

## Short-term business statistics - focus on employment

This publication focuses on employment data from short-term business statistics, and presents the long-term development in the employment index relative to the industrial and construction production indices and the services turnover index. Data is presented for the EU-27 with the analysis focusing on various activities. For industry and construction the analysis is presented for each of the main industrial groupings (MIGs) and at the NACE division level, while for services NACE sections and divisions are shown. Quarterly or annual time series are provided, for five or ten years.

Data with a more detailed activity analysis is available on Eurostat's website, as is monthly data in some cases; a large amount of data for individual countries is also available.

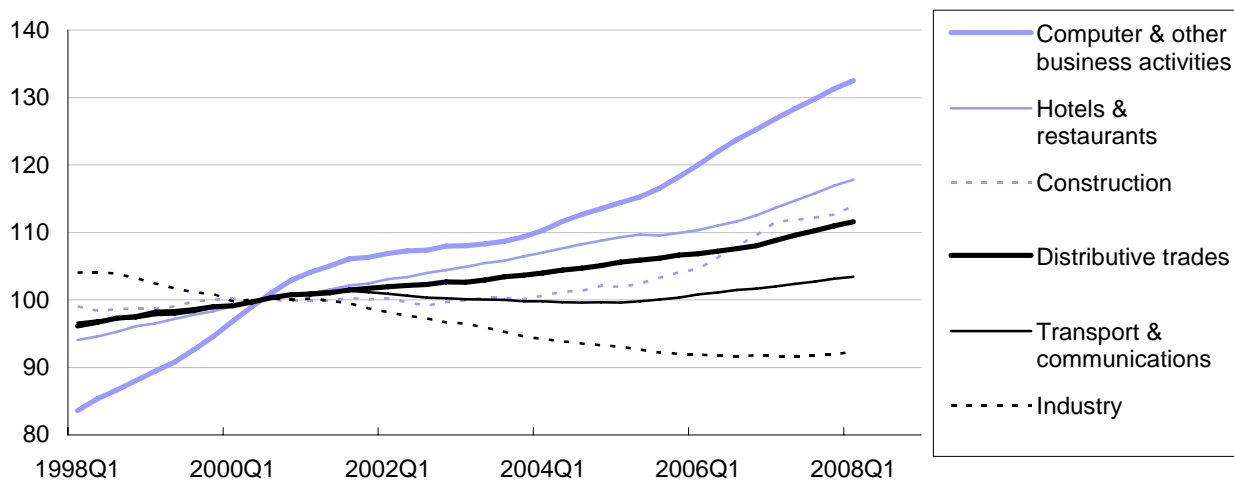
The publication shows that, over the periods analysed, employment fell overall in industry and rose in construction and services: a more detailed analysis identifies which activities went against the general trends, showing

specific industrial activities that recorded employment growth, such as recycling, and the services activities where employment contracted, such as post and telecommunications.

About three fifths (59 %) of employment in the EU-27's non-financial business economy (as covered by STS indicators) was concentrated in non-financial services activities in 2005, the remaining share in industry and construction.

The figure below shows the development of the employment index from 1998 for a selection of broad activities. While the index of employment fell in industry, it was relatively stable in transport and communications. Construction and the other non-financial service activities recorded growth. On average, from year to year, the industrial employment index went down by 1.2 % and the construction employment index increased by 1.4 %. At this level of detail computer and other business activities recorded the strongest growth, an annual average of 4.7 %.

