

### 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'."*

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### 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."*

### Decomposition of growth in GDP per capita, 2001-07, 2007-09 and 2009-10

OECD excludes Turkey.

Euro area includes the 15 countries which are also OECD members.

OECD estimates for 2007-09 and 2009-10 exclude Switzerland for which hours worked for 2009 and 2010 are missing.

### Labour productivity growth, total economy level, 1985-2010

Euro area excludes Estonia and Slovenia for which productivity estimates are only available from 2000.

### GDP per capita and labour productivity in Brazil, India, Indonesia, China and South Africa (BIICS), 1991-2009

Calculations are based on GDP in constant 2005 purchasing power parities.

Percentage gap with respect to the simple average of the 17 highest OECD countries in terms of GDP per capita and GDP per employee.

### Where people lost their jobs, 2008-09

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

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

### Where people lost their jobs in Europe, 2009-10

Europe includes the 24 countries shown in the figure.

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

### Investment in fixed and intangible assets as a share of GDP, 2006

Estimates refer to the total economy for Canada, Japan and Sweden; the market sector for Australia, France, Germany, Italy, Spain and the United Kingdom; the non-financial business sector for Finland; the commercial sector for the Netherlands and the non-farm business sector for the United States.

Data on intangible assets for the United States provided by C. Corrado; data for Japan provided by T. Miyagawa; data for Sweden provided by H. Edquist; data for the Netherlands provided by M. Tanriseven; data for Germany, Italy, Spain and the United Kingdom provided by J. Haskel, A. Pesole and members of the COINVEST project; data for Austria, Denmark and the Czech Republic provided by J. X. Hao and B. van Ark; data on intangible and tangible

investment for Australia provided by P. Barnes; for Canada by N. Belhocine. Data on tangible investment for France is based on INSEE. For other countries figures for tangible investment are OECD calculations based on the OECD, Annual National Accounts and the EU KLEMS Databases.

#### **Labour productivity growth: adding the contribution of intangible assets, 1995-2006**

Japanese estimates do not account for the contribution of labour quality.

Data for the United States is from C. Corrado, D. Sichel and C. Hulten (2009), data for Sweden is from H. Edquist (2009); data for Japan is from K. Fukao, T. Miyagawa, K. Mukai, Y. Shinoda and K. Tonogi (2009); data for Australia is from P. Barnes and A. McClure (2009); data for the United Kingdom is from G.M. Marrano, J.E. Haskel and G. Wallis (2009); data for Austria, the Czech Republic, Denmark, France, Germany, Greece, Italy, Spain and the Slovak Republic is from B. van Ark, J.X. Hao, C. Corrado and C. Hulten (2009).

#### **Foreign direct investment inflows, 1995-99, 2000-04 and 2005-09**

Other OECD includes: Australia, Canada, Chile, Iceland, Israel, Korea, Mexico, New Zealand, Norway, Switzerland and Turkey.

Other BRIICS includes: Brazil, India, Indonesia, the Russian Federation and South Africa.

#### **Outward foreign direct investment flows from EU, Japan and the United States to BRI\*CS (\*India), yearly average 2003-09**

EU includes OECD EU countries except Slovenia.

#### **Foreign direct investment outward flows from BRIICS, 1994-97, 2002-05 and 2006-09**

For Indonesia, the 2002-05 average corresponds to 2004-05.

#### **OECD manufacturing trade by technology intensity, 1995-2009**

OECD manufacturing trade is calculated as the average value of total OECD exports and imports of goods. Calculations exclude Luxembourg for which data are only available from 1999.

#### **BRIICS manufacturing trade by technology intensity, 1995-2009**

BRIICS manufacturing trade is calculated as the average value of total BRIICS exports and imports of goods. Data for South Africa are available from 2000; data from the South African Customs Union (SACU) were used as a proxy for 1995-99.

#### **World trade by end use, 1995 and 2009**

EU15 includes EU members as of 1 January 1995: Austria, Belgium, Denmark, France, Finland, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

Other OECD includes: Australia, Canada, Chile, the Czech Republic, Estonia, Hungary, Iceland, Israel, Korea, Mexico, New Zealand, Norway, Poland, the Slovak Republic, Slovenia, Switzerland and Turkey.

BRIIS consists of Brazil, India, Indonesia, South Africa and the Russian Federation (i.e. BRIICS without China).

#### **Import content of exports for selected economies and regions, 1995 and 2005**

EU15 includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, the United Kingdom.

