

## MAIN OECD DATABASES USED

### Databases maintained by the Directorate for Science, Technology and Industry (DSTI)

#### *Industrial structure and performance*

**STAN:** The database for **Industrial Analysis** includes annual measures of output, labour input, investment and international trade which allow users to construct a wide range of indicators focused on areas such as productivity growth, competitiveness and general structural change. The industry list provides sufficient details to enable users to highlight high-technology sectors and is compatible with those used in related OECD databases. STAN is primarily based on member countries' annual National Accounts by activity tables and uses data from other sources, such as national industrial surveys/censuses, to estimate any missing detail. Since many of the data points in STAN are estimated, they do not represent the official member country submissions.

The latest version of STAN is based on the International Standard Industrial Classification (ISIC) Rev. 3 and covers all activities (including services). Further details on STAN are available on the Internet at: [www.oecd.org/sti/stan](http://www.oecd.org/sti/stan).

**Publication:** STAN is available on line on SourceOECD ([www.sourceoecd.org](http://www.sourceoecd.org)), updated on a "rolling" basis (*i.e.* new tables are posted as soon as they are ready) to maximise timeliness. In May 2004, a CDROM was published providing a snapshot of the STAN industrial database together with related databases covering R&D Expenditure and Bilateral Trade by industry (ANBERD and BTM) as well as a set of derived indicators (<http://oecdpublications.gfi-nb.com/cgi-bin/OECDBookShop.storefront/EN/product/922004063C3>).

#### *Science and technology*

**R&D and TBP:** The **R&D** database contains the full results of the OECD surveys on **R&D expenditure and personnel** from the 1960s. The **TBP** database presents information on the **technology balance of payments**. These databases serve, *inter alia*, as the raw material for both the ANBERD and MSTI databases.

**Publication:** OECD (2004), *Research and Development Statistics: 2003 Edition*. Annual on CD-ROM (a printed edition is also available every two years).

**MSTI:** The **Main Science and Technology Indicators** database provides a selection of the most frequently used annual data on the scientific and technological performance of OECD member countries and eight non-member economies (Argentina, China, Israel, Romania, Russian Federation, Singapore, Slovenia, Chinese Taipei). The indicators, expressed in the form of ratios, percentages, growth rates, cover resources devoted to R&D, patent families, technology balance of payments and international trade in highly R&D-intensive industries.

**Publication:** OECD (2004), *Main Science and Technology Indicators 2004/1*. Biannual. Also available on CD-ROM.

**ANBERD:** The **Analytical Business Enterprise Research and Development** database is an estimated database constructed with a view to creating a consistent data set that overcomes the problems of international comparability and time discontinuity associated with the official business enterprise R&D data provided to the OECD by its member countries. ANBERD contains R&D expenditures for the period 1987-2001, by industry (ISIC Rev. 3), for 19 OECD countries.

**Publication:** OECD (forthcoming), *Research and Development Expenditure in Industry, 1987-2002*. Annual. Also available on line and on the CD-Rom STAN Structural Analysis databases (<http://oecdpublications.gfi-nb.com/cgi-bin/OECDBookShop.storefront/EN/product/922004063C3>).

**Patent database:** This database contains patents filed at the largest national patent offices – European Patent Office (EPO); US Patent and Trademark Office (USPTO); Japanese Patent Office (JPO) – and other national or regional offices. Each patent is referenced by: patent numbers and dates (publication, application and priority); names and countries of residence of the applicants and of the inventors; and technological categories, using the national patent classification as well as the International Patent Classification (IPC). The compiled indicators mainly refer to single patent counts in a selected patent office, as well as counts of "triadic" patent families (patents filed at the EPO, the USPTO and the JPO to protect a single invention).

The series are published on a regular basis in OECD, *Main Science and Technology Indicators*.

## Globalisation and international trade

**AFA:** The **Activities of Foreign Affiliates** database presents detailed data on the performance of foreign affiliates in the manufacturing industry of OECD countries (inward and outward investment). The data indicate the increasing importance of foreign affiliates in the economies of host countries, particularly in production, employment, value added, research and development, exports, wages and salaries. AFA contains 18 variables broken down by partner country and by industrial sector (based on ISIC Rev. 3) for 22 OECD countries.

*Publication:* OECD, *Measuring Globalisation: The Role of Multinationals in OECD Economies*, 2001 Edition. Vol. I: Manufacturing. Biennial. Also available on line on SourceOECD ([www.sourceoecd.org](http://www.sourceoecd.org)).

**FATS:** This database gives detailed data on the **activities of foreign affiliates** in the **service** sector of OECD countries (inward and outward investment). The data indicate the increasing importance of foreign affiliates in the economies of host countries and of affiliates of national firms implanted abroad. FATS contains five variables (production, employment, value added, imports and exports) broken down by country of origin (inward investments) or implantation (outward investments) and by industrial sector (based on ISIC Rev. 3) for 19 OECD countries.

*Publication:* OECD, *Measuring Globalisation: The Role of Multinationals in OECD Economies*, 2001 Edition. Vol. II: Services. Biennial. Soon available on line.

**Bilateral Trade (BTD):** This database for industrial analysis includes detailed trade flows by manufacturing industry between a set of OECD *declaring* countries and a selection of *partner* countries and geographical regions. Data are presented in thousands of USD at current prices, and cover the period 1988-2001. The data have been derived from the OECD database *International Trade by Commodities Statistics* (ITCS – formerly *Foreign Trade Statistics* or FTS). Imports and exports are grouped according to the country of origin and the country of destination of the goods. The data have been converted from product classification schemes to an activity classification scheme based on ISIC Rev.3, that matches the classification currently used for the OECD's STAN, Input-Output tables and ANBERD databases.

*Publication:* OECD, *Bilateral Trade Database*, 2002. Also available on CD-ROM with STAN and ANBERD databases (<http://oecdpublications.gfi-nb.com/cgi-bin/OECDBookShop.storefront/EN/product/922004063C3>).

## Information and communication technology (ICT)

**Telecommunications:** This database is produced in association with the biennial *Communications Outlook*. It provides time-series data covering all OECD countries for the period 1980-2001. It contains both telecommunication and economic indicators.

*Publication:* OECD (2003), *Telecommunications Database 2003*. Only available on diskette and CD-ROM.

**ICT:** Work is under way to develop a database on ICT supply and ICT usage statistics. Statistics on employment, value added, production, wages and salaries, number of enterprises, R&D, imports and exports for the ICT sector are being collected following the OECD ICT sector definition based on ISIC Rev. 3.

*Publication:* OECD (2002), *Measuring the Information Economy*, 2002. Freely available as a Web book with “clickable” access to the data used in charts and figures at: [www.oecd.org/sti/measuring-infoeconomy](http://www.oecd.org/sti/measuring-infoeconomy).

## Current country coverage of main DSTI databases used in this publication

| Industry        | Science and technology |     |     |      |        | Globalisation |     |      | ICT |          |
|-----------------|------------------------|-----|-----|------|--------|---------------|-----|------|-----|----------|
|                 | STAN                   | R&D | TBP | MSTI | ANBERD | Patents       | AFA | FATS | BTD | Telecom. |
| Australia       | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Austria         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Belgium         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Canada          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Czech Republic  | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Denmark         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Finland         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| France          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Germany         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Greece          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Hungary         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Iceland         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Ireland         | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Italy           | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Japan           | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Korea           | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Luxembourg      | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Mexico          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Netherlands     | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| New Zealand     | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Norway          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Poland          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Portugal        | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Slovak Republic | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Spain           | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Sweden          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Switzerland     | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| Turkey          | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| United Kingdom  | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |
| United States   | ✓                      | ✓   | ✓   | ✓    | ✓      | ✓             | ✓   | ✓    | ✓   | ✓        |

## Other OECD databases

**ADB:** Analytical DataBase (Economics Department).

**ANA:** Annual National Accounts (Statistics Directorate).

**Education database** (Directorate for Education).

**ITCS:** International Trade in Commodities Statistics (Statistics Directorate).

**International Direct Investment** (Directorate for Financial, Fiscal and Enterprise Affairs).

**LFS:** Labour Force Statistics (Statistics Directorate).

**SSIS:** Structural Statistics for Industry and Services (Statistics Directorate).

**Services:** Value Added and Employment (Statistics Directorate).

Further details on OECD statistics are available on the Internet at: [www.oecd.org/statistics/](http://www.oecd.org/statistics/).

## STANDARD STATISTICAL NOTES USED IN THIS PUBLICATION FOR SCIENCE AND TECHNOLOGY INDICATORS

- a)* Break in series with previous year.
- b)* Estimate.
- c)* Defence excluded (all or mostly).
- d)* Including R&D in the social sciences and humanities.
- e)* Excluding R&D in the social sciences and humanities.
- f)* Federal or central government only.
- g)* Excludes data for the R&D content of general payment to the higher education sector for combined education and research.
- h)* Excludes most or all capital expenditure.
- i)* Total intramural R&D expenditure instead of current intramural R&D expenditure.
- j)* Overestimated or based on overestimated data.
- k)* Underestimated or based on underestimated data.
- l)* Included elsewhere.
- m)* Includes other classes.
- n)* Provisional.
- o)* At current exchange rate and not at current purchasing power parities.
- p)* Unrevised breakdown not adding to the revised total.
- q)* Does not correspond exactly to the OECD recommendations.
- r)* Including extramural R&D expenditure.

## STANDARD INDUSTRY AGGREGATION BY TECHNOLOGY LEVEL

(based on ISIC Revision3)

The *high-technology* industries (HT) are defined as the sum of:

- Pharmaceuticals (2423),
- Office and computing machinery (30),
- Radio, TV and communication equipment (32),
- Medical, precision and optical equipment (33),
- Aircraft and spacecraft (353).

The *medium-high-technology* industries (MHT) are defined as the sum of:

- Chemicals excluding pharmaceuticals (24 excl. 2423),
- Machinery and equipment (29),
- Electrical machinery and apparatus (31),
- Motor vehicles and trailers (34),
- Railroad and transport equipment (352+359).

The *medium-low-technology* industries (MLT) are defined as the sum of:

- Coke, refined petroleum products and nuclear fuel (23),
- Rubber and plastic products (25),
- Other non-metallic mineral products (26),
- Basic metals (27),
- Fabricated metal products except machinery and equipment (28),
- Building and repairing of ships and boats (351).

The *low-technology industries* (LT) are defined as the sum of:

- Food products, beverages and tobacco (15-16),
- Textiles, textile products, leather and footwear (17-19),
- Wood, pulp, paper, paper products, printing and publishing (20-22),
- Manufacturing n.e.c. and recycling (36-37).

## ANNEX TABLES

 Table 1. Breakdown of GDP per capita into its components, 1990-2003  
 United States = 100

|                              | GDP per capita<br>(US=100) |           | Effect of labour force participation (%) |            |   |           |  |             |              |           |               |            | GDP per person<br>employed<br>(US=100) |           | GDP per hour<br>worked<br>(US=100) |           |
|------------------------------|----------------------------|-----------|--|------------|---|-----------|--|-------------|--------------|-----------|---------------|------------|--|-----------|------------------------------------|-----------|
|                              |                            |           | Total effect                             |            | Working-age<br>population <sup>1</sup> to total<br>population |           | Labour force to<br>working-age<br>population |             | Unemployment |           | Working hours |            |  |           |                                    |           |
|                              | (1)                        | (2)       | (3)                                      | (4)        | (5)   | (6)       | (7)  | (8)=(1)-(2) |              |           |               |            |  |           |                                    |           |
|                              | 1990                       | 2003      | 1990                                     | 2003       | 1990  | 2003      | 1990   | 2003        | 1990         | 2003      | 1990          | 2003       | 1990                                   | 2003      | 1990                               | 2003      |
| Australia <sup>2</sup>       | 73                         | 78        | -1                                       | 1          | -10   | -10       | 9  | 11          | -1           | 0         | 1             | 1          | 75                                     | 77        | 73                                 | 77        |
| Austria                      | 82                         | 79        | -  | -          | -10   | -9        | 14   | 14          | 1            | 0         | -             | -13        | 77                                     | 74        | -                                  | 87        |
| Belgium                      | 78                         | 76        | -26                                      | -30        | -10   | -12       | -6   | 1           | -1           | -2        | -9            | -17        | 95                                     | 89        | 104                                | 106       |
| Canada                       | 83                         | 83        | -3                                       | 3          | -12   | -10       | 14   | 15          | -2           | -1        | -2            | -2         | 83                                     | 79        | 86                                 | 81        |
| Czech Republic               | 48                         | 43        | 1  | 2          | -7  | -3        | 7  | 3           | 1            | -1        | -             | 3          | 47                                     | 44        | -                                  | 41        |
| Denmark                      | 79                         | 80        | -11                                      | -14        | -10   | -12       | 17   | 16          | -1           | 0         | -17           | -19        | 73                                     | 75        | 90                                 | 93        |
| Finland                      | 78                         | 73        | -1                                       | -9         | -10   | -10       | 12   | 9           | 2            | -2        | -5            | -6         | 74                                     | 77        | 79                                 | 82        |
| France                       | 79                         | 77        | -25                                      | -30        | -12   | -13       | 0  | 5           | -3           | -3        | -10           | -19        | 94                                     | 88        | 104                                | 106       |
| Germany                      | 96                         | 70        | -14                                      | -19        | -9  | -9        | 8  | 10          | 1            | -2        | -14           | -18        | 95                                     | 72        | 110                                | 90        |
| Greece                       | 49                         | 54        | -12                                      | -10        | -9  | -10       | -5   | -1          | -1           | -2        | 3             | 4          | 64                                     | 67        | 61                                 | 63        |
| Hungary <sup>3</sup>         | 35                         | 39        | -3                                       | -9         | -5  | -4        | 1  | -5          | 1            | 0         | -             | -          | 38                                     | 48        | -                                  | -         |
| Iceland                      | 87                         | 80        | 10                                       | 12         | -15   | -12       | 23   | 21          | 3            | 2         | 0             | 0          | 77                                     | 69        | 77                                 | 68        |
| Ireland                      | 56                         | 90        | -21                                      | -13        | -13   | -11       | -5   | 5           | -6           | 1         | 4             | -8         | 80                                     | 94        | 77                                 | 102       |
| Italy                        | 75                         | 70        | -31                                      | -29        | -9  | -9        | -9   | -6          | -4           | -3        | -9            | -12        | 97                                     | 88        | 106                                | 100       |
| Japan <sup>2</sup>           | 81                         | 74        | 12                                       | 3          | -7  | -8        | 9  | 12          | 3            | 0         | 7             | 0          | 76                                     | 71        | 69                                 | 71        |
| Korea                        | 32                         | 47        | -4                                       | -1         | -3  | -3        | -2   | 1           | 1            | 1         | -             | -          | 36                                     | 48        | -                                  | -         |
| Luxembourg                   | 108                        | 137       | -14                                      | -13        | -10   | -18       | -9   | 2           | 6            | 4         | -             | -          | 122                                    | 150       | -                                  | -         |
| Mexico                       | 27                         | 26        | -47                                      | -35        | -32   | -27       | -17  | -10         | 2            | 2         | -             | 1          | 74                                     | 61        | -                                  | 60        |
| Netherlands                  | 77                         | 80        | -46                                      | -37        | -8  | -9        | -12  | 1           | 0            | 3         | -26           | -31        | 97                                     | 86        | 123                                | 117       |
| New Zealand                  | 60                         | 62        | -7                                       | 1          | -2  | 0         | -3   | 0           | -2           | 1         | -1            | 0          | 66                                     | 61        | 67                                 | 61        |
| Norway                       | 78                         | 96        | -21                                      | -27        | -13   | -16       | 13   | 20          | 0            | 1         | -22           | -32        | 77                                     | 92        | 99                                 | 123       |
| Poland                       | 26                         | 31        | -4                                       | -7         | -4  | -2        | -  | -2          | -            | -6        | -             | 3          | -                                      | 41        | -                                  | 38        |
| Portugal                     | 46                         | 49        | -2                                       | -3         | -7  | -6        | 4  | 7           | 0            | 0         | 1             | -4         | 49                                     | 48        | 48                                 | 53        |
| Slovak Republic <sup>4</sup> | 28                         | 35        | -5                                       | -6         | -4  | -3        | 1  | 2           | -3           | -5        | -             | 0          | 33                                     | 41        | -                                  | 41        |
| Spain                        | 57                         | 62        | -24                                      | -10        | -9  | -8        | -10  | 3           | -5           | -4        | 0             | 0          | 81                                     | 72        | 81                                 | 72        |
| Sweden                       | 81                         | 75        | -6                                       | -13        | -14   | -13       | 19   | 12          | 3            | 1         | -14           | -13        | 74                                     | 75        | 87                                 | 88        |
| Switzerland                  | 107                        | 82        | 8  | 3          | -11   | -10       | 27   | 23          | 5            | 1         | -12           | -11        | 86                                     | 68        | 98                                 | 80        |
| Turkey                       | 20                         | 18        | -8                                       | -10        | -5  | -3        | -2   | -6          | -1           | -1        | -             | -          | 28                                     | 29        | -                                  | -         |
| United Kingdom               | 71                         | 78        | -4                                       | -5         | -11   | -12       | 11   | 12          | 0            | 1         | -3            | -6         | 72                                     | 77        | 75                                 | 83        |
| United States                | 100                        | 100       | 0  | 0          | 0   | 0         | 0  | 0           | 0            | 0         | 0             | 0          | 100                                    | 100       | 100                                | 100       |
| <b>Total OECD</b>            | <b>69</b>                  | <b>81</b> | <b>-28</b>                               | <b>-9</b>  | <b>-10</b>  | <b>2</b>  | <b>-3</b>                                    | <b>2</b>    | <b>1</b>     | <b>-1</b> | <b>-17</b>    | <b>-13</b> | <b>81</b>                              | <b>77</b> | <b>97</b>                          | <b>90</b> |
| <b>EU-25<sup>4</sup></b>     | <b>65</b>                  | <b>69</b> | <b>-11</b>                               | <b>-4</b>  | <b>-9</b>   | <b>-6</b> | <b>1</b>                                     | <b>4</b>    | <b>-4</b>    | <b>-2</b> | <b>-</b>      | <b>-</b>   | <b>76</b>                              | <b>73</b> | <b>-</b>                           | <b>-</b>  |
| <b>EU-15</b>                 | <b>76</b>                  | <b>75</b> | <b>-20</b>                               | <b>-15</b> | <b>-10</b>  | <b>-7</b> | <b>1</b>                                     | <b>6</b>    | <b>-1</b>    | <b>-2</b> | <b>-10</b>    | <b>-12</b> | <b>86</b>                              | <b>78</b> | <b>96</b>                          | <b>90</b> |

1. 15-64 years.

2. 2002 instead of 2003.

3. 1991 instead of 1990.

4. 1994 instead of 1990.

 Source: OECD, GDP from National Accounts database; other data from *OECD Economic Outlook* 75, 2004.

 Complementary estimates for hours worked from *OECD Employment Outlook*, 2004.

 StatLink: <http://dx.doi.org/10.1787/515628628843>

Table 2. Income and productivity levels in the OECD, 1950-2002

|                        | GDP per capita (US=100) |            |            |            |            |            | GDP per hour worked (US=100) |            |            |            |            |            |
|------------------------|-------------------------|------------|------------|------------|------------|------------|------------------------------|------------|------------|------------|------------|------------|
|                        | 1950                    | 1973       | 1980       | 1990       | 2000       | 2003       | 1950                         | 1973       | 1980       | 1990       | 2000       | 2003       |
| Australia <sup>1</sup> | 77                      | 76         | 75         | 73         | 74         | 78         | 72                           | 69         | 72         | 73         | 77         | 77         |
| Austria                | 42                      | 73         | 81         | 82         | 79         | 79         | -                            | -          | -          | -          | 90         | 87         |
| Belgium                | 60                      | 76         | 81         | 78         | 73         | 76         | 59                           | 85         | 102        | 104        | 108        | 106        |
| Canada                 | 81                      | 86         | 91         | 83         | 80         | 83         | 85                           | 86         | 88         | 86         | 84         | 81         |
| Czech Republic         | 50                      | 57         | 58         | 48         | 39         | 43         | -                            | -          | -          | -          | 37         | 41         |
| Denmark                | 80                      | 91         | 87         | 79         | 79         | 80         | 60                           | 81         | 89         | 90         | 95         | 93         |
| Finland                | 46                      | 69         | 74         | 78         | 72         | 73         | 35                           | 60         | 64         | 79         | 84         | 82         |
| France                 | 55                      | 78         | 82         | 79         | 73         | 77         | 46                           | 77         | 88         | 104        | 103        | 106        |
| Germany                | 42                      | 74         | 78         | 96         | 70         | 70         | 39                           | 76         | 88         | 110        | 92         | 90         |
| Greece                 | 24                      | 56         | 57         | 49         | 47         | 54         | -                            | -          | -          | 61         | 60         | 63         |
| Hungary <sup>2</sup>   | 39                      | 51         | 43         | 35         | 33         | 39         | -                            | -          | -          | -          | -          | -          |
| Iceland                | -                       | 72         | 87         | 87         | 79         | 80         | -                            | 59         | 74         | 77         | 69         | 68         |
| Ireland                | 38                      | 43         | 49         | 56         | 79         | 90         | -                            | 46         | 58         | 77         | 96         | 102        |
| Italy                  | 41                      | 70         | 78         | 75         | 70         | 70         | 43                           | 83         | 97         | 106        | 108        | 100        |
| Japan                  | 20                      | 67         | 71         | 81         | 73         | -          | 15                           | 47         | 55         | 69         | 72         | 72         |
| Korea                  | 9                       | 15         | 20         | 32         | 43         | 47         | 7                            | 10         | 16         | -          | -          | -          |
| Luxembourg             | -                       | 98         | 92         | 108        | 137        | 137        | -                            | -          | -          | -          | -          | -          |
| Mexico                 | 27                      | 31         | 35         | 27         | 26         | 26         | 31                           | 42         | -          | -          | 63         | 60         |
| Netherlands            | 67                      | 83         | 84         | 77         | 76         | -          | 59                           | 92         | 106        | 123        | 116        | 117        |
| New Zealand            | 94                      | 79         | 68         | 60         | 58         | 62         | -                            | 81         | 71         | 67         | 63         | 61         |
| Norway                 | 63                      | 74         | 91         | 78         | 101        | 96         | 57                           | 79         | 101        | 99         | 133        | 123        |
| Poland                 | 29                      | 36         | 35         | 26         | 29         | 31         | -                            | -          | -          | -          | 35         | 38         |
| Portugal               | 22                      | 44         | 43         | 46         | 48         | 49         | 19                           | 40         | -          | 48         | 53         | 53         |
| Slovak Republic        | 38                      | 43         | 44         | -          | 30         | 35         | -                            | -          | -          | -          | 35         | 41         |
| Spain                  | 28                      | 57         | 56         | 57         | 57         | 62         | 25                           | 56         | 69         | 81         | 75         | 72         |
| Sweden                 | 69                      | 78         | 78         | 81         | 75         | 75         | 58                           | 79         | 83         | 87         | 90         | 88         |
| Switzerland            | 100                     | 114        | 106        | 107        | 84         | 82         | 86                           | 96         | 101        | 98         | 86         | 80         |
| Turkey                 | 15                      | 17         | 17         | 20         | 19         | 18         | -                            | -          | -          | -          | -          | -          |
| United Kingdom         | 72                      | 72         | 69         | 71         | 71         | 78         | 61                           | 64         | 70         | 75         | 81         | 83         |
| <i>United States</i>   | <i>100</i>              | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i>                   | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> |

1. 2002 instead of 2003. 2. 1991 instead of 1990.

Source: Previous annex; *OECD Science, Technology and Industry Scoreboard*, 2003.

StatLink: <http://dx.doi.org/10.1787/482201516226>

Table 3. Gross R&amp;D expenditures, 1981-2003

Millions constant USD (1995 PPPs)

|                            | 1981                       | 1991                         | 1995                         | 2000                       | 2001                       | 2002                         | 2003                     |
|----------------------------|----------------------------|------------------------------|------------------------------|----------------------------|----------------------------|------------------------------|--------------------------|
| Australia <sup>1,2</sup>   | 2 362                      | 5 141                        | 6 570                        | 7 107                      | -                          | -                            | -                        |
| Austria                    | 1 457                      | 2 488 <sup>b</sup>           | 2 821 <sup>b</sup>           | 3 855 <sup>b</sup>         | 4 019 <sup>b,n</sup>       | 4 098 <sup>b,n</sup>         | 4 131 <sup>b,n</sup>     |
| Belgium <sup>3</sup>       | 2 605 <sup>a</sup>         | 3 350 <sup>b</sup>           | 3 762                        | 5 110                      | 5 488                      | -                            | -                        |
| Canada                     | 5 843                      | 9 373                        | 11 250                       | 15 373                     | 16 529                     | 16 072 <sup>n</sup>          | 16 065 <sup>b,n</sup>    |
| Czech Republic             | -                          | 2 324 <sup>c,q</sup>         | 1 257 <sup>a</sup>           | 1 760                      | 1 771                      | 1 800                        | -                        |
| Denmark <sup>4</sup>       | 945                        | 1 773                        | 2 159                        | 2 854                      | 3 272                      | 3 471                        | -                        |
| Finland                    | 904 <sup>a</sup>           | 1 938 <sup>a</sup>           | 2 218                        | 4 162                      | 4 221                      | 4 374                        | -                        |
| France                     | 17 870 <sup>a</sup>        | 27 961                       | 28 461                       | 30 646 <sup>a</sup>        | 31 994                     | 31 923 <sup>n</sup>          | -                        |
| Germany                    | 27 895                     | 41 987 <sup>a</sup>          | 39 412 <sup>b</sup>          | 47 838 <sup>b</sup>        | 48 518                     | 48 934 <sup>b</sup>          | 48 426 <sup>b</sup>      |
| Greece <sup>4</sup>        | 205 <sup>a</sup>           | 484                          | 671 <sup>a</sup>             | 1 056                      | 1 106 <sup>b</sup>         | -                            | -                        |
| Hungary                    | -                          | 981 <sup>c,q</sup>           | 684 <sup>c</sup>             | 908 <sup>c</sup>           | 1 116 <sup>c</sup>         | 1 249 <sup>c</sup>           | -                        |
| Iceland                    | 29                         | 68                           | 93                           | 207 <sup>b</sup>           | 237                        | 238 <sup>b</sup>             | -                        |
| Ireland                    | 251                        | 487 <sup>b</sup>             | 822 <sup>b</sup>             | 1 184 <sup>b</sup>         | 1 253 <sup>b</sup>         | -                            | -                        |
| Italy                      | 7 914 <sup>r</sup>         | 13 880 <sup>a</sup>          | 11 892                       | 13 975                     | 14 830                     | -                            | -                        |
| Japan                      | 38 752 <sup>b,j</sup>      | 74 412 <sup>b,j</sup>        | 75 659 <sup>b,j</sup>        | 90 184                     | 93 007                     | 94 172                       | -                        |
| Korea                      | -                          | 7 563 <sup>e</sup>           | 12 919 <sup>e</sup>          | 17 374 <sup>e</sup>        | 19 721 <sup>e</sup>        | 20 858 <sup>e</sup>          | -                        |
| Luxembourg                 | -                          | -                            | -                            | 318                        | -                          | -                            | -                        |
| Mexico                     | -                          | -                            | 1 935                        | 3 037                      | 3 194                      | -                            | -                        |
| Netherlands                | 4 304                      | 6 076                        | 6 650                        | 7 649                      | 7 670                      | -                            | -                        |
| New Zealand <sup>4</sup>   | -                          | 524                          | 605                          | 712                        | 873 <sup>a</sup>           | -                            | -                        |
| Norway <sup>4</sup>        | 937                        | 1 512                        | 1 765 <sup>a</sup>           | 2 055                      | 2 296                      | 2 358 <sup>b</sup>           | -                        |
| Poland                     | -                          | -                            | 1 881 <sup>a</sup>           | 2 472                      | 2 407                      | 2 244                        | -                        |
| Portugal <sup>5,1</sup>    | 271                        | 780                          | 751                          | 1 279 <sup>b</sup>         | 1 371                      | 1 512 <sup>b</sup>           | -                        |
| Slovak Republic            | -                          | 868 <sup>b,c,q</sup>         | 405 <sup>c</sup>             | 340 <sup>k</sup>           | 346 <sup>k</sup>           | 326 <sup>k</sup>             | -                        |
| Spain                      | 1 754                      | 4 944                        | 5 010                        | 6 998                      | 7 314                      | 8 090                        | -                        |
| Sweden <sup>4</sup>        | 3 234 <sup>a,k</sup>       | 4 883 <sup>k</sup>           | 6 294 <sup>a,k</sup>         | 7 715 <sup>k</sup>         | 9 503 <sup>k</sup>         | -                            | -                        |
| Switzerland <sup>1,2</sup> | 3 233 <sup>b</sup>         | 4 739                        | 4 971                        | 5 255                      | -                          | -                            | -                        |
| Turkey                     | -                          | 1 538                        | 1 284                        | 2 627                      | -                          | -                            | -                        |
| United Kingdom             | 19 201 <sup>a</sup>        | 21 673                       | 22 498                       | 24 816                     | 25 530                     | 26 207                       | -                        |
| United States              | 114 530 <sup>h</sup>       | 176 578 <sup>h</sup>         | 184 079 <sup>h</sup>         | 243 271 <sup>h</sup>       | 246 187 <sup>h</sup>       | 245 430 <sup>h,n</sup>       | 248 064 <sup>b,h,n</sup> |
| <b>Total OECD</b>          | <b>254 691<sup>b</sup></b> | <b>414 522<sup>a,b</sup></b> | <b>438 558<sup>a,b</sup></b> | <b>553 399<sup>b</sup></b> | <b>569 275<sup>b</sup></b> | <b>574 708<sup>b,n</sup></b> | -                        |
| <b>EU-25</b>               | -                          | -                            | <b>138 328<sup>b</sup></b>   | <b>166 859<sup>b</sup></b> | <b>172 704<sup>b</sup></b> | <b>175 929<sup>b,n</sup></b> | -                        |
| <b>EU-15</b>               | <b>88 551<sup>b</sup></b>  | <b>132 558<sup>a,b</sup></b> | <b>133 421</b>               | <b>160 547<sup>b</sup></b> | <b>166 123<sup>b</sup></b> | <b>169 525<sup>b,n</sup></b> | -                        |
| China                      | -                          | 13 824 <sup>k</sup>          | 18 022 <sup>k</sup>          | 45 002 <sup>a</sup>        | 52 399                     | 65 485                       | -                        |
| Israel                     | -                          | 1 937 <sup>c</sup>           | 2 630 <sup>c</sup>           | 5 613 <sup>c</sup>         | 5 937 <sup>c,n</sup>       | 5 516 <sup>c,n</sup>         | -                        |
| Russian Federation         | -                          | 23 032                       | 7 475                        | 10 537                     | 12 277                     | 13 651                       | -                        |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1992 instead of 1991.

3. 1983 instead of 1981.

5. 1982 instead of 1981.

2. 1996 instead of 1995.

4. 1999 instead of 2000.



Table 4. GERD intensity, 1981-2003

As a percentage of GDP

|                             | 1981                    | 1991                      | 1995                      | 2000                    | 2001                    | 2002                      | 2003                  |
|-----------------------------|-------------------------|---------------------------|---------------------------|-------------------------|-------------------------|---------------------------|-----------------------|
| Australia <sup>1, 2</sup>   | 0.94                    | 1.52                      | 1.66                      | 1.54                    | -                       | -                         | -                     |
| Austria                     | 1.13                    | 1.47 <sup>b</sup>         | 1.56 <sup>a,b</sup>       | 1.86 <sup>b</sup>       | 1.92 <sup>b,n</sup>     | 1.93 <sup>b,n</sup>       | 1.94 <sup>b,n</sup>   |
| Belgium <sup>3</sup>        | 1.56 <sup>a</sup>       | 1.62 <sup>b</sup>         | 1.72                      | 2.04                    | 2.17                    | -                         | -                     |
| Canada                      | 1.24                    | 1.60                      | 1.72                      | 1.92                    | 2.03                    | 1.91 <sup>n</sup>         | 1.87 <sup>b,n</sup>   |
| Czech Republic              | -                       | 2.02 <sup>c,q</sup>       | 1.01 <sup>a</sup>         | 1.33                    | 1.30                    | 1.30                      | -                     |
| Denmark <sup>4</sup>        | 1.06                    | 1.64                      | 1.84                      | 2.19                    | 2.40                    | 2.52                      | -                     |
| Finland                     | 1.18 <sup>a</sup>       | 2.04 <sup>a</sup>         | 2.28                      | 3.40                    | 3.41                    | 3.46                      | -                     |
| France                      | 1.93 <sup>a</sup>       | 2.37                      | 2.31                      | 2.18 <sup>a</sup>       | 2.23                    | 2.20 <sup>n</sup>         | -                     |
| Germany                     | 2.43                    | 2.52 <sup>a</sup>         | 2.25 <sup>b</sup>         | 2.49 <sup>b</sup>       | 2.51                    | 2.52 <sup>b</sup>         | 2.50 <sup>b</sup>     |
| Greece <sup>4</sup>         | 0.17 <sup>a</sup>       | 0.36                      | 0.49 <sup>a</sup>         | 0.67                    | 0.65 <sup>b</sup>       | -                         | -                     |
| Hungary                     | -                       | 1.06 <sup>c,q</sup>       | 0.73 <sup>a,c</sup>       | 0.80 <sup>c</sup>       | 0.95 <sup>c</sup>       | 1.02 <sup>c</sup>         | -                     |
| Iceland                     | 0.64                    | 1.17                      | 1.57                      | 2.75 <sup>b</sup>       | 3.06                    | 3.09 <sup>b</sup>         | -                     |
| Ireland                     | 0.68                    | 0.93 <sup>b</sup>         | 1.28 <sup>b</sup>         | 1.15 <sup>b</sup>       | 1.15 <sup>b</sup>       | -                         | -                     |
| Italy                       | 0.88 <sup>r</sup>       | 1.23 <sup>a</sup>         | 1.00                      | 1.07                    | 1.11                    | -                         | -                     |
| Japan                       | 2.12 <sup>j</sup>       | 2.76 <sup>j</sup>         | 2.69 <sup>j</sup>         | 2.99                    | 3.07                    | 3.12                      | -                     |
| Korea                       | -                       | 1.92 <sup>e</sup>         | 2.50 <sup>e</sup>         | 2.65 <sup>e</sup>       | 2.92 <sup>e</sup>       | 2.91 <sup>e</sup>         | -                     |
| Luxembourg                  | -                       | -                         | -                         | 1.71                    | -                       | -                         | -                     |
| Mexico                      | -                       | -                         | 0.31                      | 0.37                    | 0.39                    | -                         | -                     |
| Netherlands                 | 1.79                    | 1.97                      | 1.99 <sup>a</sup>         | 1.90                    | 1.89                    | -                         | -                     |
| New Zealand <sup>4</sup>    | -                       | 0.98                      | 0.96                      | 1.02                    | 1.18 <sup>a</sup>       | -                         | -                     |
| Norway <sup>4</sup>         | 1.18                    | 1.64                      | 1.70 <sup>a</sup>         | 1.65                    | 1.60                    | 1.67                      | -                     |
| Poland                      | -                       | -                         | 0.65 <sup>a</sup>         | 0.66                    | 0.64                    | 0.59 <sup>b</sup>         | -                     |
| Portugal <sup>5, 1</sup>    | 0.30                    | 0.61                      | 0.57 <sup>a</sup>         | 0.80 <sup>b</sup>       | 0.85                    | 0.93 <sup>b</sup>         | -                     |
| Slovak Republic             | -                       | 2.13 <sup>c,q</sup>       | 0.93 <sup>c</sup>         | 0.65 <sup>k</sup>       | 0.64 <sup>k</sup>       | 0.58 <sup>k</sup>         | -                     |
| Spain                       | 0.41                    | 0.84                      | 0.81 <sup>a</sup>         | 0.94                    | 0.95                    | 1.03                      | -                     |
| Sweden <sup>4</sup>         | 2.22 <sup>a,k</sup>     | 2.72 <sup>k</sup>         | 3.35 <sup>a,k</sup>       | 3.65 <sup>k</sup>       | 4.27 <sup>k</sup>       | -                         | -                     |
| Switzerland <sup>1, 2</sup> | 2.12 <sup>b</sup>       | 2.59                      | 2.67                      | 2.57                    | -                       | -                         | -                     |
| Turkey                      | -                       | 0.53                      | 0.38                      | 0.64                    | -                       | -                         | -                     |
| United Kingdom              | 2.38 <sup>a</sup>       | 2.07                      | 1.95                      | 1.84                    | 1.86                    | 1.88                      | -                     |
| United States               | 2.34 <sup>h</sup>       | 2.72 <sup>h</sup>         | 2.51 <sup>h</sup>         | 2.72 <sup>h</sup>       | 2.74 <sup>h</sup>       | 2.67 <sup>h,n</sup>       | 2.62 <sup>b,h,n</sup> |
| <b>Total OECD</b>           | <b>1.93<sup>b</sup></b> | <b>2.22<sup>a,b</sup></b> | <b>2.09<sup>a,b</sup></b> | <b>2.24<sup>b</sup></b> | <b>2.28<sup>b</sup></b> | <b>2.26<sup>b,n</sup></b> | -                     |
| <b>EU-25</b>                | -                       | -                         | <b>1.72<sup>b</sup></b>   | <b>1.80<sup>b</sup></b> | <b>1.83<sup>b</sup></b> | <b>1.83<sup>b,n</sup></b> | -                     |
| <b>EU-15</b>                | <b>1.67<sup>b</sup></b> | <b>1.90<sup>a,b</sup></b> | <b>1.80</b>               | <b>1.88<sup>b</sup></b> | <b>1.92<sup>b</sup></b> | <b>1.93<sup>b,n</sup></b> | -                     |
| China                       | -                       | 0.74 <sup>k</sup>         | 0.60 <sup>k</sup>         | 1.00 <sup>a</sup>       | 1.07                    | 1.23                      | -                     |
| Israel                      | -                       | 2.50 <sup>c</sup>         | 2.74 <sup>c</sup>         | 4.72 <sup>c</sup>       | 5.04 <sup>c,n</sup>     | 4.72 <sup>c,n</sup>       | -                     |
| Russian Federation          | -                       | 1.43                      | 0.85                      | 1.05                    | 1.16                    | 1.24                      | -                     |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1992 instead of 1991.                      3. 1983 instead of 1981.                      5. 1982 instead of 1981.  
2. 1996 instead of 1995.                      4. 1999 instead of 2000.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/036108151783>

**Table 5. GERD by source of funds, 1981-2003**  
As a percentage of total national R&D expenditures

|                                | Business enterprise     |                           |                           |                         |                           |                     | Government              |                           |                           |                         |                           |                     |
|--------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|
|                                | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                |
| Australia <sup>1, 2, 3</sup>   | 20.2 <sup>p</sup>       | 44.0                      | 47.8                      | 46.3 <sup>r</sup>       | -                         | -                   | 72.8 <sup>p</sup>       | 50.2                      | 45.8                      | 45.7 <sup>r</sup>       | -                         | -                   |
| Austria                        | 50.2                    | 50.3 <sup>b</sup>         | 45.3 <sup>b</sup>         | 39.9 <sup>b,n</sup>     | 40.3 <sup>b,n</sup>       | 40.8 <sup>b,n</sup> | 46.9                    | 46.5 <sup>b</sup>         | 47.3 <sup>b</sup>         | 41.1 <sup>b,n</sup>     | 40.9 <sup>b,n</sup>       | 40.4 <sup>b,n</sup> |
| Belgium <sup>4</sup>           | 64.8 <sup>a</sup>       | 64.8 <sup>b</sup>         | 67.1                      | 64.3                    | -                         | -                   | 33.4 <sup>a</sup>       | 31.3 <sup>b</sup>         | 23.1                      | 21.4                    | -                         | -                   |
| Canada                         | 40.8                    | 38.2                      | 45.7                      | 48.3                    | 45.3 <sup>n</sup>         | 44.3 <sup>n</sup>   | 50.6                    | 45.7 <sup>b</sup>         | 35.9 <sup>b</sup>         | 30.5 <sup>b</sup>       | 33.3 <sup>b,n</sup>       | 34.0 <sup>b,n</sup> |
| Czech Republic                 | -                       | -                         | 63.1                      | 52.5                    | 53.7                      | -                   | -                       | -                         | 32.3                      | 43.6                    | 42.1                      | -                   |
| Denmark                        | 42.5 <sup>a</sup>       | 51.4                      | 45.2                      | 61.5 <sup>s</sup>       | -                         | -                   | 53.5                    | 39.7                      | 39.6                      | 28.0 <sup>s</sup>       | -                         | -                   |
| Finland                        | 54.5 <sup>a</sup>       | 56.3 <sup>a</sup>         | 59.5                      | 70.8                    | 69.5                      | -                   | 43.4 <sup>a</sup>       | 40.9 <sup>a</sup>         | 35.1                      | 25.5                    | 26.1                      | -                   |
| France                         | 40.9 <sup>a</sup>       | 42.5                      | 48.4                      | 54.2                    | -                         | -                   | 53.4 <sup>a</sup>       | 48.8                      | 41.9                      | 36.9                    | -                         | -                   |
| Germany                        | 56.9                    | 61.7 <sup>a</sup>         | 60.0 <sup>b</sup>         | 65.7                    | 65.6 <sup>b</sup>         | 65.1 <sup>b</sup>   | 41.8                    | 35.9 <sup>a</sup>         | 37.9 <sup>b</sup>         | 31.4                    | 31.5 <sup>b</sup>         | 32.1 <sup>b</sup>   |
| Greece                         | 21.4 <sup>a</sup>       | 21.8                      | 25.5 <sup>a</sup>         | 29.7 <sup>b</sup>       | -                         | -                   | 78.6 <sup>a</sup>       | 57.7                      | 53.9 <sup>a</sup>         | 46.9 <sup>b</sup>       | -                         | -                   |
| Hungary                        | -                       | 56.0 <sup>c,q,s</sup>     | 38.4 <sup>c,s</sup>       | 34.8 <sup>c,s</sup>     | 29.7 <sup>c,s</sup>       | -                   | -                       | 40.0 <sup>c,q,s</sup>     | 53.1 <sup>c,s</sup>       | 53.6 <sup>c,s</sup>     | 58.6 <sup>c,s</sup>       | -                   |
| Iceland                        | 5.7                     | 24.5                      | 34.6                      | 46.2                    | -                         | -                   | 85.6                    | 69.7                      | 57.3                      | 34.0                    | -                         | -                   |
| Ireland <sup>3</sup>           | 37.7                    | 60.6 <sup>b</sup>         | 72.3 <sup>b,p</sup>       | 66.0 <sup>b</sup>       | -                         | -                   | 56.5                    | 27.9 <sup>b</sup>         | 22.5 <sup>b,p</sup>       | 22.6 <sup>b</sup>       | -                         | -                   |
| Italy                          | 50.1 <sup>r</sup>       | 44.4 <sup>a</sup>         | 41.7                      | -                       | -                         | -                   | 47.2 <sup>r</sup>       | 49.6 <sup>a</sup>         | 53.0                      | -                       | -                         | -                   |
| Japan                          | 67.7 <sup>j</sup>       | 77.4 <sup>j</sup>         | 72.3 <sup>j</sup>         | 73.0                    | 73.9                      | -                   | 24.9 <sup>k</sup>       | 16.4 <sup>k</sup>         | 20.9 <sup>k</sup>         | 18.5 <sup>b</sup>       | 18.2 <sup>b</sup>         | -                   |
| Korea                          | -                       | -                         | 76.3                      | 72.5 <sup>e</sup>       | 72.2 <sup>e</sup>         | -                   | -                       | -                         | 19.0                      | 25.0 <sup>e</sup>       | 25.4 <sup>e</sup>         | -                   |
| Luxembourg <sup>3</sup>        | -                       | -                         | -                         | 91.0 <sup>r</sup>       | -                         | -                   | -                       | -                         | -                         | 7.7 <sup>r</sup>        | -                         | -                   |
| Mexico                         | -                       | -                         | 17.6                      | 29.8                    | -                         | -                   | -                       | -                         | 66.2                      | 59.1                    | -                         | -                   |
| Netherlands                    | 46.3                    | 47.8                      | 46.0                      | 51.8                    | -                         | -                   | 47.2                    | 48.6                      | 42.2                      | 36.2                    | -                         | -                   |
| New Zealand                    | -                       | 27.4                      | 33.7                      | 37.1 <sup>a</sup>       | -                         | -                   | -                       | 61.8                      | 52.3                      | 46.4 <sup>a</sup>       | -                         | -                   |
| Norway                         | 40.1                    | 44.5                      | 49.9 <sup>a</sup>         | 51.7                    | -                         | -                   | 57.2                    | 49.5                      | 44.0 <sup>a</sup>         | 39.8                    | -                         | -                   |
| Poland                         | -                       | -                         | 36.0 <sup>a</sup>         | 30.8                    | 31.0                      | -                   | -                       | -                         | 60.2 <sup>a</sup>         | 64.8                    | 61.1                      | -                   |
| Portugal <sup>5, 1</sup>       | 30.0                    | 20.2                      | 19.5                      | 31.5                    | -                         | -                   | 61.9                    | 59.4                      | 65.3 <sup>a</sup>         | 61.0                    | -                         | -                   |
| Slovak Republic                | -                       | 68.3 <sup>c,q</sup>       | 60.4 <sup>c</sup>         | 56.1 <sup>j</sup>       | 53.6 <sup>j</sup>         | -                   | -                       | 31.7 <sup>c,q</sup>       | 37.8 <sup>c</sup>         | 41.3                    | 44.1                      | -                   |
| Spain                          | 42.8                    | 48.1                      | 44.5                      | 47.2                    | 48.9                      | -                   | 56.0                    | 45.7                      | 43.6 <sup>a</sup>         | 39.9                    | 39.1                      | -                   |
| Sweden                         | 54.9 <sup>a</sup>       | 61.9                      | 65.5 <sup>a</sup>         | 71.9                    | -                         | -                   | 42.3 <sup>a</sup>       | 34.0                      | 28.8 <sup>a</sup>         | 21.0                    | -                         | -                   |
| Switzerland <sup>1, 2, 3</sup> | 75.1 <sup>b</sup>       | 67.4                      | 67.5                      | 69.1 <sup>r</sup>       | -                         | -                   | 24.9 <sup>b</sup>       | 28.4                      | 26.9                      | 23.2 <sup>r</sup>       | -                         | -                   |
| Turkey <sup>3</sup>            | -                       | 28.5                      | 32.9                      | 42.9 <sup>r</sup>       | -                         | -                   | -                       | 70.1                      | 62.4                      | 50.6 <sup>r</sup>       | -                         | -                   |
| United Kingdom                 | 42.1 <sup>a</sup>       | 49.6                      | 48.2                      | 47.3                    | 46.7                      | -                   | 48.1 <sup>a,b</sup>     | 35.0                      | 32.8                      | 28.5                    | 26.9                      | -                   |
| United States                  | 49.4 <sup>h</sup>       | 57.2 <sup>h</sup>         | 60.2 <sup>h</sup>         | 67.3 <sup>h</sup>       | 64.4 <sup>h,n</sup>       | 63.1 <sup>h,n</sup> | 47.8 <sup>h</sup>       | 38.9 <sup>h</sup>         | 35.4 <sup>h</sup>         | 27.8 <sup>h</sup>       | 30.2 <sup>h,n</sup>       | 31.2 <sup>h,n</sup> |
| <b>Total OECD</b>              | <b>51.7<sup>b</sup></b> | <b>58.7<sup>a,b</sup></b> | <b>59.4<sup>a,b</sup></b> | <b>63.6<sup>b</sup></b> | <b>62.3<sup>b,n</sup></b> | <b>-</b>            | <b>44.1<sup>b</sup></b> | <b>35.7<sup>a,b</sup></b> | <b>34.0<sup>a,b</sup></b> | <b>28.9<sup>b</sup></b> | <b>29.9<sup>b,n</sup></b> | <b>-</b>            |
| <b>EU-25</b>                   | <b>-</b>                | <b>-</b>                  | <b>51.9<sup>b</sup></b>   | <b>55.4<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            | <b>-</b>                | <b>-</b>                  | <b>39.4<sup>b</sup></b>   | <b>34.7<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| <b>EU-15</b>                   | <b>48.7<sup>b</sup></b> | <b>52.0<sup>a,b</sup></b> | <b>52.2</b>               | <b>56.0<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            | <b>46.7<sup>b</sup></b> | <b>41.1<sup>a,b</sup></b> | <b>39.1</b>               | <b>34.1<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| China <sup>3</sup>             | -                       | -                         | -                         | 57.6 <sup>s</sup>       | -                         | -                   | -                       | -                         | -                         | 33.4 <sup>s</sup>       | -                         | -                   |
| Israel <sup>3</sup>            | -                       | 43.5 <sup>c</sup>         | 47.7 <sup>c</sup>         | 69.6 <sup>c,n</sup>     | -                         | -                   | -                       | 36.9 <sup>c</sup>         | 35.9 <sup>c</sup>         | 24.7 <sup>c</sup>       | -                         | -                   |
| Russian Federation             | -                       | -                         | 33.6                      | 33.6                    | 33.1                      | -                   | -                       | -                         | 61.5                      | 57.2                    | 58.4                      | -                   |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

- 1992 instead of 1991.
- 1996 instead of 1995.
- 2000 instead of 2001.
- 1983 instead of 1981.
- 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/442056514762>

Table 5. GERD by source of funds, 1981-2003 (cont'd)

As a percentage of total national R&amp;D expenditures

|                                | Other national sources |                          |                          |                        |                          |                     | Abroad                 |                          |                        |                        |                     |                     |
|--------------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|---------------------|------------------------|--------------------------|------------------------|------------------------|---------------------|---------------------|
|                                | 1981                   | 1991                     | 1995                     | 2001                   | 2002                     | 2003                | 1981                   | 1991                     | 1995                   | 2001                   | 2002                | 2003                |
| Australia <sup>1, 2, 3</sup>   | 2.1 <sup>p</sup>       | 3.9                      | 4.4                      | 4.8 <sup>r</sup>       | -                        | -                   | 1.0 <sup>p</sup>       | 1.8                      | 2.1                    | 3.3 <sup>r</sup>       | -                   | -                   |
| Austria                        | 0.4                    | 0.3 <sup>b</sup>         | 0.4 <sup>b</sup>         | 0.3 <sup>b,n</sup>     | 0.3 <sup>b,n</sup>       | 0.3 <sup>b,n</sup>  | 2.5                    | 3.0 <sup>b</sup>         | 7.1 <sup>b</sup>       | 18.7 <sup>b,n</sup>    | 18.5 <sup>b,n</sup> | 18.5 <sup>b,n</sup> |
| Belgium <sup>4</sup>           | 0.8 <sup>a</sup>       | 1.0 <sup>b</sup>         | 2.3                      | 2.5                    | -                        | -                   | 1.0 <sup>a</sup>       | 3.0 <sup>b</sup>         | 7.5                    | 11.8                   | -                   | -                   |
| Canada                         | 4.8                    | 6.7 <sup>b</sup>         | 6.9 <sup>b</sup>         | 8.4 <sup>b</sup>       | 9.4 <sup>b,n</sup>       | 10.0 <sup>b,n</sup> | 3.8                    | 9.4                      | 11.6                   | 12.9                   | 12.0 <sup>n</sup>   | 11.7 <sup>n</sup>   |
| Czech Republic                 | -                      | -                        | 1.3                      | 1.7                    | 1.5                      | -                   | -                      | -                        | 3.3                    | 2.2                    | 2.7                 | -                   |
| Denmark                        | 2.0 <sup>a</sup>       | 4.6                      | 4.3                      | 2.6 <sup>s</sup>       | -                        | -                   | 2.1                    | 4.4                      | 11.0                   | 7.8 <sup>s</sup>       | -                   | -                   |
| Finland                        | 1.1 <sup>a</sup>       | 1.5 <sup>a</sup>         | 1.0                      | 1.2                    | 1.2                      | -                   | 1.0 <sup>a</sup>       | 1.3 <sup>a</sup>         | 4.5                    | 2.5                    | 3.1                 | -                   |
| France                         | 0.7 <sup>a</sup>       | 0.7                      | 1.7                      | 1.7                    | -                        | -                   | 5.0 <sup>a</sup>       | 8.0                      | 8.0                    | 7.2                    | -                   | -                   |
| Germany                        | 0.4                    | 0.5 <sup>a</sup>         | 0.3 <sup>b</sup>         | 0.4                    | 0.4 <sup>b</sup>         | 0.4 <sup>b</sup>    | 1.0                    | 2.0 <sup>a</sup>         | 1.8 <sup>b</sup>       | 2.5                    | 2.5 <sup>b</sup>    | 2.4 <sup>b</sup>    |
| Greece                         | -                      | 0.7                      | 2.5 <sup>a</sup>         | 2.0 <sup>b</sup>       | -                        | -                   | -                      | 19.9                     | 18.2 <sup>a</sup>      | 21.4 <sup>b</sup>      | -                   | -                   |
| Hungary                        | -                      | 0.1 <sup>c,q,s</sup>     | 0.5 <sup>c,s</sup>       | 0.4 <sup>c,s</sup>     | 0.3 <sup>c,s</sup>       | -                   | -                      | 1.8 <sup>c,q,s</sup>     | 4.9 <sup>c,s</sup>     | 9.2 <sup>c,s</sup>     | 10.4 <sup>c,s</sup> | -                   |
| Iceland                        | 4.4                    | 1.7                      | 3.7                      | 1.6                    | -                        | -                   | 4.3                    | 4.1                      | 4.4                    | 18.3                   | -                   | -                   |
| Ireland <sup>3</sup>           | 1.1                    | 2.2 <sup>b</sup>         | 1.9 <sup>b,p</sup>       | 2.6 <sup>b</sup>       | -                        | -                   | 4.8                    | 9.4 <sup>b</sup>         | 8.5 <sup>b,p</sup>     | 8.9 <sup>b</sup>       | -                   | -                   |
| Italy                          | 0.0 <sup>f</sup>       | -                        | -                        | -                      | -                        | -                   | 2.7 <sup>f</sup>       | 6.1 <sup>a</sup>         | 5.3                    | -                      | -                   | -                   |
| Japan                          | 7.3 <sup>b,k</sup>     | 6.1 <sup>b,k</sup>       | 6.7 <sup>b,k</sup>       | 8.1 <sup>b</sup>       | 7.6 <sup>b</sup>         | -                   | 0.1 <sup>b,k</sup>     | 0.1 <sup>b,k</sup>       | 0.1 <sup>b,k</sup>     | 0.4                    | 0.4                 | -                   |
| Korea                          | -                      | -                        | 4.7                      | 2.1 <sup>e</sup>       | 2.0 <sup>e</sup>         | -                   | -                      | -                        | 0.0                    | 0.5 <sup>e</sup>       | 0.4 <sup>e</sup>    | -                   |
| Luxembourg <sup>3</sup>        | -                      | -                        | -                        | -                      | -                        | -                   | -                      | -                        | -                      | 1.3 <sup>r</sup>       | -                   | -                   |
| Mexico                         | -                      | -                        | 9.5                      | 9.8                    | -                        | -                   | -                      | -                        | 6.7                    | 1.3                    | -                   | -                   |
| Netherlands                    | 1.3                    | 1.8                      | 2.6                      | 1.1 <sup>a</sup>       | -                        | -                   | 5.2                    | 1.9                      | 9.3                    | 11.0                   | -                   | -                   |
| New Zealand                    | -                      | 8.2                      | 10.1                     | 9.9 <sup>a</sup>       | -                        | -                   | -                      | 2.5                      | 3.9                    | 6.6 <sup>a</sup>       | -                   | -                   |
| Norway                         | 1.4                    | 1.3                      | 1.2 <sup>a</sup>         | 1.4                    | -                        | -                   | 1.4                    | 4.6                      | 4.9 <sup>a</sup>       | 7.1                    | -                   | -                   |
| Poland                         | -                      | -                        | 2.1 <sup>a</sup>         | 2.0                    | 3.2                      | -                   | -                      | -                        | 1.7 <sup>a</sup>       | 2.4                    | 4.8                 | -                   |
| Portugal <sup>5, 1</sup>       | 4.8                    | 5.4                      | 3.3                      | 2.4                    | -                        | -                   | 3.3                    | 15.0                     | 11.9 <sup>a</sup>      | 5.1                    | 4.9 <sup>b</sup>    | -                   |
| Slovak Republic                | -                      | -                        | 0.1 <sup>c</sup>         | 0.8 <sup>j</sup>       | 0.3 <sup>j</sup>         | -                   | -                      | -                        | 1.6 <sup>c</sup>       | 1.9 <sup>j</sup>       | 2.1 <sup>j</sup>    | -                   |
| Spain                          | 0.1 <sup>i</sup>       | 0.6                      | 5.2 <sup>a</sup>         | 5.3                    | 5.2                      | -                   | 1.1                    | 5.6                      | 6.7                    | 7.7                    | 6.8                 | -                   |
| Sweden                         | 1.4 <sup>a</sup>       | 2.7                      | 2.2 <sup>a</sup>         | 3.8                    | -                        | -                   | 1.5 <sup>a</sup>       | 1.5                      | 3.4 <sup>a</sup>       | 3.4                    | -                   | -                   |
| Switzerland <sup>1, 2, 3</sup> | -                      | 2.3                      | 2.5                      | 3.4 <sup>r</sup>       | -                        | -                   | -                      | 1.9                      | 3.1                    | 4.3 <sup>r</sup>       | -                   | -                   |
| Turkey <sup>3</sup>            | -                      | 1.3                      | 2.7                      | 5.3 <sup>r</sup>       | -                        | -                   | -                      | 0.2                      | 2.0                    | 1.2 <sup>r</sup>       | -                   | -                   |
| United Kingdom                 | 3.0 <sup>a</sup>       | 3.5                      | 4.5                      | 5.8                    | 5.9                      | -                   | 6.9 <sup>a</sup>       | 11.9                     | 14.5                   | 18.4                   | 20.5                | -                   |
| United States                  | 2.8 <sup>h</sup>       | 3.9 <sup>h</sup>         | 4.4 <sup>h</sup>         | 5.0 <sup>h</sup>       | 5.4 <sup>h,n</sup>       | 5.7 <sup>h,n</sup>  | -                      | -                        | -                      | -                      | -                   | -                   |
| <b>Total OECD</b>              | <b>2.9<sup>b</sup></b> | <b>3.5<sup>a,b</sup></b> | <b>4.0<sup>a,b</sup></b> | <b>4.6<sup>b</sup></b> | <b>4.8<sup>b,n</sup></b> | -                   | -                      | -                        | -                      | -                      | -                   | -                   |
| <b>EU-25</b>                   | -                      | -                        | <b>1.9<sup>b</sup></b>   | <b>2.2<sup>b</sup></b> | -                        | -                   | -                      | -                        | <b>6.7<sup>b</sup></b> | <b>7.6<sup>b</sup></b> | -                   | -                   |
| <b>EU-15</b>                   | <b>1.1<sup>b</sup></b> | <b>1.3<sup>a,b</sup></b> | <b>1.8<sup>b</sup></b>   | <b>2.2<sup>b</sup></b> | -                        | -                   | <b>3.5<sup>b</sup></b> | <b>5.6<sup>a,b</sup></b> | <b>6.9</b>             | <b>7.8<sup>b</sup></b> | -                   | -                   |
| China <sup>3</sup>             | -                      | -                        | -                        | -                      | -                        | -                   | -                      | -                        | -                      | 2.7 <sup>s</sup>       | -                   | -                   |
| Israel <sup>3</sup>            | -                      | 13.1 <sup>c</sup>        | 12.0 <sup>c</sup>        | 2.8 <sup>c,n</sup>     | -                        | -                   | -                      | 6.5 <sup>c</sup>         | 4.4 <sup>c</sup>       | 2.8 <sup>c,n</sup>     | -                   | -                   |
| Russian Federation             | -                      | -                        | 0.3                      | 0.5                    | 0.4                      | -                   | -                      | -                        | 4.6                    | 8.6                    | 8.0                 | -                   |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1992 instead of 1991.      3. 2000 instead of 2001.      5. 1982 instead of 1981.  
 2. 1996 instead of 1995.      4. 1983 instead of 1981.

