

Short-term statistics: the impact of a new base year and new activity classification

During 2009 the activity classification used for short-term statistics (STS) in the EU changed from NACE Rev. 1.1 to NACE Rev. 2, and at the same time the base year weights for the various activities and countries changed from 2000 to 2005. This publication focuses on the combined impact of these changes on the index values.

As a result of the changes the level of the EU-27's industrial production index in December 2008 was lower by 1.4 percentage points. Classification changes in construction appear quite minor, but the changes in weights are substantial, notably in Spain and Germany. These changes lowered the level of the construction production index by around 2.9 percentage points in the EU-27 in the final quarter of 2008. The most complex changes caused by the introduction of NACE Rev. 2 are in services, notably with the establishment of a new Section for information and communication services. As a result of these changes the level of the EU-27's services turnover index in the final quarter of 2008 was lower by 6.6 percentage points.

The change in the STS base year involved:

- recalculating indices to average 100 in 2005 rather than in 2000, and;
- updating the weights used in base-weighted indices to reflect the structure in or around the base year of 2005.

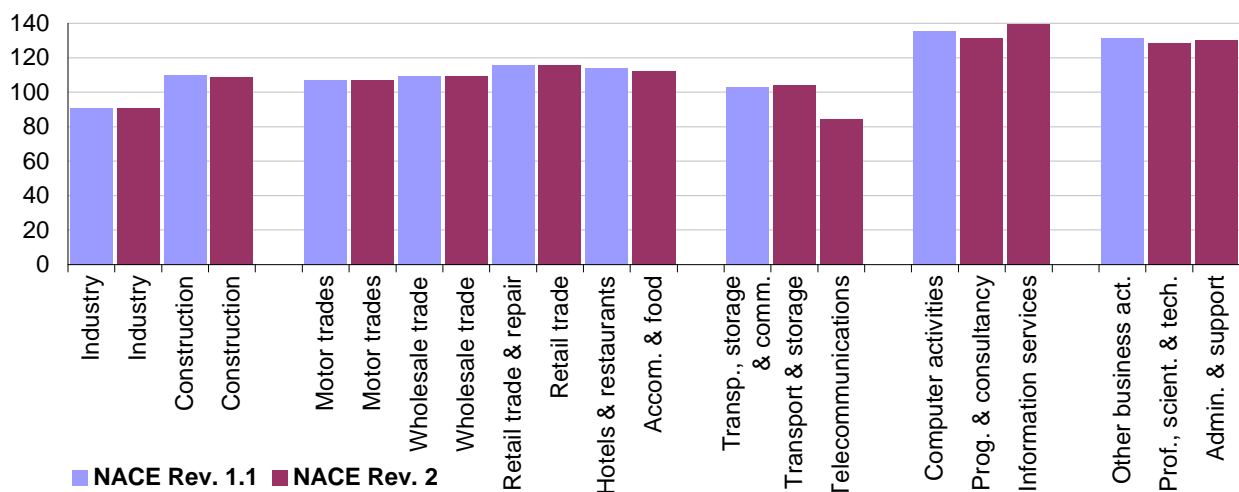
The NACE Rev. 2 classification reflects emerging activities and aims to provide a better picture of the economy. Changes in the index values stem from:

- structural change — changes in weights of activities within activity aggregates;
- structural and exchange rate changes — changes in Member States' weights in the EU;
- coverage change — resulting from the classification change.

Some Member States also used this period of change to introduce methodological changes. For volume indicators, changes may be due to changes in the deflator and/or the basic indicator.

The analysis presented here is based on indices at the end of 2008 which is when indices in NACE Rev. 1.1 stopped being produced: it should be noted that this period was coincidentally a period of economic crisis.

