

# Specialisation in manufacturing in the EU

## Statistics in focus

### INDUSTRY, TRADE AND SERVICES

41/2004

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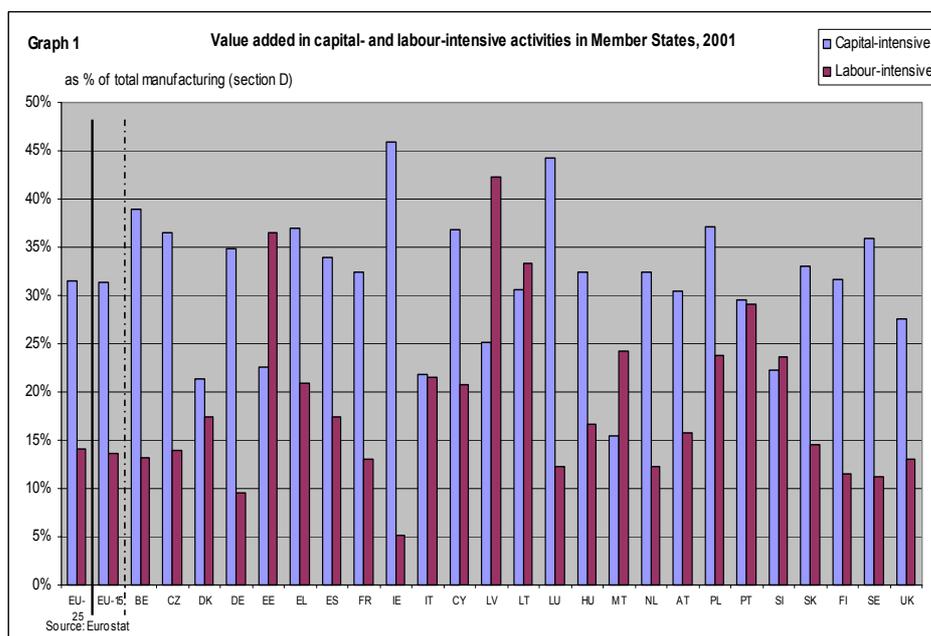
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In 2001, more than 2.1 million enterprises were active in manufacturing<sup>1</sup> in the EU<sup>2</sup>. These enterprises generated a value-added of about EUR 1.5 billion, a turnover of EUR 5.8 billion and employed altogether 34 million persons. Preliminary data for 2002 indicate that the number of persons employed for enterprises within this sector of activity fell slightly to 33 million whereas turnover observed a reduction (in current prices) to EUR 5.6 billion. This publication zooms in on the structure<sup>3</sup> of the enterprises active in manufacturing, focusing on (relative) specialisation of economies.

Manufacturing activities can be grouped into capital-intensive, labour-intensive and other activities<sup>4</sup>. 31% of the value-added in manufacturing in the EU has in 2001 been generated by capital-intensive industries whereas 14% by labour-intensive industries; 15 Member States observed for that year – expressed in value-added – relatively more capital-intensive activities compared with this EU percentage, of them were 5 new Member States (Poland, Cyprus, the Czech Republic, Slovakia and Hungary). 15 Member States can also be qualified as having relatively more labour-intensive industries than the EU as a whole; 9 of these can be found among the new Member States (**Graph 1**).



It is possible for economies to be qualified as both (relatively) more capital- and labour-intensive than the EU: in terms of value-added, in 6 countries (including 4 new Member States) the share of capital-intensive activities as well as that of labour-intensive activities exceeded that of the EU; only one country (United Kingdom) observed lower shares than the EU for both capital- and labour-intensive industries.



Manuscript completed on: 12.07.2004  
ISSN 1561-4840  
Catalogue number: KS-NP-04-041-EN-2  
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<sup>1</sup> Manufacturing covers section D of NACE Rev. 1.  
<sup>2</sup> Within this publication the EU comprises the 25 countries belonging to the EU as from May, 1<sup>st</sup> 2004.  
<sup>3</sup> Source: Eurostat. See also the methodological notes.  
<sup>4</sup> See methodological notes.

