

**IPS**  
**NATIONAL COMPETITIVENESS RESEARCH**  
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# IPS NATIONAL COMPETITIVENESS RESEARCH 2021

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## IPS

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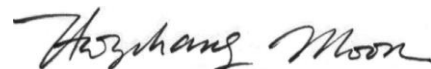
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# 01

## Extant Literature on National Competitiveness

## **Extant Literature on National Competitiveness and Major Issues**

### **DEFINITION OF NATIONAL COMPETITIVENESS**

Competitiveness is, in fact, an intricate term. National competitiveness has been conceptualized and measured in many ways (Berger, 2008; Fainshmidt, Smith, and Judge, 2016). Preceding studies have utilized national export performance (Grein and Craig, 1996), national productivity (Porter, 1990; Scott, 1985; Moon, Rugman, and Verbeke, 1998), firm-level foreign sales (Rugman, Oh, and Lim, 2012), and industry-level performance (Pajunen and Airo, 2013; Sakakibara and Porter, 2001) to measure national competitiveness. However, despite the diverse approaches adopted by the previous studies, many studies on national competitiveness tend to solely focus on productivity as the primary indicator of national competitiveness (Fainshmidt et al., 2016).

From the perspective productivity, the most popular definition of competitiveness at the national level can be found in the Report of the President's Commission on Competitiveness, written for the Reagan administration in 1984:

A nation's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance.

Such views have been echoed by other scholars. For example, Porter (1990, p. 6) maintained that the only meaningful concept of competitiveness at the national level is national productivity. Krugman (1994) stated that competitiveness would turn out to be an odd way of saying productivity and would have nothing to do with international competition. However, competitiveness and productivity are conceptually different (Moon, 2010). A nation can sometimes enhance its competitiveness by simply altering strategies (e.g., protectionism or currency devaluation), without any increase in productivity.

Productivity refers to the internal capability of an organization, while competitiveness refers to the relative position of an organization against its competitors. These two important concepts are often confused and used interchangeably. The relative competitive position in the international market, not just the absolute amount of productivity, is the critical element for a nation's competitiveness. Another important point in defining a nation's competitiveness is that it is more meaningful to compare nations with similar comparative advantages competing in similar industries (Cho and Moon, 1998). Therefore, a nation's competitiveness can now be defined as a nation's relative competitive position in the international market among nations in a similar situation. In this regard, our study – IPS National Competitiveness Research – measures rankings among similar nations (or intra-group rankings) as well as overall rankings among all countries for evaluation.

Krugman (1994), however, argued that making decisions purely based on competitiveness poses three dangers. First, it could result in increasing government expenditure on enhancing national competitiveness. Second, it could trigger protectionism and trade wars. Finally, it could lead to undesirable public policies. By pointing out these three perils, Krugman warned

that an obsession with competitiveness could be dangerous. Contrary to this, other scholars such as Thurow (1992) argued this is not always wrong or dangerous. They argue a passion for building a world-class economy in generating a high living standard for citizens is what all countries should seek to achieve. In doing so, benchmarking is not to declare economic warfare on foreign competitors but to emulate them and elevate a country's standards of performance. Therefore, despite all these threats, we need to develop a theory to explain what competitiveness is because it is essential to every nation.

## **TRADITIONAL MODEL AND LIMITATIONS**

Research on national competitiveness began in the early 1980s, but the theoretical background is based on many important concepts of works from traditional economists and trade theories that were previously proposed.

Mercantilism viewed trade as a zero-sum game in which a trade surplus of one country is offset by a trade deficit of another country. The essence of mercantilism was well explained by Thomas Mun (1571-1641), who was a director of the British East India Company and a principal mercantile theorist. To accumulate national wealth, Mun advised the government to encourage domestic production, prohibiting imports, and subsidize exports. A tax policy is often utilized to achieve the mercantilist goals by lowering taxes for exports and imposing high tariffs on imports.

Adam Smith, however, criticized the view of trade as a zero-sum game. In contrast, he viewed trade as a positive-sum game in which all trading partners can benefit. Smith argued that there are advantages of specialization by regions and nations. In this respect, Smith showed how each nation would be far better off economically by concentrating on what it could do best rather than following the mercantilist doctrine of national self-sufficiency.

There was a problem with Adam Smith's theory of absolute advantage. According to Smith, a superior country might gain no benefits from international trade. In contrast, according to David Ricardo, the superior country should specialize in production where it has the least absolute disadvantage, which came to be known as the theory of comparative advantage. One important implication of this theory is that even if a country did not have an absolute advantage in any good, this country and other countries would still benefit from international trade. This theory is thus very useful in explaining the reasons why trade may happen and how trade increases the welfare of the trading partners. However, this model is incomplete, and one of the critical limitations is that it does not satisfactorily explain why the differences in productivity levels between countries exist.

Heckscher and Ohlin (HO) explained that comparative advantage arises from differences in factor endowments. The HO model highlights that a country will have a comparative advantage in some productions, and therefore will export these goods at which that country is relatively well endowed to produce. The logic is that the more abundant a factor is, the lower its cost. The HO model is referred to as the neoclassical theory of international trade, and it contains several appealing elements; it is simple, logical, commonly understood, and appears to be virtually self-evident.



Leontief (1953), however, found a paradoxical result. He expected that the US as the most capital-abundant country in the world, should export capital-intensive goods and import labor-intensive goods; but in reality, the US imports goods required more capital per worker than U.S. export goods. This finding was the opposite of what the HO model predicted and later became well known as the Leontief Paradox. Many economists, including Leontief, have attempted to explain this.

Vernon's (1966) product cycle is one of the typical attempts to explain the Leontief Paradox. Vernon argued that many manufactured goods go through a product cycle of introduction, growth, maturity, and decline. Thus, comparative advantages of these goods shift over time from one country to another. The product cycle model is useful in reconciling the Leontief Paradox. Suppose the US has a comparative advantage in new manufactured products. The production method of these new products may be quite labor-intensive because investment in fixed capital is not likely to occur at this stage. Thus, US exports tend to be labor-intensive. When the product becomes standardized, producers become familiar with efficient engineering and receives market feedback. A large amount of fixed capital can now be invested; the production process may thus be quite capital intensive. The Leontief Paradox can be reconciled because US exports in the introducing stage where the production is labor-intensive and imports in the maturing stage where the production is capital-intensive.

We have discussed traditional trade theories, which are all still relevant. They remain useful in understanding many of today's industrial and trade policies. For example, the theory of comparative advantage is a basic guideline for many countries when they consider industrial and trade policies. Even mercantilism, a popular theory before Adam Smith, seems to gain popularity among many leading developed and developing countries. Still, no single theory is sufficient to explain the current flows of international trade because today's world is more complicated than before.

Traditional trade theorists argue that national competitiveness is a function of capital, labor, and natural resources. However, many developed countries, such as Western Europe and Japan, have prospered without abundant natural resources, and many resource-rich countries like many Latin American countries are not as developed. On a similar note, developed countries usually have expensive labor cost while less developed countries have cheaper ones. Thus, it is fair to say that the reality is almost the opposite of what traditional theorists have predicted.

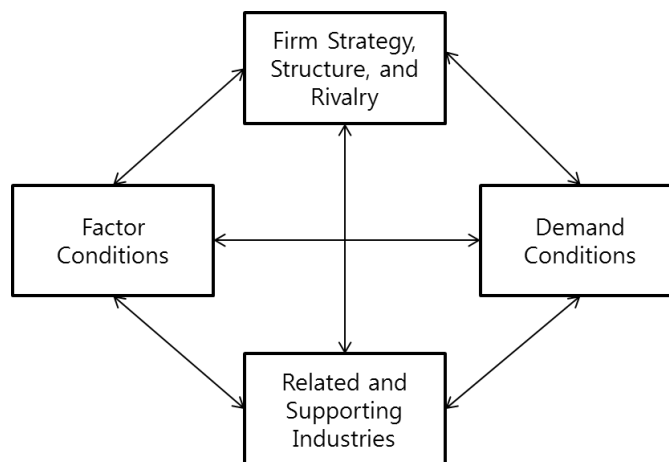
As Porter (1990) mentions in his book, the traditional model, whose origins date back to Adam Smith and David Ricardo and that is embedded in classical economics, is at best incomplete and at worst incorrect. Other economists see national competitiveness as a macroeconomic or financial phenomenon. They suggest that cheap currencies and balanced budgets enhance competitiveness. Despite this, there are many cases where nations have prospered despite appreciating currencies and budget deficits.

Since the 1980s, the argument that competitiveness is driven by government policy or influenced by different types of management practices was favored by many scholars. But, once again, the counter-examples to this were discovered as some countries succeeded without direct government intervention in which the government's role has been only modest. Moreover, different industries require different approaches to management, which calls for a new national competitiveness model.

## PORTER'S (1990) DIAMOND MODEL AND LIMITATIONS

There are two prerequisites for a good competitiveness theory. One is that the theory should be comprehensive enough to capture more than one variable, such as natural resources or labor, to explain the ever-increasing complexity of the real world. The other is that the theory should be dynamic enough to explain the changing nature of national competitiveness; this condition has not effectively been fulfilled by the classical theories such as absolute advantage and comparative advantage principles. Porter's Diamond Model satisfies both of these conditions. The model consists of four comprehensive variables - factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. In addition, Porter demonstrated that the Diamond Model is dynamic by arguing that national prosperity is created, not inherited. This implies that national competitiveness does not grow out of resource endowments or currency value, as traditional models suggest, but it can be created by strategic choices based on the four determinants of the Diamond Model (see Figure 1).

**Figure 1. The Diamond Model**



Source: Porter (1990)

**Factor Conditions:** The nation's strong position in factors of production, such as skilled labor or infrastructure, is necessary to compete in a given industry. Basic factors, such as a pool of labor or a local raw-material source, do not necessarily place the nation in an advantage setting in knowledge-intensive industries, as firms can access them easily through globalization or overcome such shortages via technology development. In the sophisticated industries that form the backbone of any advanced economy, a nation does not inherit, but instead creates, the most important factors of production – such as skilled human resources or a scientific base. These specialized and created factors are scarce, more difficult for foreign firms to imitate.

**Demand Conditions** stresses the nature of home-market demand for the industry's product or service. Nations gain competitive advantages in industries where the home demand gives the firms a clearer or earlier picture of emerging buyer needs, and therefore the demanding buyers pressure companies to innovate faster than their foreign rivals. In this factor, the size of home demand proves far less significant than the sophistication or quality of home demand.

**Related and Supporting Industries** represents the presence or absence in the nation of supplier industries and other related industries that are internationally competitive. A far more significant factor than mere access to components and machinery is the advantage derived from home-based related and supporting industries, which provide innovation – an advantage based on close working relationships. Suppliers and end-users located near each other can take advantage of short lines of communication, a quick and constant flow of information, and an ongoing exchange of ideas and innovations.

**Firm Strategy, Structure, and Rivalry:** This factor refers to the nation's governance conditions related to how companies are created, organized, and managed, as well as the nature of domestic rivalry. No one managerial system is universally accepted. Competitiveness in a specific industry results from a convergence of the management practices and organizational modes favored in the country and the sources of competitive advantages in the industry. Porter particularly emphasized the presence of strong local rivals as a powerful stimulus to the creation and persistence of competitive advantage. Domestic rivalry creates pressure on companies to innovate and constantly upgrade the sources of competitive advantage.

Since the introduction of the Diamond Model in 1990, it has been widely used in analyzing the strength of a single, or a few, country to suggest ways to pursue further development (Fainshmidt et al., 2016). For example, this model was used in the analysis of New Zealand (Crocombe et al., 1991), Turkey (Oz, 2002), the United Kingdom (Porter and Ketels, 2003), Ireland (Clancy et al., 2001), Mexico (Hodgetts, 1993), and China (Karjula, 2013). Results from many of the studies have confirmed the validity of Porter's idea on the competitive advantage of nations and the strengths of major industries (Kharub and Sharma, 2017). Nonetheless, Porter's Diamond Model is not free from criticism.

Grant (1991) argued that most of the existing studies adopted a case approach, much in line with Porter's original approach, and such an approach may lack in accuracy and generalizability. Rigorous examinations of the Diamond Model have been rare, and there have been few empirical attempts that support an abroad assortment of national outcomes (Fainshmidt et al., 2016). For example, Greign and Craig (1996) found a positive relationship between factor conditions and GDP per capita, but no similar support from the other three diamond factors. However, these criticisms are mainly about the limitations of the quantification and operational problems of the Diamond Model, rather than the problem of the model itself.

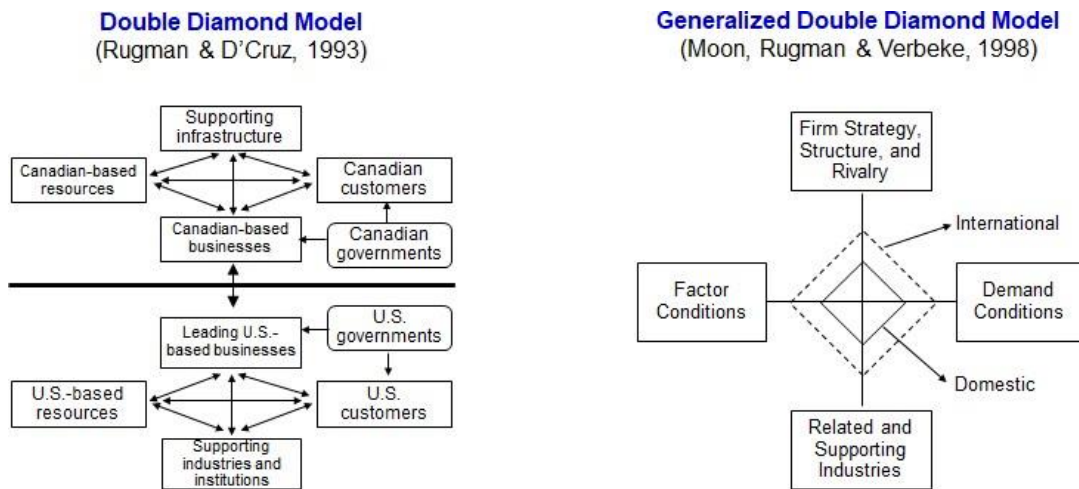
Regarding the criticism on the conceptual framework, many scholars have argued that although Porter's single diamond includes several important variables, it is not comprehensive enough to be used in explaining the increasingly complex economies of today. The following section will discuss the main limitations of a Single Diamond Model and the extended models proposed by latter scholars.

## **EXTENDED MODELS**

Some international business scholars have criticized that the Diamond Model mainly focuses on home country factors for the sources of national competitiveness, and ignores the role of multinational activities and influences on the competitiveness enhancement. The single diamond is not so relevant in small economies because their domestic variables are very limited (Rugman, 1991) and its geographical constituency has to be established on very

different criteria (Dunning, 1993). In the era of globalization, international factors must be considered to appropriately assess a nation's competitiveness. To solve this problem, the Double Diamond Model (Rugman and D'Cruz, 1993) and the Generalized Double Diamond Model (Moon et al., 1998) have been proposed (see Figure 2).

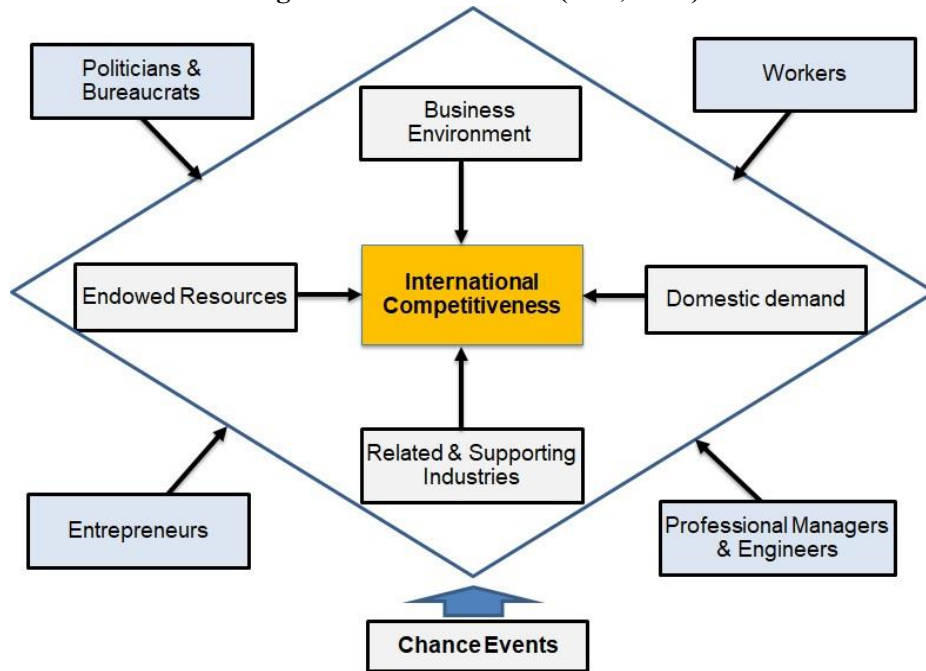
**Figure 2. Double Diamond Model and Generalized Double Diamond Model**



The Double Diamond Model, developed by Rugman and D'Cruz (1993), suggests that managers build upon both domestic and foreign diamonds to become globally competitive in terms of survival, profitability, and growth. While the Rugman and D'Cruz's North American diamond framework fits well for Canada and New Zealand, it does not carry over to other small nations relying on integration with other (foreign) countries for access to international resources, such as Korea and Singapore. Thus, Moon et al. (1995, 1998) adapted the double diamond framework to a generalized double diamond which works well for analyzing all small economies.