Figure 1: employment index, EU-27, final quarter 2008 (2000=100)



Employment

Figure 1 presents for the final quarter of 2008 (the last period available in NACE Rev. 1.1) a selection of employment indices that, in NACE Rev. 1.1 terms, covered the full range of activities within the scope of EU short-term statistics (STS). For each of the activities the figure also shows the nearest equivalent indices in NACE Rev. 2 terms. Because of the major structural changes in the classification, particularly the development of a new Section for information and communication services, it is difficult in some cases to align the two versions.

The level of the employment indices for industry, construction and each of the distributive trades Divisions are quite similar, the combined impact of classification and weights changes influencing the index level by 0.5 % or less. The index for accommodation and food services in NACE Rev. 2 is 1.2 % lower than the equivalent hotel and restaurants index in NACE Rev. 1.1, basically due to changes in weights, as there were no changes in the activity coverage of this Section.

As can be seen from Figure 1 the telecommunications index was particularly low, and as a result the

index for the NACE Rev. 2 transport and storage Section was higher than the index for the NACE Rev. 1.1 transport, storage and communications Section (which included telecommunications, as well as travel agents and tour operators).

Computer related activities under NACE Rev. 1.1 was one Division, but has been split under NACE Rev. 2 into two Divisions: the employment indices for programming and consultancy on one hand and information services on the other hand lie either side of the NACE Rev. 1.1 index value for computer related activities.

In a similar fashion, other business activities under NACE Rev. 1.1 was one Division, but has been split under NACE Rev. 2 into two Sections: the two Sections have similar levels of the employment index, both slightly below the level of the NACE Rev. 1.1 index value for other business activities. This reduced index level reflects a combination of changes in the weights, as well as some of the classification changes, such as the inclusion of travel agents and tour operators in administrative and supporting activities.

Industrial activities

Under NACE Rev. 1.1 the scope of industrial activities changed slightly, notably concerning publishing and recycling.

Moved out of industry
Installation and/or assembly of self-manufactured buildings or builders' ware; moved to construction
Publishing; moved to services
Recycling and the treatment/handling of some wastes; out of scope
Repair of household equipment (such as musical instruments & lawnmowers); out of scope
Moved into industry
Activities related to blending/bottling of wine and spirits, or packaging of fresh produce; from agriculture or services
In some cases, production of olive oil and wine from own grown produce

There were also structural changes within industry. Under NACE Rev. 1.1 the repair and maintenance of industrial equipment had typically been classified alongside the production of the same capital goods, whereas under NACE Rev. 2 such repair activities are regrouped in a specific Division with the installation of machinery and equipment. Equally, all mining support services have been re-

grouped within a single Division under NACE Rev. 2, regardless of whether they concern the extraction of energy producing materials or not.

Some activities changed their level within the classification. This impacts STS in terms of the availability of indices which are often only required at the Division (2-digit) level or higher, and the composition of main industrial groupings (MIGs) which are composed of Groups (3-digit level).

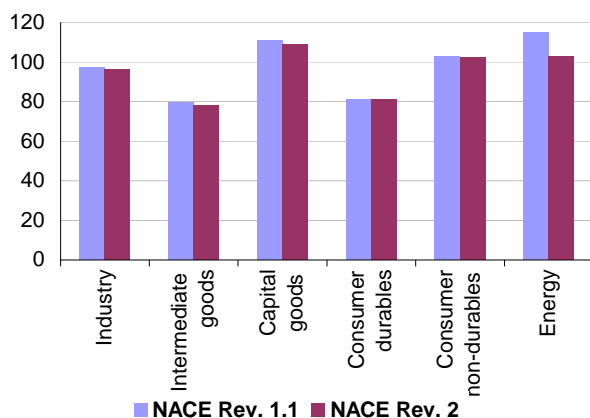
Examples of changes in the MIGs include: the manufacture of knitted and crocheted fabrics moved from intermediate goods to consumer non-durables; the manufacture of electric motors, generators and transformers moved from capital goods to intermediate goods; watches and clocks moved from consumer durables to capital goods; processing of nuclear fuel moved from energy to intermediate goods.

