European Commission

# ANNUAL REPORT ON EUROPEAN SMEs 2014/2015

## SMEs start hiring again

*Internal Market, Industry, Entrepreneurship and SMEs*

# Annual Report on European SMEs 2014 / 2015

## SMEs start hiring again

SME PERFORMANCE REVIEW 2014/2015

FINAL REPORT

NOVEMBER 2015

This report has been prepared in 2015 for the European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs; Directorate H: COSME Programme; Unit H1: COSME Programme, SME Envoys and Relations with EASME by the consortium composed of:

CARSA
PwC Luxembourg
Innova SpA
The University of Manchester, Manchester Institute of Innovation Research
London Economics
DIW Berlin
DIW Econ

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## DISCLAIMER



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# FOREWORD

For the first time in a number of years, our annual EU SME report presents good news at a time when the EU has 23 million unemployed citizens, many of whom are young and have not yet started their careers.

There are positive signs of a turn-around for Europe´s SMEs. As the report finds, a sizeable minority of SMEs have already expanded their businesses and workforces and it is particularly encouraging to note that many of these are young firms.

The report also states that there is no reason for complacency. Many more SMEs need to join the club of job creators. In terms of policy, this means that Member States and the European Commission need to continue their efforts to create the best possible policy environment. This requires a comprehensive approach, with SMEs at the centre. A priority strongly endorsed by the European Commission under the mandate of President Juncker.

Tangible progress has been made since the adoption of the Small Business Act for Europe (SBA) in 2008. The findings of DG GROW´s SME Performance Review– our analytical tool that monitors the SBA´s implementation – confirms such progress. However, further efforts are needed to fully implement the SBA in Member States. This Commission´s SME strategy encompasses all EU policy areas. All newly initiated EU policy packages are designed with SMEs in mind. The new Single Market Strategy (SMS) is an example. The SMS sees the potential of the EU as a tool for building a stronger and fairer EU economy, one market place with fewer obstacles to enable the free movement of goods and services.

As the EU SME Envoy and Member of the Commission for the Internal Market, Industry, Entrepreneurship and SMEs, I am ideally placed to coordinate the SME policies of the Commission and of the Member States. For me, the findings of this report demonstrates that our joint efforts are starting to show positive results as well as a positive and encouraging challenge to ensure that we remain engaged in pro-SME policy reforms in the EU.

Elżbieta Bieńkowska
Member of the Commission for the Internal Market, Industry, Entrepreneurship and SMEs and EU SME Envoy

# EXECUTIVE SUMMARY

This report provides an overview of the past and forecasted performance of SMEs from 2008 to 2016, and reviews in greater detail the contribution of SMEs to employment creation.

SMEs accounted for 71.4% of the increase in employment in 2014 in the non-financial business sector, which includes all sectors of the economy except for 'financial services', 'government services', 'education', 'health', 'arts and culture', 'agriculture, forestry and fishing'. SMEs are a highly diverse population of enterprises, and are present in every nook and cranny of the economy, with activities ranging from the production of artisan food to the production of high tech space exploration equipment, from retail services to the provision of highly specialised professional services, from focusing primarily on serving domestic customers to focusing mainly on the export markets.

In short, SMEs are ubiquitous, and in 2014 accounted for 99.8% of all enterprises in the non-financial business sector in the EU28. For every $km^2$ of land surface the EU has an average of 5 SMEs. Moreover, in 2014 SMEs employed almost 90 million people - 67% of total employment, and generated 58% of the sector's value added.

Almost all SMEs (93%) are micro SMEs employing less than 10 people. About three quarters of SMEs are active in the five key sectors: 'wholesale and retail trade', 'manufacturing', 'construction', 'business services' and 'accommodation and food services'.

The tentative green shoots of growth of 2013 gained in strength in 2014. Namely, in 2014 EU28 SME value added grew by 3.3% and employment by 1.2%, while in 2013 value added grew by 1.6% and employment declined by 0.5%.

However, the positive 2014 experience was not shared by all Member States - SMEs in Cyprus, Sweden, Croatia, Greece, Italy and the Czech Republic showed a decline in value added, which in the case of Cyprus and Italy was also accompanied by a reduction in employment.

Among the five key sectors, the 'business services' sector was at the EU28 level the star performer across all three SME performance indicators (i.e. regarding increase in employment, value added and number of SMEs). Value added in this sector grew by more than 5% in 2014.

The other four key sectors and the 'other' sector also recorded good value added growth ranging from 2.7% to 3.4%, but the employment growth performance of these sectors was much weaker, especially in 'construction' where employment continued to fall in 2014 (despite an increase of 3.4% in value added) and 'manufacturing' where employment grew by only 0.8%.

The latest developments in EU28 SME performance reflect improving macro-economic and business conditions.

Not all SMEs are out of the woods, though. In particular, SMEs in construction, and, to a somewhat lesser extent, in manufacturing, were hit hard by the economic and financial crisis. Employment in these two sectors in 2014 was still respectively 17% and 11% below 2008 levels, whereas value added in construction remained 18% below its 2008 level and in manufacturing has almost crawled back to

where it stood in 2008. In contrast, SMEs in the 'accommodation and food services' and the 'business services' domains benefitted from robust growth in these sectors.

A more detailed analysis at the Member States level shows that SMEs in only 7 countries (AT, BE, DE, MT, LU, SE and UK) have fully recovered in terms of the number of SMEs, value added and employment. In contrast, SMEs in 9 countries still have to achieve a recovery in any of the 3 performance indicators (EL, ES, HR, HU, IE, IT, PL, PT and RO). In the remaining Member States, SMEs have only achieved a recovery in one or two of the performance indicators.

Drilling further down into the sectorial performance of SMEs across the different Member States, one observes that a full recovery in terms of number of SMEs has been achieved in the majority of Member States in the 'services sectors', while the reverse is true in the 'manufacturing' and 'construction' sectors. The recovery in terms of value added is more uneven:' manufacturing', 'construction', and 'wholesale and retail trade' (the largest sectors) are still lagging behind in most Member States, while 'accommodation', and 'business services' have performed positively throughout almost all the EU28. The performance is somewhat more negative for employment, where only a few countries have achieved more than full recovery in at least four sectors (Austria, Germany, France, Malta, Luxembourg, United Kingdom and Sweden).

The positive developments for EU28 SMEs are expected to gain momentum in 2015 and 2016, with annual growth of, respectively, 3.3% and 3.7% expected for EU28 SME value added, 0.8% and 0.9% for SME employment, and 0.5% and 0.7% for the number of SME enterprises.

Medium-sized SMEs are forecast to do slightly better than small and micro enterprises in both 2015 and 2016 and across all three indicators.

SME growth is also expected to be more balanced in terms of sectorial growth, with all the major SME sectors predicted to take part in the overall upswing of SME activity. However, 'construction' and 'manufacturing' are forecast to continue to lag behind the other sectors.

Member States are projected to continue to exhibit a great deal of diversity in terms of SME performance in 2015 and 2016.

The SME sector contributed disproportionally to both the decline in employment from 2008 to 2013 and the subsequent employment recovery, as SMEs accounted for 67% of total EU28 employment in the non–financial business sector in both 2008 and 2013. Within the group of SMEs, micro SMEs accounted for a disproportionally large share of the decline in SME employment from 2008 to 2013.

To gain a deeper understanding of the SME employment creation dynamics, this year's SME Annual Report explores the SMEs employment creation performance.

The EU28 shows a great deal of heterogeneity in SME employment creation across Member States and sectors of economic activity.

- Only eight Member States (AT, BE, DE, FR, LU, MT, SE and UK) show SME employment growth from 2008 to 2014, with double-digit growth in four of them (BE, DE, FR and MT). Among the 20 Member States with net SME employment reduction over the period 2008 to 2014, eight Member States (Lithuania, Italy, Croatia, Latvia, Cyprus, Portugal, Spain and Greece) post double-digit net employment losses.

- The strongest SME employment growth was recorded mainly in sectors which are small. For example, the best performers in terms of SME employment creation were 'electricity, gas steam and air conditioning supply, water supply', 'administrative and support service activities', and 'sewerage, waste management and remediation'. These sectors show employment growth in excess of 10% over 2008-2013, but they account for less than 10% of total SME employment. Employment in some of the larger sectors such as 'food and beverage service', 'legal and accounting', and 'real estate', grew by 10%, 9%, and 8% respectively over the period 2008-2013. These three sectors account for 8%, 3% and 3% respectively of total SME employment.

It is estimated that one out of five EU SMEs experienced a net growth in terms of employment during the crisis years. This represents a relatively large sub-segment of approximately 4 million of the total 22,3 million SMEs in the EU.

What are the characteristics of these SMEs which appear to be spearheading a recovery in SME job creation?

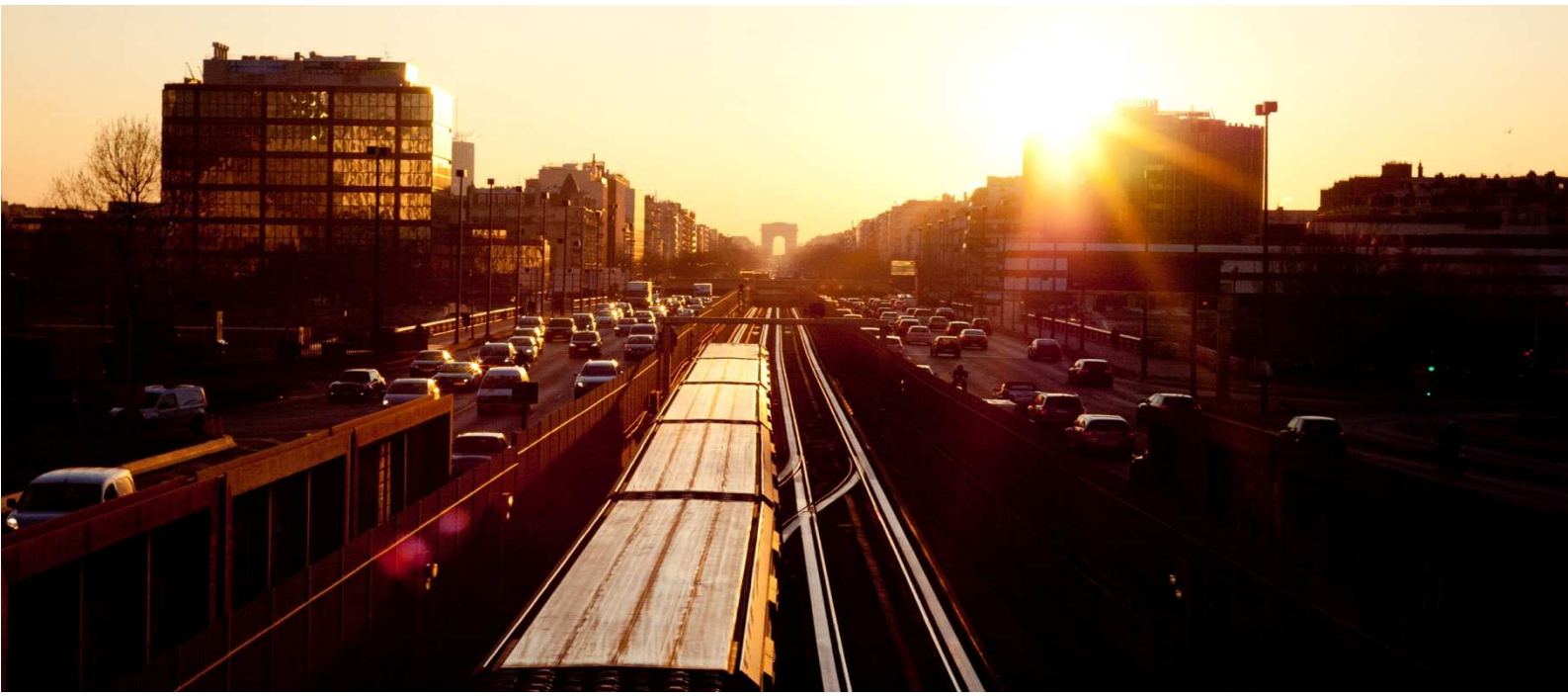
Firstly, the job-creating SMEs were primarily those providing services. They were far more prominently represented in this group than, for instance, manufacturing firms. However, there is no reason or indication to assume that manufacturing firms could not replicate the employment expansion observed in the services firms.

Secondly, net employment creation was particularly strong from 2008 to 2014 in knowledge-intensive services. This was the case across all three SME size classes (i.e. micro, small, and medium-sized firms). In contrast, all of the four types of technology-intensive goods producing sectors (ranging from low technology to high technology) showed net job losses between 2008 and 2013. During this period the less technology-intensive SMEs lost a higher proportion of their jobs than the more technology-intensive SMEs. In 2014, in terms of employment, the goods-producing sectors stagnated.

Thirdly, young SMEs of no more than nine years of age were the main net employment creators in recent years. However, a number of older firms created new jobs as well, or kept their staff, which contributed to stabilising the labour market as a whole.

Finally, general economic conditions, especially the macro-economic environment, have a major influence on the SME's employment creation performance. This means that many of the job-creating firms were based in Member States with a more favourable macro-economic environment.

Thus, while the analysis found that particularly young firms active in knowledge-intensive service sectors and based in favourable macro-economic conditions were the main net job creators, one should not neglect or underestimate the importance of all the other SMEs for the growth and jobs in the EU. As this report focuses on the analysis of recent SMEs trends, it cannot provide detailed recommendations as regards the future course of EU SME policy, but may stimulate the discussion not only on how the success of the best performing group of SMEs can be sustained, but also on how can it be replicated across all sectors, SME age classes and Member States.



# 1. Introduction

***More than 22 million SMEs were active in the EU28 in 2014***

***They employed almost 90 million people***

***They accounted for 58 % of the value added generated by the EU28 non-financial business sector***

## *Preliminary remarks*

SMEs are the backbone of the European economy.

SMEs are defined as businesses which employ less than 250 staff and have an annual turnover of less than EUR 50 million, and / or their balance sheet total is less than EUR 43 million. They comprise three categories of enterprises, namely micro, small, and medium-sized enterprises. The size-class definition used throughout the present report is based on the definitions used in the Structural Business Statistics (SBS) database maintained by Eurostat, and the definition is solely based on the number of people employed (for precise definitions see Annex I.1).

In 2014, 22.3 million SMEs were active in the non-financial business sector across the EU28 (Annex I.2). The non-financial business sector consists of all sectors of the economies of the EU28 or Member States, except for financial services, government services, education, health, arts and culture, agriculture, forestry, and fishing.[1] SMEs account for 99.8% of all enterprises in this sector.

In 2014, SMEs in the non-financial business sector generated more than EUR 3.7 trillion of value added (58% of the sector's total value added), and employed almost 90 million people (67% of the sector's total employment).

***Micro SMEs account for 93% of all SMEs***

Within the SME population, micro-enterprises accounted for 92.7% of all enterprises active in 2014 in the non-financial business sector, and small and medium enterprises for only 6.1% and 1.0% respectively.

In contrast to the concentration of enterprises in the micro SME segment, the relative importance in 2014 of the three SME groups in *total* non-financial sector business employment and value added was much less skewed:

- Micro SMEs accounted for 29.2% of total *employment*, and small and medium-sized SMEs for 20.4% and 17.3% respectively.
- Micro SMEs accounted for 21.1% of total *valued added*, and small and medium-sized SMEs for 18.2% and 18.5% respectively.

Within the micro SMEs, businesses without any employees accounted for 59% of all businesses in 2012, the last year for which such detailed information is available.

This report on the state of European SMEs, published by EC DG Growth, is an integral part of the annual SME Performance Review.

This first chapter provides a brief overview of the annual SME Performance Review, and gives a snapshot of the SME sector in 2014 in the EU28 and selected non-EU countries.

The second chapter reviews the performance of the SME sector in 2013 and 2014, and more broadly since 2008, in the EU28 and selected non-EU countries, and describes the outlook for SMEs in 2015 and in 2016 in the EU28.

The third chapter examines in greater detail the employment record of SMEs in the EU28 during the economic recession and subsequent recovery, seeking in particular to gain a deeper understanding of the features characterising SMEs which have increased their employment.

Finally, the fourth and last chapter summarises the key findings of this year's review and assessment of the performance of SMEs in the EU28, and presents a number of recommendations aimed at improving the performance of SMEs in the years ahead.

## SME Performance Review and the Small Business Act

The SME Performance Review is one of the main tools used by the European Commission to monitor and assess countries' progress in implementing the Small Business Act (SBA) on a yearly basis.

The review provides extensive information on the implementation of the measures from the SBA Action Plan, and on the performance of SMEs in EU Member States and 7 partner countries (Albania, the Former Yugoslav Republic of Macedonia, Iceland, Moldova, Montenegro, Serbia, and Turkey).

The output of this review consists of two parts, the Annual Report on European SMEs (i.e. the present report) and the SBA country fact sheets. Both the report and the factsheets are published by the Commission on its website.[2]

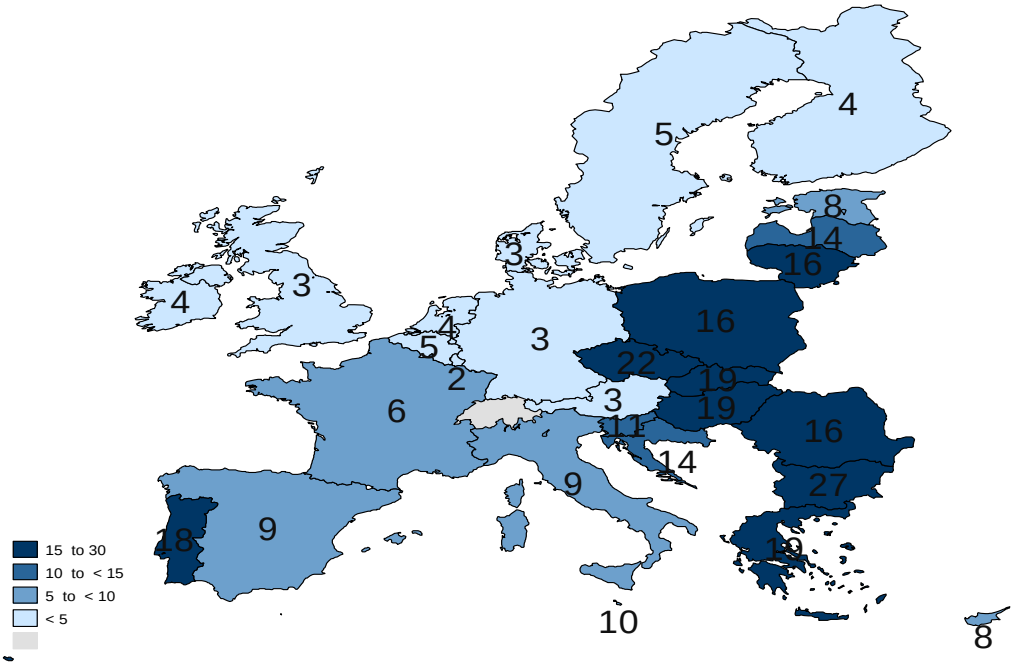
# Importance of SMEs in the economies of the Member States in 2014

***The number of SMEs relative to the size of the economy is particularly high in Central Europe and Portugal***

The enterprise population consists almost entirely of SMEs in all Member States. The share of SMEs in the total enterprise population ranges from around 99.5% in Luxembourg and Germany to more than 99.9% in Portugal, Italy, and Greece (see Annex I.3 for full country details).

While SMEs account for practically the same share of the overall number of enterprises active in the Member States, their economic contribution varies markedly. Indeed, in 2014, the number of SMEs per EUR million of valued added generated in the non-financial business sector ranged from 2 in Luxembourg to 27 in Bulgaria (Figure 1). Overall, most of the Central European countries are characterised by a high number of SMEs per EUR million of value added generated in comparison to Western European countries.

***Figure 1: Number of SMEs per EUR million of value added in the non-financial business sector across EU Member States in 2014***




*Source: Eurostat, National Statistical Offices and DIW Econ*

***Micro SMEs in Belgium, Croatia, Czech Republic, France, Greece, Hungary, Italy, Portugal, Poland, Slovakia, Slovenia and Spain account for a larger share of SME employment than on average in the EU28***

Micro SMEs play a relatively more important role in Southern and Eastern Europe (Croatia, Czech Republic, Greece, Hungary, Italy, Portugal, Poland, Slovakia, Slovenia and Spain) than on average in the EU28 and also in Belgium and France (see Annex I.3 for details).

Among this group of 12 Member States, the shares of SME employment accounted for by both small SMEs and medium-sized SMEs are typically *below* EU average. The only exceptions are:

- France, where the share of SME employment of small SMEs is *above* the EU28 average but the share of SME employment accounted for by medium-sized SMEs is *below* average.

- Czech Republic, Hungary, Poland, and Slovenia, where, in contrast to the French case, the employment share of medium-sized SMEs is *above* the EU28 average but the employment share accounted for by small SMEs is *below* the EU average.

Conversely, the share of SME employment accounted for by micro SMEs in 2014 is *below* the EU28 average in the following 16 Member States: Austria, Bulgaria, Cyprus, Denmark, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Romania, Sweden and United Kingdom. However, in all but 3 (Cyprus, Malta and Netherlands) of these same 16 Member States, the shares of employment of both small SMEs *and* medium-sized SMEs are *above* the EU average.

Additionally, in Cyprus, Malta, and Netherlands, the share of SME employment accounted for by small SMEs is *below* the EU28 average while the share is *above* the EU28 average in the case of medium-sized SMEs. (For a more detailed data breakdown, see Box 1 in Annex I.3)

While SMEs as a group accounted in 2014 for 67% of total employment and 58% of total value added in the EU28 non-financial business, the relative contribution of SMEs to total employment and total value added varies greatly across Member States (Figure 2).

***SMEs in 9 Member States (BG, CY, EE, EL, IT, LT, LV, MT and PT) account for more than 75% of total employment in the non-financial business sector***

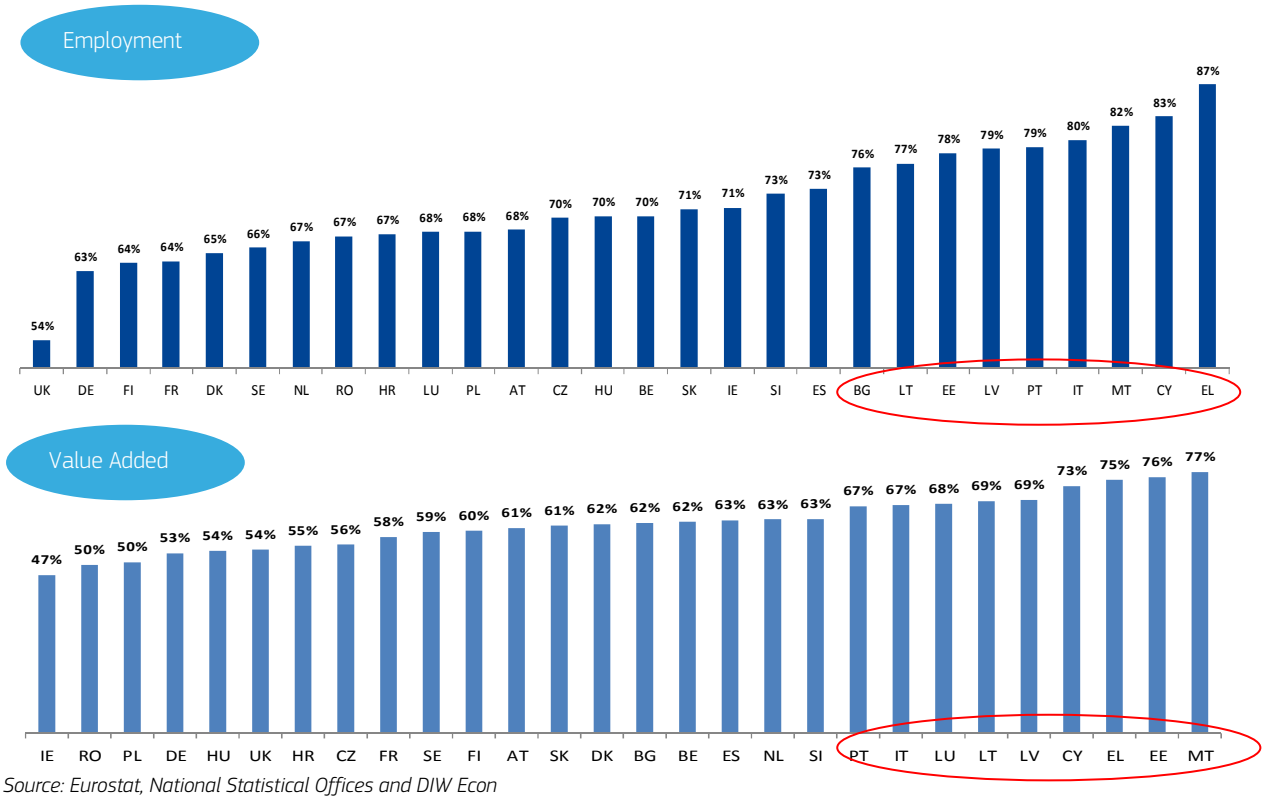
In the United Kingdom, for example, SMEs account for less than 54% of employment in the non–financial business economy.[3] In a group of 14 Member States, the share of SME employment ranges from a minimum of 63% (Germany) to a maximum of 70% (Belgium, Czech Republic and Hungary). For another set of Member States in Eastern and Southern Europe, as well as Ireland, the employment shares range from 70% to 80%. Lastly, in the case of Malta, Cyprus and Greece, SMEs account for more than 80% of the jobs (Figure 2).

***SMEs in 9 Member States (PT, IT, LU, LT, LV, CY, EL, EE and MT) account for more than 2/3 of total value added generated in the non-financial business sector***

The SME share of value added ranges from 47% in Ireland to 77% in Malta. In fact, in the case of 8 Member States (Portugal, Italy, Luxembourg, Lithuania, Cyprus, Greece, Estonia and Malta), this share exceeds ⅔ of total value added generated by the non-financial business sector while in Ireland, Romania, and Poland, SMEs generate only ½ or less of non-financial sector business value added.

The EU28 Member States show clearly a great deal of heterogeneity in terms of the *contribution* of SMEs to non-financial business sector employment and value added. In contrast, across the 28 Member States, the SME sector accounts for between 99.5% and 99.9% of *all enterprises* in the non-financial business sector (for country details see Annex I.4).

***Figure 2: Share of SME employment and value added in total employment and value added of non-financial business sector- 2014***




*Source: Eurostat, National Statistical Offices and DIW Econ*

Typically, the share of value added generated by SMEs in the non-financial business sector is *smaller* than their employment share. For example, in the EU28, SMEs accounted for 58% of *value added* in 2014 while their *employment share* was 9 percentage points *higher*.

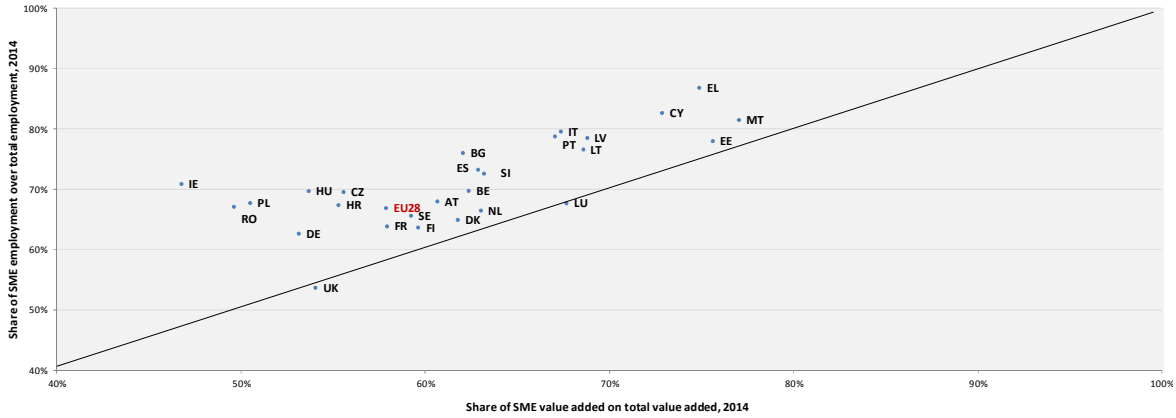
This pattern of a larger SME employment share than SME value-added share is also observed in all Member States except Luxembourg and the UK (Figure 3).

- The differences between SME employment and value added shares are particularly marked in Hungary, Romania, and Poland, where the differences are greater than 15 percentage points, and Ireland, which notably has the highest gap of 24 percentage points.

- The only countries with a *negative* gap, albeit small in magnitude, between the SME's shares of employment and value added, are Luxembourg and the UK. In the case of the UK, the difference reflects the fact that many micro SMEs are not included in the SBS SME population.[4] In the case of Luxembourg, the very small negative gap is largely explained by the fact that the differences between the average sizes of the workforces of large enterprises and medium-size SMEs is much smaller than in the EU28.

- Estonia, Denmark, Netherlands, and Malta show a *positive,* albeit relatively small, employment-value added share gap of less than 5 percentage points.

***Figure 3: Share of SME value added and employment in total non-financial business sector value added and employment - 2014***




*Source: Eurostat, National Statistical Offices and DIW Econ*

This difference between the SME share of total employment and valued added in the non-financial business sector reflects the fact that the activities undertaken by SMEs are typically more *labour intensive* than those undertaken by large enterprises.

The economy-wide difference in labour intensities of SMEs and large enterprises in the non-financial business economy (the labour intensity gap) varies across Member States, reflecting a combination of differences in the labour intensities of the different sub-sectors of a Member State's economy and differences in the relative importance of the various sub-sectors across Member States (See Annex I.5 and I.6 for details).

Consequently, an increase in SME activity will result typically in a proportionally larger rise in employment than an increase of similar magnitude in the activity level of large enterprises.

Chapter 3 discusses in greater detail employment creation by SMEs and the sensitivity of such employment to changes in business activity levels.

It is important to note that the greater labour intensity of SMEs does not mean that SMEs are less productive than large enterprises, as the activities of the latter are often capital intensive. Any comparison between the productivity of SMEs and large enterprises would need to take account of the combined usage of labour and capital.

# *Importance for SMEs of different sectors of the EU economy in 2014*

In the EU28, of all the economic sectors in the non-financial business sector, the 'wholesale and retail trade and repair' sector accounts for the *largest* share of SME employment, number of SME firms, and SME value added: 26% of all SME employment and 22% of SME value added.

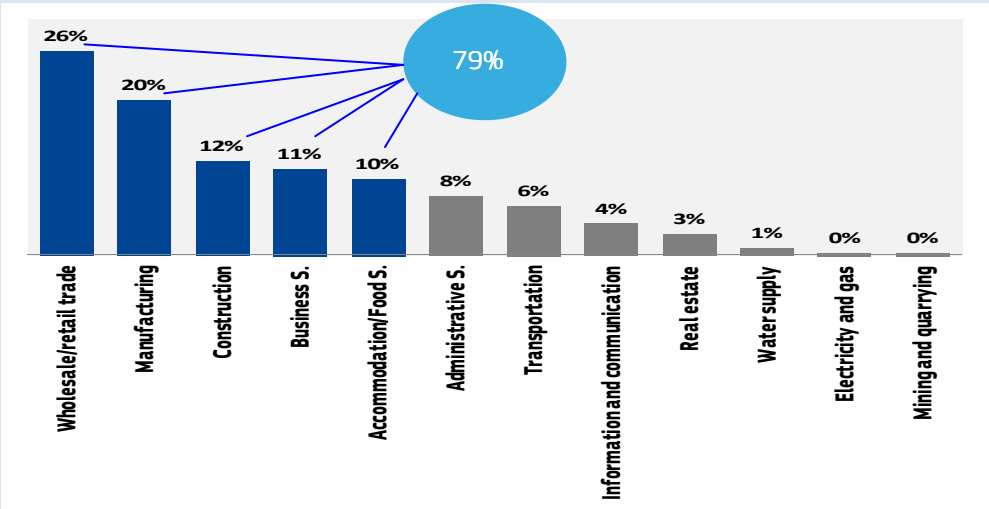
The next four sectors of importance for SMEs in the EU28 are 'manufacturing', 'construction', 'business services', and 'accommodation and food'. These four sectors, together with 'trade and repairs', account for 79% of total SME employment in the non-financial business sector, 78% of SME entreprises, and

***Five sectors - 'wholesale and retail trade and repair', 'manufacturing', 'construction', 'business services', and 'accommodation and food' account for 79% of SME employment and 71% of SME value added***

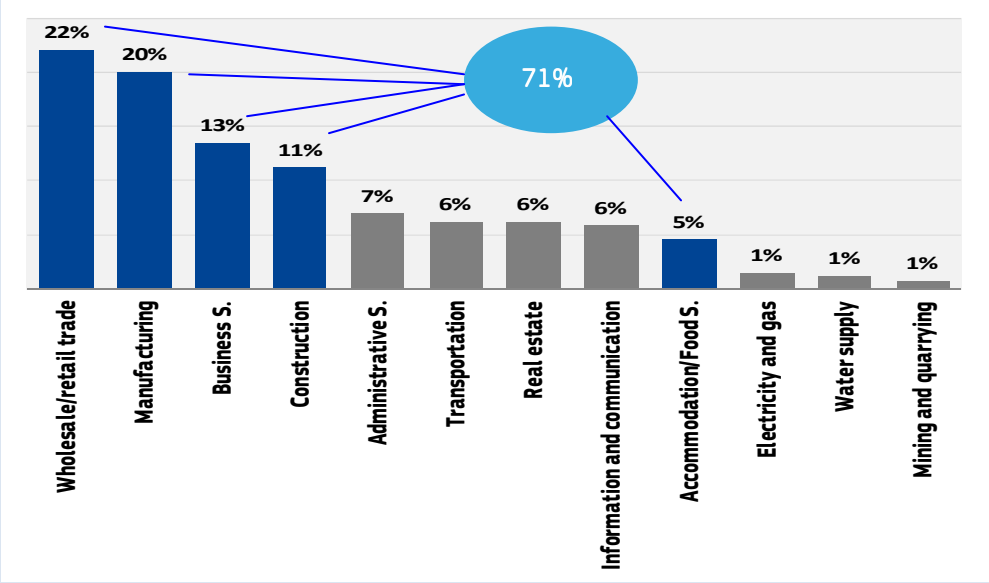
71% of SME value added (See Box 1). A detailed description of the relative importance of SMEs in different sectors across EU28 Member States is provided at Annex I.6.

## Box 1
## Key sectors of SME activity in 2014

### Employment




### Value added




*Source: Eurostat, National Statistical Offices and DIW Econ*

The contribution of SMEs in 'manufacturing' and 'construction' to overall SME *employment* declined marginally between 2008 and 2014, from 22% and 14%, respectively, of total SME employment to 20% and 12% respectively. Similarly, the contribution of SMEs in these two industries to the *value added* generated by the non-financial business sector declined by 1 and 3 percentage points respectively from 2008 to 2014.

Conversely, the contribution of SMEs in the 'accommodation and food' and 'business services' sectors to total SME *employment* increased from 2008 to 2014 by 1 percentage point in each sector, and to total SME *value added*, by respectively 1 and 2 percentage points (more detailed information on these sectoral trends is provided in Annex I.7).

| Type of SMEs | Most important sector among 5 key sectors in 2014 | Least important sector among 5 key sectors in 2014 |
|---|---|---|
| Micro | Wholesale and retail trade | Accommodation, Manufacturing (N) |
| Small | Wholesale and retail trade | Business Services (E, N), Accommodation (VA) |
| Medium | Manufacturing | Accommodation |

*Note: N= number of enterprises, E = employment and VA = value added*
*Source: Eurostat, National Statistical Offices and DIW Econ*

Among the five key sectors, the 'wholesale and retail trade' sector is the most important one for micro and small SMEs in terms of value added, employment and number of enterprises.

In the case of medium-size SMEs, the 'manufacturing' sector is the most important one.

In contrast, the 'accommodation and food' sector is the *least* important of the five sectors for micro and medium-size SMEs and in terms of *value added* for small SMEs (Annex I.8 provides more detailed information on distribution of SMEs by size class in the different sectors).

## *Importance of SMEs in different sectors of the EU economy in 2014*

Not only does the relative importance to SMEs of the various sub-sectors of the non-financial business sector vary across EU28, but the relative importance of SMEs in each of the 5 key sectors *varies* as well.

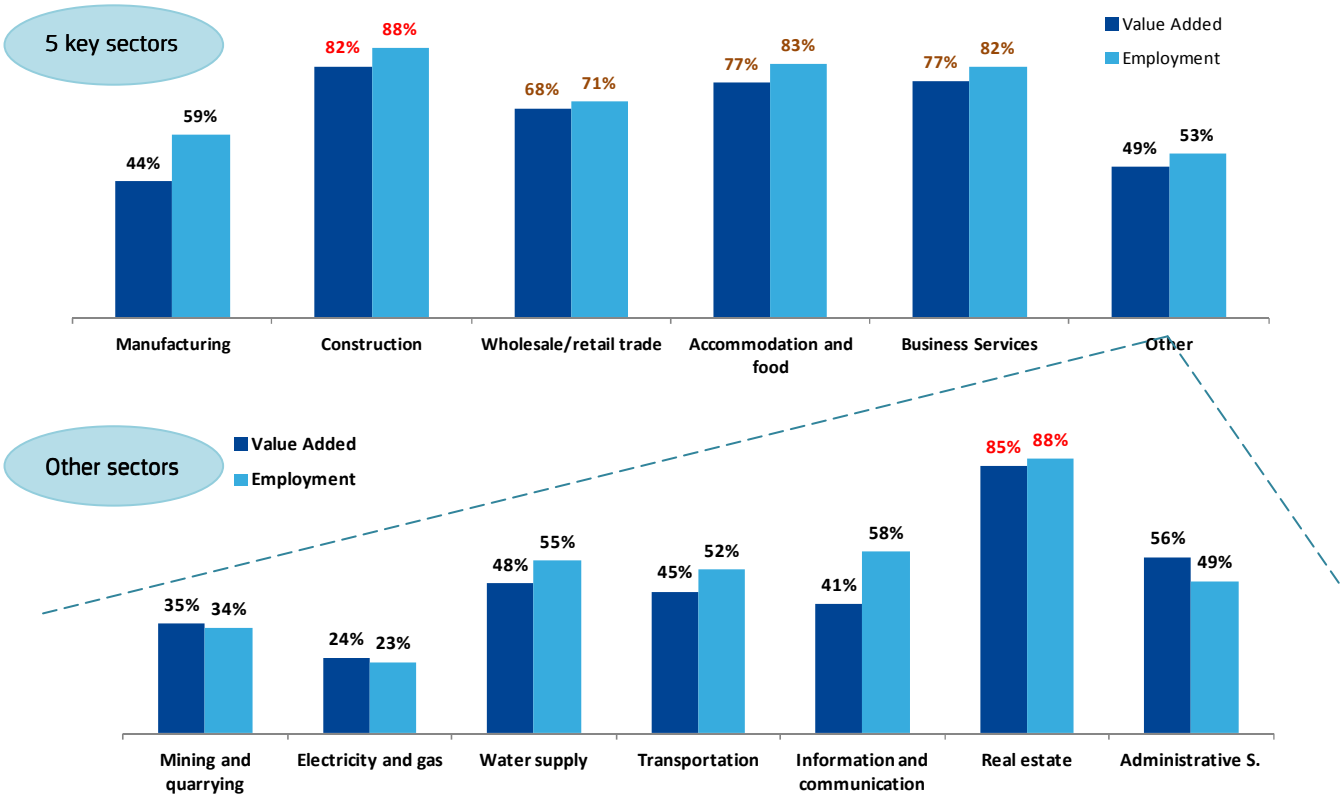
- SMEs account for a *very large* share (more than 70%) of total sector employment and value added in 'construction' and in 'accommodation and food', 'business services', and 'wholesale and retail trade'.

- In contrast, the contributions of SMEs and large enterprises to employment and value added in the 'manufacturing' and 'other' sectors are more evenly balanced. The 'other' sector regroups the following industries: 'mining and quarrying', 'electricity and gas', 'water supply', 'transportation and storage', 'information and communication'; 'real estate activities', and 'administrative and support services'.

***SMEs account for more than 4/5 of 'construction' sector value added and employment, and between 2/3 and about 4/5 of value added and employment in 'wholesale and retail', 'accommodation and food' and 'business services'***

- Among the various sectors comprising the 'other' category, the 'real estate' sector is the *only* one where SMEs account for a *very large share* (85% and more) of sector-wide value added and employment.

***Figure 4: The contribution of SMEs in various sectors to sector-wide value added and employment – 2014***




*Source: Eurostat, National Statistical Offices and DIW Econ*

# *Comparison of the importance of SMEs in the EU28 economy and other selected countries*

***SMEs in the EU 28 account for a smaller share of employment than in other countries except for the USA***

***The picture with regard to the SME share of value added is slightly more mixed***

As in the EU28, SMEs account for more than 99% of all enterprises in the partner countries (Albania, the Former Yugoslav Republic of Macedonia, Iceland, Moldova, Serbia, and Turkey) and in the USA, Japan, and the BRICs (Brazil, Russia, India, and China) (see Annex I.9 for details).

However, in the case of *employment*, EU28 SMEs account generally for a somewhat *smaller* share of total employment in the non-financial business sector than in the other countries. The main exception is the USA, where the share of SME employment in the non-financial business sector is about 15 percentage points lower than in the EU28.

In contrast, the share of *value added* generated by SMEs in the non-financial business sector shows a slightly more mixed picture, with the share being *lower* in Japan, Moldova, Serbia, Turkey, and the USA, and *higher* in Albania, Iceland, and the former Yugoslav Republic of Macedonia.


## *Key messages of chapter 2: The Actual and Expected Performance of SMEs from 2008 to 2016*

- *Macro-economic and cyclical business conditions facing SMEs in the EU 28 improved somewhat in 2014.*
- *In 2014, EU28 SME are finally emerging from the long shadow of the economic and financial crisis with SME value added growth of 3.3% and SME employment growth of 1.2%. This is a more than welcome improvement over 2013 when SME value added grew by only 1.6% and SME employment declined by 0.5%.*
- *Looking ahead, EU28 SME value added is expected to increase by 3.3% and 3.7% in 2015 and 2016, EU28 SME employment is projected to grow by 0.8% and 0.9% and the number of SMEs in the EU28 is forecast to increase by 0.5% and 0.7%.*
- *Medium-size SMEs are forecast to slightly outperform small and micro enterprises in both 2015 and 2016 in growth in value added generation, employment and number of enterprises.*
- *All the major SME sectors are predicted to share in the overall upswing of SME activity, but construction and manufacturing will continue to lag behind the other sectors.*
- *Member States are projected to continue to exhibit a great deal of diversity in terms of SME performance in the two years ahead.*

# 2.The Actual and Expected Performance of SMEs from 2008 to 2016

This second chapter of the 2015 SME Annual Report first discusses the general macro-economic conditions faced by SMEs since 2008, and the recent issues and challenges faced by EU28 SMEs.

Next, the chapter reviews the performance of SMEs in 2013 and 2014, and then more generally since 2008.

The final section focuses on the predicted performance of SMEs in 2015 and 2016.

## *Macro-economic conditions and business environment faced by SMEs in 2014*

***The macro-economic and business environment facing SMEs in the EU 28 improved in 2014***

### *Overall macro-economic performance of the EU28 economy*

The 2014 SME Annual Report discussed extensively how the evolution of different macreconomic aggregates has a varying impact on the different sectors in which SMEs are especially present. In particular, the 2014 Report highlighted the following key findings:

- Household demand has a significant impact on the performance of SMEs in the 'accommodation' and 'other' sectors;
- On the other hand, 'construction' value added is mainly affected by gross fixed capital formation;
- In all sectors, intermediate demand, i.e. the demand for goods and services emanating from domestic firms, is positively affecting SME growth of value added;
- In the case of 'accommodation' and 'retail and wholesale trade', the factors that affect employment growth are household expenditure and intermediate demand by other sectors;
- Gross fixed capital formation significantly affects employment in both 'construction' and 'business services';
- Exports of goods and services stimulates typically SME value added in 'manufacturing'.

In the light of last year's findings, key macroeconomic trends are reviewed below in some detail, as these trends largely explain the differences in SME performance across sectors.

Data on the level of economic activity in the non-financial business sector (i.e. value added) are only available in nominal terms. However, the pick-up in growth in GDP at constant prices, and the generally very low inflation in the EU28, suggests that the increase in the level of economic activity in the non-financial business sector reflects a real, albeit moderate, pick-up of economic activity in the non-financial business sector starting in 2014 (see figures in Annex I.10).

The evolution of the level of GDP (in real terms) since 2008 varied markedly across the EU28:

- The level of real GDP in 2014 was *the same as in 2008 or higher* in 16 Member States (Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Germany Ireland, Lithuania, Luxembourg, Malta, Poland, Romania, Slovakia, Sweden, and United Kingdom). These countries have clearly emerged from the long shadow of the 2008/2009 financial and economic crisis.
- In contrast, in 12 Member States (Croatia, Cyprus, Denmark, Finland, Greece, Hungary, Latvia, Italy, Netherlands, Portugal, Slovenia and Spain), the level of real GDP remained in 2014 still *below* its 2008 level, sometimes substantially so (see Annex I.11).

As the level of SME activity and employment is heavily dependent on the *overall* level of economic activity and demand for goods and services, the lack of full economy-wide recovery in 2014 in a number of Member States explains largely the *weak* SME performance in these countries.

In fact, in all Member States where GDP in 2014 was still below its 2008 level, the level of *value added* generated by SMEs in 2014 also remained *well below* the 2008 level. For example, in Greece, the level of real GDP in 2014 was 25% below its 2008 level, and the level of value added generated by SMEs in 2014 was 33% below its 2008 level.

Moreover, in countries where *no* full economy-wide recovery was achieved, the *weakness* in SME *value added* was more pronounced than in *real GDP*. In contrast, in countries where a solid recovery was achieved, the performance of SMEs (in terms of *value added)* was even *stronger* than that of the *overall* economy. To a large extent this reflects the differing impact of changes in various components of aggregate demand (private consumption, government current expenditures, gross capital formation by households, businesses and government and experts) on the demand for goods and services produced by SMEs.

Differences in macro-economic performances do not only explain differences in the value added performance of SMEs, but also differences in SME *employment creation* since 2008. The employment creation record of SMEs will be further discussed in the third chapter of the report.

Before proceeding to review the performance of SMEs in 2014, the next section discusses briefly the diverging evolution of various aggregate demand components. This discussion will shed further light on the underlying factors explaining differences in SME performance.

## *Evolution of aggregate demand components in the EU28 economy*

From 2008 to 2013, exports of goods and services (both intra-EU and extra-EU) and, to a much lesser extent, public sector consumption, were cumulatively the *only* sources of economic growth.

Gross capital formation, which includes all investments in fixed assets such as housing, infrastructure, buildings and machinery, *dragged down* economic growth substantially.

For example, gross fixed capital formation by households (mainly housing) was almost 21% lower in 2013 than in 2008, gross fixed capital formation by government (buildings, civil engineering, etc.) was 14% lower in 2013 than in 2008, and gross capital formation by businesses (buildings, plants, etc.) was 12% lower. Such a depressed level of gross fixed capital formation will clearly impact on the level of SME activity in the 'construction' sector, as SMEs account for the bulk of 'construction' value added and employment, and, more generally, on the level of SME activity economy-wide as the 'construction' sector is one of the key five sectors of importance for SMEs.

Private consumption also depressed the performance of the SME sector as the level of private consumption in 2013 was 1.2% lower than in 2008, and this aggregate demand component is a major driver of retail sales, another sector which is very important for SMEs and in which SMEs account for the bulk of value added and employment (see Annex I.13 for details).

Unfortunately, the strong gains in next exports (i.e. exports minus imports) from 2008 to 2013 had only a more limited, direct, stimulating impact on the EU28 SME sector, as the majority of SMEs are not active in export-oriented sectors.[5]

In contrast to the largely imbalanced growth observed over the period 2008 to 2013, all the main aggregate demand components contributed *positively* to economic growth in 2014 with exports of goods and services remaining the most important engine of growth, albeit much less so than in previous years (see Annexes 0 and I.15 for details). This more balanced growth explains to a large extent the recovery of SME value added in 2014.

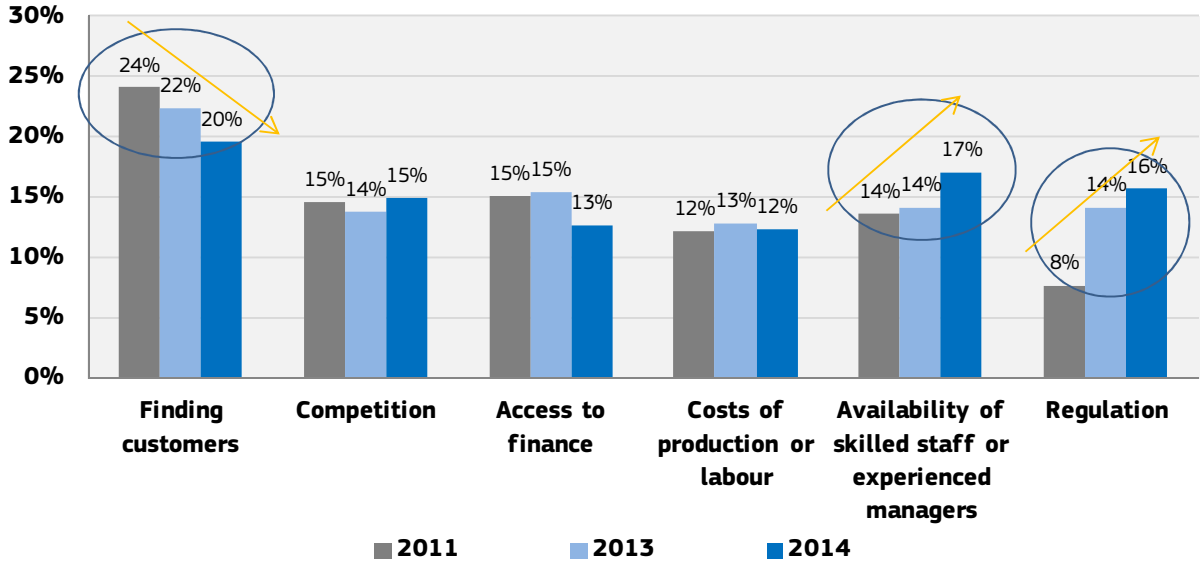
In the majority of Member States, *exports* were the key driver of the recovery and showed the strongest growth over the period 2008-2014. At the other end of the spectrum was gross fixed capital formation, which was still below pre-crisis levels in many countries, including a number of Member States where overall recovery was achieved. For this reason, recovery for SMEs in the construction sector was still very partial, as will be shown later in this section.

## *Business conditions faced by SMEs in 2014*

The analysis above showed that general economic conditions facing SMEs improved somewhat in 2014, and the latest survey of financing conditions faced by SMEs, run jointly by EC DG Growth and the European Central Bank in autumn 2014, confirms this observation. The survey results show that relative to the previous 2011 and 2013 surveys (Figure 5):

- Finding customers remained the most pressing problem for SMEs. But, relatively less so than in previous years, as the share of respondents highlighting this issue has been decreasing over time. In some cases, this may explain a hesitancy to invest and add on new employees even if firms have sufficient cash to do so.
- Access to finance also *decreased* in importance, with only 13% of respondents choosing this problem as the most pressing problem in 2014.
- A higher proportion of firms chose 'availability of skilled staff or experienced managers', and 'regulation', as the most pressing problem.

*Figure 5: Most pressing problems faced by SMEs – a comparison of the latest SAFE survey results*




Note that results do not add up to 100% because the categories 'others' and 'don't know/no answer' have been excluded from the analysis.
*Source: 2014 SAFE Survey*

The fact that the relative importance of the latter two factors is *rising*, while the relative importance of finding customers is *declining*, suggests that the structural business environment issues are gradually becoming more important, while the effect of the recent adverse cyclical developments is gradually waning.

Nevertheless, market conditions (i.e. lack of customers and competition) were the most frequently cited problem by SMEs across the EU. These two issues combined have been identified by at least 30% of respondents in all Member States, with the *exception* of Croatia, Cyprus, Finland, Greece, and Slovenia,. In these five countries, access to finance is most frequently cited as a problem for SMEs (see annex 0).

Skill shortages were viewed as a particularly serious problem in Austria, Czech Republic, Estonia, Germany, Luxembourg and United Kingdom where more than 22% of SMEs chose 'availability of skilled staff/experienced managers' as their most pressing problem.

Lastly, in Bulgaria, Croatia, France, Romania, and Slovenia, 'regulation' was perceived as the most pressing problem by more than 20% of SMEs.

While the responses of the SMEs as a group showed clear differences across Member States, there were no major differences in the way SMEs of different sizes perceive problems.

## How have SMEs fared in 2013 and 2014?

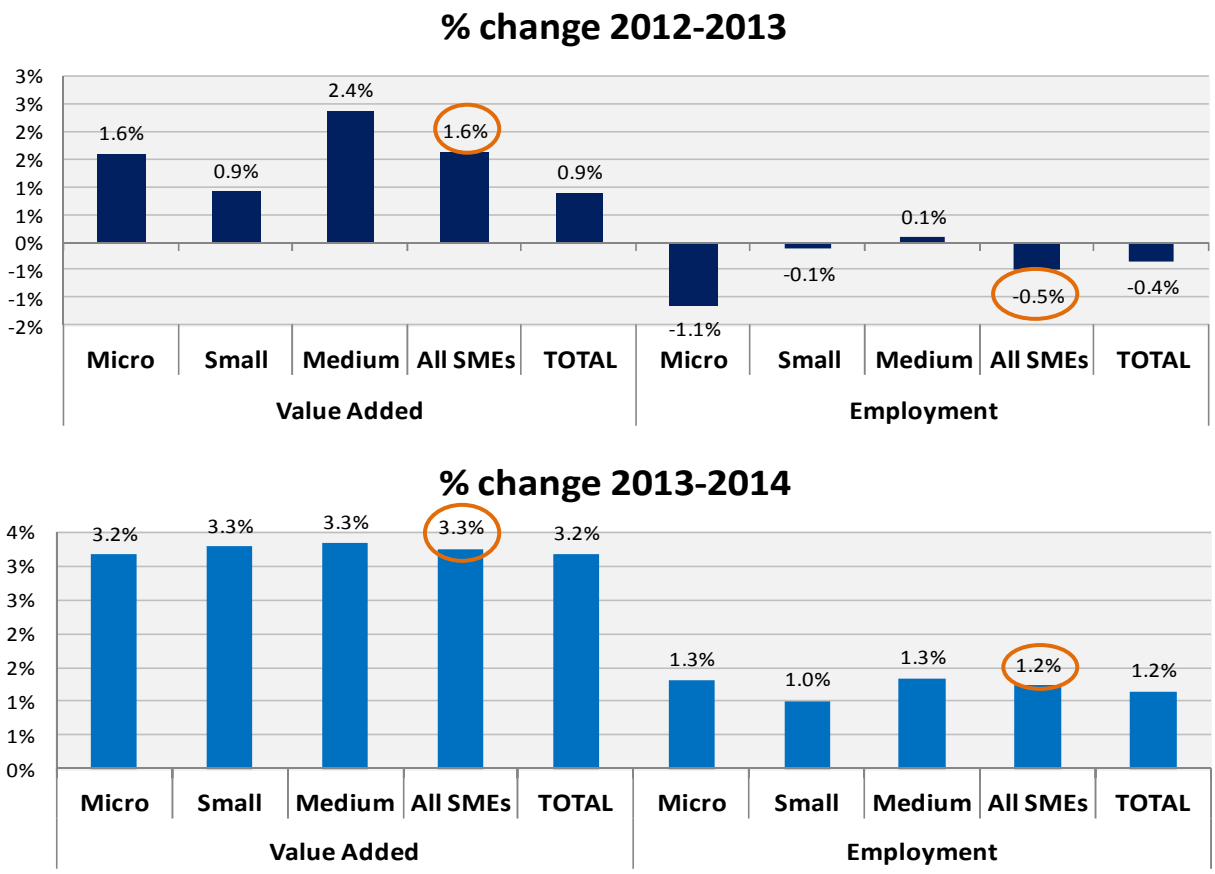
While SME *value added* showed a modest *increase* of 1.6% in 2013, SME *employment* continued to *fall*, especially among micro SMEs (Figure 6).

This subdued 2013 picture changed for the better in 2014, with SMEs posting an increase of 3.3% in value added, twice the growth recorded the previous year, with all SME size classes benefitting from this uplift, and employment growth picking up across all SME size classes (Figure 6).

***The tentative green shoots of growth of 2013 strengthened in 2014***

***In the EU28, SME value added grew by 3.3% and employment grew by 1.2%***

*Figure 6: Annual growth in SME value added and employment in the EU28 in 2013 and 2014*

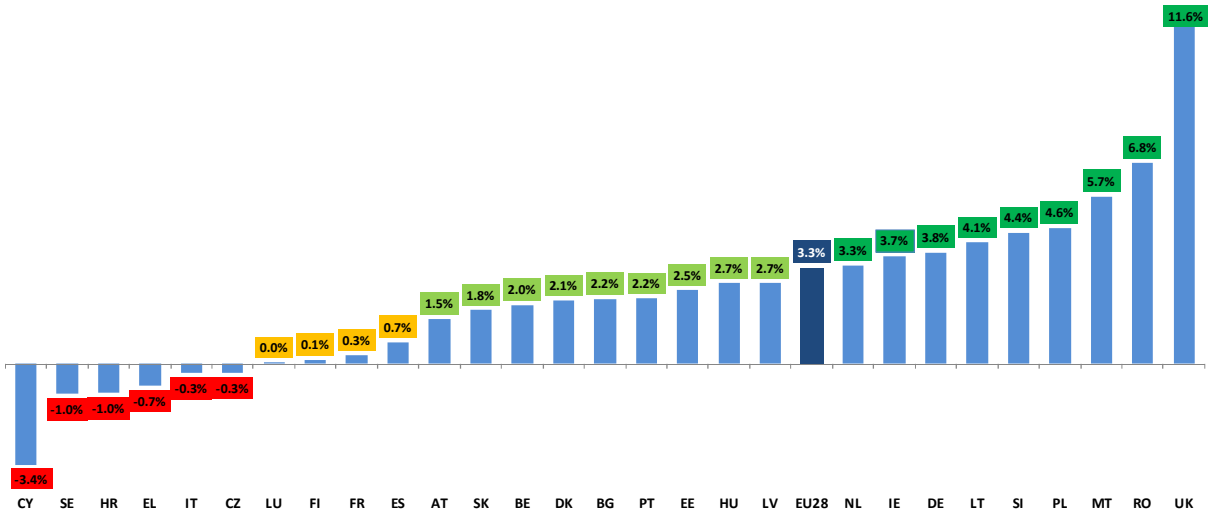



*Source: Eurostat, National Statistical Offices, DIW Econ*

While within the EU28 as a whole, SME valued added showed good growth of 3.3% in 2014, this experience was *not* shared by all Member States. In fact, one can easily identify four different groups of Member States on the basis of the growth of SME *value added* in 2014 (see Figure 7).

- In contrast to the positive development in SME value added in the EU28 economy, SMEs in a first group of 6 Member States (CZ, CY, EL, HR, IT and SE) showed a *decline* in value added in 2014.
- In a second group of 4 Member States (ES, FI, FR and LU), SMEs posted only very marginal *positive* valued added growth in 2014.
- The SME sector in all other 18 Member States showed *positive* value added growth of at least 1.5% in 2014. This group of Member States consists of:
    - a set of 9 Member States (Austria, Slovakia, Belgium, Denmark, Bulgaria, Portugal, Estonia, Hungary and Latvia) where the SME sector posted *growth* in valued added of *at least 1.5% but less than the EU28 average of 3.3%;* and,
    - a second set of 9 countries (Netherlands, Ireland, Germany, Lithuania, Slovenia, Poland, Malta, Romania and United Kingdom) in which SMEs recorded value added growth *greater than* the EU28 average.