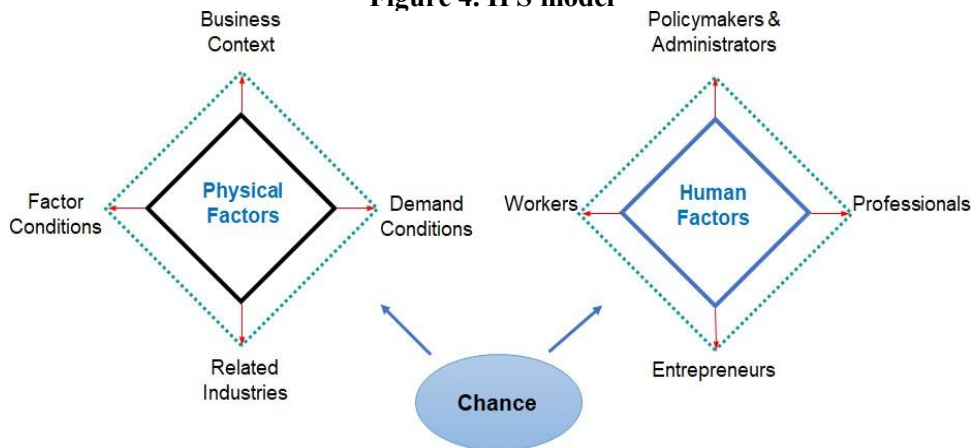
Furthermore, the Single Diamond Model does not distinguish human factors from physical factors. Porter duly explains the sources of national competitiveness possessed by the economies of advanced nations but is limited in its applicability when explaining the levels and dynamic changes of economies in less developed or developing countries. For this matter, Cho (1994) proposed the nine-factor model by incorporating the role of human factors, which was not explicit in Porter's Diamond Model (see Figure 3). In this model, the human factors include workers, politicians and bureaucrats, entrepreneurs, and professionals; physical factors include endowed resources, domestic demand, related and supporting industries, and other business environments. An external factor, chance, was added to these eight internal factors to make a new paradigm, the nine-factor model. The human factors in the nine-factor model drive the national economy forward by creating, motivating, and controlling the four physical factors in Porter's Diamond Model. Human factors mobilize the physical factors, and the countries combine and arrange the physical factors with the aim of obtaining international competitiveness. The role of human factors is particularly important in developing countries because physical factors are not sufficiently developed at this stage.

**Figure 3. 9-factor model (Cho, 1994)**



These two models, double diamond and nine-factor, are meaningful as they extended the scope and sources of national competitiveness. However, they need to be incorporated into a single framework in order to analyze and explain national competitiveness more thoroughly. The IPS report incorporates both of these extensions into a single framework or IPS model (see Figure 4), which analyzes national competitiveness by physical factors and human factors in terms of the domestic and international context. This model thus is very useful in explaining the development pattern and sources of competitiveness for large and small countries as well as both developed and developing economies. Cho, Moon, and Kim (2009) have empirically tested the explanatory power of the IPS model. The results showed that the IPS model is more comprehensive than the Generalized Double Diamond and 9-factor models in explaining the country-specific advantage of nations with heterogeneous attributes.

**Figure 4. IPS model**



In addition to the above extended models, theoretical extensions have been largely absent to date, as Porter's original model continues to be criticized for its overly home country orientation and oversight of the direct influences of national institutions (Fainshmidt et al., 2016). More recently, Fainshmidt et al. (2016), for example, suggested two additional variables including multinational firm and governance quality, to enhance the explaining power of Porter's Diamond Model. However, such an attempt overlapped with the above-mentioned extended models, such as Moon et al. (1998), Cho, (1994), and the IPS model (2013). Therefore, to the best of our knowledge, the IPS model is the most comprehensive model among the extended models of Porter's single diamond, and this further provides the legitimacy of adopting the IPS model for the analysis and evaluation of national competitiveness for our research.

# 02

## Highlights of National Competitiveness Research

## Highlights of National Competitiveness Research

### OVERALL RANKINGS

This section presents only the highlights of national rankings. For more information about specific rankings of factor and sub-factor levels, please refer to the Appendix and visit the website (<https://www.ipsncr.org/>). The top three countries in the IPS National Competitiveness Research 2021 are Denmark (1), Canada (2), and Netherlands (3) (see Table 1). Compared to the previous year, Canada stepped one place down while Denmark stepped one place up, switching rankings with each other this year. Denmark showed high competitiveness in most of the eight factors of evaluation; particularly, in demand conditions and a low-debt country, which provided Denmark a room to provide the stimulus packages in the time of crisis. The strong performance of Canada was due to its high competitiveness in Factor Conditions (2), Entrepreneurs (5), and Professionals (6). Canadian government's support measures on household income have boosted consumption which played an important role for Canada to quickly escape from the economic recession. The Netherlands on the other hand benefited from the Brexit, which contributed to its improvement in the overall rankings. After Brexit, many companies in the United Kingdom relocated to the Netherlands, which is known to have an attractive business context (4).

**Table 1. Global rankings**

Rank	Country	Index	Rank	Country	Index
1	Denmark	61.82	32	Vietnam	39.29
2	Canada	61.80	33	Philippines	39.16
3	Netherlands	61.79	34	Chile	39.09
4	Sweden	61.51	35	Greece	38.39
5	Singapore	61.19	36	Indonesia	38.15
6	Switzerland	59.83	37	Panama	38.13
7	Australia	59.83	38	Russia	38.08
8	United States	59.63	39	Hungary	37.82
9	Finland	59.57	40	Colombia	37.30
10	New Zealand	58.04	41	Jordan	37.28
11	Hong Kong	57.81	42	Spain	36.41
12	Belgium	54.73	43	Dominican Republic	34.45
13	U.A.E.	53.37	44	Turkey	34.45
14	China	52.79	45	Mexico	31.87
15	Austria	52.57	46	Argentina	31.77
16	Germany	52.07	47	Nigeria	31.73
17	Israel	46.70	48	Egypt	31.57
18	Taiwan	46.63	49	Slovak Republic	31.50
19	United Kingdom	45.51	50	Ukraine	31.05
20	Kuwait	44.06	51	Peru	30.02
21	Saudi Arabia	44.06	52	Bangladesh	29.91
22	Japan	43.98	53	Brazil	28.81
23	France	43.84	54	Croatia	27.40
24	Korea	43.53	55	Guatemala	26.96



25	Slovenia	42.66	56	Morocco	26.18
26	Czech Republic	41.95	57	Sri Lanka	25.62
27	India	41.58	58	Pakistan	25.55
28	Poland	41.46	59	Oman	25.44
29	Italy	41.44	60	Cambodia	24.87
30	Malaysia	41.25	61	South Africa	24.79
31	Thailand	40.88	62	Kenya	19.78

Among Asian countries, Singapore ranked the highest but dropped by two places to fifth compared to the previous year. Although Singapore showed weak performance in factor conditions, it showed strength in other six factors, including Professionals (8), Policymakers and Administrators (6), Business Context (4), and Related Industries (3). Singapore is heavily dependent on cross-border flows, which has been hit hard during the pandemic; its major demand market is likely to record low growth. The tourism and transportation sectors have been "severely affected" by the "sudden drop" in the number of travelers, especially the number of Chinese travelers, deepening the recession.

The economies in the Greater China region showed a fluctuation in their overall competitiveness ranking except for Taiwan. Among four first-tier Newly Industrialized Economy (NIE), Hong Kong has been affected by trade friction between China and the United States; many companies even disclosed their plans to move to Singapore to avoid the current unstable economic conditions of Hong Kong where the ranking of Entrepreneur (7) went down from the previous year. Contrary to this, Korea (26) and China (14) moved two steps up in their overall competitiveness ranking, especially due to their successful containment of coronavirus. Japan (21) fell by two positions compared to the previous ranking. The second-tier NIEs which include Indonesia, Malaysia, the Philippines showed a positive trend by securing or stepping up in global competitiveness ranking, except for Thailand that went down four places.

In Europe, in addition to Denmark and the Netherlands (3), Sweden (4), Switzerland (6), and Finland (9) were also ranked in the top ten countries. Many other European countries, such as Finland (from 17 to 19), Germany (from 17 to 16), France (23 to 23), Poland (28 to 28), and Italy (29 to 29), either showed improvement in their rankings or maintained the same position compared the previous year. Although many Latin American countries have generally remained at lower levels ranging from forty-fourth to fifty-fifth, many countries such as Chile (34), Colombia (40), Peru (51), and Guatemala (55) have all showed an improvement in their overall performance.

## **INTRA-GROUP RANKINGS**

### **Large group**

Among the twenty-two countries categorized in the large group, four were strong, eight were intermediate, and ten were weak. In the large-strong group, Canada ranked number one followed by Australia, the United States, and China. Saudi Arabia maintained the position in the large-intermediate group, and ranked number one in the large-intermediate group, followed by Japan and India. Saudi Arabia has drastically reorganized the industries related to foreign direct investment and has since been showing rapid growth. Mexico, however,

moved down from the forty-third to the forty-fifth. Mexico mismanaged the spillover of the pandemic on its economy, recorded the high rates of crime and violence, and showed deterioration of democratic institutions and values such as the rule of law and human rights.

### Medium group

The medium group consists of six strong, nine intermediate, and seven weak countries. Sweden remained in first place among the medium-strong group and all six countries of this group were also previously categorized in the medium-strong group. France was ranked in first place among the medium-intermediate group, maintaining the same position from the last year. The country which is newly incorporated in IPS NCR 2020-2021 is Oman. It secured the middle place in the small-weak group, while Ukraine took the top position in this group.

### Small group

The small group consists of nine strong, six intermediate, and three weak countries. The small-strong group includes two Asian countries and six European countries. Kuwait moved down from small-strong to small-intermediate group, while most of the other countries in the small-intermediate group maintained their positions. Kuwait is very vulnerable to changes in business environment. About 90% of the Kuwait government's revenues come from oil, and trade restrictions inside and outside made the Kuwait economy shrink.

**Table 2. Country groups: Intra-Group rankings**

<b>Size Competitiveness</b>	<b>Large (22 countries)</b>	<b>Medium (22 countries)</b>	<b>Small (18 countries)</b>
Strong (19 countries)	Canada (2) Australia (7) United States (8) China (14)	Sweden (4) Finland (9) New Zealand (10) Germany (16) Taiwan (18) United Kingdom (19)	Denmark (1) Netherlands (3) Singapore (5) Switzerland (6) Hong Kong (11) Belgium(12) U.A.E (13) Austria (15) Israel (17)
Intermediate (23 countries)	Saudi Arabia (21) Japan (22) India (27) Vietnam (39) Philippines (33) Indonesia (36) Russia (38) Colombia (40)	France (23) Korea (24) Poland (28) Italy (29) Malaysia (30) Thailand (31) Chile (34) Greece (35) Spain (42)	Kuwait (20) Slovenia (25) Czech Republic (26) Panama (37) Hungary (39) Jordan (41)

Weak (20 countries)	Turkey (44) Mexico (45) Argentina (46) Nigeria (47) Egypt (48) Peru (51) Bangladesh (52) Brazil (53) Pakistan (58) South Africa (61)	Ukraine (50) Guatemala (55) Morocco (56) Sri Lanka (57) Oman (59) Cambodia (60) Kenya (62)	Dominican Republic (43) Slovak Republic (49) Croatia (54)
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Note: Countries in each group are listed in the order of overall national competitiveness rankings, and numbers in the parentheses are their national competitiveness rankings.

### **ADVANCER, ORDINARY, AND LAGGER (AOL)**

As Table 3.3 shows, sixty-two countries are divided into three tiers—Advancer, Ordinary, and Lagger (AOL)—according to the results of the quartile analysis. Among the sixty-two countries' economies, those showed improvements of two or more steps (compared to the previous year) in the overall ranking are categorized as Advancers; those with two or more steps down in the competitiveness ranking labeled as the Lagger group; the rest are categorized as the Ordinary group. As a result, nineteen economies have been classified as Advancer, and twenty have been identified as the Lagger group, while the other twenty-three are in the Ordinary group, showing no significant changes in their overall competitiveness ranking. About 60 percent of the countries (among sixty-two) are classified either in Lagger or Advancer group, with a larger number of countries in the Lagger group.

**Table 3. Advancers, ordinaries, and laggards**

Competitiveness \ Size		Large	Medium	Small
Strong	Advancer	Australia (+3) China (+2)	Finland (+2)	Netherlands (+4) Austria (+2)
	Ordinary	Canada (-1) United States (-2)	Sweden (+1) Germany (-1) Taiwan (0) UK (+1)	Denmark (+1) U.A.E (-1) Belgium (+1)
	Lagger		New Zealand (-2)	Singapore (-2) Switzerland (-2) Hong Kong (-2) Israel (-3)
Intermediate	Advancer	Saudi Arabia (+4) Philippines (+2) Indonesia (+1)	Korea (+2) Chile (+5) Greece (+3)	Czech Republic (+5) Panama (+5) Jordan (+3)
	Ordinary	Japan (-1) Vietnam (0) Colombia (+1)	France (0) Poland (0) Italy (0) Malaysia (0)	Kuwait (-1)
	Lagger	India (-3) Russia (-4)	Thailand (-4) Spain (-6)	Slovenia (-3) Hungary (-6)
Weak	Advancer	Bangladesh (+4)		Dominican Republic (+6) Croatia (+3)
	Ordinary	Egypt (0) Peru (0) Brazil (-1) Pakistan (+1)	Ukraine (0) Guatemala (-1) Cambodia (+1) Kenya (0)	
	Lagger	Turkey (-4) Mexico (-2) Argentina (-2) Nigeria (-2) South Africa (-3)	Morocco (-3) Sri Lanka (-2)	Slovak Republic (-2)

Note: The countries in each cell are listed in the order of overall national competitiveness rankings and the numbers in the parentheses represent the change of national competitiveness rankings compared to the previous year.

**Strong group**

Countries that showed strength in manufacturing were among the advancer countries; Netherlands, Austria, Finland, Australia, and China. On the other hand, Switzerland, Israel, and New Zealand fell into the Lagger group along with Hong Kong and Singapore. The nine remaining countries in the Ordinary group were in Asia, America, Europe, and the Middle East. Here we see that fourteen economies were grouped into either Advancer or Ordinary groups.

**Intermediate group**

Among the twenty-three countries in the intermediate group, nine countries were classified as Advancers. Eight countries including Kuwait, France, Poland, Italy, Malaysia, Japan, Vietnam, and Columbia were classified in the Ordinary group. The remaining six countries were in the Lagger group. Therefore, unlike the strong group with a larger number of countries categorized in the Ordinary group, about 40 percent of countries in the intermediate group were classified as Advancers.

**Weak group**

Among nineteen countries around in the weak group, 40 percent of them were categorized into Lagers, about 15 percent as Advancers, and more than 40 percent as the Ordinary group. Turkey and Mexico moved to a weak group from an intermediate group this year.

**SIMULATION**

In this simulation, countries can have one of three choices: cost, differentiation, or neutral strategy. The combination of these strategic options will result in various scenarios, as summarized in Table 4 which shows the results of five scenarios. For example, assuming that other countries use a neutral strategy, the Netherland's current ranking of third will fall to sixteenth with a cost strategy, but it can rise to first by adopting a differentiation strategy. However, if all other countries adopt an optimal strategy, which is the one with a higher competitiveness index between cost and differentiation strategy, the Netherland's ranking will fall to twenty-seventh with a cost strategy and rise to third with a differentiation strategy. Therefore, in both cases, the differentiation strategy will be the optimal strategy for the Netherlands to enhance its national competitiveness.

This table also highlights the importance of implementing appropriate strategies in order to remain competitive amidst increasing economic uncertainty. For example, the Netherland's ranking at third may fall to sixteenth if it chooses the cost strategy instead of the optimal strategy which is differentiation. The simulation table thus is a useful guide for understanding the current competitive positions of countries and help them choose their future strategic direction.

