (2007) for Ireland, Michaelas *et al*. (1999) and Kitching *et al*. (2009) for the UK, Cassar (2004) for Australia, Ramalho and Vidigal da Silva (2007) for Portugal, and Carpenter and Petersen (2002) for the US.

(10) Carpenter and Petersen (2002).

(11) Although many SMEs use internal finance only, SMEs using external finance form an important group, because they are often innovative firms with an ambition to grow (OECD, 2009c).

(12) In OECD (2009c), five more reasons are provided why SMEs are vulnerable in times of crisis.

(13) Ruis *et al*. (2009).

(14) Source: Press release European Commission, see http://ec.europa.eu/social/main.jsp?langId =nl&catId =89&newsId =547. The importance of micro-credits for the smallest firms is also recognised in OECD (2009c).

(15) Bosma and Levie (2010, p. 55) report that over the last forty years only 30 thousand businesses in the US have ever received formal venture capital.

(16) See Lerner (2010), Mason (2009) and OECD (2009c).

(17) Within the group of informal investors, two categories are distinguished. First, there are individuals investing in firms of friends and family (also known as F&F investors). Second, there are individuals, business angels, investing in firms more purely for financial reasons. Business angel investments are carried out in a more professional manner than F&F investments.

(18) In particular, '43 % of those SMEs that had applied for a bank loan during that period [the first half of 2009] reported a deterioration in availability, while only 10 % saw an improvement' (ECB, 2009b).

conditions (i.e. charges, fees and commissions) and collateral requirements tightened in the first half of 2009 for SMEs in the euro zone [19]. For micro firms, increases in bank lending rates are also frequently reported as a source of deteriorating access to finance.

A follow-up study by the ECB, surveying firms in the euro area between November and December 2009, reveals that especially micro firms increasingly face problems in getting access to finance [20]. First, the survey reveals that during the second half of 2009, the need for bank loans of small and, especially, micro firms increased because the internal resources of these firms are drying up [21]. Secondly, in their attempts to obtain bank loans, micro firms, more often than other firms, faced problems in obtaining them [22].

As regards sectors of economic activity, firms in capital-intensive industries have a bigger chance of having their application for external finance approved, compared to labour intensive service industries. This is related to the bigger availability of collateral in capital-intensive firms [23].

A report by UEAPME on the financial and economic crisis in ten European countries, dating from July 2009, can be summarised as follows [24]. Banks are more risk averting, asking higher risk margins, demanding more collateral and securities notwithstanding lower demand for loans due to the recession. Many companies report significant impact of financial difficulties on investment and employment.

In the United States decreased access to finance for SMEs materialised shortly after the financial crisis began in September 2008. The flow of funds to small firms was much curtailed by the fourth quarter of 2008, where only the highest quality borrowers were able to obtain financing [25]. The lower rate of lending dramatically disrupted the flows of working capital to the small business economy. Based on SBA data, The Economist (2009b) shows a high level of net-tightening of small business lending standards in the US in 2008. This was followed by a huge drop in demand for loans by small businesses in the first half of 2009. By the third quarter of 2009, the decrease in the demand for loans by small firms had become smaller, indicating the first signs of recovery of the US small business economy. Also, net-tightening of lending conditions decreased in the first three quarters of 2009. As in Europe, lending conditions still deteriorate [26].

6.3.3 LACK OF EFFECTIVE DEMAND EVEN MORE PRESSING THAN FINANCE CONSTRAINTS

However, not all SMEs experience problems in getting access to finance. Since demand for products and services of firms have decreased sharply during the crisis, many firms do not feel the need to invest, and hence do not apply for bank loans. Indeed, in the ECB Bank Lending Survey of October 2009, about 50 % of the banks participating in the survey say that the demand for loans or credit lines to enterprises at their bank 'remained basically unchanged', compared to the previous quarter. This also holds for the second quarter of 2009 and applies equally to loans to SMEs and large enterprises [27]. This finding from responses of banks is confirmed by responses of SMEs in the ECB Survey on the access to finance. About half of euro area SMEs reported no major change in financing needs in both the first and the second half of 2009 [28].

