Statistics in focus

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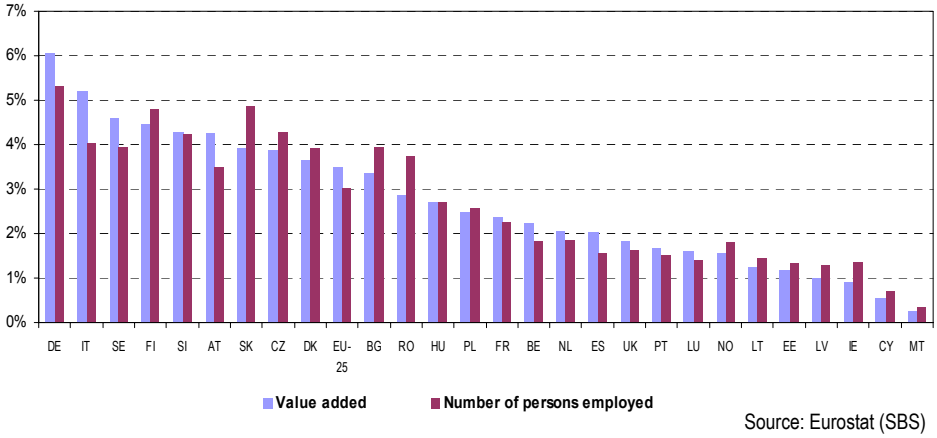
Manufacture of machinery and equipment in Europe

Germany, Italy and Sweden most specialised Member States

In 2002, the manufacture of machinery and equipment (NACE 29) was the third largest manufacturing division in value added terms in the EU-25, after the manufacture of food products and beverages (NACE 15) and that of chemicals and chemical products (NACE 24). The sector generated a value added of EUR 165 billion, which represents 10.8 % of the total value added of the manufacturing industry (NACE section D) and 3.5 % in the total non-financial business economy (NACE sections C to K excluding J).

Manufacture of machinery and equipment was the main activity of 162 256 enterprises in the EU-25 in 2001. Enterprises with this as their main activity generated a turnover of EUR 502 billion and provided jobs to over 3.5 million persons in 2002, corresponding to 10.5 % of the manufacturing industry, and 3.0 % of the total non-financial business economy workforce.

Graph 1: Importance of the manufacture of machinery and equipment (NACE 29) in the non-financial business economy as a whole (NACE C-K, excl. J), in terms of value added and number of persons employed, 2003*



Source: Eurostat (SBS)

* EU-25, IE, LU, HU, MT, PL, SI, FI, SE, NO: 2002 data – BE: 2001 data – EL and CH: not available

Looking at the importance of the sector in the non-financial business economy across the EU (Graph 1), Germany was the most specialised Member State in terms of value added, at 6.1 %, followed by Italy (5.2 %) and Sweden (4.6 %). By contrast, Malta was the least specialised, with the sector accounting for barely 0.3 % of the value added in the non-financial business economy, followed by Cyprus (0.5 %) and Ireland (0.9 %).

The sector's weight in the non-financial business economy was heavier in terms of value added than for employment in 13 of the 24 Member States with data available (i.e. excluding Greece), most of which were the older (EU-15) Member States. This was especially the case in Italy and Spain. By contrast, the opposite was true in most of the new Member States as well as in Bulgaria, Romania and Norway. The weight of employment was proportionally higher notably in Ireland, Malta, Cyprus and Latvia: countries which were also the least specialised.

The manufacture of machinery and equipment (NACE Rev.1.1, Division 29) covers all mechanical machinery and equipment except transport equipment. NACE division 29 is further broken down into the manufacture of: 'machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines' (29.1), referred to here as 'power machinery'; 'other general purpose machinery' (29.2); 'agricultural and forestry machinery' (29.3); 'machine tools' (29.4); 'other special purpose machinery' (29.5); 'weapons and ammunition' (29.6); and 'domestic appliances n.e.c.' (29.7).

