

# The region: A door to global trade

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Technical Annexes – Extended version



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# Technical Annexes

Extended version

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## ACRONYMS

CEPII	French research centre in international economics 'Centre d'études prospectives et d'informations internationales'
EPI	Export Potential Index
GDP	Gross domestic product
ICT	Information and communications technology
IMF	International Monetary Fund
ISO	International Organization for Standardization
ITC	International Trade Centre
ITU	International Telecommunications Union
LDC	Least developed country
LLDC	Landlocked developing country
LPI	Logistics Performance Index
NTM	Non-tariff measure
OECD	Organisation for Economic Co-operation and Development
PDI	Product Diversification Index
RCA	Revealed Comparative Advantage
SIDS	Small island developing State
SME	Small and medium-sized enterprise
SPS	Sanitary and phytosanitary (measures)
TBT	Technical barriers to trade
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNPAN	United Nations Public Administration Network
WIPO	World Intellectual Property Organization

## INTRODUCTION

This online document contains a comprehensive description of key methodologies, indicators and data coverage of the country profiles included in the *SME Competitiveness Outlook 2017: The region a door to global trade*. The print copy includes an abridged version of this technical annex.

The publication contains fifty country profiles – the following 15 countries have been added to this year's edition: Argentina, Bhutan, Brazil, Chile, Ghana, Hungary, Malaysia, Mexico, Nigeria, Poland, Russian Federation, Slovakia, South Africa, Ukraine and Viet Nam. These were selected based on data availability, country size and geographical spread.

The country profiles are not directly comparable across years. This is because most underlying firm-level indicators are based on publically available data that are not updated yearly. Even when the data for a specific country remains the same, its strengths and weaknesses may differ from previous years.

First, because strengths and weaknesses are relative to the performance of other countries. Second, because the expected competitiveness is a function of country's GDP per capita and hence the reference level of competitiveness may increase or decrease, following the GDP per capita. Third, the calculations of the export potential, product diversification and the prevalence of technical regulations have undergone methodological changes.

Finally, there is a change in the terminology: factors that are external to the firm but still within its microenvironment are referred to as 'business ecosystem', rather than 'immediate business environment'. Through its SME Competitiveness Surveys, ITC is in the process of collecting firm-level data that would adequately capture the concept of the business ecosystem. In the meantime, the current report uses indicators from publically accessible sources that do not fully capture the concept but nonetheless provide an approximation of the situation faced by firms in their microenvironment.

## ANNEX 1 TECHNICAL NOTES

### Key indicators

Key indicators are derived from ITC's Market Analysis Tools and databases of other international institutions. They are taken directly from their respective sources (listed in Annex 2), and are expressed in the units indicated alongside the indicator's name. They have not been transformed or undergone normalization calculations.

### SME Competitiveness

#### Concept and motivation

The SME Competitiveness Grid is a tool to classify indicators of firm competitiveness along two dimensions: how they affect competitiveness (pillars) and where they intervene (levels), summarized in Table 1.

The main motivation behind the SME Competitiveness Grid is to bridge a gap in existing composite indicators that focus on macroeconomic determinants of competitiveness rather than microeconomic determinants affecting firms and its business ecosystem. The importance of macroeconomic determinants is, however, fully recognized and reflected in the SME Competitiveness Grid. While the grid was designed with a focus on SME competitiveness, it is scale-independent and can be used to assess the competitiveness of larger firms.

Pillars of competitiveness include the capacity to compete, connect and change, and are reflected in the vertical axes of the grid.

- The **capacity to compete** refers to the static dimension of competitiveness and is centred on present operations of firms and their efficiency in terms of cost, time, quality and quantity. Examples of drivers include using internationally recognized quality certificates, accessing technical infrastructure, and smooth customs procedures.
- The **capacity to connect** centres on gathering and exploiting information and knowledge. At the firm level, this refers to efforts of gathering information flowing into the firm (e.g. consumer profiles, preferences and demand) and facilitating information flows from the firm (e.g. marketing and advertising). At the business ecosystem level, this includes links to sector associations, chambers of commerce and other trade and investment support institutions (TISIs). At the national level, the capacity to connect is predominantly about the availability of an information and communications technology (ICT) infrastructure.
- The **capacity to change** centres on the capacity of a firm to execute change in response to, or in anticipation of, dynamic market forces and to innovate through investments in human and financial capital. It incorporates the dynamic dimension of competitiveness. Industry phases, breakthrough or disruptive innovations, increased competition, and exchange-rate fluctuations are all events that require strategy

adaptation. The capacity to change, for example, involves interpreting new market trends, the tactics of rivals, opportunities derived from new infrastructure or technologies, and governmental policies.

Levels of competitiveness include firm capabilities, the business ecosystem and the national environment. These are reflected in the horizontal axis of the grid.

- **Firm capabilities** indicators assess whether firms have the capabilities to manage the resources under their control. Thus, this competitiveness level contains indicators to gauge whether firms follow best practices, such as having bank accounts, using e-mails and fully utilizing production capacities.
- The **business ecosystem** delivers the resources and competencies that help to shape whether firms are competitive. This level covers factors that are external to the firm but still within its microenvironment, such as accessing electricity, or a skilled workforce and the vicinity of a relevant cluster of economic activities.
- The **national environment** establishes the fundamentals of functioning markets. A government's action in particular determines whether firm activities are facilitated. This level encompasses all factors that exist at the national level, such as policies on entrepreneurship and ease of doing business, trade-related policies, governance, infrastructure, and resource endowments.

### **SME Competitiveness Grid Summary**

The Competitiveness Grid Summary provides an overview of the country with respect to SME competitiveness. The statistics are calculated by aggregating all 39 indicators of the SME Competitiveness Grid across pillars and levels of competitiveness, using simple (unweighted) averages. Out of 39 indicators, 17 apply directly to business establishments and are available by firm size.

All indicator values are colour-coded to facilitate interpretation. 'Strengths' are indicated in green and 'weaknesses' in red. The reference value, representing the expected competitiveness score, and the threshold values for strengths and weaknesses are at the bottom of the SME Competitiveness Grid Summary table.

### **Competitiveness reference level, strengths and weaknesses**

The threshold values defining strengths and weaknesses in competitiveness are based on a country-specific reference level. To determine the reference level for each country, the SME competitiveness indicators are averaged by country and regressed on the natural logarithm of country GDP per capita (log of GDP-per-capita), over the full sample of all 109 countries. The reference level is then set to the predicted (fitted) value for log of GDP-per-capita, as determined by the least-squares regression line.

An indicator is a 'strength' when it surpasses a threshold value of 150% of the country's reference level, indicated by bold green text. Conversely, an indicator signals 'weakness' when it falls below a threshold value of 50% of the reference level, indicated by bold red text. This way, strengths and weaknesses allow for an easy comparison of individual indicators for a given country to the average value of all indicators in the sample, taking into account the country's GDP per capita.



Table 1 SME Competitiveness Grid

		Pillars		
		Capacity to compete	Capacity to connect	Capacity to change
	<b>Firm capabilities</b>	Quality certification Bank account Capacity utilization Managers experience	E-mail Firm website	Audited financial statement Investment financed by banks Formal training programme Foreign technology licences
	<b>Business ecosystem</b>	Power reliability Domestic shipping reliability Dealing with regulations Customs clearance efficiency	State of cluster development Extent of marketing Local supplier quality University-industry collaboration in R&D	Access to finance Access to educated workforce Business licensing and permits
	<b>National environment</b>	Getting electricity Ease of trading across borders Applied tariff Prevalence of technical regulations Faced tariff Logistics performance ISO 9001 certification ISO 14001 certification Governance index	ICT access ICT use Government's online index	Ease of getting credit Interest rate spread School life expectancy Ease of starting a business Patent applications Trademark registrations

Source: ITC.

