

# Technical Notes and Sources

This section complements the data tables by providing full descriptions and sources of all the indicators used for the calculation of the Travel & Tourism Competitiveness Index 2013 (TTCI).

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.

The data used in this *Report* include the data derived from the Executive Opinion Survey as well as “hard” data from external sources. The latter represent the best available estimates from various national authorities, international agencies, and private sources at the time the *Report* was prepared. It is possible that some data will have been revised or updated by national sources after publication.

Throughout the statistical tables in this publication, “n/a” denotes that the value is not available, or that available data are unreasonably outdated or do not come from a reliable source.

## PILLAR 1: POLICY RULES AND REGULATIONS

### 1.01 Prevalence of foreign ownership

How prevalent is foreign ownership of companies in your country? [1 = very rare; 7 = highly prevalent] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 1.02 Property rights

How would you rate the protection of property rights, including financial assets, in your country? [1 = very weak; 7 = very strong] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 1.03 Business impact of rules on FDI

To what extent do rules governing foreign direct investment (FDI) encourage or discourage it? [1 = strongly discourage FDI; 7 = strongly encourage FDI] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 1.04 Visa requirements

Number of countries whose citizens are exempt from obtaining a visa [= 1], able to obtain one upon arrival [= 0.70], or obtain an electronic visa [= 0.50] out of all UN countries | 2012

This variable is based on visitor visa requirements of all UN countries. The score refers to the percentage of UN countries whose citizens require a visa to enter the country. In compiling the data, each country that requires no visa at all receives a “1,” each country for which it is possible to obtain a visa upon arrival receives a “0.70,” and each country for which it is possible to obtain an electronic visa (e-visa) receives a “0.50.” Those countries for which a visa is required prior to departure would receive a “0.” We first count the number of countries falling in each category, and then we multiply each of these three figures by the relative weight. Finally, the sum across these weighted scores produces the final score shown in the table.

Source: World Tourism Organization

### 1.05 Openness of bilateral Air Service Agreements

Index measuring the average openness of Air Service Agreements [0 = most restricted; 38 = most liberal] | 2011

This index measures the weighted average openness of all bilateral Air Service Agreements (ASAs) concluded by International Civil Aviation Organization (ICAO) signatories as registered in ICAO's *World's Air Services Agreements* (WASA) database (2010 update). The weights are the bilateral scheduled passenger traffic taking place under each ASA. Regulatory data come from ICAO's WASA database and traffic data were obtained from IATA.

Sources: World Trade Organization, based on ICAO and IATA data

### 1.06 Transparency of government policymaking

How easy is it for businesses in your country to obtain information about changes in government policies and regulations affecting their activities? [1 = impossible; 7 = extremely easy] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 1.07 Time required to start a business

Number of days required to start a business | 2012

This variable measures the median duration that incorporation lawyers indicate is necessary to complete a procedure with minimum follow-up with government agencies and no extra payments. For further details, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2013*

### 1.08 Cost to start a business

Cost to start a business as a percentage of the economy's income (GNI) per capita | 2012

This variable measures all official fees and fees for legal or professional services if such services are required by law. For further details, visit <http://www.doingbusiness.org/methodologysurveys/>.

Source: World Bank/International Finance Corporation, *Doing Business 2013*

### 1.09 GATS commitments restrictiveness index (Tourism)

[Index \[0 = most restricted; 100 = most liberal\] | 2006–2009](#)

This index measures the extent of GATS commitments for tourism services as classified by the GATS and in the four modes of the GATS. Each entry in the country's schedule is assigned scores based on its relative restrictiveness, using a criterion set out by Bernard Hoekman's methodology. The results range from 0 (unbound or no commitments) to 100 (completely liberalized), with an intermediate value of 50 for partial commitments. A simple average of the subsectoral scores were used to generate aggregate sectoral scores (for the 12 main services sectors as classified by the GATS), the four modes scores, and market access and national treatment scores.