Other OECD includes: Chile, the Czech Republic, Estonia, Hungary, Iceland, Israel, Norway, Poland, the Slovak Republic, Slovenia, Switzerland and Turkey.

Other East and South-East Asia includes: Chinese Taipei, Indonesia, Singapore, Hong Kong SAR of China, Malaysia, Philippines, Thailand, Viet Nam, Brunei Darussalam and Cambodia.

Rest of the world estimated using input-output tables and bilateral trade data for Argentina, Brazil, India, South Africa, Saudi Arabia, the Russian Federation, selected non-OECD European countries and a residual aggregate covering all other countries.

The percentage under the country names shows the import content share of a country's or region's total exports.

Country/region bubble size is proportional to the total value of the import content of exports in USD.

Bilateral trade flows are highlighted by arrows if they represent more than 1.5% of the world total import content of exports.

# 1. KNOWLEDGE ECONOMIES: TRENDS AND FEATURES

## Notes

### **Diversification index (Hannah-Kay) for selected countries, 1978-2009**

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

### **Composition of GDP in OECD and BRIICS countries, 2008**

The major activity groups are defined according to ISIC Rev. 3. "Market" Services: ISIC 50-74; "Non-market" Services: ISIC 75-99; Industry: ISIC 10-41 (i.e. Mining, Manufacturing and Utilities); Construction: ISIC 45; and Agriculture: ISIC 01-05.

OECD and BRIICS: un-weighted averages (means) of the countries' shares.

Value added measured in basic prices except for Indonesia, Japan, United States: market prices; and India: factor costs.

For Canada, figures refer to 2007.

For Australia and India, figures refer to fiscal year 2007/08.

### **US gross domestic product and trademark applications at the USPTO, 1999-2011**

Goods (resp. services) trademarks represent trademark applications designating only good (resp. service) classes; finance, insurance and real estate trademarks represent trademark applications designating Class 036 of the Nice Classification.

The US gross domestic product is based on the series of seasonally adjusted GDP, expenditure approach, in volume (chained volume estimates) contained in the OECD Quarterly National Accounts Database (May 2011).

Raw GDP and trademark applications series were treated using the OECD's Composite Leading Indicators methodology. Monthly data were used for trademark applications and quarterly data for GDP, converted to a monthly frequency via linear interpolation and aligned with the mid-quarter month. This treatment removes seasonal patterns and trends (using the Hodrick-Prescott filter) in order to extract the cyclical pattern. The cyclical pattern presented on the graph is expressed as a percentage deviation from the long-term trend. Considering the filters applied, the remaining cycles are those with a period of between 18 months and 10 years. The analysis was performed on series from January 1990 to February 2011 for trademark applications and to March 2011 for GDP. For more information on the methodology, see OECD (2008), *OECD System of Composite Leading Indicators*, OECD Publishing, Paris, [www.oecd.org/dataoecd/26/39/41629509.pdf](http://www.oecd.org/dataoecd/26/39/41629509.pdf).

The graph shows a peak around 2004 for the trademark series which does not correspond to the economic activity. It corresponds to the accession of the United States to the Madrid Agreement in November 2003, which facilitated the filing procedure for foreign applications.

### **Venture capital investment in the United States (1995-2010) and in Europe (2005-09)**

Europe includes: Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Spain, the Slovak Republic, Slovenia, Sweden, Switzerland, Ukraine and the United Kingdom.

### **Investment by business angel groups/networks in the United States and Europe, 2006-09**

A business angel is a private investor who generally provides finance and business expertise to a company in return for an equity share in the firm. Some business angels form syndicates or networks in order to take on larger deals and spread risk.

Business angel groups are formed by individual angels joining together with other angels in order to evaluate and invest in entrepreneurial ventures. The angels can pool their capital to make larger investments.

A business angel network is an organisation whose aim is to facilitate the matching of entrepreneurs with business angels.

Data refer to networks and groups surveyed by the business angel associations.

Europe includes: Andorra, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, the Russian Federation, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom.

**R&D in OECD and non-OECD countries, 2009 or latest available year**

For Australia (2008), Canada (2008), Chile (2008), France (2008), Greece (2007), Iceland (2008), Korea (2008), Mexico (2007), New Zealand (2007), South Africa (2008), Switzerland (2008) and the United States (2007).

**R&D tax incentives versus direct support to business R&D, 2004 and 2009**

Estimates of R&D tax expenditures do not cover sub-national R&D tax incentives.

China, Greece, Iceland, Israel, Italy, the Slovak Republic and the Russian Federation provide R&D tax incentives but cost estimates are not available.