Source: OECD, MSTI database, May 2004.

Table 6. GERD by two main sources of funds, as a percentage of GDP, 1981-2003

|                              | Industry                |                           |                           |                         |                           |                       | Government              |                           |                           |                         |                           |                       |
|------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|-----------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|-----------------------|
|                              | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                  | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                  |
| Australia <sup>1,2,3</sup>   | 0.19 <sup>p</sup>       | 0.67                      | 0.79                      | 0.71 <sup>r</sup>       | -                         | -                     | 0.69 <sup>p</sup>       | 0.76                      | 0.76                      | 0.70 <sup>r</sup>       | -                         | -                     |
| Austria                      | 0.57                    | 0.74 <sup>b</sup>         | 0.70 <sup>a,b</sup>       | 0.77 <sup>b,n</sup>     | 0.78 <sup>b,n</sup>       | 0.79 <sup>b,n</sup>   | 0.53                    | 0.68 <sup>b</sup>         | 0.74 <sup>a,b</sup>       | 0.79 <sup>b,n</sup>     | 0.79 <sup>b,n</sup>       | 0.78 <sup>b,n</sup>   |
| Belgium <sup>4</sup>         | 1.01 <sup>a</sup>       | 1.05 <sup>b</sup>         | 1.15                      | 1.40                    | -                         | -                     | 0.52 <sup>a</sup>       | 0.51 <sup>b</sup>         | 0.40                      | 0.47                    | -                         | -                     |
| Canada                       | 0.51                    | 0.61                      | 0.79                      | 0.98                    | 0.86 <sup>n</sup>         | 0.83 <sup>b,n</sup>   | 0.63                    | 0.73 <sup>b</sup>         | 0.62 <sup>b</sup>         | 0.62 <sup>b</sup>       | 0.64 <sup>b,n</sup>       | 0.64 <sup>b,n</sup>   |
| Czech Republic               | -                       | -                         | 0.64                      | 0.68                    | 0.70                      | -                     | -                       | 0.59 <sup>c,k,q</sup>     | 0.33 <sup>c,k,q</sup>     | 0.57                    | 0.55                      | -                     |
| Denmark                      | 0.45                    | 0.84                      | 0.83                      | 1.48 <sup>s</sup>       | -                         | -                     | 0.57                    | 0.65                      | 0.73                      | 0.67 <sup>s</sup>       | -                         | -                     |
| Finland                      | 0.64 <sup>a</sup>       | 1.15                      | 1.36                      | 2.41                    | 2.40                      | -                     | 0.51 <sup>a</sup>       | 0.83 <sup>a</sup>         | 0.80                      | 0.87                    | 0.90                      | -                     |
| France                       | 0.79                    | 1.01                      | 1.12                      | 1.21                    | -                         | -                     | 1.03 <sup>a</sup>       | 1.16                      | 0.97                      | 0.82                    | -                         | -                     |
| Germany                      | 1.38                    | 1.55 <sup>a</sup>         | 1.35                      | 1.65                    | 1.66 <sup>b</sup>         | 1.63 <sup>b</sup>     | 1.01                    | 0.90 <sup>a</sup>         | 0.85                      | 0.79                    | 0.80 <sup>b</sup>         | 0.80 <sup>b</sup>     |
| Greece                       | 0.04                    | 0.08                      | 0.12 <sup>a</sup>         | 0.19                    | -                         | -                     | 0.14 <sup>a</sup>       | 0.21                      | 0.26 <sup>a</sup>         | 0.31                    | -                         | -                     |
| Hungary                      | -                       | 0.59 <sup>m,q,s</sup>     | 0.28 <sup>a,s</sup>       | 0.33 <sup>s</sup>       | 0.30 <sup>s</sup>         | -                     | -                       | 0.42 <sup>c,m,q</sup>     | 0.39 <sup>a,c,s</sup>     | 0.51 <sup>c,s</sup>     | 0.60 <sup>c,s</sup>       | -                     |
| Iceland                      | 0.04                    | 0.29                      | 0.54                      | 1.41                    | -                         | -                     | 0.54                    | 0.82                      | 0.90                      | 1.04                    | -                         | -                     |
| Ireland <sup>3</sup>         | 0.26                    | 0.56 <sup>b</sup>         | 0.92 <sup>b,p</sup>       | 0.76 <sup>b</sup>       | -                         | -                     | 0.38                    | 0.26 <sup>b</sup>         | 0.29 <sup>b,p</sup>       | 0.26 <sup>b</sup>       | -                         | -                     |
| Italy                        | 0.44 <sup>r</sup>       | 0.54 <sup>a</sup>         | 0.42                      | -                       | -                         | -                     | 0.42 <sup>r</sup>       | 0.61 <sup>a</sup>         | 0.53                      | -                       | -                         | -                     |
| Japan                        | 1.44 <sup>j</sup>       | 2.14 <sup>j</sup>         | 1.95 <sup>j</sup>         | 2.24                    | 2.31                      | -                     | 0.53 <sup>b</sup>       | 0.45 <sup>b</sup>         | 0.56 <sup>b</sup>         | 0.57 <sup>b</sup>       | 0.57 <sup>b</sup>         | -                     |
| Korea                        | -                       | -                         | 1.91                      | 2.12 <sup>e</sup>       | 2.10 <sup>e</sup>         | -                     | -                       | -                         | 0.48                      | 0.73 <sup>e</sup>       | 0.74 <sup>e</sup>         | -                     |
| Luxembourg <sup>3</sup>      | -                       | -                         | -                         | 1.56 <sup>r</sup>       | -                         | -                     | -                       | -                         | -                         | 0.13 <sup>r</sup>       | -                         | -                     |
| Mexico                       | -                       | 0.10 <sup>b,j,q</sup>     | 0.05                      | 0.12                    | -                         | -                     | -                       | 0.21 <sup>f,q</sup>       | 0.20                      | 0.23                    | -                         | -                     |
| Netherlands                  | 0.83                    | 0.94                      | 0.91 <sup>a</sup>         | 0.98                    | -                         | -                     | 0.84                    | 0.95                      | 0.84 <sup>a</sup>         | 0.68                    | -                         | -                     |
| New Zealand                  | -                       | 0.27                      | 0.32                      | 0.44 <sup>a</sup>       | -                         | -                     | -                       | 0.61                      | 0.50                      | 0.55 <sup>a</sup>       | -                         | -                     |
| Norway                       | 0.47                    | 0.73                      | 0.85 <sup>a</sup>         | 0.83                    | -                         | -                     | 0.67                    | 0.81                      | 0.75                      | 0.64                    | -                         | -                     |
| Poland                       | -                       | -                         | 0.23                      | 0.20                    | 0.18 <sup>b</sup>         | -                     | -                       | -                         | 0.39 <sup>a</sup>         | 0.41                    | 0.36 <sup>b</sup>         | -                     |
| Portugal <sup>5,1</sup>      | 0.09                    | 0.12                      | 0.11 <sup>a</sup>         | 0.27                    | -                         | -                     | 0.18                    | 0.36                      | 0.37 <sup>a</sup>         | 0.52                    | -                         | -                     |
| Slovak Republic              | -                       | 1.46 <sup>q</sup>         | 0.56                      | 0.36                    | 0.31                      | -                     | -                       | 0.68 <sup>c,q</sup>       | 0.35 <sup>c</sup>         | 0.26 <sup>k</sup>       | 0.25 <sup>k</sup>         | -                     |
| Spain                        | 0.18                    | 0.40                      | 0.36 <sup>a</sup>         | 0.45                    | 0.50                      | -                     | 0.23                    | 0.38                      | 0.35 <sup>a</sup>         | 0.38                    | 0.40                      | -                     |
| Sweden                       | 1.22 <sup>a,k</sup>     | 1.69 <sup>k</sup>         | 2.20 <sup>k</sup>         | 3.07 <sup>k</sup>       | -                         | -                     | 0.94 <sup>a,k</sup>     | 0.93 <sup>k</sup>         | 0.96 <sup>a,k</sup>       | 0.90 <sup>k</sup>       | -                         | -                     |
| Switzerland <sup>1,2,3</sup> | 1.59 <sup>b</sup>       | 1.75                      | 1.80                      | 1.77 <sup>r</sup>       | -                         | -                     | 0.53 <sup>b</sup>       | 0.74                      | 0.72                      | 0.60 <sup>r</sup>       | -                         | -                     |
| Turkey <sup>3</sup>          | -                       | 0.15                      | 0.13                      | 0.28 <sup>r</sup>       | -                         | -                     | -                       | 0.37                      | 0.24                      | 0.32 <sup>r</sup>       | -                         | -                     |
| United Kingdom               | 1.00                    | 1.03                      | 0.94                      | 0.88                    | 0.88                      | -                     | 1.15 <sup>a,b</sup>     | 0.72                      | 0.64                      | 0.53                    | 0.50                      | -                     |
| United States                | 1.16 <sup>h</sup>       | 1.56 <sup>h</sup>         | 1.51 <sup>h</sup>         | 1.85 <sup>h</sup>       | 1.72 <sup>h,n</sup>       | 1.65 <sup>b,h,n</sup> | 1.12 <sup>h</sup>       | 1.06 <sup>h</sup>         | 0.89 <sup>h</sup>         | 0.76 <sup>h</sup>       | 0.81 <sup>h,n</sup>       | 0.82 <sup>b,h,n</sup> |
| <b>Total OECD</b>            | <b>1.00<sup>b</sup></b> | <b>1.30<sup>a,b</sup></b> | <b>1.24<sup>a,b</sup></b> | <b>1.45<sup>b</sup></b> | <b>1.41<sup>b,n</sup></b> | <b>-</b>              | <b>0.85<sup>b</sup></b> | <b>0.79<sup>a,b</sup></b> | <b>0.71<sup>a,b</sup></b> | <b>0.66<sup>b</sup></b> | <b>0.68<sup>b,n</sup></b> | <b>-</b>              |
| <b>EU-25</b>                 | <b>-</b>                | <b>-</b>                  | <b>0.89<sup>b</sup></b>   | <b>1.01<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              | <b>-</b>                | <b>-</b>                  | <b>0.68<sup>b</sup></b>   | <b>0.63<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              |
| <b>EU-15</b>                 | <b>0.81<sup>b</sup></b> | <b>0.99<sup>a,b</sup></b> | <b>0.94</b>               | <b>1.07<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              | <b>0.78<sup>b</sup></b> | <b>0.78<sup>a,b</sup></b> | <b>0.70</b>               | <b>0.65<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              |
| China <sup>3</sup>           | -                       | -                         | -                         | 0.58 <sup>s</sup>       | -                         | -                     | -                       | -                         | -                         | 0.33 <sup>s</sup>       | -                         | -                     |
| Israel <sup>3</sup>          | -                       | 1.09                      | 1.31                      | 3.29 <sup>n</sup>       | -                         | -                     | -                       | 0.92 <sup>c</sup>         | 0.98 <sup>c</sup>         | 1.17 <sup>c</sup>       | -                         | -                     |
| Russian Federation           | -                       | -                         | 0.29                      | 0.39                    | 0.41                      | -                     | -                       | -                         | 0.52                      | 0.67                    | 0.73                      | -                     |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

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2. 1996 instead of 1995. 4. 1983 instead of 1981.

Source: OECD, MSTI database, May 2004.

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Table 7. R&amp;D expenditures by sector of performance, 1981-2003

As a percentage of total national R&amp;D expenditures

|                                | Business enterprise     |                           |                           |                         |                           |                     | Higher education          |                           |                           |                         |                           |                     |
|--------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|---------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|
|                                | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                | 1981                      | 1991                      | 1995                      | 2001                    | 2002                      | 2003                |
| Australia <sup>1, 2, 3</sup>   | 25.0 <sup>b</sup>       | 44.2                      | 48.2                      | 47.5                    | -                         | -                   | 28.6                      | 26.2                      | 26.3                      | 26.8                    | -                         | -                   |
| Austria <sup>4</sup>           | 55.9                    | -                         | -                         | 63.6                    | -                         | -                   | 32.8                      | -                         | -                         | 29.7                    | -                         | -                   |
| Belgium <sup>5</sup>           | 70.6 <sup>a</sup>       | 66.5 <sup>b</sup>         | 71.3                      | 73.7                    | -                         | -                   | 19.2 <sup>a</sup>         | 26.2 <sup>b</sup>         | 23.9                      | 19.2                    | -                         | -                   |
| Canada                         | 48.1                    | 49.7                      | 58.1                      | 59.6                    | 55.2 <sup>n</sup>         | 53.7 <sup>n</sup>   | 26.7                      | 30.6                      | 26.8                      | 29.3                    | 32.8 <sup>n</sup>         | 34.9 <sup>n</sup>   |
| Czech Republic                 | -                       | 69.4 <sup>c,q</sup>       | 65.1 <sup>c,q</sup>       | 60.2                    | 61.1                      | -                   | -                         | 1.6 <sup>c,q</sup>        | 8.5 <sup>c,q</sup>        | 15.7                    | 15.6                      | -                   |
| Denmark                        | 49.7                    | 58.5                      | 57.4                      | 68.7                    | 69.3                      | -                   | 26.7                      | 22.6                      | 24.5                      | 18.8                    | 23.1 <sup>a</sup>         | -                   |
| Finland                        | 54.7 <sup>a</sup>       | 57.0 <sup>a</sup>         | 63.2                      | 71.1                    | 69.9                      | -                   | 22.2 <sup>a</sup>         | 22.1 <sup>a</sup>         | 19.5                      | 18.1                    | 19.2                      | -                   |
| France                         | 58.9 <sup>a</sup>       | 61.5                      | 61.0                      | 63.2 <sup>a</sup>       | 62.2 <sup>n</sup>         | -                   | 16.4 <sup>a</sup>         | 15.1                      | 16.7                      | 18.9                    | 19.5 <sup>n</sup>         | -                   |
| Germany                        | 69.0                    | 69.4 <sup>a</sup>         | 66.3 <sup>b</sup>         | 69.9                    | 69.4 <sup>b</sup>         | 69.1 <sup>b</sup>   | 17.1                      | 16.2 <sup>a</sup>         | 18.2 <sup>b</sup>         | 16.4                    | 16.9 <sup>b</sup>         | 17.1 <sup>b</sup>   |
| Greece                         | 22.5 <sup>a</sup>       | 26.1                      | 29.5 <sup>a</sup>         | 32.7 <sup>b</sup>       | -                         | -                   | 14.5 <sup>a</sup>         | 33.8                      | 44.3 <sup>a</sup>         | 44.9 <sup>b</sup>       | -                         | -                   |
| Hungary                        | -                       | 41.4 <sup>c,q,s</sup>     | 43.4 <sup>c,s</sup>       | 40.1 <sup>c,s</sup>     | 35.5 <sup>c,s</sup>       | -                   | -                         | 20.3 <sup>c,q,s</sup>     | 24.8 <sup>c,s</sup>       | 25.7 <sup>c,s</sup>     | 25.2 <sup>c,s</sup>       | -                   |
| Iceland                        | 9.6                     | 21.8                      | 31.9                      | 58.9                    | 57.2 <sup>b</sup>         | -                   | 26.0                      | 29.4                      | 27.5                      | 18.8                    | 16.1 <sup>b</sup>         | -                   |
| Ireland                        | 43.6                    | 63.6 <sup>b</sup>         | 70.0 <sup>b</sup>         | 69.7 <sup>b</sup>       | -                         | -                   | 16.0                      | 23.2 <sup>b</sup>         | 20.4 <sup>b</sup>         | 22.4 <sup>b</sup>       | -                         | -                   |
| Italy                          | 56.4 <sup>r</sup>       | 55.8 <sup>a</sup>         | 53.4                      | 49.1                    | -                         | -                   | 17.9 <sup>r</sup>         | 21.5 <sup>a</sup>         | 25.5                      | 32.6                    | -                         | -                   |
| Japan                          | 66.0 <sup>b,j</sup>     | 75.4 <sup>b,j</sup>       | 70.3 <sup>b,j</sup>       | 73.7                    | 74.4                      | -                   | 17.6 <sup>b,k</sup>       | 12.1 <sup>b,k</sup>       | 14.5 <sup>b,k</sup>       | 14.5                    | 13.9                      | -                   |
| Korea                          | -                       | -                         | 73.7                      | 76.2 <sup>e</sup>       | 74.9 <sup>e</sup>         | -                   | -                         | -                         | 8.2                       | 10.4 <sup>e</sup>       | 10.4 <sup>e</sup>         | -                   |
| Luxembourg <sup>3</sup>        | -                       | -                         | -                         | 92.6                    | -                         | -                   | -                         | -                         | -                         | 0.3                     | -                         | -                   |
| Mexico                         | -                       | -                         | 20.8                      | 30.3                    | -                         | -                   | -                         | -                         | 45.8                      | 30.4                    | -                         | -                   |
| Netherlands                    | 53.3                    | 49.7                      | 52.1                      | 58.3                    | -                         | -                   | 23.2                      | 29.7                      | 28.8                      | 27.0                    | -                         | -                   |
| New Zealand                    | -                       | 26.8                      | 27.0                      | 36.5 <sup>a</sup>       | -                         | -                   | -                         | 28.6                      | 30.7                      | 30.3 <sup>a</sup>       | -                         | -                   |
| Norway                         | 52.9                    | 54.6                      | 56.7 <sup>a</sup>         | 59.7                    | 57.4                      | -                   | 29.0                      | 26.7                      | 26.0 <sup>a</sup>         | 25.7                    | 26.8                      | -                   |
| Poland                         | -                       | -                         | 38.7 <sup>a</sup>         | 35.8                    | 21.4                      | -                   | -                         | -                         | 26.3 <sup>a</sup>         | 32.7                    | 33.5                      | -                   |
| Portugal <sup>6, 1</sup>       | 31.2                    | 21.7                      | 20.9 <sup>a</sup>         | 31.8                    | 34.4 <sup>b</sup>         | -                   | 20.6                      | 43.0                      | 37.1 <sup>a</sup>         | 36.7                    | 35.6 <sup>b</sup>         | -                   |
| Slovak Republic                | -                       | 74.6 <sup>c,q</sup>       | 53.9 <sup>c</sup>         | 67.3 <sup>j</sup>       | 64.3 <sup>j</sup>         | -                   | -                         | 3.9 <sup>c,q</sup>        | 5.9 <sup>c</sup>          | 9.0 <sup>j</sup>        | 9.1 <sup>j</sup>          | -                   |
| Spain                          | 45.5                    | 56.0                      | 48.2                      | 52.4                    | 54.6 <sup>a</sup>         | -                   | 23.0                      | 22.2                      | 32.0                      | 30.9 <sup>b</sup>       | 29.8                      | -                   |
| Sweden                         | 63.7 <sup>a,j</sup>     | 68.5                      | 74.3 <sup>a</sup>         | 77.6                    | -                         | -                   | 30.0 <sup>a,j</sup>       | 27.4 <sup>j</sup>         | 21.9 <sup>a,h,j</sup>     | 19.4 <sup>j</sup>       | -                         | -                   |
| Switzerland <sup>1, 2, 3</sup> | 74.2 <sup>b</sup>       | 70.1                      | 70.7                      | 73.9                    | -                         | -                   | 19.9 <sup>b</sup>         | 25.0                      | 24.3                      | 22.9                    | -                         | -                   |
| Turkey <sup>3</sup>            | -                       | 21.1                      | 23.6                      | 33.4                    | -                         | -                   | -                         | 71.1                      | 69.0                      | 60.4                    | -                         | -                   |
| United Kingdom                 | 63.0 <sup>a</sup>       | 67.1                      | 65.0                      | 66.8 <sup>a</sup>       | 67.0                      | -                   | 13.6 <sup>a</sup>         | 16.7                      | 19.2                      | 21.8                    | 22.6                      | -                   |
| United States                  | 71.2 <sup>h</sup>       | 72.5 <sup>h</sup>         | 71.8 <sup>h</sup>         | 73.0 <sup>h</sup>       | 70.2 <sup>h,n</sup>       | 68.9 <sup>h,n</sup> | 13.2 <sup>h</sup>         | 14.5 <sup>h</sup>         | 15.2 <sup>h</sup>         | 14.5 <sup>h</sup>       | 15.9 <sup>h,n</sup>       | 16.8 <sup>h,n</sup> |
| <b>Total OECD</b>              | <b>66.2<sup>b</sup></b> | <b>68.8<sup>a,b</sup></b> | <b>67.2<sup>a,b</sup></b> | <b>69.3<sup>b</sup></b> | <b>68.0<sup>b,n</sup></b> | -                   | <b>16.0<sup>b</sup></b>   | <b>16.3<sup>a,b</sup></b> | <b>17.5<sup>a,b</sup></b> | <b>17.4<sup>b</sup></b> | <b>18.1<sup>b,n</sup></b> | -                   |
| <b>EU-25</b>                   | -                       | -                         | <b>61.6<sup>b</sup></b>   | <b>64.0<sup>b</sup></b> | <b>63.6<sup>b,n</sup></b> | -                   | -                         | -                         | <b>20.8<sup>b</sup></b>   | <b>21.5<sup>b</sup></b> | -                         | -                   |
| <b>EU-15</b>                   | <b>62.3<sup>b</sup></b> | <b>63.4<sup>a,b</sup></b> | <b>62.1<sup>b</sup></b>   | <b>64.7<sup>b</sup></b> | <b>64.4<sup>b,n</sup></b> | -                   | <b>17.6<sup>a,b</sup></b> | <b>18.8<sup>a,b</sup></b> | <b>20.8<sup>a,b</sup></b> | <b>21.4<sup>b</sup></b> | -                         | -                   |
| China                          | -                       | 39.8 <sup>k,s</sup>       | 43.7 <sup>k,s</sup>       | 60.4                    | 61.2                      | -                   | -                         | 8.6 <sup>j,s</sup>        | 12.1 <sup>j,s</sup>       | 9.8                     | 10.1                      | -                   |
| Israel                         | -                       | 55.7 <sup>c</sup>         | 58.7 <sup>c</sup>         | 75.3 <sup>c,n</sup>     | 73.0 <sup>c,n</sup>       | -                   | -                         | 26.6 <sup>c,e</sup>       | 25.6 <sup>c,e</sup>       | 16.1 <sup>c,e,n</sup>   | 17.5 <sup>c,e,n</sup>     | -                   |
| Russian Federation             | -                       | 77.5                      | 68.5                      | 70.3                    | 69.9                      | -                   | -                         | 5.7 <sup>h</sup>          | 5.4                       | 5.2                     | 5.4                       | -                   |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

- 1992 instead of 1991.
- 1996 instead of 1995.
- 2000 instead of 2001.
- 1998 instead of 2001.
- 1983 instead of 1981.
- 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/458542005788>

**Table 7. R&D expenditures by sector of performance, 1981-2003 (cont'd)**

As a percentage of total national R&amp;D expenditures

|                                | Government              |                           |                           |                         |                           |                     | Private non-profit     |                          |                          |                        |                          |                    |
|--------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------|
|                                | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                | 1981                   | 1991                     | 1995                     | 2001                   | 2002                     | 2003               |
| Australia <sup>1, 2, 3</sup>   | 45.1                    | 28.1                      | 23.5                      | 22.9                    | -                         | -                   | 1.3                    | 1.6                      | 2.1                      | 2.7                    | -                        | -                  |
| Austria <sup>4</sup>           | 9.0                     | -                         | -                         | 6.4                     | -                         | -                   | 2.3                    | -                        | -                        | 0.3                    | -                        | -                  |
| Belgium <sup>5</sup>           | 5.6 <sup>a</sup>        | 6.1 <sup>b</sup>          | 3.5                       | 6.0                     | -                         | -                   | 4.6 <sup>a</sup>       | 1.2 <sup>b</sup>         | 1.4                      | 1.1                    | -                        | -                  |
| Canada                         | 24.4                    | 18.7                      | 14.4                      | 10.9                    | 11.7 <sup>n</sup>         | 11.2 <sup>n</sup>   | 0.8                    | 1.0                      | 0.7                      | 0.2                    | 0.2 <sup>n</sup>         | 0.2 <sup>n</sup>   |
| Czech Republic                 | -                       | 29.0 <sup>c,q</sup>       | 26.5 <sup>c,q</sup>       | 23.7                    | 23.0                      | -                   | -                      | -                        | 0.1                      | 0.5                    | 0.3                      | -                  |
| Denmark                        | 22.7                    | 17.7                      | 17.0                      | 11.7                    | 7.0 <sup>a</sup>          | -                   | 0.9                    | 1.2                      | 1.1                      | 0.7                    | 0.6                      | -                  |
| Finland                        | 22.6 <sup>a</sup>       | 20.2 <sup>a</sup>         | 16.7                      | 10.2                    | 10.4                      | -                   | 0.6 <sup>a</sup>       | 0.7 <sup>a</sup>         | 0.6                      | 0.6                    | 0.6                      | -                  |
| France                         | 23.6 <sup>a</sup>       | 22.7                      | 21.0                      | 16.5                    | 17.0 <sup>n</sup>         | -                   | 1.1 <sup>a</sup>       | 0.8                      | 1.3                      | 1.4                    | 1.4 <sup>n</sup>         | -                  |
| Germany                        | 13.4                    | 14.4 <sup>a</sup>         | 15.5 <sup>b,m</sup>       | 13.7 <sup>m</sup>       | 13.7 <sup>b,m</sup>       | 13.8 <sup>b,m</sup> | 0.5                    | 0.5 <sup>b</sup>         | -                        | -                      | -                        | -                  |
| Greece                         | 63.1 <sup>a</sup>       | 40.1                      | 25.5 <sup>a</sup>         | 22.1 <sup>b</sup>       | -                         | -                   | -                      | -                        | 0.7 <sup>a</sup>         | 0.4 <sup>b</sup>       | -                        | -                  |
| Hungary                        | -                       | 24.5 <sup>c,s</sup>       | 25.6 <sup>c,s</sup>       | 25.9 <sup>c,s</sup>     | 32.9 <sup>c,s</sup>       | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| Iceland                        | 60.7                    | 44.5                      | 37.5                      | 20.1                    | 24.5 <sup>b</sup>         | -                   | 3.7                    | 4.4                      | 3.2                      | 2.3                    | 2.2 <sup>b</sup>         | -                  |
| Ireland                        | 39.3                    | 11.6 <sup>b</sup>         | 9.0 <sup>b</sup>          | 7.9 <sup>b</sup>        | -                         | -                   | 1.1                    | 1.7 <sup>b</sup>         | 0.8 <sup>b</sup>         | -                      | -                        | -                  |
| Italy                          | 25.7 <sup>f</sup>       | 22.7 <sup>a</sup>         | 21.1                      | 18.4                    | -                         | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| Japan                          | 12.0 <sup>b,k</sup>     | 8.1 <sup>b,k</sup>        | 10.4 <sup>b,k</sup>       | 9.5                     | 9.5                       | -                   | 4.5 <sup>b,k</sup>     | 4.4 <sup>b,k</sup>       | 4.8 <sup>b,k</sup>       | 2.3 <sup>a</sup>       | 2.1                      | -                  |
| Korea                          | -                       | -                         | 17.0                      | 12.4 <sup>e</sup>       | 13.4 <sup>e</sup>         | -                   | -                      | -                        | 1.2                      | 1.1 <sup>e</sup>       | 1.3 <sup>e</sup>         | -                  |
| Luxembourg <sup>3</sup>        | -                       | -                         | -                         | 7.1                     | -                         | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| Mexico                         | -                       | -                         | 33.0                      | 39.1                    | -                         | -                   | -                      | -                        | 0.4                      | 0.2                    | -                        | -                  |
| Netherlands                    | 20.8                    | 18.3                      | 18.1                      | 14.2                    | -                         | -                   | 2.8                    | 2.3 <sup>a,m</sup>       | 1.0                      | 0.6                    | -                        | -                  |
| New Zealand                    | -                       | 44.6                      | 42.2                      | 33.2 <sup>a</sup>       | -                         | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| Norway                         | 17.7                    | 18.8                      | 17.3 <sup>a</sup>         | 14.6                    | 15.8                      | -                   | 0.5                    | -                        | -                        | -                      | -                        | -                  |
| Poland                         | -                       | -                         | 35.0 <sup>a</sup>         | 31.3                    | 44.9                      | -                   | -                      | -                        | 0.1                      | 0.2                    | 0.3                      | -                  |
| Portugal <sup>6, 1</sup>       | 43.6                    | 22.1                      | 27.0                      | 20.8                    | 19.8 <sup>b</sup>         | -                   | 4.6                    | 13.2                     | 15.0 <sup>a</sup>        | 10.8                   | 10.2 <sup>b</sup>        | -                  |
| Slovak Republic                | -                       | 21.5 <sup>c,q</sup>       | 40.2 <sup>c</sup>         | 23.7 <sup>c</sup>       | 26.6 <sup>c</sup>         | -                   | -                      | -                        | -                        | 0.0                    | 0.0                      | -                  |
| Spain                          | 31.6                    | 21.3                      | 18.6                      | 15.9                    | 15.4                      | -                   | -                      | 0.5                      | 1.1                      | 0.8                    | 0.2                      | -                  |
| Sweden                         | 6.1 <sup>a,f</sup>      | 4.1 <sup>f</sup>          | 3.7 <sup>a,f</sup>        | 2.8 <sup>f</sup>        | -                         | -                   | 0.3 <sup>a</sup>       | 0.1                      | 0.2 <sup>a</sup>         | 0.1                    | -                        | -                  |
| Switzerland <sup>1, 2, 3</sup> | 5.9 <sup>b</sup>        | 3.7 <sup>f</sup>          | 2.5 <sup>f</sup>          | 1.3 <sup>a,f</sup>      | -                         | -                   | 3.2 <sup>a,h</sup>     | 1.2                      | 2.5                      | 1.9                    | -                        | -                  |
| Turkey <sup>3</sup>            | -                       | 7.9                       | 7.4                       | 6.2                     | -                         | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| United Kingdom                 | 20.6 <sup>a</sup>       | 14.5 <sup>a</sup>         | 14.6                      | 9.9 <sup>a</sup>        | 8.9                       | -                   | 2.9 <sup>a</sup>       | 1.8                      | 1.3                      | 1.5                    | 1.5                      | -                  |
| United States                  | 12.5 <sup>f</sup>       | 9.8 <sup>f</sup>          | 9.4 <sup>f</sup>          | 7.9 <sup>f</sup>        | 8.8 <sup>f,n</sup>        | 9.1 <sup>f,n</sup>  | 3.1 <sup>h</sup>       | 3.3 <sup>h</sup>         | 3.6 <sup>h</sup>         | 4.7 <sup>h</sup>       | 5.1 <sup>h,n</sup>       | 5.3 <sup>h,n</sup> |
| <b>Total OECD</b>              | <b>15.2<sup>b</sup></b> | <b>12.4<sup>a,b</sup></b> | <b>12.5<sup>a,b</sup></b> | <b>10.5<sup>b</sup></b> | <b>11.0<sup>b,n</sup></b> | -                   | <b>2.6<sup>b</sup></b> | <b>2.6<sup>a,b</sup></b> | <b>2.7<sup>a,b</sup></b> | <b>2.8<sup>b</sup></b> | <b>2.9<sup>b,n</sup></b> | -                  |
| <b>EU-25</b>                   | -                       | -                         | <b>16.8<sup>b</sup></b>   | <b>13.6<sup>b</sup></b> | <b>13.7<sup>b,n</sup></b> | -                   | -                      | -                        | <b>0.9<sup>b</sup></b>   | <b>0.9<sup>b</sup></b> | <b>0.8<sup>b,n</sup></b> | -                  |
| <b>EU-15</b>                   | <b>18.8<sup>b</sup></b> | <b>16.9<sup>a,b</sup></b> | <b>16.2<sup>b</sup></b>   | <b>13.1<sup>b</sup></b> | <b>13.0<sup>b,n</sup></b> | -                   | <b>1.4<sup>b</sup></b> | <b>0.9<sup>a,b</sup></b> | <b>0.9<sup>b</sup></b>   | <b>0.9<sup>b</sup></b> | <b>0.8<sup>b,n</sup></b> | -                  |
| China                          | -                       | 49.6 <sup>j,s</sup>       | 42.1 <sup>j,s</sup>       | 29.7                    | 28.7                      | -                   | -                      | -                        | -                        | -                      | -                        | -                  |
| Israel                         | -                       | 10.8 <sup>c</sup>         | 9.9 <sup>c</sup>          | 5.2 <sup>c,n</sup>      | 5.8 <sup>c,n</sup>        | -                   | -                      | 6.9 <sup>c</sup>         | 5.8 <sup>c</sup>         | 3.4 <sup>c,n</sup>     | 3.8 <sup>c,n</sup>       | -                  |
| Russian Federation             | -                       | 16.8                      | 26.1                      | 24.3                    | 24.5                      | -                   | -                      | 0.0 <sup>h</sup>         | 0.0                      | 0.2                    | 0.2                      | -                  |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| 1. 1992 instead of 1991. | 3. 2000 instead of 2001. | 5. 1983 instead of 1981. |
| 2. 1996 instead of 1995. | 4. 1998 instead of 2001. | 6. 1982 instead of 1981. |

Source: OECD, MSTI database, May 2004.

Table 8. GERD by sector of performance, 1981-2003

As a percentage of GDP

|                                 | Business enterprise    |                           |                           |                        |                           |                        | Higher education          |                           |                           |                        |                           |                     |
|---------------------------------|------------------------|---------------------------|---------------------------|------------------------|---------------------------|------------------------|---------------------------|---------------------------|---------------------------|------------------------|---------------------------|---------------------|
|                                 | 1981                   | 1991                      | 1995                      | 2001                   | 2002                      | 2003                   | 1981                      | 1991                      | 1995                      | 2001                   | 2002                      | 2003                |
| Australia <sup>1, 2, 3</sup>    | 0.2 <sup>b</sup>       | 0.7                       | 0.8                       | 0.7                    | -                         | -                      | 0.3                       | 0.4                       | 0.4                       | 0.4                    | -                         | -                   |
| Austria <sup>4</sup>            | 0.6                    | -                         | -                         | 1.1 <sup>b, n</sup>    | -                         | -                      | 0.4                       | -                         | -                         | 0.5 <sup>b, n</sup>    | -                         | -                   |
| Belgium <sup>5</sup>            | 1.1 <sup>a, a</sup>    | 1.1 <sup>b</sup>          | 1.2                       | 1.6                    | -                         | -                      | 0.3 <sup>a</sup>          | 0.4 <sup>b</sup>          | 0.4                       | 0.4                    | -                         | -                   |
| Canada                          | 0.6                    | 0.8                       | 1.0                       | 1.2                    | 1.1 <sup>n</sup>          | 1.0 <sup>b, n</sup>    | 0.3                       | 0.5                       | 0.5                       | 0.6                    | 0.6 <sup>n</sup>          | 0.7 <sup>b, n</sup> |
| Czech Republic                  | -                      | 1.4 <sup>c, q</sup>       | 0.7 <sup>c, q</sup>       | 0.8                    | 0.8                       | -                      | -                         | 0.0 <sup>c, q</sup>       | 0.1 <sup>c, q</sup>       | 0.2                    | 0.2                       | -                   |
| Denmark                         | 0.5                    | 1.0                       | 1.1                       | 1.6                    | 1.7                       | -                      | 0.3                       | 0.4                       | 0.5                       | 0.5                    | 0.6 <sup>a</sup>          | -                   |
| Finland                         | 0.6 <sup>a</sup>       | 1.2 <sup>a</sup>          | 1.4                       | 2.4                    | 2.4                       | -                      | 0.3 <sup>a</sup>          | 0.5 <sup>a</sup>          | 0.4                       | 0.6                    | 0.7                       | -                   |
| France                          | 1.1 <sup>a</sup>       | 1.5                       | 1.4                       | 1.4 <sup>a</sup>       | 1.4 <sup>n</sup>          | -                      | 0.3 <sup>a</sup>          | 0.4                       | 0.4                       | 0.4                    | 0.4 <sup>n</sup>          | -                   |
| Germany                         | 1.7                    | 1.7 <sup>a, a</sup>       | 1.5 <sup>b</sup>          | 1.8                    | 1.7 <sup>b</sup>          | 1.7 <sup>b</sup>       | 0.4                       | 0.4 <sup>a</sup>          | 0.4 <sup>b</sup>          | 0.4                    | 0.4 <sup>b</sup>          | 0.4 <sup>b</sup>    |
| Greece                          | 0.0 <sup>a</sup>       | 0.1                       | 0.1 <sup>a</sup>          | 0.2 <sup>b</sup>       | -                         | -                      | 0.0 <sup>a</sup>          | 0.1                       | 0.2 <sup>a</sup>          | 0.3 <sup>b</sup>       | -                         | -                   |
| Hungary                         | -                      | 0.4 <sup>c, q, s</sup>    | 0.3 <sup>a, c, s</sup>    | 0.4 <sup>c, s</sup>    | 0.4 <sup>c, s</sup>       | -                      | -                         | 0.2 <sup>c, q, s</sup>    | 0.2 <sup>a, c, s</sup>    | 0.2 <sup>c, s</sup>    | 0.3 <sup>c, s</sup>       | -                   |
| Iceland                         | 0.1                    | 0.3                       | 0.5                       | 1.8                    | 1.8 <sup>b</sup>          | -                      | 0.2                       | 0.3                       | 0.4                       | 0.6                    | 0.5 <sup>b</sup>          | -                   |
| Ireland                         | 0.3                    | 0.6 <sup>b</sup>          | 0.9 <sup>b</sup>          | 0.8 <sup>b</sup>       | -                         | -                      | 0.1                       | 0.2 <sup>b</sup>          | 0.3 <sup>b</sup>          | 0.3 <sup>b</sup>       | -                         | -                   |
| Italy                           | 0.5 <sup>r</sup>       | 0.7 <sup>a</sup>          | 0.5                       | 0.5                    | -                         | -                      | 0.2 <sup>r</sup>          | 0.3 <sup>a</sup>          | 0.3                       | 0.4                    | -                         | -                   |
| Japan                           | 1.4 <sup>b, j</sup>    | 2.1 <sup>b, j</sup>       | 1.9 <sup>b, j</sup>       | 2.3                    | 2.3                       | -                      | 0.4 <sup>b, j, k</sup>    | 0.3 <sup>b, j, k</sup>    | 0.4 <sup>b, j, k</sup>    | 0.4                    | 0.4                       | -                   |
| Korea                           | -                      | -                         | 1.8 <sup>e</sup>          | 2.2 <sup>e</sup>       | 2.2 <sup>e</sup>          | -                      | -                         | -                         | 0.2 <sup>e</sup>          | 0.3 <sup>e</sup>       | 0.3 <sup>e</sup>          | -                   |
| Luxembourg <sup>3</sup>         | -                      | -                         | -                         | 1.6                    | -                         | -                      | -                         | -                         | -                         | 0.0                    | -                         | -                   |
| Mexico                          | -                      | -                         | 0.1                       | 0.1                    | -                         | -                      | -                         | -                         | 0.1                       | 0.1                    | -                         | -                   |
| Netherlands                     | 1.0                    | 1.0                       | 1.0 <sup>a</sup>          | 1.1                    | -                         | -                      | 0.4                       | 0.6                       | 0.6 <sup>a</sup>          | 0.5                    | -                         | -                   |
| New Zealand                     | -                      | 0.3                       | 0.3                       | 0.4 <sup>a</sup>       | -                         | -                      | -                         | 0.3                       | 0.3                       | 0.4 <sup>a</sup>       | -                         | -                   |
| Norway                          | 0.6                    | 0.9                       | 1.0 <sup>a</sup>          | 1.0                    | 1.0                       | -                      | 0.3                       | 0.4                       | 0.4 <sup>a</sup>          | 0.4                    | 0.4                       | -                   |
| Poland                          | -                      | -                         | 0.3 <sup>a</sup>          | 0.2                    | 0.1 <sup>b</sup>          | -                      | -                         | -                         | 0.2 <sup>a</sup>          | 0.2                    | 0.2 <sup>b</sup>          | -                   |
| Portugal <sup>6, 1</sup>        | 0.1                    | 0.1                       | 0.1 <sup>a</sup>          | 0.3                    | 0.3 <sup>b</sup>          | -                      | 0.1                       | 0.3                       | 0.2 <sup>a</sup>          | 0.3                    | 0.3 <sup>b</sup>          | -                   |
| Slovak Republic                 | -                      | 1.6 <sup>c, q</sup>       | 0.5 <sup>c, c</sup>       | 0.4 <sup>j, k</sup>    | 0.4 <sup>j, k</sup>       | -                      | -                         | 0.1 <sup>c, q</sup>       | 0.1 <sup>c</sup>          | 0.1 <sup>j, k</sup>    | 0.1 <sup>j, k</sup>       | -                   |
| Spain                           | 0.2                    | 0.5                       | 0.4 <sup>a</sup>          | 0.5                    | 0.6 <sup>a</sup>          | -                      | 0.1                       | 0.2                       | 0.3 <sup>a</sup>          | 0.3 <sup>b</sup>       | 0.3                       | -                   |
| Sweden                          | 1.4 <sup>a, j, k</sup> | 1.9 <sup>k</sup>          | 2.5 <sup>a, k</sup>       | 3.3 <sup>k</sup>       | -                         | -                      | 0.7 <sup>a, j, k</sup>    | 0.7 <sup>j, k</sup>       | 0.7 <sup>a, h, j, k</sup> | 0.8 <sup>j, k</sup>    | -                         | -                   |
| Switzerland <sup>1, 2, 3</sup>  | 1.6 <sup>b</sup>       | 1.8                       | 1.9                       | 1.9                    | -                         | -                      | 0.4 <sup>b</sup>          | 0.6                       | 0.6                       | 0.6                    | -                         | -                   |
| Turkey <sup>3</sup>             | -                      | 0.1                       | 0.1                       | 0.2                    | -                         | -                      | -                         | 0.4                       | 0.3                       | 0.4                    | -                         | -                   |
| United Kingdom                  | 1.5 <sup>a</sup>       | 1.4                       | 1.3                       | 1.2 <sup>a</sup>       | 1.3                       | -                      | 0.3 <sup>a</sup>          | 0.3                       | 0.4                       | 0.4                    | 0.4                       | -                   |
| United States                   | 1.7 <sup>h</sup>       | 2.0 <sup>h</sup>          | 1.8 <sup>h</sup>          | 2.0 <sup>h</sup>       | 1.9 <sup>h, n</sup>       | 1.8 <sup>b, h, n</sup> | 0.3 <sup>h</sup>          | 0.4 <sup>h</sup>          | 0.4 <sup>h</sup>          | 0.4 <sup>h</sup>       | 0.4 <sup>h, n</sup>       | 0.4 <sup>h, n</sup> |
| <b>Total OECD</b>               | <b>1.3<sup>b</sup></b> | <b>1.5<sup>a, b</sup></b> | <b>1.4<sup>a, b</sup></b> | <b>1.6<sup>b</sup></b> | <b>1.5<sup>b, n</sup></b> | <b>-</b>               | <b>0.3<sup>b</sup></b>    | <b>0.4<sup>a, b</sup></b> | <b>0.4<sup>a, b</sup></b> | <b>0.4<sup>b</sup></b> | <b>0.4<sup>b, n</sup></b> | <b>-</b>            |
| <b>EU-25</b>                    | <b>-</b>               | <b>-</b>                  | <b>1.1<sup>b</sup></b>    | <b>1.2<sup>b</sup></b> | <b>1.2<sup>b, n</sup></b> | <b>-</b>               | <b>-</b>                  | <b>-</b>                  | <b>0.4<sup>b</sup></b>    | <b>0.4<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| <b>EU-15</b>                    | <b>1.0<sup>b</sup></b> | <b>1.2<sup>a, b</sup></b> | <b>1.1<sup>b</sup></b>    | <b>1.2<sup>b</sup></b> | <b>1.2<sup>b, n</sup></b> | <b>-</b>               | <b>0.3<sup>a, b</sup></b> | <b>0.4<sup>a, b</sup></b> | <b>0.4<sup>a, b</sup></b> | <b>0.4<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| China                           | -                      | 0.3 <sup>k, s</sup>       | 0.3 <sup>k, s</sup>       | 0.6                    | 0.8                       | -                      | -                         | 0.1 <sup>j, k, s</sup>    | 0.1 <sup>j, k, s</sup>    | 0.1                    | 0.1                       | -                   |
| Israel                          | -                      | 1.4 <sup>c</sup>          | 1.6 <sup>c</sup>          | 3.8 <sup>c, n</sup>    | 3.4 <sup>c, n</sup>       | -                      | -                         | 0.7 <sup>c, e</sup>       | 0.7 <sup>c, e</sup>       | 0.8 <sup>c, e, n</sup> | 0.8 <sup>c, e, n</sup>    | -                   |
| Russian Federation <sup>1</sup> | -                      | 0.6                       | 0.6                       | 0.8                    | 0.9                       | -                      | -                         | 0.0 <sup>h</sup>          | 0.0                       | 0.1                    | 0.1                       | -                   |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1992 instead of 1991.                      3. 2000 instead of 2001.                      5. 1983 instead of 1981.  
2. 1996 instead of 1995.                      4. 1998 instead of 2001.                      6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/500804062506>

Table 8. GERD by sector of performance, 1981-2003 (cont'd)

