

SCIENCE AND TECHNOLOGY

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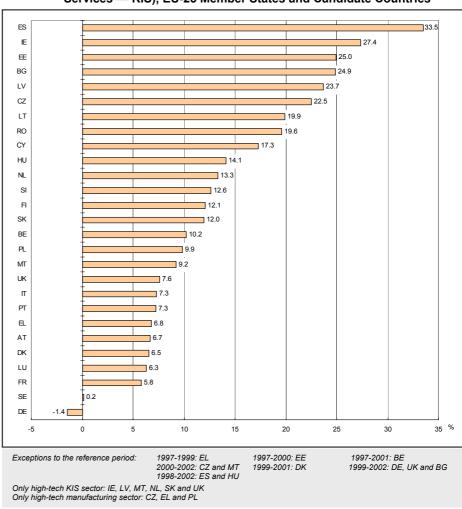
More important share of hightech exports in Malta and Ireland6



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High Technology: Enterprises and trade

Figure 1: Annual Average Growth Rate (AAGR) 1997-2002 of value added in High Technology sectors (manufacturing and Knowledge-Intensive Services — KIS), EU-25 Member States and Candidate Countries



Main findings

- In 2002 in the EU-25, the manufacturing sector counted 2.2 million enterprises. Among these, 137 000 were high technology manufacturers and 277 000 were medium high technology manufacturers.
- In 2002, an enterprise from the high technology sector generated a greater production value (4.4 million EUR) than an average enterprise of the total manufacturing sector (2.5 million EUR).
- Moreover, in the EU-25 in 2002, the labour productivity per person employed in the high-tech manufacturing sector was 63 000 EUR, which was higher than the total manufacturing sector (45 000 EUR).
- Investment in machinery and equipment was highest in the medium high-tech manufacturing sector, with 244 000 EUR invested per enterprise.
- Among EU Member States, Malta had the highest share of high-tech exports, accounting for 55.9% of its total exports in 2004. In 2002, it was also the country where investments and the production value per enterprise in the high-tech manufacturing sector were the highest.

A quarter of European high-tech manufacturers in Italy, more than a quarter of European high-tech KIS in the United Kingdom

In 2002, the EU-25 was home to more than 2 million enterprises in the manufacturing sector — See Table 1.

With 549 000 enterprises, or approximately one quarter of the EU-25 total, Italy had the highest number of enterprises in the manufacturing sector. France (248 000) came in second position, before Spain (222 000) and Poland (210 000).

Among the 2.2 million enterprises in the manufacturing sector, 136 000 were classified as 'high-technology' and 277 000 as 'medium high-technology'. At the national level, the leading country was again Italy with 35 000 high-tech and 71 000 medium high-tech enterprises.

With 19 000 high-tech enterprises in Germany, this number represented almost 10% of the country's total manufacturers. In Poland, 15 000 of its total manufacturers were high-tech (i.e. more than 7%). By contrast, the countries with the smallest number of high-tech enterprises were Greece (101), Cyprus (80) and Luxembourg (63).

In the medium high-tech manufacturing sector, Germany and the Czech Republic, with respectively 29 000 and

27 000 enterprises, were the leading European countries after Italy (71 000).

In 2002 in the EU, there were more than 500 000 enterprises in the high-technology Knowledge-Intensive Services (KIS) sector.

Among Member States, the United Kingdom had the highest number, with 143 000 such enterprises, followed by Italy (98 000), Germany (53 000) and France (46 000). In fact, these four countries accounted for about two thirds of the EU-25 total. At the other end of the scale came Greece, Cyprus, Latvia and Malta which had fewer than 1 000 enterprises.

In the market KIS sector, the leading countries were Italy, France, Spain and United Kingdom, with 818 000, 442 000, 436 000 and 426 000 enterprises respectively.

In the EU-25 in 2002, 6.7 million enterprises were recorded as market enterprises in services without being knowledge-intensive (market less KIS). Among them, 1.7 million were in Italy and almost 1.3 million in Spain.