Mexico and New Zealand repealed tax schemes in 2009. No cost estimates are available for Mexico. In 2008, the cost for R&D tax incentives for New Zealand was NZD 103 million but BERD government funding data are not available for that year.

Estimates for Australia and Hungary are based on country responses to the 2010 OECD R&D tax incentives questionnaire.

2008 instead of 2009 for Australia, France, Hungary, Ireland, Japan, Portugal, South Africa and the United States.

2007 instead of 2009 for Austria, Belgium and Spain.

2005 instead of 2004 for Belgium, Canada, the Czech Republic, Denmark, the Netherlands, Norway and the United States.

2006 instead of 2004 for Poland, Portugal and South Africa.

2007 instead of 2004 for Slovenia.

The estimate for Austria covers the refundable research premium but excludes other R&D allowances. The value of the research premium has been removed from direct government funding of business R&D to avoid double counting.

For 2008 and 2004, estimates for France are based on accrual accounting measures of tax costs instead of cash-based measures of foregone tax. Before 2009, unused credits in France could not be refunded for three years, resulting in significant differences in tax cost estimates according to the method used. For 2008, claims exceeded paid credits by EUR 2.7 billion while in 2009, as a result of exceptional stimulus measures that allowed for the immediate payment of tax credit liabilities, tax expenditures exceeded claims by nearly EUR 1.5 billion. 2009 data for France are not reported due to the unavailability of comparable estimates for business R&D direct funding for that year.

The United States estimate covers the research tax credit but excludes the expensing of R&D.

**Global Internet Protocol (IP) traffic, 2005-10**

VoD: video on demand. WAN: wide area network.

**New uses of the Internet: social networking and health information, 2010**

Social networking is considered as posting messages to chat sites, blogs, newsgroups or online discussion forums or for instant messaging (European countries). For Korea, only online community data were taken into account.

**Routed IPv4 addresses per country, year end 2010**

The Internet Protocol (IP) enables different types of physical networks, such as cable TV systems, telephony systems, or wireless networks, to transport packets of data. It uses an addressing system to identify the end points for the data sent and received on the Internet.

The Internet Protocol version 4, or "IPv4", uses a 32-bit address scheme and was first implemented in 1983.

The Internet Protocol version 6, or "IPv6", provides a greatly expanded address range of 128-bits (or  $2^{128}$  possible addresses). Its core set of protocols was developed by the Internet Engineering Task Force from 1993 to 1998.

**OECD countries with IPv6-enabled networks, 2010**

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# 1. KNOWLEDGE ECONOMIES: TRENDS AND FEATURES

## Notes

### **University hotspots – geographical distribution of highest impact institutions, 2009**

Analysis based on Scopus data processed by SCImago, SIR-SCImago Institutions Rankings, June 2011, [www.scimagoir.com](http://www.scimagoir.com).

### **Innovation hotspots in ICT, biotechnologies and nanotechnologies, 2006-08**

Data relate to patent applications filed under the Patent Cooperation Treaty (PCT) in ICT and in biotechnology and nanotechnology. Patent counts are based on the priority date, the inventor's region of residence and fractional counts. The regional breakdown used is based on the OECD's Territorial Level 2. Only the top 20 regions patenting in ICT (and in biotechnology and nanotechnology) are included in the figure.

### **Service-related trademarks applications at USPTO and OHIM, OECD and BRIICS, 1997-99 and 2007-09**

Shares of service trademarks are calculated using fractional counts of the classes designated in the trademark application. Classes 1 to 34 relate to goods; classes 35 to 45 relate to services.

### **Trademarks in knowledge-intensive services, OECD and BRIICS, 2007-09**

Shares of knowledge-intensive service trademarks are calculated using fractional counts of the classes designated in the trademark application. Business trademark applications designate Class 35; finance, Class 36, telecommunications, Class 38, and R&D, Class 42 of the Nice classification.

### **Patents and trademarks per capita, 2007-09**

"Triadic" patent families refer to patents filed at the European Patent Office (EPO), the Japan Patent Office (JPO) and the US Patent and Trademark Office (USPTO) which protect the same invention. Patent families are counted according to the earliest priority date (first patent application worldwide), the inventor's country of residence and fractional counts.

"Trademarks abroad" refer to the average number of trademark applications filed at the USPTO, the Office for Harmonization in the Internal Market (OHIM) and the JPO. For US, EU countries and Japan, figures are calculated based on the trademarks filed in the two other foreign offices. Counts are rescaled taking into account the relative average propensity of other countries to file in the three offices. Trademarks abroad are counted according to the application date and the address of the applicant.