***Figure 7: SME value added growth (in %) in 2014 by Member State***




*Source: Eurostat, National Statistical Offices, DIW econ*

***In 2014, SMEs in MT, RO and the UK posted the strongest combined performance in value added and employment growth***

***In contrast, SMEs in CY, IT and FI showed the weakest performance***

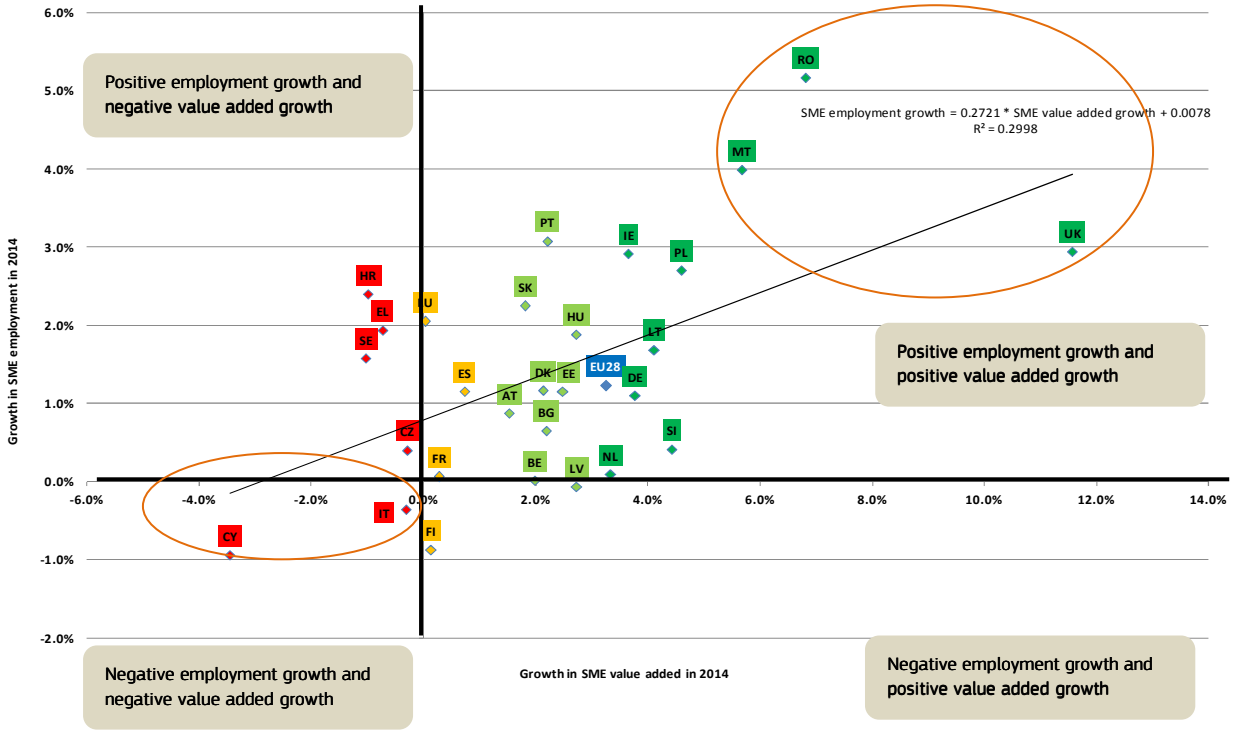
The *employment growth* performance of SMEs also varied greatly across EU28 Member States, mirroring largely but not completely the value added growth performance discussed above (see Figure 8).

The *strongest* SME employment growth in 2014 was recorded in Romania, Malta and the UK, and the *weakest* in Cyprus, Finland, and Italy. The employment creation record of SMEs is discussed in further detail in the next chapter of this report.

Overall, across the EU28 a *positive* relationship exists between SME *value added* growth and SME *employment* growth with SME employment growth being, on average, 0.3 percentage point higher for each additional 1 percentage point in SME value added growth.

However, there is a great deal of variation across Member States with some showing a considerably *stronger* link between SME value added growth and SME employment growth (for example, Malta and Romania) and others a much weaker link (for example, Belgium, Latvia and Netherlands).

**Figure 8: SME value added and employment growth (in %) in 2014 by Member State**



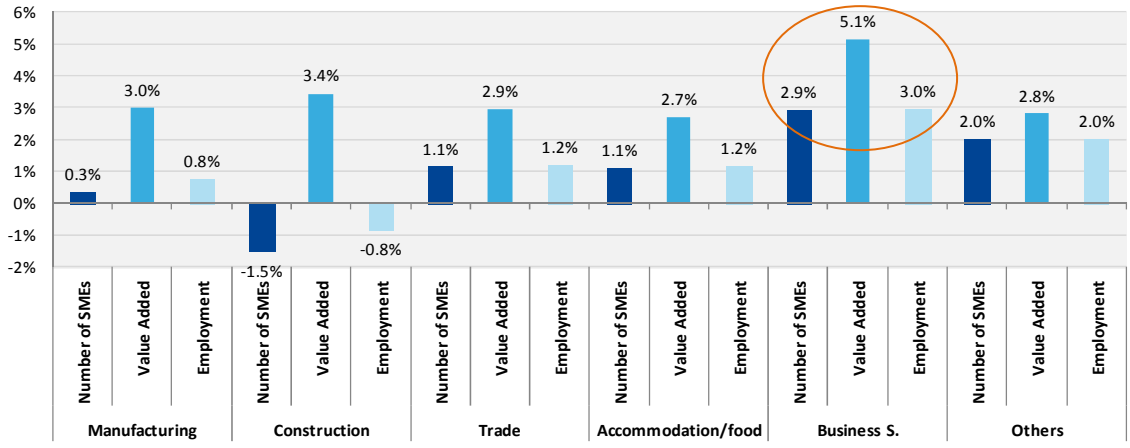

*Source: Eurostat, National Statistical Offices, DIW econ*

Among the five key sectors, the 'business services' sector was the star performer across all three SME performance indicators at the EU28 level. In particular, value added in this sector grew by more than 5% in 2014 (Figure 9).

The other four key sectors and the 'other' sector also recorded good value added growth ranging from 2.7% to 3.4%, but the employment growth performance of these sectors was much weaker, especially in 'construction' where employment continued to fall in 2014 (despite an increase of 3.4% in value added) and 'manufacturing' where employment grew by a meagre 0.8%.

***The 'business services' sector was in 2014 the best performing SME sector among the 5 key sectors***

**Figure 9: Sector performance 2013-2014, EU28**




Note: Changes in the number of enterprises can also depend on changes in the system for classification of SMEs by National Statistical Offices.

*Source: Eurostat, National Statistical Offices, DIW econ*

# How have EU28 SMEs fared since 2008?

***EU28 SMEs finally achieved a full recovery in 2014 from the 2008/09 economic and financial crisis, with value added 2.4% higher than in 2008***

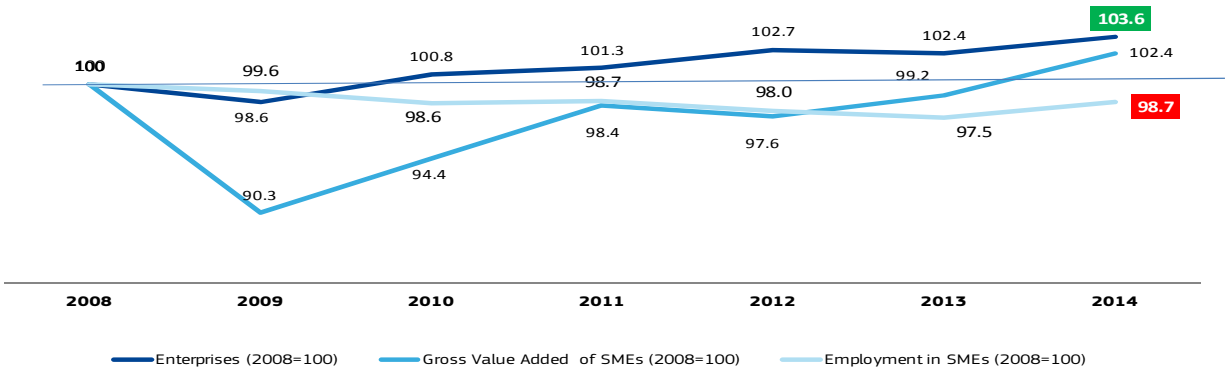
***However EU28 SME employment in 2014 is still 1.3% below its 2008 level***

European SMEs suffered serious setbacks in the years following the 2008 crisis. In particular, EU28 SMEs registered a 10% *drop* in value added in 2009, followed by a *limited recovery* in 2010 and 2011. A *second decline* in value added was experienced by SMEs in 2012 which was followed by a *return to growth* in 2013 and 2014. The pre-crisis level of value added was finally surpassed for the first time since 2008, by almost 2.5% in 2014 (see Figure 10).

On the other hand, *employment levels* of SMEs followed a *slow decline* in the period 2008-2013 in what is often termed 'jobless recovery'. However, 2014 saw a mild inversion in the trend. Nevertheless, the 2014 SME employment level was still 1.3 percentage points *below* its 2008 level.

The number of SME enterprises followed a different path: after a drop in 2009, the number of SMEs grew *steadily* thereafter except in 2010. The number of SMEs in 2014 is almost 2.5% higher than in 2008.

***Figure 10: Number of SMEs in the non-financial business sector, value added generated by these SMEs and number of persons employed by these SMEs - EU28, 2008 to 2014 (2008=100)***




Note: Slovakia is not included in the EU aggregate due to a break in the series. Changes in the number of enterprises can also depend on changes in the system for classification of SMEs by National Statistical Offices.
*Source: Eurostat, National Statistical Offices, DIW econ*

## *The crisis did not affect all sectors equally*

- 'Construction' and, to a lesser extent, 'manufacturing' are the only two sectors which, at the EU28 level, showed losses in value added and employment over the period 2008-2014. SMEs in 'construction' recorded an 18% *drop in* value added and *lost* 17% of jobs from 2008 to 2014. 'Manufacturing' also experienced a *decline* in value added (-4%) and in jobs (-11%) from 2008 to 2014. SMEs firms in these two sectors also *decreased* in number (-7% and -5% respectively).
- In 2014, the EU28 'wholesale and retail trade' sector was just *recovering* from the 2008/2009 financial and economic crisis.
- In contrast, the EU28 'accommodation and food services' and the 'business services' sectors *performed strongly* over the period 2008-

***SMEs in construction, and to a lesser extent, in manufacturing, were hard hit by the economic and financial crisis and had not yet fully recovered in 2014***

***In contrast, SMEs in 'accommodation and food services' and 'business services' showed double digit growth from 2008 to 2014***

2014, posting double digit growth in value added and employment. The performance of SMEs over the period 2008-2014 also varied widely by size class (Figure 11).

***All SME size classes experienced cumulative declines in employment, and increases in value added over 2008-2014***

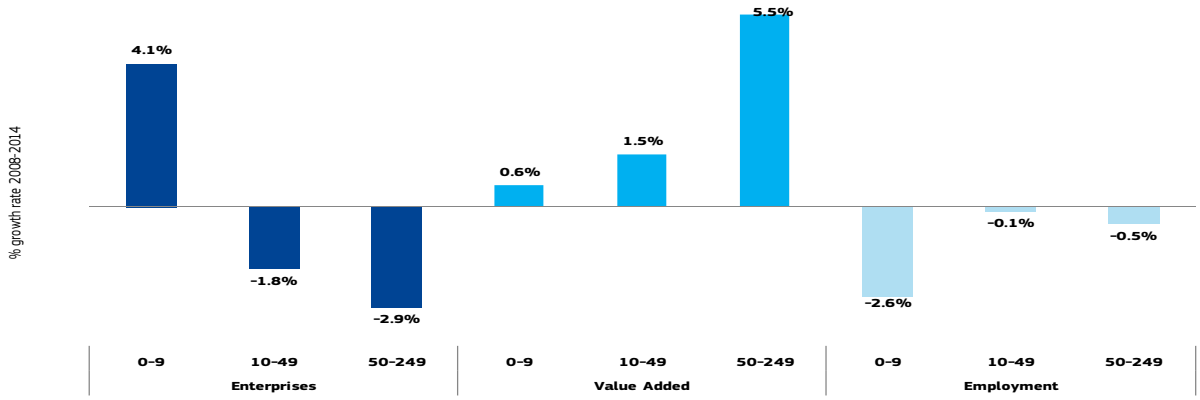
***However, only the number of micro SMEs increased over this period***

While the number of micro firms *increased* by 4.1%, small and medium firms *decreased* in number by 1.8% and 2.9% respectively. The strong growth in the number of micro SMEs was almost entirely driven by growth in the number of business with 0 employees (see Box 2), with some Member States (for example, France and the Netherlands) actively encouraging such economic activity.

The *largest gains* in value added were experienced by medium-sized firms (5.5%), while micro and small firms *lagged behind* (0.6% and 1.5%, respectively).

In the case of employment, *decreases* were recorded by *all* SME size classes. However, micro firms sustained the largest drop (-2.6%).

***Figure 11: Change (in %) in the number of SME firms, value added and employment by SME class size - 2008 to 2014***




Note: Slovakia is not included in the EU aggregate due to a break in the series. GDP at constant prices is in chain-linked volumes. Changes in the number of enterprises can also depend on changes in the system for classification of SMEs by National Statistical Offices.
*Source: Eurostat, National Statistical Offices, DIW econ*

The recovery of the SME sector from the 2008/09 financial and economic crisis was not only uneven across sectors and SME class sizes, but also the extent of the recovery, if any, varied greatly across EU Member States.

SMEs in only *seven* countries (Austria, Belgium, Germany, Luxembourg, Malta, Sweden and United Kingdom) have *more than recovered* in terms of enterprises, employment, and value added. At the other end of the spectrum are 9 Member States which are still *catching up* in all three dimensions. These are Croatia, Greece, Hungary, Ireland, Italy, Poland, Portugal, Romania, and Spain.

SMEs in all other Member States are still undergoing an *uneven recovery* (further details of the extent of the recovery of the SME sector in different Member States can be found in Annex 0 and 0).

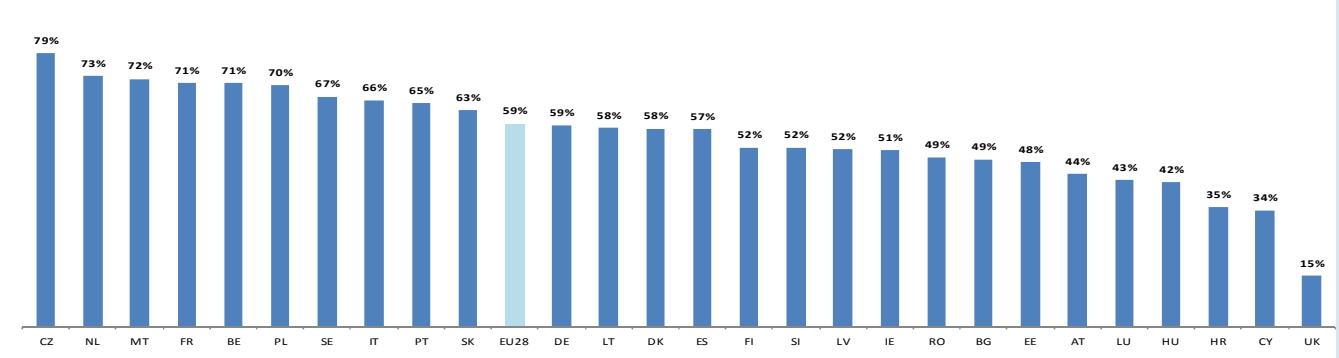
While the SMEs' performance over the last few years varies greatly across the EU, the actual difference in performance between the best performing and the worst performing Member States has reduced considerably (see Annex 0).

## *Box 2*
## *Lifting the veil of the micro-enterprises dynamics*

Data on business demography published by Eurostat provide a breakdown on the **evolution of the number of micro SMEs since 2008** for three class sizes based on the number of employees, namely 0 employees, 1 to 4 employees and 5 to 9 employees. The information is only provided for the sector 'Business economy except activities of holding companies' and is only available up to 2012. But, it allows one to gain a better understanding of the importance of self-employment (i.e. businesses with zero employment) in the micro SME segment and as a source of business creation since 2008.

Overall, in the EU28, businesses with 0 employees accounted for 59% of all micro SMEs. In a number of Member States (Czech Republic, Netherlands, Malta, France, Belgium and Poland) this figure exceeds 70% while it is lower than 40% in only three Member States (Croatia, Cyprus and United Kingdom). In the case of the United Kingdom, the very low figure of 15% reflects mainly the fact that very small businesses are often not included in the SBS statistics (see endnotes for a detailed explanation).

***Figure 12: Share of businesses with 0 employees in number of micro SMEs - 2012***




*Source: Eurostat*

In particular, it is worth noting that, in most Member States, businesses with no employees account for all or the bulk of the changes in the number of micro SMEs. This is the case irrespective of whether the number of SMEs increases or decreases. In fact, in 5 Member States (Netherlands, Latvia, Romania, France and Belgium), the increase in the number of businesses with no employees is so large that it more than offsets decreases in the two other micro SME size classes. In contrast, businesses with no employees account for the majority in the decline in the number of micro SMEs in 4 Member States (United Kingdom, Hungary, Cyprus, and Portugal).

Moreover, in general, changes in the size class of 5 to 9 employees account for very little in the change in the number of micro SMEs from 2008 to 2012.

***Table 1: Contribution of different size classes to overall change (in %) in the number of businesses with 0 to 9 employees 2008-2012***

| Member State | Change in % in the number of businesses with 0 to 9 employees - 2008 to 2012 | Contribution of size class to overall change (in %) to the number of businesses with 0 to 9 employees | | |
|---|---|---|---|---|
| | | 0 employee | 1 - 4 employees | 5 - 9 employees |
| NL | 35.6% | **103%** | -1% | -2% |
| LV | 30.4% | **125%** | -8% | -17% |
| RO | 30.1% | **142%** | -36% | -6% |
| BG | 23.1% | **58%** | 42% | 0% |
| SK | 21.3% | 34% | 75% | -8% |
| CZ | 19.0% | **91%** | 10% | -1% |
| SE | 16.3% | **67%** | 30% | 3% |
| FR | 15.0% | **109%** | -6% | -2% |
| SI | 15.0% | **75%** | 27% | -2% |
| LU | 13.6% | 48% | 43% | 9% |
| LT | 9.8% | *-18%* | 107% | 11% |
| PO | 8.6% | **78%** | 14% | 8% |
| BE | 7.9% | **103%** | -2% | -1% |
| DK | 4.6% | **69%** | 42% | -11% |
| EE | 4.5% | **54%** | 93% | -47% |
| FI | 4.1% | 11% | 86% | 3% |
| DE | 0.4% | *-12%* | 60% | 52% |
| AT | 0.1% | **582%** | -951% | 469% |
| IT | -2.1% | ***302%*** | -216% | *14%* |
| UK | -5.5% | ***63%*** | *50%* | -13% |
| IE | -7.0% | 0% | *68%* | *33%* |
| ES | -7.1% | *33%* | *50%* | *16%* |
| HU | -8.7% | ***84%*** | *13%* | *4%* |
| CY | -13.9% | ***67%*** | *20%* | *13%* |
| PT | -15.7% | ***84%*** | *8%* | *7%* |

Note: Denmark 2009 to 2012. No data available for Croatia and Malta. Shares in italics reflect a decline in the particular size class when the overall number of micro SMEs declines. Because the overall change in Austria is almost nil, the contribution of the change in each size class is very large in percentage terms even though it is small in absolute terms.

*Source: Eurostat*

# The performance of EU, US and Japanese SMEs – a comparative analysis

So far the analysis has focused on developments in the EU28 SME sector and how these developments differ across countries and sectors. From a policy-making perspective, it is also interesting to compare within-EU with developments in the USA and Japan, two other large industrialised economies, and examine whether there are any striking differences.

A comparison of SME performance is rendered somewhat more difficult due to the lack of recent data for the USA and Japan, and a structural break in 2009 in the case of Japan. Overall, the analysis, therefore, can cover only the years 2009 to 2012 (see Annex I.19 for details):

According to the latest available data, the EU28 has the largest number of SMEs (more than 22 million) and posts the highest level of SME employment among the three regions.

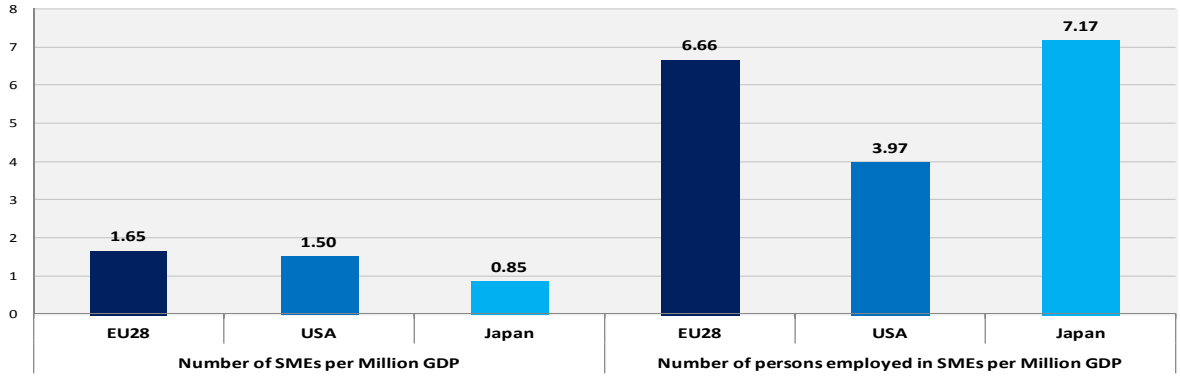
However, the smaller number of SME firms (18.8 million) in the USA generated EUR 3.8 trillion in value added, almost 9% *more* than the 18% larger number of EU28 SMEs. In Japan, the SME sector is much *smaller* in absolute terms - the country has 3.9 million SMEs and these firms provide 33 million jobs.

However, as the three economies vary in size, a more realisitic way to compare the relative importance of the SMEs in each of the three economies is to scale the SME figures by GDP and the total non-financial business economy.

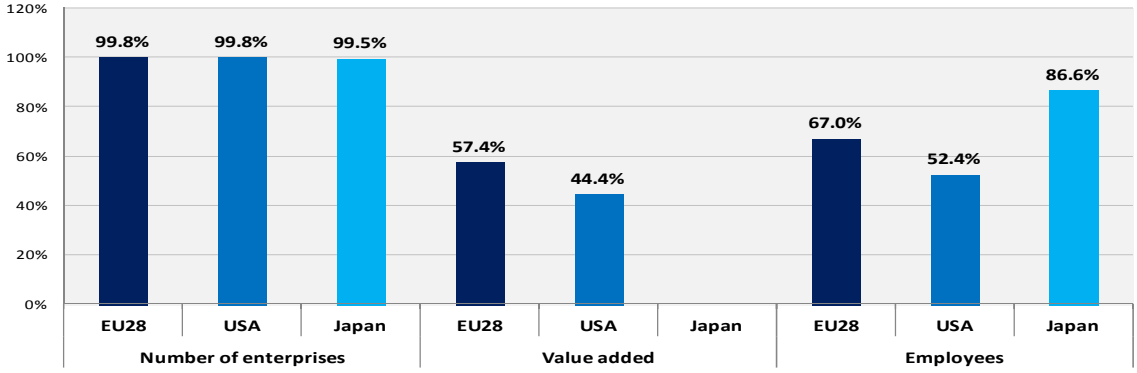
Interestingly, in the case of the *number of SMEs*, the EU28 and the USA are *roughly comparable* with 1.65 and 1.5 SMEs per million GDP. In contrast, the importance of SMEs in providing *employment* is similar in the EU and Japan (6.6 and 7.1 person employed per SME), and *much lower* in the USA, where SMEs account for slightly more than half (52%) of total employment in the non-financial business economy (Figure 13).

***Figure 13: Relative importance of SMEs in the economies of the EU28, USA, and Japan 2012***

*SMEs per million GDP (2012)*



*SMEs as a percentage of the non-financial business economy (2012)*



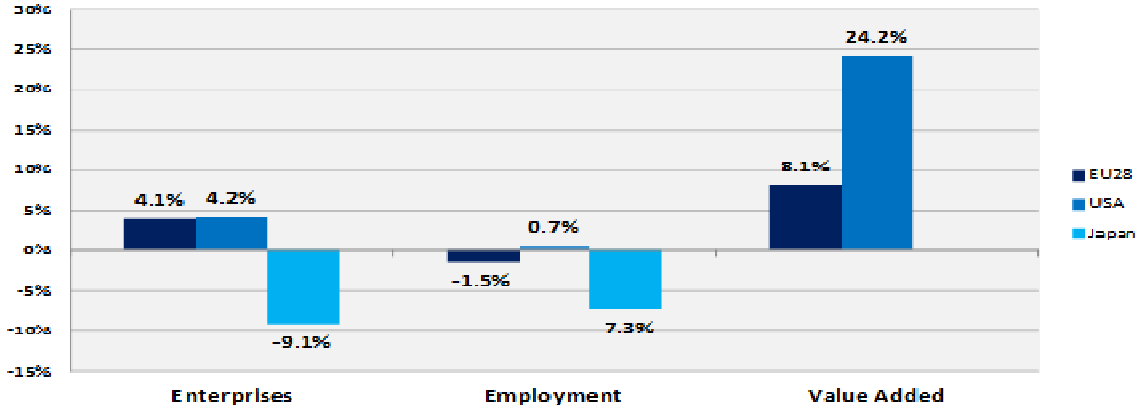

Note: Data for all three economies is for year 2012, to allow for comparisons between latest available data. Data for Japan is representative of the non financial business economy, but there is no separate section for 'N' (Administrative and support services) in Japanese industrial classification. In the USA and Japan, 'medium' firms can employ up to 299 employees; in the case of the USA, the data for micro firms are adjusted by including non employer enterprises from the US Census Bureau, to account for self-employed individuals. Data for value added is not available for the total non-financial business economy in the case of Japan.
*Source: Eurostat, National Statistical Offices, DIW econ*

Overall, for the period 2009 to 2012, the USA and the EU show broadly similar patterns in the *number of SME enterprises*. (A comparison of the evolution of the main macro-economic drivers of SME performance is provided at annex I.19).

However, the evolution of SME *value added* was *much more positive* in the USA (24%), than in the EU (8%). In this regard, it is important to note that, because of lack of data, the comparison starts in 2009. Thus, the large 2009 drop in EU28 SME value added, which affects the cumulative 2008-2014 performance of EU28 SMEs discussed earlier, is not reflected in the data used in the comparative analysis across the three economies.

The SME sector in Japan followed a somewhat different trajectory, with *losses in employment* of 7% and a *reduction in the number of SMEs* by 9%.

***Figure 14: SME performance from 2009 to 2012, EU28, USA and Japan***




Note: Data for all three economies is for year 2012, to allow for comparisons between latest available data. Data for Japan is representative of the non financial business economy, but there is no separate section for 'N' (Administrative and support services) in Japanese industrial classification. In the USA and Japan, 'medium' firms can employ up to 299 employees; in the case of the USA, the data for micro firms are adjusted by including non employer enterprises from the US Census Bureau, to account for self-employed individuals. Data for value added is not available for the total non-financial business economy in the case of Japan.
*Source: Eurostat, National Statistical Offices, DIW econ*

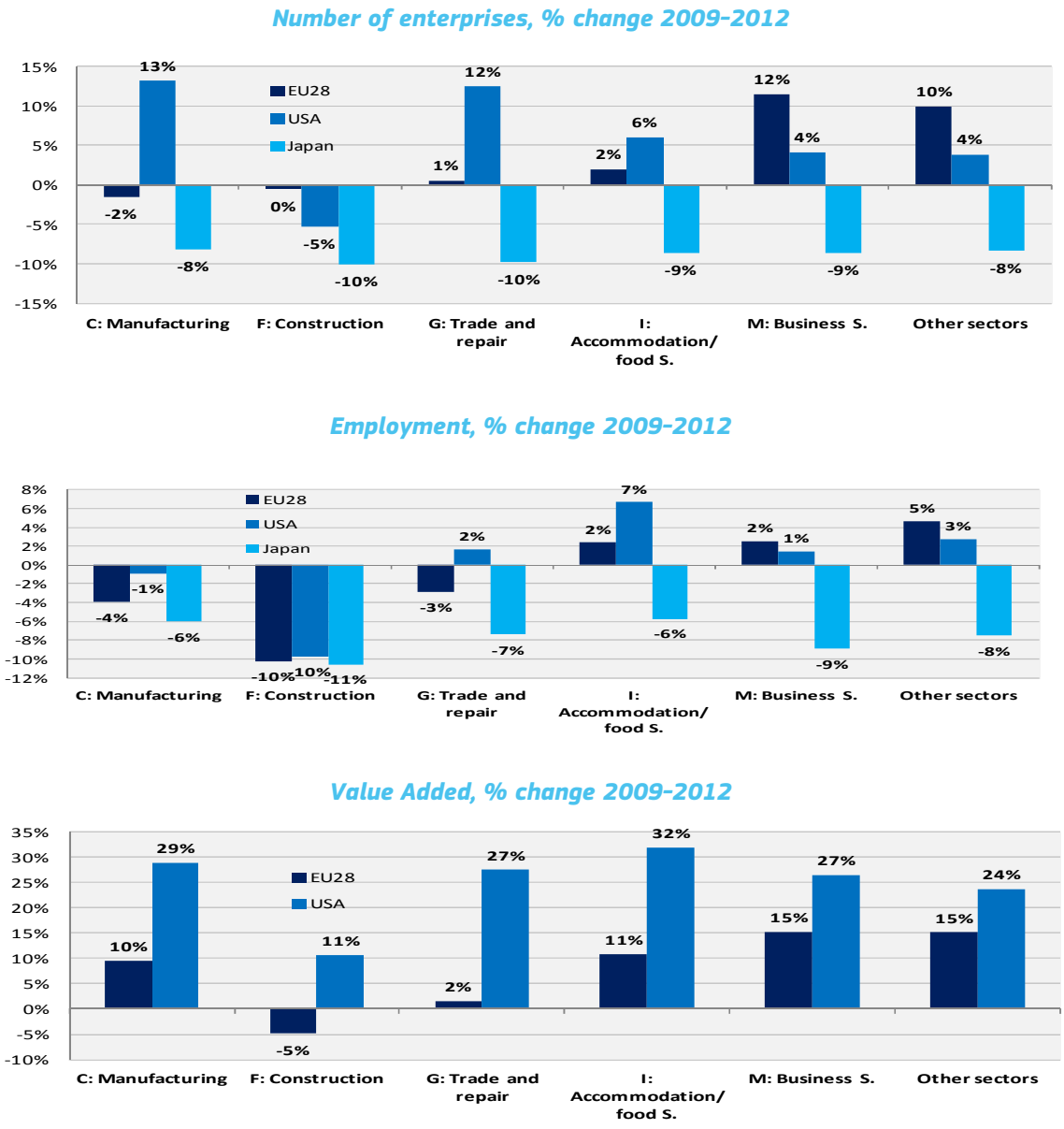
As noted earlier in this report, the 'construction' sector suffered the *largest contraction* in the EU28 This is also the case in the USA and Japan in the case of *employment* and *enterprise creation* in the years 2009-2012.

The USA outperformed the EU28 in essentially all other sectors:

- 'manufacturing', 'trade' and 'accommodation' (in terms of the number of SMEs)
- 'trade' and 'accommodation' (in terms of employment)
- all sectors of the non-financial business economy in terms of value added

Negative trends for the Japanese SMEs are observed across all sectors (Figure 15).

***Figure 15: SME performance by sector in EU28, USA, and Japan, 2009-2012***




Note: Data for all three economies is for year 2012, to allow for comparisons between latest available data. Data for Japan is representative of the non financial business economy, but there is no separate section for 'N' (Administrative and support services) in Japanese industrial classification. In the USA and Japan, 'medium' firms can employ up to 299 employees; in the case of the USA, the data for micro firms are adjusted by including non employer enterprises from the US Census Bureau, to account for self-employed individuals. Data for value added is not available for the total non-financial business economy in the case of Japan.

*Source: Eurostat, National Statistical Offices, DIW econ*

A shorter discussion of the recent performance of SMEs in other countries (Albania, Brazil, China, Former Yugoslav Republic of Macedonia, Iceland, India , Moldova , Serbia, Turkey and Russia ) is provided in annex I.19.

# The outlook for EU28 SMEs in 2015 and 2016

The outlook for the future performance of SMEs in the EU28 is positive, and somewhat stronger than in 2014 but remains uneven (Table 2).

For the years 2015 and 2016, *annual growth* of 3.3% and 3.7% is expected for EU28 SME *value added*.

In contrast, *employment* and *number of enterprises* are forecast to *lag behind,* with *growth* in 2015 and 2016 of roughly 0.8% and 0.9%, and 0.5% and 0.7% respectively.

Looking at *size-class differences*, medium-size SMEs are forecast to *slightly outperform* small and micro enterprises in both 2015 and 2016 and *across all three indicators.*

Large firms are expected to follow a similar pattern, although their expected growth is *lower* in the case of *value added, employment* and *number of firms.*

***SME value added up by 3.3% and 3.7% in 2015 and 2016***

***SME employment up by 0.8% and 0.9%***

***Number of SMEs up by 0.5% and 0.7%***

*Table 2: 2015 and 2016 forecasts of annual growth in SME performance* ***indicators – EU28***

| Size class | Indicator | % change 2013-2014 | % change 2014-2015 | % change 2015-2016 |
|---|---|---|---|---|
| Micro | Enterprises | 1.2% | 0.5% | 0.7% |
| | Value Added | 3.2% | 2.9% | 3.3% |
| | Employment | 1.3% | 0.5% | 0.8% |
| Small | Enterprises | 0.8% | 0.7% | 0.8% |
| | Value Added | 3.3% | 3.1% | 3.5% |
| | Employment | 1.0% | 0.8% | 0.9% |
| Medium | Enterprises | 0.9% | 0.9% | 1.2% |
| | Value Added | 3.3% | 3.8% | 4.2% |
| | Employment | 1.3% | 1.2% | 1.3% |
| Large | Enterprises | 0.5% | 0.0% | 0.2% |
| | Value Added | 3.1% | 2.8% | 3.1% |
| | Employment | 1.0% | 0.4% | 0.5% |
| SMEs | **Enterprises** | **1.2%** | **0.5%** | **0.7%** |
| | **Value Added** | **3.3%** | **3.3%** | **3.7%** |
| | **Employment** | **1.2%** | **0.8%** | **0.9%** |
| Total | Enterprises | 1.2% | 0.5% | 0.7% |
| | Value Added | 3.2% | 3.1% | 3.4% |
| | Employment | 1.2% | 0.6% | 0.8% |

*Source: Eurostat, National Statistical Offices, DIW econ*

*All* the major SME sectors are predicted to share in the *overall upswsing* of SME activity. However, 'construction' and 'manufacturing' will continue to lag behind the other sectors (Table 3).

*Table 3: Forecast growth of EU28 SMEs by sector, 2014-2016*

| Sector | EU28 SME value added % change 2014-2016 | EU28 SME employment % change 2014-2016 |
|---|---|---|
| **Manufacturing** | 4.4% | -0.2% |
| **Construction** | 4.0% | -2.6% |
| **Wholesale/retail trade** | 7.8% | 2.5% |
| **Accommodation/food S.** | 6.5% | 2.3% |
| **Professional S.** | 9.6% | 4.2% |
| **Other sectors** | 8.4% | 3.3% |
| **Total** | 7.0% | 1.7% |

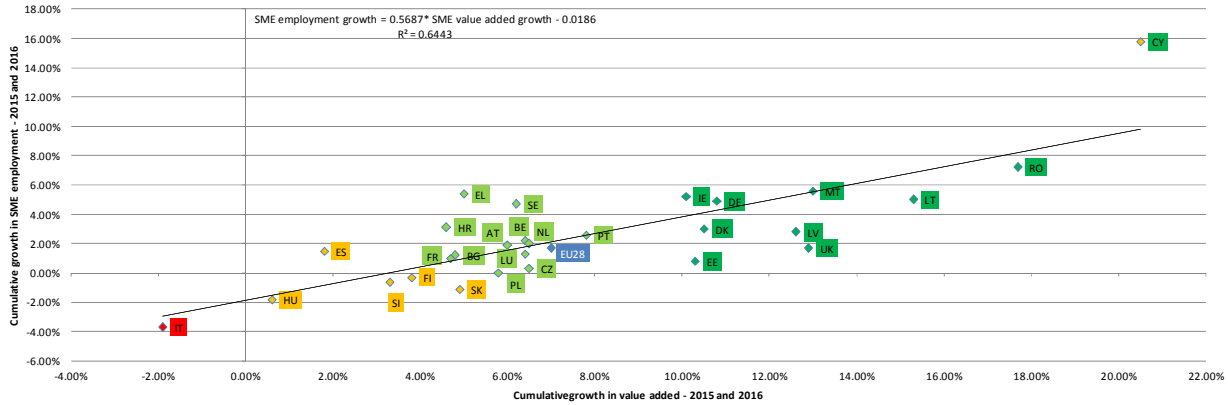
*Source: Eurostat, National Statistical Offices, DIW econ*

Member States are projected to continue exhibiting a great deal of diversity in terms of *SME performance* in the two years ahead (Figure 16 and Annex I.20 for details), with:

- Italy showing a *decline* in both SME *value added* and *employment*
- Hungary, Slovenia, Finland and Slovakia showing *small declines* in SME *employment* but *positive value added growth,* and Spain showing *weak growth* in *both indicators*
- Eleven Member States expected to post *cumulative growth* in SME *value added* and *employment* of between 0% and 6%
- Ten Member States predicted to show *double-digit* SME *value added* growth and solid *employment growth* from 2014 to 2016

On average, across the EU28, SME employment growth in 2015 and 2016 is projected to be more closely linked to SME value added growth than in 2014, with 1 additional percentage point in value added growth resulting in 0.6 percentage point of additional SME employment.

***Figure 16: Projected cumulative growth in SME value added and employment from over 2015 and 2016***

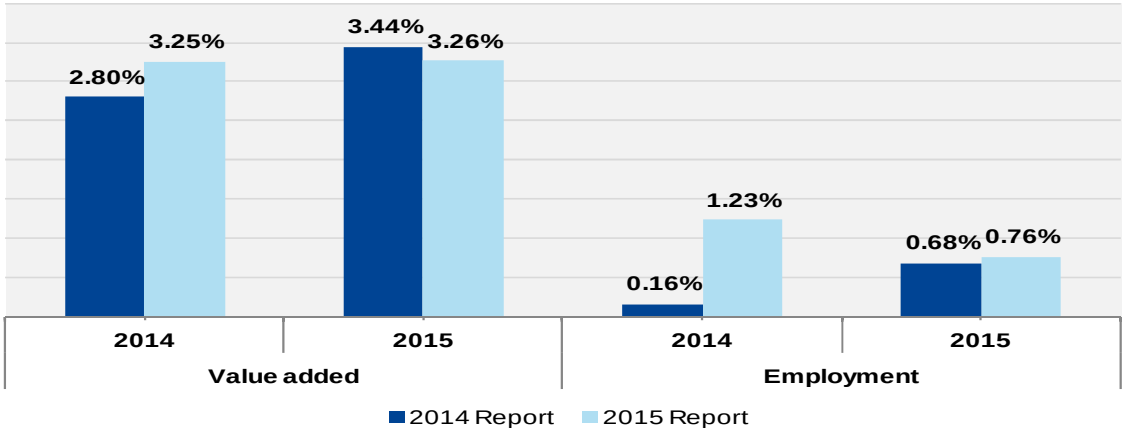



*Source: Eurostat, National Statistical Offices, DIW econ*

Overall, this year's now-casts for 2014 are somewhat *stronger* than the forecasts made in the 2014 SME Annual Report, especially in the case of SME employment. The differences largely reflect the better-than-originally-expected developments in 2014 in the EU28 economy.

In contrast, this year's forecasts of EU28 SME *value added growth* and *employment* in 2015 are *little changed* from last year's projections.

***Figure 17: Comparison of forecasts of SME performance in the EU28 shown in the 2014 SME Annual Report with current 2014 now-cast and 2015 forecast***

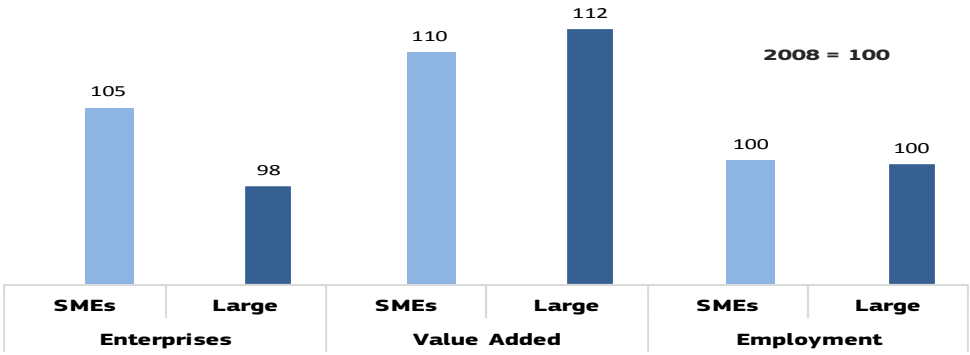



*Source: Eurostat, National Statistical Offices, DIW econ*

The forecasts show that, in the EU28, the *number of SME enterprises* and, especially, the level of SME *value added* will, in 2016, *largely surpass* their respective 2008 levels. However, the level of SME *employment* is projected to be only the same in 2016 as in 2008 (see Figure 18).

The outlook for large firms is somewhat *less optimistic*. By 2016, there will still be roughly 3% *fewer* large enterprises than there were in 2008, and *employment* will have only *returned to its 2008 level*. However, with regard to *value added*, in 2016 large firms are forecast to surpass their 2008 level by *slightly more* than SMEs.

***Figure 18: 2016 forecasted level of number of enterprises, value added, and employment: EU28 SMEs and large firms (2008 = 100)***

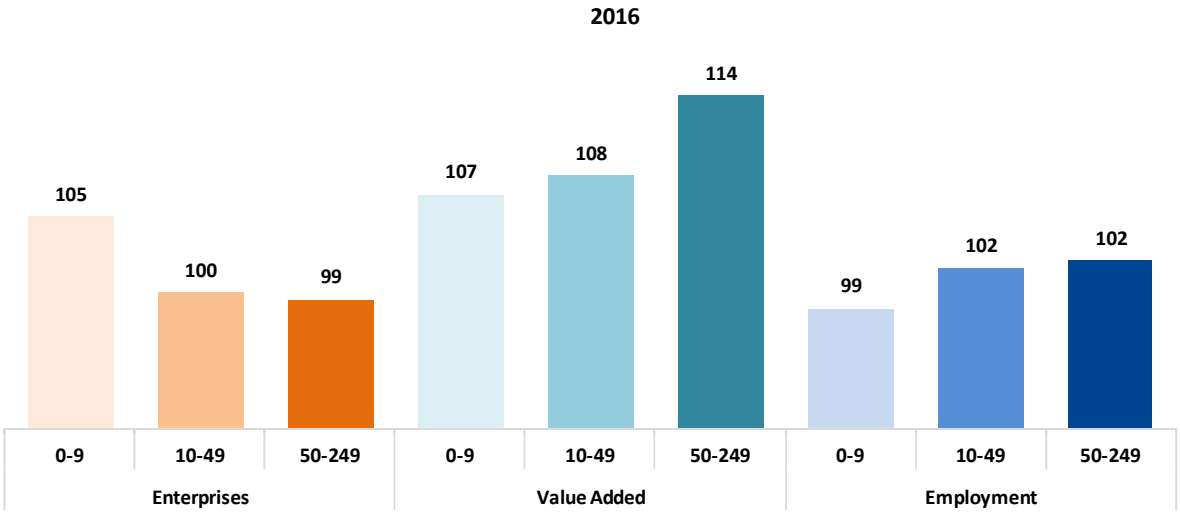



Note: 2008=100. Slovakia is not included in the EU aggregate due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Within the the SME group, in 2016 medium-sized SMEs are projected to *exceed* by 14% the level of *value added* they had generated in 2008, while micro and small SMEs will *surpass* itheir 2008 *value added* level by *only* 7% to 8%.

In contrast, the level of SME *employment* in 2016 is expected to hover *just above* the 2008 figure in the case of small and medium-sized SMEs, and to remain *just below t*he 2008 level in the case of micro SMEs.

***Figure 19: Forecasted levels of number of enterprises, value added, and employment among micro, small, and medium sized SMEs in 2016 relative to 2008 (2008 = 100)***




Note: 2008=100. Slovakia is not included in the EU aggregate due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

A detailed discussion of the SME forecasts for 2016 relative to 2008 for the different sectors in EU28 Member States is provided in annex I.21.

## *Key messages of chapter 3: Contribution of SMEs to employment creation*

- *The job creation record of SMEs over the period 2008 – 2014 is very uneven across sectors (especially when focusing on the granular sectoral breakdown of the non-financial business economy).*
- *The strongest employment growth over the period 2008 – 2014 is observed in sectors which account for only a very small proportion of total SME employment in the non-financial business sector.*
- *Moreover, the bulk of employment creation and destruction is concentrated in only a few sectors which are typically relatively large in terms of their overall share of SME employment.*
- *The net employment creation record of SMEs also varies greatly across Member States.*
- *At the EU28 level, the micro SME size class accounts for the bulk of the net employment destruction in the SME sector.*
- *Some firms move size class over time because they grow or downsize. Taking into account the SME mobility across size classes reveals a somewhat less negative picture of SME net employment creation by micro SMEs. But, this group remains a source of net SME employment destruction in recent years.*
- *Broad macroeconomic developments are key drivers of the performance of the SME.*
- *Another important factor is the age of the SME. While the results of the various analyses reported in the present chapter differ somewhat in terms of their findings about which SME class size created jobs, they all agree that the group of young firms were net job creators in recent years while the group of old firms destroyed jobs on a net basis. However, some old firms are also net job creators.*
- *However, many young firms fail in their youth – in a majority of Member States only 40% to 60% of firms born in 2008 survived in 2012.*

# 3. Contribution of SMEs to job creation

***From 2008 to 2013 SME's accounted for 73% of the drop in employment in the non-financial business sector***

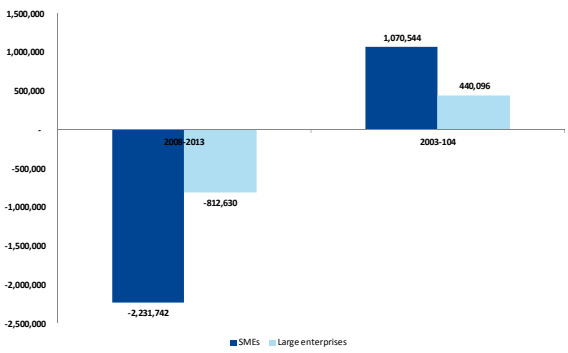
***But, in 2014 SMEs accounted 71% of the increase in employment within the same sector***

The SME sector contributed disproportionally to both the decline in employment from 2008 to 2013 *and* the subsequent employment recovery in 2014.

SMEs accounted for 67% of total EU28 employment in the EU non–financial business sector in 2014, but:

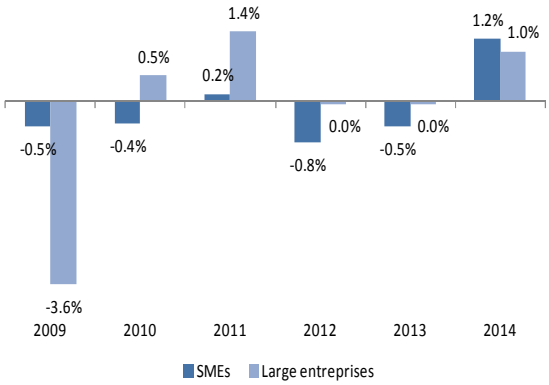
- from 2008 to 2013, SME's accounted for 73% of the 2.2 million *drop* in employment in the non-financial businesses sector across the EU28;
- while in 2014, SMEs accounted for 71% of 1.5 million increase in employment in the same sector;
- Overall, from 2008 to 2014, SMEs accounted for 76% of the net decrease in employment (Figure 22).

***Figure 20: Change in EU28 employment by SMEs and large enterprises, 2008-2013 and 2013-2014***



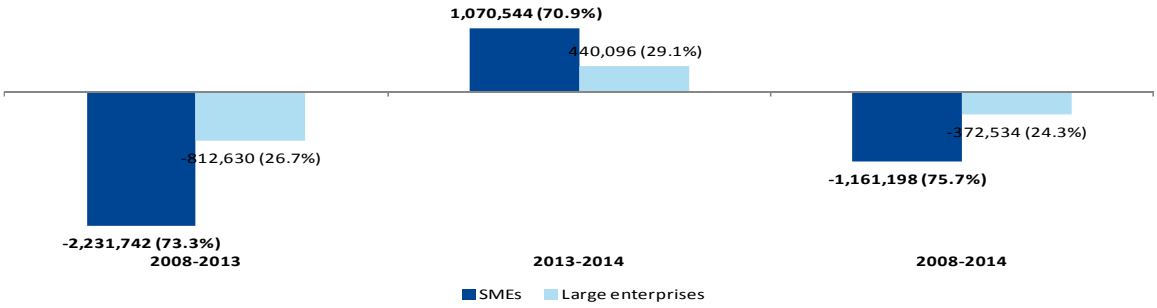

Note: the EU28 aggregate does not include Slovakia due to the break in the series. The figure in ( ) is the class size's share of the economy-wide change.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 21: Annual change (in %) of employment of SMEs and large entreprises***




Note: the EU28 aggregate does not include Slovakia due to the break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 22: Change in EU28 employment by SMEs and large enterprises, 2008-2013, 2013-2014, and 2008-2014***




Note: the EU28 aggregate does not include Slovakia due to the break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Moreover, the pattern of the annual changes in SME employment during this period differed markedly from that shown by large enterprises (Figure 21):

- In 2009, SME employment fell by much less than in large enterprises.
- In 2010, SME employment fell again and remained practically flat in 2011. In contrast, employment in large enterprises rebounded in both years, albeit only moderately.
- Finally, in 2012 and 2013, SME employment continued to decline, whereas employment in large enterprises remained unchanged.

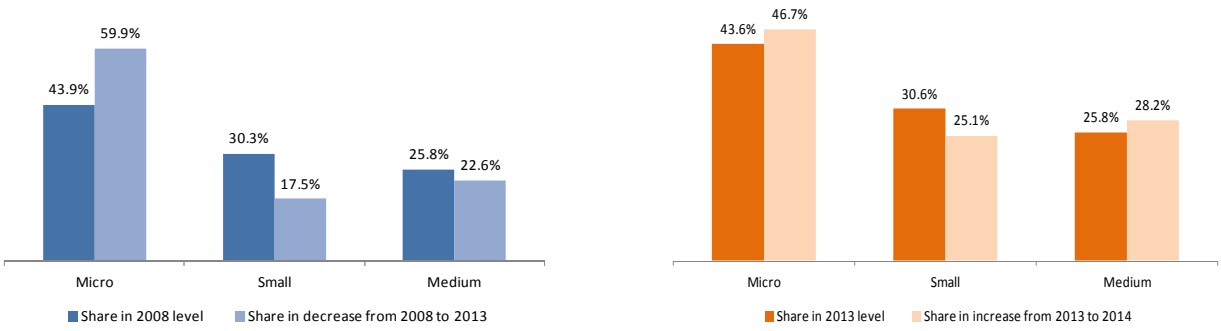
It was only in 2014 that SMEs finally started to outperform large enterprises in terms of employment creation.

***Micro SMEs accounted for a disproportionally large share of the decrease in SME employment between 2008 and 2013***

Micro SMEs accounted for a disproportionally large share of the decline in SME employment from 2008 to 2013 (Figure 23). Despite being responsible for only 44% of total SME employment, micro SMEs accounted for 60% of the total decline in SME jobs. In contrast, small SMEs accounted for a disproportionately *small* share of the overall decrease in SME employment.

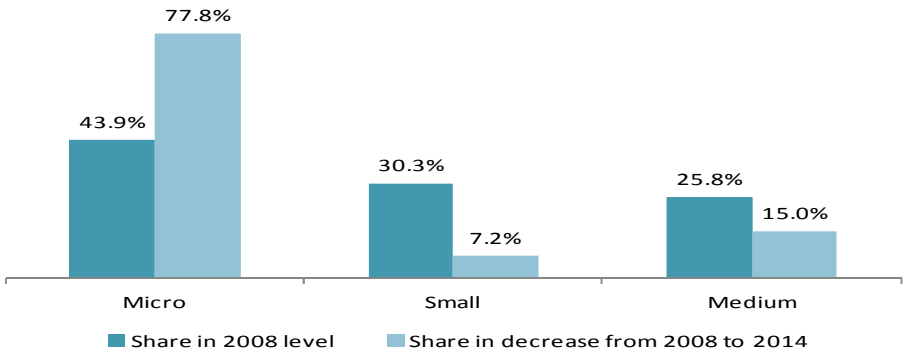
Overall, micro firms accounted for 77.8% of the change in employment from 2008 to 2014, small firms accounted for 7.2% and medium firms for 15% (Figure 24).

***Figure 23: Change in EU28 SME employment by SME size class 2008-2013 and 2013-2014***




Note: Share in 2008 (2013) level = share of employment of SME class size in total SME employment in 2008 (2013). The EU28 aggregate does not include Slovakia due to the break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 24: Change in EU28 SME employment by SME size class 2008-2014***




Note: Share in 2008 = share of employment of SME class size in total SME employment in 2008. The EU28 aggregate does not include Slovakia due to the break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

This chapter will discuss in greater detail the contribution made by SMEs to the employment dynamics in the EU. It is based on the findings from a special study on SME employment creation which accompanies the present report, and adopts a more granular analysis of the SME data presented so far.

The three key questions the chapter seeks to answer are:

1. In which economic sectors did SME employment grow/decline between 2008 and 2014?
2. How much did each SME size class contribute to changes in SME employment, taking into account that some SMEs (and even some large enterprises) may change class size over time as they grow or scale back?
3. Are there any particular firm-level characteristics which have contributed to SME employment creation/destruction since 2008?

The concepts of net and gross employment creation and destruction are crucial to an understanding of this chapter. For particular groups of SMEs, net employment creation/destruction is the term used to describe the change in employment from one year to the next within the group. A positive change is referred to as net employment creation and a negative change is called net employment destruction. Within groups of SMEs, some SMEs will have created jobs and some will have reduced employment. The number of jobs created within a group of SMEs is referred to as gross employment creation and the number of jobs lost within the same group is referred to as gross employment destruction. The net employment creation/destruction of a particular group of SMEs is simply the differnce between gross employment creation and gross employment destruction within this group. A group of SMEs, for example, may be the whole SME population, a particular SME class ize, or the SME population within a particular sector or the population of SMEs within a particular class size in a particular sector.

While net employment figures accurately reflect the aggregate employment performance of a sector and/or class size, they do however hide the considerable employment dynamics that may occur within a sector and or/size class.

The chapter is structured as follows:

- A first part reviews, at a granular level, changes in SME employment over time. It focuses on the net employment creation record of SMEs as a group in different sectors, and also on the implications of enterprise mobility across size classes.
- A second part focuses on annual employment creation and destruction at the level of individual SME enterprises. It examines whether or not there are specific characteristics common to SMEs at *firm* level, which have increased employment, such as: age of enterprise, industrial sector in which the SME is active, etc.

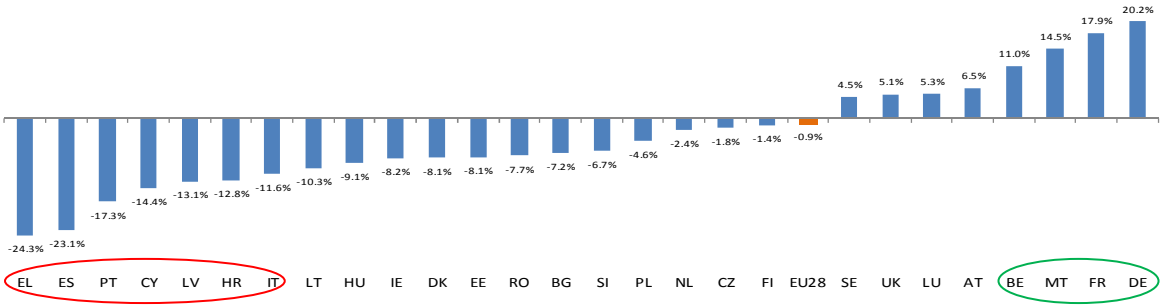
***Only 8 Member States (AT, BE, DE, FR, LU, MT, SE and UK) show SME employment growth from 2008 to 2014, with double-digit growth in BE, DE, FR and MT***

***Main sources of SME employment growth were micro SMEs in BE and FR, small SMEs in DE, LU, SE and UK, and medium SMEs in MT***

As noted in the previous chapter, economy-wide conditions have had a major impact on the performance of the SME sector as a whole and within the different SME size classes in EU28 Member States (Box 7). Overall, only eight EU Member States (Austria, Belgium, France, Germany, Luxembourg, Malta, Sweden, and United Kingdom) showed positive net SME employment growth over the period 2008 to 2014, with Belgium, France, Germany, and Malta posting double-digit growth (Figure 29).

In all other Member States the overall net change in SME employment was negative. Among the 20 Member States which showed net SME employment destruction over the period 2008 to 2014, eight Member States (Croatia, Cyprus, Greece, Italy, Latvia, Lithuania, Portugal, and Spain) posted double-digit net employment losses.

***Figure 25: Net employment creation record of SMEs in EU28 Member States – 2008 to 2014***




Note: Slovakia is not shown and the EU28 aggregate does not include Slovakia due to the break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

## The contribution of different SME size classes to overall growth in SME employment varies markedly across Member States.

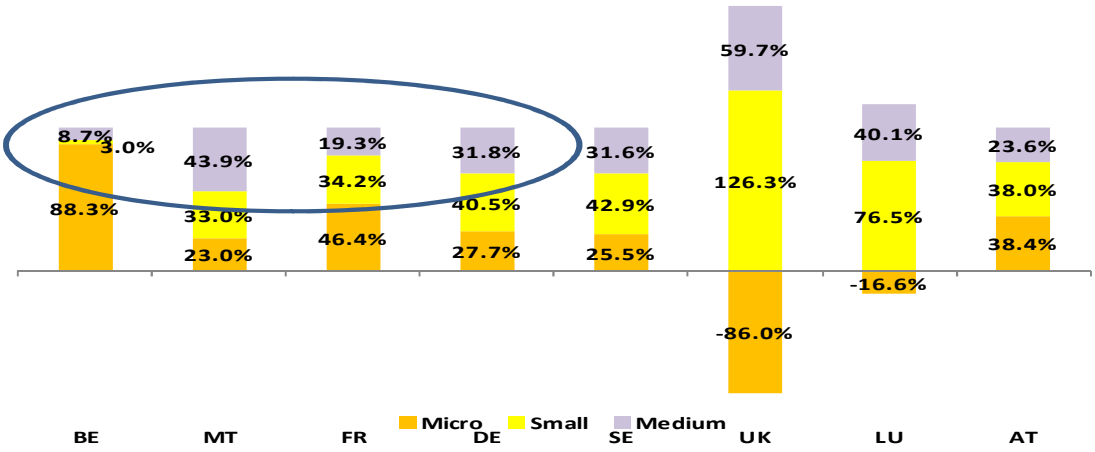
In Belgium, micro firms accounted for virtually all of the net SME employment gains and in France for about half of the increase. However, in Germany, Luxembourg, Sweden, and the United Kingdom, the small SME size class was the main contributor to net SME employment creation. In Malta, by contrast, the main contributor was the medium SME size class.

In one small group of 4 Member States (Cyprus, Greece, Poland, and Romania) showing a net decrease in SME employment, this fall was largely due to employment losses at micro SMEs, as shown in Figure 104 in annex I.23. This also is the case at the EU-wide level.

In 5 countries (Denmark, Finland, Ireland, Latvia, and the Netherlands) the overall reduction in SME employment levels was driven mainly by small firms.

Lastly, in Bulgaria, Czech Republic, Estonia, Lithuania, and Slovenia, the negative change in employment was mostly accounted for by medium size firms.

***Figure 26: Contribution of different SME size classes to net SME employment creation by SMEs in EU28 Member States – 2008 to 2014 (% of total net increase)***




Note: The figure shows the decomposition of SME employment growth only for Member States showing a net SME employment creation from 2008 to 2014.
*Source: Eurostat, National Statistical Offices, DIW econ*

The results of a simple cross-country correlation analysis of growth in real GDP and SME employment show that a 1 percentage point in real GDP growth is associated with a 0.9 percentage point growth in SME employment (Box 3). This implies that to create 1% of additional SME jobs, an increase in real GDP of 1.1% is required.