Table 1: Total number of enterprises, for the manufacturing sectors and services sectors, EU-25 Member States and Candidate Countries, 2002

| | Manufacturing | | | | | Services | | | |
|---------|---------------|--------------------|---------------------------|--------------------------|-------------------|---------------|-------------|-----------------|--|
| Country | Total | High Technology | Medium High Technology | Medium Low Technology | Low Technology | High Tech KIS | Market KIS | Market less KIS | |
| EU-25 | 2 179 030 s | 136 743 S | 277 445 s | 563 240 s | 1 201 604 s | 517 408 S | 3 612 556 s | 6 700 666 s | |
| EU-15 | 1 682 707 s | 103 914 S | 212 965 s | 434 710 s | 931 120 s | 466 921 S | 3 218 656 s | 6 013 086 s | |
| BE | 37 965 | 1 922 | 3 884 | 9 215 | 22 946 | 11 014 | 82 196 | 193 333 | |
| CZ | 159 207 | 9 014 | 26 905 | 47 533 | 75 755 | 18 833 | 182 389 | 288 243 | |
| DK | 19 235 | 1 114 | 3 779 | 5 857 | 8 485 | 8 013 | 53 167 | 75 425 | |
| DE | 196 702 | 19 346 | 29 257 | 56 655 | 91 444 | 52 816 | 499 587 | 642 058 | |
| EE | 4 398 | 215 | 357 | 927 | 2 899 | 826 | 6 889 | 16 182 | |
| EL | 4 651 | 101 | 564 | 1 125 | 2 861 | : | : | : | |
| ES | 222 291 | 7 703 | 23 293 | 61 858 | 129 437 | 32 340 | 436 132 | 1 262 083 | |
| FR | 248 349 | 16 188 | 25 941 | 46 880 | 159 340 | 45 939 | 442 297 | 927 673 | |
| IE | 4 932 | : | 760 | : | 2 556 | 4 420 | : | : | |
| IT | 549 388 | 34 651 | 70 960 | 145 343 | 298 434 | 97 873 | 817 786 | 1 714 182 | |
| CY | 6 297 | 80 | 432 | 1 587 | 4 198 | 231 | 3 032 | 29 937 | |
| LV | 4 951 | 190 | 406 | 739 | 3 616 | 912 | 13 216 | 4 875 | |
| LT | 9 483 | 363 | 654 | 1 739 | 6 727 | 1 281 | 7 475 | 34 685 | |
| LU | 984 | 63 | 95 | 289 | 537 | 1 095 | 6 676 | 10 340 | |
| HU | 73 005 | 6 106 | 10 285 | 16 551 | 40 063 | 23 855 | 152 702 | 241 197 | |
| MT | 3 792 | : | : | 914 | 2 588 | 684 | 6 731 | 17 999 | |
| NL | 46 435 | 3 130 | 6 755 | 11 880 | 24 670 | 22 225 | 119 365 | 217 215 | |
| AT | 27 572 | 1 643 | 3 246 | 5 892 | 16 791 | 12 080 | 52 831 | 132 163 | |
| PL | 210 200 | 15 398 | 21 278 | : | : | : | : | : | |
| PT | 78 789 | 1 154 | 5 774 | 20 586 | 51 275 | 2 932 | 58 630 | 309 304 | |
| SI | 19 381 | 993 | : | : | 9 059 | 2 792 | 15 933 | 40 742 | |
| SK | 5 609 | : | 1 071 | : | : | 1 073 | 5 533 | 13 720 | |
| FI | 25 799 | 1 299 | 4 639 | 6 836 | 13 025 | 4 960 | 40 307 | 80 806 | |
| SE | 54 616 | 3 359 | 8 027 | 15 117 | 28 113 | 28 200 | 156 916 | 169 100 | |
| UK | 164 999 | 11 866 | 25 991 | 45 936 | 81 206 | 143 014 | 425 819 | 185 458 | |
| BG | 25 689 | 1 200 | : | 5 012 | : | 3 238 | 19 034 | 165 644 | |
| RO | 46 517 | 1 348 | 3 284 | 8 205 | 33 680 | 7 200 | 25 083 | 207 416 | |

Exceptions to the reference year:

2001: BE and LV; manufacturing sectors in UK; services sectors in CZ.

