EXECUTIVE SUMMARY

Regaining momentum in science, technology and innovation

Science, technology and innovation are central to improved economic performance.

As the recent economic slowdown gives way to prospects of stronger economic growth across the OECD region, renewed attention is being directed to ways of tapping into science, technology and innovation to achieve economic and societal objectives. The continued transition to more knowledge-based economies, coupled with growing competition from non-OECD countries, has increased the reliance of OECD countries on the creation, diffusion and exploitation of scientific and technological knowledge, as well as other intellectual assets, as a means of enhancing growth and productivity. High-technology industries account for a growing share of OECD-wide value added and international trade and can be expected to play a significant role in the economic recovery.

Recent investments in science, technology and innovation have been constrained by slow economic growth.

In recent years, weak economic conditions limited investments in science and technology. Global investments in R&D, for example, grew at a rate of less than 1% between 2001 and 2002, compared to 4.6% annually between 1994 and 2001. As a result, R&D spending slipped from 2.28% to 2.26% of GDP across the OECD, driven by declines in the United States, which was hard hit by the economic downturn. R&D intensity also declined in several Eastern European countries that are continuing to restructure their economies, but it increased in the EU25 as a whole, as well as in Japan and the Asia-Pacific region.

Government R&D expenditures grew modestly…

Recognising the importance of innovation to economic growth and performance, most OECD governments aimed to shield public R&D investments from spending cutbacks and, in many cases, were able to increase them modestly. Although they remain far below levels of the early 1990s, OECD-wide government expenditures for R&D rose from 0.63% to 0.68% of GDP between 2000 and 2002 as budget appropriations grew, most notably in the United States, followed by Japan and the EU. Reflecting growing concerns about national security, much of the US increase related to defence R&D, although health-related R&D expenditures also increased.

... while business R&D spending declined, due to cut-backs in the United States.

Driving recent reductions in OECD-wide R&D intensity were steep cutbacks in R&D in the US business sector. Industry-financed R&D declined from 1.88% to 1.65% of GDP in the United States between 2000 and 2003, while R&D performed by the business sector declined from 2.04% to 1.81% of GDP. Japan, in contrast, saw a

steep increase in business-performed R&D – from 2.12% to 2.32% of GDP between 2000 and 2002 – and modest gains were posted in the EU. Venture capital investments also plummeted, from USD 106 billion to USD 18 billion in the United States between 2000 and 2003, and from EUR 19.6 billion to EUR 9.8 billion in the EU between 2000 and 2002. While improved economic prospects promise a turn-around in business R&D and venture capital, rates of growth may be limited by lingering uncertainties about the pace of the recovery.

Science and innovation are receiving greater policy attention...

Prospects of stronger economic growth across the OECD region provide new opportunities to enhance support for science, technology and innovation. Many OECD countries have introduced new or revised national plans for science, technology and innovation policy, and a growing number of countries have established targets for increased R&D spending. Virtually all countries are seeking ways to enhance the quality and efficiency of public research, stimulate business investments in R&D and strengthen linkages between the public and private sectors. Public/private partnerships (P/PPs) have emerged as a key element of innovation policy and are attracting a growing share of financing. Human resources for science and technology have also re-emerged as a primary concern among policy makers, especially as relates to the availability of sufficient supplies of skilled workers (including scientists and engineers) to sustain innovation-led economic growth and restructuring.

... but policy must adapt to the growing role of the service sector and increased globalisation of science and technology.

More so than before, science, technology and innovation policies need to adapt to the needs of the service sector and increased globalisation. Services account for a growing share of R&D in OECD countries – 23% of total business R&D in 2000 compared to 15% in 1991 – and the ability of service sector firms to innovate will greatly influence overall growth, productivity and employment patterns. Nevertheless, they remain less innovative than manufacturing firms overall. At the same time, science, technology and innovation are becoming increasingly global. The combined R&D expenditures of China, Israel and Russia were equivalent to 15% of those of OECD countries in 2001, up from 6.4% in 1995. Within many OECD countries, the share of R&D performed by foreign affiliates of multinational enterprises (MNEs) has also increased. Policy makers need to ensure that OECD economies remain strong in the face of growing competition and benefit from the expansion of MNE networks.

Governments are strengthening science, technology and innovation systems

Government R&D budgets are poised to grow, especially for ICT, biotechnology and nanotechnology.

Despite financial constraints, many OECD governments are committed to increasing R&D spending. Several countries, as well as the European Union, have established explicit targets for boosting R&D expenditures, by both the public and private sectors. Public money is increasingly aimed at scientific and technological fields believed to have great economic and societal value, in particular, ICT, biotechnology and nanotechnology. Several countries, including

Denmark, Germany, the Netherlands and Norway have created special funds to finance research in priority fields.

Reforms to public research organisations aim to improve their contributions to the economy and society...

Governments have introduced a range of reforms to strengthen public research systems and to enable them to contribute more effectively and efficiently to innovation. The governments of Denmark, Japan and the Slovak Republic, for example, have increased the autonomy of universities or transformed them into private or quasi-private institutions and removed obstacles to their co-operation with industry. Funding structures have also been changed in many countries to make universities and government laboratories less dependent on institutional (*i.e.* block grant) funding and more reliant on competitively awarded project funds for research. Many countries have stepped up efforts to evaluate public research organisations, with a view toward improving the quality of teaching and research.

... and to facilitate technology transfer to industry.

Countries are also taking steps to improve technology transfer from public research organisations to industry. New legislation in Denmark and Norway makes technology transfer to industry an explicit mission of universities, and the new University of Luxembourg has been encouraged to stimulate industry interaction through contract research and mobility of students and researchers. Countries continue to reform rules governing the ownership of intellectual property (IP) generated by public research institutions, in most cases granting ownership of IP to the institution in order to facilitate its commercialisation. Norway and Switzerland introduced such changes in recent years, and Iceland and Finland are preparing legislation on the subject. Several countries that have not changed legislation, such as Australia and Ireland, have nevertheless developed new guidelines to encourage commercialisation of research results and provide greater consistency in IP management among research organisations.

Support to business R&D is becoming more indirect.

Support to business R&D remains a central feature of innovation policies across the OECD, especially as governments aim to boost business R&D spending. With the exception of several Eastern European countries, direct government support to business R&D has declined, both in absolute terms and as a share of business R&D, and greater emphasis is being placed on indirect measures, such as tax incentives for R&D. Between 2002 and 2004, Belgium, Ireland, and Norway established new tax incentive schemes, bringing to 18 the number of OECD countries employing tax incentives for R&D. The United Kingdom also developed a tax incentive for large firms, complementing their scheme for small ones. Countries are also making efforts to stimulate entrepreneurship and boost R&D activities in small and medium-sized enterprises (SMEs), such as by supporting venture capital and providing preferential support to SMEs.

Innovation policy is more consistently subject to evaluation.

To measure the effectiveness of innovation policy and inform future policy development, nearly all OECD countries are placing greater emphasis on evaluation. Such evaluations take place at all

levels: individual instruments (*e.g.* tax incentives, P/PPs), institutions (*e.g.* universities and government laboratories) and national innovation systems (*e.g.* Australia, Finland, United Kingdom). Canada plans to undertake a comprehensive assessment of federal support for R&D, and the Czech Republic regularly evaluates programmes as part of its policy development. Australia recently completed an assessment of its innovation system, as did Sweden. In some cases, such as in the Netherlands, New Zealand and Switzerland, all policies and programmes are required by law to be evaluated on a regular basis.

Getting the most out of public/private partnerships

Public/private partnerships are essential to improving returns from public investments in research.

Public/private partnerships (P/PPs) are an essential instrument for fostering innovation in OECD countries. By entailing financial contributions from the public and private sectors, P/PPs provide a means of better leveraging limited public R&D funding and ensuring strong industry commitment. By linking public and private sector needs through shared objectives and active involvement of all partners in management and decision-making, P/PPs can also improve the quality of private sector contributions to public needs, enhance prospects for commercialising results of public research and improve basic knowledge infrastructures.

P/PPs account for a growing share of public R&D investment.

P/PPs account for a growing share of R&D funding in the OECD. In France, P/PPs accounted for 78% of all competitive research funding in 2002, up from 37% in 1998, and the Dutch government has reserved EUR 805 million for P/PPs in strategic areas between 2003 and 2010. Existing P/PP programmes in Australia, Austria and Sweden have also been reinforced with additional funding, and new P/PPs have been established in the Czech Republic, Ireland, Hungary and Switzerland. While many of these P/PPs take the form of join research centres, countries such as Belgium, Denmark, France, Netherlands, New Zealand, Switzerland and the United Kingdom are making efforts to establish networks between researchers in various research centres to improve co-ordination and quality of work.

Selection criteria and financing ratios should reflect the balance of public and private interest in the partnership.

Experience to date indicates that P/PPs must be carefully designed and managed so as to engage partners with different cultures, management practices and objectives. Success depends on how well P/PPs ensure industry commitment while balancing public and private objectives, fit into national innovation systems, optimise financing arrangements, create appropriate international linkages, engage SMEs, and are evaluated. For example, using a competitive, bottom-up approach to selection appears effective in ensuring that P/PPs attract capable firms and draw upon established competencies, but top-down criteria may also be needed so that P/PP programmes address areas of strategic importance for the country. The balance of financial contributions from the public and private sectors and the duration of public funding should also be adjusted to reflect the degree to which the research aims to fulfil government needs versus improving support to business R&D.

Greater participation by SMEs and foreign partners is further required for the success of P/PPs.

Although SMEs are essential to the success of many P/PPs, they have not been fully represented in many national programmes. France has seen some success, with SMEs accounting for almost 30% of the financing of 13 public/private research networks, compared to just over 20% of funding for all business R&D in the country. To encourage greater participation of SMEs, governments can take steps to lower entry barriers, such as by allowing participation of industry associations. They can also encourage formation of partnerships in fields where SMEs play a significant role. Policy can also have an influence on the participation of foreign firms, which can be important sources of talent and know-how but face numerous restrictions in many countries.

Stimulating innovation in the service sector

The service sector is a growing contributor to economic growth and employment.

Boosting innovation in the service sector is key to improving future economic performance. Services accounted for 70% of total value added in the OECD in 2000, with market services accounting for 50% of the total, up from 35% to 40% in 1980. Two-thirds of the increase in value added in OECD economies between 1990 and 2001 came from services, as did most employment growth. Services also accounted for the bulk of labour productivity growth in many OECD countries, including the United States, United Kingdom and Germany. The importance of services is likely to grow across the OECD as economies continue to become more knowledge-intensive and firms locate manufacturing in lower-cost regions of the world.

Service sector firms are innovative...

Despite the long-held view of services as slow-changing, recent survey results illustrate great potential for innovation in service sector firms. The share of innovative firms in the service sector remains lower than that in manufacturing, but innovation rates in financial intermediation and business service firms (more than 50% and 60%, respectively) exceed the manufacturing average. Growth rates for R&D in services outpace those in manufacturing by a sizeable margin. While large service sector firms tend to be more innovative than smaller ones overall, small firms in the business services and financial intermediation sectors are more innovative than those in other service industries.

... but innovation processes differ from those in manufacturing.

Innovation in services does not follow the same patterns as in manufacturing. Formal R&D plays a smaller role, and education and training are relatively more important. The share of service-sector employees with higher education is considerably higher than in manufacturing – twice as high in many OECD countries – with the largest concentration in the financial services sector. Reflecting their lower levels of R&D, services firms are more dependent on the acquisition of knowledge from external sources (*e.g.* via licensing of intellectual property and purchases of machinery and equipment), meaning that networking and supply chain considerations are paramount. Entrepreneurship also contributes to innovation, but the tendency of new service firms to be innovative is conditioned by the level of innovation in the economy as a whole.

Government policy needs to be tailored to specific needs of service sector innovation.

Boosting the innovation performance of service sector firms entails policies that better target and accommodate their needs. To date, service sector firms have only limited participation in government innovation programmes and are less likely than manufacturing firms to receive public funding. Despite the growing importance of service sector firms in OECD economies, few governments have developed innovation programmes specifically tailored to their needs. Greater efforts could be made, for example, to strengthen links between services firms and public research institutions, improve worker training, direct research to needs of particular service industries or help service firms make better use of ICT. Several countries, including Denmark, Finland, Ireland and Norway, are steps in these directions that could point the way to for other countries to follow.

Ensuring sufficient supplies of human resources for S&T

Demand is growing for skilled scientists and engineers...

Efforts to increase innovative capacity and make economies more knowledge-based are fundamentally enabled by the availability of human resources for science and technology (HRST). Employment in HRST occupations grew approximately twice as fast as overall employment between 1995 and 2000, and the number of researchers across the OECD grew, from 2.3 million in 1990 to 3.4 million in 2000 – or from 5.6 to 6.5 researchers per 10 000 employees. Approximately two-thirds work in the business sector. Efforts to boost national and regional R&D spending will create additional demand for researchers. For example, the number of additional researchers needed to attain the EU's objective of boosting R&D to 3% of GDP by 2010 could exceed a half million, by some estimates, raising questions about future supplies of S&T workers.

... but domestic supplies are uncertain in several countries.

Domestic supplies of scientists and engineers are highly unpredictable. While the overall number of tertiary-level science and engineering graduates grew in the EU, Japan and the United States, rates of growth have been modest and considerable variation exists across country, degree type and field of science or engineering. Between 1998 and 2001, the number of science graduates declined in Germany and Italy, while the number of engineering graduates declined in France, Germany, the United Kingdom and the United States. Tertiary-level enrolments in science and engineering appear to be growing faster than in all other fields combined, suggesting that longer-term supplies of HRST could increase if students complete their studies, but again patterns are mixed. Enrolments in US graduate science and engineering programmes grew from 405 000 to 455 000 students between 1998 and 2002, but Germany saw declines in physics and chemistry enrolments between 1993 and 2002. France reports declines in enrolments in first and second-level physics and biology programmes, but gains in PhD enrolments between 2001 and 2003. Well-functioning labour markets will be needed to ensure gainful employment of future graduates and avoiding skill shortages or mismatches.

Foreign workers can supplement supplies, but patterns of international migration are changing.

Nations can supplement domestic supplies of HRST by tapping into international sources of scholars and highly skilled workers. International mobility has increased over the past decade as industry and education have become more global and as OECD countries have reformed immigration rules. Some 1.5 million foreign students were enrolled in higher education institutions in the OECD in 2000, about half of which originated in the OECD area, but migration patterns are changing. While the United States receives more foreign PhD-level students than other OECD countries, the number of foreign first-time PhD students and scholars declined slightly in recent years due to stricter immigration rules and growing competition from other OECD countries; numbers rose in the United Kingdom and Australia as they and other countries have implemented a number of new measures to attract foreign and expatriate workers. At the same time, growing numbers of students in non-OECD countries are receiving degrees in their home countries, and non-member governments are actively seeking to repatriate scholars and workers who have gained experience abroad.

Governments need to take a broad-based approach.

Ensuring adequate supplies of HRST will require efforts in a number of areas, many of which are being exploited by OECD countries. First, efforts are needed to attract more people into science and engineering careers by, for example, raising interest in and awareness of science especially among youth, improving teacher training and educational curricula, and recruiting more women and under-represented populations. Second, funding can be increased, especially for PhD students and post-doctoral researchers, who can often find more lucrative employment outside the research profession. Third, demand-side policies can be used to improve the match between supply and demand, such as by fostering mobility of young researchers, improving career prospects for public researchers, and providing better information to students about employment opportunities in the business sector. Efforts to increase business R&D will also create additional jobs in the business sector.

Benefiting from globalisation

Foreign affiliates play a larger role in host economies.

Globalisation has been fuelled largely by the activities of foreign affiliates of large multinational enterprises (MNEs). Between 1995 and 2001, the share of manufacturing output and employment under foreign control rose in all OECD countries for which data is available, except Germany and the Netherlands. In 2001, the share of manufacturing R&D under the control of foreign affiliates in OECD countries ranged from 4% in Japan to more than 70% in Hungary and Ireland, with most countries falling between 15% and 45%. The share of employment in foreign affiliates ranged between 15% and 30% in most OECD countries. Growth in output from foreign affiliates grew more quickly than for domestic firms.

Non-member countries are more capable contributors to S&T.

The global reach of MNEs is expanding as non-OECD countries improve their scientific and technical capabilities. China, Israel, and Russia, among other countries, have made sizeable increases in

their R&D intensity in the last few years.* China's R&D intensity doubled between 1996 and 2002 (from 0.6 to 1.2% of GDP) and its total R&D investments lag those of only the United States and Japan in absolute terms. Foreign R&D investments in China have grown rapidly as the nation's technological capabilities have increased and its markets have become more open. US investments alone in China grew from USD 7 million to USD 500 million between 1994 and 2000.

MNEs contribute disproportionately to productivity and technology development.

Recent analysis based on firm-level data indicates that MNEs make sizeable contributions to productivity growth in their home and host countries and are important conduits for technology transfer. MNEs accounted for more of the growth in labour productivity in Belgium, the United Kingdom and the United States than uni-national or unaffiliated domestic firms; they also contributed to technological spill-overs that improve innovative performance in both home and host countries. Nearly all of the pickup in US non-financial corporate labour productivity in the late 1990s came from MNEs, and MNEs located in the United Kingdom also tended to out-perform domestic firms that were not part of a global network.

Policy should aim to capture the benefits of MNE activities, rather than limiting them.

While much attention focuses on the potential down-sides to globalisation – *i.e.* movement of domestic jobs to other countries, loss of control to foreign-owned MNEs – policy makers need to recognise the benefits to home and host countries and design policies to capture them. Policies designed to limit globalisation and repatriate foreign affiliates, for example, may not be effective means of strengthening domestic economies, as they will limit links to important sources of knowledge and productivity growth. Policy should focus on improving the attractiveness of the domestic economy to foreign affiliates and to ensuring spill-overs from their activities, such as by encouraging linkages with local firms and suppliers.

* China, Israel, the Russian Federation and South Africa are Observers to the OECD Committee for Scientific and Technological Policy.

Statistical Annex

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*.

P*ublication*: STAN is available on line on SourceOECD (*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 BTD) as well as a set of derived indicators (*http://oecdpublications.gfi-nb.com/cgi-bin/*OECDB*ookShop.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.

P*ublication*: OECD (2004), *Research and Development Statistics*: 2003 E*dition*. 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.

P*ublication*: 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.

P*ublication*: 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/*OECDB*ookShop.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*).

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 been 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*.

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/*.

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 (US=100)		Effect of labour force participation (%)										GDP per person employed (US=100)		GDP per hour worked (US=100)	
			Total effect		Working-age population[1] to total population		Labour force to working-age 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[2]	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[3]	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[2]	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[4]	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
Total OECD	**69**	**81**	**-28**	**-9**	**-10**	**2**	**-3**	**2**	**1**	**-1**	**-17**	**-13**	**81**	**77**	**97**	**90**
EU-25[4]	**65**	**69**	**-11**	**-4**	**-9**	**-6**	**1**	**4**	**-4**	**-2**	**-**	**-**	**76**	**73**	**-**	**-**
EU-15	**76**	**75**	**-20**	**-15**	**-10**	**-7**	**1**	**6**	**-1**	**-2**	**-10**	**-12**	**86**	**78**	**96**	**90**

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[1]	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[2]	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
United States	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*

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&D expenditures, 1981-2003

Millions constant USD (1995 PPPs)

	1981	1991	1995	2000	2001	2002	2003
Australia[1, 2]	2 362	5 141	6 570	7 107	-	-	-
Austria	1 457	2 488 [b]	2 821 [b]	3 855 [b]	4 019 [b,n]	4 098 [b,n]	4 131 [b,n]
Belgium[3]	2 605 [a]	3 350 [b]	3 762	5 110	5 488	-	-
Canada	5 843	9 373	11 250	15 373	16 529	16 072 [n]	16 065 [b,n]
Czech Republic	-	2 324 [c,q]	1 257 [a]	1 760	1 771	1 800	-
Denmark[4]	945	1 773	2 159	2 854	3 272	3 471	-
Finland	904 [a]	1 938 [a]	2 218	4 162	4 221	4 374	-
France	17 870 [a]	27 961	28 461	30 646 [a]	31 994	31 923 [n]	-
Germany	27 895	41 987 [a]	39 412 [b]	47 838 [b]	48 518	48 934 [b]	48 426 [b]
Greece[4]	205 [a]	484	671 [a]	1 056	1 106 [b]	-	-
Hungary	-	981 [c,q]	684 [c]	908 [c]	1 116 [c]	1 249 [c]	-
Iceland	29	68	93	207 [b]	237	238 [b]	-
Ireland	251	487 [b]	822 [b]	1 184 [b]	1 253 [b]	-	-
Italy	7 914 [r]	13 880 [a]	11 892	13 975	14 830	-	-
Japan	38 752 [b,j]	74 412 [b,j]	75 659 [b,j]	90 184	93 007	94 172	-
Korea	-	7 563 [e]	12 919 [e]	17 374 [e]	19 721 [e]	20 858 [e]	-
Luxembourg	-	-	-	318	-	-	-
Mexico	-	-	1 935	3 037	3 194	-	-
Netherlands	4 304	6 076	6 650	7 649	7 670	-	-
New Zealand[4]	-	524	605	712	873 [a]	-	-
Norway[4]	937	1 512	1 765 [a]	2 055	2 296	2 358 [b]	-
Poland	-	-	1 881 [a]	2 472	2 407	2 244	-
Portugal[5, 1]	271	780	751	1 279 [b]	1 371	1 512 [b]	-
Slovak Republic	-	868 [b,c,q]	405 [c]	340 [k]	346 [k]	326 [k]	-
Spain	1 754	4 944	5 010	6 998	7 314	8 090	-
Sweden[4]	3 234 [a,k]	4 883 [k]	6 294 [a,k]	7 715 [k]	9 503 [k]	-	-
Switzerland[1, 2]	3 233 [b]	4 739	4 971	5 255	-	-	-
Turkey	-	1 538	1 284	2 627	-	-	-
United Kingdom	19 201 [a]	21 673	22 498	24 816	25 530	26 207	-
United States	114 530 [h]	176 578 [h]	184 079 [h]	243 271 [h]	246 187 [h]	245 430 [h,n]	248 064 [b,h,n]
Total OECD	**254 691 [b]**	**414 522 [a,b]**	**438 558 [a,b]**	**553 399 [b]**	**569 275 [b]**	**574 708 [b,n]**	**-**
EU-25	**-**	**-**	**138 328 [b]**	**166 859 [b]**	**172 704 [b]**	**175 929 [b,n]**	**-**
EU-15	**88 551 [b]**	**132 558 [a,b]**	**133 421**	**160 547 [b]**	**166 123 [b]**	**169 525 [b,n]**	**-**
China	-	13 824 [k]	18 022 [k]	45 002 [a]	52 399	65 485	-
Israel	-	1 937 [c]	2 630 [c]	5 613 [c]	5 937 [c,n]	5 516 [c,n]	-
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.
2. 1996 instead of 1995.
3. 1983 instead of 1981.
4. 1999 instead of 2000.
5. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

