



# Competitiveness Of The National Economies

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Lecture No 1

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# **Defining and Measuring Competitiveness**

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Why is it important?

- ▶ Competitiveness leads to growth
- ▶ Few things matter more for the welfare of a country's citizens than the aggregate growth rate of the economy
- ▶ The challenge is to create the conditions for rapid and sustained economic growth

# Outline

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**1. Introduction**

**2. Global Competitiveness Report prepared by World Economic Forum (WEF)**

**3. The World Competitiveness Yearbook prepared by Institute for Management Development (IMD)**

**4. Business Competitiveness- Ease of Doing Business Report prepared by International Finance Corporation (IFC)**

## *Goal of this lecture:*

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- Defining the main types of approaches measuring *competitiveness*
- Analyzing the indices of *competitiveness*. Showing the differences.
- Analyzing the cases of each indices of *competitiveness*.

# What makes nations prosper?

A nation's standard of living (wealth) is determined by the productivity with which it uses its human, capital, and natural resources. The appropriate definition of competitiveness is **productivity**.

Productivity depends on the value of products and services e.g. uniqueness, quality) and the efficiency with which they are produced.

It is not what industries a nation competes in that matters for prosperity, but how firms compete in those industries

Productivity in a nation reflects what both domestic and foreign firms choose to do in that location (location of ownership is secondary)

The productivity of all “local” industries is of fundamental importance to competitiveness, not just that of traded industries

Devaluation does not make a country more “competitive”, rather it reveals a lack of fundamental competitiveness

# What is competitiveness?

Competitiveness is the **productivity** with which a nation uses its human, capital, and natural resources

- Productivity **sets the standard of living**
- Productivity growth sets **sustainable economic growth**

Productivity and prosperity depends on **how** a nation competes, not what industries it competes in

- Productivity in the modern global economy arises from a **combination of domestic and foreign firms**
- **Relentless innovation** is necessary to drive **productivity growth** and enable the standard of living to rise Technology, products, and organizational methods (source: Porter -2010)

# Does national competitiveness exist?

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Nations compete to offer the **most productive environment for business**

- **Legal framework**
- **Market efficiency**

The public and private sectors play **different but interrelated roles** in creating a productive economy



# National Competitiveness “policy clusters”

<b>External Competitiveness</b>	<b>Regulatory Competitiveness</b>	<b>Public sector Competitiveness</b>
Openness to international trade	Attractiveness of the domestic business environment  Regulation supportive of efficient markets	<ul style="list-style-type: none"><li>■ Investment in infrastructure</li><li>■ Security</li><li>■ Education</li></ul>

Dangers: ideological bias (“liberalisation”) lack of economic analysis

Source: Weymouth and Feinberg

# How can governments nurture competitiveness?

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Establish a **stable and predictable** macroeconomic, political, and legal environment

Improve the availability, quality, and efficiency of **general purpose inputs, infrastructure, and institutions**

Set overall **rules and incentives** governing competition that encourage productivity growth

Facilitate **cluster development and upgrading**

Create an explicit, ongoing **process of economic change** and competitive upgrading which informs citizens and mobilizes the private sector, government at all levels, educational and other institutions, and civil society.

National competitiveness as “the catchphrase in the global world” refers to a country’s ability to create, produce, distribute and service products in the international trade while earning rising returns on its resources. Although there are different criteria in determining the national competitiveness of the countries, competitiveness is substantially related with the productivity growth of the countries both at the macro and micro level. In this regard, national competitiveness is well enlightened by defining the national competitiveness at the firm level, at the industrial level and at the international level.

# Three well known indices

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- Global Competitiveness Report prepared by World Economic Forum (WEF)
- The World Competitiveness Yearbook prepared by Institute for Management Development (IMD)
- Business Competitiveness- Ease of Doing Business Report prepared by International Finance Corporation (IFC)

# Differences in the indices

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For example, **Turkey** is at the 39th position according to the World Competitiveness Yearbook by IMD, at the 59th rank according to the Global Competitiveness Yearbook by WEF and at the 65th position according to Business Competitiveness - Ease of Doing Business Report by IFC.

# Global Competitiveness Report prepared by World Economic Forum (WEF)

While computing the index and the score values of the countries, WEF uses a different weighting scheme in the Global Competitiveness Report. In computation of the aggregated index, every subfactors and variables are assigned a different weight depending on the development levels of the countries which is determined by the GDP per capita levels of each country. The weighting scheme used in the computation of score values of the countries is given in the following table.

# The Global Competitiveness Report

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- ▶ Evaluates the potential for sustained economic growth of 102 economies worldwide and ranks them accordingly
- ▶ Assesses the comparative strengths and weaknesses of the major economies of the world
- ▶ Is the world's leading global monitor of the competitive condition of economies

# The Global Competitiveness Report

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Competitiveness is defined as

- ▶ An economy's propensity to attain sustained economic growth in the medium to long term (over the coming 5 to 8 years)

Competitiveness is not

- ▶ A country's share of the world market for its products



# The Global Competitiveness Report

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▶ The three determinants of competitiveness are:

1. Technology

2. Quality of Public Institutions

3. Macroeconomic Environment

▶ The Growth Competitiveness Index measures the current condition of these three determinants

# The Global Competitiveness Report

The two sources:

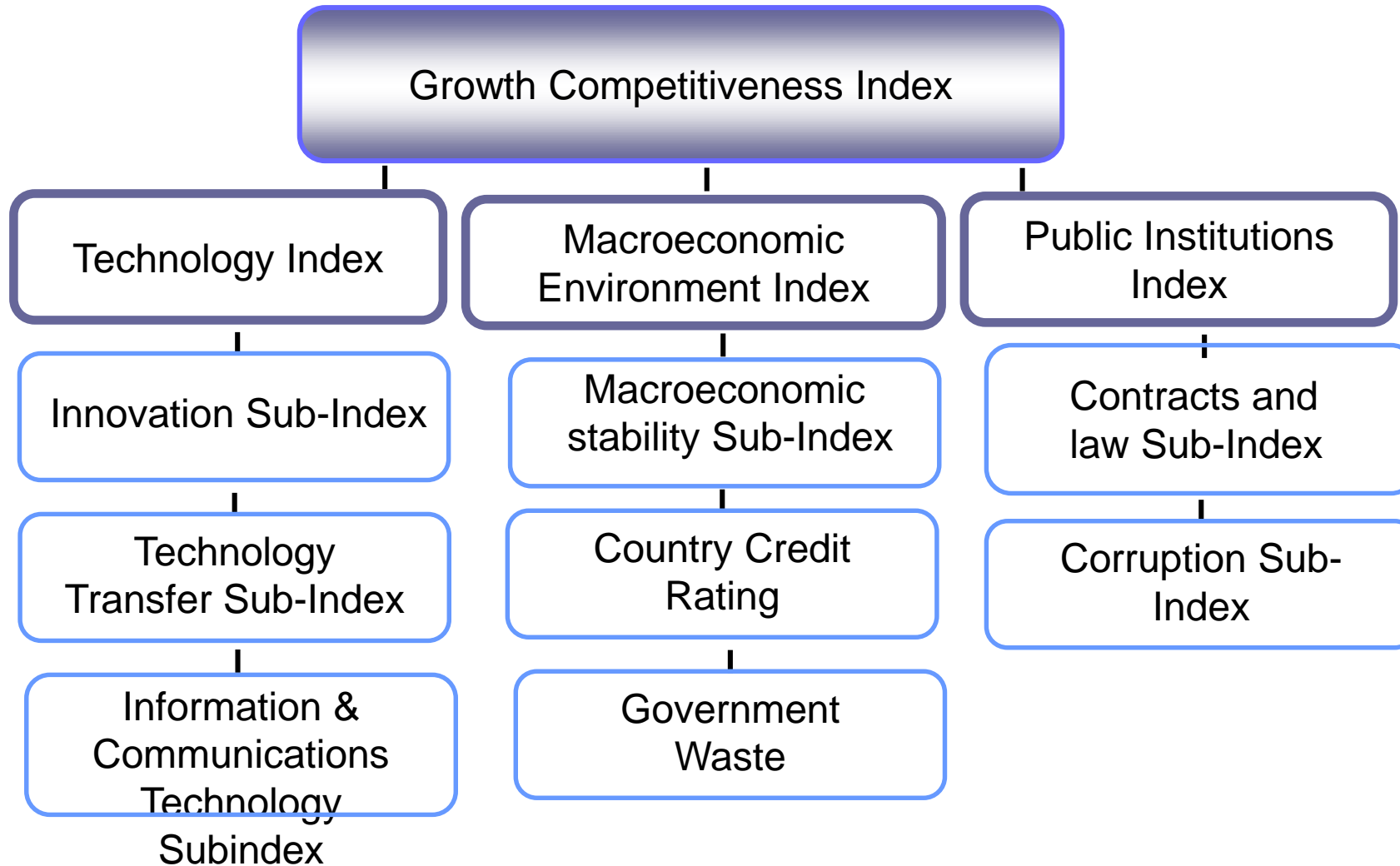
- ▶ Annual Executive Opinion Survey data
- ▶ Publicly available data