1999: manufacturing sectors in EL



Production value generally higher for high-tech manufacturers

Figure 2 shows the production value per enterprise for both the total manufacturing sector and the high-tech manufacturing sector.

Within the EU-25 in 2002, an enterprise in the total manufacturing sector typically generated a production value of 2.5 million EUR, whereas an enterprise in high-tech manufacturing averaged 4.4 million EUR. For the EU-15, these values were respectively 3.3 and 5.5 million EUR.

This means that an enterprise in the high-tech sector generated a higher production value than an average enterprise of the total manufacturing sector.

This trend applied for all EU-25 Member States except for Germany, Latvia, Luxembourg, Poland and Slovakia, largely depending on the industrial structure of the respective country. In Luxembourg the production value per enterprise in the high-tech manufacturing sector was about 2.8 million EUR, i.e. less than half the production value per enterprise in the total manufacturing sector (7.4 million).

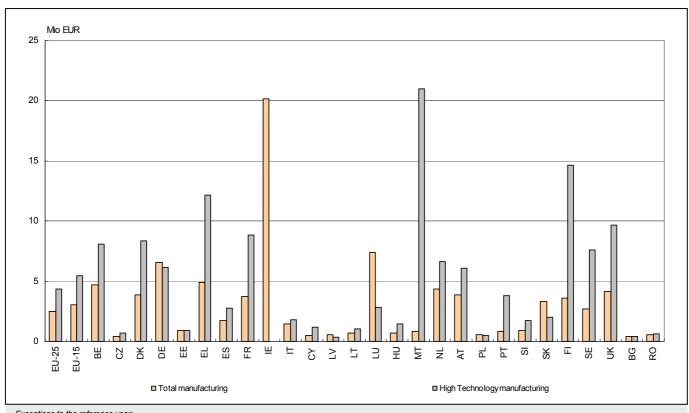
Except for Spain, Italy and Portugal, the production value per enterprise was higher for all EU-15 Member States, when compared with the EU-25 average (2.5 million EUR). It was also higher in Slovakia with 3.3 million EUR.

Consequently, in the new Member States (except in Slovakia) as well as in the Candidate Countries, the production value per enterprise for the total manufacturing sector was lower than the EU-25 average.

Almost the same situation occurs in the high-tech manufacturing sector. Apart from Malta — where the production value per enterprise was the highest (21 million EUR) — all the new Member States as well as the Candidate Countries were below the European average (4.4 million EUR). The production value was also lower than the European average in Spain (2.8), Italy (1.8), Portugal (3.8) and Luxembourg (2.8).

After Malta (21 million EUR), Finland (14.7) and Greece (12.2) were the countries with the highest production values per enterprise in the high-tech manufacturing sector.

Figure 2: Production value per enterprise (million EUR per enterprise)
for the total manufacturing sector and for the high technology manufacturing sector,
EU-25 Member States and Candidate Countries, 2002



Exceptions to the reference year: 2001: BE and UK; DK and SK in high-tech manufacturing sector 1999: LV

1997: NL in high-tech manufacturing sector

2000: MT; EE in high-tech manufacturing 1998: EL

EU-25 and EU-15: Eurostat estimates



Value-added: New Member States caught up in the high-tech sector

In 2002, the total manufacturing sector of the European Union generated a value-added of more than 1 500 billion EUR. Accounting for more than 25 % of the EU value-added, Germany was clearly in first position, followed by the United Kingdom, France and Italy (see Table 2).

In relative terms, labour productivity per person employed reached 45 000 EUR in the EU-25, but this average hides discrepancies between Member States. Indeed, the highest labour productivity per person employed attained 149 000 EUR in Ireland, whereas it did not exceed 10 000 EUR in Estonia and Lithuania.