Production concentrated in three main groups; productivity highest in 'power machinery'

Table 1: Breakdown of 'machinery and equipment' by NACE groups in the EU-25 and Member State specialisation, 2002

	Total EU value added		Total EU employment		Member State where this sector is	
	(in EUR million)	%	(in 1000s)	%	most important*	least important*
Manufacture of machinery and equipment n.e.c. (29)	**164 712**	***100.0***	**3 527**	***100.0***	**Germany**	**Malta**
Power machinery (29.1)	34 619	*21.0*	665	*18.9*	Belgium	Malta
Other general purpose machinery (29.2)	49 009	*29.8*	1 051	*29.8*	Italy	Malta
Agricultural and forestry machinery (29.3)	8 021	*4.9*	205	*5.8*	Belgium	Luxembourg
Machine-tools (29.4)	14 519	*8.8*	317	*9.0*	Germany	Lithuania
Other special purpose machinery (29.5)	42 358	*25.7*	941	*26.7*	Finland	Cyprus
Weapons and ammunition (29.6)	3 204	*1.9*	70	*2.0*	Belgium	Portugal
Domestic appliances n.e.c. (29.7)	12 808	*7.8*	278	*7.9*	Slovenia	Malta

* most/least important (specialised): based on share of non-financial business economy value added. Source: Eurostat (SBS)

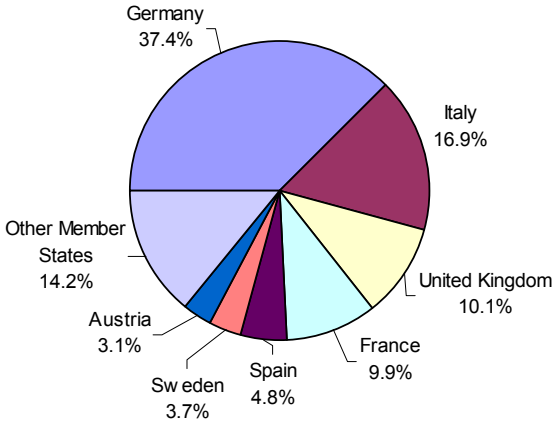
By far the largest contributor to EU-25 value added in the machinery and equipment manufacturing industry was Germany (37.4 %), as shown in Graph 2. Italy's sector followed with a share of about half as much (16.9 %). Shares in the UK and France were around 10 %. Together the sectors in these four Member States accounted for over 74 % of total EU-25 value added in 2002, about 6 percentage points more than the manufacturing industry average.

Looking closely at the breakdown of manufacture of machinery and equipment at EU level (Table 1), three of the seven NACE groups accounted for around three quarters of total value added and employment respectively in 2002: 'other general purpose machinery' (29.8 % for both), 'other special purpose machinery' (25.7 % and 26.7 %), and 'power machinery' (21 % and 18.9 %).

None of the other four NACE groups contributed more than 10 % to total EU-25 value added or employment. These were, in decreasing order, 'machine tools', 'domestic appliances', 'agricultural and forestry machinery', and finally, the smallest group, 'weapons and ammunition'.

Graph 3 shows the breakdown of machinery and equipment value added by NACE groups on a country level. Looking at the three main groups, 'other general purpose machinery' (NACE 29.2) was the largest group in nine of the 17 Member States with data available. These include all of the main contributors to EU-25 value added, except Germany and Austria. Although it dominated the Cypriot

Graph 2: EU-25 'machinery and equipment' value added: share by main contributing Member States, 2002



Source: Eurostat (SBS)

machinery and equipment industry the most (46 % of the value added generated), the group was not that important in the total non-financial business economy value added. Instead, compared with other Member States, Italy was the most 'specialised' in this activity.

'Other special purpose machinery' (NACE 29.5) was the largest group in six Member States, led by Portugal (43 %) and Finland (41 %), with the latter country being the most specialised.

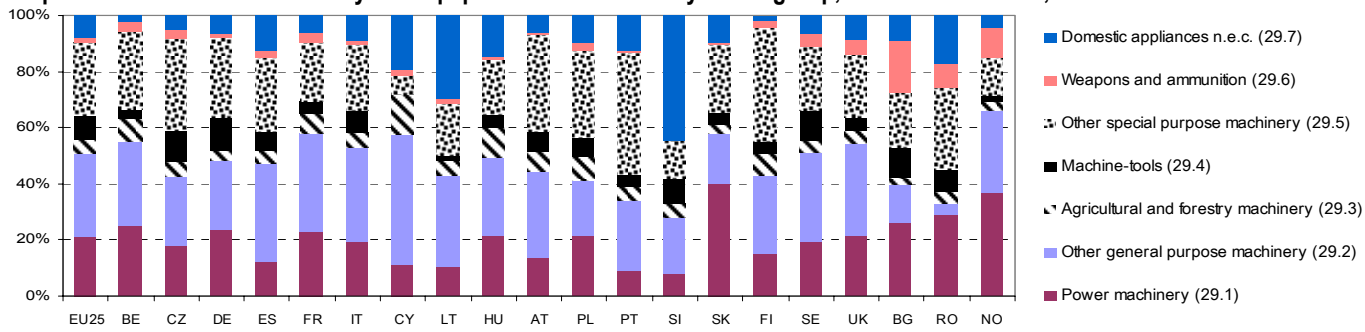
'Power machinery' (NACE 29.1) was the largest group in the Slovak Republic (40 %), and also Bulgaria and Norway. However, of the Member States, Belgium was the most specialised in this activity (2001 data).