## SME Competitiveness Grid

### *SME competitiveness indicators*

The SME Competitiveness Grid presents transformed and normalized scores for all of the competitiveness indicators. The indicators are split into three levels of competitiveness, each in turn split into three pillars. Whenever possible, the grid includes indicators by firm size. The absolute values of the indicators are available upon request. All indicator values in the tables are colour coded in black (indicating an average performance), green (indicating strengths) or red (indicating weakness).

To allow for cross-indicator and cross-country comparisons, indicators are normalized on a [1-100] scale, with a score of 100 representing the best possible outcome. For positive indicators, those in which higher values represent better outcomes, a raw data series  $X$  is transformed according to:

$$Y_{(+)} = 100 \frac{X - \min(X)}{\max(X) - \min(X)}$$

For negative indicators, those on an inverse scale in which higher values represent worse outcomes, a raw data series  $X$  is transformed according to:

$$Y_{(-)} = 100 \frac{\max(X) - X}{\max(X) - \min(X)}$$

Equivalently, the normalized series for negative indicators may be constructed from:

$$Y_{(-)} = 100 - Y_{(+)}$$

A non-linear transformation (developed by ITC) is then applied over the same [1-100] range to compensate for highly skewed distributions, aimed at bringing the sample median to 50. For an input data series  $Y$ , the transformed score  $Z$  is defined as:

$$Z = 100 \frac{\ln(1 + aY)}{\ln(1 + 100a)}$$

where

$$a = \frac{100 - 2 \text{ median}(Y)}{\text{median}(Y)^2}$$

and  $\text{median}(Y)$  is the sample median. The formula is not defined in the event that the median is already equal to 50; in this case, the second step becomes redundant. It is important to note that the minimum, maximum, and median values are determined using data series that are disaggregated by firm size class, that is, taking into consideration mean values calculated for small, medium, and large firms. This implies that an indicator's minimum value, for instance, will be the same for firms of any size. This is consistent with ITC's definition of competitiveness applied to a firm's line of business irrespective of its size.

### *Radar diagrams*

The radar diagrams on the right hand side of the SME Competitiveness Grid convey the same statistics as indicated in the tables. The solid area plots are colour-coded according to each

pillar of competitiveness and represent aggregate indicator values for all firm sizes, while the line plots of varying patterns identify indicators for small firms (dotted black line), medium firms (solid black line), and large firms (dashed black line). A blue line is a country-specific reference level indicating the expected competitiveness of this country.

## Export Potential

### Concept and scope

This section provides a short summary on ITC's methodology of calculating the unrealized export potential, product diversification and development indicators reported on the second page of each country profile. Please refer to the methodology paper for full technical details.<sup>1</sup>

Export potential and diversification assessments comprise two indicators: The first one, the export potential indicator (EPI), sets out a country's export potential of products that have been exported consistently for the past three years. The table 'Unrealized potential: existing export products' shows each profiled country's top 10 products with the highest unrealized export potential to the world. The second indicator, the product diversification indicator (PDI), informs on possibilities to diversify into new products. The summary on the top of the second page gives several examples of products with high diversification potential.

The indicators are calculated for all of the world's countries and territories (over 220) and for almost all products (over 4 000). The calculations are made at the level of detail for which trade data are comparable: at sub-headings (6-digit level) of the Harmonised System (HS) nomenclature of trade flows, or groups of sub-headings that have not changed across HS revisions since revision 1, adopted in 1996 (groups are indicated by 'xx' in product codes). The list does not include products that are not relevant for export promotion activities, such as arms and ammunitions, tobacco, products identified as polluting by international conventions, and products of extractive industries. The indicators only consider goods, not services.

### Unrealized potential: Existing export products

Unrealized export potential for product  $k$  between exporting country  $i$  and importing country  $j$  exists when the export potential exceeds the value of current exports (immediate future). The export potential depends on three critical factors, which are country  $i$ 's expected capacity to supply this product ( $Exp.MShare_{ik}$ ), partner  $j$ 's expected demand for this product ( $Exp.m_{jk}$ ) and the overall easiness to trade between countries  $i$  and  $j$  ( $Easiness_{ij}$ ). Therefore, in its simplest form, the EPI can be defined as:

$$EPI_{ijk} = Exp.MShare_{ik} \times Easiness_{ij} \times Exp.m_{jk}$$

Note that the actual formula includes correction factors corresponding to tariff (dis)advantages and product-specific distance sensitivity. The formula described above can be seen as the outcome of a theoretical model of world trade based on several assumptions. The most important assumptions are:

- A given country will offer similar products, in terms of type and quality, to all markets. In other words, the type and quality of products exported does not depend on the

export destination. This assumption is essential to derive an export potential value in new markets from the observed performance of a supplier in current markets.

- Trade costs are identical for all products.

In the final EPI that includes correction factors, trade costs vary because of different sensitivities to distance and tariff (dis)advantages.

The following text describes the three components that make up the EPI.

1) The expected market share of country  $i$  in product  $k$  is based on current exports  $x_{ik}$  times the ratio of GDP 2020 forecast and current GDP, noted  $GDP_i^g$ . The expected world market share is then simply:

$$Exp. MShare_{ik} = \frac{x_{ik} GDP_i^g}{\sum_i x_{ik} GDP_i^g}$$

2) The easiness to export from country  $i$  to country  $j$  is calculated as the ratio of actual trade and potential trade between these countries. Here, potential trade is the value of total bilateral trade based on the critical assumption that the exporter has the same market share in a particular market as it has at the world level, for every product. When the easiness to export is above one, the market is easier to reach than average markets.

$$Easiness_{ij} = \frac{x_{ij}}{\sum_k MShare_{ik} \times m_{jk}}$$

With

- $x_{ij}$  total exports of exporting country  $i$  to market  $j$
- $MShare_{ik}$  the current<sup>2</sup> world market share of exporting country  $i$  for product  $k$
- $m_{jk}$  country  $j$ 's total imports of product  $k$ .

3) Partner  $j$ 's expected demand for product  $k$  in 2020 is calculated as its current imports of that product multiplied by the expected growth ratio of these imports between the current period and 2020:

$$Exp. m_{jk} = \widetilde{m_{jk2020}} = m_{jk} \times \frac{\widetilde{m_{jk2020}}}{m_{jk}}$$

The expected growth of imports between 2011-2015 and 2020 is computed using expected annual growth rates of import per capita, which are based on GDP and population forecasts and the following relation:

$$\widehat{m}_{jkt} = \alpha_{dc} \widehat{y}_{jt} + \beta_{dc} + \varepsilon_{jkt}$$

Where

- $\widehat{m}_{jkt}$  is the growth rate of imports per capita
- $\widehat{y}_{jt}$  is the growth rate of GDP per capita

- $\alpha_{dc}$  and  $\beta_{dc}$  are parameters depending on  $d$ , the development level of market  $j$  (developed or developing), and  $c$ , the HS 2-digit chapter of product  $k$ <sup>3</sup>.

The table 'Unrealized potential: Existing export products' on the second page of each country profile shows the top 10 products with the highest EPI to the world.<sup>4</sup> The length of the bars reflects the potential by geographic region. Blank values for the EPI indicate that the product has not been in consistent demand for over five years by any country in the respective region.

