

## The economic crisis in the non-financial business economy – where was it most heavily felt?

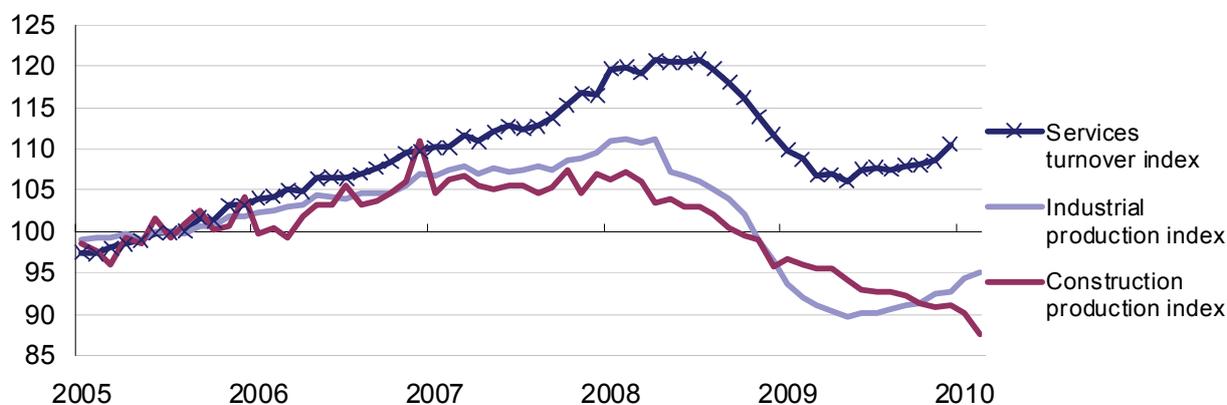
During the recent economic and financial crisis, a great deal of attention has been focused on certain Member States that experienced very large reductions in activity during the last two and a half years; equally, other Member States appear to have come through the economic crisis with relatively small reductions in activity. In both cases these extremes have been observed among the smaller Member States whose impact on the level of activity within the EU-27 is relatively limited. This publication presents an analysis of short-term business statistics that combines information on the change in output, output prices and employment in each Member State with information on that Member State's weight within the data for the EU-27. The resulting analysis allows a comparison of the impact of Member States of very different sizes.

In a similar vein the developments for industry and non-financial services within the EU-27 are analysed by identifying which activities had the greatest impact on the overall developments in

these two large parts of the non-financial business economy. Again, a simple comparison between the rates of change for activities at a particular level such as the Division (2-digit) level of NACE can be refined by considering their relative weight.

The magnitude of the recent economic downturn can be clearly seen in Figure 1. The level of EU-27 output in industry, construction and services peaked during the first or second quarter of 2008. The level of industrial output and services turnover reached a low point in the second quarter of 2009, since when both indices have been on an upward path – it should be noted that turnover is valued in current prices and so changes reflect price changes as well as changes in the underlying level of activity, whereas the production indices are volume indices showing the change after adjustment for price changes. In contrast, the latest data for construction production still shows negative rates of change, continuing a sequence unbroken since the beginning of 2008.

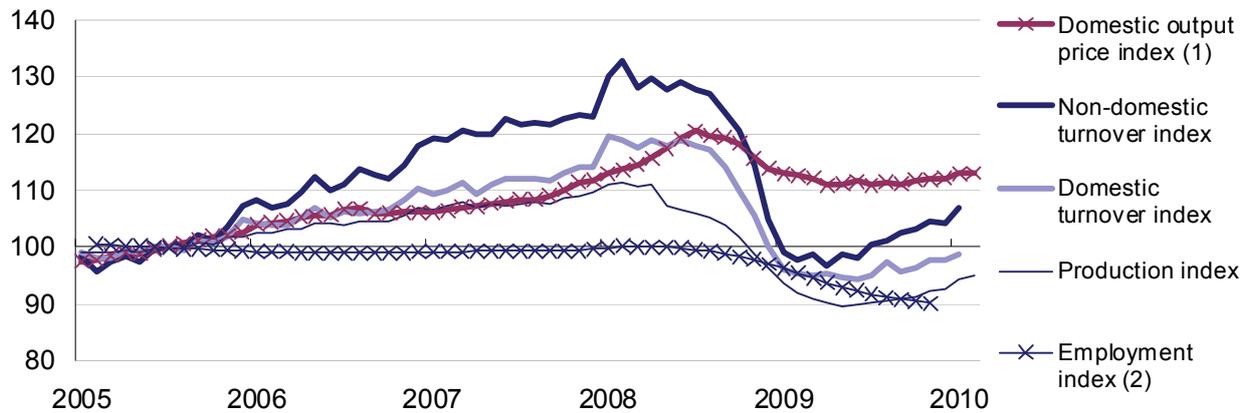
Figure 1: Selected output indicators, EU-27 (2005=100)



