Notes

Cyprus

The following note is included at the request of Turkey:

"The information in this document with reference to 'Cyprus' relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the 'Cyprus issue'."

The following note is included at the request of all the European Union member states of the OECD and the European Commission:

"The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus."

Israel

"The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law."

"It should be noted that statistical data on Israeli patents and trademarks are supplied by the patent and trademark offices of the relevant countries."

Employment in services, 2009

"Market sector services" is defined according to ISIC Rev. 3 Divisions 50-74.

"Public sector services" is defined according to ISIC Rev. 3 Divisions 75-95, *i.e.* Government (75), Education (80), Health (85), Other community, social and personal services (90-93) and Private households (95).

"Industry" is defined according to ISIC Rev. 3 Divisions 10-41, *i.e.* Mining (10-14), Manufacturing (15-37) and Utilities (40-41).

Using an industry based definition, the distinction between market and public services is an approximate one. In OECD countries private education and health services are available to varying degrees while some transport and postal services remain in the public realm.

Iceland and Turkey: Labour Force Survey (LFS) data by industry are used in the absence of employment by activity statistics published in a National Accounts (SNA) context.

New Zealand: based on employment estimates for fiscal years 2008-09 and 2009-10.

Employment in knowledge-intensive "market" services, 2008

Knowledge-intensive "market services" refers to Post and telecommunications (ISIC Rev. 3 Division 64), Finance and insurance (Divisions 65-67) and Business activities (Divisions 71-74).

Employment in high- and medium-high technology manufacturing industries, 2008

High- and medium-high technology manufacturing is defined as Chemicals and chemical products (ISIC Rev. 3 Division 24); Manufacture of machinery and equipment, n.e.c. (Division 29); Electrical and optical equipment (Division 30-33); and Transport equipment (34-35).

Services-related occupations in manufacturing, 2000 and 2008

Services-related occupations correspond to ISCO-88 major groups: 1. "Legislators, senior officials and managers"; 2. "Professionals"; 3. "Technicians and associate professionals", 4. "Clerks"; and 5. "Service workers and shop and market sales workers".

Manufacturing refers to ISIC Rev. 3 (NACE Rev. 1) divisions 15 to 37.

For Australia, manufacturing does not include publishing of recorded media.

For Japan, estimations include the self-employed.

Micro firms, 2007

Micro firms have between 1 and 9 employees.

The statistical unit for all countries is enterprise except for Japan, Korea and Mexico which refer to establishments.

Data cover the market economy (excluding financial intermediation) except for Brazil, Ireland, Israel, Japan, Korea, Luxembourg, and the Slovak Republic where data refer to manufacturing sectors only.

Value added by size class, 2007

The statistical unit for all countries is enterprise except for Japan, Korea and Mexico which refer to establishments.

Data cover the market economy (excluding financial intermediation) except for Brazil, Hungary, Ireland, Israel, Japan, Korea, Luxembourg and the Slovak Republic where data refer to manufacturing sectors only.

High-growth firms (based on growth in employment), 2007

As measured by employment, high-growth enterprises have an average annualised growth in employees greater than 20% a year, over a three-year period, and with ten or more employees at the beginning of the observation period.

Industrial specialisation, 1998 and 2008

The HK index is specified as:

$$HK(\theta) = \left(\sum_{i=1}^{N} s_i^{\theta} \right)^{1/(1-\theta)}$$

where s_i is the relative output of the ith sector, N the total number of sectors in an economy, and θ measures the extent to which the index is influenced by large sectors. The HK(2) is calculated for a value of θ (theta) equal to 2, value for which it corresponds to the inverse of the Herfindahl Index.

The index is constructed using the OECD STAN Structural Analysis Database. The sectors considered cover the following ISIC Rev. 3 Divisions: 01-05 (Agriculture), 10-14 (Mining and quarrying), 15-16 (Food products, beverages and tobacco), 17-19 (Textiles, textile products, leather and footwear), 20 (Wood and products of wood and cork), 21-22 (Pulp, paper, paper products, printing and publishing), 23-25 (Chemical, rubber, plastics and fuel products), 26 (Manufacture of other non metallic mineral products), 27-28 (Basic metals and fabricated metal products), 29 (Manufacture of machinery and equipment, n.e.c.), 30-33 (Electrical and optical equipment), 34-35 (Transport equipment), 36-37 (Manufacturing, n.e.c.), 40-41 (Electricity, gas and water supply), 45 (Construction), 50-52 (Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods), 55 (Hotels and restaurants), 60-64 (Transport, storage and communications), 65-67 (Financial intermediation), 71-74 (Renting of machinery and equipment and other business activities).