### Products with diversification opportunities

The Product Diversification Indicator (PDI) ranks products according to their diversification opportunities. The PDI is based on Hausmann and Hidalgo's concept of the product space<sup>5</sup>, which establishes links between products by assessing how frequently they are found together in countries' export baskets. Demand and supply combined allows to rank products according to their diversification opportunities for a given target market that may yield export revenues in the medium- to long-term future.

The PDI differs from the EPI in how supply conditions are captured. Market shares can only be computed for existing products. To identify diversification opportunities, the product space concept establishes linkages from a country's current comparative advantages to potential new ones. The average distance of a product from a country's current export basket replaces the expected market share as an estimate of supply capacity. Demand and market access indicators remain identical to the EPI methodology.

A country's potential to diversify is based on a density measure, which determines the proximity between products. The density of a potentially new product  $k$  with respect to a currently exported product  $l$  is based on the conditional probability of exporting  $k$  given that  $l$  is exported, taking into account the export composition of a large number of countries. The mean density is then computed over all currently exported products  $l$ , weighed by the respective comparative advantage of each product  $l$ .

Comparative advantages are defined as Balassa's revealed comparative advantages (RCA), corrected for tariffs (a country may have an RCA in a product because it benefits from a tariff advantage, but this does not imply that this country has an actual comparative advantage in exporting the product). The resulting value  $Density_{ik}$  is a measure of the comparative advantage in products surrounding product  $k$  in country  $i$ . Higher values imply that country  $i$  should be able to move into production and export of product  $k$  with relative ease. All density values are normalized to ensure that their range follows that of the corresponding market share.

The final PDI indicator is calculated as:

$$PDI_{ijk} = Density'_{ik} \times Easiness_{ij} \times Exp. m_{jk}$$

Several qualification filters are applied to potential new export products. First, only products not appearing in the EPI, are kept: they are either products that are not exported on a regular basis by the country, or products for which the potential, as measured by the EPI approach, is currently limited.

As a second step, potential agricultural products are checked against the country's climactic conditions: agricultural products unsuitable to the country's climactic endowments are not considered.

Finally, sea access is a determining factor for the production of some products: sea-related products are not considered in landlocked countries (exceptions are freshwater fish and marine equipment).

Examples of diversification opportunities, i.e. products that a country does not export yet but can potentially produce and export to diversify its export basket, are reported in each country profile on the top of the second page.

### **Development indicators**

To allow for a comprehensive analysis and policy formulation, the EPI and PDI are reported alongside four additional indicators:

- **Price stability** is based on the standard deviation of unit values at product level, sourced from the 'Centre d'Etudes Prospectives et d'Informations Internationales' (CEPII)<sup>6</sup>.
- **SME presence** is the share of SMEs in the sector, based on data from the World Bank Enterprise Surveys.
- **Women employed** is the share of female employment in the sector, based on data from the World Bank Enterprise Surveys.
- **Technology** indicates a technologically advanced product (green bullet). The product is considered advanced if it is regularly exported with comparative advantage by all countries that have a GDP per capita at least as high as the country itself.

Development indicators are relative to the country's performance in other sectors. In terms of price stability, SME presence, and women employment, green bullets indicate performance above the trade-weighted mean, and red bullets indicate performance below the trade-weighted mean. Indicator cells are empty when data is not available.

### **Methodological changes**

The calculation of the product diversification has undergone three methodological changes between 2016 and 2017: Products ranked high in both EPI and PDI are now reported in EPI results only because diversification opportunities are relevant for products that a country does not (or hardly) export. To qualify for the inclusion in the PDI, the export potential to the world has to be less than \$200,000 and the product has to be within the last 5 percentile of the distribution of export potential to the world.<sup>7</sup>

The other two modifications concern the calculation of densities, which are used to estimate a country's supply capacity of a potential new export product. These densities have to be normalized to be on the same scale as market shares. In 2016, a linear transformation was applied in one step to ensure that the total PDI value equals the projected trade between the exporting country and the market.

However, in light of export diversification, the projected trade is likely to change. Therefore, densities are rescaled in a two-step procedure: In the first step, densities are rescaled to ensure that the total diversification potential equals the total projected bilateral exports. In a

second step, densities are rescaled again to ensure that the total supply from all exporters matches with the total demand by product and market. Finally, the revealed comparative advantage, as the basis in density calculations, is computed based on current (reported) values, rather than future (forecasted) demand values.

In this year's edition, each product's technology level is calculated based on the GDP per capita and revealed comparative advantage, while in 2016 the indicator was based on the product complexity approach.<sup>8</sup>

## ANNEX 2 DEFINITIONS AND DATA SOURCES

This section provides the title, definition, formula and source for each indicator of the SME Competitiveness Grid. Whenever the indicator is generated through the survey, this section provides the exact survey question. Each indicator is calculated using the most recent data available, with specific periods for data series provided in parenthesis next to the source.



Table 2 provides the reference year for situations in which the year of data collection varies by country. Indicators rely on actual values, with the exception of GDP and population, which rely on a 2016 forecast to ensure that the reference is based on the same year for all countries.

Certain indicators contain the phrase 'inverted scale' in the description tag to signal that these indicators are based on raw data measured by an inverted (negative) scale, in which higher values indicate worse outcomes. The transformation and normalization procedure converts these series to a positive scale, in which higher values indicate better outcomes.

### **Competitiveness**

This report follows the following definition of competitiveness, elaborated in detail in the first edition of the *SME Competitiveness Outlook*<sup>9</sup>:

Competitiveness is the demonstrated ability to design, produce and commercialize an offer, which fully, uniquely and continuously fulfils the needs of targeted market segments, while connecting with and drawing resources from the business environment, and achieving a sustainable return on the resources employed.

### **Small and medium enterprises**

The definition of the size of a firm is based on the number of full-time employees:

- Micro: 1 to 4 employees
- Small: 5 to 19 employees
- Medium: 20 to 99 employees
- Large: 100 or more employees.

Note that the SME Competitiveness Grid indicators and development indicators on the SME Export Potential page are largely based on the World Bank Enterprise Surveys administered to legally register small, medium and large firms in manufacturing and services sectors.<sup>10</sup> Hence, micro firms, informal entities and agricultural enterprises are not included in the country profiles due to lack of suitable data.

### **Value chains**

Value chain (related/driven) trade refers to the absolute amount of business activities traded, generally expressed in United States dollars. The participation or integration of a country (firm) in value chains is defined as a share, and ranges from 0 to 1 (or from 0 to 100%).

## **Key indicators**

### **Population**

*Country population, forecast, measured in millions*

Source: IMF World Economic Outlook, 2016 ([www.imf.org/en/data](http://www.imf.org/en/data)).

### **GDP**

*Country gross domestic product, forecast, measured in \$ billion*

Source: IMF World Economic Outlook, 2016 edition and data (except Egypt, 2014) ([www.imf.org/en/data](http://www.imf.org/en/data)).

### **GDP per capita**

*Country gross domestic product per capita, forecast, measured in \$*

Source: IMF World Economic Outlook, 2016 (except Egypt, 2014) ([www.imf.org/en/data](http://www.imf.org/en/data)).

### **Share of world GDP**

*Percentage of country's GDP as a share of world GDP, forecast, expressed in Purchasing Power Parity (PPP) adjusted terms*

Source: IMF World Economic Outlook, 2016 ([www.imf.org/en/data](http://www.imf.org/en/data)).

### **Current account surplus/deficit**

*Percentage of current account surplus or deficit as a share of country GDP, forecast*

Source: IMF World Economic Outlook, 2016 ([www.imf.org/en/data](http://www.imf.org/en/data)).