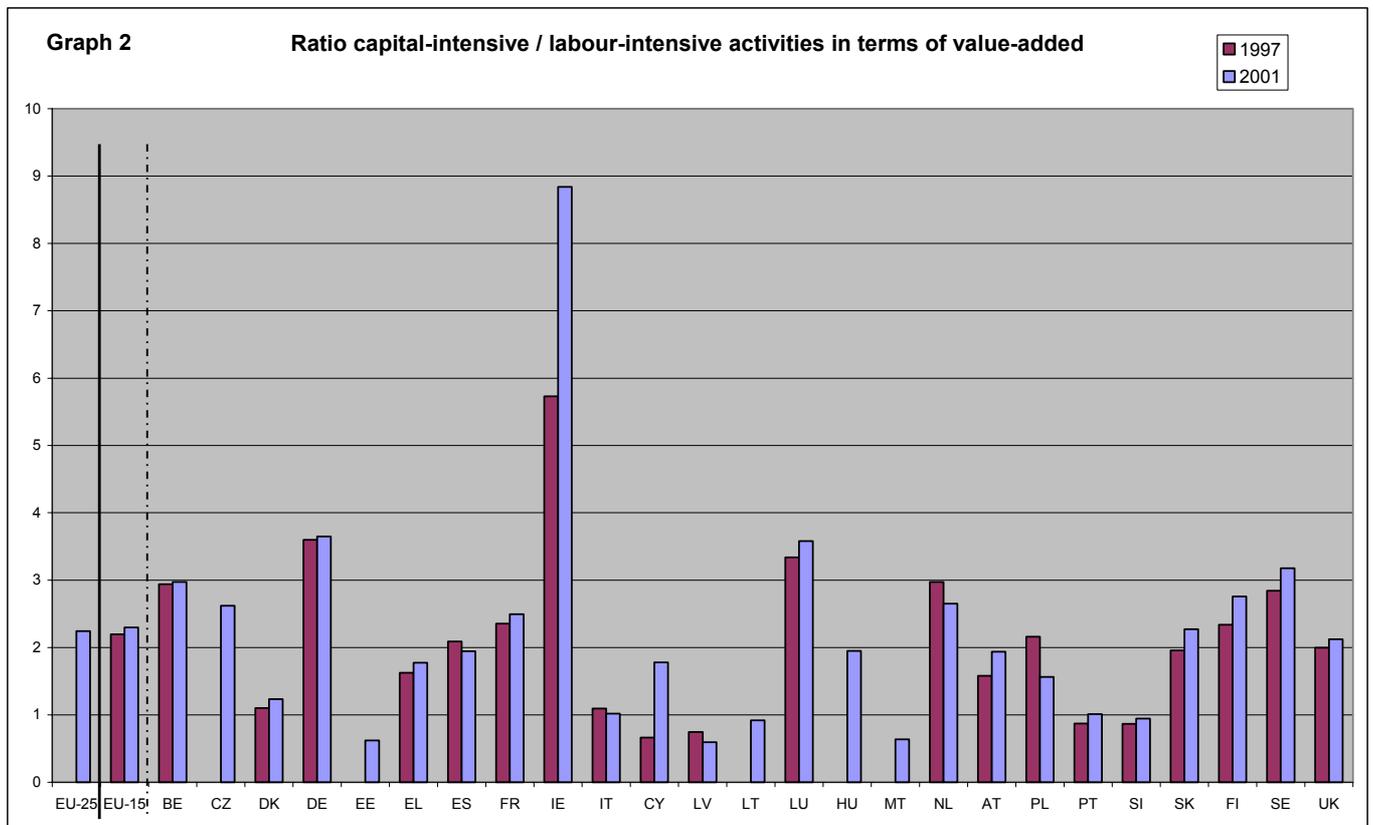
## Strong evolution towards capital-intensive activities in Ireland and Cyprus

**Graph 2** shows for the 25 Member States the relative importance of capital-intensive compared to labour-intensive activities. Ireland clearly shows an exceptional score for this ratio: in the Irish manufacturing sector capital-intensive activities generated in 2001 almost 9 times the value-added of labour-intensive activities. For the EU as a whole, this was in 2001 only 2.2 times. In 5 Member States (Slovenia, Lithuania, Malta, Estonia and Latvia) value-added in labour-intensive activities exceeded value-added in capital-intensive activities. Besides Ireland, also Germany, Luxembourg and Sweden presented capital-intensive activities at least 3 times more important in size than their labour-intensive activities. Only 2 of the 10 new Member States (Czech Republic and Slovakia) observed in 2001 a ratio exceeding that of the EU.

Although data for 1997 are not available for all countries, some interesting evolutions can be detected: Cyprus and Ireland showed an important shift towards relatively more capital-intensive activities. For Cyprus this was caused by a doubling of the share of capital-intensive activities in the manufacturing sector between 1997 and 2001 whereas for Ireland an important decrease of the share of labour-intensive activities could be observed. Based on 1997 data, Cyprus could still be

qualified as more labour-intensive; in 2001 however, the manufacturing sector of that country was more capital-intensive. Five Member States showed a tendency away from capital-intensive activities; in particular, this is the case for Poland, caused by an increase of the share of labour-intensive activities.

Another way of regrouping manufacturing activities is by the relative level of the technology used by these manufacturing activities (see methodological notes). **Table 1** shows that only 13% of the EU value-added comes from high-technology industries whereas 32% stems from low-technology; in terms of persons employed, almost 4 out of 10 are still working in the low-technology against only 1 in 10 in the high-tech sector. The top-three countries "specialised" in high-tech – compared to the EU in 2001 – were Ireland, Finland and Malta; in the last two countries, "Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1 32)" alone represented about 22% of the value-added within the manufacturing sector. The largest shares (in value-added as well as in persons employed) in low-technology industries can be found in 3 of the new Member States (Cyprus, Latvia and Lithuania).