Source: Eurostat ([sts\\_inpr\\_m](#), [sts\\_copr\\_m](#), [sts\\_trtu\\_m](#))

## Industry

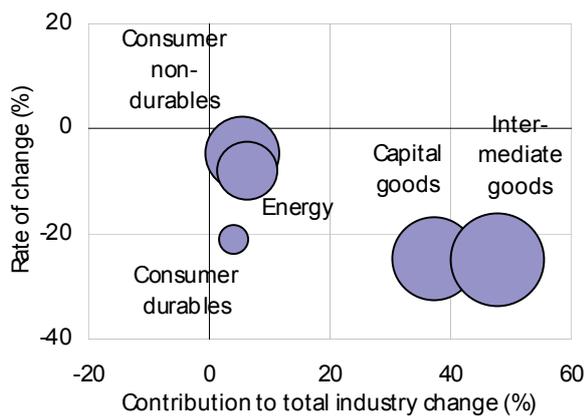
**Figure 2: Selected indicators, industry, EU-27 (2005=100)**



(1) Quarterly series. (2) Gross series.

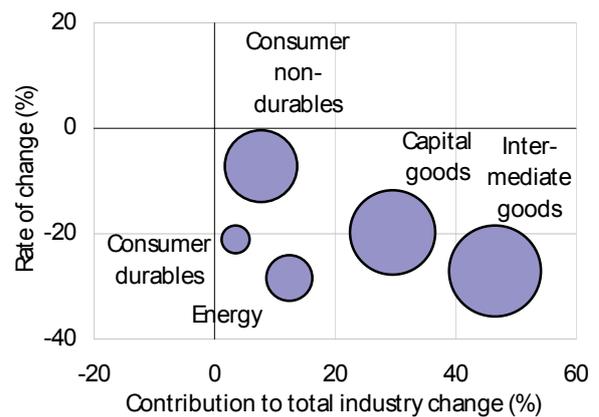
Source: Eurostat ([sts\\_inpr\\_m](#), [sts\\_inppd\\_m](#), [sts\\_intvd\\_m](#), [sts\\_inlb\\_q](#))

**Figure 3: Production index change February 2008 to May 2009, EU-27**



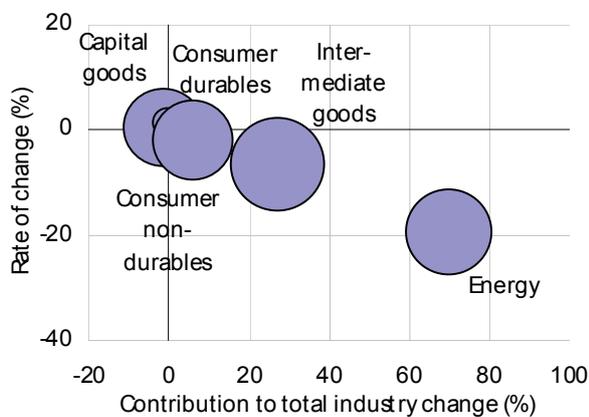
Source: Eurostat ([sts\\_inpr\\_m](#))