### **Tariff preference margin**

*Trade-weighted average difference between the Most Favourite Nation (MFN) duty and the most advantageous preferential duty, taking the perspective of an exporter, expressed as a percentage*

Prior to aggregation, all duties are converted to *ad valorem* equivalents. Tariff lines have been excluded when either MFN or preferential duties cannot be expressed in *ad valorem* terms. The weights refer to the importing country's bilateral trade (based on 2015 trade statistics).

Source: ITC Market Analysis Tools, 2006–2016 ([www.intracen.org/marketanalysis](http://www.intracen.org/marketanalysis)).

### **Imports and exports (goods and services)**

*Percentage of total imports and exports for goods and services as a share of GDP within the most recent year*

Services trade indicators are calculated using most recent available data and the combined revision of the Balance of Payments Manual (either BMP5 or BMP6). For countries not reporting services trade data, estimated values were used. For goods trade and GDP, the data year matches that of the trade in services data.

Source: Imports and exports of goods and services: ITC Market Analysis Tools, 2011–2015 ([www.trademap.org](http://www.trademap.org)); GDP: IMF World Economic Outlook ([www.imf.org/en/data](http://www.imf.org/en/data)).

**Service exports**

*Percentage of service exports as a share of total exports within the most recent year*

Source: ITC Market Analysis Tools, 2011–2015 ([www.trademap.org](http://www.trademap.org)).

**Geographic region**

*The regional groups are based on the United Nations classification of countries by geographic region (See Annex 3 for the country composition of each geographic region).*

Source: United Nations (<https://unstats.un.org/unsd/methodology/m49>).

**Development group**

*Definitions are based on the United Nations classification, including LDCs, LLDCs, and SIDS (See Annex 3 for the country composition of each group).*

Source: United Nations (<https://unstats.un.org/unsd/methodology/m49>).

**Income group**

*Income group per country GDP, based on World Bank classification, including low income, lower-middle income, upper-middle income, and high income*

Source: World Bank (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>).

**SME Competitiveness Grid indicators*****Firm capabilities***

Compete

**International quality certification**

*Percentage of firms with internationally recognized quality certification*

Question: Does this establishment have an internationally recognized quality certification? Some examples include: the ISO 9000 series (Quality management systems), the ISO 14000 series (Environmental management systems), HACCP (Hazard Analysis and Critical Control Point) for food, and AATCC (American Association of Textiles Chemists and Colorists) for textiles. Certificates granted only nationally and not recognized in international markets are not included.

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

**Bank account**

*Percentage of firms with a checking or savings account*

Question: At this time, does this establishment have a checking or savings account?

Source: Enterprise Surveys (<http://www.enterprisesurveys.org>), World Bank (2006–2016).

### **Capacity utilization**

*Capacity utilization based on comparison of the current output with the maximum output possible using the current inputs*

Question: In the last fiscal year, what was this establishment's output produced as a proportion of the maximum output possible if using all the resources available (capacity utilization)?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Manager's experience**

*Years of the top manager's experience working in the firm's sector*

Question: How many years of experience working in this sector does the top manager have?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

Connect

### **E-mail**

*Percentage of firms using e-mails to communicate with clients/suppliers*

Question: At the present time, does this establishment use e-mails to communicate with clients or suppliers?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Firm website**

*Percentage of firms having their own website*

Question: At the present time, does this establishment use its own website? (Percentage of firms using a website for business-related activities, i.e. sales, product promotion)

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

Change

### **Audited financial statement**

*Percentage of firms with their annual financial statement reviewed by an external auditor*

Question: In the last fiscal year, did this establishment have its annual financial statements checked and certified by an external auditor?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Investments financed by banks**

*Estimated proportion of purchases of fixed assets that was financed from bank loans*

Question: Over the last fiscal year, please estimate the proportion of this establishment's total purchase of fixed assets that was financed from each of the following sources:

1. Internal funds or retained earnings;
2. Owners' contribution or issued new equity shares;

3. Borrowed from banks: private and state-owned;
4. Borrowed from non-bank financial institutions;
5. Purchases on credit from suppliers and advances from customers; or
6. Other, moneylenders, friends, relatives, bonds, etc.

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Formal training programme**

*Percentage of firms offering formal training programmes for permanent, full-time employees*

Question: Over the fiscal year, did this establishment have formal training programmes for its permanent, full-time employees?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Foreign technology licences**

*Percentage of firms using technology licensed from foreign companies*

Question: Does this establishment at present use technology licensed from a foreign-owned company, excluding office software?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

## **Business ecosystem**

Compete

### **Power reliability**

*Losses due to electrical outages, as percentage of total annual sales (inverted scale)*

Question: Please estimate the losses that resulted from power outages either as a percentage of total annual sales or as total annual losses.

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Domestic shipping reliability**

*Proportion of products lost to breakage or spoilage during shipping to domestic markets (inverted scale)*

Question: In the last fiscal year, what percentage of value of products this establishment shipped to supply domestic markets was lost while in transit because of breakage or spoilage?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Dealing with regulations**

*Percentage of senior management time spent in a typical week in dealing with requirements imposed by government regulation (inverted scale)*

Question: In a typical week over the last year, what percentage of total senior management's time was spent on dealing with requirements imposed by government regulations? [Senior management means managers, directors, and officers above direct supervisors of production

or sales workers. Some examples of government regulations are taxes, customs, labour regulations, licensing and registration, including dealings with officials and completing forms].

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

### **Customs clearance efficiency**

*This indicator is the average of two indicators: average number of days to clear direct exports through customs, and average number of days to clear imports from customs (inverted scale)*

Average number of days to clear direct exports through customs

Question: When this establishment exported goods directly, how many days did it take on average from the time this establishment's goods arrived at their main point of exit (e.g., port, airport) until the time these goods cleared customs?

Average number of days to clear imports from customs

Question: When this establishment imported material inputs or supplies, how many days did it take on average from the time these goods arrived to their point of entry (e.g. port, airport) until the time these goods could be claimed from customs?

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

## **Connect**

### **State of cluster development**

*Averaged country cluster development score*

Question: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = non-existent; 7 = widespread in many fields]

Source: World Economic Forum Executive Opinion Survey, 2014–2017 (<http://reports.weforum.org/global-competitiveness-index/downloads/>).

### **Extent of marketing**

*Averaged country marketing extent score*

Question: In your country, to what extent do companies use sophisticated marketing tools and techniques? [1 = not at all; 7 = to a great extent]

Source: World Economic Forum Executive Opinion Survey, 2014–2017 (<http://reports.weforum.org/global-competitiveness-index/downloads/>).

### **Local supplier quality**

*Averaged country local supplier quality score*

Question: In your country, how would you assess the quality of local suppliers? [1 = extremely poor quality; 7 = extremely high quality]

Source: World Economic Forum Executive Opinion Survey, 2014–2017 (<http://reports.weforum.org/global-competitiveness-index/downloads/>).

**University-industry collaboration in R&D***Averaged country university-industry collaboration in R&D score*

Question: In your country, to what extent do businesses and universities collaborate on research and development (R&D)? [1 = do not collaborate at all; 7 = collaborate extensively]

Source: World Economic Forum Executive Opinion Survey, 2014–2017 (<http://reports.weforum.org/global-competitiveness-index/downloads/>).