As a percentage of GDP

|                                | Government             |                          |                          |                        |                          |                        | Private non-profit     |                          |                          |                        |                          |                    |
|--------------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------|
|                                | 1981                   | 1991                     | 1995                     | 2001                   | 2002                     | 2003                   | 1981                   | 1991                     | 1995                     | 2001                   | 2002                     | 2003               |
| Australia <sup>1, 2, 3</sup>   | 0.4                    | 0.4                      | 0.4                      | 0.4                    | -                        | -                      | 0.0                    | 0.0                      | 0.0                      | 0.0                    | -                        | -                  |
| Austria <sup>4</sup>           | 0.1                    | -                        | -                        | 0.1 <sup>b,n</sup>     | -                        | -                      | 0.0                    | -                        | -                        | 0.0                    | -                        | -                  |
| Belgium <sup>5</sup>           | 0.1 <sup>a</sup>       | 0.1 <sup>b</sup>         | 0.1                      | 0.1                    | -                        | -                      | 0.1 <sup>a</sup>       | 0.0 <sup>b</sup>         | 0.0                      | 0.0                    | -                        | -                  |
| Canada                         | 0.3                    | 0.3                      | 0.2                      | 0.2                    | 0.2 <sup>n</sup>         | 0.2 <sup>b,n</sup>     | 0.0                    | 0.0                      | 0.0                      | 0.0                    | 0.0 <sup>n</sup>         | 0.0 <sup>b,n</sup> |
| Czech Republic                 | -                      | 0.6 <sup>c,q</sup>       | 0.3 <sup>c,q</sup>       | 0.3                    | 0.3                      | -                      | -                      | -                        | -                        | 0.0                    | 0.0                      | -                  |
| Denmark                        | 0.2                    | 0.3                      | 0.3                      | 0.3                    | 0.2 <sup>a</sup>         | -                      | 0.0                    | 0.0                      | 0.0                      | 0.0                    | 0.0                      | -                  |
| Finland                        | 0.3 <sup>a</sup>       | 0.4 <sup>a</sup>         | 0.4                      | 0.3                    | 0.4                      | -                      | 0.0 <sup>a</sup>       | 0.0 <sup>a</sup>         | 0.0                      | 0.0                    | 0.0                      | -                  |
| France                         | 0.5 <sup>a</sup>       | 0.5                      | 0.5                      | 0.4                    | 0.4 <sup>n</sup>         | -                      | 0.0 <sup>a</sup>       | 0.0                      | 0.0                      | 0.0                    | 0.0 <sup>n</sup>         | -                  |
| Germany                        | 0.3                    | 0.4 <sup>a</sup>         | 0.3 <sup>b,m</sup>       | 0.3 <sup>m</sup>       | 0.3 <sup>b,m</sup>       | 0.3 <sup>b,m</sup>     | 0.0                    | -                        | -                        | -                      | -                        | -                  |
| Greece                         | 0.1 <sup>a</sup>       | 0.1                      | 0.1 <sup>a</sup>         | 0.1 <sup>b</sup>       | -                        | -                      | -                      | -                        | 0.0 <sup>a</sup>         | 0.0 <sup>b</sup>       | -                        | -                  |
| Hungary                        | -                      | 0.3 <sup>c,q,s</sup>     | 0.2 <sup>a,c,s</sup>     | 0.2 <sup>c,s</sup>     | 0.3 <sup>c,s</sup>       | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| Iceland                        | 0.4                    | 0.5                      | 0.6                      | 0.6                    | 0.8 <sup>b</sup>         | -                      | 0.0                    | 0.1                      | 0.0                      | 0.1                    | 0.1 <sup>b</sup>         | -                  |
| Ireland                        | 0.3                    | 0.1 <sup>b</sup>         | 0.1 <sup>b</sup>         | 0.1 <sup>b</sup>       | -                        | -                      | 0.0                    | 0.0 <sup>b</sup>         | 0.0 <sup>b</sup>         | -                      | -                        | -                  |
| Italy                          | 0.2 <sup>f</sup>       | 0.3 <sup>a</sup>         | 0.2                      | 0.2                    | -                        | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| Japan                          | 0.3 <sup>b,j,k</sup>   | 0.2 <sup>b,j,k</sup>     | 0.3 <sup>b,j,k</sup>     | 0.3                    | 0.3                      | -                      | 0.1 <sup>b,j,k</sup>   | 0.1 <sup>b,j,k</sup>     | 0.1 <sup>b,j,k</sup>     | 0.1 <sup>a</sup>       | 0.1                      | -                  |
| Korea                          | -                      | -                        | 0.4 <sup>e</sup>         | 0.4 <sup>e</sup>       | 0.4 <sup>e</sup>         | -                      | -                      | -                        | 0.0 <sup>e</sup>         | 0.0 <sup>e</sup>       | 0.0 <sup>e</sup>         | -                  |
| Luxembourg <sup>3</sup>        | -                      | -                        | -                        | 0.1                    | -                        | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| Mexico                         | -                      | -                        | 0.1                      | 0.2                    | -                        | -                      | -                      | -                        | 0.0                      | 0.0                    | -                        | -                  |
| Netherlands                    | 0.4                    | 0.4                      | 0.4 <sup>a</sup>         | 0.3                    | -                        | -                      | 0.0                    | 0.0 <sup>a,m</sup>       | 0.0 <sup>a</sup>         | 0.0                    | -                        | -                  |
| New Zealand                    | -                      | 0.4                      | 0.4                      | 0.4 <sup>a</sup>       | -                        | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| Norway                         | 0.2                    | 0.3                      | 0.3 <sup>a</sup>         | 0.2                    | 0.3                      | -                      | 0.0                    | -                        | -                        | -                      | -                        | -                  |
| Poland                         | -                      | -                        | 0.2 <sup>a</sup>         | 0.2                    | 0.3 <sup>b</sup>         | -                      | -                      | -                        | -                        | 0.0                    | 0.0 <sup>b</sup>         | -                  |
| Portugal <sup>6, 1</sup>       | 0.1                    | 0.1                      | 0.2 <sup>a</sup>         | 0.2                    | 0.2 <sup>b</sup>         | -                      | 0.0                    | 0.1                      | 0.1 <sup>a</sup>         | 0.1                    | 0.1 <sup>b</sup>         | -                  |
| Slovak Republic                | -                      | 0.5 <sup>c,q</sup>       | 0.4 <sup>c</sup>         | 0.2 <sup>k,c</sup>     | 0.2 <sup>k,c</sup>       | -                      | -                      | -                        | -                        | -                      | 0.0 <sup>k</sup>         | -                  |
| Spain                          | 0.1                    | 0.2                      | 0.2 <sup>a</sup>         | 0.2                    | 0.2                      | -                      | -                      | 0.0                      | 0.0 <sup>a</sup>         | 0.0                    | 0.0                      | -                  |
| Sweden                         | 0.1 <sup>a,f,k</sup>   | 0.1 <sup>f,k</sup>       | 0.1 <sup>a,f,k</sup>     | 0.1 <sup>f,k</sup>     | -                        | -                      | 0.0 <sup>a,k</sup>     | 0.0 <sup>k</sup>         | 0.0 <sup>a,k</sup>       | 0.0 <sup>k</sup>       | -                        | -                  |
| Switzerland <sup>1, 2, 3</sup> | 0.1 <sup>b</sup>       | 0.1 <sup>f</sup>         | 0.1 <sup>f</sup>         | 0.0 <sup>a,f</sup>     | -                        | -                      | -                      | 0.0                      | 0.1                      | 0.0                    | -                        | -                  |
| Turkey <sup>3</sup>            | -                      | 0.0                      | 0.0                      | 0.0                    | -                        | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| United Kingdom                 | 0.5 <sup>a</sup>       | 0.3 <sup>a</sup>         | 0.3                      | 0.2 <sup>a</sup>       | 0.2                      | -                      | 0.1 <sup>a</sup>       | 0.0                      | 0.0                      | 0.0                    | 0.0                      | -                  |
| United States                  | 0.3 <sup>f,h</sup>     | 0.3 <sup>f,h</sup>       | 0.2 <sup>f,h</sup>       | 0.2 <sup>f,h</sup>     | 0.2 <sup>f,h,n</sup>     | 0.2 <sup>b,f,h,n</sup> | 0.1 <sup>h</sup>       | 0.1 <sup>h</sup>         | 0.1 <sup>h</sup>         | 0.1 <sup>h</sup>       | 0.1 <sup>h,n</sup>       | 0.1 <sup>h,n</sup> |
| <b>Total OECD</b>              | <b>0.3<sup>b</sup></b> | <b>0.3<sup>a,b</sup></b> | <b>0.3<sup>a,b</sup></b> | <b>0.2<sup>b</sup></b> | <b>0.2<sup>b,n</sup></b> | -                      | <b>0.1<sup>b</sup></b> | <b>0.1<sup>a,b</sup></b> | <b>0.1<sup>a,b</sup></b> | <b>0.1<sup>b</sup></b> | <b>0.1<sup>b,n</sup></b> | -                  |
| <b>EU-25</b>                   | -                      | -                        | <b>0.3<sup>b</sup></b>   | <b>0.2<sup>b</sup></b> | <b>0.3<sup>b,n</sup></b> | -                      | -                      | -                        | <b>0.0<sup>b</sup></b>   | <b>0.0<sup>b</sup></b> | <b>0.0<sup>b,n</sup></b> | -                  |
| <b>EU-15</b>                   | <b>0.3<sup>b</sup></b> | <b>0.3<sup>a,b</sup></b> | <b>0.3<sup>b</sup></b>   | <b>0.3<sup>b</sup></b> | <b>0.3<sup>b,n</sup></b> | -                      | <b>0.0<sup>b</sup></b> | <b>0.0<sup>a,b</sup></b> | <b>0.0<sup>b</sup></b>   | <b>0.0<sup>b</sup></b> | <b>0.0<sup>b,n</sup></b> | -                  |
| China                          | -                      | 0.4 <sup>i,k,s</sup>     | 0.3 <sup>j,k,s</sup>     | 0.3                    | 0.4                      | -                      | -                      | -                        | -                        | -                      | -                        | -                  |
| Israel                         | -                      | 0.3 <sup>c</sup>         | 0.3 <sup>c</sup>         | 0.3 <sup>c,n</sup>     | 0.3 <sup>c,n</sup>       | -                      | -                      | 0.2 <sup>c</sup>         | 0.2 <sup>c</sup>         | 0.2 <sup>c,n</sup>     | 0.2 <sup>c,n</sup>       | -                  |
| Russian Federation             | -                      | 0.1                      | 0.2                      | 0.3                    | 0.3                      | -                      | -                      | 0.0 <sup>h</sup>         | 0.0                      | 0.0                    | 0.0                      | -                  |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| 1. 1992 instead of 1991. | 3. 2000 instead of 2001. | 5. 1983 instead of 1981. |
| 2. 1996 instead of 1995. | 4. 1998 instead of 2001. | 6. 1982 instead of 1981. |

Source: OECD, MSTI database, May 2004.



Table 9. Business R&amp;D expenditures, 1981-2003

|                                   | Millions constant USD (1995 PPPs) |                            |                              |                              |                            |                              |                          | As a percentage of total OECD |             |             |             |             |             |
|-----------------------------------|-----------------------------------|----------------------------|------------------------------|------------------------------|----------------------------|------------------------------|--------------------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|
|                                   | 1981                              | 1985                       | 1991                         | 1995                         | 2001                       | 2002                         | 2003                     | 1981                          | 1985        | 1991        | 1995        | 2001        | 2002        |
| Australia                         | 591 <sup>b</sup>                  | 1 067 <sup>b</sup>         | 1 896                        | 3 306                        | 3 718                      | -                            | -                        | 0.4                           | 0.5         | 0.7         | 1.1         | 0.9         | -           |
| Austria <sup>1</sup>              | 814                               | 949 <sup>b</sup>           | -                            | -                            | 2 214                      | -                            | -                        | 0.5                           | 0.4         | -           | -           | 0.6         | -           |
| Belgium                           | 1 664                             | 2 020                      | 2 228 <sup>b</sup>           | 2 681                        | 4 042                      | 4 170 <sup>n</sup>           | -                        | 1.0                           | 0.9         | 0.8         | 0.9         | 1.0         | 1.1         |
| Canada                            | 2 811                             | 3 958                      | 4 660                        | 6 536                        | 9 850                      | 8 875 <sup>n</sup>           | 8 630 <sup>b,n</sup>     | 1.7                           | 1.7         | 1.6         | 2.2         | 2.5         | 2.3         |
| Czech Republic                    | -                                 | -                          | 1 613 <sup>c,q</sup>         | 818 <sup>a</sup>             | 1 066                      | 1 100                        | -                        | -                             | -           | 0.6         | 0.3         | 0.3         | 0.3         |
| Denmark                           | 470                               | 671                        | 1 038                        | 1 239                        | 2 248                      | 2 404                        | -                        | 0.3                           | 0.3         | 0.4         | 0.4         | 0.6         | 0.6         |
| Finland                           | 494                               | 797                        | 1 105                        | 1 402                        | 3 001                      | 3 056                        | -                        | 0.3                           | 0.4         | 0.4         | 0.5         | 0.8         | 0.8         |
| France                            | 10 528                            | 12 974                     | 17 191                       | 17 356                       | 20 217 <sup>a</sup>        | 19 853 <sup>n</sup>          | -                        | 6.2                           | 5.7         | 6.0         | 5.9         | 5.1         | 5.1         |
| Germany                           | 19 239                            | 23 586                     | 29 116 <sup>a</sup>          | 26 122                       | 33 897                     | 33 934 <sup>b</sup>          | 33 464 <sup>b</sup>      | 11.4                          | 10.4        | 10.2        | 8.9         | 8.6         | 8.7         |
| Greece <sup>2</sup>               | 46                                | 95                         | 126                          | 198                          | 361 <sup>b</sup>           | -                            | -                        | 0.0                           | 0.0         | 0.0         | 0.1         | 0.1         | -           |
| Hungary                           | -                                 | -                          | 406 <sup>q</sup>             | 297                          | 447                        | 443                          | -                        | -                             | -           | 0.1         | 0.1         | 0.1         | 0.1         |
| Iceland                           | 3                                 | 6                          | 15                           | 29                           | 139                        | 136 <sup>b</sup>             | -                        | 0.0                           | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| Ireland                           | 109                               | 160                        | 310                          | 575                          | 873                        | -                            | -                        | 0.1                           | 0.1         | 0.1         | 0.2         | 0.2         | -           |
| Italy                             | 4 461 <sup>r</sup>                | 6 199 <sup>r</sup>         | 7 746 <sup>a</sup>           | 6 351                        | 7 278                      | 7 221 <sup>n</sup>           | 7 313 <sup>n</sup>       | 2.6                           | 2.7         | 2.7         | 2.2         | 1.8         | 1.8         |
| Japan                             | 25 562 <sup>j</sup>               | 37 894 <sup>j</sup>        | 56 098 <sup>j</sup>          | 53 174 <sup>j</sup>          | 68 522                     | 70 103                       | -                        | 15.2                          | 16.7        | 19.7        | 18.0        | 17.4        | 17.9        |
| Korea                             | -                                 | -                          | -                            | 9 525                        | 15 024                     | 15 621                       | -                        | -                             | -           | -           | 3.2         | 3.8         | 4.0         |
| Luxembourg <sup>3</sup>           | -                                 | -                          | -                            | -                            | 294 <sup>r</sup>           | -                            | -                        | -                             | -           | -           | 0.1         | -           | -           |
| Mexico                            | -                                 | -                          | 543 <sup>b,j,q</sup>         | 402                          | 968                        | -                            | -                        | -                             | -           | 0.2         | 0.1         | 0.2         | -           |
| Netherlands                       | 2 292                             | 2 866                      | 3 018                        | 3 466                        | 4 468                      | 4 203 <sup>n</sup>           | -                        | 1.4                           | 1.3         | 1.1         | 1.2         | 1.1         | 1.1         |
| New Zealand                       | -                                 | -                          | 141                          | 164                          | 319 <sup>a</sup>           | -                            | -                        | -                             | -           | 0.0         | 0.1         | 0.1         | -           |
| Norway                            | 495                               | 834                        | 825                          | 1 001 <sup>a</sup>           | 1 372                      | 1 354 <sup>b</sup>           | -                        | 0.3                           | 0.4         | 0.3         | 0.3         | 0.3         | 0.3         |
| Poland                            | -                                 | -                          | -                            | 728 <sup>a</sup>             | 863                        | 480                          | -                        | -                             | -           | -           | 0.2         | 0.2         | 0.1         |
| Portugal <sup>4, 2, 5</sup>       | 85                                | 95                         | 169                          | 157 <sup>a</sup>             | 436                        | 521 <sup>b</sup>             | -                        | 0.0                           | 0.0         | 0.1         | 0.1         | 0.1         | 0.1         |
| Slovak Republic                   | -                                 | -                          | 648 <sup>b,c,q</sup>         | 219 <sup>c</sup>             | 233                        | 210                          | -                        | -                             | -           | 0.2         | 0.1         | 0.1         | 0.1         |
| Spain                             | 798                               | 1 351                      | 2 768                        | 2 416                        | 3 830                      | 4 416 <sup>a</sup>           | -                        | 0.5                           | 0.6         | 1.0         | 0.8         | 1.0         | 1.1         |
| Sweden                            | 2 058 <sup>a</sup>                | 3 024                      | 3 344 <sup>k</sup>           | 4 673 <sup>a,k</sup>         | 7 376 <sup>k</sup>         | -                            | -                        | 1.2                           | 1.3         | 1.2         | 1.6         | 1.9         | -           |
| Switzerland <sup>2, 5, 6, 3</sup> | 2 399 <sup>b</sup>                | 3 482 <sup>a</sup>         | 3 321                        | 3 513                        | 3 884 <sup>r</sup>         | -                            | -                        | 1.4                           | 1.5         | 1.2         | 1.1         | 1.0         | -           |
| Turkey <sup>2</sup>               | -                                 | -                          | 324                          | 303                          | 879 <sup>r</sup>           | -                            | -                        | -                             | -           | 0.1         | 0.1         | 0.2         | -           |
| United Kingdom                    | 12 089                            | 13 045                     | 14 533                       | 14 615                       | 17 053 <sup>a</sup>        | 17 564                       | -                        | 7.2                           | 5.7         | 5.1         | 5.0         | 4.3         | 4.5         |
| United States                     | 81 589 <sup>h</sup>               | 112 257 <sup>h</sup>       | 127 965 <sup>h</sup>         | 132 109 <sup>h</sup>         | 179 673 <sup>h</sup>       | 172 371 <sup>h,n</sup>       | 170 945 <sup>b,h,n</sup> | 48.4                          | 49.4        | 44.9        | 44.8        | 45.5        | 44.1        |
| <b>Total OECD</b>                 | <b>168 685<sup>b</sup></b>        | <b>227 013<sup>b</sup></b> | <b>284 999<sup>a,b</sup></b> | <b>294 874<sup>a,b</sup></b> | <b>394 706<sup>b</sup></b> | <b>390 610<sup>b,n</sup></b> | <b>-</b>                 | <b>100</b>                    | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  |
| <b>EU-25</b>                      | <b>-</b>                          | <b>-</b>                   | <b>-</b>                     | <b>85 141<sup>b</sup></b>    | <b>110 640<sup>b</sup></b> | <b>111 945<sup>b,n</sup></b> | <b>-</b>                 | <b>-</b>                      | <b>-</b>    | <b>-</b>    | <b>28.9</b> | <b>28.0</b> | <b>28.7</b> |
| <b>EU-15</b>                      | <b>55 136<sup>b</sup></b>         | <b>67 794<sup>b</sup></b>  | <b>84 074<sup>a,b</sup></b>  | <b>82 839<sup>b</sup></b>    | <b>107 593<sup>b</sup></b> | <b>109 291<sup>b,n</sup></b> | <b>-</b>                 | <b>32.7</b>                   | <b>29.9</b> | <b>29.5</b> | <b>28.1</b> | <b>27.3</b> | <b>28.0</b> |
| China                             | -                                 | -                          | 5 505 <sup>k,s</sup>         | 7 871 <sup>k,s</sup>         | 31 668                     | 40 066                       | -                        | -                             | -           | 1.9         | 2.7         | 8.0         | 10.3        |
| Israel                            | -                                 | -                          | 1 079 <sup>c</sup>           | 1 544 <sup>c</sup>           | 4 470 <sup>c,n</sup>       | 4 024 <sup>c,n</sup>         | 3 916 <sup>c,n</sup>     | -                             | -           | 0.4         | 0.5         | 1.1         | 1.0         |
| Russian Federation <sup>5</sup>   | -                                 | -                          | 7 532                        | 5 121                        | 8 628                      | 9 539                        | -                        | -                             | -           | 2.7         | 1.7         | 2.2         | 2.4         |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1998 instead of 2001. 2. 1986 instead of 1985. 3. 2000 instead of 2001. 4. 1982 instead of 1981. 5. 1992 instead of 1991. 6. 1996 instead of 1995.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/730082336242>

**Table 10. BERD intensity, 1981-2003**  
As a percentage of value added in industry

|                              | 1981                   | 1985                   | 1991                     | 1995                     | 2000                   | 2001                   | 2002                     | 2003                 |
|------------------------------|------------------------|------------------------|--------------------------|--------------------------|------------------------|------------------------|--------------------------|----------------------|
| Australia                    | 0.3 <sup>b</sup>       | 0.5 <sup>b</sup>       | 0.8                      | 1.2                      | 1.0                    | 1.1                    | -                        | -                    |
| Austria <sup>1</sup>         | 0.9                    | 1.0 <sup>b</sup>       | -                        | -                        | 1.6 <sup>c</sup>       | -                      | -                        | -                    |
| Belgium                      | 1.5                    | 1.7                    | 1.6 <sup>b</sup>         | 1.8                      | 2.2                    | 2.4                    | 2.5 <sup>n</sup>         | -                    |
| Canada                       | 0.8                    | 1.0                    | 1.1                      | 1.4                      | 1.5                    | 1.6 <sup>b</sup>       | 1.4 <sup>b,n</sup>       | 1.4 <sup>b,n</sup>   |
| Czech Republic               | -                      | -                      | 1.8 <sup>c,q</sup>       | 0.9 <sup>a</sup>         | 1.1                    | 1.0                    | 1.1                      | -                    |
| Denmark <sup>2</sup>         | 0.9                    | 1.1                    | 1.5                      | 1.7                      | 2.3                    | 2.6                    | 2.8                      | -                    |
| Finland                      | 0.9                    | 1.3                    | 1.8                      | 2.2                      | 3.5                    | 3.6                    | 3.6                      | -                    |
| France                       | 1.6                    | 1.9                    | 2.1                      | 2.1                      | 2.0                    | 2.1 <sup>a</sup>       | 2.0 <sup>n</sup>         | -                    |
| Germany                      | 2.3                    | 2.7                    | 2.5 <sup>a</sup>         | 2.1                      | 2.5 <sup>b</sup>       | 2.5                    | 2.5 <sup>b</sup>         | 2.5 <sup>b</sup>     |
| Greece <sup>3,2</sup>        | 0.0                    | 0.1                    | 0.1                      | 0.2                      | 0.3                    | 0.3 <sup>b</sup>       | -                        | -                    |
| Hungary                      | -                      | -                      | 0.6 <sup>q</sup>         | 0.5                      | 0.5                    | 0.6                    | 0.6 <sup>b</sup>         | -                    |
| Iceland                      | 0.1                    | 0.2                    | 0.4                      | 0.8                      | 2.5 <sup>b</sup>       | 2.8 <sup>b</sup>       | 2.8 <sup>b</sup>         | -                    |
| Ireland                      | 0.4                    | 0.5                    | 0.8                      | 1.3                      | 1.1 <sup>b</sup>       | 1.1                    | -                        | -                    |
| Italy                        | 0.6 <sup>r</sup>       | 0.8 <sup>r</sup>       | 1.0 <sup>a</sup>         | 0.7                      | 0.8                    | 0.8                    | 0.8 <sup>n</sup>         | 0.8 <sup>n</sup>     |
| Japan                        | 1.7 <sup>j</sup>       | 2.3 <sup>j</sup>       | 2.6 <sup>j</sup>         | 2.4 <sup>j</sup>         | 2.8                    | 3.0                    | 3.1 <sup>b</sup>         | -                    |
| Korea                        | -                      | -                      | -                        | 2.2                      | 2.4                    | 2.8                    | 2.7                      | -                    |
| Luxembourg                   | -                      | -                      | -                        | -                        | 2.2                    | -                      | -                        | -                    |
| Mexico                       | -                      | -                      | 0.1 <sup>b,j,q</sup>     | 0.1                      | 0.2                    | 0.2                    | -                        | -                    |
| Netherlands                  | 1.4                    | 1.6                    | 1.4                      | 1.5                      | 1.6                    | 1.6                    | 1.6 <sup>n</sup>         | -                    |
| New Zealand <sup>2</sup>     | -                      | -                      | 0.4                      | 0.3                      | 0.4 <sup>b</sup>       | 0.6 <sup>a,b</sup>     | -                        | -                    |
| Norway <sup>2</sup>          | 0.9                    | 1.3                    | 1.3                      | 1.5 <sup>a</sup>         | 1.4                    | 1.4                    | 1.4                      | -                    |
| Poland                       | -                      | -                      | -                        | 0.4 <sup>a</sup>         | 0.3                    | 0.3                    | 0.2 <sup>b</sup>         | -                    |
| Portugal <sup>4,3,5</sup>    | 0.1                    | 0.1                    | 0.2                      | 0.2 <sup>a</sup>         | 0.4 <sup>b</sup>       | 0.4                    | 0.5 <sup>b</sup>         | -                    |
| Slovak Republic              | -                      | -                      | -                        | 0.7 <sup>c</sup>         | 0.6                    | 0.6                    | 0.5                      | -                    |
| Spain                        | 0.2                    | 0.4                    | 0.6                      | 0.5                      | 0.7                    | 0.7                    | 0.8 <sup>a</sup>         | -                    |
| Sweden <sup>2</sup>          | 2.2 <sup>a</sup>       | 2.9                    | 3.0 <sup>k</sup>         | 3.8 <sup>a,k</sup>       | 4.3 <sup>k</sup>       | 5.2 <sup>k</sup>       | -                        | -                    |
| Switzerland <sup>3,5,6</sup> | 1.6 <sup>b</sup>       | 2.6 <sup>a,b</sup>     | 2.9 <sup>b</sup>         | 3.1 <sup>b</sup>         | 3.1                    | -                      | -                        | -                    |
| Turkey                       | -                      | -                      | 0.1                      | 0.1                      | 0.3                    | -                      | -                        | -                    |
| United Kingdom               | 2.1                    | 2.0                    | 2.0                      | 1.8                      | 1.8                    | 1.8 <sup>a</sup>       | 1.9                      | -                    |
| United States                | 2.2 <sup>h</sup>       | 2.8 <sup>h</sup>       | 2.8 <sup>h</sup>         | 2.5 <sup>h</sup>         | 2.8 <sup>h</sup>       | 2.7 <sup>h</sup>       | 2.6 <sup>b,h,n</sup>     | 2.5 <sup>b,h,n</sup> |
| <b>Total OECD</b>            | <b>1.7<sup>b</sup></b> | <b>2.1<sup>b</sup></b> | <b>2.1<sup>a,b</sup></b> | <b>2.0<sup>a,b</sup></b> | <b>2.2<sup>b</sup></b> | <b>2.2<sup>b</sup></b> | <b>2.1<sup>b,n</sup></b> | -                    |
| <b>EU-25</b>                 | -                      | -                      | -                        | -                        | -                      | -                      | -                        | -                    |
| <b>EU-15</b>                 | <b>1.4<sup>b</sup></b> | <b>1.7<sup>b</sup></b> | <b>1.7<sup>a,b</sup></b> | <b>1.6<sup>b</sup></b>   | <b>1.8<sup>b</sup></b> | <b>1.8<sup>b</sup></b> | <b>1.8<sup>b,n</sup></b> | -                    |
| China                        | -                      | -                      | 0.3 <sup>k,s</sup>       | 0.3 <sup>k,s</sup>       | 0.7 <sup>a</sup>       | 0.7                    | 0.9 <sup>b</sup>         | -                    |
| Israel                       | -                      | -                      | -                        | 2.5 <sup>c</sup>         | 5.4 <sup>c</sup>       | 6.0 <sup>c,n</sup>     | 5.4 <sup>b,c,n</sup>     | 5.1 <sup>b,c,n</sup> |
| Russian Federation           | -                      | -                      | 0.6                      | 0.7                      | 1.0 <sup>b</sup>       | 1.1                    | 1.1 <sup>b</sup>         | -                    |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1998 instead of 2000.      3. 1986 instead of 1985.      5. 1992 instead of 1991.  
2. 1999 instead of 2000.      4. 1982 instead of 1981.      6. 1996 instead of 1995.

Table 11. Business R&amp;D expenditures by source of funds, 1981-2003

As a percentage of total national R&amp;D expenditures

|                              | Industry                |                           |                           |                         |                           |                     | Government              |                           |                           |                        |                          |                   |
|------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------|------------------------|--------------------------|-------------------|
|                              | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                | 1981                    | 1991                      | 1995                      | 2001                   | 2002                     | 2003              |
| Australia                    | 75.5 <sup>b,p</sup>     | 92.7                      | 92.9                      | 88.7                    | -                         | -                   | 8.4 <sup>b,p</sup>      | 3.0                       | 2.4                       | 5.1                    | -                        | -                 |
| Austria <sup>1</sup>         | 88.4                    | -                         | -                         | 64.4                    | -                         | -                   | 7.4                     | -                         | -                         | 5.5                    | -                        | -                 |
| Belgium                      | 91.5 <sup>a</sup>       | 91.4 <sup>b</sup>         | 89.2                      | 82.7                    | 83.9 <sup>n</sup>         | -                   | 8.3 <sup>a</sup>        | 7.8 <sup>b</sup>          | 4.3                       | 5.7                    | 5.9 <sup>n</sup>         | -                 |
| Canada                       | 81.9                    | 71.6                      | 74.3                      | 75.9                    | 75.9 <sup>n</sup>         | 75.9 <sup>n</sup>   | 10.7                    | 9.9                       | 6.2                       | 3.2                    | 3.2 <sup>n</sup>         | 3.2 <sup>n</sup>  |
| Czech Republic               | -                       | -                         | 92.2                      | 84.3                    | 84.0                      | -                   | -                       | 6.6 <sup>c,q</sup>        | 4.5 <sup>c,q</sup>        | 12.2                   | 12.1                     | -                 |
| Denmark                      | 84.4 <sup>a</sup>       | 86.0                      | 76.9                      | 87.4                    | -                         | -                   | 12.4                    | 7.9                       | 6.1                       | 3.1                    | -                        | -                 |
| Finland                      | 94.9 <sup>a</sup>       | 93.3                      | 89.1                      | 95.6                    | 95.7                      | -                   | 4.2 <sup>a</sup>        | 5.5                       | 5.6                       | 3.4                    | 3.2                      | -                 |
| France                       | 68.2                    | 66.2                      | 76.1                      | 82.9 <sup>a</sup>       | -                         | -                   | 24.6                    | 22.3                      | 12.7                      | 8.4 <sup>a</sup>       | -                        | -                 |
| Germany                      | 81.7                    | 87.0 <sup>a</sup>         | 87.5                      | 90.7                    | 91.2 <sup>b</sup>         | 91.0 <sup>b</sup>   | 16.9                    | 10.1 <sup>a</sup>         | 10.2                      | 6.7                    | 6.2 <sup>b</sup>         | 6.4 <sup>b</sup>  |
| Greece                       | 95.4                    | 74.0                      | 76.1                      | 80.2 <sup>b</sup>       | -                         | -                   | 4.6                     | 5.5                       | 7.4                       | 2.3 <sup>b</sup>       | -                        | -                 |
| Hungary                      | -                       | 87.0 <sup>q,s</sup>       | 78.3 <sup>s</sup>         | 75.7 <sup>s</sup>       | 69.4 <sup>s</sup>         | -                   | -                       | 8.2 <sup>q,s</sup>        | 16.2 <sup>s</sup>         | 6.1 <sup>s</sup>       | 7.2 <sup>s</sup>         | -                 |
| Iceland                      | 53.3                    | 84.5                      | 95.5                      | 73.1                    | -                         | -                   | 38.3                    | 9.6                       | 3.3                       | 1.4                    | -                        | -                 |
| Ireland                      | 80.5                    | 89.6                      | 98.2 <sup>p</sup>         | 92.8                    | -                         | -                   | 13.7                    | 3.7                       | 4.9 <sup>p</sup>          | 2.7                    | -                        | -                 |
| Italy                        | 86.9 <sup>r</sup>       | 77.2 <sup>a</sup>         | 75.2                      | 78.2                    | 78.0 <sup>n</sup>         | 78.2 <sup>n</sup>   | 8.8 <sup>r</sup>        | 13.2 <sup>a</sup>         | 16.7                      | 14.9                   | 15.0 <sup>n</sup>        | 14.4 <sup>n</sup> |
| Japan                        | 97.9                    | 98.4                      | 98.2                      | 97.8                    | 97.9                      | -                   | 1.9                     | 1.4                       | 1.6                       | 0.8                    | 1.0                      | -                 |
| Korea                        | -                       | -                         | 96.3                      | 91.2                    | 93.0                      | -                   | -                       | -                         | 3.6                       | 8.1                    | 6.4                      | -                 |
| Luxembourg <sup>2</sup>      | -                       | -                         | -                         | 97.8 <sup>-</sup>       | -                         | -                   | -                       | -                         | -                         | 1.6 <sup>-</sup>       | -                        | -                 |
| Mexico                       | -                       | 100.0 <sup>b,q</sup>      | 76.2                      | 89.8                    | -                         | -                   | -                       | 0.0 <sup>b,k,q</sup>      | 2.8                       | 9.6                    | -                        | -                 |
| Netherlands                  | 84.3                    | 89.6                      | 80.0                      | 80.3                    | -                         | -                   | 7.5                     | 7.5                       | 6.6                       | 5.2                    | -                        | -                 |
| New Zealand                  | -                       | 87.8                      | 86.4                      | 78.8 <sup>a</sup>       | -                         | -                   | -                       | 7.2                       | 6.9                       | 8.6 <sup>a</sup>       | -                        | -                 |
| Norway                       | 73.0                    | 76.8                      | 82.5 <sup>a</sup>         | 81.4                    | -                         | -                   | 25.3                    | 15.9                      | 11.9 <sup>a</sup>         | 10.3                   | -                        | -                 |
| Poland                       | -                       | -                         | 64.7 <sup>a</sup>         | 67.6                    | 86.5                      | -                   | -                       | -                         | 33.8 <sup>a</sup>         | 30.4                   | 11.8                     | -                 |
| Portugal <sup>3,4</sup>      | 92.9                    | 80.5                      | 78.6 <sup>a</sup>         | 94.4                    | -                         | -                   | 1.6                     | 9.1                       | 5.1 <sup>a</sup>          | 2.1                    | -                        | -                 |
| Slovak Republic              | -                       | 88.6 <sup>c,q</sup>       | 87.7 <sup>c</sup>         | 78.3                    | 77.5                      | -                   | -                       | 11.4 <sup>c,q</sup>       | 10.8 <sup>c</sup>         | 20.6                   | 21.1                     | -                 |
| Spain                        | 93.6                    | 80.4                      | 84.4                      | 82.5                    | 84.0 <sup>a</sup>         | -                   | 4.1                     | 11.3                      | 9.2                       | 9.5                    | 9.6 <sup>a</sup>         | -                 |
| Sweden                       | 84.6 <sup>a</sup>       | 88.0                      | 86.8 <sup>a</sup>         | 91.2                    | -                         | -                   | 13.6 <sup>a</sup>       | 10.3                      | 9.5 <sup>a</sup>          | 5.8                    | -                        | -                 |
| Switzerland <sup>4,5,2</sup> | 98.7 <sup>b</sup>       | 95.5                      | 92.5                      | 91.4 <sup>-</sup>       | -                         | -                   | 1.3 <sup>b</sup>        | 1.7 <sup>f</sup>          | 2.4 <sup>f</sup>          | 2.3 <sup>f</sup>       | -                        | -                 |
| Turkey <sup>2</sup>          | -                       | 99.9                      | 91.3                      | 92.4 <sup>-</sup>       | -                         | -                   | -                       | 0.0                       | 1.7                       | 4.3 <sup>-</sup>       | -                        | -                 |
| United Kingdom               | 61.3                    | 69.4                      | 70.5                      | 66.6 <sup>a</sup>       | 66.0                      | -                   | 30.0                    | 14.6                      | 10.5                      | 8.9 <sup>a</sup>       | 6.8                      | -                 |
| United States                | 68.4 <sup>h</sup>       | 77.4 <sup>h</sup>         | 82.2 <sup>h</sup>         | 90.6 <sup>h</sup>       | 90.1 <sup>h,n</sup>       | 90.0 <sup>h,n</sup> | 31.6                    | 22.6                      | 17.8                      | 9.4                    | 9.9 <sup>n</sup>         | 10.0 <sup>n</sup> |
| <b>Total OECD</b>            | <b>76.1<sup>b</sup></b> | <b>82.6<sup>a,b</sup></b> | <b>85.1<sup>a,b</sup></b> | <b>89.2<sup>b</sup></b> | <b>89.2<sup>b,n</sup></b> | -                   | <b>22.3<sup>b</sup></b> | <b>14.7<sup>a,b</sup></b> | <b>11.7<sup>a,b</sup></b> | <b>7.2<sup>b</sup></b> | <b>7.1<sup>b,n</sup></b> | -                 |
| <b>EU-25</b>                 | -                       | -                         | <b>80.5<sup>b</sup></b>   | <b>82.6<sup>b</sup></b> | -                         | -                   | -                       | -                         | <b>10.8<sup>b</sup></b>   | <b>7.9<sup>b</sup></b> | -                        | -                 |
| <b>EU-15</b>                 | <b>76.1<sup>b</sup></b> | <b>78.9<sup>a,b</sup></b> | <b>80.5<sup>b</sup></b>   | <b>82.8<sup>b</sup></b> | -                         | -                   | <b>19.3<sup>b</sup></b> | <b>13.4<sup>a,b</sup></b> | <b>10.7<sup>b</sup></b>   | <b>7.7<sup>b</sup></b> | -                        | -                 |
| China <sup>2</sup>           | -                       | -                         | -                         | 86.4 <sup>a,s</sup>     | -                         | -                   | -                       | -                         | -                         | 6.8 <sup>a,s</sup>     | -                        | -                 |
| Israel <sup>2</sup>          | -                       | 74.2 <sup>c</sup>         | 78.6 <sup>c</sup>         | 90.4 <sup>c,n</sup>     | -                         | -                   | -                       | 25.8 <sup>c</sup>         | 21.3 <sup>c</sup>         | 9.6 <sup>c</sup>       | -                        | -                 |
| Russian Federation           | -                       | -                         | 43.7                      | 41.5                    | 40.9                      | -                   | -                       | -                         | 51.1                      | 49.0                   | 50.6                     | -                 |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1998 instead of 2001.      3. 1982 instead of 1981.      5. 1996 instead of 1995.

2. 2000 instead of 2001.      4. 1992 instead of 1991.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/250760635132>

Table 11. Business R&amp;D expenditures by source of funds, 1981-2003 (cont'd)

As a percentage of total national R&amp;D expenditures

|                              | Other national sources |                          |                          |                        |                          |                  | Abroad                 |                          |                        |                        |                   |                   |
|------------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|------------------|------------------------|--------------------------|------------------------|------------------------|-------------------|-------------------|
|                              | 1981                   | 1991                     | 1995                     | 2001                   | 2002                     | 2003             | 1981                   | 1991                     | 1995                   | 2001                   | 2002              | 2003              |
| Australia                    | 0.3 <sup>b,p</sup>     | 0.3                      | 1.7                      | 0.7                    | -                        | -                | 1.6 <sup>b,p</sup>     | 4.1                      | 3.1                    | 5.6                    | -                 | -                 |
| Austria <sup>1</sup>         | 0.1                    | -                        | -                        | 0.1                    | -                        | -                | 4.1                    | -                        | -                      | 30.1                   | -                 | -                 |
| Belgium                      | 0.0 <sup>a</sup>       | 0.0 <sup>b</sup>         | 0.4                      | 0.1                    | 0.1 <sup>n</sup>         | -                | 0.2 <sup>a</sup>       | 0.9 <sup>b</sup>         | 6.1                    | 11.5                   | 10.3 <sup>n</sup> | -                 |
| Canada                       | 0.0                    | 0.0                      | 0.0                      | 0.0                    | 0.0 <sup>n</sup>         | 0.0 <sup>n</sup> | 7.4                    | 18.5                     | 19.5                   | 21.0                   | 21.0 <sup>n</sup> | 21.0 <sup>n</sup> |
| Czech Republic               | -                      | -                        | 0.2                      | 1.6                    | 1.6                      | -                | -                      | -                        | 3.2                    | 1.9                    | 2.3               | -                 |
| Denmark                      | 0.5 <sup>a</sup>       | 1.7                      | 1.5                      | 0.3                    | -                        | -                | 2.8                    | 4.4                      | 15.5                   | 9.2                    | -                 | -                 |
| Finland                      | 0.0                    | 0.1                      | 0.1                      | 0.3                    | 0.1                      | -                | 0.9                    | 1.2                      | 5.3                    | 0.7                    | 1.0               | -                 |
| France                       | 0.1                    | 0.1                      | 0.0                      | 0.0 <sup>a</sup>       | -                        | -                | 7.1                    | 11.4                     | 11.1                   | 8.7 <sup>a</sup>       | -                 | -                 |
| Germany                      | 0.2                    | 0.3 <sup>a</sup>         | 0.1                      | 0.2                    | 0.2 <sup>b</sup>         | 0.2 <sup>b</sup> | 1.2                    | 2.6 <sup>a</sup>         | 2.2                    | 2.4                    | 2.4 <sup>b</sup>  | 2.4 <sup>b</sup>  |
| Greece                       | -                      | -                        | 0.0                      | 0.0 <sup>b</sup>       | -                        | -                | -                      | 20.6                     | 16.5                   | 17.5 <sup>b</sup>      | -                 | -                 |
| Hungary                      | -                      | -                        | -                        | 0.1 <sup>s</sup>       | 0.1 <sup>s</sup>         | -                | -                      | 2.8 <sup>q,s</sup>       | 4.1 <sup>s</sup>       | 16.9 <sup>s</sup>      | 22.6 <sup>s</sup> | -                 |
| Iceland                      | 0.0                    | 0.0                      | 0.0                      | 0.2                    | -                        | -                | 8.4                    | 5.9                      | 1.2                    | 25.3                   | -                 | -                 |
| Ireland                      | 0.1                    | 0.2                      | 0.5 <sup>p</sup>         | -                      | -                        | -                | 5.7                    | 6.6                      | 3.8 <sup>p</sup>       | 4.5                    | -                 | -                 |
| Italy                        | 0.0 <sup>r</sup>       | -                        | -                        | 0.3                    | 0.3 <sup>n</sup>         | 0.3 <sup>n</sup> | 4.3 <sup>r</sup>       | 9.6 <sup>a</sup>         | 8.2                    | 6.6                    | 6.8 <sup>n</sup>  | 7.1 <sup>n</sup>  |
| Japan                        | 0.0                    | 0.1                      | 0.1                      | 0.8                    | 0.6                      | -                | 0.1                    | 0.1                      | 0.1                    | 0.5                    | 0.5               | -                 |
| Korea                        | -                      | -                        | 0.2                      | 0.2                    | 0.1                      | -                | -                      | -                        | 0.0                    | 0.6                    | 0.5               | -                 |
| Luxembourg <sup>2</sup>      | -                      | -                        | -                        | -                      | -                        | -                | -                      | -                        | -                      | 0.6 <sup>-</sup>       | -                 | -                 |
| Mexico                       | -                      | -                        | 0.4                      | 0.0                    | -                        | -                | -                      | -                        | 20.7                   | 0.6                    | -                 | -                 |
| Netherlands                  | 0.0                    | 0.6                      | 0.1                      | 0.1                    | -                        | -                | 8.2                    | 2.4                      | 13.2                   | 14.4                   | -                 | -                 |
| New Zealand                  | -                      | 0.2                      | 1.0                      | 0.9 <sup>a</sup>       | -                        | -                | -                      | 4.9                      | 5.7                    | 11.8 <sup>a</sup>      | -                 | -                 |
| Norway                       | 0.0                    | 0.1                      | 0.1 <sup>a</sup>         | 0.0                    | -                        | -                | 1.7                    | 7.2                      | 5.6 <sup>a</sup>       | 8.4                    | -                 | -                 |
| Poland                       | -                      | -                        | 0.2 <sup>a</sup>         | 0.2                    | 0.3                      | -                | -                      | -                        | 1.3 <sup>a</sup>       | 1.8                    | 1.4               | -                 |
| Portugal <sup>3,4</sup>      | 0.0                    | -                        | 0.3 <sup>a</sup>         | -                      | -                        | -                | 5.5                    | 10.4                     | 16.1 <sup>a</sup>      | 3.6                    | 2.9 <sup>b</sup>  | -                 |
| Slovak Republic              | -                      | -                        | 0.0 <sup>c</sup>         | 0.0                    | 0.3                      | -                | -                      | -                        | 1.6 <sup>c</sup>       | 1.1                    | 1.2               | -                 |
| Spain                        | 0.1                    | 0.2                      | 0.1                      | 0.3                    | 0.5 <sup>a</sup>         | -                | 2.2                    | 8.1                      | 6.4                    | 7.8                    | 5.9 <sup>a</sup>  | -                 |
| Sweden                       | 0.0 <sup>a</sup>       | 0.2                      | 0.1 <sup>a</sup>         | 0.1                    | -                        | -                | 1.8 <sup>a</sup>       | 1.6                      | 3.7 <sup>aj</sup>      | 2.9                    | -                 | -                 |
| Switzerland <sup>4,5,2</sup> | -                      | 0.2                      | 0.7                      | 0.5 <sup>-</sup>       | -                        | -                | -                      | 2.7                      | 4.4                    | 5.8 <sup>-</sup>       | -                 | -                 |
| Turkey <sup>2</sup>          | -                      | -                        | 1.4                      | 1.4 <sup>-</sup>       | -                        | -                | -                      | 0.1                      | 5.6                    | 1.9 <sup>-</sup>       | -                 | -                 |
| United Kingdom               | -                      | -                        | 0.0                      | 0.0 <sup>a</sup>       | 0.0                      | -                | 8.7                    | 16.0                     | 19.1                   | 24.4 <sup>a</sup>      | 27.2              | -                 |
| United States                | 0.0                    | 0.0                      | 0.0                      | 0.0                    | 0.0 <sup>n</sup>         | 0.0 <sup>n</sup> | -                      | -                        | -                      | -                      | -                 | -                 |
| <b>Total OECD</b>            | <b>0.1<sup>b</sup></b> | <b>0.1<sup>a,b</sup></b> | <b>0.1<sup>a,b</sup></b> | <b>0.2<sup>b</sup></b> | <b>0.2<sup>b,n</sup></b> | -                | -                      | -                        | -                      | -                      | -                 | -                 |
| <b>EU-25</b>                 | -                      | -                        | <b>0.1<sup>b</sup></b>   | <b>0.2<sup>b</sup></b> | <b>0.1<sup>b,n</sup></b> | -                | -                      | -                        | <b>8.6<sup>b</sup></b> | <b>9.2<sup>b</sup></b> | -                 | -                 |
| <b>EU-15</b>                 | <b>0.1<sup>b</sup></b> | <b>0.2<sup>a,b</sup></b> | <b>0.1<sup>b</sup></b>   | <b>0.1<sup>b</sup></b> | <b>0.1<sup>b,n</sup></b> | -                | <b>4.6<sup>b</sup></b> | <b>7.5<sup>a,b</sup></b> | <b>8.8<sup>b</sup></b> | <b>9.3<sup>b</sup></b> | -                 | -                 |
| China <sup>2</sup>           | -                      | -                        | -                        | -                      | -                        | -                | -                      | -                        | -                      | 4.0 <sup>a,s</sup>     | -                 | -                 |
| Israel <sup>2</sup>          | -                      | 0.0 <sup>c</sup>         | 0.1 <sup>c</sup>         | 0.0 <sup>c</sup>       | -                        | -                | -                      | 0.0 <sup>c</sup>         | 0.0 <sup>c</sup>       | 0.0 <sup>c</sup>       | -                 | -                 |
| Russian Federation           | -                      | -                        | 0.0                      | 0.3                    | 0.1                      | -                | -                      | -                        | 5.1                    | 9.2                    | 8.4               | -                 |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1998 instead of 2001.      3. 1982 instead of 1981.      5. 1996 instead of 1995.  
 2. 2000 instead of 2001.      4. 1992 instead of 1991.

Source: OECD, MSTI database, May 2004.