**Table 1: Shares of value-added and persons employed respectively by level of technology as part (%) of total manufacturing per country, 2001**

	High-technology*		Medium-high-technology*		Medium-low-technology*		Low-technology*	
	Value-added	Persons employed	Value-added	Persons employed	Value-added	Persons employed	Value-added	Persons employed
EU-25	12.6	9.1	31.0	26.7	24.2	25.0	32.1	39.1
EU-15	12.9	9.7	31.4	27.5	24.2	25.2	31.5	37.6
BE	13.0	8.1	30.8	26.4	25.6	26.7	30.5	38.7
CZ	7.3	6.3	34.1	28.8	30.2	28.0	28.4	36.9
DK	15.3	9.4	24.4	24.4	20.8	22.3	39.5	44.0
DE	10.5	9.4	43.8	38.6	23.3	24.0	22.4	27.9
EE	6.1	6.7	13.2	9.7	19.8	16.5	60.9	67.1
EL	6.3	5.6	12.3	12.9	38.2	26.1	43.2	55.4
ES	7.0	4.7	25.4	21.2	30.8	29.3	36.9	44.7
FR	17.5	13.0	27.8	24.7	23.5	25.2	31.1	37.0
IE	27.1	26.1	37.5	18.4	5.7	14.5	29.7	41.0
IT	9.6	7.1	26.6	23.8	28.8	27.7	34.9	41.3
CY	4.0	2.6	8.3	8.0	25.4	21.0	62.4	68.4
LV	2.5	2.8	8.6	10.3	15.6	12.7	73.3	74.2
LT	8.0	5.4	10.2	9.2	18.4	14.8	63.4	70.6
LU	3.3	5.0	12.6	14.4	57.4	52.3	26.8	28.3
HU	15.9	10.6	30.0	24.1	22.1	20.7	32.0	44.6
MT	28.9	15.2	8.5	7.3	18.8	27.5	43.8	50.0
NL	9.8	10.5	25.8	22.5	24.2	24.5	40.2	42.4
AT	10.5	8.9	27.6	25.1	28.7	26.6	33.1	39.3
PL	7.1	5.0	23.5	21.4	21.6	25.0	47.8	48.6
PT	6.2	3.6	18.1	13.5	25.6	21.0	50.1	62.0
SI	13.4	8.6	23.7	22.6	26.1	26.0	36.8	42.8
SK	5.3	5.3	29.4	29.0	35.5	25.8	29.8	39.9
FI	25.6	13.3	19.3	22.7	19.5	24.3	35.6	39.7
SE	12.1	14.1	34.4	31.9	20.7	22.1	32.8	31.9
UK	16.7	12.6	24.0	24.2	21.8	23.6	37.5	39.5

\* See methodological notes.

### Large shares within manufacturing sector concentrated in one division for Cyprus

Looking at a more detailed level of activity break-down – the 23 divisions of the NACE Rev. 1 classification – 2001 data show that some countries rely more<sup>5</sup> on one single sector of activities than others. On EU level the largest share of value-added within total manufacturing was generated by “Manufacture of food products and beverages (NACE Rev. 1, division 15)” (11%). For Ireland however, 37% of value-added is “concentrated”

in the sector of “Manufacture of chemicals and chemical products (24)”. Cyprus and Greece have relatively large shares in “Manufacture of food products and beverages (15)”. Similar observations can be made when these shares are studied in terms of persons employed. For the case of Ireland however, only 10% of the persons employed are active in the sector with the largest share of value-added (**Table 2**).

**Table 2: Five countries/activities with the largest shares (%) within the manufacturing sector of that country, 2001**

Sector		Share	Sector		Share
<i>In terms of value-added</i>			<i>In terms of persons employed</i>		
IE	Manufacture of chemicals and chemical products (NACE Rev. 1, division 24)	37	CY	Manufacture of food products and beverages (NACE Rev. 1, division 15)	31
CY	Manufacture of food products and beverages (NACE Rev. 1, division 15)	31	EL	Manufacture of food products and beverages (NACE Rev. 1, division 15)	22
MT	Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32)	22	IE	Manufacture of food products and beverages (NACE Rev. 1, division 15)	20
FI	Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32)	22	LV	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	20
BE	Manufacture of chemicals and chemical products (NACE Rev. 1, division 24)	20	DK	Manufacture of food products and beverages (NACE Rev. 1, division 15)	18
EU-25	Manufacture of food products and beverages (NACE Rev. 1, division 15)	11	EU-25	Manufacture of food products and beverages (NACE Rev. 1, division 15)	13

Note: The share is calculated as the part of each sector/division within the manufacturing sector of this country, respectively of the EU-25. Countries/activities with large shares for which data are confidential have not been included in this table.