In order to assess whether employment growth by SMEs had been impacted factors other than real GDP growth, such as labour costs, the tax burden on SMEs or other features of the environment in which SMEs operate, a simple econometric model was estimated relating the growth in SME employment (all SMEs and by size class) to:

- the output gap in 2008, the hypothesis being that if firms hoard labour, a larger output gap in 2008 may dampen employment growth thereafter as it may take longer to adjust to a larger gap;
- real GDP growth from 2009 to 2014;
- the growth in real unit labour costs from 2009 to 2014;
- the change from 2009 to 2014 in the effective tax rate on SMEs;
- the change from 2009 to 2014 of a country's overall position(relative to the most efficient situation) with regards to environment for enforcing contracts;
- the change from 2009 to 2014 in the time it takes (in hours) to comply with all tax laws and tax regulations; and,
- the change from 2009 to 2014 of a country's overall position (relative to the most efficient situation) with regards to starting a new business.

The detailed estimation results reported at Annex I.25 show that, in general, no economy-wide factor other than growth in GDP (in constant prices) explains the observed trends in overall SME employment growth across the EU from 2009 to 2014. Obviously, a number of firm-specific factors may explain differences in employment creation by individual SMEs.[6]

## *Box 3*

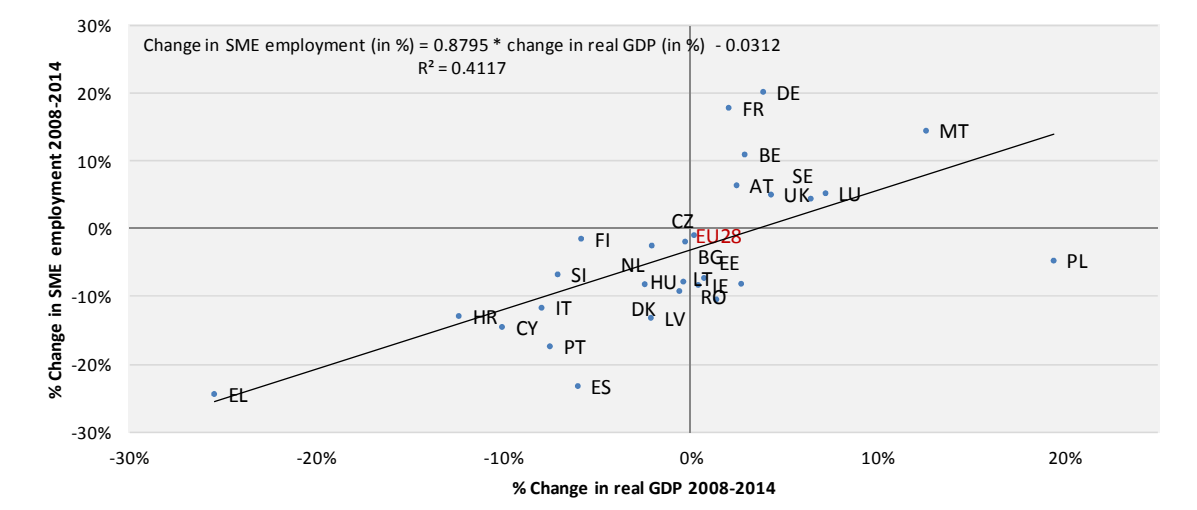
## *Apparent elasticity of SME employment to real GDP*

A simple cross-section analysis which relates the cumulative rate of growth of SME employment from 2008 to 2014 to the cumulative rate of growth in real GDP over the same period, shows that, on average across the EU, **a 1 percentage point in real GDP growth is associated with a 0.9 percentage point growth in SME employment** (see figure below).

This result is highly dependent on the particular period over which the empirical analysis is undertaken (and different periods may yield slightly different results). However, the findings clearly underline the importance of taking into account overall macro-economic developments when comparing the employment creation performance of SMEs.

However, the presence of clear outliers such as France, indicates that other factors besides macro-economic conditions may also be at play.

***Figure 27: Relationship between GDP and SME employment growth over the period 2008-2014***




Note: EU28 aggregate does not include Slovakia due to the break in the series.
*Source: London Economics based on data from Eurostat, National Statistical Offices, DIW econ*

For each of the three SME size classes, a relationship exists between the change (in %) in SME employment and the change (in %) in real GDP over the period 2008-2014. However, as shown in the table below, the average sensitivity of micro SME employment growth to real GDP growth is approximately 60% of that of small SMEs and 66% of that of medium SMEs. Additionally, the relationship for micro SMEs explains only about 20% of the cross-country variation in micro SME employment growth, while the relationships for small and medium size SMEs explain 41% and 37% respectively of the cross-country variation in SME employment growth. Further details are provided in Annex I.22.

| SME size class | Impact in percentage point of a 1 percentage point in real GDP growth on SME employment growth | Proportion of variation across EU28 Member States in SME employment growth that is explained by differences in real GDP growth |
|---|---|---|
| All SMEs | 0.88 | 41% |
| Micro SMEs | 0.68 | 21% |
| Small SMEs | 1.16 | 41% |
| Medium-sized SMEs | 1.02 | 37% |

Note: Slovakia is not included in the analysis due to a break in the data series.
*Source: London Economics based on data from Eurostat, National Statistical Offices, DIW econ*

# Employment dynamics in various sectors of the economy

This section starts with an overview of SME employment creation and destruction in different broad sectors of the economy. Next, it examines the employment creation record of EU28 SMEs in different industry groupings of particular interest to policy-makers, such as groupings based on export intensity, technology intensity, and knowledge intensity. Finally, the section takes a more granular look at SME employment patterns and identifies, at a highly disaggregated level, the sectors which experienced the strongest and weakest SME employment growth.

However, before diving into this detailed analysis, it is important to note that, economy wide, the demand for manufacturing and services followed very different paths between 2008 and 2014.

- Demand for manufactured goods was weak in general (with total sector value added declining by 3.9%), hitting micro and small SMEs particularly hard.
- In contrast, demand for services grew more solidly, with a sector-wide increase in value added of 9.4% and all firm class size benefitting from this uplift.

*Table 4: Growth of value added in manufacturing and services, 2008 to 2014*

| | Manufacturing sector | Services sector |
|---|---|---|
| Micro | -7.9% | 7.2% |
| Small | -7.6% | 8.6% |
| Medium | 0.4% | 14.2% |
| SMEs | 3.6% | 9.5% |
| Large | 0.1% | 9.4% |
| Total sector | -3.9% | 9.4% |

*Source: London Economics based on data from Eurostat, National Statistical Offices, DIW econ*

## *SME employment by broad economic sector from 2008 to 2014*

2008-2013

Three broad sectors stand out in terms of showing significant net employment destruction over the period 2008-2013. These are 'construction', 'mining and quarrying', and 'manufacturing'. Together, these three sectors still accounted for 1/3 of total SME employment in the EU28 in 2014 (Figure 28).

At the other end of the spectrum, another set of three broad sectors ('electricity, gas steam and air conditioning supply, water supply', 'administrative and support service activities', and 'sewerage, waste management and remediation') experienced more than 10% growth in net employment from 2008 to 2013. However, these three sectors accounted for less than 10% of total SME employment.

A middle ground between the two extremes of net job creation and destruction is occupied by two groups of broad sectors exhibiting very different patterns.

The first group ('real estate activities', 'professional, scientific and technical services', 'accommodation and food services', and 'information and communication') experienced solid, single-digit net employment creation between 2008 and 2013. This group of industries accounted for slightly more than a quarter of total SME employment in 2014.

However, within these sectors the variation in growth rates is substantial. Some small industries exhibited growth rates higher than 10%. For example, within the professional services sector, over the period 2008-2013, employment grew by 20% in 'Activities of head offices; consultancy', and 14% in 'Veterinary activities' and 'Scientific research & development'. On the other hand, employment in 'Architectural & engineering; technical testing and analysis' grew by only 1%, and in 'Legal and accounting', and 'Other professional, scientific and tech activities' employment grew by only 7% (see Annex I.26 for details).

***'Construction', 'mining and quarrying' and 'manufacturing' SMEs show large employment declines from 2008 to 2013. They account for approximately 1/3 of total employment***

***In contrast, SMEs in 'electricity, gas steam and air conditioning supply, water supply', 'administrative and support service activities', and 'sewerage, waste management and remediation', post employment growth in excess of 10% over 2008-2013. However, these sectors account for less than 10% of total SME employment***

The second group ('transportation and storage', and 'retail and wholesale trade') showed marginal net employment destruction from 2008 to 2013. Within the transport industry, however, one sector ('Postal and courier activities') posted 14% employment growth. All other sectors (air, water, land and pipeline transport) as well as all trade sectors posted declines in employment. Industries in this group accounted for almost 1/3 of total SME employment in the EU28 in 2014 (see Annex I.26 for details).

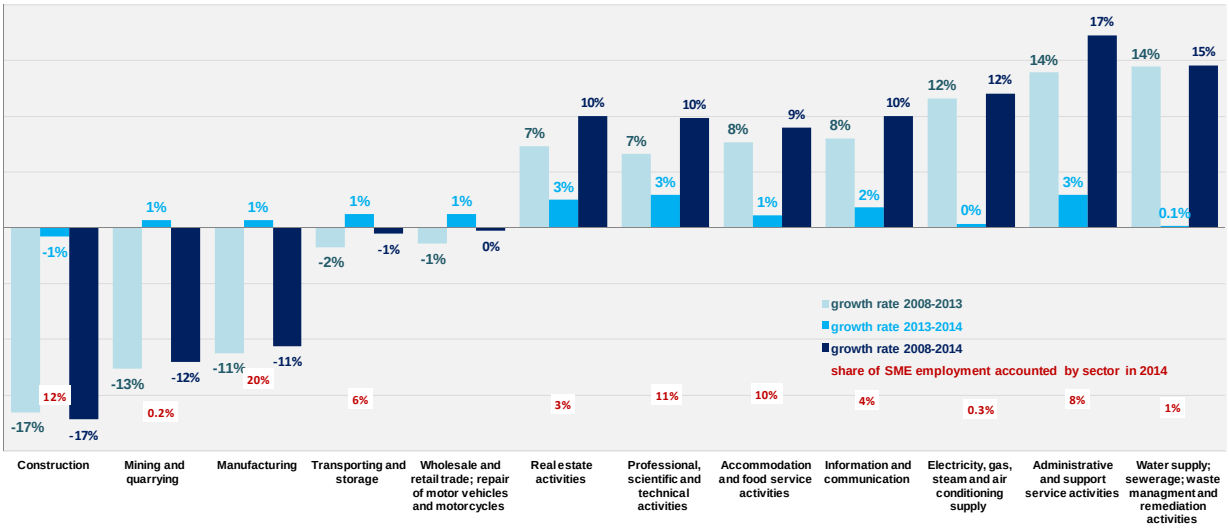
2013-2014

In contrast to the widely divergent employment trends of 2008-2013 among the different industrial sectors of the EU28 non-financial business economy, in 2014 these differences in employment performance were much more muted. With the exception of the 'construction sector', all sectors mentioned above showed positive net employment growth ranging from 1% to to 3%.

For the overall period from 2008 to 2014, the best performing industry was 'administrative and support services activities', with SME employment growth of 17%, followed by 'water supply,

sewerage, waste management and remediation activities' (+15%). The sector with the largest decrease in employment was construction (-17%).

***Figure 28: Growth rates of SME employment by broad economic sector, 2008-2013, 2013-2014, and 2008-2014, EU28***




Note: Slovakia is not included in the analysis due to a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Detailed country-level information on growth of employment by sector is provided in Annexes I.24 and I.26.

## *More granular industrial analysis of SME employment growth*

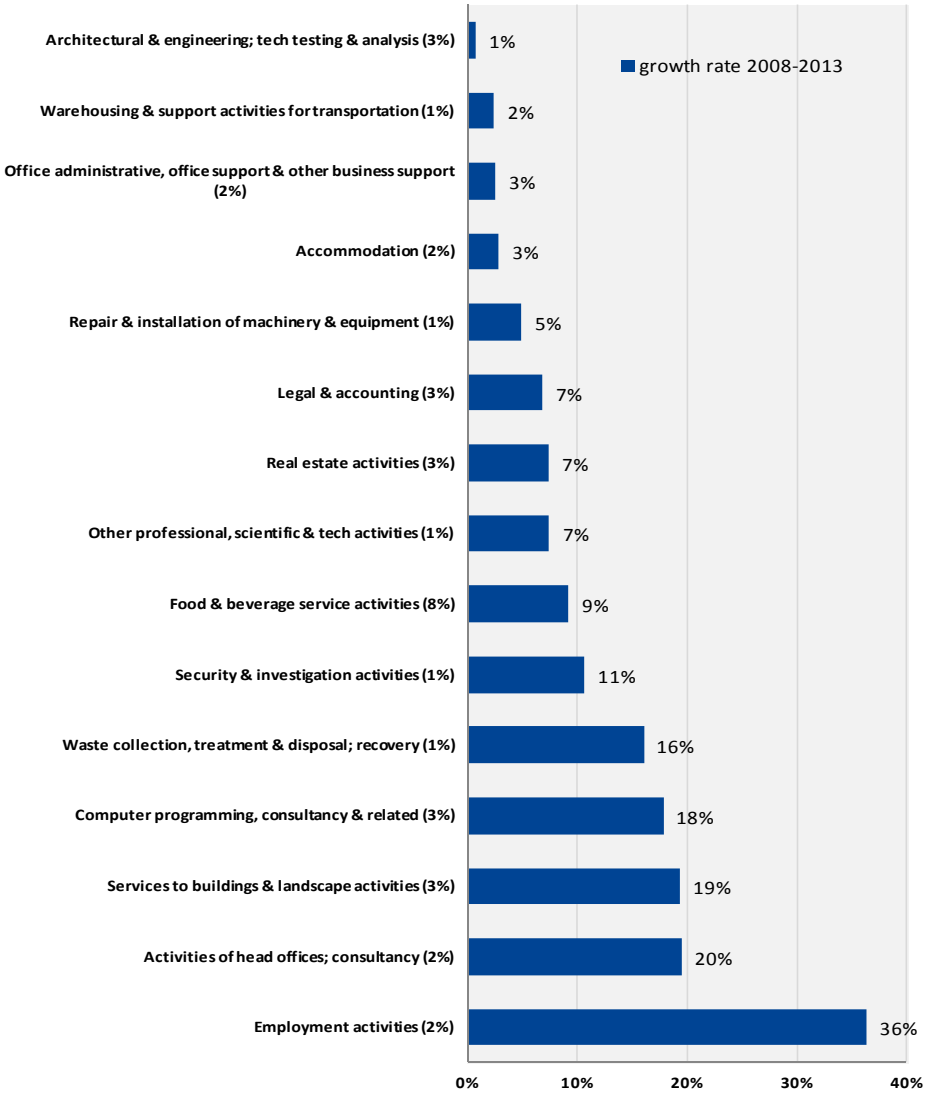
The analysis in this section builds on the previous discussion, examining SME performance at a much more granular level. It focuses on the 67 different industries that make up the EU28 non-financial business sector.

Over the period 2008-2013, the EU28 non-financial economy experienced subdued employment growth in sectors accounting for 36% of SME employment (in 2014) and the sectors accounting for the remaining 64% of SME employment all suffered employment losses (see Annex I.32 for details).

The key point to note is that the best performing sectors are those that account for only relatively low shares of SME employment, such as 'employment activities' and 'activities of head offices and consultancy'. Overall, the best performers in terms of SME employment increases are 'remediation activities and other waste management', and 'mining support service activities'. These sectors, however, account for only 0.03% and 0.02% of SME employment in the EU.

Employment in some larger sectors, such as 'food and beverage service', 'legal and accounting', and 'real estate', grew by 9%, 7%, and 7% respectively over the period 2008-2013. These 3 sectors account for 8%, 3%, and 3% respectively of total SME employment.

***Figure 29: Largest SME sectors with positive employment growth, 2008-2013, EU28***



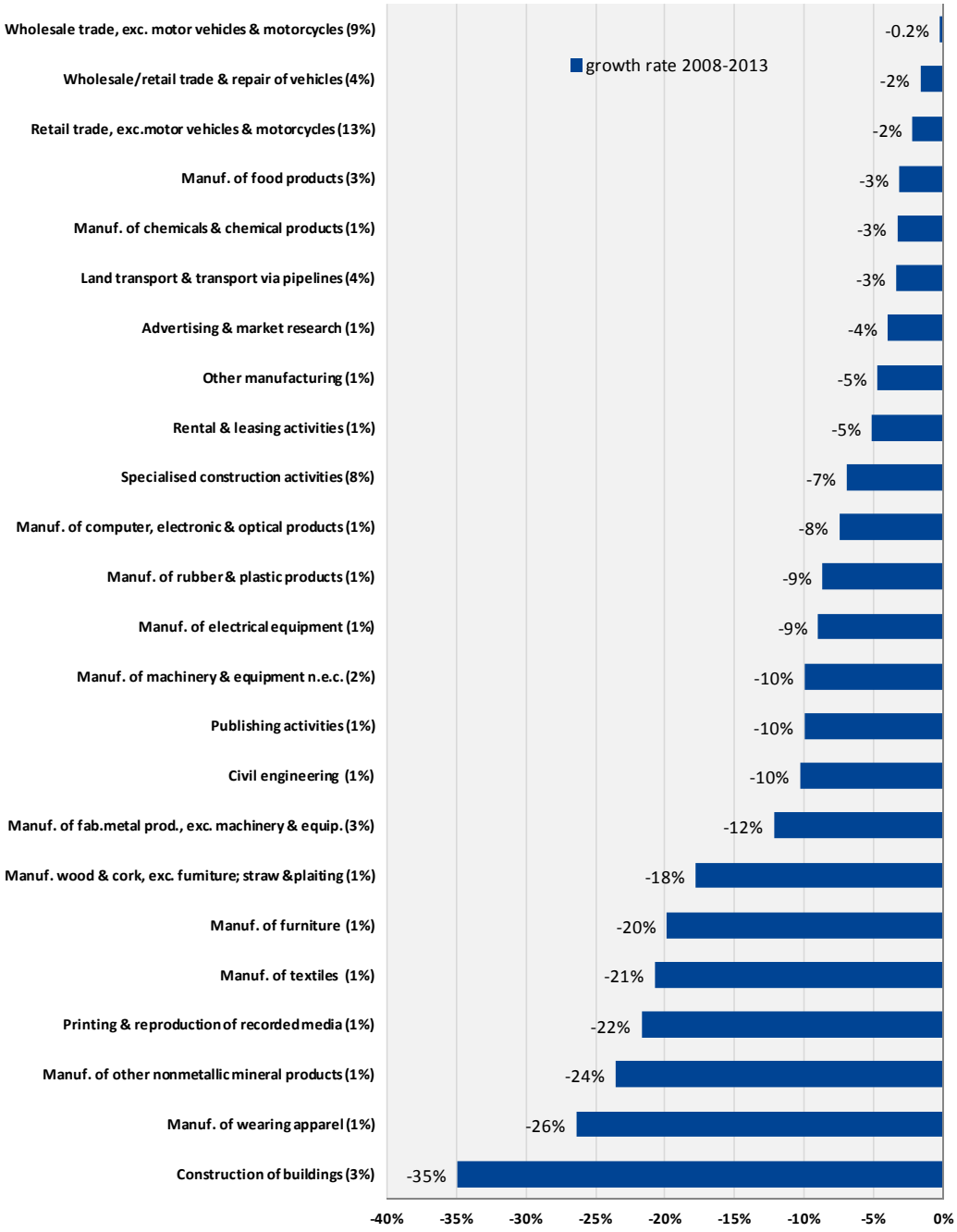

Note: the percentages in brackets are the share of SME employment accounted for by the sector in 2014. Sectors represented in this chart are those accounting for at least 1% of SME employment. For this reason, shares do not add up to a 100%. Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

In contrast, sectors such as 'construction of buildings', 'manufacturing of wearing apparel', 'manufacturing of other nonmetallic mineral products', 'printing & reproduction of recorded' media', and 'manufacturing of furniture', showed net employment decreases of more than 20% between 2008 and 2013. Together, these fiver sectors accounted for 7% of total SME employment in 2014.

Other large SME employment sectors, such as 'manufacturing of fabricated metal products, except machinery & equipment' and 'specialised construction activities', experienced a drop in SME employment of 12% and 7% respectively. These two sectors together accounted for 11% of total SME employment in 2014.

Lastly, three of the largest sectors: 'retail trade, except motor vehicles & motorcycles', 'wholesale trade except motor vehicles and motorcycles', and 'wholesale/retail trade & repair of vehicles' , experienced small SME employment losses of 2%, 0.2%, and 2% over 2008-2013. Despite only a small employment decrease in percentage terms, the actual SME employment losses amounted to more than 300,000 jobs, as these three sectors are very large and account for more than 25% of SME employment.

***Figure 30: Largest SME sectors with reductions in employment, 2008-2013, EU28***




Note: the percentages in brackets are the share of SME employment accounted for by the sector in 2014. Sectors represented in this chart are those accounting for at least 1% of SME employment. For this reason, shares do not add up to a 100%. Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

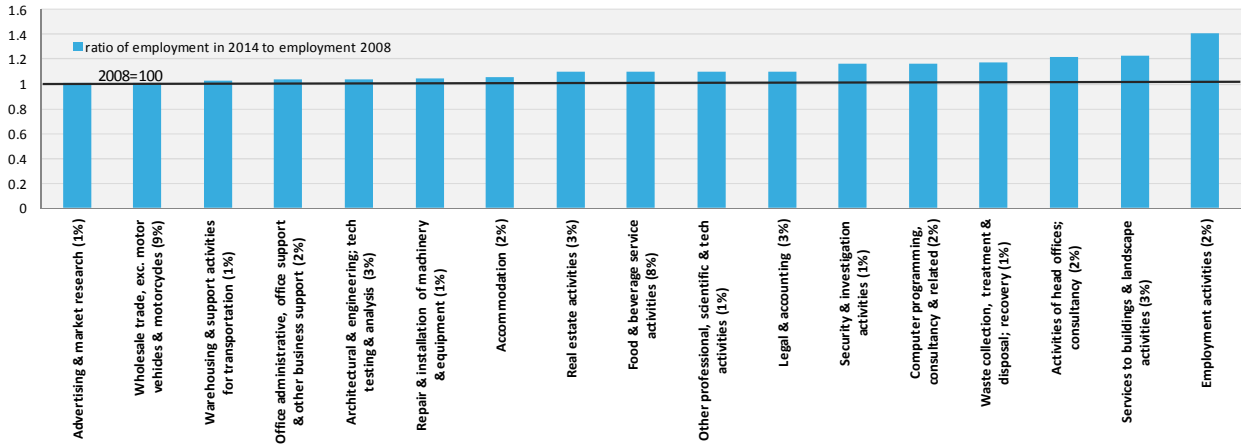
A similar analysis covering all sectors for the whole period from 2008 to 2014 can be found in Annex I.27.

The data clearly shows that, by 2014, *only half* of the EU28 sectors had achieved full recovery to pre-crisis levels of employment.

For example, SMEs involved in a few of the larger service activities such as 'services to buildings & landscape activities', 'employment activities', 'and 'activities of head offices; consultancy', were in 2014 well above pre-crisis levels in terms of employment. This was also true for smaller sectors such as 'remediation activities & other waste management' and 'mining support service activities'.

However, some of the more important sectors in terms of SME jobs, show only very marginal SME employment growth from 2008 to 2014. One example is 'wholesale trade, excluding motor vehicles & motorcycles', a sector which accounts for more than 9% of total SME employment, but in which SME employment recovered by only roughly 1%.

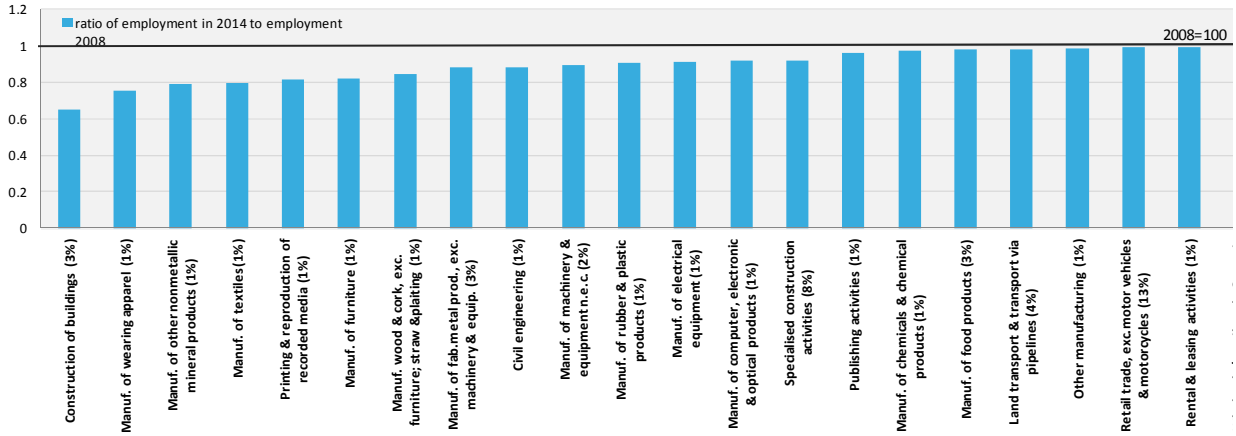
***Figure 31: Largest SME sectors which achieved employment recovery, 2008-2014, EU28***




Note: the percentages in brackets are the share of SME employment accounted by the sector in 2014. Sectors represented in this chart are those accounting for at least 1% of SME employment, with achieved recovery. For this reason, shares do not add up to a 100%. Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

As for the remaining SME sectors (which together account for 53% of total SME employment), employment levels in 2014 had not yet recovered to the levels of 2008 (Figure 32).

***Figure 32: Largest SME sectors lagging in employment recovery, 2008-2014, EU28***




Note: Sectors represented in this chart are those accounting for at least 1% of SME employment, which are currently lagging in employment recovery. For this reason, shares do not add up to a 100%.Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Moreover, the employment creation record of SMEs from 2008 to 2014 is uneven both *across* countries and *within* countries.

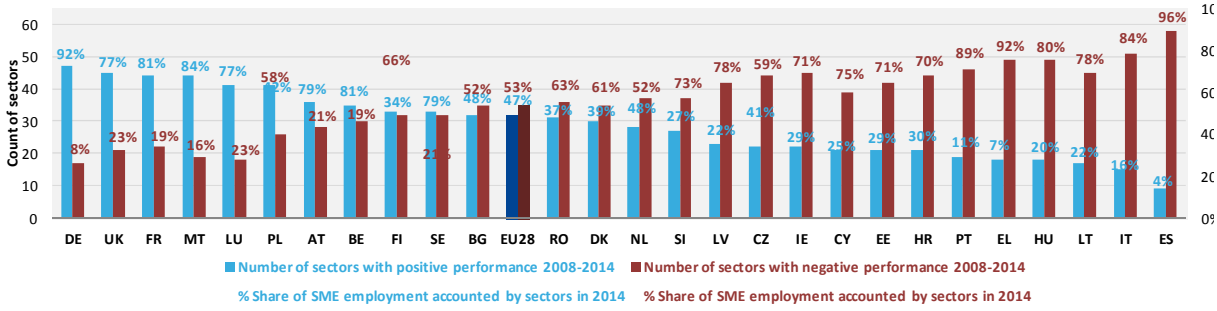
In Austria, Belgium, France, Germany, Luxembourg, Malta, Poland, and the United Kingdom, more than half of the 67 industries performed positively in terms of employment growth from 2008 to 2014 (Figure 33). In all these Member States but Poland, these industries also accounted for the vast majority (more than 75%) of SME employment in 2014.

The EU28 average lies in the middle of the spectrum in terms of the number of sectors showing SME job gains and SME job losses, together with Bulgaria, Finland, and Sweden. From

2008 to 2014, about half of the industries in these economies experienced increased employment , and half experienced reduced employment.

In all the remaining Member States (Croatia, Cyprus, Czech Republic, Denmark, Estonia, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, the Netherlands, Portugal, Romania, Slovenia, and Spain), the majority of industries showed negative performance in SME employment from 2008 to 2014. With the exception of the Netherlands, where employment distribution is more even, in all these Member States the sectors showing employment losses are those which are the most important, as they account for more than 70% of SME jobs.

***Figure 33: Number of sectors with positive and negative performance from 2008 to 2014, and relative shares of SME employment by Member State***



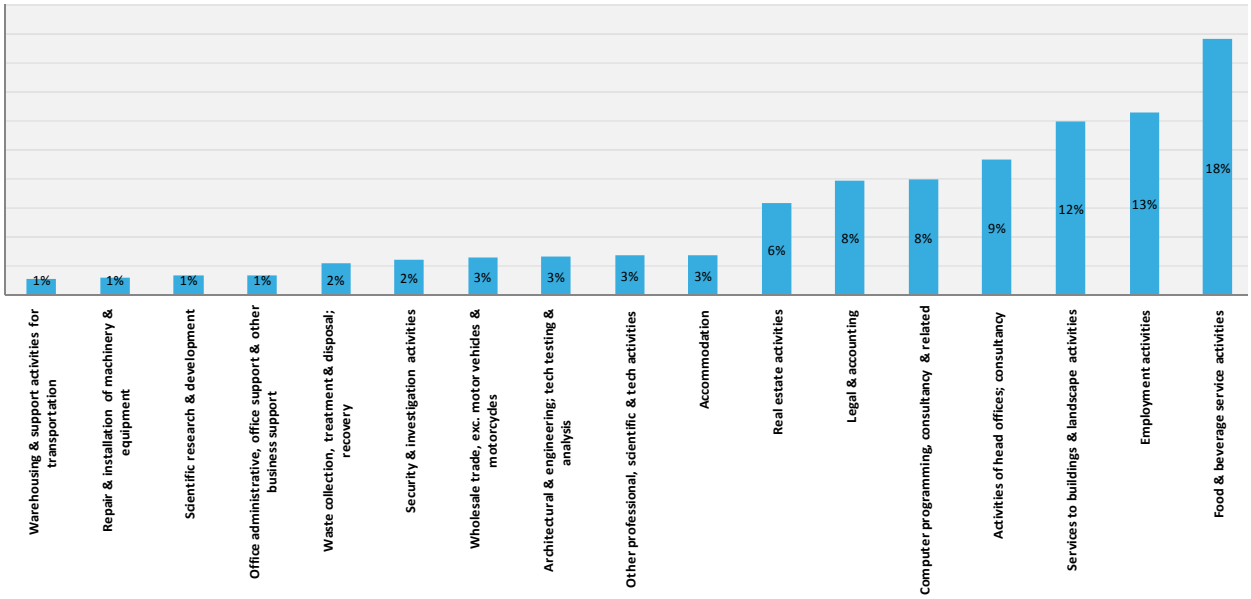

Note: Slovakia is not shown and not included due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

The contribution of individual sectors to overall SME employment gains or losses shows a highly skewed distribution, with a limited number of sectors accounting for the bulk of gains or losses (Figure 34 and Figure 35).

- In the case of net employment creation, *four* sectors accounted for 52% of all net employment creation: 'Activities of head offices; consultancy', 'Services to buildings & landscape activities', 'Employment activities', and ' Food & beverage service activities'.

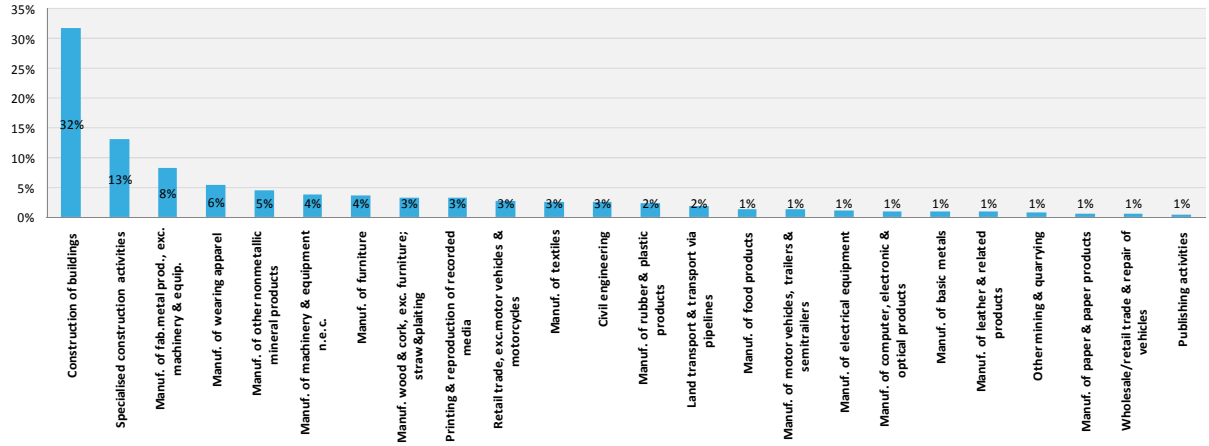
- In the case of net employment losses, *four* sectors accounted for 59% of net employment destruction: 'Construction of buildings', 'Specialised construction activities', 'Manufacturing of fabricated metal products excluding. machinery & equipment', and 'Manufacturing of wearing apparel'.

**Figure 34: Sectoral contribution to job creation 2008-2014, EU28**




Note: Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

**Figure 35: Sectoral contribution to job destruction 2008-2014, EU28**




Note: Data exclude Slovakia due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

## SME employment dynamics in sectors of different export intensity

At the EU27 level, net employment losses over the period 2008-2013 were much larger in sectors with a high export propensity (proxied by the ratio of sector exports to total final demand sales), than in sectors with a low export propensity (See Figure 36 and Annex I.28 for the detailed definition of the various export-intensity classses, and the export-intensity of the various economic sectors of the economy).

Examples of sectors of high and very-high export intensity include: 'Manufacturing of motor vehicles, trailers and semitrailers', 'Manufacturing of other transport equipment' and 'Manufacturing of basic pharmaceutical products and preparations'. Detailed information can be found at Annex I.28.

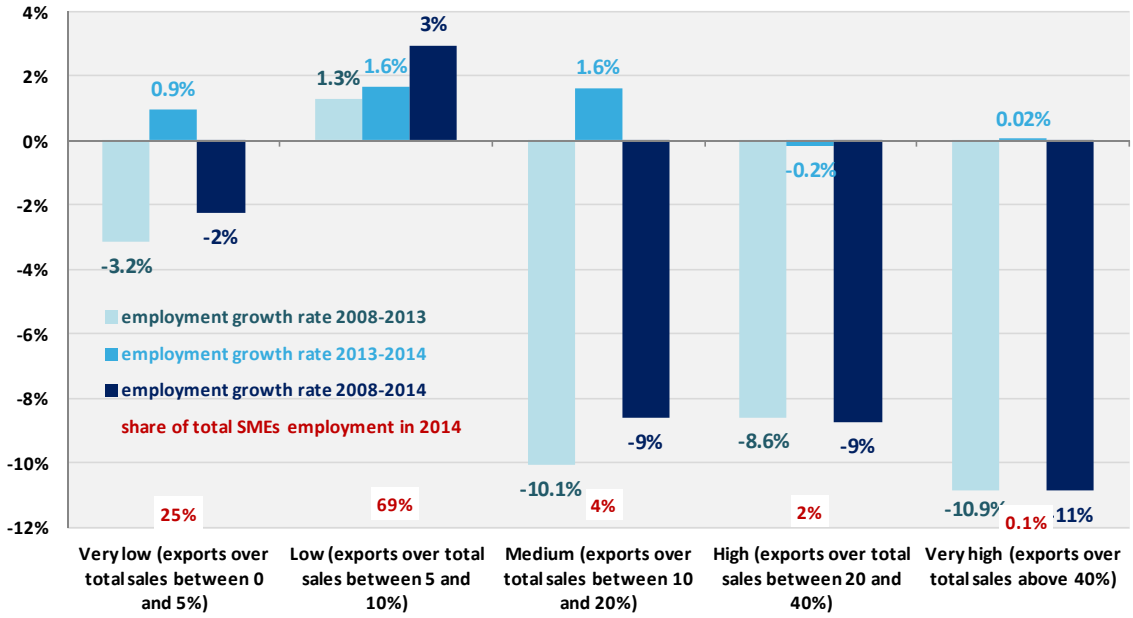
However, it should be noted that the vast majority of SME employment is in very low or low export-driven industries such as: 'Repair & installation of machinery & equipment', 'Retail

trade, except motor vehicles & motorcycles', 'Land transport & transport via pipelines', 'Accommodation and food services'.

In 2014 , this dichotomy in employment dynamics continued, with modest employment growth among SMEs with low and medium propensity to export (Figure 36), and stagnation of SME employment in sectors with a higher export propensity.

Academic study of firm-level data shows that exporting is associated with stronger firm performance.[7] However this may be due to self-selection, with only those firms which are confident of performing well in the international trade arena choosing to export, and in the process, benefiting from the larger market. Disentangling these self-selection effects poses significant challenges which cannot be addressed with aggregate data.

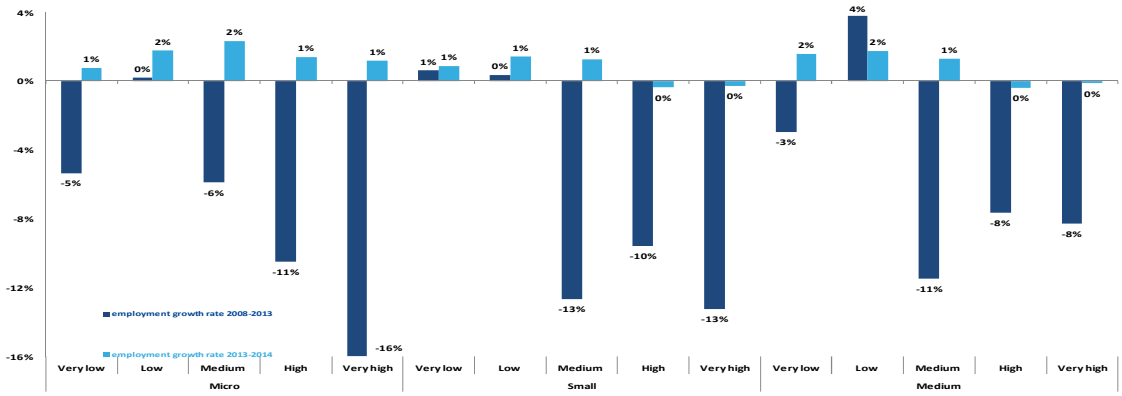
***Figure 36: Post-crisis (2008-2013), recent (2013-2014), and overall (2008-2014) SME employment performance by export intensity, EU27***




Note: this chart refers to EU27 due to lack of export data for Croatia in the EU input-output table, and excludes Slovakia due to break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ; Eurostat Input Output table (Domestic Use 2011)*

Similar patterns can be observed at the level of each SME size class (Figure 37).

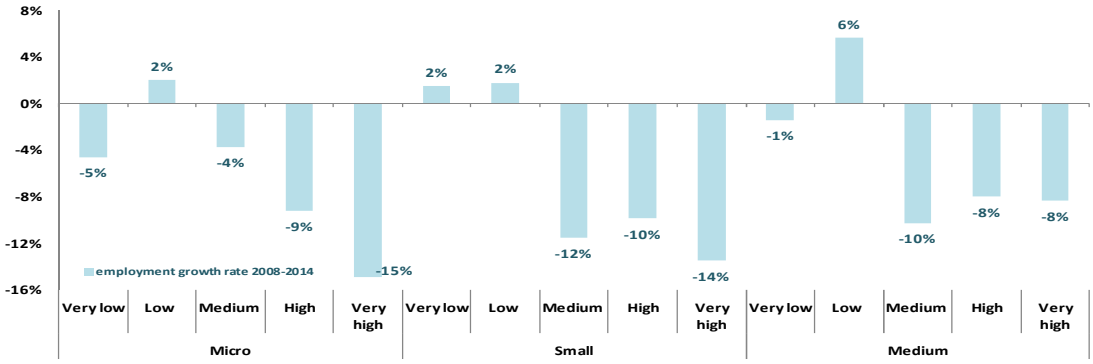
***Figure 37: Post-crisis (2008-2013) and recent (2013-2014) SME employment performance by export intensity and size class, EU27***




Note: this chart refers to EU27 due to lack of export data for Croatia in the EU input-output table and excludes Slovakia due to break in the series. Slovakia is not included in the EU27 data due to a break in the series
*Source: Eurostat, National Statistical Offices, DIW econ; Eurostat Input Output table (Domestic Use 2011)*

Overall, 'low' export intensity firms of all size classes performed positively throughout the period 2008-2014 (Figure 38), while medium and high-export SMEs were consistenly underperforming.

***Figure 38: EU SME employment performance by export intensity and size class, 2008-2014, EU27***




Note: this chart refers to EU27 due to lack of export data for Croatia in the EU input-output table. and excludes Slovakia due to break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ; Eurostat Input Output table (Domestic Use 2011)*

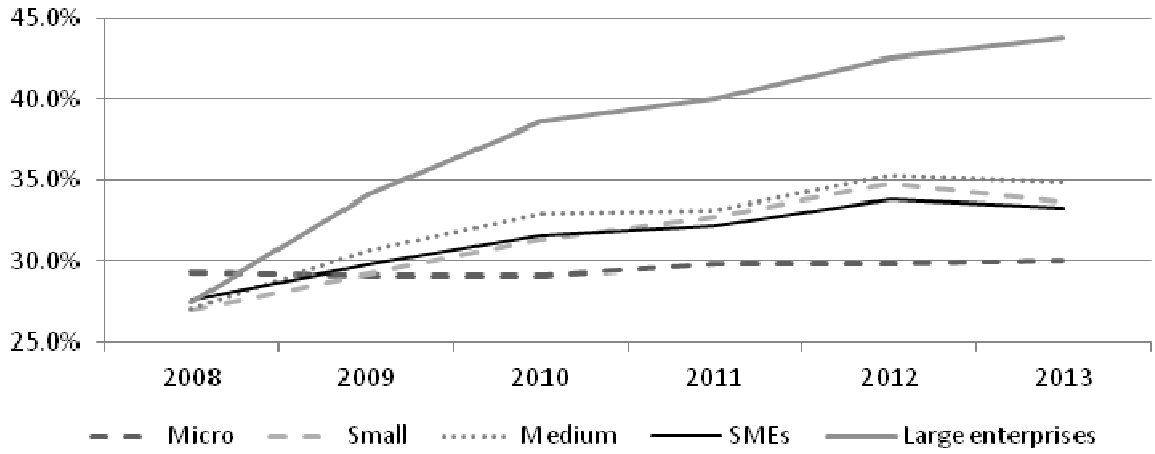
The contrast is quite striking between the overall macroeconomic picture in which growth in exports was a key engine of growth and the gowth of the value added generated by SMEs operating in industries which are more export focused (i.e., those industries characterised as being of medium, high or very high export intensity).

The strinkingly different evolution reflects the combination of two factors:

- First, the value of exports to other EU countries by firms of all class sizes increased only by 14% from 2008 to 2013 (the last year for which detailed data on exports by firm class-size are available) while the value of total exports by all firms to destinations outside the EU increased by 95% over the same period.
- Second, while the SMEs' and large firms' shares of extra-EU exports in their respective total exports were broadly the same in 2008 (27.1% in the case of SMEs and 27.6% in the case of large firms), large firms managed to rebalance their export destinations much more than SMEs. By 2013, extra-EU exports accounted for 43.7% of the total value of exports by larger firms while the share of SME exports to markets outside the EU increased only to 33.3%.

Thus, large firms benefited much more from the rapid growth in extra-EU exports while SMEs' exports were held back to some extent by their dependence on intra-EU markets.

***Figure 39: Shares of extra-EU exports in total export value by firm size class EU27 2008-2013***



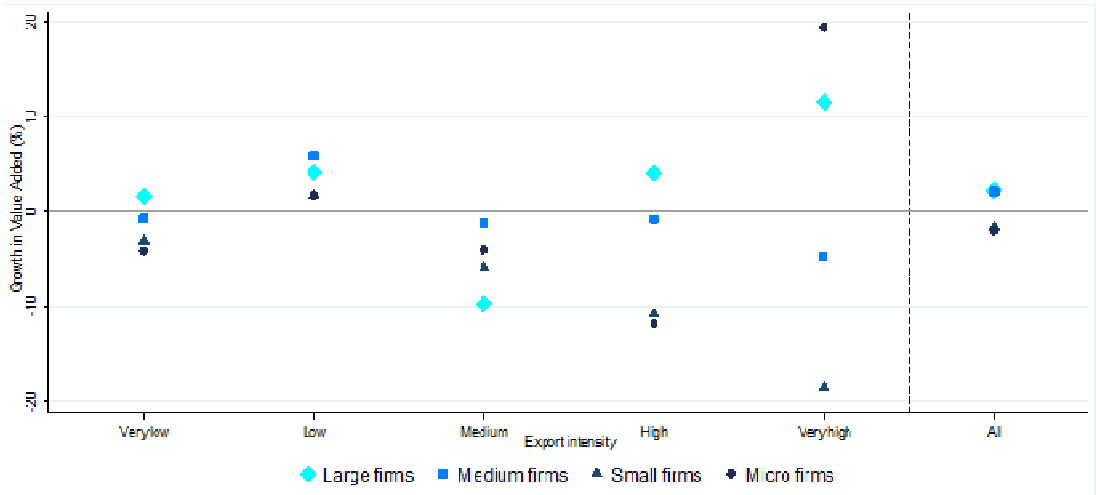

*Source: Eurostat - Comext*

Despite the lack of significant increase in the share of extra-EU exports in total exports, not all SMEs suffered from a lack of presence in extra-EU market.

Indeed, the figures below show, for example, that micro firms active in the very-high-export intesity experienced solid value added and employment growth over the period 2008-2013. The other two SME size classes (small and medium-sized) in the same sector experienced a decline in value added. One potential explanation may be that many of the micro firms in the very-high export intensity sector are suppliers to the large firms and thus benefitted indirectly from the growth in exports. Some of these micro SMEs may also be born-global firms, i.e enterprises launched to exploit a global niche from the first day of operation.[8]

In contrast, in the medium-export-intensity and high-export-instensity sector all three SME size classes saw value added decline over the period 2008-2013.

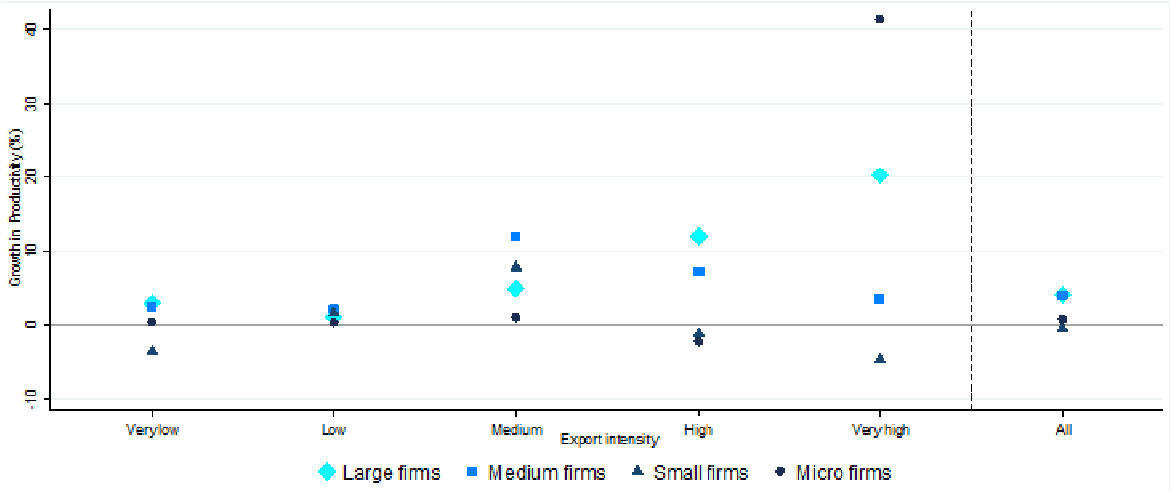
***Figure 40: Change in SME value added generated in sectors of different export intensities, EU27 2008-2013***




Note: Slovakia is excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

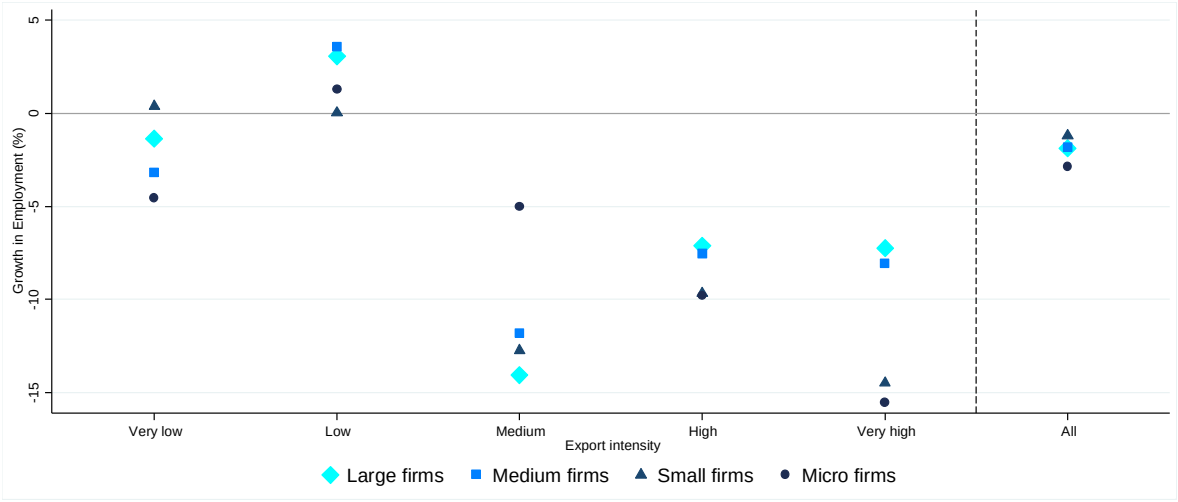
In addition, the different firm size-classes generally raised apparent labour productivity in the medium, high and, especially, the very-high export intensity sectors. As a result, the SME employment declines of the three different SME size classes were typically even larger than the declines in value added, or the firms size classes posted employment losses despite an increase in value added.

***Figure 41: Change in apparent labour productivity in sectors of different export intensities, EU27 2008-2013***




Note: Slovakia is excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 42: Increase in apparent labour productivity in sectors of different export intensities, EU27 2008-2013***




Note: Slovakia is excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Despite this overall trend of EU-wide SME employment losses in very export-intensive or highly export-intensive sectors, in a few countries a very different picture emerged in the period 2008 to 2014.

- In 7 Member States (Austria, Bulgaria, Cyprus, Germany, Denmark, Luxembourg and the United Kingdom), SMEs in very highly export-intensive indiustries recorded net employment growth, with SMEs in 4 of these Member States (Bulgaria, Cyprus, Germany, and Denmark) showing double-digit growth (Table 5)).
- Additionally, in 7 Member States (Czech Republic, Spain, Finland, Luxembourg, Lithuania, Latvia, United Kingdom), SMEs in highly export intensive industries showed net employment growth, with double digit growth in 1 case (Latvia).

Additional detailed country-level information on employment growth in sectors of different export intensity is provided in annex I.29.

It is important to note that the relationship between the employment creation performance of SMEs in very high / high / medium export intensity industries and Member States' economy-wide export performance (in terms of exports of goods and services) is very weak. On average, over the period 2008-2014, the relationship was close to nil across Member States. Te correlation between SME employment growth and export growth is respectively -0.07, -0.04 , and -0.02 in these same three industries.

*Table 5: SME employment growth from 2008 to 2014 by export intensity of sectors in which EU27 SMEs are active*

| Very high export intensity | | High export intensity | | Medium export intensity | |
|---|---|---|---|---|---|
| AT | 2.20% | ES | 1.20% | EE | 0.80% |
| LU | 6.20% | CZ | 1.90% | HU | 2.90% |
| UK | 9.20% | FI | 3.00% | SE | 4.20% |
| DK | 10.70% | LU | 3.80% | UK | 5.30% |
| CY | 16.30% | LT | 6.10% | NL | 7.20% |
| BG | 16.40% | UK | 9.20% | SI | 14.00% |
| DE | 21.60% | LV | 14.50% | AT | 14.20% |
| | | | | FR | 15.80% |
| | | | | DE | 19.50% |
| | | | | BE | 22.90% |
| | | | | MT | 26.10% |

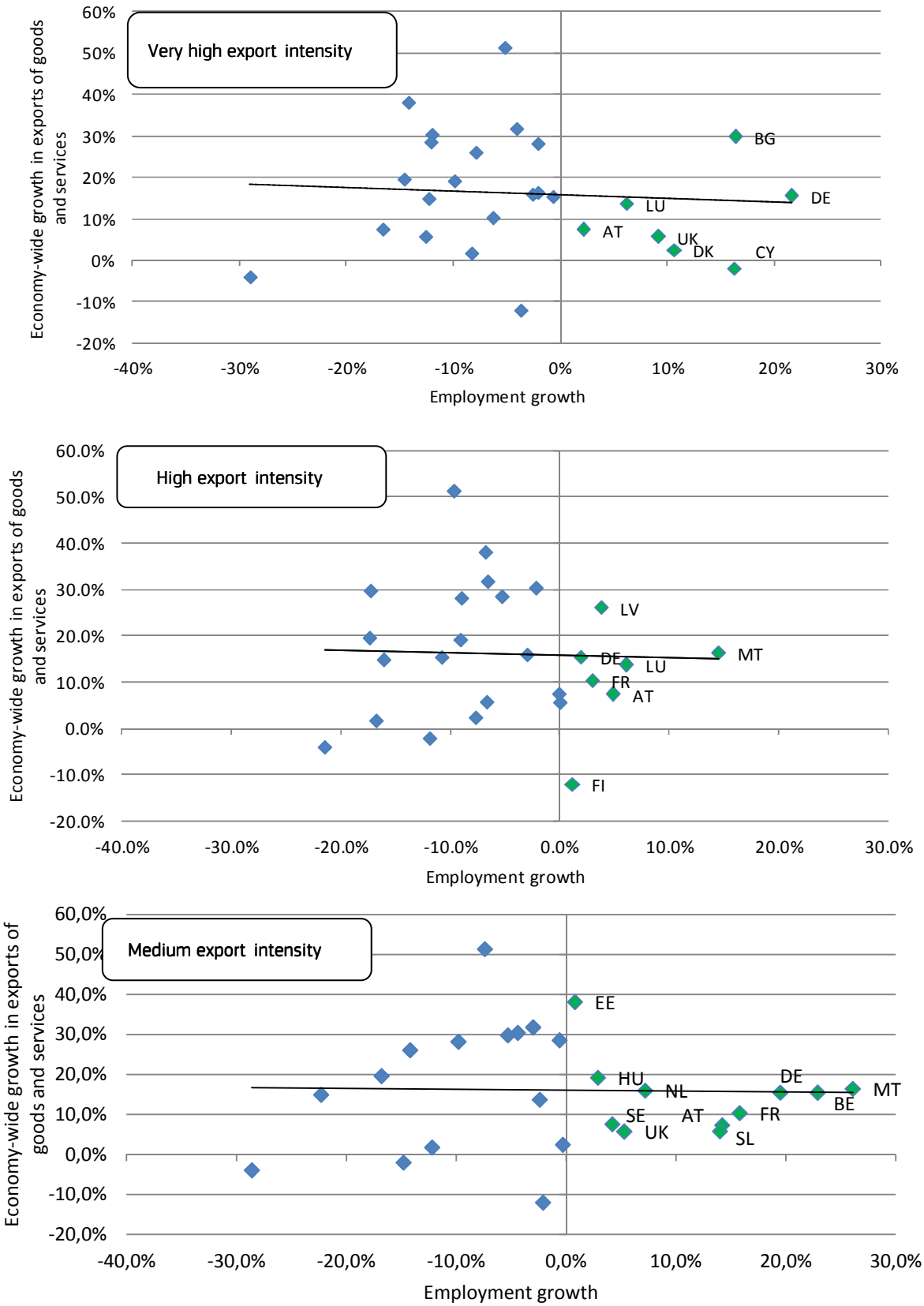
Note: Slovakia is not displayed due to break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ; Eurostat Input Output table (Domestic Use 2011)*

Many Member States have posted an overall positive *export* performance but a negative *employment* performance by SMEs in these three groups of industries. These Member States are located in the top left quadrant in the figure below.

In contrast, practically all Member States which showed positive *employment* performance by SMEs in these three groups of industries, also posted an overall positive *export* performance.

Overall, the performance comparison of the various Member States suggests that a positive economy-wide export performance is a necessary but not sufficient condition for a good employment growth performance by SMEs in very high / high / medium export intensity industries.

***Figure 43: SME employment growth among SMEs operating in different export intensity industries and economy-wide growth in exports of goods and services (at constant prices) 2008-2014 EU27***




*Source: Eurostat, National Statistical Offices, DIW econ; Eurostat Input Output table (Domestic Use 2011)*

## *SME employment dynamics in high-technology and knowledge intensive sectors*

Two typologies based on technology intensity or knowledge intensity are frequently used in the SME policy-making process to characterise the activities of SMEs.

***SMEs in knowledge intensive services increased employment by 9% from 2008 to 2013***

***In contrast, SMEs in high-technology reduced their employment by 5% over the same period***

***The lower the degree of technology intensity of the goods producing sectors, the larger the employment losses***

The first typology distinguishes four types of goods-producing industries (high tech, medium-high tech, medium-low tech, and low tech) and the second typology distinguishes two types of services-producing industries (knowledge intensive services and less knowledge intensive services).

Among these six industry groupings, only SMEs in the two *services*-producing sectors created jobs between 2008 and 2013 (Figure 44).

- Net employment creation was particularly strong in knowledge-intensive services across all three size classes. Knowledge intensive micro-firms grew in employment by 9%. Small and medium firms grew by 9% and 10% respectively (Figure 45).
- The less knowledge-intensive service sector, which accounts for almost half of all SME jobs, showed only very modest net employment creation of 2% over this period.
- The four goods-producing industries showed net job losses between 2008 and 2013. The magnitude of the net employment destruction was inversely related to the degree of technology intensity of the industries, ranging from -5% to -13%.

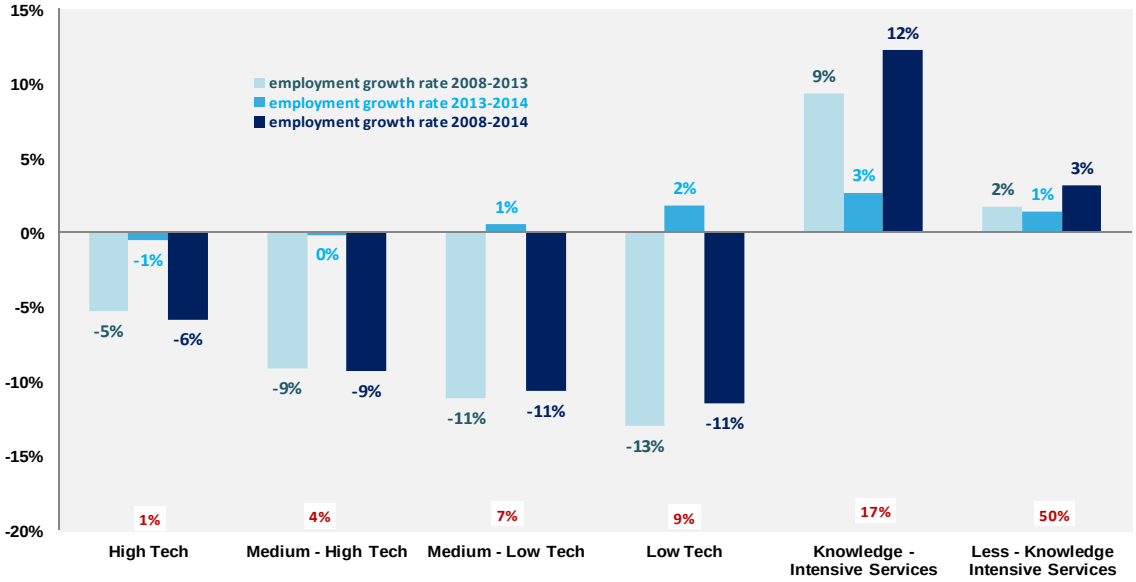
The performance pattern of relatively stronger net employment creation in the knowledge-intensive services, compared with the less-knowledge intensive services, was repeated in 2014.