Table 12. Business R&amp;D expenditures, by two main sources of funds, 1981-2003

As a percentage of GDP

|                              | Industry                |                           |                           |                         |                           |                       | Government              |                           |                           |                         |                           |                     |
|------------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|-----------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------|
|                              | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                  | 1981                    | 1991                      | 1995                      | 2001                    | 2002                      | 2003                |
| Australia                    | 0.18 <sup>b,p</sup>     | 0.54                      | 0.81                      | 0.69                    | -                         | -                     | 0.02 <sup>b,p</sup>     | 0.02                      | 0.02                      | 0.04                    | -                         | -                   |
| Austria <sup>1</sup>         | 0.56                    | -                         | -                         | 0.73                    | -                         | -                     | 0.05                    | -                         | -                         | 0.06                    | -                         | -                   |
| Belgium                      | 0.92 <sup>a</sup>       | 0.99 <sup>b</sup>         | 1.09                      | 1.32                    | 1.38 <sup>n</sup>         | -                     | 0.08 <sup>a</sup>       | 0.08 <sup>b</sup>         | 0.05                      | 0.09                    | 0.10 <sup>n</sup>         | -                   |
| Canada                       | 0.49                    | 0.57                      | 0.74                      | 0.92                    | 0.80 <sup>n</sup>         | 0.77 <sup>b,n</sup>   | 0.06                    | 0.08                      | 0.06                      | 0.04                    | 0.03 <sup>n</sup>         | 0.03 <sup>b,n</sup> |
| Czech Republic               | -                       | - <sup>c,q</sup>          | 0.61 <sup>c,q</sup>       | 0.66                    | 0.66                      | -                     | -                       | 0.09 <sup>c,q</sup>       | 0.03 <sup>c,q</sup>       | 0.10                    | 0.10                      | -                   |
| Denmark                      | 0.45 <sup>a</sup>       | 0.83                      | 0.81                      | 1.44                    | -                         | -                     | 0.07                    | 0.08                      | 0.06                      | 0.05                    | -                         | -                   |
| Finland                      | 0.61 <sup>a</sup>       | 1.08                      | 1.28                      | 2.31                    | 2.31                      | -                     | 0.03 <sup>a</sup>       | 0.06                      | 0.08                      | 0.08                    | 0.08                      | -                   |
| France                       | 0.78                    | 0.97                      | 1.07                      | 1.17 <sup>a</sup>       | -                         | -                     | 0.28                    | 0.33                      | 0.18                      | 0.12 <sup>a</sup>       | -                         | -                   |
| Germany                      | 1.36                    | 1.52 <sup>a</sup>         | 1.30                      | 1.59                    | 1.60 <sup>b</sup>         | 1.57 <sup>b</sup>     | 0.28                    | 0.18 <sup>a</sup>         | 0.15                      | 0.12                    | 0.11 <sup>b</sup>         | 0.11 <sup>b</sup>   |
| Greece                       | 0.04                    | 0.07                      | 0.11 <sup>a</sup>         | 0.17 <sup>b</sup>       | -                         | -                     | 0.00                    | 0.00                      | 0.01 <sup>a</sup>         | 0.00 <sup>b</sup>       | -                         | -                   |
| Hungary                      | -                       | 0.38 <sup>q,s</sup>       | 0.25 <sup>a,s</sup>       | 0.29 <sup>a</sup>       | 0.25 <sup>s</sup>         | -                     | -                       | 0.04 <sup>r,s</sup>       | 0.05 <sup>a,s</sup>       | 0.02 <sup>s</sup>       | 0.03 <sup>s</sup>         | -                   |
| Iceland                      | 0.03                    | 0.22                      | 0.48                      | 1.32                    | - <sup>b</sup>            | -                     | 0.02                    | 0.02                      | 0.02                      | 0.03                    | -                         | -                   |
| Ireland                      | 0.23                    | 0.53                      | 0.87 <sup>p</sup>         | 0.74                    | -                         | -                     | 0.04                    | 0.02                      | 0.04 <sup>p</sup>         | 0.02                    | -                         | -                   |
| Italy                        | 0.43 <sup>r</sup>       | 0.52 <sup>a</sup>         | 0.40                      | 0.43                    | 0.42 <sup>n</sup>         | 0.43 <sup>n</sup>     | 0.04 <sup>r</sup>       | 0.09 <sup>a</sup>         | 0.09                      | 0.08                    | 0.08 <sup>n</sup>         | 0.08 <sup>n</sup>   |
| Japan                        | 1.37 <sup>j</sup>       | 2.05 <sup>j</sup>         | 1.86 <sup>j</sup>         | 2.21                    | 2.27                      | -                     | 0.03 <sup>j</sup>       | 0.03 <sup>j</sup>         | 0.03 <sup>j</sup>         | 0.02                    | 0.02                      | -                   |
| Korea                        | -                       | -                         | 1.77                      | 2.03                    | 2.03                      | -                     | -                       | -                         | 0.07                      | 0.18                    | 0.14                      | -                   |
| Luxembourg <sup>2</sup>      | -                       | -                         | -                         | 1.56 <sup>r</sup>       | -                         | -                     | -                       | -                         | -                         | 0.02 <sup>r</sup>       | -                         | -                   |
| Mexico                       | -                       | 0.09 <sup>b,j,q</sup>     | 0.05                      | 0.11                    | -                         | -                     | -                       | -                         | 0.00                      | 0.01                    | -                         | -                   |
| Netherlands                  | 0.80                    | 0.88                      | 0.83 <sup>a</sup>         | 0.88                    | -                         | -                     | 0.07                    | 0.07                      | 0.07 <sup>a</sup>         | 0.06                    | -                         | -                   |
| New Zealand                  | -                       | 0.23                      | 0.22                      | 0.34 <sup>a</sup>       | -                         | -                     | -                       | 0.02                      | 0.02                      | 0.04 <sup>a</sup>       | -                         | -                   |
| Norway                       | 0.45                    | 0.68                      | 0.79 <sup>a</sup>         | 0.78                    | -                         | -                     | 0.16                    | 0.14                      | 0.11 <sup>a</sup>         | 0.10                    | -                         | -                   |
| Poland                       | -                       | -                         | 0.16 <sup>a</sup>         | 0.16                    | 0.11 <sup>b</sup>         | -                     | -                       | -                         | 0.08 <sup>a</sup>         | 0.07                    | 0.02 <sup>b</sup>         | -                   |
| Portugal <sup>3,4</sup>      | 0.08                    | 0.10                      | 0.09 <sup>a</sup>         | 0.25                    | -                         | -                     | 0.00                    | 0.01                      | 0.01 <sup>a</sup>         | 0.01                    | -                         | -                   |
| Slovak Republic              | -                       | 1.41 <sup>c,q</sup>       | 0.44 <sup>c</sup>         | 0.34                    | 0.29                      | -                     | -                       | 0.18 <sup>c,q</sup>       | 0.05 <sup>c</sup>         | 0.09                    | 0.08                      | -                   |
| Spain                        | 0.18                    | 0.38                      | 0.33 <sup>a</sup>         | 0.41                    | 0.47 <sup>a</sup>         | -                     | 0.01                    | 0.05                      | 0.04 <sup>a</sup>         | 0.05                    | 0.05 <sup>a</sup>         | -                   |
| Sweden                       | 1.19 <sup>a</sup>       | 1.65 <sup>k</sup>         | 2.16 <sup>a,k</sup>       | 3.03 <sup>k</sup>       | -                         | -                     | 0.19 <sup>a</sup>       | 0.19 <sup>k</sup>         | 0.24 <sup>a,k</sup>       | 0.19 <sup>k</sup>       | -                         | -                   |
| Switzerland <sup>4,5,2</sup> | 1.55 <sup>b</sup>       | 1.74                      | 1.75                      | 1.74 <sup>r</sup>       | -                         | -                     | 0.02 <sup>b</sup>       | 0.03 <sup>f</sup>         | 0.05 <sup>f</sup>         | 0.04 <sup>f</sup>       | -                         | -                   |
| Turkey <sup>2</sup>          | -                       | 0.11                      | 0.08                      | 0.19 <sup>r</sup>       | -                         | -                     | -                       | 0.00                      | 0.00                      | 0.01 <sup>r</sup>       | -                         | -                   |
| United Kingdom               | 0.92                    | 0.96                      | 0.89                      | 0.83 <sup>a</sup>       | 0.83                      | -                     | 0.45                    | 0.20                      | 0.13                      | 0.11 <sup>a</sup>       | 0.09                      | -                   |
| United States                | 1.14 <sup>h</sup>       | 1.53 <sup>h</sup>         | 1.48 <sup>h</sup>         | 1.81 <sup>h</sup>       | 1.68 <sup>h,n</sup>       | 1.63 <sup>b,h,n</sup> | 0.53 <sup>h</sup>       | 0.44 <sup>h</sup>         | 0.32 <sup>h</sup>         | 0.19 <sup>h</sup>       | 0.19 <sup>h,n</sup>       | 0.18 <sup>b,h</sup> |
| <b>Total OECD</b>            | <b>0.97<sup>b</sup></b> | <b>1.26<sup>a,b</sup></b> | <b>1.19<sup>a,b</sup></b> | <b>1.41<sup>b</sup></b> | <b>1.37<sup>b,n</sup></b> | <b>-</b>              | <b>0.28<sup>b</sup></b> | <b>0.22<sup>a,b</sup></b> | <b>0.16<sup>a,b</sup></b> | <b>0.11<sup>b</sup></b> | <b>0.11<sup>b,n</sup></b> | <b>-</b>            |
| <b>EU-25</b>                 | <b>-</b>                | <b>-</b>                  | <b>0.85<sup>b</sup></b>   | <b>0.97<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              | <b>-</b>                | <b>-</b>                  | <b>0.11<sup>b</sup></b>   | <b>0.09<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| <b>EU-15</b>                 | <b>0.79<sup>b</sup></b> | <b>0.95<sup>a,b</sup></b> | <b>0.90<sup>b</sup></b>   | <b>1.03<sup>b</sup></b> | <b>-</b>                  | <b>-</b>              | <b>0.20<sup>b</sup></b> | <b>0.16<sup>a,b</sup></b> | <b>0.12<sup>b</sup></b>   | <b>0.10<sup>b</sup></b> | <b>-</b>                  | <b>-</b>            |
| China <sup>2</sup>           | -                       | -                         | -                         | 0.52 <sup>a,s</sup>     | -                         | -                     | -                       | -                         | -                         | 0.04 <sup>a,s</sup>     | -                         | -                   |
| Israel <sup>2</sup>          | -                       | 1.03 <sup>c</sup>         | 1.27 <sup>c</sup>         | 3.22 <sup>c,n</sup>     | -                         | -                     | -                       | 0.36 <sup>c</sup>         | 0.34 <sup>c</sup>         | 0.34 <sup>c</sup>       | -                         | -                   |
| Russian Federation           | -                       | -                         | 0.25                      | 0.34                    | 0.36                      | -                     | -                       | -                         | 0.30                      | 0.40                    | 0.44                      | -                   |

## Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

## Year availability:

1. 1998 instead of 2001.      3. 1982 instead of 1981.      5. 1996 instead of 1995.  
2. 2000 instead of 2001.      4. 1992 instead of 1991.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/348312071533>

**Table 13. Intensity in business R&D expenditures by sector, 1991 and 2001 or nearest years available**  
As a percentage of value added in industry

|   | Australia      |            | Belgium           |            | Canada     |            | Czech Republic |            | Denmark           |            | Finland    |            | France     |            | Germany    |            | Ireland    |            | Italy      |            |            |
|---|----------------|------------|-------------------|------------|------------|------------|----------------|------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|   | 1991           | 2000       | 1992              | 2001       | 1991       | 2000       | 1992           | 2001       | 1991              | 1999       | 1991       | 2001       | 1991       | 2000       | 1991       | 2001       | 1991       | 1999       | 1991       | 2001       |            |
| <b>Total manufacturing</b>                            | <b>(15-37)</b> | <b>2.9</b> | <b>3.3</b>        | <b>5.2</b> | <b>7.7</b> | <b>3.6</b> | <b>4.1</b>     | <b>2.8</b> | <b>2.1</b>        | <b>4.4</b> | <b>6.0</b> | <b>5.6</b> | <b>9.4</b> | <b>7.2</b> | <b>6.9</b> | <b>6.5</b> | <b>7.7</b> | <b>2.1</b> | <b>2.2</b> | <b>2.9</b> | <b>2.4</b> |
| Food prod., beverages and tobacco                     | (15-37)        | 1.0        | 1.0 <sup>1</sup>  | 1.4        | 1.7        | 0.4        | 0.4            | 0.3        | 0.1 <sup>1</sup>  | 1.5        | 1.5        | 3.1        | 2.3        | 1.0        | 1.2        | 0.7        | 0.7        | 1.2        | 1.0        | 0.3        | 0.4        |
| Textiles, textile prod., leather and footwear         | (17-19)        | 0.3        | 0.8 <sup>1</sup>  | 1.2        | 3.6        | 1.1        | 1.1            | 2.5        | 0.4 <sup>1</sup>  | 0.5        | 0.8        | 1.8        | 2.6        | 0.5        | 1.0        | 1.1        | 2.3        | 1.3        | 1.0        | 0.0        | 0.1        |
| Wood, pulp, paper, paper prod., printing & publishing | (20-22)        | 0.6        | 0.8 <sup>1</sup>  | 0.8        | 1.1        | 0.7        | 0.4            | 0.4        | 0.0 <sup>1</sup>  | 0.3        | 0.3        | 2.4        | 1.3        | 0.3        | 0.3        | 0.4        | 0.3        | 0.2        | 0.2        | 0.0        | 0.1        |
| Chemical, rubber, plastics and fuel prod.             | (23-25)        | 3.8        | 4.4 <sup>1</sup>  | 10.2       | 14.0       | 3.8        | 4.0            | 3.6        | 2.6 <sup>1</sup>  | 10.3       | 17.5       | 9.3        | 12.2       | 9.8        | 9.4        | 9.0        | 10.1       | 2.6        | 1.3        | 4.9        | 3.5        |
| Coke, refined petroleum prod. and nuclear fuel        | (23)           | 0.9        | 1.1 <sup>1</sup>  | 7.3        | 2.9        | 5.8        | 1.6            | 3.7        | 0.3 <sup>1</sup>  | 0.0        | 0.0        | 4.9        | 5.8        | 5.6        | 2.4        | 2.7        | 0.8        | -          | -          | 2.0        | 1.9        |
| Chemicals and chemical prod.                          | (24)           | 5.7        | 6.9 <sup>1</sup>  | 12.0       | 17.8       | 4.5        | 6.6            | 3.4        | 4.2 <sup>1</sup>  | 15.7       | 23.7       | 13.8       | 17.6       | 14.1       | 13.9       | 12.6       | 15.0       | 2.8        | 1.2        | 7.3        | 4.8        |
| ....Chemicals excluding pharmaceuticals               | (24ex2423)     | -          | -                 | 10.3       | -          | 2.4        | 2.1            | -          | 2.9 <sup>1</sup>  | 4.4        | 8.1        | 11.6       | 7.0        | 10.7       | 7.1        | 11.4       | 12.1       | 1.1        | 0.4        | 4.4        | 3.2        |
| ....Pharmaceuticals                                   | (2423)         | -          | -                 | 18.6       | -          | 11.4       | 23.9           | -          | 10.3 <sup>1</sup> | 28.2       | 33.6       | 20.5       | 63.7       | 22.1       | 26.3       | 18.3       | 24.1       | 10.5       | 4.5        | 12.0       | 7.0        |
| Rubber and plastics prod.                             | (25)           | 2.2        | 1.5 <sup>1</sup>  | 4.3        | 4.4        | 0.6        | 0.8            | 3.8        | 1.1 <sup>1</sup>  | 1.0        | 4.4        | 4.1        | 6.0        | 3.7        | 5.1        | 2.2        | 3.4        | 1.2        | 2.6        | 1.5        | 1.3        |
| Other non-metallic mineral prod.                      | (26)           | 1.2        | 0.8 <sup>1</sup>  | 1.7        | 2.9        | 0.5        | 0.2            | 0.7        | 0.6 <sup>1</sup>  | 2.1        | 1.2        | 2.0        | 1.7        | 1.7        | 2.4        | 1.9        | 2.2        | 1.1        | 1.1        | 0.2        | 0.3        |
| Basic metals and fabricated metal prod.               | (27-28)        | 2.5        | 2.2 <sup>1</sup>  | 2.2        | 3.3        | 1.9        | 1.1            | 2.5        | 1.0 <sup>1</sup>  | 1.6        | 1.0        | 3.8        | 3.6        | 1.7        | 1.4        | 1.3        | 1.5        | 1.3        | 1.4        | 0.8        | 0.3        |
| Machinery and equipment                               | (29-33)        | 9.3        | 9.6 <sup>1</sup>  | 12.6       | 16.5       | 13.1       | 17.7           | 5.0        | 2.2 <sup>1</sup>  | 8.3        | 9.5        | 12.6       | 19.8       | 13.5       | 12.9       | 8.7        | 9.4        | 4.5        | 6.0        | 5.2        | 4.7        |
| Machinery and equipment, n.e.c.                       | (29)           | 3.8        | 5.1 <sup>1</sup>  | 5.4        | 6.5        | 1.6        | 2.1            | 3.8        | 2.8 <sup>1</sup>  | 5.4        | 7.1        | 5.7        | 7.3        | 4.2        | 5.3        | 5.4        | 6.3        | 2.0        | 3.6        | 1.6        | 1.8        |
| Electrical and optical equipment                      | (30-33)        | 14.9       | 13.6 <sup>1</sup> | 18.4       | 24.7       | 22.0       | 30.5           | 7.2        | 1.8 <sup>1</sup>  | 12.9       | 12.4       | 22.8       | 25.9       | 19.8       | 17.5       | 11.7       | 13.0       | 5.1        | 6.3        | 9.1        | 8.5        |
| ....Office, accounting and computing machinery        | (30)           | -          | -                 | -          | -          | 61.4       | 38.1           | -87.5      | 0.5 <sup>1</sup>  | 14.2       | 13.9       | 11.1       | 23.4       | 16.1       | 13.4       | 13.1       | 22.0       | 2.3        | 1.7        | 43.5       | 9.8        |
| ....Electrical machinery and apparatus, nec           | (31)           | -          | -                 | -          | -          | 2.2        | 5.6            | 2.9        | 1.2 <sup>1</sup>  | 4.8        | 8.1        | 9.4        | 14.6       | 5.8        | 6.8        | 6.1        | 3.8        | 3.8        | 6.4        | 4.1        | 2.4        |
| ....Radio, television and communication equip.        | (32)           | -          | -                 | -          | -          | 26.5       | 36.4           | 28.5       | 3.3 <sup>1</sup>  | 19.5       | 13.0       | 46.5       | 30.2       | 25.3       | 33.2       | 27.5       | 45.4       | 23.5       | 14.1       | 18.3       | 21.0       |
| ....Medical, precision and optical instruments        | (33)           | -          | -                 | -          | -          | -          | -              | 10.3       | 1.9 <sup>1</sup>  | 16.5       | 15.6       | 20.6       | 11.0       | 34.9       | 16.5       | 12.5       | 10.9       | 2.0        | 4.2        | 1.7        | 5.5        |
| Transport equipment                                   | (34-35)        | 6.2        | 6.7 <sup>1</sup>  | 2.7        | 4.8        | 5.4        | 3.8            | 6.8        | 10.3 <sup>1</sup> | 2.0        | 6.4        | 5.4        | 4.4        | 26.1       | 17.1       | 16.0       | 18.0       | 3.0        | 3.1        | 16.4       | 12.1       |
| Motor vehicles, trailers and semi-trailers            | (34)           | 5.8        | 8.1 <sup>1</sup>  | -          | -          | 0.9        | 1.4            | 4.0        | 10.7 <sup>1</sup> | -          | -          | 5.7        | 3.7        | 13.2       | 13.8       | 13.1       | 18.4       | 6.9        | 5.9        | 15.5       | 12.1       |
| Other transport equipment                             | (35)           | 7.4        | 4.0 <sup>1</sup>  | -          | -          | 15.5       | 10.7           | 31.3       | 8.4 <sup>1</sup>  | 3.1        | 9.9        | 5.1        | 4.8        | 61.3       | 24.8       | 32.3       | 15.7       | 0.4        | 1.4        | 18.0       | 12.0       |
| ....Building and repairing of ships and boats         | (351)          | -          | -                 | -          | -          | -          | -              | -          | 0.0 <sup>1</sup>  | 2.6        | 13.2       | 2.7        | 2.1        | 1.1        | 1.9        | 4.2        | 1.5        | 0.0        | 3.1        | 2.3        | 0.9        |
| ....Aircraft and spacecraft                           | (353)          | -          | -                 | -          | -          | 23.7       | 14.0           | -          | 18.5 <sup>1</sup> | -          | -          | 0.9        | 8.1        | 112.0      | 32.5       | 51.2       | 20.2       | -          | -          | 32.5       | 24.3       |
| ....Railroad equip. and transport equip. n.e.c.       | (352+359)      | -          | -                 | -          | -          | -          | -              | -          | 3.4 <sup>1</sup>  | 5.4        | 0.6        | 17.4       | 16.9       | 8.4        | 6.6        | 14.7       | 9.9        | 0.4        | 0.0        | 6.3        | 4.0        |
| Manufacturing nec; recycling                          | (36-37)        | -          | -                 | 3.0        | 2.2        | -          | -              | 1.3        | 0.9 <sup>1</sup>  | 4.9        | 1.4        | 1.0        | 2.8        | 0.5        | 2.5        | 1.3        | 1.8        | 0.3        | 0.9        | 0.1        | 0.2        |
| Electricity, gas and water supply                     | (40-41)        | 0.4        | 0.2               | 0.1        | 0.7        | 1.1        | 0.7            | 0.0        | 0.0               | 0.1        | 0.2        | 2.6        | 2.0        | 1.2        | 1.6        | 0.3        | 0.2        | -          | -          | 0.7        | 0.1        |
| Construction  | (45)           | 0.0        | 0.1               | 0.3        | 0.4        | 0.0        | 0.1            | 0.1        | 0.1               | 0.2        | 0.1        | 0.2        | 0.6        | 0.2        | 0.2        | 0.1        | 0.1        | -          | -          | 0.0        | 0.0        |
| <b>Total services<sup>2</sup></b>                     | <b>(50-99)</b> | <b>0.3</b> | <b>0.4</b>        | <b>0.2</b> | <b>0.3</b> | <b>0.3</b> | <b>0.4</b>     | <b>1.1</b> | <b>0.5</b>        | <b>0.4</b> | <b>0.9</b> | <b>0.2</b> | <b>0.5</b> | <b>0.1</b> | <b>0.2</b> | <b>0.1</b> | <b>0.2</b> | <b>0.2</b> | <b>0.4</b> | <b>0.1</b> | <b>0.2</b> |
| Wholesale and retail trade; restaurants and hotels    | (50-55)        | -          | -                 | 0.1        | 0.1        | -          | -              | -          | 0.1               | -          | -          | -          | -          | -          | 0.0        | -          | -          | -          | 0.0        | 0.0        | 0.0        |
| Transport and storage and communication               | (60-64)        | -          | -                 | 0.0        | 0.6        | 0.4        | 0.1            | 0.1        | 0.1               | -          | -          | 0.3        | 1.6        | -          | -          | -          | -          | 0.5        | 1.6        | 0.0        | 0.0        |
| Transport and storage                                 | (60-63)        | -          | -                 | -          | -          | 0.1        | 0.1            | 0.1        | -                 | -          | -          | 0.0        | 0.2        | 0.1        | 1.8        | -          | 0.6        | 0.0        | -          | 0.0        | 0.0        |
| Post and telecommunications                           | (64)           | -          | -                 | -          | -          | 0.8        | 0.2            | 0.0        | -                 | 1.5        | 4.8        | 1.0        | 4.7        | -          | -          | -          | -          | 1.1        | -          | 0.2        | 0.0        |
| Finance, insurance, real estate and business services | (65-74)        | -          | -                 | 0.6        | 0.6        | 0.6        | 0.9            | 3.1        | 1.3               | -          | 1.7        | -          | -          | -          | -          | -          | -          | -          | 0.8        | 0.3        | 0.4        |
| Financial intermediation                              | (65-67)        | -          | -                 | 0.5        | 0.2        | 0.4        | 0.2            | 0.0        | 0.0               | -          | 0.7        | -          | -          | -          | -          | -          | -          | -          | 0.0        | 0.0        | 0.2        |
| Real estate, renting and business activities          | (70-74)        | -          | -                 | 0.6        | 0.7        | 0.7        | 1.2            | 5.0        | 1.7               | 1.2        | 2.0        | -          | -          | 0.3        | 0.3        | -          | 0.5        | -          | 1.0        | 0.4        | 0.5        |
| ....Real estate activities                            | (70)           | -          | -                 | -          | -          | -          | -              | -          | -                 | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| ....Renting of m&eq and other business activities     | (71-74)        | -          | -                 | -          | -          | -          | -              | -          | -                 | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| .....Other business activities                        | (74)           | -          | -                 | -          | -          | -          | -              | 3.0        | -                 | 3.4        | 1.7        | -          | 0.3        | -          | 0.5        | -          | -          | -          | -          | -          | 0.2        |
| Community social and personal services                | (75-99)        | -          | -                 | 0.0        | 0.0        | -          | -              | 0.0        | 0.2               | -          | -          | -          | 0.1        | -          | -          | -          | -          | -          | 0.0        | 0.0        | 0.0        |
| High-technology manufactures                          |                | 16.5       | 15.5 <sup>1</sup> | -          | -          | 24.9       | 29.3           | 36.3       | 5.2 <sup>1</sup>  | 21.7       | 23.5       | 27.2       | 29.2       | 35.8       | 25.9       | 21.0       | 22.6       | 6.2        | 5.9        | 15.0       | 12.7       |
| Medium-high technology manufactures                   |                | 4.5        | 5.2 <sup>1</sup>  | -          | -          | 1.6        | 2.0            | 4.7        | 4.8 <sup>1</sup>  | 4.8        | 7.1        | 7.8        | 8.4        | 8.6        | 8.6        | 8.8        | 10.7       | 1.8        | 1.1        | 4.8        | 3.6        |
| Medium-low technology manufactures                    |                | 2.3        | 1.9 <sup>1</sup>  | -          | -          | 2.0        | 1.0            | 2.3        | 0.9 <sup>1</sup>  | 1.6        | 2.4        | 3.6        | 3.7        | 2.4        | 2.4        | 1.6        | 2.0        | 1.2        | 1.6        | 0.9        | 0.5        |
| Low-technology manufactures                           |                | -          | -                 | 1.3        | 1.9        | 0.6        | 0.5            | 1.1        | 0.3 <sup>1</sup>  | 1.5        | 1.0        | 2.4        | 1.6        | 0.6        | 1.0        | 0.7        | 0.8        | 0.8        | 0.6        | 0.1        | 0.2        |
| High- and medium-high technology manufactures         |                | 7.3        | 7.9 <sup>1</sup>  | 10.0       | 14.6       | 8.0        | 9.6            | 5.2        | 4.8 <sup>1</sup>  | 9.3        | 13.3       | 11.7       | 18.3       | 16.7       | 14.3       | 11.2       | 13.0       | 3.8        | 3.3        | 7.5        | 6.0        |

1. Intensity of the previous year.

2. 1998 instead of 1995.

3. EU includes the 15 EU Members before 1 May 2004 excluding Austria, Greece, Luxembourg, Portugal (for which no Arberd data are available).

Source: OECD, STAN Indicators 2004.

4. OECD includes previous EU countries and Canada, Japan, and the United States.

5. Due to differences in data reporting methodologies, service sector R&D figures are not fully comparable across countries.

Table 13. Intensity in business R&amp;D expenditures by sector, 1991 and 2001 or nearest years available (cont'd)

As a percentage of value added in industry

|   |                | Korea      |            | Netherlands |            | Norway     |            | Poland     |            | Spain      |            | Sweden     |             | UK         |            | US         |            | EU <sup>3</sup> |            | OECD <sup>4</sup> |             |
|---|----------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|-----------------|------------|-------------------|-------------|
|   |                | 1995       | 2001       | 1991        | 2000       | 1991       | 1998       | 1994       | 2001       | 1991       | 2001       | 1991       | 2001        | 1991       | 2001       | 1991       | 2000       | 1992            | 1999       | 1991              | 1999        |
| <b>Total manufacturing</b>                            | <b>(15-37)</b> | <b>5.2</b> | <b>6.0</b> | <b>5.1</b>  | <b>5.7</b> | <b>5.1</b> | <b>4.1</b> | <b>1.2</b> | <b>1.0</b> | <b>1.9</b> | <b>1.8</b> | <b>9.8</b> | <b>15.7</b> | <b>5.7</b> | <b>6.6</b> | <b>8.5</b> | <b>8.5</b> | <b>5.3</b>      | <b>5.7</b> | <b>83.9</b>       | <b>76.8</b> |
| Food prod., beverages and tobacco                     | (17-19)        | 0.9        | 0.9        | 1.8         | 2.4        | 1.2        | 1.5        | 0.1        | 0.1        | 0.3        | 0.7        | 1.6        | 1.1         | 1.2        | 1.5        | 1.1        | 1.1        | 0.9             | 0.9        | 1.5               | 1.3         |
| Textiles, textile prod., leather and footwear         | (20-22)        | 0.6        | 1.1        | 0.7         | 1.0        | 0.9        | 1.8        | 0.5        | 0.4        | 0.1        | 0.6        | 0.9        | 1.2         | 0.3        | 0.5        | 0.5        | 0.5        | 0.4             | 0.6        | 0.5               | 0.4         |
| Wood, pulp, paper, paper prod., printing & publishing | (23-25)        | 0.6        | 0.5        | 0.2         | 0.3        | 0.8        | 0.9        | 0.1        | 0.1        | 0.2        | 0.2        | 1.7        | 1.7         | 0.3        | 0.1        | 1.0        | 1.6        | 0.4             | 0.4        | 1.1               | 1.3         |
| Chemical, rubber, plastics and fuel prod.             | (23)           | 3.4        | 2.8        | 10.7        | 8.1        | 11.6       | 7.5        | 1.7        | 1.3        | 2.8        | 3.0        | 14.9       | 23.3        | 11.4       | 14.9       | 10.3       | 9.1        | 8.6             | 9.2        | 18.1              | 15.9        |
| Coke, refined petroleum prod. and nuclear fuel        | 23             | 1.3        | 0.7        | 6.1         | 2.0        | -          | -          | 1.2        | 0.6        | 1.0        | 1.0        | 0.9        | 3.1         | 12.7       | 9.6        | 8.7        | 3.1        | 4.5             | 4.0        | 1.7               | 0.5         |
| Chemicals and chemical prod.                          | (24)           | 5.2        | 5.3        | 13.9        | 10.6       | -          | -          | 2.3        | 2.3        | 4.3        | 4.7        | 20.8       | 30.7        | 15.8       | 23.1       | 12.9       | 12.6       | 12.5            | 12.9       | 14.9              | 14.0        |
| ....Chemicals excluding pharmaceuticals               | (24ex2423)     | 6.1        | 5.5        | 12.1        | 7.2        | -          | -          | -          | 1.8        | 2.7        | 2.0        | 6.9        | 6.5         | 8.4        | 5.6        | 9.2        | 8.0        | 8.9             | 7.3        | 8.1               | 5.9         |
| ....Pharmaceuticals                                   | (2423)         | 2.9        | 4.8        | 27.5        | 25.4       | 42.7       | 19.6       | -          | 3.9        | 7.2        | 10.4       | 39.5       | 45.5        | 32.9       | 50.0       | 22.2       | 20.2       | 21.9            | 25.3       | 6.8               | 8.1         |
| Rubber and plastics prod.                             | (25)           | 2.4        | 2.6        | 1.7         | 1.6        | 1.3        | 3.5        | 1.1        | 0.5        | 1.1        | 1.2        | 2.8        | 2.3         | 0.7        | 0.6        | 3.4        | 2.9        | 1.9             | 2.6        | 1.5               | 1.5         |
| Other non-metallic mineral prod.                      | (26)           | 1.4        | 1.1        | 0.4         | 1.0        | 1.9        | 1.6        | 0.2        | 0.2        | 0.4        | 0.4        | 1.3        | 1.2         | 1.2        | 0.8        | 2.0        | 2.2        | 1.1             | 1.3        | 1.0               | 0.7         |
| Basic metals and fabricated metal prod.               | (27-28)        | 1.8        | 1.2        | 1.4         | 1.5        | 4.7        | 3.0        | 0.7        | 0.5        | 0.7        | 0.7        | 1.9        | 2.6         | 0.9        | 0.7        | 1.6        | 1.6        | 1.3             | 1.2        | 2.9               | 2.0         |
| Machinery and equipment                               | (29-33)        | 10.7       | 18.1       | 11.6        | 17.9       | 15.0       | 11.2       | 2.8        | 2.5        | 5.3        | 3.6        | 21.0       | 38.1        | 9.1        | 10.2       | 13.6       | 16.5       | 9.1             | 9.1        | 35.9              | 35.0        |
| Machinery and equipment, n.e.c.                       | (29)           | 5.1        | 5.3        | 2.1         | 9.1        | 6.9        | 6.1        | 2.6        | 2.5        | 1.8        | 2.4        | 9.6        | 10.0        | 5.3        | 8.1        | 3.9        | 5.5        | 4.6             | 4.9        | 5.6               | 5.6         |
| Electrical and optical equipment                      | (30-33)        | 12.7       | 22.8       | 18.2        | 25.4       | 23.6       | 16.4       | 3.1        | 2.4        | 8.1        | 4.8        | 35.4       | 89.1        | 11.7       | 11.5       | 18.4       | 21.4       | 13.1            | 12.8       | 30.3              | 29.4        |
| ....Office, accounting and computing machinery        | (30)           | 10.1       | 21.5       | 31.3        | 257.7      | 34.5       | 20.8       | 0.3        | 1.4        | 11.4       | 4.6        | 19.1       | 18.3        | 13.4       | 4.2        | 40.0       | 30.7       | -               | 15.4       | 7.9               | 5.2         |
| ....Electrical machinery and apparatus, nec           | (31)           | 5.1        | 10.5       | 40.4        | 7.8        | 6.8        | 4.5        | 2.7        | 2.1        | 3.0        | 2.4        | 12.5       | 7.6         | 11.8       | 10.4       | 8.4        | 9.6        | -               | 4.3        | 5.1               | 3.9         |
| ....Radio, television and communication equip.        | (32)           | 15.0       | 29.0       | 14.0        | 0.5        | 71.2       | 54.1       | 5.5        | 5.3        | 16.0       | 12.6       | 82.1       | -862.9      | 14.7       | 18.5       | 15.9       | 18.6       | -               | 25.7       | 11.1              | 12.6        |
| ....Medical, precision and optical instruments        | (33)           | 4.0        | 4.9        | -           | -          | 10.1       | 6.5        | 1.4        | 1.0        | 6.7        | 3.4        | 3.9        | 25.8        | 7.7        | 8.8        | 16.9       | 30.2       | -               | 11.4       | 6.2               | 7.8         |
| Transport equipment                                   | (34-35)        | 11.3       | 6.7        | 7.4         | 3.9        | 2.0        | 2.5        | 3.6        | 3.2        | 4.8        | 4.7        | 17.5       | 24.3        | 14.3       | 14.7       | 25.4       | 16.2       | 15.2            | 15.5       | 22.4              | 19.7        |
| Motor vehicles, trailers and semi-trailers            | (34)           | 12.3       | 7.5        | 14.7        | 5.9        | 4.5        | 9.2        | 2.5        | 2.7        | 3.5        | 2.8        | 17.9       | 25.2        | 10.4       | 10.3       | 22.8       | 15.4       | -               | 13.6       | 11.3              | 12.1        |
| Other transport equipment                             | (35)           | 7.0        | 5.4        | 3.6         | 1.4        | 1.8        | 1.7        | 4.5        | 3.8        | 9.8        | 13.3       | 16.4       | 20.6        | 18.4       | 19.3       | 27.3       | 17.5       | -               | 21.0       | 11.0              | 7.5         |
| ....Building and repairing of ships and boats         | (351)          | 4.0        | -          | -           | 1.9        | 1.7        | 1.5        | -          | 1.6        | 3.1        | 7.4        | 5.5        | 3.1         | 2.0        | 6.2        | -          | -          | -               | 3.5        | 0.1               | 0.1         |
| ....Aircraft and spacecraft                           | (353)          | 49.9       | -          | -           | 0.6        | 1.8        | 13.5       | -          | 9.0        | 35.9       | 27.9       | 25.6       | 29.7        | 22.8       | 21.2       | 31.7       | 20.8       | -               | 31.6       | 10.5              | 6.8         |
| ....Railroad equip. and transport equip. n.e.c.       | (352+359)      | 3.0        | -          | -           | 1.7        | 3.4        | 0.8        | -          | 4.6        | 1.8        | 6.5        | 5.5        | 11.0        | 3.9        | 28.2       | -          | -          | -               | 8.9        | 0.4               | 0.6         |
| Manufacturing nec; recycling                          | (36-37)        | 0.6        | 3.6        | -           | 0.4        | -          | -          | 0.2        | 0.3        | 0.3        | 0.6        | 1.5        | 1.2         | 0.7        | 0.5        | -          | 1.3        | -               | 0.9        | -                 | 0.6         |
| Electricity, gas and water supply                     | (40-41)        | 1.8        | 0.9        | 0.1         | 0.4        | 0.0        | -          | 0.1        | 0.2        | 0.4        | 0.2        | 1.5        | 0.5         | 1.3        | 0.6        | 0.2        | 0.1        | -               | -          | -                 | -           |
| Construction  | (45)           | 1.1        | 0.8        | 0.1         | 0.2        | 0.1        | -          | 0.2        | 0.1        | 0.0        | 0.1        | -          | 0.2         | 0.1        | 0.1        | -          | 0.1        | -               | -          | -                 | -           |
| <b>Total services<sup>5</sup></b>                     | <b>(50-99)</b> | <b>0.3</b> | <b>0.5</b> | <b>0.1</b>  | <b>0.3</b> | <b>0.6</b> | <b>0.7</b> | <b>0.1</b> | <b>0.1</b> | <b>0.1</b> | <b>0.3</b> | <b>0.3</b> | <b>0.6</b>  | <b>0.3</b> | <b>0.4</b> | <b>0.7</b> | <b>0.9</b> | <b>0.2</b>      | <b>0.2</b> | <b>14.4</b>       | <b>20.8</b> |
| Wholesale and retail trade; restaurants and hotels    | (50-55)        | 0.0        | 0.1        | -           | -          | -          | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | -          | 0.0         | -          | -          | -          | -          | -               | -          | -                 | -           |
| Transport and storage and communication               | (60-64)        | 1.5        | 1.0        | -           | 0.4        | 0.2        | 0.7        | 0.2        | 0.3        | 0.2        | 0.5        | -          | 0.6         | -          | 1.0        | -          | -          | -               | -          | -                 | -           |
| Transport and storage                                 | (60-63)        | 0.0        | 0.0        | -           | 0.1        | 0.0        | 0.1        | -          | -          | 0.0        | -          | -          | 0.0         | -          | 0.0        | -          | 0.1        | -               | -          | -                 | -           |
| Post and telecommunications                           | (64)           | 4.5        | 2.9        | -           | 0.9        | 1.0        | 2.7        | -          | -          | 0.6        | -          | -          | 1.9         | 1.9        | 2.5        | -          | -          | -               | -          | -                 | -           |
| Finance, insurance, real estate and business services | (65-74)        | 0.5        | 1.0        | -           | 0.6        | 2.0        | 2.0        | 0.2        | 0.1        | 0.4        | 0.7        | -          | 1.5         | -          | -          | -          | -          | -               | -          | -                 | -           |
| Financial intermediation                              | (65-67)        | 0.0        | 0.0        | -           | 0.4        | 0.2        | 0.2        | 0.0        | 0.0        | 0.1        | -          | -          | 1.1         | -          | -          | -          | 0.5        | -               | -          | -                 | -           |
| Real estate, renting and business activities          | (70-74)        | 0.7        | 1.6        | -           | 0.7        | 2.8        | 2.6        | 0.2        | 0.1        | 0.5        | 1.0        | -          | 1.5         | 1.0        | 0.7        | -          | -          | -               | -          | -                 | -           |
| ....Real estate activities                            | (70)           | -          | -          | -           | -          | -          | -          | -          | -          | -          | -          | -          | -           | -          | -          | -          | -          | -               | -          | -                 | -           |
| ....Renting of m&eq and other business activities     | (71-74)        | -          | -          | -           | -          | -          | -          | -          | -          | -          | -          | -          | -           | -          | -          | -          | -          | -               | -          | -                 | -           |
| .....Other business activities                        | (74)           | -          | -          | -           | 0.4        | 2.1        | 1.0        | -          | -          | -          | -          | -          | 0.1         | -          | 0.4        | -          | -          | -               | -          | -                 | -           |
| Community social and personal services                | (75-99)        | 0.1        | 0.0        | 0.2         | 0.0        | -          | 0.0        | 0.1        | 0.1        | 0.0        | 0.0        | -          | 0.0         | 0.0        | 0.0        | -          | -          | -               | -          | -                 | -           |
| High-technology manufactures                          |                | 12.5       | -          | 13.2        | 26.1       | 34.4       | 24.6       | -          | 3.5        | 11.6       | 10.3       | 39.9       | 81.1        | 18.9       | 23.1       | 23.6       | 22.5       | -               | 22.0       | 42.4              | 40.4        |
| Medium-high technology manufactures                   |                | 8.3        | -          | 11.7        | 7.7        | -          | -          | -          | 2.3        | 2.8        | 2.5        | 11.6       | 14.5        | 8.2        | 8.7        | 9.7        | 9.8        | -               | 7.7        | 30.6              | 28.1        |
| Medium-low technology manufactures                    |                | 1.8        | -          | 1.8         | 1.5        | -          | -          | -          | 0.5        | 0.8        | 0.9        | 2.0        | 2.5         | 2.3        | 1.6        | 2.9        | 2.1        | -               | 1.7        | 7.3               | 4.8         |
| Low-technology manufactures                           |                | 0.7        | 1.0        | -           | 1.2        | -          | -          | 0.2        | 0.2        | 0.3        | 0.5        | 1.6        | 1.5         | 0.7        | 0.7        | -          | 1.3        | -               | 0.7        | -                 | 3.6         |
| High- and medium-high technology manufactures         |                | 9.7        | 11.3       | 11.9        | 13.1       | -          | -          | 2.9        | 2.6        | 4.9        | 4.2        | 20.0       | 32.0        | 12.1       | 14.5       | 16.0       | 15.6       | 11.3            | 11.6       | 73.2              | 68.6        |

1. Intensity of the previous year.

4. OECD includes previous EU countries and Canada, Japan, and the United States.

2. 1998 instead of 1995.

5. Due to differences in data reporting methodologies, service sector R&amp;D figures are not fully comparable across countries.

3. EU includes the 15 EU Members before 1 May 2004 excluding Austria, Greece, Luxembourg, Portugal (for which no Anberd data are available).

Source: OECD, STAN indicators 2004.





Table 14. Business R&D expenditures by sector, 1991 and 2001 or nearest years available (cont'd)  
As a percentage of total R&D expenditures

|   | (ISIC Rev.3)   | Korea       |             | Netherlands |             | Norway      |             | Poland      |             | Spain       |             | Sweden      |             | United Kingdom |             | United States |             | EU <sup>1</sup> |             | OECD <sup>2</sup> |             |
|---|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|---------------|-------------|-----------------|-------------|-------------------|-------------|
|   |                | 1995        | 2001        | 1991        | 2000        | 1991        | 1998        | 1994        | 2001        | 1991        | 2001        | 1991        | 2001        | 1991           | 2000        | 1991          | 2000        | 1992            | 1999        | 1991              | 1999        |
| <b>Total business sector</b>                          | <b>(01-99)</b> | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>  | <b>100</b>     | <b>100</b>  | <b>100</b>    | <b>100</b>  | <b>100</b>      | <b>100</b>  | <b>100</b>        | <b>100</b>  |
| <b>Total manufacturing</b>                            | <b>(15-37)</b> | <b>83.3</b> | <b>82.8</b> | <b>89.7</b> | <b>75.9</b> | <b>63.3</b> | <b>54.4</b> | <b>71.9</b> | <b>69.4</b> | <b>78.4</b> | <b>60.0</b> | <b>87.9</b> | <b>87.4</b> | <b>79.7</b>    | <b>79.2</b> | <b>75.7</b>   | <b>64.9</b> | <b>87.9</b>     | <b>84.3</b> | <b>83.9</b>       | <b>76.8</b> |
| Food prod., beverages and tobacco                     | (15-16)        | 1.4         | 1.4         | 5.6         | 5.8         | 2.5         | 2.9         | 1.5         | 4.7         | 2.4         | 3.1         | 1.4         | 0.5         | 2.4            | 2.5         | 1.1           | 0.8         | 1.8             | 1.7         | 1.5               | 1.3         |
| Textiles, textile prod., leather and footwear         | (17-19)        | 0.7         | 0.7         | 0.4         | 0.3         | 0.3         | 0.4         | 3.7         | 1.8         | 0.5         | 1.5         | 0.1         | 0.1         | 0.3            | 0.2         | 0.2           | 0.1         | 0.5             | 0.5         | 0.5               | 0.4         |
| Wood, pulp, paper, paper prod., printing & publishing | (20-22)        | 0.5         | 0.3         | 0.5         | 0.5         | 2.1         | 2.3         | 0.7         | 0.9         | 0.8         | 0.7         | 3.3         | 2.0         | 0.5            | 0.3         | 1.2           | 1.6         | 0.7             | 0.7         | 1.1               | 1.3         |
| Chemical, rubber, plastics and fuel prod.             | (23-25)        | 10.6        | 9.3         | 37.6        | 21.4        | 17.4        | 11.3        | 16.2        | 14.9        | 18.4        | 17.1        | 17.0        | 20.1        | 28.4           | 30.4        | 15.7          | 12.1        | 22.3            | 22.6        | 18.1              | 15.9        |
| Coke, refined petroleum prod. and nuclear fuel        | (23)           | 1.3         | 1.1         | 2.7         | 0.7         | 1.6         | 1.6         | 2.3         | 0.6         | 1.3         | 1.0         | 0.1         | 0.2         | 4.5            | 2.0         | 2.1           | 0.6         | 1.3             | 0.8         | 1.7               | 0.5         |
| Chemicals and chemical prod.                          | (24)           | 8.1         | 7.0         | 33.9        | 20.1        | 15.4        | 8.7         | 11.0        | 12.8        | 15.2        | 14.1        | 16.2        | 19.5        | 23.4           | 28.1        | 12.5          | 10.7        | 19.7            | 20.0        | 14.9              | 14.0        |
| ....Chemicals excluding pharmaceuticals               | (24ex2423)     | 6.7         | 4.8         | 26.2        | 11.2        | 8.4         | 4.3         | 8.8         | 7.0         | 6.3         | 4.3         | 3.1         | 1.6         | 8.7            | 4.1         | 6.5           | 4.2         | 10.1            | 7.8         | 8.1               | 5.9         |
| ....Pharmaceuticals                                   | (2423)         | 1.4         | 2.2         | 7.7         | 8.9         | 7.0         | 4.4         | 2.3         | 5.8         | 8.8         | 9.8         | 13.1        | 17.9        | 14.7           | 24.0        | 6.0           | 6.5         | 9.5             | 12.2        | 6.8               | 8.1         |
| Rubber and plastics prod.                             | (25)           | 1.3         | 1.3         | 1.1         | 0.7         | 0.4         | 1.0         | 2.9         | 1.5         | 1.9         | 2.0         | 0.7         | 0.4         | 0.4            | 0.4         | 1.1           | 0.8         | 1.4             | 1.8         | 1.5               | 1.5         |
| Other non-metallic mineral prod.                      | (26)           | 1.0         | 0.5         | 0.3         | 0.6         | 0.9         | 0.8         | 0.9         | 0.9         | 1.3         | 1.1         | 0.4         | 0.2         | 0.5            | 0.3         | 0.4           | 0.4         | 0.9             | 0.9         | 1.0               | 0.7         |
| Basic metals and fabricated metal prod.               | (27-28)        | 3.6         | 1.8         | 3.2         | 2.3         | 7.3         | 5.6         | 5.4         | 4.3         | 3.2         | 2.8         | 2.3         | 2.0         | 1.4            | 0.9         | 1.4           | 1.3         | 2.6             | 2.2         | 2.9               | 2.0         |
| Machinery and equipment                               | (29-33)        | 41.1        | 51.3        | 36.3        | 42.0        | 29.7        | 26.3        | 26.4        | 28.9        | 31.5        | 16.9        | 43.9        | 43.4        | 25.8           | 25.2        | 31.5          | 33.0        | 34.0            | 30.5        | 35.9              | 35.0        |
| Machinery and equipment, n.e.c.                       | (29)           | 5.1         | 4.1         | 2.8         | 9.9         | 7.0         | 7.3         | 13.9        | 14.2        | 4.8         | 5.7         | 11.2        | 7.4         | 6.0            | 7.7         | 3.0           | 3.4         | 7.9             | 7.5         | 5.6               | 5.6         |
| Electrical and optical equipment                      | (30-33)        | 36.0        | 47.2        | 33.5        | 32.1        | 22.7        | 19.0        | 12.5        | 14.7        | 26.7        | 11.2        | 32.7        | 36.0        | 19.7           | 17.5        | 28.5          | 29.6        | 26.0            | 23.0        | 30.3              | 29.4        |
| ....Office, accounting and computing machinery        | (30)           | 1.8         | 7.8         | 4.1         | 25.7        | 1.8         | 1.0         | 0.0         | 0.2         | 5.9         | 1.1         | 2.2         | 0.8         | 4.0            | 0.8         | 9.6           | 5.2         | 3.7             | 2.5         | 7.9               | 5.2         |
| ....Electrical machinery and apparatus, nec           | (31)           | 1.9         | 1.8         | 15.6        | 1.6         | 3.4         | 2.4         | 5.4         | 6.6         | 4.3         | 2.8         | 3.1         | 1.6         | 6.4            | 4.6         | 2.6           | 1.9         | 5.7             | 3.1         | 5.1               | 3.9         |
| ....Radio, television and communication equip.        | (32)           | 31.6        | 36.2        | 12.8        | 0.3         | 15.6        | 13.5        | 5.8         | 6.0         | 13.1        | 5.7         | 26.6        | 28.9        | 5.9            | 8.2         | 8.8           | 12.9        | 10.8            | 12.6        | 11.1              | 12.6        |
| ....Medical, precision and optical instruments        | (33)           | 0.7         | 1.4         | 1.0         | 4.5         | 2.0         | 2.1         | 1.3         | 1.9         | 3.5         | 1.5         | 1.0         | 4.8         | 3.4            | 3.8         | 7.4           | 9.6         | 5.8             | 4.7         | 6.2               | 7.8         |
| Transport equipment                                   | (34-35)        | 24.1        | 16.8        | 5.8         | 2.7         | 3.1         | 4.6         | 16.6        | 12.0        | 19.7        | 16.0        | 19.1        | 19.0        | 20.2           | 19.1        | 23.5          | 15.1        | 24.6            | 24.8        | 22.4              | 19.7        |
| Motor vehicles, trailers and semi-trailers            | (34)           | 21.1        | 11.5        | 4.0         | 2.2         | 0.5         | 1.8         | 5.2         | 5.6         | 11.4        | 7.8         | 13.9        | 15.9        | 7.4            | 6.9         | 8.9           | 9.3         | 13.9            | 16.1        | 11.3              | 12.1        |
| Other transport equipment                             | (35)           | 3.0         | 5.3         | 1.8         | 0.4         | 2.6         | 2.8         | 11.4        | 6.5         | 8.3         | 8.3         | 5.3         | 3.1         | 12.8           | 12.2        | 14.6          | 5.8         | 10.7            | 8.7         | 11.0              | 7.5         |
| ....Building and repairing of ships and boats         | (351)          | 1.4         | 1.0         | 0.1         | 0.3         | 2.1         | 2.4         | 1.1         | 1.6         | 1.2         | 1.9         | 0.3         | 0.1         | 0.2            | 0.7         | 0.0           | 0.0         | 0.3             | 0.3         | 0.1               | 0.1         |
| ....Aircraft and spacecraft                           | (353)          | 1.5         | 3.8         | 1.7         | 0.1         | 0.3         | 0.4         | 4.4         | 3.8         | 6.6         | 5.2         | 4.4         | 2.7         | 12.4           | 9.9         | 14.2          | 5.2         | 9.8             | 7.7         | 10.5              | 6.8         |
| ....Railroad equip. and transport equip. n.e.c.       | (352+359)      | 0.1         | 0.4         | 0.0         | 0.1         | 0.3         | 0.0         | 5.9         | 1.1         | 0.5         | 1.2         | 0.5         | 0.3         | 0.2            | 1.6         | 0.4           | 0.6         | 0.6             | 0.7         | 0.4               | 0.6         |
| Manufacturing nec; recycling                          | (36-37)        | 0.2         | 0.6         | -           | 0.4         | -           | -           | 0.5         | 1.0         | 0.6         | 0.8         | 0.4         | 0.2         | 0.3            | 0.3         | -             | 0.4         | -               | 0.6         | -                 | 0.6         |
| Electricity, gas and water supply                     | (40-41)        | 2.0         | 1.1         | 0.3         | 0.5         | 0.1         | -           | 0.6         | 2.3         | 2.5         | 0.6         | 2.3         | 0.4         | 2.4            | 0.8         | 0.2           | 0.1         | -               | -           | -                 | -           |
| Construction  | (45)           | 6.7         | 3.1         | 0.5         | 0.8         | 0.5         | -           | 4.2         | 3.6         | 0.6         | 0.9         | -           | 0.3         | 0.2            | 0.2         | -             | 0.1         | -               | -           | -                 | -           |
| <b>Total services<sup>3</sup></b>                     | <b>(50-99)</b> | <b>7.6</b>  | <b>12.6</b> | <b>6.7</b>  | <b>19.7</b> | <b>41.8</b> | <b>48.0</b> | <b>14.4</b> | <b>18.2</b> | <b>16.4</b> | <b>37.6</b> | <b>9.0</b>  | <b>11.5</b> | <b>15.1</b>    | <b>18.8</b> | <b>24.3</b>   | <b>34.4</b> | <b>8.2</b>      | <b>12.9</b> | <b>14.4</b>       | <b>20.8</b> |
| Wholesale and retail trade; restaurants and hotels    | (50-55)        | -           | 0.4         | -           | -           | -           | -           | 0.3         | 0.3         | 0.0         | 0.8         | -           | 0.1         | -              | -           | -             | -           | -               | -           | -                 | -           |
| Wholesale and retail trade; repairs                   | (50-52)        | -           | 0.4         | -           | 4.0         | 0.4         | -           | 0.3         | 0.3         | 0.0         | 0.7         | -           | 0.1         | -              | 0.4         | -             | 12.6        | -               | -           | -                 | -           |
| Hotels and restaurants                                | (55)           | -           | 0.0         | -           | -           | -           | -           | 0.0         | 0.0         | 0.1         | -           | 0.0         | -           | -              | -           | -             | -           | -               | -           | -                 | -           |
| Transport and storage and communication               | (60-64)        | -           | 3.0         | -           | 2.4         | 2.8         | -           | 4.1         | 7.7         | 2.5         | 8.8         | -           | 1.4         | -              | 5.9         | -             | -           | -               | -           | -                 | -           |
| Transport and storage                                 | (60-63)        | -           | 0.0         | -           | 0.6         | 0.4         | -           | 1.3         | 2.6         | 0.0         | 0.2         | -           | 0.0         | -              | 0.1         | -             | 0.1         | -               | -           | -                 | -           |
| Post and telecommunications                           | (64)           | -           | 3.0         | -           | 1.9         | 2.3         | -           | 2.7         | 5.1         | 2.4         | 8.6         | -           | 1.3         | 3.9            | 5.8         | -             | -           | -               | -           | -                 | -           |
| Finance, insurance, real estate and business services | (65-74)        | -           | 8.9         | -           | 13.2        | 38.6        | -           | 5.5         | 3.5         | 13.4        | 27.4        | -           | 10.0        | -              | -           | -             | -           | -               | -           | -                 | -           |
| Financial intermediation                              | (65-67)        | -           | 0.0         | -           | 2.2         | 1.1         | -           | 0.0         | 0.1         | 0.0         | 0.6         | -           | 1.1         | -              | -           | -             | 2.0         | -               | -           | -                 | -           |
| Real estate, renting and business activities          | (70-74)        | -           | 8.9         | -           | 11.0        | 37.5        | -           | 5.5         | 3.4         | 13.4        | 26.8        | -           | 8.9         | 10.9           | 12.3        | -             | -           | -               | -           | -                 | -           |
| .....Other business activities                        | (74)           | 1.3         | 2.1         | -           | 3.1         | 7.1         | -           | 0.0         | 0.1         | 6.8         | 3.9         | -           | 0.3         | 1.8            | 2.7         | -             | -           | -               | 2.2         | -                 | -           |
| Community social and personal services                | (75-99)        | -           | 0.3         | 4.7         | 0.1         | -           | -           | 4.5         | 6.8         | 0.4         | 0.6         | -           | 0.1         | 0.2            | 0.1         | -             | -           | -               | -           | -                 | -           |
| High-technology manufactures                          |                | 37.0        | 51.4        | 27.3        | 39.5        | 26.6        | 21.4        | 13.8        | 17.7        | 37.9        | 23.4        | 47.2        | 55.1        | 40.5           | 46.8        | 46.1          | 39.4        | 39.7            | 39.7        | 42.4              | 40.4        |
| Medium-high technology manufactures                   |                | 34.9        | 22.6        | 48.6        | 24.9        | 19.5        | 15.8        | 39.1        | 34.5        | 27.3        | 21.7        | 31.7        | 26.7        | 28.7           | 24.9        | 21.4          | 19.4        | 38.2            | 35.2        | 30.6              | 28.1        |
| Medium-low technology manufactures                    |                | 8.6         | 5.7         | 7.4         | 4.5         | 12.2        | 11.4        | 12.6        | 8.8         | 8.9         | 8.8         | 3.8         | 2.8         | 7.1            | 4.2         | 5.0           | 3.2         | 6.5             | 6.0         | 7.3               | 4.8         |
| Low-technology manufactures                           |                | 2.9         | 3.1         | -           | 7.0         | -           | -           | 6.5         | 8.4         | 4.3         | 6.1         | 5.2         | 2.8         | 3.5            | 3.2         | -             | 3.0         | -               | 3.4         | -                 | 3.6         |
| High- and medium-high technology manufactures         |                | 73.3        | 75.1        | 76.0        | 64.7        | 48.2        | 39.6        | 54.0        | 53.7        | 66.4        | 47.0        | 79.3        | 81.9        | 69.4           | 72.4        | 67.5          | 58.8        | 78.2            | 75.3        | 73.2              | 68.6        |

1. EU includes the 15 EU Members before 1 May 2004 excluding Austria, Greece, Luxembourg, Portugal (for which no Anberd data are available).

