

Technical Notes and Sources

This section complements the data tables by providing additional information for those indicators that are not derived from the World Economic Forum's Executive Opinion Survey. The number next to the variable corresponds to the number of the data table that shows the ranks and scores for all countries/economies on this particular indicator. Indicators in Pillars 1 through 12 enter the composition of the Global Competitiveness Index 2012–2013. The data used in this *Report* represent the best available estimates at the time the *Report* was prepared. It is possible that some data will have been updated or revised after publication.

Key indicators

0.01 Gross domestic product

[Gross domestic product in billions of current US dollars | 2011](#)

Source: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

0.02 Population

[Total population in millions | 2011](#)

Sources: United Nations, Department of Economic and Social Affairs, Population Division (2011), *World Population Prospects: The 2010 Revision*, CD-ROM Edition; national sources

0.03 GDP per capita

[Gross domestic product per capita in current US dollars | 2011](#)

Source: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

0.04 GDP as a share of world GDP

[Gross domestic product based on purchasing power parity as a percentage of world GDP | 2011](#)

Sources: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

Pillar 1: Institutions

1.22 Strength of investor protection

[Strength of Investor Protection Index on a 0–10 \(best\) scale | 2011](#)

This variable is a combination of the Extent of disclosure index (transparency of transactions), the Extent of director liability index (liability for self-dealing), and the Ease of shareholder suit index (shareholders' ability to sue officers and directors for misconduct). For more details about the methodology employed and the assumptions made to compute this indicator, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*

Pillar 2: Infrastructure

2.06 Available airline seat kilometers

[Scheduled available airline seat kilometers per week originating in country \(in millions\) | 2012](#)

This variable measures the total passenger-carrying capacity of all scheduled flights, including domestic flights, originating in a country. It is computed by taking the number of seats available on each flight multiplied by the flight distance in kilometers, summing the result across all scheduled flights in a week during January (winter schedule) and July (summer schedule) 2012, and taking the average capacity of the two weeks.

Source: International Air Transport Association, SRS Analyser

2.08 Mobile telephone subscriptions

[Number of mobile telephone subscriptions per 100 population | 2011](#)

A *mobile telephone subscription* refers to a subscription to a public mobile telephone service that provides access to the public switched telephone network (PSTN) using cellular technology, including the number of pre-paid SIM cards active during the past three months. This includes both analog and digital cellular systems (IMT-2000, Third Generation, 3G) and 4G subscriptions, but excludes mobile broadband subscriptions via data cards or USB modems. Subscriptions to public mobile data services, private trunked mobile radio, telepoint or radio paging, and telemetry services are also excluded. It includes all mobile cellular subscriptions that offer voice communications.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators Database 2012* (June 2012 edition)

2.09 Fixed telephone lines

[Number of active fixed telephone lines per 100 population | 2011](#)

A *fixed telephone line* is an active line connecting the subscriber's terminal equipment to the public switched telephone network (PSTN) and that has a dedicated port in the telephone exchange equipment. Active lines are those that have registered an activity in the past three months.

Source: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators Database 2012* (June 2012 edition)

Pillar 3: Macroeconomic environment

3.01 Government budget balance

General government budget balance as a percentage of GDP | 2011

Net lending (+)/ borrowing (–) is calculated as general government revenue minus total expenditure. This is a core Government Finance Statistics (GFS) balance that measures the extent to which the general government is either putting financial resources at the disposal of other sectors in the economy and nonresidents (net lending), or utilizing the financial resources generated by other sectors and nonresidents (net borrowing). This balance may be viewed as an indicator of the financial impact of general government activity on the rest of the economy and nonresidents. Revenue consists of taxes, social contributions, grants receivable, and other revenue. Revenue increases a government's net worth, which is the difference between its assets and liabilities. General government total expenditure consists of total expenses and the net acquisition of nonfinancial assets.

Sources: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition) and Public Information Notices (various issues); national sources

3.02 Gross national savings

Gross national savings as a percentage of GDP | 2011

Aggregate national savings is defined as public- and private-sector savings as a percentage of nominal GDP. National savings equals gross domestic investment plus the current account balance.

Sources: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition) and Public Information Notices (various issues); national sources

3.03 Inflation

Annual percent change in consumer price index (year average) | 2011

Annual percent change in year average consumer price index.

Sources: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

3.04 Government debt

Gross general government debt as a percentage of GDP | 2011

Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of special drawing rights, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Thus, all liabilities in the *Government Finance Statistics Manual 2001* system are debt, except for equity and investment fund shares and financial derivatives and employee stock options.

Sources: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition) and *Public Information Notices* (various issues); national sources

3.05 Country credit rating

Expert assessment of the probability of sovereign debt default on a 0–100 (lowest probability) scale | March 2012

Institutional Investor's Country Credit ratings developed by Institutional Investor are based on information provided by senior economists and sovereign-debt analysts at leading global banks and money management and security firms. Twice a year, the respondents grade each country on a scale of 0 to 100, with 100 representing the least chance of default. For more information, visit <http://www.institutionalinvestor.com/Research/3633/Global-Rankings.html>.