# The Global Competitiveness Report

## Executive Opinion Survey

- ▶ Captures perceptions of the current operating environment from a representative sample of business leaders in each country
- ▶ Respondents compare their own operating environments with global standards on a wide range of dimensions
- ▶ The goal is not to predict economic growth in 102 miscellaneous economies
- ▶ The goal is to identify and analyze the strengths and weaknesses of the economies included in our sample

# The Global Competitiveness Report



# The 12 Pillars of Competitiveness\*

## Basic Requirements

- Institutions
- Infrastructure
- Macroeconomic environment
- Health and primary education

Key for  
**factor-driven**  
economies

## Efficiency enhancers

- Higher education and training
- Goods market efficiency
- Labor market efficiency
- Financial market development
- Technological readiness
- Market size

Key for  
**efficiency-driven**  
economies

## Innovation and sophistication factors

- Business sophistication
- Innovation

Key for  
**innovation-driven**  
economies

## Results and Analysis

➤ Top 10 rankings (out of 102)

COUNTRY	GCI
Finland	1
United States	2
Sweden	3
Denmark	4
Taiwan	5
Singapore	6
Switzerland	7
Iceland	8
Norway	9
Australia	10

➤ Top 10 transition economies (out of 102)

RANKING	GCI
Estonia	22
Slovenia	31
Hungary	33
Latvia	37
Czech Republic	39
Lithuania	40
Slovak Republic	43
China	44
Poland	45
Croatia	53

## Results and Analysis

In the Survey, Finland emerges as the most competitive economy in the world. It performs well not only in terms of overall macroeconomic management but also scores very high on those measures which assess the quality of its public institutions. Finland, as do most Scandinavian countries, exhibits very low levels of corruption and its firms operate in a legal environment where there is widespread respect for contracts and the rule of law.

<b>RANKING</b>	<b>Finland</b>
<b>GCI</b>	<b>1</b>
<b>Macro environment</b>	<b>2</b>
<b>Public institutions</b>	<b>2</b>
<b>Technology</b>	<b>2</b>

## Results and Analysis

In the USA, which scores 2nd on the GCI, performance is a little more uneven. The country exhibits primacy in the area of technology, with specially high scores for such indicators as company spending on R&D, the creativity of the scientific community, personal computer use and internet penetration rates. However, this is offset by lower scores on the public institutions and macroeconomic environment indexes.

<b>RANKING</b>	<b>USA</b>
<b>GCI</b>	<b>2</b>
<b>Technology</b>	<b>1</b>
<b>Public inst.</b>	<b>17</b>
<b>Macro envir.</b>	<b>14</b>



## Results and Analysis

What are some key insights that can be gained from the results of the GCI?

(1) A strong macro performance without strong public institutions does not equal a competitively placed economy.

This is well demonstrated by examples such as China. The country has a relatively strong macroeconomic performance, but performs poorly on the public institutions index.

<b>RANKING</b>	<b>CHINA</b>
<b>GCI</b>	<b>44</b>
<b>Macro envir.</b>	<b>25</b>
<b>Public inst.</b>	<b>52</b>
<b>Technology</b>	<b>65</b>

## Results and Analysis

Furthermore, strong growth and stability at the present time offer no guarantee of a sustainable performance. This would be a particularly valuable lesson for countries such as the Russian Federation which have exhibited strong growth, and an improved fiscal and balance-of-payments performance over the past five years. Its recovery from crisis has been impressive but sustained growth will be difficult without substantial improvement in the quality of its public institutions, where Russia clearly ranks low.

## Results and Analysis

(2) Openness and sustained economic reforms are important for increased competitiveness.

Countries such as Estonia, Hungary, Latvia and Slovenia are examples of the benefits of coherent policies implemented over prolonged periods of time. Estonia is the only country that has had to *introduce* agricultural subsidies and import duties to join the EU.

Ranking	Estonia	Hungary	Latvia	Slovenia
GCI	22	33	37	31
Macro	34	38	36	37
Public Institutions	28	33	45	35
Technology	10	32	26	24

## Results and Analysis

(3) Globalization is important, but so is the domestic policy environment.

Chile and Argentina have long faced the same external environment yet the two neighbours display a 50-country gap in their ranks in the GCI. There may well be many forces outside the control of governments, but a great deal can be achieved by good macroeconomic management and sustained, coherent reforms.

<b>RANKING</b>	<b>Chile</b>	<b>Argentina</b>
<b>GCI</b>	<b>28</b>	<b>78</b>
<b>Macro envir.</b>	<b>35</b>	<b>93</b>
<b>Public inst.</b>	<b>19</b>	<b>88</b>
<b>Technology</b>	<b>31</b>	<b>45</b>

**Table 1: Sub-index weighting scheme according to the Global Competitiveness Report**

	<b>STAGES OF DEVELOPMENT</b>				
	<b>Stage 1: Factor- Driven</b>	<b>Transition from Stage 1 to Stage 2</b>	<b>Stage 2: Efficiency- Driven</b>	<b>Transition from Stage 2 to Stage 3</b>	<b>Stage 3: Innovation- Driven</b>
<b>GDP per capita (US\$) thresholds</b>	<2,000	2,000-2,999	3,000-8,999	9,000-17,000	>17,000
<b>Weight for basic requirements sub index</b>	60%	40-60 %	40%	20-40 %	20%
<b>Weight for efficiency enhancers sub index</b>	35%	35-50 %	50%	50%	50%
<b>Weight for innovation and sophistication factors sub index</b>	5%	5-10 %	10%	10-30 %	30%

**Source: WEF, Global Competitiveness Report, 2011-2012.**

Based on the sub - index weights displayed in the Table 1, WEF computes the score values of the countries and makes the ranking accordingly in the Global Competitiveness Report. After weighting, based on the values in Table 1, WEF and then weights pillars equally within each of these three categories of competitiveness factors. Thus, it becomes more inferable to obtain different score values for the countries at different development stages.

**Table 2: Ranking and score values of Turkey according to 12 pillars of competitiveness in the Global Competitiveness Report**

PILLARS	RANK	SCORE		RANK	SCORE
Basic Requirements	64	4,61	Institutions	80	3,69
			Infrastructure	51	4,39
			Macroeconomic Environment	69	4,76
			Health and Primary Education	75	5,62
Efficiency Enhancers	52	4,22	Higher Education and Training	74	4,02
			Goods Market Efficiency	47	4,38
			Labor Market Efficiency	133	3,51
			Financial Market Development	55	4,26
			Technological Readiness	55	3,95
			Market Size	17	5,19
Innovation and Sophistication Factors	58	3,62	Business Sophistication	58	4,09
			Innovation	69	3,15

Source: WEF, Global Competitiveness Report 2011-2012

# Global Competitiveness Report prepared by World Economic Forum (WEF)

## Turkey Ranking

According to Table 2, Turkey highly benefits from its market size since Turkey is at the 17th rank, at the 47th rank in goods market efficiency and Turkey is at 51th rank in the view of infrastructure which is regarded as reasonably developed. However, regarding the labor market efficiency, health and primary education and higher education and training rankings, it is apparent that Turkey should improve its efficiency in the labor market and focus on improving its human sources by ameliorating health and education services for achieving higher development stages.