Table 2: Main indicators of the 'manufacture of machinery and equipment' (NACE 29), 2003

	EU-25**	BE*	CZ	DK	DE	EE	ES	FR	IE**	IT	CY	LV	LT	LU**
Value added at factor cost - in million EUR	164 712	2 807	1 871	3 508	61 574	52	7 912	16 258	632	27 840	28	47	73	163
Persons employed	3 527 400	44 995	153 725	63 932	1 072 233	5 036	193 487	318 052	12 754	585 424	1 314	7 058	11 200	2 559
Number of enterprises	162 256*	1 913	7 658	2 332	19 159	206	13 422	16 509	333	41 457	248	251	328	49
Turnover - in million EUR	501 963	9 725	5 978	9 464	169 589	155	24 368	57 410	1 730	96 505	76	113	227	629
Average personnel costs in thousand EUR	36.6	44.8	8.7	44.3	48.7	6.9	30.7	41.3	32.9	35.0	16.8	3.6	4.8	46.4
Apparent labour productivity (value-added per person employed) - in thousand EUR	46.7	62.4	12.2	54.9	57.4	10.2	40.9	51.1	49.6	47.6	21.0	6.7	6.5	63.5
Wage adjusted labour productivity - in %	127.7	139.1	140.2	123.9	117.9	148.1	133.0	123.7	150.8	135.9	124.6	183.9	134.6	137.0
Gross operating rate - in %	8.1	9.0	10.4	7.5	5.9	11.0	9.1	5.8	12.5	9.8	9.6	19.1	8.5	7.1

*2001 data – **2002 data – EL: data not available Source: Eurostat (SBS)

Graph 3: Breakdown of 'machinery and equipment' value added by NACE group, available countries, 2003*



*Note: 2002 data: EU-25, HU, PL, SI, FI, SE, NO; 2001 data: BE – Not available: DK, EE, EL, IE, LU, LV, NL, MT

Source: Eurostat (SBS)

In fact, Belgium was the most specialised Member State also in two of the smaller activities: 'agricultural and forestry machinery' (NACE 29.3) and 'weapons and ammunition' (NACE 29.6). Despite this, the weight of machinery and equipment manufacturing as a whole in the business economy was below the EU-25 average, as seen in Graph 1.

Interestingly, one of the smallest groups at the EU-level, 'domestic appliances' (NACE 29.7) accounted for about 45 % of machinery and equipment value added in Slovenia, which was also clearly the most specialised Member State in this activity.

Apparent labour productivity (value added per person employed) was EUR 46 700 in the machinery and equipment industry in the EU-25 in 2002 (Table 2), not much more than the manufacturing industry average. Among the NACE groups, it was highest in 'power machinery' (EUR 52 100) and lowest in 'agricultural and forestry machinery' (EUR 39 200). In the same year, average personnel costs were EUR 36 600 per person employed, some 13 % more than in the manufacturing industry. Average personnel costs were highest in 'weapons and ammunition' (EUR 41 600) and lowest in 'agricultural and forestry machinery' (EUR 28 700).

Because of these higher personnel costs, the ratio of wage adjusted labour productivity (based on value added over personnel costs and adjusted to take account of the share of unpaid persons employed) was 127.7 % in the EU-25 in 2002, 12.6 percentage points below the manufacturing industry average. Only in 'domestic appliances' was the ratio above that in manufacturing, at 142.9 %.

The gross operating rate (gross operating surplus over turnover), which is one profitability indicator, stood at 8.1 % in the EU-25 in 2002, a 0.7 percentage point below the manufacturing industry average. The highest rate was for 'power machinery' (9 %) and the lowest for 'weapons and ammunition' (3.3 %).

Looking next at enterprise size, based on an average of 21 Member States (accounting for 98 % of total EU-25 value added), 50 % of machinery and equipment manufacturing value added in 2002 was generated by small and medium-sized enterprises (1-249 persons employed), about 5 percentage points less than in manufacturing. More specifically, medium-sized enterprises (50-249 persons employed) accounted for 27.6 % of total value added (22.3 % in manufacturing), small enterprises (10-49 persons employed) 16.4 % (15.4 %) and micro enterprises (1-9 persons employed) 6 % (7.3 %).