In contrast, the goods-producing industries showed a very different pattern in 2014 relative to the period 2008-13. Only the medium-low tech and low tech industries recorded positive, albeit limited, employment growth in 2014, while employment in high tech industry declined marginally, and remained broadly unchanged in high-medium tech industry.

Among small and medium firms (Figure 45), the high-tech sector was the worst performer (-1%), while employment in medium-high and medium-low tech firms stagnated in 2014.

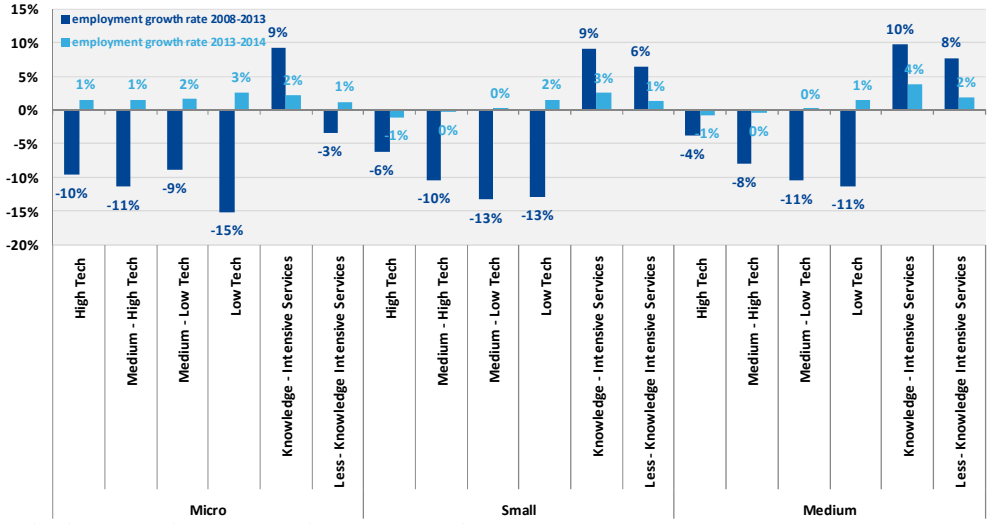
Micro firms, however, recorded positive employment growth in all 4 types of technology intensity categories.

**Figure 44: SME employment performance in high-tech and knowledge intensive from 2008 to 2013, from 2013 to 2014 and from 2008 to 2014 - EU28**




Note: Slovakia is not included in the analysis due to a break in the data series. Red shares do not add up to 100% as technology intensity and knowledge intensity classifications exclude some industries (Construction; Mining and quarrying; Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities) .
*Source: Eurostat, National Statistical Offices, DIW econ*

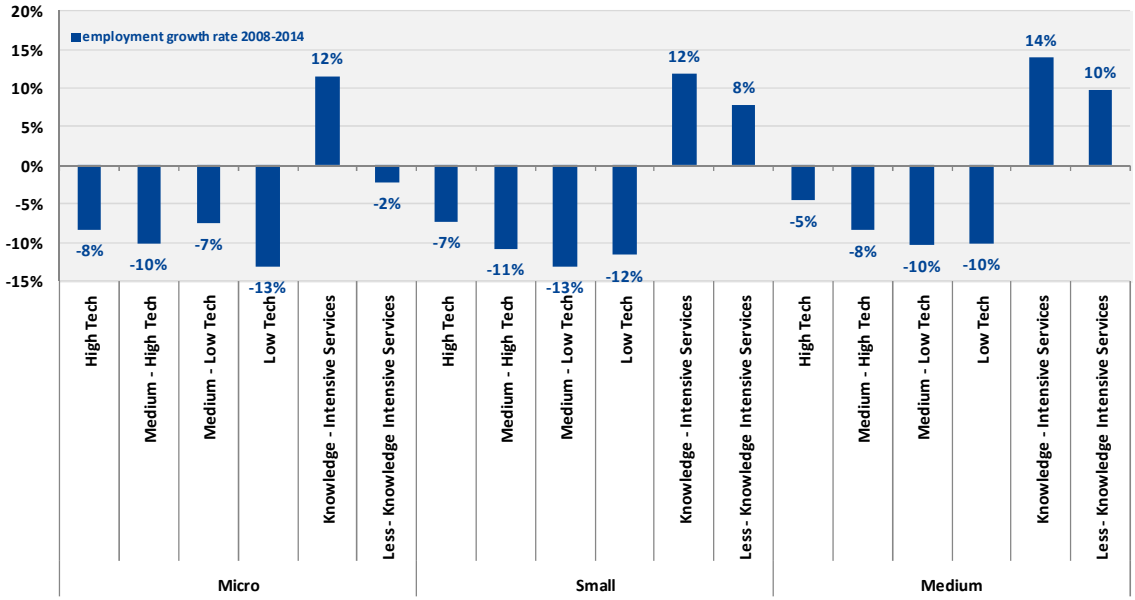
**Figure 45: SME employment performance in high-tech and knowledge intensive sectors by SME size class from 2008 to 2013, from 2013 to 2014 and from 2008 to 2014 - EU28**




Note: Slovakia is not included in the analysis due to a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

The top performance over the period 2008-2014 (Figure 40) was achieved by medium knowledge-intensive firms (14% growth), followed by small and micro knowledge-intensive firms, (12%). Low-tech and medium-low tech firms across all size classes posted the largest decreases in employment.

***Figure 46: SME employment performance in high-tech and knowledge intensive sectors by SME size class, 2008-2014, EU28***




Note: Slovakia is not included in the analysis due to a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Within each of the technology classes defined earlier, trends shown by individual types of sectors showed some divergence.

- In high-tech industry, despite 'pharmaceutical manufacturing' growing by 5% since the crisis, the trend was driven downwards by 'computer and electronics manufacturing', in which employment declined by 8% (see Annex 0 for details) .

- Medium-high tech sectors all experienced losses in employment, ranging from -3% ('chemicals') to – 12% ('other transport equipment').

- This was also the case for medium-low technology, where only one industry ('manufacturing of non-metallic mineral products') had a positive employment trend. In one of the sectors ('coke and petrolium products'), the losses from 2008 to 2013 were higher than 20%, but the subsequent year saw a 3% rebound.

For the period after the crisis and up to 2013, the majority of knowledge-intensive sectors performed positively in terms of job creation. The top performer was 'employment activities' with a growth of 36%. Aside from this outlier, which accounts for a marginal 2% of overall SME employment, employment in many other industries in this group grew markedly, by 8% to 20%. However, losses were recorded in the media sector ('publishing' -10% , 'advertising' -4%), and in transport ('water' -11% and 'air' -18%). By contrast, from 2013 to 2014, *all* knowledge intensive services increased their employment levels (see Annex 0 for details).

Growth in the less-knowledge intensive service SMEs was much more subdued. The top performing industry in this group was 'services to buildings and landscape activities', with 20% growth from 2008 to 2013. All other sectors grew at roughly 1% - 2% from 2013 to 2014.

Looking at country patterns for the overall period from 2008 to 2014, it is noteworthy that, out of the 28 Member States, only 9 (Bulgaria, Spain, Finland, Ireland, Lithuania, Malta, Netherlands,

Poland, Slovenia) also show the EU-wide pattern of smaller SME employment declines in the high and medium-high tech sectors than in the medium-low tech and low-tech sectors (see Annex 0).

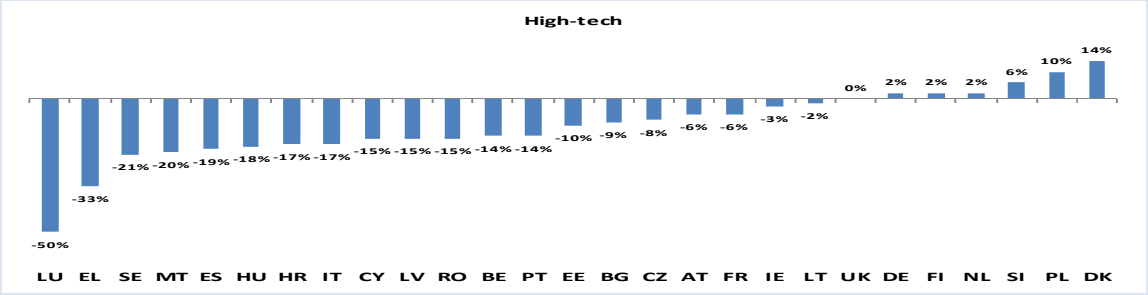
- Only 6 Member States exhibited positive growth rates in high-tech SME manufacturing. These were Denmark, Finland, Germany, the Netherlands, Poland, and Slovenia. Denmark was the top performer with 14% employment growth from 2008 to 2014 (see Box 8).
- Only two countries showed SME employment growth in medium-tech and low tech industries: Denmark and Poland in medium-high tech industries, Germany and Malta in medium-low tech / low-tech industries).

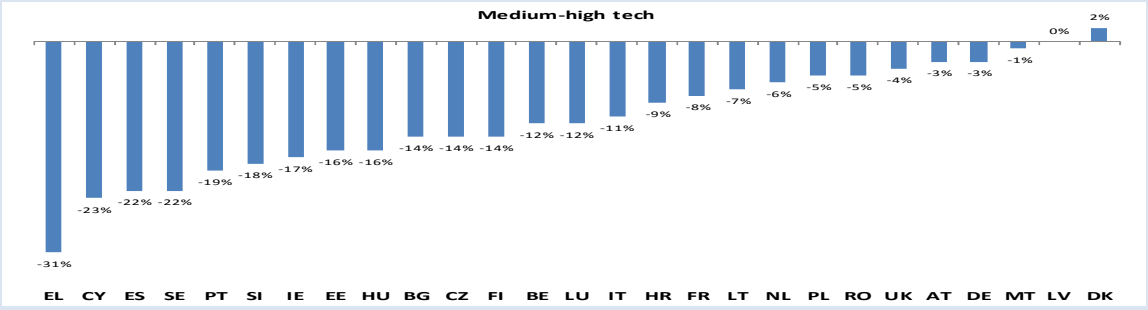
In the case of services, only one Member State (Germany) shows a pattern which clearly differs from the EU28 where the SME employment performance of the knowledge-intensive service sector is better than the one of the less-knowledge intensive services sector.

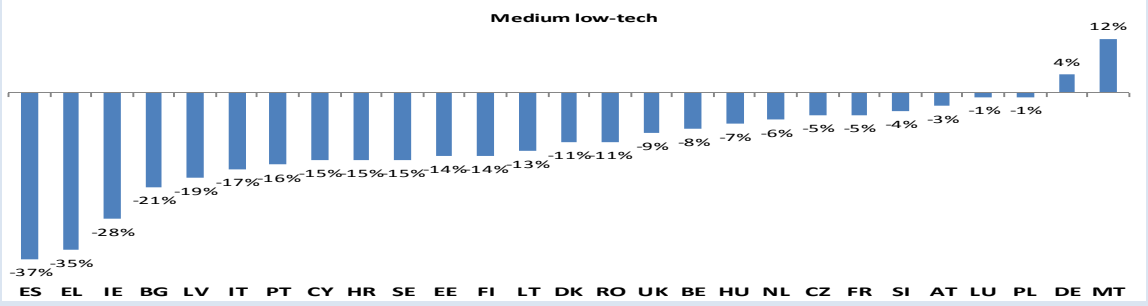
- In the case of knowledge intensive sectors, SMEs in 23 Member States recorded net employment gains over the period 2008-2014, with double-digit employment growth in 15 Member States, including Belgium, France, and Malta, all of which exhibited growth of more than 30%.
- In contrast, only 10 Member States (Austria, Belgium, Bulgaria, Czech Republic, Germany, France, Luxembourg, Malta, Sweden and United Kingdom) recorded an increase in net employment in SMEs in less-knowledge intensive industries.

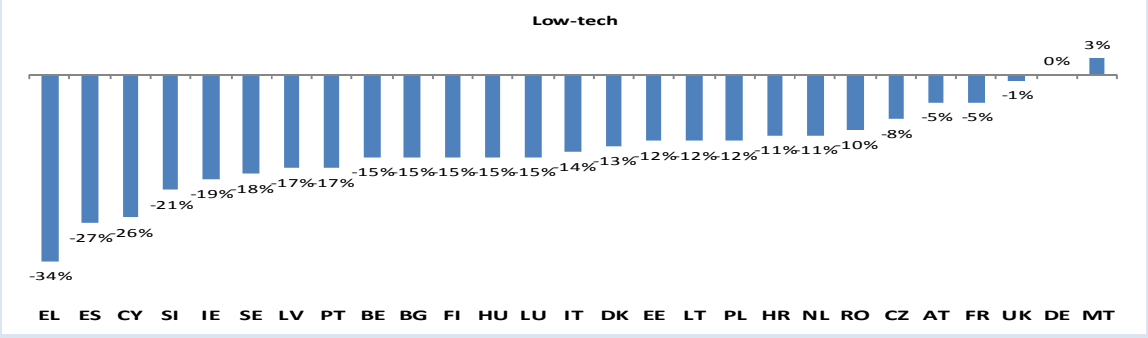
## Box 4

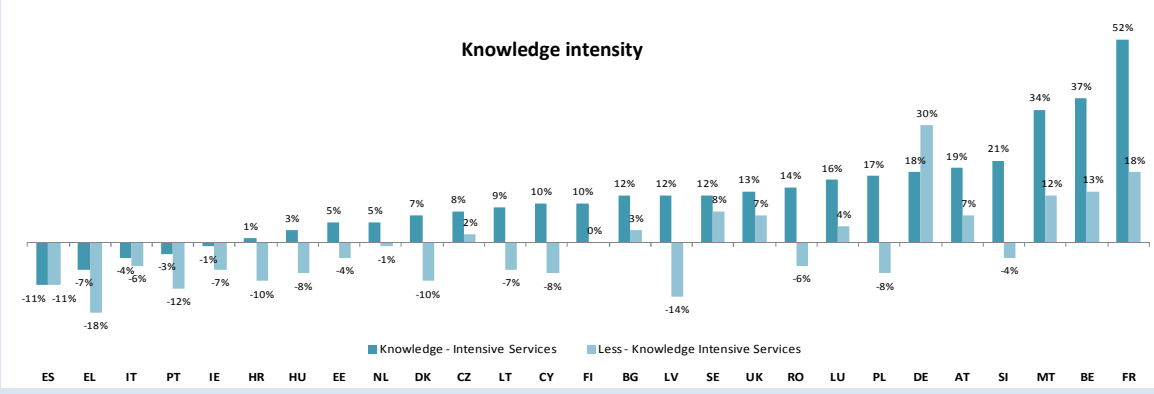
## Employment creation performance of SMEs in sectors of different technology and knowledge intensity (2008 to 2014)




Note: Slovakia is not included in the analysis due to a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

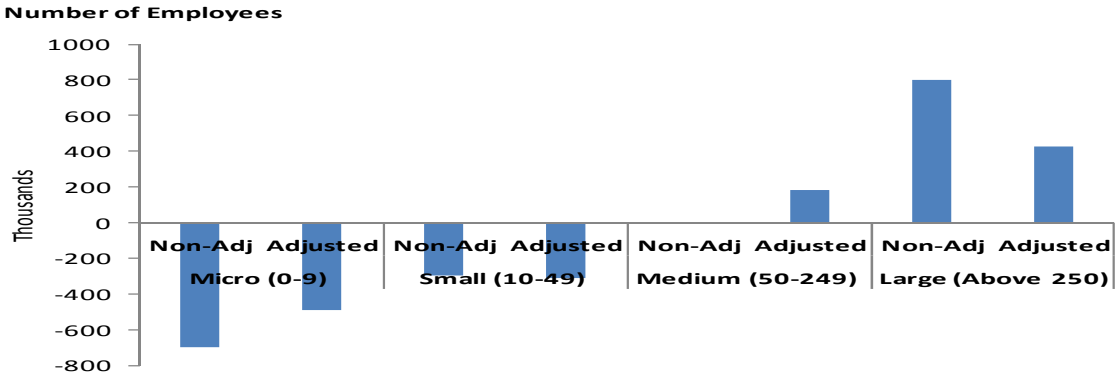
# Employment dynamics by size class

While the previous section focused on SME employment creation and destruction at a *sectoral* level, this section examines employment creation and destruction by *SME class sizes* (micro, small, and medium-sized) at the economy-wide level as well as the sectoral level.

This more detailed analysis takes into account that, over the period 2008-2012, some enterprises may have changed size class due to growth or downsizing. The results reported below incorporate adjustments by enterprise class size to the published employment figures, presenting a more nuanced picture of SME employment dynamics.

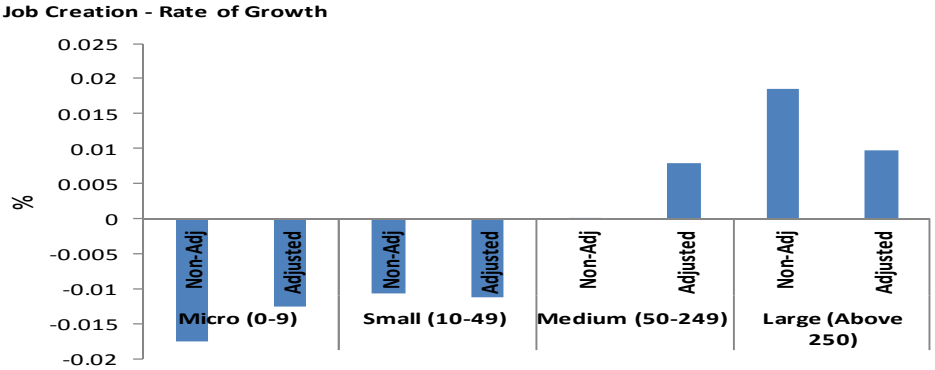
The main results of such an analysis are that micro SMEs suffered a smaller employment contraction while medium-sized SMEs contributed more to employment creation than shown by a simple analysis of changes in SME employment by class size between 2008 and 2012 which does not take into account class size mobiliy.

***Figure 47: Change in the total number of employees 2008 - 2012***




Note: non-adjusted data are the published data while adjusted data take into account firm mobility across size classes.
*Source : U. Manchester based on DIW econ, Eurostat*

***Figure 48: Rate of growth of employment – 2008-2012***




Note: non-adjusted data are the published data while adjusted data take into account firm mobility across size classes
*Source: U. Manchester based on DIW econ, Eurostat*

A comparison of the *observed* growth rates with the *dynamically adjusted* growth rates shows the extent to which size-class transitions are relevant in each Member State. These results are shown in annex I.34.

# *How do SMEs which created employment differ from those which reduced employment?*

From the previous analysis, it is clear that the sector in which an SME is active will be an important factor in explaining, to some extent at least, its employment performance. This can be seen in the 'construction' sector, which experienced large *decreases* in employment in many Member States, whereas in other sectors, such as 'food and beverages', SME employment *increased* considerably.

However, from a policy perspective, the question is: *are there any other SME characteristics which could explain differences in the employment performance of SMEs in the same sector or across different sectors*? These factors might, for example, include the age of the SME, its export-orientation, its R&D intensity, etc.

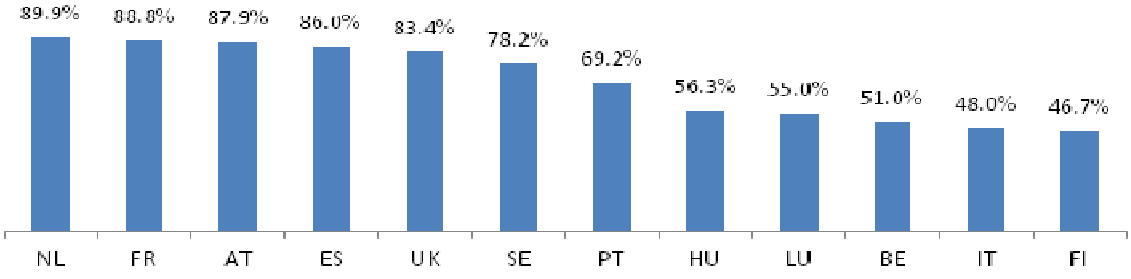
The literature on SME characteristics, and SME employment performance in particular, is very sparse. Previous studies have focused on start-ups versus established firms, young versus mature/old firms, high-growth firms versus firms showing no or limited growth, high-tech versus medium and low tech firms.[9]

A recent and important study from the OECD *Dynamics of Employment* (DynEmp) project provides a detailed discussion of the job creation and destruction process of SMEs and large enterprises for the period 2001 to 2011 in 18 countries, 12 of which are EU Member States .

The key finding is that firms less than 5 years old were the most positive contributors to net job creation in a number of countries (Austria, France, Netherlands, Portugal, Spain, Sweden and United Kingdom). Specifically, start-ups (entrants) contributed the greatest share of *net* job creation, with young firms (less than three years old) as the next most important contributor. However, the economic and financial crisis ultimately slowed down the entry and growth of young firms during this period, while the contribution of older firms to net job creation continued to remain marginal. In other countries such as Belgium, Finland, Hungary Italy and Luxembourg, the contribution of younger firms and more establsihed firms was broadly the same.

The study also highlights a high level of *cross-country diversity*. In terms of *gross* employment creation, young firms contributed to the vast majority of new jobs in a number of european countries (Figure 49).

***Figure 49: Young firms - share of gross employment creation accounted for by entry 2001-2011***



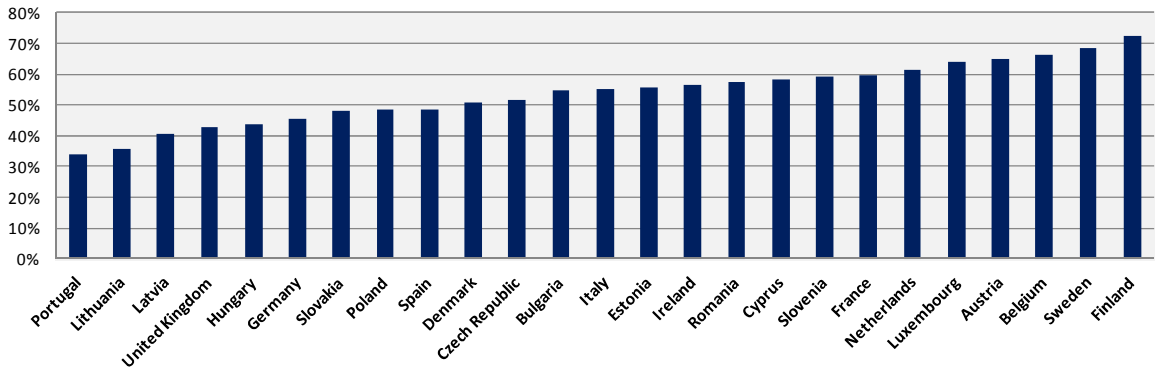

*Source: Criscuolo et al. (2014)*

While the OECD study points to age of the firm as a significant employment creation factor, it is important to note that the data on firm mortality available from Eurostat show that the survival rate of new firms varies greatly across the EU.

The highest survival rates in 2012 of micro-SMEs born in 2008 are found in Finland, Sweden, Belgium, Luxembourg, and Austria. In these Member States more than 60% of firms established in 2008 were still active five years later. In contrast, in Portugal and Lithuania, only one in 3 firms created in 2008 had survived to 2012. In all other Member States the percentage of firms that survived the period 2008-2012 ranges between 40% and 60%, implying that during the economic downturn only about one in two new firms survived.

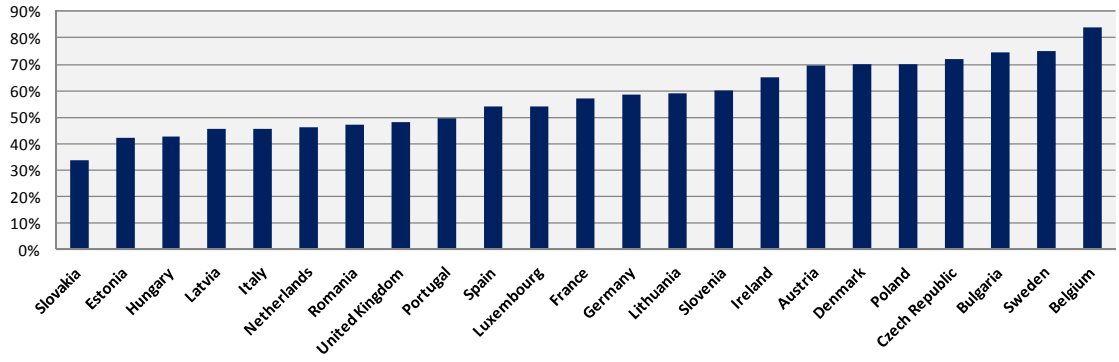
***In the majority of EU28 Member States, only 40% to 60% of micro SMEs created in 2008 survived into 2012***

***Figure 50: Enterprise survival rates in 2012 across the EU28 of micro SMEs born in 2008***




Note: data for Croatia and Malta were not available at the time of the preparation of the report. Data for 'micro' firms is obtained as a weighted average of 3 sub-groups: 0, 1-4, and 5-9 employees.
*Source: Eurostat, Structural Business Statistics*

***Figure 51: Enterprise survival rates in 2012 across the EU28 of firms with 10 employees or more born in 2008***




Note: data for Croatia and Malta were not available at the time of the preparation of the report. Data for Finland are not shown due to a break in the series.
*Source: Eurostat, Structural Business Statistics*

As part of the empirical analysis undertaken for this report, the effect of the *age* of firms was further examined, using firm level data available from Orbis, a database published by Bureau van Dijk, which provides economic and financial data on individual companies.[10] As the 2013 data were

still very patchy and incomplete when the database for the present project was created in early 2015, the analysis below focuses on the period 2007 to 2012 only.

Over the period 2007 to 2012, net employment losses totalled 217,000 within the SME population for which comprehensive data are available in the Orbis database (Figure 52). This change is the outcome of overall job destruction of 1.8 million jobs and overall job creation of 1.6 milion jobs.

These net changes can be the result of both *growth* and *shrinkage* of firms, and also of movements by firms *across size classes*. Overall, 10% SMEs changed size class, with a small majority (54%) of such firm movements being downwards to a smaller size class.

***Table 6: Mobility of firms from 2007 to 2012- distribution within each SME size class***

| | Firms that remained in the same size class over the period 2007 to 2012 | | | Firms that changed size class over the period 2007 to 2012 | | | |
|---|---|---|---|---|---|---|---|
| Size in 2007 | with job creation | with job destruction | unchanged levels | to micro | to small | to medium | Total |
| Micro | 23% | 30% | 42% | - | 5% | 0.1% | 100 % |
| Small | 29% | 30% | 11% | 27% | -. | 3% | 100 % |
| Medium | 33% | 33% | 8% | 4% | 21% | - | 100 % |
| All SMEs | 24% | 30% | 36% | 5% | 4% | 1% | 100 % |

Note: analysis is based on the change in jobs of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012). Firms with missing employment data for 2007 are not included in the analysis.

*Source: London Economics, based on Orbis data*

Among all the SMEs for which employment data exist for the year 2007 in the ORBIS database, 20% increased their employment from 2007 to 2012 and and 26% show unchanged employment levels. The other 54% of SMEs are still active but show lower employment levels in 2012 than in 2007 or are appear to be no longer active.

Wihin the group of SMEs having moved size class, the upwards and downwards mobility between the micro and small size classes account for 86% of all size class movements., suggesting the "border" between the two size classes is very fluid. For example, while only 5% of micro SMEs became a small SME between 2007 and 2012 (Table 6), such mobile micro firms are so numerous that they account for 38% of all SMEs moving class size (Table 7).

***Table 7: Mobility of firms from 2007 to 2012 - distribution of mobile SMEs***

| | Firms that changed size class over the period 2007 to 2012 in % of all mobile firms | | |
|---|---|---|---|
| Size in 2007 | to micro | to small | to medium |
| Micro | | 38% | 1% |
| Small | 48% | | 6% |
| Medium | 1% | 6% | |

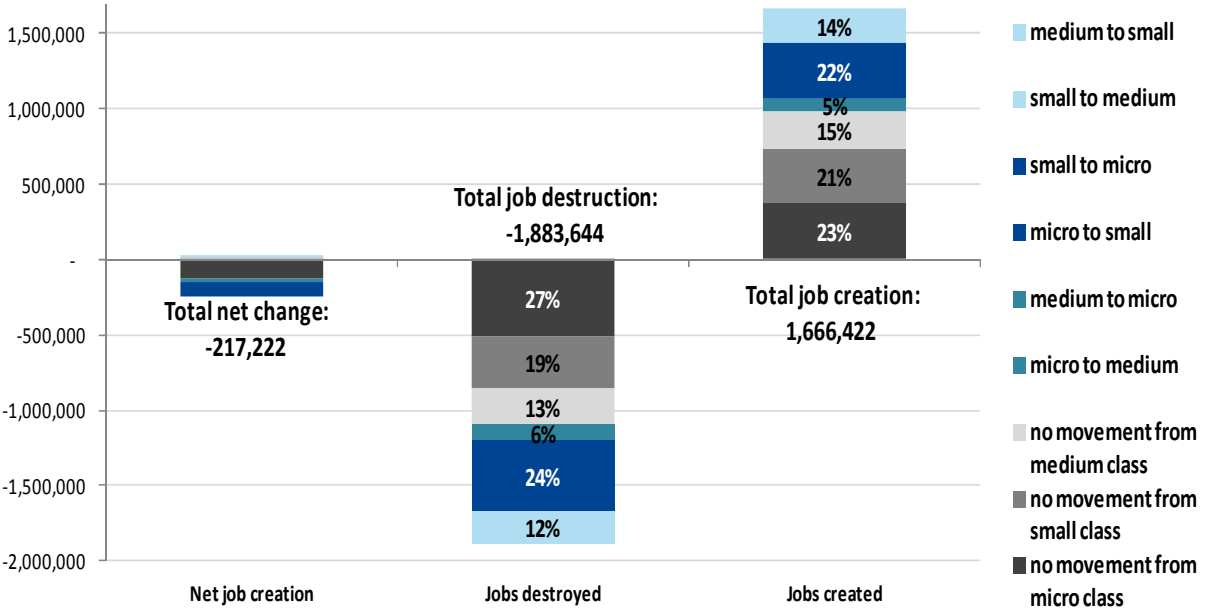
Note: analysis is based on the change in jobs of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012).

*Source: London Economics, based on Orbis data*

However, in practice, job creation and job destruction mainly occured in firms that stayed in the same size class over the period 2007-2012. For example, 27% of job *destruction* occurred within the micro-size class, and 21% of job *creation* took place in small firms. Overall, roughly 60% of job destruction and creation took place in firms that *stayed in the same size class* over the period 2007-2012.

The second driver of employment flow is firm mobility between size classes. For example, 24% of jobs were destroyed by firms that *shrank* from small to micro, and 22% of jobs created were due to micro firms *moving* into the small size class. These flows largely offset each other.

***Figure 52: Net job creation by SME size class, 2007-2012***




Note: job destruction and job creation flows across size classes are colour-coded similarly to denote the various transitions.
*Source: London Economics, based on Orbis data*

Some jobs may also be lost when firms cease to exist, because either of bankruptcy, or a decision by the owners to cease operating, or a merger or acquisition. The employment implications of the different types of firm "death" vary greatly as, in a number of cases, a firm may continue to operate, sometimes on a lower scale, under a different name and/or as part of a larger company or group of companies. As the ORBIS database does not provide any information on the reasons why, from a certain point in time, there are no longer data in the ORBIS database for a particular company, it is not possible to determine what happened to the firms which were SMEs in 2007 and no longer in the database by 2012.

It also important to note that the analysis above focuses only on those firms which show a net change in employment from 2007 to 2012. A number of firms do show any net change over this period and, thus, would not be included in the data underpinning Figure 52 above. This is the case for example of sole traders and solo entrepeneurs if they remained a one-person operation.

To assess where the strongest job creation occcured over the period 2007-2012, it is important to classify job flows according to the original size class of each firm in 2007. Table 8 provides a breakdown of all employment flows by size class.

- For firms that were micro enterprises in 2007, a large majority of job creation took place either in firms that *remained* micro firms until 2012 (378,369), or *moved from micro to small*, 366,238. One group of 963 firms managed to grow from *micro to medium* , creating a total of 79,546 jobs.
- Of the 191,000 small firms which existed in 2007, a total of 133,000 *stayed* small throughout the period from 2007 and 2012, creating a net total of 766 jobs. Roughly 6000 firms *grew from small to medium size*, creating more than 230,000 jobs in the process.
- The majority of firms which were medium size in 2007 stayed in the same size class until 2012 (21,000 firms out of 29,000), creating a net total of 17,000 jobs.

***Table 8: Breakdown of employment growth from 2007 to 2012 by size class and by firm movement across size classes***

| Size class in 2007 | Movement | Net jobs created breakdown | Jobs destroyed | Jobs created | Number of enterprises |
|---|---|---|---|---|---|
| **Micro in 2007** | | | | | |
| | growth within same size class | -128,163 | -506,532 | 378,369 | 808,232 |
| | in movement from micro to small | 366,238 | n.a. | 366,238 | 41,240 |
| | in movement from micro to medium | 79,546 | n.a. | 79,546 | 963 |
| | Total[a] | 317,621 | -506,532 | 824,153 | 850,435 |
| **Small in 2007** | | | | | |
| | growth within same size class | 766 | -351,645 | 352,411 | 133,232 |
| | in movement from small to medium | 231,801 | n.a. | 231,801 | 6,278 |
| | in movement from small to micro | -461,042 | -461,042 | n.a. | 51,513 |
| | Total[b] | -228,475 | -812,687 | 584,212 | 191,023 |
| **Medium in 2007** | | | | | |
| | growth within same size class | 17,280 | - 240,777 | 258,057 | 21,922 |
| | in movement from medium to micro | -103,994 | - 103,994 | n.a. | 1,235 |
| | in movement from medium to small | -219,654 | - 219,654 | n.a. | 6,236 |
| | Totalc | - 306,368 | -564,425 | 258,057 | 29,393 |
| **Total SMEs** | | | | | |
| | Total (a+b+c) | -217,222 | - 1,883,644 | 1,666,422[( | 1,070,851 |

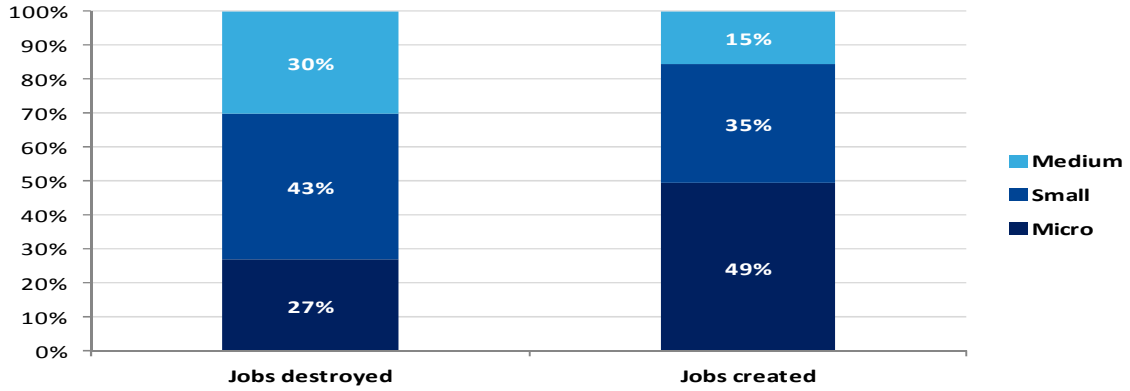
Note: analysis is based on the change in jobs of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012). Firms with missing employment data for 2007 are not included in the analysis.

*Source: London Economics, based on Orbis data*

Focusing on employment growth regardless of transitions to higher or lower size classes, the following is worth noting:

- Firms which were micro enterprises in 2007 accounted for 49% of overall job creation, and only 27% of job destruction over the period 2007 to 2012.
- Firms which were small enterprises in 2007 were responsible for 35% of jobs created, but accounted for 43% of overall SME job losses over the period 2007 to 2012.
- Firms which were medium-size enterprises in 2007 accounted for only 15% of jobs created, while being responsible for 30% of jobs lost over the period 2007 to 2012.

***Figure 53: Size class contributions to job creation and job destruction, 2007-2012***




Note: analysis is based on the change in job creation/destruction of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012).

*Source: London Economics, based on Orbis data*

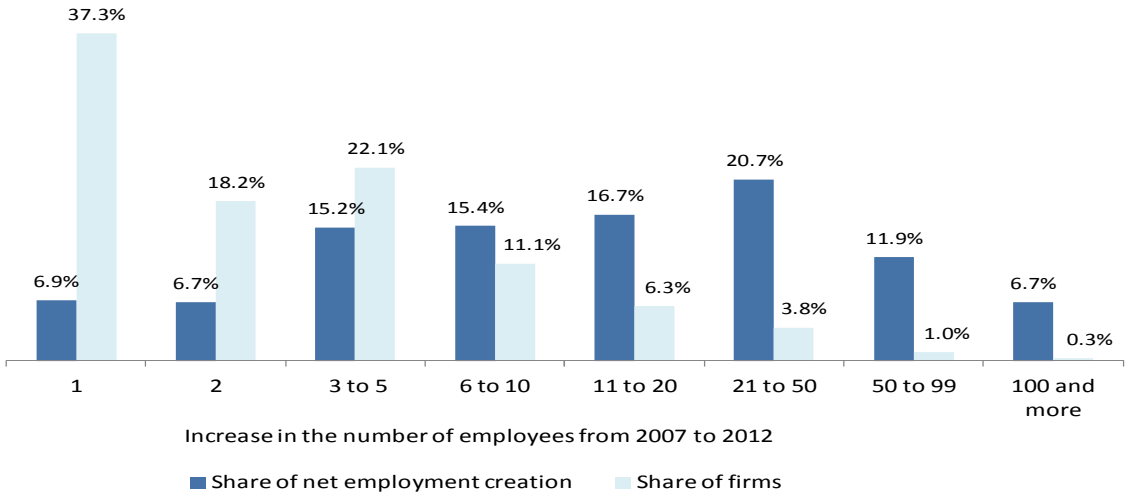
Among those SMEs which show a net increase in employment from 2007 to 2012, the majority of firms (55%) increased employment by 1 or 2 two persons (Figure 54).

Even if this group of firms represents the majority of firms, they account for only 14% of the overall net increase in SME employment.

At the other end of the spectrum, only 11% of all SMEs posting an increase in net employment between 2007 and 2012 account for more than half (55%) of that increase. These firms added 21 or more employees between 2007 and 2012.

Moreover, firms which added more than 50 employees account for almost 20% of the total increase in SME jobs while they represent only slightly more than 1% of all SME firms (Figure 55).

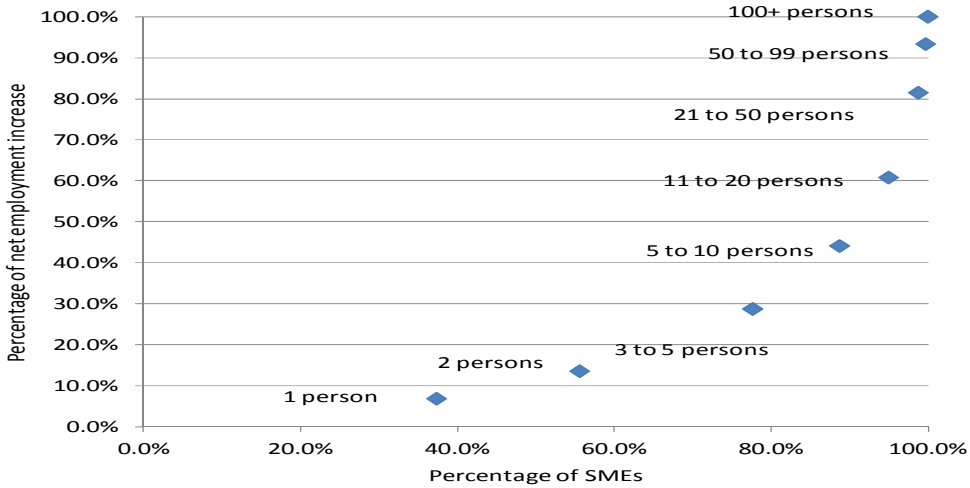
***Figure 54: Distribution of overall net SME employment creation by size of the net increase in employment by SMEs from 2007 to 2012l***




Note: analysis is based on the change in job creation/destruction of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012).

*Source: London Economics, based on Orbis data*

**Figure 55: Skewness of the SME employment creation process from 2007 to 2012**




Note: analysis is based on the change in job creation/destruction of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012). The data points in the figure refer to the number of employees added by SMEs, namely 1, 2, ....100 and more additional employees.

*Source: London Economics, based on Orbis data*

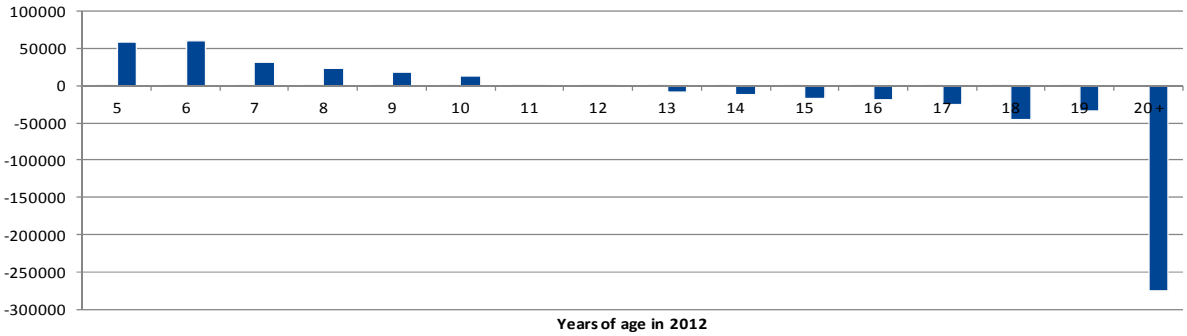
***SMEs 5 to 9 years old accounted for 92% of all net employment creation by SMEs***

***SMEs more than 10 years old accounted for most job destruction***

Focusing on those age segments for which information is available, i.e. firms that were at least 5 years old in 2012, the data show that the group of young enterprises (5 - 6 years old) was responsible for approximately 57% all net job creation by SMEs which were at least 5 years old in 2012. Moreover, together firms aged 5 to 9 years account for 92% of such job creation

Conversely, the group of firms older than 12 years experienced net employment losses. These ranged from 8200 (in the case of 13 year old firms), to 32000 (firms that were 19 years old in 2012). The remaining age class, firms of 20 years or older, determined the bulk of job destruction.

**Figure 56: Net job creation by age of SME over period 2007-2012**

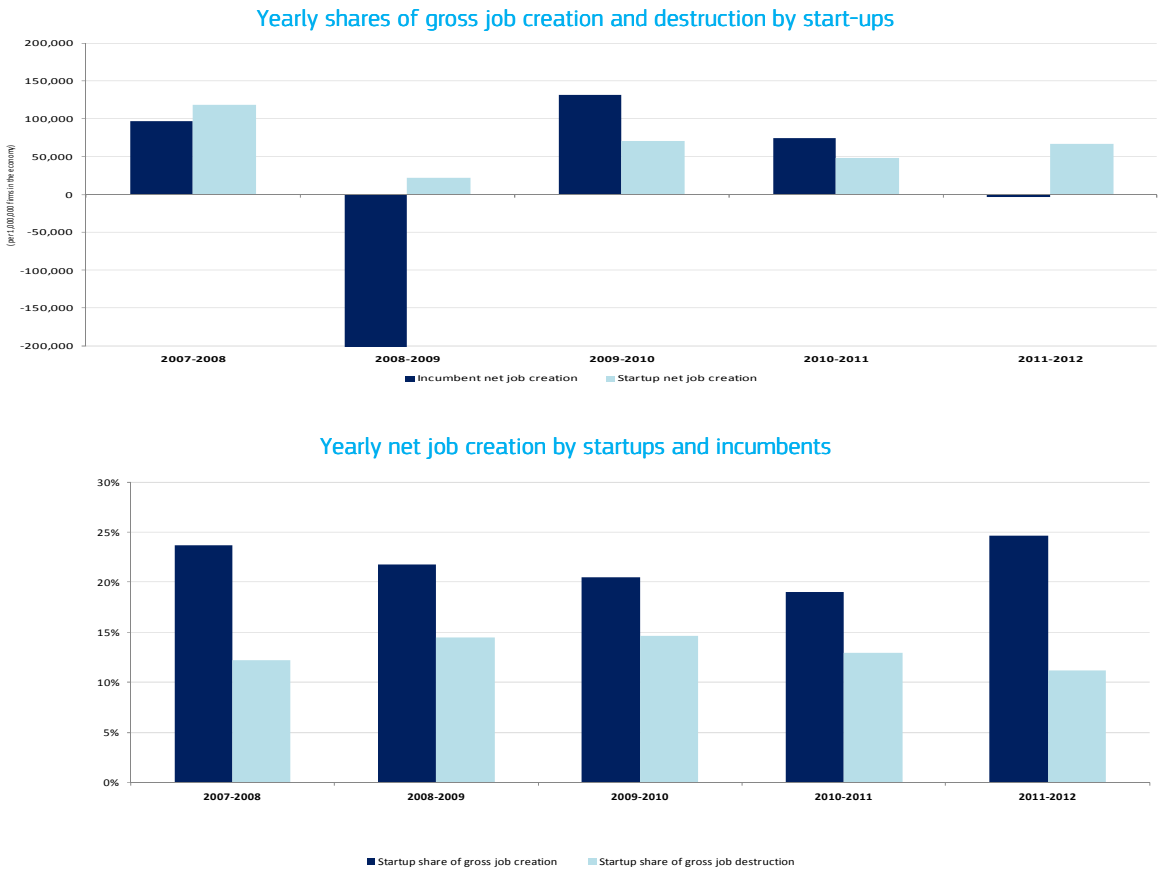



Note: analysis is based on whole sample of Orbis data.

*Source: London Economics, based on Orbis data*

Startups (firms less than 3 years old) contributed disproportionately to job creation in recent years. More than 16% of jobs generated after the trough of (2009-2010) were accounted for by startups. The share of jobs destroyed by startups in the same period is 4%.

***Figure 57: The role of start-ups in job creation***



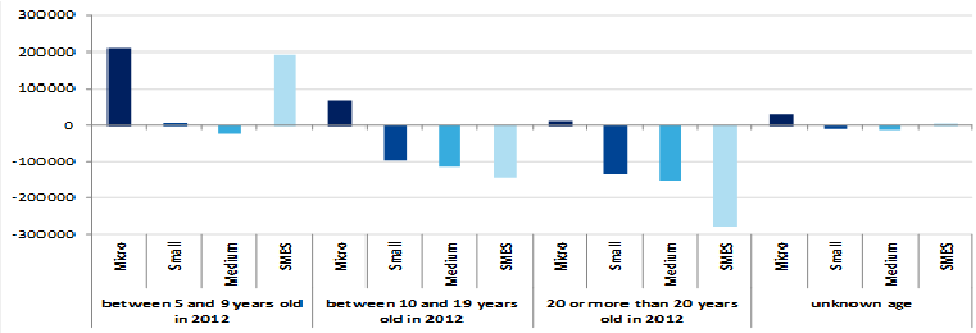

Note: analysis is based on whole sample of Orbis data.
*Source: London Economics, based on Orbis data*

***The pattern of job creation by younger firms versus job destruction by older firms is only observed for small and medium SMEs***

Firms which were older than 10 years in 2012 are largely responsible for the overall negative employment performance of small and medium firms.

The largest job creation was instead registered by micro firms 5 to 9 years old in 2012, and micro firms 10 to 20 years old in 2012.

***Figure 58: Job creation and destruction by size and age of SMEs, 2007-2012***

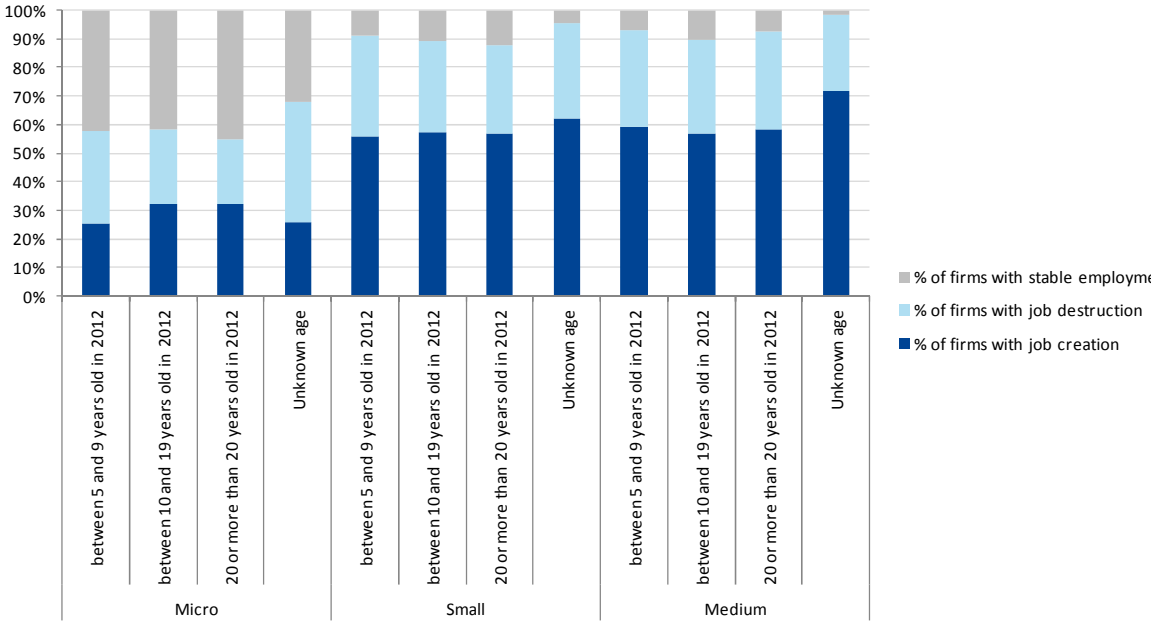



Note: the analysis is based on the change in jobs of firms that belonged to each size class at the beginning of the period (2007), regardless of the size class they belonged to at the end of the period (2012).

*Source: London Economics, based on Orbis data*

Although younger firms tend to contribute the most to the creation of jobs, within each age class SMEs creating and destroying jobs co-exist.

***Figure 59: Distribution of SMEs creating and destroying jobs over the period 2007-2012, by age and size***




*Source: London Economics, based on Orbis data*

In the micro size class, the share of job creating SMEs is somewhat small, hovering around 25%. In this group, however, there is also a large incidence of firms with unchanged levels of employment.

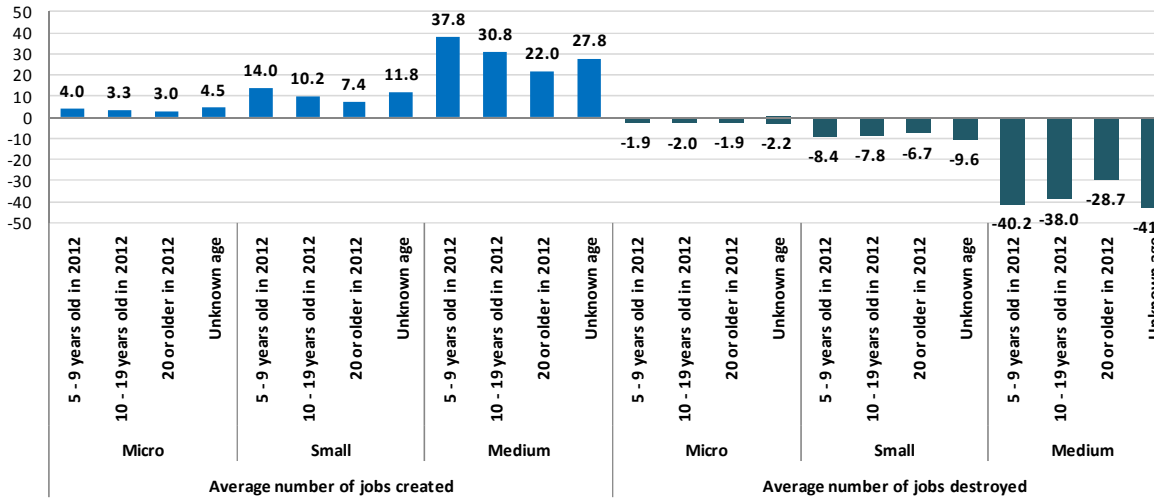
The share of job creators is much larger in the small and medium size classes, where about half of the SMEs are job creators and the share of firms with unchanged employment is less than a 1/10 of the group.

There is significant variation, however, in the average number of jobs created (and destroyed) by these SME size classes.

- On average, a young micro firm created 4 jobs from 2007 to 2012, while an old one only 3.
- The differences are starker among larger SMEs: a young small SME generated on average twice as many jobs as an old firm (14 versus 7.4); a medium SME 5 to 9 years old generated on average 37 new jobs over the 5 years covered by analysis, while firms that were 20 years old only added, on average, 22 new jobs.

In terms of job destruction, the differences within the micro size-class appear negligible. In small and medium sized firms the young cohorts shed relatively more jobs than their old counterparts, but the differences are not as marked as in the case of job creation.

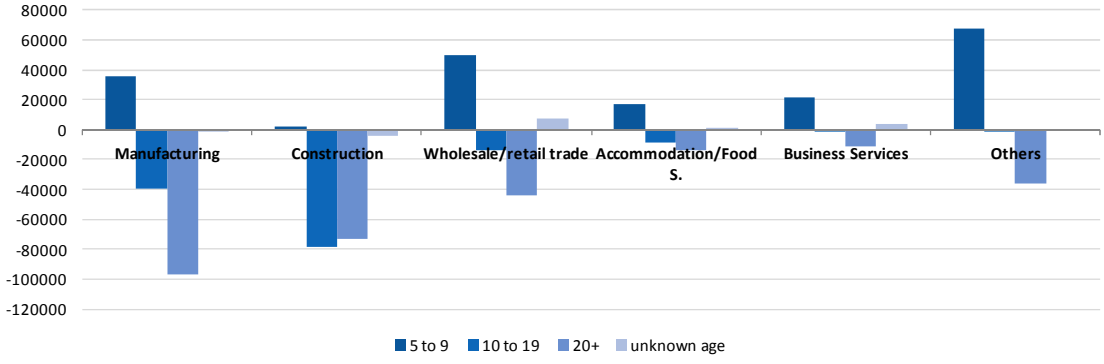
***Figure 60: Average number of gross jobs destroyed and created by SME size and age, 2007-2012***




*Source: London Economics, based on Orbis data*

Young firms have been shown to be consistent job creators across the three SME size classes. The same pattern is found across all sectors of the economy. The net job creation flows by industry and age show that only firms aged 5 to 9 years in 2012 have consistently posted positive net employment changes (***Figure 61***).

***Figure 61: net job creation flows by age and industry, 2007 - 2012***




*Source: London Economics, based on Orbis data*

It should be noted that such net changes arise from large gross job creation and job destruction flows that characterise firms of all sectors and industries. Detailed information on gross flows by age and sector can be found in the annex to the special study. The shares of employment-creation SMEs accounted for by firms aged 5 to 9 years range from 23% ('manufacturing') to 37% ('business services'), but only from a minimum of 14% ('manufacturing') to a maximum of 28% '(business services') in the case of job destroying firms.

In terms of job creation on a gross basis, these young firms contribute vastly to job creation (34% of jobs created in 'accommodation and food services'), whilst not contributing much to job destruction when compared to firms older than 10. Detailed information on these firms and gross flows by age and sector can be found in the special study annex "Additional analysis of firm age and growth'.

Some sectors tend to be more prone to high job creation and destruction than others. The average number of jobs created in 'manufacturing' was 7.5, while the average number of jobs lost from 2007 to 2012 was just 7 (Figure 62). In 'construction' average job destruction was higher than average job creation (-5.7 versus 5). In 'trade', the average number of jobs created was just above 4, while the average job loss for an SME in services was just above 3.

***Figure 62: Average jobs created and destroyed by sector, 2007-2012***


*Source: London Economics, based on Orbis data*

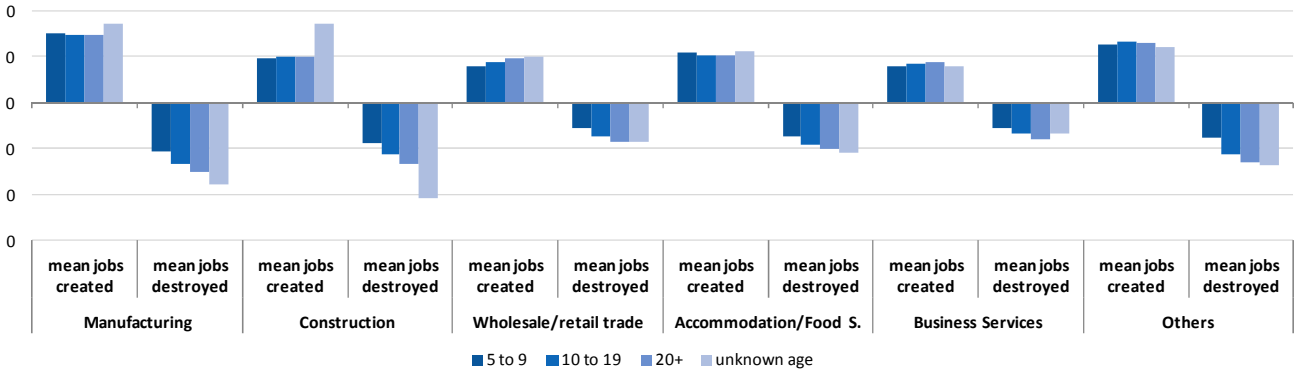
There are no significant differences across sectors in the cumulative distribution of employment creation (see annex of the special study for details). Across all industries, roughly a third of job-creating SMEs created 1 job between 2007 and 2012. In all sectors, approximately 90% of the firms created less than 10 jobs each, and they generated about 50% of all jobs.

On average, gross job creation within a sector did not vary largely according to the age of the firm (Figure 63). Ignoring firms whose age is unknown, 'manufacturing' firms created on average between 7 and 8 jobs from 2007 to 2012; 'construction' and' accommodation/food services' firms created 5 jobs; business services created approximately 4 jobs each.

However, average job destruction is markedly correlated with age. In the 'manufacturing' and 'construction' industry, firms older than 20 lost almost or exactly twice as many jobs as their younger counterparts. This direct relationship between average jobs lost and age also holds across all other industries, albeit less starkly than in the cases of 'construction' and 'manufacturing' SMEs.

The balance between the two gross positive and negative job flows explains the positive role of young firms as the only net job creators across all industries.

***Figure 63: Average jobs created and destroyed by age, 2007-2012***




*Source: London Economics, based on Orbis data*

## *The pattern over time of net employment creation / destruction by SMEs in recent years*

The previous section highlighted that young firms were the main SME employment growth engine (on a net employment creation basis). But, it also showed that some of the older firms were also net job creators even if their particular age cohorts show net job destruction.

While it is not possible to determine which precise factors or events led such older firms to increase employment, an issue of particular interest is whether such firms and indeed younger firms create jobs mainly in waves or in a more steady manner.[11] As well, some studies suggest that SME employment creation is concentrated among a limited number of "prolific" employment creators. Similarly, job destruction may be concentrated in a particular year or may be spread out over several years.

