This section complements the Data Tables by providing additional information for all indicators used in the computation of the Networked Readiness Index 2015. In the case of indicators derived from the Executive Opinion Survey (the Survey), the full question and associated answers are provided. For more details on Survey indicators, refer to Chapter 1.3 of The Global Competitiveness Report 2014–2015.

For indicators sourced from other organizations, because of space limitations it is not possible to reproduce in this Report all the additional information associated with specific data points. Readers and users are urged to refer to the original source for any additional information and exceptions for certain economies or data points.

Although the World Economic Forum takes every reasonable step to ensure the quality and accuracy of the data used in the computation of the Networked Readiness Index, it makes no warranties with respect to their quality and accuracy. The World Economic Forum shall not be held responsible or liable for any outcome resulting from the use of these data. In particular, it shall not be responsible for any interpretation, decisions, or actions based on these data.

Furthermore, the data used in the computation of the Networked Readiness Index 2015 represent the most recent or/and best data available at the time when they were collected. It is possible that data were updated or revised subsequently.

For the detailed terms of use and disclaimer, refer to page ii at the beginning of the Report.

1st pillar: Political and regulatory environment

1.01 Effectiveness of law-making bodies

How effective is your national parliament/congress as a law-making institution? [1 = not effective at all—among the worst in the world; 7 = extremely effective—among the best in the world] | 2013–14 weighted average


1.02 Laws relating to ICTs

How developed are your country’s laws related to the use of ICTs (e.g., electronic commerce, digital signatures, consumer protection)? [1 = not developed at all; 7 = extremely well developed] | 2013–14 weighted average


1.03 Judicial independence

In your country, to what extent is the judiciary independent from influences of members of government, citizens, or firms? [1 = heavily influenced; 7 = entirely independent] | 2013–14 weighted average


1.04 Efficiency of legal framework in settling disputes

In your country, how efficient is the legal framework for private businesses in settling disputes? [1 = extremely inefficient; 7 = extremely efficient] | 2013–14 weighted average


1.05 Efficiency of legal framework in challenging regulations

In your country, how easy is it for private businesses to challenge government actions and/or regulations through the legal system? [1 = extremely difficult; 7 = extremely easy] | 2013–14 weighted average


1.06 Intellectual property protection

In your country, how strong is the protection of intellectual property, including anti-counterfeiting measures? [1 = extremely weak; 7 = extremely strong] | 2013–14 weighted average


1.07 Software piracy rate

Unlicensed software units as a percentage of total software units installed | 2013

This measure covers piracy of all packaged software that runs on personal computers (PCs), including desktops, laptops, and ultra-portables, including netbooks. This includes operating systems; systems software such as databases and security packages; business applications; and consumer applications such as games, personal finance, and reference software. The study does not include software that runs on servers or mainframes, or software loaded onto tablets or smartphones.

For more information about the methodology, refer to the study available at http://globalstudy.bsa.org/2013/index.html.

Source: The Software Alliance (BSA), The Compliance Gap: BSA Global Software Survey (June 2014)
2.03 Total tax rate

Sum of profit tax, labor tax and social contributions, property taxes, turnover taxes, and other taxes, as a share (%) of commercial profits | 2013

The total tax rate measures the amount of taxes and mandatory contributions borne by the business in the second year of operation, expressed as a share of commercial profit. Doing Business 2015 reports the total tax rate for calendar year 2013. The total amount of taxes borne is the sum of all the different taxes and contributions payable after accounting for allowable deductions and exemptions. The taxes withheld (such as personal income tax) or collected by the company and remitted to the tax authorities (such as value-added tax, sales tax, or goods and service tax) but not borne by the company are excluded. The taxes included can be divided into five categories: profit or corporate income taxes; social contributions and labor taxes paid by the employer (in respect of which all mandatory contributions are included, even if paid to a private entity such as a required pension fund); property taxes; turnover taxes; and other taxes (such as municipal fees and vehicle taxes).

For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodology/paying-taxes.


2.04 Time required to start a business

Number of days required to start a business | 2014

Time is recorded in calendar days. The measure captures the median duration that incorporation lawyers indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no extra payments.

For more details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodology/starting-a-business.


2.05 Number of procedures required to start a business

Number of procedures required to start a business | 2014

A procedure is defined as any interaction of the company founders with external parties (e.g., government agencies, lawyers, auditors, or notaries).

For details about the methodology employed and the assumptions made to compute this indicator, visit http://www.doingbusiness.org/methodology/starting-a-business.