# What is the IMD World Competitiveness Yearbook?

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The IMD World Competitiveness Yearbook (WCY), first published in 1989, is a comprehensive annual report and worldwide reference point on the competitiveness of countries. It provides benchmarking and trends, as well as statistics and survey data based on extensive research. It analyzes and ranks countries according to how they manage their competencies to achieve long-term value creation. An economy's competitiveness cannot be reduced only to GDP and productivity because enterprises also have to cope with political, social and cultural dimensions. The Yearbook provides extensive coverage of 63 economies, chosen based on the availability of comparable international statistics and our collaboration with local Partner Institutes, which contribute to the collection of survey data and ensure that all data are reliable, accurate and as up-to-date as possible. This year, we have the privilege of collaborating with a unique global network of 55 Partner Institutes.



# The World Competitiveness Yearbook published by Institute for Management Development (IMD)

## • Competitiveness Factors

<b>Economic Performance</b> (82 criteria)	Macro-economic evaluation of the domestic economy: Domestic Economy, International Trade, International Investment, Employment and Prices.
<b>Government Efficiency</b> (70 criteria)	Extent to which government policies are conducive to competitiveness: Public Finance, Fiscal Policy, Institutional Framework, Business Legislation and Societal Framework.
<b>Business Efficiency</b> (67 criteria)	Extent to which the national environment encourages enterprises to perform in an innovative, profitable and responsible manner: Productivity and Efficiency, Labor Market, Finance, Management Practices and Attitudes and Values.
<b>Infrastructure</b> (110 criteria)	Extent to which basic, technological, scientific and human resources meet the needs of business: Basic Infrastructure, Technological Infrastructure, Scientific Infrastructure, Health and Environment and Education.

# IMD methodology

TABLE 2 • The Breakdown of Competitiveness Factors



## Economic Performance

Domestic Economy

International Trade

International Investment

Employment

Prices



## Government Efficiency

Public Finance

Fiscal Policy

Institutional Framework

Business Legislation

Societal Framework



## Business Efficiency

Productivity

Labor Market

Finance

Management Practices

Attitudes and Values



## Infrastructure

Basic Infrastructure

Technological Infrastructure

Scientific Infrastructure

Health and Environment

Education

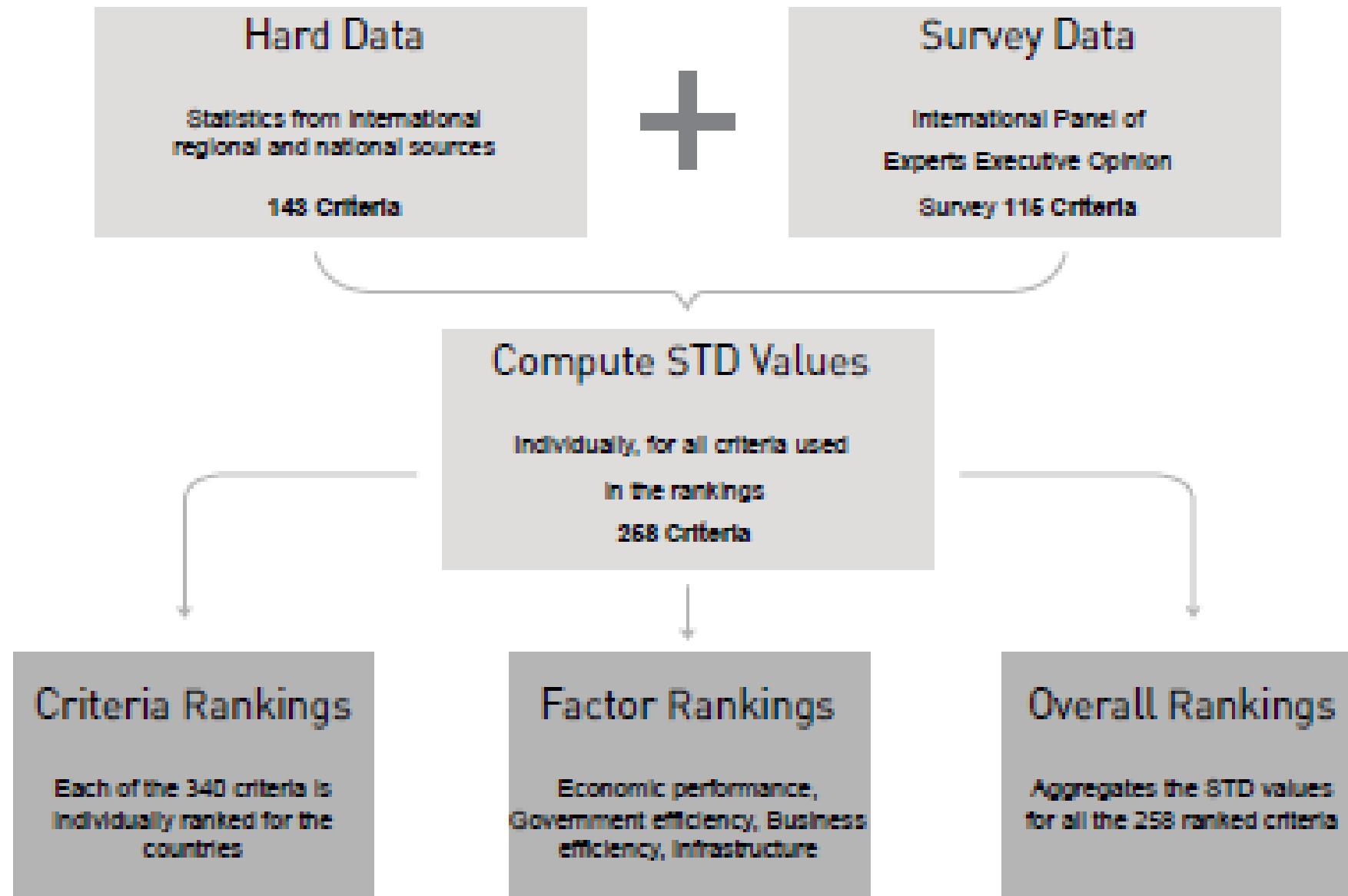
# How are the rankings computed?

Table 3. Criteria Details

Ranking/Report	Criteria			
	<i>Hard Data</i>	<i>Survey</i>	<i>Background</i>	<i>total</i>
World Competitiveness	143	115	82	340
World Digital Competitiveness	30	20	NA	50
World Talent	12	18	NA	30

The essential building block for the rankings is the standardized value for all the criteria (i.e., STD value). The first step is to compute the STD value for each criterion using the data available for all the economies (see the next section Data Processing Methodology for more detail). We then rank the economies based on the criteria that are used in the aggregation: a combination of hard and survey data. Additional criteria are presented for background information only; they are not included in the aggregation of data to determine the overall rankings. Details on the type and number of criteria used in the calculation of each of the rankings are presented in **Table 3**.

Figure 1. Computing the Rankings



# Data Processing Methodology

As distinct criteria exhibit different scales and units, a comparable standard measure – the Standard Deviation Method (SDM) – is used to compute the overall, factor and sub-factor results. It measures the relative difference between the economies' performances, resulting in a more accurate assessment of each country's relative position in the final rankings.

STD values are calculated for each individual criterion, based on the STD method described above. All hard data indicators are reviewed to determine the shape of the distribution. Non-normally distributed data are normalized by taking the log. The STD is then calculated using the logged values.