In the high-tech manufacturing sector, labour productivity was 63 000 EUR for EU-25, which was higher than the total manufacturing sector; a trend that was true for all EU-25 Member States except Estonia, Luxembourg and Slovakia.

Still in the high-tech manufacturing sector, Finland and Belgium had the highest labour productivity (of more than 100 000 EUR), followed by Denmark (87), the United Kingdom (78) and Malta (72) respectively.

In the medium high-tech manufacturing sector, the production value of the EU-25 was 53 000 EUR. This figure exceeded 300 000 EUR in Ireland, whereas for all the other Member States it was below 80 000 EUR.

In absolute terms, the high-tech KIS sector of the EU-25 created a value-added of 364 billion EUR in 2002. The United Kingdom generated the highest amount, with almost 91 billion EUR, before Germany (72 billion EUR) and France (54 billion EUR).

In relative terms, labour productivity per person employed in the high-tech KIS sector reached 65 000 EUR in the EU-25. The top two countries in the EU were Ireland and Luxembourg with 136 and 115 thousand EUR respectively per person employed.

Cyprus was the only new Member State to have a production value higher than the EU-25 average. Denmark, Spain, France, Finland and Sweden, as well as all the other new Member States and Candidate Countries, had a production value below the EU-25 average.

As shown in Figure 1, the value-added generated by the high-tech sectors (high-tech manufacturing and high-tech KIS) increased in all countries between 1997 and 2002, except in Germany. It increased most in Spain with an AAGR of 33.5% and in Ireland (27.4%).

New Member States or Candidate Countries are closing their gap in the high-tech domain. Indeed, eight of them were among the top ten countries having the highest AAGR. Furthermore, all of them had an AAGR greater than or equal to 9.2 % (Malta).

Table 2: Value-added (in million EUR) and labour productivity (in '000 EUR per person employed), for the manufacturing sectors and the services sectors, EU-25 Member States and Candidate Countries, 2002