StatLink: http://dx.doi.org/10.1787/367403882784

Table 4. GERD intensity, 1981-2003

As a percentage of GDP

	1981	1991	1995	2000	2001	2002	2003
Australia[1, 2]	0.94	1.52	1.66	1.54	-	-	-
Austria	1.13	1.47 [b]	1.56 [a,b]	1.86 [b]	1.92 [b,n]	1.93 [b,n]	1.94 [b,n]
Belgium[3]	1.56 [a]	1.62 [b]	1.72	2.04	2.17	-	-
Canada	1.24	1.60	1.72	1.92	2.03	1.91 [n]	1.87 [b,n]
Czech Republic	-	2.02 [c,q]	1.01 [a]	1.33	1.30	1.30	-
Denmark[4]	1.06	1.64	1.84	2.19	2.40	2.52	-
Finland	1.18 [a]	2.04 [a]	2.28	3.40	3.41	3.46	-
France	1.93 [a]	2.37	2.31	2.18 [a]	2.23	2.20 [n]	-
Germany	2.43	2.52 [a]	2.25 [b]	2.49 [b]	2.51	2.52 [b]	2.50 [b]
Greece[4]	0.17 [a]	0.36	0.49 [a]	0.67	0.65 [b]	-	-
Hungary	-	1.06 [c,q]	0.73 [a,c]	0.80 [c]	0.95 [c]	1.02 [c]	-
Iceland	0.64	1.17	1.57	2.75 [b]	3.06	3.09 [b]	-
Ireland	0.68	0.93 [b]	1.28 [b]	1.15 [b]	1.15 [b]	-	-
Italy	0.88 [r]	1.23 [a]	1.00	1.07	1.11	-	-
Japan	2.12 [j]	2.76 [j]	2.69 [j]	2.99	3.07	3.12	-
Korea	-	1.92 [e]	2.50 [e]	2.65 [e]	2.92 [e]	2.91 [e]	-
Luxembourg	-	-	-	1.71	-	-	-
Mexico	-	-	0.31	0.37	0.39	-	-
Netherlands	1.79	1.97	1.99 [a]	1.90	1.89	-	-
New Zealand[4]	-	0.98	0.96	1.02	1.18 [a]	-	-
Norway[4]	1.18	1.64	1.70 [a]	1.65	1.60	1.67	-
Poland	-	-	0.65 [a]	0.66	0.64	0.59 [b]	-
Portugal[5, 1]	0.30	0.61	0.57 [a]	0.80 [b]	0.85	0.93 [b]	-
Slovak Republic	-	2.13 [c,q]	0.93 [c]	0.65 [k]	0.64 [k]	0.58 [k]	-
Spain	0.41	0.84	0.81 [a]	0.94	0.95	1.03	-
Sweden[4]	2.22 [a,k]	2.72 [k]	3.35 [a,k]	3.65 [k]	4.27 [k]	-	-
Switzerland[1, 2]	2.12 [b]	2.59	2.67	2.57	-	-	-
Turkey	-	0.53	0.38	0.64	-	-	-
United Kingdom	2.38 [a]	2.07	1.95	1.84	1.86	1.88	-
United States	2.34 [h]	2.72 [h]	2.51 [h]	2.72 [h]	2.74 [h]	2.67 [h,n]	2.62 [b,h,n]
Total OECD	**1.93 [b]**	**2.22 [a,b]**	**2.09 [a,b]**	**2.24 [b]**	**2.28 [b]**	**2.26 [b,n]**	**-**
EU-25	**-**	**-**	**1.72 [b]**	**1.80 [b]**	**1.83 [b]**	**1.83 [b,n]**	**-**
EU-15	**1.67 [b]**	**1.90 [a,b]**	**1.80**	**1.88 [b]**	**1.92 [b]**	**1.93 [b,n]**	**-**
China	-	0.74 [k]	0.60 [k]	1.00 [a]	1.07	1.23	-
Israel	-	2.50 [c]	2.74 [c]	4.72 [c]	5.04 [c,n]	4.72 [c,n]	-
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.
2. 1996 instead of 1995.
3. 1983 instead of 1981.
4. 1999 instead of 2000.
5. 1982 instead of 1981.

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

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

	Other national sources						Abroad					
	1981	1991	1995	2001	2002	2003	1981	1991	1995	2001	2002	2003
Australia[1, 2, 3]	2.1 [p]	3.9	4.4	4.8 [-]	-	-	1.0 [p]	1.8	2.1	3.3 [-]	-	-
Austria	0.4	0.3 [b]	0.4 [b]	0.3 [b,n]	0.3 [b,n]	0.3 [b,n]	2.5	3.0 [b]	7.1 [b]	18.7 [b,n]	18.5 [b,n]	18.5 [b,n]
Belgium[4]	0.8 [a]	1.0 [b]	2.3	2.5	-	-	1.0 [a]	3.0 [b]	7.5	11.8	-	-
Canada	4.8	6.7 [b]	6.9 [b]	8.4 [b]	9.4 [b,n]	10.0 [b,n]	3.8	9.4	11.6	12.9	12.0 [n]	11.7 [n]
Czech Republic	-	-	1.3	1.7	1.5	-	-	-	3.3	2.2	2.7	-
Denmark	2.0 [a]	4.6	4.3	2.6 [s]	-	-	2.1	4.4	11.0	7.8 [s]	-	-
Finland	1.1 [a]	1.5 [a]	1.0	1.2	1.2	-	1.0 [a]	1.3 [a]	4.5	2.5	3.1	-
France	0.7 [a]	0.7	1.7	1.7	-	-	5.0 [a]	8.0	8.0	7.2	-	-
Germany	0.4	0.5 [a]	0.3 [b]	0.4	0.4 [b]	0.4 [b]	1.0	2.0 [a]	1.8 [b]	2.5	2.5 [b]	2.4 [b]
Greece	-	0.7	2.5 [a]	2.0 [b]	-	-	-	19.9	18.2 [a]	21.4 [b]	-	-
Hungary	-	0.1 [c,q,s]	0.5 [c,s]	0.4 [c,s]	0.3 [c,s]	-	-	1.8 [c,q,s]	4.9 [c,s]	9.2 [c,s]	10.4 [c,s]	-
Iceland	4.4	1.7	3.7	1.6	-	-	4.3	4.1	4.4	18.3	-	-
Ireland[3]	1.1	2.2 [b]	1.9 [b,p]	2.6 [b]	-	-	4.8	9.4 [b]	8.5 [b,p]	8.9 [b]	-	-
Italy	0.0 [r]	-	-	-	-	-	2.7 [r]	6.1 [a]	5.3	-	-	-
Japan	7.3 [b,k]	6.1 [b,k]	6.7 [b,k]	8.1 [b]	7.6 [b]	-	0.1 [b,k]	0.1 [b,k]	0.1 [b,k]	0.4	0.4	-
Korea	-	-	4.7	2.1 [e]	2.0 [e]	-	-	-	0.0	0.5 [e]	0.4 [e]	-
Luxembourg[3]	-	-	-	-	-	-	-	-	-	1.3 [-]	-	-
Mexico	-	-	9.5	9.8	-	-	-	-	6.7	1.3	-	-
Netherlands	1.3	1.8	2.6	1.1 [a]	-	-	5.2	1.9	9.3	11.0	-	-
New Zealand	-	8.2	10.1	9.9 [a]	-	-	-	2.5	3.9	6.6 [a]	-	-
Norway	1.4	1.3	1.2 [a]	1.4	-	-	1.4	4.6	4.9 [a]	7.1	-	-
Poland	-	-	2.1 [a]	2.0	3.2	-	-	-	1.7 [a]	2.4	4.8	-
Portugal[5, 1]	4.8	5.4	3.3	2.4	-	-	3.3	15.0	11.9 [a]	5.1	4.9 [b]	-
Slovak Republic	-	-	0.1 [c]	0.8 [j]	0.3 [j]	-	-	-	1.6 [c]	1.9 [j]	2.1 [j]	-
Spain	0.1 [l]	0.6	5.2 [a]	5.3	5.2	-	1.1	5.6	6.7	7.7	6.8	-
Sweden	1.4 [a]	2.7	2.2 [a]	3.8	-	-	1.5 [a]	1.5	3.4 [a]	3.4	-	-
Switzerland[1, 2, 3]	-	2.3	2.5	3.4 [-]	-	-	-	1.9	3.1	4.3 [-]	-	-
Turkey[3]	-	1.3	2.7	5.3 [-]	-	-	-	0.2	2.0	1.2 [-]	-	-
United Kingdom	3.0 [a]	3.5	4.5	5.8	5.9	-	6.9 [a]	11.9	14.5	18.4	20.5	-
United States	2.8 [h]	3.9 [h]	4.4 [h]	5.0 [h]	5.4 [h,n]	5.7 [h,n]	-	-	-	-	-	-
Total OECD	**2.9** [b]	**3.5** [a,b]	**4.0** [a,b]	**4.6** [b]	**4.8** [b,n]	**-**	**-**	**-**	**-**	**-**	**-**	**-**
EU-25	**-**	**-**	**1.9** [b]	**2.2** [b]	**-**	**-**	**-**	**-**	**6.7** [b]	**7.6** [b]	**-**	**-**
EU-15	**1.1** [b]	**1.3** [a,b]	**1.8** [b]	**2.2** [b]	**-**	**-**	**3.5** [b]	**5.6** [a,b]	**6.9**	**7.8** [b]	**-**	**-**
China[3]	-	-	-	-	-	-	-	-	-	2.7 [s]	-	-
Israel[3]	-	13.1 [c]	12.0 [c]	2.8 [c,n]	-	-	-	6.5 [c]	4.4 [c]	2.8 [c,n]	-	-
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.
2. 1996 instead of 1995.
3. 2000 instead of 2001.
4. 1983 instead of 1981.
5. 1982 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[1, 2, 3]	0.19 [p]	0.67	0.79	0.71 [-]	-	-	0.69 [p]	0.76	0.76	0.70 [-]	-	-
Austria	0.57	0.74 [b]	0.70 [a,b]	0.77 [b,n]	0.78 [b,n]	0.79 [b,n]	0.53	0.68 [b]	0.74 [a,b]	0.79 [b,n]	0.79 [b,n]	0.78 [b,n]
Belgium[4]	1.01 [a]	1.05 [b]	1.15	1.40	-	-	0.52 [a]	0.51 [b]	0.40	0.47	-	-
Canada	0.51	0.61	0.79	0.98	0.86 [n]	0.83 [b,n]	0.63	0.73 [b]	0.62 [b]	0.62 [b]	0.64 [b,n]	0.64 [b,n]
Czech Republic	-	-	0.64	0.68	0.70	-	-	0.59 [c,k,q]	0.33 [c,k,q]	0.57	0.55	-
Denmark	0.45	0.84	0.83	1.48 [s]	-	-	0.57	0.65	0.73	0.67 [s]	-	-
Finland	0.64 [a]	1.15	1.36	2.41	2.40	-	0.51 [a]	0.83 [a]	0.80	0.87	0.90	-
France	0.79	1.01	1.12	1.21	-	-	1.03 [a]	1.16	0.97	0.82	-	-
Germany	1.38	1.55 [a]	1.35	1.65	1.66 [b]	1.63 [b]	1.01	0.90 [a]	0.85	0.79	0.80 [b]	0.80 [b]
Greece	0.04	0.08	0.12 [a]	0.19	-	-	0.14 [a]	0.21	0.26 [a]	0.31	-	-
Hungary	-	0.59 [m,q,s]	0.28 [a,s]	0.33 [s]	0.30 [s]	-	-	0.42 [c,m,q]	0.39 [a,c,s]	0.51 [c,s]	0.60 [c,s]	-
Iceland	0.04	0.29	0.54	1.41	-	-	0.54	0.82	0.90	1.04	-	-
Ireland[3]	0.26	0.56 [b]	0.92 [b,p]	0.76 [b]	-	-	0.38	0.26 [b]	0.29 [b,p]	0.26 [b]	-	-
Italy	0.44 [r]	0.54 [a]	0.42	-	-	-	0.42 [r]	0.61 [a]	0.53	-	-	-
Japan	1.44 [j]	2.14 [j]	1.95 [j]	2.24	2.31	-	0.53 [b]	0.45 [b]	0.56 [b]	0.57 [b]	0.57 [b]	-
Korea	-	-	1.91	2.12 [e]	2.10 [e]	-	-	-	0.48	0.73 [e]	0.74 [e]	-
Luxembourg[3]	-	-	-	1.56 [-]	-	-	-	-	-	0.13 [-]	-	-
Mexico	-	0.10 [b,j,q]	0.05	0.12	-	-	-	0.21 [f,q]	0.20	0.23	-	-
Netherlands	0.83	0.94	0.91 [a]	0.98	-	-	0.84	0.95	0.84 [a]	0.68	-	-
New Zealand	-	0.27	0.32	0.44 [a]	-	-	-	0.61	0.50	0.55 [a]	-	-
Norway	0.47	0.73	0.85 [a]	0.83	-	-	0.67	0.81	0.75	0.64	-	-
Poland	-	-	0.23	0.20	0.18 [b]	-	-	-	0.39 [a]	0.41	0.36 [b]	-
Portugal[5, 1]	0.09	0.12	0.11 [a]	0.27	-	-	0.18	0.36	0.37 [a]	0.52	-	-
Slovak Republic	-	1.46 [q]	0.56	0.36	0.31	-	-	0.68 [c,q]	0.35 [c]	0.26 [k]	0.25 [k]	-
Spain	0.18	0.40	0.36 [a]	0.45	0.50	-	0.23	0.38	0.35 [a]	0.38	0.40	-
Sweden	1.22 [a,k]	1.69 [k]	2.20 [k]	3.07 [k]	-	-	0.94 [a,k]	0.93 [k]	0.96 [a,k]	0.90 [k]	-	-
Switzerland[1, 2, 3]	1.59 [b]	1.75	1.80	1.77 [-]	-	-	0.53 [b]	0.74	0.72	0.60 [-]	-	-
Turkey[3]	-	0.15	0.13	0.28 [-]	-	-	-	0.37	0.24	0.32 [-]	-	-
United Kingdom	1.00	1.03	0.94	0.88	0.88	-	1.15 [a,b]	0.72	0.64	0.53	0.50	-
United States	1.16 [h]	1.56 [h]	1.51 [h]	1.85 [h]	1.72 [h,n]	1.65 [b,h,n]	1.12 [h]	1.06 [h]	0.89 [h]	0.76 [h]	0.81 [h,n]	0.82 [b,h,n]
Total OECD	**1.00** [b]	**1.30** [a,b]	**1.24** [a,b]	**1.45** [b]	**1.41** [b,n]	**-**	**0.85** [b]	**0.79** [a,b]	**0.71** [a,b]	**0.66** [b]	**0.68** [b,n]	**-**
EU-25	**-**	**-**	**0.89** [b]	**1.01** [b]	**-**	**-**	**-**	**-**	**0.68** [b]	**0.63** [b]	**-**	**-**
EU-15	**0.81** [b]	**0.99** [a,b]	**0.94**	**1.07** [b]	**-**	**-**	**0.78** [b]	**0.78** [a,b]	**0.70**	**0.65** [b]	**-**	**-**
China[3]	-	-	-	0.58 [s]	-	-	-	-	-	0.33 [s]	-	-
Israel[3]	-	1.09	1.31	3.29 [n]	-	-	-	0.92 [c]	0.98 [c]	1.17 [c]	-	-
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.

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Source: OECD, MSTI database, May 2004.

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

As a percentage of total national R&D expenditures

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

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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&D expenditures

	Government						Private non-profit					
	1981	1991	1995	2001	2002	2003	1981	1991	1995	2001	2002	2003
Australia[1, 2, 3]	45.1	28.1	23.5	22.9 [-]	-	-	1.3	1.6	2.1	2.7 [-]	-	-
Austria[4]	9.0	-	-	6.4	-	-	2.3	-	-	0.3	-	-
Belgium[5]	5.6 [a]	6.1 [b]	3.5	6.0	-	-	4.6 [a]	1.2 [b]	1.4	1.1	-	-
Canada	24.4	18.7	14.4	10.9	11.7 [n]	11.2 [n]	0.8	1.0	0.7	0.2	0.2 [n]	0.2 [n]
Czech Republic	-	29.0 [c,q]	26.5 [c,q]	23.7	23.0	-	-	-	0.1	0.5	0.3	-
Denmark	22.7	17.7	17.0	11.7	7.0 [a]	-	0.9	1.2	1.1	0.7	0.6	-
Finland	22.6 [a]	20.2 [a]	16.7	10.2	10.4	-	0.6 [a]	0.7 [a]	0.6	0.6	0.6	-
France	23.6 [a]	22.7	21.0	16.5	17.0 [n]	-	1.1 [a]	0.8	1.3	1.4	1.4 [n]	-
Germany	13.4	14.4 [a]	15.5 [b,m]	13.7 [m]	13.7 [b,m]	13.8 [b,m]	0.5	0.5 [b]	-	-	-	-
Greece	63.1 [a]	40.1	25.5 [a]	22.1 [b]	-	-	-	-	0.7 [a]	0.4 [b]	-	-
Hungary	-	24.5 [c,q,s]	25.6 [c,s]	25.9 [c,s]	32.9 [c,s]	-	-	-	-	-	-	-
Iceland	60.7	44.5	37.5	20.1	24.5 [b]	-	3.7	4.4	3.2	2.3	2.2 [b]	-
Ireland	39.3	11.6 [b]	9.0 [b]	7.9 [b]	-	-	1.1	1.7 [b]	0.8 [b]	-	-	-
Italy	25.7 [r]	22.7 [a]	21.1	18.4	-	-	-	-	-	-	-	-
Japan	12.0 [b,k]	8.1 [b,k]	10.4 [b,k]	9.5	9.5	-	4.5 [b,k]	4.4 [b,k]	4.8 [b,k]	2.3 [a]	2.1	-
Korea	-	-	17.0	12.4 [e]	13.4 [e]	-	-	-	1.2	1.1 [e]	1.3 [e]	-
Luxembourg[3]	-	-	-	7.1 [-]	-	-	-	-	-	-	-	-
Mexico	-	-	33.0	39.1	-	-	-	-	0.4	0.2	-	-
Netherlands	20.8	18.3	18.1	14.2	-	-	2.8	2.3 [a,m]	1.0	0.6	-	-
New Zealand	-	44.6	42.2	33.2 [a]	-	-	-	-	-	-	-	-
Norway	17.7	18.8	17.3 [a]	14.6	15.8	-	0.5	-	-	-	-	-
Poland	-	-	35.0 [a]	31.3	44.9	-	-	-	0.1	0.2	0.3	-
Portugal[6, 1]	43.6	22.1	27.0	20.8	19.8 [b]	-	4.6	13.2	15.0 [a]	10.8	10.2 [b]	-
Slovak Republic	-	21.5 [c,q]	40.2 [c]	23.7 [c]	26.6 [c]	-	-	-	-	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 [a,f]	4.1 [f]	3.7 [a,f]	2.8 [f]	-	-	0.3 [a]	0.1	0.2 [a]	0.1	-	-
Switzerland[1, 2, 3]	5.9 [b]	3.7 [f]	2.5 [f]	1.3 [a,f]	-	-	3.2 [a,h]	1.2	2.5	1.9 [-]	-	-
Turkey[3]	-	7.9	7.4	6.2 [-]	-	-	-	-	-	-	-	-
United Kingdom	20.6 [a]	14.5 [a]	14.6	9.9 [a]	8.9	-	2.9 [a]	1.8	1.3	1.5	1.5	-
United States	12.5 [f]	9.8 [f]	9.4 [f]	7.9 [f]	8.8 [f,n]	9.1 [f,n]	3.1 [h]	3.3 [h]	3.6 [h]	4.7 [h]	5.1 [h,n]	5.3 [h,n]
Total OECD	**15.2** [b]	**12.4** [a,b]	**12.5** [a,b]	**10.5** [b]	**11.0** [b,n]	**-**	**2.6** [b]	**2.6** [a,b]	**2.7** [a,b]	**2.8** [b]	**2.9** [b,n]	**-**
EU-25	**-**	**-**	**16.8** [b]	**13.6** [b]	**13.7** [b,n]	**-**	**-**	**-**	**0.9** [b]	**0.9** [b]	**0.8** [b,n]	**-**
EU-15	**18.8** [b]	**16.9** [a,b]	**16.2** [b]	**13.1** [b]	**13.0** [b,n]	**-**	**1.4** [b]	**0.9** [a,b]	**0.9** [b]	**0.9** [b]	**0.8** [b,n]	**-**
China	-	49.6 [j,s]	42.1 [j,s]	29.7	28.7	-	-	-	-	-	-	-
Israel	-	10.8 [c]	9.9 [c]	5.2 [c,n]	5.8 [c,n]	-	-	6.9 [c]	5.8 [c]	3.4 [c,n]	3.8 [c,n]	-
Russian Federation	-	16.8	26.1	24.3	24.5	-	-	0.0 [h]	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.
2. 1996 instead of 1995.
3. 2000 instead of 2001.
4. 1998 instead of 2001.
5. 1983 instead of 1981.
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[1, 2, 3]	0.2 [b]	0.7	0.8	0.7	-	-	0.3	0.4	0.4	0.4	-	-
Austria[4]	0.6	-	-	1.1 [b, n]	-	-	0.4	-	-	0.5 [b,n]	-	-
Belgium[5]	1.1 [a,a]	1.1 [b]	1.2	1.6	-	-	0.3 [a]	0.4 [b]	0.4	0.4	-	-
Canada	0.6	0.8	1.0	1.2	1.1 [n]	1.0 [b, n]	0.3	0.5	0.5	0.6	0.6 [n]	0.7 [b,n]
Czech Republic	-	1.4 [c, q]	0.7 [c, q]	0.8	0.8	-	-	0.0 [c,q]	0.1 [c,q]	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 [a]	-
Finland	0.6 [a]	1.2 [a]	1.4	2.4	2.4	-	0.3 [a]	0.5 [a]	0.4	0.6	0.7	-
France	1.1 [a]	1.5	1.4	1.4 [a]	1.4 [n]	-	0.3 [a]	0.4	0.4	0.4	0.4 [n]	-
Germany	1.7	1.7 [a,a]	1.5 [b]	1.8	1.7 [b]	1.7 [b]	0.4	0.4 [a]	0.4 [b]	0.4	0.4 [b]	0.4 [b]
Greece	0.0 [a]	0.1	0.1 [a]	0.2 [b]	-	-	0.0 [a]	0.1	0.2 [a]	0.3 [b]	-	-
Hungary	-	0.4 [c, q, s]	0.3 [a, c, s]	0.4 [c, s]	0.4 [c, s]	-	-	0.2 [c,q,s]	0.2 [a,c,s]	0.2 [c,s]	0.3 [c,s]	-
Iceland	0.1	0.3	0.5	1.8	1.8 [b]	-	0.2	0.3	0.4	0.6	0.5 [b]	-
Ireland	0.3	0.6 [b]	0.9 [b]	0.8 [b]	-	-	0.1	0.2 [b]	0.3 [b]	0.3 [b]	-	-
Italy	0.5 [r]	0.7 [a]	0.5	0.5	-	-	0.2 [r]	0.3 [a]	0.3	0.4	-	-
Japan	1.4 [b, j]	2.1 [b, j]	1.9 [b, j]	2.3	2.3	-	0.4 [b,j,k]	0.3 [b,j,k]	0.4 [b,j,k]	0.4	0.4	-
Korea	-	-	1.8 [e]	2.2 [e]	2.2 [e]	-	-	-	0.2 [e]	0.3 [e]	0.3 [e]	-
Luxembourg[3]	-	-	-	1.6	-	-	-	-	-	0.0	-	-
Mexico	-	-	0.1	0.1	-	-	-	-	0.1	0.1	-	-
Netherlands	1.0	1.0	1.0 [a]	1.1	-	-	0.4	0.6	0.6 [a]	0.5	-	-
New Zealand	-	0.3	0.3	0.4 [a]	-	-	-	0.3	0.3	0.4 [a]	-	-
Norway	0.6	0.9	1.0 [a]	1.0	1.0	-	0.3	0.4	0.4 [a]	0.4	0.4	-
Poland	-	-	0.3 [a]	0.2	0.1 [b]	-	-	-	0.2 [a]	0.2	0.2 [b]	-
Portugal[6, 1]	0.1	0.1	0.1 [a]	0.3	0.3 [b]	-	0.1	0.3	0.2 [a]	0.3	0.3 [b]	-
Slovak Republic	-	1.6 [c, q]	0.5 [c,c]	0.4 [j, k]	0.4 [j, k]	-	-	0.1 [c,q]	0.1 [c]	0.1 [j,k]	0.1 [j,k]	-
Spain	0.2	0.5	0.4 [a]	0.5	0.6 [a]	-	0.1	0.2	0.3 [a]	0.3 [b]	0.3	-
Sweden	1.4 [a, j, k]	1.9 [k]	2.5 [a, k]	3.3 [k]	-	-	0.7 [a,j,k]	0.7 [j,k]	0.7 [a,h,j,k]	0.8 [j,k]	-	-
Switzerland[1, 2, 3]	1.6 [b]	1.8	1.9	1.9	-	-	0.4 [b]	0.6	0.6	0.6	-	-
Turkey[3]	-	0.1	0.1	0.2	-	-	-	0.4	0.3	0.4	-	-
United Kingdom	1.5 [a]	1.4	1.3	1.2 [a]	1.3	-	0.3 [a]	0.3	0.4	0.4	0.4	-
United States	1.7 [h]	2.0 [h]	1.8 [h]	2.0 [h]	1.9 [h, n]	1.8 [b, h, n]	0.3 [h]	0.4 [h]	0.4 [h]	0.4 [h]	0.4 [h,n]	0.4 [h,n]
Total OECD	**1.3** [b]	**1.5** [a, b]	**1.4** [a, b]	**1.6** [b]	**1.5** [b, n]	**-**	**0.3** [b]	**0.4** [a,b]	**0.4** [a,b]	**0.4** [b]	**0.4** [b,n]	**-**
EU-25	**-**	**-**	**1.1** [b]	**1.2** [b]	**1.2** [b, n]	**-**	**-**	**-**	**0.4** [b]	**0.4** [b]	**-**	**-**
EU-15	**1.0** [b]	**1.2** [a, b]	**1.1** [b]	**1.2** [b]	**1.2** [b, n]	**-**	**0.3** [a,b]	**0.4** [a,b]	**0.4** [a,b]	**0.4** [b]	**-**	**-**
China	-	0.3 [k, s]	0.3 [k, s]	0.6	0.8	-	-	0.1 [j,k,s]	0.1 [j,k,s]	0.1	0.1	-
Israel	-	1.4 [c]	1.6 [c]	3.8 [c, n]	3.4 [c, n]	-	-	0.7 [c,e]	0.7 [c,e]	0.8 [c,e,n]	0.8 [c,e,n]	-
Russian Federation[1]	-	0.6	0.6	0.8	0.9	-	-	0.0 [h]	0.0	0.1	0.1	-