ECB (2009b) reports that the most pressing problem facing euro area SMEs in the first half of 2009 is 'finding customers' (27 %). Access to finance is the second most important problem (17 %). For the second half of 2009, these percentages amount to 28 and 19, respectively (ECB, 2010) [29]. This suggests that demand conditions on product markets are an even more important problem than getting access to finance. Indeed, a UK survey among 800 SMEs interviewed between November-December 2008 finds that in 2008, market demand constraints are regarded 94 % higher than finance constraints [30]. The authors also compared their results to a similar survey held in 1991 (also a recession year in the UK). The demand constraint was regarded more important than the finance constraint in both 1991 and 2008, but in 2008, the importance of the demand constraint was twice as large as in 1991. Also in the US poor sales are currently a more important problem than access to credit [31].

(19) ECB (2009b).

(20) ECB (2010).

(21) In particular, a lower percentage of micro firms (46 %), relative to small, medium-sized and large firms (49 %, 60 % and 68 %), indicated that over the last six months, internal funds were used to finance day-to-day business operations or specific projects or investments (ECB, 2010). Given the strong preference for internal finance of micro firms, this indicates an internal finance constraint. This, in turn, increases the need for external finance. Indeed, when respondents were asked whether the need for bank loans increased or decreased over the last six months, a net percentage of 20 % of micro firms indicated that this need had increased. These percentages are 15, 8 and 6 for small, medium-sized and large firms, respectively.

(22) In particular, among the group of firms applying for a bank loan, 50 % of micro firms 'applied and got everything' (58, 66 and 72 % for small, medium, and large firms, respectively), while 24 % of micro firms 'applied but were rejected' (15, 11 and 5 % for small, medium, and large firms, respectively). Also, a net percentage – 'net' referring in this case to the difference between those who agreed and those who disagreed to the question – of 41 % of micro firms indicated that availability of bank loans deteriorated in the second half of 2009 (24, 29 and 29 % for small, medium, and large firms, respectively). Finally, a net percentage of 14 % of micro firms indicated that interest rates were increased by their banks (4, 2 and 9 % for small, medium, and large firms, respectively).

(23) See Michaelas *et al*. (1999) and Snoei and De Jong (2009).

(24) UEAPME (2009b).

(25) SBA (2009).

(26) The Economist (2009b).

(27) ECB (2009a).

(28) ECB (2009b, p. 4), and ECB (2010).

(29) Finding customers is mentioned as most pressing problem by 29 % of micro firms, 25 % of small firms, 29 % of medium-sized firms, and 24 % of large firms. Access to finance is mentioned by 21 % of micro firms, 19 % of small firms, 17 % of medium-sized firms, and 12 % of large firms (ECB, 2010).

(30) This percentage varies between 85 % for micro firms and 99 % for small firms (95 % for medium-sized firms). See Cosh *et al*. (2009).

(31) Dennis (2010).

Kitching *et al*. (2009) have conducted a large scale survey among SMEs (and particularly micro firms) in the UK between March and August 2009. Out of a list of five possible negative finance-related effects of the crisis, late payment by customers turned out to be the most important constraint (mentioned by 64 % of respondents) ([32]). Availability of bank loans/overdraft was mentioned only by 24 %. In fact, 79 % of respondents indicated to have never used bank loans, while another 13 % indicated that their use of bank loans did not change between the first quarter of 2008 and the first quarter of 2009. On the other hand, during this period 22 % of the owner-managers surveyed had increased their use of personal savings to finance their business operations.

To summarise, demand constraints on the product market are now even more restrictive for SMEs to meet their business objectives than finance constraints. Nevertheless, once demand for their products and services starts to increase again, access to external finance will become a more important issue for a larger part of the SME population. Supply of finance will remain scarce and reliance on internal resources alone will not be a sustainable approach for future investment in business growth ([33]).

(32) In 2009 the European Commission has amended the existing directive on late payments. In particular, public authorities will have to pay contractors within 30 days or face financial penalties. The amendment is expected to benefit SMEs that win public contracts by improving cash flow. Source: press release European Commission, see http://www.euractiv.com/en/enterprise-jobs/eu-moves-fight-late-payments-smes/article-181164. See also OECD (2009c).