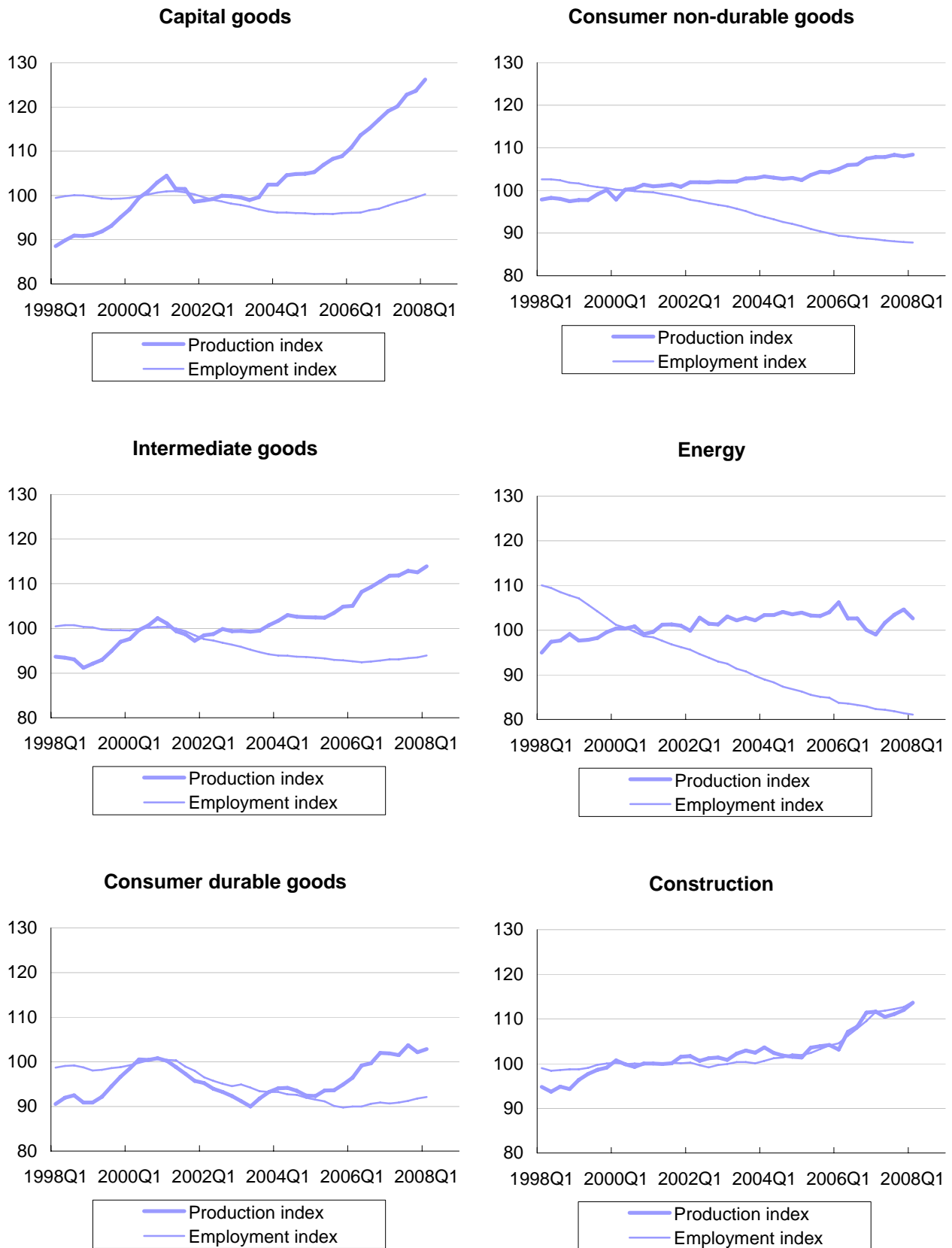
Figure 1: Employment index, seasonally adjusted, EU-27 (2000=100) (1)



(1) Includes Eurostat estimates.