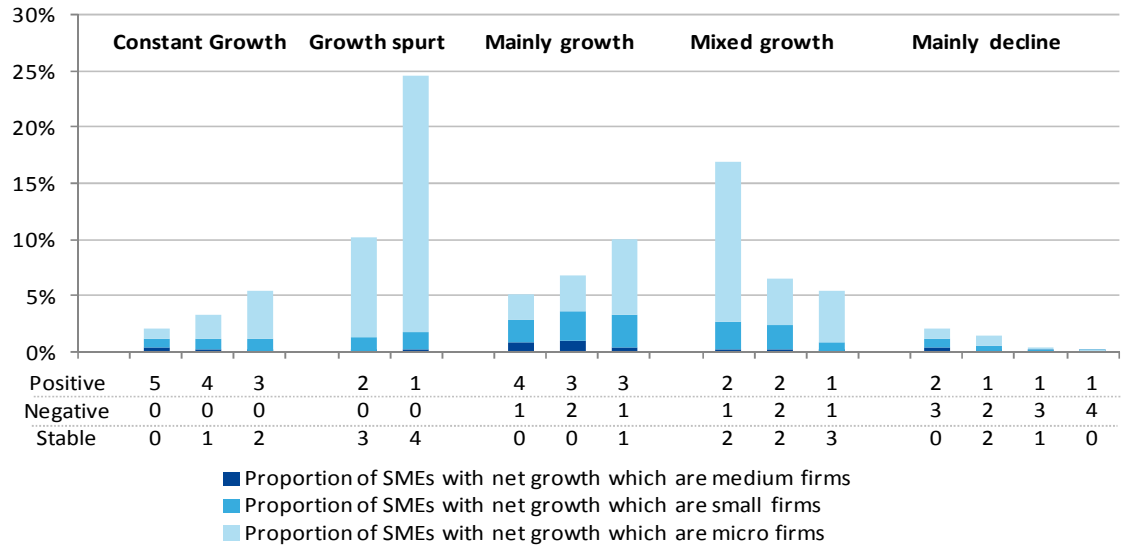
To shed further light on these aspects of the SME employment dynamics, an analysis was undertaken of year-to-year changes in employment among all the firms in the ORBIS database which were SMEs in 2007 (the first year of the firm sample used for the analysis) and which show a net increase in employment over the period 2007-2012.

The first part of the analysis involved a simple count of the number of times a firm posted a net increase in annual employment. Intra-year variations in employment are ignored in such analysis as no data are available to undertake such more granular assessment.

The key points to note are that:

- From 2007 to 2012, SMEs show frequently through a 'growth spurt' (i.e. one or two years of growth, and no change otherwise) and to a somewhat lesser extent a 'mixed growth' pattern (i.e. one or two years of growth combined with a decline which does not occur more frequently than the growth spurts).
- The 'growth spurt' is particularly common for micro firms.
- The most common growth pattern for small and medium firms was one of 'more mainly growth' pattern, i.e. growth in most of the years, however with at least one year of decline.

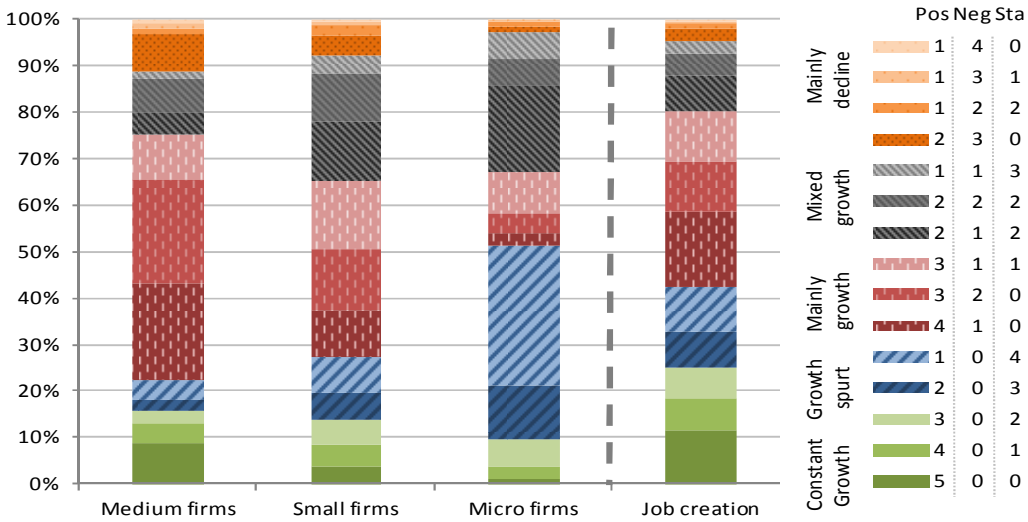
***Figure 64: SMEs grouped by different patterns of SME employment growth – percentage of total number of SMEs***




Note: Positive = increase in net employment, negative = decrease in net employment and stable – no change in net employment. The figures under the bars represent the number of years each of the type of net employment change occurred. For example, the group of constant growth firms are characterised by 5 years of increases in employment. Only firms showing an increase in net employment over the period 2007-2012 are included, irrespective of whether they are a SME or not in 2012.

*Source: London Economics based on Orbis data*

***Figure 65: Patterns of net employment creation by SMEs – percentage of total net employment creation from 2007 to 2012 by size class***




Note: Only firms showing an increase in net employment over the period 2007-2012 are included, irrespective of whether they are a SME or not in 2012. The categorization of a firm as medium, small or micro is based on the firm's size in 2007.

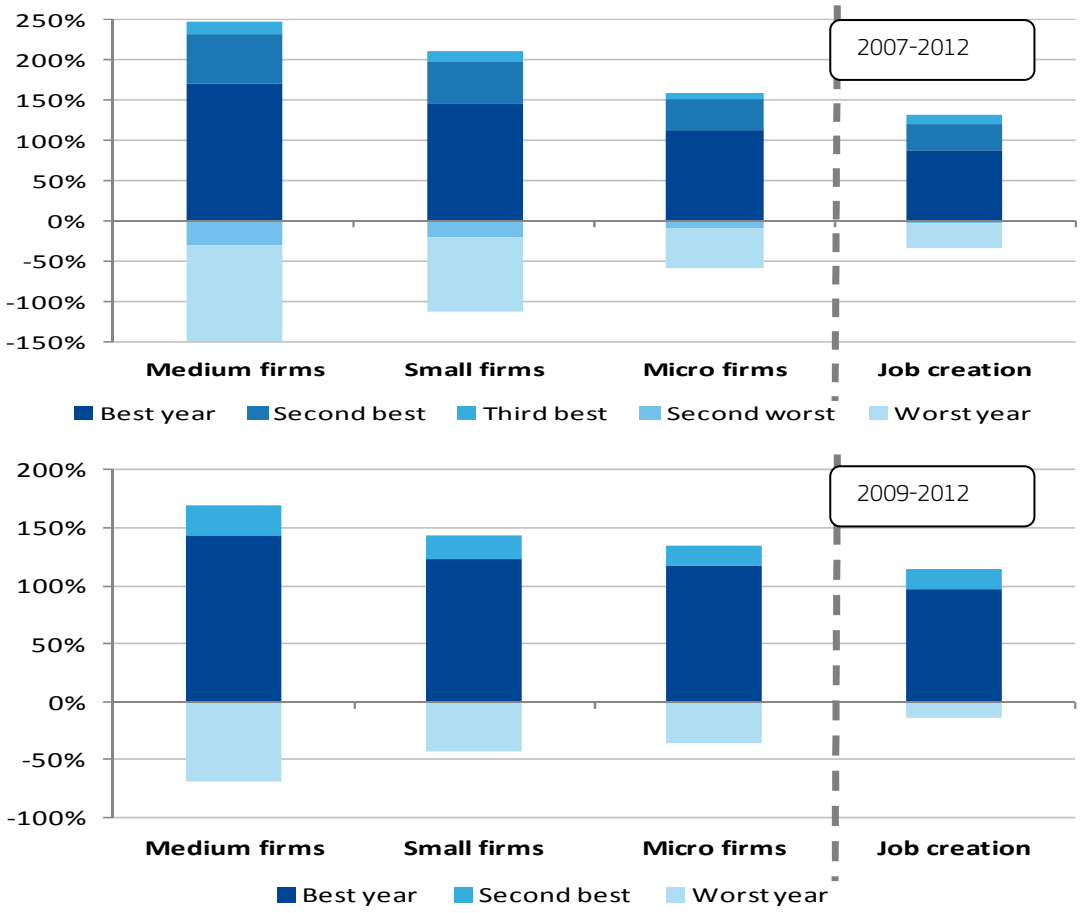
*Source: London Economics based on Orbis data*

Overall, most jobs were created in firms showing a 'mainly growth' dynamic, in particular by those firms posting four years of growth and one year of decline. The second most important group is of firms showing a 'constant growth' dynamic, i.e. growth in at least half of the years without declines.

Thus, while the growth spurt appears to be the most common occurrence in the terms of changes in employment, once the magnitude of such changes are considered the growth spurt is much less important.

Moreover, the largest employment creation in one year by SMEs of different size classes typically accounts from more than the total net employment creation. This finding holds for both a period which includes the economic and financial crisis and a more recent post crisis period.

***Figure 66: Contribution of annual change in employment to total net employment creation from 2007 to 2012 and 2012 by size class***



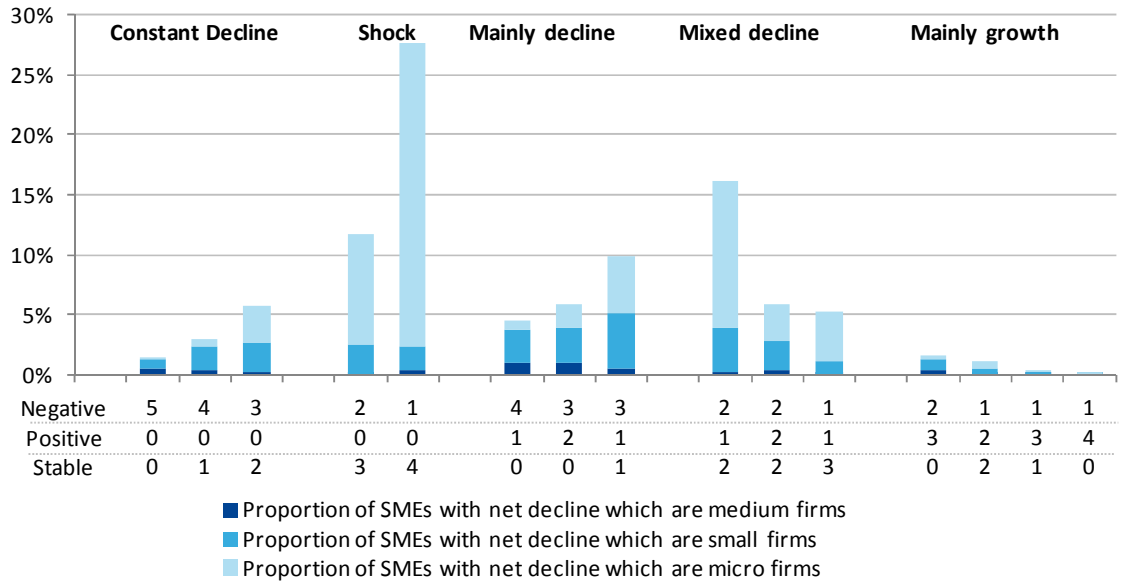

Note: Only firms showing an increase in net employment over the period 2007-2012 are included, irrespective of whether they are a SME or not in 2012. The categorization of a firm as medium, small or micro is based on the firm's size in 2007.

*Source: London Economics based on Orbis data*

A broadly mirror image results from an analysis of the employment destruction pattern of firms which show a net decrease in employment from 2007 to 2012.

The most common pattern of employment destruction is that of a shock, in particular a reduction in employment over 1 year. A constant attrition in employment (i.e. the constant decline pattern) is not a very common phenomenon.

***Figure 67: SMEs grouped by different patterns of SME employment decreases – percentage of total number of SMEs***

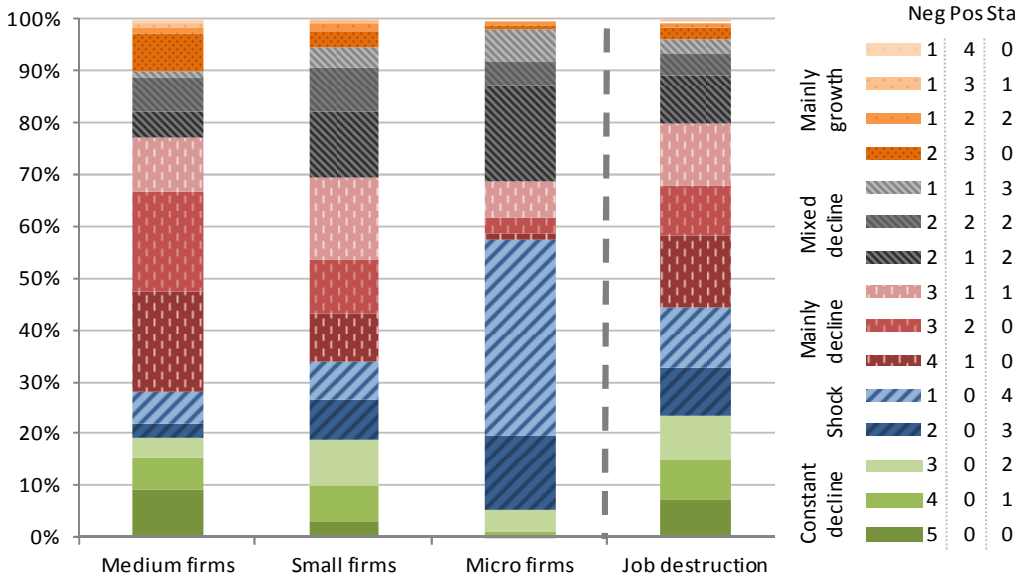



Note: Positive = increase in net employment, negative = decrease in net employment and stable – no change in net employment. The figures under the bars represent the number of years each of the type of net employment change occurred. For example, the group of constant growth firms are characterised by 5 years of increases in employment. Only firms showing a decrease in net employment over the period 2007-2012 are included, irrespective of whether they are a SME or not in 2012.

*Source: London Economics based on Orbis data*

In terms of number of jobs lost, the most important job destruction pattern is one of frequent annual declines (the "mainly decline pattern") for SMEs as a group and, in particular, in the case of medium-size and small firms. In contrast, in the case of micro firms, the "shock" in pattern is by far the most prevalent.

***Figure 68: Patterns of net employment creation by SMEs – percentage of total net employment creation from 2007 to 2012 by size class***




Note: Only firms showing a decrease in net employment over the period 2007-2012 are included, irrespective of whether they are a SME or not in 2012. The categorization of a firm as medium, small or micro is based on the firm's size in 2007.

*Source: London Economics based on Orbis data*

# *Further analysis of the characteristics of employment-creating SMEs for selected countries*

To complement the analysis undertaken with the ORBIS data, firm level micro-data were made available for the project by National Statistical Organisations from Estonia, France, Lithuania, Luxembourg, and the UK. In addition, establishment-level micro data from the German IAB Establishment Panel survey were also obtained.

The main findings of this analysis (which is reported in detail in the accompanying special study on employment creation by SMEs) are that:

- Micro SMEs contribute more to SME job creation than larger-sized SMEs.
    - Micro firms systematically generate more jobs than they destroy.
    - This is particularly true in the United Kingdom, where 69% of jobs created from 2007 to 2014 came from micro SMEs, and only 37% of jobs lost were due to micro firms.
    - In Germany, survey establishment data show that medium-size establishments contributed relatively less to job creation (50%) than job destruction (70%) for the period 2007 to 2013. Small and micro units, on the contrary, generated more jobs than they destroyed.
    - In France, micro firms are responsible for 61% of gross jobs created between 2007 and 2012, and 38% of gross jobs destroyed.
    - In Luxembourg, net job creation for the period from 2006 to 2012 was largely driven by micro firms and to a somewhat lesser extent, small firms. In fact, micro firms in Luxembourg created more than 12,000 jobs in these six years, and lost less than 4,000. The resulting balance was a net job creation of more than 8,000 jobs.
    - In Lithuania, the respective shares of employment creation and destruction by micro SMEs over the period 2007-2012 are 51% and 19%; and 53% and 27% in Estonia.
- Age and size often go together: young SMEs are generally those generating most jobs.
    - In France, Estonia and Lithuania, only micro firms younger than 10 years old post positive employment trends from 2007 to 2012.
    - Younger firms (those between 5 and 9 years) are the largest net contributors to the creation of new employment among Luxembourg's SMEs over the years from 2006 to 2012.
    - In contrast, in the United Kingdom, micro firms of all ages showed high net job creation from 2007 to 2014.
- The role of start-ups is quite prominent in job creation.
    - In France, the cohorts of SMEs younger than 3 years old contributed to more than 20% of jobs created every year from 2007 to 2012, while their role in job destruction is much more limited (less than 10% of jobs destroyed).
    - In Lithuania, start-ups account for 30% of the new jobs every year.

- In Luxembourg, 30% of new jobs created each year came from firms younger than 5 years, while their share of annual job destruction was less than 20%.

- **In general, the bulk of gross job creation and gross job destruction occurred in firms that remained within the same size class over the period covered by the analysis.**

  - In France and the United Kingdom, approximately 37% of gross job creation is accounted for by micro firms that do not cross the 9 employee barrier.

  - Estonia and Lithuania show a somewhat more dynamic environment: although the majority of jobs is created by firms that do not change class, a significant percentage of new jobs arises from micro firms moving to the small size class (23% and 24% respectively in the two countries).

# 4. Conclusions

Three major findings emerge from the various analyses of SME employment creation presented in the report:

- First, as a group, young SME firms were the main creators of SMEs jobs in recent years. But, job creation and reduction co-exist within all SME age groups and a number of older firms also contributed to SME employment creation.

- Second, the ORBIS data show that contribution to SME job creation is highly concentrated among a small group of SMEs. Namely, among all the SMEs that increased employment between 2007 and 2012, 11% of them accounted for 55% of this increase and each of these SMEs increased their workforce by at least 21 employees.

- Third, there is also a large number of SMEs which managed to retain their staff. Whilst they did not increase net employment, they complemented the job growth of other SMEs, by stabilising the labour market as a whole.

SMEs employment creation (and reduction) takes place in highly varied circumstances, but the macroeconomic developments appear to be the main factor explaining differences observed over the last few years in the performance of SMEs accross EU Member States. However, a clear exception to this general conclusion is a set of policy measures encouring self-employment and solo entrepreneurship, which has markedly boosted the number of micro SMEs in countries such as France and the Netherlands.

Five key policy implications also arise from the analysis of the SMEs' actual and predicted performance and their employment creation record.

- First, and not surprinsingly, a good macro-economic and business enviroment is a *sine qua non* for a good SME performance.

- Second, and equally important, policy-making should take account of the fact that it is young SMEs which, as a group, created jobs (on an net basis) in recent years in a number of countries while older SMEs, as a group, reduced jobs. Thus, public policies supporting enterprise creation will go some way towards strengthening the overall employment creation performance of SMEs, especially where the firm creation rate is lower than in the Member States which perform best in this regard.

  However, many young enterprises fail in their early years. Therefore, policies such as those arising from the 'Second Chance' SBA principle are crucial. In particular, from a societal point of view, it is important to minimise the economic and human cost of failures by implementing strong measures to prevent such failures.

  Furthermore, should such a failure occur despite the implementation of preventive measures, it is important to have in place efficient systems and procedures for dealing with such failures in order to avoid discouraging the creation of new businesses.

- Third, the various analyses presented in the previous chapter do not yield clear conclusions as to which kind of newly created SMEs are the most likely to result in robust employment creation.

  However, the various analysis suggest that the typical firm which created employment since the economic and financial crisis was a young firm active in one of the service sectors.

The analysis also showed that the population of SMEs is not a static one with SMEs remaining confined to their birth size class. To the contrary, over time, a number of SMEs move size classes, upwards and downwards . In total, 10% of SMEs moved class size in the sample of SMEs used in the firm level analysis.

From an employment creation perspective, it is the upward mobility of SMEs which obviously is of interest. The policy implication is that any size-class specific obstacles or disincentives (tax-related or others) to growing a business should be eliminated or, at a minimum, significantly reduced.

- Fourth, it might be worthwile to encourage SMEs with solely intra-EU exports to also start exporting beyond the EU. Also, as many viable SMEs do not export at all, programs encouraging them to seize in particular the opportunities of the EU internal market would be beneficial.

- Fifth, while the analysis shows that, in recent years, SMEs in more technology intensive industries did not create jobs on a net basis, this may reflect more the recent cyclical circumstances than a systemic and structural feature of the EU economy, and the relative contribution of technology and knowledge intensive firms may well change in the coming years. Thus, while one could be inclined, on the basis of the recent record of both types of firms, to favour supporting knowledge-intensive firms over technology-intensive firms, a great deal of caution should be exercised before reaching a firm conclusion. There is no reason or indication to assume that for example technology-intensive manufacturing firms and construction firms could not replicate the employment expansion observed in knowledge-intensive services firms. Furthermore, concerning the SMEs that managed to keep the same number of jobs even during the economic crises, it will be important to study how these firms managed to achieve this in such difficult times.

This report is meant to identify the most important trends regarding EU SMEs as opposed to provide extensive and detailed discussions on policy options. Nonetheless, the above conclusions provide important input into the discussion on the design of EU SME policies, and, in particular, the SBA.

## REFERENCES

Criscuolo, C., Gal, P, and Menon, P. (2014), "The Dynamics of Employment Growth – New Evidence from 18 Countries", OECD Science, Technology and Industry Policy Papers, No. 14.

Nightingale, P. and Coad, A. (2013), "Muppets and gazelles: Political and Methodological Biases in Entrepreneurship Research", Industrial and Corporate Change, September, pp. 12-26.

# I. ANNEXES

## I.1. DEFINITION OF SMES

***Table 9: EU definition of SMEs***

| | Employees | Turnover | or | Balance sheet total |
|---|---|---|---|---|
| **Micro SME** | < 10 | < €2 million | | < €2 million |
| **Small SME** | < 50 | < €10 million | | < €10 million |
| **Medium –sized SME** | <250 | < €50 million | | < €43 million |

*Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small, and medium-sized enterprises.(2003/361/EC), Official Journal of the European Union, L 124/36, 20 May 2003*

## I.2. SMES IN THE EU28 IN 2014

***Table 10: SMEs and large enterprises: number of enterprises, employment, and value added in the EU28 in 2014***

| | Micro | Small | Medium | SMEs | Large | Total |
|---|---|---|---|---|---|---|
| **Enterprises (Number)** | 20,710,324 | 1,373,365 | 224,811 | 22,308,500 | 43,766 | 22,352,260 |
| **%** | 92.7% | 6.1% | 1.0% | 99.8% | 0.2% | 100% |
| **Persons Employed (Number)** | 39,274,088 | 27,452,716 | 23,257,412 | 89,984,216 | 44,438,724 | 134,422,944 |
| **%** | 29.2% | 20.4% | 17.3% | 66.9% | 33.1% | 100% |
| **Value Added (EUR billion)** | 1,358 | 1,169 | 1,188 | 3,715 | 2,710 | 6,425 |
| **%** | 21.1% | 18.2% | 18.5% | 57.8% | 42.2% | 100% |

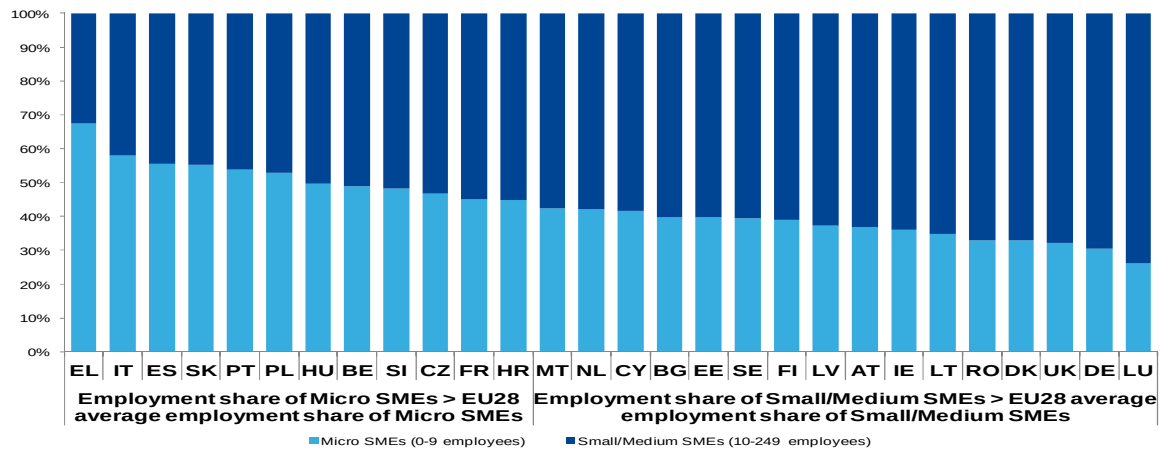
*Source: Eurostat, National Statistical Offices,and DIW Econ*

# I.3. IMPORTANCE OF DIFFERENT SME SIZE CLASSES IN THE EU28

*Box 5*

*Relative importance of micro, small and medium SMEs in EU28 Member States*

***Figure 69: Contribution of micro SMEs and small/medium-sized SMEs to total SME employment - 2014***




*Source: Eurostat, National Statistical Offices and DIW Econ*

***Figure 70: Relative importance of small and medium SMEs in Member States where the contribution of micro SMEs to total SME employment is lower than the EU28 average - 2014***

| | | Share of employment of medium-sized SMEs in total SME employment | |
|---|---|---|---|
| | | Below EU28 average | Above EU28 average |
| Share of employment of small SMEs in total SME employment | Below EU28 average | | CY, MT, NL |
| | Above EU28 average | | AT, BG, DE, DK, EE; FI; IE, LT, LU, LV, RO, SE, UK |

*Source: Eurostat, National Statistical Offices and DIW Econ*

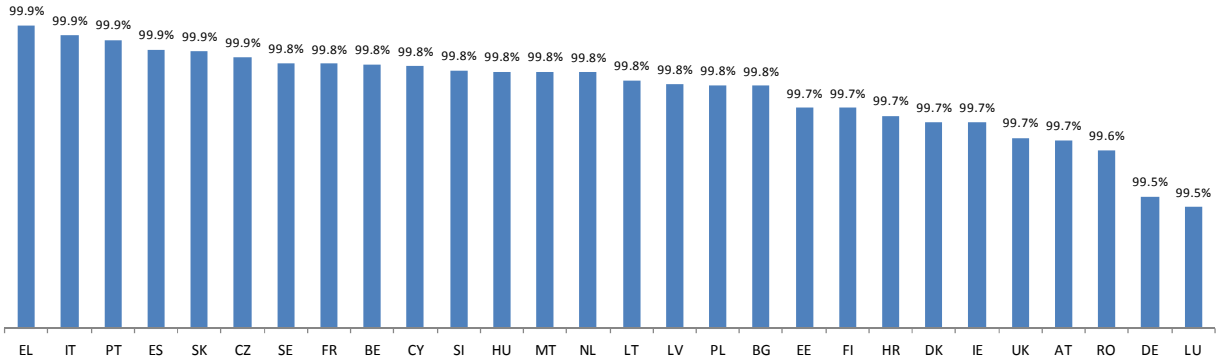
***Figure 71: Relative importance of small and medium SMEs in Member States where the contribution of micro SMEs to total SME employment is higher than the EU28 average - 2014***

| | | Share of employment of medium-sized SMEs in | |
|---|---|---|---|
| | | Below EU28 average | Above EU28 average |
| Share of employment of small SMEs in total SME employment | Below EU28 average | BE, EL, ES, HU, IT, PT, SK | CZ, HR, PL, SI |
| | Above EU28 average | FR | |

*Source: Eurostat, National Statistical Offices and DIW Econ*

# I.4. THE IMPORTANCE OF SMES IN THE TOTAL BUSINESS ECONOMY – NUMBER OF ENTERPRISES

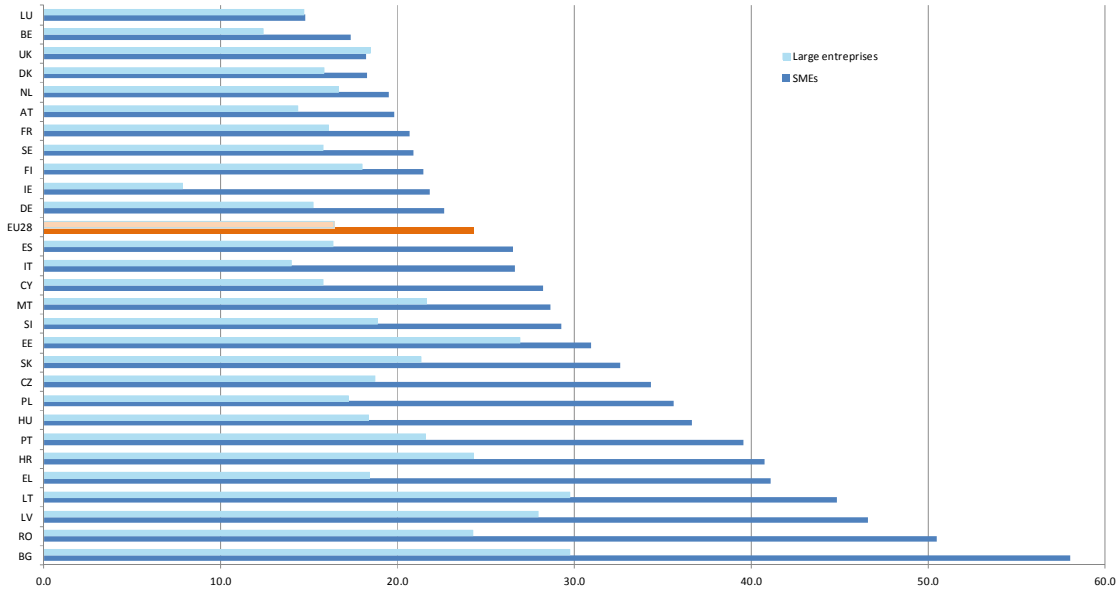
***Figure 72: Share of number of SME enterprises in the total number of enterprises in the non-financial business sector by Member State - 2014***




*Source: Eurostat, National Statistical Offices, and DIW Econ*

# I.5. LABOUR INTENSITY OF SMES AND LARGE ENTERPRISES

***Figure 73: Labour intensity of SMEs and large enterprises (number of employees per EUR million in value added adjusted for differences in price levels) - 2014***




*Note: Labour intensity= number of employees per EUR million of value added*
*Source: Eurostat, National Statistical Offices and DIW Econ*

# I.6. IMPORTANCE OF THE FIVE KEY SECTORS TO SMES IN MEMBER STATE – 2014

*Wholesale and retail trade*

As noted above, in 2014, the 'wholesale and retail trade' is the most important of the five sectors of interest for SMEs at the EU28-wide level. This is the case across all three indicators – employment, number of enterprises, and value added.

The sector holds the top position in terms of employment, in all EU28 Member States except Slovenia, the Czech Republic, Estonia, and Finland, where it comes second to the 'manufacturing' sector.

The top rank of the 'wholesale and retail trade' sector with regard to number of enterprises is also held in all countries apart from the UK, the Netherlands, Sweden, and Slovenia, where the 'business services' sector dominates the number of SMEs, and in Finland, where the 'construction' sector is the leader.

According to value added ranking, however, the 'trade' sector is closely followed by the 'manufacturing' sector. The share of SMEs' value added from 'trade' is the second highest after that of 'manufacturing' in Denmark, Finland, Estonia, Poland, Hungary, the Czech Republic, Slovenia, and Italy.

*Manufacturing*

The second most important sector in terms of SMEs' employment and value added in 2014 is the 'manufacturing' sector.

However, In terms of share of employment, it drops to third place in Luxembourg, Belgium, and Ireland.

In terms of share of value added generated by SMEs, the 'manufacturing' sector comes third after 'business services' in the UK and Malta, third after 'accommodation and food services' in Cyprus, and fourth in Luxembourg after 'business services' and 'construction'.

The second place, with regard to number of enterprises, is held by the 'business services' sector in all EU 28 countries with the exception of Finland, France, Lithuania, Slovakia, and Cyprus, where it comes third after 'construction', and in Sweden, the UK, Netherlands, and Slovenia, where it comes first ahead of 'trade'.

*Construction*

The sector of third highest importance in 2014, in terms of EU28 SME's employment and number of enterprises, is the 'construction sector'.

The countries which deviate from the employment ranking are the UK, Hungary, Netherlands, Ireland, and Malta, where the 'construction' sector comes fourth, and Greece, where it comes last of the five; and in Luxembourg and Belgium, where it exceeds the EU28 ranking by one position. The sector ranks one place lower than the overall EU28 in terms of number of SMEs, coming fourth after 'manufacturing' in Slovenia and Romania, and last of the top five in Croatia.

*Business services*

In terms of share of value added by SMEs, the sector which, in 2014 ranks third, is 'business services'. However, in 5 of the EU28 countries - Sweden, Estonia, Latvia, Lithuania, and Slovakia - the 'business services' sector ranks fourth in terms of value added. The countries where the 'business services@ sector

outperforms its EU-wide ranking are Luxembourg, Malta, and Cyprus, where the sector takes second place, and the UK where SMEs in that sector generate the largest share of SMEs' value added.

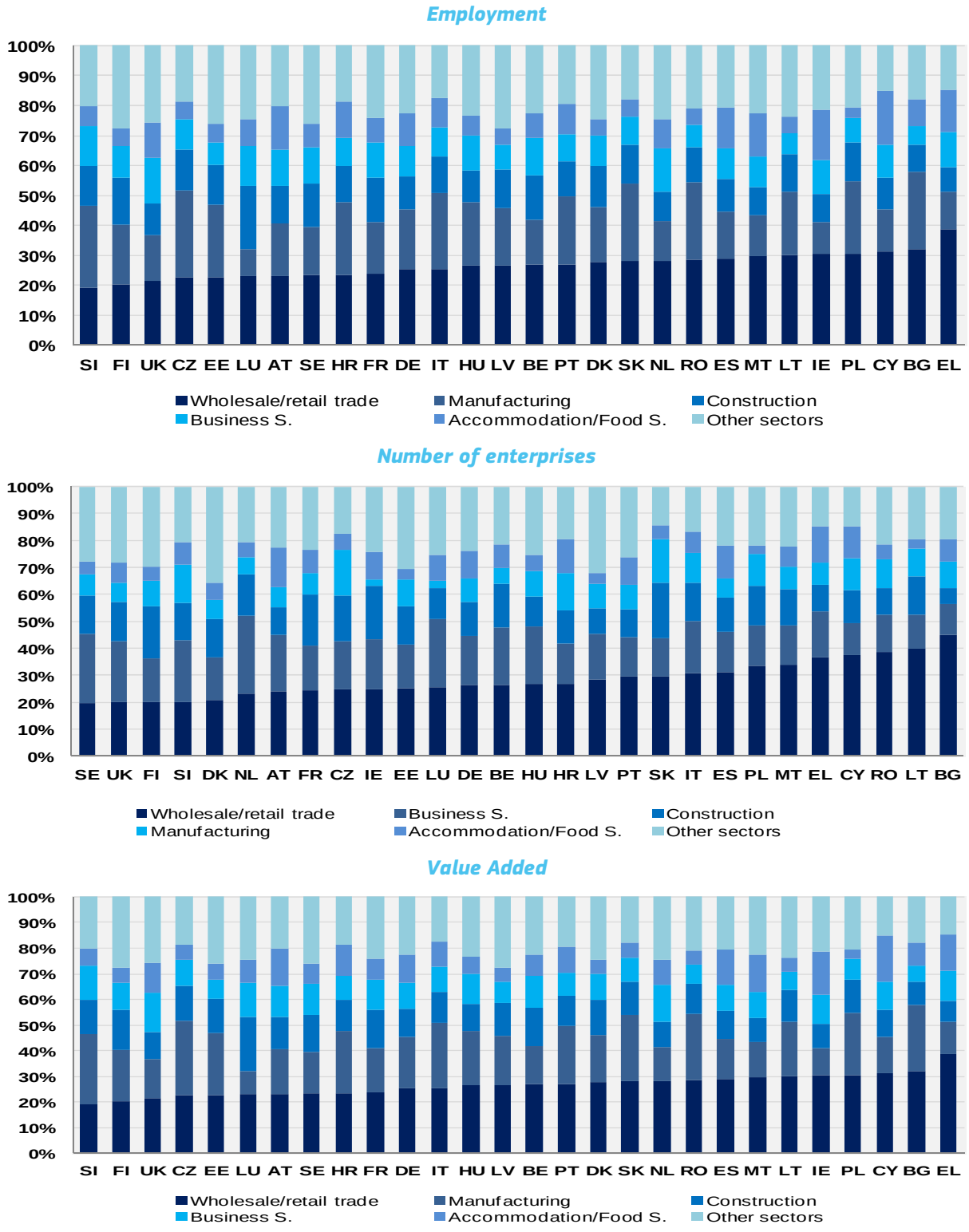
There is larger country variation at the bottom of the rankings. 'Business services' take an overall fourth place in the EU28 share of SME employment, but in Austria, Germany, Italy, Portugal, Bulgaria, and Croatia, the sector takes the last of the top five places, being overtaken by accommodation and food services.

In contrast, in the UK, Ireland, Luxembourg, Netherlands, Malta, and Cyprus, the 'business services' sector is the third largest employment-providing sector among SMEs.

### *Accommodation and food services*

The fifth place of importance across all three indicators is occupied typically by 'accommodation and food services'. The most notable outperformance of the accommodation and food services sector is its second highest share in value added in Cyprus, and its second place in employment in Cyprus, Malta, and Ireland.

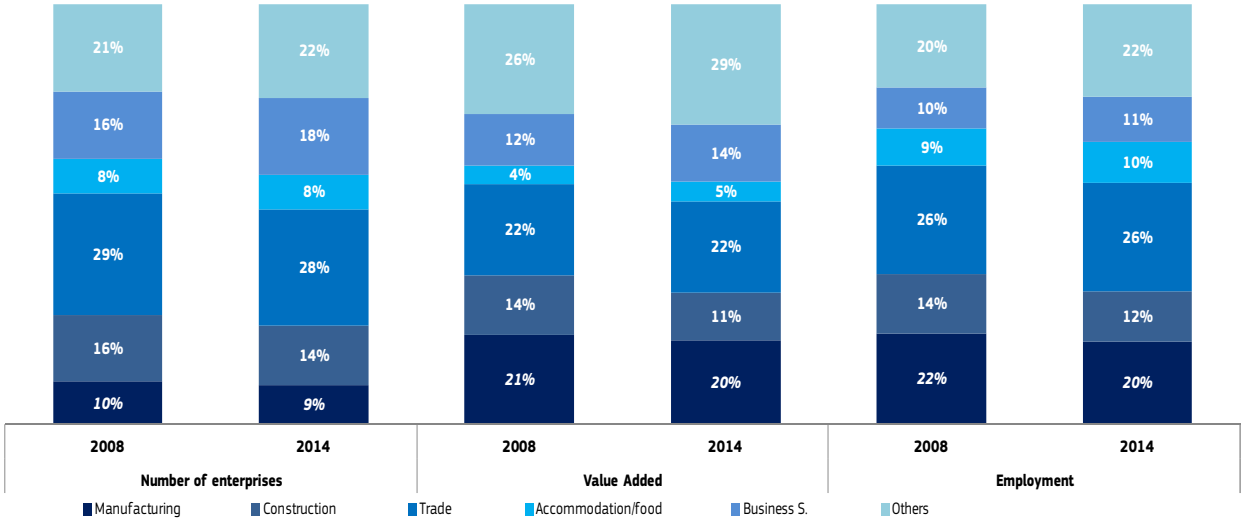
**Figure 74: Distribution of SMEs across sectors in Member States in 2014**




*Source: Eurostat, National Statistical Offices and DIW Econ*

# I.7. THE DISTRIBUTION OF SMES ACROSS 5 KEY SECTORS IN THE EU28 – 2008 AND 2014

***Figure 75: Evolution of the share of key SME sectors in total non-financial business sector 2008 to 2004***



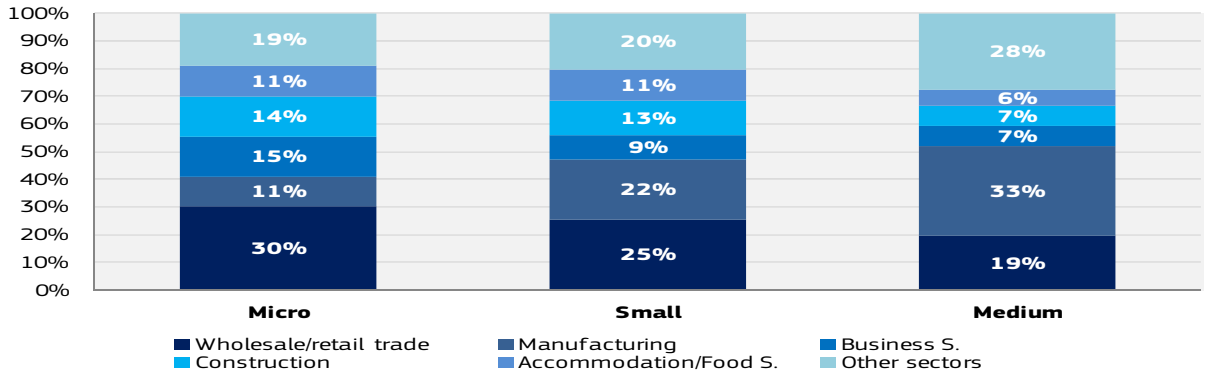

*Source: Eurostat, National Statistical Offices, and DIW Econ*

# I.8. THE DISTRIBUTION OF SMES BY SIZE CLASS ACROSS 5 KEY SECTORS

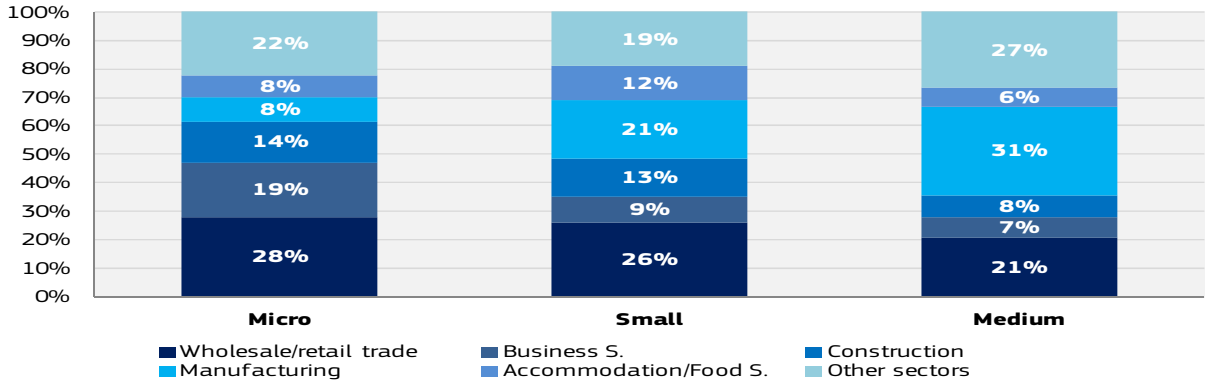
Among the five sub-sectors of interest (and the sub-sector regrouping all the other sub-sectors), the 'retail and wholesale trade' sector is the most important for micro and small SMEs, while the 'manufacturing' sector is the most important one for medium-sized SMEs (Figure 76). For example, the figure shows that the wholesale and retail sector accounts for 30% of total micro-SME employment, 28% of micro firms and 22% of micro-SME valued added while the construction sector accounts for 11% of micro-SME employment, 19% of micro firms and 9% of micro-SME value added.

***Figure 76: Distribution of SMEs across sectors by class size in the EU28 in 2014***

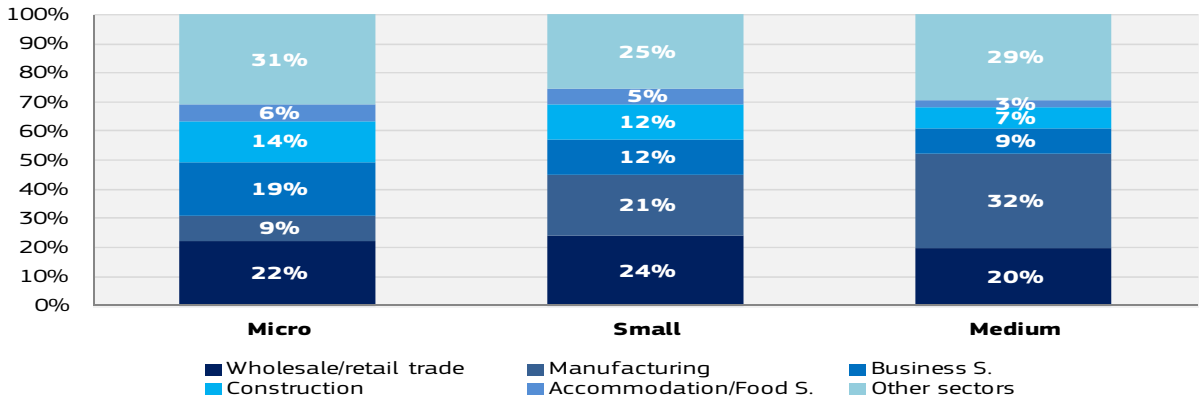
***Employment***




***Number of enterprises***




***Value added***




*Source: Eurostat, National Statistical Offices, and DIW Econ*

# I.9. SMES IN OTHER COUNTRIES

**Table 11: Overview of SMEs in EU28, partner countries, USA, Japan, and BRIC (latest year with data)**

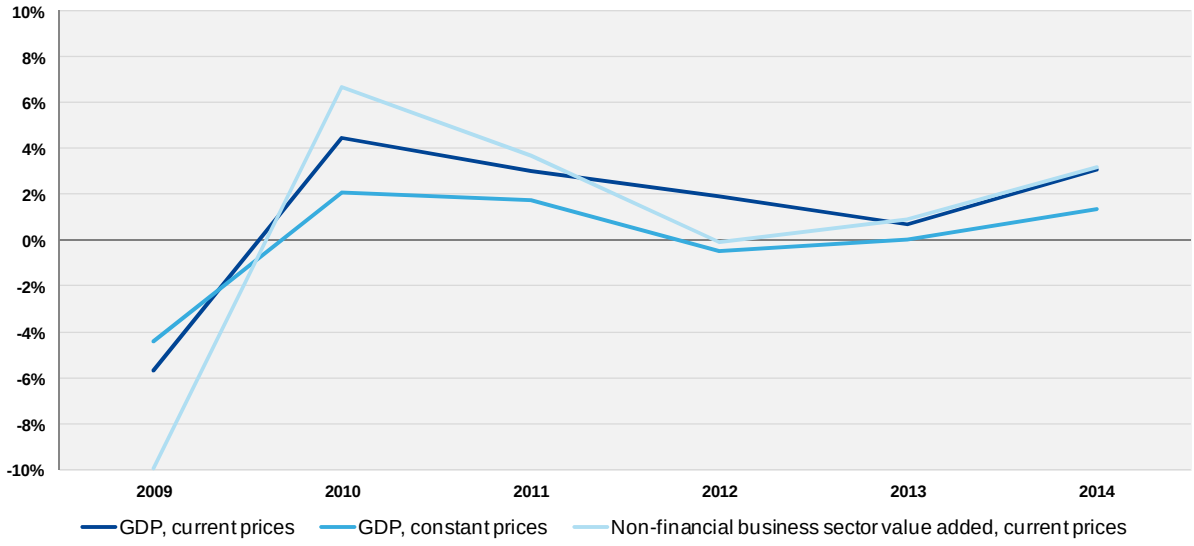
| | Number of SMEs | | Employment of SMEs | | Value Added | |
|---|---|---|---|---|---|---|
| | millions | % of total non-financial economy | millions | % of total non-financial economy | EUR billion | % of total non-financial economy |
| EU28 | 22.31 | 99.8% | 89.98 | 66.9% | 3,715 | 57.8% |
| Iceland | 0.02 | 99.6% | 0.08 | 71.7% | 4.0 | 68.2% |
| Former Yugoslav Republic of Macedonia | 0.05 | 99.8% | 0.26 | 76.6% | 2.2 | 66.6% |
| Serbia* | 0.28 | 99.8% | 1.01 | 70.9% | 7.9 | 54.2% |
| Turkey | 2.43 | 99.8% | 8.88 | 75.5% | 86 | 53.9% |
| Albania | 0.08 | 99.9% | 0.26 | 81.0% | 1.9 | 67.7% |
| Moldova | 0.04 | 97.6% | 0.23 | 58.6% | 1.4 | 47.1% |
| USA* | 18.82 | 99.8% | 50.00 | 52.4% | 3,781 | 44.4% |
| Japan | 3.92 | 99.5% | 33.24 | 86.6% | 475 | 55.0% |
| Brazil | 4.27 | 99.7% | 23.97 | 64.3% | - | - |
| Russia** | 1.84 | - | 11.85 | - | 879 | - |
| India*** | 23.92 | - | 57.28 | - | - | - |
| China**** | 0.29 | 82.0% | - | - | - | - |

Note: '-' -= data not available. Latest available year for EU28 is 2014; for Iceland, the former Yugoslav Republic of Macedonia, Albania ,and China is 2013; for Serbia, Turkey, Moldova, USA, Japan, Brazil, Russia and India is 2012. * SMEs in Serbia and the USA include sole proprietors. ** Turnover is used instead of Value Added for Russia. *** Sectors B, C, H, J, M, and N do not account for all NACE rev.2 sectors for India. **** SMEs in China include enterprises with 20-300 employees. Total SME data for China is based only on the available NACE sectors - B (Mining and quarrying), C (Manufacturing), and D (Electricity, gas, steam, and air condition supply).

*Source: Eurostat, National Statistical Offices, and DIW Econ*

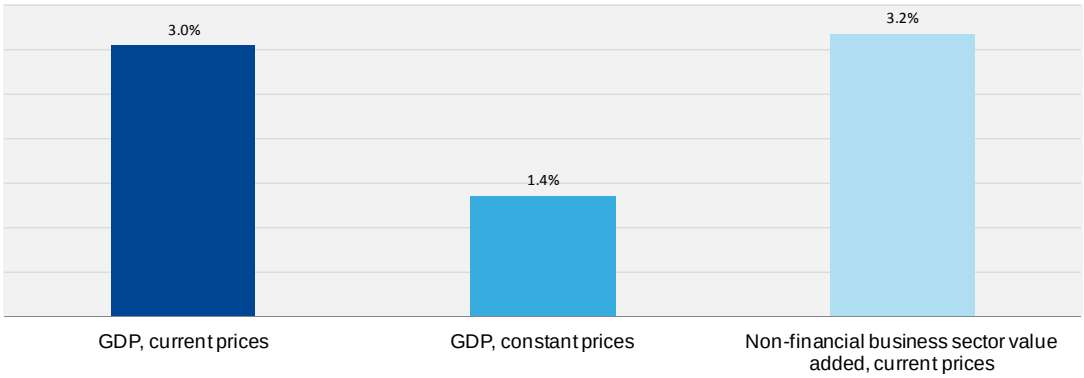
# I.10. GROWTH OF GDP AND SME VALUE ADDED IN THE EU

***Figure 77: Evolution of annual growth in EU28 GDP and EU28 value added of non-financial business sector (in %)***




Note: Slovakia is not included in the value added aggregate due to a break in the series. GDP at constant prices is in chain-linked volumes.
*Source: Eurostat, National Statistical Offices, DIW Econ*

***Figure 78: Annual growth (in %) of EU28 GDP and EU28 value added in non-financial business sector from 2013 to 2014***




Note: Slovakia is not included in the EU value added aggregate due to a break in the series. GDP at constant prices is in chain-linked volumes.
*Source: Eurostat, National Statistical Offices, DIW Econ*

# I.11. EVOLUTION OF GDP AND AGGREGATE DEMAND COMPONENTS – 2008 TO 2014

***Table 12: Evolution of GDP and aggregate demand components – 2008 to 2014***

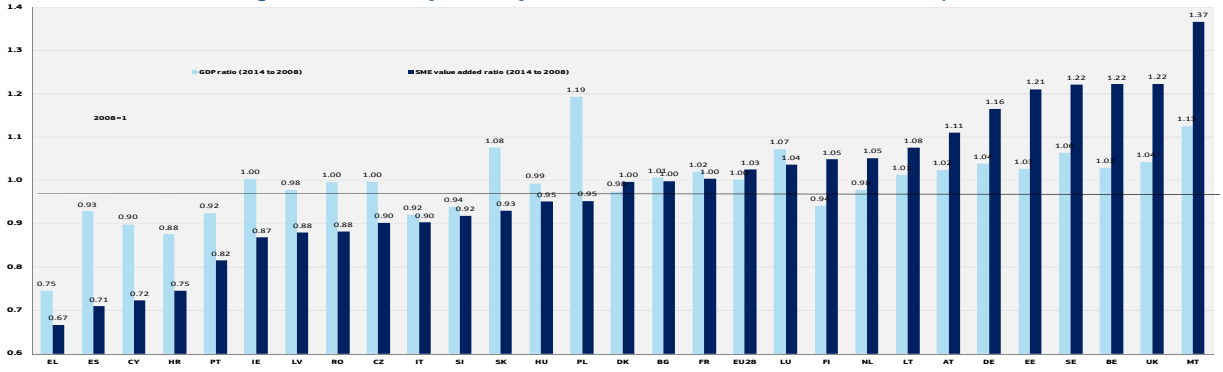
| | Gross domestic product at 2010 market prices | | | Final consumption expenditure of general government at 2010 prices | | | Private final consumption expenditure at 2010 prices | | | Gross fixed capital formation at 2010 prices: total economy | | | Exports of goods and services at 2010 prices | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % change 2008-2013 | % change 2013-2014 | ratio 2014 to 2008 (100) | % change 2008-2013 | % change 2013-2014 | ratio 2014 to 2008 (100) | % change 2008-2013 | % change 2013-2014 | ratio 2014 to 2008 (100) | % change 2008-2013 | % change 2013-2014 | ratio 2014 to 2008 (100) | % change 2008-2013 | % change 2013-2014 | ratio 2014 to 2008 (100) |
| **European Union** | -1% | 1% | 1.00 | 3% | 1% | 1.04 | -1% | 1% | 1.00 | -14% | 2% | 0.88 | 8% | 3% | 1.12 |
| Belgium | 2% | 1% | 1.03 | 6% | 1% | 1.07 | 5% | 1% | 1.06 | -6% | 4% | 0.98 | 11% | 3% | 1.15 |
| Bulgaria | -1% | 1% | 1.00 | -2% | 2% | 1.00 | -3% | 1% | 0.99 | -34% | 2% | 0.67 | 27% | 0% | 1.27 |
| Czech Republic | -2% | 2% | 1.00 | 2% | 2% | 1.03 | -1% | 1% | 1.01 | -15% | 3% | 0.88 | 18% | 7% | 1.27 |
| Denmark | -4% | 1% | 0.97 | 2% | 1% | 1.03 | -2% | 0% | 0.98 | -16% | 2% | 0.86 | 0% | 3% | 1.03 |
| Germany | 2% | 2% | 1.04 | 7% | 1% | 1.08 | 4% | 1% | 1.06 | 0% | 3% | 1.03 | 11% | 4% | 1.15 |
| Estonia | 1% | 2% | 1.03 | 4% | 1% | 1.05 | -7% | 4% | 0.97 | -7% | -1% | 0.92 | 34% | 2% | 1.37 |
| Ireland | -4% | 5% | 1.00 | -10% | 2% | 0.91 | -8% | 1% | 0.92 | -33% | 9% | 0.73 | 14% | 13% | 1.28 |
| Greece | -26% | 1% | 0.75 | -19% | -1% | 0.80 | -26% | 1% | 0.75 | -63% | 1% | 0.37 | -12% | 8% | 0.95 |
| Spain | -7% | 1% | 0.94 | -1% | 1% | 0.99 | -10% | 2% | 0.92 | -34% | 3% | 0.68 | 10% | 4% | 1.15 |
| France | 2% | 0% | 1.02 | 9% | 2% | 1.10 | 2% | 1% | 1.03 | -6% | -2% | 0.93 | 7% | 2% | 1.09 |
| Croatia | -12% | -1% | 0.88 | 0% | -2% | 0.98 | -12% | -1% | 0.87 | -32% | -4% | 0.65 | -4% | 6% | 1.02 |
| Italy | -7% | -1% | 0.92 | -3% | -1% | 0.96 | -7% | 0% | 0.93 | -23% | -3% | 0.75 | -1% | 1% | 1.00 |
| Cyprus | -8% | -3% | 0.89 | -2% | -5% | 0.93 | -10% | -1% | 0.89 | -51% | -11% | 0.43 | -7% | 0% | 0.93 |
| Latvia | -4% | 3% | 0.98 | -13% | 1% | 0.88 | -3% | 3% | 1.00 | -28% | 1% | 0.73 | 23% | 1% | 1.25 |
| Lithuania | -2% | 3% | 1.01 | -2% | 2% | 1.00 | -10% | 5% | 0.95 | -22% | 7% | 0.84 | 46% | 3% | 1.51 |
| Luxembourg | 4% | 3% | 1.07 | 18% | 3% | 1.22 | 8% | 3% | 1.10 | -2% | 2% | 1.00 | 8% | 2% | 1.10 |
| Hungary | -4% | 3% | 0.99 | 3% | 1% | 1.04 | -10% | 2% | 0.91 | -18% | 14% | 0.93 | 10% | 8% | 1.18 |
| Malta | 8% | 3% | 1.12 | 8% | 6% | 1.14 | 6% | 2% | 1.09 | -7% | 10% | 1.02 | 16% | 1% | 1.17 |
| Netherlands | -3% | 1% | 0.98 | 3% | 0% | 1.03 | -5% | 0% | 0.95 | -18% | 2% | 0.83 | 10% | 4% | 1.15 |
| Austria | 2% | 0% | 1.02 | 4% | 1% | 1.05 | 3% | 0% | 1.04 | -4% | 1% | 0.97 | 5% | 0% | 1.05 |
| Poland | 15% | 3% | 1.19 | 7% | 2% | 1.09 | 11% | 3% | 1.15 | 6% | 9% | 1.16 | 25% | 5% | 1.31 |
| Portugal | -7% | 1% | 0.94 | -9% | 0% | 0.91 | -10% | 2% | 0.92 | -36% | 2% | 0.65 | 15% | 4% | 1.20 |
| Romania | -3% | 3% | 1.00 | -5% | 2% | 0.97 | -6% | 5% | 0.98 | -41% | -5% | 0.55 | 43% | 8% | 1.55 |
| Slovenia | -9% | 3% | 0.93 | -1% | -2% | 0.97 | -5% | 1% | 0.95 | -40% | 5% | 0.63 | 1% | 6% | 1.07 |
| Slovakia | 5% | 2% | 1.08 | 7% | 4% | 1.11 | -2% | 2% | 1.00 | -13% | 4% | 0.90 | 24% | 4% | 1.29 |
| Finland | -6% | 0% | 0.94 | 3% | 0% | 1.04 | 3% | 0% | 1.03 | -15% | -4% | 0.82 | -14% | 1% | 0.87 |
| Sweden | 4% | 2% | 1.06 | 6% | 2% | 1.08 | 9% | 2% | 1.12 | -4% | 5% | 1.01 | 2% | 2% | 1.05 |
| United Kingdom | 1% | 3% | 1.04 | 3% | 2% | 1.05 | 0% | 2% | 1.02 | -3% | 7% | 1.04 | 5% | -1% | 1.04 |

*Source: Eurostat*

# I.12. EXTENT OF RECOVERY IN GDP ACROSS MEMBER STATES

In the figure below, a ratio of 1 implies that full recovery from the financial and economic crisis has been achieved; a ratio above 1 means that GDP has more than recovered, while a ratio below 1 implies a lack of full recovery.