| | Manufacturing | | | | | | Services | | | |
|----------|-----------------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
| | Tota | al | High Tech | nology | Medium High | Гесhnology | High Techno | ology KIS | market | KIS |
| Country | Value added | Labour Product. | Value added | Labour Product. | Value added | Labour Product. | Value added | Labour Product. | Value added | Labour Product. |
| EU-25 | 1 533 907 s | 45 s | 195 521 s | 63 s | 476 155 s | 53 s | 363 823 s | 65 s | 834 462 s | 46 s |
| EU-15 | 1 450 220 s | 52 s | 188 463 s | 70 s | 456 113 s | 59 s | 355 107 s | 68 s | 823 151 s | 48 s |
| BE | 44 271 (1) | 65 (1) | 5 761 (1) | 104 (1) | 13 652 (1) | 76 (1) | 9 261 (1) | 67 (1) | 18 526 (1) | 44 (1) |
| cz | 18 120 | 13 | 1 316 | 15 | 5 885 | 14 | 2 701 (1) | 23 (1) | 3 099 (1) | 9 (1) |
| DK | 25 495 | 56 | 3 915 (1) | 87 (1) | 6 221 | 55 | 6 502 | 65 | 21 725 | 75 |
| DE | 401 497 | 55 | 43 734 | 63 | 177 389 | 62 | 71 669 | 68 | 194 638 | 56 |
| EE | 1 136 | 9 | 64 (2) | 7 (2) | 106 (2) | 11 (2) | 285 | 24 | 532 | 12 |
| EL | 8 371 (3) | 34 (3) | 519 (3) | 37 (3) | 1 203 (3) | 34 (3) | : | : | : | : |
| ES | 109 038 | 41 | 6 279 | 52 | 27 661 | 49 | 23 857 | 64 | 62 503 | 33 |
| FR | 207 984 | 52 | 35 419 | 68 | 57 687 | 58 | 53 966 | 59 (1) | 127 401 | 48 (1) |
| IE | 35 989 | 149 | : | : | 14 902 | 333 | 7 394 | 136 | : | : |
| IT | 203 014 | 42 | 19 340 | 56 | 53 925 | 47 | 42 982 | 65 | 69 250 | 34 |
| CY | 960 | 26 | 37 | 34 | 76 | 25 | 429 | 82 | 630 | 36 |
| LV | 1 635 (1) | 11 (1) | : | : | 140 (1) | 9 (1) | 491 | 21 | 479 | 8 |
| LT | 1 540 | 6 | 125 | 9 | : | : | 422 | 20 | 440 | 9 |
| LU | 2 309 | 67 | 75 | 37 | 301 | 64 | 1 211 | 115 | 2 063 | 48 |
| HU | 12 320 | 14 | 1 744 | 19 | 3 866 | 18 | 2 805 | 22 | 3 564 | 9 |
| MT | 808 | 25 | 354 (2) | 72 (2) | 58 (2) | 26 (2) | 230 | 49 | 557 | 37 |
| NL | 54 467 | 64 | : | : | 14 829 | : | 20 045 | 73 | 51 766 | 43 |
| AT | 37 516 | 59 | 3 706 | 69 | 10 637 | 67 | 6 973 | 65 | 17 794 | 61 |
| PL | 38 673 | 16 | 2 498 | 19 | 7 498 | 16 | : | : | : | : |
| PT | 18 208 | 20 | 1 065 | 39 | 3 280 | 27 | 4 053 | 74 | 7 070 | 22 |
| SI | 4 478 | 17 | 622 | 29 | : | : | 507 | 23 | 976 | 19 |
| SK | 4 018 | 10 | 207 (1) | 9 (1) | 1 236 | 10 | 846 | 18 | 1 035 | 15 |
| FI | 29 655 | 69 | 7 034 | 127 | 5 736 | 57 | 4 735 | 57 | 8 804 | 53 |
| SE | 43 364 | 55 | 6 518 | 62 | : | : | 11 506 | 54 | 26 926 | 54 |
| UK | 229 042 (1) | 59 (1) | 38 136 (1) | 78 (1) | 54 947 (1) | 58 (1) | 90 951 | 73 | 208 946 | 55 |
| BG | 1 795 | 3 | 146 | 6 | 398 (1) | 3 (1) | 783 | 12 | 321 | 3 |
| RO | 6 620 | 4 | 320 | 7 | 1 558 | 4 | 1 583 | 11 | 1 111 | 6 |
| Evention | s to the reference ve | | | | | | | | | |

Exceptions to the reference year:

(1) 2001 (2) 2000

(3) 1999



Investments more significant in the medium high-tech manufacturing sector

As shown in Table 3, the gross investment in machinery and equipment in the manufacturing sector amounted to almost 182 billion EUR in the EU-25 in 2002.

Germany was the country with the highest investment (close to 46 billion EUR). It was followed by France, Italy and the United Kingdom with around 25 billion EUR each.

In relative terms, Ireland, Greece and Germany were the countries investing most, with respectively 481 000, 246 000 and 233 000 EUR invested per enterprise.

If the high-tech manufacturing sector is taken into account, investment in machinery and equipment per enterprise reached 163 000 EUR in the EU-25, which was higher than the investment per enterprise in the total manufacturing sector (92 000 EUR). Malta was in first position with investment of 1.9 million EUR per enterprise. More than 70% of the Maltese total acquisitions of machinery and

equipment (226 million EUR) were done in the high-tech manufacturing sector.

In absolute terms, Germany and the United Kingdom invested the largest amounts in the high-tech sector, with 5 and 4 billion EUR respectively.

At EU-25 level, investments in machinery and equipment were higher in the medium high-tech manufacturing, where an average of 244 000 EUR per enterprise was spent. Enterprises investing the highest amounts are found in Ireland (964 000), Germany (755 000) and Belgium (586 000).