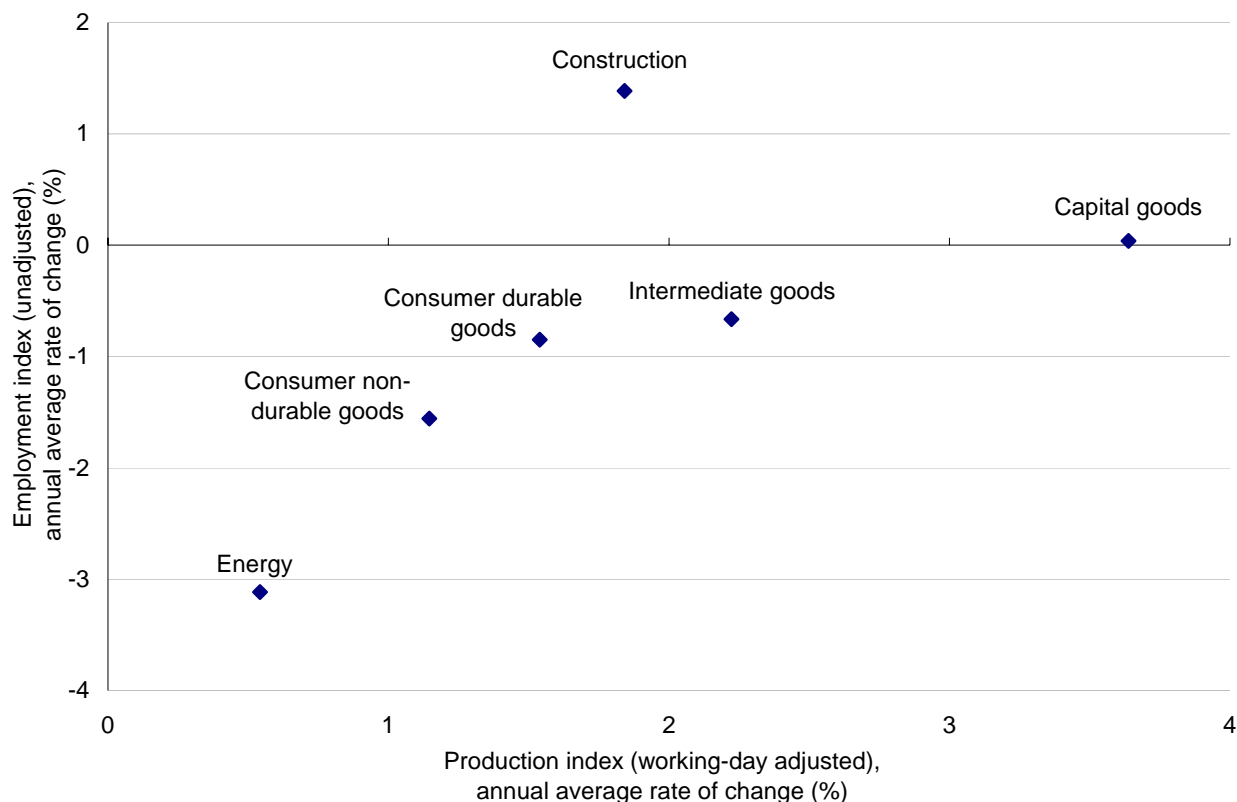
## Industry and construction

Figure 2: Employment and production indices, seasonally adjusted, EU-27 (2000=100) (1)



(1) Includes Eurostat estimates.

**Figure 3: Annual average growth rate from 1997 to 2007, EU-27 (1)**



(1) Includes Eurostat estimates; energy, growth rates from 1998 instead of 1997.

Over the 10-year period from 1998 to the beginning of 2008 the EU-27 recorded a fall in the employment index for most industrial activities. Analysing industry at the level of the five main industrial groupings (first five graphs in Figure 2) all except for capital goods recorded an overall fall during this period. The employment index for capital goods indicated moderate growth from the beginning of 1998 through until the middle of 2001, at which point the index level started to fall slowly for four years, until the third quarter of 2005. Recent growth lifted the employment index such that in the last quarter of 2007 it exceeded the level at the beginning of the series (1998 quarter 1), and by the first quarter of 2008 was less than 1 % below its high in 2001 quarter 2. Some similarities can be seen in the developments for intermediate goods and consumer durable goods, where the index began to decline from a peak at the end of 2000/beginning of 2001, and has only shown growth again in the last two years: however, the index in both of these MIGs fell more strongly than for capital goods and its recent growth has been less substantial. In contrast the remaining MIGs, namely consumer non-durable goods and energy, showed an uninterrupted decline in the employment index, and this was particularly strong for energy.