**Table 4. Results of five scenarios**

Strategy of all countries except my country	NS			OS	
Strategy of my country	NS	CS	DS	CS	DS
Scenario	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Denmark	1	16	1	28	1
Canada	2	12	1	18	9
<b>Netherlands</b>	<b>3</b>	<b>16</b>	<b>1</b>	<b>27</b>	<b>3</b>
Sweden	4	16	1	26	2
Singapore	5	16	1	25	6
Switzerland	6	19	1	32	4
Australia	7	12	1	18	10
United States	8	19	1	34	8
Finland	9	16	1	27	5
New Zealand	10	16	1	21	12
Hong Kong	11	16	1	27	7
Belgium	12	24	1	38	11
U.A.E.	13	16	10	26	16
China	14	16	10	22	15
Austria	15	27	1	42	13
Germany	16	31	6	44	14
Israel	17	42	17	51	24
Taiwan	18	31	12	44	18
United Kingdom	19	42	17	47	20
Kuwait	20	20	19	34	30
Saudi Arabia	21	22	17	35	21
Japan	22	41	17	47	23
France	23	42	17	51	22
Korea	24	41	12	47	17
Slovenia	25	42	17	51	28
Czech Republic	26	42	19	47	31
India	27	35	17	45	26
Poland	28	42	17	47	27
Italy	29	42	15	50	19
Malaysia	30	34	19	45	29
Thailand	31	39	17	46	25
Vietnam	32	39	20	46	34
Philippines	33	41	20	47	32
Chile	34	39	20	46	33
Greece	35	44	24	53	36
Indonesia	36	39	20	47	35
Panama	37	41	24	47	38
Russia	38	32	30	44	43
Hungary	39	44	26	53	39
Colombia	40	42	24	50	37

Jordan	41	42	27	51	42
Spain	42	52	27	57	41
Dominican Republic	43	47	30	56	44
Turkey	44	50	26	56	40
Mexico	45	50	40	57	47
Argentina	46	49	43	56	49
Nigeria	47	53	32	60	45
Egypt	48	48	43	56	50
Slovak Republic	49	56	40	61	46
Ukraine	50	52	43	57	48
Peru	51	45	45	56	53
Bangladesh	52	46	43	56	51
Brazil	53	53	45	60	55
Croatia	54	61	45	61	52
Guatemala	55	53	51	59	57
Morocco	56	61	45	61	54
Sri Lanka	57	56	53	61	59
Pakistan	58	53	54	58	61
Oman	59	54	61	61	62
Cambodia	60	53	60	60	61
South Africa	61	62	45	62	56
Kenya	62	62	62	62	62

Note: NS: Neutral Strategy, CS: Cost Strategy, DS: Differentiation Strategy, OS: Optimal Strategy

There is a notable finding in Table 4. The numbers in Column 3 (NS-CS) and Column 5 (OS-CS) show that the rankings of most of the 62 countries are much lower than those in Column 4 (NS-DS) and Column 6 (OS-DS). This comparison implies that a differentiation strategy is better than a cost strategy for all of the countries except for Pakistan, Oman and Cambodia.

## **INTRODUCTION OF THE TEXT INFORMATION ANALYSIS (TIA) METHOD**

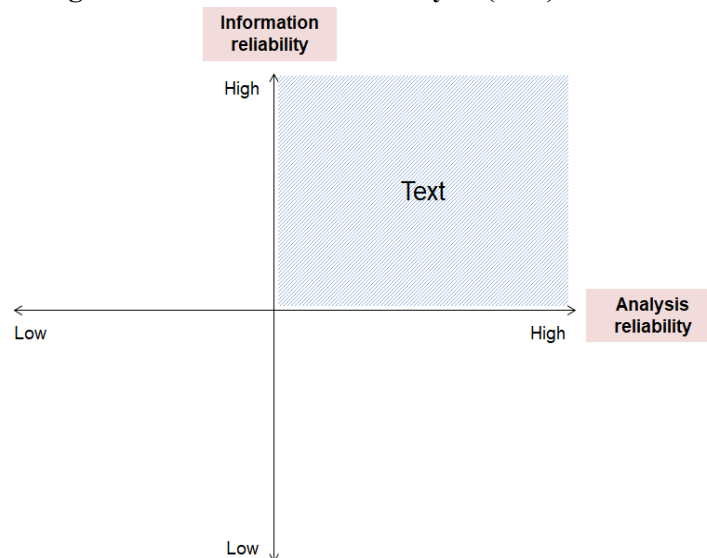
Our research has so far used traditional methods to collect hard and soft data for evaluating national competitiveness. Despite their strengths and complementarity, these two types have their own shortcomings. For hard data, despite its strengths in objectivity toward measuring competitiveness, there is usually a time lag when reflecting the recent development status of countries. To overcome this shortcoming, we collected additional data using a survey instrument. However, it should be noted that a survey alone is an inadequate complement because there are risks associated with validity and reliability, resulting from the high level of subjectivity involved with the data. This can lead to the data being biased particularly when the response rate is low. To address this problem, we used content analysis of text information to complement the limitations of both hard and soft data.

In recent times, big data analytics has become increasingly important in both academic and business fields (Chen, Chiang, and Storey, 2012). Big data is defined by Goes (2014) as “massive amounts of observational data, of different types, supporting different types of decisions” and consists of three common features: volume, velocity, and variety (Kwon, Lee, and Shin, 2014). Yet, one of the main challenges for this approach is data acquisition (Labrinidis and Jagadish, 2012). As not all of the data will be pertinent, researchers or decision

makers have to place great effort in defining the filters so that the data collection will provide useful information. To this end, the credibility of the data source is crucial with downstream analysis. Another challenge is that the information collected is not in a format ready for analysis (Labrinidis and Jagadish, 2012). To address this, a process for information extraction is necessary so that the required information can be taken out from the underlying sources and allows for them to be expressed in a structured form suitable for analysis (Labrinidis and Jagadish, 2012). Moreover, as Shah, Horne, and Capellá (2012) have pointed out, good data won't guarantee a good decision. In order to better use of the information, firms need to make a good decision, often called "big judgement."

Given the two challenges mentioned above, we have introduced a new framework as shown in Figure 3.1, which seeks to collect more reliable text information and to analyze the text more reliably. This framework comprises of two variables – information reliability and analysis reliability. The degree of *information reliability* can be measured as high or low and is greatly influenced by the information source. On the other hand, *analysis reliability* refers to the degree of processing the text for extracting and translating the necessary information for reliable analysis, and this dimension can also be measured as high or low. Despite the variety of the data format, our research focuses on text data from sources with high reliability. These texts are filtered by our researchers to extract useful information that will be suitable for analyzing national competitiveness (the upper-right shaded area).

**Figure 1. Text information analysis (TIA) model**



In order to compile a collection of articles on the most recent developments in economies from around the world, searches were conducted through Google using the keywords of "(nation name), competitiveness, 2020-2021." Based on the relevance to the research objective, we selected articles published in English by established and reputable media sources. Regarding the sample size, there is no commonly accepted level for qualitative studies, and the optimal sample often depends on the purpose of the study, research questions, and richness of data (Elo et al., 2014). However, Guthrie et al. (2004) suggested that the saturation of data could indicate that the data reached an optimal sample size. According to Morse et al. (2002), saturated data ensures the replication in content



categories, which can help verify and ensure comprehension and completeness. In our study, the top 100 articles listed in the Google search are considered as the optimal sample size. These articles often refer to the last six months, thereby covering a recent period which is missed when using both hard and soft data.

For the variable of analysis reliability, we used the technique of content analysis to extract the useful information. Content analysis is broadly defined by Shapiro and Markoff (1997) as “any methodological measurement applied to text (or other symbolic materials) for social science purposes.” There are several advantages to this approach (Krippendorff, 1980; Duriau et al., 2007; Short and Palmer, 2008). First, it is unobtrusive and useful when dealing with a large volume of data. Second, it is a powerful technique for data reduction by compressing many words of text into a few content categories. Third, it can be used to extract both manifest and latent content.

For data coding with content analysis, there are three approaches: human scored system, individual word count system, and computerized systems using artificial intelligence (Short and Palmer, 2008). Among the three methods, we selected the human scored system as this approach has particularly strength in capturing the latent content in the given text. We scored the articles based upon the level of positive reporting on the economy covered in the piece. Using a scale ranging from -5 to +5, if the article delivers a more positive reporting, it will be given a higher score toward +5 and vice versa. Data coding was conducted by one trained coder, and then checked by two experienced researchers. For the 2021 report, we coded economies that displayed changes in rankings by more than five places compared to the previous year while economies that maintained their position were assessed by using only hard and soft data. The coded economies and results are shown in Table 3.6. By adding the adjusted scores to the overall competitiveness index for these coded economies, our competitiveness rankings are strengthened to better reflect both the most recent advancements and attain the desired level of objectivity.

**Table 5. Coded economies and results of coding**

<b>Rank</b>	<b>Country</b>	<b>Adjusted score</b>
2	Canada	1.33
3	Netherlands	0.14
11	Hong Kong	-1.22
17	Israel	3.05
23	France	-0.37
24	Korea	-3.03
27	India	1.03
29	Italy	-2.39
34	Chile	-1.46

# 03

## Conceptual Framework and Analytical Methodologies

## **Conceptual Framework and Analytical Methodologies**

### **THE THEORETICAL EVOLUTION OF NATIONAL COMPETITIVENESS**

Porter (1990) developed a comprehensive approach to analyze national competitiveness entitled the Diamond Model. It was then extended by other scholars into two directions. One is the Double Diamond Model (Moon, Rugman, and Verbeke, 1998; Rugman, 1991) and the other is the 9-Factor Model (Cho, 1994). Later on, a new comprehensive model was introduced by integrating the two models into one framework (Cho et al., 2008, 2009; IPS, 2006). This new model was labeled as the IPS Model (IPS, 2008), which forms the underlying analytical framework for the IPS National Competitiveness Research.

While there are several reports on national competitiveness, many have been unsatisfactory in their methodologies and findings. Further discussion on these limitations can be found in Cho and Moon (2000, 2013). It is very important to note here that rankings for national competitiveness are unreliable if they are not based on rigorous models and effective methodologies. Policymakers, who often become sensitive to the results of national competitiveness reports, may then pursue distorted policies based on misleading outcomes. In order to solve this problem, therefore, the theoretical and methodological problems evident in the existing reports were corrected in this study. And hopefully, policymakers and business leaders will derive useful implications from this research.

### **CRITICAL REVIEW OF EXISTING REPORTS**

The International Institute for Management Development (IMD) and the World Economic Forum (WEF) are world-renowned institutions publishing national competitiveness reports. These two reports often make big headlines around the world; however, a careful examination of their methodologies reveals some notable problems.

#### **Theoretical background**

The two reports provide different explanations for how to define competitiveness. The IMD describes competitiveness as “the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people” (IMD, 2014: 502). By contrast, the WEF sees competitiveness as “the set of institutions, policies, and factors that determine the level of productivity of a country” (WEF, 2019: 13). While their definitions of competitiveness are different, both institutes adopted very similar factors for competitiveness in their early reports (see Cho and Moon, 2013 for details). Regarding the evaluation model, the IMD added “location attractiveness” to its original model in 1999 and introduced a completely new one in 2001, which consisted of four variables: economic performance, government efficiency, business efficiency, and infrastructure. Alongside this, there were changes in the index. The IMD formerly used a single index until 2002 but introduced customized rankings according to population size in 2003, and two more rankings based on GDP per capita and geographic region in 2004. However, careful observation will notice immediately that this model and index are not as rigorous as Porter’s Diamond Model.

The WEF, on the other hand, used eight variables until 2000, but since then the number of variables has been changed. In addition, the WEF showed frequent index changes from Current Competitiveness Index (CCI) to Microeconomic Competitiveness Index (MICI) and Business Competitiveness Index (BCI) until 2007. Furthermore, the WEF launched a new index, the Global Competitiveness Index (GCI) in 2005 as part of an attempt to integrate the two separate indices (Growth Competitiveness Index and BCI) into a

single index. More recently, the GCI 4.0 introduced in 2020, provides a series of factors and attributes that drive productivity, growth, and human development in the era of the Fourth Industrial Revolution (WEF, 2019: 7). There are major differences between this research and the other reports which are illustrated in Table 1.

**Table 1. Comparison of the three competitiveness reports**

Report	IMD World Competitiveness Yearbook (2020)	WEF Global Competitiveness Report (2019)	IPS National Competitiveness Research (2020-2021)
<b>Sponsoring institute</b>	International Institute for Management Development	World Economic Forum	IPSNC
<b>Location</b>	Lausanne (Switzerland)	Geneva (Switzerland)	Seoul (Korea) & Sorengo (Switzerland)
<b>Year started</b>	1989	1996	2001
<b>Theoretical base</b>	No particular theory	No particular theory	IPS model
<b>Main factors</b>	A collection of 4 factors - Economic Performance - Government Efficiency - Business Efficiency - Infrastructure	A collection of 12 factors - Institutions - Infrastructure - ICT adoption - Macroeconomic Stability - Health - Skills - Product Market - Labor Market - Financial System - Market Size - Business Dynamism - Innovation Capability	A collection of 8 factors 4 Physical Factors - Factor conditions - Demand conditions - Related Industries - Business Context 4 Human Factors - Workers - Policymakers & Administrators - Entrepreneurs - Professionals
<b>Criteria</b>	255 (computed in the rankings)	103	98
<b>Data base</b>	Hard data: 163 Soft data: 92	Hard data 56 Soft data: 47	Hard data: 57 Soft data: 41
<b>Weights</b>	Hard data: 2/3 Soft data: 1/3	The same weight for factors, sub-factors, and criteria	Different weights for different strategies
<b>Partner institutes</b>	Global network of 56 partner institutes	Local partner institutes	KOTRA offices abroad Partner scholars
<b>Number of Countries</b>	63 countries	141 countries	62 countries
<b>Strengths</b>	- The first and largest survey on national competitiveness - A collection of multiple variables for competitiveness	- Similar to IMD, but more effective in elaborating the variables - Ongoing efforts to improve the study	- Strong theoretical basis with minimum multi-co linearity - Useful information of intra-group rankings - A series of analytical tools for policy implementation
<b>Weaknesses</b>	- Weak theoretical basis - Lack of consistency among partner institutions conducting the surveys	- In general, similar to IMD, but more emphasis on soft data - Lack of consistency among partner institutions conducting the surveys	- Improved weighting method, but still controversial

Note: As WEF published Global Competitiveness Report Special Edition 2020, GCI and its ranking are paused. Instead, the report suggests priorities for policymakers to consider in their decision-making process and overcome the COVID-19 pandemic. The index and ranking may restart in 2021.

### Methodology

Although the IMD and WEF reports originally employed eight variables, which were almost identical, they produced different results. This was because they applied different weights to the same variables. The IMD report contains both hard data (that is, statistical indicators published by organizations) and soft data (that is, survey results compiled from people like executives). As soft data can be volatile to the changes in the environment, hard data accounts for two-thirds of the factors in determining the overall ranking, while survey data accounts for one-third of the overall ranking.

The WEF report, on the other hand, applies different weights to a range of groups at various stages of development, as shown in Table 4.2. In the 2006-2007 Report, the WEF classified countries by the level of GDP per capita. Countries with a GDP per capita smaller than US\$ 2,000 are in the factor-driven stage (Stage 1); countries with a GDP per capita between US\$ 3,000 and US\$ 8,999 are in the efficiency-driven stage (Stage2); countries with a GDP per capita larger than US\$ 17,000 are in the innovation-driven stage (Stage 3). In addition, countries between two of the three stages are regarded as “in transition” (WEF, 2006: 12). However, in the 2007-2008 Report, when determining the stages of development, another criterion was added: the share of exports of mineral goods in total exports (goods and services). All countries whose exports are more than 70 percent of mineral products are categorized in the factor-driven group, regardless of whether they are in Stage 2 or 3. The recent WEF report since 2020, however, gives the same weight to the scores of the components of sub-factors and factors.

**Table 2. Weights of the three main pillars at each development stage**

Sub-index	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

Source: Global Competitiveness Report 2017-2018 (WEF, 2017)

### Policy implications

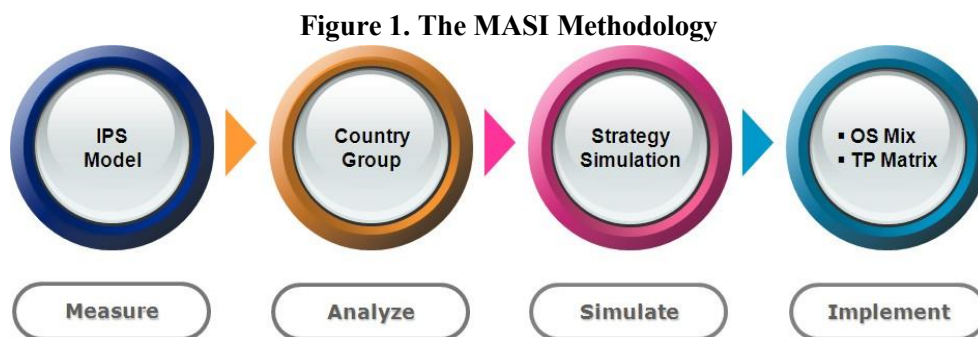
Both reports rank countries by their overall national competitiveness. For example, in the WEF Global Competitiveness Report 2019, Singapore ranked number one, while the Philippines ranked sixty-fourth among one hundred and forty-one countries measured. However, more critical questions arise: What are the useful implications from these findings? Will such knowledge help the Philippines change its policy to enhance its competitiveness? Does this mean that the country has to invest large amounts of money and effort toward developing technologies in the hope that someday it might catch up with Singapore?