**Figure 5: Domestic turnover of change January 2008 to June 2009, EU-27**



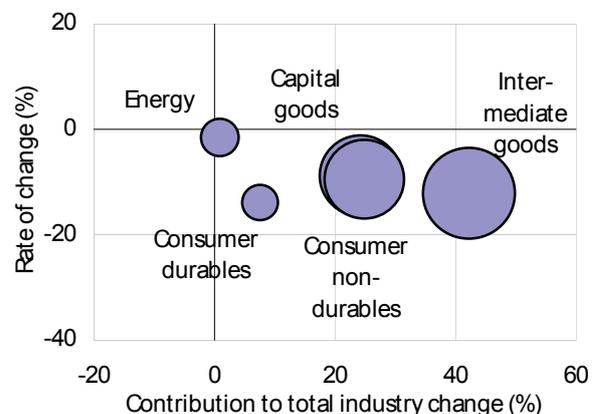
Source: Eurostat ([sts\\_intvd\\_m](#))

**Figure 4: Domestic output price index change July 2008 to July 2009, gross, EU-27**



Source: Eurostat ([sts\\_inppd\\_m](#))

**Figure 6: Employment index change Q1-2008 to Q4-2009, EU-27**



Source: Eurostat ([sts\\_inlb\\_q](#))

## Large impact of energy MIG on prices

Figures 3 to 6 show the contribution of each of the main industrial groupings (MIGs) to the change recorded for total industry: for each indicator the rate of change is shown covering the period from the relative high prior to the recent economic downturn to the low at the bottom of the downturn for total industry. The size of the bubble shows the weight of each MIG for the indicator concerned.

For the EU-27 industrial production index, intermediate and capital goods recorded falls in output of close to 25 % between February 2008 and May 2009. The combined weighted rate of change in these two MIGs was equivalent to over four fifths of the overall fall (-19.4 %) in the index for total industry. Due to its small weight, the considerable reduction in output for consumer durable goods had little impact on the index for total industry.

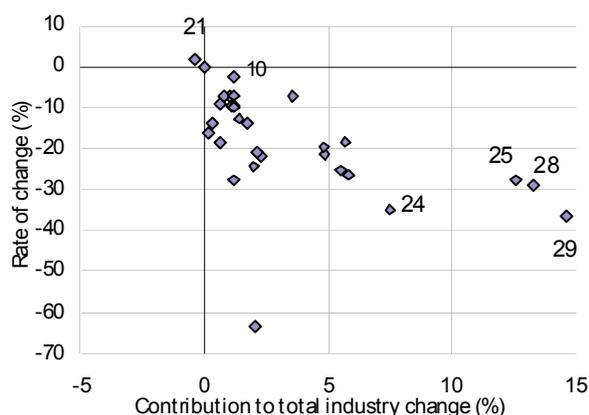
For domestic output prices, the overall 8.0 % fall in the EU-27 index between July 2008 and July 2009 was strongly influenced by a 19.2 % reduction in

prices that was recorded for the energy MIG: the weighted rate of change for the energy MIG was equivalent to approximately 70 % of the total change for industry. The price indices for capital goods, as well as the smaller consumer durables MIG actually increased over this period.

For the domestic turnover index total industry recorded a fall of 21.0 %. The MIG contributions reflected a similar pattern to that for the production index, but with a greater contribution for energy reflecting the large price changes noted above, and a smaller change for capital goods.

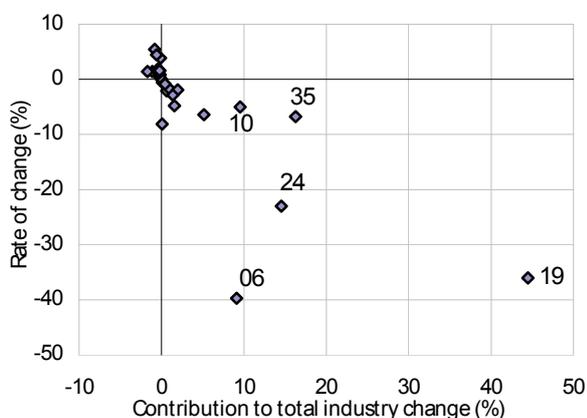
For the employment index (total industry fell 9.9 % from the first quarter of 2008 to the final quarter of 2009) a significant difference is the stronger contribution of consumer non-durables: the weighted rate of change for this MIG was less than 10 % of the EU-27 total industry change for the other indicators presented here, but was close to one quarter for the employment index.