2.06 Intensity of local competition

In your country, how intense is competition in the local markets? [1 = not intense at all; 7 = extremely intense] | 2013–14 weighted average

In your country, how easy is it for entrepreneurs with innovative but risky projects to find venture capital? [1 = extremely difficult; 7 = extremely easy] | 2013–14 weighted average


2.07 Tertiary education enrollment rate

Gross tertiary education enrollment rate, gross % | 2012 or most recent

Tertiary enrollment rate is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the tertiary education level. Tertiary education, whether or not leading to an advanced research qualification, normally requires, as a minimum condition of admission for allowance of the successful completion of education at the secondary level.

2.08 Quality of management schools
In your country, how would you assess the quality of business schools? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2013–14 weighted average

2.09 Government procurement of advanced technology products
In your country, to what extent do government purchasing decisions foster innovation? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average

3rd pillar: Infrastructure

3.01 Electricity production
Electricity production (kWh per capita) | 2011 or most recent
Electricity production is measured at the terminals of all alternator sets in a station. In addition to hydropower, coal, oil, gas, and nuclear power generation, it covers generation by geothermal, solar, wind, and tide and wave energy as well as that from combustible renewables and waste. Production includes the output of electricity plants designed to produce electricity only, as well as that of combined heat and power plants. Total electricity production is then divided by total population. Population figures are from the World Bank’s World Development Indicators Online (retrieved November 26, 2014).
Sources: The World Bank, World Development Indicators (retrieved November 26, 2014); US Central Intelligence Agency (CIA), The World Factbook (retrieved January 8, 2015)

3.02 Mobile network coverage rate
Percentage of total population covered by a mobile network signal | 2013 or most recent
This indicator measures the percentage of inhabitants who are within range of a mobile cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants within range of a mobile cellular signal by the total population. Note that this is not the same as the mobile subscription density or penetration.

3.03 International Internet bandwidth
International Internet bandwidth (kb/s) per Internet user | 2013 or most recent
International Internet bandwidth is the sum of the capacity of all Internet exchanges offering international bandwidth measured in kilobits per second (kb/s).

3.04 Secure Internet servers
Secure Internet servers per million population | 2013
Secure Internet servers are servers using encryption technology in Internet transactions.
Source: The World Bank, World Development Indicators (retrieved November 26, 2014)

4th pillar: Affordability

4.01 Prepaid mobile cellular tariffs
Average per-minute cost of different types of mobile cellular calls (PPP $) | 2013 or most recent
This measure is constructed by first taking the average per-minute cost of a local call to another mobile cellular phone on the same network (on-net) and on another network (off-net). This amount is then averaged with the per-minute cost of a local call to a fixed telephone line. All the tariffs are for calls placed during peak hours and based on a basic, representative mobile cellular pre-paid subscription service.

In order to account for differences in costs of living, we convert the dollar amounts into international dollars by applying the purchasing power parity (PPP) conversion factor sourced from the World Bank’s World Development Indicators (retrieved January 2, 2015).

There are limitations associated with using PPP estimates. First, finding comparable baskets of goods with which to compare purchasing power across countries is an arduous task because there are inherent differences across countries in the quality of goods and consumption patterns. Second, price levels in one particular sector or industry, or for a particular product (or service), do not always reflect the general level of prices; this is a result of specific market conditions (competition, maturity, offering, and so on). Tariff rates expressed in PPP terms must therefore be interpreted with caution.

Sources: Authors’ calculations based on International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators Database 2014 (December 2014 edition); World Bank, World Development Indicators (retrieved January 2, 2015); national sources

4.02 Fixed broadband Internet tariffs
Monthly subscription charge for fixed (wired) broadband Internet service (PPP $) | 2013 or most recent
Fixed (wired) broadband is considered any dedicated connection to the Internet at downstream speeds equal to, or greater than, 256 kilobits per second. In order to account for differences in costs of living, we convert the dollar amounts into international dollars by applying the purchasing power parity (PPP) conversion factor sourced from the World Bank’s World Development Indicators (retrieved January 2, 2015).

There are limitations associated with using PPP estimates. First, finding comparable baskets of goods with which to compare purchasing power across countries is an arduous task because there are inherent differences across countries in the quality of goods and consumption patterns. Second, price levels in one particular sector or industry, or for a particular product (or service), do not always reflect the general level of prices; this is a result of specific market conditions (competition, maturity, offering, and so on). Tariff rates expressed in PPP terms must therefore be interpreted with caution.