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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[1, 2, 3]	0.4	0.4	0.4	0.4	-	-	0.0	0.0	0.0	0.0	-	-
Austria[4]	0.1	-	-	0.1 b,n	-	-	0.0	-	-	0.0	-	-
Belgium[5]	0.1 a	0.1 b	0.1	0.1	-	-	0.1 a	0.0 b	0.0	0.0	-	-
Canada	0.3	0.3	0.2	0.2	0.2 n	0.2 b,n	0.0	0.0	0.0	0.0	0.0 n	0.0 b,n
Czech Republic	-	0.6 c,q	0.3 c,q	0.3	0.3	-	-	-	-	0.0	0.0	-
Denmark	0.2	0.3	0.3	0.3	0.2 a	-	0.0	0.0	0.0	0.0	0.0	-
Finland	0.3 a	0.4 a	0.4	0.3	0.4	-	0.0 a	0.0 a	0.0	0.0	0.0	-
France	0.5 a	0.5	0.5	0.4	0.4 n	-	0.0 a	0.0	0.0	0.0	0.0 n	-
Germany	0.3	0.4 a	0.3 b,m	0.3 m	0.3 b,m	0.3 b,m	0.0	-	-	-	-	-
Greece	0.1 a	0.1	0.1 a	0.1 b	-	-	-	-	0.0 a	0.0 b	-	-
Hungary	-	0.3 c,q,s	0.2 a,c,s	0.2 c,s	0.3 c,s	-	-	-	-	-	-	-
Iceland	0.4	0.5	0.6	0.6	0.8 b	-	0.0	0.1	0.0	0.1	0.1 b	-
Ireland	0.3	0.1 b	0.1 b	0.1 b	-	-	0.0	0.0 b	0.0 b	-	-	-
Italy	0.2 r	0.3 a	0.2	0.2	-	-	-	-	-	-	-	-
Japan	0.3 b,j,k	0.2 b,j,k	0.3 b,j,k	0.3	0.3	-	0.1 b,j,k	0.1 b,j,k	0.1 b,j,k	0.1 a	0.1	-
Korea	-	-	0.4 e	0.4 e	0.4 e	-	-	-	0.0 e	0.0 e	0.0 e	-
Luxembourg[3]	-	-	-	0.1	-	-	-	-	-	-	-	-
Mexico	-	-	0.1	0.2	-	-	-	-	0.0	0.0	-	-
Netherlands	0.4	0.4	0.4 a	0.3	-	-	0.0	0.0 a,m	0.0 a	0.0	-	-
New Zealand	-	0.4	0.4	0.4 a	-	-	-	-	-	-	-	-
Norway	0.2	0.3	0.3 a	0.2	0.3	-	0.0	-	-	-	-	-
Poland	-	-	0.2 a	0.2	0.3 b	-	-	-	-	0.0	0.0 b	-
Portugal[6, 1]	0.1	0.1	0.2 a	0.2	0.2 b	-	0.0	0.1	0.1 a	0.1	0.1 b	-
Slovak Republic	-	0.5 c,q	0.4 c	0.2 k,c	0.2 k,c	-	-	-	-	-	0.0 k	-
Spain	0.1	0.2	0.2 a	0.2	0.2	-	-	0.0	0.0 a	0.0	0.0	-
Sweden	0.1 a,f,k	0.1 f,k	0.1 a,f,k	0.1 f,k	-	-	0.0 a,k	0.0 k	0.0 a,k	0.0 k	-	-
Switzerland[1, 2, 3]	0.1 b	0.1 f	0.1 f	0.0 a,f	-	-	-	0.0	0.1	0.0	-	-
Turkey[3]	-	0.0	0.0	0.0	-	-	-	-	-	-	-	-
United Kingdom	0.5 a	0.3 a	0.3	0.2 a	0.2	-	0.1 a	0.0	0.0	0.0	0.0	-
United States	0.3 f,h	0.3 f,h	0.2 f,h	0.2 f,h	0.2 f,h,n	0.2 b,f,h,n	0.1 h	0.1 h	0.1 h	0.1 h	0.1 h,n	0.1 h,n
Total OECD	**0.3 b**	**0.3 a,b**	**0.3 a,b**	**0.2 b**	**0.2 b,n**	**-**	**0.1 b**	**0.1 a,b**	**0.1 a,b**	**0.1 b**	**0.1 b,n**	**-**
EU-25	**-**	**-**	**0.3 b**	**0.2 b**	**0.3 b,n**	**-**	**-**	**-**	**0.0 b**	**0.0 b**	**0.0 b,n**	**-**
EU-15	**0.3 b**	**0.3 a,b**	**0.3 b**	**0.3 b**	**0.3 b,n**	**-**	**0.0 b**	**0.0 a,b**	**0.0 b**	**0.0 b**	**0.0 b,n**	**-**
China	-	0.4 j,k,s	0.3 j,k,s	0.3	0.4	-	-	-	-	-	-	-
Israel	-	0.3 c	0.3 c	0.3 c,n	0.3 c,n	-	-	0.2 c	0.2 c	0.2 c,n	0.2 c,n	-
Russian Federatior	-	0.1	0.2	0.3	0.3	-	-	0.0 h	0.0	0.0	0.0	-

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Source: OECD, MSTI database, May 2004.

Table 9. Business R&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 [b]	1 067 [b]	1 896	3 306	3 718	-	-	0.4	0.5	0.7	1.1	0.9	-
Austria[1]	814	949 [b]	-	-	2 214	-	-	0.5	0.4	-	-	0.6	-
Belgium	1 664	2 020	2 228 [b]	2 681	4 042	4 170 [n]	-	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 [n]	8 630 [b,n]	1.7	1.7	1.6	2.2	2.5	2.3
Czech Republic	-	-	1 613 [c,q]	818 [a]	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 [a]	19 853 [n]	-	6.2	5.7	6.0	5.9	5.1	5.1
Germany	19 239	23 586	29 116 [a]	26 122	33 897	33 934 [b]	33 464 [b]	11.4	10.4	10.2	8.9	8.6	8.7
Greece[2]	46	95	126	198	361 [b]	-	-	0.0	0.0	0.0	0.1	0.1	-
Hungary	-	-	406 [q]	297	447	443	-	-	-	0.1	0.1	0.1	0.1
Iceland	3	6	15	29	139	136 [b]	-	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 [r]	6 199 [r]	7 746 [a]	6 351	7 278	7 221 [n]	7 313 [n]	2.6	2.7	2.7	2.2	1.8	1.8
Japan	25 562 [j]	37 894 [j]	56 098 [j]	53 174 [j]	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[3]	-	-	-	-	294 [-]	-	-	-	-	-	0.1	-	-
Mexico	-	-	543 [b,j,q]	402	968	-	-	-	-	0.2	0.1	0.2	-
Netherlands	2 292	2 866	3 018	3 466	4 468	4 203 [n]	-	1.4	1.3	1.1	1.2	1.1	1.1
New Zealand	-	-	141	164	319 [a]	-	-	-	-	0.0	0.1	0.1	-
Norway	495	834	825	1 001 [a]	1 372	1 354 [b]	-	0.3	0.4	0.3	0.3	0.3	0.3
Poland	-	-	-	728 [a]	863	480	-	-	-	-	0.2	0.2	0.1
Portugal[4, 2, 5]	85	95	169	157 [a]	436	521 [b]	-	0.0	0.0	0.1	0.1	0.1	0.1
Slovak Republic	-	-	648 [b,c,q]	219 [c]	233	210	-	-	-	0.2	0.1	0.1	0.1
Spain	798	1 351	2 768	2 416	3 830	4 416 [a]	-	0.5	0.6	1.0	0.8	1.0	1.1
Sweden	2 058 [a]	3 024	3 344 [k]	4 673 [a,k]	7 376 [k]	-	-	1.2	1.3	1.2	1.6	1.9	-
Switzerland[2, 5, 6, 3]	2 399 [b]	3 482 [a]	3 321	3 513	3 884 [-]	-	-	1.4	1.5	1.2	1.1	1.0	-
Turkey[2]	-	-	324	303	879 [-]	-	-	-	-	0.1	0.1	0.2	-
United Kingdom	12 089	13 045	14 533	14 615	17 053 [a]	17 564	-	7.2	5.7	5.1	5.0	4.3	4.5
United States	81 589 [h]	112 257 [h]	127 965 [h]	132 109 [h]	179 673 [h]	172 371 [h,n]	170 945 [b,h,n]	48.4	49.4	44.9	44.8	45.5	44.1
Total OECD	**168 685** [b]	**227 013** [b]	**284 999** [a,b]	**294 874** [a,b]	**394 706** [b]	**390 610** [b,n]	**-**	**100**	**100**	**100**	**100**	**100**	**100**
EU-25	**-**	**-**	**-**	**85 141** [b]	**110 640** [b]	**111 945** [b,n]	**-**	**-**	**-**	**-**	**28.9**	**28.0**	**28.7**
EU-15	**55 136** [b]	**67 794** [b]	**84 074** [a,b]	**82 839** [b]	**107 593** [b]	**109 291** [b,n]	**-**	**32.7**	**29.9**	**29.5**	**28.1**	**27.3**	**28.0**
China	-	-	5 505 [k,s]	7 871 [k,s]	31 668	40 066	-	-	-	1.9	2.7	8.0	10.3
Israel	-	-	1 079 [c]	1 544 [c]	4 470 [c,n]	4 024 [c,n]	3 916 [c,n]	-	-	0.4	0.5	1.1	1.0
Russian Federation[5]	-	-	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 [b]	0.5 [b]	0.8	1.2	1.0	1.1	-	-
Austria[1]	0.9	1.0 [b]	-	-	1.6 [-]	-	-	-
Belgium	1.5	1.7	1.6 [b]	1.8	2.2	2.4	2.5 [n]	-
Canada	0.8	1.0	1.1	1.4	1.5	1.6 [b]	1.4 [b,n]	1.4 [b,n]
Czech Republic	-	-	1.8 [c,q]	0.9 [a]	1.1	1.0	1.1	-
Denmark[2]	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 [a]	2.0 [n]	-
Germany	2.3	2.7	2.5 [a]	2.1	2.5 [b]	2.5	2.5 [b]	2.5 [b]
Greece[3, 2]	0.0	0.1	0.1	0.2	0.3	0.3 [b]	-	-
Hungary	-	-	0.6 [q]	0.5	0.5	0.6	0.6 [b]	-
Iceland	0.1	0.2	0.4	0.8	2.5 [b]	2.8 [b]	2.8 [b]	-
Ireland	0.4	0.5	0.8	1.3	1.1 [b]	1.1	-	-
Italy	0.6 [r]	0.8 [r]	1.0 [a]	0.7	0.8	0.8	0.8 [n]	0.8 [n]
Japan	1.7 [j]	2.3 [j]	2.6 [j]	2.4 [j]	2.8	3.0	3.1 [b]	-
Korea	-	-	-	2.2	2.4	2.8	2.7	-
Luxembourg	-	-	-	-	2.2	-	-	-
Mexico	-	-	0.1 [b,j,q]	0.1	0.2	0.2	-	-
Netherlands	1.4	1.6	1.4	1.5	1.6	1.6	1.6 [n]	-
New Zealand[2]	-	-	0.4	0.3	0.4 [b]	0.6 [a,b]	-	-
Norway[2]	0.9	1.3	1.3	1.5 [a]	1.4	1.4	1.4	-
Poland	-	-	-	0.4 [a]	0.3	0.3	0.2 [b]	-
Portugal[4, 3, 5]	0.1	0.1	0.2	0.2 [a]	0.4 [b]	0.4	0.5 [b]	-
Slovak Republic	-	-	-	0.7 [c]	0.6	0.6	0.5	-
Spain	0.2	0.4	0.6	0.5	0.7	0.7	0.8 [a]	-
Sweden[2]	2.2 [a]	2.9	3.0 [k]	3.8 [a,k]	4.3 [k]	5.2 [k]	-	-
Switzerland[3, 5, 6]	1.6 [b]	2.6 [a,b]	2.9 [b]	3.1 [b]	3.1	-	-	-
Turkey	-	-	0.1	0.1	0.3	-	-	-
United Kingdom	2.1	2.0	2.0	1.8	1.8	1.8 [a]	1.9	-
United States	2.2 [h]	2.8 [h]	2.8 [h]	2.5 [h]	2.8 [h]	2.7 [h]	2.6 [b,h,n]	2.5 [b,h,n]
Total OECD	**1.7 [b]**	**2.1 [b]**	**2.1 [a,b]**	**2.0 [a,b]**	**2.2 [b]**	**2.2 [b]**	**2.1 [b,n]**	**-**
EU-25	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
EU-15	**1.4 [b]**	**1.7 [b]**	**1.7 [a,b]**	**1.6 [b]**	**1.8 [b]**	**1.8 [b]**	**1.8 [b,n]**	**-**
China	-	-	0.3 [k,s]	0.3 [k,s]	0.7 [a]	0.7	0.9 [b]	-
Israel	-	-	-	2.5 [c]	5.4 [c]	6.0 [c,n]	5.4 [b,c,n]	5.1 [b,c,n]
Russian Federatior	-	-	0.6	0.7	1.0 [b]	1.1	1.1 [b]	-

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.
2. 1999 instead of 2000.
3. 1986 instead of 1985.
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/10.1787/754616431240

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

As a percentage of total national R&D expenditures

	Industry						Government					
	1981	1991	1995	2001	2002	2003	1981	1991	1995	2001	2002	2003
Australia	75.5 [b,p]	92.7	92.9	88.7	-	-	8.4 [b,p]	3.0	2.4	5.1	-	-
Austria[1]	88.4	-	-	64.4	-	-	7.4	-	-	5.5	-	-
Belgium	91.5 [a]	91.4 [b]	89.2	82.7	83.9 [n]	-	8.3 [a]	7.8 [b]	4.3	5.7	5.9 [n]	-
Canada	81.9	71.6	74.3	75.9	75.9 [n]	75.9 [n]	10.7	9.9	6.2	3.2	3.2 [n]	3.2 [n]
Czech Republic	-	-	92.2	84.3	84.0	-	-	6.6 [c,q]	4.5 [c,q]	12.2	12.1	-
Denmark	84.4 [a]	86.0	76.9	87.4	-	-	12.4	7.9	6.1	3.1	-	-
Finland	94.9 [a]	93.3	89.1	95.6	95.7	-	4.2 [a]	5.5	5.6	3.4	3.2	-
France	68.2	66.2	76.1	82.9 [a]	-	-	24.6	22.3	12.7	8.4 [a]	-	-
Germany	81.7	87.0 [a]	87.5	90.7	91.2 [b]	91.0 [b]	16.9	10.1 [a]	10.2	6.7	6.2 [b]	6.4 [b]
Greece	95.4	74.0	76.1	80.2 [b]	-	-	4.6	5.5	7.4	2.3 [b]	-	-
Hungary	-	87.0 [q,s]	78.3 [s]	75.7 [s]	69.4 [s]	-	-	8.2 [q,s]	16.2 [s]	6.1 [s]	7.2 [s]	-
Iceland	53.3	84.5	95.5	73.1	-	-	38.3	9.6	3.3	1.4	-	-
Ireland	80.5	89.6	98.2 [p]	92.8	-	-	13.7	3.7	4.9 [p]	2.7	-	-
Italy	86.9 [r]	77.2 [a]	75.2	78.2	78.0 [n]	78.2 [n]	8.8 [r]	13.2 [a]	16.7	14.9	15.0 [n]	14.4 [n]
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[2]	-	-	-	97.8 [-]	-	-	-	-	-	1.6 [-]	-	-
Mexico	-	100.0 [b,q]	76.2	89.8	-	-	-	0.0 [b,k,q]	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 [a]	-	-	-	7.2	6.9	8.6 [a]	-	-
Norway	73.0	76.8	82.5 [a]	81.4	-	-	25.3	15.9	11.9 [a]	10.3	-	-
Poland	-	-	64.7 [a]	67.6	86.5	-	-	-	33.8 [a]	30.4	11.8	-
Portugal[3, 4]	92.9	80.5	78.6 [a]	94.4	-	-	1.6	9.1	5.1 [a]	2.1	-	-
Slovak Republic	-	88.6 [c,q]	87.7 [c]	78.3	77.5	-	-	11.4 [c,q]	10.8 [c]	20.6	21.1	-
Spain	93.6	80.4	84.4	82.5	84.0 [a]	-	4.1	11.3	9.2	9.5	9.6 [a]	-
Sweden	84.6 [a]	88.0	86.8 [a]	91.2	-	-	13.6 [a]	10.3	9.5 [a]	5.8	-	-
Switzerland[4, 5, 2]	98.7 [b]	95.5	92.5	91.4 [-]	-	-	1.3 [b]	1.7 [f]	2.4 [f]	2.3 [f]	-	-
Turkey[2]	-	99.9	91.3	92.4 [-]	-	-	-	0.0	1.7	4.3 [-]	-	-
United Kingdom	61.3	69.4	70.5	66.6 [a]	66.0	-	30.0	14.6	10.5	8.9 [a]	6.8	-
United States	68.4 [h]	77.4 [h]	82.2 [h]	90.6 [h]	90.1 [h,n]	90.0 [h,n]	31.6	22.6	17.8	9.4	9.9 [n]	10.0 [n]
Total OECD	**76.1** [b]	**82.6** [a,b]	**85.1** [a,b]	**89.2** [b]	**89.2** [b,n]	**-**	**22.3** [b]	**14.7** [a,b]	**11.7** [a,b]	**7.2** [b]	**7.1** [b,n]	**-**
EU-25	**-**	**-**	**80.5** [b]	**82.6** [b]	**-**	**-**	**-**	**-**	**10.8** [b]	**7.9** [b]	**-**	**-**
EU-15	**76.1** [b]	**78.9** [a,b]	**80.5** [b]	**82.8** [b]	**-**	**-**	**19.3** [b]	**13.4** [a,b]	**10.7** [b]	**7.7** [b]	**-**	**-**
China[2]	-	-	-	86.4 [a,s]	-	-	-	-	-	6.8 [a,s]	-	-
Israel[2]	-	74.2 [c]	78.6 [c]	90.4 [c,n]	-	-	-	25.8 [c]	21.3 [c]	9.6 [c]	-	-
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.
2. 2000 instead of 2001.
3. 1982 instead of 1981.
4. 1992 instead of 1991.
5. 1996 instead of 1995.