Source: The World Bank Institute

## PILLAR 2: ENVIRONMENTAL SUSTAINABILITY

### 2.01 Stringency of environmental regulation

[How would you assess the stringency of your country's environmental regulations? \[1 = very lax; 7 = among the world's most stringent\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 2.02 Enforcement of environmental regulation

[How would you assess the enforcement of environmental regulations in your country? \[1 = very lax; 7 = among the world's most rigorous\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 2.03 Sustainability of T&T industry development

[How would you assess the effectiveness of your government's efforts to ensure that the T&T sector is being developed in a sustainable way? \[1 = very ineffective—development of the sector does not take into account issues related to environmental protection and sustainable development; 7 = very effective—issues related to environmental protection and sustainable development are at the core of the government's strategy\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 2.04 Carbon dioxide emissions

[Emissions, metric tons per capita | 2008](#)

According to the World Bank, *carbon dioxide emissions* are those emanating from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during the consumption of solid, liquid, and gas fuels and gas flaring. In the World Development Indicators, this indicator is labeled "CO<sub>2</sub> emissions (metric tons per capita)."

Source: The World Bank, *World Development Indicators* (September 2012 edition)

### 2.05 Particulate matter concentration (PM<sub>10</sub>)

[Urban population-weighted PM<sub>10</sub> micrograms per cubic meter | 2009](#)

*Particulate matter concentrations* refers to fine, suspended particulates less than 10 microns in diameter (PM<sub>10</sub>) that are capable of penetrating deep into the respiratory tract and causing significant health damage. Data for countries and aggregates for regions and income groups are urban population-weighted PM<sub>10</sub> levels in residential areas of cities with more than 100,000 residents. The estimates represent the average annual exposure level of the average urban resident to outdoor particulate matter. The state of a country's technology and pollution control is an important determinant of particulate matter concentrations.

Source: The World Bank, *World Development Indicators* (September 2012 edition)

### 2.06 Threatened species

[Threatened species as a percentage of total species \(mammals, birds, amphibians\) | 2012](#)

This variable measures the total number of Critically Endangered, Endangered, and Vulnerable species as a percentage of total known species for mammals, birds, and amphibians.

Source: The International Union for Conservation of Nature (IUCN), Red List of Threatened Species 2012

### 2.07 Environmental treaty ratification

[Total number of ratified environmental treaties | 2012](#)

This variable measures the total number of international treaties from a set of 25 for which a state is a participant. A state is acknowledged as a "participant" whenever its status for each treaty appears as "Ratified," "Accession," or "In Force." The treaties included are: the International Convention for the Regulation of Whaling, 1948 Washington; the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended in 1962 and 1969; 1954 London; the Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 Ramsar; the Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 Paris; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 London, Mexico City, Moscow, Washington; the Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 Washington; the International Convention for the Prevention of Pollution from Ships (MARPOL) as modified by the Protocol of 1978, 1978 London; the Convention on the Conservation of Migratory Species of Wild Animals, 1979 Bonn; the United Nations Convention on the Law of the Sea, 1982 Montego Bay; the Convention on the Protection of the Ozone Layer, 1985 Vienna; the Protocol on Substances that Deplete the Ozone Layer, 1987 Montreal; the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 Basel; the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 London; the United Nations Framework Convention on Climate Change, 1992 New York; the Convention on Biological Diversity, 1992 Rio de Janeiro; the International Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly Africa, 1994 Paris; the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, 1994 New York; the Agreement relating to the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 New York; the Kyoto Protocol to the United Nations Framework Convention on the Climate Change, Kyoto 1997; the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998 Rotterdam; the Cartagena Protocol of Biosafety to the Convention on Biological Diversity, 2000 Montreal; the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000 London; the Stockholm Convention on Persistent Organic Pollutants, 2001 Stockholm; the International Treaty on Plant Genetic Resources for Food and Agriculture, 2001 Rome; the International Tropical Timber Agreement, 2006 Geneva.

Source: The International Union for Conservation of Nature (IUCN), Environmental Law Centre *ELIS Treaty Database*

## PILLAR 3: SAFETY AND SECURITY

### 3.01 Business costs of crime and violence

[To what extent does the incidence of crime and violence impose costs on businesses in your country? \[1 = to a great extent; 7 = not at all\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 3.02 Reliability of police services

To what extent can police services be relied upon to enforce law and order in your country? [1 = cannot be relied upon at all; 7 = can be completely relied upon] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 3.03 Road traffic accidents

Estimated deaths due to road traffic accidents per 100,000 population | 2007

This indicator is estimated using fatal road traffic injury data.

Source: World Health Organization, *World Health Statistics 2012*

### 3.04 Business costs of terrorism

To what extent does the threat of terrorism impose costs on businesses in your country? [1 = to a great extent; 7 = not at all] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

## PILLAR 4: HEALTH AND HYGIENE

### 4.01 Physician density

Physician density per 1,000 population | 2009

This variable measures the number of physicians in the country per 1,000 population. The World Bank defines *physicians* as graduates of any faculty of medicine who are working in the country in any medical field (practice, teaching, research).