**Figure 7: Production index change February 2008 to May 2009, EU-27**



Source: Eurostat ([sts\\_inpr\\_m](#))

**Figure 8: Domestic output price index change July 2008 to July 2009, gross, EU-27**



Source: Eurostat ([sts\\_inppd\\_m](#))

## Motor vehicles manufacturing had the strongest downward impact on production

Figure 7 shows an analysis for the EU-27 production index at a more detailed level, namely by NACE division. The divisions that most strongly pulled the total industry index downwards were the manufacture of fabricated metal products (Division 25), machinery and equipment n.e.c. (28) and motor vehicles, trailers and semi-trailers (29), while the manufacture of basic metals (24) was the next most influential, despite a relatively low weight. A relatively small negative rate of change for the large activity of the manufacture of food products (10) softened the overall fall in industrial output, as did the only positive rate of change during this period for the manufacture of pharmaceuticals (21).

A similar analysis of the EU-27 domestic output price index (Figure 8) shows that three of the five divisions with the greatest contribution to the overall fall in the total industry index were related to energy, namely the manufacture of coke and refined petroleum products (Division 19), the supply of electricity, gas, steam and air conditioning (35) and the extraction of crude petroleum and natural gas (06); the other two activities that contributed strongly to the overall fall were the manufacture of basic metals (24) and food products (10). Several divisions recorded an increase for the domestic output price index, but none had a significant impact on the overall index.

## EU-27 production index strongly influenced by Germany and Italy

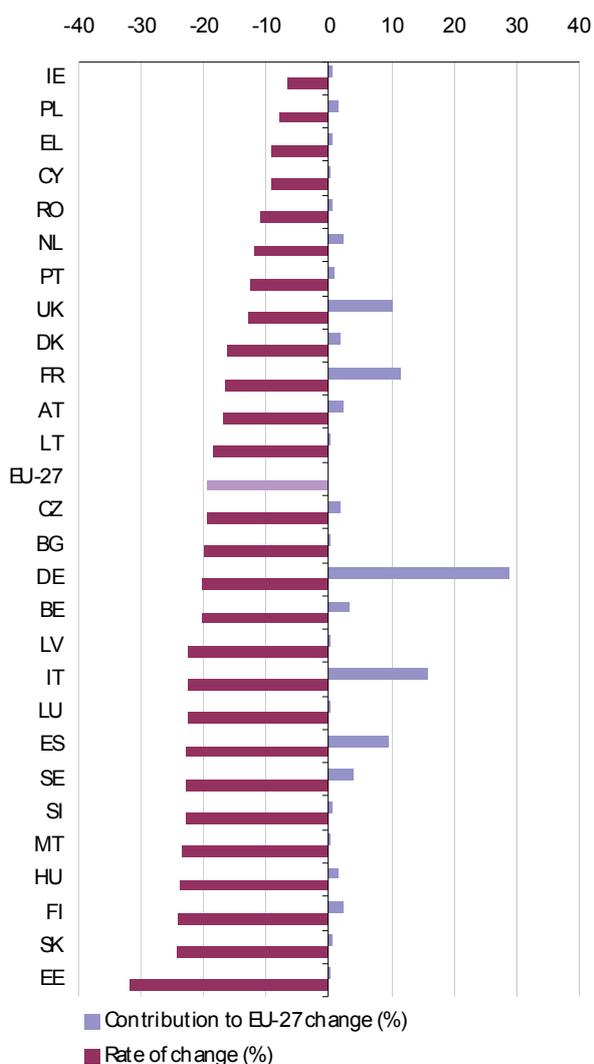
Figure 9 shows an analysis by Member State rather than by activity. Although Estonia recorded by far the largest fall in industrial output (during the period February 2008 to May 2009), its impact on the overall EU-27 index was small because of its low weight. In contrast, Germany, with the largest weight of all Member States, had the greatest impact on the overall EU-27 index despite its rate of change being only slightly lower than the EU average. Italy has the fourth largest weight in industrial output but registered the second largest downward impact on output within the EU-27's industrial economy during the downturn, as its negative rate of change (-22.5 %) was notably greater than that of France and the United Kingdom. In a similar manner the large negative

rate of change in Spain (-22.7 %) was also significant.