Source: OECD, MSTI database, May 2004.

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

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

As a percentage of total national R&D expenditures

	Other national sources						Abroad					
	1981	1991	1995	2001	2002	2003	1981	1991	1995	2001	2002	2003
Australia	0.3 [b,p]	0.3	1.7	0.7	-	-	1.6 [b,p]	4.1	3.1	5.6	-	-
Austria[1]	0.1	-	-	0.1	-	-	4.1	-	-	30.1	-	-
Belgium	0.0 [a]	0.0 [b]	0.4	0.1	0.1 [n]	-	0.2 [a]	0.9 [b]	6.1	11.5	10.3 [n]	-
Canada	0.0	0.0	0.0	0.0	0.0 [n]	0.0 [n]	7.4	18.5	19.5	21.0	21.0 [n]	21.0 [n]
Czech Republic	-	-	0.2	1.6	1.6	-	-	-	3.2	1.9	2.3	-
Denmark	0.5 [a]	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 [a]	-	-	7.1	11.4	11.1	8.7 [a]	-	-
Germany	0.2	0.3 [a]	0.1	0.2	0.2 [b]	0.2 [b]	1.2	2.6 [a]	2.2	2.4	2.4 [b]	2.4 [b]
Greece	-	-	0.0	0.0 [b]	-	-	-	20.6	16.5	17.5 [b]	-	-
Hungary	-	-	-	0.1 [s]	0.1 [s]	-	-	2.8 [q,s]	4.1 [s]	16.9 [s]	22.6 [s]	-
Iceland	0.0	0.0	0.0	0.2	-	-	8.4	5.9	1.2	25.3	-	-
Ireland	0.1	0.2	0.5 [p]	-	-	-	5.7	6.6	3.8 [p]	4.5	-	-
Italy	0.0 [r]	-	-	0.3	0.3 [n]	0.3 [n]	4.3 [r]	9.6 [a]	8.2	6.6	6.8 [n]	7.1 [n]
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[2]	-	-	-	-	-	-	-	-	-	0.6 [-]	-	-
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 [a]	-	-	-	4.9	5.7	11.8 [a]	-	-
Norway	0.0	0.1	0.1 [a]	0.0	-	-	1.7	7.2	5.6 [a]	8.4	-	-
Poland	-	-	0.2 [a]	0.2	0.3	-	-	-	1.3 [a]	1.8	1.4	-
Portugal[3, 4]	0.0	- [-]	0.3 [a]	-	-	-	5.5	10.4	16.1 [a]	3.6	2.9 [b]	-
Slovak Republic	-	-	0.0 [c]	0.0	0.3	-	-	-	1.6 [c]	1.1	1.2	-
Spain	0.1	0.2	0.1	0.3	0.5 [a]	-	2.2	8.1	6.4	7.8	5.9 [a]	-
Sweden	0.0 [a]	0.2	0.1 [a]	0.1	-	-	1.8 [a]	1.6	3.7 [a,j]	2.9	-	-
Switzerland[4, 5, 2]	-	0.2	0.7	0.5 [-]	-	-	-	2.7	4.4	5.8 [-]	-	-
Turkey[2]	-	-	1.4	1.4 [-]	-	-	-	0.1	5.6	1.9 [-]	-	-
United Kingdom	-	-	0.0	0.0 [a]	0.0	-	8.7	16.0	19.1	24.4 [a]	27.2	-
United States	0.0	0.0	0.0	0.0	0.0 [n]	0.0 [n]	-	-	-	-	-	-
Total OECD	**0.1** [b]	**0.1** [a,b]	**0.1** [a,b]	**0.2** [b]	**0.2** [b,n]	**-**	**-**	**-**	**-**	**-**	**-**	**-**
EU-25	**-**	**-**	**0.1** [b]	**0.2** [b]	**0.1** [b,n]	**-**	**-**	**-**	**8.6** [b]	**9.2** [b]	**-**	**-**
EU-15	**0.1** [b]	**0.2** [a,b]	**0.1** [b]	**0.1** [b]	**0.1** [b,n]	**-**	**4.6** [b]	**7.5** [a,b]	**8.8** [b]	**9.3** [b]	**-**	**-**
China[2]	-	-	-	-	-	-	-	-	-	4.0 [a,s]	-	-
Israel[2]	-	0.0 [c]	0.1 [c]	0.0 [c]	-	-	-	0.0 [c]	0.0 [c]	0.0 [c]	-	-
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.
2. 2000 instead of 2001.
3. 1982 instead of 1981.
4. 1992 instead of 1991.
5. 1996 instead of 1995.

Source: OECD, MSTI database, May 2004.

Table 12. Business R&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 [b,p]	0.54	0.81	0.69	-	-	0.02 [b,p]	0.02	0.02	0.04	-	-
Austria[1]	0.56	-	-	0.73	-	-	0.05	-	-	0.06	-	-
Belgium	0.92 [a]	0.99 [b]	1.09	1.32	1.38 [n]	-	0.08 [a]	0.08 [b]	0.05	0.09	0.10 [n]	-
Canada	0.49	0.57	0.74	0.92	0.80 [n]	0.77 [b,n]	0.06	0.08	0.06	0.04	0.03 [n]	0.03 [b,n]
Czech Republic	-	- [c,q]	0.61 [c,q]	0.66	0.66	-	-	0.09 [c,q]	0.03 [c,q]	0.10	0.10	-
Denmark	0.45 [a]	0.83	0.81	1.44	-	-	0.07	0.08	0.06	0.05	-	-
Finland	0.61 [a]	1.08	1.28	2.31	2.31	-	0.03 [a]	0.06	0.08	0.08	0.08	-
France	0.78	0.97	1.07	1.17 [a]	-	-	0.28	0.33	0.18	0.12 [a]	-	-
Germany	1.36	1.52 [a]	1.30	1.59	1.60 [b]	1.57 [b]	0.28	0.18 [a]	0.15	0.12	0.11 [b]	0.11 [b]
Greece	0.04	0.07	0.11 [a]	0.17 [b]	-	-	0.00	0.00	0.01 [a]	0.00 [b]	-	-
Hungary	-	0.38 [q,s]	0.25 [a,s]	0.29 [s]	0.25 [s]	-	-	0.04 [r,s]	0.05 [a,s]	0.02 [s]	0.03 [s]	-
Iceland	0.03	0.22	0.48	1.32	- [b]	-	0.02	0.02	0.02	0.03	-	-
Ireland	0.23	0.53	0.87 [p]	0.74	-	-	0.04	0.02	0.04 [p]	0.02	-	-
Italy	0.43 [r]	0.52 [a]	0.40	0.43	0.42 [n]	0.43 [n]	0.04 [r]	0.09 [a]	0.09	0.08	0.08 [n]	0.08 [n]
Japan	1.37 [j]	2.05 [j]	1.86 [j]	2.21	2.27	-	0.03 [j]	0.03 [j]	0.03 [j]	0.02	0.02	-
Korea	-	-	1.77	2.03	2.03	-	-	-	0.07	0.18	0.14	-
Luxembourg[2]	-	-	-	1.56 [-]	-	-	-	-	-	0.02 [-]	-	-
Mexico	-	0.09 [b,j,q]	0.05	0.11	-	-	-	-	0.00	0.01	-	-
Netherlands	0.80	0.88	0.83 [a]	0.88	-	-	0.07	0.07	0.07 [a]	0.06	-	-
New Zealand	-	0.23	0.22	0.34 [a]	-	-	-	0.02	0.02	0.04 [a]	-	-
Norway	0.45	0.68	0.79 [a]	0.78	-	-	0.16	0.14	0.11 [a]	0.10	-	-
Poland	-	-	0.16 [a]	0.16	0.11 [b]	-	-	-	0.08 [a]	0.07	0.02 [b]	-
Portugal[3, 4]	0.08	0.10	0.09 [a]	0.25	-	-	0.00	0.01	0.01 [a]	0.01	-	-
Slovak Republic	-	1.41 [c,q]	0.44 [c]	0.34	0.29	-	-	0.18 [c,q]	0.05 [c]	0.09	0.08	-
Spain	0.18	0.38	0.33 [a]	0.41	0.47 [a]	-	0.01	0.05	0.04 [a]	0.05	0.05 [a]	-
Sweden	1.19 [a]	1.65 [k]	2.16 [a,k]	3.03 [k]	-	-	0.19 [a]	0.19 [k]	0.24 [a,k]	0.19 [k]	-	-
Switzerland[4, 5, 2]	1.55 [b]	1.74	1.75	1.74 [-]	-	-	0.02 [b]	0.03 [f]	0.05 [f]	0.04 [f]	-	-
Turkey[2]	-	0.11	0.08	0.19 [-]	-	-	-	0.00	0.00	0.01 [-]	-	-
United Kingdom	0.92	0.96	0.89	0.83 [a]	0.83	-	0.45	0.20	0.13	0.11 [a]	0.09	-
United States	1.14 [h]	1.53 [h]	1.48 [h]	1.81 [h]	1.68 [h,n]	1.63 [b,h,n]	0.53 [h]	0.44 [h]	0.32 [h]	0.19 [h]	0.19 [h,n]	0.18 [b,h]
Total OECD	**0.97** [b]	**1.26** [a,b]	**1.19** [a,b]	**1.41** [b]	**1.37** [b,n]	**-**	**0.28** [b]	**0.22** [a,b]	**0.16** [a,b]	**0.11** [b]	**0.11** [b,n]	**-**
EU-25	**-**	**-**	**0.85** [b]	**0.97** [b]	**-**	**-**	**-**	**-**	**0.11** [b]	**0.09** [b]	**-**	**-**
EU-15	**0.79** [b]	**0.95** [a,b]	**0.90** [b]	**1.03** [b]	**-**	**-**	**0.20** [b]	**0.16** [a,b]	**0.12** [b]	**0.10** [b]	**-**	**-**
China[2]	-	-	-	0.52 [a,s]	-	-	-	-	-	0.04 [a,s]	-	-
Israel[2]	-	1.03 [c]	1.27 [c]	3.22 [c,n]	-	-	-	0.36 [c]	0.34 [c]	0.34 [c]	-	-
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.
2. 2000 instead of 2001.
3. 1982 instead of 1981.
4. 1992 instead of 1991.
5. 1996 instead of 1995.

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
Total manufacturing	**(15-37)**	**2.9**	**3.3**	**5.2**	**7.7**	**3.6**	**4.1**	**2.8**	**2.1**	**4.4**	**6.0**	**5.6**	**9.4**	**7.2**	**6.9**	**6.5**	**7.7**	**2.1**	**2.2**	**2.9**	**2.4**
Food prod., beverages and tobacco	(15-37)	1.0	1.0 [1]	1.4	1.7	0.4	0.4	0.3	0.1 [1]	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 [1]	1.2	3.6	1.1	1.1	2.5	0.4 [1]	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 [1]	0.8	1.1	0.7	0.4	0.4	0.0 [1]	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 [1]	10.2	14.0	3.8	4.0	3.6	2.6 [1]	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 [1]	7.3	2.9	5.8	1.6	3.7	0.3 [1]	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 [1]	12.0	17.8	4.5	6.6	3.4	4.2 [1]	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 [1]	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 [1]	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 [1]	4.3	4.4	0.6	0.8	3.8	1.1 [1]	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 [1]	1.7	2.9	0.5	0.2	0.7	0.6 [1]	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 [1]	2.2	3.3	1.9	1.1	2.5	1.0 [1]	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 [1]	12.6	16.5	13.1	17.7	5.0	2.2 [1]	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 [1]	5.4	6.5	1.6	2.1	3.8	2.8 [1]	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 [1]	18.4	24.7	22.0	30.5	7.2	1.8 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	2.7	4.8	5.4	3.8	6.8	10.3 [1]	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 [1]	-	-	0.9	1.4	4.0	10.7 [1]	-	-	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 [1]	-	-	15.5	10.7	31.3	8.4 [1]	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 [1]	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 [1]	-	-	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 [1]	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 [1]	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
Total services[5]	**(50-99)**	**0.3**	**0.4**	**0.2**	**0.3**	**0.3**	**0.4**	**1.1**	**0.5**	**0.4**	**0.9**	**0.2**	**0.5**	**0.1**	**0.2**	**0.1**	**0.2**	**0.2**	**0.4**	**0.1**	**0.2**
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 [1]	-	-	24.9	29.3	36.3	5.2 [1]	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 [1]	-	-	1.6	2.0	4.7	4.8 [1]	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 [1]	-	-	2.0	1.0	2.3	0.9 [1]	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 [1]	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 [1]	10.0	14.6	8.0	9.6	5.2	4.8 [1]	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 Anberd data are available).

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.

Source: OECD, STAN Indicators 2004.

StatLink: http://dx.doi.org/10.1787/052066133807

Table 13. Intensity in business R&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[3]		OECD[4]	
		1995	2001	1991	2000	1991	1998	1994	2001	1991	2001	1991	2001	1991	2001	1991	2000	1992	1999	1991	1999
Total manufacturing	**(15-37)**	**5.2**	**6.0**	**5.1**	**5.7**	**5.1**	**4.1**	**1.2**	**1.0**	**1.9**	**1.8**	**9.8**	**15.7**	**5.7**	**6.6**	**8.5**	**8.5**	**5.3**	**5.7**	**83.9**	**76.8**
Food prod., beverages and tobacco	(17-19)	0.9	0.9	1.8	2.4	1.2	1.5	0.1	0.1 [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 [1]	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 [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 [1]	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]	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 [1]	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 [1]	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 [1]	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	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 [1]	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 [1]	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 [1]	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]	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 [1]	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 [1]	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 [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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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]	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 [1]	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	-	-	-	-
Total services[5]	**(50-99)**	**0.3**	**0.5**	**0.1**	**0.3**	**0.6**	**0.7**	**0.1**	**0.1**	**0.1**	**0.3**	**0.3**	**0.6**	**0.3**	**0.4**	**0.7**	**0.9**	**0.2**	**0.2**	**14.4**	**20.8**
Wholesale and retail trade; restaurants and hotels	(50-55)	0.0 [2]	0.1	-	-	-	0.0 [1]	0.0	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	-	-
Transport and storage and communication	(60-64)	1.5 [2]	1.0	-	0.4	0.2	0.7 [1]	0.2	0.3	0.2	0.5	-	0.6	-	1.0	-	-	-	-	-	-
Transport and storage	(60-63)	0.0 [2]	0.0	-	0.1	0.0	0.1 [1]	-	-	0.0	-	-	0.0	-	0.0	-	0.1	-	-	-	-
Post and telecommunications	(64)	4.5 [2]	2.9	-	0.9	1.0	2.7 [1]	-	-	0.6	-	-	1.9	1.9	2.5	-	-	-	-	-	-
Finance, insurance, real estate and business services	(65-74)	0.5 [2]	1.0	-	0.6	2.0	2.0 [1]	0.2	0.1	0.4	0.7	-	1.5	-	-	-	-	-	-	-	-
Financial intermediation	(65-67)	0.0 [2]	0.0	-	0.4	0.2	0.2 [1]	0.0	0.0	0.0	0.1	-	1.1	-	-	-	0.5	-	-	-	-
Real estate, renting and business activities	(70-74)	0.7 [2]	1.6	-	0.7	2.8	2.6 [1]	0.2	0.1	0.5	1.0	-	1.5	1.0	0.7	-	-	-	-	-	-
….Real estate activities	(70)	- [2]	-	-	-	-	- [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
….Renting of m&eq and other business activities	(71-74)	- [2]	-	-	-	-	- [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
……Other business activities	(74)	- [2]	-	-	0.4	2.1	1.0 [1]	-	-	-	-	-	0.1	-	0.4	-	-	-	-	-	-
Community social and personal services	(75-99)	0.1 [2]	0.0	0.2	0.0	-	0.0 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	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.

2. 1998 instead of 1995.

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

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.

Source: OECD, STAN Indicators 2004.

Table 14. Business R&D expenditures by sector, 1991 and 2001 or nearest years available