The development of the employment index for construction was quite different, remaining relatively stable for several years (through until the end of 2003), since when it has reflected a period of sustained growth.

The development of the employment index can be contrasted with that of the production index. Both indices are shown in Figure 2, and the average annual growth over the ten years from 1997 to 2007 is summarised in Figure 3. In contrast to the development of the employment index that was generally negative in industry and positive in construction, all five of the MIGs as well as construction recorded real output growth. Construction aside, MIGs that recorded stronger output growth recorded a lower overall reduction in employment.

An analysis at a more detailed level of activity is shown in Table 1, and this indicates that some industrial activities did record overall employment growth from 1997 to 2007, most notably recycling, metal products, and rubber and plastics manufacturing. The largest falls in the employment index were recorded for a number of extractive activities (coal and lignite, oil and gas, as well as uranium and thorium), for textiles, wearing apparel and leather manufacturing, as well as tobacco manufacturing: all of these activities also recorded a fall in the production index.

**Table 1: Annual average growth rate from 1997 to 2007, EU-27 (1)**

Activities ranked by the annual average growth of the employment index from 1997 to 2007

Activity (NACE Rev. 1.1)		Employment index			Production index
		1997 to 2002	2002 to 2007	1997 to 2007	1997 to 2007
Recycling (2)	37	3.5	5.7	4.6	5.8
Construction	45	0.4	2.4	1.4	1.8
Fabricated metal products	28	0.5	1.1	0.8	2.7
Rubber & plastic products	25	0.9	0.5	0.7	2.4
Motor vehicles, trailers & semi-trailers	34	1.0	-0.1	0.4	4.3
Medical, precision & optical instruments, watches & clocks	33	-0.3	0.8	0.2	3.9
Electrical machinery & apparatus n.e.c.	31	0.3	-0.1	0.1	3.2
Water supply	41	-0.3	-0.2	-0.3	-0.5
Food products & beverages	15	-0.7	-0.3	-0.5	1.6
Wood & wood products	20	-0.3	-0.9	-0.6	2.4
Publishing, printing & reproduction of recorded media	22	0.1	-1.6	-0.8	1.1
Furniture; manufacturing n.e.c.	36	-0.9	-0.8	-0.9	0.8
Machinery & equipment n.e.c.	29	-1.4	-0.4	-0.9	2.8
Other transport equipment	35	-1.7	-0.2	-0.9	2.7
Other non-metallic mineral products	26	-1.2	-1.2	-1.2	1.5
Chemicals & chemical products	24	-1.4	-1.3	-1.4	3.4
Other mining & quarrying	14	-2.4	-0.5	-1.5	2.6
Pulp, paper & paper products	21	-1.4	-2.2	-1.8	1.8
Radio, TV & communication equipment	32	-0.3	-3.4	-1.9	6.0
Basic metals	27	-3.3	-2.0	-2.7	1.1
Office machinery & computers	30	-1.5	-3.9	-2.7	4.1
Coke, refined petroleum products & nuclear fuel	23	-3.4	-2.2	-2.8	0.5
Electricity, gas, steam & hot water supply	40	-3.4	-2.5	-2.9	2.0
Leather & leather products	19	-3.7	-4.9	-4.3	-5.4
Wearing apparel; fur	18	-3.2	-6.1	-4.7	-5.3
Tobacco products	16	-4.6	-4.8	-4.7	-3.6
Mining of uranium & thorium ores	12	-7.3	-2.2	-4.8	:
Extraction of crude petroleum & natural gas	11	-5.3	-4.8	-5.0	-2.7
Textiles	17	-4.4	-5.9	-5.1	-2.8
Mining of coal & lignite	10	-8.9	-5.9	-7.4	-4.9
Mining of metal ores	13	:	-15.1	:	-1.4

(1) Includes Eurostat estimates; Division 11, growth rates from 1998 instead of 1997.