In absolute terms, most of the investments in the medium high-tech manufacturing sector were made by Germany with 22 billion EUR. In other terms, half of its total investment in machinery and equipment was devoted to the medium high-tech sector.

Table 3: Gross investments in machinery and equipment for the manufacturing sectors, Total (in million EUR) and per enterprise ('000 EUR), EU-25 Member States and Candidate Countries, 2002.

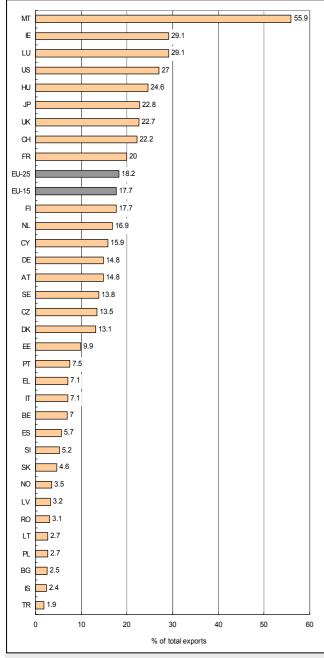
| LO-25 Member States and Candidate Countries, 2002. | | | | | | | | |
|--|---------------|----------------|-----------|----------------|------------------------|----------------|--|--|
| | | Total | High Tecl | • | Medium High Technology | | | |
| | manufacturing | | manufa | cturing | manufacturing | | | |
| Caumani | Total | Per enterprise | Total | Per enterprise | Total | Per enterprise | | |
| Country | (mio EUR) | (1000s EUR) | (mio EUR) | (1000s EUR) | (mio EUR) | (1000s EUR) | | |
| EU-25 | 181 923 | s 92 s | : | 163 s | : | 244 s | | |
| EU-15 | 172 899 | | : | 182 s | : | 280 s | | |
| BE | 7 047 | (1) 186 (1) | 535 (1) | 278 (1) | 2 277 (1 |) 586 (1) | | |
| CZ | 2 915 | 18 | 178 | 20 | 1 285 | 48 | | |
| DK | 2 905 | 151 | 439 (1) | 387 (1) | 545 | 144 | | |
| DE | 45 825 | 233 | 5 051 | 261 | 22 097 | 755 | | |
| Œ | 161 | 37 | 6 (2) | 29 (2) | 12 (2 | , | | |
| EL | 1 144 | (4) 246 (4) | 44 (4) | 433 (4) | 140 (4 |) 248 (4) | | |
| ES | 15 267 | 69 | 871 | 113 | 4 738 | 203 | | |
| FR | 24 623 | (3) 98 (3) | 3 485 (3) | 208 (3) | 7 851 (3 |) 299 (3) | | |
| IE | 2 375 | 481 | : | : | 733 | 964 | | |
| IT | 26 096 | 47 | 1 893 | 55 | 6 511 | 92 | | |
| CY | 136 | 22 | 5 | 58 | 6 | 14 | | |
| LV | 242 | (2) 48 (2) | 3 (3) | 14 (3) | 18 (2 | 42 (2) | | |
| LT | 187 | 20 | 8 | 22 | : | : | | |
| LU | : | • | • | : | • | : | | |
| HU | 2 469 | 34 | 402 | 66 | 892 | 87 | | |
| MT | 226 | (2) 60 (2) | 167 (2) | 1 855 (2) | 9 (2 | 54 (2) | | |
| NL | 6 298 | (3) 136 (3) | 552 (3) | 193 (3) | 2 030 (3 |) 320 (3) | | |
| AT | 4 465 | 162 | 497 | 303 | 1 101 | 339 | | |
| PL | : | : | : | : | : | : | | |
| PT | 3 392 | 43 | 161 | 139 | 590 | 102 | | |
| SI | 681 | 35 | 81 | 81 | • | : | | |
| SK | 863 | 154 | 32 (1) | 78 (1) | 323 | 302 | | |
| FI | 3 238 | 125 | 386 | 297 | 555 | 120 | | |
| SE | 5 168 | 95 | 639 | 190 | : | : | | |
| UK | 25 821 | (1) 156 (1) | 4 370 (1) | 368 (1) | 8 048 (1 |) 310 (1) | | |
| BG | 474 | (2) 19 (2) | 13 (2) | 12 (2) | 79 (2 | | | |
| RO | 1 910 | 41 | 71 | 52 | 386 | 117 | | |