On the other hand, we argue that a nation’s competitiveness is more relevant when compared among nations endowed with similar comparative advantages competing in similar industries rather than among those with different comparative advantages. For example, it is not very meaningful to say that Korea is less competitive than the United States. By contrast, it is more relevant to say that Korea is more (or less) competitive than Taiwan because these two countries are very similar in terms of comparative advantages. Therefore, in order to derive

useful policy implications, we need to consider rankings in groups of similar countries (Intra-Group Ranking), as well as overall rankings for all countries around the world (World Ranking). Based on the principles of theory, methodology, and policy implications mentioned above, the IPS National Competitiveness Research (the IPS research) reports both intra-group rankings and overall (or world) rankings.

### IPS NATIONAL COMPETITIVENESS RESEARCH

By correcting the problems evident among existing studies, the IPS research pursues four different approaches. First, the competitiveness of sixty-two countries is measured by using the IPS Model. Next, the competitiveness of these countries is analyzed within the country group. The structure of national competitiveness is demonstrated through strategy simulation, followed by the Optimal Strategic (OS) Mix and the Term-Priority (TP) Matrix. Figure 1 illustrates the MASI methodology of the IPS research.



### Measuring national competitiveness

There are two conditions necessary for a good competitiveness theory. One is to be comprehensive enough to capture the most important variables in order to explain the complexity of the real world. The other is to be dynamic enough to explain the changing nature of national competitiveness. Porter's (1990) Diamond Model satisfies both of these aspects by incorporating four competitiveness variables: Factor Conditions, Demand Conditions, Related & Supporting Industries, and Firm Strategy, Structure & Rivalry. Notably, Porter has demonstrated that the Diamond Model is dynamic by arguing that national prosperity is created, rather than inherited. This implies that national competitiveness does not grow out of resource endowments or currency value, as traditional models suggest, but that it can be created by a combination of strategic choices along with the four determinants of the Diamond Model (see Figure 2.1 of Chapter 2).

Despite its advantages, Porter's Diamond Model is not free from criticism. Specifically, the it is limited to application in the international context. The model is not that relevant for small economies because their domestic variables are very limited (Rugman, 1991) while their geographical constituency requires different criteria (Dunning, 1993). In the era of globalization, international factors must be considered in order to accurately assess a nation's competitiveness. To address this problem, the Double Diamond Model (Rugman and D'Cruz, 1993) and the Generalized Double Diamond Model (Moon et al., 1998) have been proposed.

Another issue is that the Single Diamond Model does not distinguish human factors from physical factors. In reality, the roles of different groups of people are important for countries at different levels of economic development. For this matter, Cho (1994) proposed the

9-Factor Model by incorporating the role of human factors, which are not well reflected in Porter’s Diamond Model. Human factors in the 9-Factor Model drive the national economy forward by creating, motivating, and controlling the four physical factors in Porter’s Diamond Model. The related literature in this regard is well documented in Cho and Moon (2000, 2013).

These two models, the Double Diamond and 9-Factor, are meaningful since they extend the scope and source of national competitiveness. The IPS research incorporates both of these extensions into the IPS Model, which analyzes national competitiveness by assessing physical and human factors in terms of domestic and international contexts (see Figure 2.4 of Chapter 2).

Appendix 2 shows the ninety-eight criteria used in IPS NCR 2019-2020 for measuring national competitiveness. Among these fifty-seven criteria are hard data, and the other forty-one criteria are soft data. The hard data were collected through various statistical sources published by international and government organizations. The soft data were collected by our partner institution Korea Trade-Investment Promotion Agency (KOTRA) which has more than one hundred offices abroad as well as our partner scholars for a number of other countries.

### Analyzing National Competitiveness

Table 3 illustrates a 3x3 matrix of country groups and Table 4.4 shows countries (in competitiveness order) for each of the nine groups. By considering the size and competitive structure simultaneously, we can now more realistically compare and contrast the relative positions of countries.

**Table 3. Typology of country groups**

<b>Size Competitiveness</b>	<b>Large</b>	<b>Medium</b>	<b>Small</b>
Strong	Large-Strong countries	Medium-Strong countries	Small-Strong countries
Intermediate	Large-Intermediate countries	Medium-Intermediate countries	Small-Intermediate countries
Weak	Large-Weak countries	Medium-Weak countries	Small-Weak countries

**Table 4. Country groups: results**

Competitiveness	Size		
	Large	Medium	Small
Strong	Canada (2) Australia (7) United States (8) China (14)	Sweden (4) Finland (9) New Zealand (10) Germany (16) Taiwan (18) United Kingdom (19)	Denmark (1) Netherlands (3) Singapore (5) Switzerland (6) Hong Kong (11) Belgium (12) U.A.E. (13) Austria (15) Israel (17)
Intermediate	Saudi Arabia (21) Japan (22) India (27) Vietnam (32) Philippines (33) Indonesia (36) Russia (38) Colombia (40)	France (23) Korea (24) Poland (28) Italy (29) Malaysia (30) Thailand (31) Chile (34) Greece (35) Spain (42)	Kuwait (20) Slovenia (25) Czech Republic (26) Panama (37) Hungary (39) Jordan (41)
Weak	Turkey (44) Mexico (45) Argentina (46) Nigeria (47) Egypt (48) Peru (51) Bangladesh (52) Brazil (53) Pakistan (58) South Africa (61)	Ukraine (50) Guatemala (55) Morocco (56) Sri Lanka (57) Oman (59) Cambodia (60) Kenya (62)	Dominican Republic (43) Slovak Republic (49) Croatia (54)

Note: Countries in each group are listed in the order of National Competitiveness Rankings, and the numbers in parentheses stand for the national competitiveness rankings.

### Simulation

When countries want to enhance their competitiveness to provide a higher standard of living and a better environment for doing business, two generic strategies, cost and differentiation, can be applied at the national level (Porter et al., 2000). The cost strategy aims to achieve “low cost and high efficiency,” utilizing mainly cheap workers and natural resources. By contrast, the differentiation strategy emphasizes “high cost but high value added,” and focuses more on Demand Conditions and Professionals. The differences are illustrated in Figure 2.

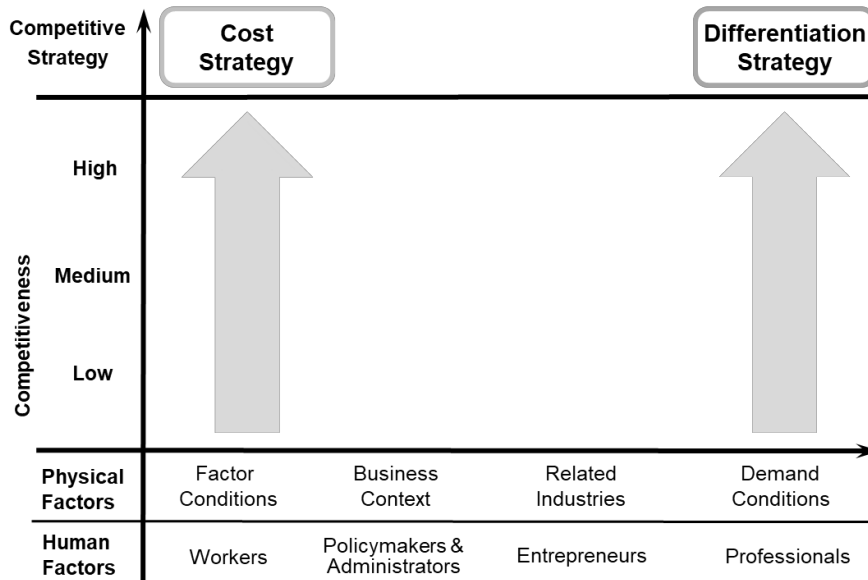


**Table 5. Weights for cost strategy and differentiation strategy**

Main Factors	Weights		Sub-factors	Weights	
	C	D		C	D
<b>Physical Factors</b>					
Factor Conditions	32/120	4/120	Energy Resources	3/4	1/4
			Other Resources	1/4	3/4
Business Context	16/120	8/120	Structure	3/4	1/4
			Strategy	1/4	3/4
Related Industries	8/120	16/120	Industrial Infrastructure	3/4	1/4
			Coordination and Synergy	1/4	3/4
Demand Conditions	4/120	32/120	Demand Size	3/4	1/4
			Demand Quality	1/4	3/4
<b>Human Factors</b>					
Workers	32/120	4/120	Quantity of Labor Force	3/4	1/4
			Quality of Labor Force	1/4	3/4
Policymakers & Administrators	16/120	8/120	Policymakers	3/4	1/4
			Administrators	1/4	3/4
Entrepreneurs	8/120	16/120	Personal Competence	3/4	1/4
			Social Context	1/4	3/4
Professionals	4/120	32/120	Personal Competence	3/4	1/4
			Social Context	1/4	3/4

Note: C: Cost Strategy, D: Differentiation Strategy

**Figure 2. Competitive strategies of nations**

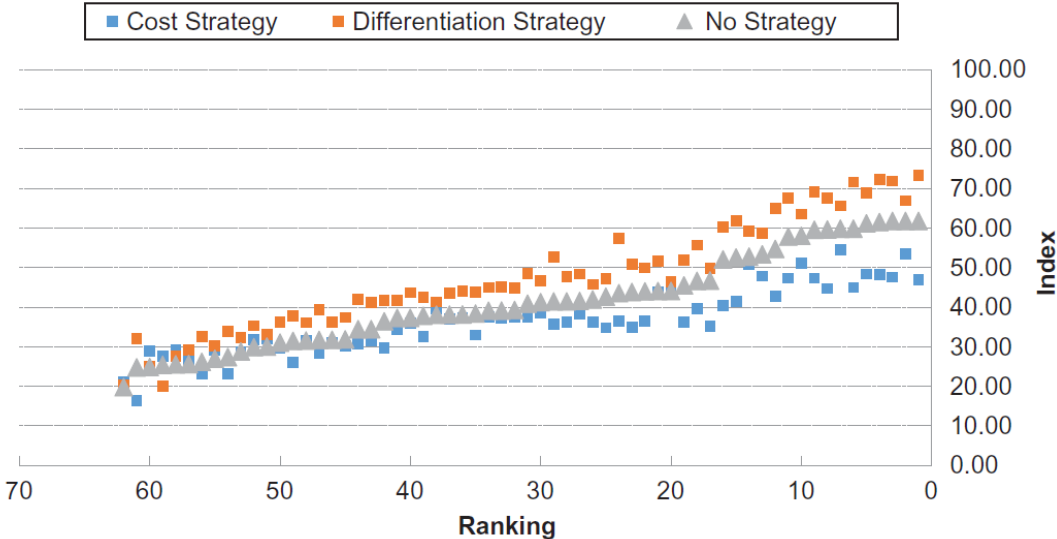


We give different weights to the competitiveness variables for different strategies, as shown in Table 5. To derive appropriate weights for the competitiveness variables in our research, we use the analytic hierarchy process (AHP), which is a popular multi-criteria decision-making tool in the related literature (Sureshchandar and Leisten, 2006). For cost strategy, equal weight (50 percent) is given to physical and human factors. However, factors and sub-factors are given different weights. For differentiation strategy, equal weight (50 percent) is given to Physical and Human Factors, but more weight is given to Demand Conditions and Professionals. The following simulations and their results suggest sophisticated but practical scenarios for policy makers.

*All countries with the same strategy*

This simulation focuses on the changes in the score of the Neutral Strategy Index (NSI) when cost and differentiation strategies are applied. The three strategies—neutral, cost, and differentiation strategies—are given to all countries, respectively. Thus, this is ideally a controlled simulation. Figure 4.3 shows the results of changes in the absolute index for each strategy. It shows that a country with higher competitiveness should pursue a differentiation strategy rather than a cost strategy. The indices of the three strategies are calculated to determine the relationship of the changes in the competitiveness index (CSI-NSI, DSI-NSI) with the size of a country or its competitiveness (NSI). The results are shown in Table 4.6.

**Figure 3. Changing indices with different strategies**



Note: The years for ranking and index are based on IPSNC NCR 2020-2021.

**Table 6. Multiple linear regression model between the changes in variables**

	CSI – NSI (Model 1)	DSI – NSI (Model 2)
Size	0.076	-0.026
(P-value)	(0.003)	(0.217)
Competitiveness (NSI)	-0.289	0.275
(P-value)	(0.000)	(0.000)
Constant	6.061	-6.072
(P-value)	(0.000)	(0.000)
N (observations)	62	62
R <sup>2</sup>	0.549	0.592
Adjust R <sup>2</sup>	0.534	0.578
Residual Std. Error	2.918 (df = 59)	2.459 (df = 59)
F statistic	35.980 (df = 2; 59)	42.797 (df = 2; 59)
(P-value)	(0.000)	(0.000)

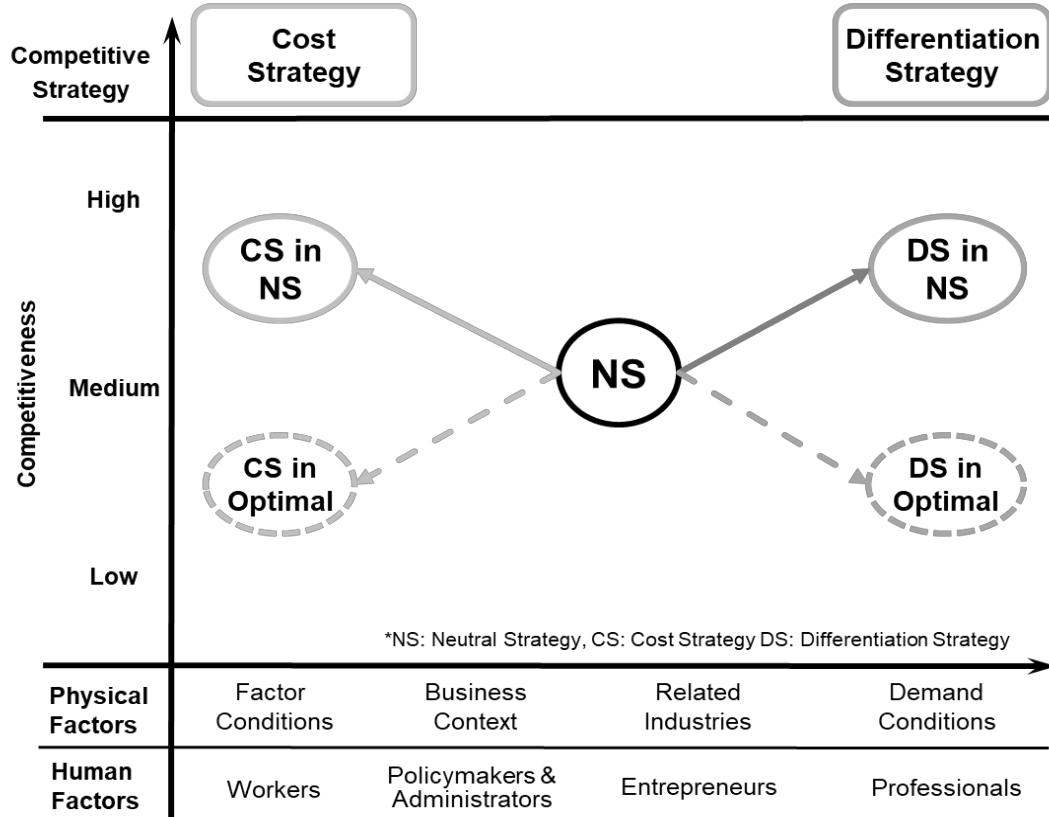
Note: 1) CSI: Cost Strategy Index, DSI: Differentiation Strategy Index, NSI: Neutral Strategy Index, CSI – NSI: Cost Strategy Index – Neutral Strategy Index, DSI – NSI: Differentiation Strategy Index – Neutral Strategy Index. 2) If a p-value of an independent variable is smaller than 0.01, the variable is significant in these models.

Some important implications are derived from this analysis. First, the cost strategy is more suitable for larger countries with lower competitiveness (Model 1). Second, regardless of a country's size, the differentiation strategy is more appropriate for stronger countries that have higher competitiveness (Model 2). This reveals that a country should carefully choose between cost and differentiation strategies as the best approach to enhance its competitiveness, according to an accurate assessment of its current position.

#### *More realistic stories*

The previous simulation assumes that all countries will adopt the same strategy, which is far from reality. Therefore, the following section introduces more realistic scenarios. In general countries have a choice among three strategies: neutral, best, or worst. The best strategy refers to the one that produces the highest performance between cost and differentiation strategies, and the worst strategy is the one which leads to the lowest performance between the two strategies. An optimal strategy represents the situation where all countries choose the best approach in a competitive environment. Figure 4 illustrates the choice of a neutral strategy where it is the base and the starting point. The rankings that result from the choice of a cost strategy under neutral and optimal strategy basis are shown on the left side. The rankings that come from choosing a differentiation strategy under the two bases are listed on the right side. Table 7 contrasts the different indices of the best strategy and the worst strategy. For example, Jordan ranks forty-second with the best strategy, while falling to fifty-first with the worst strategy. The difference in Korea's case is even more remarkable. It ranks seventeenth with the best strategy but falls to forty-seventh with the worst strategy. Therefore, choosing the right strategy is more crucial for Korea than for Jordan.