***Figure 79: Ratio of level of 2014 GDP to 2008 GDP (at constant prices)***

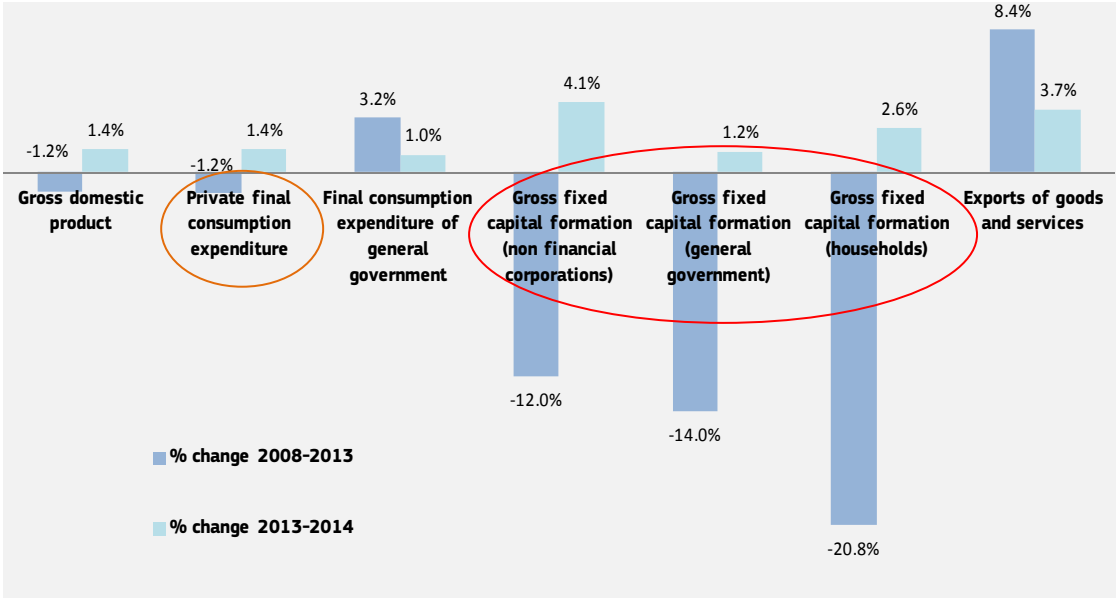



Note: A figure greater than one means that GDP /SME value added in 2014 exceeds its 2008 level. For example, in the UK, GDP in 2014 is 4% higher than in 2008 and SME valued added 10%

*Source: Eurostat, National Statistical Offices, DIW Econ*

# I.13. RECENT DEVELOPMENTS IN EU GDP AND DEMAND COMPONENTS

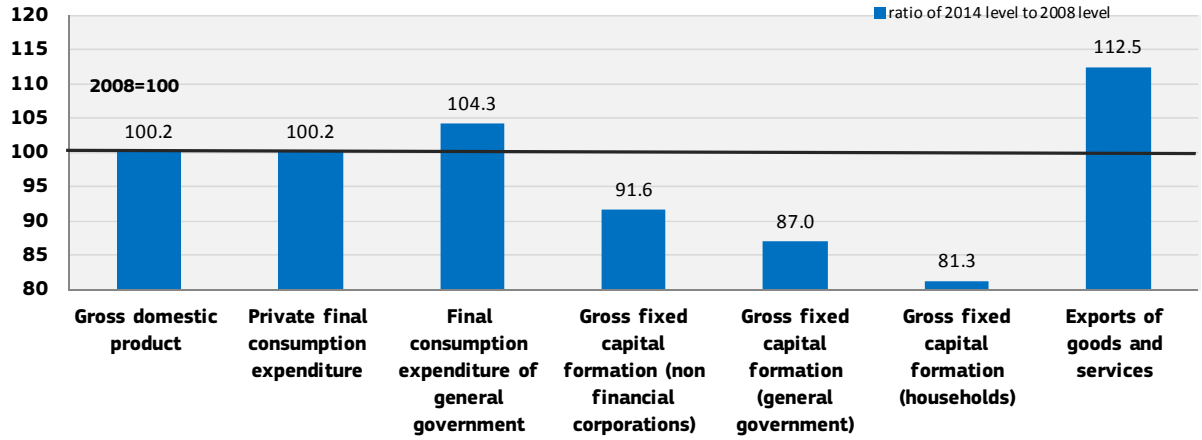
***Figure 80: Recent developments in GDP and demand aggregates at EU level - 2008 to 2013 and 2013 to 2014***




*Source: Eurostat*

# I.14. EXTENT OF RECOVERY IN EU AGGREGATE DEMAND COMPONENTS

***Figure 81: Extent of recovery in aggregate demand components at EU28 level – 2014***




*Source: Eurostat*

# I.15. THE EXTENT OF RECOVERY IN AGGREGATE DEMAND COMPONENTS IN EU28 MEMBER STATES

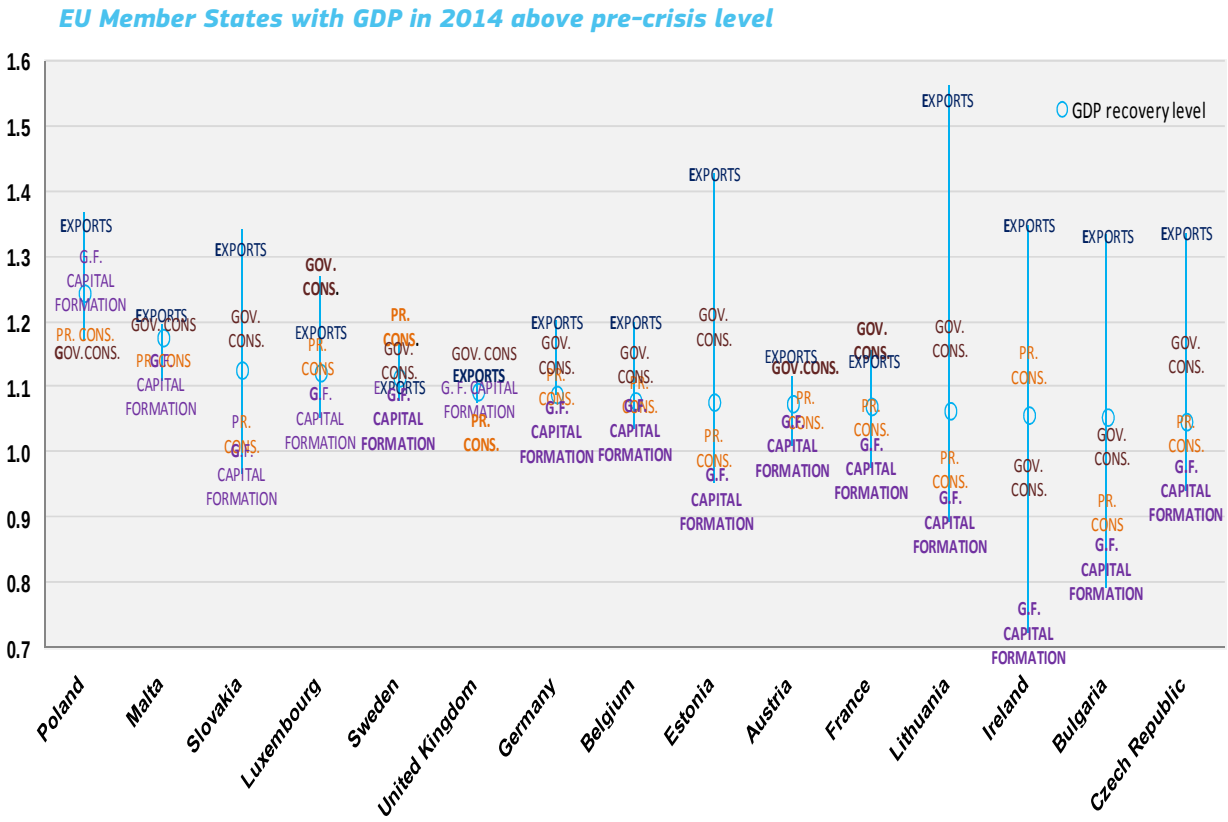
As in the case of the analysis of GDP recovery, in the figure below, a ratio of 1 implies that full recovery from the financial and economic crisis has been achieved; a ratio above 1 means that the demand component in question has more than recovered, while a ratio below 1 implies a lack of full recovery. Each component of aggregate demand (namely, private consumption, government consumption, capital formation and exports) are represented by a point on a line joining, for each country, the component which shows the least of a recovery and the component showing the most of a recovery.

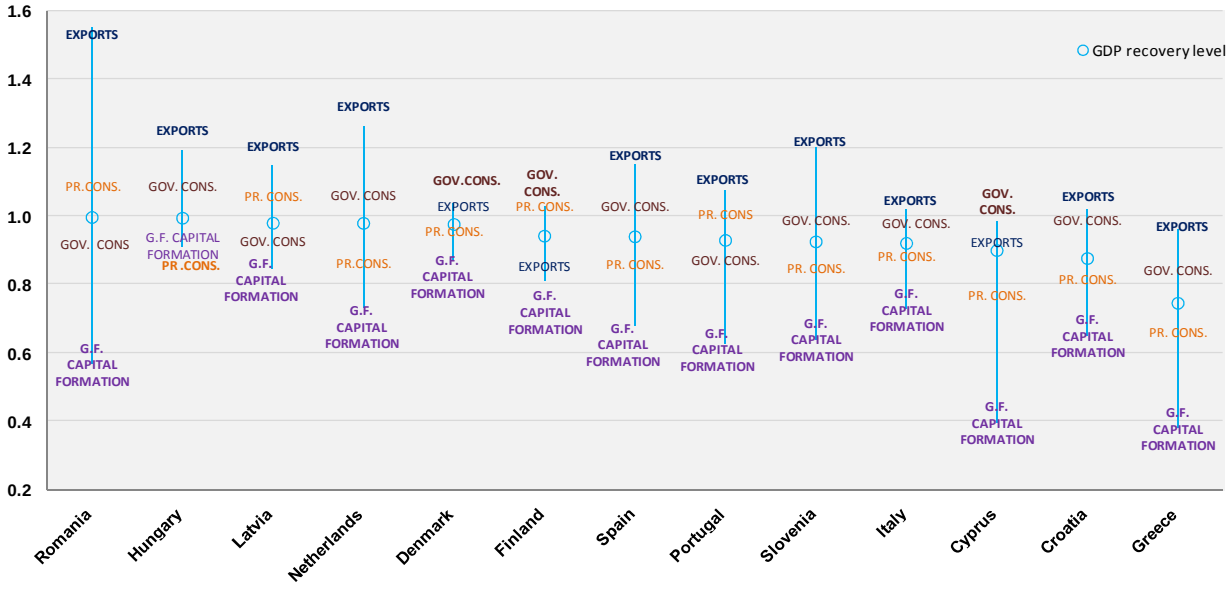
- In the case of Poland, exports show the highest level of recovery and government consumption the lowest. However, because the figure for government consumption is higher than 1, it means that even the final demand component showing the weakest growth stands in 2014 above its 2008 level.

- In contrast, in the case of Slovakia, the value for gross capital formation is less than 1. This implies that the level of gross capital formation in 2014 is still below its 2008 level.

The longer the line for a country is, the greater the differences in the rates of recovery across the different demand components. For ease of visualisation, in the top panel are countries where the GDP recovery has been achieved, while the bottom panel represents countries that are still catching up.

***Figure 82: Extent of recovery from 2008-09 crisis in various aggregate demand components in EU28 Member States***

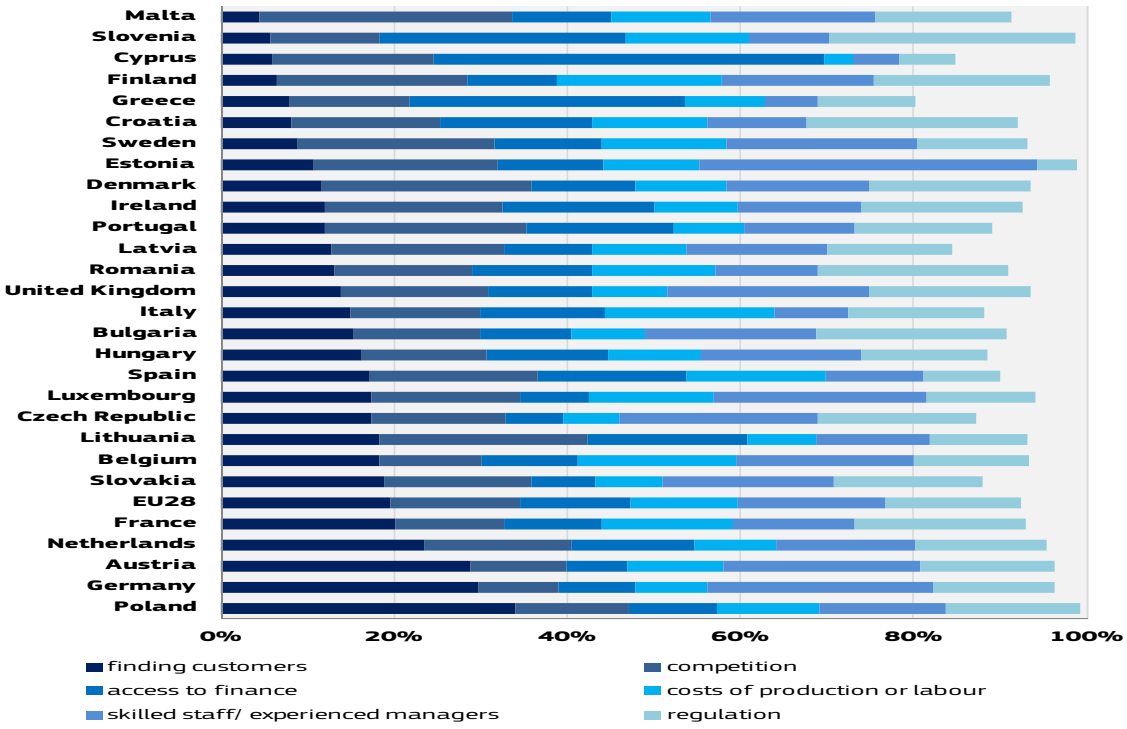



*Source: Elaboration on Eurostat National Accounts data*

# I.16. ADDITIONAL RESULTS FROM THE SURVEY ON ACCESS TO FINANCE (SAFE)

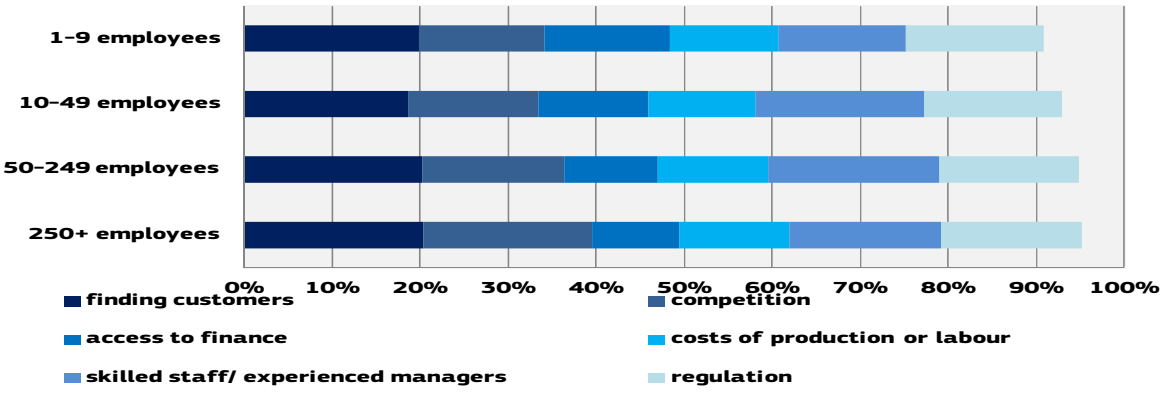
***Figure 83: Most pressing problems faced by SMEs – results of the SAFE 2014 wave by country***




Note that results do not add up to 100% because the categories 'others' and 'don't know/no answer' have been excluded from the analysis.
*Source: 2014 SAFE Survey*

- In all size classes, roughly the same number of respondents (20%) declared that finding customers is the most pressing issue.
- The identification of competition as a problem increases (mildly) with size, and ranges from 14% of respondents in the micro class to 19% of respondents in large enterprises.
- The reverse holds true for access to finance, which is perceived most strongly as an issue by micro SMEs.
- Labour cost-related factors, together with regulation, are cited as the most pressing problem by the same percentage of respondents across all groups.
- Lastly, the availability of skilled staff is most frequently noted to be the most pressing issue by the small and medium-sized SMEs (19%), rather than micro SMEs (14%) or large enterprises (17%).

***Figure 84: Most pressing problems faced by SMEs and large enterprises – results of the SAFE 2014 wave by size class***

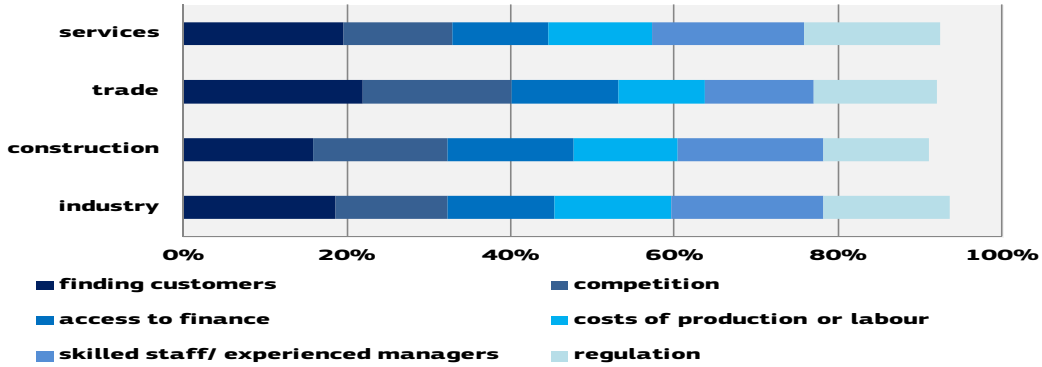



Note that results do not add up to 100% because the categories 'others' and 'don't know/no answer' have been excluded from the analysis.

*Source: 2014 SAFE Survey*

Skill shortages (i.e. 'availability of skilled staff/experienced managers' in the survey) are cited most often in 'industry' (a sector which includes manufacturing and utilities) as well as in 'services', with 19% of survey respondents identifying these two issues as the most pressing. In these two sectors, regulation was also noted to be the most pressing problem by more than 15% of firms.

***Figure 85: Most pressing problems faced by SMEs– results of the SAFE 2014 survey by sector***




Note that results do not add up to 100% because the categories 'others' and 'don't know/no answer' have been excluded from the analysis.
*Source: 2014 SAFE Survey*

# I.17. SME PERFORMANCE BY MEMBER STATES FROM 2008 TO 2014

The tables below provide for each SME performance indicator, a qualitative indication of whether SMEs have or have not fully recovered from the economic and financial crisis. More quantitative information is provided thereafter.

***Table 13: Extent of recovery by Member State (2014 compared to 2008)***

| | *More than full recovery* | | | *Just recovered* | | | *Less than full recovery* | | |
|---|---|---|---|---|---|---|---|---|---|
| | Employment | Value added | Number of enterprises | Employment | Value added | Number of enterprises | Employment | Value added | Number of enterprises |
| **AT** | + | + | + | | | | | | |
| **BE** | + | + | + | | | | | | |
| **BG** | | | + | | = | | - | | |
| **CY** | | | | | | | - | - | - |
| **CZ** | | | + | | | | - | - | |
| **DE** | + | + | + | | | | | | |
| **DK** | | | | | = | = | - | | |
| **EE** | | + | + | | | | - | | |
| **EL** | | | | | | | - | - | - |
| **ES** | | | | | | | - | - | - |
| **FI** | | + | | | | | - | | - |
| **FR** | + | | + | | = | | | | |
| **HR** | | | | | | | - | - | - |
| **HU** | | | | | | | - | - | - |
| **IE** | | | | | | | - | - | - |
| **IT** | | | | | | | - | - | - |
| **LT** | | + | + | | | | - | | |
| **LU** | + | + | + | | | | | | |
| **LV** | | | + | | | | - | - | |
| **MT** | + | + | + | | | | | | |
| **NL** | | + | + | | | | - | | |
| **PL** | | | | | | = | - | - | |
| **PT** | | | | | | | - | - | - |
| **RO** | | | | | | | - | - | - |
| **SE** | + | + | + | | | | | | |
| **SI** | | | + | | | | - | - | |
| **UK** | + | + | + | | | | | | |

Note: '+' = more than full recovery, '=' =full recovery, '-'= less than full recovery. Slovakia excluded because of a break in the data series
*Source: Eurostat, National Statistical Offices, DIW econ*

In terms of the *magnitude* of the cumulative change from 2008 to 2014 in SME performance indicators over the period 2008-2014, significant variation across countries continues to be observed (see Box overleaf).

## *Box 6*

## *Cumulative growth in SME performance indicators in EU28 Member States– 2008 to 2014*

***Figure 86: Cumulative growth (in %) in number of SMEs - 2008 to 2014***

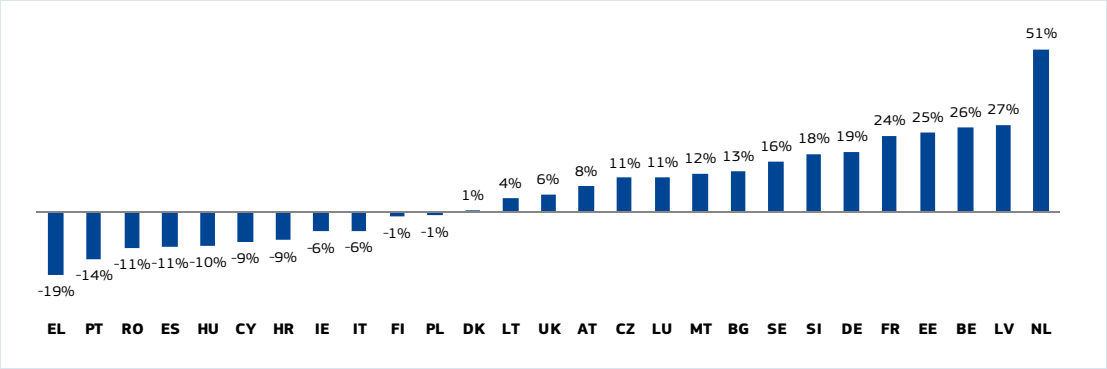



***Figure 87: Cumulative growth (in %) in SME value added - 2008 to 2014***

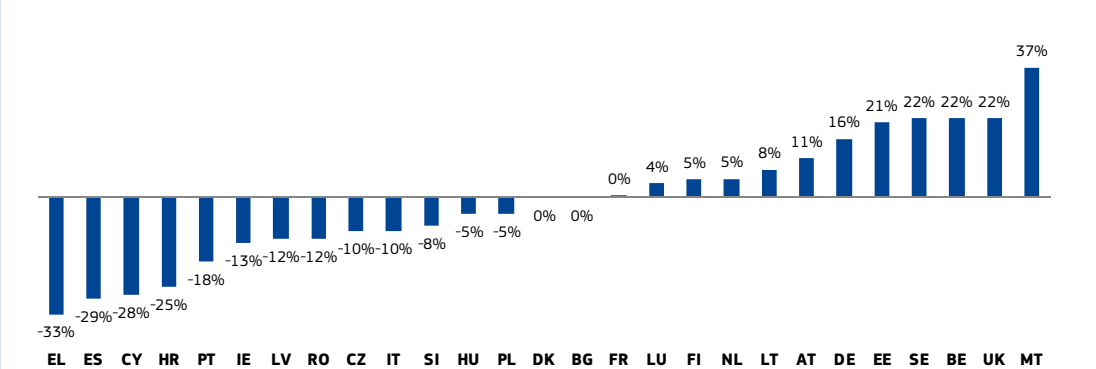
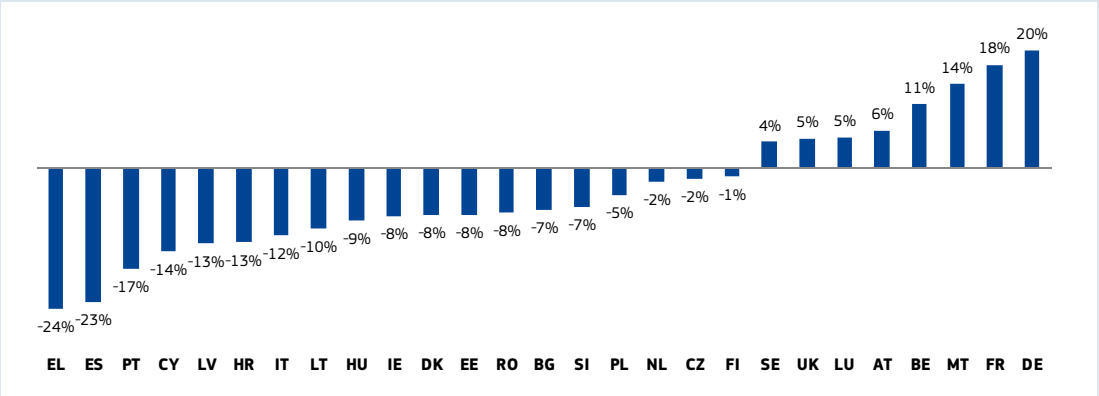



***Figure 88: Cumulative growth (in %) in SME employment - 2008 to 2014***

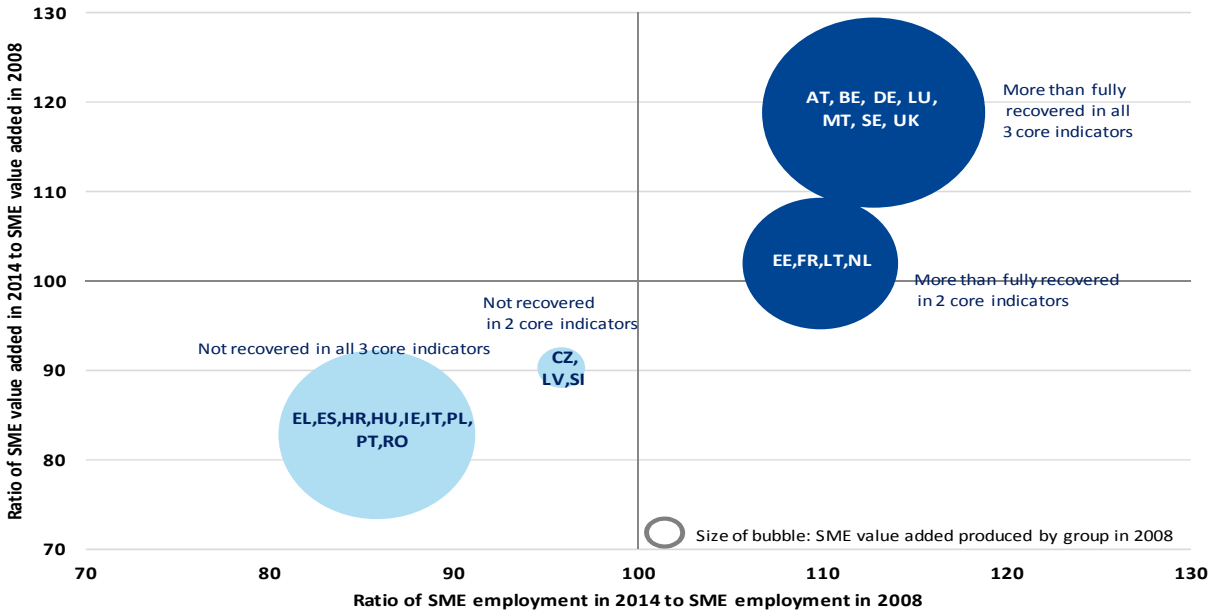



Note: Slovakia not included because of a break in data series

*Source: Eurostat, National Statistical Offices, DIW econ*

Overall, one can distinguish a number of clusters of countries, based on the number of SME performance indicators for which full recovery has or has not yet been achieved.

**Figure 89: Member State clusters by degree of recovery in SME performance indicators**

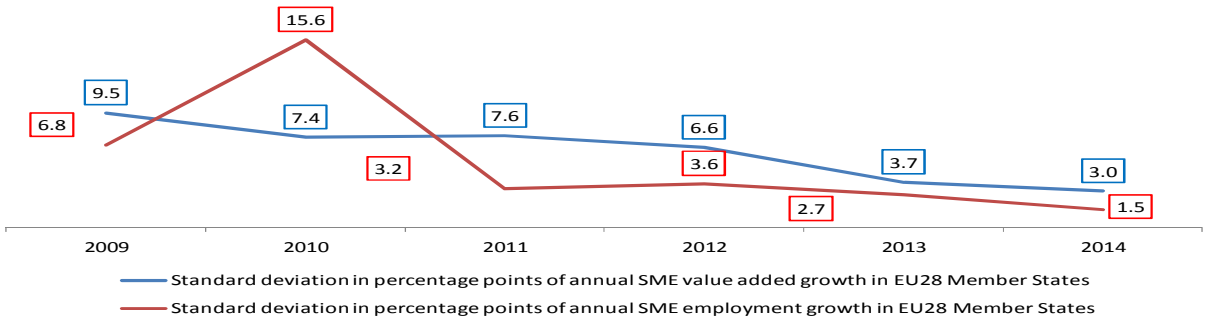



Note: Bulgaria, Cyprus, Denmark, Finland and Slovenia do not appear in the chart due to uneven recovery pattern. Slovakia is not included in the analysis due to a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

However, *cross-country differences* in SME performance have *reduced* considerably, with the standard deviation[12] in the annual growth rates of SME *value added* across EU28 Member States *falling* from 6.8 percentage points in 2009 to 3.0 percentage points in 2014, *less than half its 2009 value*.

Similarly, SME *employment growth* showed a *sharp drop* in the dispersion of annual SME employment growth across the EU28, with the standard deviation *falling* in 2014 to 1.5, less than 1/4 of its 2009 level (see figure below).

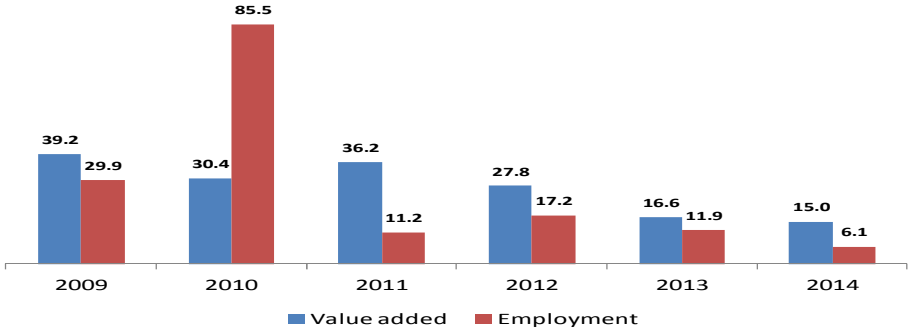
**Figure 90: Evolution of the dispersion (in percentage points) of the annual growth rates in SME value added and SME employment - 2009 to 2014**




Note: Slovakia is not included due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

Not only did the dispersion in value added and employment growth rates *reduce* markedly, but so did the *gap* between the highest and lowest growth rate in the EU28 Member States (see figure below).

***Figure 91: Evolution of the difference (in percentage points) across Member States between highest and lowest annual growth rates in SME value added and SME employment – 2009 to 2014***




Note: Slovakia is not included due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

# I.18. EXTENT OF THE RECOVERY IN DIFFERENT KEY SME SECTORS – EU28 AND BY MEMBER STATE

The analysis of recent SME developments in the main body of the report highlights distinct sectoral patterns in SME performance during the period 2008 to 2014.

A few sectors exhibited a positive performance (such as 'services'), while others experienced large losses ('manufacturing' and 'construction').

***Table 14: Performance of SMEs sector in the EU28 - 2008-2014***

| | EU28 Number of SMEs - Ratio of 2014 level to 2008 level | EU28 Value Added of SMEs - Ratio of 2014 level to 2008 level | EU28 SME Employment - Ratio of 2014 level to 2008 level |
|---|---|---|---|
| Manufacturing | 0.95 | 0.96 | 0.89 |
| Construction | 0.93 | 0.82 | 0.83 |
| Wholesale and retail trade | 0.99 | 1.03 | 1.00 |
| Accommodation/Food Services | 1.03 | 1.12 | 1.09 |
| Business Services | 1.17 | 1.12 | 1.10 |
| Other | 1.12 | 1.12 | 1.09 |
| Total | 1.04 | 1.02 | 0.99 |

Note: Slovakia is not included in the EU aggregate due to a break in the series
*Source: Eurostat, National Statistical Offices, DIW econ*

The key findings of a more granular analysis focusing on the performance of SMEs in different sectors in the various Member States are as follows:

- A full recovery in terms of number of SMEs has been achieved in the majority of Member States in the two 'services' sectors, while the reverse is true in 'manufacturing' and 'construction'.
- The recovery in terms of value added is more uneven: `manufacturing', 'construction', and 'wholesale and retail trade' (the largest sectors) are still lagging in most Member States, while 'accommodation', and 'business services' have performed positively throughout almost all the EU28.
- The performance is somewhat more negative for employment, with only a few countries having achieved more than full recovery in at least four sectors (Austria, Germany, France, Malta, Luxembourg, United Kingdom and Sweden).

*Table 15: Number of enterprises - degree of recovery by sector and Member State, 2008-2014*

| | Manufacturing | | | Construction | | | Wholesale/retail trade | | | Accommodation/ food services | | | Business services | | | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - |
| AT | | | - | + | | | | = | | + | | | + | | | + | | |
| BE | | | - | + | | | + | | | + | | | + | | | + | | |
| BG | | = | | | | - | + | | | + | | | + | | | + | | |
| CY | | | - | | | - | | | - | | | - | + | | | | | - |
| CZ | + | | | + | | | + | | | | = | | + | | | + | | |
| DE | + | | | + | | | + | | | + | | | + | | | + | | |
| DK | | | - | | | - | | | - | + | | | + | | | + | | |
| EE | + | | | + | | | + | | | + | | | + | | | + | | |
| EL | | | - | | | - | | | - | | | - | | | - | | | - |
| ES | | | - | | | - | | | - | | | - | | | - | | | - |
| FI | | | - | | = | | | | - | | = | | + | | | + | | |
| FR | + | | | + | | | + | | | + | | | + | | | + | | |
| HR | | | - | | | - | | | - | + | | | + | | | | | - |
| HU | | | - | | | - | | | - | | | - | + | | | | | - |
| IE | | | - | | | - | | = | | + | | | + | | | + | | |
| IT | | | - | | | - | | | - | | = | | + | | | + | | |
| LT | | | - | | | - | + | | | + | | | + | | | | | - |
| LU | | | - | + | | | + | | | | = | | + | | | + | | |
| LV | + | | | + | | | + | | | + | | | + | | | + | | |
| MT | + | | | + | | | + | | | + | | | | = | | + | | |
| NL | + | | | + | | | + | | | + | | | + | | | + | | |
| PL | | | - | | | - | | | - | | | - | + | | | + | | |
| PT | | | - | | | - | | | - | | | - | | | - | | | - |
| RO | | | - | | | - | | | - | + | | | + | | | + | | |
| SE | | | - | + | | | + | | | + | | | + | | | + | | |
| SI | + | | | | | - | + | | | + | | | + | | | + | | |
| UK | | | - | | | - | | | - | | | - | + | | | + | | |

Note: '+' = more than full recovery, '=' =full recovery, '-'= less than full recovery. Slovakia is not included due to a break in the series

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 16: Value Added - degree of recovery by sector and Member State, 2008-2014***

| | Manufacturing | | | Construction | | | Wholesale/retail trade | | | Accommodation/ food services | | | Business services | | | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - |
| AT | + | | | + | | | + | | | + | | | + | | | + | | |
| BE | | = | | + | | | + | | | + | | | + | | | + | | |
| BG | | = | | | | - | + | | | + | | | | | - | + | | |
| CY | | | - | | | - | | | - | + | | | + | | | | | - |
| CZ | | | - | | | - | | | - | | | - | | | - | | | - |
| DE | + | | | + | | | + | | | + | | | + | | | + | | |
| DK | | | - | | | - | | | - | + | | | + | | | + | | |
| EE | + | | | | | - | + | | | + | | | + | | | + | | |
| EL | | | - | | | - | | | - | | | - | | | - | | | - |
| ES | | | - | | | - | | | - | | | - | | | - | | | - |
| FI | | | - | | = | | | = | | + | | | + | | | + | | |
| FR | | | - | | | - | | = | | + | | | + | | | + | | |
| HR | | | - | | | - | | | - | + | | | | | - | | | - |
| HU | + | | | | | - | | | - | | | - | + | | | | = | |
| IE | | | - | | | - | | | - | | | - | | | - | + | | |
| IT | | | - | | | - | | | - | + | | | | | - | + | | |
| LT | + | | | | | - | + | | | + | | | | = | | + | | |
| LU | | | - | + | | | + | | | + | | | + | | | + | | |
| LV | | | - | | | - | | | - | | | - | | | - | + | | |
| MT | | | - | + | | | + | | | + | | | + | | | + | | |
| NL | + | | | | | - | + | | | + | | | | = | | + | | |
| PL | + | | | | | - | | | - | + | | | + | | | + | | |
| PT | | | - | | | - | | | - | | | - | | | - | | | - |
| RO | | | - | | | - | | | - | | | - | + | | | + | | |
| SE | | = | | + | | | + | | | + | | | + | | | + | | |
| SI | | | - | | | - | | | - | | | - | + | | | + | | |
| UK | + | | | | = | | + | | | + | | | + | | | + | | |

Note: '+'= more than full recovery, '=' = full recovery, '-' =less than full recovery. Slovakia is not included due to a break in the series
*Source: Eurostat, National Statistical Offices, DIW econ*

*Table 17: Employment degree of recovery by sector and Member State, 2008-2014*

| | Manufacturing | | | Construction | | | Wholesale/retail trade | | | Accommodation/ food services | | | Business services | | | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - | + | = | - |
| AT | | | - | + | | | + | | | + | | | + | | | + | | |
| BE | | | - | + | | | + | | | | = | | + | | | + | | |
| BG | | | - | | | - | | = | | + | | | + | | | + | | |
| CY | | | - | | | - | | | - | | | - | + | | | | | - |
| CZ | | | - | | | - | + | | | | = | | + | | | + | | |
| DE | | = | | + | | | + | | | + | | | + | | | + | | |
| DK | | | - | | | - | | | - | | | - | + | | | | = | |
| EE | | | - | | | - | | | - | + | | | | | - | + | | |
| EL | | | - | | | - | | | - | | | - | | = | | | | - |
| ES | | | - | | | - | | | - | | | - | | | - | | | - |
| FI | | | - | | | - | | | - | + | | | + | | | + | | |
| FR | | | - | + | | | + | | | + | | | + | | | + | | |
| HR | | | - | | | - | | | - | + | | | + | | - | + | | |
| HU | | | - | | | - | | | - | | | - | + | | | | | - |
| IE | | | - | | | - | | | - | | | - | + | | - | | = | |
| IT | | | - | | | - | | | - | | | - | + | | - | | | - |
| LT | | | - | | | - | | | - | | | - | + | | | | | - |
| LU | | | - | + | | | + | | | + | | | + | | | + | | |
| LV | | | - | | | - | | | - | | | - | + | | | | = | |
| MT | + | | | + | | | + | | | + | | | + | | | + | | |
| NL | | | - | | | - | | | - | + | | | + | = | | + | | |
| PL | | | - | | | - | | | - | | | - | + | | | + | | |
| PT | | | - | | | - | | | - | | | - | + | | - | | | - |
| RO | | | - | | | - | | | - | + | | | + | | | + | | |
| SE | | | - | + | | | + | | | + | | | + | | | + | | |
| SI | | | - | | | - | | | - | | = | | + | | | + | | |
| UK | | | - | | | - | + | | | + | | | + | | | + | | |

Note: '+' = more than full recovery, '=' = full recovery, '-'= less than full recovery. Slovakia is not included due to a break in the series
*Source: Eurostat, National Statistical Offices, DIW econ*

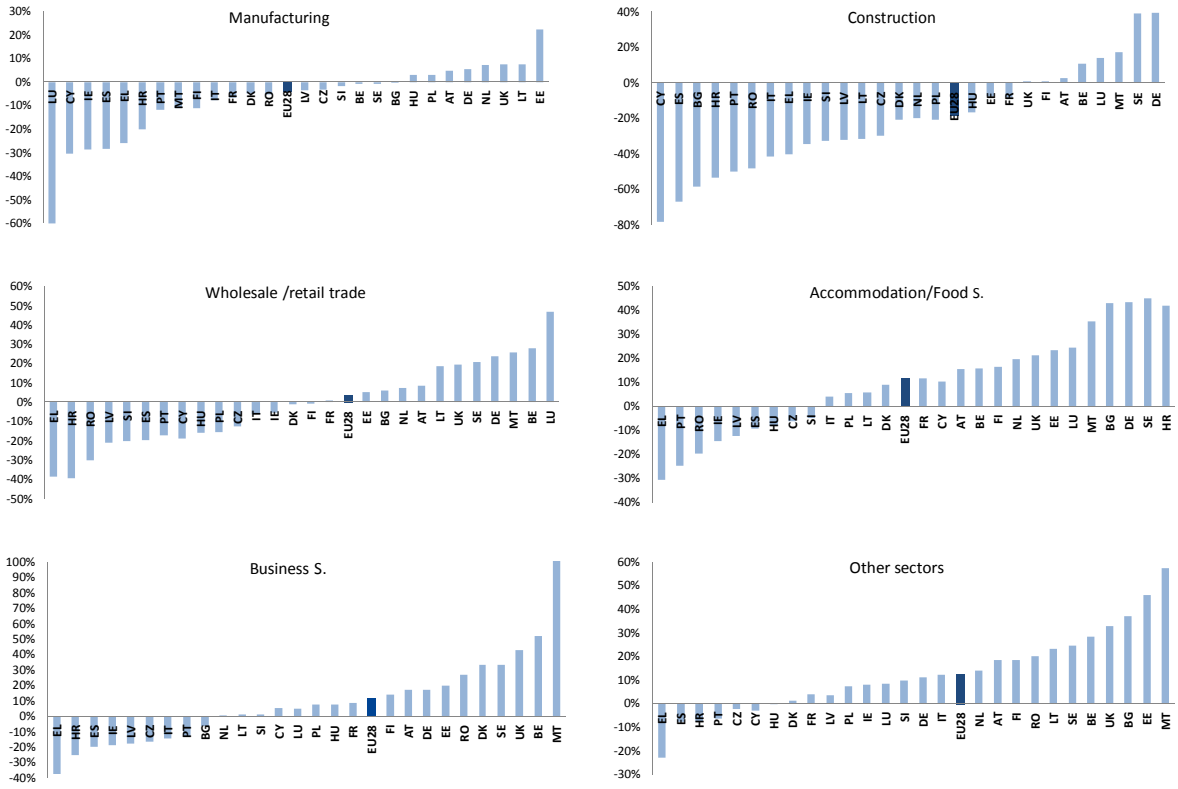
While the previous tables provide a qualitative overview of the extent to which recovery has or has not been achieved, a quantitative perspective of the recovery or the recovery gap (i.e., lack of recovery) by key SME sector and Member States is shown in the figures overleaf. As an introduction to such information, the table below shows, for each of the three performance indicators, the number of EU28 Member States where full or more than full recovery has been achieved.

*Table 18: Number of Member States in which the level of the SME performance indicator in 2014 is higher than in 2008*

| | SME performance indicator | | |
|---|---|---|---|
| Sector | Value added | Employment | Number of firms |
| Manufacturing | 8 | 2 | 8 |
| Construction | 7 | 7 | 11 |
| Wholesale and retail trade | 13 | 10 | 15 |
| Accommodation/Food Services | 19 | 14 | 16 |
| Business Services | 18 | 19 | 22 |
| Other | 20 | 16 | 18 |

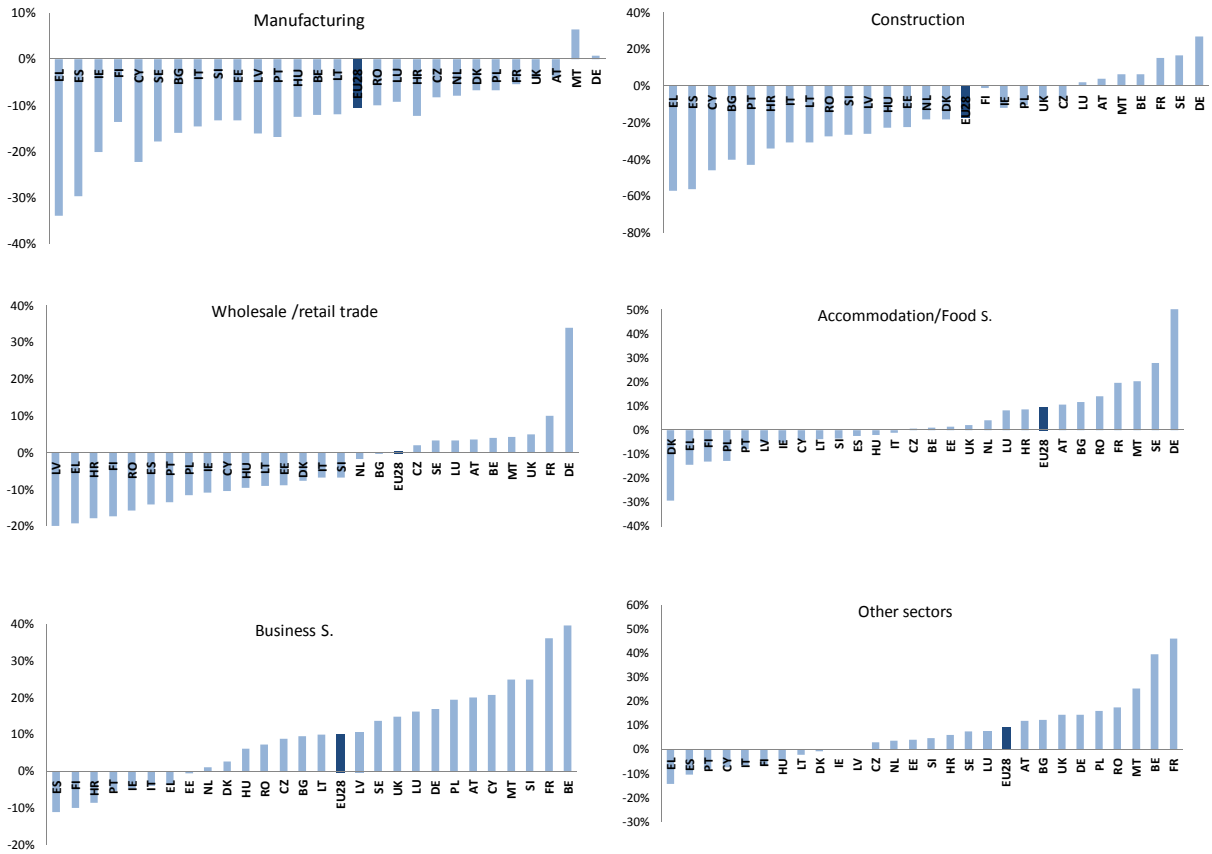
Note: Slovakia is not included due to a break in the data.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 92: Value added recovery of EU28 SMEs in various economic sectors by Member State, percentage change from 2008 to 2014***



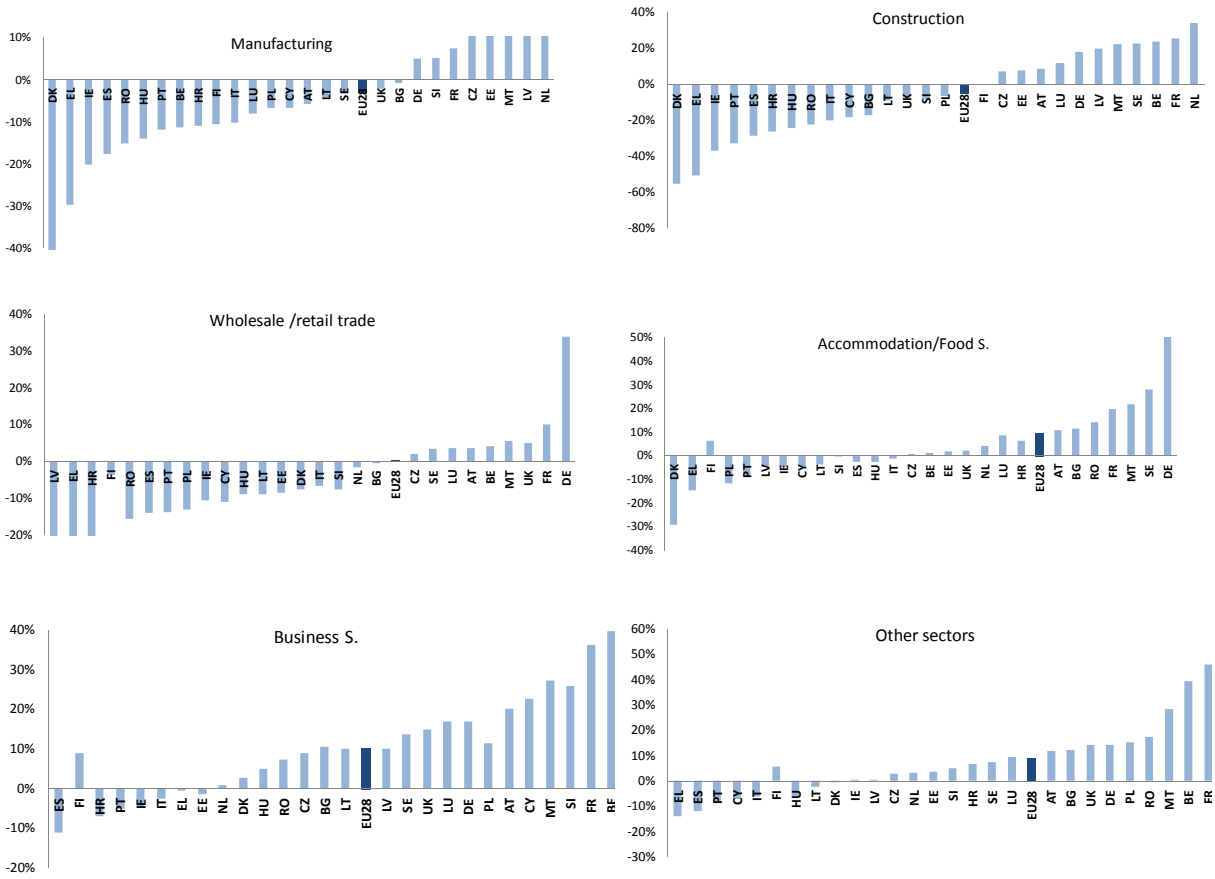

Note: Slovakia is not shown nor included in the EU aggregate due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 93: Employment recovery of EU28 SMEs in various economic sectors by Member State, percentage change from 2008 to 2014***




Note: Slovakia is not shown nor included in the EU aggregate due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Figure 94: Recovery of number of EU28 SMEs in various economic sectors by Member State, percentage change from 2008 to 2014***



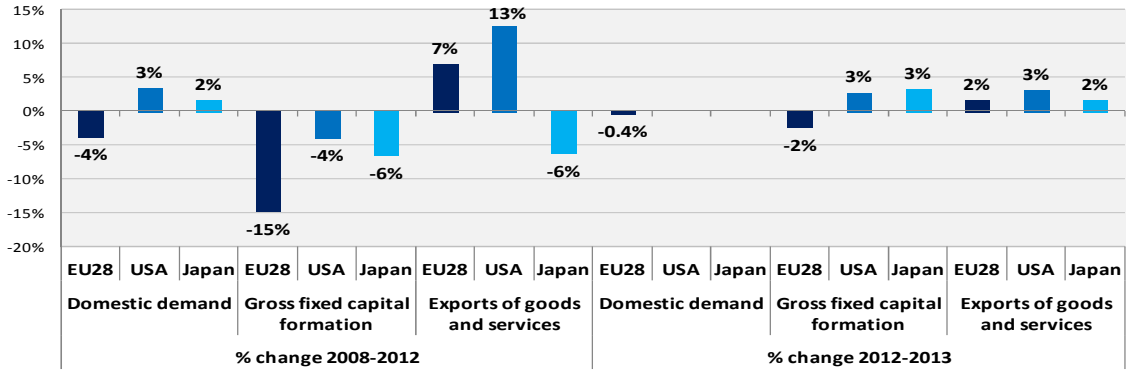

Note: Slovakia is not shown nor included in the EU aggregate due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

# I.19. AN OVERVIEW OF SME PERFORMANCE IN THE PARTNER COUNTRIES OF THE EUROPEAN UNION

### *EU28, USA and Japan – macroeconomic context*

Over the years 2008 to 2012, the EU28 experienced a marked contraction in domestic demand. This contraction was not as pronounced in the USA and Japan, where domestic demand recovered from the crisis and grew at (slow) but positive rates of 3% and 2%. The developments in gross fixed capital formation from 2008 to 2012 were similar, showing a negative trend, but the EU28 experienced the largest decline (-15%) in comparison to the USA (-4%) and Japan (-6%). As highlighted earlier, exports were the leading engine for growth in Europe and this was also the case in the US.

***Figure 95: Macroeconomic trends in the EU28, USA, and Japan***




Note: all variables in constant prices indexed at 2005. No USA and Japan data for domestic demand in 2013 available at time of drafting.

*Source: Eurostat National Accounts*

### *SMEs in the three countries*

***Table 19: Overview of SMEs in EU28, USA and Japan - 2012***

| | Number of SMEs (millions) | Value Added of SMEs (trillion Euros) | SME Employment (millions) |
|---|---|---|---|
| **EU28** | 22.1 | 3.5 | 89.3 |
| **USA** | 18.8 | 3.8 | 50.0 |
| **Japan** | 3.9 | n.a. | 33.2 |

Note: Data for all three economies is for year 2012, to allow for comparisons between latest available data. Data for Japan is representative of the non financial business economy, but there is no separate section for 'N' (Administrative and support services) in Japanese industrial classification. In the USA and Japan, 'medium' firms can employ up to 299 employees; in the case of the USA, the data for micro firms are adjusted by including non employer enterprises from the US Census Bureau, to account for self-employed individuals. Data for value added is not available for the total non-financial business economy in the case of Japan.

*Source: Eurostat, National Statistical Offices, DIW econ;*

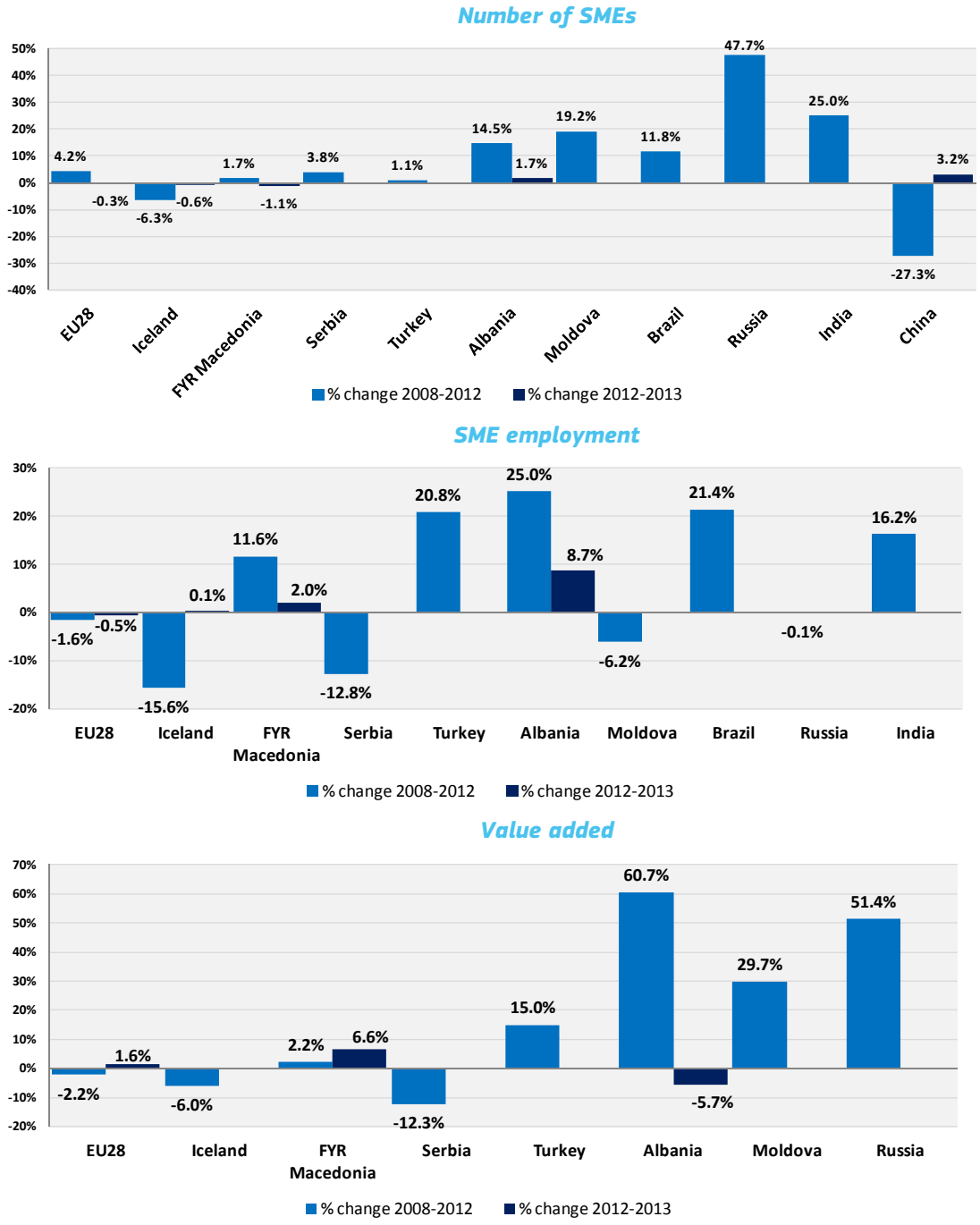
### *EU28 and partner countries*

Overall, in all but a few countries (i.e. Iceland and China) there were positive trends in the number of SMEs during the period 2008-2012. In particular, in Russia and India, the number of SMEs grew by 47% and 25% respectively.

Employment in SMEs exhibited large growth in the former Yugoslav Republic of Macedonia (11%), Turkey (20%), Albania (25%), Brazil (21%), and India (16%), as opposed to the EU, where jobs dropped by 1.6% in the period 2008-2012.

The growth in value added was even more polarised. Albania, Moldova and Russia are the top performers with growth rates of 61%, 29%,and 51% respectively. Conversely, the drop in EU value added (-2%) was small when compared to the decline in Serbia (-12%) and Iceland (-6%).

***Figure 96: SMEs in EU28 and selected other countries - 2008 to 2012 and 2012 to 2013***




*Source: Eurostat, National Statistical Offices, DIW econ*

# I.20. FORECASTS OF SME PERFORMANCE (VALUE ADDED AND EMPLOYMENT GROWTH) BY MEMBER STATE

*Table 20: Forecast growth of SMEs by Member State, 2014-2016*

| Member State | SME value added % change 2014-2016 | SME employment# % change 2014-2016 |
|---|---|---|
| **AT** | 6.0% | 1.9% |
| **BE** | 6.4% | 2.2% |
| **BG** | 4.8% | 1.2% |
| **CY** | 20.5% | 15.8% |
| **CZ** | 6.5% | 0.3% |
| **DE** | 10.8% | 4.9% |
| **DK** | 10.5% | 3.0% |
| **EE** | 10.3% | 0.8% |
| **EL** | 5.0% | 5.4% |
| **ES** | 1.8% | 1.5% |
| **FI** | 3.8% | -0.3% |
| **FR** | 4.7% | 1.0% |
| **HR** | 4.6% | 3.1% |
| **HU** | 0.6% | -1.8% |
| **IE** | 10.1% | 5.2% |
| **IT** | -1.9% | -3.7% |
| **LT** | 15.3% | 5.0% |
| **LU** | 6.4% | 1.3% |
| **LV** | 12.6% | 2.8% |
| **MT** | 13.0% | 5.6% |
| **NL** | 6.5% | 2.0% |
| **PL** | 5.8% | 0.0% |
| **PT** | 7.8% | 2.6% |
| **RO** | 17.7% | 7.2% |
| **SE** | 6.2% | 4.7% |
| **SI** | 3.3% | -0.6% |
| **SK** | 4.9% | -1.1% |
| **UK** | 12.9% | 1.7% |
| **EU28** | 7.0% | 1.7% |

*Source: Eurostat, National Statistical Offices, DIW econ*

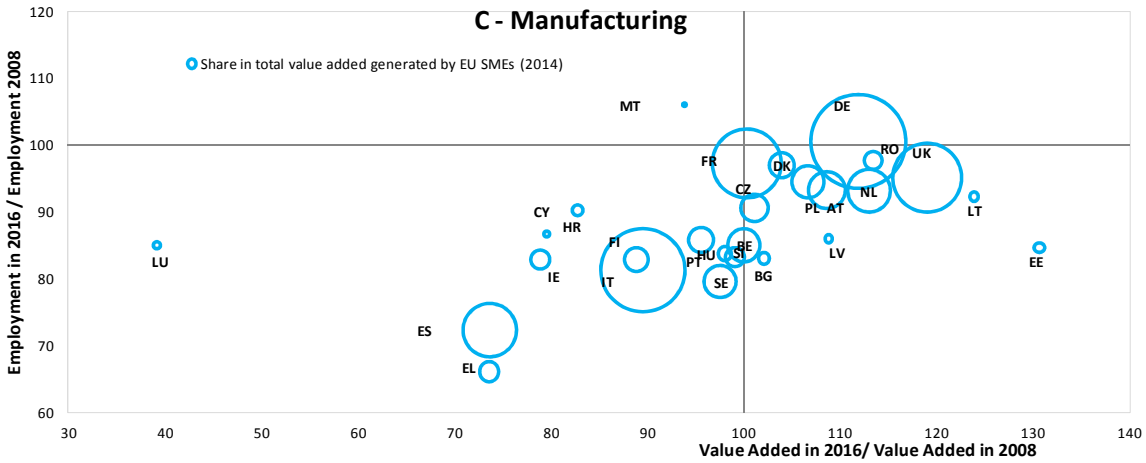
# I.21. HOW WILL THE SITUATION IN 2016 COMPARE TO 2008? A SECTORAL AND MEMBER STATE COMPARISON

## *Manufacturing*

Looking ahead to 2016, the manufacturing sector will still present an uneven recovery across the EU. In fact, while value added levels are forecast to be above pre-crisis in roughly half of the Member States, employment will still be far from having recovered in virtually all of the EU countries.