Examples of activities that have been promoted to the Division level (and for which separate indices are now available) include, the separation of food and beverages from each other, the separation of pharmaceutical products from other chemical products, and the separation of furniture from other manufacturing.

Industry and MIGs

Figure 2 shows the impact of classification and weights changes on the EU-27 production index. These changes have impacted particularly heavily on the energy MIG whose December 2008 production index level was 12.1 percentage points lower under NACE Rev. 2 with 2005 weights than under NACE Rev. 1.1 with 2000 weights: the main cause of this is a classification change. The overall impact for industry is a December 2008 index level for the EU-27 that is lower by 1.4 percentage points.

Figure 2: production index, working day adjusted, EU-27, December 2008 (2000=100)



Scope changes

The exclusion of publishing and recycling are the two major changes to the scope within industry, and as can be seen from Figures 3 and 4 their development has been different from the overall evolution of industrial production for many years: publishing output fell in contrast to the steady overall industrial expansion (at least until the recent economic crisis), while recycling was one of the few industrial Divisions that recorded employment increases during recent years, in contrast to the steady decline in industrial employment.

Figure 3: production index, seasonally adjusted, EU-27 (2000=100)

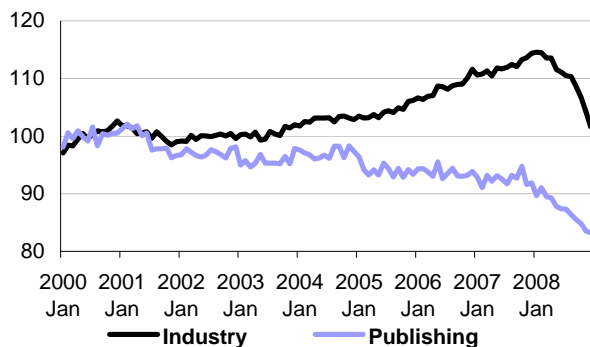
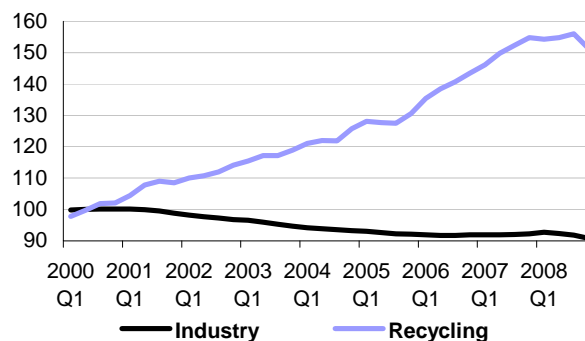


Figure 4: employment index, seasonally adjusted, EU-27 (2000=100)



Weight changes

Table 1 shows the latest monthly and quarterly index values for the production and employment indices for the Member States whose weight changes between 2000 and 2005 have had the greatest impact on the EU-27 indices.

The September 2009 production index level for the EU-27 is 2.1 percentage points lower with 2005 weights for the United Kingdom than with 2000 weights (caused mainly by changes in the exchange rate between the euro and the pound sterling), while the change in French weights causes the index to be 0.9 percentage points lower. In contrast, the increase in the Polish weights resulted in the EU-27 index being 1.1 % higher with the 2005 weights. Overall, the weights change for the production index added 0.8 percentage points to the level of the EU-27 index in September 2009.

In contrast, the change in weights for the employment index resulted in the index level for the EU-27 being 0.3 percentage points lower. Again the change in the weights for the United Kingdom had the biggest downward impact on the index, while changes in the weights for Greece and Spain both lead to the EU-27 index level being 0.3 percentage points higher.