As a percentage of total R&D expenditures

	(ISIC Rev.3)	Australia		Belgium		Canada		Czech Republic		Denmark		Finland		France		Germany		Ireland		Italy	
		1991	2000	1992	2001	1991	2001	1992	2001	1991	1999	1991	2001	1991	2000	1991	2001	1991	1999	1991	2001
Total business sector	**(01-99)**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total manufacturing	**(15-37)**	**62.8**	**50.4**	**84.9**	**82.9**	**66.7**	**69.8**	**59.3**	**68.3**	**69.4**	**60.4**	**85.3**	**84.6**	**92.1**	**85.0**	**95.4**	**90.9**	**84.7**	**74.9**	**89.8**	**79.4**
Food prod., beverages and tobacco	(15-16)	4.0	3.5	3.0	2.4	1.3	0.7	1.0	0.4	4.6	2.5	6.6	1.4	1.8	2.0	0.8	0.8	12.3	5.6	0.9	1.2
Textiles, textile prod., leather and footwear	(17-19)	0.4	0.7	1.3	2.1	1.0	0.7	6.6	0.7	0.4	0.2	1.0	0.4	0.5	0.6	0.6	0.6	2.3	0.5	0.2	0.6
Wood, pulp, paper, paper prod., printing & publishing	(20-22)	1.9	1.4	1.1	1.1	2.3	1.4	0.6	0.1	0.6	0.5	9.4	3.1	0.4	0.3	0.5	0.3	1.0	1.2	0.1	0.4
Chemical, rubber, plastics and fuel prod.	(23-25)	12.7	9.5	37.5	39.7	11.7	8.4	7.7	7.1	21.5	28.7	17.7	11.5	20.6	22.6	19.8	19.8	20.7	15.1	20.0	15.7
Coke, refined petroleum prod. and nuclear fuel	(23)	0.5	0.3	2.8	1.0	3.0	0.4	1.4	0.1	0.0	0.0	2.2	0.8	2.0	1.3	0.2	0.2	0.0	0.0	1.3	0.7
Chemicals and chemical prod.	(24)	10.1	8.4	32.0	36.8	8.2	7.3	4.1	5.9	20.8	26.5	13.7	8.9	16.5	18.6	18.1	17.7	19.1	13.6	16.9	13.2
….Chemicals excluding pharmaceuticals	(24ex2423)	5.1	1.6	21.7	16.0	3.4	1.8	3.2	3.2	3.0	3.5	8.7	2.9	8.9	6.1	13.4	10.9	6.3	3.1	6.1	5.1
….Pharmaceuticals	(2423)	5.0	6.8	10.3	20.9	4.8	5.6	0.9	2.7	17.8	23.0	4.9	6.0	7.7	12.4	4.7	6.8	12.8	10.5	10.8	8.1
Rubber and plastics prod.	(25)	2.0	0.9	2.8	1.9	0.5	0.6	2.2	1.1	0.7	2.2	1.9	1.7	2.1	2.7	1.5	2.0	1.5	1.5	1.8	1.8
Other non-metallic mineral prod.	(26)	1.3	0.6	1.5	1.7	0.3	0.1	1.0	2.6	1.5	0.6	1.3	0.5	1.1	1.3	1.0	0.9	1.7	0.9	0.5	0.6
Basic metals and fabricated metal prod.	(27-28)	10.0	4.3	5.4	4.8	4.3	2.8	8.0	4.0	2.6	1.1	6.2	3.5	2.9	2.3	2.4	2.3	2.3	1.1	3.3	1.4
Machinery and equipment	(29-33)	20.4	19.9	29.3	25.7	32.3	44.7	19.8	14.2	31.7	23.9	38.5	62.2	33.6	30.3	38.8	31.7	40.9	48.2	34.6	33.7
Machinery and equipment, n.e.c.	(29)	4.2	4.0	5.5	4.5	1.8	2.3	10.0	7.4	12.6	10.0	10.5	7.6	4.3	4.8	11.4	11.2	3.5	2.9	5.8	7.0
Electrical and optical equipment	(30-33)	16.2	15.9	23.8	21.2	30.5	42.4	9.8	6.8	19.2	13.9	28.1	54.5	29.3	25.5	27.3	20.5	37.4	45.3	28.8	26.7
….Office, accounting and computing machinery	(30)	2.1	1.9	0.3	0.3	6.1	4.1	0.2	0.0	1.5	0.8	0.9	0.2	3.5	1.5	3.9	1.9	8.3	5.1	6.8	1.1
….Electrical machinery and apparatus, nec	(31)	2.6	1.4	4.9	2.2	1.0	2.3	3.0	2.4	2.6	2.9	4.9	4.4	3.0	3.5	7.3	3.0	4.4	4.7	5.9	3.4
….Radio, television and communication equip.	(32)	9.4	9.9	16.1	17.5	22.2	33.7	5.0	2.9	7.3	4.0	16.8	47.5	8.1	13.7	10.1	10.7	21.5	30.6	14.7	18.3
….Medical, precision and optical instruments	(33)	2.2	2.7	2.5	1.2	1.2	2.3	1.5	1.4	7.9	6.1	5.4	2.4	14.7	6.8	6.0	4.9	3.3	5.0	1.3	4.0
Transport equipment	(34-35)	10.5	9.1	4.2	4.7	13.0	10.6	13.4	38.9	1.3	1.9	3.9	1.4	31.0	24.5	30.8	33.9	3.0	1.6	30.2	25.4
Motor vehicles, trailers and semi-trailers	(34)	6.7	7.9	2.3	2.6	1.4	2.6	7.1	34.8	0.0	0.5	1.5	0.4	11.5	13.8	21.4	29.8	2.7	1.2	18.3	14.0
Other transport equipment	(35)	3.8	1.2	1.9	2.1	11.5	8.0	6.3	4.2	1.3	1.5	2.4	1.0	19.5	10.7	9.4	4.1	0.2	0.4	12.0	11.4
….Building and repairing of ships and boats	(351)	1.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.5	0.8	0.3	0.1	0.1	0.3	0.1	0.0	0.1	0.4	0.2
….Aircraft and spacecraft	(353)	1.2	0.1	1.4	1.8	11.5	7.8	4.1	2.8	0.0	0.0	0.1	0.3	18.9	10.2	8.2	3.6	0.0	0.4	10.6	10.2
….Railroad equip. and transport equip. n.e.c.	(352+359)	0.6	0.5	0.5	0.3	0.0	0.2	2.2	1.4	0.4	0.0	1.6	0.4	0.5	0.4	1.0	0.5	0.2	0.0	1.0	1.0
Manufacturing nec; recycling	(36-37)	-	-	1.6	0.8	0.6	0.4	1.3	0.3	5.3	0.9	0.5	0.6	0.3	1.1	0.6	0.6	0.4	0.6	0.2	0.3
Electricity, gas and water supply	(40-41)	2.2	0.7	0.2	1.0	4.4	1.5	0.1	0.0	0.3	0.3	4.5	1.4	1.9	2.1	0.4	0.2	-	-	2.0	0.5
Construction	(45)	0.3	0.9	1.4	1.0	0.2	0.4	0.5	1.2	0.8	0.2	1.1	1.2	0.8	0.6	0.3	0.2	-	-	0.0	0.2
Total services[3]	**(50-99)**	**27.1**	**39.9**	**13.3**	**13.7**	**25.5**	**26.4**	**38.8**	**29.8**	**28.5**	**38.9**	**7.6**	**12.4**	**4.2**	**10.6**	**3.5**	**8.4**	**13.5**	**24.6**	**8.1**	**19.9**
Wholesale and retail trade; restaurants and hotels	(50-55)	-	-	1.3	1.0	-	-	-	1.2	-	-	-	-	-	0.0	-	-	-	0.0	0.0	0.6
Wholesale and retail trade; repairs	(50-52)	-	-	1.3	1.0	4.0	4.4	-	1.2	5.5	7.5	-	0.1	-	0.0	-	-	-	0.0	0.0	0.6
Hotels and restaurants	(55)	-	-	0.0	0.0	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	0.0	0.0	0.0
Transport and storage and communication	(60-64)	-	-	0.2	2.5	3.3	0.8	0.3	0.9	-	-	1.9	6.4	-	-	-	-	4.2	9.2	0.4	0.2
Transport and storage	(60-63)	-	-	0.1	1.0	0.4	0.3	0.3	0.8	-	-	0.1	0.5	0.3	5.2	-	1.1	0.2	0.0	0.0	0.1
Post and telecommunications	(64)	-	-	0.1	1.5	2.9	0.5	0.0	0.1	2.9	6.8	1.8	5.9	-	-	-	-	4.0	9.2	0.4	0.1
Finance, insurance, real estate and business services	(65-74)	-	-	11.6	9.8	18.3	21.3	38.5	23.8	-	24.6	-	-	-	-	-	-	-	15.3	7.5	19.1
Financial intermediation	(65-67)	-	-	2.4	0.7	2.9	1.6	0.0	0.0	-	2.2	-	-	-	-	-	-	-	0.0	0.0	2.5
Real estate, renting and business activities	(70-74)	-	-	9.2	9.1	15.3	19.7	38.5	23.8	20.0	22.5	-	-	4.0	5.5	-	6.9	-	15.3	7.5	16.6
……..Other business activities	(74)	-	-	4.5	5.0	2.4	3.1	9.2	1.8	15.9	5.6	-	0.5	-	2.9	-	-	-	1.5	0.5	2.2
Community social and personal services	(75-99)	-	-	0.1	0.4	-	-	0.0	3.9	-	-	-	1.0	-	-	-	-	-	0.0	0.2	0.0
High-technology manufactures		19.9	21.4	30.6	41.7	45.8	53.5	11.7	9.8	34.3	34.0	28.2	56.4	52.8	44.6	32.9	27.9	45.9	51.5	44.2	41.6
Medium-high technology manufactures		19.2	15.4	34.9	25.5	7.6	9.1	25.6	49.2	18.6	16.9	27.1	15.8	28.1	28.6	54.5	55.3	17.2	11.8	37.1	30.5
Medium-low technology manufactures		15.8	6.8	12.5	9.3	8.1	3.9	12.6	7.8	5.6	5.4	12.4	6.9	8.2	7.8	5.5	5.4	5.6	3.6	7.2	4.8
Low-technology manufactures		-	-	7.0	6.4	5.2	3.3	9.4	1.5	10.9	4.1	17.5	5.5	2.9	4.0	2.5	2.3	16.1	8.0	1.3	2.5
High- and medium-high technology manufactures		41.0	37.4	65.4	67.2	53.5	62.6	37.3	59.1	53.8	52.4	56.1	72.5	81.1	73.3	87.7	83.2	63.0	63.4	81.8	72.3

1. EU includes the 15 EU Members before 1May 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.

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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		Unites States		EU[1]		OECD[2]	
		1995	2001	1991	2000	1991	1998	1994	2001	1991	2001	1991	2001	1991	2001	1991	2000	1992	1999	1991	1999
Total business sector	**(01-99)**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total manufacturing	**(15-37)**	**83.3**	**82.8**	**89.7**	**75.9**	**63.3**	**54.4**	**71.9**	**69.4**	**78.4**	**60.0**	**87.9**	**87.4**	**79.7**	**79.2**	**75.7**	**64.9**	**87.9**	**84.3**	**83.9**	**76.8**
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	-	-	-	-
Total services[3]	**(50-99)**	**7.6**	**12.6**	**6.7**	**19.7**	**41.8**	**48.0**	**14.4**	**18.2**	**16.4**	**37.6**	**9.0**	**11.5**	**15.1**	**18.8**	**24.3**	**34.4**	**8.2**	**12.9**	**14.4**	**20.8**
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	0.0	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&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 n	-	-	0.30	0.35	0.35	0.37	0.38 p	- p
Czech Republic	-	-	22.1	27.4	36.9	45.3	43.4	- d,t	- a	0.16 d,t	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[1, 2]	-	17.1	16.4	16.4 -	-	21.5	-	-	0.24	0.22	0.22 -	-	0.30 a	- p
Germany	-	16.1	18.1	19.0	-	-	-	- a	0.24	0.28	0.32	- c	-	- c
Greece	7.6	3.8	3.6	4.5	-	-	-	0.01	0.01 a	0.00	0.01	-	- c	-
Hungary[2]	-	21.8	65.3	78.5 -	-	-	-	- t	0.07 a	0.20	0.20 -	-	-	-
Ireland	68.6	66.2	65.3	63.8	-	65.2	-	0.40	0.59	0.59	0.55	- c	0.52	-
Italy[3]	23.1	-	-	-	-	-	-	0.15	-	-	-	-	-	- p
Japan	0.9	1.4	1.3	3.9	3.6	-	-	0.02 l	0.03 l	0.03	0.08	0.08	-	-
Netherlands	-	-	20.6	21.5	18.7	-	-	-	- a	0.23	0.25	0.21	-	- p
Poland[4]	-	-	-	12.1	12.1	4.6	-	-	- a	-	0.03	0.03	0.01	- b
Portugal	-	-	-	18.0	-	30.8	-	-	- a	-	0.03	- c	0.08	- c
Slovak Republic[4]	-	0.8	-	20.4	20.4	19.0	-	- d,t	0.00 d	- a	0.09	0.09	0.08	-
Spain[5]	38.7 -	26.8	35.7	32.8	-	31.0	-	0.18 -	0.10 a	0.14	0.15	-	0.15	- a
Sweden	17.1	18.4	15.9	34.1	34.0	-	-	0.32 m	0.46 a,m	0.42 m	0.93 m	-	- m	-
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 a	0.48
United States	10.2	13.3	12.3	14.7	14.7	14.9	-	0.20 j	0.24 j	0.24 j	0.29 j	0.30 j	0.30 j	- j,p

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.

StatLink: http://dx.doi.org/10.1787/073550815144

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

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

	Government						
	1981	1985	1991	1995	2001	2002	2003
Australia[1, 2, 3]	1.8 [p]	2.7	5.7	5.7	5.6 [-]	-	-
Austria[4]	1.5	1.3	-	-	3.1	-	-
Belgium[5]	0.0 [a]	0.0	1.2 [b]	2.1	12.4	-	-
Canada	1.0	1.0	1.7	1.8	2.6	2.6 [n]	2.6 [n]
Czech Republic	-	-	-	11.3 [a]	6.6	9.6	-
Denmark	1.6	2.2	3.6	3.5	7.5	5.4 [a]	-
Finland	9.5 [a]	-	11.2 [a]	11.9	15.2	14.2	-
France	1.8	0.7	4.8	5.4	6.3	-	-
Germany	0.8	1.4	1.3 [a]	3.4 [m]	2.3 [m]	2.3 [b,m]	2.3 [b,m]
Greece	0.0	-	1.0	2.3	1.9	-	-
Hungary	-	-	22.0 [c]	15.1 [c]	13.1 [c]	6.4 [c]	-
Iceland	0.5	22.3	10.4	7.2	5.0	-	-
Ireland[3]	3.6	9.0	13.4 [b]	21.8	10.6	8.8 [n]	-
Italy	2.3 [r]	2.0 [r]	1.9 [a]	1.8	3.5	2.2 [n]	2.9 [n]
Japan	1.3	5.4	2.2	0.7	0.7	1.2	-
Korea	-	-	-	16.5 [e]	8.1 [e]	4.6 [e]	-
Luxembourg[3]	-	-	-	-	5.8 [-]	-	-
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 [a]	14.3	23.3	-
Portugal[6, 7, 1]	0.2	4.1	7.1	0.3	3.5	-	-
Slovak Republic	-	-	9.3 [c,q]	32.6 [c]	14.0 [c]	14.0 [c]	-
Spain	0.7	3.8	3.8	5.3	7.1	4.1	-
Sweden	5.4 [e,f]	4.8 [e,f]	4.8 [e,f]	3.0 [f]	1.6 [f]	-	-
Switzerland[7]	-	3.4 [f]	0.3 [b,f]	-	-	-	-
Turkey[3]	-	-	0.3	3.0	5.4 [-]	-	-
United Kingdom	11.0	14.6 [a]	12.0 [a]	6.9	12.5 [a]	10.7	-
United States	0.0 [f]	0.0 [f]	0.0 [f]	0.0 [f]	0.0 [f]	0.0 [f,n]	0.0 [f,n]
Total OECD	**2.1** [b]	**2.9** [b]	**3.1** [a,b]	**3.7** [a,b]	**3.6** [b]	**-**	**-**
EU-25	**-**	**-**	**-**	**6.0** [b]	**6.7** [b]	**-**	**-**
EU-15	**4.1** [b]	**5.2** [a,b]	**4.8** [a,b]	**5.1** [b]	**6.3** [b]	**-**	**-**
China[3]	-	-	-	-	9.6 [s]	-	-
Israel[3]	-	-	1.4 [c]	0.2 [c]	7.5 [c,n]	-	-
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.
2. 1996 instead of 1995.
3. 2000 instead of 2001.
4. 1998 instead of 2001.
5. 1983 instead of 1981.
6. 1982 instead of 1981.
7. 1986 instead of 1985.

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&D expenditures of the sector

	Higher education						
	1981	1985	1991	1995	2001	2002	2003
Australia[1, 2, 3]	1.4	2.1	2.5	4.7	4.9 [-]	-	-
Austria[4]	1.0	1.7	-	-	1.8	-	-
Belgium[5]	9.4 [a]	8.7	15.4 [b]	13.2	12.7	-	-
Canada	4.1	4.3	7.0	8.1	9.3	9.3 [n]	9.3 [n]
Czech Republic	-	-	-	2.0 [a]	0.7	0.9	-
Denmark	0.7	1.0	1.6	1.9	3.0	4.2 [a]	-
Finland	2.1 [a]	-	3.6 [a]	5.7	6.7	6.2	-
France	1.3 [a]	1.9	4.2	3.3	3.1	-	-
Germany	1.8	5.4	7.0 [a]	8.2	12.2	12.2 [b]	11.3 [b]
Greece	0.0 [a]	-	6.1	5.6 [a]	6.9	-	-
Hungary	-	-	14.4	2.1	4.4	11.8	-
Iceland	1.2	0.6	5.0	5.4	10.9	-	-
Ireland[3]	7.1	6.9	8.6 [b]	6.9 [b]	5.3 [-]	-	-
Italy	2.7	1.5	4.0	4.7	-	-	-
Japan	1.5 [b]	2.4 [b]	3.7 [b]	3.6 [b]	2.3	2.6	-
Korea	-	-	-	22.4 [e]	14.3 [e]	13.9 [e]	-
Luxembourg[3]	-	-	-	-	-	-	-
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[6, 1, 2]	0.0	0.9	0.5	0.9 [a]	0.8	-	-
Slovak Republic	-	-	6.1 [q]	1.0 [m]	0.3	0.0	-
Spain	0.0	1.1	10.0	8.3	8.7 [b]	7.6	-
Sweden	2.3 [a]	5.5	5.2	4.6 [a,h]	5.5	-	-
Switzerland[1, 2, 7, 3]	9.5 [b]	3.3 [a,b]	1.8	6.2	5.1 [-]	-	-
Turkey[3]	-	-	10.4	16.1	19.4 [-]	-	-
United Kingdom	2.8 [a]	5.2 [a]	7.8	6.3	6.2	5.8	-
United States	3.3 [h]	4.5 [h]	5.3 [h]	5.5 [h]	5.5 [h]	4.9 [h,n]	4.5 [h,n]
Total OECD	**2.6** [b]	**3.8** [b]	**5.5** [a,b]	**5.8** [a,b]	**6.0** [b]	**5.8** [b,n]	**-**
EU-25	**-**	**-**	**-**	**6.0** [b]	**6.7** [b]	**-**	**-**
EU-15	**2.0** [a,b]	**3.7** [a,b]	**5.8** [a,b]	**5.9** [a,b]	**6.8** [b]	**-**	**-**
China[3]	-	-	-	-	32.4 [s]	-	-
Israel[3]	-	-	7.4 [e]	2.3 [e]	3.7 [e]	-	-
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.
2. 1992 instead of 1991.
3. 2000 instead of 2001.
4. 1998 instead of 2001.
5. 1983 instead of 1981.
6. 1982 instead of 1981.
7. 1996 instead of 1995.

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[1, 2, 3]	0.33 [i,p]	0.43 [i]	0.43 [i]	0.40 [i]	-	-	35.1 [i,p]	28.3 [i]	25.9 [i]	26.0 [i]	-	-
Austria[4]	-	-	-	0.27 [a, k]	-	-	-	-	-	15.2 [a, k]	-	-
Czech Republic	-	-	0.17	0.53 [i]	0.49 [i]	-	-	- [c,q]	16.8 [c,q]	40.8 [i]	37.7 [i]	-
Denmark	-	-	-	0.44 [a]	-	-	-	-	-	18.3 [a]	-	-
France	-	0.48 [i]	0.51 [i]	0.52 [i]	-	-	- [a]	20.3 [i]	22.1 [i]	23.3 [i]	- [n]	-
Germany	0.46 [s]	0.47 [a]	-	-	-	-	18.9 [s]	18.7 [a]	-	-	-	-
Hungary[1]	-	0.23 [q]	0.18 [a]	0.24	0.25	-	-	22.1 [c,q]	24.7 [a,c]	25.3 [c]	24.5 [c]	-
Iceland	0.16	0.29 [i]	0.38 [i]	0.47 [i]	0.49 [b,i]	-	25.0	24.8 [i]	24.2 [i]	15.4 [i]	15.9 [i,b]	-
Ireland[3]	0.07	0.08	-	0.14 [i]	-	-	10.3	8.6 [b]	-	12.2 [i,b]	-	-
Italy	0.11 [r]	0.25 [a,i]	0.22 [i]	-	-	-	12.5 [r]	20.3 [a,i,a]	22.0 [i]	-	-	-
Japan	0.28 [e,i,j]	0.36 [i,j]	0.41 [i,j]	0.37 [i,k]	0.39 [i,k]	-	12.1 [e,i,j]	12.2 [i,j]	14.1 [i,j]	12.1 [i,k]	12.5 [i,k]	-
Korea	-	-	0.31	0.37 [e,i]	0.40 [e,i]	-	-	-	12.4 [e]	12.7 [e,i]	13.7 [e,i]	-
Mexico	-	-	0.09	0.12	-	-	-	-	29.0	30.8	-	-
Netherlands[4]	0.48 [a]	0.27 [i]	0.19 [a,i]	-	-	-	25.0 [a]	13.7 [i]	9.5 [a,i]	-	-	-
New Zealand	-	-	-	0.53 [i]	-	-	-	-	-	44.9 [a,i]	-	-
Norway	0.19	0.22	0.25	0.24	-	-	16.1	13.4	14.7 [a]	15.0	-	-
Poland	-	-	0.20 [a,m]	0.19 [m]	0.19 [b,m]	-	-	-	30.8 [a,m]	29.7 [m]	32.2 [b,m]	-
Portugal[5, 1]	0.05 [i]	0.15 [i]	0.14 [a,i,p]	0.19	-	-	16.7 [i]	24.6 [i]	24.6 [a,i,p,a]	22.4	- [b]	-
Slovak Republic	-	-	0.20 [c]	0.15	0.15	-	-	- [c,q]	21.5 [c]	23.4 [k]	25.9 [k]	-
Spain	0.06	0.13	0.17 [a]	0.15	0.16	-	14.6	15.5	21.0 [a]	15.8	15.5	-
Sweden	0.50 [a,k]	0.50 [k,p]	-	-	-	-	22.5 [a,k]	18.4 [k,p]	- [a,k]	- [k]	-	-
Switzerland[2, 3]	-	-	0.80 [i]	0.72 [i]	-	-	-	-	30.0 [i]	28.0 [i]	-	-
United States	0.32	0.46	0.40	0.47	0.49 [n]	0.50 [b,n]	13.7 [h]	16.9 [h]	15.9 [h]	17.2 [h]	18.4 [h,n]	19.1 [b,h,n]
China	-	0.03 [i,k]	0.03 [i,k]	0.06 [i]	0.07 [i]	-	-	4.1 [i,k]	5.0 [i,k]	5.6 [i]	5.7 [i]	-
Israel	-	-	-	0.89 [c,i,n]	0.89 [c,i,n]	-	-	-	-	17.7 [c,i,n]	18.9 [c,i,n]	-
Russian Federation[1]	-	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.
2. 1996 instead of 1995.
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4. 1998 instead of 2001.
5. 1983 instead of 1981.
6. 1982 instead of 1981.

Source: OECD, MSTI database, May 2004.