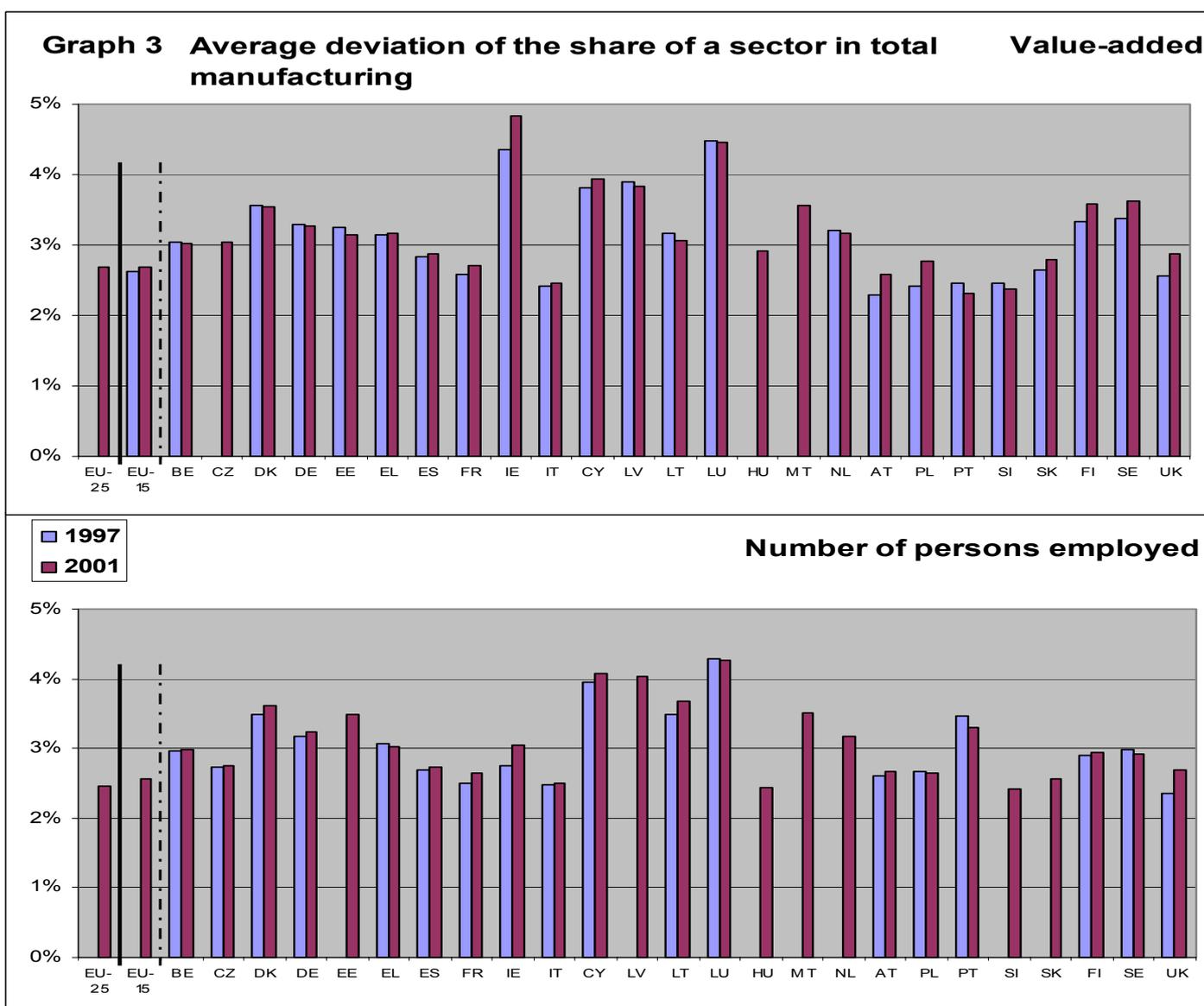
<sup>5</sup> Only countries for which data are available and not confidential are taken into consideration.

## Average deviation: Ireland more and more “specialised”

**Graph 3** summarizes the degree of variability of each country within the manufacturing sector by means of the average deviation of the share of each division of activity in the total national manufacturing sector. The higher the average deviation, the more “specialised” the country is. In 2001, only the manufacturing sectors of Portugal, Slovenia, Italy and Austria were in terms of value-added less specialised than the EU manufacturing sector. Expressed in number of persons employed, this is only the case for Hungary and Slovenia. Whereas based on 2001 data expressed in value-added, the manufacturing sector of Ireland (Portugal) is the most (least) “varied” of the 25 Member States, in terms of the number of persons employed, the manufacturing sector of Luxembourg (Slovenia) is the most (least) specialised. In 1997 – among the countries for which data are available and expressed by the

average deviation – Luxembourg had also in terms of value-added the most specialised manufacturing sector. Measured by this average deviation in terms of value-added, 13 Member States evolved towards a more specialised manufacturing sector of which in particular Ireland, Austria, Poland, Finland, Sweden and the United Kingdom; 9 Member States were in 2001 less specialised than in 1997; the most outspoken country of this group is Portugal. Data at this level of detail do not present evidence of a (strong) relation between the size of the economy or the manufacturing sector of a country and its degree of specialisation.