Figure 4. Changing rankings with different strategy simulation



\*NS: Neutral Strategy, CS: Cost Strategy DS: Differentiation Strategy

Note: NS: Neutral Strategy; CS; Cost Strategy; DS: Differentiation Strategy

**Table 7. Strategy simulation under optimal strategy basis**

Country	BSR	BSI	WSR	WSI	Country	BSR	BSI	WSR	WSI
Denmark	1	73.4	28	47.03	Philippines	32	45.1	47	37.23
Sweden	2	72.32	26	48.36	Chile	33	45.02	46	37.64
Netherlands	3	71.92	27	47.64	Vietnam	34	44.84	46	37.53
Switzerland	4	71.63	32	45.03	Indonesia	35	44.07	47	37.36
Finland	5	69.21	27	47.36	Greece	36	43.79	53	32.96
Singapore	6	68.91	25	48.4	Colombia	37	43.69	50	35.96
Hong Kong	7	67.64	27	47.38	Panama	38	43.64	47	37.04
United States	8	67.5	34	44.73	Hungary	39	42.47	53	32.64
Canada	9	66.94	18	53.49	Turkey	40	42.01	56	30.86
Australia	10	65.67	18	54.51	Spain	41	41.75	57	29.74
Belgium	11	65.04	38	42.86	Jordan	42	41.73	51	34.5
New Zealand	12	63.53	21	51.19	Russia	43	41.37	44	39.47
Austria	13	61.88	42	41.58	Dominican Republic	44	41.26	56	31.59
Germany	14	60.21	44	40.46	Nigeria	45	39.37	60	28.27
China	15	59.25	22	50.79	Slovak Republic	46	37.79	61	26.13
U.A.E.	16	58.78	26	47.9	Mexico	47	37.43	57	30.21
Korea	17	57.35	47	36.61	Ukraine	48	36.22	57	29.74
Taiwan	18	55.68	44	39.68	Argentina	49	36.21	56	31.16
Italy	19	52.68	50	35.68	Egypt	50	36.13	56	31.65
United Kingdom	20	51.97	47	36.27	Bangladesh	51	35.35	56	31.77
Saudi Arabia	21	51.68	35	43.89	Croatia	52	33.89	61	23.25
France	22	50.96	51	34.86	Peru	53	33.11	56	31.94
Japan	23	49.95	47	36.49	Morocco	54	32.51	61	23.04
Israel	24	49.81	51	35.21	Brazil	55	32.36	60	28.72
Thailand	25	48.6	46	37.63	South Africa	56	32.11	62	16.5
India	26	48.37	45	38.28	Guatemala	57	30.23	59	29.1
Poland	27	47.68	47	36.24	Pakistan	58	29.25	61	27.69
Slovenia	28	47.14	51	34.82	Sri Lanka	59	29.19	61	26.45
Malaysia	29	46.63	45	38.47	Cambodia	60	28.86	61	24.98
Kuwait	30	46.5	34	44.52	Oman	61	27.7	62	20.12
Czech Republic	31	45.81	47	36.34	Kenya	62	21.13	62	20.41

Note: BSR: Best Strategy Ranking, BSI: Best Strategy Index, WSR: Worst Strategy Ranking, WSI: Worst Strategy Index

## Implementation

### *Optimal strategic mix (Macro level)*

Once the strategic implications are clarified, a series of concrete strategies across different stages of economic development should be followed to guarantee further success. To this end, the optimal strategic mix by the stage of economic development is illustrated in Table 8.

The strategic capabilities of countries should be focused on the accomplishment of solutions listed in the next stage. In doing so, the eight factors comprising of national competitiveness may have different weight schemes according to the country's current status of economic development. In the early stage of national competitiveness development, the viable strategy should be the cost strategy with a focus on Factor Conditions and Workers. As countries move into higher stages of national economic development, the strategy should gradually move from a cost to a differentiation strategy. In the final stage, countries should employ a differentiation strategy to enhance national competitiveness with an emphasis on Demand Conditions and Professionals.

**Table 8. Optimal strategic mix for different stages of economic development**

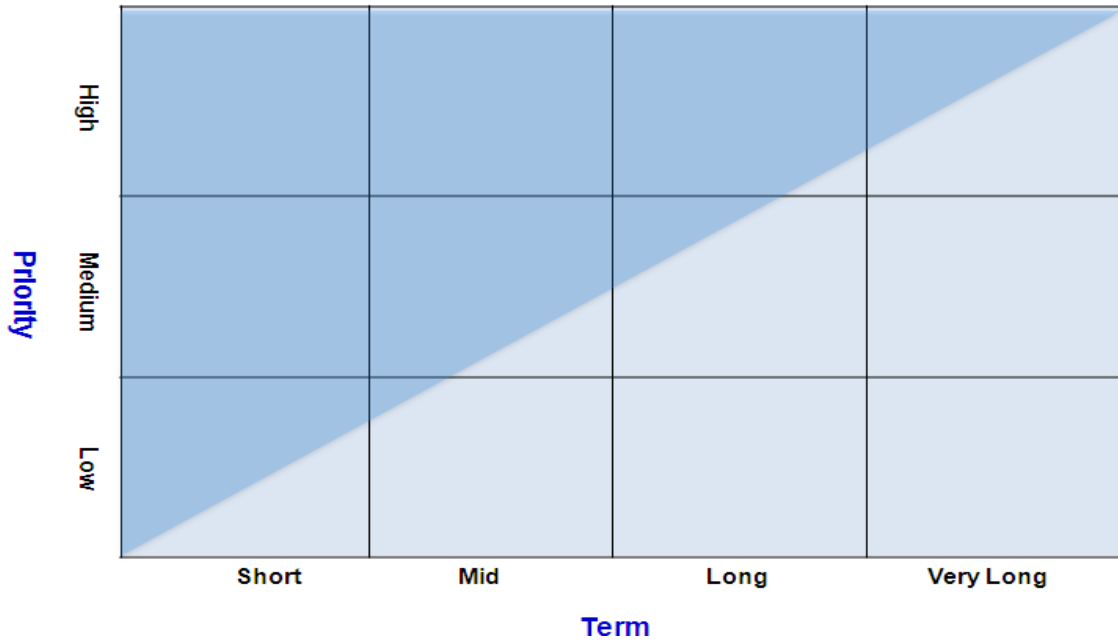
Factor	Stage	Developing	Transitional	Developed
Physical Factors	Factor Conditions	Resource-Based	Manufacturing-Based	Knowledge-Based
	Business Context	Protectionism	Efficiency	Competition
	Related Industries	Physical Infrastructure (Roads & Ports)	Industrial Cluster	Regional Integration
	Demand Conditions	Quantity	Quality	Sophistication
Human Factors	Workers	Cheap	Motivated	Skilled
	Policymakers & Administrators	Facilitation	Support & Regulation	Advice
	Entrepreneurs	Risk Taking	Efficiency Developing	Value Creating
	Professionals	Operational	Managerial	Strategic

### *Term-Priority Matrix (Micro level)*

The Term-Priority Matrix is a policy tool to improve weak criteria. The detailed methodology is as follows. First, the ninety-eight criteria are classified into strong (criteria in which a country displays relative strengths), medium (criteria in which a country ranks in moderate positions), and weak categories (criteria in which a country shows relative weaknesses).

Secondly, the sub-factors with weak criteria are categorized into twelve groups by terms (or time span) and priorities of policies. The degree of priority (Y-axis) is determined by the correlation between the sub-factors and GDP per capita. The upper-left triangle represents the more important and effective policies while the lower-right triangle shows the less important ones (see Figure 5).

**Figure 5. The Term-Priority Matrix**



# 04

## Application of MASI: The Case of Korea



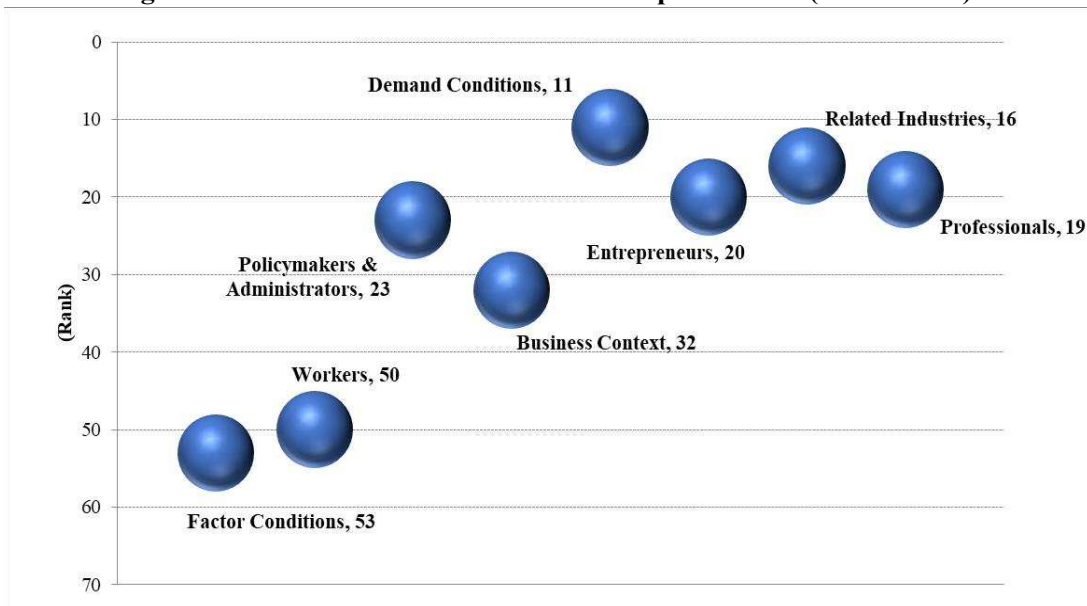
## Application of MASI: The Case of Korea

This section examines the case example of Korea for the application of a series of analytical tools (MASI) introduced in the previous section.

### MEASUREMENT

In 2020, Korea ranked twenty-fourth out of sixty-two countries, rising by two steps from 2019. Korea's competitiveness structure at specific factor levels is shown in Figure 1. Korea belonged to the low-level group in Factor Conditions (53) and Workers (50). The ranks of Korea in Business Context (32) and Policymakers & Administrators (23) which showed medium-level competitiveness, were stable without any significant changes compared to 2019. In the other four factors including Demand Conditions (11), Related Industries (16), Entrepreneurs (20), and Professionals (19), Korea was classified as a high-level country.

**Figure 1. Structure of Korea's national competitiveness (Factor level)**

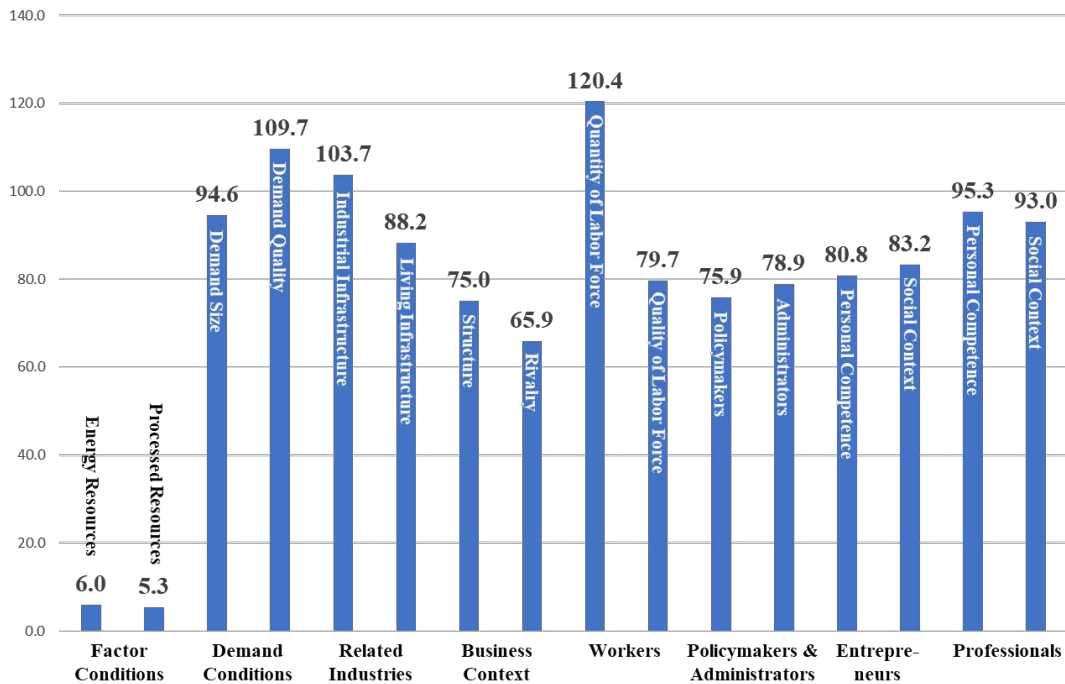


Note: The numbers are the national competitiveness rankings of each factor.

### ANALYSIS

Korea was categorized in the medium-intermediate group. Korea can then be compared with the six medium-strong countries in order to analyze its relative strengths and weaknesses. Figure 2 shows that Korea was weaker than the medium-strong countries in most of the sub-factors. Korea was particularly weak in Quality of Labor Force under Workers and the sub-factors under Factor Conditions, Business Context, Policymakers & Administrators, and Entrepreneurs, where Korea was less than 85 percent of the average level among the six medium-strong countries. In addition, for Demand Size, Living Infrastructure, and Social Context of Professionals, Korea was 85-95 percent of the average level among the six medium-strong countries. However, with respect to Demand Quality, Industrial Infrastructure, Quantity of Labor Force, and Personal Competence of Professionals, Korea had similar or higher competitiveness than the average among the six medium-strong countries.

**Figure 2. Relative position of Korea (Sub-factor level)**



## **SIMULATION**

Korea ranked twenty-fourth in the overall national competitiveness rankings, such as the neutral strategy ranking. If Korea pursues a cost strategy, it will drop to forty-first place. On the other hand, if Korea applies a differentiation strategy, it will move up to the twelfth place, which is higher than its current ranking (24) by twelve places. Korea has a competitive structure with relatively high scores on Demand Conditions and Related Industries in the physical factors and Entrepreneurs and Professionals in the human factors. Therefore, Korea should pursue a differentiation strategy for further enhancement of its national competitiveness.

## **IMPLEMENTATION**

### **Optimal strategic mix (Macro level)**

The key strategic variables are listed in Table 1 to indicate the different stages of economic development. In the far-right column of the table, specific strategic implementations are suggested. For example, in the case of Factor Conditions, Korea's deficiency in natural resources can be overcome through internationalization such as imports or investment in foreign mining industries. Korea's manufacturing-based economy can be upgraded to a knowledge-based economy by creating higher value-added products. The strategic guidelines of this table are illustrated for Korea after an in-depth analysis of Korea's competitiveness. A similar illustration can be made for other countries based on the competitiveness data included in this National Competitiveness Research report.

**Table 1. Development stages and policy implementations: A case of Korea**

<b>Factors</b>	<b>Stages</b>	<b>Developing</b>	<b>Transitional</b>	<b>Developed</b>	<b>Strategies for Enhancing Competitiveness</b>
<b>Physical Factors</b>					
<b>Factor Conditions</b>		Resource-Based	Manufacturing-Based	Knowledge-Based	<ul style="list-style-type: none"> <li>- Overcome problems through internationalization</li> <li>- Create high value-added products by applying high technology and design to the production processes</li> </ul>
<b>Business Context</b>		Protectionism	Efficiency	Competition	<ul style="list-style-type: none"> <li>- Enhance corporate competences such as management techniques and labor-management relations</li> <li>- Attract investment and establish a system to encourage competition by opening up the domestic market</li> </ul>
<b>Related Industries</b>		Physical Infrastructure (Roads & Ports)	Industrial Cluster	Regional Integration	<ul style="list-style-type: none"> <li>- Develop R&amp;D competence by strengthening academic-industrial cooperation and increasing R&amp;D expenditures</li> <li>- Create synergies of technology, human resources, and services through regional integration</li> </ul>
<b>Demand Conditions</b>		Quantity	Quality	Sophistication	<ul style="list-style-type: none"> <li>- Enlarge the market size by exporting and investing abroad</li> <li>- Pay more attention to the sophistication of the market</li> </ul>
<b>Human Factors</b>					
<b>Workers</b>		Cheap	Motivated	Skilled	<ul style="list-style-type: none"> <li>- Establish mutually beneficial labor-management relations and improve worker motivation</li> <li>- Improve skill level of the workforce by establishing a lifetime education and training system</li> </ul>
<b>Policymakers &amp; Administrators</b>		Facilitation	Support & Regulation	Advice	<ul style="list-style-type: none"> <li>- Enhance the stability and efficiency of the political system</li> <li>- Regulate critical issues such as environment, health and safety as an adviser; reduce other regulations and unnecessary intervention</li> </ul>
<b>Entrepreneurs</b>		Risk Taking	Efficiency Developing	Value Creating	<ul style="list-style-type: none"> <li>- Improve the market mechanism for enhancing a creative mindset among entrepreneurs</li> <li>- Reduce direct support for start-up firms</li> </ul>
<b>Professionals</b>		Operational	Managerial	Strategic	<ul style="list-style-type: none"> <li>- Enhance tertiary education and open the skilled labor market</li> <li>- Create a social context for professionals</li> </ul>

## Term-Priority Matrix (Micro level)

### *Identification of weak criteria*

The weak criteria that need to be improved are summarized in Figure 5.3. If a rank of a certain criterion is lower than that of the sub-factors that criteria belong to, we categorize it as the weak area of Korea. Two sub-factors under Demand Conditions do not have weak criteria and will be excluded from the term-priority matrix. Moreover, we excluded the uncontrollable variables such as natural resources under Factor Conditions. Accordingly, 38 criteria under 13 sub-factors, or about 39 percent of the total 98 criteria, are classified as Korea's weak area.