Value added of the top four industries, 2008

The sector Concentration Ratio index shown is the analogous to the K-firm concentration ratio and is defined as the cumulative share of the Kth sector, where s_i is the relative output of the ith sector. CR(4) is calculated for a value of K equal to 4.

$$CRK = \sum_{i=1}^{K} s_i$$

The index is constructed using the OECD STAN Structural Analysis database. The sectors considered cover the following ISIC Rev. 3 Divisions: 01-05 (Agriculture), 10-14 (Mining and quarrying), 15-16 (Food products, beverages and tobacco), 17-19 (Textiles, textile products, leather and footwear), 20 (Wood and products of wood and cork), 21-22 (Pulp, paper, paper products, printing and publishing), 23-25 (Chemical, rubber, plastics and fuel products), 26 (Manufacture of other non-metallic mineral products), 27-28 (Basic metals and fabricated metal products), 29 (Manufacture of machinery and equipment, n.e.c.), 30-33 (Electrical and optical equipment), 34-35 (Transport equipment), 36-37 (Manufacturing, n.e.c.), 40-41 (Electricity, gas and water supply), 45 (Construction), 50-52 (Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods), 55 (Hotels and restaurants), 60-64 (Transport, storage and communications), 65-67 (Financial intermediation), 71-74 (Renting of machinery and equipment and other business activities).

The denominator "total value added" excludes "Real estate activities" (ISIC Rev. 3 Division 70) and "Community, social and personal services" (Divisions 75-99).

Value added of the top four industries, G7, 1980-2009

Data for Germany prior to 1991 are for western Germany only.

The denominator "total value added" excludes "Real estate activities" (ISIC Rev. 3 Division 70) and "Community, social and personal services" (Divisions 75-99).

Distribution of foreign-controlled employment by broad sectors, 2008

Financial intermediation excluded completely or in part for all countries except Austria, the Czech Republic, Denmark, Finland, Italy, Sweden, Switzerland and the United States.

Community, social and personal services excluded for Austria, Denmark, France, Germany, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia and Spain.

For Switzerland, manufacturing includes other sectors.

Share of national employment under control by foreign affiliates, 2000 and 2008

Financial intermediation excluded completely or in part for all countries except Austria, the Czech Republic, Denmark, Finland, Italy, Sweden, Switzerland and the United States.

Community, social and personal services excluded for Austria, France, Germany, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia and Spain.

Share of national value added under control by foreign affiliates, 2000 and 2008

Financial intermediation excluded completely or in part for all countries except Austria, the Czech Republic and the United States.

Community, social and personal services excluded for Austria, France, Germany, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia and Spain.

Average of total exports and imports as a percentage of GDP, 2000, 2008 and 2009

OECD and BRIICS refer to the simple averages (un-weighted means) of the countries' shares of GDP.

OECD excludes Luxembourg.

Average of exports and imports of goods as a percentage of GDP, 2000, 2008 and 2009

OECD and BRIICS refer to the simple averages (un-weighted means) of the countries' shares of GDP.

OECD excludes Luxembourg.

Average of exports and imports of services as a percentage of GDP, 2000, 2008 and 2009

OECD and BRIICS refer to the simple averages (un-weighted means) of the countries' shares of GDP

OECD excludes Luxembourg.

Import content of exports, 1995 and 2005

Data refer to fiscal years 1994/95 and 2004/05 for Australia; fiscal years 1993/94 and 2006/07 for India; 1996 and 2002 for Turkey.

Data refer to 2004 (instead of 2005) for Israel; Ireland, Slovenia and South Africa: data refer to 1998, 1996 and 1993, respectively (instead of 1995).

Import content of household final consumption, 1995 and 2005

Data refer to fiscal years 1994/95 and 2004/05 for Australia; fiscal years 1993/94 and 2006/07 for India; 1996 and 2002 for Turkey.

Data refer to 2004 (instead of 2005) for Israel; Ireland, Slovenia and South Africa: data refer to 1998, 1996 and 1993, respectively (instead of 1995).

Business R&D intensity adjusted for industrial structure, 2008

The structure-adjusted indicator of R&D intensity is a weighted average of the R&D intensities of a country's industrial sectors, using the OECD industrial structure – sector value added shares in 2007 – as weights instead of a country's actual shares (which are used in the calculation of the unadjusted measure of BERD intensity).

BERD data are from 2009 for the Czech Republic, Estonia and Italy. 2007 for Austria, Belgium, Finland, France, Germany, Greece, Mexico, Norway, Sweden, the United Kingdom and the United States. 2006 for Denmark, the Netherlands and Poland. 2005 for Australia, Canada, Iceland and Ireland.

R&D series are presented as a percentage of value added in industry estimated as the value added in all activities excluding "Real estate activities" (ISIC Rev. 3 70), "Public administrations and defence" (ISIC Rev. 3 75), "Education" (ISIC Rev. 3 80), "Health and social work" (ISIC Rev. 3 85) and "Private households with employed persons" (ISIC Rev. 3 95).