Change

**Access to finance***Percentage of firms identifying access to finance as an obstacle to current operations (inverted scale)*

Question: To what degree is access to finance an obstacle to the current operations of this establishment? Choices range from 0 (no obstacle) to 4 (very severe obstacle)

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

**Access to educated workforce***Percentage of firms identifying an inadequately educated workforce as an obstacle to current operations (inverted scale)*

Question: To what degree is an inadequately educated workforce an obstacle to the current operations of this establishment? Choices range from 0 (no obstacle) to 4 (very severe obstacle)

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

**Business licensing and permits***Percentage of firms identifying business licensing and permits as an obstacle to current operations (inverted scale)*

Question: To what degree are business licensing and permits an obstacle to the current operations of this establishment? Choices range from 0 (no obstacle) to 4 (very severe obstacle)

Source: World Bank Enterprise Surveys, 2006–2016 (<http://www.enterprisesurveys.org>).

**National environment**

Compete

**Getting electricity***Doing Business: 'Ease of getting electricity' score*

*Doing Business* records all procedures required for a business to obtain a permanent electricity connection and supply for a standardized warehouse. These procedures include applications and contracts with electricity utilities, all necessary inspections and clearances from the utility and other agencies, and the external and final connection works. The questionnaire divides the process of getting an electricity connection into distinct procedures and solicits data for calculating the time and cost to complete each procedure.

The ranking of economies on the ease of getting electricity is determined by sorting their distance to frontier scores for getting electricity. These scores are the simple average of the distance to frontier scores for each of the component indicators.

Source: World Bank *Doing Business 2017* ([www.doingbusiness.org/methodology](http://www.doingbusiness.org/methodology)).

### **Ease of trading across borders**

*Doing Business: 'Ease of trading across borders' score (%)*

The 'Ease of trading across borders' index measures the time and cost (excluding tariffs) associated with exporting and importing a standardized cargo of goods by sea transport. The index records the time and costs necessary to complete four predefined stages for importing and exporting goods (document preparation; customs clearance and inspections; inland transport and handling; and port and terminal handling). This includes any time, costs and documents associated with processes at inland borders (i.e. for landlocked countries), and those associated with the issuance or advising of a letter of credit (for payments). The time and costs associated with sea transport are not included.

The trading across borders indicator is calculated from the simple average of the Distance to Frontier score for each of the component indicators. Data in turn is compiled from local freight forwarders, shipping lines, customs brokers, port officials and banks, and is made comparable across economies.

Source: World Bank *Doing Business 2017* ([www.doingbusiness.org/methodology](http://www.doingbusiness.org/methodology)).

### **Applied tariff, trade-weighted average**

*Applied tariff rate, trade-weighted mean, all products (%) (inverted scale)*

A tariff is a customs duty that is levied by the destination country on imports of merchandise goods. The trade-weighted average tariff is calculated for each importing country using the trade patterns of the importing country's reference group (based on 2015 trade statistics). To the extent possible, specific rates are converted to their *ad valorem* equivalent rates and included in the calculation of trade-weighted average tariffs. Preferential tariff arrangements (tariff preferences) are taken into account.

Source: Calculations based on ITC Market Analysis Tools data, 2006–2016 ([www.intracen.org/marketanalysis](http://www.intracen.org/marketanalysis)).

### **Prevalence of technical regulations**

*Average number of technical regulations per imported product (inverted scale)*

The prevalence of technical regulations is calculated as an average number of technical requirements per imported product (HS 6-digit level):

$$P_i = \frac{\sum_1^p N_{ip} M_{ip}}{\sum_1^p M_{ip}}$$

where  $P_i$  is the prevalence score for each importing country  $i$ ,  $N_{ip}$  is the number of requirements applied by country  $i$  to regulate import of product  $p$ , and  $M_{ip}$  is a dummy equal to 1 if product  $p$  is imported by country  $i$ . This score is then normalized, standardized and inverted as described earlier.



Requirements are a combination of the measure type from the classification of non-tariff measures (NTMs) and the number of regulations. Calculations include only technical measures, comprising sanitary and phytosanitary (SPS) requirements and technical barriers to trade (TBT).

In this year's *SME Competitiveness Outlook* calculations are performed at country level, i.e. only include regulations applied to the world. This approach is different from the calculations in the 2016 *SME Competitiveness Outlook* that have taken into account the bilateral measures. Therefore, the values of both years are not comparable.

Source: Calculations based on ITC Market Analysis Tools data, 2006–2016 ([www.intracen.org/marketanalysis](http://www.intracen.org/marketanalysis)).

### **Faced tariff, trade-weighted average**

*Trade-weighted average tariff faced in destination markets (%) (inverted scale)*

The tariff faced is an indicator calculated as the trade-weighted average of the applied tariff rates, including preferential rates that the rest of the world applies to each country. The weights are the trade patterns of the importing country's reference group (based on 2015 trade statistics).

Source: Calculations based on ITC Market Analysis Tools data, 2006–2016, [www.intracen.org/marketanalysis](http://www.intracen.org/marketanalysis).

### **Logistics performance index**

*Logistics Performance Index score*

A multidimensional assessment of logistics performance, the Logistics Performance Index (LPI), compares the trade logistics profiles of countries and rates them on a scale of 1 (worst) to 5 (best). The LPI's six components include: (1) customs, the efficiency of the clearance process (speed, simplicity, and predictability of formalities) by border control agencies, including customs; (2) infrastructure, the quality of trade- and transport-related infrastructure (ports, railroads, roads, IT); (3) international shipments, the ease of arranging competitively priced shipments; (4) logistics competence, the competence and quality of logistics services (transport operators, customs brokers); (5) tracking and tracing, the ability to track and trace consignments; and (6) timeliness, the frequency with which shipments reach the consignee within the scheduled or expected delivery time.<sup>11</sup>

Source: World Bank and Turku School of Economics, Logistics Performance Index, 2007–2016 (<http://lpi.worldbank.org/>).

### **ISO 9001 quality certificates**

*ISO 9001:2008 Quality management systems: Number of certificates issued (per million people)*

Source: ISO Survey of Management System Standard Certifications, 2015 ([www.iso.org](http://www.iso.org)).

### **ISO 14001 environmental certificates**

*ISO 14001:2004 Environmental management systems: Number of certificates issued (per million people)*

Source: ISO Survey of Management System Standard Certifications, 2015 ([www.iso.org](http://www.iso.org)).

## **Governance index**

### *Governance index*

The governance index is the average score of six governance dimensions: voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law; and control of corruption.

Source: World Bank Worldwide Governance Indicators, 2015 (<http://info.worldbank.org/governance/wgi/index.aspx#home>).

## **Connect**

### **ICT access**

#### *ICT access score*

The ICT access sub-index is the first sub-index in the ICT Development Index of the International Telecommunication Union (ITU). The composite index weights five ICT indicators (20% each): (1) fixed-telephone subscriptions per 100 inhabitants; (2) mobile-cellular telephone subscriptions per 100 inhabitants; (3) international Internet bandwidth (bit/s) per Internet user; (4) percentage of households with a computer; and (5) percentage of households with Internet access.

Source: ITU Measuring the Information Society (2016), ICT Development Index (2016) (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2016.aspx>).

### **ICT use**

#### *ICT use score*

The ICT use sub-index is the second sub-index in ITU's ICT Development Index. The composite index weights three ICT indicators (33% each): (1) percentage of individuals using the Internet; (2) fixed (wired)-broadband subscriptions per 100 inhabitants; and (3) wireless-broadband subscriptions per 100 inhabitants.

Source: ITU Measuring the Information Society (2016), ICT Development Index (2016) (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2016.aspx>).

### **Government's online service**

#### *Government's online service index*

To arrive at a set of online service index values, research teams assessed each country's national website, including the national central portal, e-services portal, and e-participation portal as well as the websites of the related ministries of education, labour, social services, health, finance, and environment, as applicable. The websites are assessed for content, features, accessibility and uptake.