It should be noted however that the level of this average deviation and thus subsequently also the ranking of the countries depends on the level of detail of the data used.



## Germany contributing most to EU total value-added for most divisions

As could be expected, Germany, France, the United Kingdom and Italy are found – at the division level of the activity breakdown (NACE Rev. 1 2-digit level) – to be the countries contributing most<sup>6</sup> to the total value-added of the EU. Germany does not belong to the top-2 countries contributing to the EU value-added for “Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1 division 18)” and “Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (19)”; for all other 21 divisions of the manufacturing sector, Germany however contributes most or second-most. France can be found for 7 divisions among the two countries

contribution most to the total value-added of the EU whereas for the United Kingdom this is 10 times out of the 23 divisions and for Italy 8 times (Table 3).

Table 3 also shows which two divisions for each Member State contribute most<sup>7</sup> to the total value-added for that division on EU level. For Germany, the highest contribution came from “Manufacture of motor vehicles, trailers and semi-trailers (34)” with 47% whereas for Malta it is “Manufacture of radio, television and communication equipment and apparatus (32)” with 0.4% of the EU total.

**Table 3: Top-2 countries contributing to EU-25 value-added per NACE division**

Top-2 countries contributing to EU-25 value-added per NACE division			Top-2 NACE divisions per country contributing to EU-25 value-added			2001
NACE Rev. 1 division	Country	Share (%) of EU-25 value-added in division	Country	NACE Rev. 1 division	Share (%) of EU-25 value-added in division	
Manufacture of food products and beverages (NACE Rev. 1, division 15)	DE	18.5	BE	Manufacture of chemicals and chemical products (NACE Rev. 1, division 24) Recycling (NACE Rev. 1, division 37)	5.6	
	UK	17.3			5.3	
Manufacture of tobacco products (NACE Rev. 1, division 16)	DE	21.5	CZ	Manufacture of other non-metallic mineral products (NACE Rev. 1, division 26) Manufacture of basic metals (NACE Rev. 1, division 27)	1.8	
	UK	18.9			1.6	
Manufacture of textiles (NACE Rev. 1, division 17)	IT	29.0	DK	Manufacture of furniture; manufacturing n.e.c. (NACE Rev. 1, division 36) Manufacture of tobacco products (NACE Rev. 1, division 16)	2.8	
	DE	14.0			2.7	
Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	IT	32.0	DE	Manufacture of motor vehicles, trailers and semi-trailers (NACE Rev. 1, division 34) Manufacture of electrical machinery and apparatus n.e.c. (NACE Rev. 1, division 31)	47.1	
	FR	12.7			39.0	
Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Rev. 1, division 19)	IT	45.2	EE	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20) Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	0.4	
	FR	11.7			0.3	
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	DE	20.4	EL	Manufacture of coke, refined petroleum products and nuclear fuel (NACE Rev. 1, division 23) Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	3.9	
	IT	15.2			1.5	
Manufacture of pulp, paper and paper products (NACE Rev. 1, division 21)	DE	20.7	ES	Manufacture of other non-metallic mineral products (NACE Rev. 1, division 26) Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Rev. 1, division 19)	13.1	
	UK	12.5			10.1	
Publishing, printing and reproduction of recorded media (NACE Rev. 1, division 22)	UK	26.5	FR	Recycling (NACE Rev. 1, division 37) Manufacture of office machinery and computers (NACE Rev. 1, division 30)	25.3	
	DE	21.5			21.7	
Manufacture of coke, refined petroleum products and nuclear fuel (NACE Rev. 1, division 23)	DE	24.3	IE	Manufacture of office machinery and computers (NACE Rev. 1, division 30) Manufacture of chemicals and chemical products (NACE Rev. 1, division 24)	11.3	
	UK	17.1			7.6	
Manufacture of chemicals and chemical products (NACE Rev. 1, division 24)	DE	24.9	IT	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Rev. 1, division 19) Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	45.2	
	FR	15.3			32.0	
Manufacture of rubber and plastic products (NACE Rev. 1, division 25)	DE	27.0	CY	Manufacture of tobacco products (NACE Rev. 1, division 16) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	0.2	
	UK	16.8			0.2	
Manufacture of other non-metallic mineral products (NACE Rev. 1, division 26)	DE	20.9	LV	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20) Manufacture of textiles (NACE Rev. 1, division 17)	1.0	
	IT	16.4			0.3	
Manufacture of basic metals (NACE Rev. 1, division 27)	DE	29.2	LT	Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	0.5	
	IT	12.8			0.3	
Manufacture of fabricated metal products, except machinery and equipment (NACE Rev. 1, division 28)	DE	27.5	LU	Manufacture of basic metals (NACE Rev. 1, division 27) Manufacture of rubber and plastic products (NACE Rev. 1, division 25)	0.8	
	IT	18.5			0.5	
Manufacture of machinery and equipment n.e.c. (NACE Rev. 1, division 29)	DE	37.4	HU	Manufacture of coke, refined petroleum products and nuclear fuel (NACE Rev. 1, division 23) Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32)	1.5	
	IT	17.2			1.5	
Manufacture of office machinery and computers (NACE Rev. 1, division 30)	DE	22.3	MT	Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32) Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	0.4	
	UK	22.0			0.2	
Manufacture of electrical machinery and apparatus n.e.c. (NACE Rev. 1, division 31)	DE	39.0	NL	Publishing, printing and reproduction of recorded media (NACE Rev. 1, division 22) Manufacture of coke, refined petroleum products and nuclear fuel (NACE Rev. 1, division 23)	5.8	
	FR	12.0			5.4	
Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32)	FR	17.6	AT	Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	5.1	
	DE	17.4			4.9	
Manufacture of medical, precision and optical instruments, watches and clocks (NACE Rev. 1, division 33)	DE	32.7	PL	Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	5.5	
	UK	17.7			5.4	
Manufacture of motor vehicles, trailers and semi-trailers (NACE Rev. 1, division 34)	DE	47.1	PT	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Rev. 1, division 19) Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18)	5.4	
	FR	14.3			4.6	
Manufacture of other transport equipment (NACE Rev. 1, division 35)	UK	31.1	SI	Manufacture of wearing apparel; dressing and dyeing of fur (NACE Rev. 1, division 18) Manufacture of textiles (NACE Rev. 1, division 17)	0.6	
	DE	20.7			0.5	
Manufacture of furniture; manufacturing n.e.c. (NACE Rev. 1, division 36)	DE	21.3	SK	Manufacture of basic metals (NACE Rev. 1, division 27) Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Rev. 1, division 19)	0.9	
	UK	17.7			0.6	
Recycling (NACE Rev. 1, division 37)	FR	25.3	FI	Manufacture of radio, television and communication equipment and apparatus (NACE Rev. 1, division 32) Manufacture of pulp, paper and paper products (NACE Rev. 1, division 21)	14.5	
	DE	19.9			10.6	
				SE	Manufacture of pulp, paper and paper products (NACE Rev. 1, division 21)	9.4
					Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Rev. 1, division 20)	5.4
				UK	Manufacture of other transport equipment (NACE Rev. 1, division 35)	31.1
					Publishing, printing and reproduction of recorded media (NACE Rev. 1, division 22)	26.5