Source: World Health Organization, *World Health Statistics 2012*

### 4.02 Access to improved sanitation

Access to adequate sanitation as a percentage of total population | 2010

This variable refers to the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.

Source: World Health Organization, *World Health Statistics 2012*

### 4.03 Access to improved drinking water

Access to safe drinking water as a percentage of total population | 2010

This indicator refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, or rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. *Reasonable access* is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling.

Source: World Health Organization, *World Health Statistics 2012*

### 4.04 Hospital beds

Hospital beds per 10,000 population | 2009

*Hospital beds* includes inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In most cases, beds for both acute and chronic care are included.

Source: The World Bank, *World Development Indicators* (September 2012 edition)

## PILLAR 5: PRIORITIZATION OF TRAVEL & TOURISM

### 5.01 Government prioritization of the T&T industry

How much of a priority is the development of the T&T industry for the government of your country? [1 = not a priority at all; 7 = a top priority] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 5.02 T&T government expenditure

T&T government expenditure as a percentage of total government budget | 2011

This measure includes expenditures (transfers or subsidies) made by government agencies to provide T&T services such as cultural (e.g., art museums), recreational (e.g., national parks), clearance (e.g., immigration/customs), and so on to visitors.

Source: World Travel & Tourism Council, Tourism Satellite Accounting Research 2012

### 5.03 Effectiveness of marketing and branding to attract tourists

How would you assess the effectiveness of your country's marketing and branding campaigns to attract tourists? [1 = very ineffective; 7 = very effective] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 5.04 Comprehensiveness of annual T&T data

Number of data available [0 = no data; 120 = all selected indicators are available] | 2012

This indicator shows how many of the yearly data provided by national administrations, on 30 different concepts from the UNWTO Compendium of Tourism Statistics, are available. It covers the 2007 through 2010 period. The scores range from a minimum of 0 to a maximum of 120, where 120 can be obtained by a country providing data for all the 30 concepts in all of the four years taken into consideration.

Source: World Tourism Organization

### 5.05 Timeliness of providing monthly/quarterly T&T data

Number of latest data available [0 = no data; 18 = data reported for all the periods considered] | 2012

This variable shows the availability of two key T&T indicators (international tourist arrivals and tourism receipts) on a monthly or quarterly basis, covering the period from October 2011 to September 2012. The UNWTO has calculated the score of each country based on the data included in the October 2012 issue of the UNWTO World Tourism Barometer by adding the number of months for which data on the international tourist arrivals are available to the number of months for which data on international tourism receipts are available. Half weight has been applied to the lower of the two scores, so the scores range from a minimum of 0 to a maximum of 18 (the maximum number of period counts a country can get is 12 for one measure and 6 for the other).

Source: World Tourism Organization

## PILLAR 6: AIR TRANSPORT INFRASTRUCTURE

### 6.01 Quality of air transport infrastructure

How would you assess air transport infrastructure in your country? [1 = extremely underdeveloped; 7 = extensive and efficient by international standards] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 6.02 Available seat kilometers, domestic

[Scheduled available domestic seat kilometers per week originating in country \(in millions\) | 2011](#)

This variable measures an airline's passenger-carrying capacity; it is composed of the number of seats available on each domestic flight multiplied by the flight distance in kilometers. The resulting variable is an average of the total for all scheduled flights in a week during January 2011 (winter schedule) and July 2011 (summer schedule).

Source: International Air Transport Association, SRS Analyser

### 6.03 Available seat kilometers, international

[Scheduled available international seat kilometers per week originating in country \(in millions\) | 2011](#)

This variable measures an airline's passenger-carrying capacity; it is composed of the number of seats available on each international flight multiplied by the flight distance in kilometers. The resulting variable is an average of the total for all scheduled flights in a week during January 2011 (winter schedule) and July 2011 (summer schedule).

Source: International Air Transport Association, SRS Analyser

### 6.04 Departures per 1,000 population

[Number of departures per 1,000 population | 2010](#)

*Aircraft departures* are the number of domestic and international take-offs of air carriers registered in the country.

Source: Booz & Company, based on World Bank data

### 6.05 Airport density

[Number of airports with at least one scheduled flight per million population | 2011](#)

Source: International Air Transport Association, SRS Analyser

### 6.06 Number of operating airlines

[Number of airlines with scheduled flights originating in country | January 2011 – July 2011 average](#)

Number of airlines with scheduled flights originating in country.