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{N}}$$

Where:

$x_i$  = original value

$\bar{x}$  = average value of all the economies

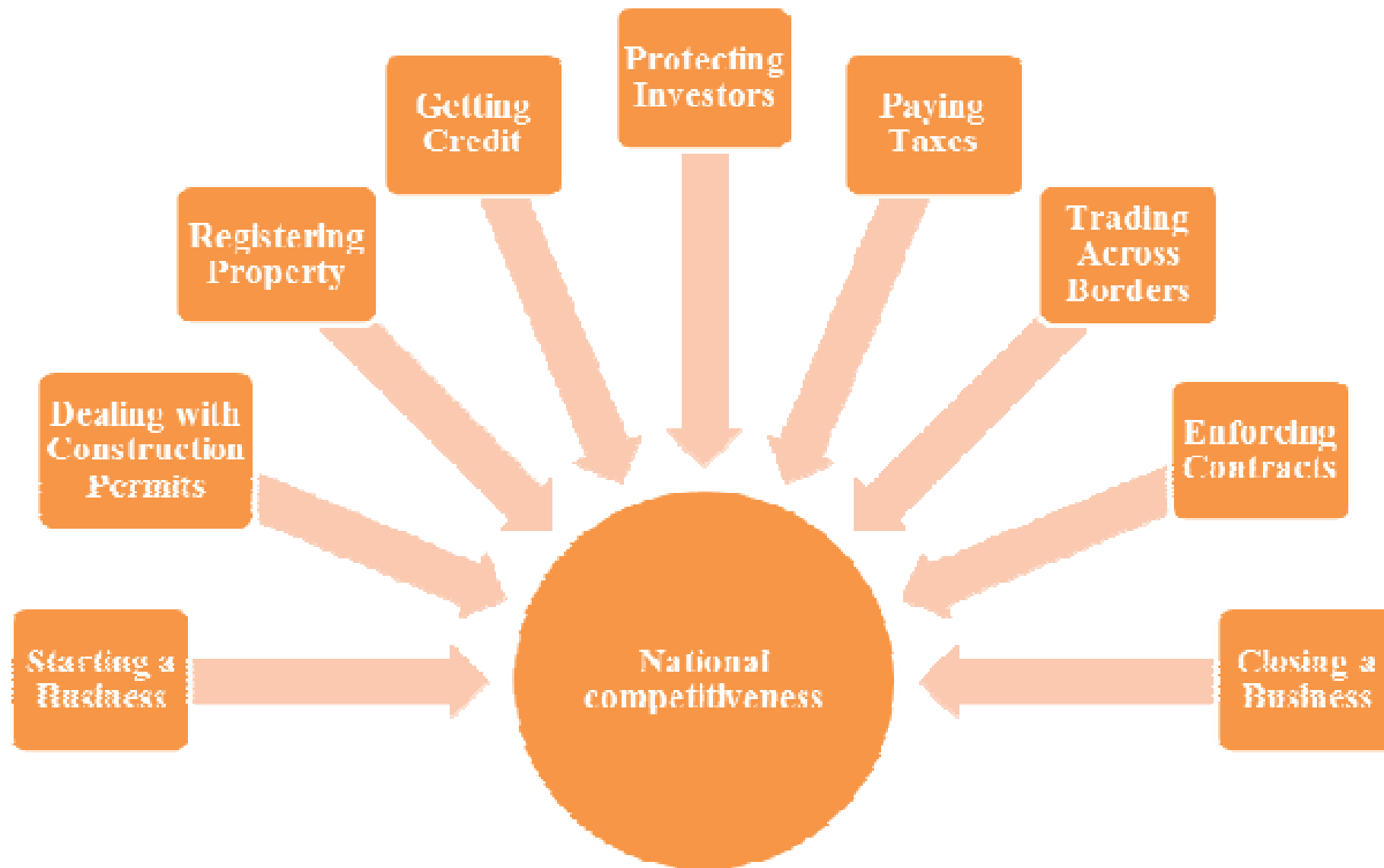
$N$  = number of economies

$S$  = standard deviation

$$(\text{STD value})_i = \frac{x_i - \bar{x}}{S}$$

# **Business Competitiveness - Ease of Doing Business Report prepared by International Finance Corporation (IFC)**

**Business Competitiveness** - Ease of Doing Business Report prepared by International Finance Corporation (IFC) is also a source of computing the national competitiveness. According to Ease of Doing Business Report, 9 indicators are taken into account in the computation of the score values of the countries for 183 economies



**Figure 3: Indicators for National Competitiveness used in Ease of Doing Business Report**

**Source: Ease of Doing Business Report prepared by IFC and World Bank.**

# **Business Competitiveness - Ease of Doing Business Report prepared by International Finance Corporation (IFC)**

Doing Business Report focuses on the business sector and evaluates the economies in the view of how difficult or easy for a business to run when complying with the regulations. This publication doesn't include any macroeconomic conditions or financial systems while computing the score values; it just focuses on the business sector to understand the availability of regulatory environment for business.



# **Business Competitiveness - Ease of Doing Business Report prepared by International Finance Corporation (IFC)**

Doing Business measures aspects of business regulation affecting domestic small and medium-size firms defined based on standardized case scenarios and located in the largest business city of each economy. In addition, for 11 economies a second city is covered.

Doing Business covers 11 areas of business regulation across 190 economies. Ten of these areas—starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency—are included in the distance to frontier score and ease of doing business ranking.

Doing Business also measures features of labor market regulation, which is not included in these two measures.

# **Business Competitiveness - Ease of Doing Business Report prepared by International Finance Corporation (IFC)**

Doing Business relies on four main sources of information: the relevant laws and regulations, Doing Business respondents, the governments of the economies covered and the World Bank Group regional staff. [?](#)

More than 43,000 professionals in 190 economies have assisted in providing the data that inform the Doing Business indicators over the past 15 years. [?](#)

Doing Business data are widely used by governments, researchers, international organizations and think tanks to guide policies, conduct research and develop new indexes.

# Business Competitiveness

What is measured in *Doing Business*?



Doing Business focuses on key areas of interaction between the government and entrepreneurs, where policy makers and regulators can directly influence procedures to facilitate these interactions.

**TABLE 2.1** *What Doing Business* measures—11 areas of business regulation

Indicator set	What is measured
Starting a business	Procedures, time, cost and paid-in minimum capital to start a limited liability company
Dealing with construction permits	Procedures, time and cost to complete all formalities to build a warehouse and the quality control and safety mechanisms in the construction permitting system
Getting electricity	Procedures, time and cost to get connected to the electrical grid, the reliability of the electricity supply and the transparency of tariffs
Registering property	Procedures, time and cost to transfer a property and the quality of the land administration system
Getting credit	Movable collateral laws and credit information systems
Protecting minority investors	Minority shareholders' rights in related-party transactions and in corporate governance
Paying taxes	Payments, time and total tax and contribution rate for a firm to comply with all tax regulations as well as post-filing processes
Trading across borders	Time and cost to export the product of comparative advantage and import auto parts
Enforcing contracts	Time and cost to resolve a commercial dispute and the quality of judicial processes
Resolving insolvency	Time, cost, outcome and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency
Labor market regulation	Flexibility in employment regulation and aspects of job quality

**TABLE 2.3** Advantages and limitations of the *Doing Business* methodology

Feature	Advantages	Limitations
Use of standardized case scenarios	Makes data comparable across economies and methodology transparent	Reduces scope of data; only regulatory reforms in areas measured can be systematically tracked
Focus on largest business city <sup>a</sup>	Makes data collection manageable (cost-effective) and data comparable	Reduces representativeness of data for an economy if there are significant differences across locations
Focus on domestic and formal sector	Keeps attention on formal sector—where regulations are relevant and firms are most productive	Unable to reflect reality for informal sector—important where that is large—or for foreign firms facing a different set of constraints
Reliance on expert respondents	Ensures that data reflect knowledge of those with most experience in conducting types of transactions measured	Indicators less able to capture variation in experiences among entrepreneurs
Focus on the law	Makes indicators “actionable”—because the law is what policy makers can change	Where systematic compliance with the law is lacking, regulatory changes will not achieve full results desired