2. OECD includes previous countries and Canada, Japan, and the United States.

3. Due to differences in data reporting methodologies, service sector R&D figures are not fully comparable across countries.

Source: OECD, STAN Indicators 2004.

Table 15. R&amp;D expenditures of affiliates under foreign control, 1991-2002

|                              | As a percentage of total business R&D expenditures |      |      |      |      |                   |      | As a percentage of GDP |                     |                     |                   |                   |                   |                  |
|------------------------------|--|------|------|------|------|-------------------|------|------------------------|---------------------|---------------------|-------------------|-------------------|-------------------|------------------|
|                              | 1991   | 1995 | 1997 | 1999 | 2000 | 2001              | 2002 | 1991                   | 1995                | 1997                | 1999              | 2000              | 2001              | 2002             |
| Australia                    | -  | 31.1 | -    | 41.8 | -    | -                 | -    | -                      | 0.27                | -                   | 0.28              | -                 | -                 | -                |
| Canada                       | -  | 29.7 | 34.3 | 32.6 | 32.1 | 31.6 <sup>n</sup> | -    | -                      | 0.30                | 0.35                | 0.35              | 0.37              | 0.38 <sup>p</sup> | - <sup>p</sup>   |
| Czech Republic               | -  | -    | 22.1 | 27.4 | 36.9 | 45.3              | 43.4 | - <sup>d,t</sup>       | - <sup>a</sup>      | 0.16 <sup>d,t</sup> | 0.21              | 0.30              | 0.35              | 0.34             |
| Finland                      | -  | -    | 13.3 | 14.9 | 12.7 | 14.3              | -    | -                      | -                   | 0.24                | 0.33              | 0.31              | 0.34              | -                |
| France <sup>1,2</sup>        | -  | 17.1 | 16.4 | 16.4 | -    | 21.5              | -    | -                      | 0.24                | 0.22                | 0.22              | -                 | 0.30 <sup>a</sup> | - <sup>p</sup>   |
| Germany                      | -  | 16.1 | 18.1 | 19.0 | -    | -                 | -    | - <sup>a</sup>         | 0.24                | 0.28                | 0.32              | - <sup>c</sup>    | -                 | - <sup>c</sup>   |
| Greece                       | 7.6  | 3.8  | 3.6  | 4.5  | -    | -                 | -    | 0.01                   | 0.01 <sup>a</sup>   | 0.00                | 0.01              | -                 | - <sup>c</sup>    | -                |
| Hungary <sup>2</sup>         | -  | 21.8 | 65.3 | 78.5 | -    | -                 | -    | - <sup>t</sup>         | 0.07 <sup>a</sup>   | 0.20                | 0.20              | -                 | -                 | -                |
| Ireland                      | 68.6   | 66.2 | 65.3 | 63.8 | -    | 65.2              | -    | 0.40                   | 0.59                | 0.59                | 0.55              | - <sup>c</sup>    | 0.52              | -                |
| Italy <sup>3</sup>           | 23.1   | -    | -    | -    | -    | -                 | -    | 0.15                   | -                   | -                   | -                 | -                 | -                 | - <sup>p</sup>   |
| Japan                        | 0.9  | 1.4  | 1.3  | 3.9  | 3.6  | -                 | -    | 0.02 <sup>i</sup>      | 0.03 <sup>i</sup>   | 0.03                | 0.08              | 0.08              | -                 | -                |
| Netherlands                  | -  | -    | 20.6 | 21.5 | 18.7 | -                 | -    | -                      | - <sup>a</sup>      | 0.23                | 0.25              | 0.21              | -                 | - <sup>p</sup>   |
| Poland <sup>4</sup>          | -  | -    | -    | 12.1 | 12.1 | 4.6               | -    | -                      | - <sup>a</sup>      | -                   | 0.03              | 0.03              | 0.01              | - <sup>b</sup>   |
| Portugal                     | -  | -    | -    | 18.0 | -    | 30.8              | -    | -                      | - <sup>a</sup>      | -                   | 0.03              | - <sup>c</sup>    | 0.08              | - <sup>c</sup>   |
| Slovak Republic <sup>4</sup> | -  | 0.8  | -    | 20.4 | 20.4 | 19.0              | -    | - <sup>d,t</sup>       | 0.00 <sup>d</sup>   | - <sup>a</sup>      | 0.09              | 0.09              | 0.08              | -                |
| Spain <sup>5</sup>           | 38.7   | 26.8 | 35.7 | 32.8 | -    | 31.0              | -    | 0.18                   | 0.10 <sup>a</sup>   | 0.14                | 0.15              | -                 | 0.15              | - <sup>a</sup>   |
| Sweden                       | 17.1   | 18.4 | 15.9 | 34.1 | 34.0 | -                 | -    | 0.32 <sup>m</sup>      | 0.46 <sup>a,m</sup> | 0.42 <sup>m</sup>   | 0.93 <sup>m</sup> | -                 | - <sup>m</sup>    | -                |
| Turkey                       | -  | -    | 14.8 | 7.3  | 10.6 | -                 | -    | -                      | -                   | 0.02                | 0.02              | 0.02              | -                 | -                |
| United Kingdom               | -  | 29.2 | 32.8 | 31.2 | 31.3 | 40.6              | 38.0 | -                      | 0.37                | 0.39                | 0.39              | 0.38              | 0.50 <sup>a</sup> | 0.48             |
| United States                | 10.2   | 13.3 | 12.3 | 14.7 | 14.7 | 14.9              | -    | 0.20 <sup>j</sup>      | 0.24 <sup>j</sup>   | 0.24 <sup>j</sup>   | 0.29 <sup>j</sup> | 0.30 <sup>j</sup> | 0.30 <sup>j</sup> | - <sup>j,p</sup> |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1998 instead of 1997.      2. 1998 instead of 1999.      3. 1992 instead of 1991.      4. 2000 instead of 1999.      5. 1990 instead of 1991.

Source: OECD, MSTI database, May 2004.

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**Table 16. Share of public R&D expenditures financed by industry, 1981-2003**

As a percentage of total national R&amp;D expenditures of the sector

|                            | Government             |                          |                          |                          |                        |                    |                    |
|----------------------------|------------------------|--------------------------|--------------------------|--------------------------|------------------------|--------------------|--------------------|
|                            | 1981                   | 1985                     | 1991                     | 1995                     | 2001                   | 2002               | 2003               |
| Australia <sup>1,2,3</sup> | 1.8 <sup>p</sup>       | 2.7                      | 5.7                      | 5.7                      | 5.6 <sup>-</sup>       | -                  | -                  |
| Austria <sup>4</sup>       | 1.5                    | 1.3                      | -                        | -                        | 3.1                    | -                  | -                  |
| Belgium <sup>5</sup>       | 0.0 <sup>a</sup>       | 0.0                      | 1.2 <sup>b</sup>         | 2.1                      | 12.4                   | -                  | -                  |
| Canada                     | 1.0                    | 1.0                      | 1.7                      | 1.8                      | 2.6                    | 2.6 <sup>n</sup>   | 2.6 <sup>n</sup>   |
| Czech Republic             | -                      | -                        | -                        | 11.3 <sup>a</sup>        | 6.6                    | 9.6                | -                  |
| Denmark                    | 1.6                    | 2.2                      | 3.6                      | 3.5                      | 7.5                    | 5.4 <sup>a</sup>   | -                  |
| Finland                    | 9.5 <sup>a</sup>       | -                        | 11.2 <sup>a</sup>        | 11.9                     | 15.2                   | 14.2               | -                  |
| France                     | 1.8                    | 0.7                      | 4.8                      | 5.4                      | 6.3                    | -                  | -                  |
| Germany                    | 0.8                    | 1.4                      | 1.3 <sup>a</sup>         | 3.4 <sup>m</sup>         | 2.3 <sup>m</sup>       | 2.3 <sup>b,m</sup> | 2.3 <sup>b,m</sup> |
| Greece                     | 0.0                    | -                        | 1.0                      | 2.3                      | 1.9                    | -                  | -                  |
| Hungary                    | -                      | -                        | 22.0 <sup>c</sup>        | 15.1 <sup>c</sup>        | 13.1 <sup>c</sup>      | 6.4 <sup>c</sup>   | -                  |
| Iceland                    | 0.5                    | 22.3                     | 10.4                     | 7.2                      | 5.0                    | -                  | -                  |
| Ireland <sup>3</sup>       | 3.6                    | 9.0                      | 13.4 <sup>b</sup>        | 21.8                     | 10.6                   | 8.8 <sup>n</sup>   | -                  |
| Italy                      | 2.3 <sup>r</sup>       | 2.0 <sup>r</sup>         | 1.9 <sup>a</sup>         | 1.8                      | 3.5                    | 2.2 <sup>n</sup>   | 2.9 <sup>n</sup>   |
| Japan                      | 1.3                    | 5.4                      | 2.2                      | 0.7                      | 0.7                    | 1.2                | -                  |
| Korea                      | -                      | -                        | -                        | 16.5 <sup>e</sup>        | 8.1 <sup>e</sup>       | 4.6 <sup>e</sup>   | -                  |
| Luxembourg <sup>3</sup>    | -                      | -                        | -                        | -                        | 5.8 <sup>-</sup>       | -                  | -                  |
| Mexico                     | -                      | -                        | -                        | 3.3                      | 5.8                    | -                  | -                  |
| Netherlands                | 5.7                    | 23.2                     | 14.8                     | 16.7                     | 21.6                   | 18.1               | -                  |
| New Zealand                | -                      | -                        | 5.7                      | 17.7                     | 20.3                   | -                  | -                  |
| Norway                     | 3.6                    | 7.6                      | 7.3                      | 10.0                     | 10.6                   | -                  | -                  |
| Poland                     | -                      | -                        | -                        | 22.6 <sup>a</sup>        | 14.3                   | 23.3               | -                  |
| Portugal <sup>6,7,1</sup>  | 0.2                    | 4.1                      | 7.1                      | 0.3                      | 3.5                    | -                  | -                  |
| Slovak Republic            | -                      | -                        | 9.3 <sup>c,q</sup>       | 32.6 <sup>c</sup>        | 14.0 <sup>c</sup>      | 14.0 <sup>c</sup>  | -                  |
| Spain                      | 0.7                    | 3.8                      | 3.8                      | 5.3                      | 7.1                    | 4.1                | -                  |
| Sweden                     | 5.4 <sup>e,f</sup>     | 4.8 <sup>e,f</sup>       | 4.8 <sup>e,f</sup>       | 3.0 <sup>f</sup>         | 1.6 <sup>f</sup>       | -                  | -                  |
| Switzerland <sup>7</sup>   | -                      | 3.4 <sup>f</sup>         | 0.3 <sup>b,f</sup>       | -                        | -                      | -                  | -                  |
| Turkey <sup>3</sup>        | -                      | -                        | 0.3                      | 3.0                      | 5.4 <sup>-</sup>       | -                  | -                  |
| United Kingdom             | 11.0                   | 14.6 <sup>a</sup>        | 12.0 <sup>a</sup>        | 6.9                      | 12.5 <sup>a</sup>      | 10.7               | -                  |
| United States              | 0.0 <sup>f</sup>       | 0.0 <sup>f</sup>         | 0.0 <sup>f</sup>         | 0.0 <sup>f</sup>         | 0.0 <sup>f</sup>       | 0.0 <sup>f,n</sup> | 0.0 <sup>f,n</sup> |
| <b>Total OECD</b>          | <b>2.1<sup>b</sup></b> | <b>2.9<sup>b</sup></b>   | <b>3.1<sup>a,b</sup></b> | <b>3.7<sup>a,b</sup></b> | <b>3.6<sup>b</sup></b> | -                  | -                  |
| <b>EU-25</b>               | -                      | -                        | -                        | <b>6.0<sup>b</sup></b>   | <b>6.7<sup>b</sup></b> | -                  | -                  |
| <b>EU-15</b>               | <b>4.1<sup>b</sup></b> | <b>5.2<sup>a,b</sup></b> | <b>4.8<sup>a,b</sup></b> | <b>5.1<sup>b</sup></b>   | <b>6.3<sup>b</sup></b> | -                  | -                  |
| China <sup>3</sup>         | -                      | -                        | -                        | -                        | 9.6 <sup>s</sup>       | -                  | -                  |
| Israel <sup>3</sup>        | -                      | -                        | 1.4 <sup>c</sup>         | 0.2 <sup>c</sup>         | 7.5 <sup>c,n</sup>     | -                  | -                  |
| Russian Federation         | -                      | -                        | -                        | 8.1                      | 12.4                   | 12.2               | -                  |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1992 instead of 1991.    3. 2000 instead of 2001.    5. 1983 instead of 1981.    7. 1986 instead of 1985.  
 2. 1996 instead of 1995.    4. 1998 instead of 2001.    6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/702620165887>

**Table 16. Share of public R&D expenditures financed by industry, 1981-2003 (cont'd)**

As a percentage of total national R&amp;D expenditures of the sector

|                                   | 1981                     | 1985                     | Higher education         |                          |                        |                          |                    |
|-----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------|
|                                   |                          |                          | 1991                     | 1995                     | 2001                   | 2002                     | 2003               |
| Australia <sup>1, 2, 3</sup>      | 1.4                      | 2.1                      | 2.5                      | 4.7                      | 4.9                    | -                        | -                  |
| Austria <sup>4</sup>              | 1.0                      | 1.7                      | -                        | -                        | 1.8                    | -                        | -                  |
| Belgium <sup>5</sup>              | 9.4 <sup>a</sup>         | 8.7                      | 15.4 <sup>b</sup>        | 13.2                     | 12.7                   | -                        | -                  |
| Canada                            | 4.1                      | 4.3                      | 7.0                      | 8.1                      | 9.3                    | 9.3 <sup>n</sup>         | 9.3 <sup>n</sup>   |
| Czech Republic                    | -                        | -                        | -                        | 2.0 <sup>a</sup>         | 0.7                    | 0.9                      | -                  |
| Denmark                           | 0.7                      | 1.0                      | 1.6                      | 1.9                      | 3.0                    | 4.2 <sup>a</sup>         | -                  |
| Finland                           | 2.1 <sup>a</sup>         | -                        | 3.6 <sup>a</sup>         | 5.7                      | 6.7                    | 6.2                      | -                  |
| France                            | 1.3 <sup>a</sup>         | 1.9                      | 4.2                      | 3.3                      | 3.1                    | -                        | -                  |
| Germany                           | 1.8                      | 5.4                      | 7.0 <sup>a</sup>         | 8.2                      | 12.2                   | 12.2 <sup>b</sup>        | 11.3 <sup>b</sup>  |
| Greece                            | 0.0 <sup>a</sup>         | -                        | 6.1                      | 5.6 <sup>a</sup>         | 6.9                    | -                        | -                  |
| Hungary                           | -                        | -                        | 14.4                     | 2.1                      | 4.4                    | 11.8                     | -                  |
| Iceland                           | 1.2                      | 0.6                      | 5.0                      | 5.4                      | 10.9                   | -                        | -                  |
| Ireland <sup>3</sup>              | 7.1                      | 6.9                      | 8.6 <sup>b</sup>         | 6.9 <sup>b</sup>         | 5.3                    | -                        | -                  |
| Italy                             | 2.7                      | 1.5                      | 4.0                      | 4.7                      | -                      | -                        | -                  |
| Japan                             | 1.5 <sup>b</sup>         | 2.4 <sup>b</sup>         | 3.7 <sup>b</sup>         | 3.6 <sup>b</sup>         | 2.3                    | 2.6                      | -                  |
| Korea                             | -                        | -                        | -                        | 22.4 <sup>e</sup>        | 14.3 <sup>e</sup>      | 13.9 <sup>e</sup>        | -                  |
| Luxembourg <sup>3</sup>           | -                        | -                        | -                        | -                        | -                      | -                        | -                  |
| Mexico                            | -                        | -                        | -                        | 1.4                      | 1.1                    | -                        | -                  |
| Netherlands                       | 0.3                      | 1.0                      | 1.2                      | 4.0                      | 7.1                    | -                        | -                  |
| New Zealand                       | -                        | -                        | 4.6                      | 9.4                      | 5.3                    | -                        | -                  |
| Norway                            | 2.9                      | 5.0                      | 4.7                      | 5.3                      | 5.8                    | -                        | -                  |
| Poland                            | -                        | -                        | -                        | 11.4                     | 6.3                    | 5.8                      | -                  |
| Portugal <sup>6, 1, 2</sup>       | 0.0                      | 0.9                      | 0.5                      | 0.9 <sup>a</sup>         | 0.8                    | -                        | -                  |
| Slovak Republic                   | -                        | -                        | 6.1 <sup>q</sup>         | 1.0 <sup>m</sup>         | 0.3                    | 0.0                      | -                  |
| Spain                             | 0.0                      | 1.1                      | 10.0                     | 8.3                      | 8.7 <sup>b</sup>       | 7.6                      | -                  |
| Sweden                            | 2.3 <sup>a</sup>         | 5.5                      | 5.2                      | 4.6 <sup>a,h</sup>       | 5.5                    | -                        | -                  |
| Switzerland <sup>1, 2, 7, 3</sup> | 9.5 <sup>b</sup>         | 3.3 <sup>a,b</sup>       | 1.8                      | 6.2                      | 5.1                    | -                        | -                  |
| Turkey <sup>3</sup>               | -                        | -                        | 10.4                     | 16.1                     | 19.4                   | -                        | -                  |
| United Kingdom                    | 2.8 <sup>a</sup>         | 5.2 <sup>a</sup>         | 7.8                      | 6.3                      | 6.2                    | 5.8                      | -                  |
| United States                     | 3.3 <sup>h</sup>         | 4.5 <sup>h</sup>         | 5.3 <sup>h</sup>         | 5.5 <sup>h</sup>         | 5.5 <sup>h</sup>       | 4.9 <sup>h,n</sup>       | 4.5 <sup>h,n</sup> |
| <b>Total OECD</b>                 | <b>2.6<sup>b</sup></b>   | <b>3.8<sup>b</sup></b>   | <b>5.5<sup>a,b</sup></b> | <b>5.8<sup>a,b</sup></b> | <b>6.0<sup>b</sup></b> | <b>5.8<sup>b,n</sup></b> | -                  |
| <b>EU-25</b>                      | -                        | -                        | -                        | <b>6.0<sup>b</sup></b>   | <b>6.7<sup>b</sup></b> | -                        | -                  |
| <b>EU-15</b>                      | <b>2.0<sup>a,b</sup></b> | <b>3.7<sup>a,b</sup></b> | <b>5.8<sup>a,b</sup></b> | <b>5.9<sup>a,b</sup></b> | <b>6.8<sup>b</sup></b> | -                        | -                  |
| China <sup>3</sup>                | -                        | -                        | -                        | -                        | 32.4 <sup>s</sup>      | -                        | -                  |
| Israel <sup>3</sup>               | -                        | -                        | 7.4 <sup>e</sup>         | 2.3 <sup>e</sup>         | 3.7 <sup>e</sup>       | -                        | -                  |
| Russian Federation                | -                        | -                        | -                        | 27.5                     | 26.5                   | 27.2                     | -                  |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1986 instead of 1985.      3. 2000 instead of 2001.      5. 1983 instead of 1981.      7. 1996 instead of 1995.  
 2. 1992 instead of 1991.      4. 1998 instead of 2001.      6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

Table 17. Basic research expenditures, 1981-2003

|                                 | As a percentage of GDP |                     |                       |                       |                       |                     | As a percentage of GERD |                       |                         |                       |                       |                       |
|---------------------------------|------------------------|---------------------|-----------------------|-----------------------|-----------------------|---------------------|-------------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|
|                                 | 1981                   | 1991                | 1995                  | 2001                  | 2002                  | 2003                | 1981                    | 1991                  | 1995                    | 2001                  | 2002                  | 2003                  |
| Australia <sup>1,2,3</sup>      | 0.33 <sup>i,p</sup>    | 0.43 <sup>i</sup>   | 0.43 <sup>i</sup>     | 0.40 <sup>i</sup>     | -                     | -                   | 35.1 <sup>i,p</sup>     | 28.3 <sup>i</sup>     | 25.9 <sup>i</sup>       | 26.0 <sup>i</sup>     | -                     | -                     |
| Austria <sup>4</sup>            | -                      | -                   | -                     | 0.27 <sup>a,k</sup>   | -                     | -                   | -                       | -                     | -                       | 15.2 <sup>a,k</sup>   | -                     | -                     |
| Czech Republic                  | -                      | -                   | 0.17                  | 0.53 <sup>i</sup>     | 0.49 <sup>i</sup>     | -                   | -                       | - <sup>c,q</sup>      | 16.8 <sup>c,q</sup>     | 40.8 <sup>i</sup>     | 37.7 <sup>i</sup>     | -                     |
| Denmark                         | -                      | -                   | -                     | 0.44 <sup>a</sup>     | -                     | -                   | -                       | -                     | -                       | 18.3 <sup>a</sup>     | -                     | -                     |
| France                          | -                      | 0.48 <sup>i</sup>   | 0.51 <sup>i</sup>     | 0.52 <sup>i</sup>     | -                     | -                   | - <sup>a</sup>          | 20.3 <sup>i</sup>     | 22.1 <sup>i</sup>       | 23.3 <sup>i</sup>     | - <sup>n</sup>        | -                     |
| Germany                         | 0.46 <sup>s</sup>      | 0.47 <sup>a</sup>   | -                     | -                     | -                     | -                   | 18.9 <sup>s</sup>       | 18.7 <sup>a</sup>     | -                       | -                     | -                     | -                     |
| Hungary <sup>1</sup>            | -                      | 0.23 <sup>q</sup>   | 0.18 <sup>a</sup>     | 0.24                  | 0.25                  | -                   | -                       | 22.1 <sup>c,q</sup>   | 24.7 <sup>a,c</sup>     | 25.3 <sup>c</sup>     | 24.5 <sup>c</sup>     | -                     |
| Iceland                         | 0.16                   | 0.29 <sup>i</sup>   | 0.38 <sup>i</sup>     | 0.47 <sup>i</sup>     | 0.49 <sup>b,j</sup>   | -                   | 25.0                    | 24.8 <sup>i</sup>     | 24.2 <sup>i</sup>       | 15.4 <sup>i</sup>     | 15.9 <sup>lb</sup>    | -                     |
| Ireland <sup>3</sup>            | 0.07                   | 0.08                | -                     | 0.14 <sup>i</sup>     | -                     | -                   | 10.3                    | 8.6 <sup>b</sup>      | -                       | 12.2 <sup>i,b</sup>   | -                     | -                     |
| Italy                           | 0.11 <sup>r</sup>      | 0.25 <sup>a,i</sup> | 0.22 <sup>i</sup>     | -                     | -                     | -                   | 12.5 <sup>r</sup>       | 20.3 <sup>a,i,a</sup> | 22.0 <sup>i</sup>       | -                     | -                     | -                     |
| Japan                           | 0.28 <sup>e,i,j</sup>  | 0.36 <sup>i,j</sup> | 0.41 <sup>i,j</sup>   | 0.37 <sup>i,k</sup>   | 0.39 <sup>i,k</sup>   | -                   | 12.1 <sup>e,i,j</sup>   | 12.2 <sup>i,j</sup>   | 14.1 <sup>i,j</sup>     | 12.1 <sup>i,k</sup>   | 12.5 <sup>i,k</sup>   | -                     |
| Korea                           | -                      | -                   | 0.31                  | 0.37 <sup>a,i</sup>   | 0.40 <sup>a,i</sup>   | -                   | -                       | -                     | 12.4 <sup>e</sup>       | 12.7 <sup>a,i</sup>   | 13.7 <sup>a,i</sup>   | -                     |
| Mexico                          | -                      | -                   | 0.09                  | 0.12                  | -                     | -                   | -                       | -                     | 29.0                    | 30.8                  | -                     | -                     |
| Netherlands <sup>4</sup>        | 0.48 <sup>a</sup>      | 0.27 <sup>i</sup>   | 0.19 <sup>a,i</sup>   | -                     | -                     | -                   | 25.0 <sup>a</sup>       | 13.7 <sup>i</sup>     | 9.5 <sup>a,i</sup>      | -                     | -                     | -                     |
| New Zealand                     | -                      | -                   | -                     | 0.53 <sup>i</sup>     | -                     | -                   | -                       | -                     | -                       | 44.9 <sup>a,i</sup>   | -                     | -                     |
| Norway                          | 0.19                   | 0.22                | 0.25                  | 0.24                  | -                     | -                   | 16.1                    | 13.4                  | 14.7 <sup>a</sup>       | 15.0                  | -                     | -                     |
| Poland                          | -                      | -                   | 0.20 <sup>a,m</sup>   | 0.19 <sup>m</sup>     | 0.19 <sup>b,m</sup>   | -                   | -                       | -                     | 30.8 <sup>a,m</sup>     | 29.7 <sup>m</sup>     | 32.2 <sup>b,m</sup>   | -                     |
| Portugal <sup>5,1</sup>         | 0.05 <sup>i</sup>      | 0.15 <sup>i</sup>   | 0.14 <sup>a,i,p</sup> | 0.19                  | -                     | -                   | 16.7 <sup>i</sup>       | 24.6 <sup>i</sup>     | 24.6 <sup>a,i,p,a</sup> | 22.4                  | - <sup>b</sup>        | -                     |
| Slovak Republic                 | -                      | -                   | 0.20 <sup>c</sup>     | 0.15                  | 0.15                  | -                   | -                       | - <sup>c,q</sup>      | 21.5 <sup>c</sup>       | 23.4 <sup>k</sup>     | 25.9 <sup>k</sup>     | -                     |
| Spain                           | 0.06                   | 0.13                | 0.17 <sup>a</sup>     | 0.15                  | 0.16                  | -                   | 14.6                    | 15.5                  | 21.0 <sup>a</sup>       | 15.8                  | 15.5                  | -                     |
| Sweden                          | 0.50 <sup>a,k</sup>    | 0.50 <sup>k,p</sup> | -                     | -                     | -                     | -                   | 22.5 <sup>a,k</sup>     | 18.4 <sup>k,p</sup>   | - <sup>a,k</sup>        | - <sup>k</sup>        | -                     | -                     |
| Switzerland <sup>2,3</sup>      | -                      | -                   | 0.80 <sup>i</sup>     | 0.72 <sup>i</sup>     | -                     | -                   | -                       | -                     | 30.0 <sup>i</sup>       | 28.0 <sup>i</sup>     | -                     | -                     |
| United States                   | 0.32                   | 0.46                | 0.40                  | 0.47                  | 0.49 <sup>n</sup>     | 0.50 <sup>b,n</sup> | 13.7 <sup>h</sup>       | 16.9 <sup>h</sup>     | 15.9 <sup>h</sup>       | 17.2 <sup>h</sup>     | 18.4 <sup>h,n</sup>   | 19.1 <sup>b,h,n</sup> |
| China                           | -                      | 0.03 <sup>i,k</sup> | 0.03 <sup>i,k</sup>   | 0.06 <sup>i</sup>     | 0.07 <sup>i</sup>     | -                   | -                       | 4.1 <sup>i,k</sup>    | 5.0 <sup>i,k</sup>      | 5.6 <sup>i</sup>      | 5.7 <sup>i</sup>      | -                     |
| Israel                          | -                      | -                   | -                     | 0.89 <sup>c,i,n</sup> | 0.89 <sup>c,i,n</sup> | -                   | -                       | -                     | -                       | 17.7 <sup>c,i,n</sup> | 18.9 <sup>c,i,n</sup> | -                     |
| Russian Federation <sup>1</sup> | -                      | 0.07                | 0.13                  | 0.15                  | 0.17                  | -                   | -                       | 9.5                   | 15.3                    | 12.9                  | 13.7                  | -                     |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1992 instead of 1991.      3. 2000 instead of 2001.      5. 1983 instead of 1981.  
2. 1996 instead of 1995.      4. 1998 instead of 2001.      6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/345101246407>

**Table 18. Basic research by performer, 1991-2003**  
As a percentage of GDP

|                                 | Business enterprise |                       |                       |                       |                       | Government          |                       |                       |                       |                       | Higher education    |                     |                       |                       |                     | Private non-profit |                   |                     |                     |                       |
|---------------------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|-----------------------|-----------------------|---------------------|--------------------|-------------------|---------------------|---------------------|-----------------------|
|                                 | 1991                | 1995                  | 2001                  | 2002                  | 2003                  | 1991                | 1995                  | 2001                  | 2002                  | 2003                  | 1991                | 1995                | 2001                  | 2002                  | 2003                | 1991               | 1995              | 2001                | 2002                | 2003                  |
| Australia <sup>1,2,3</sup>      | 0.04                | 0.04                  | 0.05 <sup>-</sup>     | -                     | -                     | 0.12                | 0.11                  | 0.10 <sup>-</sup>     | -                     | -                     | 0.25                | 0.25 <sup>i</sup>   | 0.23 <sup>-</sup>     | -                     | -                   | 0.02               | 0.02              | 0.03 <sup>-</sup>   | -                   | -                     |
| Austria <sup>4</sup>            | -                   | -                     | 0.04 <sup>a</sup>     | -                     | -                     | -                   | -                     | 0.02 <sup>a,k</sup>   | -                     | -                     | -                   | -                   | 0.21 <sup>a</sup>     | -                     | -                   | -                  | -                 | 0.00                | -                   | -                     |
| Czech Republic                  | -                   | 0.01 <sup>i</sup>     | 0.22 <sup>i</sup>     | 0.19 <sup>i</sup>     | -                     | -                   | 0.13 <sup>i</sup>     | 0.20 <sup>i</sup>     | 0.19 <sup>i</sup>     | -                     | -                   | 0.04 <sup>i</sup>   | 0.10 <sup>i</sup>     | 0.11 <sup>i</sup>     | -                   | -                  | 0.00              | 0.00                | 0.00                | -                     |
| Denmark                         | -                   | -                     | 0.08                  | -                     | -                     | 0.05                | 0.08                  | 0.07 <sup>a</sup>     | 0.03                  | -                     | 0.20                | 0.25                | 0.28 <sup>a</sup>     | 0.34                  | -                   | 0.01               | 0.01              | 0.01                | 0.01                | -                     |
| France                          | 0.06 <sup>i</sup>   | 0.06 <sup>i</sup>     | 0.05 <sup>a,i</sup>   | -                     | -                     | 0.09 <sup>i</sup>   | 0.11 <sup>i</sup>     | 0.09 <sup>i</sup>     | -                     | -                     | 0.32 <sup>i</sup>   | 0.33 <sup>i</sup>   | 0.37 <sup>i</sup>     | -                     | -                   | 0.01               | 0.01              | 0.01                | -                   | -                     |
| Germany                         | 0.09 <sup>a</sup>   | 0.07                  | 0.08                  | -                     | -                     | 0.12 <sup>a</sup>   | -                     | -                     | -                     | -                     | 0.26 <sup>a</sup>   | -                   | -                     | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| Hungary <sup>1</sup>            | 0.02 <sup>c,q</sup> | 0.01 <sup>a</sup>     | 0.01                  | 0.02                  | -                     | 0.13 <sup>c,q</sup> | 0.10 <sup>a</sup>     | 0.11                  | 0.13                  | -                     | 0.09 <sup>c,q</sup> | 0.07 <sup>a</sup>   | 0.11                  | 0.10                  | -                   | -                  | -                 | -                   | -                   | -                     |
| Iceland                         | -                   | -                     | 0.00                  | 0.00                  | -                     | 0.10 <sup>i</sup>   | 0.12 <sup>i,p</sup>   | 0.15 <sup>i</sup>     | 0.19 <sup>b,i</sup>   | -                     | 0.16 <sup>i</sup>   | 0.24 <sup>i,p</sup> | 0.27 <sup>i</sup>     | 0.23 <sup>b,i</sup>   | -                   | 0.03               | 0.02              | 0.05                | 0.05 <sup>b</sup>   | -                     |
| Ireland                         | 0.02                | -                     | 0.04 <sup>i</sup>     | -                     | -                     | 0.00                | 0.00 <sup>b</sup>     | -                     | -                     | -                     | 0.06 <sup>b</sup>   | 0.08 <sup>b</sup>   | 0.10 <sup>b</sup>     | -                     | -                   | 0.00 <sup>b</sup>  | 0.00 <sup>b</sup> | -                   | -                   | -                     |
| Italy                           | 0.02 <sup>a,i</sup> | 0.02 <sup>i</sup>     | 0.03 <sup>i</sup>     | 0.03 <sup>i,n</sup>   | 0.03 <sup>i,n</sup>   | 0.09 <sup>a,i</sup> | 0.08 <sup>i</sup>     | 0.06 <sup>i</sup>     | 0.09 <sup>i,n</sup>   | 0.08 <sup>i,n</sup>   | 0.14 <sup>i</sup>   | 0.13 <sup>i</sup>   | -                     | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| Japan                           | 0.14 <sup>i,j</sup> | 0.13 <sup>i,j</sup>   | 0.13 <sup>i,k</sup>   | 0.14 <sup>i,k</sup>   | -                     | 0.04 <sup>j</sup>   | 0.05 <sup>a</sup>     | 0.09                  | 0.09 <sup>i,k</sup>   | -                     | 0.18 <sup>j</sup>   | 0.14 <sup>a</sup>   | 0.16                  | 0.16 <sup>i,k</sup>   | -                   | 0.02 <sup>j</sup>  | 0.02 <sup>a</sup> | 0.01                | 0.01                | -                     |
| Korea <sup>2</sup>              | -                   | 0.15 <sup>e</sup>     | 0.16 <sup>i</sup>     | 0.20 <sup>i</sup>     | -                     | -                   | 0.07 <sup>e</sup>     | 0.08 <sup>a,i</sup>   | 0.09 <sup>e,i</sup>   | -                     | -                   | 0.10 <sup>ei</sup>  | 0.12 <sup>ei</sup>    | 0.11 <sup>ei</sup>    | -                   | -                  | 0.01 <sup>e</sup> | 0.00 <sup>e</sup>   | 0.00 <sup>e</sup>   | -                     |
| Mexico                          | -                   | 0.00                  | 0.01                  | -                     | -                     | -                   | 0.04                  | 0.06                  | -                     | -                     | -                   | 0.05                | 0.06                  | -                     | -                   | -                  | 0.00              | 0.00                | -                   | -                     |
| Netherlands                     | 0.13 <sup>i</sup>   | -                     | -                     | -                     | -                     | 0.13 <sup>i</sup>   | -                     | -                     | -                     | -                     | 0.01 <sup>i</sup>   | -                   | -                     | -                     | -                   | 0.01               | -                 | -                   | -                   | -                     |
| New Zealand                     | -                   | -                     | 0.09 <sup>i</sup>     | -                     | -                     | -                   | -                     | 0.20 <sup>i</sup>     | -                     | -                     | -                   | -                   | 0.24 <sup>i</sup>     | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| Norway                          | 0.01                | 0.02 <sup>a</sup>     | 0.03                  | -                     | -                     | 0.03                | 0.04                  | 0.04                  | -                     | -                     | 0.17                | 0.19                | 0.18                  | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| Poland                          | -                   | 0.01 <sup>a,m</sup>   | 0.01 <sup>m</sup>     | 0.01 <sup>b,m</sup>   | -                     | -                   | 0.10 <sup>a,m</sup>   | 0.09 <sup>m</sup>     | 0.09 <sup>b,m</sup>   | -                     | -                   | 0.09 <sup>m</sup>   | 0.10 <sup>m</sup>     | 0.10 <sup>b,m</sup>   | -                   | -                  | 0.00              | 0.00                | 0.00                | -                     |
| Portugal <sup>1</sup>           | 0.00                | 0.00 <sup>a,i,p</sup> | 0.01                  | -                     | -                     | 0.01                | 0.01 <sup>a,i,p</sup> | 0.01                  | -                     | -                     | 0.11                | 0.10 <sup>ap</sup>  | 0.14                  | -                     | -                   | 0.02               | 0.03              | 0.03                | -                   | -                     |
| Slovak Republic                 | -                   | 0.03 <sup>c</sup>     | 0.03                  | 0.03                  | -                     | -                   | 0.13 <sup>c</sup>     | 0.08 <sup>c</sup>     | 0.09 <sup>c</sup>     | -                     | -                   | 0.04                | 0.04                  | 0.03                  | -                   | -                  | -                 | 0.00 <sup>k</sup>   | 0.00 <sup>k</sup>   | -                     |
| Spain                           | 0.02                | 0.02 <sup>a</sup>     | 0.02                  | 0.02 <sup>a</sup>     | -                     | 0.03                | 0.03 <sup>a</sup>     | 0.03                  | 0.03                  | -                     | 0.08                | 0.11 <sup>a</sup>   | 0.10                  | 0.11                  | -                   | 0.00               | 0.00              | 0.00                | 0.00                | -                     |
| Sweden                          | 0.03 <sup>p</sup>   | -                     | -                     | -                     | -                     | 0.01 <sup>e,f</sup> | 0.08 <sup>f</sup>     | 0.09 <sup>f</sup>     | -                     | -                     | 0.46                | -                   | -                     | -                     | -                   | 0.00 <sup>k</sup>  | -                 | -                   | -                   | -                     |
| Switzerland <sup>1,2,3</sup>    | 0.16                | 0.19                  | 0.20 <sup>-</sup>     | -                     | -                     | 0.00                | 0.00                  | 0.00                  | 0.00 <sup>i,j</sup>   | -                     | -                   | 0.55                | 0.47 <sup>-</sup>     | -                     | -                   | 0.00               | 0.06              | 0.04 <sup>-</sup>   | -                   | -                     |
| Turkey                          | 0.01                | 0.01 <sup>i</sup>     | -                     | -                     | -                     | 0.01                | 0.00 <sup>i</sup>     | -                     | -                     | -                     | -                   | -                   | -                     | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| United Kingdom                  | 0.04 <sup>p</sup>   | 0.05 <sup>p</sup>     | 0.05 <sup>a</sup>     | 0.08                  | -                     | 0.03 <sup>s</sup>   | 0.04                  | 0.03 <sup>a</sup>     | 0.03                  | -                     | -                   | -                   | -                     | -                     | -                   | -                  | -                 | -                   | -                   | -                     |
| United States                   | 0.13                | 0.08                  | 0.08                  | 0.08 <sup>n</sup>     | 0.08 <sup>b,n</sup>   | 0.04 <sup>f</sup>   | 0.04 <sup>f</sup>     | 0.04 <sup>f</sup>     | 0.04 <sup>f,n</sup>   | 0.04 <sup>b,f,n</sup> | 0.25                | 0.24                | 0.28                  | 0.30 <sup>n</sup>     | 0.31 <sup>b,n</sup> | 0.04 <sup>h</sup>  | 0.04 <sup>h</sup> | 0.06 <sup>h</sup>   | 0.07 <sup>h,n</sup> | 0.07 <sup>b,h,n</sup> |
| China                           | 0.00 <sup>i,k</sup> | 0.00 <sup>i,k</sup>   | 0.00 <sup>i</sup>     | 0.00 <sup>i</sup>     | -                     | 0.02 <sup>i</sup>   | 0.02 <sup>i</sup>     | 0.04 <sup>i</sup>     | 0.04 <sup>i</sup>     | -                     | 0.01 <sup>i</sup>   | 0.01 <sup>i</sup>   | 0.02 <sup>i</sup>     | 0.03 <sup>i</sup>     | -                   | -                  | -                 | -                   | -                   | -                     |
| Israel                          | -                   | -                     | 0.19 <sup>c,i,n</sup> | 0.17 <sup>c,i,n</sup> | 0.17 <sup>c,i,n</sup> | -                   | -                     | 0.05 <sup>c,i,n</sup> | 0.05 <sup>c,i,n</sup> | -                     | -                   | -                   | 0.61 <sup>e,i,n</sup> | 0.62 <sup>e,i,n</sup> | -                   | -                  | -                 | 0.04 <sup>c,n</sup> | 0.05 <sup>c,n</sup> | -                     |
| Russian Federation <sup>1</sup> | 0.01                | 0.02                  | 0.02                  | 0.02                  | -                     | 0.05                | 0.09                  | 0.11                  | 0.13                  | -                     | 0.02                | 0.02                | 0.02                  | 0.02                  | -                   | 0.00               | 0.00              | 0.00                | 0.00                | -                     |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

- 1992 instead of 1991.
- 1996 instead of 1995.
- 2000 instead of 2001.
- 1998 instead of 2001.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/377412476274>

**Table 19. Government budget appropriations and outlays for R&D by socio-economic objectives, 1991-2003**  
As a percentage of total R&D budget

|                              | Defense                 |                           |                       | Civil                   |                           |                      |                         |                           |                       |                        |                          |                      |                         |                           |                      |                          |                           |                     |
|------------------------------|-------------------------|---------------------------|-----------------------|-------------------------|---------------------------|----------------------|-------------------------|---------------------------|-----------------------|------------------------|--------------------------|----------------------|-------------------------|---------------------------|----------------------|--------------------------|---------------------------|---------------------|
|                              | 1991                    | 2001                      | 2003                  | Economic development    |                           |                      | Health                  |                           |                       | Space                  |                          |                      | Non-oriented programs   |                           |                      | General university funds |                           |                     |
|                              |                         |                           |                       | 1991                    | 2001                      | 2003                 | 1991                    | 2001                      | 2003                  | 1991                   | 2001                     | 2003                 | 1991                    | 2001                      | 2003                 | 1991                     | 2001                      | 2003                |
| Australia                    | 10.3 <sup>f</sup>       | 5.8 <sup>f</sup>          | 5.7 <sup>f,n</sup>    | 25.8 <sup>f</sup>       | 36.8 <sup>f</sup>         | 34.3 <sup>f,n</sup>  | 14.6 <sup>f</sup>       | 16.4 <sup>f</sup>         | 19.9 <sup>f,n</sup>   | -                      | 0.0 <sup>f</sup>         | 0.0 <sup>f,n</sup>   | 15.0 <sup>f</sup>       | 3.1 <sup>f</sup>          | 3.7 <sup>f,n</sup>   | 34.4 <sup>f</sup>        | 37.9 <sup>f</sup>         | 36.4 <sup>f,n</sup> |
| Austria                      | 0.0 <sup>f</sup>        | 0.0 <sup>f</sup>          | 0.0 <sup>f,n</sup>    | 14.6 <sup>f</sup>       | 15.8 <sup>f</sup>         | 12.7 <sup>f,n</sup>  | 8.6 <sup>f</sup>        | 8.8 <sup>f</sup>          | 8.5 <sup>f,n</sup>    | 0.4 <sup>f</sup>       | 0.1 <sup>f</sup>         | 0.1 <sup>f,n</sup>   | 12.4 <sup>f</sup>       | 13.7 <sup>f</sup>         | 13.1 <sup>f,n</sup>  | 64.0 <sup>f</sup>        | 61.5 <sup>f</sup>         | 65.5 <sup>f,n</sup> |
| Belgium                      | 0.2                     | 0.2                       | 0.4 <sup>n</sup>      | 25.6                    | 32.9                      | 36.9 <sup>n</sup>    | 10.1                    | 9.7                       | 9.6 <sup>n</sup>      | 12.4                   | 11.2                     | 8.9 <sup>n</sup>     | 22.7                    | 23.3                      | 22.9 <sup>n</sup>    | 23.9                     | 18.6                      | 18.2 <sup>n</sup>   |
| Canada                       | 5.1 <sup>f</sup>        | 4.3 <sup>f</sup>          | -                     | 33.8 <sup>f</sup>       | 32.0 <sup>f</sup>         | -                    | 13.8 <sup>f</sup>       | 23.5 <sup>f</sup>         | -                     | 7.2 <sup>f</sup>       | 6.2 <sup>f</sup>         | -                    | 12.5 <sup>f</sup>       | 7.2 <sup>f</sup>          | -                    | 27.6 <sup>b,f</sup>      | 25.7 <sup>b,f</sup>       | -                   |
| Czech Republic <sup>1</sup>  | -                       | -                         | 3.3 <sup>-</sup>      | -                       | -                         | 19.8 <sup>-</sup>    | -                       | -                         | 16.7 <sup>-</sup>     | -                      | -                        | 0.9 <sup>-</sup>     | -                       | -                         | 25.7 <sup>-</sup>    | -                        | -                         | 27.6 <sup>-</sup>   |
| Denmark                      | 0.6                     | 0.5 <sup>a</sup>          | 1.1                   | 26.3                    | 21.1 <sup>a</sup>         | 16.5                 | 14.1                    | 19.8 <sup>a</sup>         | 16.7                  | 2.7                    | 2.4 <sup>a</sup>         | 2.2                  | 23.3                    | 18.0 <sup>a</sup>         | 20.6                 | 33.0                     | 37.4 <sup>a</sup>         | 42.1                |
| Finland                      | 1.4 <sup>a</sup>        | 1.6                       | 2.9 <sup>n</sup>      | 40.4 <sup>a</sup>       | 41.1                      | 39.1 <sup>n</sup>    | 16.3 <sup>a</sup>       | 15.4                      | 15.2 <sup>n</sup>     | 3.1 <sup>a</sup>       | 1.9                      | 1.9 <sup>n</sup>     | 10.5 <sup>a</sup>       | 14.2                      | 13.7 <sup>n</sup>    | 28.3 <sup>a</sup>        | 25.9                      | 27.2 <sup>n</sup>   |
| France <sup>1</sup>          | 36.1                    | 22.8 <sup>a</sup>         | 24.3 <sup>n</sup>     | 21.0                    | 12.7                      | 12.3 <sup>n</sup>    | 6.3                     | 10.1                      | 10.2 <sup>n</sup>     | 8.6                    | 9.6                      | 8.9 <sup>n</sup>     | 15.3                    | 19.3                      | 19.7 <sup>n</sup>    | 12.4                     | 23.2                      | 23.0 <sup>n</sup>   |
| Germany                      | 11.0 <sup>a</sup>       | 7.4                       | 6.7 <sup>n</sup>      | 22.7 <sup>a</sup>       | 18.8 <sup>a</sup>         | 19.1 <sup>n,s</sup>  | 11.6 <sup>a</sup>       | 13.4 <sup>a</sup>         | 13.7 <sup>n,s</sup>   | 5.4 <sup>a</sup>       | 4.9 <sup>a</sup>         | 4.9 <sup>n,s</sup>   | 15.2 <sup>a</sup>       | 17.2 <sup>a</sup>         | 16.6 <sup>n,s</sup>  | 33.2 <sup>a</sup>        | 38.4 <sup>a</sup>         | 39.3 <sup>n,s</sup> |
| Greece <sup>1</sup>          | 1.5                     | 0.8                       | 0.9 <sup>n</sup>      | 29.7                    | 20.8                      | 18.0 <sup>n</sup>    | 17.5                    | 19.8                      | 19.0 <sup>n</sup>     | 0.3                    | 0.2                      | 0.1 <sup>n</sup>     | 3.4                     | 12.5                      | 10.9 <sup>n</sup>    | 46.1                     | 45.6                      | 50.7 <sup>n</sup>   |
| Iceland                      | 0.0                     | 0.0                       | 0.0 <sup>n</sup>      | 51.4                    | 36.7                      | 33.0 <sup>n</sup>    | 7.2                     | 10.6                      | 10.0 <sup>n</sup>     | -                      | -                        | -                    | 16.6                    | 17.5                      | - <sup>n</sup>       | 24.9                     | 35.2                      | 38.4 <sup>n</sup>   |
| Ireland                      | 0.0                     | 0.0                       | -                     | 48.5                    | 41.4                      | -                    | 12.7                    | 12.8                      | -                     | 3.8                    | 0.0                      | -                    | 5.1                     | 27.6                      | -                    | 29.9                     | 18.3                      | -                   |
| Italy                        | 7.9                     | 4.0 <sup>n</sup>          | -                     | 21.8                    | 16.1 <sup>n</sup>         | -                    | 18.2                    | 15.5 <sup>n</sup>         | -                     | 7.0                    | 7.3 <sup>n</sup>         | -                    | 10.6                    | 13.3 <sup>n</sup>         | -                    | 31.3                     | 43.7 <sup>n</sup>         | -                   |
| Japan                        | 5.7 <sup>e,f,k</sup>    | 4.3 <sup>l,k</sup>        | 4.5                   | 31.6 <sup>e,f</sup>     | 32.8 <sup>f</sup>         | 31.9 <sup>f,n</sup>  | 5.4 <sup>e,f</sup>      | 7.5 <sup>f</sup>          | 7.3 <sup>f,n</sup>    | 6.8 <sup>e,f</sup>     | 6.7 <sup>f</sup>         | 6.7                  | 8.0 <sup>e,f</sup>      | 13.8 <sup>f</sup>         | 15.3 <sup>f,n</sup>  | 42.5 <sup>e,f</sup>      | 34.8 <sup>f</sup>         | 34.4 <sup>f,n</sup> |
| Korea                        | -                       | 15.8                      | 14.2                  | -                       | 46.7                      | 44.7                 | -                       | 15.7                      | 16.7                  | -                      | 3.2                      | 2.8                  | -                       | 18.5 <sup>m</sup>         | 21.6                 | -                        | - <sup>i</sup>            | -                   |
| Mexico                       | 0.0 <sup>f</sup>        | 0.0                       | -                     | 32.6 <sup>f</sup>       | 33.5                      | -                    | 14.2 <sup>f</sup>       | 12.5                      | -                     | 0.0 <sup>f</sup>       | 0.0                      | -                    | 20.4 <sup>f</sup>       | - <sup>i</sup>            | -                    | 32.8 <sup>f</sup>        | 53.9 <sup>m</sup>         | -                   |
| Netherlands                  | 3.0                     | 1.9                       | -                     | 28.1                    | 25.3                      | -                    | 8.7                     | 8.7                       | -                     | 2.6                    | 2.6                      | -                    | 10.6                    | 10.7                      | -                    | 43.0                     | 46.3                      | -                   |
| New Zealand                  | 1.5                     | -                         | -                     | 46.7                    | -                         | -                    | 25.3                    | -                         | -                     | -                      | -                        | -                    | 1.2                     | -                         | -                    | 24.1                     | -                         | -                   |
| Norway                       | 6.2                     | 7.5                       | 6.9 <sup>n</sup>      | 31.5                    | 26.1                      | 21.2 <sup>n</sup>    | 18.3                    | 18.8                      | 18.8 <sup>n</sup>     | 2.7                    | 2.2                      | 1.9 <sup>n</sup>     | 10.5                    | 8.9                       | 12.2 <sup>n</sup>    | 30.8                     | 36.4                      | 39.0 <sup>n</sup>   |
| Portugal                     | 0.7                     | 2.1                       | 2.0 <sup>n</sup>      | 38.5                    | 31.4                      | 35.4 <sup>n</sup>    | 18.0                    | 17.8                      | 16.7 <sup>n</sup>     | 0.2                    | 0.5                      | 0.5 <sup>n</sup>     | 8.4                     | 10.5                      | 9.9 <sup>n</sup>     | 30.3                     | 35.6                      | 33.5 <sup>n</sup>   |
| Slovak Republic <sup>2</sup> | -                       | 9.3 <sup>m</sup>          | 7.2 <sup>m</sup>      | -                       | 29.2                      | 21.3                 | -                       | 10.9                      | 10.2                  | -                      | - <sup>i</sup>           | - <sup>i</sup>       | -                       | 32.4 <sup>m</sup>         | - <sup>a,m</sup>     | -                        | 16.6                      | - <sup>i</sup>      |
| Spain                        | 16.8                    | 37.3 <sup>b</sup>         | -                     | 27.5                    | 22.7 <sup>b</sup>         | -                    | 15.1                    | 9.7 <sup>b</sup>          | -                     | 7.0                    | 2.4 <sup>b</sup>         | -                    | 10.8                    | 2.1 <sup>b</sup>          | -                    | 20.0                     | 25.8 <sup>b</sup>         | -                   |
| Sweden                       | 27.3                    | 14.6                      | 22.2                  | 17.8                    | 12.2                      | 13.6                 | 8.3                     | 10.8                      | 8.9                   | 1.7                    | 2.7                      | 0.6                  | 14.6                    | 16.7                      | 16.7                 | 30.4                     | 43.1                      | 38.0                |
| Switzerland <sup>3,4</sup>   | 4.6 <sup>f</sup>        | 0.7 <sup>f</sup>          | -                     | 3.7 <sup>f,k</sup>      | 4.6 <sup>l,k</sup>        | -                    | 3.5 <sup>f,k</sup>      | 2.4 <sup>l,k</sup>        | -                     | -                      | -                        | -                    | - <sup>i</sup>          | - <sup>i</sup>            | -                    | 59.3 <sup>f,m</sup>      | 61.1 <sup>f,m</sup>       | -                   |
| United Kingdom <sup>1</sup>  | 43.9                    | 30.5                      | 34.1 <sup>-</sup>     | 16.2                    | 9.4                       | 9.8 <sup>-</sup>     | 12.5                    | 22.4                      | 20.1 <sup>-</sup>     | 2.7                    | 2.1                      | 1.9 <sup>-</sup>     | 5.1                     | 13.6                      | 13.3 <sup>-</sup>    | 18.9                     | 21.8                      | 20.2 <sup>-</sup>   |
| United States                | 59.7 <sup>f,g,h</sup>   | 50.5 <sup>g</sup>         | 53.7 <sup>b,f,g</sup> | 8.9 <sup>f,g,h</sup>    | 6.5 <sup>g,i</sup>        | 5.6 <sup>b,f,g</sup> | 17.5 <sup>f,g,h</sup>   | 26.2 <sup>g,i</sup>       | 26.3 <sup>b,f,g</sup> | 9.9 <sup>f,g,h</sup>   | 9.8 <sup>g</sup>         | 8.4 <sup>b,f,g</sup> | 4.0 <sup>f,g,h</sup>    | 6.9 <sup>g</sup>          | 6.0 <sup>b,f,g</sup> | -                        | -                         | -                   |
| <b>Total OECD</b>            | <b>36.4<sup>a</sup></b> | <b>28.8<sup>n</sup></b>   | -                     | <b>17.9<sup>a</sup></b> | <b>15.9<sup>n</sup></b>   | -                    | <b>13.8<sup>a</sup></b> | <b>18.8<sup>n</sup></b>   | -                     | <b>7.5<sup>a</sup></b> | <b>7.2<sup>n</sup></b>   | -                    | <b>8.2<sup>a</sup></b>  | <b>10.7<sup>n</sup></b>   | -                    | <b>15.5<sup>a</sup></b>  | <b>17.4<sup>n</sup></b>   | -                   |
| <b>EU-25</b>                 | -                       | <b>14.9<sup>a,n</sup></b> | -                     | -                       | <b>16.8<sup>a,n</sup></b> | -                    | -                       | <b>13.5<sup>a,n</sup></b> | -                     | -                      | <b>5.2<sup>a,n</sup></b> | -                    | -                       | <b>14.8<sup>a,n</sup></b> | -                    | -                        | <b>31.6<sup>a,n</sup></b> | -                   |
| <b>EU-15</b>                 | <b>20.6<sup>a</sup></b> | <b>15.4<sup>a,n</sup></b> | -                     | <b>23.8<sup>a</sup></b> | <b>17.2<sup>a,n</sup></b> | -                    | <b>11.3<sup>a</sup></b> | <b>13.8<sup>a,n</sup></b> | -                     | <b>5.6<sup>a</sup></b> | <b>5.3<sup>a,n</sup></b> | -                    | <b>12.4<sup>a</sup></b> | <b>15.0<sup>a,n</sup></b> | -                    | <b>24.9<sup>a</sup></b>  | <b>32.5<sup>a,n</sup></b> | -                   |
| Russian Federation           | -                       | 43.5                      | -                     | -                       | 24.4                      | -                    | -                       | 7.0                       | -                     | -                      | 10.1                     | -                    | -                       | 14.0                      | -                    | -                        | 0.0                       | -                   |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 2002 instead of 2003. 2. 2002 instead of 2001. 3. 1992 instead of 1991. 4. 2000 instead of 2001.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/14740350165>

**Table 20. Tax treatment of R&D, 1990-2004**  
Rate of tax subsidies for 1 USD of R&D<sup>1</sup>, large firms and SMEs

|                          | SMEs  |       |       | Large firms |       |                    |       |       |
|--------------------------|-------|-------|-------|-------------|-------|--------------------|-------|-------|
|                          | 1999  | 2001  | 2004  | 1990        | 1995  | 1999               | 2001  | 2004  |
| Australia <sup>2</sup>   | 0.11  | 0.20  | 0.12  | 0.28        | 0.21  | 0.11               | 0.20  | 0.12  |
| Austria                  | 0.12  | 0.12  | 0.11  | 0.02        | 0.07  | 0.12               | 0.12  | 0.11  |
| Belgium                  | -0.01 | -0.01 | -0.01 | -0.01       | -0.01 | -0.01              | -0.01 | -0.01 |
| Canada                   | 0.32  | 0.32  | 0.32  | 0.17        | 0.17  | 0.17               | 0.17  | 0.17  |
| Denmark <sup>3</sup>     | -     | 0.11  | 0.18  | 0.00        | 0.13  | -0.02 <sup>4</sup> | 0.11  | 0.18  |
| Finland                  | -0.01 | -0.01 | -0.01 | -0.02       | -0.01 | -0.01              | -0.01 | -0.01 |
| France                   | 0.09  | 0.06  | 0.13  | 0.09        | 0.08  | 0.09               | 0.06  | 0.13  |
| Germany                  | -0.04 | -0.02 | -0.02 | -0.05       | -0.05 | -0.04              | -0.02 | -0.02 |
| Greece                   | -0.01 | -0.01 | -0.01 | -           | -     | -0.01              | -0.01 | -0.01 |
| Hungary <sup>5</sup>     | -     | -     | 0.16  | -           | -     | -                  | -     | 0.16  |
| Iceland                  | -0.03 | -0.01 | -0.01 | -0.03       | -     | -0.03              | -0.01 | -0.01 |
| Ireland                  | 0.06  | -     | 0.05  | 0.00        | -     | 0.06               | -     | 0.05  |
| Italy                    | 0.45  | 0.44  | 0.45  | -0.04       | -0.05 | -0.03              | -0.03 | -0.03 |
| Japan <sup>6</sup>       | 0.06  | 0.12  | 0.19  | -0.02       | -0.01 | 0.02               | 0.01  | 0.14  |
| Mexico                   | 0.03  | 0.03  | 0.39  | -0.02       | -0.02 | 0.03               | 0.03  | 0.39  |
| Netherlands <sup>7</sup> | -     | 0.35  | 0.11  | -0.02       | 0.10  | 0.10               | 0.10  | 0.02  |
| New Zealand              | -0.13 | -0.02 | -0.02 | -           | -     | -0.13              | -0.02 | -0.02 |
| Norway                   | -0.02 | 0.23  | 0.23  | -0.04       | -0.02 | -0.02              | -0.02 | 0.21  |
| Portugal                 | 0.15  | 0.34  | 0.28  | -0.02       | -0.02 | 0.15               | 0.34  | 0.28  |
| Spain                    | 0.31  | 0.44  | 0.44  | 0.25        | 0.28  | 0.31               | 0.44  | 0.44  |
| Sweden                   | -0.01 | -0.01 | -0.01 | -0.02       | -0.02 | -0.01              | -0.01 | -0.01 |
| Switzerland              | -0.01 | -0.01 | -0.01 | -0.01       | -0.02 | -0.01              | -0.01 | -0.01 |
| United Kingdom           | 0.11  | 0.11  | 0.11  | 0.00        | 0.00  | 0.00               | 0.10  | 0.10  |
| United States            | 0.07  | 0.07  | 0.07  | 0.09        | -0.02 | 0.07               | 0.07  | 0.07  |

1. Tax subsidies are calculated as 1 minus the B-index. For example, in Australia in 2001, 1 dollar of R&D expenditure by large firms results in 20 cents of tax relief.