Note: Countries/activities with large shares for which data are confidential have not been included in this table.

<sup>6</sup> Only countries for which data are available and not confidential are taken into consideration.

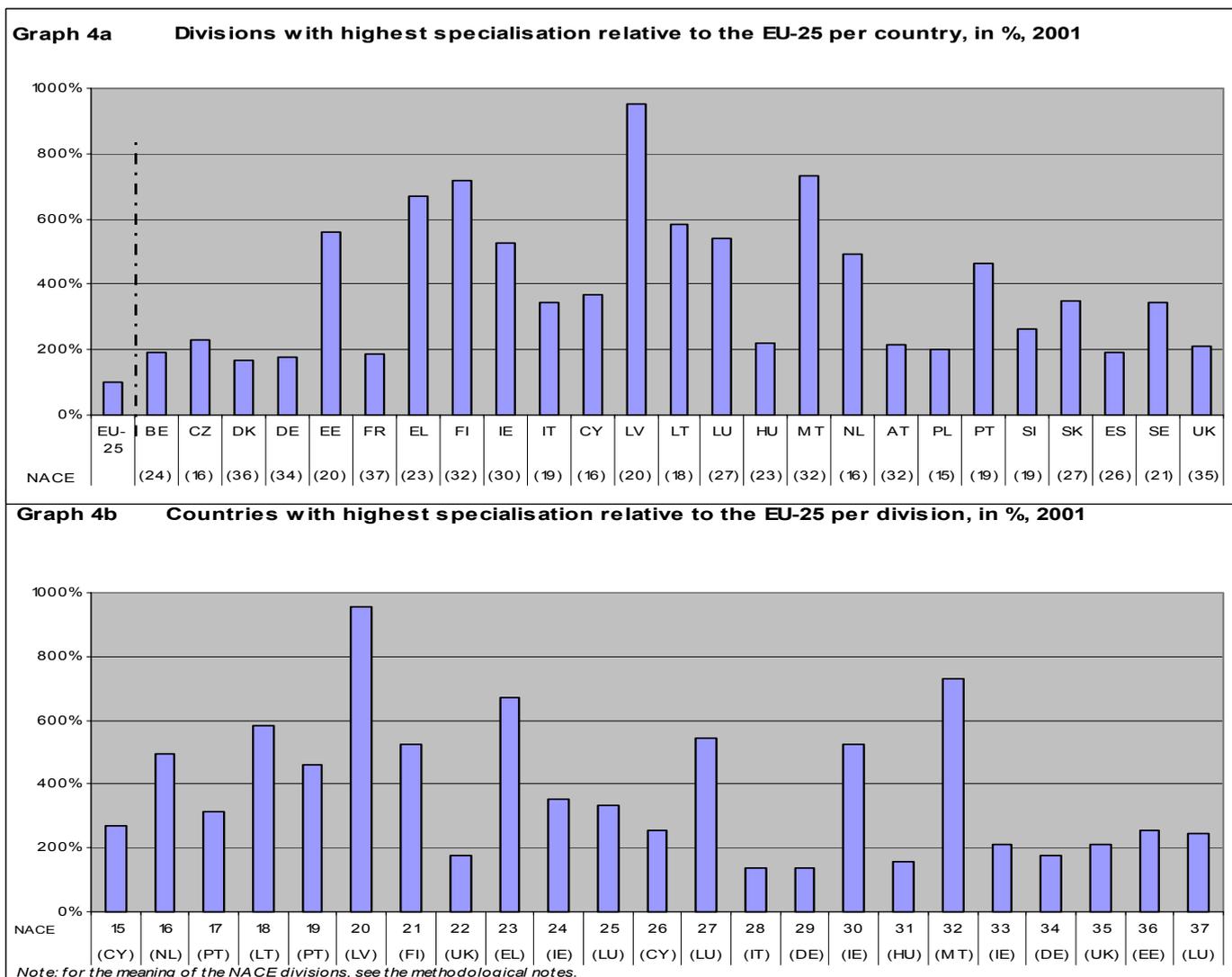
<sup>7</sup> Only activities for which data are available and not confidential are taken into consideration.