Table 1: change in industry weights

	Index value (2005=100)	Share in EU-27 (%)		Impact on EU-27 index	
		Old weight	New weight		
Production index 2009 Sep.	UK	88.3	16.6	14.2	-2.1
	FR	94.3	13.4	12.5	-0.9
	IT	89.5	13.2	12.5	-0.5
	DE	100.9	24.9	25.6	0.6
	CZ	130.9	1.0	1.5	0.7
	ES	87.2	6.5	7.4	0.8
	PL	127.7	2.5	3.4	1.1
Employment index 2009 Q2	UK	86.9	10.1	9.0	-0.9
	NL	99.4	2.9	2.4	-0.4
	PT	88.6	2.5	2.1	-0.3
	EL	94.9	0.9	1.2	0.3
	ES	85.0	6.8	7.2	0.3

Construction

The transition to NACE Rev. 2 has changed the scope of construction only slightly, and the impact of these changes may be negligible in some countries.

Moved out of construction
Installation of fire and burglar alarm systems with (remote) monitoring; moved to services
Moved into construction
Installation and/or assembly of self-manufactured buildings or builders' ware; moved from industry
Construction project development; moved from services

There were other classification changes within construction, but at a more detailed level than that used for STS. In NACE Rev. 2 building and civil engineering are separately identified at the Division level, alongside a Division for specialised construction activities.

Figure 5 shows the different index levels for the EU-27 at the end of 2008 with the indices based on NACE Rev. 2 and 2005 weights lower than those based on NACE Rev. 1.1 and 2000 weights, notably for the production indices. These differences are mainly the result of changes in the weights — see Table 2. The EU-27 production index level for second quarter of 2009 is 11.4 percentage points lower with 2005 weights for Germany than with 2000 weights, while the change in weights for Spain and the United Kingdom cause the index to be higher. Overall, the weights change for the construction production index lowered the level of the EU-27 index in the second quarter of 2009 by around 6 percentage points. The change in weights for the employment index resulted in the index

level for the EU-27 being 1.3 percentage points lower. Again the change in German and Spanish weights had the biggest impact on the index.

Figure 5: indices of construction production (working day adjusted) and employment (gross), EU-27, final quarter 2008 (2000=100)

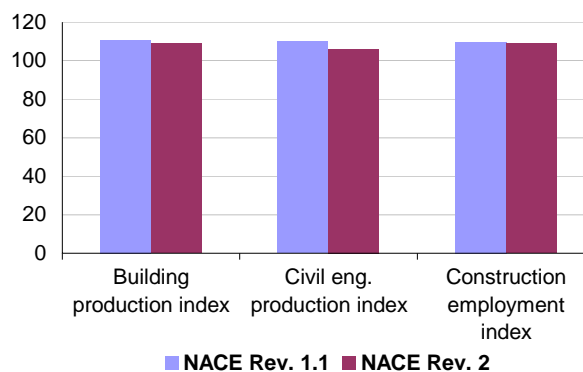


Table 2: change in construction weights, second quarter 2009

	2009 Q2 Index value (2005=100)	Share in EU-27 (%)		Impact on EU-27 index	
		Old weight	New weight		
Production index (1)	DE	118.5	20.7	11.0	-11.4
	NL	117.0	6.0	5.0	-1.2
	FR	106.0	13.5	12.5	-1.1
	UK	89.5	17.5	21.2	3.3
	ES	72.0	11.0	18.8	5.6
Employment (1)	DE	96.4	17.7	10.4	-7.1
	PL	122.6	6.7	5.0	-2.1
	NL	101.4	4.1	2.8	-1.3
	IT	100.0	12.1	13.2	1.1
	IE	100.0	0.4	1.8	1.4
	UK	107.1	9.2	10.7	1.6
	ES	81.5	13.9	19.9	4.9

(1) The United Kingdom, 2009 Q1.

Retail trade and services

Services saw some of the most complex changes to the activity classification, making approximations between NACE Rev. 1.1 and NACE Rev. 2 difficult, although the scope did not change greatly.