Source: Institutional Investor

Pillar 4: Health and basic education

4.02 Malaria incidence

Number of malaria cases per 100,000 population | 2009

Data are estimates and are provided only for economies in which malaria is considered to be endemic. In the corresponding data table, "NE" denotes an economy where malaria is not endemic.

Source: Cibulskis, R.E., M. Aregawi, R. Williams, M. Otten, and C. Dye. 2011. "Worldwide Incidence of Malaria in 2009: Estimates, Time Trends, and a Critique of Methods." *PLoS Med* 8 (12): e1001142. doi: 10.1271/journal.pmed.1001142.

4.04 Tuberculosis incidence

Number of tuberculosis cases per 100,000 population | 2010

Incidence of tuberculosis is the estimated number of new pulmonary, smear positive, and extra-pulmonary tuberculosis cases.

Sources: The World Bank, *World Development Indicators & Global Development Finance Catalog* (April 2012 edition); national sources

4.06 HIV prevalence

HIV prevalence as a percentage of adults aged 15–49 years | 2009

HIV prevalence refers to the number of infections at a particular point in time, no matter when infection occurred.

Sources: The World Bank, *World Development Indicators & Global Development Finance Catalog* (April 2012 edition); UNAIDS, *Global Report on the Global AIDS Epidemic* (2008 edition); national sources

4.07 Infant mortality

Infant (children aged 0–12 months) mortality per 1,000 live births | 2010

Infant mortality rate is the number of infants dying before reaching one year of age per 1,000 live births in a given year.

Sources: The World Bank, *World Development Indicators & Global Development Finance Catalog* (April 2012 edition); national sources

4.08 Life expectancy

Life expectancy at birth (years) | 2010

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.

Sources: The World Bank, *World Development Indicators & Global Development Finance Catalog* (April 2012 edition); national sources

4.10 Primary education enrollment rate

Net primary education enrollment rate | 2010

The reported value corresponds to the ratio of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age. Primary education (ISCED level 1) provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.

Sources: UNESCO Institute for Statistics (accessed May 10, 2012); The World Bank, *EdStats Database* (accessed June 27, 2012); Organisation for Economic Co-operation and Development (OECD), *Education at a Glance 2011*; national sources

Pillar 5: Higher education and training

5.01 Secondary education enrollment rate

Gross secondary education enrollment rate | 2010

The reported value corresponds to the ratio of total secondary enrollment, regardless of age, to the population of the age group that officially corresponds to the secondary education level. Secondary education (ISCED levels 2 and 3) completes the provision of basic education that began at the primary level, and aims to lay the foundations for lifelong learning and human development by offering more subject- or skills-oriented instruction using more specialized teachers.

Sources: UNESCO Institute for Statistics (accessed May 10, 2012); UNICEF ChildInfo.org Country Profiles; The World Bank, *EdStats Database* (accessed June 25, 2012); national sources

5.02 Tertiary education enrollment rate

Gross tertiary education enrollment rate | 2010

The reported value corresponds to the ratio of total tertiary enrollment, regardless of age, to the population of the age group that officially corresponds to the tertiary education level. Tertiary education (ISCED levels 5 and 6), whether or not leading to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.

Sources: UNESCO Institute for Statistics (accessed May 10, 2012); national sources

Pillar 6: Goods market efficiency

6.05 Total tax rate

This variable is a combination of profit tax (% of profits), labor tax and contribution (% of profits), and other taxes (% of profits) | 2011

The total tax rate measures the amount of taxes and mandatory contributions payable by a business in the second year of operation, expressed as a share of commercial profits. The total amount of taxes is the sum of five different types of taxes and contributions payable after accounting for deductions and exemptions: profit or corporate income tax, social contributions and labor taxes paid by the employer, property taxes, turnover taxes, and other small taxes. For more details about the methodology employed and the assumptions made to compute this indicator, please visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*

6.06 Number of procedures required to start a business

Number of procedures required to start a business | 2011

For details about the methodology employed and the assumptions made to compute this indicator, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*

6.07 Time required to start a business

Number of days required to start a business | 2011

For details about the methodology employed and the assumptions made to compute this indicator, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*

6.10 Trade tariffs

Trade-weighted average tariff rate | 2011

This indicator is calculated as a weighted average of all the applied tariff rates, including preferential rates that a country applies to the rest of the world. The weights are the trade patterns of the importing country's reference group (2010 data). An *applied tariff* is a customs duty that is levied on imports of merchandise goods.

Source: International Trade Centre

6.14 Imports as a percentage of GDP

Imports of goods and services as a percentage of gross domestic product | 2011

Total imports is the sum of total imports of merchandise and commercial services.