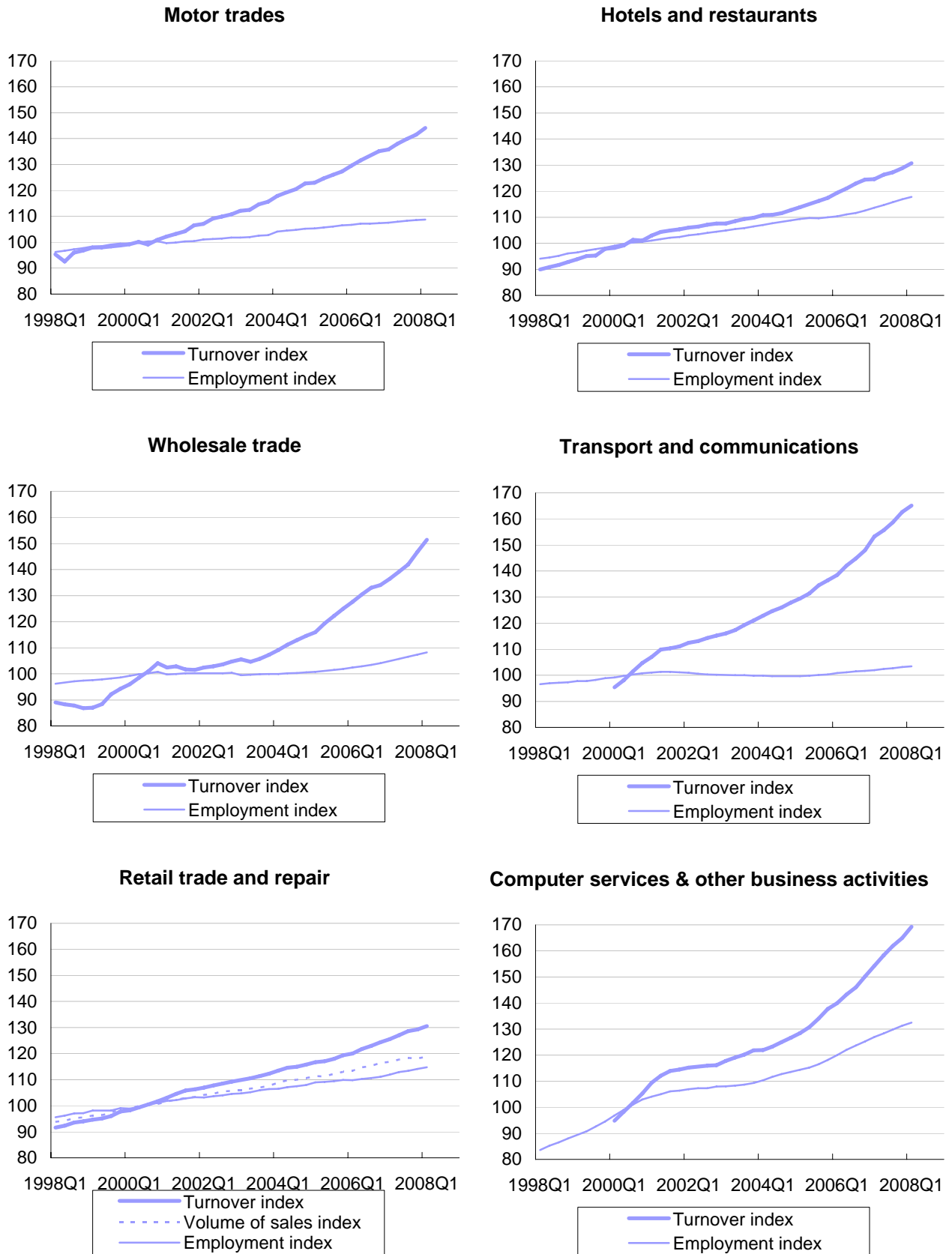
(2) Production index, growth rates from 2000 instead of 1997.

## Services

In contrast to most industrial activities, service activities generally recorded employment growth during the last ten years. Figure 4 shows the employment and turnover indices for the three distributive trades NACE divisions, and the same indices for a more aggregated level for the other services: all of these activities recorded growth in employment and turnover over the ten years shown. The turnover index is expressed here in

current prices and therefore reflects changes in both the quantity and the price of services delivered. The employment growth was weakest in transport and communications where it averaged just 0.7 % per year, and was strongest in computer and other business activities where it reached 4.7 %.