In many countries which account for the largest shares of manufacturing value added (Italy, Spain, Finland, and to a lesser extent, France), the outlook is negative with both forecasted 2016 employment and value added below pre-crisis levels.

***Figure 97: Outlook for EU28 SMEs employment and value added performance, by country, from 2008 to 2016 – manufacturing***




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

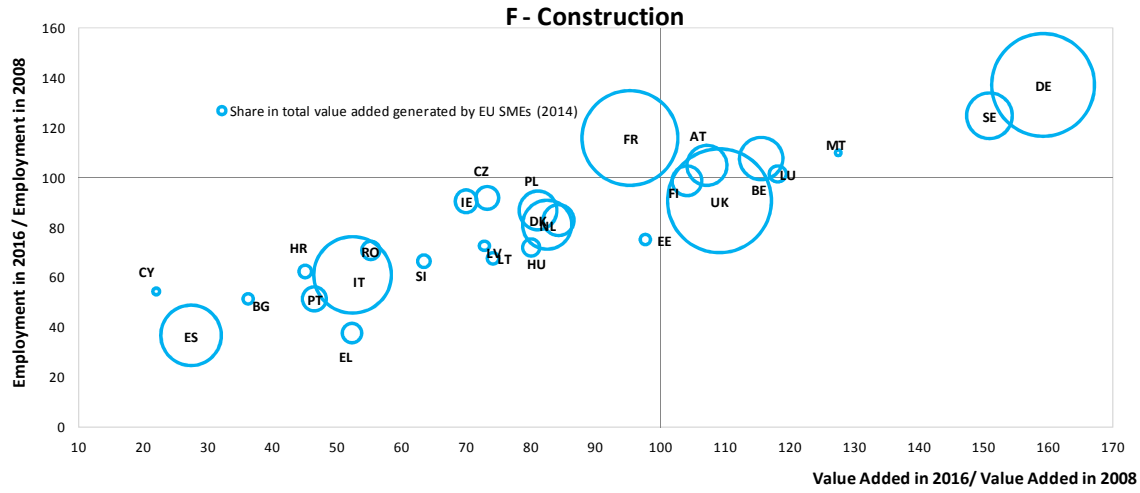
## *Construction*

This pessimistic outlook applies also to the construction sector.

With the exception of Sweden, Malta, Belgium, Austria, Luxembourg, and Germany, where a full recovery will be achieved, the SMEs in this industry will remain in 2016 far from posting pre-crisis performance levels in both value added and employment.

France and the United Kingdom show an unbalanced pattern: in France, SMEs are expected to generate higher levels of employment in 2016 than in 2008, but value added will still be lower. The reverse is true for the United Kingdom.

***Figure 98: Outlook for EU28 SMEs employment and value added performance, by country, from 2008 to 2016 - construction***




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

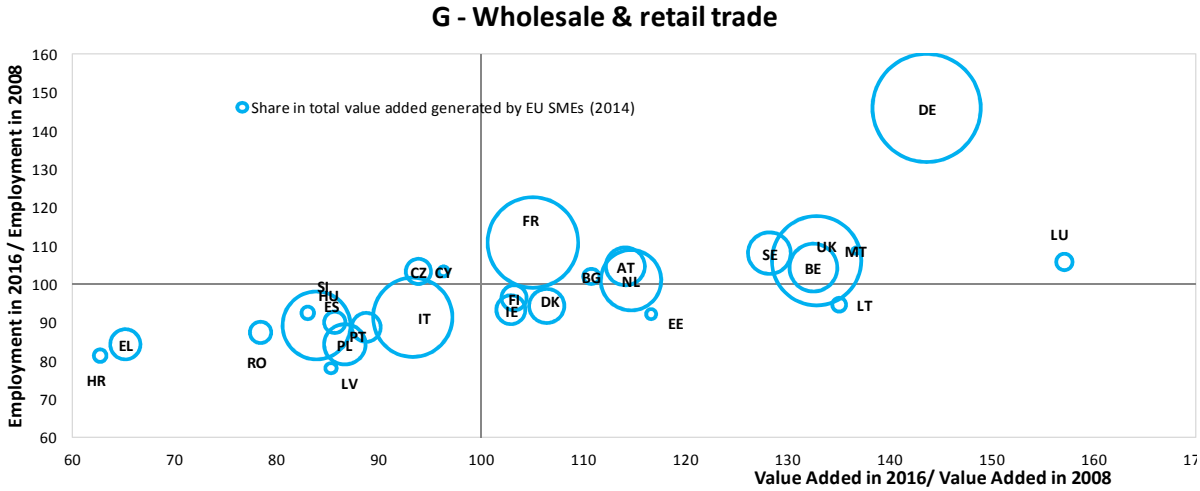
## *Wholesale and retail trade*

Wholesale and retail trade is the largest sector in the SME economy, and the outlook for the coming year is more positive.

A full recovery will be achieved in 2016 in both employment and value added in Luxembourg, Germany, United Kingdom, Malta, Belgium, Sweden, France, Austria, and Bulgaria.

In contrast, Southern Europe and parts of Central Europe are forecast to lag behind in both employment and value added.

***Figure 99: Outlook for EU28 SMEs employment and value added performance, by country, from 2008 to 2016 – wholesale and retail trade***




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

## *Accomodation and food services*

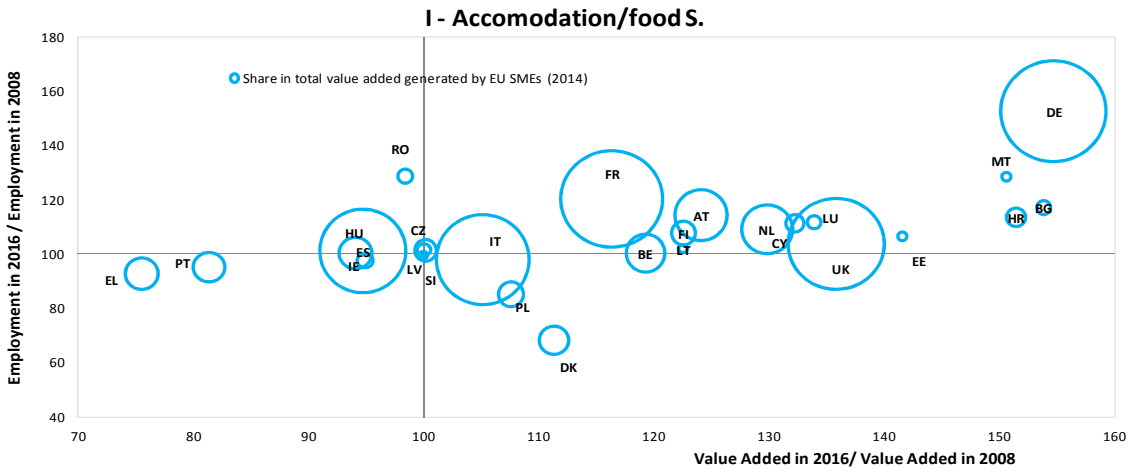
The accommodation sector, although relatively smaller than the previously discussed sectors, has performed positively since the crisis.

The forecasts for this sector are also optimistic for the majority of Member States, where recovery will be largely achieved.

A few countries (Greece, Portugal, and to a lesser extent, Spain, Hungary, Romania, and Ireland) are forecast to remain below pre-crisis levels in terms of value added.

However, the employment recovery will be more subdued in most Member States.

***Figure 100: Outlook for EU28 SMEs employment and value added performance, by country, from 2008 to 2016 – accommodation and food services***




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

## *Professional services*

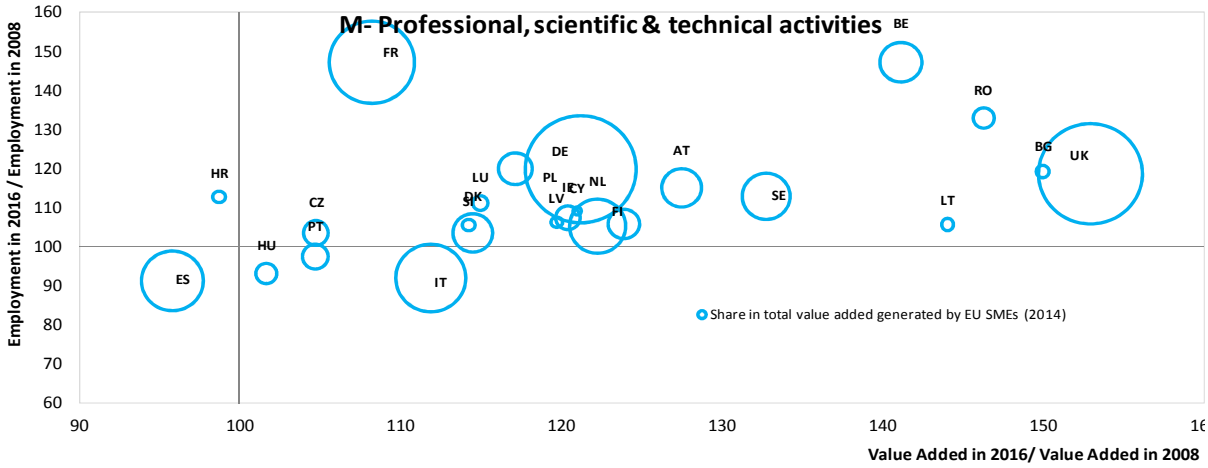
The outlook for professional services is optimistic.

In all but two Member States (Spain and Croatia), SMEs will have returned to the pre-crisis levels of value added by 2016. In many countries this recovery will be in excess of 10%.

In terms of employment, the majority of countries are forecast to return to pre-crisis levels, although this is not the case for Spain, Hungary, Italy, Portugal, Cyprus, and Finland.

France is forecast to be the top performer in employment creation.

***Figure 101: Outlook for EU28 SMEs employment and value added performance, by country, from 2008 to 2016 – professional, scientific, and technical activities***




*Source: Eurostat, National Statistical Offices, DIW econ*

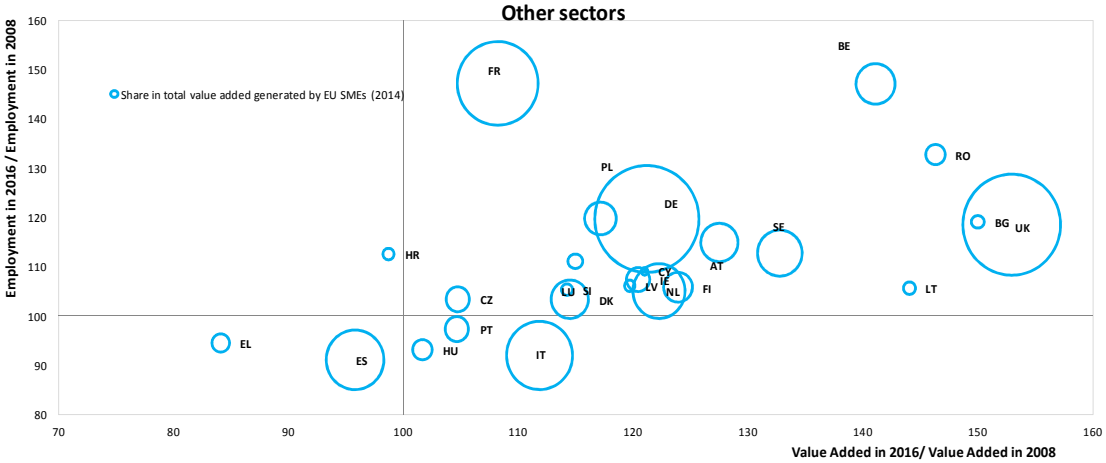
## *Other sectors*

The 'Other sectors' category combines a number of small sectors, which together account for roughly 30% of the SME non-financial economy.

The outlook for this group of sectors is mixed in terms of employment forecasts, as Greece, Hungary, Italy, Spain, and Portugal are forecast to remain below pre-crisis levels in 2016.

The picture is generally positive in terms of value added. However, the level of value added in Greece, Spain and Croatia is expected to be still below pre-crisis levels in 2016.

***Figure 102: Outlook for EU28 SMEs employment and value added performance by country from 2008 to 2016 – professional, scientific and technical activities***

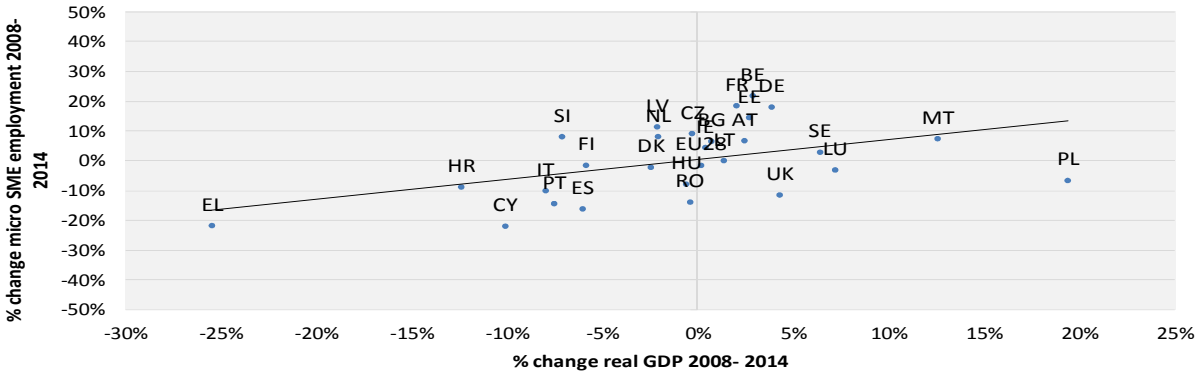



*Source: Eurostat, National Statistical Offices, DIW econ*

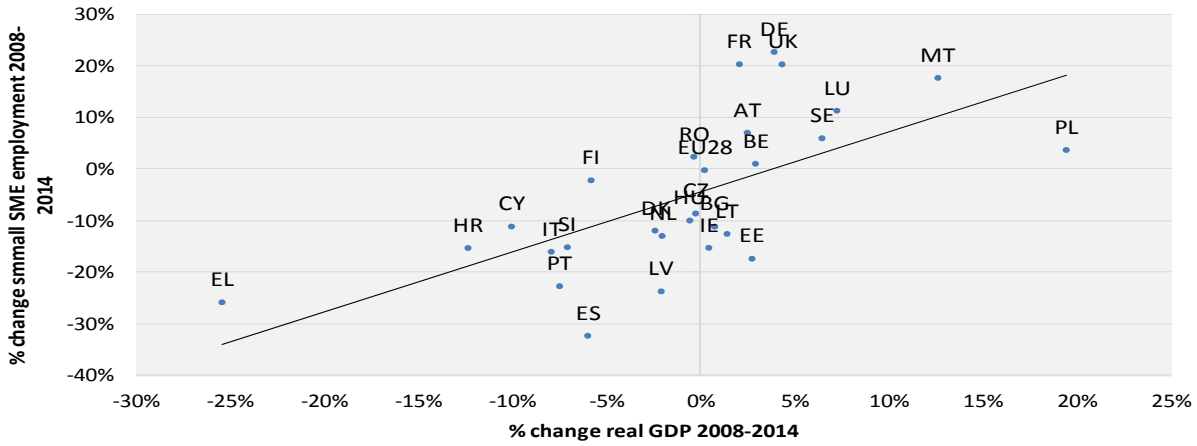
# I.22. THE RELATIONSHIP BETWEEN EMPLOYMENT GROWTH AND GDP GROWTH

***Figure 103: the relationship between GDP growth and SME employment growth by size class, 2008-2014***

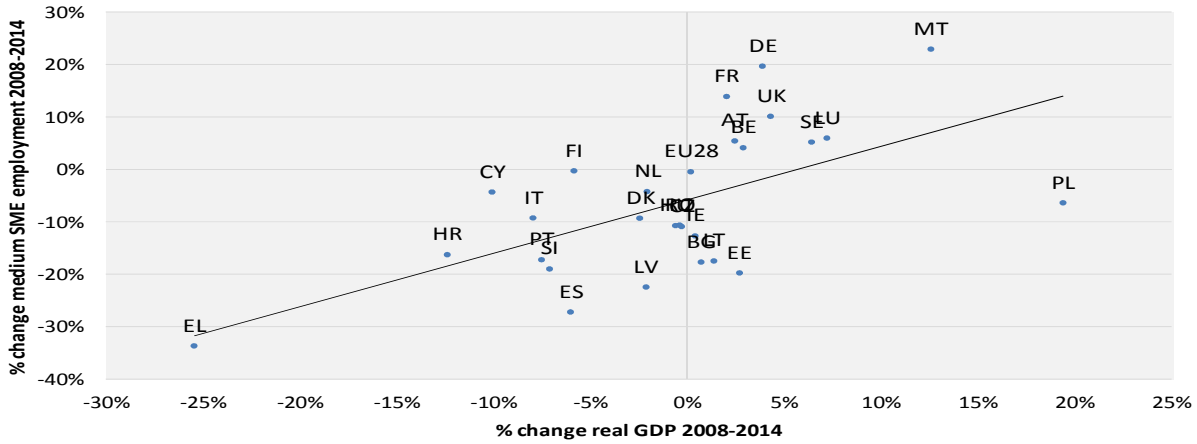
Micro SMEs




Small SMEs




Medium SMEs




Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

### *Table 21: Implied elasticities of employment growth to GDP growth by size*

| | Micro | Small | Medium | SMEs | Large | Total |
|---|---|---|---|---|---|---|
| AT | 2.74 | 2.19 | 0.55 | 2.63 | 0.55 | 1.94 |
| BE | 7.56 | 1.41 | -1.09 | 3.81 | -1.09 | 2.18 |
| BG | 9.08 | -24.71 | -22.92 | -10.02 | -22.92 | -13.36 |
| CY | 2.18 | 0.44 | 1.68 | 1.43 | 1.68 | 1.47 |
| CZ | -31.27 | 37.54 | 34.31 | 6.29 | 34.31 | 15.33 |
| DE | 4.64 | 5.06 | 2.30 | 5.21 | 2.30 | 4.06 |
| DK | 0.90 | 3.83 | 2.29 | 3.31 | 2.29 | 2.96 |
| EE | 5.37 | -7.33 | -2.49 | -2.98 | -2.49 | -2.87 |
| EL | 0.85 | 1.33 | 1.07 | 0.95 | 1.07 | 0.97 |
| ES | 2.68 | 4.53 | 1.59 | 3.84 | 1.59 | 3.31 |
| FI | 0.26 | 0.06 | 1.91 | 0.24 | 1.91 | 0.89 |
| FR | 9.09 | 6.81 | 6.86 | 8.79 | 6.86 | 8.08 |
| HR | 0.71 | 1.32 | 1.00 | 1.03 | 1.00 | 1.02 |
| HU | 13.03 | 17.95 | 3.39 | 15.17 | 3.39 | 11.79 |
| IE | 10.88 | -31.25 | -13.68 | -20.16 | -13.68 | -18.32 |
| IT | 1.26 | 1.17 | 0.65 | 1.46 | 0.65 | 1.30 |
| LT | 0.04 | -12.75 | -11.33 | -7.52 | -11.33 | -8.45 |
| LU | -0.43 | 0.82 | 0.44 | 0.73 | 0.44 | 0.64 |
| LV | -5.37 | 10.62 | 7.33 | 6.17 | 7.33 | 6.42 |
| MT | 0.59 | 1.82 | -0.28 | 1.15 | -0.28 | 0.85 |
| NL | -3.91 | 2.07 | 3.57 | 1.17 | 3.57 | 2.00 |
| PL | -0.34 | -0.33 | 0.01 | -0.24 | 0.01 | -0.16 |
| PT | 1.91 | 2.30 | 1.18 | 2.30 | 1.18 | 2.08 |
| RO | 35.85 | 27.61 | 34.07 | 19.99 | 34.07 | 24.80 |
| SE | 0.45 | 0.80 | 0.22 | 0.70 | 0.22 | 0.53 |
| SI | -1.14 | 2.68 | 3.03 | 0.94 | 3.03 | 1.59 |
| UK | -2.67 | 2.34 | -1.04 | 1.18 | -1.04 | 0.10 |
| EU28 | -8.65 | -2.85 | -5.07 | -4.89 | -5.07 | -4.95 |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

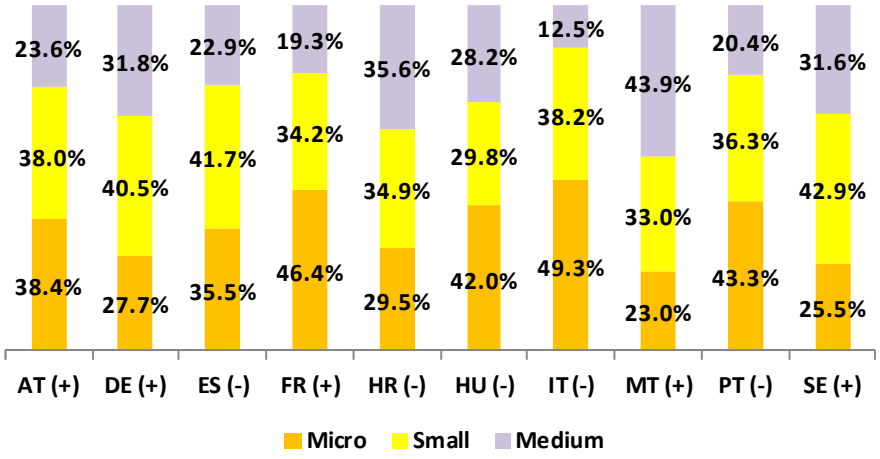
# I.23. SIZE CLASS CONTRIBUTION TO NET EMPLOYMENT CHANGES FROM 2008 TO 2014

***Figure 104: Contribution of different SME size classes to net SME employment creation by SMEs in EU28 Member States – 2008 to 2014 (% of total net change)***

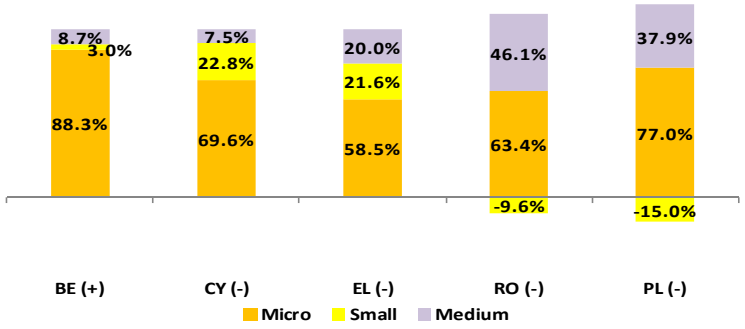
Country cluster

Country – level size class distribution of net change in employment from 2008 to 2014

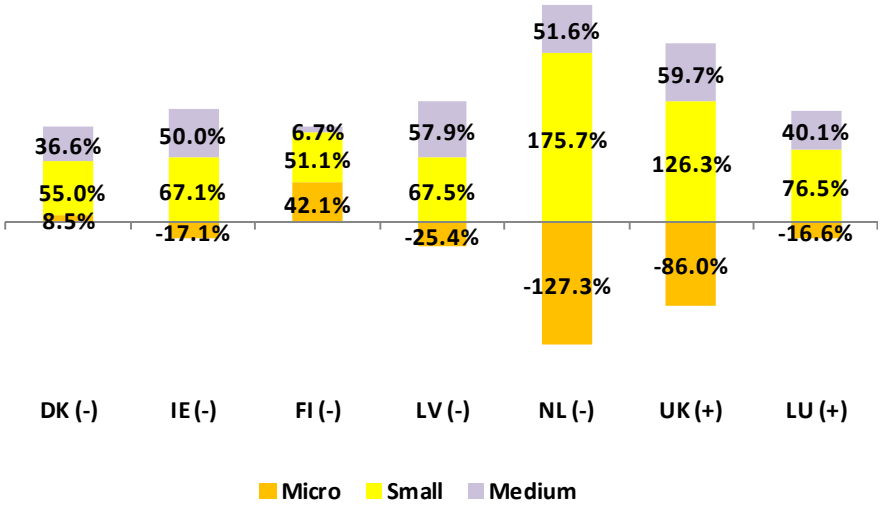
Cluster 1) Even contribution to net employment change across size classes



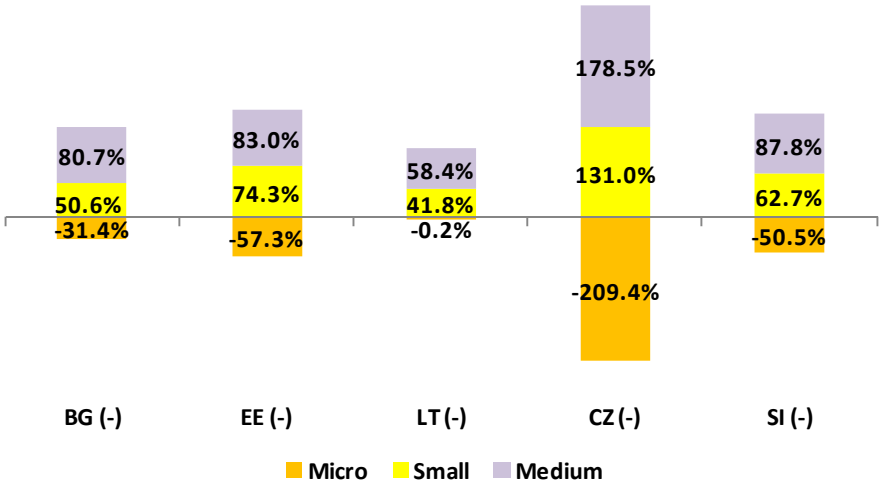

Cluster 2) Micro size class accounts for more than 50% of net employment change




Cluster 3) Small size class accounts for more than 50% of net employment change



Cluster 4) Medium size class accounts for more than 50% of net employment change




Note: the '-'signs next to the country labels indicate that the net change in employment from 2008 to 2014 was negative; '+' signs indicate that the net change was positive; Slovakia is excluded due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

# I.24. GROWTH RATES OF SME EMPLOYMENT BY NACE SECTION AND MEMBER STATES, 2008-2013 AND 2013-2014

***Table 22 Growth in SME employment by sector and Member State, 2008-2014, Sections B,C,D***

| | Mining and quarrying | | Manufacturing | | Electricity and gas | |
|---|---|---|---|---|---|---|
| | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 |
| AT | -6% | 1% | -4% | 0% | 18% | 1% |
| BE | 1% | -2% | -10% | -2% | 52% | 0% |
| BG | -17% | 1% | -17% | 2% | 34% | 4% |
| CY | -14% | -4% | -20% | -3% | | -6% |
| CZ | -25% | 0% | -8% | 0% | 10% | -1% |
| DE | -3% | -1% | 0% | 0% | 14% | -2% |
| DK | 13% | -3% | -8% | 1% | -19% | -2% |
| EE | -11% | 3% | -11% | -2% | -6% | 4% |
| EL | -17% | 4% | -32% | -2% | | |
| ES | -47% | 1% | -30% | 0% | -36% | 0% |
| FI | -14% | -1% | -12% | -2% | 19% | 2% |
| FR | 16% | 1% | -6% | 0% | 29% | 4% |
| HR | -24% | -1% | -14% | 2% | 32% | 0% |
| HU | -26% | 1% | -12% | 0% | -3% | 1% |
| IE | -56% | 2% | -21% | 1% | -1% | 3% |
| IT | -23% | -2% | -14% | 0% | 25% | -2% |
| LT | -15% | -10% | -13% | 1% | 11% | -7% |
| LU | -27% | 3% | -8% | -2% | 60% | 2% |
| LV | 4% | -5% | -12% | -4% | 1% | -4% |
| MT | -15% | 1% | 4% | 3% | | |
| NL | 47% | 3% | -7% | -1% | 120% | 5% |
| PL | 18% | 2% | -9% | 3% | -9% | 2% |
| PT | -37% | 2% | -20% | 4% | 19% | 2% |
| RO | -14% | 3% | -15% | 6% | 7% | 2% |
| SE | 5% | 1% | -17% | -2% | 11% | 1% |
| SI | -15% | -2% | -13% | 0% | 72% | 0% |
| UK | -2% | 4% | -7% | 2% | 174% | 7% |
| EU28 | -13% | 1% | -11% | 1% | 11% | 0% |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 23: Growth in SME employment by sector and Member State, 2008-2014, Sections E,F,G***

| | Water supply | | Construction | | Wholesale/retail trade | |
|---|---|---|---|---|---|---|
| | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 |
| AT | 10% | 1% | 4% | 0% | 3% | 0% |
| BE | 1% | -1% | 8% | -2% | 4% | 0% |
| BG | 25% | 2% | -41% | 0% | -1% | 1% |
| CY | 31% | -4% | -40% | -11% | -12% | 1% |
| CZ | -1% | -1% | -7% | 0% | 2% | 0% |
| DE | 17% | -1% | 26% | 1% | 32% | 1% |
| DK | -19% | -3% | -19% | 2% | -8% | 1% |
| EE | -19% | 5% | -24% | 2% | -13% | 5% |
| EL | 61% | 4% | -54% | -7% | -23% | 3% |
| ES | 31% | -2% | -55% | -3% | -16% | 2% |
| FI | 9% | 0% | 1% | -2% | -3% | 0% |
| FR | 17% | 2% | 17% | -1% | 10% | 0% |
| HR | 9% | -3% | -32% | -3% | -23% | 4% |
| HU | -15% | -1% | -24% | 1% | -11% | 2% |
| IE | 8% | 1% | -18% | 7% | -12% | 2% |
| IT | 5% | -2% | -28% | -4% | -7% | 0% |
| LT | 0% | -9% | -32% | 1% | -12% | 4% |
| LU | -9% | 2% | 1% | 1% | 2% | 2% |
| LV | -6% | -4% | -29% | 4% | -22% | 0% |
| MT | 9% | 5% | 4% | 3% | 3% | 2% |
| NL | -11% | 3% | -15% | -3% | -2% | 0% |
| PL | 19% | 2% | -11% | 0% | -15% | 2% |
| PT | 7% | 3% | -41% | -3% | -16% | 2% |
| RO | 26% | 2% | -29% | 2% | -18% | 3% |
| SE | 20% | 1% | 14% | 2% | 0% | 3% |
| SI | 5% | -3% | -26% | -1% | -8% | 0% |
| UK | 47% | 3% | -11% | 3% | 3% | 2% |
| EU28 | 14% | 0% | -16% | -1% | -1% | 1% |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 24:Growth in SME employment by sector and Member State, 2008-2014, Sections H,I,J***

| | Transportation | | Accommodation/Food S. | | Information and communication | |
|---|---|---|---|---|---|---|
| | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 |
| AT | 0% | 0% | 10% | 1% | 14% | 0% |
| BE | 0% | 0% | 1% | 0% | 19% | 0% |
| BG | 10% | 1% | 10% | 1% | 22% | 2% |
| CY | -14% | 1% | -5% | 1% | 0% | 0% |
| CZ | -3% | 0% | 1% | 0% | 5% | 1% |
| DE | 7% | 1% | 49% | 1% | 17% | 2% |
| DK | -6% | 1% | -30% | 1% | 19% | 0% |
| EE | 1% | 5% | -3% | 5% | 15% | 12% |
| EL | -18% | 3% | -17% | 3% | -26% | -2% |
| ES | -16% | 2% | -5% | 2% | -8% | 0% |
| FI | -2% | 0% | 7% | -1% | 6% | 0% |
| FR | 2% | 0% | 20% | 0% | 15% | 0% |
| HR | -8% | 2% | 2% | 5% | 9% | 12% |
| HU | -6% | 2% | -5% | 2% | 0% | 4% |
| IE | -9% | 1% | -6% | 2% | 14% | 1% |
| IT | -7% | 0% | -1% | 0% | -9% | 0% |
| LT | 7% | 4% | -7% | 4% | 8% | -4% |
| LU | 0% | 2% | 7% | 2% | 13% | 4% |
| LV | 1% | 0% | -5% | 0% | 14% | 13% |
| MT | 8% | 2% | 19% | 2% | 63% | 6% |
| NL | -4% | 0% | 4% | 1% | 9% | 1% |
| PL | 1% | 2% | -14% | 2% | 22% | 7% |
| PT | -12% | 3% | -10% | 2% | -1% | 8% |
| RO | 8% | 3% | 11% | 3% | 1% | -3% |
| SE | -1% | 3% | 24% | 3% | 7% | 1% |
| SI | -5% | 0% | 0% | 0% | 19% | 1% |
| UK | 7% | 2% | 1% | 2% | 12% | 3% |
| EU28 | -1% | 1% | 8% | 1% | 8% | 2% |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 25:Growth in SME employment by sector and Member State, 2008-2014, Sections L,M,N***

| | Real estate | | Business S. | | Administrative S. | |
|---|---|---|---|---|---|---|
| | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 | % change 2008-2013 | % change 2013-2014 |
| AT | 25% | 2% | 16% | 3% | 14% | 3% |
| BE | 99% | 2% | 36% | 2% | 97% | 1% |
| BG | 2% | 1% | 14% | -3% | 14% | -4% |
| CY | -42% | 2% | 19% | 3% | 3% | 3% |
| CZ | 12% | 4% | 6% | 3% | 3% | 1% |
| DE | 0% | 0% | 15% | 2% | 20% | 2% |
| DK | -4% | 1% | 0% | 2% | -7% | 2% |
| EE | -10% | -3% | 6% | -7% | 4% | -7% |
| EL | -7% | -1% | -8% | 9% | -14% | 10% |
| ES | -18% | 5% | -13% | 2% | -12% | 2% |
| FI | 10% | -3% | 8% | 1% | 16% | 0% |
| FR | 57% | -1% | 35% | 1% | 130% | 1% |
| HR | 4% | 28% | -7% | 0% | 6% | -1% |
| HU | -10% | -3% | -1% | 6% | -12% | 3% |
| IE | 14% | 14% | -9% | 5% | -15% | 5% |
| IT | -13% | 0% | -5% | 2% | -3% | 2% |
| LT | -35% | -3% | 8% | 2% | 1% | 2% |
| LU | -13% | 4% | 12% | 4% | 11% | 4% |
| LV | -22% | 3% | 12% | -2% | 12% | -2% |
| MT | 56% | 4% | 16% | 10% | 8% | 9% |
| NL | -10% | -1% | 0% | 1% | 5% | 1% |
| PL | 12% | 10% | 5% | 7% | 19% | 5% |
| PT | -20% | 7% | -11% | 6% | -17% | 8% |
| RO | -10% | 25% | -6% | 14% | 24% | 14% |
| SE | 9% | 2% | 12% | 1% | 9% | 1% |
| SI | -3% | 1% | 21% | 4% | 4% | 2% |
| UK | 47% | 3% | 10% | 5% | -2% | 6% |
| EU28 | 7% | 2% | 7% | 3% | 14% | 3% |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

# I.25. ESTIMATION RESULTS OF SIMPLE SME EMPLOYMENT GROWTH MODEL

*Table 26: Estimation results of models aiming to explain differences in cumulative SME employment growth from 2008 to 2014*

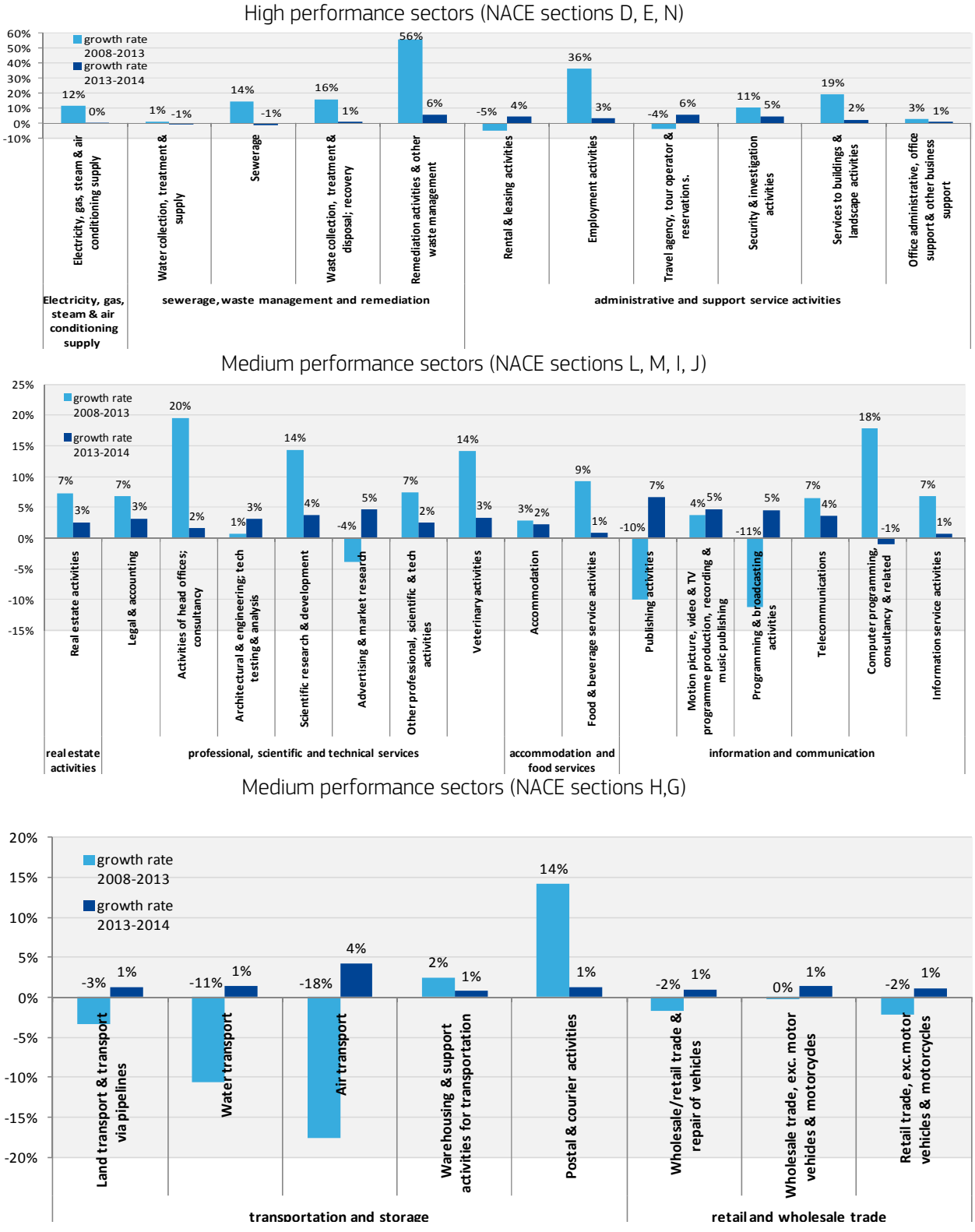
| | All SMES | Micro SMEs | Small SMEs | Medium SMEs | Large firms |
|---|---|---|---|---|---|
| Explanatory variable | Dependent variable: cumulative employment growth from 2008 to 2014 | | | | |
| Output gap in 2008 | -0.00287 | 0.003245 | -0.00343 | -0.00971 | -0.01297 |
| Cumulative growth in real GDP (at constant prices) 2009-2014 | ***0.761421*** | ***0.917503*** | ***0.827866*** | *0.596464* | ***0.625684*** |
| Cumulative growth in real unit labour costs, 2009-2014 | -0.28423 | ***-0.84305*** | 0.171029 | 0.153488 | 0.146191 |
| Change in effective tax rate for SMEs, 2009-2014 | 0.003488 | ***0.011597*** | -0.00189 | -0.00038 | -0.00152 |
| Change in gap relative to efficiency frontier for enforcing contracts | -0.00335 | -0.00698 | 0.000113 | -0.00109 | -0.00117 |
| Change in time (in hours) required to comply with tax laws and regulations, 2009-2014 | 0.000106 | 9.64E-05 | 0.000137 | 9.56E-05 | -1.6E-05 |
| Change in gap relative to efficiency frontier for starting a new business | ***-0.00384*** | 0.001661 | ***-0.00625*** | -0.0089 | -0.00332 |
| Constant | *0.006057* | *0.009978* | *-0.02647* | 0.021002 | *0.008629* |
| Adjusted R2 | *0.7426* | *0.5845* | *0.5734* | *0.6599* | *0.607* |

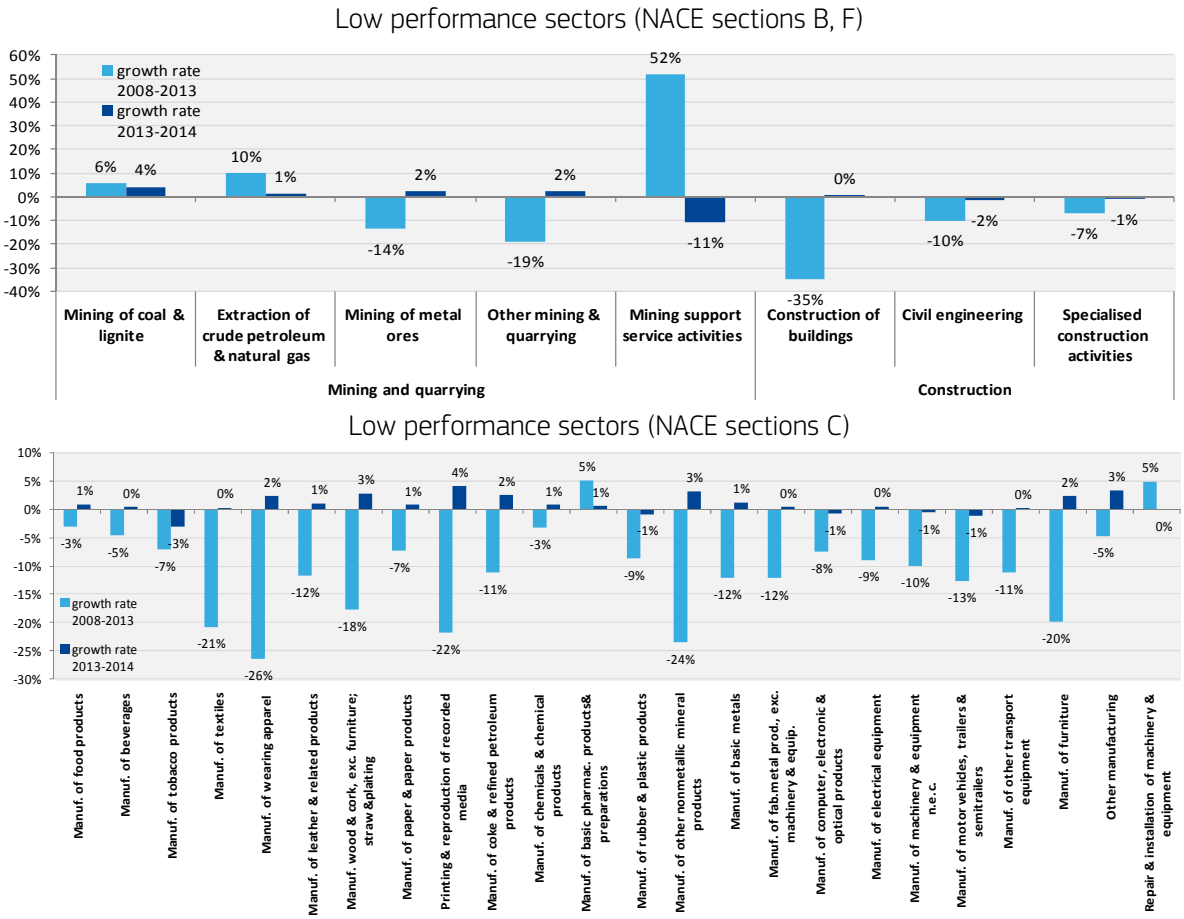
Note: Coefficients in bold and italics are statistical significant at 5%

*Source: London Economics based on Eurostat, National Statistical Offices, DIW econ*

# I.26. GROWTH RATES OF SME EMPLOYMENT BY DIVISION, EU28, 2008-2013 AND 2013-2014

***Figure 105: Detailed growth trends in SME employment in EU28, 2008-2013 and 2013-2014***







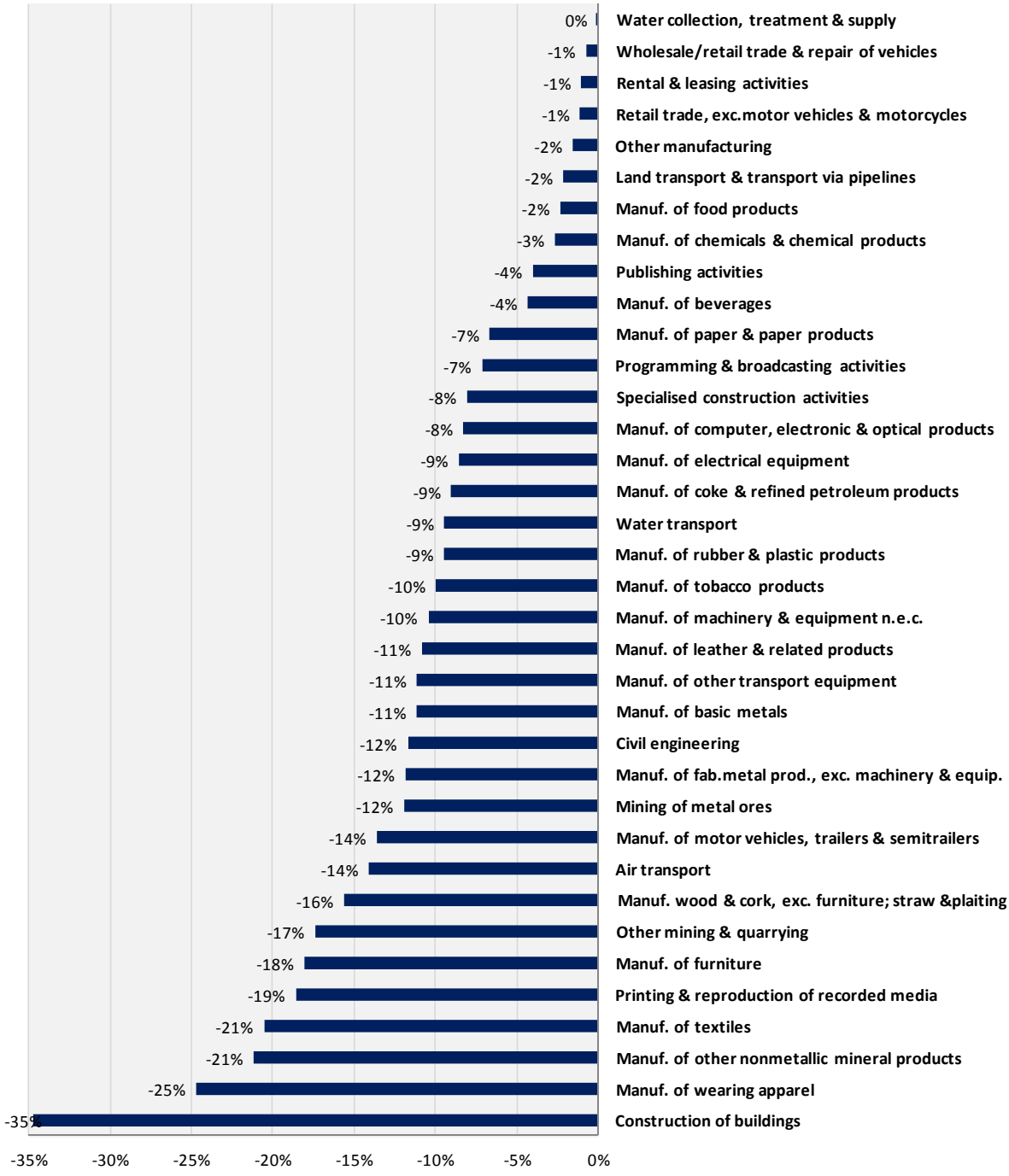


Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

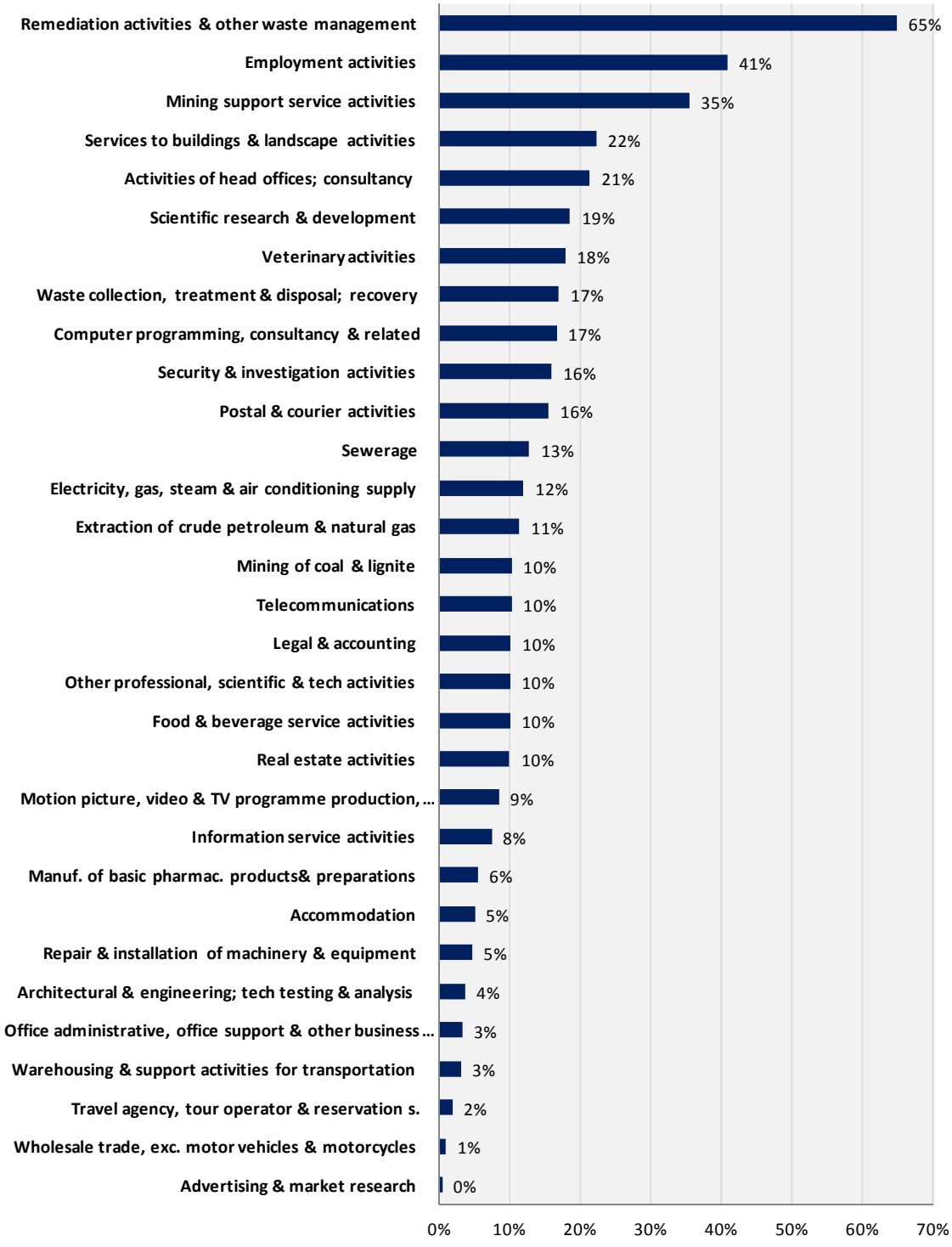
# I.27. GROWTH BY INDUSTRY IN SME EMPLOYMENT, 2008-2014

*Figure 106: SME sectors with reductions in employment, 2008-2014, EU28*




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

*Figure 107:SME sectors with increases in employment, 2008-2014, EU28*




Note: Slovakia is not displayed due to a break in the series.
*Source: Eurostat, National Statistical Offices, DIW econ*

# I.28. EXPORT INTENSITY

The classification of export intensity levels is determined using EU27 Input Output tables. The share of exports over total sales was calculated for each sector. The scale is defined as follows:

***Table 27: Definition of export intensity***

| Sector identifier | Definition of sector |
|---|---|
| 1 | Very low (exports over total sales between 0 and 5%) |
| 2 | Low (exports over total sales between 5 and 10%) |
| 3 | Medium (exports over total sales between 10 and 20%) |
| 4 | High (exports over total sales between 20 and 40%) |
| 5 | Very high (exports over total sales above 40%) |

The table below shows the specific export intensity of each sector.

***Table 28: Sector specific export intensity levels***

| Industry | Sector intensity |
|---|---|
| Mining | 2 |
| Manuf. of food products ; Manuf. of beverages ;Manuf. of tobacco products | 2 |
| Manuf. of textiles ; Manuf. of wearing apparel ;Manuf. of leather & related products | 3 |
| Manuf. wood & cork, exc. furniture; straw &plaiting | 2 |
| Manuf. of paper & paper products | 3 |
| Printing & reproduction of recorded media | 1 |
| Manuf. of coke & refined petroleum products | 3 |
| Manuf. of chemicals & chemical products | 4 |
| Manuf. of basic pharmaceutical products& preparations | 4 |
| Manuf. of rubber & plastic products | 3 |
| Manuf. of other non-metallic mineral products | 2 |
| Manuf. of basic metals | 3 |
| Manuf. of fabricated .metal products., exc. machinery & equip. | 2 |
| Manuf. of computer, electronic & optical products | 4 |
| Manuf. of electrical equipment | 4 |
| Manuf. of machinery & equipment n.e.c. | 4 |
| Manuf. of motor vehicles, trailers & semitrailers | 4 |
| Manuf. of other transport equipment | 5 |
| Manuf. of furniture ; Other manufacturing | 3 |
| Repair & installation of machinery & equipment | 1 |
| Electricity, gas, steam & air conditioning supply | 1 |
| Water collection, treatment & supply | 1 |
| Sewerage ; Waste collection, treatment & disposal; recovery ; Remediation activities & other waste management | 2 |
| Construction | 1 |
| Wholesale/retail trade & repair of vehicles | 1 |
| Wholesale trade, exc. motor vehicles & motorcycles | 2 |

| | |
|---|---|
| Retail trade, exc. motor vehicles & motorcycles | 1 |
| Land transport & transport via pipelines | 1 |
| Water transport | 4 |
| Air transport | 4 |
| Warehousing & support activities for transportation | 2 |
| Postal & courier activities | 1 |
| Accommodation and food services | 1 |
| Publishing activities | 1 |
| Motion picture, video & TV programme production, recording & music publishing; Programming & broadcasting activities | 1 |
| Telecommunications | 1 |
| Computer programming, consultancy & related; Information service activities | 2 |
| Real estate activities | 1 |
| Legal & accounting ; Activities of head offices; consultancy | 2 |
| Architectural & engineering; tech testing & analysis | 2 |
| Scientific research & development | 3 |
| Advertising & market research | 2 |
| Other professional, scientific & tech activities ; Veterinary activities | 3 |
| Rental & leasing activities | 2 |
| Employment activities | 1 |
| Travel agency, tour operator & reservation s. | 1 |
| Security & investigation activities ; Services to buildings & landscape activities ; Office administrative, office support & other business support | 2 |

*Source: London Economics based on Eurostat EU27 input-output table,*

# I.29. POST-CRISIS EMPLOYMENT IN SECTORS OF DIFFERENT EXPORT INTENSITY

***Table 29: Groupings of countries by changes in exports and value added (2008-2013)***

| | ***Growth in value added*** | ***Decrease in value added*** | |
|---|---|---|---|
| ***Growth in exports*** | AT, BE, BG, DE, EE, FR, LT, MT, NL, SE, UK, **EU28** | CZ, ES, HU, IE, LU, LV, PL, PT, RO, SI | |
| ***Decrease in exports*** | DK | CY, EL, FI, HR, IT | |
| | | | |
| | | | |

Note: Slovakia excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 30: Countries with increases in Value Added (2008-2013) – breakdown by combinations of large firms and SMEs***

| **Export intensity** | ***Large firms & SME firms*** | ***Large firms only*** |
|---|---|---|
| ***Very low*** | AT, BE, DE, EE, FR, LU, MT, SE, UK | CY, IE, IT, NL, PL, **EU28** |
| ***Low*** | AT, BE, BG, DE, EE, FI, FR, NL, SE, **EU28** | DK, IE, IT, LV, PL, SI |
| ***Medium*** | BG, DE, DK, EE, LT | AT, IE, PL |
| ***High*** | BE, BG, HU, NL | AT, CZ, DE, DK, EE, IE, IT, PT, RO, SE, **EU28** |
| ***Very High*** | DE, EE, FR, SE, UK | BE, CY, CZ, DK, MT, **EU28** |
| ***All*** | AT, BE, DE, EE, FR, NL, SE | BG, CY, DK, IE, IT, LV, PL, **EU28** |

Note: Slovakia excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 31: Countries with increases in Employment (2008-2013) - breakdown by combinations of large firms and SMEs***

| **Export intensity** | ***Large firms & SME firms*** | ***Large firms only*** |
|---|---|---|
| ***Very low*** | DE, FR, SE | - |
| ***Low*** | AT, BE, DK, FI, FR, LU, PL, SE, UK, **EU28** | EE |
| ***Medium*** | DE | IE |
| ***High*** | DK | AT, DE, LU |
| ***Very High*** | DE, UK | BE, CZ, SE |
| ***All*** | AT, DE, FR, LU, SE | - |

Note: Slovakia excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

### *Table 32: Countries with increases in value added and employment from 2008 to 2013 – breakdown by combinations of SME size class*

*Value added*

| Export intensity | *Medium, small, micro* | *Medium, small* | *Medium, micro* | *Medium* | *Small, Micro* | *Small* | *Micro* |
|---|---|---|---|---|---|---|---|
| *Very low* | AT, BE, DE, FI, LU, MT, SE, UK | - | FR | NL | EE | - | BG, DK, LT |
| *Low* | AT, BE, BG, DE, EE, FI, FR, LT, SE, UK, **EU28** | DK | NL | LU | - | - | HU, IE |
| *Medium* | DE, EE, LT, SE, UK | - | DK | NL, PL, RO, SI | AT, BG | MT | HU, IE, LU |
| *High* | LT, LV | MT | AT, BE, BG, DE, IT, RO | CZ, FR, HU, NL, UK | PL | PT | EE, EL, IE, LU |
| *Very High* | AT, LU, UK | FR, MT, SE | CY, EE, NL | FI, HR, LV, PL, RO | BE, DE, PT | DK, HU | ES, LT, SI, **EU28** |
| *All* | AT, BE, DE, EE, FI, LU, MT, SE,UK | - | NL | FR, **EU28** | LT | - | BG, DK |

Note: Slovakia excluded because of a break in the data series.