Source: International Air Transport Association, SRS Analyser

### 6.07 International air transport network

[To what extent does the air transport network in your country provide connections to the overseas markets offering the greatest potential to your country's businesses? \[1 = not at all; 7 = extremely well\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

## PILLAR 7: GROUND TRANSPORT INFRASTRUCTURE

### 7.01 Quality of roads

[How would you assess roads in your country? \[1 = extremely underdeveloped; 7 = extensive and efficient by international standards\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 7.02 Quality of railroad infrastructure

[How would you assess the railroad system in your country? \[1 = extremely underdeveloped; 7 = extensive and efficient by international standards\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 7.03 Quality of port infrastructure

[How would you assess port facilities in your country? \\* For landlocked countries, how accessible are port facilities? \[1 = extremely underdeveloped; 7 = well developed and efficient by international standards\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 7.04 Quality of ground transport network

[To what extent does your national ground transport network \(buses, trains, trucks, taxis, etc.\) offer efficient transportation within your country? \[1 = not at all; 7 = extremely well\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 7.05 Road density

[Kilometers of road per 100 square kilometers of land | 2009](#)

Source: The World Bank, *World Development Indicators* (September 2012 edition)

## PILLAR 8: TOURISM INFRASTRUCTURE

### 8.01 Hotel rooms

[Number of hotel rooms per 100 population | 2011](#)

Source: World Tourism Organization

### 8.02 Presence of major car rental companies

[Index of presence of major car rental companies \[1 = no company is present; 7 = all the 7 considered companies are present\] | 2012](#)

This indicator measures the presence of seven major car rental companies: Avis, Budget, Europcar, Hertz, National Car Rental, Sixt, and Thrifty. For each country we count how many of these companies operate via an online research.

Sources: Individual rental car websites, online research

### 8.03 ATMs accepting Visa cards

[Number of automated teller machines \(ATMs\) accepting Visa credit cards per million population | 2012](#)

Source: Visa

## PILLAR 9: ICT INFRASTRUCTURE

### 9.01 ICT use for business-to-business transactions

[To what extent do businesses in your country use ICTs for communicating and carrying out transactions with other businesses? \[1 = not at all; 7 = extensively\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 9.02 Internet use for business-to-consumer transactions

[To what extent do businesses in your country use the Internet for selling their goods and services to consumers? \[1 = not at all; 7 = extensively\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

### 9.03 Individual using internet

[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 Indicators 2012*, December update

#### 9.04 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, *World Telecommunication Indicators 2012*, December update

#### 9.05 Broadband Internet subscribers

[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 Indicators 2012*, December update

#### 9.06 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, *World Telecommunication Indicators 2012*, December update

#### 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.

Source: International Telecommunication Union, *World Telecommunication Indicators 2012*, December update

## PILLAR 10: PRICE COMPETITIVENESS IN THE T&T INDUSTRY

#### 10.01 Ticket taxes and airport charges

[Index of relative cost of access \(ticket taxes and airport charges\) to international air transport services | \[0 = highest cost; 100 = lowest cost\] | 2012](#)

This index measures the relative cost of access to international air transport services based on the level of airport charges, passenger ticket taxes, and value-added taxation. It reflects the costs associated with a narrow-body and a wide-body passenger plane arrival and departure at the major international airports in each country. Charges include landing, terminal navigation, and passenger and security charges as listed in the IATA Airport and Air Navigation Charges manual. Ticket taxes applicable to international travel were applied as described in the IATA List of Ticket and Airport Taxes and Fees manual. Per-passenger charges were calculated by applying a 75 percent load factor to a typical seating configuration of each type of aircraft. Value-added taxes (VATs) were calculated based on an average ticket price for each country, applied to half of the departing passengers, because the VAT is normally charged only on itineraries originating in the country concerned. A higher score indicates a lower level of charges and taxes.

Source: International Air Transport Association, SRS Analyser

#### 10.02 Purchasing power parity

[Ratio of purchasing power parity \(PPP\) conversion factor to official exchange rate | 2011](#)

The World Bank defines the *purchasing power parity (PPP) conversion factor* as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as a US dollar would buy in the United States. *Official exchange rate* refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the US dollar). The variable shown is the PPP conversion factor to market exchange rate ratio as reported by the World Bank's *World Development Indicator* database.