According to data available for 20 Member States in 2002 (97 % of total EU-25 value added), apparent labour productivity increased with enterprise size, from about EUR 34 700 for micro enterprises to EUR 57 400 for large ones. Productivity was higher in machinery and equipment manufacturing than in the manufacturing industry in every size class except large enterprises with 250 or more persons employed. Furthermore, the difference between productivity levels was largest for micro enterprises (close to EUR 8 000), and progressively narrowed per size class so that for large enterprises, the level was lower by almost EUR 4 600.

Table 2: Main indicators of the 'manufacture of machinery and equipment' (NACE 29), 2003 (continued)

	HU**	MT**	NL	AT	PL**	PT	SI**	SK	FI**	SE**	UK	BG	RO	NO**	CH*
Value added at factor cost - in million EUR	833	8	4 726	5 069	2 417	1 022	435	433	3 082	6 031	16 660	229	491	1 682	7 571
Persons employed	72 711	429	83 917	80 681	192 349	43 124	25 178	43 625	58 707	103 120	293 769	68 359	146 732	22 430	105 150
Number of enterprises	7 259	57	4 170	2 215	13 270	3 514	1 521	635	3 551	5 132	12 994	1 898	1 344	1 101	3 364
Turnover - in million EUR	3 340	18	15 870	13 599	6 737	2 866	1 753	1 744	10 625	19 205	46 332	790	1 559	5 070	19 626
Average personnel costs in thousand EUR	8.6	12.7	44.2	44.1	14.8	16.6	14.4	6.4	40.2	44.2	44.9**	2.6	3.1	55.9	:
Apparent labour productivity (value-added per person employed) - in thousand EUR	11.5	17.5	56.3	62.8	12.6	23.7	17.3	9.9	52.5	58.5	56.7	3.4	3.3	75.0	72.0
Wage adjusted labour productivity - in %	132.6	137.8	127.5	142.3	84.9	142.5	119.7	156.0	130.6	132.3	135.9**	130.2	108.5	134.1	:
Gross operating rate - in %	7.9	13.1	6.8	11.5	-2.7	11.4	4.9	9.0	8.9	8.2	11.3	7.5	3.8	8.6	7.2

**2002 data

Main products sold: Tower cranes, packing/wrapping machinery and washing machines

Machinery and tools produced within this sector consist mainly of capital equipment used in other industries for general or specific use, such as agricultural, industrial or construction process machinery, many of which are integrated or installed into more complex products. Domestic appliances (NACE/CPA 29.7) is the only product group for which households are the main customers.

The two largest products produced in the EU-25 and sold in 2004 (Table 3) belonged to the largest NACE/Product group 29.2 'other general purpose machinery': 'tower cranes' (EUR 5.8 billion), followed by 'machinery for packing or wrapping' (4.9 billion). Interestingly, the third largest product sold was in one of the smallest groups, 'domestic appliances': 'fully-automatic washing machines with a dry linen capacity equal to or less than 10 kg' (EUR 4.7 billion).

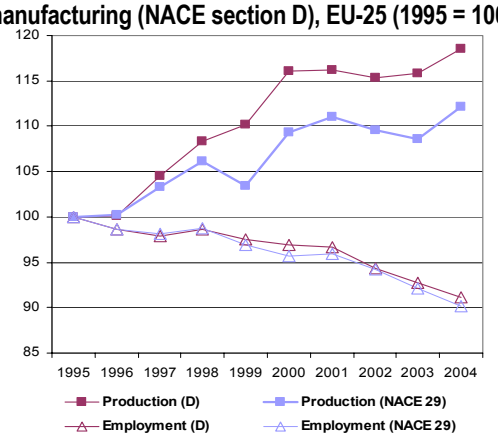
Table 3: Main machinery and equipment products† produced in the EU-25 and sold in 2004