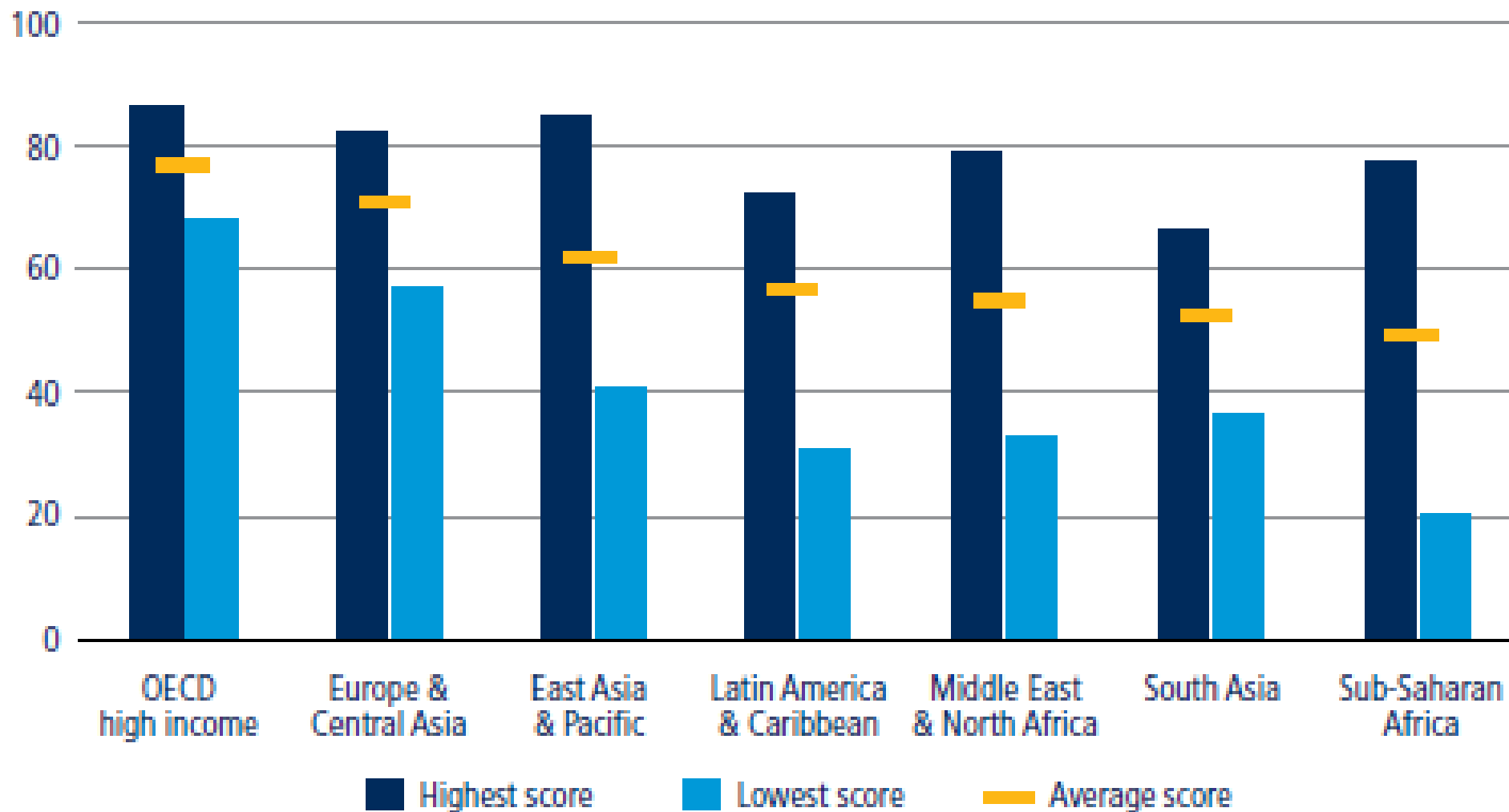
a. In economies with a population of more than 100 million as of 2013, *Doing Business* covers business regulation in both the largest and second largest business city.

# Business Competitiveness

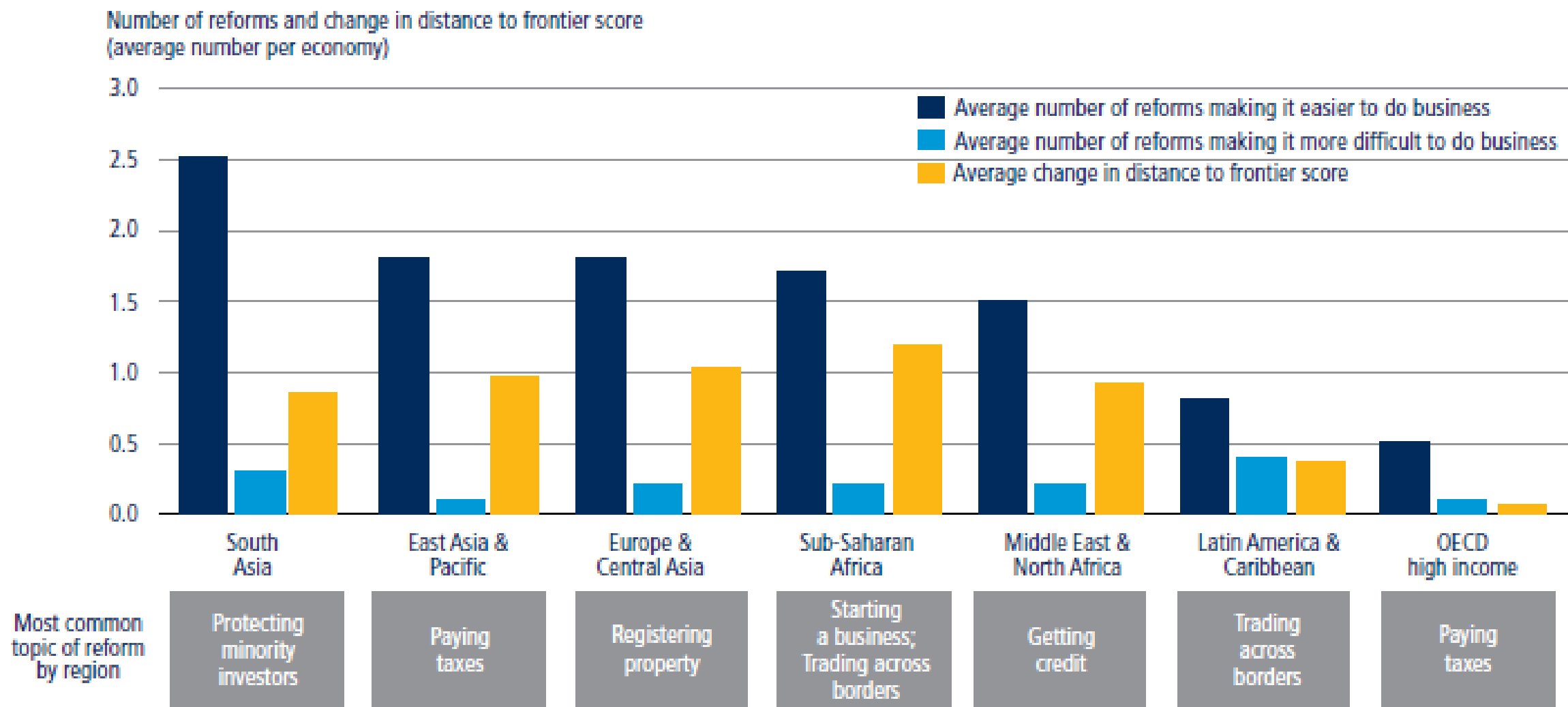
What can the Doing Business 2018 data tell us about global patterns? Good regulatory practices are present in almost all of the world's regions. Aside from 28 OECD high-income economies, the 50 highest ranked economies include 13 from Europe and Central Asia, five from East Asia and the Pacific, two from Sub-Saharan Africa and one each from the regions of Latin America and the Caribbean and the Middle East and North Africa. Each region also has a relatively wide spectrum of strong and weak performers. Economies are ranked based on the distance to frontier score. This measure shows the distance of each economy to the “frontier,” which represents the best performance observed on each of the indicators across all economies in the Doing Business sample (box 1.1). In OECD high-income economies, for example, New Zealand, Denmark and Korea have the highest overall distance to frontier scores at 86.55, 84.06 and 83.92, respectively. Conversely, Greece, Luxembourg and Chile have the lowest scores in this group, at 68.02, 69.01 and 71.22. However, the OECD high-income group has the smallest gap between the highest and the lowest scores, of only 18.53 percentage points (figure 1.2). Sub-Saharan Africa has the widest gap (57.56 percentage points), with a regional average score of only 50.43—the lowest across all regions. Among the economies of Sub-Saharan Africa, Mauritius has the highest distance to frontier score (77.54), while Somalia the lowest (19.98).

**FIGURE 2** Where it is easier to do business and where it is more difficult

Distance to frontier score (0–100)



**FIGURE 3** The average number of reforms per economy is highest in South Asia but the average impact is biggest in Sub-Saharan Africa



Source: Doing Business database.

Note: The average change in the distance to frontier score shows the change between *Doing Business 2018* and *Doing Business 2017*.