Source: The World Bank, *World Development Indicators* (September 2012 edition)

#### 10.03 Extent and effect of taxation

[What impact does the level of taxes in your country have on incentives to work or invest? \[1 = significantly limits incentives to work or invest; 7 = has no impact on incentives to work or invest\] | 2011–2012 weighted average](#)

Source: World Economic Forum, Executive Opinion Survey

#### 10.04 Fuel price levels

[Retail diesel fuel prices, US cents per liter | 2010](#)

According to the World Bank, this variable refers to the pump prices of the most widely sold grade diesel fuel.

Source: The World Bank, *World Development Indicators* (September 2012 edition)

#### 10.05 Hotel price index

[Average room rates calculated for first-class branded hotels for calendar year \(in US dollars\) | 2012](#)

This index measures the average price, in US dollars, of first-class hotel accommodation in each country. The index is calculated by using the average room rate achieved by first-class hotels in each country over a 12-month period from January through December 2011, to mitigate the impact of any seasonality fluctuations. Data may refer to the 2009 or the 2007 period where the 2011 update is not available.

Source: Deloitte–STR Global and Smith Travel Research Inc.

## PILLAR 11: HUMAN RESOURCES

### 11.01 Primary education enrollment

#### 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; Organisation for Economic Co-operation and Development (OECD), *Education at a Glance 2011*

### 11.02 Secondary education enrollment

#### 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.

Source: UNESCO Institute for Statistics

### 11.03 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 = very well] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.04 Local availability of specialized research and training services

#### In your country, to what extent are high-quality, specialized training services available? [1 = not at all available; 7 = widely available] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.05 Extent of staff training

#### To what extent do companies in your country invest in training and employee development? [1 = hardly at all; 7 = to a great extent] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.06 Hiring and firing practices

#### How would you characterize the hiring and firing of workers in your country? [1 = impeded by regulations; 7 = flexibly determined by employers] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.07 Ease of hiring foreign labor

#### To what extent does labor regulation in your country limit the ability to hire foreign labor? [1 = very much limits hiring foreign labor; 7 = does not limit hiring foreign labor at all] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.08 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* (April 2012 edition); UNAIDS, *Global Report on the Global AIDS Epidemic* (2008 edition)

### 11.09 Business impact of HIV/AIDS

#### How serious an impact do you consider HIV will have on your company in the next five years (e.g., death, disability, medical and funeral expenses, productivity and absenteeism, recruitment and training expenses, revenues)? [1 = a serious impact; 7 = no impact at all] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 11.10 Life expectancy

#### Life expectancy at birth in years | 2011

*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.

Source: The World Bank, *World Development Indicators* (September 2012 edition)

## PILLAR 12: AFFINITY FOR TRAVEL & TOURISM

### 12.01 Tourism openness

#### Tourism expenditure and receipts as a percentage of GDP | 2011

This variable is the ratio of the sum of international tourism expenditures and receipts to GDP. *International tourism expenditures* are expenditures of international outbound visitors in other countries, including payments to foreign carriers for international transport. *International tourism receipts* are expenditures of international inbound visitors in other countries, including payments to foreign carriers for international transport.

Sources: World Tourism Organization; International Monetary Fund, *World Economic Outlook, 2012*

### 12.02 Attitude of population toward foreign visitors

#### How welcome are foreign visitors in your country? [1 = very unwelcome; 7 = very welcome] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 12.03 Extension of business trips recommended

#### When senior executives visit your country for the first time for business purposes, how likely are you to recommend extending their trip for leisure purposes? [1 = very unlikely; 7 = very likely] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 12.04 Degree of customer orientation

#### How well do companies in your country treat customers? [1 = generally treat their customers badly; 7 = are highly responsive to customers and seek customer retention] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

## PILLAR 13: NATURAL RESOURCES

### 13.01 Number of World Heritage natural sites

#### Number of World Heritage natural sites in the country | 2012

The World Heritage natural sites are those properties that the World Heritage Committee considers as having outstanding universal value.

Source: UNESCO World Heritage List, available at <http://whc.unesco.org/en/list/>

### 13.02 Quality of the natural environment

#### How would you assess the quality of the natural environment in your country? [1 = extremely poor; 7 = among the world's most pristine] | 2011–2012 weighted average

Source: World Economic Forum, Executive Opinion Survey

### 13.03 Total known species

[Total known species \(mammals, birds, amphibians\) in the country | 2012](#)

This variable measures the total known species of mammals, birds, and amphibians.