The survey covers four stages of a government's online service development, with points assigned for: (1) an emerging presence, providing limited and basic information; (2) an enhanced presence, providing greater public policy and governance sources of information such as policies, laws and regulation, downloadable databases; (3) a transactional presence, allowing two-way interactions between the government and citizens (G2C and C2G), including

paying taxes and applying for ID cards, birth certificates, passports, licence renewals, etc.; and (4) a connected presence, characterized by G2G, G2C, and C2G interactions, as well as participatory deliberative policy- and decision-making. A citizen-centric approach was followed.

Source: UNPAN e-Government Survey 2016 (<http://www2.unpan.org/egovkb/>).

## Change

### **Ease of getting credit**

*Doing Business: 'Ease of getting credit' score*

*Doing Business* measures the legal rights of borrowers and lenders with respect to secured transactions through one set of indicators and the sharing of credit information through another. The ranking is the simple average of the percentile rankings on the component indicators of the ease of getting credit index: strength of legal rights index (range 0–10) and depth of credit information index (range 0–6). The first set of indicators measures whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws. The second set measures the coverage, scope and accessibility of credit information available through credit reporting service providers such as credit bureaus or registries. The ranking of economies on the ease of getting credit is determined by sorting their distance to frontier scores for getting credit.

Source: World Bank *Doing Business 2017* ([www.doingbusiness.org/methodology](http://www.doingbusiness.org/methodology)).

### **Interest rate spread**

*Interest rate spread score (inverted scale)*

The interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Source: World Bank, based on IMF data, International Financial Statistics and data files, 1988–2016 (<http://data.worldbank.org/indicator/FR.INR.LNDP/countries>).

### **School life expectancy**

*School life expectancy, primary to tertiary education*

Total number of years of schooling that a child of a certain age can expect to receive in the future, assuming that the probability of his or her being enrolled in school at any particular age is equal to the current enrolment ratio for that age.

Source: UNESCO Institute for Statistics, 2001–2016 (<http://stats.uis.unesco.org>).

### **Ease of starting a business**

*Doing Business: 'Ease of starting a business' score*

*Doing Business* measures the number of procedures, the time and cost for a small and medium-sized limited liability company to start up and formally operate. To make the data comparable across economies, *Doing Business* uses a standardized business that is 100% domestically owned, has start-up capital equivalent to 10 times income per capita, engages in

general industrial or commercial activities, and employs between 10 and 50 people within the first month of operations.

Source: World Bank *Doing Business 2017* ([www.doingbusiness.org/methodology](http://www.doingbusiness.org/methodology)).

### **Patent applications**

*Resident patent applications (per million people), equivalent count by applicant's origin*

Patent filings made by applicants at their home office (national or regional), also called domestic applications. Applications at regional offices are equivalent to multiple applications, one in each of the state members of those offices. Therefore, each application is multiplied by the corresponding number of member states, except for the European Patent Office and for the African Regional Intellectual Property Organization, for which designated countries are not known. In the latter case, each application is counted as one application abroad if the applicant does not reside in a member state; or as one resident and one application abroad if the applicant resides in a member state.

Source: WIPO, 2000–2015 (<http://www.wipo.int/portal/en/index.html>).

### **Trademark registrations**

*Resident trademark registrations (per million people), equivalent class count by applicant's origin*

A trademark is a distinctive sign distinguishing certain goods or services of one undertaking from those produced or provided by other undertakings. The holder of a registered trademark has the legal right to exclusive use of the mark in relation to the products or services for which it is registered. The owner can prevent unauthorized use of the trademark, or a confusingly similar mark, used for goods or services that are identical or similar to the goods and services for which the mark is registered.

Depending on different legal systems, one trademark application may specify several classes. Technically, that trademark turns into several marks linking to different goods or services. For the reason of international comparability, one should look at the count of classes to counter systemic differences between countries.

Source: WIPO, 2004–2015, (<http://www.wipo.int/portal/en/index.html>).

## **Export Potential**

### **Exports**

*Country's yearly total export value, simple average over the period 2011–2015, measured in \$ million*

Source: ITC Market Analysis Tools, 2011–2015 ([www.trademap.org](http://www.trademap.org)).

### **Value of unrealized potential exports**

*Estimated value of potential additional exports for existing export product lines, measured in \$ million; based on the Export Potential Indicator (EPI); see Annex 1 above for calculations.*

Source: ITC Export Potential Assessment Methodology (<http://exportpotential.intracen.org>).

**Price stability**

*Indicator for stability of export revenue, based on the standard deviation of product-level unit values (relative to country mean)*

Source: ITC calculations based on CEPII (Centre d'études prospectives et d'informations internationales) data.

**SME presence**

*Indicator for the share of SMEs in the sector corresponding to indicated product (relative to country mean)*

Source: ITC calculations based on World Bank Enterprise Surveys 2006–2016 (<http://www.enterprisesurveys.org>).

**Women employed**

*Indicator for the proportion of female employment by sector corresponding to indicated product (relative to country mean)*

Source: ITC calculations based on World Bank Enterprise Surveys 2006–2016 (<http://www.enterprisesurveys.org>).

**Technology**

Indicator identifying technologically advanced products. A product is technologically advanced if it is regularly exported with comparative advantage by countries that have a GDP per capita at least as high as the country itself. Source: ITC Export Potential Assessment Methodology (<http://exportpotential.intracen.org>).

The calculations of export potential and product diversification also include the following data. Ad-valorem tariff data is derived from the ITC Market Access Map, for the most recent year available (as of December 2015). Price elasticities are derived from GTAP.<sup>12</sup> Distances between main cities are based on CEPII GeoDist.<sup>13</sup> GDP growth projections are based on the World Economic Outlook database (October 2015). Trade unit values are derived from CEPII's Trade Unit Values Database<sup>14</sup> for years 2003–2013.

**Latest data availability for the SME Competitiveness Grid**

Databases used in calculating the SME Competitiveness Grid are in

Table 2. Cells indicate the latest available year for each country and database. (. Not available data is indicated as "-").