**Table 3: Rankings of Turkey and 11 countries in line with the indicators used in the Ease of Doing Business Report**

Indicators	Brazil	China	Colombia	Egypt	India	Indonesia	Korea	Malaysia	Russia	South Africa	Turkey	Vietnam
Starting a business	128	151	73	18	165	155	60	113	108	75	63	100
Dealing with construction permits	112	181	32	154	177	60	22	108	182	52	137	62
Registering property	122	38	55	93	94	98	74	60	51	91	38	43
Getting credit	89	65	65	72	32	116	15	1	89	2	72	15
Protecting investors	74	93	5	74	44	44	74	4	93	10	59	173
Paying taxes	152	114	118	136	164	130	49	23	105	24	75	124
Trading across borders	114	50	99	21	100	47	8	37	162	149	76	63
Enforcing contracts	98	15	150	143	182	154	5	59	18	85	26	31
Closing a business	132	68	29	131	134	142	13	55	103	74	115	124

**Source: Ease of Doing Business Report prepared by International Finance Corporation and World Bank**

**Table 4: Rank and Score Values of Turkey and other 11 countries**

<b>Countries</b>	<b>Global Competitiveness Report 2011-2012 (WEF)</b>		<b>World Competitiveness Report 2011 (IMD)</b>		<b>Ease of Doing Business Report (IFC) 2011</b>
	<b>Rank</b>	<b>Score</b>	<b>Rank</b>	<b>Score</b>	<b>Rank</b>
<b>Brazil</b>	53	4,32	44	61,04	127
<b>China</b>	26	4,90	19	81,10	79
<b>Colombia</b>	68	4,20	46	59,77	34
<b>Egypt</b>	94	3,88	53(̂)	50,55(̂)	94
<b>India</b>	56	4,30	32	70,65	134
<b>Indonesia</b>	46	4,38	37	64,61	121
<b>Korea</b>	24	5,02	22	78,50	16
<b>Malaysia</b>	21	5,08	16	84,12	21
<b>Russia</b>	66	4,21	49	58,38	123
<b>South Africa</b>	50	4,34	52	56,86	39
<b>Turkey</b>	59	4,28	39	63,79	65
<b>Vietnam</b>	65	4,24	36 (̂)	65,36(̂)	78

Source: The World Competitiveness Yearbook 2011, Ease of Doing Business Report 2011 and the Global Competitiveness Yearbook 2011-2012

\* Since these values are not given in IMD's Global Competitiveness Yearbook, they're estimated by using missing value obtaining techniques.

## Differences in the indices

Table 4 gives the rankings of mentioned countries based on three well known competitiveness indices. So, it is clearly seen that ranking of a country is different for each index. This situation arises from the difference in the variables used in the indices and weighting scheme assigned for each variable. First of all, IMD and WEF don't use the same variables, for example WEF uses 116 variables in its computation of national competitiveness, whereas IMD uses 341 variables in its computation and these variables are changing. Moreover, while WEF gives specific and unequal weights for each indicator, IMD assigns equal weights for all variables. So, it is not something surprising to encounter such a difference in the rankings of the countries. Nevertheless, to determine which index is more reliable and more accurate, correlations between these indices may be guiding. In this regard, the correlation between WEF's Global Competitiveness Index and Doing Business Report is 0.408, the correlation between IMD's World Competitiveness Yearbook and Doing Business Report is 0,305 and the correlation between WEF's Global Competitiveness Index and IMD's World Competitiveness Yearbook is 0,867.

## Differences in the indices

In comparison of WEF's Global Competitiveness Index and IMD's World Competitiveness Yearbook, IMD's World Competitiveness Report is useful for different communities since it uses larger amount of variables than WEF. This Report addresses to business sector, academy and also to the government. Nevertheless, IMD gives equal weights to the variables while computing the index, but, WEF uses a different weighting scheme in its computations. The methods used in these indices show that WEF focuses on the variables which are suitable for achieving high economic growth and WEF's Global Competitiveness Index is more appropriate for the developed countries in this respect. Therefore, it receives more attention in the world and it is regarded as more reliable.

## Percentages of the Rankings

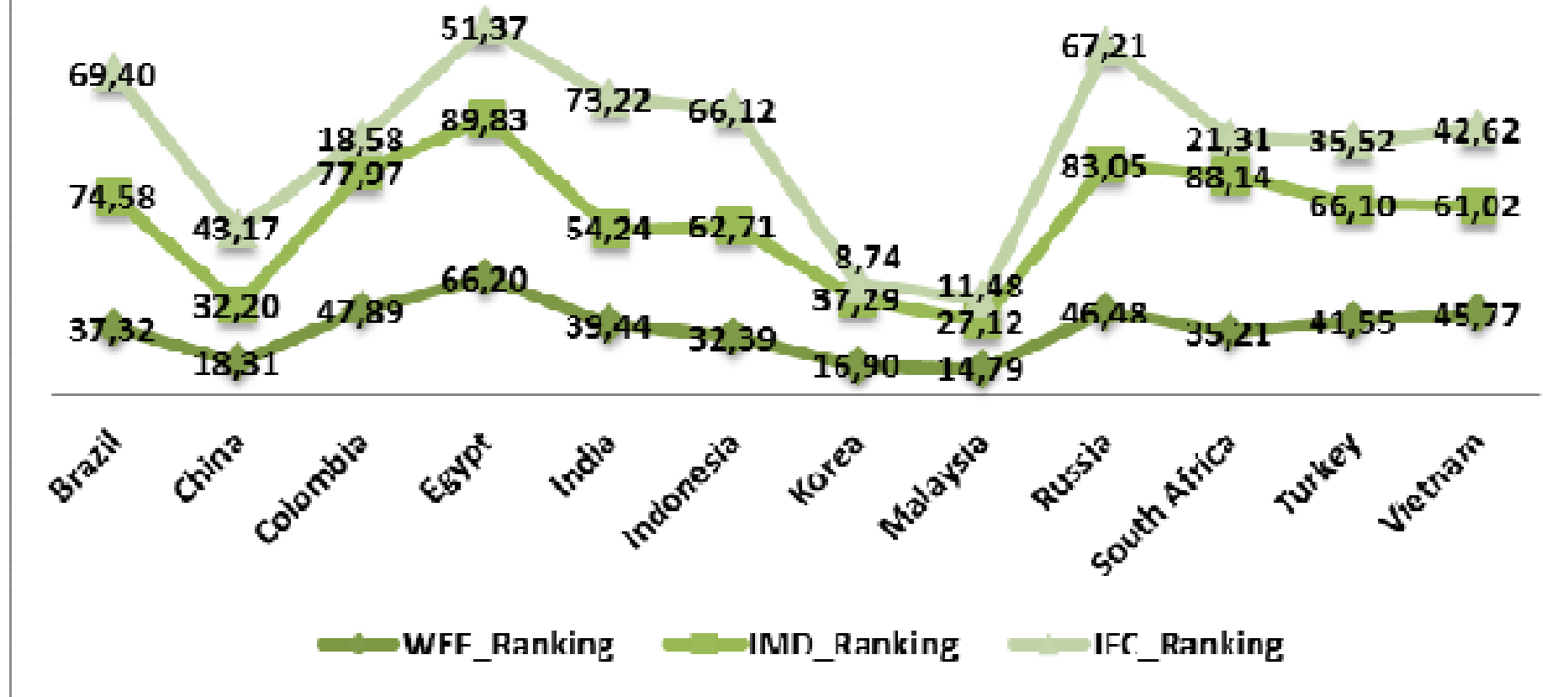


Figure 4: Percentages of the ranking for each index

Source: WEF, IMD, IFC Rankings

Percentages of the rankings can be seen from the figure given above. These percentages are calculated by dividing the rankings to the number of the economies used in each index. Based on this graph, Turkey lies in top 36% (59/142) of the 142 countries according to WEF's Global Competitiveness Index, lies in top 66% (39/59) of the 59 countries according to IMD's World Competitiveness Yearbook and lies in top 42 % (65/183) of the 183 countries according to IFC's Ease of Doing Business Report. To determine the reliability of this method, it is necessary to look at the correlations of the indices after taking percentages of the rankings. As can be seen from the figure given above, the percentage values of each index moves on the same direction. After taking the percentages of the rankings of each index, the correlation between WEF and IMD is 0,837, the correlation between WEF and IFC is 0,397 and the correlation between IMD and IFC is 0,331. These correlations of percentage rankings are approximately same as the correlations of rankings of each index. So, it implies that taking the percentages of the rankings for each index is beneficial to interpret the competitiveness of the mentioned countries.