*Source: Eurostat, National Statistical Offices, DIW econ*

*Employment*

| Export intensity | *Medium, small, micro* | *Medium, small* | *Medium, micro* | *Medium* | *Small, Micro* | *Small* | *Micro* |
|---|---|---|---|---|---|---|---|
| *Very low* | AT, DE, FR, MT, SE | FI, LU, UK | BE | CY | - | PL, **EU28** | BG, CZ, EE, IE, NL |
| *Low* | AT, BE, DE, FR, LU, MT, SE, **EU28** | UK | DK | - | PL | CY, RO | BG, CZ, EE, FI, LT, LV, NL, SI |
| *Medium* | - | - | - | - | DE, FR | LU, UK | AT, BE, CZ, DK, EE, LV, MT, NL, SI |
| *High* | LT | - | | NL | DK | EE, LU, MT | AT, DE, LV, PL |
| *Very High* | AT, DE, LU | FR, MT, UK | | FI, LV, NL | DK, RO | HU, LT | CZ, EE, PL, SI |
| *All* | AT, BE, DE, FR, MT, SE | LU, UK | - | FI | - | PL | BG, CZ, EE, IE, LV, NL, SI |

Note: Slovakia excluded because of a break in the data series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 33: SME employment growth/decrease by export intensity and Member State from 2008 to 2014***

| Country | Very low (exports over total sales between 0% and 5%) | Low (exports over total sales between 5% and 10%) | Medium (exports over total sales between 10% and 20%) | High (exports over total sales between 20% and 40%) | Very high (exports over total sales above 40%) |
|---|---|---|---|---|---|
| AT | 9.50% | 10.80% | 14.20% | 4.90% | 2.20% |
| BE | 28.30% | 5.10% | 22.90% | -10.80% | -0.70% |
| BG | -21.30% | 2.60% | -5.30% | -17.30% | 16.40% |
| CY | -21.70% | -14.90% | -14.80% | -11.90% | 16.30% |
| CZ | -3.30% | -6.10% | -0.60% | -5.30% | -12.10% |
| DE | 19.50% | 29.00% | 19.50% | 1.90% | 21.60% |
| DK | -19.80% | 2.20% | -0.30% | -7.70% | 10.70% |
| EE | -2.90% | -18.40% | 0.80% | -6.80% | -14.20% |
| EL | -24.90% | -23.80% | -28.60% | -21.50% | -29.00% |
| ES | -32.10% | -18.70% | -22.30% | -16.10% | -12.30% |
| FI | 1.90% | -3.70% | -2.10% | 1.20% | -3.70% |
| FR | 30.10% | 7.20% | 15.80% | 3.00% | -6.30% |
| HU | -14.40% | -11.70% | 2.90% | -9.10% | -9.90% |
| IE | -8.90% | -3.40% | -9.80% | -9.00% | -2.10% |
| IT | -13.00% | -5.90% | -12.20% | -16.80% | -8.30% |
| LT | -18.10% | 20.80% | -7.40% | -9.70% | -5.20% |
| LU | 2.90% | 19.90% | -2.40% | 6.10% | 6.20% |
| LV | -15.80% | 7.20% | -14.20% | 3.80% | -7.90% |
| MT | 8.10% | 18.30% | 26.10% | 14.50% | -2.10% |
| NL | -4.70% | 13.00% | 7.20% | -3.00% | -2.60% |
| PL | -1.70% | 4.70% | -3.00% | -6.60% | -4.10% |
| PT | -24.00% | -0.40% | -16.80% | -17.40% | -14.60% |
| RO | -14.40% | -0.50% | -4.40% | -2.20% | -12.00% |
| SE | 13.80% | 20.60% | 4.20% | -0.10% | -12.60% |
| SI | -15.00% | 24.20% | 14.00% | -6.70% | -16.60% |
| UK | 4.50% | 7.80% | 5.30% | 0.00% | 9.20% |
| EU27 | -1% | 1% | -8% | -8% | -11% |

Note: the EU27 aggregate is shown due to lack of Input Output tables for Croatia and EU28.

*Source: Eurostat, National Statistical Offices, DIW econ*

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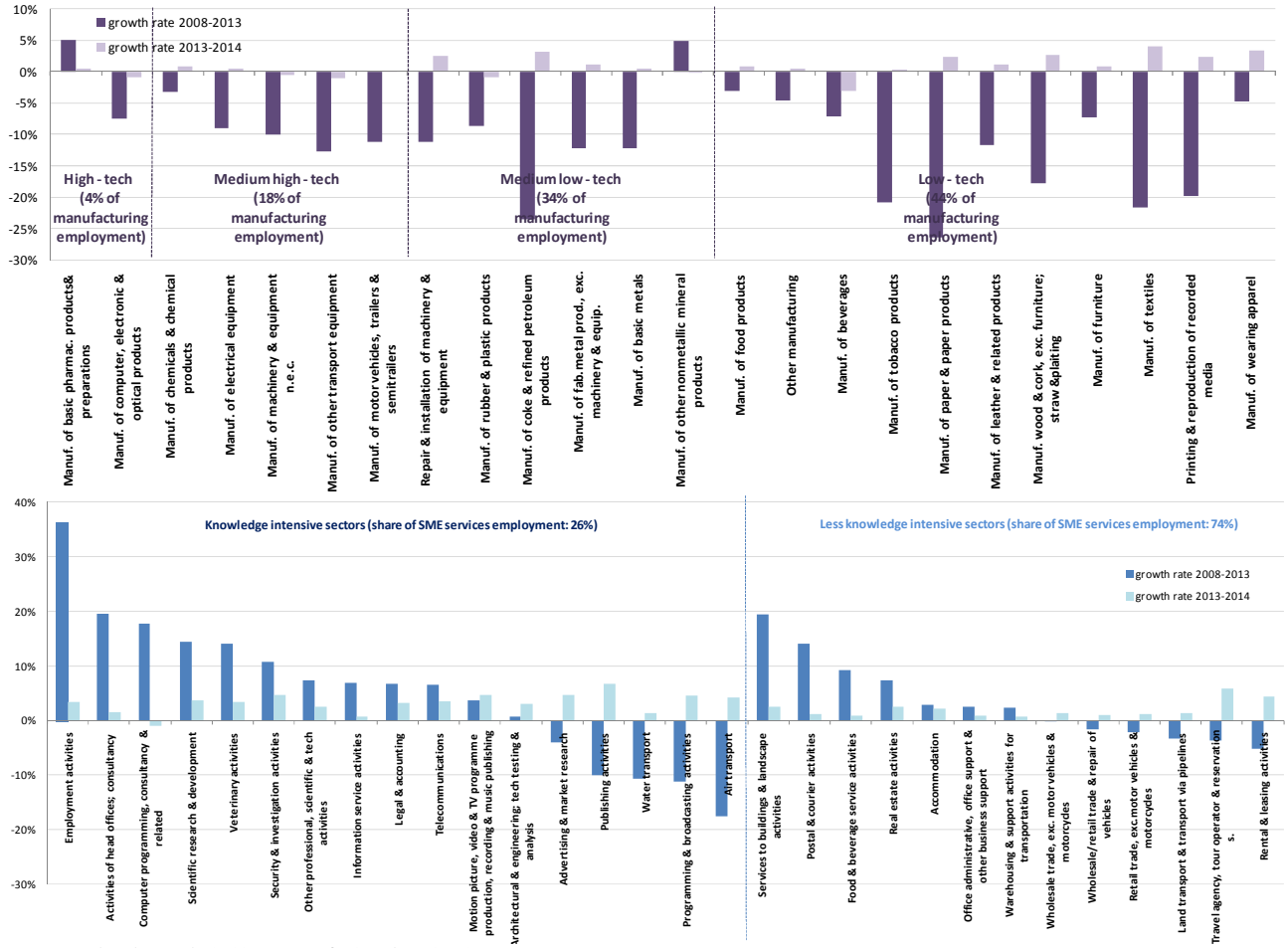
# I.30. SME EMPLOYMENT GROWTH BY HIGH TECH AND KNOWLEDGE INTENSITY

***Figure 108: Trends in SME employment, 2008-2013 and 2013-2014, by high-tech and knowledge intensive sector type***




Note: Slovakia excluded because of a break in the data series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 34: SME employment growth/decrease from 2008 to 2014 in sectors of different technology and knowledge intensity***

| | Manufacturing | | | | Services | |
|---|---|---|---|---|---|---|
| | **High tech** | **Medium-high tech** | **Medium-low tech** | **Low tech** | **Knowledge intense** | **Less knowledge intense** |
| AT | -6% | -3% | -3% | -5% | 18.9% | 7.1% |
| BE | -14% | -12% | -8% | -15% | 37.1% | 13.3% |
| BG | -9% | -14% | -21% | -15% | 12.4% | 3.4% |
| CY | -15% | -23% | -15% | -26% | 9.5% | -8.4% |
| CZ | -8% | -14% | -5% | -8% | 7.8% | 1.8% |
| DE | 2% | -3% | 4% | 0% | 18.4% | 29.5% |
| DK | 14% | 2% | -11% | -13% | 6.7% | -10.1% |
| EE | -10% | -16% | -14% | -12% | 4.6% | -3.6% |
| EL | -33% | -31% | -35% | -34% | -7.2% | -17.9% |
| ES | -19% | -22% | -37% | -27% | -10.8% | -11.4% |
| FI | 2% | -14% | -14% | -15% | 10.3% | -0.2% |
| FR | -6% | -8% | -5% | -5% | 51.8% | 18.1% |
| HR | -17% | -9% | -15% | -11% | 0.7% | -10.2% |
| HU | -18% | -16% | -7% | -15% | 2.9% | -8.1% |
| IE | -3% | -17% | -28% | -19% | -0.6% | -7.3% |
| IT | -17% | -11% | -17% | -14% | -4.5% | -5.5% |
| LT | -2% | -7% | -13% | -12% | 8.7% | -6.7% |
| LU | -50% | -12% | -1% | -15% | 16.3% | 4.5% |
| LV | -15% | 0% | -19% | -17% | 11.6% | -14.0% |
| MT | -20% | -1% | 12% | 3% | 34.4% | 12.3% |
| NL | 2% | -6% | -6% | -11% | 4.8% | -1.0% |
| PL | -5% | -1% | -12% | -14% | 17.2% | -7.5% |
| RO | -15% | -5% | -11% | -10% | 13.8% | -6.1% |
| SE | -21% | -22% | -15% | -18% | 11.9% | 7.7% |
| SI | 6% | -18% | -4% | -21% | 21.5% | -4.5% |
| UK | 0% | -4% | -9% | -1% | 13.4% | 6.9% |
| EU28 | -6% | -9% | -10% | -11% | 12.5% | 3.5% |

Note: Slovakia excluded because of a break in the data series.
*Source: Eurostat, National Statistical Offices, DIW econ*

# I.31. BEST AND WORST PERFORMING SECTORS IN TERMS OF 2008-2014 GROWTH IN SME EMPLOYMENT BY MEMBER STATE

***Table 35: Best and worst performing sectors in terms of 2008-2014 growth in SME employment by Member State***

| country | Sector with best performance 2008-2014 | Growth rate of SME employment from 2008 to 2014 | Share of SME employment accounted by sector in 2014 | Sector with worst performance 2008-2014 | Growth rate of SME employment from 2008 to 2014 | Share of SME employment accounted by sector in 2014 |
|---|---|---|---|---|---|---|
| AT | Mining support service activities | 121% | 0.002% | Manuf. of coke & refined petroleum products | -75% | 0.003% |
| BE | Remediation activities & other waste management | 1024% | 0.054% | Mining support service activities | -78% | 0.002% |
| BG | Extraction of crude petroleum & natural gas | 250% | 0.007% | Construction of buildings | -53% | 3.892% |
| CY | Services to buildings & landscape activities | 137% | 0.912% | Water transport | -78% | 0.237% |
| CZ | Veterinary activities | 39% | 0.143% | Mining of coal & lignite | -84% | 0.001% |
| DE | Food & beverage service activities | 60% | 7.984% | Air transport | -37% | 0.027% |
| DK | Manuf. of coke & refined petroleum products | 457% | 0.004% | Manuf. of leather & related products | -59% | 0.015% |
| EE | Mining support service activities | 600% | 0.013% | Manuf. of coke & refined petroleum products | -93% | 0.008% |
| EL | Manuf. of coke & refined petroleum products | 182% | 0.012% | Employment activities | -75% | 0.030% |
| ES | Mining of metal ores | 99% | 0.009% | Extraction of crude petroleum & natural gas | -72% | 0.001% |
| FI | Mining support service activities | 115% | 0.040% | Mining of metal ores | -45% | 0.061% |
| FR | Employment activities | 630% | 3.409% | Extraction of crude petroleum & natural gas | -62% | 0.003% |
| HR | Manuf. of tobacco products | 713% | 0.035% | Scientific research & development | -58% | 0.255% |
| HU | Extraction of crude petroleum & natural gas | 111% | 0.004% | Manuf. of tobacco products | -50% | 0.013% |
| IE | Manuf. of tobacco products | 59% | 0.028% | Mining of metal ores | -79% | 0.006% |
| IT | Extraction of crude petroleum & natural gas | 370% | 0.008% | Construction of buildings | -46% | 3.307% |
| LT | Office administrative, office support & other business support | 67% | 0.419% | Manuf. of other transport equipment | -45% | 0.127% |
| LU | Sewerage | 150% | 0.012% | Manuf. of basic pharmac. products& preparations | -75% | 0.001% |
| LV | Manuf. of coke & refined petroleum products | 222% | 0.006% | Remediation activities & other waste management | -67% | 0.018% |
| MT | Veterinary activities | 368% | 0.087% | Manuf. of motor vehicles, trailers & semitrailers | -70% | 0.013% |
| NL | Electricity, gas, steam & air conditioning supply | 130% | 0.185% | Manuf. of tobacco products | -51% | 0.012% |
| PL | Mining of metal ores | 554% | 0.003% | Other professional, scientific & tech activities | -42% | 0.882% |
| PT | Mining support service activities | 358% | 0.010% | Mining of metal ores | -65% | 0.003% |
| RO | Postal & courier activities | 74% | 0.179% | Manuf. of tobacco products | -69% | 0.008% |
| SE | Mining of metal ores | 121% | 0.025% | Manuf. of paper & paper products | -49% | 0.343% |
| SI | Manuf. of basic pharmac. Products & preparations | 610% | 0.085% | Manuf. of coke & refined petroleum products | -59% | 0.009% |
| UK | Remediation activities & other waste management | 358% | 0.056% | Air transport | -27% | 0.080% |
| EU28 | Remediation activities & other waste management | 65% | 0.033% | Construction of buildings | -34% | 3.113% |

Note: Slovakia is not displayed due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

# I.32. SME EMPLOYMENT GROWTH RATES AND INDUSTRY SME EMPLOYMENT SHARES FOR SECTORS WITH NEGATIVE AND POSITIVE EMPLOYMENT GROWTH FROM 2008 TO 2013

***Table 36: SME employment decreases and industry employment shares for sectors with negative employment growth from 2008 to 2013***

| | Growth rate of SME employment 2008-2013 | Share of SME employment by sector in 2014 |
|---|---|---|
| Retail trade, exc.motor vehicles & motorcycles | -2% | 13% |
| Wholesale trade, exc. motor vehicles & motorcycles | 0% | 9% |
| Specialised construction activities | -7% | 8% |
| Land transport & transport via pipelines | -3% | 4% |
| Wholesale/retail trade & repair of vehicles | -2% | 4% |
| Manuf. of fab.metal prod., exc. machinery & equip. | -12% | 3% |
| Construction of buildings | -35% | 3% |
| Manuf. of food products | -3% | 3% |
| Manuf. of machinery & equipment n.e.c. | -10% | 2% |
| Manuf. of rubber & plastic products | -9% | 1% |
| Civil engineering | -10% | 1% |
| Advertising & market research | -4% | 1% |
| Manuf. wood & cork, exc. furniture; straw &plaiting | -18% | 1% |
| Manuf. of other nonmetallic mineral products | -24% | 1% |
| Manuf. of wearing apparel | -26% | 1% |
| Manuf. of furniture | -20% | 1% |
| Printing & reproduction of recorded media | -22% | 1% |
| Other manufacturing | -5% | 1% |
| Manuf. of electrical equipment | -9% | 1% |
| Publishing activities | -10% | 1% |
| Manuf. of chemicals & chemical products | -3% | 1% |
| Rental & leasing activities | -5% | 1% |
| Manuf. of computer, electronic & optical products | -8% | 1% |
| Manuf. of textiles | -21% | 1% |
| Manuf. of motor vehicles, trailers & semitrailers | -13% | 0% |
| Travel agency, tour operator & reservation s. | -4% | 0% |
| Manuf. of paper & paper products | -7% | 0% |
| Manuf. of basic metals | -12% | 0% |
| Manuf. of leather & related products | -12% | 0% |
| Manuf. of beverages | -5% | 0% |
| Manuf. of other transport equipment | -11% | 0% |
| Other mining & quarrying | -19% | 0% |
| Water transport | -11% | 0% |
| Programming & broadcasting activities | -11% | 0% |
| Air transport | -18% | 0% |
| Manuf. of coke & refined petroleum products | -11% | 0% |
| Manuf. of tobacco products | -7% | 0% |
| Mining of metal ores | -14% | 0% |

Note: Slovakia is not included in the EU total due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

***Table 37: SME employment growth rates and industry SME shares for sectors with positive employment growth from 2008 to 2013***

| | growth rate of SME employment 2008-2013 | share of SME employment by sector in 2014 |
|---|---|---|
| Food & beverage service activities | 9% | 8% |
| Legal & accounting | 7% | 3% |
| Architectural & engineering; tech testing & analysis | 1% | 3% |
| Real estate activities | 7% | 3% |
| Services to buildings & landscape activities | 19% | 3% |
| Accommodation | 3% | 2% |
| Computer programming, consultancy & related | 18% | 2% |
| Activities of head offices; consultancy | 20% | 2% |
| Employment activities | 36% | 2% |
| Office administrative, office support & other business support | 3% | 2% |
| Warehousing & support activities for transportation | 2% | 1% |
| Other professional, scientific & tech activities | 7% | 1% |
| Repair & installation of machinery & equipment | 5% | 1% |
| Security & investigation activities | 11% | 1% |
| Waste collection, treatment & disposal; recovery | 16% | 1% |
| Information service activities | 7% | 0% |
| Motion picture, video & TV programme production, recording & music publishing | 4% | 0% |
| Scientific research & development | 14% | 0% |
| Electricity, gas, steam & air conditioning supply | 12% | 0% |
| Postal & courier activities | 14% | 0% |
| Telecommunications | 7% | 0% |
| Veterinary activities | 14% | 0% |
| Water collection, treatment & supply | 1% | 0% |
| Manuf. of basic pharmaceutical products& preparations | 5% | 0% |
| Sewerage | 14% | 0% |
| Remediation activities & other waste management | 56% | 0% |
| Mining support service activities | 52% | 0% |
| Extraction of crude petroleum & natural gas | 10% | 0% |
| Mining of coal & lignite | 6% | 0% |

Note: Slovakia is not included in the EU total due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

# I.33. EXTENT OF SME EMPLOYMENT RECOVERY AND SME INDUSTRY SHARES FOR SECTORS WITH ACHIEVED RECOVERY IN EMPLOYMENT OR LAGGING BEHIND – 2008 TO 2014

***Table 38: SME employment recovery levels and industry SME shares for sectors with achieved recovery in employment – 2008 to 2014***

| | Ratio of 2014 level to 2008 level of employment | Share of SME employment by sector in 2014 |
|---|---|---|
| Wholesale trade, exc. motor vehicles & motorcycles | 1.01 | 9% |
| Food & beverage service activities | 1.10 | 8% |
| Legal & accounting | 1.10 | 3% |
| Architectural & engineering; tech testing & analysis | 1.04 | 3% |
| Real estate activities | 1.10 | 3% |
| Services to buildings & landscape activities | 1.22 | 3% |
| Accommodation | 1.05 | 2% |
| Computer programming, consultancy & related | 1.17 | 2% |
| Activities of head offices; consultancy | 1.21 | 2% |
| Employment activities | 1.41 | 2% |
| Office administrative, office support & other business support | 1.03 | 2% |
| Warehousing & support activities for transportation | 1.03 | 1% |
| Other professional, scientific & tech activities | 1.10 | 1% |
| Advertising & market research | 1.00 | 1% |
| Repair & installation of machinery & equipment | 1.05 | 1% |
| Security & investigation activities | 1.16 | 1% |
| Waste collection, treatment & disposal; recovery | 1.17 | 1% |
| Information service activities | 1.08 | 0% |
| Travel agency, tour operator & reservation s. | 1.02 | 0% |
| Motion picture, video & TV programme production, recording & music publishing | 1.09 | 0% |
| Scientific research & development | 1.19 | 0% |
| Electricity, gas, steam & air conditioning supply | 1.12 | 0% |
| Postal & courier activities | 1.16 | 0% |
| Telecommunications | 1.10 | 0% |
| Veterinary activities | 1.18 | 0% |
| Manuf. of basic pharmaceutical products& preparations | 1.06 | 0% |
| Sewerage | 1.13 | 0% |
| Remediation activities & other waste management | 1.65 | 0% |
| Mining support service activities | 1.35 | 0% |
| Extraction of crude petroleum & natural gas | 1.11 | 0% |
| Mining of coal & lignite | 1.10 | 0% |

Note: Slovakia is not included in the EU total due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

### *Table 39: SME employment recovery levels and industry SME shares for sectors lagging in employment recovery – 2008 to 2014*

| | Ratio of 2014 level to 2008 level of employment | Share of SME employment by sector in 2014 |
|---|---|---|
| Retail trade, excluding motor vehicles & motorcycles | 0.99 | 13% |
| Specialised construction activities | 0.92 | 8% |
| Land transport & transport via pipelines | 0.98 | 4% |
| Wholesale/retail trade & repair of vehicles | 0.99 | 4% |
| Manuf. of fabricated metal products, exc. machinery & equip. | 0.88 | 3% |
| Construction of buildings | 0.65 | 3% |
| Manuf. of food products | 0.98 | 3% |
| Manuf. of machinery & equipment n.e.c. | 0.90 | 2% |
| Manuf. of rubber & plastic products | 0.91 | 1% |
| Civil engineering | 0.88 | 1% |
| Manuf. wood & cork, exc. furniture; straw &plaiting | 0.84 | 1% |
| Manuf. of other non-metallic mineral products | 0.79 | 1% |
| Manuf. of wearing apparel | 0.75 | 1% |
| Manuf. of furniture | 0.82 | 1% |
| Printing & reproduction of recorded media | 0.81 | 1% |
| Other manufacturing | 0.98 | 1% |
| Manuf. of electrical equipment | 0.91 | 1% |
| Publishing activities | 0.96 | 1% |
| Manuf. of chemicals & chemical products | 0.97 | 1% |
| Rental & leasing activities | 0.99 | 1% |
| Manuf. of computer, electronic & optical products | 0.92 | 1% |
| Manuf. of textiles | 0.79 | 1% |
| Manuf. of motor vehicles, trailers & semitrailers | 0.86 | 0% |
| Manuf. of paper & paper products | 0.93 | 0% |
| Manuf. of basic metals | 0.89 | 0% |
| Manuf. of leather & related products | 0.89 | 0% |
| Manuf. of beverages | 0.96 | 0% |
| Manuf. of other transport equipment | 0.89 | 0% |
| Other mining & quarrying | 0.83 | 0% |
| Water collection, treatment & supply | 1.00 | 0% |
| Water transport | 0.91 | 0% |
| Programming & broadcasting activities | 0.93 | 0% |
| Air transport | 0.86 | 0% |
| Manuf. of coke & refined petroleum products | 0.91 | 0% |
| Manuf. of tobacco products | 0.90 | 0% |
| Mining of metal ores | 0.88 | 0% |

Note: Slovakia is not included in the EU total due to a break in the series.

*Source: Eurostat, National Statistical Offices, DIW econ*

# I.34. SME EMPLOYMENT GROWTH WITH DYNAMIC ADJUSTMENT

*Table 40: Employment growth (in %) of three SME size classes in the non-financial business economy by EU Member State 2009-2012*

| Country | | Micro | Small | Medium | Large | SMEs | Total |
|---|---|---|---|---|---|---|---|
| Austria | Not-Adj | 4.7 | 6 | 6.2 | 4.8 | 5.6 | 5.3 |
| | Adj. | 6.9 | 6.4 | 7.1 | 2.4 | 6.8 | 5.3 |
| Belgium | Not-Adj | 17.4 | 10.1 | 4.5 | 2.2 | 12.1 | 9 |
| | Adj. | 20.5 | 5.6 | 5.4 | 1.9 | 10.5 | 9 |
| Bulgaria | Not-Adj | -4.8 | -11.3 | -11.7 | -6.1 | -9 | -8.3 |
| | Adj. | -6.2 | -7.1 | -11.9 | -8.6 | -8.4 | -8.3 |
| Croatia | Not-Adj | -16.7 | -14.4 | -10.6 | -9.6 | -14.5 | -13 |
| | Adj. | -16.4 | -14.4 | -10.2 | -10.4 | -13.7 | -13 |
| Cyprus | Not-Adj | -10.6 | -1.5 | 4.9 | -5.7 | -4.3 | -4.6 |
| | Adj. | -11.2 | -2 | 1.1 | 0.1 | -4 | -4.6 |
| Czech Republic | Not-Adj | 6 | -3.5 | -1.1 | 1.9 | 1.4 | 1.5 |
| | Adj. | 7.1 | 0.5 | -0.3 | -2.2 | 2.5 | 1.5 |
| Denmark | Not-Adj | -1 | -2.3 | 8 | 9.4 | 1.2 | 3.9 |
| | Adj. | 8.4 | -0.1 | 4.8 | 3.6 | 4.4 | 3.9 |
| Estonia | Not-Adj | 13.6 | -3.3 | -1.1 | 2.3 | 3.2 | 3 |
| | Adj. | 27.2 | -5.3 | -5.1 | -3.7 | 5.6 | 3 |
| Finland | Not-Adj | 0.6 | 3.8 | 6.3 | -2 | 3.2 | 1.2 |
| | Adj. | 2 | 6 | 4.5 | -3.2 | 4.2 | 1.2 |
| France | Not-Adj | 7 | 6.2 | 3.7 | 3.8 | 5.9 | 5.1 |
| | Adj. | 7.4 | 9.6 | -2.1 | 4.4 | 5 | 5.1 |
| Germany | Not-Adj | 7 | 9.4 | 7.8 | 9.1 | 8.1 | 8.5 |
| | Adj. | -0.1 | 10.4 | 15.9 | 8.2 | 8.7 | 8.5 |
| Greece | Not-Adj | -13.6 | -24.7 | -24.4 | -18.5 | -17.5 | -17.6 |
| | Adj. | -15.4 | -22.1 | -19.1 | -19.8 | -18.8 | -17.6 |
| Hungary | Not-Adj | -1.5 | -3.8 | -0.7 | 4.2 | -1.9 | -0.2 |
| | Adj. | 2 | -4.7 | -0.1 | 0.2 | -1 | -0.2 |
| Ireland | Not-Adj | 4.8 | -4.5 | -6.7 | -6.2 | -2.1 | -3.3 |
| | Adj. | 12.8 | -3.7 | -12.9 | -7.1 | -1.3 | -3.3 |
| Italy | Not-Adj | -5.8 | -7.6 | -5.5 | -3.3 | -6.2 | -5.7 |
| | Adj. | -4.9 | -9.3 | -6.3 | -2.9 | -6.8 | -5.7 |
| Latvia | Not-Adj | 12.4 | -1.9 | 2.2 | 0.6 | 4.4 | 3.6 |
| | Adj. | 41.9 | -6.3 | -10.5 | -4.7 | 8.4 | 3.6 |
| Lithuania | Not-Adj | 10 | -1.7 | -0.8 | 0.2 | 2.3 | 1.8 |
| | Adj. | 27.4 | -0.9 | -5.2 | -8.8 | 7.1 | 1.8 |
| Luxembourg | Not-Adj | 2.6 | 12.1 | 10.5 | 3.4 | 8.9 | 7.1 |
| | Adj. | 5.2 | 12.7 | 9 | 2.7 | 8.9 | 7.1 |
| Malta | Not-Adj | -8.5 | 9.6 | 13.5 | -8.7 | 2.4 | 0.2 |
| | Adj. | -9.2 | 8.9 | 16.4 | -9.8 | 5.4 | 0.2 |
| Netherlands | Not-Adj | 12.3 | -9.2 | -1.9 | -3.9 | 1.1 | -0.6 |
| | Adj. | 8.7 | -10.7 | 2.3 | -2.7 | 0.1 | -0.6 |
| Poland | Not-Adj | -1.5 | 6.2 | -4.4 | -1.3 | -0.8 | -1 |
| | Adj. | 0.3 | 0.5 | -3 | -1.9 | -0.7 | -1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Portugal | Not-Adj | -12.1 | -16.4 | -13.1 | -6.9 | -13.5 | -12.2 |
| | Adj. | -13.4 | -15 | -12.9 | -6 | -13.8 | -12.2 |
| Romania | Not-Adj | -11.3 | 3.9 | -1.5 | -2.7 | -3.4 | -3.2 |
| | Adj. | -7.1 | 8.2 | -1.3 | -8.1 | 0 | -3.2 |
| Slovenia | Not-Adj | 1.1 | -11.3 | -12 | -12.7 | -6.2 | -8.1 |
| | Adj. | 1.4 | -10.1 | -8.9 | -15.7 | -5.8 | -8.1 |
| Spain | Not-Adj | -11.6 | -18.7 | -15.4 | -3.7 | -14.3 | -11.7 |
| | Adj. | -9.7 | -19 | -18.2 | -4.5 | -15.6 | -11.7 |
| Sweden | Not-Adj | 8.5 | 8.8 | 9 | 4 | 8.7 | 7.1 |
| | Adj. | 5.6 | 9.8 | 9.5 | 5.3 | 8.3 | 7.1 |
| United Kingdom | Not-Adj | -16.6 | 0.7 | 4.9 | 1.7 | -4.6 | -1.7 |
| | Adj. | -12.8 | -1.6 | 4.7 | 1 | -3.3 | -1.7 |

Note: non-adjusted data are the published data while adjusted data take into account firm mobility across size classes. Slovakia not included in the analysis due to a break in the series.
*Source: University of Manchester*

The values in the table below represent percentage differences by country and by size class between the growth rates obtained with adjusted and not adjusted values. Specifically:

- Where the value is positive, the dynamic classification has yielded a larger increase/ssmaller decrease in employment than the static classification
- Where the value is negative, the dynamic classification has yielded a smaller increase/larger decrease  than the static classification

*Table 41: Differences between non-adjusted and adjusted estimates of employment growth (in %) for the three SME size classes in the non-financial business economy by EU Member State 2009-2012*

| | | ***Difference between adjusted and not adjusted values*** | | | | |
|---|---|---|---|---|---|---|
| | | ***0-9*** | ***10-49*** | ***50-249*** | ***GE250*** | ***SMEs*** |
| ***Austria*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.022 | 0.003 | 0.009 | -0.025 | 0.012 |
| ***Belgium*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.032 | -0.046 | 0.010 | -0.003 | -0.016 |
| ***Bulgaria*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.013 | 0.042 | -0.002 | -0.024 | 0.006 |
| ***Croatia*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.004 | 0.000 | 0.004 | -0.007 | 0.008 |
| ***Cyprus*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.006 | -0.005 | -0.038 | 0.059 | 0.003 |
| ***Czech Republic*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.011 | 0.040 | 0.008 | -0.040 | 0.011 |
| ***Denmark*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.093 | 0.022 | -0.032 | -0.058 | 0.031 |
| ***Estonia*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.136 | -0.020 | -0.040 | -0.061 | 0.024 |
| ***Finland*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.013 | 0.023 | -0.018 | -0.012 | 0.010 |
| ***France*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.004 | 0.035 | -0.058 | 0.006 | -0.010 |
| ***Germany*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.071 | 0.010 | 0.082 | -0.009 | 0.006 |
| ***Greece*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.018 | 0.026 | 0.053 | -0.013 | -0.014 |

| | | | | | | |
|---|---|---|---|---|---|---|
| ***Hungary*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.034 | -0.010 | 0.006 | -0.040 | 0.009 |
| ***Ireland*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.080 | 0.008 | -0.061 | -0.009 | 0.008 |
| ***Italy*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.009 | -0.016 | -0.008 | 0.004 | -0.006 |
| ***Latvia*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.295 | -0.044 | -0.127 | -0.053 | 0.040 |
| ***Lithuania*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.174 | 0.008 | -0.044 | -0.090 | 0.048 |
| ***Luxembourg*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.026 | 0.006 | -0.015 | -0.007 | 0.001 |
| ***Malta*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.007 | -0.007 | 0.029 | -0.012 | 0.030 |
| ***Netherlands*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.036 | -0.016 | 0.041 | 0.012 | -0.010 |
| ***Poland*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.018 | -0.057 | 0.014 | -0.006 | 0.001 |
| ***Portugal*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.013 | 0.014 | 0.002 | 0.009 | -0.003 |
| ***Romania*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.042 | 0.044 | 0.002 | -0.055 | 0.034 |
| ***Slovenia*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.003 | 0.012 | 0.031 | -0.030 | 0.003 |
| ***Spain*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.019 | -0.004 | -0.029 | -0.008 | -0.014 |
| ***Sweden*** | *Not-Adj* | | | | | |
| | *Adjusted* | -0.029 | 0.010 | 0.005 | 0.013 | -0.004 |
| ***United Kingdom*** | *Not-Adj* | | | | | |
| | *Adjusted* | 0.038 | -0.024 | -0.003 | -0.007 | 0.013 |

Note: non-adjusted data are the published data while adjusted data take into account firm mobility across size classes. Slovakia not included in the analysis due to a break in the series.

*Source: University of Manchester*

# I.35. SHARES OF SMES' EMPLOYMENT, VALUE ADDED AND NUMBER OF ENTERPRISES ACROSS COUNTRIES AND SECTORS IN 2014

*Table 42: SMEs by size class – shares of all SMEs' employment, value added and number of enterprises across countries and sectors in 2014*

| | | Enterprises | | | Value Added | | | Employment | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Country | Sector | Micro | Small | Medium | Micro | Small | Medium | Micro | Small | Medium |
| AT | Manufacturing | 73% | 21% | 6% | 11% | 29% | 59% | 17% | 33% | 49% |
| AT | Construction | 81% | 17% | 2% | 27% | 45% | 28% | 33% | 45% | 23% |
| AT | Wholesale/Retail trade | 87% | 11% | 1% | 30% | 39% | 32% | 40% | 37% | 23% |
| AT | Accommodation/Foood s. | 87% | 12% | 1% | 39% | 40% | 21% | 47% | 36% | 17% |
| AT | Business S. | 94% | 5% | 1% | 46% | 32% | 22% | 56% | 28% | 16% |
| AT | Others | 90% | 8% | 2% | 38% | 25% | 37% | 34% | 32% | 34% |
| BE | Manufacturing | 83% | 13% | 4% | 14% | 32% | 55% | 21% | 34% | 45% |
| BE | Construction | 95% | 5% | 1% | 44% | 33% | 23% | 54% | 29% | 16% |
| BE | Wholesale/Retail trade | 94% | 6% | 1% | 38% | 37% | 25% | 52% | 32% | 16% |
| BE | Accommodation/Foood s. | 95% | 5% | 0% | 56% | 32% | 12% | 65% | 28% | 7% |
| BE | Business S. | 98% | 2% | 0% | 56% | 23% | 21% | 70% | 17% | 14% |
| BE | Others | 94% | 5% | 1% | 41% | 30% | 29% | 43% | 29% | 28% |
| BG | Manufacturing | 75% | 19% | 6% | 10% | 29% | 61% | 17% | 33% | 50% |
| BG | Construction | 86% | 12% | 2% | 18% | 35% | 46% | 28% | 37% | 34% |
| BG | Wholesale/Retail trade | 94% | 5% | 1% | 37% | 37% | 26% | 56% | 29% | 15% |
| BG | Accommodation/Foood s. | 90% | 9% | 1% | 23% | 36% | 42% | 45% | 36% | 19% |
| BG | Business S. | 97% | 3% | 0% | 55% | 27% | 18% | 68% | 21% | 12% |
| BG | Others | 92% | 7% | 1% | 39% | 33% | 28% | 37% | 31% | 32% |
| CY | Manufacturing | 87% | 11% | 2% | 27% | 42% | 32% | 36% | 38% | 27% |
| CY | Construction | 90% | 9% | 1% | 30% | 42% | 28% | 38% | 34% | 28% |
| CY | Wholesale/Retail trade | 94% | 6% | 1% | 35% | 39% | 26% | 50% | 31% | 20% |
| CY | Accommodation/Foood | 90% | 8% | 2% | 33% | 26% | 41% | 34% | 24% | 42% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | s. | | | | | | | | | |
| **CY** | **Business S.** | 92% | 7% | 1% | 37% | 34% | 28% | 50% | 31% | 19% |
| **CY** | **Others** | 92% | 7% | 1% | 30% | 35% | 35% | 36% | 30% | 34% |
| **CZ** | **Manufacturing** | 94% | 5% | 2% | 18% | 24% | 58% | 29% | 26% | 45% |
| **CZ** | **Construction** | 97% | 2% | 0% | 45% | 28% | 27% | 60% | 25% | 15% |
| **CZ** | **Wholesale/Retail trade** | 96% | 3% | 0% | 38% | 36% | 26% | 56% | 28% | 16% |
| **CZ** | **Accommodation/Food s.** | 96% | 4% | 0% | 53% | 26% | 22% | 59% | 29% | 12% |
| **CZ** | **Business S.** | 98% | 1% | 0% | 51% | 25% | 23% | 66% | 20% | 15% |
| **CZ** | **Others** | 96% | 3% | 1% | 39% | 25% | 35% | 39% | 27% | 34% |
| **DE** | **Manufacturing** | 65% | 28% | 8% | 10% | 30% | 60% | 16% | 34% | 51% |
| **DE** | **Construction** | 83% | 16% | 1% | 32% | 47% | 21% | 42% | 43% | 15% |
| **DE** | **Wholesale/Retail trade** | 83% | 15% | 2% | 25% | 38% | 37% | 33% | 39% | 28% |
| **DE** | **Accommodation/Food s.** | 77% | 21% | 2% | 29% | 46% | 26% | 33% | 47% | 20% |
| **DE** | **Business S.** | 91% | 8% | 1% | 42% | 36% | 22% | 47% | 34% | 19% |
| **DE** | **Others** | 86% | 11% | 3% | 36% | 28% | 37% | 26% | 31% | 43% |
| **DK** | **Manufacturing** | 73% | 21% | 5% | 12% | 32% | 56% | 17% | 38% | 46% |
| **DK** | **Construction** | 90% | 9% | 1% | 38% | 40% | 22% | 40% | 41% | 19% |
| **DK** | **Wholesale/Retail trade** | 85% | 13% | 2% | 27% | 39% | 34% | 33% | 39% | 29% |
| **DK** | **Accommodation/Food s.** | 91% | 8% | 1% | 44% | 35% | 21% | 44% | 36% | 20% |
| **DK** | **Business S.** | 94% | 5% | 1% | 34% | 35% | 31% | 38% | 30% | 32% |
| **DK** | **Others** | 94% | 5% | 1% | 48% | 30% | 22% | 37% | 31% | 32% |
| **EE** | **Manufacturing** | 76% | 18% | 6% | 10% | 31% | 59% | 17% | 32% | 51% |
| **EE** | **Construction** | 91% | 8% | 1% | 38% | 39% | 23% | 51% | 33% | 16% |
| **EE** | **Wholesale/Retail trade** | 92% | 7% | 1% | 36% | 37% | 27% | 47% | 30% | 23% |
| **EE** | **Accommodation/Food s.** | 81% | 16% | 2% | 22% | 41% | 37% | 34% | 42% | 24% |
| **EE** | **Business S.** | 97% | 3% | 0% | 59% | 28% | 13% | 67% | 22% | 11% |
| **EE** | **Others** | 92% | 7% | 1% | 42% | 27% | 32% | 42% | 30% | 28% |
| **EL** | **Manufacturing** | 94% | 5% | 1% | 42% | 23% | 35% | 51% | 24% | 24% |
| **EL** | **Construction** | 97% | 3% | 0% | 56% | 31% | 13% | 71% | 21% | 8% |
| **EL** | **Wholesale/Retail trade** | 97% | 3% | 0% | 52% | 30% | 18% | 71% | 19% | 10% |
| **EL** | **Accommodation/Food s.** | 97% | 3% | 0% | 48% | 31% | 21% | 74% | 18% | 8% |
| **EL** | **Business S.** | 98% | 2% | 0% | 55% | 24% | 21% | 72% | 16% | 11% |
| **EL** | **Others** | 97% | 3% | 0% | 49% | 30% | 22% | 61% | 22% | 17% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **ES** | **Manufacturing** | 84% | 13% | 2% | 18% | 37% | 45% | 29% | 37% | 34% |
| **ES** | **Construction** | 96% | 4% | 0% | 48% | 33% | 19% | 64% | 25% | 11% |
| **ES** | **Wholesale/Retail trade** | 95% | 4% | 0% | 48% | 31% | 20% | 63% | 25% | 13% |
| **ES** | **Accommodation/Food s.** | 94% | 5% | 0% | 48% | 32% | 20% | 63% | 25% | 12% |
| **ES** | **Business S.** | 97% | 2% | 0% | 50% | 26% | 24% | 68% | 19% | 13% |
| **ES** | **Others** | 95% | 4% | 1% | 46% | 26% | 28% | 49% | 26% | 25% |
| **FI** | **Manufacturing** | 83% | 13% | 4% | 17% | 32% | 51% | 20% | 33% | 47% |
| **FI** | **Construction** | 93% | 6% | 1% | 46% | 36% | 18% | 50% | 34% | 16% |
| **FI** | **Wholesale/Retail trade** | 92% | 7% | 1% | 37% | 36% | 27% | 44% | 35% | 21% |
| **FI** | **Accommodation/Food s.** | 91% | 8% | 1% | 45% | 35% | 20% | 49% | 33% | 18% |
| **FI** | **Business S.** | 95% | 4% | 1% | 45% | 30% | 25% | 52% | 28% | 21% |
| **FI** | **Others** | 93% | 6% | 1% | 38% | 31% | 31% | 36% | 32% | 32% |
| **FR** | **Manufacturing** | 85% | 12% | 3% | 21% | 33% | 47% | 24% | 35% | 41% |
| **FR** | **Construction** | 95% | 5% | 0% | 54% | 32% | 15% | 53% | 33% | 14% |
| **FR** | **Wholesale/Retail trade** | 95% | 4% | 1% | 46% | 30% | 24% | 50% | 28% | 21% |
| **FR** | **Accommodation/Food s.** | 95% | 5% | 0% | 60% | 31% | 9% | 58% | 34% | 8% |
| **FR** | **Business S.** | 97% | 3% | 0% | 52% | 29% | 18% | 54% | 27% | 18% |
| **FR** | **Others** | 95% | 4% | 1% | 45% | 25% | 30% | 42% | 29% | 29% |
| **HR** | **Manufacturing** | 85% | 12% | 3% | 17% | 33% | 50% | 26% | 31% | 42% |
| **HR** | **Construction** | 92% | 7% | 1% | 32% | 33% | 36% | 45% | 30% | 25% |
| **HR** | **Wholesale/Retail trade** | 93% | 7% | 1% | 35% | 36% | 29% | 50% | 29% | 20% |
| **HR** | **Accommodation/Food s.** | 93% | 6% | 1% | 41% | 28% | 31% | 61% | 23% | 15% |
| **HR** | **Business S.** | 96% | 4% | 0% | 54% | 30% | 16% | 66% | 24% | 10% |
| **HR** | **Others** | 93% | 6% | 1% | 37% | 29% | 34% | 40% | 28% | 32% |
| **HU** | **Manufacturing** | 85% | 11% | 3% | 13% | 27% | 60% | 23% | 31% | 46% |
| **HU** | **Construction** | 94% | 5% | 0% | 42% | 35% | 23% | 56% | 30% | 14% |
| **HU** | **Wholesale/Retail trade** | 94% | 5% | 1% | 36% | 35% | 29% | 58% | 27% | 15% |
| **HU** | **Accommodation/Food s.** | 92% | 7% | 1% | 34% | 36% | 30% | 55% | 32% | 14% |
| **HU** | **Business S.** | 98% | 2% | 0% | 56% | 25% | 19% | 74% | 17% | 9% |
| **HU** | **Others** | 95% | 4% | 1% | 42% | 28% | 30% | 47% | 26% | 27% |
| **IE** | **Manufacturing** | 56% | 32% | 12% | 12% | 18% | 70% | 8% | 32% | 59% |
| **IE** | **Construction** | 96% | 3% | 1% | 60% | 23% | 17% | 44% | 33% | 22% |
| **IE** | **Wholesale/Retail trade** | 85% | 13% | 2% | 27% | 41% | 31% | 36% | 40% | 24% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **IE** | **Accommodation/Food s.** | 80% | 16% | 4% | 21% | 34% | 45% | 29% | 33% | 38% |
| **IE** | **Business S.** | 94% | 5% | 1% | 51% | 31% | 19% | 57% | 27% | 16% |
| **IE** | **Others** | 92% | 7% | 2% | 33% | 36% | 31% | 40% | 29% | 31% |
| **IT** | **Manufacturing** | 84% | 14% | 2% | 19% | 41% | 41% | 33% | 39% | 28% |
| **IT** | **Construction** | 96% | 4% | 0% | 56% | 32% | 12% | 68% | 24% | 7% |
| **IT** | **Wholesale/Retail trade** | 97% | 3% | 0% | 53% | 31% | 16% | 71% | 21% | 9% |
| **IT** | **Accommodation/Food s.** | 93% | 6% | 0% | 56% | 35% | 10% | 69% | 25% | 6% |
| **IT** | **Business S.** | 99% | 1% | 0% | 75% | 16% | 9% | 84% | 11% | 6% |
| **IT** | **Others** | 95% | 4% | 1% | 44% | 28% | 28% | 47% | 27% | 26% |
| **LT** | **Manufacturing** | 83% | 13% | 4% | 6% | 27% | 67% | 17% | 33% | 50% |
| **LT** | **Construction** | 92% | 7% | 1% | 17% | 37% | 46% | 29% | 37% | 34% |
| **LT** | **Wholesale/Retail trade** | 93% | 6% | 1% | 25% | 41% | 33% | 46% | 33% | 21% |
| **LT** | **Accommodation/Food s.** | 81% | 17% | 2% | 16% | 47% | 37% | 33% | 47% | 21% |
| **LT** | **Business S.** | 96% | 4% | 0% | 39% | 35% | 26% | 59% | 27% | 14% |
| **LT** | **Others** | 89% | 9% | 2% | 26% | 33% | 41% | 32% | 32% | 35% |
| **LU** | **Manufacturing** | 63% | 27% | 10% | 8% | 35% | 58% | 9% | 35% | 57% |
| **LU** | **Construction** | 71% | 24% | 4% | 22% | 39% | 39% | 15% | 46% | 38% |
| **LU** | **Wholesale/Retail trade** | 88% | 10% | 2% | 28% | 34% | 38% | 31% | 39% | 30% |
| **LU** | **Accommodation/Food s.** | 86% | 13% | 1% | 43% | 41% | 16% | 43% | 44% | 14% |
| **LU** | **Business S.** | 94% | 5% | 1% | 39% | 28% | 33% | 45% | 32% | 23% |
| **LU** | **Others** | 89% | 8% | 3% | 46% | 21% | 33% | 21% | 32% | 47% |
| **LV** | **Manufacturing** | 80% | 15% | 5% | 4% | 32% | 65% | 18% | 33% | 50% |
| **LV** | **Construction** | 85% | 13% | 2% | 16% | 40% | 44% | 27% | 39% | 34% |
| **LV** | **Wholesale/Retail trade** | 91% | 8% | 1% | 27% | 40% | 33% | 45% | 33% | 23% |
| **LV** | **Accommodation/Food s.** | 80% | 18% | 2% | 13% | 47% | 40% | 27% | 46% | 27% |
| **LV** | **Business S.** | 97% | 2% | 0% | 54% | 30% | 16% | 72% | 19% | 10% |
| **LV** | **Others** | 93% | 6% | 1% | 38% | 29% | 33% | 40% | 31% | 28% |
| **MT** | **Manufacturing** | 90% | 8% | 2% | 19% | 36% | 45% | 31% | 29% | 40% |
| **MT** | **Construction** | 97% | 3% | 0% | 62% | 20% | 18% | 57% | 22% | 21% |
| **MT** | **Wholesale/Retail trade** | 95% | 5% | 1% | 38% | 39% | 23% | 51% | 32% | 17% |
| **MT** | **Accommodation/Food s.** | 90% | 7% | 3% | 27% | 19% | 53% | 26% | 23% | 51% |
| **MT** | **Business S.** | 96% | 4% | 0% | 48% | 39% | 13% | 52% | 29% | 19% |
| **MT** | **Others** | 94% | 5% | 1% | 43% | 30% | 27% | 37% | 27% | 36% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **NL** | **Manufacturing** | 86% | 11% | 3% | 15% | 31% | 54% | 24% | 31% | 46% |
| **NL** | **Construction** | 95% | 4% | 1% | 42% | 32% | 25% | 50% | 28% | 21% |
| **NL** | **Wholesale/Retail trade** | 93% | 6% | 1% | 33% | 34% | 33% | 44% | 32% | 24% |
| **NL** | **Accommodation/Food s.** | 92% | 8% | 1% | 52% | 32% | 15% | 56% | 31% | 13% |
| **NL** | **Business S.** | 97% | 2% | 0% | 54% | 25% | 21% | 60% | 23% | 17% |
| **NL** | **Others** | 93% | 5% | 2% | 27% | 30% | 43% | 31% | 29% | 40% |
| **PL** | **Manufacturing** | 88% | 9% | 3% | 15% | 24% | 60% | 27% | 25% | 49% |
| **PL** | **Construction** | 96% | 3% | 1% | 38% | 29% | 33% | 61% | 22% | 17% |
| **PL** | **Wholesale/Retail trade** | 96% | 3% | 1% | 34% | 34% | 32% | 63% | 20% | 17% |
| **PL** | **Accommodation/Food s.** | 95% | 4% | 1% | 35% | 31% | 34% | 66% | 20% | 14% |
| **PL** | **Business S.** | 98% | 1% | 0% | 55% | 18% | 26% | 75% | 12% | 13% |
| **PL** | **Others** | 96% | 3% | 1% | 27% | 27% | 47% | 52% | 19% | 29% |
| **PT** | **Manufacturing** | 84% | 14% | 3% | 14% | 36% | 50% | 25% | 37% | 37% |
| **PT** | **Construction** | 95% | 5% | 1% | 35% | 37% | 29% | 57% | 28% | 15% |
| **PT** | **Wholesale/Retail trade** | 96% | 3% | 0% | 38% | 37% | 25% | 63% | 24% | 13% |
| **PT** | **Accommodation/Food s.** | 96% | 4% | 0% | 46% | 31% | 24% | 62% | 25% | 13% |
| **PT** | **Business S.** | 98% | 2% | 0% | 51% | 26% | 23% | 75% | 15% | 9% |
| **PT** | **Others** | 98% | 2% | 0% | 39% | 29% | 32% | 59% | 19% | 23% |
| **RO** | **Manufacturing** | 70% | 23% | 7% | 10% | 29% | 61% | 14% | 35% | 51% |
| **RO** | **Construction** | 82% | 16% | 2% | 27% | 30% | 43% | 28% | 41% | 32% |
| **RO** | **Wholesale/Retail trade** | 91% | 8% | 1% | 27% | 40% | 33% | 48% | 34% | 18% |
| **RO** | **Accommodation/Food s.** | 84% | 14% | 1% | 25% | 44% | 31% | 38% | 44% | 18% |
| **RO** | **Business S.** | 95% | 5% | 1% | 46% | 24% | 30% | 55% | 26% | 19% |
| **RO** | **Others** | 88% | 10% | 2% | 33% | 32% | 35% | 31% | 32% | 37% |
| **SE** | **Manufacturing** | 88% | 9% | 3% | 16% | 34% | 50% | 23% | 33% | 44% |
| **SE** | **Construction** | 94% | 5% | 0% | 44% | 38% | 18% | 49% | 36% | 15% |
| **SE** | **Wholesale/Retail trade** | 94% | 5% | 1% | 31% | 38% | 31% | 42% | 33% | 25% |
| **SE** | **Accommodation/Food s.** | 90% | 9% | 1% | 41% | 40% | 19% | 45% | 39% | 17% |
| **SE** | **Business S.** | 98% | 2% | 0% | 49% | 29% | 23% | 52% | 28% | 20% |
| **SE** | **Others** | 95% | 4% | 1% | 44% | 26% | 30% | 34% | 32% | 34% |
| **SI** | **Manufacturing** | 89% | 8% | 3% | 19% | 28% | 52% | 28% | 26% | 46% |
| **SI** | **Construction** | 95% | 5% | 0% | 47% | 34% | 18% | 58% | 29% | 13% |
| **SI** | **Wholesale/Retail trade** | 95% | 4% | 1% | 39% | 34% | 28% | 52% | 26% | 22% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **SI** | **Accommodation/Foood s.** | 96% | 4% | 0% | 50% | 26% | 24% | 65% | 21% | 14% |
| **SI** | **Business S.** | 98% | 2% | 0% | 54% | 31% | 16% | 71% | 18% | 11% |
| **SI** | **Others** | 95% | 4% | 1% | 31% | 28% | 41% | 45% | 26% | 29% |
| **SK** | **Manufacturing** | 94% | 4% | 1% | 26% | 25% | 49% | 34% | 25% | 41% |
| **SK** | **Construction** | 98% | 1% | 0% | 57% | 27% | 16% | 72% | 18% | 11% |
| **SK** | **Wholesale/Retail trade** | 96% | 3% | 0% | 48% | 37% | 16% | 62% | 24% | 14% |
| **SK** | **Accommodation/Food s.** | 96% | 4% | 0% | 52% | 35% | 13% | 66% | 26% | 9% |
| **SK** | **Business S.** | 99% | 1% | 0% | 65% | 17% | 18% | 81% | 10% | 9% |
| **SK** | **Others** | 95% | 4% | 1% | 42% | 27% | 31% | 46% | 25% | 29% |
| **UK** | **Manufacturing** | 78% | 17% | 5% | 16% | 32% | 52% | 17% | 35% | 48% |
| **UK** | **Construction** | 94% | 6% | 1% | 52% | 28% | 20% | 49% | 33% | 18% |
| **UK** | **Wholesale/Retail trade** | 88% | 11% | 1% | 33% | 34% | 33% | 34% | 39% | 26% |
| **UK** | **Accommodation/Food s.** | 77% | 21% | 2% | 34% | 37% | 29% | 28% | 47% | 25% |
| **UK** | **Business S.** | 94% | 5% | 1% | 47% | 27% | 26% | 39% | 33% | 28% |
| **UK** | **Others** | 91% | 7% | 2% | 39% | 29% | 31% | 30% | 33% | 37% |
| **EU28** | **Manufacturing** | 83% | 14% | 3% | 16% | 33% | 52% | 24% | 34% | 43% |
| **EU28** | **Construction** | 94% | 6% | 1% | 46% | 35% | 20% | 52% | 32% | 16% |
| **EU28** | **Wholesale/Retail trade** | 93% | 6% | 1% | 37% | 34% | 29% | 51% | 30% | 19% |
| **EU28** | **Accommodation/Food s.** | 90% | 9% | 1% | 44% | 36% | 20% | 50% | 35% | 15% |
| **EU28** | **Business S.** | 97% | 3% | 0% | 50% | 28% | 22% | 59% | 24% | 17% |
| **EU28** | **Others** | 93% | 5% | 1% | 40% | 28% | 33% | 38% | 29% | 33% |

*Source: Eurostat, National Statistical Offices, DIW econ*

# II. METHODOLOGICAL OVERVIEW

## II.1. NACE SECTION CLASSIFICATION (REV.2)

***Table 43: Overview of sector classification (NACE Rev.2 Section level)***

| NACE SECTION | Sector name in report |
|---|---|
| B | Mining and quarrying |
| C | Manufacturing |
| D | Electricity and gas |
| E | Water supply |
| F | Construction |
| G | Trade and repair |
| H | Transportation and storage |
| I | Accommodation/ food Services |
| J | Information and communication |
| L | Real estate activities |
| M | Business Services |
| N | Administrative and support Services |

## II.2. DEFINITION OF KNOWLEDGE INTENSIVE SERVICES

The group of Knowledge intensive services is classified according to EUROSTAT as: High tech services: J59, Motion picture, video and television programme production, sound recording and music publishing activities, J60, Programming and broadcasting services, J61, Telecommunications,J62, Computer programming, consultancy and related activities, J63, Information service activities, M72, Scientific research and development; Market services: H50 water transport, H51 Air transport ,M69, legal and accounting activities, M70, Activities of head offices, management consultancy activities, M71, Architectural and engineering activities; technical testing and analysis, M73, Advertising and market research M74, Other professional, scientific and professional services N78, Employment activities N80, Security and investigation activities; Other KIS:J58, Publishing activities, M75 Veterinary activities The remaining sectors are part of the Less Knowledge Intensive Services and are allocated as follows: Market G45, Wholesale and retail trade and repair of motor vehicles and motorcycles, G46, Wholesale trade except of motor vehicles and motorcycles,G47, Retail trade, except of motor vehicles and motorcycle, H49, Land transport and transport via pipelines, H52, Warehousing and support activities for transportation,I55, Accommodation,I56, Food and beverage service activities,L68, Real estate activities,N77, Rental and leasing activities,N79, Travel agency, tour operator reservation service N81, Services to buildings and landscape activities and N82, Office administrative, office support and other business support activities; Other: H53, Postal and courier activities.

## II.3. DEFINITION OF HIGH TECH (MANUFACTURING) SECTORS

The group of manufacturing industries can be divided into: High tech industries - manufacture of basic pharmaceutical products and pharmaceutical preparations (C21) and manufacture of computer, electronic and optical products (C26); Medium-high-tech industries manufacture of chemicals and chemical products (C20), manufacture of electrical equipment (C27), manufacture of machinery and equipment n.e.c. (C28), manufacture of motor vehicles, trailers and semi-trailers (C29), manufacture of other transport equipment (C30); Medium-low-tech - Manufacture of coke and refined petroleum products (C19), manufacture of rubber and plastic products (C22), manufacture of other non-metallic mineral products (C23), manufacture of basic metals (C24), manufacture of fabricated metal products, except machinery and equipment (C25), repair and installation of machinery and equipment(C33); Low-tech - manufacture of food products (C10),manufacture of beverages (C11), manufacture of tobacco products (C12), manufacture of textiles (C13), manufacture of wearing apparel (C14), manufacture of leather and related products (C15), manufacture of wood and of products of wood and

cork, except furniture; manufacture of articles of straw and plaiting materials (C16), manufacture of paper and paper products (C17), printing and reproduction of recorded media (C18).

# III. INDEX OF FIGURES

# IV. INDEX OF TABLES

## Endnotes

[1] The non-financial business sector includes the following sub-sectors: 'mining and quarrying', 'manufacturing', 'electricity, gas, steam and air condition supply', 'water supply, sewerage, waste management and remediation activities', 'construction', 'wholesale and retail trade, repair of motor vehicles and motorcycles', 'transportation and storage', 'accommodation and food services', 'information and communication', 'real estate activities', 'professional, scientific and technical activities' and 'administrative and support services'.

[2] For example, the 2014 Annual SME Report and the SBA factsheets are available at http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/index_en.htm

[3] The relatively low share of non-financial business sector employment accounted for by SMEs in the UK is in large part due to the fact that the SBS data include only SMEs which are registered for VAT and/or employee income tax and social security payment (PAYE). The VAT registration threshold in 2014 is £82,000 (or EUR 115,305 at the £/€ exchange rate of 25 June 2015). Alternative UK statistics produced by the UK Department for Business, Skills and Innovation and covering all businesses in the UK show that, at the beginning of 2014, SME businesses account 60% of total private sector employment.

[4] See footnote iii for details.

[5] See the 2013/14 SME Annual Report for an in-depth discussion of the participation of SMEs in export activities. Obviously, even SMEs not active in export-oriented industries will benefit indirectly from a general, export-driven, economic uplift.

[6] See Eurofound (forthcoming), ERM annual report 2015: Job creation in SMES, Publications Office of the European Union, Luxembourg for a detailed review of the literature of the various non macro-economic factors which explains differences in employment creation by individual SMEs

[7] Bernard, A.B., J. Branford Jensen, S.J. Redding, and P.K. Schott. 2007. Firms in International Trade. Journal of Economic Perspectives 21 (3):105-30; Greenaway and Kneller. 2007. Firm Heterogeneity, Exporting and Foreign Direct Investment. Economic Journal 117 (517):134-161.

[8] See, for example, discussion and analysis of born global firms in Eurofound *op. cit.*

[9] See the special companion working paper on employment creation and destruction by SMEs for more details.

[10] The advantages and disadvantages of the use of the ORBIS database for the analysis of employment creation by SMEs are discussed in details in the companion working paper.

[11] As already noted, the Eurofound report (*op. cit.)* provides a detailed discussion of the firm-specific factors explaining differences in employment creation among SMEs.

[12] The standard deviation is a measure that is used to quantify the amount of variation or dispersion around the mean of a data series.

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