- Factor Conditions

*Energy Resources* (56): Korea ranked fifty-sixth in this sub-factor due to its small land size (58) and poor endowment of natural resources. Korea had low competitiveness in oil reserves (50) and natural gas reserves per capita (46). And it was placed in the medium-level group in coal reserves per capita (30) and freshwater resources per capita (39).

*Processed Resources* (48): Except for natural gas production (45) and coal production per capita (30) in which Korea was classified in the low-level group, Korea had medium-level competitiveness in meat production (26) per capita, wood production per capita (32), and oil production (38).

- Demand Conditions

*Demand Size* (14): Korea showed high competitiveness in GDP (12), export of goods and services (8), and import of goods and services (10), while it showed relatively weak performance in GDP per capita (22), classified as a medium-level group.

*Demand Quality* (6): Korea's strength in this sub-factor was derived from its superior position in consumer sophistication on design (8) and new technology (3); Korea also showed strong performance in consumer sophistication on quality (12), health and environmental issues (16), and intellectual property rights (19).

- Related Industries

*Industrial Infrastructure* (8): Korea showed the best performance in Industrial Infrastructure among the whole sub-factors. The country was categorized as the medium-level group with vehicles (22) and international travel (28). However, Korea displayed remarkably high-level competitiveness in transportation, such as international maritime (11), communication infrastructure such as internet users (4), and technology infrastructures such as R&D expenditures as a percentage of GDP (2) and patents granted (3).

*Living Infrastructure* (20): In education, such as public spending on education (30), students per teacher (32), and student mobility (33), Korea was classified as the medium-level group, performing relatively weak. Instead, it showed high-level competitiveness in tertiary enrollment rate (4), medical services (2), personal security (14), social safety net (19), and leisure, sports, and culture facilities (18). However, it demonstrated relative weakness or very low-level competitiveness in the Gini index (25) and CO<sub>2</sub> emissions (55).

- Business Context

*Structure* (26): Korea showed high-level competitiveness in some criteria measuring business strategy and governance among firms, particularly in unique brands (10). However, Korea showed relatively weak performance in most of the other criteria, such as ethical value (24) and firms' decision structure (23), shared value (30), equal treatment (35), and health, safety, and environmental concerns (27), where the country belonged to the medium-level group.

*Rivalry* (35): While Korea had high-level competitiveness in outward foreign direct investment (FDI) as a percentage of GDP (15) in investment openness, it recorded low-level competitiveness in inward FDI (56). For trade openness, Korea showed medium-level competitiveness in goods export (25) and import (28) openness but had relatively weak positions in services export (41) and import (37) as a percentage of GDP. In regard to portfolio openness, Korea had medium-level competitiveness in terms of both financial inflows (27) and outflows (23) as a percentage of GDP.

- Workers

*Quantity of Labor Force* (39): Korea showed high-level competitiveness in the number of labor force (20) and medium-level competitiveness in working hours (14). It performed relatively weak in the criteria of employment rate (33) and monthly compensation for manufacturing workers (30), in which the country was categorized as the medium-level group and the low-level group, respectively.

*Quality of Labor Force* (39): Korea ranked high in literacy rate (7) and education (16). In attitude and motivation (27), the competitiveness of Korea was medium-level. However, the country showed low-level competitiveness in the openness of the labor market (48) and the relationship between managers and workers (46).

- Policymakers & Administrations

*Policymakers* (26): Korea showed high-level competitiveness in the education level of policymakers (15). And the country was classified as the medium-level group in the process of parliament/congress (30), the results of legislation (24), policymakers' ethics (24), and international experience (27).

*Administrators* (20): Similar to the sub-factor for Policymakers, Korea displayed high-level competitiveness in the education level of administrators (17) and the process of government (19). However, it showed only medium-level competitiveness in criteria of international experience (22), the result of policy implementation (22), and bureaucrats' ethics (23).

- Entrepreneurs

*Personal Competence* (21): Korea showed an exceptionally strong standing in entrepreneur's competence (1), and also established high-level competitiveness in the areas of the process of decision making (19), the result for decision making (20), and education level (20). And Korea was classified into the medium-level country in international experience (24), in which the ranking of the country was slightly lower than in that of the other criteria for this sub-factor.

*Social Context* (21): Korea had high-level competitiveness in new business (5), availability of entrepreneurs (15), and support for the social system (15). However, the country should make some improvements in entrepreneurs' social status (24) and openness to foreign

entrepreneurs (44), where it was classified as the medium-level group and the low-level group, respectively.

- Professionals

*Personal Competence* (18): Korea displayed high rankings in most criteria under this sub-factor, including the professional's decision making (17), education level (18), and international experience (19). And the country was classified into the medium-level group in these two criteria: the professional's core competences (24) and the ability to manage opportunities (21).

*Social Context* (18): Except for the criterion of openness to foreign professionals (38) where Korea showed low-level competitiveness, the country displayed high and medium level performance in the other four criteria: availability of professionals (11), social status of professionals (18), and professional's compensation (21), and the mobility of professionals (26).

Figure 3. Criteria for public policy formulation

Factor Conditions	Related Industries	Business Context
<p><b>Processed Resources</b></p> <ul style="list-style-type: none"> <li>- Coal production per capita (30)</li> <li>- Natural gas production per capita (45)</li> </ul>	<p><b>Industrial Infrastructure</b></p> <ul style="list-style-type: none"> <li>- Vehicles (22)</li> <li>- International travel (28)</li> </ul> <p><b>Living Infrastructure</b></p> <ul style="list-style-type: none"> <li>- Gini index (25)</li> <li>- Public spending on education (30)</li> <li>- Students per teacher (elementary) (32)</li> <li>- Student international mobility (33)</li> <li>- Secondary enrollment rate (38)</li> <li>- CO2 emission (55)</li> </ul>	<p><b>Structure</b></p> <ul style="list-style-type: none"> <li>- Global standards (27)</li> <li>- Health, safety, and environmental concerns (27)</li> <li>- Shared Value (30)</li> <li>- Firms' decision process (34)</li> <li>- Equal treatment (35)</li> <li>- Ethical and legal practices (39)</li> </ul> <p><b>Rivalry</b></p> <ul style="list-style-type: none"> <li>- Services export as % of GDP (37)</li> <li>- Services import as % of GDP (41)</li> <li>- FDI inflows as % of GDP (56)</li> </ul>
<p><b>Workers</b></p> <p><b>Quantity of Labor Force</b></p> <ul style="list-style-type: none"> <li>- Monthly compensation (30)</li> <li>- Employment rate (33)</li> </ul> <p><b>Quality of Labor Force</b></p> <ul style="list-style-type: none"> <li>- Management labor relationships (46)</li> <li>- The openness of labor market (48)</li> </ul>	<p><b>Policymakers &amp; Administrators</b></p>	<p><b>Professionals</b></p>
<p><b>Entrepreneurs</b></p> <p><b>Personal Competence</b></p> <ul style="list-style-type: none"> <li>- Entrepreneur's international experience (24)</li> </ul> <p><b>Social Context</b></p> <ul style="list-style-type: none"> <li>- Social status of Entrepreneurs (24)</li> <li>- Openness to foreign entrepreneurs (44)</li> </ul>	<p><b>Policymakers</b></p> <ul style="list-style-type: none"> <li>- International experience (27)</li> <li>- The process of parliament/congress (30)</li> </ul> <p><b>Administrators</b></p> <ul style="list-style-type: none"> <li>- International experience (22)</li> <li>- The result of policy implementation (22)</li> <li>- Bureaucrats' ethics (23)</li> </ul>	<p><b>Personal Competence</b></p> <ul style="list-style-type: none"> <li>- The ability to manage opportunities (21)</li> <li>- The professional's core competences (24)</li> </ul> <p><b>Social Context</b></p> <ul style="list-style-type: none"> <li>- Professional's compensation (21)</li> <li>- Openness to foreign professionals (38)</li> <li>- The mobility of professionals (26)</li> </ul>

Note: Two sub-factors under Demand Conditions do not have weak criteria and thus are not included for policy formulation.

*Constructing a Term-Priority Matrix*

The thirteen sub-factors listed in Figure 3 are organized into a 4 x 3 matrix in order to provide an overview for policy suggestions as shown in Table 2. The sub-factors in the short term (Term 1) in the order of correlation are Administrations, Policymakers, and Rivalry. The sub-factors under the midterm (Term 2) are Industrial Infrastructure, Social Context of Entrepreneurs, and Produced Resources. The sub-factors in the long term (Term 3) are Personal Competence of Entrepreneurs, Structure, and Social Context and Personal Competence of Professionals. The sub-factors in the very long term (Term 4) are Living Infrastructure, Quality of Labor Force, and Quantity of Labor Force. Therefore, it would be more effective for the Korean government to pay strategic attention to the areas in the upper-left hand corner in Figure 4.

**Table 2. Correlation with GDP per capita (2020-2021)**

Priority	Term 1		Term 2		Term 3		Term 4	
	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.
<b>High</b>	Administrators	0.907	Industrial Infrastructure	0.914	Personal Competence (E)	0.899	Living Infrastructure	0.826
<b>Medium</b>	Policymakers	0.758	Social Context (E)	0.823	Structure	0.763	Quality of Labor Force	0.554
<b>Low</b>	Rivalry	0.562	Processed Resources	0.400	Social Context (P)	0.671	Quantity of Labor Force	-0.625
					Personal Competence (P)	0.654		



Figure 4. Term-Priority Matrix: The case of Korea

<ul style="list-style-type: none"> <li>▪ <b>Administrators</b></li> <li>- Ethics (Bribery &amp; corruption)</li> <li>- The result of policy implementation</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Industrial Infrastructure</b></li> <li>- International travel</li> <li>- Vehicles</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Personal Competence of Entrepreneurs</b></li> <li>- Entrepreneur's international experience</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Living infrastructure</b></li> <li>- CO<sub>2</sub> emission</li> <li>- Education</li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Policymakers</b></li> <li>- The process of parliament/congress</li> <li>- International experience</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Social Context of Entrepreneurs</b></li> <li>- Openness to foreign entrepreneurs</li> <li>- Social status of entrepreneurs</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Structure</b></li> <li>- Ethical and legal practices</li> <li>- Equal treatment</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quality of Labor Force</b></li> <li>- The openness of labor market</li> <li>- Management labor relationships</li> </ul>	
<ul style="list-style-type: none"> <li>▪ <b>Rivalry</b></li> <li>- FDI openness</li> <li>- Service openness</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Processed resources</b></li> <li>- Oil production</li> <li>- Natural gas production</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Social Context of Professionals</b></li> <li>- Openness to foreign professionals</li> <li>▪ <b>Personal Competence of Professionals</b></li> <li>- The professional's core competences</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quantity of Labor Force</b></li> <li>- Employment rate</li> <li>- Monthly compensation for manufacturing workers</li> </ul>	
High	Medium	Low	Short	Mid
				Term
				Very long

# 05

## Factor and Sub-factor Rankings

## World Rankings: Factor Conditions

Factor conditions			Energy Resources			Produced Resources		
1	Australia	42.48	1	Australia	48.84	1	Australia	36.13
2	Canada	36.42	2	Canada	42.02	2	New Zealand	32.11
3	Kuwait	32.41	3	Kuwait	33.92	3	Kuwait	30.90
4	New Zealand	29.57	4	Russia	29.42	4	Canada	30.83
5	U.A.E.	27.75	5	U.A.E.	28.75	5	U.A.E.	26.76
6	Russia	25.33	6	New Zealand	27.02	6	Oman	25.60
7	Saudi Arabia	17.96	7	Saudi Arabia	18.72	7	Finland	21.84
8	Oman	17.81	8	Peru	16.58	8	Russia	21.23
9	Finland	15.13	9	Chile	15.33	9	Sweden	18.69
10	Sweden	12.84	10	Colombia	13.20	10	Saudi Arabia	17.20
11	United States	10.37	11	Oman	10.01	11	United States	13.14
12	Chile	10.04	12	Panama	9.85	12	Austria	12.92
13	Peru	9.12	13	Brazil	9.74	13	Czech Republic	8.97
14	Colombia	8.09	14	Finland	8.42	14	Netherlands	7.78
15	Austria	7.57	15	United States	7.61	15	Malaysia	7.45
16	Malaysia	7.13	16	Sweden	6.99	16	Germany	6.74
17	Brazil	5.55	17	Malaysia	6.80	17	Slovenia	6.06
18	Czech Republic	5.38	18	Argentina	5.99	18	Poland	5.93
19	Panama	5.11	19	Ukraine	4.52	19	Denmark	5.28
20	Argentina	5.01	20	Slovenia	3.48	20	South Africa	5.08
21	Netherlands	4.78	21	Poland	3.34	21	Croatia	4.90
22	Slovenia	4.77	22	Croatia	3.29	22	Chile	4.74
23	Poland	4.63	23	Indonesia	3.18	23	Belgium	4.15
24	Germany	4.39	24	Greece	3.01	24	Argentina	4.04
25	Croatia	4.10	25	Cambodia	2.66	25	China	3.60
26	South Africa	3.83	26	South Africa	2.57	26	Israel	3.34
27	Ukraine	3.78	27	Austria	2.22	27	Greece	3.31
28	Greece	3.16	28	Guatemala	2.11	28	United Kingdom	3.16
29	Indonesia	3.10	29	Germany	2.05	29	Ukraine	3.04
30	Denmark	3.09	30	Mexico	1.97	30	Indonesia	3.02
31	China	2.51	31	Turkey	1.81	31	Colombia	2.98
32	Belgium	2.29	32	Czech Republic	1.79	32	Slovak Republic	2.95
33	Turkey	2.20	33	Netherlands	1.78	33	France	2.93
34	Slovak Republic	2.13	34	Hungary	1.77	34	Turkey	2.60
35	France	2.11	35	Nigeria	1.65	35	Switzerland	2.39
36	Israel	2.07	36	Vietnam	1.57	36	Hungary	2.25
37	United Kingdom	2.03	37	Switzerland	1.52	37	Thailand	2.05
38	Hungary	2.01	38	Thailand	1.43	38	Egypt	1.83
39	Switzerland	1.95	39	China	1.42	39	Peru	1.66
40	Thailand	1.74	40	Philippines	1.40	40	Mexico	1.48
41	Mexico	1.73	41	Spain	1.36	41	Vietnam	1.36
42	Egypt	1.57	42	Slovak Republic	1.31	42	Brazil	1.35
43	Vietnam	1.46	43	Egypt	1.30	43	Spain	1.13
44	Cambodia	1.40	44	France	1.28	44	Italy	1.12
45	Nigeria	1.32	45	Italy	1.09	45	Nigeria	0.98
46	Spain	1.25	46	Japan	1.03	46	Japan	0.88
47	Guatemala	1.16	47	Morocco	1.01	47	India	0.73
48	Italy	1.10	48	United Kingdom	0.91	48	Korea, Republic of	0.73
49	Japan	0.96	49	Denmark	0.89	49	Bangladesh	0.49
50	Philippines	0.83	50	Dominican Republ	0.86	50	Pakistan	0.40
51	India	0.72	51	Kenya	0.83	51	Panama	0.36
52	Morocco	0.64	52	Sri Lanka	0.81	52	Singapore	0.29
53	Korea, Republic of	0.60	53	Israel	0.80	53	Morocco	0.28
54	Kenya	0.50	54	India	0.71	54	Philippines	0.26
55	Dominican Republic	0.48	55	Jordan	0.61	55	Guatemala	0.22
56	Sri Lanka	0.43	56	Korea, Republic of	0.46	56	Kenya	0.17
57	Pakistan	0.42	57	Belgium	0.43	57	Cambodia	0.14
58	Bangladesh	0.37	58	Pakistan	0.43	58	Dominican Republic	0.09
59	Jordan	0.32	59	Taiwan, China	0.31	59	Taiwan, China	0.05
60	Taiwan, China	0.18	60	Bangladesh	0.26	60	Hong Kong SAR	0.05
61	Singapore	0.16	61	Singapore	0.03	61	Sri Lanka	0.04
62	Hong Kong SAR	0.02	62	Hong Kong SAR	0.00	62	Jordan	0.03

The top five countries for *Factor Conditions* are Australia, Canada, Kuwait, New Zealand, and United Arab Emirates (U.A.E.). These countries showed high competitiveness in both sub-factors of *Energy Resources* and *Produced Resources*. The sub-factor, *Energy Resources*, is measured by the amount of reserves in natural resources per capita such as oil, natural gas, and coal. Land area and freshwater resources are also included. The other sub-factor, *Produced Resources*, is measured by the amount of energy resources produced per capita such as oil, natural gas, and coal. The productions of wood and meat are also included.