2. Calculation of Australia's B-index was adjusted to show the correct weights of the volume-based, 125% tax concession and the 175% incremental tax concession for R&D.

3. The 2004 calculation for Denmark applies to the 150% allowance on collaborative research at universities or public research institutions. Without this incentive, the B-index is 1.015.

4. 1998 instead of 1999.

5. The B-index for Hungary is based on the 100% R&D tax allowance for research and technology development (which also applies to subcontracted R&D if the partner is a public or non-profit research organization). A 300% allowance is available if the company's R&D laboratory is located at a university or public research site; the B-index in this situation equals 0.666.

6. The 2004 B-index for large firms in Japan applies to firms with a ratio of R&D to sales of less than 10%. The B-index for large firms with a R&D-to-sales ratio above 10% is 0.831. The B-index for research conducted in collaboration with universities is 0.782.

7. Calculations for the Netherlands were revised to reflect the taxability of the savings from the tax credit.



Table 21. Total researchers per thousand employment, 1981-2002

|                                   | 1981                   | 1985                     | 1991                     | 1995                     | 2001                     | 2002              |
|-----------------------------------|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------|
| Australia <sup>1, 2, 3</sup>      | 3.6 <sup>b</sup>       | 4.3                      | 6.8                      | 7.2                      | 7.3 <sup>-</sup>         | -                 |
| Austria <sup>4</sup>              | 1.8                    | 2.0 <sup>k</sup>         | -                        | -                        | 4.7 <sup>k</sup>         | -                 |
| Belgium                           | 3.5 <sup>b,r</sup>     | 4.1 <sup>b,r</sup>       | 4.8 <sup>b,r</sup>       | 6.1                      | 7.8                      | -                 |
| Canada <sup>3</sup>               | 3.5                    | 4.4                      | 5.1                      | 6.4                      | 7.1 <sup>b,n</sup>       | -                 |
| Czech Republic <sup>1</sup>       | -                      | -                        | 3.8 <sup>b,c,j,q,r</sup> | 2.2 <sup>b</sup>         | 2.9 <sup>b</sup>         | 2.9 <sup>b</sup>  |
| Denmark                           | 2.8 <sup>b,r</sup>     | 3.4 <sup>b,r</sup>       | 4.6 <sup>r</sup>         | 6.1 <sup>r</sup>         | 7.0 <sup>r</sup>         | -                 |
| Finland <sup>5</sup>              | 3.9 <sup>r</sup>       | -                        | 6.0 <sup>r</sup>         | 8.2 <sup>r</sup>         | 15.8 <sup>r</sup>        | 16.4 <sup>r</sup> |
| France                            | 3.9 <sup>a</sup>       | 4.7                      | 5.7                      | 6.7                      | 7.2                      | -                 |
| Germany                           | 4.6                    | 5.2                      | 6.3 <sup>a</sup>         | 6.2                      | 6.8                      | 6.8 <sup>b</sup>  |
| Greece                            | -                      | -                        | 1.8 <sup>b</sup>         | 2.6 <sup>a</sup>         | -                        | -                 |
| Hungary                           | -                      | -                        | 3.2 <sup>b,c</sup>       | 2.9 <sup>c</sup>         | 3.8 <sup>c</sup>         | 3.9 <sup>c</sup>  |
| Iceland                           | -                      | -                        | -                        | -                        | -                        | -                 |
| Ireland <sup>3</sup>              | 1.8 <sup>b</sup>       | 2.5 <sup>b</sup>         | 4.4 <sup>b</sup>         | 4.5 <sup>b</sup>         | 5.0 <sup>a,b</sup>       | -                 |
| Italy                             | 2.4                    | 2.9                      | 3.3                      | 3.4                      | 2.8                      | -                 |
| Japan                             | 5.3 <sup>j</sup>       | 6.2 <sup>j</sup>         | 7.5 <sup>j</sup>         | 8.3 <sup>j</sup>         | 10.2                     | 9.9 <sup>b</sup>  |
| Korea                             | -                      | -                        | -                        | 4.9 <sup>e</sup>         | 6.3 <sup>e</sup>         | 6.4 <sup>e</sup>  |
| Luxembourg <sup>3</sup>           | -                      | -                        | -                        | -                        | 6.2 <sup>-</sup>         | -                 |
| Mexico                            | -                      | -                        | -                        | 0.6                      | -                        | -                 |
| Netherlands                       | 3.4                    | 4.3                      | -                        | 4.8                      | 5.5                      | -                 |
| New Zealand                       | -                      | -                        | 4.0                      | 4.7                      | 6.9 <sup>a</sup>         | -                 |
| Norway                            | 3.8 <sup>r</sup>       | 4.8 <sup>r</sup>         | 6.6 <sup>r</sup>         | 7.5 <sup>a,r</sup>       | 8.7 <sup>r</sup>         | -                 |
| Poland                            | -                      | -                        | -                        | 3.4                      | 3.8                      | 3.9 <sup>b</sup>  |
| Portugal <sup>6, 7, 1</sup>       | 0.8 <sup>b</sup>       | 1.1 <sup>b</sup>         | 2.1 <sup>a,b,r</sup>     | 2.6 <sup>r</sup>         | 3.5 <sup>b,r</sup>       | -                 |
| Slovak Republic                   | -                      | -                        | -                        | 4.6 <sup>c</sup>         | 4.7                      | 4.6               |
| Spain                             | 1.6 <sup>b</sup>       | 1.8                      | 2.9                      | 3.5                      | 5.0                      | 5.1               |
| Sweden                            | 4.2 <sup>a,k</sup>     | 5.0 <sup>k,r</sup>       | 5.9 <sup>k,r</sup>       | 8.2                      | 10.6                     | -                 |
| Switzerland <sup>7, 1, 2, 3</sup> | -                      | 4.2 <sup>a,b,r</sup>     | 4.4                      | 5.5                      | 6.3 <sup>-</sup>         | -                 |
| Turkey <sup>3</sup>               | -                      | -                        | 0.6                      | 0.8 <sup>b</sup>         | 1.1 <sup>b</sup>         | -                 |
| United Kingdom                    | 4.9                    | 5.0                      | 4.6 <sup>a</sup>         | 5.4                      | -                        | -                 |
| United States                     | 6.3                    | 7.0 <sup>a</sup>         | 7.7                      | 7.6                      | -                        | -                 |
| <b>Total OECD<sup>3</sup></b>     | <b>4.5<sup>b</sup></b> | <b>5.2<sup>a,b</sup></b> | <b>5.6<sup>a,b</sup></b> | <b>5.8<sup>a,b</sup></b> | <b>6.5<sup>b,n</sup></b> | -                 |
| <b>EU-25</b>                      | -                      | -                        | -                        | <b>4.9<sup>b</sup></b>   | <b>5.6<sup>b</sup></b>   | -                 |
| <b>EU-15</b>                      | <b>3.5<sup>b</sup></b> | <b>4.0<sup>b</sup></b>   | <b>4.7<sup>a,b</sup></b> | <b>5.2<sup>b</sup></b>   | <b>5.9<sup>b</sup></b>   | -                 |
| China                             | -                      | -                        | 0.7 <sup>k</sup>         | 0.8 <sup>k</sup>         | 1.0                      | 1.1               |
| Israel                            | -                      | -                        | -                        | -                        | -                        | -                 |
| Russian Federation                | -                      | -                        | -                        | 9.2                      | 7.9                      | 7.5               |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1992 instead of 1991.      3. 2000 instead of 2001.      5. 1983 instead of 1981.      7. 1986 instead of 1985.  
 2. 1996 instead of 1995.      4. 1998 instead of 2001.      6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/730776281328>

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**Table 22. Researchers by sector of performance, 1991-2002**  
Per thousand labour force

|                                | Business sector     |                     |                   |                   | Government               |                          |                   |                   | Higher education   |                   |                    |                    | Private non-profit |                   |                   |          |
|--------------------------------|---------------------|---------------------|-------------------|-------------------|--------------------------|--------------------------|-------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|-------------------|----------|
|                                | 1991                | 1995                | 2001              | 2002              | 1991                     | 1995                     | 2001              | 2002              | 1991               | 1995              | 2001               | 2002               | 1991               | 1995              | 2001              | 2002     |
| Australia <sup>1, 2, 3</sup>   | 1.62                | 1.67                | 1.66              | -                 | 1.12                     | 0.99                     | 0.92              | -                 | 3.25               | 3.88              | 4.07               | -                  | 0.08               | 0.14              | 0.15              | -        |
| Austria <sup>4</sup>           | -                   | -                   | 3.01              | -                 | -                        | -                        | 0.25              | -                 | -                  | -                 | 1.53               | -                  | -                  | -                 | 0.02              | -        |
| Belgium                        | 2.08 <sup>br</sup>  | 2.82                | 4.06 <sup>b</sup> | 4.08 <sup>b</sup> | 0.19 <sup>b</sup>        | 0.23                     | 0.44              | -                 | 2.00 <sup>br</sup> | 2.32 <sup>r</sup> | 2.72 <sup>b</sup>  | -                  | 0.04 <sup>br</sup> | 0.06 <sup>r</sup> | 0.06 <sup>b</sup> | -        |
| Canada                         | 2.09                | 3.30                | 3.99              | -                 | 0.58                     | 0.52                     | 0.44              | - <sup>n</sup>    | 1.99               | 2.08              | 2.12 <sup>bn</sup> | -                  | 0.04               | 0.03              | 0.02              | -        |
| Czech Republic                 | -                   | 0.95                | 1.11              | 1.20              | - <sup>c,q</sup>         | 0.83 <sup>a</sup>        | 0.94              | 0.86              | -                  | 0.52              | 0.82               | 0.83               | -                  | 0.00              | 0.03              | 0.01     |
| Denmark                        | 1.77                | 2.39                | 3.37              | -                 | 0.88                     | 1.28                     | 1.26              | 0.77              | 1.42               | 1.97              | 2.10               | 2.75 <sup>br</sup> | 0.06               | 0.07              | 0.06              | 0.05     |
| Finland                        | -                   | -                   | -                 | -                 | - <sup>a</sup>           | -                        | -                 | -                 | -                  | -                 | -                  | -                  | -                  | -                 | -                 | -        |
| France                         | 2.37                | 2.61                | 3.28 <sup>a</sup> | -                 | 1.03                     | 1.07                     | 0.85              | - <sup>n</sup>    | 1.68               | 2.11              | 2.31               | -                  | 0.08               | 0.15              | 0.13              | -        |
| Germany                        | 3.56 <sup>a</sup>   | 3.29                | 3.98              | -                 | 0.94 <sup>a</sup>        | 0.95 <sup>b</sup>        | 0.97              | 0.99 <sup>b</sup> | 1.57 <sup>a</sup>  | 1.64              | 1.71               | 1.76 <sup>b</sup>  | 0.03 <sup>a</sup>  | -                 | -                 | -        |
| Greece                         | 0.26                | 0.37                | -                 | -                 | 0.49                     | 0.47 <sup>a</sup>        | 0.45 <sup>b</sup> | -                 | 0.83               | 1.43 <sup>a</sup> | 1.96               | -                  | -                  | 0.02              | 0.01              | -        |
| Hungary <sup>1</sup>           | 0.82                | 0.71                | 0.99              | 1.06              | 0.85 <sup>c,q</sup>      | 0.86 <sup>c</sup>        | 1.14 <sup>c</sup> | 1.12 <sup>c</sup> | 1.05               | 0.99              | 1.45               | 1.46               | -                  | -                 | -                 | -        |
| Iceland                        | 1.19 <sup>a</sup>   | 2.41                | 5.24              | -                 | 2.06                     | 2.17                     | 2.61              | -                 | 1.53 <sup>a</sup>  | 2.55              | 3.16               | -                  | 0.11 <sup>a</sup>  | 0.09              | 0.42              | -        |
| Ireland                        | 1.57                | 2.32                | 3.35              | -                 | 0.26 <sup>b</sup>        | 0.19 <sup>b</sup>        | 0.28              | 0.31              | 1.83 <sup>b</sup>  | 1.32 <sup>b</sup> | 1.23               | -                  | 0.15 <sup>b</sup>  | 0.12 <sup>b</sup> | -                 | -        |
| Italy                          | 1.20                | 1.19                | 1.11              | -                 | 0.51 <sup>a</sup>        | 0.61                     | 0.54              | -                 | 1.34               | 1.51              | 1.14               | -                  | -                  | -                 | -                 | -        |
| Japan                          | 5.24                | 5.76                | 6.38              | 6.45              | 0.46 <sup>bj</sup>       | 0.46 <sup>bj</sup>       | 0.50              | 0.51              | 1.65               | 1.82              | 2.97               | 2.55               | 0.21               | 0.24              | 0.16              | 0.16     |
| Korea                          | -                   | 3.23                | 4.47              | 4.55              | - <sup>e</sup>           | 0.61 <sup>e</sup>        | 0.54 <sup>e</sup> | 0.50 <sup>e</sup> | -                  | 0.93 <sup>e</sup> | 1.03 <sup>e</sup>  | 1.09 <sup>e</sup>  | -                  | 0.05 <sup>e</sup> | 0.05 <sup>e</sup> | 0.06     |
| Luxembourg <sup>3</sup>        | -                   | -                   | 5.24              | -                 | -                        | -                        | 0.76 <sup>-</sup> | -                 | -                  | -                 | 0.08               | -                  | -                  | -                 | -                 | -        |
| Mexico                         | -                   | 0.06                | -                 | -                 | -                        | 0.17                     | -                 | -                 | -                  | 0.32              | -                  | -                  | -                  | 0.01              | -                 | -        |
| Netherlands                    | -                   | 1.79                | 2.75              | -                 | -                        | 1.06                     | 0.83              | 0.82              | 1.78               | 1.68              | 1.93               | -                  | -                  | 0.06              | 0.04              | 0.03     |
| New Zealand                    | 0.83                | 0.88                | 1.30 <sup>a</sup> | -                 | 0.93                     | 0.84                     | 1.02 <sup>a</sup> | -                 | 1.14               | 1.69              | 2.89 <sup>a</sup>  | -                  | -                  | -                 | -                 | -        |
| Norway                         | -                   | -                   | 4.78              | -                 | -                        | -                        | 1.31              | -                 | 1.95               | 2.28              | 2.40               | -                  | -                  | -                 | -                 | -        |
| Poland                         | -                   | 0.65                | 0.55              | 0.27              | -                        | 0.65 <sup>a</sup>        | 0.61              | 0.85              | -                  | 1.63              | 2.10               | 2.16               | -                  | 0.00              | 0.00              | 0.00     |
| Portugal <sup>1</sup>          | 0.21 <sup>a</sup>   | 0.23 <sup>a</sup>   | 0.51              | -                 | 0.42                     | 0.58                     | 0.68              | -                 | 1.13 <sup>a</sup>  | 1.23 <sup>a</sup> | 1.68               | -                  | 0.24 <sup>a</sup>  | 0.41 <sup>a</sup> | 0.45              | -        |
| Slovak Republic                | -                   | 0.85 <sup>c</sup>   | 0.85              | 0.83              | - <sup>b,c,q</sup>       | 1.48 <sup>c</sup>        | 0.92 <sup>k</sup> | 0.91 <sup>k</sup> | -                  | 1.60              | 1.84               | 1.76               | -                  | -                 | 0.00              | 0.00     |
| Spain                          | 0.73                | 0.66                | 1.06              | 1.34 <sup>a</sup> | 0.51                     | 0.51                     | 0.75              | 0.69              | 1.31               | 1.69              | 2.63               | 2.49               | 0.01               | 0.03              | 0.05              | 0.02     |
| Sweden                         | 2.93 <sup>k</sup>   | 4.34 <sup>a</sup>   | 6.25              | -                 | 0.38 <sup>k</sup>        | 0.62 <sup>ak</sup>       | 0.51 <sup>k</sup> | -                 | 2.52               | 2.70              | 3.55               | -                  | 0.01 <sup>e</sup>  | -                 | -                 | -        |
| Switzerland <sup>1, 2, 3</sup> | 2.37                | 3.04                | 3.86              | -                 | 0.15                     | 0.14                     | -                 | 0.11              | 1.76 <sup>a</sup>  | 2.09              | 2.18               | -                  | -                  | -                 | -                 | -        |
| Turkey <sup>3</sup>            | 0.06                | 0.10                | 0.16 <sup>a</sup> | -                 | 0.09                     | 0.08                     | 0.11 <sup>-</sup> | -                 | 0.41               | 0.54              | 0.75 <sup>a</sup>  | -                  | -                  | -                 | -                 | -        |
| United Kingdom                 | 2.78                | 2.88                | 3.16 <sup>a</sup> | 3.50              | 0.52                     | 0.48                     | 0.34              | 0.31              | 1.01               | 1.65              | -                  | -                  | 0.10               | 0.11              | 0.13              | 0.14     |
| United States <sup>3</sup>     | 6.04                | 5.89                | 7.20 <sup>n</sup> | -                 | 0.45 <sup>h</sup>        | 0.40 <sup>h</sup>        | -                 | -                 | 1.08               | 1.35              | -                  | -                  | 0.07               | 0.08 <sup>k</sup> | -                 | -        |
| <b>Total OECD</b>              | <b>3.51</b>         | <b>3.44</b>         | <b>-</b>          | <b>-</b>          | <b>0.54<sup>ab</sup></b> | <b>0.43<sup>ab</sup></b> | <b>-</b>          | <b>-</b>          | <b>1.24</b>        | <b>1.14</b>       | <b>-</b>           | <b>-</b>           | <b>0.07</b>        | <b>0.06</b>       | <b>-</b>          | <b>-</b> |
| <b>EU-25</b>                   | <b>-</b>            | <b>-</b>            | <b>-</b>          | <b>-</b>          | <b>-</b>                 | <b>-</b>                 | <b>-</b>          | <b>-</b>          | <b>-</b>           | <b>-</b>          | <b>-</b>           | <b>-</b>           | <b>-</b>           | <b>-</b>          | <b>-</b>          | <b>-</b> |
| <b>EU-15</b>                   | <b>2.22</b>         | <b>2.32</b>         | <b>-</b>          | <b>-</b>          | <b>0.71<sup>ab</sup></b> | <b>0.74</b>              | <b>-</b>          | <b>-</b>          | <b>1.45</b>        | <b>1.75</b>       | <b>-</b>           | <b>-</b>           | <b>0.05</b>        | <b>0.08</b>       | <b>-</b>          | <b>-</b> |
| China                          | 0.19 <sup>k,s</sup> | 0.28 <sup>k,s</sup> | 0.53              | 0.59              | 0.31 <sup>k</sup>        | 0.27 <sup>k</sup>        | 0.25              | 0.25              | 0.20 <sup>s</sup>  | 0.19 <sup>s</sup> | 0.23               | 0.24               | -                  | -                 | -                 | -        |
| Israel                         | -                   | 5.05                | 4.02              | 3.81              | -                        | 2.16                     | 2.05              | 2.01              | -                  | 1.15              | 1.06               | 0.96               | -                  | 0.00              | 0.03              | 0.02     |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. 1992 instead of 1991.

2. 1996 instead of 1995.

3. 2000 instead of 2001.

4. 1998 instead of 2001.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/178788378577>

Table 23. Human resources in science and technology, 1995-2002

|                    | HRST                                  |   |
|--------------------|---------------------------------------|---|
|                    | Average annual growth rate, 1995-2002 | As a percentage of total employment, 2002 |
| Australia          | 3.07 <sup>1</sup>                     | 35.6 <sup>2</sup>                         |
| Austria            | 2.08 <sup>3</sup>                     | 24.7 <sup>2</sup>                         |
| Belgium            | 2.23 <sup>3</sup>                     | 30.1 <sup>2</sup>                         |
| Canada             | 3.00                                  | 29.0                                      |
| Czech Republic     | 1.69                                  | 29.7                                      |
| Denmark            | 3.46                                  | 35.3                                      |
| Finland            | 2.32 <sup>4</sup>                     | 32.5                                      |
| France             | 2.11                                  | 29.2                                      |
| Germany            | 2.04 <sup>3</sup>                     | 33.5 <sup>2</sup>                         |
| Greece             | 2.65                                  | 19.7                                      |
| Hungary            | -1.03 <sup>5</sup>                    | 23.9 <sup>2</sup>                         |
| Iceland            | 5.60 <sup>5</sup>                     | 29.0 <sup>2</sup>                         |
| Ireland            | 7.05                                  | 22.4                                      |
| Italy              | 4.26                                  | 28.4                                      |
| Japan <sup>6</sup> | -                                     | 15.7                                      |
| Korea              | 3.40                                  | 16.2                                      |
| Luxembourg         | 5.43 <sup>3</sup>                     | 31.6 <sup>2</sup>                         |
| Netherlands        | 3.90                                  | 34.3                                      |
| New Zealand        | 3.06 <sup>1</sup>                     | 26.0 <sup>2</sup>                         |
| Norway             | 7.64 <sup>5</sup>                     | 34.7 <sup>2</sup>                         |
| Poland             | -1.14 <sup>5</sup>                    | 23.5 <sup>2</sup>                         |
| Portugal           | -0.64                                 | 14.8                                      |
| Slovak Republic    | 1.03 <sup>7</sup>                     | 28.8                                      |
| Spain              | 8.36                                  | 23.1                                      |
| Sweden             | 3.37 <sup>4</sup>                     | 37.7                                      |
| Switzerland        | 1.04 <sup>7</sup>                     | 36.1                                      |
| United Kingdom     | 2.49                                  | 25.3                                      |
| United States      | 2.00                                  | 32.7                                      |

1. 1996-2001 instead of 1995-2002.

2. 2001 instead of 2002.

3. 1995-2001 instead of 1995-2002.

4. 1997-2001 instead of 1995-2002.

5. 1999-2001 instead of 1995-2002.

6. Data for Japan are national estimates.

7. 1999-2002 instead of 1995-2002.

Source: OECD, *Science, Technology and Industry Scoreboard 2003*.

StatLink: <http://dx.doi.org/10.1787/053853630826>

**Table 24. University graduates in science and engineering, 1988-2001**  
Tertiary A level and advanced research programmes

|                                   | Thousand of graduates |              |              |              |              |              | As a percentage of total graduates |             |             |             |             |             | Share of women |             |             |             |            |            |
|-----------------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|------------------------------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|-------------|-------------|------------|------------|
|                                   | Science               |              |              | Engineering  |              |              | Science                            |             |             | Engineering |             |             | Science        |             |             | Engineering |            |            |
|                                   | 1998                  | 2000         | 2001         | 1998         | 2000         | 2001         | 1998                               | 2000        | 2001        | 1998        | 2000        | 2001        | 1998           | 2000        | 2001        | 1998        | 2000       | 2001       |
| Australia                         | 17.2                  | 17.5         | 19.7         | 11.8         | 11.8         | 12.4         | 11.5                               | 11.8        | 11.9        | 7.9         | 7.9         | 7.5         | 8.4            | 8.6         | 8.5         | 2.9         | 3.0        | 2.9        |
| Austria                           | 2.2                   | 1.7          | 1.7          | 2.4          | 3.0          | 3.5          | 13.7                               | 9.9         | 9.1         | 14.7        | 17.3        | 18.7        | 9.3            | 7.0         | 7.4         | 5.0         | 6.7        | 6.7        |
| Belgium <sup>1</sup>              | 1.5                   | 3.2          | 3.7          | 2.6          | 4.0          | 4.3          | 8.3                                | 9.9         | 10.9        | 14.6        | 12.5        | 12.5        | 6.9            | 7.5         | 8.2         | 6.3         | 5.3        | 5.1        |
| Canada                            | 17.5                  | 18.9         | -            | 12.0         | 12.6         | -            | 11.7                               | 12.2        | -           | 8.0         | 8.2         | -           | 8.9            | 9.6         | -           | 3.1         | 3.2        | -          |
| Czech Republic                    | 1.3                   | 3.8          | 4.2          | 5.0          | 4.6          | 4.5          | 5.9                                | 12.7        | 11.9        | 22.3        | 15.5        | 12.8        | 3.2            | 6.3         | 5.3         | 9.9         | 8.3        | 7.5        |
| Denmark <sup>2</sup>              | 1.6                   | 1.9          | 2.2          | 1.2          | 1.4          | 3.0          | 12.9                               | 12.6        | 6.7         | 9.8         | 8.9         | 9.0         | 10.9           | 10.7        | 4.5         | 5.8         | 4.7        | 3.4        |
| Finland                           | 1.8                   | 2.2          | 2.2          | 5.5          | 6.7          | 6.4          | 8.0                                | 7.9         | 7.2         | 24.2        | 24.0        | 20.8        | 6.5            | 6.2         | 5.3         | 7.9         | 7.7        | 6.5        |
| France                            | 56.8                  | 65.2         | 67.0         | 46.1         | 40.6         | 41.3         | 15.9                               | 18.0        | 18.2        | 12.9        | 11.2        | 11.2        | 13.8           | 13.8        | 14.2        | 5.0         | 4.8        | 4.7        |
| Germany                           | 31.5                  | 27.6         | 26.2         | 43.0         | 38.8         | 36.4         | 14.7                               | 13.5        | 13.2        | 20.1        | 19.0        | 18.4        | 10.6           | 9.5         | 9.5         | 7.6         | 8.3        | 8.2        |
| Hungary                           | 2.0                   | 1.4          | 1.4          | 5.9          | 5.8          | 4.2          | 4.5                                | 2.3         | 2.5         | 13.5        | 9.8         | 7.4         | 3.6            | 1.3         | 1.3         | 5.5         | 3.6        | 3.3        |
| Iceland                           | 0.1                   | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 13.1                               | 10.7        | 11.0        | 5.9         | 7.1         | 6.5         | 8.1            | 7.8         | 8.2         | 2.3         | 2.6        | 2.1        |
| Ireland                           | 3.9                   | 5.4          | 5.5          | 2.3          | 2.5          | 2.2          | 16.9                               | 19.7        | 19.4        | 10.0        | 9.3         | 7.9         | 14.9           | 16.8        | 15.9        | 3.9         | 3.9        | 3.5        |
| Italy                             | 18.3                  | 15.8         | 15.6         | 25.1         | 29.7         | 31.0         | 11.1                               | 8.5         | 8.0         | 15.2        | 16.0        | 15.9        | 11.6           | 8.4         | 7.8         | 7.6         | 7.9        | 7.8        |
| Japan                             | 26.3                  | 26.7         | 28.8         | 127.7        | 129.7        | 133.5        | 4.4                                | 4.4         | 4.6         | 21.6        | 21.3        | 21.2        | 3.0            | 3.0         | 3.1         | 4.9         | 5.3        | 5.8        |
| Korea                             | 24.4                  | 27.2         | 33.3         | 62.7         | 67.4         | 74.3         | 11.0                               | 11.1        | 12.2        | 28.2        | 27.4        | 27.2        | 11.6           | 11.7        | 12.3        | 14.4        | 14.3       | 13.6       |
| Luxembourg                        | -                     | 0.1          | -            | -            | -            | -            | -                                  | 31.5        | -           | -           | -           | -           | -              | -           | -           | -           | -          | -          |
| Mexico                            | 6.5                   | 25.8         | 29.0         | 51.8         | 40.4         | 41.1         | 2.8                                | 9.0         | 9.7         | 22.0        | 14.0        | 13.8        | 2.8            | 8.0         | 8.4         | 14.5        | 6.0        | 6.2        |
| Netherlands                       | 4.8                   | 3.6          | 4.1          | 10.1         | 7.8          | 8.3          | 5.7                                | 4.8         | 5.2         | 12.1        | 10.4        | 10.5        | 3.0            | 2.5         | 2.7         | 2.8         | 2.4        | 2.4        |
| New Zealand                       | 3.6                   | 4.1          | 4.5          | 1.8          | 1.8          | 1.8          | 13.3                               | 13.0        | 14.1        | 6.9         | 5.6         | 5.5         | 10.2           | 9.7         | 10.4        | 3.7         | 3.0        | 2.9        |
| Norway                            | 1.3                   | 1.6          | 1.9          | 3.1          | 1.8          | 2.4          | 3.8                                | 6.3         | 6.8         | 9.0         | 6.8         | 8.3         | 1.9            | 2.9         | 3.2         | 3.7         | 2.9        | 3.0        |
| Poland                            | 3.4                   | 11.7         | 15.0         | 23.5         | 27.6         | 29.8         | 1.5                                | 3.4         | 3.5         | 10.4        | 8.0         | 7.0         | 0.3            | 3.4         | 3.1         | 0.8         | 3.0        | 2.6        |
| Portugal                          | -                     | 3.0          | -            | -            | 6.6          | -            | -                                  | 5.7         | -           | -           | 12.4        | -           | -              | 4.1         | -           | -           | 6.6        | -          |
| Slovak Republic <sup>2</sup>      | 1.6                   | 1.4          | 2.3          | 2.8          | 3.2          | 4.3          | 8.5                                | 6.8         | 9.4         | 14.8        | 15.4        | 17.8        | 4.8            | 4.0         | 6.2         | 7.6         | 8.8        | 10.8       |
| Spain                             | 20.1                  | 21.7         | 22.8         | 24.0         | 27.6         | 30.8         | 9.4                                | 10.2        | 10.4        | 11.2        | 12.9        | 14.2        | 7.3            | 8.1         | 8.1         | 4.9         | 6.0        | 6.9        |
| Sweden                            | 3.0                   | 3.2          | 3.6          | 5.4          | 7.8          | 8.3          | 9.0                                | 8.5         | 9.4         | 16.2        | 20.5        | 21.5        | 5.4            | 6.7         | 7.5         | 6.2         | 8.6        | 10.1       |
| Switzerland                       | 2.6                   | 3.9          | 4.0          | 3.8          | 4.2          | 3.7          | 11.4                               | 14.5        | 15.0        | 17.0        | 15.7        | 14.1        | 8.2            | 9.3         | 9.0         | 5.1         | 4.6        | 4.3        |
| Turkey                            | 13.5                  | 14.3         | 16.3         | 14.3         | 17.5         | 18.1         | 10.5                               | 10.9        | 10.4        | 11.1        | 13.3        | 11.6        | 12.2           | 12.5        | 12.1        | 6.6         | 7.8        | 6.7        |
| United Kingdom                    | 54.2                  | 64.7         | 77.0         | 46.5         | 39.0         | 44.7         | 14.5                               | 16.5        | 18.1        | 12.4        | 9.9         | 10.5        | 11.4           | 13.3        | 14.6        | 4.3         | 3.6        | 3.7        |
| United States                     | 158.3                 | 169.7        | 173.4        | 120.6        | 117.7        | 118.3        | 9.2                                | 9.3         | 9.4         | 7.0         | 6.5         | 6.4         | 7.2            | 7.3         | 7.3         | 2.4         | 2.4        | 2.4        |
| <b>Total OECD<sup>1,2,3</sup></b> | <b>510.9</b>          | <b>544.3</b> | <b>565.5</b> | <b>657.4</b> | <b>654.9</b> | <b>668.6</b> | <b>9.6</b>                         | <b>9.8</b>  | <b>10.0</b> | <b>12.4</b> | <b>11.8</b> | <b>11.8</b> | <b>7.7</b>     | <b>8.0</b>  | <b>8.0</b>  | <b>4.2</b>  | <b>4.4</b> | <b>4.5</b> |
| <b>EU-25<sup>1,2,3</sup></b>      | <b>211.6</b>          | <b>234.4</b> | <b>254.5</b> | <b>258.2</b> | <b>250.0</b> | <b>263.0</b> | <b>11.1</b>                        | <b>11.6</b> | <b>11.6</b> | <b>13.6</b> | <b>12.3</b> | <b>12.0</b> | <b>9.4</b>     | <b>9.0</b>  | <b>8.9</b>  | <b>5.4</b>  | <b>5.0</b> | <b>4.9</b> |
| <b>EU-15<sup>1,2,3</sup></b>      | <b>198.6</b>          | <b>216.2</b> | <b>231.7</b> | <b>220.1</b> | <b>208.8</b> | <b>220.2</b> | <b>12.9</b>                        | <b>13.7</b> | <b>14.1</b> | <b>14.3</b> | <b>13.3</b> | <b>13.4</b> | <b>10.4</b>    | <b>10.8</b> | <b>11.1</b> | <b>5.6</b>  | <b>5.5</b> | <b>5.6</b> |
| Israel                            | -                     | 4.0          | 4.6          | -            | 3.3          | 3.8          | -                                  | 10.3        | 11.5        | -           | 8.5         | 9.6         | -              | 7.3         | 8.4         | -           | 3.3        | 3.7        |

1. Flemish Community only instead of Belgium in 1998.

2. 1999 instead of 1998.

3. Do not include Greece, Luxembourg, Portugal and Spain.

Source: OECD, Education database, July 2004.

StatLink: <http://dx.doi.org/10.1787/831562532438>

Table 25. Triadic<sup>1</sup> patent families by priority year, 1991-2000

|                              | Number of triadic patent families |               |               |                             |                               | Average annual growth rate 1991-2000 | As a percentage of total world triadic patent families |             |             |                           |                           |
|------------------------------|-----------------------------------|---------------|---------------|-----------------------------|-------------------------------|--------------------------------------|--|-------------|-------------|---------------------------|---------------------------|
|                              | 1991                              | 1995          | 1997          | 1999                        | 2000                          |                                      | 1991   | 1995        | 1997        | 1999                      | 2000                      |
| Australia                    | 156                               | 226           | 299           | 304 <sup>b,n</sup>          | 321 <sup>b,n</sup>            | 8.0                                  | 0.5  | 0.6         | 0.7         | 0.7 <sup>b,n</sup>        | 0.7 <sup>b,n</sup>        |
| Austria                      | 174                               | 217           | 248           | 262 <sup>b,n</sup>          | 274 <sup>b,n</sup>            | 5.0                                  | 0.6  | 0.6         | 0.6         | 0.6 <sup>b,n</sup>        | 0.6 <sup>b,n</sup>        |
| Belgium                      | 239                               | 369           | 395           | 366 <sup>b,n</sup>          | 359 <sup>b,n</sup>            | 4.5                                  | 0.8  | 1.0         | 0.9         | 0.8 <sup>b,n</sup>        | 0.8 <sup>b,n</sup>        |
| Canada                       | 275                               | 382           | 525           | 539 <sup>b,n</sup>          | 519 <sup>b,n</sup>            | 7.1                                  | 0.9  | 1.1         | 1.2         | 1.2 <sup>b,n</sup>        | 1.2 <sup>b,n</sup>        |
| Czech Republic               | 9                                 | 3             | 10            | 9 <sup>b,n</sup>            | 9 <sup>b,n</sup>              | -0.6                                 | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Denmark                      | 105                               | 188           | 221           | 250 <sup>b,n</sup>          | 254 <sup>b,n</sup>            | 9.8                                  | 0.4  | 0.5         | 0.5         | 0.6 <sup>b,n</sup>        | 0.6 <sup>b,n</sup>        |
| Finland                      | 161                               | 312           | 416           | 419 <sup>b,n</sup>          | 489 <sup>b,n</sup>            | 12.4                                 | 0.5  | 0.9         | 1.0         | 1.0 <sup>b,n</sup>        | 1.1 <sup>b,n</sup>        |
| France                       | 1 783                             | 1 905         | 2 200         | 2 081 <sup>b,n</sup>        | 2 127 <sup>b,n</sup>          | 2.0                                  | 6.0  | 5.4         | 5.2         | 4.8 <sup>b,n</sup>        | 4.9 <sup>b,n</sup>        |
| Germany                      | 3 676                             | 4 815         | 5 634         | 5 867 <sup>b,n</sup>        | 5 777 <sup>b,n</sup>          | 5.0                                  | 12.3   | 13.6        | 13.4        | 13.4 <sup>b,n</sup>       | 13.2 <sup>b,n</sup>       |
| Greece                       | 5                                 | 1             | 9             | 4 <sup>b,n</sup>            | 6 <sup>b,n</sup>              | 2.0                                  | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Hungary                      | 22                                | 25            | 31            | 30 <sup>b,n</sup>           | 33 <sup>b,n</sup>             | 4.6                                  | 0.1  | 0.1         | 0.1         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>        |
| Iceland                      | 3                                 | 6             | 4             | 5 <sup>b,n</sup>            | 4 <sup>b,n</sup>              | 3.7                                  | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Ireland                      | 27                                | 31            | 37            | 56 <sup>b,n</sup>           | 45 <sup>b,n</sup>             | 5.8                                  | 0.1  | 0.1         | 0.1         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>        |
| Italy                        | 659                               | 610           | 711           | 740 <sup>b,n</sup>          | 767 <sup>b,n</sup>            | 1.7                                  | 2.2  | 1.7         | 1.7         | 1.7 <sup>b,n</sup>        | 1.8 <sup>b,n</sup>        |
| Japan                        | 8 895                             | 9 428         | 11 207        | 11 726 <sup>b,n</sup>       | 11 757 <sup>b,n</sup>         | 3.1                                  | 29.7   | 26.6        | 26.6        | 26.9 <sup>b,n</sup>       | 26.9 <sup>b,n</sup>       |
| Korea                        | 93                                | 327           | 387           | 459 <sup>b,n</sup>          | 478 <sup>b,n</sup>            | 18.2                                 | 0.3  | 0.9         | 0.9         | 1.1 <sup>b,n</sup>        | 1.1 <sup>b,n</sup>        |
| Luxembourg                   | 9                                 | 13            | 16            | 19 <sup>b,n</sup>           | 17 <sup>b,n</sup>             | 6.4                                  | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Mexico                       | 6                                 | 12            | 11            | 11 <sup>b,n</sup>           | 15 <sup>b,n</sup>             | 10.2                                 | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Netherlands                  | 568                               | 724           | 840           | 833 <sup>b,n</sup>          | 857 <sup>b,n</sup>            | 4.6                                  | 1.9  | 2.0         | 2.0         | 1.9 <sup>b,n</sup>        | 2.0 <sup>b,n</sup>        |
| New Zealand                  | 19                                | 20            | 39            | 33 <sup>b,n</sup>           | 36 <sup>b,n</sup>             | 7.1                                  | 0.1  | 0.1         | 0.1         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>        |
| Norway                       | 58                                | 86            | 94            | 108 <sup>b,n</sup>          | 109 <sup>b,n</sup>            | 7.0                                  | 0.2  | 0.2         | 0.2         | 0.2 <sup>b,n</sup>        | 0.2 <sup>b,n</sup>        |
| Poland                       | 9                                 | 5             | 9             | 8 <sup>b,n</sup>            | 10 <sup>b,n</sup>             | 0.5                                  | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Portugal                     | 3                                 | 2             | 6             | 5 <sup>b,n</sup>            | 8 <sup>b,n</sup>              | 10.2                                 | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Slovak Republic <sup>2</sup> | 1                                 | 2             | 4             | 3 <sup>b,n</sup>            | 4 <sup>b,n</sup>              | 23.2                                 | -  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| Spain                        | 70                                | 87            | 108           | 120 <sup>b,n</sup>          | 113 <sup>b,n</sup>            | 5.3                                  | 0.2  | 0.2         | 0.3         | 0.3 <sup>b,n</sup>        | 0.3 <sup>b,n</sup>        |
| Sweden                       | 391                               | 700           | 853           | 838 <sup>b,n</sup>          | 811 <sup>b,n</sup>            | 8.1                                  | 1.3  | 2.0         | 2.0         | 1.9 <sup>b,n</sup>        | 1.9 <sup>b,n</sup>        |
| Switzerland                  | 723                               | 746           | 790           | 792 <sup>b,n</sup>          | 753 <sup>b,n</sup>            | 0.5                                  | 2.4  | 2.1         | 1.9         | 1.8 <sup>b,n</sup>        | 1.7 <sup>b,n</sup>        |
| Turkey                       | 0                                 | 2             | 3             | 5 <sup>b,n</sup>            | 6 <sup>b,n</sup>              | 34.5                                 | 0.0  | 0.0         | 0.0         | 0.0 <sup>b,n</sup>        | 0.0 <sup>b,n</sup>        |
| United Kingdom               | 1 250                             | 1 516         | 1 589         | 1 767 <sup>b,n</sup>        | 1 794 <sup>b,n</sup>          | 4.0                                  | 4.2  | 4.3         | 3.8         | 4.0 <sup>b,n</sup>        | 4.1 <sup>b,n</sup>        |
| United States                | 10 217                            | 12 312        | 14 763        | 15 079 <sup>b,n</sup>       | 14 985 <sup>b,k,n</sup>       | 4.3                                  | 34.1   | 34.7        | 35.1        | 34.6 <sup>b,n</sup>       | 34.3 <sup>b,n</sup>       |
| <b>Total OECD</b>            | <b>29 607</b>                     | <b>35 070</b> | <b>41 459</b> | <b>42 738<sup>b,n</sup></b> | <b>42 739<sup>b,k,n</sup></b> | <b>4.1</b>                           | <b>98.9</b>  | <b>98.8</b> | <b>98.5</b> | <b>97.9<sup>b,n</sup></b> | <b>97.9<sup>b,n</sup></b> |
| <b>EU-25</b>                 | <b>9 168</b>                      | <b>11 533</b> | <b>13 343</b> | <b>13 687<sup>b,n</sup></b> | <b>13 770<sup>b,n</sup></b>   | <b>4.5</b>                           | <b>30.6</b>  | <b>32.5</b> | <b>31.7</b> | <b>31.4<sup>b,n</sup></b> | <b>31.5<sup>b,n</sup></b> |
| <b>EU-15</b>                 | <b>9 122</b>                      | <b>11 489</b> | <b>13 283</b> | <b>13 627<sup>b,n</sup></b> | <b>13 699<sup>b,n</sup></b>   | <b>4.5</b>                           | <b>30.5</b>  | <b>32.4</b> | <b>31.6</b> | <b>31.2<sup>b,n</sup></b> | <b>31.4<sup>b,n</sup></b> |
| <b>Total world</b>           | <b>29 923</b>                     | <b>35 501</b> | <b>42 097</b> | <b>43 635<sup>b,n</sup></b> | <b>43 664<sup>b,n</sup></b>   | <b>4.2</b>                           | <b>100</b>   | <b>100</b>  | <b>100</b>  | <b>100<sup>b,n</sup></b>  | <b>100<sup>b,n</sup></b>  |
| China                        | 12                                | 19            | 41            | 66 <sup>b,n</sup>           | 93 <sup>b,n</sup>             | 22.9                                 | 0.0  | 0.1         | 0.1         | 0.2 <sup>b,n</sup>        | 0.2 <sup>b,n</sup>        |
| Israel                       | 104                               | 158           | 284           | 347 <sup>b,n</sup>          | 342 <sup>b,n</sup>            | 13.2                                 | 0.3  | 0.4         | 0.7         | 0.8 <sup>b,n</sup>        | 0.8 <sup>b,n</sup>        |
| Russian Federation           | 37                                | 62            | 65            | 71 <sup>b,n</sup>           | 76 <sup>b,n</sup>             | 7.9                                  | 0.1  | 0.2         | 0.2         | 0.2 <sup>b,n</sup>        | 0.2 <sup>b,n</sup>        |

Times series notes:

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

Year availability:

1. Patent filed at the European Patent Office (EPO), the US Patent & Trademark Office (USPTO) and the Japanese Patent Office (JPO).
2. 1992 instead of 1991.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/482445177814>