Sources: Authors’ calculations based on International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators Database 2014 (December 2014 edition); World Bank, World Development Indicators (retrieved January 2, 2015); national sources
2.3: Technical Notes and Sources

4.03 Internet and telephony sectors competition index
Level of competition index for Internet services, international long distance services, and mobile telephone services on a 0-to-2 (best) scale | 2013 or most recent
This variable measures the degree of liberalization in 17 categories of ICT services, including 3G/4G telephony, international long distance calls, and international gateways. For each economy, the level of competition in each of the categories is assessed as follows: monopoly, partial competition, and full competition. The results reflect the situation as of 2013 for the majority of countries (for others, data are available as of 2012 or earlier years). The index is calculated as the average of points obtained in each of the 17 categories for which data are available. Full liberalization across all categories yields a score of 2, the best possible score.

5th pillar: Skills

5.01 Quality of the educational system
How well does the educational system in your country meet the needs of a competitive economy? [1 = not well at all; 7 = extremely well] | 2013-14 weighted average

5.02 Quality of math and science education
In your country, how would you assess the quality of math and science education in schools? [1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world] | 2013-14 weighted average

5.03 Secondary enrollment rate
Secondary education gross enrollment rate (%) | 2012 or most recent
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.

5.04 Adult literacy rate
Adult literacy rate (%) | 2015 or most recent
Adult literacy is defined as the percentage of the population aged 15 years and over who can both read and write with understanding a short, simple statement on his/her everyday life. For OECD member countries, when data are missing, we apply a value of 99 percent for the purposes of calculating the NRI. This is in line with the approach adopted by the United Nations Development Programme (UNDP) in calculating the 2009 edition of the Human Development Index. We also assume a rate of 99 percent for Hong Kong SAR. In the corresponding table, those countries are identified by an asterisk.
Sources: United Nations Education, Science and Culture Organization (UNESCO), UNESCO Institute for Statistics Data Centre (retrieved November 26, 2014); national sources

6th pillar: Individual usage

6.01 Mobile telephone subscriptions
Mobile telephone subscriptions (post-paid and pre-paid) per 100 population | 2013
A mobile telephone subscription refers to a subscription to a public mobile telephone service that provides access to the Public Switched Telephone Network using cellular technology, including prepaid SIM cards active during the past three months. This includes both analog and digital cellular systems (MT-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, teleport or radio paging, and telemetry services are also excluded. It includes all mobile cellular subscriptions that offer voice communications.

6.02 Internet users
Percentage of individuals using the Internet | 2013
This refers to the proportion of individuals who used the Internet 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.

6.03 Households with a personal computer
Percentage of households equipped with a personal computer | 2013 or most recent
The proportion of households with a computer is calculated by dividing the number of households with a computer by the total number of households. A computer refers to a desktop or a laptop computer. It does not include equipment with some embedded computing abilities such as mobile cellular phones, personal digital assistants (PDAs) or TV sets.

6.04 Households with Internet access
Percentage of households with Internet access at home | 2013 or most recent
The share of households with Internet access at home is calculated by dividing the number of in-scope households (where at least one household member is aged 15–74) with Internet access by the total number of in-scope households.

6.05 Fixed broadband Internet subscriptions
Fixed broadband Internet subscriptions per 100 population | 2013 or most recent
This refers to total fixed (wired) broadband Internet subscriptions to high-speed access to the public Internet—a TCP/IP connection—at downstream speeds equal to, or greater than, 256 kib/s. This includes cable modem, DSL, fiber-to-the-home/building, and other fixed (wired)-broadband subscriptions. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks and wireless-broadband technologies.
6.06 Mobile broadband Internet subscriptions
Mobile broadband Internet subscriptions per 100 population | 2013 or most recent
Mobile-broadband subscriptions refers to the sum of standard mobile-broadband and dedicated mobile-broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets.


6.07 Use of virtual social networks
In your country, how widely used are virtual social networks (e.g., Facebook, Twitter, LinkedIn)? [1 = not used at all; 7 = widely used] | 2013–14 weighted average


7th pillar: Business usage

7.01 Firm-level technology absorption
In your country, to what extent do businesses adopt new technology? [1 = not at all; 7 = adopt extensively] | 2013–14 weighted average


7.02 Capacity for innovation
In your country, to what extent do companies have the capacity to innovate? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average


7.03 PCT patents applications
Number of applications filed under the Patent Cooperation Treaty (PCT) per million population | 2011–2012 average
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.