**Figure 4: Employment and turnover indices, seasonally adjusted, EU-27 (2000=100) (1)**



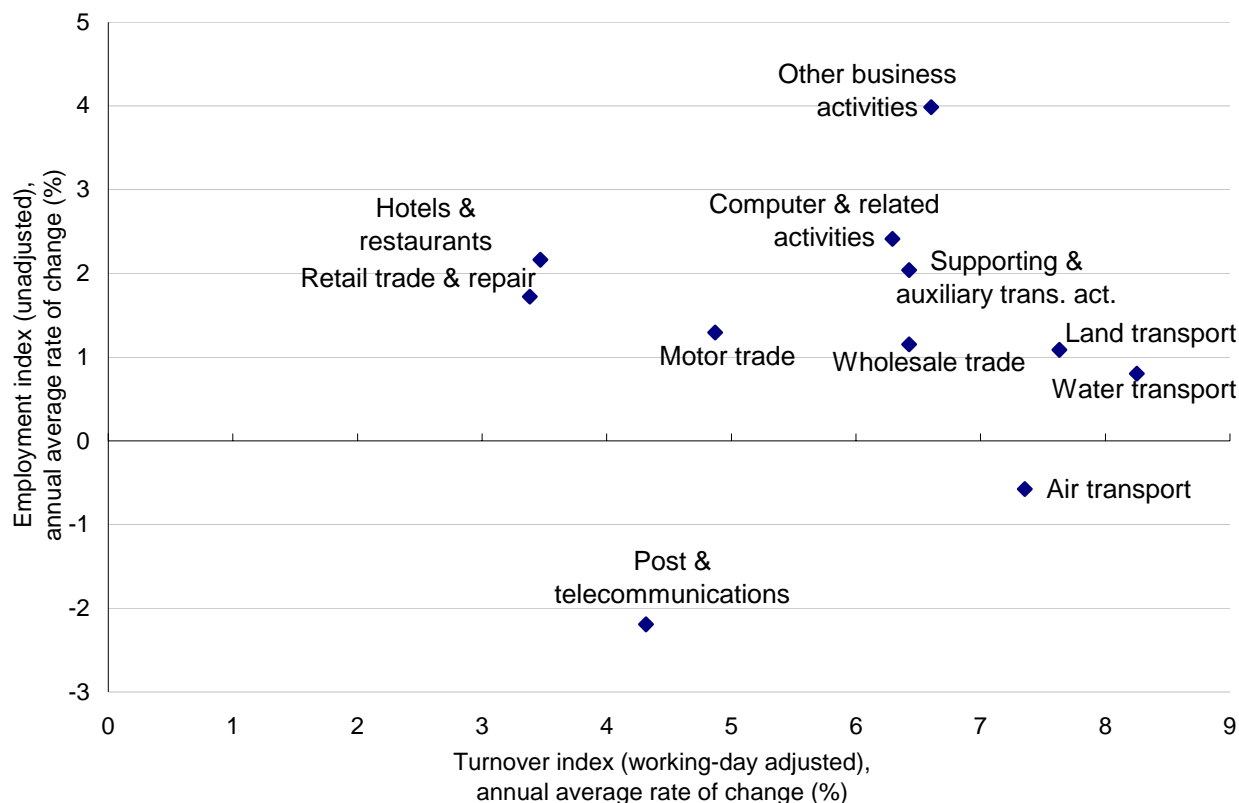
(1) Includes Eurostat estimates.

A more detailed activity analysis is provided in Figure 5 and Table 2 for the five year period from 2002 to 2007. These show that the low employment growth in transport and communications can be attributed in large part to the fall in the employment index in post and telecommunications and a smaller fall in air transport. Although the employment index for water and land transport increased, growth was relatively

subdued compared with other non-financial service activities. Other business activities recorded the highest rate of employment growth.