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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[1, 2, 3]	0.04	0.04	0.05 -	-	-	0.12	0.11	0.10 -	-	-	0.25	0.25 i	0.23 -	-	-	0.02	0.02	0.03 -	-	-
Austria[4]	-	-	0.04 a	-	-	-	-	0.02 a,k	-	-	-	-	0.21 a	-	-	-	-	0.00	-	-
Czech Republic	-	0.01 i	0.22 i	0.19 i	-	-	0.13 i	0.20 i	0.19 i	-	-	0.04 i	0.10 i	0.11 i	-	-	0.00	0.00	0.00	-
Denmark	-	-	0.08	-	-	0.05	0.08	0.07 a	0.03	-	0.20	0.25	0.28 a	0.34	-	0.01	0.01	0.01	0.01	-
France	0.06 i	0.06 i	0.05 a,i	-	-	0.09 i	0.11 i	0.09 i	-	-	0.32 i	0.33 i	0.37 i	-	-	0.01	0.01	0.01	-	-
Germany	0.09 a	0.07	0.08	-	-	0.12 a	-	-	-	-	0.26 a	-	-	-	-	-	-	-	-	-
Hungary[1]	0.02 c,q	0.01 a	0.01	0.02	-	0.13 c,q	0.10 a	0.11	0.13	-	0.09 c,q	0.07 a	0.11	0.10	-	-	-	-	-	-
Iceland	-	-	0.00	0.00	-	0.10 i	0.12 i,p	0.15 i	0.19 b,i	-	0.16 i	0.24 i,p	0.27 i	0.23 b,i	-	0.03	0.02	0.05	0.05 b	-
Ireland	0.02	-	0.04 i	-	-	0.00	0.00 b	-	-	-	0.06 b	0.08 b	0.10 b	-	-	0.00 b	0.00 b	-	-	-
Italy	0.02 a,i	0.02 i	0.03 i	0.03 i,n	0.03 i,n	0.09 a,i	0.08 i	0.06 i	0.09 i,n	0.08 i,n	0.14 i	0.13 i	-	-	-	-	-	-	-	-
Japan	0.14 i,j	0.13 i,j	0.13 i,k	0.14 i,k	-	0.04 j	0.05 a	0.09	0.09 i,k	-	0.18 j	0.14 a	0.16	0.16 i,k	-	0.02 j	0.02 a	0.01	0.01	-
Korea[2]	-	0.15 e	0.16 i	0.20 i	-	-	0.07 e	0.08 e,i	0.09 e,i	-	-	0.10 ei	0.12 ei	0.11 ei	-	-	0.01 e	0.00 e	0.00 e	-
Mexico	-	0.00	0.01	-	-	-	0.04	0.06	-	-	-	0.05	0.06	-	-	-	0.00	0.00	-	-
Netherlands	0.13 i	-	-	-	-	0.13 i	-	-	-	-	0.01 i	-	-	-	-	0.01	-	-	-	-
New Zealand	-	-	0.09 i	-	-	-	-	0.20 i	-	-	-	-	0.24 i	-	-	-	-	-	-	-
Norway	0.01	0.02 a	0.03	-	-	0.03	0.04	0.04	-	-	0.17	0.19	0.18	-	-	-	-	-	-	-
Poland	-	0.01 a,m	0.01 m	0.01 b,m	-	-	0.10 a,m	0.09 m	0.09 b,m	-	-	0.09 m	0.10 m	0.10 b,m	-	-	0.00	0.00	0.00	-
Portugal[1]	0.00	0.00 a,i,p	0.01	-	-	0.01	0.01 a,i,p	0.01	-	-	0.11	0.10 aip	0.14	-	-	0.02	0.03	0.03	-	-
Slovak Republic	-	0.03 c	0.03	0.03	-	-	0.13 c	0.08 c	0.09 c	-	-	0.04	0.04	0.03	-	-	-	0.00 k	0.00 k	-
Spain	0.02	0.02 a	0.02	0.02 a	-	0.03	0.03 a	0.03	0.03	-	0.08	0.11 a	0.10	0.11	-	0.00	0.00	0.00	0.00	-
Sweden	0.03 p	-	-	-	-	0.01 e,f	0.08 f	0.09 f	-	-	0.46	-	-	-	-	0.00 k	-	-	-	-
Switzerland[1, 2, 3]	0.16	0.19	0.20 -	-	-	0.00	0.00	0.00	0.00 f,i	-	-	0.55	0.47 -	-	-	0.00	0.06	0.04 -	-	-
Turkey	0.01	0.01 i	-	-	-	0.01	0.00 i	-	-	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	0.04 p	0.05 p	0.05 a	0.08	-	0.03 s	0.04	0.03 a	0.03	-	-	-	-	-	-	-	-	-	-	-
United States	0.13	0.08	0.08	0.08 n	0.08 b,n	0.04 f	0.04 f	0.04 f	0.04 f,n	0.04 b,f,n	0.25	0.24	0.28	0.30 n	0.31 b,n	0.04 h	0.04 h	0.06 h	0.07 h,n	0.07 b,h,n
China	0.00 i,k	0.00 i,k	0.00 i	0.00 i	-	0.02 i	0.02 i	0.04 i	0.04 i	-	0.01 i	0.01 i	0.02 i	0.03 i	-	-	-	-	-	-
Israel	-	-	0.19 c,i,n	0.17 c,i,n	0.17 c,i,n	-	-	0.05 c,i,n	0.05 c,i,n	-	-	-	0.61 e,i,n	0.62 e,i,n	-	-	-	0.04 c,n	0.05 c,n	-
Russian Federation[1]	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:

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/10.1787/377412476274

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														
				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	1991	2001	2003
Australia	10.3 f	5.8 f	5.7 f,n	25.8 f	36.8 f	34.3 f,n	14.6 f	16.4 f	19.9 f,n	-	0.0 f	0.0 f,n	15.0 f	3.1 f	3.7 f,n	34.4 f	37.9 f	36.4 f,n
Austria	0.0 f	0.0 f	0.0 f,n	14.6 f	15.8 f	12.7 f,n	8.6 f	8.8 f	8.5 f,n	0.4 f	0.1 f	0.1 f,n	12.4 f	13.7 f	13.1 f,n	64.0 f	61.5 f	65.5 f,n
Belgium	0.2	0.2	0.4 n	25.6	32.9	36.9 n	10.1	9.7	9.6 n	12.4	11.2	8.9 n	22.7	23.3	22.9 n	23.9	18.6	18.2 n
Canada	5.1 f	4.3 f	-	33.8 f	32.0 f	-	13.8 f	23.5 f	-	7.2 f	6.2 f	-	12.5 f	7.2 f	-	27.6 b,f	25.7 b,f	-
Czech Republic[1]	-	-	3.3 c	-	-	19.8 c	-	-	16.7 c	-	-	0.9 c	-	-	25.7 c	-	-	27.6 c
Denmark	0.6	0.5 a	1.1	26.3	21.1 a	16.5	14.1	19.8 a	16.7	2.7	2.4 a	2.2	23.3	18.0 a	20.6	33.0	37.4 a	42.1
Finland	1.4 a	1.6	2.9 n	40.4 a	41.1	39.1 n	16.3 a	15.4	15.2 n	3.1 a	1.9	1.9 n	10.5 a	14.2	13.7 n	28.3 a	25.9	27.2 n
France[1]	36.1	22.8 a	24.3 n	21.0	12.7	12.3 n	6.3	10.1	10.2 n	8.6	9.6	8.9 n	15.3	19.3	19.7 n	12.4	23.2	23.0 n
Germany	11.0 a	7.4	6.7 n	22.7 a	18.8 s	19.1 n,s	11.6 a	13.4 s	13.7 n,s	5.4 a	4.9 s	4.9 n,s	15.2 a	17.2 s	16.6 n,s	33.2 a	38.4 s	39.3 n,s
Greece[1]	1.5	0.8	0.9 n	29.7	20.8	18.0 n	17.5	19.8	19.0 n	0.3	0.2	0.1 n	3.4	12.5	10.9 n	46.1	45.6	50.7 n
Iceland	0.0	0.0	0.0 n	51.4	36.7	33.0 n	7.2	10.6	10.0 n	-	-	-	16.6	17.5	- n	24.9	35.2	38.4 n
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 n	-	21.8	16.1 n	-	18.2	15.5 n	-	7.0	7.3 n	-	10.6	13.3 n	-	31.3	43.7 n	-
Japan	5.7 e,f,k	4.3 f,k	4.5	31.6 e,f	32.8 f	31.9 f,n	5.4 e,f	7.5 f	7.3 f,n	6.8 e,f	6.7 f	6.7	8.0 e,f	13.8 f	15.3 f,n	42.5 e,f	34.8 f	34.4 f,n
Korea	-	15.8	14.2	-	46.7	44.7	-	15.7	16.7	-	3.2	2.8	-	18.5 m	21.6	-	- l	-
Mexico	0.0 f	0.0	-	32.6 f	33.5	-	14.2 f	12.5	-	0.0 f	0.0	-	20.4 f	- l	-	32.8 f	53.9 m	-
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 n	31.5	26.1	21.2 n	18.3	18.8	18.8 n	2.7	2.2	1.9 n	10.5	8.9	12.2 n	30.8	36.4	39.0 n
Portugal	0.7	2.1	2.0 n	38.5	31.4	35.4 n	18.0	17.8	16.7 n	0.2	0.5	0.5 n	8.4	10.5	9.9 n	30.3	35.6	33.5 n
Slovak Republic[2]	-	9.3 m	7.2 m	-	29.2	21.3	-	10.9	10.2	-	- l	- l	-	32.4 m	- a,m	-	16.6	- l
Spain	16.8	37.3 b	-	27.5	22.7 b	-	15.1	9.7 b	-	7.0	2.4 b	-	10.8	2.1 b	-	20.0	25.8 b	-
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[3, 4]	4.6 f	0.7 f	-	3.7 f,k	4.6 f,k	-	3.5 f,k	2.4 f,k	-	-	-	-	- l	- l	-	59.3 f,m	61.1 f,m	-
United Kingdom[1]	43.9	30.5	34.1 c	16.2	9.4	9.8 c	12.5	22.4	20.1 c	2.7	2.1	1.9 c	5.1	13.6	13.3 c	18.9	21.8	20.2 c
United States	59.7 f,g,h	50.5 f,g	53.7 b,f,g	8.9 f,g,h	6.5 f,g,l	5.6 b,f,g	17.5 f,g,h	26.2 f,g,l	26.3 b,f,g	9.9 f,g,h	9.8 f,g	8.4 b,f,g	4.0 f,g,h	6.9 f,g	6.0 b,f,g	-	-	-
Total OECD	**36.4 a**	**28.8 n**	**-**	**17.9 a**	**15.9 n**	**-**	**13.8 a**	**18.8 n**	**-**	**7.5 a**	**7.2 n**	**-**	**8.2 a**	**10.7 n**	**-**	**15.5 a**	**17.4 n**	**-**
EU-25	**-**	**14.9 a,n**	**-**	**-**	**16.8 a,n**	**-**	**-**	**13.5 a,n**	**-**	**-**	**5.2 a,n**	**-**	**-**	**14.8 a,n**	**-**	**-**	**31.6 a,n**	**-**
EU-15	**20.6 a**	**15.4 a,n**	**-**	**23.8 a**	**17.2 a,n**	**-**	**11.3 a**	**13.8 a,n**	**-**	**5.6 a**	**5.3 a,n**	**-**	**12.4 a**	**15.0 a,n**	**-**	**24.9 a**	**32.5 a,n**	**-**
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/10.1787/147403505165

Table 20. Tax treatment of R&D, 1990-2004

Rate of tax subsidies for 1 USD of R&D[1], large firms and SMEs

	SMEs			Large firms				
	1999	2001	2004	1990	1995	1999	2001	2004
Australia[2]	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[3]	-	0.11	0.18	0.00	0.13	-0.02 [4]	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[5]	-	-	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[6]	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[7]	-	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.

Source: OECD, 2004.

StatLink: http://dx.doi.org/10.1787/486405683434

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

	1981	1985	1991	1995	2001	2002
Australia[1, 2, 3]	3.6 [b]	4.3	6.8	7.2	7.3 [-]	-
Austria[4]	1.8	2.0 [k]	-	-	4.7 [k]	-
Belgium	3.5 [b,r]	4.1 [b,r]	4.8 [b,r]	6.1	7.8	-
Canada[3]	3.5	4.4	5.1	6.4	7.1 [b,n]	-
Czech Republic[1]	-	-	3.8 [b,c,j,q,r]	2.2 [b]	2.9 [b]	2.9 [b]
Denmark	2.8 [b,r]	3.4 [b,r]	4.6 [r]	6.1 [r]	7.0 [r]	-
Finland[5]	3.9 [r]	-	6.0 [r]	8.2 [r]	15.8 [r]	16.4 [r]
France	3.9 [a]	4.7	5.7	6.7	7.2	-
Germany	4.6	5.2	6.3 [a]	6.2	6.8	6.8 [b]
Greece	-	-	1.8 [b]	2.6 [a]	-	-
Hungary	-	-	3.2 [b,c]	2.9 [c]	3.8 [c]	3.9 [c]
Iceland	-	-	-	-	-	-
Ireland[3]	1.8 [b]	2.5 [b]	4.4 [b]	4.5 [b]	5.0 [a,b]	-
Italy	2.4	2.9	3.3	3.4	2.8	-
Japan	5.3 [j]	6.2 [j]	7.5 [j]	8.3 [j]	10.2	9.9 [b]
Korea	-	-	-	4.9 [e]	6.3 [e]	6.4 [e]
Luxembourg[3]	-	-	-	-	6.2 [-]	-
Mexico	-	-	-	0.6	-	-
Netherlands	3.4	4.3	-	4.8	5.5	-
New Zealand	-	-	4.0	4.7	6.9 [a]	-
Norway	3.8 [r]	4.8 [r]	6.6 [r]	7.5 [a,r]	8.7 [r]	-
Poland	-	-	-	3.4	3.8	3.9 [b]
Portugal[6, 7, 1]	0.8 [b]	1.1 [b]	2.1 [a,b,r]	2.6 [r]	3.5 [b,r]	-
Slovak Republic	-	-	-	4.6 [c]	4.7	4.6
Spain	1.6 [b]	1.8	2.9	3.5	5.0	5.1
Sweden	4.2 [a,k]	5.0 [k,r]	5.9 [k,r]	8.2	10.6	-
Switzerland[7, 1, 2, 3]	-	4.2 [a,b,r]	4.4	5.5	6.3 [-]	-
Turkey[3]	-	-	0.6	0.8 [b]	1.1 [b]	-
United Kingdom	4.9	5.0	4.6 [a]	5.4	-	-
United States	6.3	7.0 [a]	7.7	7.6	-	-
Total OECD[3]	**4.5 [b]**	**5.2 [a,b]**	**5.6 [a,b]**	**5.8 [a,b]**	**6.5 [b,n]**	**-**
EU-25	**-**	**-**	**-**	**4.9 [b]**	**5.6 [b]**	**-**
EU-15	**3.5 [b]**	**4.0 [b]**	**4.7 [a,b]**	**5.2 [b]**	**5.9 [b]**	**-**
China	-	-	0.7 [k]	0.8 [k]	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.
2. 1996 instead of 1995.
3. 2000 instead of 2001.
4. 1998 instead of 2001.
5. 1983 instead of 1981.
6. 1982 instead of 1981.
7. 1986 instead of 1985.

Source: OECD, MSTI database, May 2004.

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

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[1, 2, 3]	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[4]	-	-	3.01	-	-	-	0.25	-	-	-	1.53	-	-	-	0.02	-
Belgium	2.08 [b,r]	2.82	4.06 [b]	4.08 [b]	0.19 [b]	0.23	0.44	-	2.00 [b,r]	2.32 [r]	2.72 [b]	-	0.04 [b,r]	0.06 [r]	0.06 [b]	-
Canada	2.09	3.30	3.99	-	0.58	0.52	0.44	- [n]	1.99	2.08	2.12 [b,n]	-	0.04	0.03	0.02	-
Czech Republic	-	0.95	1.11	1.20	- [c,q]	0.83 [a]	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 [a,r]	0.06	0.07	0.06	0.05
Finland	-	-	-	-	- [a]	-	-	-	-	-	-	-	-	-	-	-
France	2.37	2.61	3.28 [a]	-	1.03	1.07	0.85	- [n]	1.68	2.11	2.31	-	0.08	0.15	0.13	-
Germany	3.56 [a]	3.29	3.98	-	0.94 [a]	0.95 [b]	0.97	0.99 [b]	1.57 [a]	1.64	1.71	1.76 [b]	0.03 [a]	-	-	-
Greece	0.26	0.37	-	-	0.49	0.47 [a]	0.45 [b]	-	0.83	1.43 [a]	1.96	-	-	0.02	0.01	-
Hungary[1]	0.82	0.71	0.99	1.06	0.85 [c,q]	0.86 [c]	1.14 [c]	1.12 [c]	1.05	0.99	1.45	1.46	-	-	-	-
Iceland	1.19 [a]	2.41	5.24	-	2.06	2.17	2.61	-	1.53 [a]	2.55	3.16	-	0.11 [a]	0.09	0.42	-
Ireland	1.57	2.32	3.35	-	0.26 [b]	0.19 [b]	0.28	0.31	1.83 [b]	1.32 [b]	1.23	-	0.15 [b]	0.12 [b]	-	-
Italy	1.20	1.19	1.11	-	0.51 [a]	0.61	0.54	-	1.34	1.51	1.14	-	-	-	-	-
Japan	5.24	5.76	6.38	6.45	0.46 [b,j]	0.46 [b,j]	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	- [e]	0.61 [e]	0.54 [e]	0.50 [e]	-	0.93 [e]	1.03 [e]	1.09 [e]	-	0.05 [e]	0.05 [e]	0.06
Luxembourg[3]	-	-	5.24	-	-	-	0.76 [-]	-	-	-	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 [a]	-	0.93	0.84	1.02 [a]	-	1.14	1.69	2.89 [a]	-	-	-	-	-
Norway	-	-	4.78	-	-	-	1.31	-	1.95	2.28	2.40	-	-	-	-	-
Poland	-	0.65	0.55	0.27	-	0.65 [a]	0.61	0.85	-	1.63	2.10	2.16	-	0.00	0.00	0.00
Portugal[1]	0.21 [a]	0.23 [a]	0.51	-	0.42	0.58	0.68	-	1.13 [a]	1.23 [a]	1.68	-	0.24 [a]	0.41 [a]	0.45	-
Slovak Republic	-	0.85 [c]	0.85	0.83	- [b,c,q]	1.48 [c]	0.92 [k]	0.91 [k]	-	1.60	1.84	1.76	-	-	0.00	0.00
Spain	0.73	0.66	1.06	1.34 [a]	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 [k]	4.34 [a]	6.25	-	0.38 [k]	0.62 [a,k]	0.51 [k]	-	2.52	2.70	3.55	-	0.01 [e]	-	-	-
Switzerland[1, 2, 3]	2.37	3.04	3.86	-	0.15	0.14	-	0.11	1.76 [a]	2.09	2.18	-	-	-	-	-
Turkey[3]	0.06	0.10	0.16 [a]	-	0.09	0.08	0.11 [-]	-	0.41	0.54	0.75 [a]	-	-	-	-	-
United Kingdom	2.78	2.88	3.16 [a]	3.50	0.52	0.48	0.34	0.31	1.01	1.65	-	-	0.10	0.11	0.13	0.14
United States[3]	6.04	5.89	7.20 [n]	-	0.45 [h]	0.40 [h]	-	-	1.08	1.35	-	-	0.07	0.08 [k]	-	-
Total OECD	**3.51**	**3.44**	**-**	**-**	**0.54** [a,b]	**0.43** [a,b]	**-**	**-**	**1.24**	**1.14**	**-**	**-**	**0.07**	**0.06**	**-**	**-**
EU-25	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
EU-15	**2.22**	**2.32**	**-**	**-**	**0.71** [a,b]	**0.74**	**-**	**-**	**1.45**	**1.75**	**-**	**-**	**0.05**	**0.08**	**-**	**-**
China	0.19 [k,s]	0.28 [k,s]	0.53	0.59	0.31 [k]	0.27 [k]	0.25	0.25	0.20 [s]	0.19 [s]	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 [1]	35.6 [2]
Austria	2.08 [3]	24.7 [2]
Belgium	2.23 [3]	30.1 [2]
Canada	3.00	29.0
Czech Republic	1.69	29.7
Denmark	3.46	35.3
Finland	2.32 [4]	32.5
France	2.11	29.2
Germany	2.04 [3]	33.5 [2]
Greece	2.65	19.7
Hungary	-1.03 [5]	23.9 [2]
Iceland	5.60 [5]	29.0 [2]
Ireland	7.05	22.4
Italy	4.26	28.4
Japan[6]	-	15.7
Korea	3.40	16.2
Luxembourg	5.43 [3]	31.6 [2]
Netherlands	3.90	34.3
New Zealand	3.06 [1]	26.0 [2]
Norway	7.64 [5]	34.7 [2]
Poland	-1.14 [5]	23.5 [2]
Portugal	-0.64	14.8
Slovak Republic	1.03 [7]	28.8
Spain	8.36	23.1
Sweden	3.37 [4]	37.7
Switzerland	1.04 [7]	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[1]	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[2]	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[2]	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
Total OECD[1, 2, 3]	**510.9**	**544.3**	**565.5**	**657.4**	**654.9**	**668.6**	**9.6**	**9.8**	**10.0**	**12.4**	**11.8**	**11.8**	**7.7**	**8.0**	**8.0**	**4.2**	**4.4**	**4.5**
EU-25[1, 2, 3]	**211.6**	**234.4**	**254.5**	**258.2**	**250.0**	**263.0**	**11.1**	**11.6**	**11.6**	**13.6**	**12.3**	**12.0**	**9.4**	**9.0**	**8.9**	**5.4**	**5.0**	**4.9**
EU-15[1, 2, 3]	**198.6**	**216.2**	**231.7**	**220.1**	**208.8**	**220.2**	**12.9**	**13.7**	**14.1**	**14.3**	**13.3**	**13.4**	**10.4**	**10.8**	**11.1**	**5.6**	**5.5**	**5.6**
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[1] 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 b,n	321 b,n	8.0	0.5	0.6	0.7	0.7 b,n	0.7 b,n
Austria	174	217	248	262 b,n	274 b,n	5.0	0.6	0.6	0.6	0.6 b,n	0.6 b,n
Belgium	239	369	395	366 b,n	359 b,n	4.5	0.8	1.0	0.9	0.8 b,n	0.8 b,n
Canada	275	382	525	539 b,n	519 b,n	7.1	0.9	1.1	1.2	1.2 b,n	1.2 b,n
Czech Republic	9	3	10	9 b,n	9 b,n	-0.6	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Denmark	105	188	221	250 b,n	254 b,n	9.8	0.4	0.5	0.5	0.6 b,n	0.6 b,n
Finland	161	312	416	419 b,n	489 b,n	12.4	0.5	0.9	1.0	1.0 b,n	1.1 b,n
France	1 783	1 905	2 200	2 081 b,n	2 127 b,n	2.0	6.0	5.4	5.2	4.8 b,n	4.9 b,n
Germany	3 676	4 815	5 634	5 867 b,n	5 777 b,n	5.0	12.3	13.6	13.4	13.4 b,n	13.2 b,n
Greece	5	1	9	4 b,n	6 b,n	2.0	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Hungary	22	25	31	30 b,n	33 b,n	4.6	0.1	0.1	0.1	0.1 b,n	0.1 b,n
Iceland	3	6	4	5 b,n	4 b,n	3.7	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Ireland	27	31	37	56 b,n	45 b,n	5.8	0.1	0.1	0.1	0.1 b,n	0.1 b,n
Italy	659	610	711	740 b,n	767 b,n	1.7	2.2	1.7	1.7	1.7 b,n	1.8 b,n
Japan	8 895	9 428	11 207	11 726 b,n	11 757 b,n	3.1	29.7	26.6	26.6	26.9 b,n	26.9 b,n
Korea	93	327	387	459 b,n	478 b,n	18.2	0.3	0.9	0.9	1.1 b,n	1.1 b,n
Luxembourg	9	13	16	19 b,n	17 b,n	6.4	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Mexico	6	12	11	11 b,n	15 b,n	10.2	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Netherlands	568	724	840	833 b,n	857 b,n	4.6	1.9	2.0	2.0	1.9 b,n	2.0 b,n
New Zealand	19	20	39	33 b,n	36 b,n	7.1	0.1	0.1	0.1	0.1 b,n	0.1 b,n
Norway	58	86	94	108 b,n	109 b,n	7.0	0.2	0.2	0.2	0.2 b,n	0.2 b,n
Poland	9	5	9	8 b,n	10 b,n	0.5	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Portugal	3	2	6	5 b,n	8 b,n	10.2	0.0	0.0	0.0	0.0 b,n	0.0 b,n
Slovak Republic[2]	1	2	4	3 b,n	4 b,n	23.2	-	0.0	0.0	0.0 b,n	0.0 b,n
Spain	70	87	108	120 b,n	113 b,n	5.3	0.2	0.2	0.3	0.3 b,n	0.3 b,n
Sweden	391	700	853	838 b,n	811 b,n	8.1	1.3	2.0	2.0	1.9 b,n	1.9 b,n
Switzerland	723	746	790	792 b,n	753 b,n	0.5	2.4	2.1	1.9	1.8 b,n	1.7 b,n
Turkey	0	2	3	5 b,n	6 b,n	34.5	0.0	0.0	0.0	0.0 b,n	0.0 b,n
United Kingdom	1 250	1 516	1 589	1 767 b,n	1 794 b,n	4.0	4.2	4.3	3.8	4.0 b,n	4.1 b,n
United States	10 217	12 312	14 763	15 079 b,n	14 985 b,k,n	4.3	34.1	34.7	35.1	34.6 b,n	34.3 b,n
Total OECD	**29 607**	**35 070**	**41 459**	**42 738 b,n**	**42 739 b,k,n**	**4.1**	**98.9**	**98.8**	**98.5**	**97.9 b,n**	**97.9 b,n**
EU-25	**9 168**	**11 533**	**13 343**	**13 687 b,n**	**13 770 b,n**	**4.5**	**30.6**	**32.5**	**31.7**	**31.4 b,n**	**31.5 b,n**
EU-15	**9 122**	**11 489**	**13 283**	**13 627 b,n**	**13 699 b,n**	**4.5**	**30.5**	**32.4**	**31.6**	**31.2 b,n**	**31.4 b,n**
Total world	**29 923**	**35 501**	**42 097**	**43 635 b,n**	**43 664 b,n**	**4.2**	**100**	**100**	**100**	**100 b,n**	**100 b,n**
China	12	19	41	66 b,n	93 b,n	22.9	0.0	0.1	0.1	0.2 b,n	0.2 b,n
Israel	104	158	284	347 b,n	342 b,n	13.2	0.3	0.4	0.7	0.8 b,n	0.8 b,n
Russian Federation	37	62	65	71 b,n	76 b,n	7.9	0.1	0.2	0.2	0.2 b,n	0.2 b,n