		Prodcom code	EUR bn
	Power machinery (29.1)		
1	Ball bearings	29141030	2.5
2	Gearboxes and other speed changers for machinery and land/sea vehicles excluding gears and gearing	29142450	2.4
3	Mixing valves for sinks, wash basins, bidets, water cisterns etc. excluding valves for pressure-reducing or oleohydraulic/pneumatic power transmissons, check valves, safety/relief valves	29131233	2.4
	Other general purpose machinery (29.2)		
1	Tower cranes	29221443	5.8
2	Machinery for packing or wrapping (excluding for filling, closing, sealing, capsuling or labelling bottles, cans, boxes, bags or other containers)	29242170	4.9
3	Parts of machinery of HS 8425, 8427 and 8428 (excluding lift, skip hoists or escalators)**	29221930	3.4
	Agricultural and forestry machinery (29.3)		
1	New agricultural and forestry tractors, wheeled, of an engine power > 90 kW (excluding pedestrian-controlled tractors)	29312370	3.1
2	New agricultural and forestry tractors, wheeled, of an engine power > 59 kW but <= 75 kW (excluding pedestrian-controlled tractors)	29312330	1.8
3	New agricultural and forestry tractors, wheeled, of an engine power > 37 kW but <= 59 kW (excluding pedestrian-controlled tractors)	29312200	1.1
	Machine tools (29.4)		
1	Parts and accessories for metal forming machine-tools (excluding tool holders and self-opening dieheads, work holders, dividing heads and other special attachments for machine-tools)	29424050	1.1*
2	Fully or partly automatic electrical machines for resistance welding of metal	29432030	1.1*
3	Multi-station transfer machines for working metal	29421270	1.0
	Other special purpose machinery (29.5)		
1	Self-propelled bulldozers... with a 360° revolving superstructure	29522600	3.2
2	Parts for earthmoving equipt., ships' derricks, cranes, mobile lifting frames excluding buckets, shovels, grabs, grips, blades (all types of construction equipt.), for boring/sinking machinery	29526150	2.7
3	Wheeled loaders, crawler shovel loaders, front-end loaders	29522550	1.9
	Domestic appliances n.e.c. (29.7)		
1	Fully-automatic washing machines of a dry linen capacity <= 10 kg (including machines which both wash and dry)	29711330	4.7
2	Household dishwashing machines	29711200	2.3
3	Combined refrigerators-freezers, with separate external doors	29711110	1.6

† Excluding sales of services such as repair, maintenance and installation as well as products that may have a military use (NACE/CPA 29.6 Weapons and ammunition), since production is confidential in some countries.
* estimated data.
**Items include pulley tackle and hoists, fork-lift trucks, conveyors… For further information, see the Harmonized Commodity Description and Coding System, 2002.
Source: Eurostat (PRODCOM)

Below-average production growth and drop in employment between 1995 and 2004

Graph 4: Development of production and employment in 'machinery and equipment' (NACE 29) and manufacturing (NACE section D), EU-25 (1995 = 100)



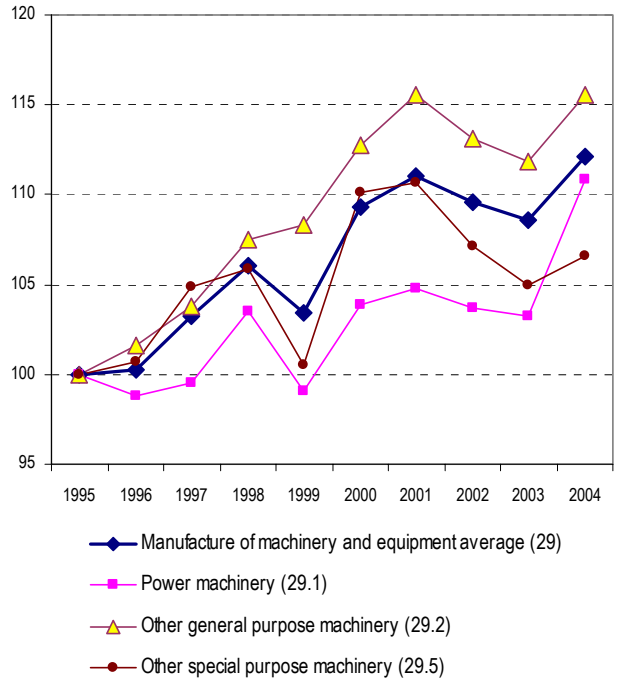
Source: Eurostat (STS)

According to the Industrial Production Index, production in the machinery and equipment industry in the EU-25 grew by a total of +12.1 % between 1995 and 2004, compared with +18.6 % in the total manufacturing industry (Graph 4).

Although broadly symmetrical with the development in the manufacturing industry, production in the machinery and equipment industry started to lag behind this benchmark in 1997, before notably declining between 1998 and 1999 (-2.5 %), the same year in which manufacturing industry growth only slightly slowed down (+1.6 %). A similar but less dramatic situation occurred in 2003, before production once again turned upwards in 2004.