Thank  
you



## Part II. Hungary: Results

Growth Competitiveness Index: Hungary among the transition economies

<b>RANKING</b>	<b>GCI</b>	<b>Technology</b>	<b>Public institutions</b>	<b>Macro environment</b>
Estonia	22	10	28	34
Slovenia	31	24	35	37
Hungary	33	32	33	38
Latvia	37	26	45	36
Czech Republic	39	21	47	39
Lithuania	40	36	41	41
Slovak Republic	43	33	51	50
China	44	65	52	25
Poland	45	34	58	49
Croatia	53	41	67	55
Vietnam	60	73	61	45
Bulgaria	64	63	62	73
Russian Federation	70	69	81	61
Romania	75	55	86	81
Serbia	77	66	77	87
Macedonia	81	70	93	80
Ukraine	84	84	94	70



## Part II. Hungary: Results

### The Macroeconomic Environment Index

Hungary is placed 5th (out of 17) among the transition economies and 38th in the world

Country	Macroeconomic Environment Index	Macroeconomic Stability Subindex	2.01 Recession Expectations	8.05 Access to credit	3.28 Inflation	3.3 Interest rate	3.29 Real Exchange rate	3.24 Govt surplus	3.26 Savings rate	Country Credit Rating	Waste
China	25	4	7	63	5	20	94	48	2	34	35
Estonia	34	25	6	5	57	31	84	10	58	36	26
Latvia	36	12	3	10	24	41	88	41	32	44	28
Slovenia	37	53	56	12	78	43	39	44	26	29	31
Hungary	38	66	37	25	69	12	78	86	52	30	41
Czech Republic	39	27	35	26	20	27	85	61	40	32	71
Lithuania	41	14	11	8	9	48	100	29	70	46	57
Vietnam	45	16	1	21	56	11	52	71	7	67	40
Poland	49	62	67	73	24	52	80	72	79	33	65
Slovak Republic	50	44	24	9	50	23	74	82	37	43	64
Croatia	55	51	59	15	32	77	51	78	51	49	59
Russian Federatio	61	61	34	49	93	76	62	12	10	55	76
Ukraine	70	42	51	64	12	94	96	13	17	78	85
Bulgaria	73	76	75	75	72	55	91	24	80	57	86
Macedonia	80	67	85	89	37	65	6	66	97	83	79
Romania	81	81	47	60	98	74	86	43	53	66	96
Serbia	87	86	77	68	95	90	9	65	95	93	56

## Part II. Hungary: Results

### Public Institutions Index

Hungary is placed 2nd (out of 17) among the transition economies and 33rd in the world

Country	Public Institutions Index	Contracts and Law Subindex	Judicial Independence	Property rights	Favoritism in decisions of government officials	organized crime	Corruption Subindex	Irregular payments in exports & imports	Irregular payments in public utilities	Irregular payments in tax collection
Estonia	28	32	22	32	29	41	27	27	31	26
Hungary	33	39	29	37	67	46	28	33	30	22
Slovenia	35	43	45	46	49	37	32	31	33	29
Lithuania	41	58	65	51	38	65	34	40	32	36
Latvia	45	44	47	48	24	51	49	51	49	50
Czech Republic	47	61	46	72	68	62	41	41	39	45
Slovak Republic	51	70	68	60	76	78	40	60	34	38
China	52	60	62	64	43	60	50	43	60	52
Poland	58	66	51	69	69	74	53	52	57	49
Vietnam	61	54	53	62	31	61	61	76	64	64
Bulgaria	62	92	78	92	87	93	35	35	44	31
Croatia	67	81	79	90	73	71	54	57	53	54
Serbia	77	77	80	87	50	79	74	78	82	63
Russian Federation	81	91	81	96	81	87	75	87	79	59
Romania	86	83	82	79	93	67	90	98	86	70
Macedonia	93	96	88	99	78	99	86	91	76	74
Ukraine	94	94	83	100	82	91	89	94	74	89

## Part II. Hungary: Results

### Technology Index: Innovation subindex

Hungary is placed 5th (out of 17) among the transition economies and 32nd in the world

Country	Technology Index	Innovation subindex	Technological sophistication	Firm-level technology absorption	Company spending on research and development	University/industry research collaboration	Patents	Tertiary enrollment
Estonia	10	26	24	19	44	41	29	17
Czech Republic	21	45	38	53	42	34	30	45
Slovenia	24	23	33	46	20	33	26	11
Latvia	26	22	31	38	24	32	72	10
Hungary	32	38	47	68	67	61	28	36
Slovak Republic	33	44	37	26	54	38	36	44
Poland	34	29	50	54	45	42	53	19
Lithuania	36	30	56	25	40	47	49	23
Croatia	41	48	80	35	57	46	32	46
Romania	55	56	75	65	76	65	60	52
Bulgaria	63	43	79	95	79	80	50	35
China	65	70	48	58	29	20	55	78
Serbia	66	62	96	86	80	70	72	54
Russian Federation	69	27	61	66	70	56	38	8
Macedonia	70	63	88	93	83	82	72	53
Vietnam	73	69	71	15	30	40	72	75
Ukraine	84	36	68	67	81	36	47	33

## Part II. Hungary: Results

Technology Index: ICT subindex

Country	Technology Index	ICT subindex	Internet access in schools	Quality of competition in the ISP sector	Government prioritization of ICT	Government success in ICT promotion	Laws relating to ICT	Mobile	Internet Users	Internet hosts	Phone lines	PC
Estonia	10	20	13	5	18	12	6	26	16	17	35	28
Czech Republic	21	30	29	47	62	77	35	8	31	24	32	35
Slovenia	24	26	21	59	58	55	23	13	19	29	30	23
Latvia	26	34	28	40	52	43	28	38	40	34	36	30
Hungary	32	35	27	94	50	65	49	28	36	27	34	40
Slovak Republic	33	37	38	67	75	78	47	32	35	31	43	29
Poland	34	41	39	71	84	81	46	41	44	30	37	43
Lithuania	36	38	35	58	54	52	45	35	39	33	40	39
Croatia	41	39	43	83	49	64	61	36	34	43	31	33
Romania	55	54	45	72	73	49	50	59	48	55	53	62
Bulgaria	63	49	59	70	88	85	70	56	46	47	33	52
China	65	62	54	52	32	24	51	61	58	84	56	72
Serbia	66	55	72	91	45	57	65	48	53	56	47	68
Russian Federation	69	56	61	80	78	86	76	67	64	50	46	42
Macedonia	70	63	63	76	85	89	84	68	68	59	42	#N/A
Vietnam	73	82	71	85	34	15	54	85	76	95	77	81
Ukraine	84	70	77	75	69	82	85	81	84	57	51	73

## Part II. Hungary: Results

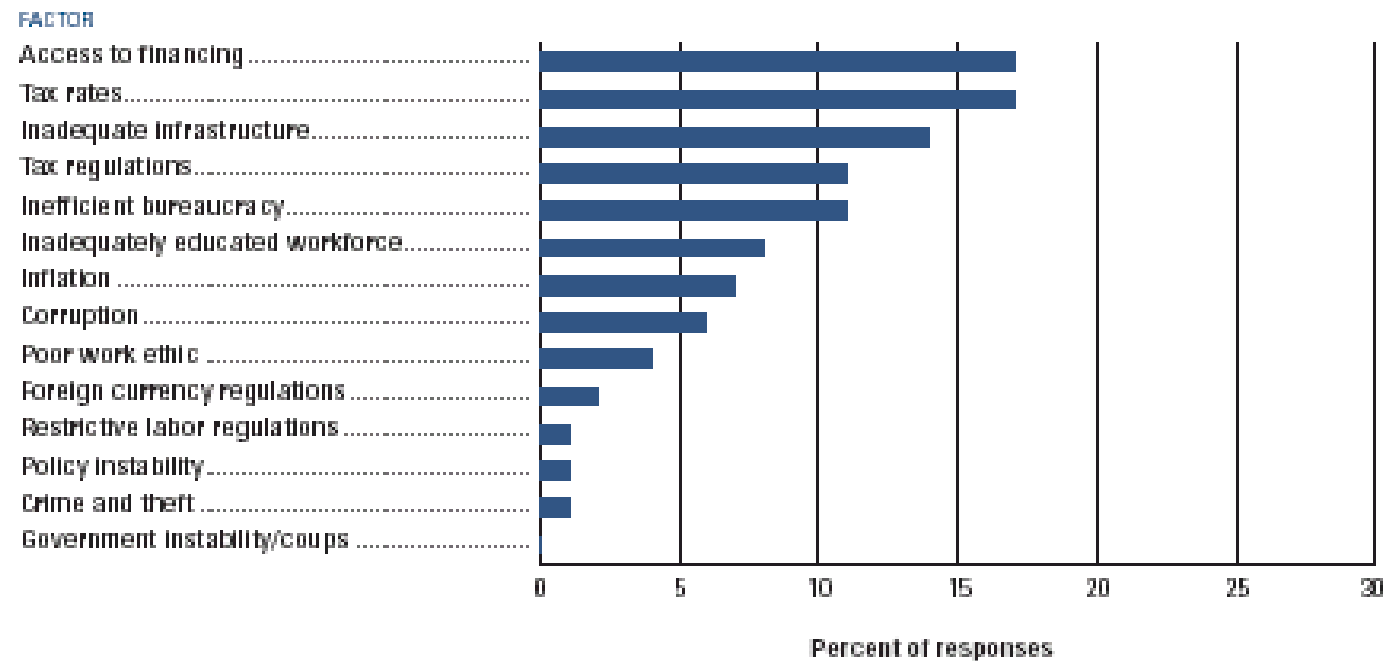
### Technology Index: Technology Transfer subindex