### **The impact of scientific production and the extent of international scientific collaboration, 2003-09**

Analysis based on Scopus data processed by SCImago, SIR-SCImago Institutions Rankings, June 2011, [www.scimagoir.com](http://www.scimagoir.com).

### **International collaboration in science and innovation, 2007-09**

International co-authorship of scientific publications is measured as the share of scientific articles with at least one author from a different country in total scientific articles. The scientific publication indicators are developed from the information contained in the Scopus® Database (Elsevier B.V.).

International co-inventions are measured as the share of patent applications filed under the Patent Cooperation Treaty (PCT) with at least one co-inventor located in a different country in total patents invented domestically. Patent counts are based on the priority date and the inventor's country of residence.

### **Co-inventions with BRIICS countries, 1991-2009**

Co-inventions are measured as the share of patent applications with at least one co-inventor located in one of the BRIICS countries over total patents invented domestically.

Data relate to total PCT patent applications, at international phase, published by the World Intellectual Property Organization (WIPO). Patent counts are based on the priority date and the inventor's country of residence.

### **The innovation-science link in "clean" energy technologies, 2000-09**

The data refers to a set of patents published by the EPO, the USPTO or through the Patent Co-operation Treaty (PCT) route. Patents cover technologies or applications for mitigation or adaptation with respect to climate change: capture, storage, sequestration or disposal of greenhouse gases (Y02C); and reduction of greenhouse gases emission related to energy generation, transmission or distribution (Y02E). Analysis of the link between patents and scientific literature



is based on the “non-patent literature” (NPL) listed as relevant references in patent documents. The NPL is matched with the scientific literature database (Scopus) which makes it possible to determine whether or not the NPL is a scientific article and to obtain bibliographical information recorded in the NPL.

#### **Triadic patent families by blocs, 1999 and 2009**

“Triadic” patent families refer to patents filed at the European Patent Office (EPO), the Japan Patent Office (JPO) and the US Patent and Trademark Office (USPTO) which protect the same invention.

#### **Technology transfers to selected BRIICS, 2005-07**

The data refer to claimed priorities, i.e. patents for which protection has been requested at at least two patent offices. Patent counts are based on the earliest priority date, the inventor’s country of residence and intellectual property (IP) offices in the BRIICS area, using fractional counts.

#### **Biggest net CO<sub>2</sub> importers and exporters, 2005**

Countries are sorted by their production-based CO<sub>2</sub> emissions, in descending order on the left-hand side and in ascending order on the right-hand side.

#### **R&D spending for energy and the environment, OECD countries, 1990-2009**

Chile and Turkey are not included. The Czech Republic, Estonia and Poland are included from 2002. Hungary and Luxembourg are included from 2005. Korea is included from 1999.

#### **Trends in patents by technology fields, 1995-2008**

Claimed priorities refer to patents for which protection has been requested to at least two patent offices. Patent counts are based on the earliest priority date, the inventor’s country of residence and fractional counts. Data for 2008 are estimates based on more recent patent series.

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 and codes Y02 of the European Classification (ECLA).

Patents in nanotechnologies are identified by the ECLA Code Y01.

#### **Transition to alternative-fuel vehicle (AFV) technologies, 1990-99 and 2000-07**

Claimed priorities refer to patents for which protection has been requested to at least two patent offices. Patent counts are based on the earliest priority date, the inventor’s country of residence and fractional counts.

Patents in technologies for alternative-fuel vehicles and motor vehicles are defined using combinations of International Patent Classification (IPC) codes.

#### **Convergence in the old-age support ratio across the OECD and BRIICS, historical and projected values, 1950-2050**

Younger OECD countries have the highest old-age support ratio as of 2011.

Older OECD countries have the lowest old-age support ratio as of 2011.

#### **Transition from upper secondary education to graduation at the university level, 2008**

Graduation rates for single year of age.

Upper secondary graduation rates refer to general programmes.

Graduation rates at university level refer to first degree graduation at tertiary-Type A (ISCED-5A).

#### **Gender gap in employment, 1980, 1990, 2000 and 2009**

Labour force participation rates are computed for the population aged 15-64.

#### **Earning differentials at tertiary level educational attainment, 1999 and 2009**

Belgium, Korea and Turkey report earnings net of income tax.

Slovenia reports earnings excluding data for individuals in part-time and/or part-year earnings.

Data on part-time employment refers to 2007 for Israel.



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