Moved out of services
Some wholesale services related to blending/bottling of wine and spirits, or packaging of fresh produce; moved to industry
Activities of head offices and holding companies
Repair services of household goods, accounting and computing machinery; out of scope
Some activities related to training and forest management consultancy; moved to agriculture and out of scope

Moved into services
Publishing; moved from industry
Installation of PCs and peripherals; moved from industry
Off-site liquefaction & regasification of natural gas for land/water transport; moved from industry
Installation of fire & burglar alarm systems with (remote) monitoring; moved from construction
Some activities related to landscaping, business & facilities management; from out of scope
Audiovisual (film, video, radio and television) services, ticketing and casting agencies, and news agency activities; from out of scope

Some of the most complex changes to the activity classification took place within services, and this makes approximations between NACE Rev. 1.1 and NACE Rev. 2 difficult. Many of the changes impact on the availability of STS indicators which are often defined at the Division level (2-digit).

- An information and communication services Section was created: telecommunications was separated from postal activities and promoted and split across two Divisions; audiovisual services moved into scope and were promoted and split across two Divisions, one of which was combined with part of telecommunications; computer activities were separated from other business activities and split across two Divisions, with news agencies moving into scope in one of these Divisions; publishing moved from industry and was promoted to a Division.
- The retail sale of automotive fuel moved from the motor trades Division under NACE Rev. 1.1 to the retail trade Division under NACE Rev. 2.

- The Division for other business activities was split into ten NACE Rev. 2 Divisions forming the bulk of two Sections.
- Travel agencies and tour operators were separated from other supporting transport services and promoted to a NACE Rev. 2 Division in administrative and support services; ticketing agencies were added to this Division.

Figure 6 shows the impact of classification and weight changes on the EU-27 turnover index for selected services. These changes have impacted particularly heavily on computer activities. In the last quarter of 2008 the turnover index for the computer programming and consultancy activities Division was 12.6 percentage points below the NACE Rev. 1.1 computer and related activities Division, while the index for information services was 20.6 percentage points lower. In fact, the indices for all of the NACE Rev. 2 activities shown in Figure 6 were lower than the indices for the nearest equivalent NACE Rev. 1.1 headings.

Figure 6: selected services activities, index of turnover, working day adjusted, EU-27, final quarter 2008 (2000=100)

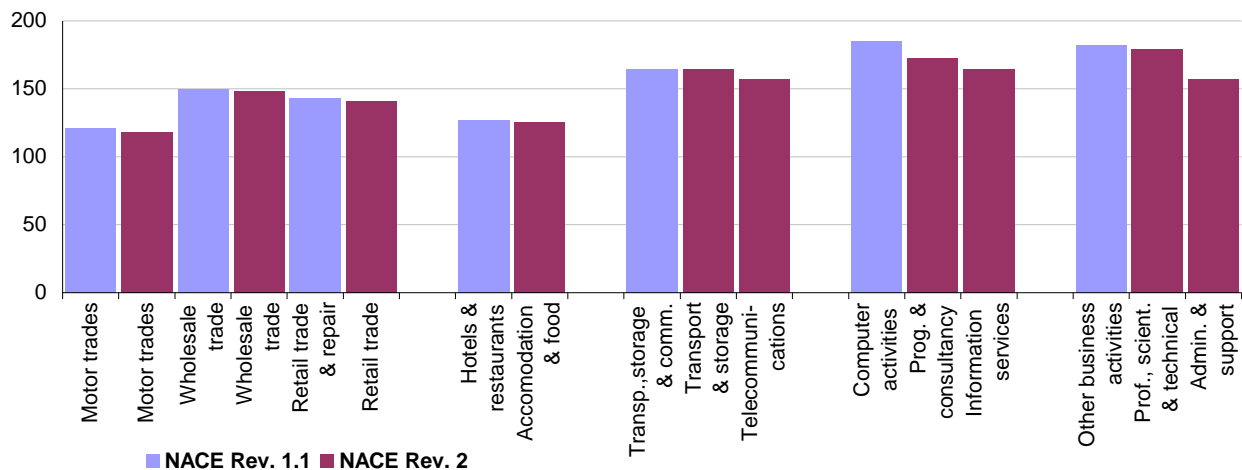


Figure 7: services turnover index, EU-27 (2000=100)