Hungary is placed 5th (out of 17) among the transition economies and 32nd in the world

<b>Country</b>	<b>Technology Index</b>	<b>Tech Transfer Subindex</b>	<i>FDI and technology transfer</i>	<i>Prevalence of foreign technology licensing</i>
Estonia	<b>10</b>	11	3	25
Czech Republic	<b>21</b>	5	4	10
Slovenia	<b>24</b>	50	63	34
Latvia	<b>26</b>	19	28	10
Hungary	<b>32</b>	21	6	40
Slovak Republic	<b>33</b>	16	5	29
Poland	<b>34</b>	26	24	29
Lithuania	<b>36</b>	42	40	40
Croatia	<b>41</b>	43	64	14
Romania	<b>55</b>	38	32	40
Bulgaria	<b>63</b>	67	69	65
China	<b>65</b>	47	42	44
Serbia	<b>66</b>	60	55	55
Russian Federation	<b>69</b>	69	71	67
Macedonia	<b>70</b>	59	59	52
Vietnam	<b>73</b>	30	16	44
Ukraine	<b>84</b>	71	74	67

## Part II. Hungary: Results

### The Most Problematic Factors for Doing Business



Note: From a list of 14 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

## Part II. Hungary: Results

### NOTABLE COMPETITIVE ADVANTAGES

	RANK/102
Macroeconomic Environment	
Interest rate spread, 2002	12
Extent of distortive government subsidies	14
Access to credit	25
Country credit rating, 2003	30
Public Institutions	
Irregular payments in tax collection	22
Judicial independence	29
Irregular payments in public utilities	30
Technology	
FDI and technology transfer	6
Internet access in schools	27
Internet hosts, 2002	27
Utility patents, 2002	28
Cellular telephones, 2002	28

# Part II. Hungary: Results

## NOTABLE COMPETITIVE DISADVANTAGES

	RANK/102
Macroeconomic Environment	
Government surplus/deficit, 2002	86
Real exchange rate, 2002	78
Inflation, 2002	69
National savings rate, 2002	52
Public trust of politicians	47
Diversion of public funds	41
Recession expectations	37
Public Institutions	
Favoritism in decisions of government officials	67
Organized crime	46
Property rights	37
Irregular payments in exports and imports	33
Technology	
Quality of competition in the ISP sector	94
Firm-level technology absorption	68
Company spending on research and development	67
Government success in ICT promotion	65
University/industry research collaboration	61
Government prioritization of ICT	50
Laws relating to ICT	49
Technological sophistication	47
Prevalence of foreign technology licensing	41
Personal computers, 2002	40
Tertiary enrollment	36
Internet users, 2002	36
Telephone lines, 2002	34



# KAZAKHSTAN

## OVERALL PERFORMANCE (63 countries)



## CHALLENGES IN 2018

- Maintaining macroeconomic stability.
- Ensuring a favorable business climate.
- Development of economic sectors, including the digital component.
- Development of transport and logistics infrastructure.
- Improving the quality of human capital.

Provided by:

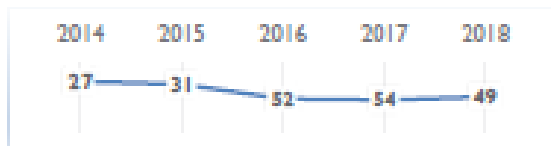
Economic Research Institute, JSC of the Ministry of National Economy, Astana

## BASIC FACTS

	Astana	Rank
Capital		
Land area (square km '000)	2,725 <sup>2017</sup>	
Exchange Rate (per \$)	326,001 <sup>2017</sup>	
Population - market size (millions)	18.04 <sup>2017</sup>	32
Gross Domestic Product (GDP) (US\$ billions)	158.2 <sup>2017</sup>	49
GDP (PPP) per capita (US\$)	26,477 <sup>2017</sup>	44
Real GDP growth (%)	4.0 <sup>2017</sup>	15
Consumer price inflation (%)	7.43 <sup>2017</sup>	59
Unemployment rate (%)	4.90 <sup>2017</sup>	24
Labor force (millions)	8.99 <sup>2017</sup>	33
Current account balance (% of GDP)	-2.95 <sup>2017</sup>	54
Direct Investment stocks Inward (\$bn)	129.8 <sup>2016</sup>	35
Direct Investment flows Inward (% of GDP)	2.87 <sup>2017</sup>	24

## KAZAKHSTAN

## ECONOMIC PERFORMANCE



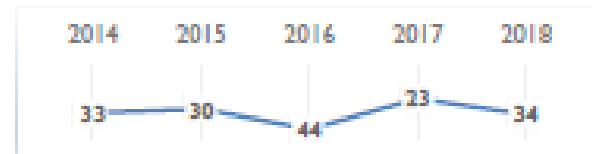
Sub-Factor Rankings :	2017	2018
Domestic Economy	40	46
International Trade	62	56
International Investment	18	28
Employment	32	26
Prices	53	48

## GOVERNMENT EFFICIENCY



Sub-Factor Rankings :	2017	2018
Public Finance	4	19
Tax Policy	10	14
Institutional Framework	46	50
Business Legislation	22	28
Societal Framework	30	28

## BUSINESS EFFICIENCY



Sub-Factor Rankings :	2017	2018
Productivity & Efficiency	38	42
Labor Market	7	13
Finance	40	42
Management Practices	14	29
Attitudes and Values	11	33

## INFRASTRUCTURE



Sub-Factor Rankings :	2017	2018
Basic Infrastructure	32	24
Technological Infrastructure	43	49
Scientific Infrastructure	49	47
Health and Environment	53	56
Education	35	29

**TABLE 3.1 Economies in Europe and Central Asia recorded the highest share of reforms making it easier to do business in 2016/17**

Area of reform	Number of reforms in 2016/17	Region with the highest share of reformers in 2016/17
Starting a business	38	South Asia
Dealing with construction permits	22	Sub-Saharan Africa
Getting electricity	20	Europe & Central Asia
Registering property	29	Europe & Central Asia
Getting credit	38	South Asia
Protecting minority investors	21	South Asia
Paying taxes	30	East Asia & Pacific
Trading across borders	33	South Asia
Enforcing contracts	20	South Asia
Resolving insolvency	13	South Asia

Source: *Doing Business* database.

Note: The labor market regulation indicators also recorded 17 regulatory changes in the *Doing Business 2018* report. These changes are not included in the total reform count.

Appendix 1: WEF's Global Competitiveness Index 2011-2012, page 15, retrieved from [http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2010-11.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf)

Appendix 2: IMD's The World Competitiveness Scoreboard 2011 retrieved from <http://www.imd.org/research/publications/wcy/upload/scoreboard.pdf>

Appendix 3: IFC's Ease of Doing Business Report 2011, page 4, retrieved from <http://www.doingbusiness.org/~media/FPDKM/Doing%20Business/Documents/Annual-Reports/English/DB11-FullReport.pdf>