In Germany, the largest negative rate of change (among the main NACE divisions) during this period was recorded for the manufacture of basic metals, where output fell by more than 30 %. In Italy output fell by around 40 % for the manufacture of machinery and equipment, basic metals, as well as motor vehicles, trailers and semi-trailers. In Spain, the largest significant reductions, again around 40 %, were recorded for the manufacture of furniture as well as motor vehicles, trailers and semi-trailers.

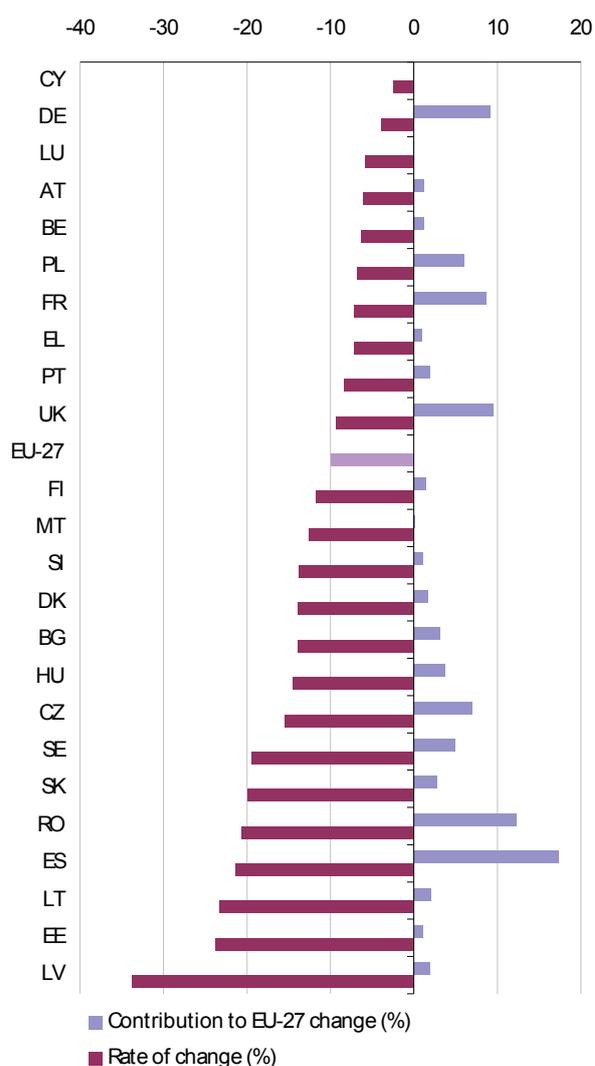
The negative rates of change for industrial employment are shown in Figure 10, with Spain and Romania having the largest impact on the EU-27 index, and Germany only the fifth largest impact.

**Figure 9: Production index change February 2008 to May 2009, total industry**



Source: Eurostat ([sts\\_inpr\\_m](#))