(33) See Beck *et al*. (2006) and Carpenter and Petersen (2002).

[7] Conclusions

7.1 Structure and trends

7.1.1 THE TYPICAL ENTERPRISE IS INCREASINGLY A MICRO ENTERPRISE

Of the more than 20 million enterprises in the EU non-financial business economy, about 99.8 % are SMEs (i.e., having less than 250 employed persons). Within the SME-sector, the vast majority (92 %) are micro enterprises, having less than 10 employed persons. The typical EU business is increasingly a micro business. Furthermore, between 2002 and 2008 the number of SMEs in the EU has increased by 2.4 million (or 13 %), whereas the number of large enterprise increased by only 2 000 (or 5 %).

7.1.2 VARIANCE IN AVERAGE FIRM SIZE ACROSS COUNTRIES EU-27 IS DECREASING

Overall the EU-12 and EU-15 do not differ much as regards the average number of employed persons per enterprise. However, the variance in average enterprise size across countries within both groups is large (varying between 3 and 12 occupied persons per enterprise in EU-15, and between 3 and 18 in EU-12). Individual Member States across the whole of the EU-27 have clearly converged in this respect. Countries with initially high average enterprise size in 2002 tend to experience a decrease of average enterprise size in 2002-2008, while countries with initially low average enterprise size have seen an increase.

7.1.3 BETWEEN 2002 AND 2008 SMES WERE THE JOB MACHINE OF THE EUROPEAN UNION

In the past years SMEs were the job machine of the European Union. On average, between 2002 and 2008, the number of jobs in SMEs increased by 1.9 % annually, while the number of jobs in large enterprises increased by 0.8 % annually. In absolute numbers 9.4 million jobs were created in the SME-sector between 2002 and 2008.

7.1.4 SMES LAG IN LABOUR PRODUCTIVITY

SMEs have a lower labour productivity than large enterprises. Labour productivity is lowest in micro enterprises at EUR 32 000, while in LSEs, a worker on average contributes EUR 59 000 to GDP. Consequently, SMEs (and micro enterprises in particular) exhibit lower profitability than large enterprises. The lower labour productivity of SMEs compared to large firms reflects differences in sector structure as well as in capital intensity. It also indicates a lesser ability of smaller enterprises to reap scale economies and the use of lower qualified personnel.

7.1.5 MICRO ENTERPRISES HAVE HIGHEST PROPENSITY TO INVEST

For the EU non-financial business economy, the propensity to invest is structurally highest for micro firms. For micro firms, gross investment in tangible goods amounts to 24 % of value added, compared to 19 % for all firms. The higher propensity for micro firms is mainly a sector effect. It reflects a relatively high propensity to invest (76 %) by micro firms in the real estate activities, which, in terms of value added, comprises 13 % of the total micro firm sector. This high investment propensity is partly related to relatively high levels of profitability and labour productivity of micro firms in this sector. However, the propensity to invest in micro enterprises excluding real estate is still higher than could be expected on the basis of their profitability.

7.2 SMEs in the financial and economic crisis

7.2.1 MAIN EFFECT OF THE ECONOMIC CRISIS IS A LACK OF MARKET DEMAND

The financial and economic crisis has grave consequences for the business performance of many small and medium-sized enterprises in Europe. In 2009, production growth of SMEs in the EU-27 is estimated to have declined by 5.5 %. In the second half of 2009, lack of market demand was the most pressing problem for 28 % of SMEs in the euro area. In the coming years SMEs, which are heavily oriented towards the domestic market, will experience continued weak market demand.

7.2.2 SME FINANCE IS CURRENTLY THE SECOND BIGGEST PROBLEM FOR SMES

Access to finance is another important problem for SMEs, although in the short run it is less pressing than lack of market demand. In the second half of 2009 access to finance was the most pressing problem for 19 % of SMEs in the euro area. Especially micro firms increasingly face problems in getting access to finance. Due to the financial and economic crisis banks are now more risk averse, ask higher risk margins and require more collateral. Once the demand for products and services starts to increase again, access to finance will become an even more pressing issue for an increasing share of the SME population.