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

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[1]	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[2]	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
Total OECD	**468**	**454**	**447**	**466**	**461**	**468**
EU-25	**-**	**-**	**432**	**482**	**479**	**485**
EU-15	**389**	**416**	**499**	**555**	**550**	**556**
China[3]	-	5	8	13	14	16
Israel	-	985	1 068	994	1 004	1 007
Russian Federation[4]	-	-	135	118	126	110

1. Includes articles from the former Czechoslavakia 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 (total number)		Clinical medicine		Biomedical research		Biology		Chemistry		Physics		Earth & space sciences		Engineering & technology		Mathematics		Psychology		Social sciences		Other[1]	
	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	5.3
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[2]	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[3]	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
Total OECD	**398 238**	**551 402**	**31.1**	**30.7**	**15.2**	**15.0**	**7.7**	**6.8**	**10.8**	**10.3**	**12.0**	**11.9**	**4.1**	**5.4**	**6.7**	**8.2**	**2.1**	**2.0**	**3.7**	**3.3**	**2.8**	**2.6**	**3.8**	**3.8**
EU-25[4]	**143 034**	**138 116**	**21.2**	**10.6**	**14.2**	**7.0**	**5.2**	**3.3**	**24.2**	**26.7**	**16.9**	**32.6**	**2.8**	**4.9**	**6.2**	**8.9**	**3.6**	**3.8**	**3.4**	**0.9**	**1.4**	**0.5**	**0.9**	**0.7**
EU-15[4]	**134 544**	**137 368**	**34.8**	**28.2**	**14.3**	**12.7**	**7.2**	**7.6**	**13.4**	**14.3**	**12.7**	**12.6**	**3.8**	**5.1**	**6.2**	**10.0**	**2.4**	**2.9**	**2.3**	**3.0**	**1.4**	**1.3**	**1.4**	**2.4**
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[5]	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. Czechoslavakia 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[1,2,3]	14	68	200	128	-	-	142	188	370	344	-	-	- 129	- 120	- 170	- 215	-	-
Austria[4]	24 [k]	30 [k]	79 [k]	1 907	2 430 [-]	-	99 [k]	114 [k]	301 [k]	2 140	2 426 [-]	-	- 75	- 84	- 222	- 233	4	-
Belgium	622 [a]	694	1 945	3 758 [a]	5 709	-	727 [a]	800	2 380	3 080 [a]	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 [k]	107 [k]	311 [k]	390 [k]	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 [n]	1 479	1 650	7 979	13 170	20 942	21 295 [n]	- 545	- 479	-1 697	-2 537	-6 636	-5 539
Hungary[3]	-	-	-	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 [n]	273	163	420	487	419	664 [n]	- 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 [k]	28 [k]	348	496	1 382	1 379	76 [k]	77 [k]	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 [q]	30 [n,q]	-	-	-	-	27 [q]	65 [n,q]	-	-	-	-	- 17	- 34	-
Spain	181	137	641	79	-	-	567	552	2 276	1 110	-	-	- 387	- 414	-1 635	-1 031	-	-
Sweden	68	87	217 [a]	-	-	-	64	49	116 [a]	-	-	-	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 [n]	-	798	923	2 302	3 530	7 713 [n]	-	167	115	32	688	9 392	-
United States	7 284	6 678	17 819	30 289	41 098	44 142 [n]	650	1 170	4 035	6 919	16 713	19 258 [n]	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[1, 2, 3]	7.8	8.3	7.8	5.0	-	-
Austria[4]	12.8 [k]	13.7 [k]	12.1 [b,k]	58.5 [b]	68.5 [b]	-
Belgium[5]	53.2 [a]	59.5	72.5 [b]	64.9 [a]	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 [a,k]	12.6 [b,k]	12.4 [a,k]	13.2 [k]	25.6	27.1
France	8.6 [a]	9.0	8.5	8.3	9.2	-
Germany	8.8	9.7	17.9 [a]	23.9 [b]	45.0	42.5 [n]
Hungary[3]	-	-	-	73.3 [c]	-	-
Italy	16.0 [r]	11.4 [r]	16.6 [a]	31.3	28.3	-
Japan	4.3 [k]	3.3 [k]	2.9 [k]	2.7 [k]	3.5	-
Mexico	-	-	-	55.0	17.1	-
Netherlands	22.3	57.1	99.8	-	-	-
New Zealand	-	-	3.7	1.4	-	-
Norway	10.4 [k]	8.1 [k]	22.5	36.9 [a]	45.8	37.3
Poland	-	-	-	26.7 [a]	67.0	-
Portugal	-	-	-	88.1	64.3	61.2
Slovak Republic	-	-	-	14.8 [c,q]	48.5 [j,n,q]	-
Spain	71.9	60.4	49.3	23.4	-	-
Sweden	2.4 [a,j]	1.7 [j]	1.7 [a,j]	-	-	-
Switzerland[1, 2, 3, 4]	-	8.6 [a]	13.9	17.7	30.4 [-]	-
Turkey	-	-	-	-	-	-
United Kingdom	6.6 [a]	9.0 [a]	10.8	15.9	29.0 [n]	-
United States	0.9 [h]	1.0 [h]	2.5 [h]	3.8 [h]	6.1 [h]	7.0 [h,n]
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.
2. 1992 instead of 1991.
3. 1996 instead of 1995.
4. 2000 instead of 2001.
5. 1983 instead of 1981.

Source: OECD, MSTI database, May 2004.

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

Table 31. Share of value added in total gross value added, 1991-2001

	(ISIC Rev.3)	Australia		Austria		Belgium		Canada		Czech Republic		Denmark		Finland		France		Germany		Greece		Iceland		Ireland	
		1991	2000	1991	2001	1992	2001	1991	2000	1992	2001	1991	1999	1991	2001	1991	2000	1991	2001	1991	2001	1991	2001	1991	1999
Total manufacturing	**(15-37)**	**13.5**	**12.0**	**21.6**	**20.6**	**20.1**	**18.7**	**15.8**	**19.9**	**29.1**	**27.5**	**17.0**	**16.3**	**19.6**	**24.5**	**19.9**	**18.1**	**27.4**	**22.4**	**14.8**	**11.9**	**15.9**	**-**	**26.6**	**33.7**
Food prod., beverages and tobacco	(15-16)	2.4	2.6 [1]	2.9	2.3	2.7	2.5	2.6	2.1	4.7	3.8 [1]	3.2	2.7	2.7	1.6	2.9	2.4	2.3	2.0	2.8	2.6	7.9	-	6.9	5.4
Textiles, textile prod., leather and footwear	(17-19)	0.8	0.6 [1]	1.4	0.8	1.4	1.0	0.8	0.8	3.6	1.6 [1]	0.8	0.5	0.8	0.4	1.3	0.8	1.0	0.5	4.1	1.9	0.6	-	1.2	0.5
Wood, pulp, paper, paper prod., printing & publishing	(20-22)	2.1	2.1 [1]	2.8	3.0	1.8	1.8	2.8	4.2	2.0	2.6 [1]	2.3	2.2	5.1	6.5	2.1	1.8	2.5	2.1	1.4	1.2	1.9	0.0	3.4	6.0
Chemical, rubber, plastics and fuel prod.	(23-25)	2.1	1.8 [1]	2.4	2.7	4.5	4.9	2.6	2.5	3.0	2.8 [1]	2.2	2.7	2.5	2.6	3.3	3.6	4.1	3.7	1.7	2.0	1.1	-	5.3	11.3
….Coke, refined petroleum prod. and nuclear fuel	(23)	0.4	0.2 [1]	0.3	0.8	0.5	0.6	0.4	0.3	0.5	0.2 [1]	0.0	0.0	0.6	0.4	0.6	0.8	0.2	0.4	0.5	0.9	-	-	0.0	0.0
….Chemicals and chemical prod.	(24)	1.1	1.0 [1]	1.3	1.1	3.3	3.6	1.5	1.4	1.6	1.4 [1]	1.4	1.8	1.3	1.4	1.8	2.0	2.7	2.2	0.8	0.7	0.6	-	4.5	10.7
……..Chemicals excluding pharmaceuticals	(24ex2423)	-	-	0.9	0.8	2.6	-	1.2	1.1	-	1.2 [1]	0.7	0.7	1.0	1.1	1.3	1.3	2.2	1.7	0.6	-	-	-	3.7	8.4
……..Pharmaceuticals	(2423)	-	-	0.5	0.4	0.7	-	0.4	0.3	-	0.2 [1]	0.7	1.1	0.3	0.3	0.5	0.7	0.5	0.5	0.2	-	-	-	0.8	2.3
….Rubber and plastics prod.	(25)	0.6	0.6 [1]	0.8	0.8	0.8	0.7	0.6	0.9	0.8	1.1 [1]	0.8	0.8	0.6	0.8	0.9	0.8	1.3	1.1	0.4	0.3	0.5	-	0.8	0.6
Other non-metallic mineral prod.	(26)	0.7	0.7 [1]	1.5	1.2	1.1	1.0	0.4	0.5	1.8	1.9 [1]	0.7	0.8	0.9	0.8	1.0	0.8	1.0	0.8	0.9	0.9	0.9	-	1.1	0.8
Basic metals and fabricated metal prod.	(27-28)	2.6	1.9 [1]	3.2	3.3	3.1	2.5	1.8	2.6	4.4	4.4 [1]	1.8	1.7	2.1	2.7	2.7	2.4	3.6	2.9	1.4	1.1	1.4	-	1.2	0.8
Machinery and equipment	(29-33)	1.4	1.3 [1]	5.1	4.9	2.9	2.7	2.1	2.9	5.4	5.7 [1]	4.1	4.1	4.0	8.5	3.9	3.5	8.4	6.3	0.9	0.9	0.8	-	5.9	7.8
….Machinery and equip., n.e.c.	(29)	0.7	0.6 [1]	2.5	2.3	1.3	1.2	0.9	1.3	3.6	2.7 [1]	2.5	2.3	2.4	2.8	1.6	1.3	4.0	3.4	0.3	0.4	-	-	1.1	0.8
….Electrical and optical equipment	(30-33)	0.7	0.7 [1]	2.6	2.5	1.6	1.5	1.2	1.6	1.9	3.0 [1]	1.6	1.8	1.6	5.7	2.3	2.2	4.4	3.0	0.5	0.5	-	-	4.8	7.0
……..Office, accounting and computing machinery	(30)	-	-	0.0	0.1	-	-	0.1	0.1	0.0	0.1 [1]	0.1	0.1	0.1	0.0	0.3	0.2	0.6	0.2	0.0	0.0	-	-	2.3	3.0
……..Electrical machinery and apparatus, nec	(31)	-	-	0.9	1.0	-	-	0.4	0.4	1.4	1.7 [1]	0.6	0.6	0.7	0.8	0.8	0.8	2.2	1.5	0.1	0.2	-	-	0.8	0.7
……..Radio, television and communication equipment	(32)	-	-	1.2	1.1	-	-	0.7	1.1	0.2	0.6 [1]	0.4	0.5	0.5	4.3	0.5	0.6	0.7	0.4	0.3	0.2	-	-	0.6	2.1
……..Medical, precision and optical instruments	(33)	-	-	0.4	0.4	-	-	-	-	0.2	0.6 [1]	0.5	0.6	0.3	0.6	0.7	0.6	0.9	0.9	0.1	0.0	-	-	1.1	1.2
Transport equipment	(34-35)	1.1	1.1 [1]	1.0	1.3	1.9	1.7	2.0	3.4	2.7	2.9 [1]	0.7	0.5	0.9	0.9	1.9	2.1	3.6	3.6	0.7	0.6	0.8	-	0.7	0.5
….Motor vehicles, trailers and semi-trailers	(34)	0.7	0.7 [1]	0.8	1.1	-	-	1.4	2.5	2.4	2.4 [1]	0.3	0.2	0.3	0.3	1.4	1.5	3.1	3.1	0.1	0.1	-	-	0.3	0.2
….Other transport equipment	(35)	0.3	0.4 [1]	0.2	0.2	-	-	0.6	0.9	0.3	0.5 [1]	0.4	0.2	0.6	0.6	0.5	0.6	0.5	0.5	0.6	0.5	-	-	0.4	0.3
……..Building and repairing of ships and boats	(351)	-	-	0.0	0.0	-	-	0.1	0.1	-	0.0 [1]	0.4	0.2	0.4	0.4	0.1	0.1	0.1	0.1	-	-	-	-	0.1	0.0
……..Aircraft and spacecraft	(353)	-	-	-	-	-	-	0.4	0.6	-	0.2 [1]	-	-	0.1	0.1	0.3	0.5	0.3	0.3	-	-	-	-	0.0	0.0
……..Railroad equip. and transport equip. n.e.c.	(352+359)	-	-	0.2	0.2	-	-	0.1	0.2	-	0.3 [1]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-	-	0.3	0.3
Manufacturing nec; recycling	(36-37)	0.5	0.4	1.2	1.1	0.7	0.6	0.6	0.9	1.3	1.3 [1]	1.2	1.0	0.7	0.6	0.9	0.7	0.8	0.6	1.0	0.8	0.7	-	1.0	0.7
Electricity, gas and water supply	(40-41)	3.6	2.5	2.8	2.2	2.9	2.6	3.3	2.8	6.3	4.0	2.3	2.2	2.3	1.8	2.4	2.0	2.3	1.9	2.6	1.8	3.5	-	2.4	1.3
Construction	(45)	6.1	5.7	7.3	7.4	5.5	4.9	6.3	5.0	6.9	7.1	4.8	5.3	7.5	5.7	6.0	4.6	5.9	4.8	7.5	8.3	8.8	-	5.4	6.6
Total services	**(50-99)**	**68.2**	**70.6**	**64.6**	**67.1**	**69.3**	**72.3**	**68.3**	**64.1**	**49.1**	**55.8**	**71.0**	**72.1**	**64.8**	**64.2**	**68.4**	**72.5**	**62.2**	**69.4**	**62.8**	**70.4**	**60.0**	**-**	**56.3**	**53.9**
Wholesale and retail trade; restaurants and hotels	**(50-55)**	13.6	13.3	17.7	16.6	14.9	13.4	14.0	13.3	14.2	17.0	14.6	14.5	12.3	11.4	13.7	12.8	11.9	12.0	18.5	20.7	14.8	-	14.7	12.2
Transport and storage and communication	**(60-64)**	9.0	8.4	7.8	7.1	6.9	6.9	7.3	6.8	6.1	8.2	7.5	7.6	9.4	10.5	6.4	6.3	5.8	6.2	6.6	8.4	7.2	-	5.9	5.5
Transport and storage	(60-63)	5.9	5.3	5.4	4.8	-	-	4.2	4.1	4.7	-	5.5	5.3	7.1	7.1	4.1	4.2	3.5	3.8	-	5.2	5.7	-	3.4	-
Post and telecommunications	(64)	3.0	3.2	2.5	2.2	-	-	3.1	2.7	1.5	-	2.1	2.3	2.3	3.4	2.3	2.1	2.4	2.4	-	3.2	1.5	-	2.5	-
Finance, insurance, real estate and business services	**(65-74)**	25.9	29.3	18.4	23.5	24.6	28.0	23.9	24.7	17.2	15.7	22.8	23.2	18.0	21.0	27.1	30.4	24.2	29.8	19.5	21.2	17.2	-	15.8	20.0
Financial intermediation	(65-67)	6.5	7.4	6.8	6.6	6.2	5.3	6.3	7.1	6.6	3.6	4.8	5.0	4.3	3.8	5.0	5.1	5.0	3.8	-	5.7	5.3	-	3.3	4.5
Real estate, renting and business activities	(70-74)	19.4	21.9	11.6	16.8	18.4	22.7	17.6	17.6	10.5	12.1	18.0	18.2	13.7	17.2	22.1	25.3	19.2	26.0	-	15.5	11.9	-	12.5	15.5
….Real estate activities	(70)	9.9	9.8	6.6	8.3	-	-	12.2	10.8	4.6	-	11.1	10.7	9.1	10.4	11.0	11.9	9.3	12.4	-	12.2	7.9	-	-	-
….Renting of m&eq and other business activities	(71-74)	9.6	12.1	5.0	8.5	-	-	5.4	6.8	5.9	-	6.9	7.5	4.6	6.8	11.1	13.4	9.9	13.6	-	3.3	4.0	-	-	-
……..Other business activities	(74)	-	-	3.6	5.6	-	-	-	-	4.3	-	5.0	5.4	2.9	4.2	7.3	9.2	7.3	9.5	-	2.7	-	-	-	-
Community social and personal services	**(75-99)**	19.7	19.6	20.7	20.0	23.0	24.1	23.1	19.3	11.6	15.0	26.0	26.7	25.1	21.2	21.2	23.1	20.3	21.4	18.2	20.2	20.8	-	19.9	16.1
High technology manufactures		0.8	0.9 [1]	2.1	1.9	-	-	1.6	2.1	0.4	1.7 [1]	1.7	2.3	1.3	5.2	2.3	2.5	2.9	2.3	-	-	-	-	4.8	8.6
Medium-high technology manufactures		2.7	2.3 [1]	5.3	5.4	-	-	4.0	5.5	7.4	8.3 [1]	4.1	3.9	4.5	5.1	5.1	5.0	11.6	9.7	-	-	-	-	6.1	10.4
Medium-low technology manufactures		4.3	3.6 [1]	5.8	6.1	-	-	3.5	4.3	7.6	7.7 [1]	3.7	3.6	4.5	5.0	5.3	4.9	6.2	5.2	3.5	-	-	-	3.1	2.2
Low technology manufactures		5.7	5.6	8.3	7.2	6.6	5.9	6.8	8.0	11.7	9.2 [1]	7.6	6.5	9.3	9.2	7.1	5.7	6.6	5.2	9.3	6.4	11.0	-	12.5	12.5
High and medium-high technology manufactures		3.6	3.3 [1]	7.4	7.3	8.0	8.0	5.6	7.7	9.8	10.0 [1]	6.2	6.4	6.2	10.8	7.6	7.6	14.6	12.1	2.4	2.2	2.1	-	11.0	19.0

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 Anberd data are available).

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

Source: OECD, STAN Indicators 2004.