**Figure 10: Employment index change Q1-2008 to Q4-2009, total industry (1)**

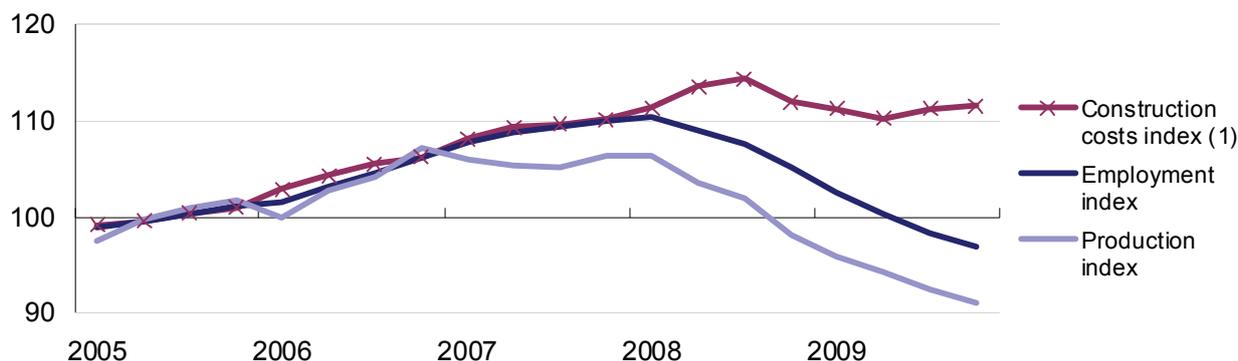


(1) Ireland, Italy and the Netherlands, not available.

Source: Eurostat ([sts\\_inlb\\_q](#))

## Construction

Figure 11: Selected indicators, construction, EU-27 (2005=100)



(1) Gross series.

Source: Eurostat ([sts\\_copr\\_q](#), [sts\\_colb\\_q](#), [sts\\_copi\\_q](#))

Figure 12: Production index change Q1-2008 to Q4-2009, construction



Source: Eurostat ([sts\\_copr\\_q](#))

Between the first quarter of 2008 and the fourth quarter of 2009 (the last period for which data are available), construction output fell by 14.4 % in the EU-27; during the same period employment fell by 12.1 %. The construction costs index fell by 3.6 % between the third quarter of 2008 and the second quarter of 2009, before returning to an upward path through to the end of 2009.

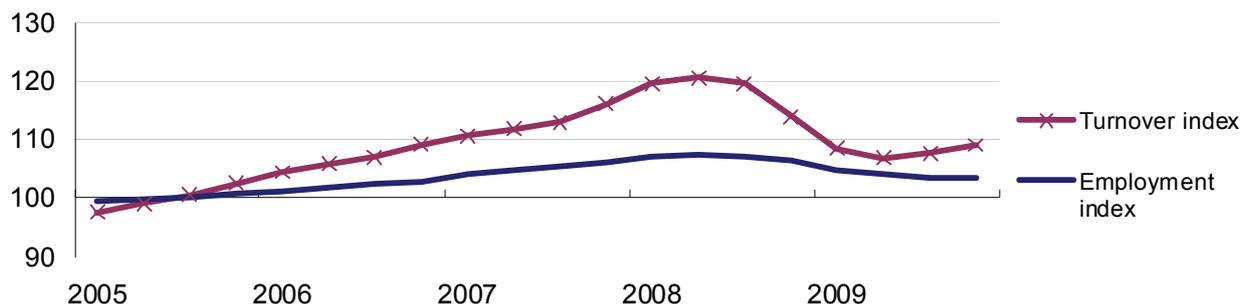
### **Construction output: largest falls in the Baltic States and Ireland; Spain the largest influence on the EU-27**

The impact on the overall EU-27 index of these large negative rates of change in the Baltic Member States was generally small because of their low weight. However, in the case of Ireland the change was sufficiently large that Ireland had the fourth largest downward impact on the EU-27 index, behind only Spain, the United Kingdom and Italy, and ahead of both France and Germany. As for industry, the Spanish production index in construction fell more heavily than among the other larger Member States, down 21.4 %. In contrast, Poland was the only Member State to record an increase in construction output during this period, increasing by 6.5 %.

A similar analysis for the employment index also shows strong falls in the index in the Baltic Member States, but again the greatest impact on the EU-27 index is from Spain. The Spanish employment index in construction fell 32.7 % between the first quarter of 2008 and the last quarter of 2009, in comparison to 12.1 % for the EU-27 as a whole. The weighted rate of change in Spain was equivalent to about three fifths of the overall fall in the EU-27 construction employment index.