Exceptions to the reference year: (1) 2001 (2) 2000 (3) 1999 (4) 1998



More important share of high-tech exports in Malta and Ireland

Figure 3: High-tech exports as % of total exports⁽¹⁾, EU-25 Member States, Candidate Countries, Iceland, Norway, Switzerland, United States and Japan - 2004



Exceptions to the reference year

(1) External trade statistics cover both extra- and intra-EU trade except for EU aggregates which doesn't include intra-EU trade

Comparing the EU with the United States and Japan, the share of high-tech exports in the EU (18.2%), as a percentage of total exports, was lower than in Japan (22.8%) and the United States (27%).

Among EU countries, Malta, with 55.9% of its total exports, had the highest share of high-tech exports. Ireland and Luxembourg followed, both at 29.1%. With regard to Malta and Ireland, this observation is not that surprising since they were the countries where investments in machinery and equipment were the highest.

On the other hand, the share of high-tech exports in Italy did not reach 10%, whereas it accounted for a quarter of EU-25 high-tech manufacturers in 2002.

The same can be said for Germany which, in absolute terms, was the country with the highest amount of investment and the highest value-added in the high-tech manufacturing sector in 2002, but which had a lower share of high-tech exports (14.8%) than the EU average (18.2%).

In 2004, only seven countries had a share of high-tech exports higher than the European average, namely Malta, Ireland, Luxembourg, Hungary, the United Kingdom, France and Switzerland. Apart from Malta (55.9 %), all of them had a share of between 20 % and 30 %.

Beside Malta, two other new Member States display a share of high-tech exports greater than 10% in 2004: Cyprus (15.9%) and the Czech Republic (13.5 %). As was the case for Luxembourg, this share is quite unexpected for Cyprus since the number of high-tech manufacturers was very low.

Estonia came fourth place among the new Member States and Candidate Countries with a proportion of high-tech exports of 9.9%.

Southern European countries (Greece, Spain, Italy and Portugal), as well as Belgium had quite a low proportion of high-tech exports, ranging from 5.7% (Spain) to 7.5 % (Portugal).

Finally, those countries with a proportion of high-tech exports lower than or equal to 5.2 % (Slovenia) included New Member States, Candidate Countries, Iceland and Norway.



> ESSENTIAL INFORMATION - METHODOLOGICAL NOTES

Sources

Data in this present Statistics in Focus (SIF) are based on the Structural Business Statistics (SBS) and the COMEXT/UN Comtrade databases. The first source was used to extract information related to high-tech industries and knowledge-intensive services. COMEXT was used for trade data.

Definitions

Structural Business Statistics (SBS):

Collected within the framework of Council regulation on structural business statistics. This Regulation governs the transmission of data to Eurostat from the reference year 1995 onwards. In principle, it covers all market activities in section C to K and M to O of the NACE Rev.1, but, in practice, the data available are confined to sections C to K, excluding section J (financial services). For further methodological notes, see the methodology document for "SBS" on NewCronos:

http://europa.eu.int/estatref/info/sdds/en/hitech/sbs.pdf

NACE

The data in this publication are based on the statistical classification of economic activities in the European Community, NACE Rev.1.1.

Value added at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes.

Labour productivity refers to the value added at factor costs per person employed.

Production value is the value of what was produced by the unit during the reference year.

Gross investments in machinery and equipment is the investments in all in machinery and equipment goods during the reference period.

The high values of the Irish data for value added, labour productivity, production value, etc. show the extent to which foreign ownership of enterprises, outsourcing of activities and accounting practices of multinational enterprises influence the data.