**Table 2 Data availability for the SME Competitiveness Grid**

Economy	IMF World Economic Outlook	ISO	ITC Trade Map	ITU, ICT index	World Bank Doing Business	WB Enterprise Survey	WEF Executive Opinion Survey	WIPO	Prevalence of technical regulations
Albania	2016	2015	2015	2016	2017	2013	2017	2015	-
Angola	2016	2015	2015	2016	2017	2010	2015	-	-
Argentina	2016	2015	2015	2016	2017	2010	2017	2015	2012
Armenia	2016	2015	2015	2016	2017	2013	2017	2015	-
Azerbaijan	2016	2015	2015	2016	2017	2013	2017	2015	-
Bangladesh	2016	2015	2015	2016	2017	2013	2017	2000	-
Barbados	2016	2015	2015	2016	2017	2010	2017	2014	2015
Benin	2016	2015	2014	2016	2017	2016	2017	-	-
Bhutan	2016	2015	2015	2016	2017	2015	2017	2013	-
Bolivia	2016	2015	2015	2016	2017	2010	2017	2014	2012
Bosnia and Herzegovina	2016	2015	2015	2016	2017	2013	2017	2014	-
Botswana	2016	2015	2015	2016	2017	2010	2017	2014	-
Brazil	2016	2015	2015	2016	2017	2009	2017	2015	2012
Bulgaria	2016	2015	2015	2016	2017	2013	2017	2015	2012
Burkina Faso	2016	2015	2014	2016	2017	2009	2015	-	2010
Burundi	2016	2015	2014	2016	2017	2014	2017	-	-
Cabo Verde	2016	2015	2015	2016	2017	2009	2017	-	-
Cambodia	2016	2015	2015	2016	2017	2016	2017	-	-
Cameroon	2016	2015	2013	2016	2017	2016	2017	-	2015
Chad	2016	2015	2009	2016	2017	2009	2017	-	-
Chile	2016	2015	2015	2016	2017	2010	2017	2015	2012
China	2016	2015	2015	2016	2017	2012	2017	2015	2012
Colombia	2016	2015	2015	2016	2017	2010	2017	2015	2012
Costa Rica	2016	2015	2015	2016	2017	2010	2017	2015	2012
Côte d'Ivoire	2016	2015	2014	2016	2017	2016	2017	2012	2012
Croatia	2016	2015	2015	2016	2017	2013	2017	2015	2012
Czech Republic	2016	2015	2015	2016	2017	2013	2017	2015	2012
Democratic Republic of the Congo	2016	2015	2014	2016	2017	2013	2017	-	-
Dominican Republic	2016	2015	2015	2016	2017	2010	2017	2015	-
Ecuador	2016	2015	2015	2016	2017	2010	2017	2006	2012
Egypt	2014	2015	2015	2016	2017	2013	2017	2014	2016
El Salvador	2016	2015	2015	2016	2017	2016	2017	2015	-
Estonia	2016	2015	2015	2016	2017	2013	2017	2015	2012
Ethiopia	2016	2015	2015	2016	2017	2015	2017	-	-
Gabon	2016	2015	2014	2016	2017	2009	2017	-	-

Gambia	2016	2015	2013	2016	2017	2006	2017	-	-
Georgia	2016	2015	2015	2016	2017	2013	2017	2015	-
Ghana	2016	2015	2015	2016	2017	2013	2017	-	-
Guatemala	2016	2015	2015	2016	2017	2010	2017	2014	2012
Guinea	2016	2015	2013	2016	2017	2016	2016	-	-
Guyana	2016	2015	2014	2016	2017	2010	2016	-	2015
Honduras	2016	2015	2015	2016	2017	2010	2017	2013	-
Hungary	2016	2015	2015	2016	2017	2013	2017	2015	2012
India	2016	2015	2015	2016	2017	2014	2017	2015	2016
Indonesia	2016	2015	2015	2016	2017	2015	2017	2015	-
Israel	2016	2015	2015	2016	2017	2013	2017	2015	2016
Jamaica	2016	2015	2015	2016	2017	2010	2017	2015	2015
Jordan	2016	2015	2015	2016	2017	2013	2017	2015	2016
Kazakhstan	2016	2015	2015	2016	2017	2013	2017	2015	2012
Kenya	2016	2015	2015	2016	2017	2013	2017	2015	-
Kyrgyzstan	2016	2015	2015	2016	2017	2013	2017	2015	-
Lao People's Democratic Republic	2016	2015	2015	2016	2017	2016	2017	-	-
Latvia	2016	2015	2015	2016	2017	2013	2017	2015	2012
Lebanon	2016	2015	2014	2016	2017	2013	2017	2015	2016
Lesotho	2016	2015	2014	2016	2017	2016	2017	-	-
Liberia	2016	2015	2015	2016	2017	2009	2017	-	-
Lithuania	2016	2015	2015	2016	2017	2013	2017	2015	2012
Madagascar	2016	2015	2015	2016	2017	2013	2017	2008	2011
Malawi	2016	2015	2015	2016	2017	2014	2017	-	2011
Malaysia	2016	2015	2015	2016	2017	2015	2017	2015	-
Mali	2016	2015	2014	2016	2017	2016	2017	-	-
Mauritania	2016	2015	2014	2016	2017	2014	2017	-	2015
Mauritius	2016	2015	2015	2016	2017	2009	2017	2015	2011
Mexico	2016	2015	2015	2016	2017	2010	2017	2015	2012
Mongolia	2016	2015	2015	2016	2017	2013	2017	2015	-
Montenegro	2016	2015	2015	2016	2017	2013	2017	2015	-
Morocco	2016	2015	2015	2016	2017	2013	2017	2015	2016
Mozambique	2016	2015	2015	2016	2017	2007	2017	2015	-
Myanmar	2016	2015	2014	2016	2017	2014	2016	-	-
Namibia	2016	2015	2015	2016	2017	2014	2017	-	2011
Nepal	2016	2015	2015	2016	2017	2013	2017	2013	2012
Nicaragua	2016	2015	2015	2016	2017	2010	2017	2013	-
Nigeria	2016	2015	2015	2016	2017	2014	2017	-	-
Pakistan	2016	2015	2015	2016	2017	2013	2017	2015	2016
Panama	2016	2015	2015	2016	2017	2010	2017	2015	-
Paraguay	2016	2015	2015	2016	2017	2010	2017	2010	2012



Peru	2016	2015	2015	2016	2017	2010	2017	2015	2012
Philippines	2016	2015	2015	2016	2017	2015	2017	2015	2008
Poland	2016	2015	2015	2016	2017	2013	2017	2015	2012
Republic of Moldova	2016	2015	2015	2016	2017	2013	2017	2015	-
Romania	2016	2015	2015	2016	2017	2013	2017	2015	2012
Russian Federation	2016	2015	2015	2016	2017	2012	2017	2015	2009
Rwanda	2016	2015	2015	2016	2017	2011	2017	2012	2011
Senegal	2016	2015	2014	2016	2017	2014	2017	-	2011
Serbia	2016	2015	2015	2016	2017	2013	2017	2015	-
Sierra Leone	2016	2015	2014	-	2017	2009	2017	-	-
Slovakia	2016	2015	2015	2016	2017	2013	2017	2015	2012
Slovenia	2016	2015	2015	2016	2017	2013	2017	2011	2012
South Africa	2016	2015	2015	2016	2017	2007	2017	2015	-
Sri Lanka	2016	2015	2015	2016	2017	2011	2017	2015	2016
Suriname	2016	2015	2015	2016	2017	2010	2015	-	2015
Swaziland	2016	2015	2015	2016	2017	2016	2016	-	-
Sweden	2016	2015	2015	2016	2017	2014	2017	2015	2012
Tajikistan	2016	2015	2015	-	2017	2013	2017	2012	-
Thailand	2016	2015	2015	2016	2017	2016	2017	2014	-
Macedonia, the Former Yugoslav Republic of	2016	2015	2015	2016	2017	2013	2017	2013	-
Timor-Leste	2016	-	2015	2016	2017	2015	2015	-	-
Trinidad and Tobago	2016	2015	2011	2016	2017	2010	2017	2015	2015
Tunisia	2016	2015	2015	2016	2017	2013	2017	2015	2016
Turkey	2016	2015	2015	2016	2017	2013	2017	2015	2016
Uganda	2016	2015	2015	2016	2017	2013	2017	-	-
Ukraine	2016	2015	2015	2016	2017	2013	2017	2015	-
Tanzania, United Republic of	2016	2015	2015	2016	2017	2013	2017	-	-
Uruguay	2016	2015	2015	2016	2017	2010	2017	2015	2012
Venezuela	2016	2015	2015	2016	2017	2010	2017	2011	2012
Viet Nam	2016	2015	2015	2016	2017	2015	2017	2015	-
Yemen	2016	2015	2014	2016	2017	2013	2017	2014	-
Zambia	2016	2015	2014	2016	2017	2013	2017	2014	-
Zimbabwe	2016	2015	2012	2016	2017	2011	2017	2015	-

## ANNEX 3 LISTED COUNTRIES AND COMPOSITION OF REGIONS

The SME Competitiveness sample does not cover all countries in the five regions. For example, in Europe, the data is mainly available for countries in Central and Eastern Europe; in the Americas, the sample covers Latin America and the Caribbean; in Asia, the sample does not include Japan or the Republic of Korea. Data for Oceania is not available.