## Services

**Figure 13: Selected indicators, services, EU-27 (2005=100)**



Source: Eurostat ([sts\\_trtu\\_q](#), [sts\\_trlb\\_q](#))

### **Wholesale trade: strongest influence on services turnover and employment**

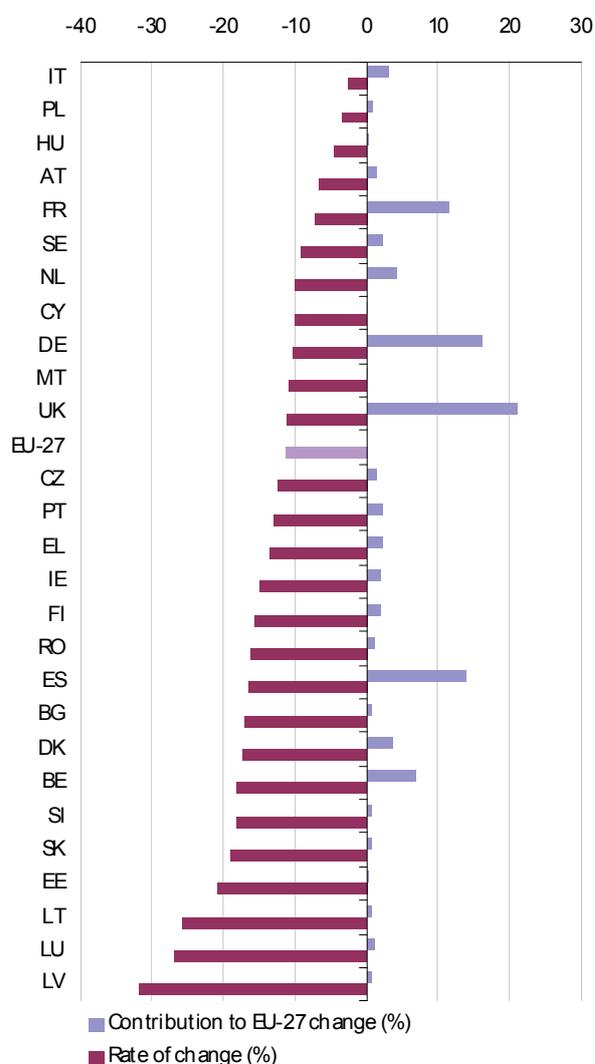
Between the second quarters of 2008 and 2009 services turnover fell by 11.4 % in the EU-27. The magnitude of the fall was due almost entirely to the 16.4 % reduction in wholesale trades (Division 46) and the 15.5 % fall in motor trades (45) and to a lesser extent the 3.8 % fall in retail trade (47) (see Figure 15). Other activities recorded larger falls in turnover, such as -22.7 % for employment services (78), but their lower weight resulted in a smaller impact on the total services turnover index.

Since the second quarter of 2008 the EU-27 services employment index has fallen by 3.6 %, and by the last quarter of 2009 was still on a downward path. Figure 16 shows that wholesale trade (Division 46) again had the greatest influence on this overall index, but only slightly more than administrative and support services (Section N). Other activities that contributed significantly to the fall in services employment over this period included retail trade (Division 47), accommodation and food services (Section I) and professional, scientific and technical activities (M).

### **EU-27 services turnover: influenced most by United Kingdom and Germany**

Between the second quarters of 2008 and 2009 the United Kingdom and Germany had the largest downward impact on the EU-27's services turnover index despite falls slightly below the EU-27 average. Among the Member States with above average falls in services turnover, Spain had the largest impact, followed by Belgium and Denmark. In Spain at least five services divisions recorded a fall in turnover in excess of 20 %, most notably employment activities (-30.6 %), motor trades (-28.8 %) and wholesale trade (-22.8 %).

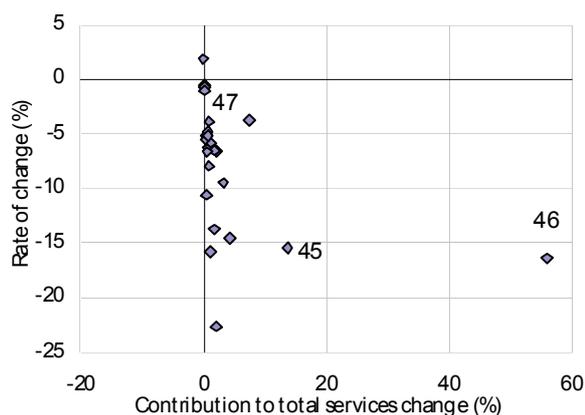
**Figure 14: Turnover index change Q2-2008 to Q2-2009, services (1)**



(1) Belgium, Q2-2008 to Q1-2009; Italy, Q2-2008 to Q4-2008.