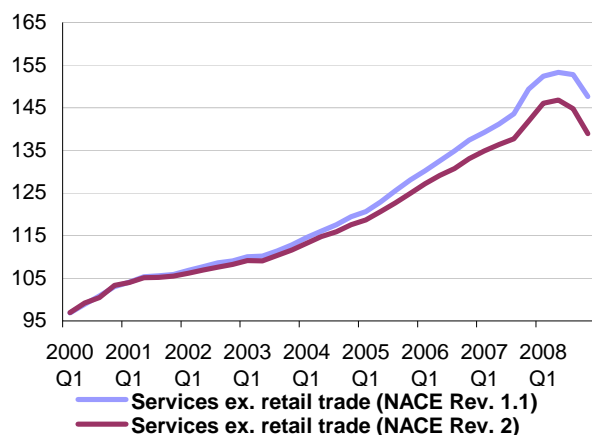
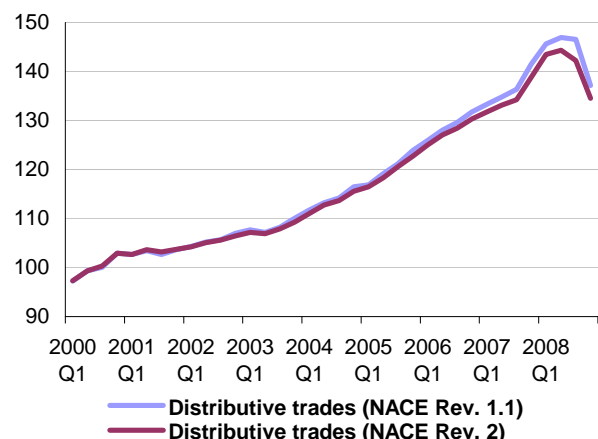


Figure 8: distributive trades' turnover index, EU-27 (2000=100)



Figures 7 to 12 show the development since 2000 for most of these activities. Figure 10 shows how the initially faster growth in telecommunications was reflected in a higher index level for the NACE Rev. 1.1 Section for transport, storage and communications than for the NACE Rev. 2 Section for transport and storage until the end of 2007.

Table 3 shows the Member States whose weight changes from 2000 to 2005 have had the biggest impact on turnover indices in distributive trades as of the second quarter of 2009. The weight changes for motor trades reflect in part the removal of automotive fuel retailing from this Division: this scope change will have increased the relative weight in 2005 of countries with small automotive fuel retailing activities.

Overall, the turnover index for the EU-27 in the second quarter of 2009 was higher for both wholesale and retail trade using 2005 weights rather than 2000 weights, with the largest shift in the index level being a 0.6 percentage point rise for retail trade.

Table 3: change in turnover weights

		2009 Q2 Index value (2005=100)	Share in EU-27 (%)		Impact on EU-27 index
			Old weight	New weight	
Motor trades	UK	89.1	19.9	18.2	-1.6
	DK	82.0	4.6	2.9	-1.4
	DE	107.1	16.0	14.9	-1.2
	NL	90.1	6.2	5.1	-1.0
	ES	65.0	7.5	8.8	0.8
	FR	102.9	12.3	15.2	3.0
Whole- sale trade	DE	99.0	18.6	16.3	-2.3
	FR	100.7	15.4	16.5	1.1
	EL	124.2	0.7	1.8	1.3
Retail trade	DE	98.9	19.5	16.9	-2.6
	UK	108.7	19.6	17.7	-2.2
	FR	102.6	17.2	16.4	-0.9
	ES	99.9	8.1	9.0	0.9
	IT	102.3	11.7	12.9	1.2
	EL	110.3	0.7	2.3	1.7