This section lists all 109 countries that were included in the calculations of the SME Competitiveness Grid, grouped following the United Nations' definition of geographic regions<sup>15</sup>. It also shows whether countries are least developed countries (LDCs), landlocked developing countries (LLDCs), small island developing States (SIDS), and/or belong to the Organisation for Economic Co-operation and Development (OECD). The 50 countries, which are included in the country profiles, are indicated in bold.

### Africa

Table 3 Countries covered in Africa Country

Country	Group
Angola	LDC
Benin	LDC
Botswana	LLDC
<b>Burkina Faso</b>	LDC, LLDC
Burundi	LDC, LLDC
Cabo Verde	SIDS
Cameroon	
Chad	LDC, LLDC
<b>Côte d'Ivoire</b>	
Democratic Republic of the Congo	LDC
<b>Egypt</b>	
Ethiopia	LDC, LLDC
Gabon	
Gambia	LDC
<b>Ghana</b>	
<b>Guinea</b>	LDC
<b>Kenya</b>	
Lesotho	LDC, LLDC
Liberia	LDC
<b>Madagascar</b>	LDC
<b>Malawi</b>	LDC, LLDC
Mali	LDC, LLDC
Mauritania	LDC
<b>Mauritius</b>	SIDS
<b>Morocco</b>	
Mozambique	LDC
<b>Namibia</b>	
<b>Nigeria</b>	

<b>Rwanda</b>	LDC, LLDC
<b>Senegal</b>	LDC
Sierra Leone	LDC
<b>South Africa</b>	
Swaziland	LLDC
<b>Tunisia</b>	
Uganda	LDC, LLDC
<b>Tanzania, United Republic of</b>	LDC
Zambia	LDC, LLDC
Zimbabwe	LLDC

**Note:** Countries indicated in bold are included in the country profiles.

## Americas

**Table 4 Countries covered in Americas**

Country	Group
<b>Argentina</b>	
<b>Barbados</b>	SIDS
Bolivia	LLDC
<b>Brazil</b>	
<b>Chile</b>	OECD
<b>Colombia</b>	
<b>Costa Rica</b>	
Dominican Republic	SIDS
<b>Ecuador</b>	
El Salvador	
Guatemala	
Guyana	SIDS
Honduras	
<b>Jamaica</b>	SIDS
<b>Mexico</b>	OECD
Nicaragua	
Panama	
<b>Paraguay</b>	LLDC
<b>Peru</b>	
Suriname	SIDS
<b>Trinidad and Tobago</b>	SIDS
<b>Uruguay</b>	
Venezuela	

**Note:** Countries indicated in bold are included in the country profiles.

## Asia

**Table 5 Countries covered in Asia**

Country	Group
Armenia	LLDC
Azerbaijan	LLDC
<b>Bangladesh</b>	LDC
<b>Bhutan</b>	LDC, LLDC
<b>Cambodia</b>	LDC
<b>China</b>	
Georgia	
<b>India</b>	
<b>Indonesia</b>	
Israel	OECD
<b>Jordan</b>	
<b>Kazakhstan</b>	LLDC
Kyrgyzstan	LLDC
Lao People's Democratic Republic	LDC, LLDC
<b>Lebanon</b>	
<b>Malaysia</b>	
Mongolia	LLDC
Myanmar	LDC
<b>Nepal</b>	LDC, LLDC
Pakistan	
Philippines	
<b>Sri Lanka</b>	
Tajikistan	LLDC
<b>Thailand</b>	
Timor-Leste	LDC, SIDS
<b>Turkey</b>	OECD
<b>Viet Nam</b>	
Yemen	LDC

**Note:** Countries indicated in bold are included in the country profiles.

## Europe

**Table 6 Countries covered in Europe**

Country	Group
Albania	
Bosnia and Herzegovina	
Bulgaria	
Croatia	
Czech Republic	OECD
Estonia	OECD
<b>Hungary</b>	OECD
Latvia	OECD
Lithuania	
Montenegro	
<b>Poland</b>	OECD
Republic of Moldova	LLDC
Romania	
<b>Russian Federation</b>	
Serbia	
<b>Slovakia</b>	OECD
Slovenia	OECD
Sweden	OECD
Macedonia, the Former Yugoslav Republic of	LLDC
<b>Ukraine</b>	

**Note:** Countries indicated in bold are included in the country profiles.

<sup>1</sup> Yvan Decreux and Julia Spies, “Export Potential Assessments – A Methodology to Identify (New) Export Opportunities for Developing Countries,” *Mimeo*, 2015.

<sup>2</sup> “Current” refers to averages computed over the period 2011-2015.

<sup>3</sup> In line with gravity literature, the income elasticity of imports per capita  $\alpha_{dc}$  is on average less than one because fast growing countries gain market shares in their own markets. The intercept  $\beta_{dc}$  reflects chapter-specific trends.

<sup>4</sup> An exhaustive list of products can be found on <http://exportpotential.intracen.org>. To receive information for other products or a more detailed and customized analysis, please contact [marketanalysis@intracen.org](mailto:marketanalysis@intracen.org).

<sup>5</sup> Cesar Hidalgo et al., “The Product Space Conditions the Development of Nations,” *Science*, no. 317 (2007): 482–87.

<sup>6</sup> Unit values are sourced from Trade Unit Values (TUV) database of CEPII (Centre d'Etudes Prospectives et d'Informations Internationales), available at [http://www.cepii.fr/cepii/en/bdd\\_modele/presentation.asp?id=2](http://www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=2)

<sup>7</sup> Export potential is ranked in descending order.

<sup>8</sup> Cesar Hidalgo and Ricardo Hausmann, “The Building Blocks of Economic Complexity,” *Proceedings of the National Academy of Sciences of the United States of America* 106, no. 26 (2009): 10570–75.

<sup>9</sup> See Chapter 9 of the SME Competitiveness Outlook 2015: Compete, Connect and Change for Inclusive Growth (ITC, 2015) for a more elaborate discussion on the definition of firm competitiveness

<sup>10</sup> World Bank (2009). Enterprise Survey and Indicator Surveys—Sampling Methodology. Washington, D.C. Available at [http://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Methodology/Sampling\\_Note.pdf](http://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Methodology/Sampling_Note.pdf).

<sup>11</sup> Details of the survey methodology used to construct the LPI can be found in Jean-François Arvis et al., *Connecting to Compete 2014: Trade Logistics in the Global Economy* (The World Bank, 2014).

<sup>12</sup> Thomas Hertel et al., “How Confident Can We Be of CGE-Based Assessments of Free Trade Agreements?,” *Economic Modeling* 24 (2007): 611–35.

<sup>13</sup> Thierry Mayer and Soledad Zignago, “Notes on CEPII’s Distances Measures: The GeoDist Database,” *CEPII Working Paper Series* 25 (2011).

<sup>14</sup> Antoine Berthou and Charlotte Emlinger, “The Trade Unit Values Database,” *Economie Internationale* 4 (2012): 97–117.

<sup>15</sup> UN definition of regional groups is available at <https://unstats.un.org/unsd/methodology/m49/#geo-regions>.