Business R&D in the manufacturing sector by technological intensity, 2008

Technology groupings give a broad sense of the relative specialisation of countries in terms of business R&D, but do not take into account the fact that in some countries the technology intensity of a given industry may be significantly different from that of the OECD average. Further details on the technology classification are available at: *http://oecd.org/dataoecd/43/41/48350231.pdf*.

2010 data for Italy. 2009 data for the Czech Republic, Estonia and Japan. 2007 data for Austria, Belgium, Canada, Finland, France, Germany, Greece, Mexico, Sweden and the United States. 2006 data for the Netherlands and Poland. 2005 data for Iceland and Ireland.

Share of services in business R&D, 1998 and 2008

For the Slovak Republic, estimates are also based on additional national sources in order to allocate the R&D by firms engaged primarily in R&D (registered in ISIC 73 in ANBERD) to industry served. For this country, the redistribution of ISIC 73 by industry served was not directly implemented in ANBERD because the breakdown is not available at a detailed sector level.

Revealed technological advantage in ICT, 1997-99 and 2007-09

Data relate to patent applications filed under the Patent Cooperation Treaty (PCT), at international phase, published by the WIPO. Patent counts are based on the priority date, the inventor's country of residence and fractional counts.

The revealed technological advantage index is calculated as the share of country in ICT-related patents relative to the share of country in total patents. Only countries with more than 500 patents in 2007-09 are included in the figure.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Revealed technological advantage in biotechnologies, 1997-99 and 2007-09

Data relate to patent applications filed under the Patent Cooperation Treaty (PCT), at international phase, published by the WIPO. Patent counts are based on the priority date, the inventor's country of residence and fractional counts.

The revealed technological advantage index is calculated as the share of country in biotechnology patents relative to the share of country in total patents. Only countries with more than 500 patents in 2007-09 are included in the figure.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Revealed technological advantage in nanotechnologies, 1997-99 and 2007-09

Data relate to patent applications filed under the Patent Cooperation Treaty (PCT), at international phase, published by the WIPO. Patent counts are based on the priority date, the inventor's country of residence and fractional counts.

The revealed technological advantage index is calculated as the share of country in nanotechnology patents relative to the share of country in total patents. Only countries with more than 500 patents in 2007-09 are included in the figure.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Internet selling and purchasing for total industry, 2010

The definition of Internet selling and purchasing varies between countries, with some explicitly including orders placed by conventional e-mail (*e.g.* Australia and Canada) and others explicitly excluding such orders (*e.g.* Ireland, the United Kingdom and some other European countries). Most countries explicitly use the OECD concept of Internet commerce, that is, goods or services are ordered over the Internet but payment and/or delivery may be off line.

For Australia, Internet income results from orders received via the Internet or the web for goods or services, where an order is a commitment to purchase.

For Japan, businesses with 100 or more employees.

For Mexico, businesses with 50 or more employees.

For New Zealand, businesses with 6 or more employees and with a turnover greater than NZD 30 000.

For Switzerland, businesses with 5 or more employees and connections equal to or faster than 144 kbits per second (mobile and fix).

Businesses and individuals experiencing ICT security incidents, 2010

For businesses, ICT related incidents can include: destruction or corruption of data due to hardware or software failures, unavailability of ICT services due to attacks from outside, *e.g.* denial of service attack, destruction or corruption of data due to infection or malicious software or unauthorised access, or disclosure of confidential data due to intrusion, pharming, phishing attacks.

For Japan, Mexico, Korea: just incidents involving virus', trojans or worms.

For New Zealand, Internet users having been victim of fraudulent activity which has resulted in some loss (*e.g.* money).

Patenting activity by sector, 2007-09

Patenting firms were linked to the ORBIS© database, using combinations of string matching algorithm that maximise the precision of the match. The patent portfolio of firms refers to patents applied at the European Patent Office (EPO) and at the US Patent and Trademark Office (USPTO) between 2007 and 2009. Only countries with matching rates above 60% of patent filings over the period considered are shown.

The list of industries follows the ISIC, Rev. 3. High and medium-high technology manufactures cover Sectors 24, 29-35 less 351; medium-low technology manufactures include 23, 25-28, 351; and business sector services – excluding real estate – refer to 50-67, 71-74.

Top three industries patenting in selected technology fields, 2007-09

Patenting firms were linked to the ORBIS© database, using combinations of string matching algorithm that maximise the precision of the match. The patent portfolio of firms refers to patents applied at the European Patent Office (EPO) and at the US Patent and Trademark Office (USPTO) between 2007 and 2009. Only countries with matching rates above 60% of patent filings over the period considered are included.

The list of industries follows the ISIC, Rev. 3.

Patents in biotechnologies and health- and ICT-related technologies are based on a selection of International Patent Classification (IPC) classes.