For more information, consult http://www.oecd.org/sti/innovation/ oecdpatentdatabases.htm. The average count of applications filed in 2011 and 2012 is divided by population, using figures from the World Bank’s World Development Indicators (retrieved November 26, 2014).

Sources: Organisation for Economic Co-operation and Development (OECD), Patent Database, January 2015; World Bank, World Development Indicators (retrieved November 26, 2014)

7.04 Business-to-business Internet use
In your country, to what extent do businesses use ICTs for transactions with other businesses? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average


7.05 Business-to-consumer Internet use
In your country, to what extent do businesses use the Internet for selling their goods and services to consumers? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average


7.06 Extent of staff training
In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average


8th pillar: Government usage

8.01 Importance of ICTs to government vision of the future
To what extent does the government have a clear implementation plan for utilizing ICTs to improve your country’s overall competitiveness? [1 = no plan; 7 = clear plan] | 2013–14 weighted average


8.02 Government Online Service Index
The Government Online Service Index assesses the quality of government’s delivery of online services on a 0-to-1 (best) scale | 2013

According to the United Nations’ Public Administration Network, the Government Online Service Index captures a government’s performance in delivering online services to the citizens. There are four stages of service delivery: Emerging, Enhanced, Transactional, and Connected. Online services are assigned to each stage according to their degree of sophistication, from the more basic to the more sophisticated. In each country, the performance of the government in each of the four stages is measured as the number of services provided as a percentage of the maximum services in the corresponding stage. Examples of services include online presence, deployment of multimedia content, governments’ solicitation of citizen input, widespread data sharing, and use of social networking.

For more information about the methodology, consult http://unpan3.un.org/egovkb/.

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Development Database (retrieved November 27, 2014)

8.03 Government success in ICT promotion
In your country, how successful is the government in promoting the use of information and communication technologies (ICTs)? [1 = not successful at all; 7 = extremely successful] | 2013–14 weighted average


9th pillar: Economic impacts

9.01 Impact of ICTs on new services and products
In your country, to what extent do ICTs enable new business models? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average

9.02 PCT ICT patent applications

Number of applications for information and communication technology–related patents filed under the Patent Cooperation Treaty (PCT) per million population | 2011–2012 average

This measures the count of applications filed under the Patent Cooperation Treaty (PCT) in the technology domain of information and communication technologies by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors.

For more information, consult http://www.oecd.org/sti/inno/oecdpatentdatabases.htm. The average count of applications filed in 2011 and 2012 is divided by population, using figures from the World Bank’s World Development Indicators (retrieved November 26, 2014).

Sources: Organisation for Economic Co-operation and Development (OECD), Patent Database, January 2015; World Bank, World Development Indicators (retrieved November 26, 2014)

9.03 Impact of ICTs on new organizational models

In your country, to what extent do ICTs enable new organizational models (e.g., virtual teams, remote working, telecommuting) within businesses? [1 = not at all; 7 = to a great extent] | 2013–14 weighted average


9.04 Share of workforce employed in knowledge-intensive activities (%)

Share of workforce employed in knowledge-intensive activities (%) | 2013 or most recent

Knowledge-intensive jobs correspond to the International Labour Organization (ILO) aggregate category “Managers, professionals, and technicians,” as provided in the ILOSTAT Database. For a few countries, when aggregate data were not available, authors have manually calculated the share of knowledge-intensive jobs (as a percentage of total employment) summing the following ISCO-88 categories: (1) Legislators, senior officials and managers; (2) Professionals; and (3) Technicians and associate professionals.


10.04 E-Participation Index

The E-Participation Index assesses, on a 0-to-1 (best) scale, the quality, relevance, and usefulness of government websites in providing online information and participatory tools and services to their citizens | 2013

According to the United Nations, the E-Participation Index assesses the quality and usefulness of information and services provided by a country for the purpose of engaging its citizens in public policymaking through the use of e-government programs. Within the E-Participation Index, countries are benchmarked in three areas: e-information, e-consultation, and e-decision-making. As such, the index indicates both the capacity and the willingness of the state in encouraging the citizen in promoting deliberative, participatory decision-making in public policy and of the reach of its own socially inclusive governance program.

For more information about the methodology, consult http://unpan3.un.org/egovkb/.

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Development Database (retrieved November 27, 2014)