**Table 26. Number of triadic<sup>1</sup> patent families by priority year, 1991-2000**  
Per million inhabitants

|                              | 1991                    | 1993                    | 1995                    | 1997        | 1999                      | 2000                        |
|------------------------------|-------------------------|-------------------------|-------------------------|-------------|---------------------------|-----------------------------|
| Australia                    | 9.0                     | 10.8                    | 12.4                    | 16.0        | 16.0 <sup>b,n</sup>       | 16.7 <sup>b,n</sup>         |
| Austria                      | 22.3                    | 21.7                    | 27.3                    | 31.1        | 32.7 <sup>b,n</sup>       | 34.2 <sup>b,n</sup>         |
| Belgium                      | 23.9                    | 32.6                    | 36.4                    | 38.8        | 35.8 <sup>b,n</sup>       | 35.1 <sup>b,n</sup>         |
| Canada                       | 9.8                     | 10.5                    | 13.0                    | 17.5        | 17.7 <sup>b,n</sup>       | 16.9 <sup>b,n</sup>         |
| Czech Republic               | 0.9                     | 0.7                     | 0.3                     | 0.9         | 0.9 <sup>b,n</sup>        | 0.9 <sup>b,n</sup>          |
| Denmark                      | 20.4                    | 30.7                    | 35.9                    | 41.9        | 47.0 <sup>b,n</sup>       | 47.7 <sup>b,n</sup>         |
| Finland                      | 32.1                    | 48.3                    | 61.0                    | 80.9        | 81.1 <sup>b,n</sup>       | 94.5 <sup>b,n</sup>         |
| France                       | 30.5                    | 28.7                    | 32.1                    | 36.8        | 34.5 <sup>b,n</sup>       | 35.1 <sup>b,n</sup>         |
| Germany                      | 46.0 <sup>a</sup>       | 49.1                    | 59.0                    | 68.7        | 71.5 <sup>b,n</sup>       | 70.3 <sup>b,n</sup>         |
| Greece                       | 0.5                     | 0.3                     | 0.1                     | 0.8         | 0.4 <sup>b,n</sup>        | 0.6 <sup>b,n</sup>          |
| Hungary                      | 2.1                     | 2.2                     | 2.4                     | 3.0         | 2.9 <sup>b,n</sup>        | 3.3 <sup>b,n</sup>          |
| Iceland                      | 11.6                    | 3.8                     | 22.4                    | 12.9        | 17.2 <sup>b,n</sup>       | 14.9 <sup>b,n</sup>         |
| Ireland                      | 7.6                     | 5.2                     | 8.6                     | 10.1        | 14.8 <sup>b,n</sup>       | 11.9 <sup>b,n</sup>         |
| Italy                        | 11.6                    | 11.0 <sup>a</sup>       | 10.6                    | 12.4        | 12.8 <sup>b,n</sup>       | 13.3 <sup>b,n</sup>         |
| Japan                        | 71.8                    | 67.8                    | 75.1                    | 88.8        | 92.6 <sup>b,n</sup>       | 92.6 <sup>b,n</sup>         |
| Korea                        | 2.1                     | 3.8                     | 7.2                     | 8.4         | 9.8 <sup>b,n</sup>        | 10.2 <sup>b,n</sup>         |
| Luxembourg                   | 24.1                    | 36.1                    | 31.8                    | 37.8        | 44.2 <sup>b,n</sup>       | 37.8 <sup>b,n</sup>         |
| Mexico                       | 0.1                     | 0.1                     | 0.1                     | 0.1         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>          |
| Netherlands                  | 37.7                    | 39.0                    | 46.8                    | 53.9        | 52.7 <sup>b,n</sup>       | 53.8 <sup>b,n</sup>         |
| New Zealand                  | 5.3                     | 3.1                     | 5.5                     | 10.2        | 8.5 <sup>b,n</sup>        | 9.2 <sup>b,n</sup>          |
| Norway                       | 13.6                    | 16.3                    | 19.7                    | 21.4        | 24.2 <sup>b,n</sup>       | 24.2 <sup>b,n</sup>         |
| Poland                       | 0.2                     | 0.3                     | 0.1                     | 0.2         | 0.2 <sup>b,n</sup>        | 0.3 <sup>b,n</sup>          |
| Portugal                     | 0.3                     | 0.4                     | 0.2                     | 0.6         | 0.5 <sup>b,n</sup>        | 0.8 <sup>b,n</sup>          |
| Slovak Republic <sup>2</sup> | 0.1                     | 0.2                     | 0.4                     | 0.8         | 0.6 <sup>b,n</sup>        | 0.8 <sup>b,n</sup>          |
| Spain                        | 1.8                     | 1.9                     | 2.2                     | 2.8         | 3.0 <sup>b,n</sup>        | 2.8 <sup>b,n</sup>          |
| Sweden                       | 45.4                    | 57.5                    | 79.3                    | 96.5        | 94.6 <sup>b,n</sup>       | 91.4 <sup>b,n</sup>         |
| Switzerland                  | 105.0                   | 101.0                   | 105.4                   | 111.1       | 110.5 <sup>b,n</sup>      | 104.5 <sup>b,n</sup>        |
| Turkey                       | 0.0                     | 0.0                     | 0.0                     | 0.1         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>          |
| United Kingdom               | 21.8                    | 23.5                    | 26.2                    | 27.3        | 30.2 <sup>b,n</sup>       | 30.6 <sup>b,n</sup>         |
| United States                | 40.3                    | 40.5                    | 46.2                    | 54.1        | 54.0 <sup>b,n</sup>       | 53.1 <sup>b,k,n</sup>       |
| <b>Total OECD</b>            | <b>31.3<sup>a</sup></b> | <b>31.4</b>             | <b>32.2<sup>a</sup></b> | <b>37.5</b> | <b>38.1<sup>b,n</sup></b> | <b>37.8<sup>b,k,n</sup></b> |
| <b>EU-25</b>                 | <b>-</b>                | <b>-</b>                | <b>25.8</b>             | <b>29.7</b> | <b>30.4<sup>b,n</sup></b> | <b>30.4<sup>b,n</sup></b>   |
| <b>EU-15</b>                 | <b>24.9<sup>a</sup></b> | <b>26.4<sup>a</sup></b> | <b>30.8</b>             | <b>35.5</b> | <b>36.2<sup>b,n</sup></b> | <b>36.2<sup>b,n</sup></b>   |
| China                        | 0.0                     | 0.0                     | 0.0                     | 0.0         | 0.1 <sup>b,n</sup>        | 0.1 <sup>b,n</sup>          |
| Israel                       | 21.1                    | 23.3                    | 28.5                    | 48.8        | 56.7 <sup>b,n</sup>       | 54.5 <sup>b,n</sup>         |
| Russian Federation           | 0.2                     | 0.2                     | 0.4                     | 0.4         | 0.5 <sup>b,n</sup>        | 0.5 <sup>b,n</sup>          |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. Patent filed at the EPO, the USPTO and the JPO.
2. 1992 instead of 1991.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/366528340153>

**Table 27. Science and engineering articles by country, 1988-2001**

Per million inhabitants

|                                 | 1988       | 1991       | 1995       | 1999       | 2000       | 2001       |
|---------------------------------|------------|------------|------------|------------|------------|------------|
| Australia                       | 593        | 618        | 736        | 797        | 763        | 758        |
| Austria                         | 294        | 353        | 437        | 527        | 532        | 564        |
| Belgium                         | 362        | 416        | 519        | 580        | 560        | 582        |
| Canada                          | 798        | 817        | 836        | 768        | 743        | 727        |
| Czech Republic <sup>1</sup>     | 265        | 279        | 193        | 231        | 239        | 256        |
| Denmark                         | 672        | 733        | 843        | 923        | 923        | 931        |
| Finland                         | 564        | 640        | 809        | 943        | 942        | 983        |
| France                          | 372        | 402        | 493        | 532        | 511        | 514        |
| Germany <sup>2</sup>            | 477        | 412        | 467        | 531        | 529        | 530        |
| Greece                          | 121        | 153        | 194        | 249        | 265        | 304        |
| Hungary                         | 164        | 175        | 177        | 226        | 224        | 243        |
| Iceland                         | 276        | 403        | 591        | 491        | 548        | 610        |
| Ireland                         | 224        | 260        | 336        | 406        | 420        | 432        |
| Italy                           | 198        | 243        | 312        | 361        | 364        | 385        |
| Japan                           | -          | -          | -          | -          | 437        | 451        |
| Korea                           | 18         | 31         | 84         | 180        | 200        | 233        |
| Mexico                          | 11         | 13         | 21         | 30         | 30         | 32         |
| Netherlands                     | 581        | 671        | 798        | 800        | 783        | 786        |
| New Zealand                     | 620        | 598        | 665        | 760        | 784        | 742        |
| Norway                          | 521        | 564        | 678        | 701        | 711        | 721        |
| Poland                          | 106        | 102        | 117        | 134        | 138        | 147        |
| Portugal                        | 43         | 65         | 99         | 174        | 177        | 208        |
| Slovak Republic                 | -          | -          | 212        | 185        | 186        | 177        |
| Spain                           | 140        | 187        | 289        | 375        | 370        | 387        |
| Sweden                          | 898        | 945        | 1 052      | 1 143      | 1 106      | 1 159      |
| Switzerland                     | 797        | 886        | 1 040      | 1 158      | 1 173      | 1 117      |
| Turkey                          | 9          | 15         | 28         | 49         | 52         | 60         |
| United Kingdom                  | 641        | 696        | 794        | 837        | 844        | 807        |
| United States                   | 725        | 766        | 762        | 711        | 696        | 705        |
| <b>Total OECD</b>               | <b>468</b> | <b>454</b> | <b>447</b> | <b>466</b> | <b>461</b> | <b>468</b> |
| <b>EU-25</b>                    | <b>-</b>   | <b>-</b>   | <b>432</b> | <b>482</b> | <b>479</b> | <b>485</b> |
| <b>EU-15</b>                    | <b>389</b> | <b>416</b> | <b>499</b> | <b>555</b> | <b>550</b> | <b>556</b> |
| China <sup>3</sup>              | -          | 5          | 8          | 13         | 14         | 16         |
| Israel                          | -          | 985        | 1 068      | 994        | 1 004      | 1 007      |
| Russian Federation <sup>4</sup> | -          | -          | 135        | 118        | 126        | 110        |

1. Includes articles from the former Czechoslovakia before 1996.

2. Includes articles from the former East Germany before 1992.

3. Includes articles from the Hong Kong economy before 2000.

4. Includes articles from the former USSR.

Source: NSF, *Science and Engineering Indicators* 2004. Population from OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/871586367658>

Table 28. Portfolio of S&E articles by field, 1988-2001  
As a percentage of total publications

|                                 | All fields<br>(total number) |                | Clinical<br>medicine |             | Biomedical<br>research |             | Biology    |            | Chemistry   |             | Physics     |             | Earth & space<br>sciences |            | Engineering &<br>technology |             | Mathematics |            | Psychology |            | Social<br>sciences |            | Other <sup>1</sup> |            |
|---------------------------------|------------------------------|----------------|----------------------|-------------|------------------------|-------------|------------|------------|-------------|-------------|-------------|-------------|---------------------------|------------|-----------------------------|-------------|-------------|------------|------------|------------|--------------------|------------|--------------------|------------|
|                                 | 1988                         | 2001           | 1988                 | 2001        | 1988                   | 2001        | 1988       | 2001       | 1988        | 2001        | 1988        | 2001        | 1988                      | 2001       | 1988                        | 2001        | 1988        | 2001       | 1988       | 2001       | 1988               | 2001       | 1988               | 2001       |
|                                 | Australia                    | 9 896          | 14 788               | 29.9        | 28.7                   | 13.8        | 13.1       | 16.1       | 14.7        | 8.2         | 6.8         | 7.1         | 6.9                       | 6.3        | 7.8                         | 4.5         | 6.6         | 2.2        | 1.7        | 5.2        | 4.8                | 3.3        | 3.7                | 3.4        |
| Austria                         | 2 241                        | 4 526          | 42.1                 | 42.5        | 10.6                   | 13.0        | 6.3        | 5.6        | 13.8        | 10.0        | 12.4        | 11.3        | 2.5                       | 4.6        | 4.4                         | 6.1         | 2.4         | 2.7        | 2.8        | 2.2        | 1.4                | 1.2        | 1.3                | 0.9        |
| Belgium                         | 3 586                        | 5 984          | 38.4                 | 32.9        | 17.1                   | 14.6        | 5.4        | 8.0        | 10.4        | 11.0        | 11.9        | 12.5        | 3.0                       | 4.5        | 5.5                         | 7.8         | 2.3         | 2.1        | 2.8        | 2.7        | 1.7                | 2.0        | 1.6                | 2.0        |
| Canada                          | 21 391                       | 22 626         | 25.9                 | 29.3        | 14.3                   | 15.2        | 14.6       | 10.3       | 8.1         | 7.8         | 8.0         | 6.6         | 5.8                       | 7.3        | 8.1                         | 7.9         | 2.3         | 1.9        | 4.6        | 4.7        | 4.4                | 4.4        | 3.9                | 4.6        |
| Czech Republic <sup>2</sup>     | 2 746                        | 2 622          | 16.5                 | 14.5        | 13.9                   | 16.0        | 4.6        | 7.7        | 29.0        | 22.9        | 14.5        | 16.2        | 3.6                       | 4.5        | 5.3                         | 8.2         | 1.5         | 3.9        | 7.9        | 3.1        | 2.9                | 1.5        | 0.4                | 1.3        |
| Denmark                         | 3 445                        | 4 988          | 54.6                 | 34.2        | 15.9                   | 17.9        | 6.0        | 11.7       | 4.8         | 7.8         | 8.6         | 9.3         | 2.6                       | 6.2        | 2.3                         | 5.3         | 1.7         | 1.4        | 1.7        | 3.3        | 1.1                | 1.0        | 0.8                | 1.9        |
| Finland                         | 2 789                        | 5 098          | 51.1                 | 37.8        | 14.3                   | 14.1        | 7.1        | 10.1       | 6.1         | 7.5         | 7.0         | 8.5         | 3.7                       | 5.5        | 4.3                         | 7.3         | 1.8         | 1.3        | 1.6        | 1.8        | 1.4                | 1.8        | 1.7                | 3.9        |
| France                          | 21 409                       | 31 317         | 29.1                 | 27.1        | 16.6                   | 15.2        | 5.9        | 5.7        | 15.3        | 12.9        | 17.2        | 16.1        | 4.7                       | 6.6        | 4.7                         | 9.0         | 3.0         | 4.4        | 1.8        | 1.4        | 1.1                | 0.9        | 0.5                | 0.7        |
| Germany <sup>3</sup>            | 25 666                       | 43 623         | 29.0                 | 30.9        | 15.4                   | 14.1        | 6.2        | 5.2        | 15.7        | 12.7        | 16.5        | 16.3        | 3.3                       | 5.0        | 6.7                         | 8.5         | 2.2         | 2.2        | 1.8        | 1.8        | 2.3                | 2.0        | 1.0                | 1.3        |
| Greece                          | 1 239                        | 3 329          | 20.4                 | 31.3        | 8.1                    | 8.1         | 9.3        | 9.2        | 14.7        | 12.5        | 16.3        | 14.1        | 7.9                       | 6.3        | 14.7                        | 11.4        | 4.3         | 3.0        | 2.4        | 2.1        | 0.6                | 0.5        | 1.1                | 1.5        |
| Hungary                         | 1 714                        | 2 479          | 21.2                 | 26.7        | 19.5                   | 13.1        | 3.7        | 5.2        | 27.3        | 23.5        | 12.0        | 15.0        | 1.7                       | 2.8        | 4.3                         | 7.0         | 6.2         | 3.9        | 2.2        | 1.6        | 0.7                | 0.8        | 1.2                | 0.4        |
| Iceland                         | 69                           | 174            | 45.0                 | 31.9        | 12.3                   | 10.2        | 6.2        | 16.2       | 0.0         | 3.3         | 3.4         | 4.6         | 17.6                      | 16.2       | 2.2                         | 2.9         | 2.2         | 2.1        | 1.5        | 5.8        | 3.6                | 3.9        | 6.1                | 3.0        |
| Ireland                         | 790                          | 1 665          | 35.8                 | 30.7        | 11.9                   | 14.6        | 11.9       | 14.0       | 9.2         | 8.4         | 8.7         | 10.3        | 4.7                       | 3.0        | 3.9                         | 6.9         | 4.5         | 2.4        | 5.8        | 4.1        | 1.5                | 1.7        | 2.2                | 4.1        |
| Italy                           | 11 229                       | 22 313         | 38.0                 | 35.1        | 13.4                   | 12.0        | 3.8        | 4.5        | 15.4        | 11.9        | 16.2        | 16.2        | 3.6                       | 6.0        | 5.2                         | 8.8         | 2.3         | 2.9        | 1.0        | 1.3        | 0.8                | 0.7        | 0.4                | 0.6        |
| Japan                           | 34 435                       | 57 420         | 25.6                 | 28.7        | 15.2                   | 14.0        | 6.9        | 6.1        | 17.7        | 14.9        | 19.1        | 19.1        | 1.9                       | 3.0        | 11.1                        | 11.6        | 1.4         | 1.4        | 0.5        | 0.5        | 0.5                | 0.5        | 0.1                | 0.2        |
| Korea                           | 771                          | 11 037         | 10.0                 | 17.9        | 4.6                    | 11.3        | 3.7        | 3.3        | 30.5        | 17.7        | 18.2        | 22.4        | 1.5                       | 3.0        | 24.9                        | 20.7        | 2.7         | 1.7        | 2.5        | 1.0        | 0.1                | 0.3        | 1.3                | 0.8        |
| Mexico                          | 884                          | 3 209          | 24.5                 | 18.7        | 14.9                   | 12.0        | 15.7       | 14.8       | 11.1        | 10.5        | 15.7        | 21.2        | 6.5                       | 7.6        | 4.0                         | 7.7         | 3.4         | 2.1        | 2.7        | 1.7        | 1.2                | 1.5        | 0.5                | 2.3        |
| Netherlands                     | 8 581                        | 12 602         | 36.6                 | 37.5        | 15.5                   | 14.2        | 8.2        | 6.0        | 10.8        | 8.6         | 11.9        | 8.8         | 4.1                       | 5.5        | 4.3                         | 6.4         | 1.5         | 1.4        | 2.7        | 3.9        | 2.7                | 3.6        | 1.6                | 4.0        |
| New Zealand                     | 2 075                        | 2 903          | 28.4                 | 25.9        | 10.1                   | 10.5        | 28.6       | 23.6       | 6.1         | 5.7         | 4.6         | 4.2         | 6.1                       | 9.3        | 3.8                         | 5.2         | 1.5         | 1.8        | 3.2        | 4.4        | 4.6                | 4.4        | 2.9                | 5.0        |
| Norway                          | 2 192                        | 3 252          | 40.3                 | 33.4        | 13.8                   | 12.7        | 12.8       | 12.9       | 8.0         | 6.3         | 4.9         | 5.0         | 6.4                       | 10.1       | 4.4                         | 6.2         | 2.1         | 2.3        | 3.9        | 4.4        | 2.2                | 3.1        | 1.2                | 3.7        |
| Poland                          | 4 030                        | 5 686          | 12.4                 | 13.2        | 9.3                    | 8.6         | 5.3        | 4.8        | 27.1        | 26.7        | 28.4        | 26.5        | 1.9                       | 4.1        | 9.1                         | 11.0        | 4.4         | 3.9        | 1.0        | 0.5        | 0.6                | 0.3        | 0.7                | 0.5        |
| Portugal                        | 429                          | 2 142          | 15.7                 | 14.5        | 11.4                   | 12.5        | 6.4        | 11.0       | 17.6        | 20.5        | 20.1        | 16.8        | 5.0                       | 4.7        | 16.0                        | 13.1        | 2.4         | 3.5        | 2.2        | 1.4        | 0.9                | 0.9        | 2.4                | 1.1        |
| Slovak Republic                 | -                            | 955            | -                    | 12.2        | -                      | 17.5        | -          | 4.8        | -           | 22.5        | -           | 15.9        | -                         | 3.4        | -                           | 8.5         | -           | 3.4        | -          | 8.2        | -                  | 3.2        | 0.0                | 0.4        |
| Spain                           | 5 432                        | 15 570         | 23.3                 | 24.7        | 18.8                   | 13.9        | 8.9        | 10.7       | 23.8        | 18.5        | 12.4        | 11.7        | 3.3                       | 5.7        | 4.2                         | 7.8         | 3.1         | 3.3        | 1.1        | 1.7        | 0.7                | 0.9        | 0.4                | 1.0        |
| Sweden                          | 7 573                        | 10 314         | 48.2                 | 36.7        | 17.2                   | 15.5        | 6.9        | 7.4        | 7.5         | 8.3         | 7.5         | 10.5        | 3.2                       | 4.4        | 3.9                         | 8.1         | 1.2         | 1.2        | 1.8        | 1.9        | 1.2                | 1.7        | 1.4                | 4.2        |
| Switzerland                     | 5 316                        | 8 107          | 36.3                 | 32.7        | 18.5                   | 16.1        | 4.1        | 5.8        | 11.9        | 12.8        | 16.5        | 13.4        | 2.7                       | 6.4        | 4.2                         | 6.6         | 1.6         | 1.4        | 1.7        | 2.1        | 1.7                | 1.4        | 0.9                | 1.3        |
| Turkey                          | 507                          | 4 098          | 33.1                 | 44.3        | 6.0                    | 6.3         | 5.4        | 5.2        | 15.8        | 14.2        | 12.4        | 8.9         | 6.2                       | 4.6        | 13.4                        | 11.2        | 3.3         | 1.3        | 2.6        | 1.9        | 0.9                | 1.1        | 1.1                | 1.1        |
| United Kingdom                  | 36 509                       | 47 660         | 36.6                 | 32.8        | 14.8                   | 14.2        | 7.4        | 6.2        | 9.9         | 8.5         | 9.1         | 9.0         | 4.0                       | 5.9        | 6.3                         | 7.4         | 1.5         | 1.6        | 4.5        | 5.7        | 2.4                | 3.0        | 3.7                | 5.7        |
| United States                   | 177 662                      | 200 870        | 31.0                 | 31.7        | 15.5                   | 16.9        | 7.2        | 6.2        | 7.4         | 7.1         | 10.1        | 8.7         | 4.5                       | 5.6        | 6.7                         | 6.9         | 2.2         | 1.8        | 4.9        | 4.7        | 4.0                | 3.9        | 6.4                | 6.4        |
| <b>Total OECD</b>               | <b>398 238</b>               | <b>551 402</b> | <b>31.1</b>          | <b>30.7</b> | <b>15.2</b>            | <b>15.0</b> | <b>7.7</b> | <b>6.8</b> | <b>10.8</b> | <b>10.3</b> | <b>12.0</b> | <b>11.9</b> | <b>4.1</b>                | <b>5.4</b> | <b>6.7</b>                  | <b>8.2</b>  | <b>2.1</b>  | <b>2.0</b> | <b>3.7</b> | <b>3.3</b> | <b>2.8</b>         | <b>2.6</b> | <b>3.8</b>         | <b>3.8</b> |
| <b>EU-25<sup>4</sup></b>        | <b>143 034</b>               | <b>138 116</b> | <b>21.2</b>          | <b>10.6</b> | <b>14.2</b>            | <b>7.0</b>  | <b>5.2</b> | <b>3.3</b> | <b>24.2</b> | <b>26.7</b> | <b>16.9</b> | <b>32.6</b> | <b>2.8</b>                | <b>4.9</b> | <b>6.2</b>                  | <b>8.9</b>  | <b>3.6</b>  | <b>3.8</b> | <b>3.4</b> | <b>0.9</b> | <b>1.4</b>         | <b>0.5</b> | <b>0.9</b>         | <b>0.7</b> |
| <b>EU-15<sup>4</sup></b>        | <b>134 544</b>               | <b>137 368</b> | <b>34.8</b>          | <b>28.2</b> | <b>14.3</b>            | <b>12.7</b> | <b>7.2</b> | <b>7.6</b> | <b>13.4</b> | <b>14.3</b> | <b>12.7</b> | <b>12.6</b> | <b>3.8</b>                | <b>5.1</b> | <b>6.2</b>                  | <b>10.0</b> | <b>2.4</b>  | <b>2.9</b> | <b>2.3</b> | <b>3.0</b> | <b>1.4</b>         | <b>1.3</b> | <b>1.4</b>         | <b>2.4</b> |
| China                           | 4 001                        | 20 978         | 13.8                 | 10.7        | 6.7                    | 8.0         | 2.9        | 3.8        | 13.0        | 26.3        | 39.1        | 23.4        | 5.1                       | 4.4        | 13.0                        | 16.3        | 3.9         | 3.9        | 0.1        | 1.1        | 1.7                | 0.5        | 0.6                | 1.7        |
| Israel                          | 4 916                        | 6 487          | 33.6                 | 32.9        | 13.6                   | 12.7        | 8.8        | 6.9        | 5.8         | 7.6         | 13.7        | 13.6        | 3.4                       | 3.4        | 6.2                         | 8.3         | 3.5         | 4.0        | 4.7        | 3.5        | 3.1                | 3.3        | 3.7                | 3.9        |
| Russian Federation <sup>5</sup> | 31 625                       | 15 846         | 14.3                 | 3.2         | 17.7                   | 7.5         | 2.6        | 4.0        | 27.1        | 27.1        | 27.6        | 35.6        | 4.1                       | 8.1        | 4.1                         | 8.9         | 0.9         | 3.4        | 0.6        | 1.3        | 0.6                | 0.6        | 0.4                | 0.3        |

1. Other: Health sciences and professional fields.
2. Czechoslovakia instead of the Czech Republic in 1988.
3. Western Germany only in 1988.
4. Average for countries available.
5. Former USSR instead of Russian Federation in 1988.

Source: US National Science Foundation, *Science and Engineering Indicators* 2004.

StatLink: <http://dx.doi.org/10.1787/581733703880>



Table 29. Technology balance of payments, 1981-2002

Millions current USD

|                            | Receipts         |                 |                  |                    |                     |                     | Payments         |                  |                  |                    |                    |                     | Balance |       |        |        |        |        |
|----------------------------|------------------|-----------------|------------------|--------------------|---------------------|---------------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|---------|-------|--------|--------|--------|--------|
|                            | 1981             | 1985            | 1991             | 1995               | 2001                | 2002                | 1981             | 1985             | 1991             | 1995               | 2001               | 2002                | 1981    | 1985  | 1991   | 1995   | 2001   | 2002   |
| Australia <sup>1,2,3</sup> | 14               | 68              | 200              | 128                | -                   | -                   | 142              | 188              | 370              | 344                | -                  | -                   | -129    | -120  | -170   | -215   | -      | -      |
| Austria <sup>4</sup>       | 24 <sup>k</sup>  | 30 <sup>k</sup> | 79 <sup>k</sup>  | 1 907              | 2 430               | -                   | 99 <sup>k</sup>  | 114 <sup>k</sup> | 301 <sup>k</sup> | 2 140              | 2 426              | -                   | -75     | -84   | -222   | -233   | 4      | -      |
| Belgium                    | 622 <sup>a</sup> | 694             | 1 945            | 3 758 <sup>a</sup> | 5 709               | -                   | 727 <sup>a</sup> | 800              | 2 380            | 3 080 <sup>a</sup> | 4 641              | -                   | -105    | -106  | -435   | 677    | 1 068  | -      |
| Canada                     | 157              | 399             | 929              | 1 283              | 2 034               | -                   | 416              | 550              | 928              | 1 008              | 1 051              | -                   | -259    | -151  | 1      | 275    | 983    | -      |
| Czech Republic             | -                | -               | -                | -                  | 487                 | 451                 | -                | -                | -                | -                  | 554                | 781                 | -       | -     | -      | -      | -67    | -330   |
| Denmark                    | 107              | 184             | -                | -                  | -                   | -                   | 71               | 161              | -                | -                  | -                  | -                   | 36      | 23    | -      | -      | -      | -      |
| Finland                    | 5                | 4               | 54               | 58                 | 1 303               | 1 468               | 87 <sup>k</sup>  | 107 <sup>k</sup> | 311 <sup>k</sup> | 390 <sup>k</sup>   | 1 060              | 1 231               | -82     | -102  | -257   | -332   | 243    | 237    |
| France                     | 906              | 894             | 1 742            | 2 170              | 3 196               | -                   | 991              | 1 064            | 2 451            | 2 988              | 2 695              | -                   | -85     | -170  | -709   | -818   | 501    | -      |
| Germany                    | 934              | 1 171           | 6 282            | 10 633             | 14 306              | 15 756 <sup>n</sup> | 1 479            | 1 650            | 7 979            | 13 170             | 20 942             | 21 295 <sup>n</sup> | -545    | -479  | -1 697 | -2 537 | -6 636 | -5 539 |
| Hungary <sup>3</sup>       | -                | -               | -                | 181                | -                   | -                   | -                | -                | -                | 215                | -                  | -                   | -       | -     | -      | -35    | -      | -      |
| Italy                      | 198              | 144             | 1 410            | 3 051              | 2 684               | 2 978               | 570              | 546              | 2 366            | 3 437              | 3 440              | 2 993               | -372    | -402  | -956   | -386   | -756   | -15    |
| Japan                      | 794              | 982             | 2 751            | 5 976              | 10 259              | -                   | 1 177            | 1 229            | 2 930            | 4 165              | 4 512              | -                   | -383    | -247  | -179   | 1 811  | 5 747  | -      |
| Mexico                     | 33               | 14              | 79               | 118                | 41                  | 48 <sup>n</sup>     | 273              | 163              | 420              | 487                | 419                | 664 <sup>n</sup>    | -241    | -149  | -341   | -369   | -378   | -616   |
| Netherlands                | 387              | 1 196           | 4 876            | -                  | -                   | -                   | 593              | 1 503            | 5 933            | -                  | -                  | -                   | -206    | -308  | -1 057 | -      | -      | -      |
| New Zealand                | -                | -               | 21               | 20                 | -                   | -                   | -                | -                | 15               | 8                  | -                  | -                   | -       | -     | 5      | 12     | -      | -      |
| Norway                     | 44 <sup>k</sup>  | 28 <sup>k</sup> | 348              | 496                | 1 382               | 1 379               | 76 <sup>k</sup>  | 77 <sup>k</sup>  | 438              | 928                | 1 246              | 1 189               | -33     | -48   | -90    | -431   | 136    | 190    |
| Poland                     | -                | -               | -                | 231                | 177                 | -                   | -                | -                | -                | 234                | 795                | -                   | -       | -     | -      | -3     | -618   | -      |
| Portugal                   | -                | -               | -                | 139                | 282                 | 385                 | -                | -                | -                | 537                | 597                | 693                 | -       | -     | -      | -398   | -316   | -308   |
| Slovak Republic            | -                | -               | -                | 9 <sup>q</sup>     | 30 <sup>n,q</sup>   | -                   | -                | -                | -                | 27 <sup>q</sup>    | 65 <sup>n,q</sup>  | -                   | -       | -     | -      | -17    | -34    | -      |
| Spain                      | 181              | 137             | 641              | 79                 | -                   | -                   | 567              | 552              | 2 276            | 1 110              | -                  | -                   | -387    | -414  | -1 635 | -1 031 | -      | -      |
| Sweden                     | 68               | 87              | 217 <sup>a</sup> | -                  | -                   | -                   | 64               | 49               | 116 <sup>a</sup> | -                  | -                  | -                   | 4       | 38    | 102    | -      | -      | -      |
| Switzerland                | -                | 870             | 1 941            | 2 778              | 3 233               | 4 334               | -                | 233              | 745              | 1 262              | 3 251              | 4 250               | -       | 637   | 1 196  | 1 516  | -18    | 84     |
| United Kingdom             | 965              | 1 038           | 2 333            | 4 218              | 17 105 <sup>n</sup> | -                   | 798              | 923              | 2 302            | 3 530              | 7 713 <sup>n</sup> | -                   | 167     | 115   | 32     | 688    | 9 392  | -      |
| United States              | 7 284            | 6 678           | 17 819           | 30 289             | 41 098              | 44 142 <sup>n</sup> | 650              | 1 170            | 4 035            | 6 919              | 16 713             | 19 258 <sup>n</sup> | 6 634   | 5 508 | 13 784 | 23 370 | 24 385 | 24 884 |
| Russian Federation         | -                | -               | -                | -                  | 242                 | 211                 | -                | -                | -                | -                  | 398                | 577                 | -       | -     | -      | -      | -157   | -366   |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1986 instead of 1985. 2. 1992 instead of 1991. 3. 1996 instead of 1995. 4. 2000 instead of 2001.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/525456707887>

**Table 30. Technology balance of payments, 1981-2002**

Payments as a percentage of GERD

|                                   | 1981                | 1985                | 1991                | 1995                | 2001                  | 2002               |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|--------------------|
| Australia <sup>1, 2, 3</sup>      | 7.8                 | 8.3                 | 7.8                 | 5.0                 | -                     | -                  |
| Austria <sup>4</sup>              | 12.8 <sup>k</sup>   | 13.7 <sup>k</sup>   | 12.1 <sup>b,k</sup> | 58.5 <sup>b</sup>   | 68.5 <sup>b</sup>     | -                  |
| Belgium <sup>5</sup>              | 53.2 <sup>a</sup>   | 59.5                | 72.5 <sup>b</sup>   | 64.9 <sup>a</sup>   | 94.0                  | -                  |
| Canada                            | 11.3                | 10.9                | 9.9                 | 10.1                | 7.4                   | -                  |
| Czech Republic                    | -                   | -                   | -                   | -                   | 74.4                  | 86.6               |
| Denmark                           | 11.4                | 22.2                | -                   | -                   | -                     | -                  |
| Finland                           | 14.4 <sup>a,k</sup> | 12.6 <sup>b,k</sup> | 12.4 <sup>a,k</sup> | 13.2 <sup>k</sup>   | 25.6                  | 27.1               |
| France                            | 8.6 <sup>a</sup>    | 9.0                 | 8.5                 | 8.3                 | 9.2                   | -                  |
| Germany                           | 8.8                 | 9.7                 | 17.9 <sup>a</sup>   | 23.9 <sup>b</sup>   | 45.0                  | 42.5 <sup>n</sup>  |
| Hungary <sup>3</sup>              | -                   | -                   | -                   | 73.3 <sup>c</sup>   | -                     | -                  |
| Italy                             | 16.0 <sup>r</sup>   | 11.4 <sup>r</sup>   | 16.6 <sup>a</sup>   | 31.3                | 28.3                  | -                  |
| Japan                             | 4.3 <sup>k</sup>    | 3.3 <sup>k</sup>    | 2.9 <sup>k</sup>    | 2.7 <sup>k</sup>    | 3.5                   | -                  |
| Mexico                            | -                   | -                   | -                   | 55.0                | 17.1                  | -                  |
| Netherlands                       | 22.3                | 57.1                | 99.8                | -                   | -                     | -                  |
| New Zealand                       | -                   | -                   | 3.7                 | 1.4                 | -                     | -                  |
| Norway                            | 10.4 <sup>k</sup>   | 8.1 <sup>k</sup>    | 22.5                | 36.9 <sup>a</sup>   | 45.8                  | 37.3               |
| Poland                            | -                   | -                   | -                   | 26.7 <sup>a</sup>   | 67.0                  | -                  |
| Portugal                          | -                   | -                   | -                   | 88.1                | 64.3                  | 61.2               |
| Slovak Republic                   | -                   | -                   | -                   | 14.8 <sup>c,q</sup> | 48.5 <sup>j,n,q</sup> | -                  |
| Spain                             | 71.9                | 60.4                | 49.3                | 23.4                | -                     | -                  |
| Sweden                            | 2.4 <sup>a,j</sup>  | 1.7 <sup>j</sup>    | 1.7 <sup>a,j</sup>  | -                   | -                     | -                  |
| Switzerland <sup>1, 2, 3, 4</sup> | -                   | 8.6 <sup>a</sup>    | 13.9                | 17.7                | 30.4 <sup>-</sup>     | -                  |
| Turkey                            | -                   | -                   | -                   | -                   | -                     | -                  |
| United Kingdom                    | 6.6 <sup>a</sup>    | 9.0 <sup>a</sup>    | 10.8                | 15.9                | 29.0 <sup>n</sup>     | -                  |
| United States                     | 0.9 <sup>h</sup>    | 1.0 <sup>h</sup>    | 2.5 <sup>h</sup>    | 3.8 <sup>h</sup>    | 6.1 <sup>h</sup>      | 7.0 <sup>h,n</sup> |
| Russian Federation                | -                   | -                   | -                   | -                   | 11.1                  | 13.4               |

*Times series notes:*

(a) to (r): See standard statistical notes for science and technology indicators earlier in the Annex.

*Year availability:*

1. 1986 instead of 1985.

3. 1996 instead of 1995.

5. 1983 instead of 1981.

2. 1992 instead of 1991.

4. 2000 instead of 2001.

Source: OECD, MSTI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/507503146810>





**Table 32. Trade-to-GDP ratio for goods and services, 1991-2003<sup>1</sup>**  
Average imports and exports, as a percentage of nominal GDP, and average annual growth rates (%)

|                                 | Goods              |             |             |             |                |            |             | Services           |            |            |            |                |            |             | Goods and services |             |             |             |                |            |             |
|---------------------------------|--------------------|-------------|-------------|-------------|----------------|------------|-------------|--------------------|------------|------------|------------|----------------|------------|-------------|--------------------|-------------|-------------|-------------|----------------|------------|-------------|
|                                 | Trade-to-GDP ratio |             |             |             | Average growth |            |             | Trade-to-GDP ratio |            |            |            | Average growth |            |             | Trade-to-GDP ratio |             |             |             | Average growth |            |             |
|                                 | 1991               | 1995        | 2001        | 2003        | 1991-2003      | 1991-2001  | 2001-03     | 1991               | 1995       | 2001       | 2003       | 1991-2003      | 1991-2001  | 2001-03     | 1991               | 1995        | 2001        | 2003        | 1991-2003      | 1991-2001  | 2001-03     |
| Australia <sup>2</sup>          | 13.1               | 15.3        | 17.0        | 16.6        | 2.1            | 2.6        | -2.4        | 4.0                | 4.6        | 4.5        | 4.3        | 0.8            | 1.3        | -4.5        | 17.1               | 19.9        | 21.6        | 20.9        | 1.8            | 2.3        | -2.9        |
| Austria                         | 26.7               | 25.8        | 35.4        | 34.7        | 2.2            | 2.8        | -1.0        | 12.1               | 11.4       | 17.0       | 16.3       | 2.5            | 3.4        | -1.9        | 38.8               | 37.2        | 52.4        | 51.0        | 2.3            | 3.0        | -1.3        |
| Belgium                         | -                  | -           | -           | -           | -              | -          | -           | -                  | -          | -          | -          | -              | -          | -           | 68.2               | 66.9        | 84.2        | 80.9        | 1.4            | 2.1        | -2.0        |
| Canada                          | 21.4               | 31.0        | 35.3        | 30.9        | 3.1            | 5.0        | -6.7        | 4.3                | 5.1        | 5.9        | 5.5        | 2.0            | 3.1        | -3.9        | 25.7               | 36.1        | 41.2        | 36.4        | 2.9            | 4.7        | -6.3        |
| Czech Republic                  | 41.3               | 44.0        | 61.0        | 58.4        | 2.9            | 3.9        | -2.3        | 8.0                | 12.0       | 11.1       | 8.8        | 0.8            | 3.3        | -11.3       | 49.3               | 56.0        | 72.1        | 67.2        | 2.6            | 3.8        | -3.5        |
| Denmark                         | 26.6               | 26.4        | 29.4        | 28.3        | 0.5            | 1.0        | -1.8        | 7.7                | 7.0        | 12.1       | 11.7       | 3.5            | 4.5        | -1.5        | 34.3               | 33.4        | 41.4        | 40.0        | 1.3            | 1.9        | -1.7        |
| Finland                         | 17.7               | 26.4        | 30.2        | 28.7        | 4.0            | 5.4        | -2.6        | 4.7                | 6.4        | 5.5        | 5.3        | 0.9            | 1.6        | -2.4        | 22.4               | 32.8        | 35.7        | 34.0        | 3.5            | 4.7        | -2.6        |
| France                          | 18.0               | 18.1        | 22.5        | 20.8        | 1.2            | 2.2        | -4.0        | 3.7                | 3.7        | 4.6        | 4.4        | 1.5            | 2.3        | -2.5        | 21.7               | 21.8        | 27.1        | 25.2        | 1.2            | 2.2        | -3.7        |
| Germany                         | 22.3               | 20.0        | 28.3        | 28.0        | 1.9            | 2.4        | -0.5        | 4.1                | 4.1        | 5.9        | 5.9        | 3.0            | 3.6        | 0.1         | 26.4               | 24.2        | 34.2        | 34.0        | 2.1            | 2.6        | -0.4        |
| Greece                          | 17.8               | 16.5        | 17.9        | 16.7        | -0.5           | 0.1        | -3.5        | 4.3                | 4.7        | 10.1       | 7.7        | 4.8            | 8.5        | -13.9       | 22.1               | 21.3        | 28.0        | 24.4        | 0.8            | 2.4        | -7.0        |
| Hungary                         | -                  | 34.5        | 62.1        | 54.3        | 5.7            | 9.8        | -6.7        | -                  | 10.1       | 11.4       | 9.7        | -0.5           | 2.0        | -7.9        | 41.8               | 44.6        | 73.5        | 64.1        | 3.6            | 5.6        | -6.9        |
| Iceland                         | 23.6               | 24.8        | 26.8        | 23.5        | 0.0            | 1.3        | -6.6        | 8.9                | 9.7        | 14.2       | 13.5       | 3.5            | 4.7        | -2.7        | 32.5               | 34.5        | 41.0        | 37.0        | 1.1            | 2.3        | -5.2        |
| Ireland                         | 45.0               | 57.9        | 63.4        | 47.2        | 0.4            | 3.4        | -14.7       | 10.4               | 12.9       | 27.6       | 28.7       | 8.4            | 9.7        | 2.1         | 55.4               | 70.8        | 90.9        | 75.9        | 2.6            | 5.0        | -9.0        |
| Italy                           | 14.7               | 19.4        | 21.6        | 19.5        | 2.3            | 3.9        | -5.2        | 3.9                | 5.6        | 6.1        | 5.7        | 3.2            | 4.5        | -3.4        | 18.6               | 25.0        | 27.7        | 25.1        | 2.5            | 4.0        | -4.8        |
| Japan <sup>3</sup>              | 7.5                | 6.9         | 8.4         | 8.8         | 1.4            | 1.1        | 4.6         | 1.7                | 1.5        | 1.7        | 1.8        | 0.6            | 0.2        | 5.5         | 9.2                | 8.4         | 10.1        | 11.0        | 1.5            | 1.0        | 4.4         |
| Korea                           | 23.7               | 24.5        | 29.9        | 30.7        | 2.2            | 2.3        | 1.3         | 3.7                | 4.9        | 6.7        | 6.2        | 4.3            | 6.0        | -4.4        | 27.4               | 29.4        | 36.7        | 36.9        | 2.5            | 2.9        | 0.3         |
| Luxembourg                      | 62.4               | 53.3        | 53.5        | 46.8        | -2.4           | -1.5       | -6.7        | 40.3               | 49.6       | 90.9       | 81.3       | 5.8            | 8.1        | -5.6        | 102.7              | 103.0       | 144.4       | 128.1       | 1.8            | 3.4        | -6.0        |
| Mexico <sup>2</sup>             | 14.7               | 25.7        | 26.3        | 25.5        | 5.0            | 5.8        | -3.1        | 3.1                | 3.4        | 2.4        | 2.3        | -2.7           | -2.7       | -3.4        | 17.8               | 29.1        | 28.6        | 27.8        | 4.0            | 4.7        | -3.2        |
| Netherlands                     | 43.5               | 44.9        | 51.1        | 48.4        | 0.7            | 1.6        | -3.7        | 9.2                | 9.5        | 11.5       | 11.8       | 1.9            | 2.2        | 0.4         | 52.7               | 54.5        | 62.6        | 59.0        | 0.9            | 1.7        | -2.9        |
| New Zealand <sup>2</sup>        | 20.8               | 21.3        | 25.4        | 23.4        | 1.1            | 2.0        | -8.3        | 7.2                | 7.6        | 8.4        | 8.2        | 1.2            | 1.5        | -2.2        | 27.9               | 28.9        | 33.7        | 31.5        | 1.1            | 1.9        | -6.7        |
| Norway                          | -                  | -           | -           | -           | -              | -          | -           | -                  | -          | -          | -          | -              | -          | -           | 36.0               | 34.9        | 37.2        | 34.5        | -0.3           | 0.3        | -3.7        |
| Poland <sup>3</sup>             | 19.8               | 19.5        | 24.5        | 26.3        | 2.6            | 2.1        | 7.1         | 3.1                | 3.1        | 5.0        | 5.0        | 4.3            | 4.8        | -0.5        | 22.9               | 22.6        | 29.5        | 35.7        | 3.7            | 2.5        | 9.5         |
| Portugal <sup>3</sup>           | -                  | 27.4        | 29.6        | 28.0        | 0.3            | 1.3        | -5.7        | -                  | 5.9        | 6.1        | 5.9        | 0.1            | 0.6        | -2.5        | 33.6               | 33.3        | 35.7        | 33.4        | 0.0            | 0.6        | -3.2        |
| Slovak Republic                 | -                  | 45.4        | 66.2        | 68.6        | 4.3            | 4.9        | 1.8         | -                  | 11.6       | 11.3       | 10.2       | -3.3           | -2.8       | -5.2        | 46.1               | 57.0        | 77.5        | 78.8        | 4.5            | 5.2        | 0.9         |
| Spain                           | 13.8               | 17.5        | 23.1        | 21.7        | 3.8            | 5.2        | -3.0        | 4.2                | 5.2        | 7.7        | 7.1        | 4.4            | 6.0        | -3.8        | 18.0               | 22.7        | 30.7        | 28.8        | 4.0            | 5.4        | -3.2        |
| Sweden                          | 20.8               | 29.1        | 32.1        | 30.5        | 3.2            | 4.3        | -2.6        | 5.8                | 6.8        | 10.6       | 9.9        | 4.5            | 6.0        | -3.3        | 26.6               | 35.9        | 42.7        | 40.4        | 3.5            | 4.7        | -2.8        |
| Switzerland <sup>2</sup>        | 27.1               | 26.0        | 33.7        | 31.4        | 1.2            | 2.2        | -4.0        | 6.5                | 6.8        | 9.3        | 9.3        | 3.1            | 3.5        | 1.1         | 33.6               | 32.9        | 43.0        | 40.6        | 1.6            | 2.5        | -2.9        |
| Turkey                          | -                  | -           | -           | -           | -              | -          | -           | -                  | -          | -          | -          | -              | -          | -           | 15.2               | 22.1        | 32.5        | 29.0        | 5.4            | 7.6        | -5.7        |
| United Kingdom                  | 18.6               | 22.2        | 21.2        | 19.2        | 0.3            | 1.3        | -4.9        | 5.1                | 6.4        | 7.6        | 7.4        | 3.1            | 3.9        | -1.1        | 23.7               | 28.5        | 28.7        | 26.6        | 1.0            | 1.9        | -3.9        |
| United States <sup>2</sup>      | 7.8                | 9.1         | 9.5         | 9.1         | 1.4            | 2.0        | -4.3        | 2.5                | 2.6        | 2.7        | 2.6        | 0.5            | 0.7        | -1.0        | 10.3               | 11.7        | 12.1        | 11.7        | 1.2            | 1.7        | -3.6        |
| <b>Total OECD<sup>2,4</sup></b> | <b>13.4</b>        | <b>14.7</b> | <b>16.8</b> | <b>16.5</b> | <b>1.9</b>     | <b>2.3</b> | <b>-1.7</b> | <b>3.3</b>         | <b>3.6</b> | <b>4.3</b> | <b>4.4</b> | <b>2.5</b>     | <b>2.6</b> | <b>1.4</b>  | <b>18.0</b>        | <b>19.4</b> | <b>22.3</b> | <b>22.1</b> | <b>1.9</b>     | <b>2.1</b> | <b>-0.9</b> |
| <b>EU-15<sup>2,4</sup></b>      | <b>19.4</b>        | <b>21.3</b> | <b>25.7</b> | <b>24.7</b> | <b>1.6</b>     | <b>2.7</b> | <b>-3.9</b> | <b>4.6</b>         | <b>5.3</b> | <b>7.3</b> | <b>7.3</b> | <b>4.1</b>     | <b>4.6</b> | <b>-0.4</b> | <b>26.3</b>        | <b>28.8</b> | <b>35.5</b> | <b>34.3</b> | <b>1.9</b>     | <b>2.8</b> | <b>-2.7</b> |
| <b>EU-25<sup>2,4</sup></b>      | <b>19.4</b>        | <b>21.6</b> | <b>26.3</b> | <b>25.3</b> | <b>1.8</b>     | <b>3.1</b> | <b>-4.7</b> | <b>4.6</b>         | <b>5.3</b> | <b>7.3</b> | <b>7.3</b> | <b>4.2</b>     | <b>4.6</b> | <b>-0.6</b> | <b>26.4</b>        | <b>29.0</b> | <b>35.9</b> | <b>34.9</b> | <b>2.2</b>     | <b>3.1</b> | <b>-2.4</b> |

1. Or nearest years available.

2. 2002 instead of 2003.

3. 2002 instead of 2003 for Goods and for Services.

4. Aggregates of countries for which data are available.

Source: OECD, National Accounts database, November 2004.

StatLink: <http://dx.doi.org/10.1787/534761537201>

**Table 33. Export ratio by industry and technology level, 1992-2002**  
Exports as a percentage of production

|   | (ISIC Rev.3)   | Australia |           | Austria   |                         | Belgium   |                         | Canada    |           | Czech Rep. |                        | Denmark    |            | Finland   |           | France    |                        | Germany   |            | Greece    |           |
|---|----------------|-----------|-----------|-----------|-------------------------|-----------|-------------------------|-----------|-----------|------------|------------------------|------------|------------|-----------|-----------|-----------|------------------------|-----------|------------|-----------|-----------|
|   |                | 1992      | 1999      | 1992      | 2002                    | 1992      | 2002                    | 1992      | 2000      | 1993       | 2001                   | 1992       | 2002       | 1992      | 2002      | 1992      | 2002                   | 1992      | 2001       | 1995      | 2002      |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>17</b> | <b>21</b> | <b>45</b> | <b>67</b>               | <b>46</b> | <b>115</b>              | <b>42</b> | <b>53</b> | <b>33</b>  | <b>53</b>              | <b>57</b>  | <b>70</b>  | <b>38</b> | <b>48</b> | <b>29</b> | <b>38</b>              | <b>32</b> | <b>47</b>  | <b>20</b> | <b>22</b> |
| <b>High technology manufactures</b>             |                | <b>31</b> | <b>41</b> | <b>56</b> | <b>107</b> <sup>1</sup> | -         | <b>155</b> <sup>2</sup> | <b>57</b> | <b>84</b> | <b>76</b>  | <b>68</b> <sup>1</sup> | <b>101</b> | <b>130</b> | <b>59</b> | -         | <b>42</b> | <b>62</b> <sup>1</sup> | <b>54</b> | <b>101</b> | <b>26</b> | -         |
| Pharmaceuticals                                 | (2423)         | 16        | 26        | 58        | 111 <sup>1</sup>        | 59        | 135 <sup>2</sup>        | 10        | 25        | -          | 67 <sup>1</sup>        | 85         | 101        | 36        | -         | 24        | 53 <sup>1</sup>        | 46        | 90         | 11        | -         |
| Office, accounting and computing machinery      | (30)           | 99        | 116       | 1,044     | 208                     | -         | 2,804 <sup>2</sup>      | 117       | 120       | 180        | 114 <sup>1</sup>       | 206        | 406        | 69        | 310       | 62        | 102 <sup>1</sup>       | 46        | 117        | 156       | 895       |
| Radio, television and communication equip.      | (32)           | 16        | 25        | 32        | 90                      | -         | 110 <sup>2</sup>        | 40        | 69        | 72         | 73 <sup>1</sup>        | 95         | 185        | 62        | 58        | 39        | 66 <sup>1</sup>        | 51        | 108        | 20        | 38        |
| Medical, precision and optical instruments      | (33)           | 42        | 67        | 71        | 102                     | -         | 232 <sup>2</sup>        | -         | -         | 29         | 42 <sup>1</sup>        | 102        | 96         | 71        | 62        | 29        | 45 <sup>1</sup>        | 47        | 74         | 50        | 68        |
| Aircraft and spacecraft                         | (353)          | 42        | 40        | -         | - <sup>1</sup>          | -         | 78 <sup>2</sup>         | 74        | 87        | -          | 38 <sup>1</sup>        | -          | -          | 9         | -         | 68        | 66 <sup>1</sup>        | 100       | 142        | -         | -         |
| <b>Medium-high technology manufactures</b>      |                | <b>14</b> | <b>20</b> | <b>73</b> | <b>92</b> <sup>1</sup>  | -         | <b>129</b> <sup>2</sup> | <b>62</b> | <b>72</b> | <b>63</b>  | <b>69</b> <sup>1</sup> | <b>75</b>  | <b>86</b>  | <b>50</b> | -         | <b>41</b> | <b>51</b> <sup>1</sup> | <b>42</b> | <b>54</b>  | <b>24</b> | -         |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | 13        | 18        | 54        | 79 <sup>1</sup>         | 56        | 118 <sup>2</sup>        | 38        | 53        | -          | 59 <sup>1</sup>        | 63         | 90         | 38        | -         | 47        | 61 <sup>1</sup>        | 46        | 60         | 21        | -         |
| Machinery and equipment, nec                    | (29)           | 19        | 26        | 71        | 81                      | -         | 160 <sup>2</sup>        | 47        | 67        | 43         | 80 <sup>1</sup>        | 76         | 77         | 46        | 48        | 39        | 55 <sup>1</sup>        | 43        | 57         | 23        | 38        |
| Electrical machinery and apparatus, nec         | (31)           | 14        | 25        | 81        | 90                      | -         | 97 <sup>2</sup>         | 41        | 66        | 31         | 71 <sup>1</sup>        | 58         | 77         | 49        | 77        | 37        | 53 <sup>1</sup>        | 24        | 38         | 29        | 42        |
| Motor vehicles, trailers and semi-trailers      | (34)           | 11        | 17        | 96        | 123                     | -         | 141 <sup>2</sup>        | 81        | 81        | 56         | 66 <sup>1</sup>        | 113        | 156        | 137       | 165       | 40        | 44                     | 48        | 55         | 36        | 33        |
| Railroad equip. and transport equip. nec        | (352+359)      | 5         | 5         | 32        | 68 <sup>1</sup>         | -         | 89 <sup>2</sup>         | 32        | 34        | -          | 60 <sup>1</sup>        | 118        | 165        | 9         | -         | 39        | 36 <sup>1</sup>        | 42        | 38         | -         | -         |
| <b>Medium-low technology manufactures</b>       |                | <b>21</b> | <b>23</b> | <b>40</b> | <b>44</b> <sup>1</sup>  | -         | <b>66</b> <sup>2</sup>  | <b>33</b> | <b>35</b> | <b>31</b>  | <b>46</b> <sup>1</sup> | <b>43</b>  | <b>41</b>  | <b>34</b> | <b>41</b> | <b>21</b> | <b>24</b> <sup>1</sup> | <b>22</b> | <b>31</b>  | <b>23</b> | -         |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 17        | 26        | 6         | 13                      | 34        | 55                      | 21        | 25        | 12         | 23 <sup>1</sup>        | 42         | 28         | 30        | 38        | 14        | 15                     | 15        | 21         | 22        | 18        |
| Rubber and plastics prod.                       | (25)           | 5         | 7         | 68        | 66                      | 46        | 102                     | 27        | 40        | 31         | 58 <sup>1</sup>        | 54         | 58         | 34        | 38        | 26        | 31 <sup>1</sup>        | 26        | 39         | 18        | 31        |
| Other non-metallic mineral prod.                | (26)           | 3         | 4         | 26        | 28                      | 30        | 52                      | 18        | 28        | 48         | 50 <sup>1</sup>        | 32         | 28         | 18        | 26        | 16        | 19                     | 15        | 23         | 22        | 11        |
| Basic metals                                    | (27)           | 47        | 46        | 56        | 65                      | 47        | 90 <sup>2</sup>         | 60        | 53        | 32         | 44 <sup>1</sup>        | 54         | 67         | 47        | 58        | 42        | 45 <sup>1</sup>        | 36        | 47         | 37        | 35        |
| Fabricated metal prod., except mach. & equip.   | (28)           | 5         | 4         | 37        | 40                      | 21        | 42 <sup>2</sup>         | 15        | 24        | 34         | 48 <sup>1</sup>        | 35         | 34         | 22        | 19        | 12        | 14 <sup>1</sup>        | 15        | 22         | 12        | 16        |
| Building and repairing of ships and boats       | (351)          | 19        | 49        | 58        | 394 <sup>1</sup>        | -         | 38 <sup>2</sup>         | 15        | 51        | -          | 90 <sup>1</sup>        | 54         | 60         | 44        | 75        | 24        | 49 <sup>1</sup>        | 46        | 66         | -         | -         |
| <b>Low technology manufactures</b>              |                | <b>14</b> | <b>16</b> | <b>29</b> | <b>48</b>               | <b>39</b> | <b>83</b>               | <b>29</b> | <b>38</b> | <b>24</b>  | <b>34</b> <sup>1</sup> | <b>48</b>  | <b>59</b>  | <b>32</b> | <b>41</b> | <b>20</b> | <b>26</b> <sup>1</sup> | <b>20</b> | <b>27</b>  | <b>18</b> | <b>18</b> |
| Food prod., beverages and tobacco               | (15-16)        | 19        | 22        | 8         | 27                      | 30        | 56                      | 14        | 21        | 14         | 13 <sup>1</sup>        | 51         | 59         | 5         | 10        | 20        | 23                     | 13        | 18         | 15        | 13        |
| Textiles, textile prod., leather and footwear   | (17-19)        | 20        | 26        | 64        | 95                      | 58        | 153                     | 13        | 35        | 42         | 71 <sup>1</sup>        | 82         | 193        | 38        | 54        | 31        | 52                     | 49        | 77         | 32        | 38        |
| Wood and prod. of wood and cork                 | (20)           | 8         | 10        | 35        | 47                      | 30        | 65                      | 60        | 58        | 27         | 38 <sup>1</sup>        | 42         | 43         | 48        | 45        | 12        | 18 <sup>1</sup>        | 9         | 18         | 6         | 5         |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 3         | 4         | 41        | 50                      | 24        | 49                      | 45        | 44        | 21         | 37 <sup>1</sup>        | 18         | 22         | 51        | 54        | 13        | 17 <sup>1</sup>        | 16        | 23         | 7         | 6         |
| Manufacturing nec; recycling                    | (36-37)        | 9         | 12        | 32        | 60                      | 70        | 186                     | 25        | 51        | 37         | 53 <sup>1</sup>        | 61         | 59         | 23        | 26        | 19        | 26 <sup>1</sup>        | 25        | 37         | 6         | 8         |

1. Intensity of the previous year.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

2. 2000 instead of 2002.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.