Unlike in industry, there appears to be little relationship between employment and turnover growth, as water, land, and air transport recorded the highest average rates of turnover growth.

**Figure 5: Annual average growth rate from 2002 to 2007, EU-27 (1)**



(1) Includes Eurostat estimates.

**Table 2: Annual average growth rate from 2002 to 2007, EU-27 (1)**

Activities ranked by the annual average growth of the employment index from 2002 to 2007

Activity (NACE Rev. 1.1)		2002 to 2007	
		Employment index	Turnover index
Other business activities	74	4.0	6.6
Computer and related activities	72	2.4	6.3
Hotels and restaurants	55	2.2	3.5
Supporting and auxiliary transport activities	63	2.0	6.4
Retail trade and repair (2)	52	1.7	3.4
Motor trade	50	1.3	4.9
Wholesale trade	51	1.2	6.4
Land transport	60	1.1	7.6
Water transport	61	0.8	8.3
Air transport	62	-0.6	7.4
Post and telecommunications	64	-2.2	4.3

(1) Includes Eurostat estimates.

(2) Volume of sales (deflated turnover) index, annual average growth rate: 2.3 %.

## METHODOLOGICAL NOTES

The source for all of the data presented in this publication is Eurostat's short-term business statistics (STS).

The legal basis for the STS is Council Regulation No 1165/98 of 19 May 1998 <sup>(1)</sup> concerning short-term statistics and Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 <sup>(2)</sup> amending Council Regulation (EC) No 1165/98.

### Definitions

The definitions of short-term statistics variables are laid down in Commission Regulation (EC) No 1503/2006 of 28 September 2006 <sup>(3)</sup>.

Employment is an important short-term indicator in monitoring the economy. The **employment index** is based on the number of persons employed, defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll. Note that Member States may use an index of (paid) employees to approximate the index of the number of persons employed.

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

The objective of the services **turnover index** is to show the evolution of the market for services. Turnover comprises the totals invoiced by the observation unit during the reference period. This corresponds to market sales of services supplied to third parties. It includes all duties and taxes on the services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover.

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<sup>(1)</sup> [Official Journal No L 162, of 5 June 1998.](#)

<sup>(2)</sup> [Official Journal No L 191, of 22 July 2005.](#)

<sup>(3)</sup> [Official Journal No L 281, of 12 October 2006.](#)

The **volume** measure of the retail trade turnover index is more commonly referred to as the index of the **volume of (retail) sales** and is a short-term indicator for final domestic demand. It is a deflated version of the turnover index.

### Classifications

The classification of activities used in this publication is NACE Rev. 1.1 <sup>(4)</sup>. The classification by the main industrial groupings (MIGs) <sup>(5)</sup> is a specific activity aggregation starting from the Group level of NACE Rev. 1.1.

### Decomposition - forms of indices

The basic form of an index is its gross (also known as unadjusted) form. To facilitate analysis this may be adjusted in a number of ways.

The production, turnover and volume of sales indices in this publication have been adjusted for working day effects, in other words to adjust for the impact of calendar effects (such as weekdays/weekends, official holidays, leap years) on the indices.

These indices and the employment 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. If the national statistical office providing the data does the seasonal adjustment, these series are used. If no seasonally adjusted series are supplied, Eurostat perform the seasonal adjustment.

### Abbreviations and symbols

EU-27	European Union of 27 Member States
STS	Short-term statistics
NACE	statistical classification of economic activities in the European Community
MIG(s)	Main industrial grouping(s)
:	(in tables) not available

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<sup>(4)</sup> *Commission Regulation (EC) No 29/2002 of 19 December 2001. Official Journal No L 6, of 10 January 2002.*

<sup>(5)</sup> *Commission Regulation No 586/2001 of 26 March 2001. Official Journal No L 86, of 27 March 2001.*

## Further information






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Data: [Eurostat Website: http://ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)

Select your theme on the left side of the homepage and then 'Data' from the menu.

Data: [Eurostat website/Industry, trade and services/short-term business statistics](#)

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