Figure 9: hotels and restaurants turnover index, EU-27 (2000=100)

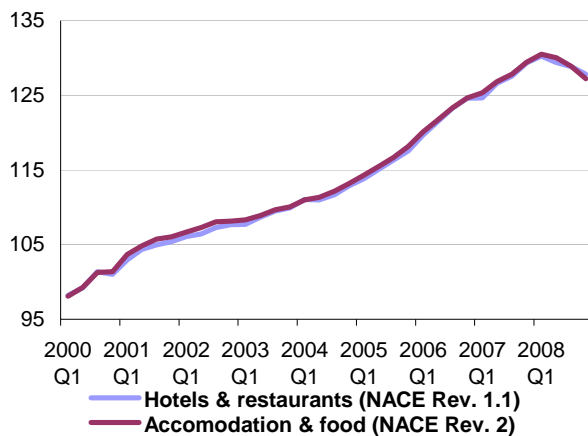


Figure 11: computer activities turnover index, EU-27 (2000=100)

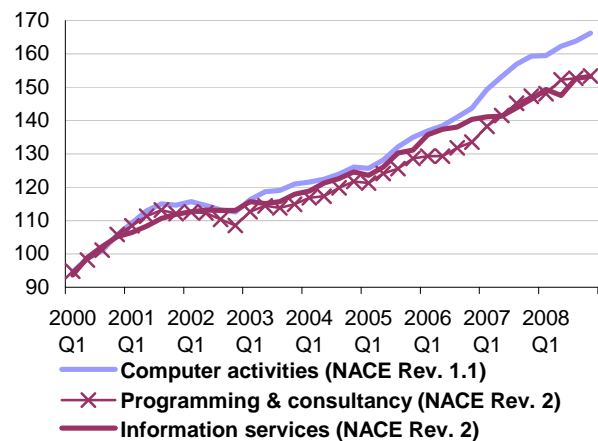


Figure 10: transport, storage & communications turnover index, EU-27 (2000=100)

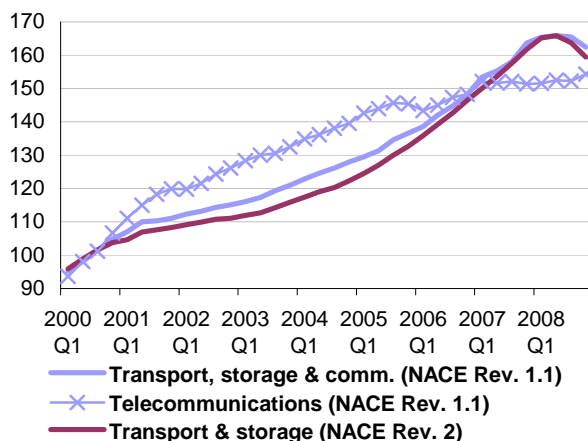
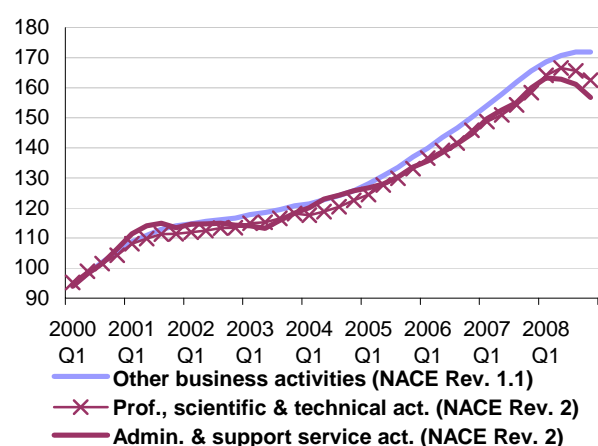


Figure 12: other business activities turnover index, EU-27 (2000=100)



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 ⁽¹⁾ concerning short-term statistics amended most recently by Regulation (EC) [No 1158/2005](#) of the European Parliament and of the Council ⁽²⁾.