Employment, by contrast, dropped constantly throughout this period, and did so mostly in line with the manufacturing industry; by a total of -9.9 % and -8.8 % respectively. A closer inspection suggests, though, that the 1999 contraction in production also affected the employment trend, pushing it slightly below that of the manufacturing industry from that year onwards. Finally, between 2003 and 2004, while production rebounded in both sectors, employment still continued to contract.

Graph 5: Development of production in 'machinery and equipment' (NACE 29): three largest NACE groups,* EU-25 (1995 = 100)



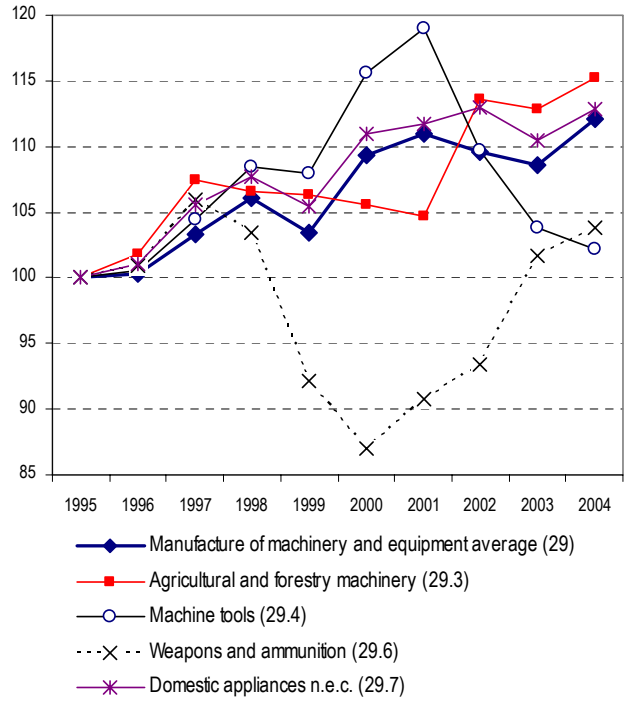
*See Table 1 Source: Eurostat (STS)

Looking at the development in the three major NACE groups (Graph 5), the largest group, 'other general purpose machinery' (NACE 29.2) recorded the highest total growth between 1995 and 2004, of +15.6 %, 3.5 percentage points more than the sectoral average. Only between 2001 and 2003, in a period of general economic slowdown, did production decline in this group. Moreover, 'other general purpose machinery' was the only group to display growth between 1998 and 1999, of +0.8 %.

From this, it is evident that the dip in machinery and equipment production in 1999 was due mainly to the contraction in the two other largest groups. In this year, production in the second largest group 'manufacture of other special purpose machinery' (NACE 29.5) declined by -5 %, while that of the third largest group 'power machinery' (NACE 29.1) fell by -4.3 %.

Looking briefly at the other smaller groups (Graph 6), the most spectacular development was in the smallest group 'weapons and ammunition' (NACE 29.6). After faster-than-average growth between 1995 and 1997, the group declined by about -17.9 % by 2000, to then rebound, increasing by +19.4 % by 2004. The trend in the production of machine tools (NACE 29.4) was almost the opposite, with rapid growth until 2002, followed by sharp contraction.

Graph 6: Development of production in 'machinery and equipment' (NACE 29): four smallest NACE groups*, EU-25 (1995 = 100)



*See Table 1 Source: Eurostat (STS)

All groups picked up again after the 2001-2003 slowdown, apart from 'machine tools' (NACE 29.4), where the steep decline only marginally stabilised.

Production grew in most of the main producing Member States, with the EU's largest producer, Germany, experiencing production growth of +15.7 % between 1995 and 2004. Growth in France's sector (fourth largest) was not far behind at +15.1 %. Italy's sector (second largest) recorded a much smaller growth of +5.5 %. Among the main producers, growth in this period was highest in Spain (+20 %), but in Austria, production grew by +62 % in the 1996-2004 period (no data available for 1995). Combined, these growths were enough to offset the negative trends both in the third largest producer, the United Kingdom (-6.3 %) as well as in Sweden (-0.5 %).