Patents in environment-related technologies are defined using combinations of IPC classes (for EPO and USPTO) and codes Y02 of the European Classification (ECLA) for EPO only.

Patents in nanotechnologies are identified by the ECLA Code Y01.

Patenting activity of young firms, 2007-09

Patenting firms were linked to the ORBIS© database, using combinations of string matching algorithm that maximise the precision of the match. The patent portfolio of firms refers to patents applied at the European Patent Office (EPO) and at the US Patent and Trademark Office (USPTO) between 2007 and 2009. Only countries with matching rates above 60% of patent filings over the period considered are shown.

Young patenting firms are firms featuring an incorporation date in ORBIS© between 2004 and 2009.

Innovation intensity in sectors, 2002-06

Industries are defined according to 2-digit ISIC Rev. 3 (NACE Rev. 1) divisions:

- 73 Research and development.
- 24 Chemicals and chemical products.
- 66 Insurance and pension funding, except compulsory social security.
- 23 Coke, refined petroleum products and nuclear fuel.
- 32 Radio, television and communication equipment.
- 65 Financial intermediation except insurance and pension funding.
- 72 Computer and related activities.
- 33 Medical, precision and optical instruments, watches and clocks.
- 34 Motor vehicles, trailers and semi-trailers.
- 64 Post and telecommunications.
- 30 Office, accounting and computing machinery.
- 01 Agriculture, hunting and related service activities.
- 80 Education.
- 16 Tobacco products.
- 31 Electrical machinery and apparatus, n.e.c.
- 02 Forestry, logging and related service activities
- 11 Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction surveying.
- 29 Manufacture of machinery and equipment, n.e.c.
- 91 Membership organisations, n.e.c.
- 35 Other transport equipment.

Industry R&D intensity defined as R&D expenditure as a percentage of value added.

Value added of innovation-intensive manufacturing sectors, 2008

Industries are defined according to 2-digit ISIC Rev. 3 (NACE Rev. 1) classes.

Value added of innovation-intensive service sectors, 2008

Industries are defined according to 2-digit ISIC Rev. 3 (NACE Rev. 1) classes.

"Market" services are defined as ISIC Rev. 3 Divisions 50-74 excluding 70 (real estate).

Patent quality index by country, 1990-2000 and 2000-10

The Patent Quality Index is a composite index based on a set of normalised indicators (backward and forward citations, family size, number of claims, grant lag and patent generality), ranging from 0 to 1 (maximum quality). The data refers to patents granted by the European Patent Office (EPO) up to 2010, by applicant's residence country and filing date. Only countries with more than 250 granted patents are included in the figure.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Patent quality index by technology field, 2000-10

The Patent Quality Index is a composite index based on a set of normalised indicators (backward and forward citations, family size, number of claims, grant lag and patent generality), ranging from 0 to 1 (maximum quality). The data refers to patents granted by the European Patent Office (EPO) up to 2010, by applicant's residence country and filing date. Patents are allocated to technology fields using International Patent Classification (IPC) codes following the classification presented in Schmoch (2008). Only countries with more than 50 granted patents per field over the period are included in the figure. The threshold is lower to 10 granted patents for solar energy, micro-structural and nano-technology, wind energy technology and IT methods for management.

Generality of patent applications, 1996-2000 and 2001-05

The generality index measures the dispersion of citing patents over technology classes, and follows the specification proposed by Hall and Trajtenberg (2004). It relies on information concerning the number and distribution of citations received, and the IPC classes of the patents these citations come from. The measure is high if a patent is cited by subsequent patents belonging to a wide range of fields – *i.e.* the considered invention has been relevant for a number of later inventions, and not only in its own technology class. Conversely, if most citations are concentrated in a few fields the generality index is low, *i.e.* close to zero.

Data refer to patent applications published by the European Patent Office (EPO) up to 2005, by inventor's residence country and publication date. Only OECD and BRIICS countries with at least 250 patent applications are included.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Patent scope by country, 1996-2000 and 2001-05

The scope of each patent application is calculated as the number of distinct IPC subclasses (*i.e.* 4-digit IPC classification) into which the application is assigned by the EPO. The graph displays the average by inventor's residence country and publication date, up to 2005.

Data refer to patent applications published by the European Patent Office (EPO) up to 2005, by inventor's residence country and publication date. Only OECD and BRIICS countries with at least 250 patent applications are included.

BRIICS refers to Brazil, the Russian Federation, India, Indonesia, China and South Africa.

Highly cited patent applications to the EPO (top 1%), 1996-2000 and 2001-05

The top 1% patent applications in terms of received citations within a field and year are considered highly cited. The data refers to patent applications published by the EPO up to 2005, by inventor's residence country and date of publication.

Countries included are OECD countries, BRIICS countries and Singapore. Only countries with at least one highly cited patent application are shown.