## World Rankings: Demand Conditions

Demand Conditions			Demand Size			Demand Quality		
1	United States	81.40	1	United States	92.93	1	Finland	85.58
2	China	64.35	2	China	63.65	2	Denmark	84.69
3	Switzerland	58.43	3	Germany	48.71	3	Sweden	84.54
4	Germany	55.89	4	Japan	33.55	4	Switzerland	83.73
5	Denmark	53.08	5	Switzerland	33.13	5	Austria	80.06
6	Sweden	52.70	6	United Kingdom	31.43	6	Korea, Republic of	77.43
7	Finland	51.05	7	France	30.62	7	Canada	75.80
8	Canada	50.70	8	Singapore	30.18	8	Hong Kong SAR	74.23
9	Netherlands	50.37	9	Netherlands	28.83	9	Australia	73.17
10	Hong Kong SAR	50.32	10	Hong Kong SAR	26.40	10	Netherlands	71.90
11	Korea, Republic of	50.21	11	Canada	25.61	11	Belgium	71.56
12	Japan	50.14	12	Australia	23.67	12	United States	69.87
13	Singapore	49.94	13	Italy	23.00	13	Singapore	69.70
14	Austria	49.80	14	Korea, Republic of	22.98	14	Italy	69.69
15	France	48.65	15	Belgium	21.97	15	New Zealand	69.52
16	Australia	48.42	16	Denmark	21.46	16	Japan	66.72
17	Belgium	46.77	17	Sweden	20.86	17	France	66.68
18	Italy	46.35	18	Austria	19.55	18	China	65.05
19	United Kingdom	43.85	19	U.A.E.	19.18	19	Taiwan, China	64.65
20	New Zealand	41.68	20	Spain	18.43	20	Saudi Arabia	63.63
21	Taiwan, China	39.53	21	Finland	16.52	21	Germany	63.06
22	Saudi Arabia	37.62	22	Israel	14.73	22	Colombia	61.20
23	U.A.E.	37.62	23	Taiwan, China	14.42	23	Thailand	59.79
24	Spain	33.93	24	New Zealand	13.85	24	Vietnam	59.45
25	India	33.75	25	India	13.42	25	Nigeria	58.91
26	Thailand	33.64	26	Mexico	12.31	26	Panama	57.36
27	Israel	33.54	27	Russia	12.15	27	United Kingdom	56.27
28	Poland	32.76	28	Saudi Arabia	11.61	28	U.A.E.	56.06
29	Russia	32.71	29	Kuwait	10.60	29	Slovenia	55.89
30	Kuwait	32.35	30	Poland	10.08	30	Poland	55.45
31	Vietnam	32.18	31	Czech Republic	9.65	31	Kuwait	54.10
32	Colombia	31.99	32	Brazil	9.29	32	India	54.09
33	Slovenia	31.91	33	Slovenia	7.92	33	Russia	53.27
34	Panama	31.03	34	Thailand	7.48	34	Turkey	52.83
35	Mexico	30.72	35	Turkey	7.42	35	Israel	52.36
36	Nigeria	30.24	36	Malaysia	7.18	36	Philippines	52.28
37	Turkey	30.13	37	Greece	7.01	37	Malaysia	51.47
38	Malaysia	29.33	38	Slovak Republic	6.99	38	Chile	51.29
39	Chile	28.57	39	Hungary	6.65	39	Indonesia	51.16
40	Indonesia	28.38	40	Chile	5.86	40	Croatia	50.68
41	Philippines	27.59	41	Indonesia	5.61	41	Spain	49.43
42	Brazil	27.54	42	Argentina	5.13	42	Mexico	49.14
43	Croatia	27.53	43	Oman	4.97	43	Greece	48.02
44	Greece	27.51	44	Vietnam	4.91	44	Sri Lanka	47.66
45	Slovak Republic	27.02	45	Panama	4.70	45	Slovak Republic	47.05
46	Czech Republic	25.42	46	Croatia	4.39	46	Bangladesh	46.54
47	Argentina	25.40	47	South Africa	3.54	47	Brazil	45.78
48	Hungary	24.44	48	Philippines	2.91	48	Argentina	45.67
49	Sri Lanka	24.36	49	Colombia	2.77	49	Jordan	43.90
50	Bangladesh	23.80	50	Peru	2.66	50	Ukraine	43.54
51	Peru	22.96	51	Dominican Republic	2.28	51	Peru	43.26
52	Ukraine	22.56	52	Ukraine	1.58	52	Hungary	42.22
53	Jordan	22.46	53	Nigeria	1.58	53	Dominican Republic	42.21
54	South Africa	22.30	54	Egypt	1.50	54	Morocco	42.15
55	Dominican Republic	22.25	55	Morocco	1.31	55	Guatemala	41.38
56	Morocco	21.73	56	Guatemala	1.10	56	Czech Republic	41.19
57	Guatemala	21.24	57	Bangladesh	1.06	57	South Africa	41.06
58	Egypt	19.51	58	Sri Lanka	1.06	58	Egypt	37.51
59	Pakistan	19.05	59	Jordan	1.01	59	Pakistan	37.26
60	Kenya	11.51	60	Pakistan	0.85	60	Kenya	22.81
61	Cambodia	10.47	61	Kenya	0.21	61	Cambodia	20.86
62	Oman	7.52	62	Cambodia	0.08	62	Oman	10.08

The top five countries for *Demand Conditions* are the United States, China, Switzerland, Germany, and Denmark. The United States was ranked number one in this factor due to its superior advantage in *Demand Size*. Interestingly, despite its small domestic market size, Switzerland was ranked in the top five for *Demand Conditions* due to its high ratings in purchasing power, degree of openness, and market sophistication. The sub-factor, *Demand Size*, is measured by GDP, GDP per capita, and exports and imports of goods and services. Therefore, demand size is not only determined by domestic market size but also by the degree of its openness to the international market. *Demand Quality* is measured by surveys among customers on their sensitivity to quality, design, health and environment, intellectual property rights, and new technology. Countries with strength in this sub-factor have sophisticated and demanding consumers who pressure firms to continuously innovate and improve the competitiveness of their products and services.

## World Rankings: Related Industries

Related Industries			Industrial Infrastructure			Living Infrastructure		
1	Denmark	65.85	1	United States	59.62	1	Denmark	79.31
2	Finland	64.15	2	Singapore	55.26	2	Finland	78.65
3	Switzerland	63.10	3	Hong Kong SAR	54.69	3	Sweden	74.18
4	Sweden	63.02	4	Switzerland	53.49	4	Austria	73.87
5	Austria	62.44	5	Denmark	52.38	5	Belgium	73.87
6	Netherlands	60.60	6	Sweden	51.86	6	Netherlands	73.33
7	Belgium	60.42	7	Austria	51.02	7	Switzerland	72.71
8	Singapore	59.96	8	Korea, Republic of	50.04	8	New Zealand	70.02
9	Australia	59.30	9	Finland	49.64	9	Australia	69.97
10	New Zealand	59.25	10	U.A.E.	49.37	10	Taiwan, China	69.44
11	Taiwan, China	58.10	11	Australia	48.63	11	Spain	66.52
12	United States	57.94	12	Japan	48.58	12	Germany	65.47
13	Hong Kong SAR	57.54	13	New Zealand	48.49	13	Czech Republic	65.46
14	Germany	56.96	14	Germany	48.44	14	France	65.45
15	Japan	56.30	15	Israel	48.14	15	Slovenia	64.84
16	Korea, Republic of	56.01	16	Netherlands	47.88	16	Singapore	64.67
17	U.A.E.	55.50	17	Canada	47.04	17	Japan	64.03
18	Canada	55.43	18	Belgium	46.98	18	United Kingdom	63.83
19	Czech Republic	54.89	19	Taiwan, China	46.77	19	Canada	63.82
20	France	54.63	20	Saudi Arabia	44.80	20	Korea, Republic of	61.99
21	Slovenia	54.39	21	Czech Republic	44.31	21	U.A.E.	61.62
22	Israel	54.31	22	United Kingdom	44.21	22	Israel	60.49
23	United Kingdom	54.02	23	Hungary	44.07	23	Hong Kong SAR	60.38
24	Spain	53.83	24	Slovenia	43.94	24	Italy	58.51
25	Italy	49.90	25	France	43.80	25	Greece	58.15
26	Hungary	49.39	26	Italy	41.28	26	Poland	57.97
27	Greece	49.11	27	Spain	41.15	27	United States	56.26
28	Saudi Arabia	48.90	28	Greece	40.07	28	Slovak Republic	55.29
29	Poland	48.12	29	Malaysia	38.84	29	Croatia	55.11
30	Slovak Republic	46.48	30	Kuwait	38.79	30	Hungary	54.71
31	Croatia	45.43	31	Poland	38.27	31	Thailand	54.00
32	Kuwait	44.57	32	Slovak Republic	37.67	32	China	53.98
33	China	43.74	33	Croatia	35.74	33	Turkey	53.44
34	Thailand	43.72	34	Russia	34.51	34	Saudi Arabia	53.01
35	Malaysia	43.14	35	China	33.50	35	Argentina	52.34
36	Russia	42.30	36	Thailand	33.43	36	Chile	51.31
37	Chile	41.61	37	Oman	32.68	37	Ukraine	50.99
38	Turkey	40.66	38	Panama	32.17	38	Kuwait	50.36
39	Panama	38.78	39	Chile	31.91	39	Russia	50.10
40	Jordan	37.26	40	Morocco	29.65	40	Malaysia	47.45
41	Colombia	36.56	41	Mexico	28.39	41	Jordan	46.78
42	Ukraine	36.38	42	South Africa	28.13	42	Indonesia	46.25
43	Philippines	35.87	43	Turkey	27.88	43	Colombia	45.46
44	Dominican Republic	35.58	44	Philippines	27.85	44	Panama	45.39
45	Vietnam	35.47	45	Brazil	27.81	45	Sri Lanka	44.91
46	Argentina	35.34	46	Dominican Republic	27.74	46	Vietnam	44.73
47	Mexico	35.22	47	Jordan	27.73	47	Philippines	43.89
48	Indonesia	35.17	48	Colombia	27.66	48	Egypt	43.51
49	Brazil	34.54	49	Vietnam	26.22	49	Dominican Republic	43.42
50	Sri Lanka	34.14	50	India	25.23	50	Peru	42.21
51	Oman	33.63	51	Indonesia	24.10	51	Mexico	42.05
52	India	33.23	52	Peru	23.96	52	Brazil	41.27
53	Peru	33.08	53	Sri Lanka	23.38	53	India	41.23
54	Morocco	32.94	54	Cambodia	23.02	54	Morocco	36.22
55	Egypt	31.55	55	Guatemala	22.30	55	Oman	34.58
56	South Africa	31.24	56	Ukraine	21.77	56	South Africa	34.35
57	Kenya	27.12	57	Nigeria	21.75	57	Kenya	33.01
58	Guatemala	27.02	58	Bangladesh	21.74	58	Bangladesh	31.79
59	Bangladesh	26.76	59	Kenya	21.23	59	Guatemala	31.73
60	Nigeria	26.69	60	Egypt	19.58	60	Nigeria	31.62
61	Cambodia	24.48	61	Pakistan	18.95	61	Pakistan	29.14
62	Pakistan	24.05	62	Argentina	18.35	62	Cambodia	25.93

The top five countries for Related Industries are Denmark, Finland, Switzerland, Sweden, and Austria. Denmark was ranked number one in this factor due to its superiority in Living Infrastructure. Finland was second due to its advantage in Industrial Infrastructure and Living Infrastructure. On the other hand, Sweden, and Austria showed higher competitiveness in Living Industrial Infrastructure. Industrial Infrastructure, measures the infrastructure of transportation, communication, finance, and science & technology. Transportation is composed of indices such as motor vehicles, civil aviation, maritime transport, and international travel. Communication includes indices such as the number of mobile phone subscribers and internet users. Finance is composed of capital value and capital accessibility. Finally, Science & Technology is captured by the number of scientists and engineers, the quality of scientific research institutions, research and development expenditure, and international patents granted. Living Infrastructure is composed of indices on education, social security, and quality of life. Education is measured by public spending on education, students per teacher, secondary and tertiary enrollment rates, and international mobility of students. Quality of life is measured by the Gini index, the Human Development Index, CO2 emissions, and the development of leisure, sports, and cultural facilities.

## World Rankings: Business Context

Business Context			Structure			Rivalry		
1	Hong Kong	77.97	1	Sweden	90.54	1	Hong Kong	79.78
2	Singapore	74.30	2	Denmark	89.85	2	Singapore	71.79
3	Netherlands	66.71	3	Netherlands	87.51	3	Netherlands	45.91
4	Denmark	58.27	4	New Zealand	86.82	4	U.A.E.	34.11
5	Belgium	56.91	5	Canada	83.14	5	Belgium	33.94
6	Sweden	56.83	6	Austria	83.07	6	Switzerland	30.46
7	Switzerland	55.64	7	Australia	81.05	7	Denmark	26.68
8	Austria	52.41	8	Switzerland	80.82	8	Vietnam	25.51
9	Finland	51.46	9	Finland	80.77	9	Cambodia	25.35
10	Canada	50.31	10	Belgium	79.88	10	Hungary	23.55
11	New Zealand	49.25	11	Singapore	76.80	11	Sweden	23.13
12	Australia	46.80	12	Hong Kong	76.16	12	Slovak Republic	22.98
13	Germany	45.27	13	Germany	72.88	13	Slovenia	22.46
14	U.A.E.	44.05	14	Italy	68.64	14	Finland	22.14
15	Taiwan	40.95	15	China	68.47	15	Austria	21.74
16	Italy	40.89	16	United States	67.06	16	United Kingdom	21.24
17	Thailand	39.27	17	Taiwan	62.55	17	Czech Republic	21.17
18	Czech Republic	38.95	18	Thailand	60.21	18	Taiwan	19.36
19	United States	38.46	19	Israel	59.41	19	Malaysia	18.88
20	France	37.69	20	Indonesia	58.60	20	France	18.83
21	Slovenia	37.40	21	Philippines	58.51	21	Oman	18.61
22	Vietnam	37.23	22	Japan	58.36	22	Thailand	18.34
23	China	37.00	23	India	57.90	23	Germany	17.65
24	United Kingdom	36.65	24	Czech Republic	56.73	24	Canada	17.48
25	Israel	36.56	25	France	56.56	25	Panama	16.12
26	Kuwait	35.25	26	Korea	55.73	26	Croatia	15.96
27	Japan	34.89	27	Kuwait	54.93	27	Spain	15.88
28	Spain	34.75	28	U.A.E.	53.98	28	Kuwait	15.57
29	Malaysia	34.56	29	Spain	53.62	29	Ukraine	14.92
30	Philippines	34.47	30	Poland	52.94	30	Poland	14.47
31	Panama	34.34	31	Saudi Arabia	52.88	31	Jordan	14.41
32	Korea	34.19	32	Panama	52.57	32	Greece	14.37
33	Poland	33.70	33	Slovenia	52.34	33	Israel	13.72
34	Hungary	33.01	34	Colombia	52.08	34	Italy	13.14
35	Indonesia	32.50	35	United Kingdom	52.07	35	Korea	12.65
36	Jordan	32.39	36	Nigeria	51.03	36	Morocco	12.57
37	India	32.22	37	Jordan	50.37	37	Australia	12.55
38	Greece	31.74	38	Malaysia	50.24	38	New Zealand	11.69
39	Saudi Arabia	31.64	39	Guatemala	49.55	39	South Africa	11.51
40	Slovak Republic	31.36	40	Greece	49.11	40	Japan	11.42
41	Colombia	29.91	41	Vietnam	48.95	41	Chile	11.16
42	Nigeria	28.05	42	Brazil	46.14	42	Mexico	10.79
43	Guatemala	27.93	43	Argentina	45.98	43	Philippines	10.43
44	Ukraine	27.15	44	Russia	45.62	44	Saudi Arabia	10.39
45	Egypt	27.11	45	Egypt	45.42	45	United States	9.86
46	Dominican Republic	27.11	46	Dominican Republic	45.07	46	Dominican Republic	9.15
47	Russia	26.78	47	Hungary	42.47	47	Egypt	8.8
48	Chile	26.25	48	Turkey	41.86	48	Peru	8.12
49	Brazil	25.88	49	Bangladesh	41.59	49	Russia	7.95
50	Argentina	25.54	50	Chile	41.35	50	Turkey	7.83
51	South Africa	25.47	51	Mexico	39.80	51	Colombia	7.73
52	Mexico	25.29	52	Slovak Republic	39.74	52	Sri Lanka	7.67
53	Turkey	24.84	53	South Africa	39.43	53	India	6.54
54	Cambodia	23.86	54	Ukraine	39.37	54	Indonesia	6.39
55	Morocco	23.77	55	Sri Lanka	37.79	55	Guatemala	6.32
56	Bangladesh	23.10	56	Pakistan	37.59	56	Kenya	5.71
57	Sri Lanka	22.73	57	Peru	36.96	57	Brazil	5.62
58	Peru	22.54	58	Morocco	34.96	58	China	5.52
59	Pakistan	20.69	59	Croatia	23.39	59	Argentina	5.09
60	Croatia	19.67	60	Cambodia	22.36	60	Nigeria	5.07
61	Oman	15.65	61	Kenya	16.42	61	Bangladesh	4.62
62	Kenya	11.07	62	Oman	12.69	62	Pakistan	3.79

The top five countries for the factor of *Business Context* are Hong Kong, Singapore, Netherlands, UAE, and Belgium. The top five countries were ranked in the higher places, due to their superior advantage in *Rivalry* in particular. In addition, the graphs showed higher competitiveness in the sub-factor of *Structure* among five countries. The sub-factor, *Structure*, measures the aspects of business governance and ethical practices among firms. These components were measured with survey data. Business governance includes indices such as a firm's decision process, the development of unique brands, and equal treatment. Business morality consists of indices such as social value, ethical practice, health and safety performance, and environmental concerns. *Rivalry* is composed of investment openness in terms of foreign direct investment, financial portfolio, and trade. Countries with strength in this sub-factor are more likely to have a higher degree of both domestic and international competition and are favored by multinational companies as a destination for doing international business.