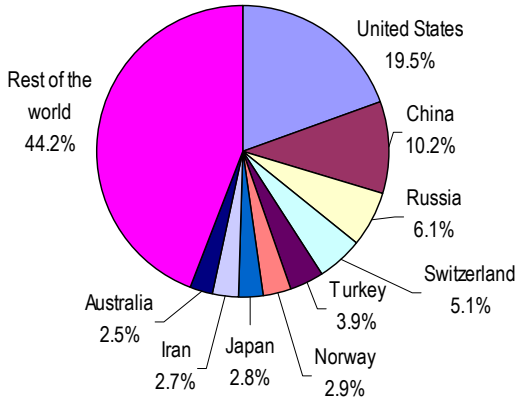
Largest trade surplus of all industrial goods; increase in exports drive up production in 2004

Exports play an important role in machinery and equipment manufacturing. In 2004, the EU-25 exported EUR 141 billion worth of machinery and equipment goods, yielding a trade surplus of about EUR 79 billion, the largest of all industrial goods divisions.

Germany accounted for the largest share of extra-EU exports (36 %) in 2004. Together with Italy, the UK and France, these four Member States accounted for over 74 % of extra EU exports, reflecting these countries' weights in the EU-25 machinery and equipment manufacturing industry (see Graph 2, page 2). Interestingly, instead of Spain, the Netherlands (not among the top seven producers) was the fifth largest exporter, before Sweden.

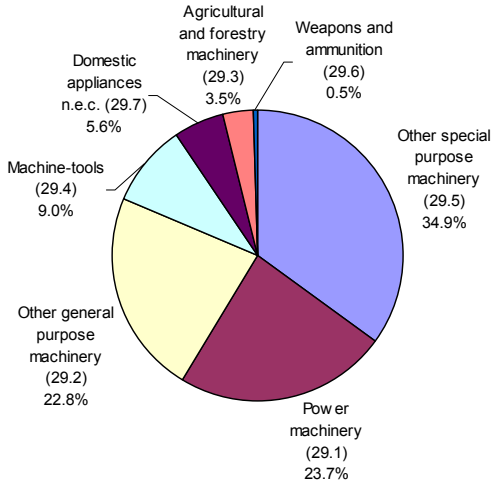
The most important destination for EU-25 exports was the United States (19.5 %) followed by China with 10.2 % (Graph 7). However, as can be seen, there was quite a widespread geographical distribution of the export of machinery and equipment products.

Graph 7: Main destinations of EU-25 exports of machinery and equipment products, 2004



Source: Eurostat (Comext)

Graph 8: EU-25 exports of machinery and equipment products, by main product group (CPA), 2004

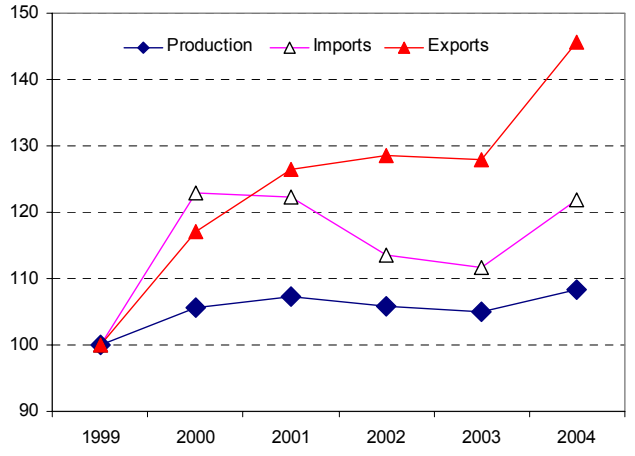


Source: Eurostat (Comext)

Looking at the breakdown of EU-25 exports by product group (Graph 8), shares were also similar to those recorded in production (Table 1, page 2), with the exception that 'other special purpose machinery' was considerably more important in terms of exports (34.9 % compared with 25.7 % of EU-25 industrial value added).

Finally, a comparison of the evolution in exports and imports of machinery and equipment products with that in production in the machinery and equipment industry in the EU-25 suggests that the 1999-2004 period was characterised by a relatively weak home market, in which production was export-driven (Graph 9). Between 1999 and 2004, while exports of these products increased by +45.5 %, production only increased by +8.4 %. Between 2001 and 2003, exports of these products increased by +1.2 %, at the same time as production in the industry contracted by almost -2.2 %. In 2004, production turned up again (+3.3 %), most probably fuelled by the steep jump in exports (+13.6 %). The increase in imports in this year (+9 %) most likely reflects generally improving home markets.

Graph 9: Evolution of exports and imports of machinery and equipment products (CPA 29), compared with production in the machinery and equipment industry (NACE 29), 1999-2004, (1999=100)



Source: Eurostat (Comext and STS)

When comparing external trade data, the production index, and structural business statistics readers should note however that these data originate from independent statistical sources, which are not entirely comparable. External trade data are based on products, the production index on kind-of-activity units, and business statistics on enterprises whose main activity is to produce these products. These enterprises could be involved in other types of production, while some machinery and equipment products could be produced also by enterprises with another main activity.