In the United States decreased access to finance for SMEs also materialised shortly after the financial crisis begun in September 2008. A huge drop in demand for loans by small businesses occurred in the first half of 2009, as economic activity had slowed down. By the third quarter of 2009, the decrease in the demand for loans by small firms had become smaller, indicating the first signs of recovery of the US small business economy. Also, net-tightening of lending conditions decreased in the first three quarters of 2009. The net percentage of tightening is still positive.

7.2.3 DISCONTINUATION OF UPWARD TREND IN THE NUMBER OF SMES

Based on recent data it is likely that the economic crisis has caused an abrupt discontinuation of the upward trend in the number of SMEs in the EU-27. While 2008 already showed a deceleration, in 2009 the growth of the number of businesses in the EU is estimated to have stalled. In the US the crisis even caused an absolute decline in the number of firms. Japan presents an altogether different case, where the number of firms has been structurally decreasing since the 1980s.

However, underlying structural determinants of the earlier growth trend in the number of enterprises in the EU are nonetheless expected to remain relevant in the coming years. They include the Internet revolution, the growth of the services sector and institutional developments favouring self-employment. When economic growth seriously picks up again, the number of enterprises is expected to resume its upward development.

7.2.4 THE SME JOB MACHINE FALTERS

The SME job machine now falters as the deep recession inevitably leads to job shedding in all size classes. In 2009 this happened mostly in large and medium-sized firms. In 2010, even though production growth is expected to gradually pick up again, lagged adjustment will cause a relatively large decline of employment in micro and small enterprises. Over 2009 and 2010, the SME sector may loose in the order of 3.25 million jobs in total.

7.2.5 INCREASE IN BUSINESS CLOSURES

The inevitable increase in business closures accompanying the recession burdens society with additional costs. On the other hand, it also creates more room in the market for innovative business start-ups and new business development by incumbent firms. In the longer run, enhanced business dynamics may be expected to have a positive effect on future economic growth and new job creation.

7.3 Policy implications

Below some policy implications of the research findings in this report are briefly summarised. These implications concern specific SME policies as well as more general economic policies with relevance for SMEs.

1. Because a lack of market demand is now the major problem for SMEs, attention for stimulating demand should be a prime concern for policy makers. Given the large government budget deficits increasing government expenditures or lowering taxes are not very realistic options for most countries. However, measures to facilitate and promote exports would directly support SMEs that export their products or are subcontractors to exporting businesses. In addition, as exports now are a major engine of the economic recovery, many more SMEs will indirectly benefit from such policies.

2. New business start-ups contribute to innovation, economic growth and employment creation. Policy may foster start-ups and the attractiveness of entrepreneurship by removing unnecessary administrative burdens and improving incentive structures influencing the choice of labour market participants between wage-employment and self-employment. The importance of new business initiatives may also be a warning for governments to be careful in providing direct financial support to existing firms. In the end, such support may also lead to weaker firms and hamper the birth and growth of innovative and/or more efficient enterprises.

3. Rigid labour market regulations are negatively associated with various measures of entrepreneurship. First, more rigid labour market regulation (e.g. higher employment protection) makes it less attractive for employees to leave their wage job. Second, it also makes entrepreneurs more hesitant to grow their businesses. Improving flexibility may thus be another prime concern for policy makers.

4. For SMEs that need bank loans to finance new investments, the situation is problematic as banks are currently very reluctant to provide loans. This may hamper the economic recovery. Bank guarantee systems implemented by governments have proven to be an effective way to make bank lending easier. Lowering the conditions of guaranteed loans would make life much easier for SMEs and is less costly than direct financial support to businesses. In the medium term, when the economic recovery gains momentum and increasing numbers of SMEs will resume investments, access to finance will become an even more pressing issue.

5. During an economic slowdown or recession late payments become an even bigger problem than under normal circumstances. Especially SMEs suffer from late payments. This issue certainly deserves the attention it is now receiving from the Commission.

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