StatLink: http://dx.doi.org/10.1787/005860125823

Table 31. Share of value added in total gross value added, 1991-2001 (cont'd)

	(ISIC Rev.3)	Italy		Japan		Korea		Netherlands		Norway		Poland		Spain		Sweden		United Kingdom		Unites States		EU[3]		OECD[4]	
		1991	2001	1991	2001	1995	2001	1991	2000	1991	1998	1994	2001	1991	2001	1991	2001	1991	2001	1991	2000	1992	1999	1991	1999
Total manufacturing	**(15-37)**	**22.5**	**20.1**	**25.8**	**20.1**	**29.2**	**30.3**	**18.2**	**16.0**	**12.1**	**13.0**	**21.7**	**17.9**	**19.9**	**17.4**	**18.9**	**20.6**	**21.0**	**16.5**	**17.4**	**15.5**	**21.8**	**20.1**	**21.0**	**18.7**
Food prod., beverages and tobacco	(15-16)	2.4	2.0	2.5	2.4	3.0	3.4	3.2	3.0	2.1	1.9	3.5	3.8 [1]	3.4	2.5	1.8	1.7	3.1	2.3	1.9	1.5	2.7	2.4	2.4	2.1
Textiles, textile prod., leather and footwear	(17-19)	3.4	2.9	1.3	0.6	2.1	1.4	0.6	0.4	0.3	0.2	2.6	1.5 [1]	1.9	1.3	0.3	0.3	1.3	0.7	0.9	0.5	1.6	1.2	1.3	0.8
Wood, pulp, paper, paper prod., printing & publishing	(20-22)	2.1	2.0	2.3	1.9	1.7	1.4	2.5	2.3	2.5	2.5	2.3	2.5 [1]	2.1	1.9	4.0	4.4	2.8	2.5	2.5	2.1	2.4	2.3	2.4	2.3
Chemical, rubber, plastics and fuel prod.	(23-25)	2.9	2.7	3.4	3.3	5.7	7.5	3.6	3.2	1.5	1.5	3.4	3.1 [1]	3.1	3.0	2.4	3.2	3.8	2.8	3.0	2.7	3.3	3.2	3.2	3.1
….Coke, refined petroleum prod. and nuclear fuel	(23)	0.5	0.2	1.0	1.3	1.8	3.4	0.5	0.4	-	-	0.7	0.6 [1]	0.6	0.5	0.3	0.2	0.5	0.3	0.5	0.4	-	0.3	-	0.5
….Chemicals and chemical prod.	(24)	1.7	1.6	2.0	1.7	2.9	2.9	2.5	2.3	-	-	1.7	1.4 [1]	1.7	1.6	1.6	2.4	2.2	1.7	1.9	1.7	2.0	2.0	2.0	1.9
……..Chemicals excluding pharmaceuticals	(24ex2423)	1.0	0.9	1.4	1.0	2.0	1.9	2.2	1.9	-	-	-	1.1 [1]	1.1	1.1	0.9	0.9	1.6	1.0	1.4	1.1	1.4	1.3	1.4	1.2
……..Pharmaceuticals	(2423)	0.6	0.7	0.6	0.7	0.9	1.0	0.3	0.4	0.2	0.2	-	0.3 [1]	0.6	0.5	0.7	1.5	0.7	0.7	0.5	0.7	0.6	0.6	0.6	0.6
….Rubber and plastics prod.	(25)	0.8	0.8	0.3	0.2	1.0	1.1	0.6	0.5	0.3	0.3	1.0	1.0 [1]	0.8	0.8	0.5	0.6	1.0	0.9	0.6	0.6	-	0.9	-	0.7
Other non-metallic mineral prod.	(26)	1.4	1.4	0.9	0.7	1.3	1.0	0.7	0.7	0.5	0.5	1.4	1.4 [1]	1.5	1.4	0.6	0.5	0.7	0.5	0.4	0.4	1.1	1.0	0.8	0.7
Basic metals and fabricated metal prod.	(27-28)	3.1	2.7	3.6	2.3	3.8	3.4	2.3	1.8	1.5	1.9	2.6	2.2 [1]	2.2	2.3	2.5	2.8	2.4	1.7	1.8	1.6	2.7	2.5	2.6	2.2
Machinery and equipment	(29-33)	4.8	4.3	7.7	5.5	7.0	6.3	3.2	2.8	1.9	2.3	3.3	3.1 [1]	2.8	2.5	4.4	4.2	4.3	3.4	4.5	4.1	5.0	4.6	5.3	4.6
….Machinery and equip., n.e.c.	(29)	2.5	2.4	3.0	1.9	1.8	1.7	1.3	1.3	1.0	1.2	1.9	1.5 [1]	1.3	1.2	2.4	2.7	1.7	1.3	1.5	1.2	2.3	2.1	2.1	1.6
….Electrical and optical equipment	(30-33)	2.3	1.9	4.8	3.6	5.2	4.6	1.9	1.5	0.9	1.1	1.4	1.6 [1]	1.6	1.2	1.9	1.5	2.5	2.1	3.0	2.8	2.6	2.5	3.2	2.9
……..Office, accounting and computing machinery	(30)	0.1	0.1	0.7	0.5	0.3	0.8	0.1	0.1	0.0	0.0	0.1	0.1 [1]	0.2	0.1	0.2	0.2	0.5	0.3	0.5	0.3	0.3	0.2	0.5	0.4
……..Electrical machinery and apparatus, nec	(31)	1.0	0.9	1.3	1.0	0.7	0.4	0.4	0.2	0.5	0.5	0.7	0.7 [1]	0.7	0.6	0.5	0.8	0.8	0.6	0.6	0.4	1.2	1.0	0.9	0.7
……..Radio, television and communication equipment	(32)	0.6	0.5	2.3	1.8	3.9	2.8	0.9	0.8	0.2	0.2	0.4	0.3 [1]	0.4	0.2	0.7	-0.1	0.6	0.6	1.1	1.4	0.6	0.7	1.1	1.3
……..Medical, precision and optical instruments	(33)	0.5	0.4	0.5	0.3	0.3	0.6	-	-	0.2	0.3	0.3	0.4 [1]	0.3	0.2	0.5	0.7	0.7	0.6	0.9	0.6	0.6	0.6	0.7	0.5
Transport equipment	(34-35)	1.3	1.3	2.4	2.3	3.9	5.5	0.8	0.8	1.5	1.8	1.6	1.3 [1]	2.0	1.8	2.3	2.9	2.1	1.8	1.8	1.9	2.1	2.2	2.1	2.2
….Motor vehicles, trailers and semi-trailers	(34)	0.8	0.7	2.2	2.0	3.1	3.4	0.3	0.4	0.1	0.2	0.7	0.7 [1]	1.6	1.5	1.6	2.3	1.1	0.9	0.8	1.2	1.6	1.6	1.4	1.6
….Other transport equipment	(35)	0.5	0.6	0.2	0.3	0.8	2.2	0.5	0.4	1.4	1.6	0.9	0.6 [1]	0.4	0.3	0.7	0.6	1.0	0.9	1.0	0.7	0.5	0.6	0.7	0.6
……..Building and repairing of ships and boats	(351)	0.1	0.2	0.1	0.1	0.7	-	-	0.2	1.2	1.6	-	0.3 [1]	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
……..Aircraft and spacecraft	(353)	0.2	0.3	0.1	0.1	0.1	-	-	0.1	0.1	0.0	-	0.1 [1]	0.1	0.1	0.4	0.3	0.8	0.6	0.9	0.5	0.3	0.3	0.5	0.4
……..Railroad equip. and transport equip. n.e.c.	(352+359)	0.1	0.2	0.1	0.1	0.1	-	-	0.1	0.1	0.0	-	0.1 [1]	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Manufacturing nec; recycling	(36-37)	1.1	1.0	1.6	1.1	0.6	0.4	1.2	1.1	0.4	0.5	1.0	1.0 [1]	0.9	0.8	0.5	0.6	0.6	0.7	0.6	0.6	0.8	0.8	0.9	0.8
Electricity, gas and water supply	(40-41)	2.2	2.3	3.1	3.7	2.1	2.8	2.0	1.5	3.4	2.6	3.8	3.7	3.3	2.1	3.3	2.7	2.7	1.8	2.9	2.2	2.5	2.2	2.8	2.5
Construction	(45)	6.2	4.9	9.3	6.9	11.2	8.3	5.8	5.8	4.1	5.1	7.3	7.2	8.7	8.7	6.6	4.4	5.9	5.5	3.9	4.7	6.3	5.4	6.0	5.4
Total services	**(50-99)**	**65.2**	**69.5**	**59.3**	**67.9**	**51.0**	**53.9**	**66.1**	**71.4**	**63.7**	**64.6**	**56.1**	**65.0**	**62.4**	**67.9**	**68.0**	**70.2**	**66.0**	**72.8**	**72.1**	**76.2**	**66.0**	**69.4**	**66.6**	**70.8**
Wholesale and retail trade; restaurants and hotels	**(50-55)**	17.0	16.6	13.6	13.2	10.2 #	12.2	15.4	15.2	12.3	11.8 [1]	20.5	21.8	18.0	19.0	12.0	12.1	14.0	15.1	17.3	18.3	14.3	14.5	15.4	15.8
Transport and storage and communication	**(60-64)**	7.1	7.4	6.5	6.2	7.0 #	6.6	7.0	7.3	11.4	9.6 [1]	7.5	7.3	7.2	8.7	8.7	8.2	8.1	7.9	6.5	6.7	6.9	7.0	6.7	6.8
Transport and storage	(60-63)	5.3	5.0	5.0	4.5	4.6 #	4.3	5.0	4.8	9.1	7.4 [1]	-	-	5.2	-	6.4	5.6	5.0	4.7	3.1	3.2	4.5	-	4.0	-
Post and telecommunications	(64)	1.8	2.3	1.5	1.7	2.4 #	2.3	2.0	2.6	2.3	2.2 [1]	-	-	2.0	-	2.3	2.6	3.1	3.1	3.4	3.5	2.4	-	2.6	-
Finance, insurance, real estate and business services	**(65-74)**	21.2	26.0	21.2	26.9	19.3 #	19.0	20.3	26.4	18.3	17.5 [1]	9.1	15.3	18.1	20.0	21.8	25.0	22.2	27.9	25.3	30.0	23.5	26.4	23.4	27.2
Financial intermediation	(65-67)	6.1	5.9	5.1	6.3	6.8 #	6.9	4.8	6.3	5.1	4.0 [1]	1.1	2.2	6.3	5.8	4.9	3.6	5.4	5.3	6.4	8.7	5.5	5.1	5.8	6.6
Real estate, renting and business activities	(70-74)	15.1	20.1	16.1	20.6	12.5 #	12.2	15.5	20.0	13.2	13.5 [1]	8.0	13.1	11.8	14.2	17.0	21.4	16.8	22.7	18.9	21.3	18.0	21.3	17.6	20.5
….Real estate activities	(70)	-	10.8	10.3	12.8	8.5 #	8.5	7.3	8.0	8.7	7.7 [1]	-	-	7.4	-	11.0	10.7	-	9.5	11.5	11.4	-	-	-	-
….Renting of m&eq and other business activities	(71-74)	-	9.4	5.8	7.7	4.0 #	3.7	8.2	12.0	4.5	5.8 [1]	-	-	4.4	-	6.0	10.6	-	13.1	7.4	9.9	-	-	-	-
……..Other business activities	(74)	-	7.5	-	-	- #	-	6.2	8.7	3.3	4.1 [1]	-	-	-	-	-	7.4	-	9.1	-	-	-	-	-	-
Community social and personal services	**(75-99)**	19.8	19.5	18.0	21.6	15.3 #	16.1	23.4	22.5	21.7	21.5 [1]	19.0	20.6	19.1	20.2	25.5	24.9	21.7	21.8	23.0	21.3	21.3	21.6	21.1	21.1
High technology manufactures		2.1	2.0	4.2	3.4	5.4	-	2.1	1.8	0.8	0.9	-	1.4 [1]	1.6	1.2	2.5	2.5	3.2	2.8	3.8	3.6	2.3	2.4	3.3	3.2
Medium-high technology manufactures		5.6	5.1	7.9	6.0	7.7	-	4.3	3.9	-	-	-	4.1 [1]	4.8	4.5	5.7	6.9	5.3	3.9	4.3	4.0	6.6	6.2	5.9	5.3
Medium-low technology manufactures		5.9	5.3	6.0	4.7	8.6	-	4.2	3.6	-	-	-	5.6 [1]	5.3	5.2	4.0	4.2	4.7	3.5	3.4	3.1	5.2	4.8	4.7	4.2
Low technology manufactures		8.9	7.8	7.7	6.0	7.5	6.6	7.6	6.7	5.2	5.1	9.4	8.8 [1]	8.3	6.5	6.6	7.0	7.8	6.2	5.9	4.8	7.6	6.7	7.0	6.0
High and medium-high technology manufactures		7.8	7.2	12.2	9.5	13.8	14.8	6.6	5.9	-	-	6.6	5.8 [1]	6.5	5.9	8.3	9.5	8.6	6.9	8.2	7.7	9.1	8.7	9.4	8.7

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 Anberd data are available).

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

Source: OECD, STAN Indicators 2004.

Table 32. Trade-to-GDP ratio for goods and services, 1991-2003[1]

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[2]	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[3]	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[2]	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[2]	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[3]	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[3]	-	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[2]	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[2]	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
Total OECD[2, 4]	**13.4**	**14.7**	**16.8**	**16.5**	**1.9**	**2.3**	**-1.7**	**3.3**	**3.6**	**4.3**	**4.4**	**2.5**	**2.6**	**1.4**	**18.0**	**19.4**	**22.3**	**22.1**	**1.9**	**2.1**	**-0.9**
EU-15[2, 4]	**19.4**	**21.3**	**25.7**	**24.7**	**1.6**	**2.7**	**-3.9**	**4.6**	**5.3**	**7.3**	**7.3**	**4.1**	**4.6**	**-0.4**	**26.3**	**28.8**	**35.5**	**34.3**	**1.9**	**2.8**	**-2.7**
EU-25[2, 4]	**19.4**	**21.6**	**26.3**	**25.3**	**1.8**	**3.1**	**-4.7**	**4.6**	**5.3**	**7.3**	**7.3**	**4.2**	**4.6**	**-0.6**	**26.4**	**29.0**	**35.9**	**34.9**	**2.2**	**3.1**	**-2.4**

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

1. 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/10.1787/442804674716

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

1. 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 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[3]		OECD[4]	
		1994	2001	1992	1999	1997	1999	1992	2001	1992	2001	1997	2000	1992	2001	1992	2001	1992	1999	1992	1999
Total manufacturing	**(15-37)**	**1**	**1**	**29**	**38**	**54**	**63**	**19**	**31**	**41**	**51**	**54**	**66**	**31**	**43**	**13**	**17**	**30**	**39**	**21**	**26**
High technology manufactures		**-**	**4** [1]	**42**	**62**	**-**	**-**	**28**	**49**	**66**	**67**	**-**	**-**	**57**	**100**	**26**	**35**	**49**	**71**	**34**	**43**
Pharmaceuticals	(2423)	-	4 [1]	11	23	-	-	10	32	67	79	-	-	40	76	10	15	33	56	19	28
Office, accounting and computing machinery	(30)	0	1 [1]	175	128	78	461	52	50	97	136	-	-	69	101	47	58	65	104	48	57
Radio, television and communication equip.	(32)	5	5 [1]	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 [1]	61	60	34	30	24	47	65	72	76	88	51	63	16	26	44	56	30	41
Aircraft and spacecraft	(353)	-	9 [1]	-	-	-	-	121	86	46	103	-	-	70	123	35	44	73	77	47	57
Medium-high technology manufactures		**-**	**2** [1]	**39**	**66**	**-**	**-**	**36**	**51**	**50**	**58**	**-**	**-**	**45**	**53**	**20**	**24**	**42**	**51**	**-**	**-**
Chemicals excluding pharmaceuticals	(24ex2423)	-	2 [1]	20	34	-	-	22	38	43	66	-	-	46	60	17	22	41	54	-	-
Machinery and equipment, nec	(29)	3	3 [1]	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 [1]	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 [1]	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 [1]	28	27	-	-	15	45	18	23	-	-	17	20	11	11	33	38	33	32
Medium-low technology manufactures		**-**	**1** [1]	**19**	**24**	**-**	**-**	**17**	**21**	**39**	**44**	**-**	**-**	**21**	**24**	**7**	**8**	**22**	**25**	**-**	**-**
Coke, refined petroleum prod. and nuclear fuel	(23)	1	1 [1]	24	18	34	45	24	20	48	49	-	-	24	29	5	5	18	20	-	-
Rubber and plastics prod.	(25)	1	1 [1]	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 [1]	18	19	47	45	11	18	17	26	21	27	16	17	6	7	16	20	11	13
Basic metals	(27)	1	1 [1]	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 [1]	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 [1]	29	10	-	-	47	26	71	57	-	-	15	15	10	9	31	39	33	34
Low technology manufactures		**0**	**0** [1]	**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 [1]	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 [1]	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 [1]	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 [1]	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 [1]	19	21	45	53	10	21	34	41	88	95	26	24	12	15	26	32	14	19

1. 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

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

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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
Total manufacturing	**(15-37)**	**38**	**63**	**55**	**63**	**64**	**76**	**21**	**31**	**21**	**24**	**25**	**45**	**63**	**80**	**38**	**43**	**44**	**47**
High technology manufactures		**-**	**94**	**-**	**81** [1]	**147**	**140**	**40**	**63**	**33**	**-**	**-**	**84**	**93**	**211** [1]	**-**	**-**	**84**	**177** [1]
Pharmaceuticals	(2423)	-	55	-	62 [1]	-125	-139	20	49	7	11	17	23	62	101 [1]	-	-	70	84 [1]
Office, accounting and computing machinery	(30)	88	110	-	100 [1]	112	111	83	93	51	32	91	192	296	-	-	-	114	693 [1]
Radio, television and communication equipment	(32)	78	98	-	97 [1]	102	135	41	61	27	48	77	72	52	90 [1]	-	-	77	90 [1]
Medical, precision and optical instruments	(33)	47	94	-	80 [1]	91	87	43	61	63	43	-	-	-	- [1]	-	-	75	- [1]
Aircraft and spacecraft	(353)	200	32	-	66 [1]	184	152	46	74	99	-	-	205	-	82 [1]	-	-	80	79 [1]
Medium-high technology manufactures		**-**	**77**	**-**	**82** [1]	**78**	**98**	**32**	**45**	**28**	**-**	**37**	**69**	**83**	**94** [1]	**-**	**-**	**-**	**96** [1]
Chemicals excluding pharmaceuticals	(24ex2423)	-	80	-	64 [1]	69	104	36	48	33	35	32	52	70	85 [1]	-	-	-	95 [1]
Machinery and equipment, nec	(29)	54	91	-	82	98	98	23	38	48	45	72	96	85	72	-	-	64	76 [1]
Electrical machinery and apparatus, nec	(31)	69	51	-	82 [1]	77	116	16	27	32	54	87	192	102	148 [1]	-	-	50	128 [1]
Motor vehicles, trailers and semi-trailers	(34)	80	92	-	98 [1]	90	98	52	62	6	6	10	45	99	114 [1]	-	-	99	110 [1]
Railroad equip. and transport equip. nec	(352+359)	51	74	-	84 [1]	11	13	25	41	10	-	-	56	-	123 [1]	-	-	37	123 [1]
Medium-low technology manufactures		**25**	**46**	**-**	**60** [1]	**71**	**63**	**16**	**20**	**15**	**-**	**24**	**37**	**52**	**53** [1]	**-**	**-**	**-**	**53** [1]
Coke, refined petroleum prod. and nuclear fuel	(23)	11	19	-	- [1]	121	121	18	16	17	14	18	11	47	63	-	-	-	61 [1]
Rubber and plastics prod.	(25)	36	59	49	53	76	66	16	22	8	12	42	60	80	80	-	-	60	81 [1]
Other non-metallic mineral prod.	(26)	21	36	21	20	36	34	7	9	6	11	7	13	39	27	20	21	25	33 [1]
Basic metals	(27)	48	65	89	94 [1]	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 [1]	60	50	5	7	10	10	32	54	34	26	19	18	42	29 [1]
Building and repairing of ships and boats	(351)	21	55	-	99 [1]	65	62	11	34	22	-	-	42	-	14 [1]	-	-	37	19
Low technology manufactures		**27**	**37**	**37**	**42**	**37**	**32**	**14**	**21**	**13**	**18**	**12**	**18**	**46**	**47**	**-**	**-**	**24**	**27**
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[3]		OECD[4]	
		1992	2001	1992	1999	1992	2001	1997	1999	1992	2001	1997	2000	1992	2001	1992	2001	1992	1999	1992	1999
Total manufacturing	**(15-37)**	**21**	**38**	**38**	**47**	**25**	**35**	**55**	**63**	**37**	**45**	**53**	**65**	**34**	**48**	**15**	**23**	**30**	**37**	**20**	**26**
High technology manufactures		**-**	**70** [1]	**69**	**74** [1]	**51**	**68**	**-**	**-**	**65**	**62**	**-**	**-**	**57**	**100**	**23**	**36**	**52**	**71**	**31**	**43**
Pharmaceuticals	(2423)	-	65 [1]	36	53 [1]	19	46	-	-	48	57	-	-	29	72	8	19	28	48	17	27
Office, accounting and computing machinery	(30)	88	83 [1]	104	108 [1]	76	74	97	157	98	109	139	142	75	101	51	68	74	103	50	65
Radio, television and communication equipment	(32)	50	74 [1]	66	64 [1]	58	80	89	117	58	45	57	69	59	126	32	42	53	73	29	38
Medical, precision and optical instruments	(33)	50	49 [1]	89	87 [1]	58	71	59	64	64	70	49	71	50	64	12	23	44	55	27	38
Aircraft and spacecraft	(353)	-	93 [1]	-	- [1]	114	90	-	-	50	103	-	-	60	124	14	30	69	74	36	49
Medium-high technology manufactures		**-**	**59** [1]	**66**	**73** [1]	**43**	**55**	**-**	**-**	**46**	**52**	**-**	**-**	**47**	**58**	**21**	**31**	**38**	**46**	**-**	**-**
Chemicals excluding pharmaceuticals	(24ex2423)	-	55 [1]	47	59 [1]	37	47	-	-	55	73	-	-	43	58	11	20	41	51	-	-
Machinery and equipment, nec	(29)	44	63 [1]	70	69 [1]	52	56	71	87	45	54	50	68	49	56	19	26	36	44	24	31
Electrical machinery and apparatus, nec	(31)	28	56 [1]	60	80 [1]	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 [1]	83	87 [1]	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 [1]	65	40 [1]	36	42	-	-	23	27	-	-	31	41	17	21	36	43	28	32
Medium-low technology manufactures		**-**	**28** [1]	**29**	**34** [1]	**17**	**22**	**-**	**-**	**37**	**39**	**-**	**-**	**24**	**26**	**9**	**13**	**22**	**24**	**-**	**-**
Coke, refined petroleum prod. and nuclear fuel	(23)	11	14 [1]	30	26 [1]	23	23	18	26	50	42	109	113	18	26	9	13	24	22	-	-
Rubber and plastics prod.	(25)	24	37 [1]	35	47 [1]	22	30	64	78	50	57	52	56	25	26	9	12	25	29	18	20
Other non-metallic mineral prod.	(26)	11	19 [1]	10	13 [1]	8	10	31	33	27	30	34	40	18	19	9	14	14	15	10	13
Basic metals	(27)	16	43 [1]	63	76 [1]	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 [1]	24	31 [1]	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 [1]	17	10 [1]	18	26	-	-	69	24	-	-	13	8	2	6	17	20	12	15
Low technology manufactures		**11**	**21** [1]	**22**	**27** [1]	**14**	**21**	**36**	**44**	**23**	**30**	**-**	**-**	**25**	**30**	**11**	**16**	**22**	**26**	**15**	**19**
Food prod., beverages and tobacco	(15-16)	8	9 [1]	16	22 [1]	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 [1]	31	36 [1]	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 [1]	11	16 [1]	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 [2]	19	23 [2]	14	17	35	43	13	16	31	37	18	18	4	6	16	18	9	10
Manufacturing nec; recycling	(36-37)	17	29 [1]	30	29 [1]	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
	1990	1995	1998	1999	2000	2001	1990	1995	1998	1999	2000	2001	net outflow
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[1]	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
Total OECD[2]	**236**	**335**	**645**	**1 015**	**1 263**	**580**	**171**	**214**	**506**	**888**	**1 267**	**590**	**1 020**
EU-25[2]	**129**	**157**	**410**	**715**	**944**	**375**	**93**	**118**	**259**	**508**	**811**	**370**	**862**
EU-15[2]	**129**	**157**	**410**	**715**	**943**	**375**	**93**	**111**	**249**	**493**	**793**	**355**	**943**

1. The statistics cover unified Germany as from 1990.

2. Excluding missing countries for respective years.

Source: OECD, FDI database, May 2004.

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