Source: The International Union for Conservation of Nature (IUCN), Red List Threatened Species 2012

### 13.04 Terrestrial biome protection

[This is a measure of the degree to which a country achieves the target of protecting 17 percent of each terrestrial biome within its borders. Therefore it is expressed as the average of the percentage of land protected by biome. It ranges between 0 and 17 percent. | 2010](#)

This indicator is calculated by Columbia University's Center for International Earth Science Information Network (CIESIN) by overlaying the protected area mask on terrestrial biome data developed by the World Wildlife Fund (WWF)'s Terrestrial Eco-Regions of the World for each country. A *biome* is defined as a major regional or global biotic community, such as a grassland or desert, characterized chiefly by the dominant forms of plant life and the prevailing climate. Scores are capped at 17 percent per biome such that higher levels of protection of some biomes cannot be used to offset lower levels of protection of other biomes, hence the maximum level of protection a country can achieve is 17 percent. CIESIN uses time series of the World Database on Protected Areas (WDPA) developed by the United Nations Environment Programme (UNEP) World Conservation Monitoring Centre (WCMC) in 2011, which provides a spatial time series of protected area coverage from 1990 to 2010. The WCMC considers all nationally designated protected areas whose location and extent is known. Boundaries were defined by polygons where available; where they were not available, protected-area centroids were buffered to create a circle in accordance with the protected area size. The WCMC removed all overlaps between different protected areas by dissolving the boundaries to create a protected areas mask.

Source: Yale University-CIESIN, Environmental Performance Index 2012, based on UNEP World Conservation Monitoring Centre

### 13.05 Marine protected areas

[Percentage of each country's exclusive economic zone \(EEZ, 0–200 nautical miles\) that is under protection by a marine protected area \(MPA\) | 2010](#)

The January 2011 version of the World Database on Protected Areas was used by the UNEP World Conservation Monitoring Centre for a spatial time series analysis of protected area coverage from 1990 to 2010. WCMC considered all nationally designated protected areas whose location and extent is known. They used polygons where available, otherwise they used buffered points. WCMC removed all overlaps between different designations and categories, buffered points and polygons, and dissolved the boundaries so as to create a protected areas mask. The time series was generated based on the date of gazetting of the protected areas. Dated and undated protected areas were used; protected areas with unknown year of establishment were assumed to have been established before 1990. A logarithmic transformation is applied to the scores in order to spread the data distribution. Landlocked countries are excluded in the calculation of this indicator.

Source: Yale University-CIESIN, Environmental Performance Index 2012, based on IUCN and UNEP-WCMC The World Database on Protected Areas (WDPA)

## PILLAR 14: CULTURAL RESOURCES

### 14.01 Number of World Heritage cultural sites

[Number of World Heritage cultural sites and Oral & Intangible Heritage | 2012](#)

The World Heritage cultural sites are those properties that the World Heritage Committee considers as having outstanding universal value. Intangible Cultural Heritage are those practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts, and cultural spaces associated therewith—that communities, groups, and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment and their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

Source: UNESCO World Heritage List, available at <http://whc.unesco.org/en/list/> and <http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011>

### 14.02 Sports stadiums

[Sports stadium capacity per million population | 2011](#)

This variable is calculated as the ratio of total seats for all major sports stadiums in the country to the total population (in millions).

Source: Booz & Company, based on Worldstadiums.com

### 14.03 Number of international fairs and exhibitions

[Number of international fairs and exhibitions held in the country annually | 2009–11 average](#)

This variable measures the average number of international fairs and exhibitions held annually in each country between 2009 and 2011. Data on international fairs and exhibitions were obtained from the International Congress and Convention Association (ICCA), which includes meetings organized by international associations attended by at least 50 participants that take place on a regular basis (one-time events are not included) and rotate between a minimum of three countries.

Source: International Congress and Convention Association

### 14.04 Creative industries exports

[Exports of creative industries products as a share of world total in such exports. | 2011](#)

This variable measures the share of the world's total exports of the following creative industries products: art crafts such as carpets, celebration articles, paperware, wickerware, yarn, other; films; architecture, fashion, glassware, jewelry; music; books, newspapers and other; antiques, paintings, photography, sculpture, and other. Data were obtained from the UNCTAD's Creative Industries database and HS 2002 codes were used.

Source: United Nations Conference on Trade and Development (UNCTAD), Creative industry database, *Creative Economy Report 2012*