## Specialisation relative to the EU

Indicators discussed earlier in this article focussed already in different ways on specialisation aspects within the manufacturing industry of a country. By taking the size and structure, determined on the basis of the distribution of the value-added by activities on the level of NACE divisions, of the EU manufacturing as a reference, country and activity specific specialisation degrees relative to the EU can be produced (see also the methodological notes) that permit better comparisons between countries with different structures of their manufacturing sector. **Graph 4a** shows for example that Latvia was (relative to the EU) in 2001 strongly specialised in “Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (20)”; in other words: for division 20 Latvia would generate more than 9 times the value-added of the EU in case the size of the Latvian manufacturing sector were to be identical to that of the EU. The highest (relative to the EU) degree of specialisation for Denmark

is observed in “Manufacture of furniture; manufacturing n.e.c. (36)”; this country would exceed the EU value-added (under the assumption of equal sizes of the manufacturing sector of DK and EU) by 67% for this division of activities.

**Graph 4b** shows - per division of activity - which country is (relatively) the most specialised in that sector of activity: in the sector “Manufacture of food products and beverages (15)” Cyprus is the most specialised country, exceeding the EU by 169% - always assuming the two economies (CY and EU) having the same size as regards the manufacturing sector. In “Manufacture of radio, television and communication equipment and apparatus (32)”, Malta would have realized more than 7 times the EU value-added. This sector is also the one in which Malta is mostly specialised (see again Graph 4a).



### Symbols

“c” confidential

### Definitions

Within the context of this article, some **aggregates** of activities have been used; these aggregates are:

**Capital-intensive industries**, these consist of:

- 15.5 Manufacture of dairy products
- 15.6 Manufacture of grain mill products, starches and starch products
- 15.7 Manufacture of prepared animal feeds
- 15.8 Manufacture of other food products
- 15.9 Manufacture of beverages
- 21.1 Manufacture of pulp, paper and paperboard
- 24.1 Manufacture of basic chemicals
- 24.3 Manufacturing of paints, varnishes and similar coatings, printing ink and mastics
- 24.5 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
- 24.7 Manufacture of man-made fibres
- 25.2 Manufacture of plastic products
- 26.1 Manufacture of glass and glass products
- 26.5 Manufacture of cement, lime and plaster
- 26.7 Cutting, shaping and finishing of stone
- 27.1 Manufacture of basic iron and steel and of ferro-alloys (ECSC)
- 24.4 Manufacture of basic precious and non-ferrous metals
- 37.4 Manufacture of motor vehicles, trailers and semi-trailers

**Labour-intensive industries**, these consist of:

- 15.1 Production, processing and preserving of meat and meat products
- 15.2 Processing and preserving of fish and fish products
- 15.3 Processing and preserving of fruit and vegetables
- 17 Manufacture of textiles
- 18 Manufacture of wearing apparel; dressing and dyeing of fur
- 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
- 20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- 26.2 Manufacture of non-refractory ceramic goods other than for construction purposes; manufacture of refractory ceramic products
- 28.2 Manufacture of tanks, reservoirs and containers of metal; manufacture of central heating radiators and boilers
- 29.3 Manufacture of agricultural and forestry machinery
- 29.7 Manufacture of domestic appliances n.e.c.
- 33.5 Manufacture of watches and clocks
- 34.2 Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
- 35.1 Building and repairing of ships and boats
- 35.2 Manufacture of railway and tramway locomotives and rolling stock
- 35.4 Manufacture of motorcycles and bicycles
- 36.4 Manufacture of sports goods
- 36.5 Manufacture of games and toys