Definitions

The **employment index** shows the evolution of employment. Employment is defined as 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, delivery personnel, repair and maintenance teams). Member States can use the number of employees as an approximation of the number of persons employed.

The **production index** shows the output and activity of industry and construction. 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 and other similar deductible taxes directly linked to turnover.

Classifications

In this publication two classifications of activities are used, namely NACE Rev. 1.1 ⁽³⁾ and NACE Rev. 2 ⁽⁴⁾. The classification by the main industrial groupings (MIGs) is based on a regrouping of activities from the Group level of these classifications, and so are slightly different in terms of NACE Rev. 1.1 ⁽⁵⁾ or NACE Rev. 2 ⁽⁶⁾.

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

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

⁽³⁾ Commission Regulation (EC) [No 29/2002](#) of 19 December 2001 amending Council Regulation (EEC) [No 3037/90](#). Official Journal No L 6/3 of 10 January 2002.

⁽⁴⁾ Regulation (EC) [No 1893/2006](#) of the European Parliament and of the Council of 20 December 2006. Official Journal No L 393/1 of 30 December 2006.

⁽⁵⁾ Commission Regulation (EC) [No 586/2001](#) of 26 March 2001. Official Journal No L 86/11, of 27 March 2001.

⁽⁶⁾ Commission Regulation (EC) [No 656/2007](#) of 14 June 2007. Official Journal No L 155/3, of 15 June 2007.

NACE has been modernised by introducing new detail to reflect different forms of production and emerging activities; the detail of the classification has substantially increased in service-producing activities. NACE Rev. 2 provides a better picture of the overall economy and facilitates international comparisons.

NACE Rev. 2 level	Code structure
Section	1 letter
Division	2 digit
Group	3 digit
Class	4 digit

Base year

STS indices are traditionally presented with reference to a fixed year such that the average value of the indices in that year=100. In conjunction with the change to NACE Rev. 2, the base year for STS moved from 2000 to 2005. This publication uses data from both classifications and so to ease comparison all indices in this publication have been simply rescaled to 2000=100.

The change in base year also involves updating the weights used in base-weighted indices to reflect the structure in or around the new base year. The weights used, as well as other methodological information, are available in the library section of the STS CIRCA group, accessible from the STS methodology page:

http://epp.eurostat.ec.europa.eu/portal/page/portal/s hort_term_business_statistics/methodology

Decomposition – forms of indices

The basic form of an index is its gross (also known as unadjusted) form or working day adjusted in the case of production indices. To facilitate analysis 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.

Abbreviations

EU-27	European Union; 27 Member States		
CZ	Czech Republic	FR	France
DK	Denmark	IT	Italy
DE	Germany	NL	Netherlands
EI	Ireland	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	UK	United Kingdom

For more information: Ulrich.Eidmann@ec.europa.eu

Further information

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

More information about "short-term business statistics"

http://epp.eurostat.ec.europa.eu/portal/page/portal/short_term_business_statistics/introduction

Journalists can contact the media support service:

Bech Building Office A4/125 L - 2920 Luxembourg

Tel. (352) 4301 33408 Fax (352) 4301 35349

E-mail: eurostat-mediasupport@ec.europa.eu

European Statistical Data Support:

With the members of the 'European statistical system', Eurostat has set up a network of support centres in nearly all Member States and in some EFTA countries.

Their mission is to provide help and guidance to Internet users of European statistical data.

Contact details for this support network can be found on our Internet site:

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

A list of worldwide sales outlets is available at the:

Publications Office of the European Union.

2, rue Mercier

L - 2985 Luxembourg

URL: <http://publications.europa.eu>

E-mail: info@publications.europa.eu

Manuscript completed on: 14.01.2010

Data extracted on: 03.12.2009

ISSN 1977-0316

Catalogue number: KS-SF-10-002-EN-N

© European Union, 2010