Sources: World Trade Organization, Statistical Database: Time Series on merchandise and commercial services (accessed June 4, 2012); International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

Pillar 7: Labor market efficiency

7.04 Redundancy costs

Redundancy costs in weeks of salary | 2011

This variable estimates the cost of advance notice requirements, severance payments, and penalties due when terminating a redundant worker, expressed in weekly wages. For more details about the methodology employed and the assumptions made to compute this indicator, visit <http://www.doingbusiness.org/methodologysurveys/>.

Sources: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*; authors' calculations

7.08 Female participation in labor force

Ratio of women to men in the labor force* | 2010

This measure is the percentage of women aged 15–64 participating in the labor force divided by the percentage of men aged 15–64 participating in the labor force.

Sources: International Labour Organization, *Key Indicators of the Labor Markets Net* (accessed June 5, 2012); national sources

Pillar 8: Financial market development

8.08 Legal rights index

Degree of legal protection of borrowers and lenders' rights on a 0–10 (best) scale | 2011

This index measures the degree to which collateral and bankruptcy laws protect borrowers' and lenders' rights and thus facilitate lending. For more details about the methodology employed and the assumptions made to compute this indicator, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2012: Doing Business in a More Transparent World*

Pillar 9: Technological readiness

9.04 Internet users

Percentage of individuals using the Internet | 2011

Internet users refers to people using the Internet from any device (including mobile phones) in the last 12 months. Data are based on surveys generally carried out by national statistical offices or estimated based on the number of Internet subscriptions.

Source: International Telecommunication Union, *World Telecommunication/ICT Indicators 2012* (June 2012 edition)

9.05 Fixed broadband Internet subscriptions

Fixed broadband Internet subscriptions per 100 population | 2011

This refers to total fixed (wired) broadband Internet subscriptions (that is, subscriptions to high-speed access to the public Internet—a TCP/IP connection—at downstream speeds equal to or greater than 256 kb/s).

Source: International Telecommunication Union, *World Telecommunication/ICT Indicators 2012* (June 2012 edition)

9.06 Internet bandwidth

International Internet bandwidth (kb/s) per Internet user | 2011

International Internet bandwidth is the sum of capacity of all Internet exchanges offering international bandwidth measured in kilobits per second (kb/s).

Source: International Telecommunication Union, *World Telecommunication/ICT Indicators 2012* (June 2012 edition)

9.07 Mobile broadband subscriptions

Mobile broadband subscriptions per 100 population | 2011

Mobile broadband subscriptions refers to active SIM cards or, on CDMA networks, connections accessing the Internet at consistent broadband speeds of over 512 kb/s, including cellular technologies such as HSPA, EV-DO, and above. This includes connections being used in any type of device able to access mobile broadband networks, including smartphones, USB modems, mobile hotspots, and other mobile-broadband connected devices.

Sources: International Telecommunication Union, *ITU World Telecommunication/ICT Indicators Database 2012* (June 2012 edition); Informa Telecoms & Media; national sources

Pillar 10: Market size

10.01 Domestic market size index

Sum of gross domestic product plus value of imports of goods and services, minus value of exports of goods and services, normalized on a 1–7 (best) scale | 2011

The size of the domestic market is calculated as the natural log of the sum of the gross domestic product valued at PPP plus the total value (PPP estimates) of imports of goods and services, minus the total value (PPP estimates) of exports of goods and services. Data are then normalized on a 1–7 scale. PPP estimates of imports and exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP.

Source: Authors' calculation. For more details refer to the appendix in Chapter 1.1 of this *Report*.

10.02 Foreign market size index

Value of exports of goods and services, normalized on a 1–7 (best) scale | 2011

The size of the foreign market is estimated as the natural log of the total value (PPP estimates) of exports of goods and services, normalized on a 1–7 scale. PPP estimates of exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP.

Source: Authors' calculation. For more details refer to Appendix A in Chapter 1.1 of this *Report*.

10.03 GDP (PPP)

Gross domestic product valued at purchasing power parity in billions of international dollars | 2011

Source: International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

10.04 Exports as a percentage of GDP

Exports of goods and services as a percentage of gross domestic product | 2011

Total exports is the sum of total exports of merchandise and commercial services.

Sources: World Trade Organization, Online statistics database (accessed June 4, 2012); International Monetary Fund, *World Economic Outlook Database* (April 2012 edition); national sources

Pillar 12: Innovation

12.07 PCT patent applications

Number of applications filed under the Patent Cooperation Treaty (PCT) per million population | 2008-2009

This measures the total count of applications filed under the Patent Cooperation Treaty (PCT), by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors. The average count of applications filed in 2008 and 2009 is divided by population figures for 2009.

Sources: Organisation for Economic Co-operation and Development (OECD), *Patent Database*, June 2012; United Nations, Department of Economic and Social Affairs, Population Division, 2011, *World Population Prospects: The 2010 Revision*, CD-ROM Edition; authors' calculations