COMEXT

Eurostat's reference database on external trade statistics. Data for countries are broken down by detailed product group and aggregated according to the high-tech classification of those industries these products are originating from.

High-tech trade covers exports of those products whose production has involved a high intensity of R&D (For a full list of these products, see also p. 357 of the EU Commission DG Research's 'Third European Report on Science and Technology Indicators').

For more details see the methodology document for "COMEXT" on NewCronos:

http://europa.eu.int/estatref/info/sdds/en/extrade/extrade base.htm

General abbreviations

Annual average growth rate in %; AAGR: KIS Knowledge-intensive services;

Eurostat estimate; s not available.

Geographical coverage

EU-25 Member States, Candidate Countries, Iceland, Norway, Switzerland, United States and Japan.

High-tech classification of manufacturing industries

Eurostat and OECD use the following breakdown of the manufacturing industry according to global technological intensity and based on NACE rev 11 at 3-digit level

| rev. 1.1 at 3-digit level: | | | | |
|--|--|--|--|--|
| High-technology | NACE Rev. 1.1 codes: 24.4 Manufacture of pharmaceuticals, medicinal chemicals and botanical products; 30 Manufacture of office machinery and computers; 32 Manufacture of radio, television and communication equipment and apparatus; 33 Manufacture of medical, precision and optical instruments, watches and clocks. 35.3 Manufacture of aircraft and spacecraft | | | |
| Medium-high- technology | NACE Rev. 1.1 codes: 24 Manufacture of chemicals and chemical product, excluding 24.4 Manufacture of pharmaceuticals, medicinal chemicals and botanical products; 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 Manufacture of other transport equipment, excluding 35.1 Building and repairing of ships and boats and 35.3 Manufacture of aircraft and spacecraft. | | | |
| Medium-low- technology | NACE Rev. 1.1 codes: 23 Manufacture of coke, refined petroleum products and nuclear fuel; 25 to 28 Manufacture of rubber and plastic products; basic metals and fabricated metal products; other non-metallic mineral products; 35.1 Building and repairing of ships and boats. | | | |
| Low-technology | NACE Rev. 1.1 codes: 15 to 22 Manufacture of food products, beverages and tobacco; textiles and textile products; leather and leather products; wood and wood products; pulp, paper and paper products, publishing and printing; 36 to 37 Manufacturing n.e.c. | | | |
| Classification of knowledge-intensive services Similar as for manufacturing, Eurostat defines the following sectors as | | | | |

| knowledge-Intensive Services — KIS: | | | | |
|-------------------------------------|--|--|--|--|
| | NACE Rev. 1.1 codes: | | | |
| High-technology KIS | 64 Post and telecommunications; | | | |
| mgm toomiology rac | 72 Computer and related activities; | | | |
| | 73 Research and development. | | | |
| | NACE Rev. 1.1 codes: | | | |
| Market KIS | 61 Water transport; | | | |
| (excl. financial | 62 Air transport; | | | |
| intermediation and | 70 Real estate activities; | | | |
| high-tech KIS) | 71 Renting of machinery and equipment without | | | |
| g too re, | operator and of personal and household goods; | | | |
| | 74 Other business activities. | | | |
| | NACE Rev. 1.1 codes: | | | |
| | 50 to 52 Wholesale and retail trade; repair of motor | | | |
| | vehicles, motorcycles and personal and household | | | |
| Market less KIS | goods; | | | |
| marnot root rue | 55 Hotels and restaurants; | | | |
| | 60 Land transport; transport via pipelines; | | | |
| | 63 Supporting and auxiliary transport activities; | | | |
| | activities of travel agencies. | | | |

Data presented in this Statistics in Focus shows the data availability in Eurostat's reference database as of August 2005.



Further information:

Databases

EUROSTAT Website/Science and technology/High tech industry and knowledge based services/High-tech industries and knowledge-intensive services: economic statistics/High tech industries and knowledge based services: economic statistics at national level/Economic statistics on high-tech industries and Knowledge Intensive Services

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