Table 33. Export ratio by industry and technology level, 1992-2002 (cont'd)

Exports as a percentage of production

|   | (ISIC Rev.3)   | Hungary   |                  | Iceland   |                  | Ireland   |           | Italy     |                 | Japan     |                 | Korea     |           | Mexico    |           | Netherlands |                    | New Zealand |           | Norway    |                  |
|---|----------------|-----------|------------------|-----------|------------------|-----------|-----------|-----------|-----------------|-----------|-----------------|-----------|-----------|-----------|-----------|-------------|--------------------|-------------|-----------|-----------|------------------|
|   |                | 1992      | 2002             | 1992      | 2000             | 1992      | 1999      | 1992      | 2002            | 1992      | 2002            | 1994      | 2001      | 1992      | 2001      | 1992        | 2002               | 1992        | 1998      | 1992      | 2002             |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>39</b> | <b>63</b>        | <b>50</b> | <b>54</b>        | <b>70</b> | <b>84</b> | <b>23</b> | <b>34</b>       | <b>13</b> | <b>18</b>       | <b>23</b> | <b>31</b> | <b>19</b> | <b>42</b> | <b>64</b>   | <b>82</b>          | <b>36</b>   | <b>40</b> | <b>37</b> | <b>40</b>        |
| <b>High technology manufactures</b>             |                | -         | 94 <sup>1</sup>  | -         | 36 <sup>1</sup>  | 123       | 120       | 31        | 56 <sup>1</sup> | 27        | 30 <sup>1</sup> | 39        | -         | -         | 84        | 93          | 223 <sup>1</sup>   | -           | -         | 67        | 78 <sup>1</sup>  |
| Pharmaceuticals                                 | (2423)         | -         | 48 <sup>1</sup>  | -         | 15 <sup>1</sup>  | 248       | 168       | 15        | 50 <sup>1</sup> | 4         | 6 <sup>1</sup>  | 4         | 6         | 8         | 15        | 61          | 101 <sup>1</sup>   | -           | -         | 64        | 62 <sup>1</sup>  |
| Office, accounting and computing machinery      | (30)           | 35        | 108 <sup>1</sup> | -         | 187 <sup>1</sup> | 106       | 106       | 76        | 83 <sup>1</sup> | 34        | 33 <sup>1</sup> | 59        | 53        | 89        | 141       | 392         | 1,625 <sup>1</sup> | -           | -         | 179       | 259 <sup>1</sup> |
| Radio, television and communication equip.      | (32)           | 67        | 98 <sup>1</sup>  | -         | 8 <sup>1</sup>   | 103       | 124       | 26        | 51 <sup>1</sup> | 27        | 28 <sup>1</sup> | 44        | 58        | 76        | 68        | 46          | 84 <sup>1</sup>    | -           | -         | 57        | 64 <sup>1</sup>  |
| Medical, precision and optical instruments      | (33)           | 24        | 91 <sup>1</sup>  | -         | 49 <sup>1</sup>  | 95        | 92        | 32        | 55 <sup>1</sup> | 43        | 86              | 33        | 20        | -         | -         | -           | - <sup>1</sup>     | -           | -         | 55        | 54 <sup>1</sup>  |
| Aircraft and spacecraft                         | (353)          | 229       | 5 <sup>1</sup>   | -         | 47 <sup>1</sup>  | -         | -         | 48        | 70 <sup>1</sup> | 13        | 31 <sup>1</sup> | 96        | -         | -         | 140       | -           | 76 <sup>1</sup>    | -           | -         | 55        | 237 <sup>1</sup> |
| <b>Medium-high technology manufactures</b>      |                | -         | 77 <sup>1</sup>  | -         | 22 <sup>1</sup>  | 77        | 99        | 33        | 50 <sup>1</sup> | 20        | 25 <sup>1</sup> | 24        | -         | 34        | 69        | 82          | 95 <sup>1</sup>    | -           | -         | -         | -                |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | -         | 69 <sup>1</sup>  | -         | 4 <sup>1</sup>   | 79        | 101       | 22        | 37 <sup>1</sup> | 14        | 21 <sup>1</sup> | 27        | 36        | 21        | 31        | 76          | 90 <sup>1</sup>    | -           | -         | -         | -                |
| Machinery and equipment, nec                    | (29)           | 40        | 85 <sup>1</sup>  | -         | 47               | 96        | 96        | 42        | 59              | 19        | 29              | 28        | 45        | 42        | 94        | 82          | 74                 | -           | -         | 40        | 47 <sup>1</sup>  |
| Electrical machinery and apparatus, nec         | (31)           | 76        | 56 <sup>1</sup>  | -         | 4 <sup>1</sup>   | 70        | 115       | 19        | 31 <sup>1</sup> | 16        | 24 <sup>1</sup> | 39        | 45        | 89        | 159       | 102         | 160 <sup>1</sup>   | -           | -         | 26        | 52 <sup>1</sup>  |
| Motor vehicles, trailers and semi-trailers      | (34)           | 78        | 94 <sup>1</sup>  | -         | 42 <sup>1</sup>  | 60        | 87        | 39        | 53 <sup>1</sup> | 23        | 26 <sup>1</sup> | 16        | 31        | 26        | 55        | 99          | 122 <sup>1</sup>   | -           | -         | 96        | 82 <sup>1</sup>  |
| Railroad equip. and transport equip. nec        | (352+359)      | 36        | 77 <sup>1</sup>  | -         | 0 <sup>1</sup>   | 2         | 8         | 35        | 50 <sup>1</sup> | 74        | 95 <sup>1</sup> | 8         | -         | -         | 61        | -           | 130 <sup>1</sup>   | -           | -         | 11        | 23 <sup>1</sup>  |
| <b>Medium-low technology manufactures</b>       |                | 28        | 36 <sup>1</sup>  | -         | 54 <sup>1</sup>  | 61        | 46        | 17        | 24 <sup>1</sup> | 6         | 8 <sup>1</sup>  | 16        | -         | 12        | 20        | 56          | 60 <sup>1</sup>    | -           | -         | -         | -                |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 15        | 22 <sup>1</sup>  | -         | -                | -         | -         | 14        | 17              | 2         | 1               | 8         | 17        | 8         | 1         | 76          | 78                 | -           | -         | -         | -                |
| Rubber and plastics prod.                       | (25)           | 32        | 45 <sup>1</sup>  | 4         | 9                | 72        | 53        | 23        | 32              | 15        | 21 <sup>1</sup> | 18        | 26        | 17        | 30        | 76          | 79                 | -           | -         | 30        | 34 <sup>1</sup>  |
| Other non-metallic mineral prod.                | (26)           | 27        | 30 <sup>1</sup>  | 1         | 1                | 31        | 26        | 17        | 21              | 5         | 8               | 4         | 7         | 8         | 15        | 31          | 20                 | 6           | 4         | 13        | 13 <sup>1</sup>  |
| Basic metals                                    | (27)           | 53        | 53 <sup>1</sup>  | 94        | 98 <sup>1</sup>  | 94        | 94        | 22        | 30 <sup>1</sup> | 6         | 11              | 16        | 19        | 16        | 20        | 94          | 105                | 76          | 85        | 75        | 75               |
| Fabricated metal prod., except mach. & equip.   | (28)           | 26        | 34 <sup>1</sup>  | 9         | 5 <sup>1</sup>   | 54        | 33        | 12        | 17 <sup>1</sup> | 4         | 6               | 17        | 19        | 14        | 39        | 32          | 25                 | 10          | 12        | 26        | 21 <sup>1</sup>  |
| Building and repairing of ships and boats       | (351)          | 29        | 50 <sup>1</sup>  | -         | 99 <sup>1</sup>  | 63        | 9         | 11        | 56 <sup>1</sup> | 54        | 53 <sup>1</sup> | 49        | -         | -         | 9         | -           | 34 <sup>1</sup>    | -           | -         | 51        | 20               |
| <b>Low technology manufactures</b>              |                | 37        | 42 <sup>1</sup>  | 59        | 59               | 51        | 43        | 19        | 28              | 3         | 3 <sup>1</sup>  | 21        | 23        | 6         | 16        | 50          | 53                 | -           | -         | 18        | 21               |
| Food prod., beverages and tobacco               | (15-16)        | 25        | 24 <sup>1</sup>  | 72        | 73               | 50        | 41        | 9         | 16              | 1         | 1               | 4         | 4         | 2         | 5         | 52          | 58                 | 51          | 52        | 16        | 20               |
| Textiles, textile prod., leather and footwear   | (17-19)        | 111       | 76 <sup>1</sup>  | 30        | 35               | 85        | 85        | 30        | 44              | 6         | 10 <sup>1</sup> | 48        | 58        | 13        | 44        | 121         | 158                | 56          | 58        | 32        | 44               |
| Wood and prod. of wood and cork                 | (20)           | 26        | 42 <sup>1</sup>  | 0         | 3                | 33        | 23        | 5         | 8               | 0         | 0 <sup>1</sup>  | 4         | 3         | 6         | 5         | 33          | 21                 | 37          | 36        | 19        | 13               |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 10        | 21 <sup>1</sup>  | 1         | 2                | 52        | 44        | 9         | 14              | 2         | 2 <sup>1</sup>  | 6         | 12        | 7         | 11        | 31          | 31                 | 16          | 18        | 21        | 22               |
| Manufacturing nec; recycling                    | (36-37)        | 33        | 151 <sup>1</sup> | 0         | 1                | 31        | 34        | 33        | 44              | 5         | 7 <sup>1</sup>  | 26        | 43        | 24        | 53        | 33          | 28                 | 14          | 12        | 23        | 28               |

1. Intensity of the previous year.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

2. 2000 instead of 2002.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.

Table 33. Export ratio by industry and technology level, 1992-2002 (cont'd)

Exports as a percentage of production

|   | (ISIC Rev.3)   | Poland   |                | Portugal  |           | Slovak Rep. |           | Spain     |           | Sweden    |           | Switzerland |           | UK        |           | Unites States |           | EU <sup>3</sup> |           | OECD <sup>4</sup> |           |
|---|----------------|----------|----------------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|---------------|-----------|-----------------|-----------|-------------------|-----------|
|   |                | 1994     | 2001           | 1992      | 1999      | 1997        | 1999      | 1992      | 2001      | 1992      | 2001      | 1997        | 2000      | 1992      | 2001      | 1992          | 2001      | 1992            | 1999      | 1992              | 1999      |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>1</b> | <b>1</b>       | <b>29</b> | <b>38</b> | <b>54</b>   | <b>63</b> | <b>19</b> | <b>31</b> | <b>41</b> | <b>51</b> | <b>54</b>   | <b>66</b> | <b>31</b> | <b>43</b> | <b>13</b>     | <b>17</b> | <b>30</b>       | <b>39</b> | <b>21</b>         | <b>26</b> |
| <b>High technology manufactures</b>             |                | -        | 4 <sup>1</sup> | 42        | 62        | -           | -         | 28        | 49        | 66        | 67        | -           | -         | 57        | 100       | 26            | 35        | 49              | 71        | 34                | 43        |
| Pharmaceuticals                                 | (2423)         | -        | 4 <sup>1</sup> | 11        | 23        | -           | -         | 10        | 32        | 67        | 79        | -           | -         | 40        | 76        | 10            | 15        | 33              | 56        | 19                | 28        |
| Office, accounting and computing machinery      | (30)           | 0        | 1 <sup>1</sup> | 175       | 128       | 78          | 461       | 52        | 50        | 97        | 136       | -           | -         | 69        | 101       | 47            | 58        | 65              | 104       | 48                | 57        |
| Radio, television and communication equip.      | (32)           | 5        | 5 <sup>1</sup> | 52        | 75        | 77          | 140       | 33        | 66        | 65        | 55        | 40          | 52        | 52        | 123       | 24            | 37        | 45              | 74        | 31                | 40        |
| Medical, precision and optical instruments      | (33)           | 1        | 1 <sup>1</sup> | 61        | 60        | 34          | 30        | 24        | 47        | 65        | 72        | 76          | 88        | 51        | 63        | 16            | 26        | 44              | 56        | 30                | 41        |
| Aircraft and spacecraft                         | (353)          | -        | 9 <sup>1</sup> | -         | -         | -           | -         | 121       | 86        | 46        | 103       | -           | -         | 70        | 123       | 35            | 44        | 73              | 77        | 47                | 57        |
| <b>Medium-high technology manufactures</b>      |                | -        | 2 <sup>1</sup> | 39        | 66        | -           | -         | 36        | 51        | 50        | 58        | -           | -         | 45        | 53        | 20            | 24        | 42              | 51        | -                 | -         |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | -        | 2 <sup>1</sup> | 20        | 34        | -           | -         | 22        | 38        | 43        | 66        | -           | -         | 46        | 60        | 17            | 22        | 41              | 54        | -                 | -         |
| Machinery and equipment, nec                    | (29)           | 3        | 3 <sup>1</sup> | 36        | 51        | 58          | 81        | 34        | 42        | 52        | 64        | 70          | 82        | 51        | 55        | 24            | 27        | 45              | 54        | 32                | 38        |
| Electrical machinery and apparatus, nec         | (31)           | 3        | 2 <sup>1</sup> | 57        | 94        | 64          | 82        | 25        | 36        | 49        | 66        | 44          | 51        | 36        | 52        | 24            | 38        | 29              | 41        | 24                | 34        |
| Motor vehicles, trailers and semi-trailers      | (34)           | 3        | 3 <sup>1</sup> | 57        | 85        | 112         | 103       | 49        | 67        | 54        | 50        | 104         | 126       | 45        | 48        | 18            | 19        | 47              | 52        | 33                | 35        |
| Railroad equip. and transport equip. nec        | (352+359)      | -        | 5 <sup>1</sup> | 28        | 27        | -           | -         | 15        | 45        | 18        | 23        | -           | -         | 17        | 20        | 11            | 11        | 33              | 38        | 33                | 32        |
| <b>Medium-low technology manufactures</b>       |                | -        | 1 <sup>1</sup> | 19        | 24        | -           | -         | 17        | 21        | 39        | 44        | -           | -         | 21        | 24        | 7             | 8         | 22              | 25        | -                 | -         |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 1        | 1 <sup>1</sup> | 24        | 18        | 34          | 45        | 24        | 20        | 48        | 49        | -           | -         | 24        | 29        | 5             | 5         | 18              | 20        | -                 | -         |
| Rubber and plastics prod.                       | (25)           | 1        | 1 <sup>1</sup> | 14        | 33        | 67          | 75        | 18        | 29        | 45        | 56        | 48          | 53        | 21        | 22        | 8             | 11        | 26              | 32        | 18                | 21        |
| Other non-metallic mineral prod.                | (26)           | 0        | 0 <sup>1</sup> | 18        | 19        | 47          | 45        | 11        | 18        | 17        | 26        | 21          | 27        | 16        | 17        | 6             | 7         | 16              | 20        | 11                | 13        |
| Basic metals                                    | (27)           | 1        | 1 <sup>1</sup> | 17        | 47        | 62          | 54        | 27        | 29        | 52        | 61        | 94          | 174       | 33        | 44        | 10            | 13        | 35              | 39        | 19                | 22        |
| Fabricated metal prod., except mach. & equip.   | (28)           | 0        | 0 <sup>1</sup> | 18        | 26        | 34          | 47        | 10        | 13        | 25        | 27        | 27          | 31        | 13        | 15        | 5             | 6         | 15              | 18        | 9                 | 11        |
| Building and repairing of ships and boats       | (351)          | -        | 2 <sup>1</sup> | 29        | 10        | -           | -         | 47        | 26        | 71        | 57        | -           | -         | 15        | 15        | 10            | 9         | 31              | 39        | 33                | 34        |
| <b>Low technology manufactures</b>              |                | 0        | 0 <sup>1</sup> | 29        | 31        | 39          | 45        | 9         | 19        | 28        | 39        | -           | -         | 16        | 17        | 6             | 7         | 20              | 25        | 12                | 15        |
| Food prod., beverages and tobacco               | (15-16)        | 0        | 0 <sup>1</sup> | 9         | 12        | 14          | 13        | 7         | 16        | 6         | 15        | 12          | 13        | 14        | 15        | 6             | 6         | 15              | 19        | 9                 | 11        |
| Textiles, textile prod., leather and footwear   | (17-19)        | 1        | 0 <sup>1</sup> | 49        | 53        | 96          | 125       | 15        | 36        | 58        | 107       | 72          | 78        | 30        | 43        | 7             | 13        | 35              | 46        | 21                | 29        |
| Wood and prod. of wood and cork                 | (20)           | 0        | 0 <sup>1</sup> | 38        | 39        | 45          | 53        | 7         | 11        | 36        | 42        | 8           | 10        | 3         | 5         | 6             | 4         | 14              | 19        | 11                | 14        |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 0        | 0 <sup>1</sup> | 20        | 24        | 43          | 52        | 9         | 16        | 40        | 50        | 21          | 26        | 11        | 12        | 5             | 6         | 17              | 21        | 11                | 12        |
| Manufacturing nec; recycling                    | (36-37)        | 0        | 0 <sup>1</sup> | 19        | 21        | 45          | 53        | 10        | 21        | 34        | 41        | 88          | 95        | 26        | 24        | 12            | 15        | 26              | 32        | 14                | 19        |

1. Intensity of the previous year.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

2. 2000 instead of 2002.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.



Table 34. Import penetration by industry and technology level, 1992-2002

Imports as a percentage of domestic demand

|   | (ISIC Rev.3)   | Australia |           | Austria   |                         | Belgium    |                         | Canada    |           | Czech Republic |                        | Denmark    |            | Finland   |                        | France    |                        | Germany   |            | Greece    |           |
|---|----------------|-----------|-----------|-----------|-------------------------|------------|-------------------------|-----------|-----------|----------------|------------------------|------------|------------|-----------|------------------------|-----------|------------------------|-----------|------------|-----------|-----------|
|   |                | 1992      | 1999      | 1992      | 2002                    | 1995       | 2002                    | 1992      | 2000      | 1993           | 2001                   | 1992       | 2002       | 1992      | 2002                   | 1992      | 2002                   | 1992      | 2001       | 1995      | 2002      |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>26</b> | <b>34</b> | <b>49</b> | <b>66</b>               | <b>76</b>  | <b>117</b>              | <b>43</b> | <b>53</b> | <b>32</b>      | <b>53</b>              | <b>53</b>  | <b>68</b>  | <b>31</b> | <b>37</b>              | <b>29</b> | <b>37</b>              | <b>29</b> | <b>40</b>  | <b>40</b> | <b>46</b> |
| <b>High technology manufactures</b>             |                | <b>65</b> | <b>75</b> | <b>68</b> | <b>106</b> <sup>1</sup> | <b>129</b> | <b>152</b>              | <b>72</b> | <b>88</b> | <b>92</b>      | <b>81</b> <sup>1</sup> | <b>101</b> | <b>137</b> | <b>67</b> | <b>52</b> <sup>1</sup> | <b>42</b> | <b>59</b> <sup>1</sup> | <b>56</b> | <b>101</b> | <b>72</b> | <b>-</b>  |
| Pharmaceuticals                                 | (2423)         | 36        | 49        | 65        | 109 <sup>1</sup>        | 91         | 145 <sup>2</sup>        | 32        | 53        | -              | 86 <sup>1</sup>        | 73         | 103        | 58        | 74 <sup>1</sup>        | 19        | 47 <sup>1</sup>        | 36        | 84         | 58        | -         |
| Office, accounting and computing machinery      | (30)           | 100       | 103       | 152       | 146                     | 253        | 474 <sup>2</sup>        | 107       | 108       | 106            | 106 <sup>1</sup>       | 126        | 155        | 78        | 119                    | 72        | 101 <sup>1</sup>       | 62        | 109        | 102       | 109       |
| Radio, television and communication equipment   | (32)           | 50        | 70        | 42        | 90                      | 119        | 110 <sup>2</sup>        | 56        | 74        | 83             | 82 <sup>1</sup>        | 95         | 172        | 63        | 37                     | 45        | 64 <sup>1</sup>        | 57        | 107        | 71        | 73        |
| Medical, precision and optical instruments      | (33)           | 75        | 85        | 79        | 102                     | 151        | 169 <sup>2</sup>        | -         | -         | 66             | 62 <sup>1</sup>        | 103        | 94         | 75        | 54                     | 33        | 48 <sup>1</sup>        | 38        | 65         | 91        | 95        |
| Aircraft and spacecraft                         | (353)          | 71        | 76        | -         | -                       | 86         | 78 <sup>2</sup>         | 73        | 83        | -              | 71 <sup>1</sup>        | -          | -          | 50        | 84 <sup>1</sup>        | 55        | 49 <sup>1</sup>        | 100       | 156        | -         | -         |
| <b>Medium-high technology manufactures</b>      |                | <b>39</b> | <b>49</b> | <b>76</b> | <b>92</b> <sup>1</sup>  | <b>102</b> | <b>135</b> <sup>2</sup> | <b>66</b> | <b>73</b> | <b>66</b>      | <b>67</b> <sup>1</sup> | <b>77</b>  | <b>88</b>  | <b>54</b> | <b>56</b> <sup>1</sup> | <b>38</b> | <b>48</b> <sup>1</sup> | <b>29</b> | <b>39</b>  | <b>71</b> | <b>-</b>  |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | 32        | 40        | 66        | 84 <sup>1</sup>         | 109        | 125 <sup>2</sup>        | 42        | 59        | -              | 69 <sup>1</sup>        | 76         | 93         | 50        | 54 <sup>1</sup>        | 44        | 57 <sup>1</sup>        | 36        | 53         | 65        | -         |
| Machinery and equipment, nec                    | (29)           | 51        | 63        | 71        | 77                      | 100        | 161 <sup>2</sup>        | 69        | 79        | 55             | 81 <sup>1</sup>        | 68         | 72         | 45        | 39                     | 41        | 56 <sup>1</sup>        | 26        | 37         | 70        | 75        |
| Electrical machinery and apparatus, nec         | (31)           | 39        | 54        | 76        | 88                      | 64         | 97 <sup>2</sup>         | 65        | 82        | 33             | 68 <sup>1</sup>        | 62         | 71         | 49        | 74                     | 30        | 48 <sup>1</sup>        | 17        | 32         | 48        | 65        |
| Motor vehicles, trailers and semi-trailers      | (34)           | 37        | 46        | 97        | 123                     | 111        | 150 <sup>2</sup>        | 79        | 76        | 42             | 53 <sup>1</sup>        | 106        | 120        | 128       | 130                    | 35        | 38                     | 34        | 35         | 92        | 93        |
| Railroad equip. and transport equip. nec        | (352+359)      | 32        | 44        | 37        | 60 <sup>1</sup>         | 80         | 94 <sup>2</sup>         | 31        | 38        | -              | 45 <sup>1</sup>        | 111        | 111        | 25        | 50 <sup>1</sup>        | 40        | 43 <sup>1</sup>        | 39        | 42         | -         | -         |
| <b>Medium-low technology manufactures</b>       |                | <b>15</b> | <b>20</b> | <b>38</b> | <b>45</b> <sup>1</sup>  | <b>53</b>  | <b>60</b> <sup>2</sup>  | <b>28</b> | <b>33</b> | <b>22</b>      | <b>47</b> <sup>1</sup> | <b>45</b>  | <b>46</b>  | <b>28</b> | <b>27</b>              | <b>22</b> | <b>25</b> <sup>1</sup> | <b>22</b> | <b>27</b>  | <b>34</b> | <b>-</b>  |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 16        | 15        | 23        | 39                      | 39         | 48                      | 11        | 11        | 18             | 45 <sup>1</sup>        | 47         | 35         | 31        | 26                     | 22        | 20                     | 28        | 27         | 16        | 16        |
| Rubber and plastics prod.                       | (25)           | 24        | 29        | 64        | 67                      | 81         | 102                     | 36        | 43        | 38             | 64 <sup>1</sup>        | 52         | 57         | 40        | 38                     | 27        | 32 <sup>1</sup>        | 22        | 29         | 41        | 51        |
| Other non-metallic mineral prod.                | (26)           | 10        | 12        | 21        | 27                      | 36         | 42                      | 30        | 37        | 20             | 30 <sup>1</sup>        | 26         | 30         | 19        | 20                     | 15        | 19                     | 16        | 20         | 25        | 17        |
| Basic metals                                    | (27)           | 18        | 23        | 53        | 58                      | 76         | 87 <sup>2</sup>         | 39        | 45        | 19             | 53 <sup>1</sup>        | 78         | 82         | 31        | 42                     | 42        | 47 <sup>1</sup>        | 37        | 45         | 46        | 42        |
| Fabricated metal prod., except mach.&equip.     | (28)           | 11        | 13        | 35        | 39                      | 34         | 43 <sup>2</sup>         | 27        | 33        | 21             | 37 <sup>1</sup>        | 31         | 35         | 21        | 16                     | 12        | 15 <sup>1</sup>        | 12        | 15         | 33        | 35        |
| Building and repairing of ships and boats       | (351)          | 3         | 50        | 71        | 239 <sup>1</sup>        | 36         | 29 <sup>2</sup>         | 16        | 59        | -              | 82 <sup>1</sup>        | 25         | 48         | 25        | 17                     | 14        | 29 <sup>1</sup>        | 16        | 50         | -         | -         |
| <b>Low technology manufactures</b>              |                | <b>15</b> | <b>19</b> | <b>31</b> | <b>44</b>               | <b>59</b>  | <b>81</b>               | <b>22</b> | <b>27</b> | <b>17</b>      | <b>32</b> <sup>1</sup> | <b>38</b>  | <b>52</b>  | <b>14</b> | <b>20</b>              | <b>22</b> | <b>28</b> <sup>1</sup> | <b>27</b> | <b>31</b>  | <b>26</b> | <b>29</b> |
| Food prod., beverages and tobacco               | (15-16)        | 7         | 9         | 11        | 27                      | 42         | 50                      | 13        | 17        | 10             | 15 <sup>1</sup>        | 29         | 40         | 7         | 17                     | 16        | 19                     | 17        | 20         | 22        | 24        |
| Textiles, textile prod., leather and footwear   | (17-19)        | 35        | 48        | 71        | 96                      | 91         | 180                     | 41        | 54        | 25             | 69 <sup>1</sup>        | 85         | 169        | 59        | 73                     | 39        | 61                     | 64        | 85         | 31        | 41        |
| Wood and prod. of wood and cork                 | (20)           | 13        | 12        | 20        | 24                      | 55         | 62                      | 17        | 16        | 10             | 22 <sup>1</sup>        | 50         | 54         | 8         | 9                      | 16        | 23 <sup>1</sup>        | 20        | 19         | 27        | 36        |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 15        | 16        | 33        | 36                      | 45         | 51                      | 23        | 23        | 27             | 41 <sup>1</sup>        | 28         | 31         | 9         | 10                     | 17        | 21 <sup>1</sup>        | 16        | 21         | 32        | 25        |
| Manufacturing nec; recycling                    | (36-37)        | 28        | 36        | 38        | 60                      | 119        | 189                     | 39        | 48        | 27             | 38 <sup>1</sup>        | 38         | 46         | 30        | 36                     | 27        | 35 <sup>1</sup>        | 30        | 40         | 29        | 36        |

1. For comparison: intensity of the previous year.

2. 2000 instead of 2002.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.

StatLink: <http://dx.doi.org/10.1787/707487145841>

Table 34. Import penetration by industry and technology level, 1992-2002 (cont'd)

Imports as a percentage of domestic demand

|   | (ISIC Rev.3)   | Hungary   |           | Iceland   |                        | Ireland    |            | Italy     |           | Korea     |           | Mexico    |           | Netherlands |                         | New Zealand |           | Norway    |                         |
|---|----------------|-----------|-----------|-----------|------------------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------------------|-------------|-----------|-----------|-------------------------|
|   |                | 1992      | 2001      | 1992      | 2000                   | 1992       | 1999       | 1992      | 2001      | 1994      | 2001      | 1992      | 2001      | 1992        | 2002                    | 1992        | 1998      | 1992      | 2002                    |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>38</b> | <b>63</b> | <b>55</b> | <b>63</b>              | <b>64</b>  | <b>76</b>  | <b>21</b> | <b>31</b> | <b>21</b> | <b>24</b> | <b>25</b> | <b>45</b> | <b>63</b>   | <b>80</b>               | <b>38</b>   | <b>43</b> | <b>44</b> | <b>47</b>               |
| <b>High technology manufactures</b>             |                | -         | <b>94</b> | -         | <b>81</b> <sup>1</sup> | <b>147</b> | <b>140</b> | <b>40</b> | <b>63</b> | <b>33</b> | -         | -         | <b>84</b> | <b>93</b>   | <b>211</b> <sup>1</sup> | -           | -         | <b>84</b> | <b>177</b> <sup>1</sup> |
| Pharmaceuticals                                 | (2423)         | -         | 55        | -         | 62 <sup>1</sup>        | -125       | -139       | 20        | 49        | 7         | 11        | 17        | 23        | 62          | 101 <sup>1</sup>        | -           | -         | 70        | 84 <sup>1</sup>         |
| Office, accounting and computing machinery      | (30)           | 88        | 110       | -         | 100 <sup>1</sup>       | 112        | 111        | 83        | 93        | 51        | 32        | 91        | 192       | 296         | -                       | -           | -         | 114       | 693 <sup>1</sup>        |
| Radio, television and communication equipment   | (32)           | 78        | 98        | -         | 97 <sup>1</sup>        | 102        | 135        | 41        | 61        | 27        | 48        | 77        | 72        | 52          | 90 <sup>1</sup>         | -           | -         | 77        | 90 <sup>1</sup>         |
| Medical, precision and optical instruments      | (33)           | 47        | 94        | -         | 80 <sup>1</sup>        | 91         | 87         | 43        | 61        | 63        | 43        | -         | -         | -           | - <sup>1</sup>          | -           | -         | 75        | - <sup>1</sup>          |
| Aircraft and spacecraft                         | (353)          | 200       | 32        | -         | 66 <sup>1</sup>        | 184        | 152        | 46        | 74        | 99        | -         | -         | 205       | -           | 82 <sup>1</sup>         | -           | -         | 80        | 79 <sup>1</sup>         |
| <b>Medium-high technology manufactures</b>      |                | -         | <b>77</b> | -         | <b>82</b> <sup>1</sup> | <b>78</b>  | <b>98</b>  | <b>32</b> | <b>45</b> | <b>28</b> | -         | <b>37</b> | <b>69</b> | <b>83</b>   | <b>94</b> <sup>1</sup>  | -           | -         | -         | <b>96</b> <sup>1</sup>  |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | -         | 80        | -         | 64 <sup>1</sup>        | 69         | 104        | 36        | 48        | 33        | 35        | 32        | 52        | 70          | 85 <sup>1</sup>         | -           | -         | -         | 95 <sup>1</sup>         |
| Machinery and equipment, nec                    | (29)           | 54        | 91        | -         | 82                     | 98         | 98         | 23        | 38        | 48        | 45        | 72        | 96        | 85          | 72                      | -           | -         | 64        | 76 <sup>1</sup>         |
| Electrical machinery and apparatus, nec         | (31)           | 69        | 51        | -         | 82 <sup>1</sup>        | 77         | 116        | 16        | 27        | 32        | 54        | 87        | 192       | 102         | 148 <sup>1</sup>        | -           | -         | 50        | 128 <sup>1</sup>        |
| Motor vehicles, trailers and semi-trailers      | (34)           | 80        | 92        | -         | 98 <sup>1</sup>        | 90         | 98         | 52        | 62        | 6         | 6         | 10        | 45        | 99          | 114 <sup>1</sup>        | -           | -         | 99        | 110 <sup>1</sup>        |
| Railroad equip. and transport equip. nec        | (352+359)      | 51        | 74        | -         | 84 <sup>1</sup>        | 11         | 13         | 25        | 41        | 10        | -         | -         | 56        | -           | 123 <sup>1</sup>        | -           | -         | 37        | 123 <sup>1</sup>        |
| <b>Medium-low technology manufactures</b>       |                | <b>25</b> | <b>46</b> | -         | <b>60</b> <sup>1</sup> | <b>71</b>  | <b>63</b>  | <b>16</b> | <b>20</b> | <b>15</b> | -         | <b>24</b> | <b>37</b> | <b>52</b>   | <b>53</b> <sup>1</sup>  | -           | -         | -         | <b>53</b> <sup>1</sup>  |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 11        | 19        | -         | - <sup>1</sup>         | 121        | 121        | 18        | 16        | 17        | 14        | 18        | 11        | 47          | 63                      | -           | -         | -         | 61 <sup>1</sup>         |
| Rubber and plastics prod.                       | (25)           | 36        | 59        | 49        | 53                     | 76         | 66         | 16        | 22        | 8         | 12        | 42        | 60        | 80          | 80                      | -           | -         | 60        | 81 <sup>1</sup>         |
| Other non-metallic mineral prod.                | (26)           | 21        | 36        | 21        | 20                     | 36         | 34         | 7         | 9         | 6         | 11        | 7         | 13        | 39          | 27                      | 20          | 21        | 25        | 33 <sup>1</sup>         |
| Basic metals                                    | (27)           | 48        | 65        | 89        | 94 <sup>1</sup>        | 96         | 97         | 36        | 44        | 20        | 21        | 27        | 40        | 94          | 104                     | 69          | 80        | 70        | 68                      |
| Fabricated metal prod., except mach.&equip.     | (28)           | 24        | 45        | 47        | 41 <sup>1</sup>        | 60         | 50         | 5         | 7         | 10        | 10        | 32        | 54        | 34          | 26                      | 19          | 18        | 42        | 29 <sup>1</sup>         |
| Building and repairing of ships and boats       | (351)          | 21        | 55        | -         | 99 <sup>1</sup>        | 65         | 62         | 11        | 34        | 22        | -         | -         | 42        | -           | 14 <sup>1</sup>         | -           | -         | 37        | 19                      |
| <b>Low technology manufactures</b>              |                | <b>27</b> | <b>37</b> | <b>37</b> | <b>42</b>              | <b>37</b>  | <b>32</b>  | <b>14</b> | <b>21</b> | <b>13</b> | <b>18</b> | <b>12</b> | <b>18</b> | <b>46</b>   | <b>47</b>               | -           | -         | <b>24</b> | <b>27</b>               |
| Food prod., beverages and tobacco               | (15-16)        | 9         | 13        | 24        | 33                     | 23         | 24         | 15        | 20        | 9         | 12        | 7         | 8         | 34          | 40                      | 11          | 15        | 10        | 14                      |
| Textiles, textile prod., leather and footwear   | (17-19)        | 118       | 75        | 71        | 75                     | 90         | 94         | 14        | 27        | 18        | 32        | 18        | 42        | 112         | 138                     | 52          | 60        | 79        | 85                      |
| Wood and prod. of wood and cork                 | (20)           | 20        | 41        | 61        | 54                     | 47         | 42         | 15        | 17        | 27        | 28        | 9         | 11        | 58          | 47                      | 6           | 7         | 20        | 24                      |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 25        | 36        | 30        | 30                     | 45         | 24         | 11        | 16        | 11        | 14        | 21        | 31        | 33          | 31                      | 20          | 23        | 21        | 22                      |
| Manufacturing nec; recycling                    | (36-37)        | 40        | 346       | 45        | 56                     | 32         | 41         | 11        | 18        | 15        | 29        | 25        | 39        | 45          | 39                      | 30          | 34        | 48        | 52                      |

1. For comparison: intensity of the previous year.

2. 2000 instead of 2002.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.

Table 34. Import penetration by industry and technology level, 1992-2002 (cont'd)

Imports as a percentage of domestic demand

|   | (ISIC Rev.3)   | Poland    |                 | Portugal  |                  | Spain     |           | Slovak Rep. |           | Sweden    |           | Switzerland |           | United Kingdom |           | United States |           | EU <sup>3</sup> |           | OECD <sup>4</sup> |           |
|---|----------------|-----------|-----------------|-----------|------------------|-----------|-----------|-------------|-----------|-----------|-----------|-------------|-----------|----------------|-----------|---------------|-----------|-----------------|-----------|-------------------|-----------|
|   |                | 1992      | 2001            | 1992      | 1999             | 1992      | 2001      | 1997        | 1999      | 1992      | 2001      | 1997        | 2000      | 1992           | 2001      | 1992          | 2001      | 1992            | 1999      | 1992              | 1999      |
| <b>Total manufacturing</b>                      | <b>(15-37)</b> | <b>21</b> | <b>38</b>       | <b>38</b> | <b>47</b>        | <b>25</b> | <b>35</b> | <b>55</b>   | <b>63</b> | <b>37</b> | <b>45</b> | <b>53</b>   | <b>65</b> | <b>34</b>      | <b>48</b> | <b>15</b>     | <b>23</b> | <b>30</b>       | <b>37</b> | <b>20</b>         | <b>26</b> |
| <b>High technology manufactures</b>             |                | -         | 70 <sup>1</sup> | 69        | 74 <sup>1</sup>  | 51        | 68        | -           | -         | 65        | 62        | -           | -         | 57             | 100       | 23            | 36        | 52              | 71        | 31                | 43        |
| Pharmaceuticals                                 | (2423)         | -         | 65 <sup>1</sup> | 36        | 53 <sup>1</sup>  | 19        | 46        | -           | -         | 48        | 57        | -           | -         | 29             | 72        | 8             | 19        | 28              | 48        | 17                | 27        |
| Office, accounting and computing machinery      | (30)           | 88        | 83 <sup>1</sup> | 104       | 108 <sup>1</sup> | 76        | 74        | 97          | 157       | 98        | 109       | 139         | 142       | 75             | 101       | 51            | 68        | 74              | 103       | 50                | 65        |
| Radio, television and communication equipment   | (32)           | 50        | 74 <sup>1</sup> | 66        | 64 <sup>1</sup>  | 58        | 80        | 89          | 117       | 58        | 45        | 57          | 69        | 59             | 126       | 32            | 42        | 53              | 73        | 29                | 38        |
| Medical, precision and optical instruments      | (33)           | 50        | 49 <sup>1</sup> | 89        | 87 <sup>1</sup>  | 58        | 71        | 59          | 64        | 64        | 70        | 49          | 71        | 50             | 64        | 12            | 23        | 44              | 55        | 27                | 38        |
| Aircraft and spacecraft                         | (353)          | -         | 93 <sup>1</sup> | -         | - <sup>1</sup>   | 114       | 90        | -           | -         | 50        | 103       | -           | -         | 60             | 124       | 14            | 30        | 69              | 74        | 36                | 49        |
| <b>Medium-high technology manufactures</b>      |                | -         | 59 <sup>1</sup> | 66        | 73 <sup>1</sup>  | 43        | 55        | -           | -         | 46        | 52        | -           | -         | 47             | 58        | 21            | 31        | 38              | 46        | -                 | -         |
| Chemicals excluding pharmaceuticals             | (24ex2423)     | -         | 55 <sup>1</sup> | 47        | 59 <sup>1</sup>  | 37        | 47        | -           | -         | 55        | 73        | -           | -         | 43             | 58        | 11            | 20        | 41              | 51        | -                 | -         |
| Machinery and equipment, nec                    | (29)           | 44        | 63 <sup>1</sup> | 70        | 69 <sup>1</sup>  | 52        | 56        | 71          | 87        | 45        | 54        | 50          | 68        | 49             | 56        | 19            | 26        | 36              | 44        | 24                | 31        |
| Electrical machinery and apparatus, nec         | (31)           | 28        | 56 <sup>1</sup> | 60        | 80 <sup>1</sup>  | 33        | 41        | 70          | 83        | 54        | 66        | 35          | 43        | 39             | 53        | 27            | 47        | 25              | 38        | 21                | 34        |
| Motor vehicles, trailers and semi-trailers      | (34)           | 35        | 61 <sup>1</sup> | 83        | 87 <sup>1</sup>  | 45        | 66        | 110         | 105       | 41        | 40        | 101         | 103       | 52             | 62        | 29            | 36        | 43              | 48        | 29                | 34        |
| Railroad equip. and transport equip. nec        | (352+359)      | -         | 39 <sup>1</sup> | 65        | 40 <sup>1</sup>  | 36        | 42        | -           | -         | 23        | 27        | -           | -         | 31             | 41        | 17            | 21        | 36              | 43        | 28                | 32        |
| <b>Medium-low technology manufactures</b>       |                | -         | 28 <sup>1</sup> | 29        | 34 <sup>1</sup>  | 17        | 22        | -           | -         | 37        | 39        | -           | -         | 24             | 26        | 9             | 13        | 22              | 24        | -                 | -         |
| Coke, refined petroleum prod. and nuclear fuel  | (23)           | 11        | 14 <sup>1</sup> | 30        | 26 <sup>1</sup>  | 23        | 23        | 18          | 26        | 50        | 42        | 109         | 113       | 18             | 26        | 9             | 13        | 24              | 22        | -                 | -         |
| Rubber and plastics prod.                       | (25)           | 24        | 37 <sup>1</sup> | 35        | 47 <sup>1</sup>  | 22        | 30        | 64          | 78        | 50        | 57        | 52          | 56        | 25             | 26        | 9             | 12        | 25              | 29        | 18                | 20        |
| Other non-metallic mineral prod.                | (26)           | 11        | 19 <sup>1</sup> | 10        | 13 <sup>1</sup>  | 8         | 10        | 31          | 33        | 27        | 30        | 34          | 40        | 18             | 19        | 9             | 14        | 14              | 15        | 10                | 13        |
| Basic metals                                    | (27)           | 16        | 43 <sup>1</sup> | 63        | 76 <sup>1</sup>  | 27        | 36        | 39          | 35        | 42        | 53        | 95          | 155       | 43             | 50        | 14            | 22        | 39              | 43        | 20                | 24        |
| Fabricated metal prod., except mach.&equip.     | (28)           | 16        | 33 <sup>1</sup> | 24        | 31 <sup>1</sup>  | 13        | 14        | 36          | 48        | 22        | 22        | 22          | 26        | 14             | 18        | 6             | 9         | 12              | 14        | 9                 | 11        |
| Building and repairing of ships and boats       | (351)          | -         | 19 <sup>1</sup> | 17        | 10 <sup>1</sup>  | 18        | 26        | -           | -         | 69        | 24        | -           | -         | 13             | 8         | 2             | 6         | 17              | 20        | 12                | 15        |
| <b>Low technology manufactures</b>              |                | 11        | 21 <sup>1</sup> | 22        | 27 <sup>1</sup>  | 14        | 21        | 36          | 44        | 23        | 30        | -           | -         | 25             | 30        | 11            | 16        | 22              | 26        | 15                | 19        |
| Food prod., beverages and tobacco               | (15-16)        | 8         | 9 <sup>1</sup>  | 16        | 22 <sup>1</sup>  | 10        | 17        | 22          | 23        | 14        | 25        | 18          | 19        | 19             | 22        | 5             | 6         | 16              | 19        | 11                | 13        |
| Textiles, textile prod., leather and footwear   | (17-19)        | 12        | 59 <sup>1</sup> | 31        | 36 <sup>1</sup>  | 22        | 39        | 96          | 128       | 84        | 103       | 86          | 90        | 45             | 67        | 27            | 44        | 39              | 50        | 31                | 42        |
| Wood and prod. of wood and cork                 | (20)           | 4         | 12 <sup>1</sup> | 11        | 16 <sup>1</sup>  | 14        | 19        | 20          | 31        | 9         | 15        | 17          | 19        | 29             | 31        | 8             | 13        | 19              | 21        | 14                | 17        |
| Pulp, paper, paper prod., printing & publishing | (21-22)        | 22        | 26 <sup>2</sup> | 19        | 23 <sup>2</sup>  | 14        | 17        | 35          | 43        | 13        | 16        | 31          | 37        | 18             | 18        | 4             | 6         | 16              | 18        | 9                 | 10        |
| Manufacturing nec; recycling                    | (36-37)        | 17        | 29 <sup>1</sup> | 30        | 29 <sup>1</sup>  | 18        | 22        | 39          | 51        | 39        | 41        | 91          | 96        | 37             | 39        | 27            | 39        | 26              | 31        | 19                | 26        |

1. For comparison: intensity of the previous year.

2. 2000 instead of 2002.

3. EU includes the 15 EU Members before 1 May 2004 excluding Belgium, Greece, Luxembourg, Netherlands.

4. OECD includes previous EU countries and Australia, Canada, Japan, Norway and the United States.

Source: OECD, STAN Indicators 2004.

Table 35. Outward and inward foreign direct investment flows, 1990-2001

Billion USD

|                               | Outward flows |            |            |              |              |            | Inward flows |            |            |            |              |            | Cumulative<br>net outflow |
|-------------------------------|---------------|------------|------------|--------------|--------------|------------|--------------|------------|------------|------------|--------------|------------|---------------------------|
|                               | 1990          | 1995       | 1998       | 1999         | 2000         | 2001       | 1990         | 1995       | 1998       | 1999       | 2000         | 2001       |                           |
| Australia                     | 2             | 2          | 5          | 2            | 1            | 6          | 6            | 5          | 6          | 7          | 7            | 6          | - 39                      |
| Austria                       | 2             | 1          | 3          | 3            | 6            | 3          | -            | -          | -          | 3          | 9            | 6          | 10                        |
| Belgium-Luxembourg            | 6             | 12         | 28         | 133          | 218          | 86         | 8            | 11         | 23         | 149        | 226          | 77         | - 38                      |
| Canada                        | 5             | 11         | 34         | 16           | 48           | 35         | 8            | 9          | 23         | 24         | 67           | 27         | 10                        |
| Czech Republic                | -             | 0          | 0          | 0            | 0            | 0          | -            | 3          | 4          | 6          | 5            | 5          | - 26                      |
| Denmark                       | 2             | 3          | 4          | 13           | 24           | 9          | 1            | 4          | 6          | 11         | 32           | 7          | - 4                       |
| Finland                       | 3             | 1          | 19         | 7            | 24           | 8          | 1            | 1          | 12         | 5          | 9            | 3          | 40                        |
| France                        | 36            | 16         | 43         | 127          | 176          | 83         | 16           | 24         | 29         | 47         | 43           | 53         | 326                       |
| Germany <sup>1</sup>          | 24            | 39         | 89         | 110          | 50           | 43         | 2            | 14         | 25         | 55         | 195          | 32         | 171                       |
| Greece                        | -             | -          | -          | -            | -            | 1          | 2            | -          | -          | -          | -            | 2          | - 7                       |
| Hungary                       | -             | -          | -          | 0            | 1            | 0          | -            | -          | -          | 2          | 2            | 2          | - 5                       |
| Iceland                       | 0             | 0          | 0          | 0            | 0            | 0          | 0            | 0          | 0          | 0          | 0            | 0          | 0                         |
| Ireland                       | -             | -          | 4          | 5            | 5            | 6          | 0            | 0          | 9          | 19         | 26           | 16         | - 53                      |
| Italy                         | 7             | 6          | 12         | 7            | 12           | 21         | 6            | 5          | 3          | 7          | 13           | 15         | 40                        |
| Japan                         | 57            | 53         | 40         | 65           | 50           | 33         | 3            | 4          | 10         | 21         | 29           | 18         | 441                       |
| Korea                         | 1             | 3          | 3          | 2            | 3            | 2          | 1            | 1          | 5          | 11         | 10           | 3          | - 13                      |
| Mexico                        | -             | -          | -          | -            | -            | -          | 3            | 10         | 12         | 12         | 15           | 24         | - 132                     |
| Netherlands                   | 13            | 19         | 39         | 41           | 72           | 40         | 9            | 11         | 38         | 32         | 54           | 51         | 92                        |
| New Zealand                   | 2             | 2          | 0          | 1            | 1            | 1          | 2            | 3          | 2          | 1          | 1            | 3          | - 19                      |
| Norway                        | 1             | 3          | 3          | 6            | 8            | 2          | 1            | 2          | 4          | 8          | 6            | 3          | 3                         |
| Poland                        | -             | 0          | 0          | 0            | 0            | 0          | 0            | 4          | 6          | 7          | 9            | 6          | - 46                      |
| Portugal                      | 0             | 1          | 4          | 3            | 8            | 8          | 2            | 1          | 3          | 1          | 6            | 6          | - 3                       |
| Slovak Republic               | -             | -          | -          | -            | 0            | 0          | -            | -          | -          | -          | 2            | 1          | - 4                       |
| Spain                         | 3             | 4          | 19         | 42           | 55           | 28         | 14           | 6          | 12         | 16         | 38           | 22         | 18                        |
| Sweden                        | 15            | 11         | 24         | 22           | 41           | -          | 2            | 14         | 20         | 61         | 23           | 13         | - 20                      |
| Switzerland                   | 7             | 12         | 19         | 33           | 43           | 11         | 5            | 2          | 9          | 12         | 19           | 8          | 119                       |
| Turkey                        | -             | -          | -          | 1            | 1            | 0          | 1            | 1          | 1          | 1          | 1            | 3          | - 11                      |
| United Kingdom                | 18            | 44         | 122        | 201          | 254          | 39         | 30           | 20         | 71         | 88         | 117          | 53         | 372                       |
| United States                 | 31            | 92         | 131        | 175          | 165          | 114        | 48           | 59         | 174        | 283        | 301          | 124        | - 201                     |
| <b>Total OECD<sup>2</sup></b> | <b>236</b>    | <b>335</b> | <b>645</b> | <b>1 015</b> | <b>1 263</b> | <b>580</b> | <b>171</b>   | <b>214</b> | <b>506</b> | <b>888</b> | <b>1 267</b> | <b>590</b> | <b>1 020</b>              |
| <b>EU-25<sup>2</sup></b>      | <b>129</b>    | <b>157</b> | <b>410</b> | <b>715</b>   | <b>944</b>   | <b>375</b> | <b>93</b>    | <b>118</b> | <b>259</b> | <b>508</b> | <b>811</b>   | <b>370</b> | <b>862</b>                |
| <b>EU-15<sup>2</sup></b>      | <b>129</b>    | <b>157</b> | <b>410</b> | <b>715</b>   | <b>943</b>   | <b>375</b> | <b>93</b>    | <b>111</b> | <b>249</b> | <b>493</b> | <b>793</b>   | <b>355</b> | <b>943</b>                |

1. The statistics cover unified Germany as from 1990.

2. Excluding missing countries for respective years.

Source: OECD, FDI database, May 2004.

StatLink: <http://dx.doi.org/10.1787/771435384853>

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