➢ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

DATA SOURCES

The source of all figures presented is Eurostat (unless specifically stated otherwise). Most data sources are continually updated and revised where necessary. This publication reflects the state of data availability in Eurostat's reference database as of November 2005.

Structural Business Statistics (SBS) is the main data source for this publication. Two main SBS data sets have been used: annual enterprise statistics and annual enterprise statistics broken down by size classes. These and other SBS data sets are available under theme 'Industry, trade and services' on the Eurostat website http://europa.eu.int/comm/eurostat/ (select 'Data' / 'Industry, trade and services' / 'Horizontal view' / 'Structural Business Statistics'). Selected publications, data and background information are available in the section dedicated to European Business, located directly under the theme 'Industry, trade and services' on the Eurostat website.

PRODCOM provides detailed information on the production of about 5000 manufactured products. Data presented here relate to the value of production sold during the reference period.

COMEXT Eurostat's database on external trade supplied data on the value of exports and imports of products, by type of product, by reporting Member State and by destination.

Short-Term Statistics (STS) was used to complement SBS data with information on time series development based on the Industrial production index, which shows the evolution of value added at factor cost at constant prices.

COUNTRIES

This publication covers the European Union, including the 25 Member States (EU-25): Belgium (BE), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Greece (EL), Spain (ES), France (FR), Ireland (IE), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK). Also included are the Candidate Countries, EFTA and EEA countries with data available: Bulgaria (BG), Romania (RO) and Norway (NO).

EU-25

EU-25 aggregates include estimates for missing components where necessary. In the absence of EU-25 aggregates, averages of available countries are presented where appropriate.

EXCHANGE RATES

All data are presented in ECU/EUR terms, with national currencies converted using average exchange rates prevailing for the year in question.

SYMBOLS

":" not available or confidential.

SECTORS

Statistics are presented by sectors of activity according to the NACE Rev. 1.1 system of classification. Comparisons are made with the whole non-financial business economy and/or total Manufacturing (NACE Section D). **Non-financial business economy** includes the Sections C (Mining and quarrying), D (Manufacturing), E (Electricity, gas and water supply), F (Construction), G (Wholesale and retail trade), H (Hotels and restaurants), I (Transport, storage and communication) and K (Real estate, renting and business activities). Please note that for such comparisons in this publication: IE excludes E; CY excludes K.

OBSERVATION UNIT

The observation unit is the enterprise. An enterprise carries out one or more activities at one or more locations. Enterprises are classified into sectors (by NACE) according to their main activity. The enterprise should not be confused with the local unit, which is an enterprise or part thereof situated in one geographically identified place.

STRUCTURAL BUSINESS STATISTICS VARIABLES

Variables are defined according to Commission Regulation No 2700/98 and include:

Number of enterprises

The number of enterprises active during at least part of the reference period.

Number of persons employed

The total number of persons who work in the observation unit, as well as persons who work outside the unit who belong to it and are paid by it. It includes working proprietors, unpaid family workers, part-time workers, seasonal workers etc.

Value added at factor cost

The gross income from operating activities after adjusting for operating subsidies and indirect taxes (including value added tax).

Turnover

The totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties.

Apparent labour productivity

This is a simple indicator of productivity calculated as value added divided by persons employed.

Average personnel costs

Personnel costs are the total remuneration, in cash or in kind, payable by an employer to an employee for work carried out. This is divided by the number of employees (paid workers), which includes part-time workers, seasonal workers etc, but excludes persons on long-term leave.

Wage adjusted labour productivity (%)

Value added divided by personnel costs, after the latter has been divided by the share of employees (paid workers) in the number of total persons employed. It can also be calculated by dividing apparent labour productivity by average personnel costs.

The gross operating rate (%)

This is an indicator of profitability where the gross operating surplus is related to the turnover generated. The gross operating surplus is the surplus generated by operating activities after the labour factor input has been recompensed. It can be calculated from the value-added at factor cost less the personnel costs.

Further information:

Data:

EUROSTAT Website/Industry, trade and services/Industry, trade and services - horizontal view/Structural Business Statistics (Industry, Construction, Trade and Services)/Annual enterprise statistics/Annual detailed enterprise statistics on manufacturing subsections DF-DN and total manufacturing (NACE D) (part of Annex 2)

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