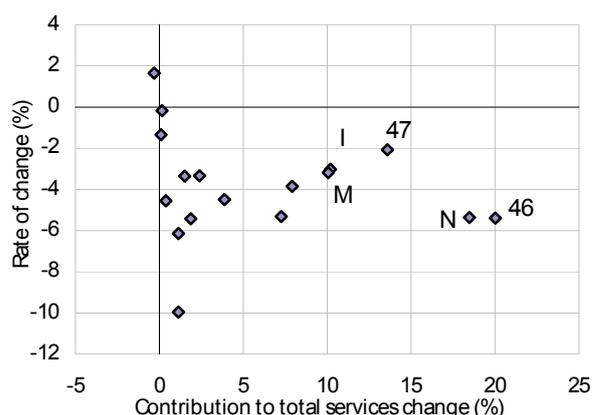
Source: Eurostat ([sts\\_trtu\\_q](#))

**Figure 15: Turnover index change Q2-2008 to Q2-2009, EU-27**



Source: Eurostat ([sts\\_setu\\_q](#), [sts\\_trtu\\_q](#))

**Figure 16: Employment index rate of change Q2-2008 to Q4-2009, EU-27**



Source: Eurostat ([sts\\_selb\\_q](#), [sts\\_trlb\\_q](#))

## METHODOLOGICAL NOTES

### Geographical coverage

The EU-27 aggregate is consistently composed of the 27 countries that at the time of writing compose the European Union. Data for the EU-27 include estimates: Eurostat estimate EU-27 indices when enough Member States' data are available to account for at least 60 % of the total weight of all EU-27 Member States.

### Definitions

The definitions of short-term statistics variables are laid down in Commission Regulation (EC) No1503/2006 of 28 September 2006 <sup>(1)</sup>.

The **production index** is a business cycle indicator showing the output and activity of industry or construction. The index provides a measure of the volume trend in value added at factor cost over a given reference period.

**Turnover** comprises the totals invoiced by the observation unit during the reference period, corresponding to market sales of goods or services supplied to third parties.

The **producer (or output) price index** for an activity measures the average price development of all goods and related services resulting from an activity. The producer price index should take into account quality changes in products or services.

**Employment** is defined as the total number of persons who work in the observation unit (including working proprietors or partners and unpaid family workers), as well as persons who work outside the unit, but who belong to it and are paid by it (for example, sales representatives).

### Forms

The basic form of an index is its gross (also known as unadjusted) form. To facilitate analysis most indices

have been adjusted to account for seasonal effects. Seasonal adjustment aims to take account of the impact of the known seasonal factors that have been observed in the past. All series presented here are seasonally adjusted except for output price indices which are presented in their gross form.

### Classifications

These indices are compiled using NACE Rev. 2. The classification by the main industrial groupings (MIGs) <sup>(2)</sup> is based on a regrouping of activities from the Group level of NACE Rev. 2.

Total industry is generally defined as Sections B, C and D and Division 36 of NACE Rev. 2. For the production index the coverage is Sections B, C and D; for the turnover indices the coverage is Sections B and C.

Non-financial services are defined as Sections G, H, I, J and the activities within Sections M and N covered by the STS Regulation.

### Abbreviations

EU-27: European Union of 27 Member States — Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Hungary (HU), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), United Kingdom (UK).

MIG: Main industrial grouping

NACE: Classification of economic activities in the European Community

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<sup>(1)</sup> Official Journal No L 281, of 12 October 2006.

<sup>(2)</sup> Commission Regulation No 656/2007 of 14 June 2007. Official Journal No L 155/3, of 15 June 2007.

## Further information

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Eurostat Website: <http://ec.europa.eu/eurostat>

Data on "Short-term business statistics"

[http://epp.eurostat.ec.europa.eu/portal/page/portal/short\\_term\\_business\\_statistics/data/database](http://epp.eurostat.ec.europa.eu/portal/page/portal/short_term_business_statistics/data/database)

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