**High-technology industries**, these consist of:

- 24.4 Manufacturing of pharmaceuticals, medicinal chemicals and botanical products
- 30 Manufacture of office machinery and computers
- 32 Manufacturing of radio, television and communication equipment and apparatus
- 33 Manuf. of medical, precision and optical instruments, watches and clocks
- 35.3 Manufacture of aircraft and spacecraft

**Medium-high-technology industries**, these consist of:

- 24.1 Manufacture of basic chemicals
- 24.2 Manufacture of pesticides and other agro-chemical products
- 24.3 Manuf. of paints, varnishes and similar coatings, printing ink and mastics
- 24.5 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
- 24.6 Manufacture of other chemical products
- 24.7 Manufacture of man-made fibres
- 29 Manufacture of machinery and equipment n.e.c.
- 31 Manufacture of electrical machinery and apparatus n.e.c.
- 34 Manufacture of motor vehicles, trailers and semi-trailers
- 35.2 Manufacture of railway and tramway locomotives and rolling stock
- 35.4 Manufacture of motorcycles and bicycles
- 35.5 Manufacture of other transport equipment n.e.c.

**Medium-low-technology industries**, these consist of:

- 23 Manufacture of coke, refined petroleum products and nuclear fuel
- 25 Manufacture of rubber and plastic products
- 26 Manufacture of other non-metallic mineral products
- 27 Manufacture of basic metals
- 28 Manuf. of fabricated metal products, except machinery and equipment
- 35.1 Building and repairing of ships and boats

**Low-technology industries**, these consist of:

- 15 Manufacture of food products and beverages
- 16 Manufacture of tobacco products
- 17 Manufacture of textiles
- 18 Manufacture of wearing apparel; dressing and dyeing of fur
- 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
- 20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- 21 Manufacture of pulp, paper and paper products
- 22 Publishing, printing and reproduction of recorded media
- 36 Manufacture of furniture; manufacturing n.e.c.
- 37 Recycling

**Number of persons employed:** defined as the total number of persons who work in the observation unit (including working proprietors and 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. It includes seasonal workers, apprentices and home workers who are on the pay-roll. The observation unit for aggregating data is the enterprise, which is defined as 'the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources'.

**Value-added:** Value-added is measured at factor cost; it is the gross income from operating activities after adjusting for operating subsidies and indirect taxes (including value-added tax).

**Specialisation relative to the EU:** this measure describes whether a country is more (>100%) or less (<100%) specialised in certain activities than the EU. In formula:

$$100 \cdot \frac{x_a^i}{\sum_a x_a^i} \bigg/ \frac{x_a^{EU}}{\sum_a x_a^{EU}}$$

where  $x_a^i$  is the value of an indicator (value-added, number of persons employed, ...) in country  $i$  in activity  $a$  and  $x_a^{EU}$  the value of that same indicator in activity  $a$  for the EU.

**Average deviation:** is calculated as the average of the absolute deviations of data points from their mean. It is a measure of the variability in a data set. High values indicate a high degree of variability. In formula:

$$\frac{1}{n} \sum |x - \bar{x}|$$

### Estimations made

Due to the fact that some data were not (yet) available, estimations have been made by Eurostat for the missing data in order to be able to calculate aggregates on the level of EU. In most cases data of the last available year have been used. For Slovenia, the number of persons employed is estimated on the basis of the number of employees. For Greece, data include only enterprises with 10 or more persons employed. Given the size of the economies for which these "estimates" have been made, the impact is assumed to be very limited on the quality of the aggregates. However, for the individual countries for which data are partially or totally estimated, reliability and thus comparability is questionable.

### Sources

Structural Business Statistics (SBS): collected in the framework of Council Regulation on structural business statistics (Regulation (EC, EURATOM) No. 58/97 of December 1996). The SBS Regulation governs the transmission of data to Eurostat from the reference year 1995 onwards and, in principle, covers all market activities in sections C to K and M to O of NACE Rev.1, but, in practice, the data available are confined to sections C to K excluding section J. Detailed SBS data are regularly updated and further documented on NewCronos, the major Eurostat dissemination tool. The data used for this article could be found under <http://europa.eu.int/newcronos/suite/display.do?root=theme4/sbs/enterpr&language=en&depth=1&screen=navigation>.

## *Further information:*

### ➤ **Databases**

[EUROSTAT web site/Industry, trade and services/Industry, trade and services - horizontal view/Structural Business Statistics \(Industry, Construction, Trade and Services\)/Annual enterprise statistics](#)

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### **European Statistical Data Support:**

Eurostat set up with the members of the 'European statistical system' a network of support centres, which will exist in nearly all Member States as well as in some EFTA countries.

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ORIGINAL TEXT: English