### World Rankings: (Unskilled) Workers

(Unskilled) Workers			Quantity of Workers			Quality of Workers		
1	China	84.15	1	China	92.56	1	Denmark	88.80
2	Vietnam	68.15	2	Bangladesh	73.85	2	Netherlands	83.65
3	Philippines	66.75	3	India	72.99	3	New Zealand	79.55
4	Indonesia	64.44	4	Cambodia	71.56	4	Sweden	78.92
5	Thailand	62.03	5	Pakistan	68.91	5	Canada	78.67
6	India	60.76	6	Indonesia	67.37	6	China	75.73
7	Hong Kong	60.57	7	Thailand	65.95	7	Australia	74.69
8	Panama	60.04	8	Vietnam	65.67	8	Belgium	74.23
9	Colombia	59.45	9	Philippines	64.03	9	Singapore	73.31
10	Taiwan	59.00	10	Guatemala	63.21	10	Switzerland	73.02
11	Poland	58.63	11	Mexico	61.75	11	Taiwan	73.00
12	Netherlands	58.29	12	Malaysia	61.21	12	Italy	72.47
13	Singapore	58.07	13	Sri Lanka	60.07	13	Vietnam	70.64
14	Dominican Republic	58.06	14	Peru	60.02	14	Philippines	69.47
15	Denmark	57.61	15	Panama	59.09	15	Kuwait	67.40
16	Malaysia	57.39	16	Egypt	58.90	16	Spain	66.35
17	Kuwait	57.36	17	Ukraine	56.08	17	Hong Kong	66.33
18	Jordan	56.99	18	Colombia	55.74	18	Finland	65.77
19	Mexico	56.80	19	Saudi Arabia	55.21	19	Poland	64.90
20	Peru	56.65	20	Hong Kong	54.80	20	Czech Republic	64.01
21	New Zealand	56.42	21	Dominican Republic	54.76	21	Austria	63.77
22	Argentina	55.97	22	Russia	53.58	22	Slovenia	63.46
23	Ukraine	55.91	23	Argentina	52.55	23	Chile	63.44
24	Russia	55.88	24	Poland	52.36	24	Colombia	63.17
25	Guatemala	55.71	25	Turkey	52.22	25	Greece	62.79
26	Saudi Arabia	55.12	26	Jordan	51.96	26	Germany	62.32
27	Belgium	55.08	27	Kenya	47.85	27	Jordan	62.02
28	Bangladesh	55.04	28	Brazil	47.47	28	Japan	61.82
29	Czech Republic	55.02	29	Kuwait	47.31	29	Indonesia	61.51
30	Chile	54.90	30	U.A.E.	47.31	30	Dominican Republic	61.36
31	Sweden	54.59	31	Oman	46.39	31	Panama	60.99
32	Italy	54.38	32	Chile	46.35	32	Argentina	59.39
33	Canada	53.70	33	Hungary	46.28	33	United States	59.18
34	Slovenia	53.57	34	Czech Republic	46.03	34	Russia	58.18
35	Sri Lanka	52.66	35	Taiwan	45.01	35	Thailand	58.11
36	Australia	52.24	36	Croatia	44.42	36	Ukraine	55.74
37	Cambodia	51.67	37	Slovenia	43.68	37	U.A.E.	55.45
38	Turkey	51.54	38	Singapore	42.82	38	Saudi Arabia	55.03
39	U.A.E.	51.38	39	Korea	41.44	39	Korea	54.47
40	Japan	50.70	40	Slovak Republic	40.56	40	Malaysia	53.58
41	Switzerland	50.14	41	Nigeria	40.10	41	Peru	53.29
42	Brazil	49.86	42	United States	39.59	42	Brazil	52.24
43	Pakistan	49.81	43	Japan	39.57	43	Mexico	51.86
44	Egypt	49.73	44	United Kingdom	38.01	44	Turkey	50.86
45	Greece	49.60	45	Greece	36.42	45	Nigeria	50.76
46	United States	49.38	46	Italy	36.29	46	United Kingdom	50.63
47	Spain	49.32	47	Belgium	35.93	47	Hungary	50.52
48	Hungary	48.40	48	Morocco	35.35	48	Israel	49.05
49	Finland	48.37	49	Israel	34.75	49	France	48.92
50	Korea	47.96	50	New Zealand	33.28	50	India	48.52
51	Austria	47.60	51	Netherlands	32.94	51	Guatemala	48.20
52	Germany	45.62	52	Spain	32.29	52	Sri Lanka	45.25
53	Nigeria	45.43	53	Austria	31.43	53	Egypt	40.57
54	United Kingdom	44.32	54	Finland	30.96	54	Morocco	36.61
55	Israel	41.90	55	Sweden	30.26	55	Bangladesh	36.23
56	Kenya	41.71	56	Australia	29.78	56	Kenya	35.57
57	Croatia	39.66	57	France	29.69	57	Croatia	34.89
58	France	39.30	58	Germany	28.92	58	Cambodia	31.78
59	Oman	38.93	59	Canada	28.72	59	Oman	31.48
60	Morocco	35.98	60	Switzerland	27.26	60	Pakistan	30.71
61	Slovak Republic	28.56	61	Denmark	26.43	61	South Africa	22.76
62	South Africa	12.10	62	South Africa	1.43	62	Slovak Republic	16.56

The top five countries for *(Unskilled) Workers* are China, Vietnam, the Philippines, Indonesia, and Thailand. They all demonstrated strong competitiveness in this factor due to their advantage in the *Quantity of Workers*. The sub-factor, *Quantity of Workers*, is measured by the size of the labor force, employment rate, working hours, and monthly compensation for manufacturing workers. *Quality of Workers* is measured by literacy rate, attitude and motivation, education, the openness of the labor market, and the relationship between management and workers. Countries with strength in this sub-factor have a relative advantage as far as the attitude of workers and working conditions are concerned.

### World Rankings: Policymakers & Administrators

Policymakers & Administrators			Policymakers			Administrators		
1	Singapore	93.25	1	Denmark	91.25	1	Singapore	96.32
2	Finland	91.80	2	Singapore	90.17	2	Finland	93.49
3	Switzerland	89.72	3	Switzerland	90.14	3	Netherlands	91.70
4	Denmark	89.51	4	Finland	90.10	4	Switzerland	89.30
5	Netherlands	89.29	5	Netherlands	86.87	5	Sweden	87.95
6	Sweden	86.13	6	Sweden	84.31	6	Denmark	87.76
7	New Zealand	84.39	7	New Zealand	82.12	7	New Zealand	86.66
8	Australia	81.03	8	Australia	79.02	8	Canada	84.04
9	Canada	80.87	9	Canada	77.70	9	Hong Kong	83.55
10	Germany	77.06	10	Germany	76.67	10	Australia	83.04
11	Hong Kong	73.01	11	China	76.49	11	Japan	78.24
12	Belgium	72.94	12	Saudi Arabia	72.42	12	Germany	77.45
13	U.A.E.	71.16	13	Belgium	71.75	13	United States	76.12
14	Austria	69.18	14	U.A.E.	70.57	14	Belgium	74.14
15	France	69.01	15	Austria	68.62	15	United Kingdom	73.74
16	Japan	68.50	16	France	65.79	16	France	72.23
17	United States	68.07	17	Hong Kong	62.48	17	U.A.E.	71.74
18	United Kingdom	66.60	18	Kuwait	60.35	18	Taiwan	69.84
19	Taiwan	65.02	19	Taiwan	60.21	19	Austria	69.75
20	China	64.30	20	United States	60.01	20	Korea	64.36
21	Saudi Arabia	63.67	21	Chile	59.88	21	Chile	64.27
22	Chile	62.07	22	United Kingdom	59.46	22	Israel	60.56
23	Korea	60.83	23	Japan	58.77	23	Czech Republic	55.20
24	Israel	57.12	24	Greece	58.47	24	Saudi Arabia	54.91
25	Italy	52.62	25	Jordan	58.31	25	Slovenia	54.74
26	Greece	52.42	26	Korea	57.30	26	Italy	52.50
27	Jordan	52.35	27	Egypt	55.45	27	China	52.10
28	Kuwait	51.41	28	Vietnam	55.45	28	Poland	51.20
29	India	50.77	29	Israel	53.67	29	Malaysia	49.94
30	Czech Republic	50.56	30	Italy	52.73	30	Spain	49.75
31	Malaysia	48.69	31	India	52.71	31	India	48.84
32	Slovenia	48.31	32	Panama	48.54	32	Jordan	46.39
33	Vietnam	46.61	33	Philippines	48.18	33	Greece	46.36
34	Poland	46.22	34	Indonesia	48.16	34	Kuwait	42.47
35	Philippines	44.36	35	Malaysia	47.45	35	Hungary	42.27
36	Panama	44.13	36	Russia	46.50	36	Oman	41.09
37	Indonesia	43.73	37	Czech Republic	45.91	37	Philippines	40.54
38	Hungary	43.07	38	Pakistan	45.26	38	Panama	39.72
39	Egypt	42.80	39	Thailand	44.19	39	Indonesia	39.30
40	Thailand	41.65	40	Hungary	43.87	40	Thailand	39.11
41	Spain	40.63	41	Slovenia	41.88	41	Slovak Republic	38.24
42	Oman	39.70	42	Bangladesh	41.75	42	Vietnam	37.76
43	Russia	39.64	43	Poland	41.25	43	Turkey	35.89
44	Turkey	38.27	44	Turkey	40.64	44	Colombia	35.68
45	Argentina	37.39	45	Nigeria	40.34	45	Argentina	35.54
46	Pakistan	37.14	46	Argentina	39.24	46	Russia	32.77
47	Colombia	36.17	47	Cambodia	38.81	47	South Africa	30.67
48	Bangladesh	35.30	48	Oman	38.32	48	Egypt	30.15
49	Slovak Republic	33.69	49	Dominican Republic	36.88	49	Morocco	29.77
50	Morocco	32.50	50	Colombia	36.65	50	Pakistan	29.01
51	Nigeria	31.83	51	Morocco	35.22	51	Bangladesh	28.85
52	Dominican Republic	31.65	52	Spain	31.51	52	Croatia	27.47
53	Cambodia	31.63	53	Slovak Republic	29.14	53	Dominican Republic	26.41
54	South Africa	27.10	54	Ukraine	27.04	54	Peru	26.28
55	Kenya	25.64	55	Kenya	26.64	55	Brazil	26.16
56	Brazil	25.42	56	Guatemala	25.40	56	Sri Lanka	25.90
57	Ukraine	25.31	57	Brazil	24.69	57	Kenya	24.63
58	Peru	25.31	58	Peru	24.34	58	Cambodia	24.46
59	Sri Lanka	21.75	59	South Africa	23.52	59	Ukraine	23.59
60	Mexico	21.57	60	Mexico	20.09	60	Nigeria	23.31
61	Guatemala	21.07	61	Sri Lanka	17.60	61	Mexico	23.06
62	Croatia	16.65	62	Croatia	5.83	62	Guatemala	16.75

The top five countries for *Policymakers & Administrators* are Singapore, Finland, Switzerland, Denmark, and the Netherlands. Singapore was ranked number one in this factor due to its strength in both *Policymakers* and *Administrators*. Four of the top five countries are classified in the Small-Strong Group and the rest of one country is in the Medium-Strong Group. *Administrators* is measured by five criteria including the process of policy implementation, the results of policy implementation, ethics, education level, and the international experience of bureaucrats. Countries with strength in this sub-factor have relatively high competitiveness in morality and international experience. As if the top five countries for *Policymakers*, all top five countries for *Administrators* are small-strong countries.



## World Rankings: Entrepreneurs

Entrepreneurs			Personal Competence of Entrepreneurs			Social Context of Entrepreneurs		
1	United States	82.84	1	United States	84.91	1	Netherlands	91.20
2	Sweden	82.41	2	Canada	80.63	2	Sweden	85.06
3	Denmark	80.86	3	Sweden	79.77	3	Finland	83.19
4	Finland	80.33	4	Denmark	78.85	4	Denmark	82.86
5	Canada	80.11	5	Hong Kong	78.16	5	United States	80.76
6	Netherlands	80.07	6	Finland	77.46	6	Canada	79.60
7	Hong Kong	78.20	7	Switzerland	75.30	7	U.A.E.	78.84
8	Switzerland	76.41	8	Australia	74.94	8	Hong Kong	78.24
9	Australia	73.37	9	Israel	74.47	9	Singapore	77.75
10	Singapore	72.97	10	Netherlands	68.94	10	Switzerland	77.52
11	U.A.E.	72.08	11	Singapore	68.18	11	New Zealand	76.21
12	New Zealand	70.81	12	Belgium	65.94	12	Australia	71.79
13	Israel	68.59	13	United Kingdom	65.56	13	Belgium	71.00
14	Belgium	68.47	14	New Zealand	65.40	14	Germany	70.42
15	United Kingdom	66.06	15	U.A.E.	65.31	15	United Kingdom	66.56
16	Austria	64.52	16	Austria	64.91	16	Taiwan	66.23
17	Germany	63.72	17	France	57.61	17	China	64.57
18	Taiwan	61.75	18	Taiwan	57.26	18	Austria	64.13
19	France	58.69	19	Germany	57.02	19	Saudi Arabia	63.49
20	Korea	58.15	20	Chile	56.47	20	Israel	62.72
21	Saudi Arabia	57.33	21	Korea	54.22	21	Korea	62.08
22	Chile	57.26	22	Malaysia	52.28	22	France	59.78
23	China	53.01	23	Saudi Arabia	51.18	23	Chile	58.04
24	Slovenia	51.39	24	Czech Republic	50.22	24	Italy	57.99
25	Czech Republic	51.29	25	Japan	47.95	25	Slovenia	56.90
26	Poland	49.39	26	Colombia	46.70	26	Thailand	55.09
27	Kuwait	48.81	27	Slovenia	45.87	27	Vietnam	54.70
28	Italy	48.33	28	Kuwait	45.71	28	Poland	53.29
29	Malaysia	47.78	29	Poland	45.50	29	Czech Republic	52.35
30	Hungary	45.94	30	Hungary	45.46	30	Kuwait	51.91
31	Japan	45.23	31	China	41.45	31	Dominican Republic	51.91
32	Colombia	44.91	32	Oman	40.06	32	Jordan	51.54
33	Dominican Republic	44.40	33	Slovak Republic	39.51	33	Indonesia	50.49
34	Panama	43.69	34	Italy	38.67	34	India	50.40
35	Jordan	43.44	35	Panama	37.82	35	Panama	49.56
36	Thailand	42.55	36	Spain	37.09	36	Turkey	49.16
37	Greece	41.77	37	Dominican Republic	36.89	37	Egypt	47.42
38	Vietnam	41.08	38	Greece	36.74	38	Philippines	47.39
39	Slovak Republic	40.74	39	Jordan	35.34	39	Greece	46.80
40	Indonesia	39.96	40	Nigeria	35.18	40	Hungary	46.43
41	Spain	39.93	41	Croatia	34.79	41	Malaysia	43.29
42	Turkey	39.57	42	South Africa	34.13	42	Colombia	43.12
43	India	39.40	43	Mexico	33.12	43	Peru	43.07
44	Philippines	38.49	44	Peru	31.10	44	Russia	42.76
45	Mexico	37.71	45	Thailand	30.02	45	Spain	42.76
46	Oman	37.17	46	Turkey	29.98	46	Japan	42.51
47	Peru	37.08	47	Philippines	29.59	47	Mexico	42.31
48	Russia	35.72	48	Indonesia	29.43	48	Slovak Republic	41.98
49	Egypt	35.11	49	Russia	28.68	49	Ukraine	39.72
50	South Africa	33.52	50	India	28.41	50	Morocco	38.03
51	Nigeria	33.25	51	Vietnam	27.47	51	Guatemala	35.67
52	Ukraine	32.35	52	Ukraine	24.99	52	Oman	34.27
53	Croatia	29.72	53	Brazil	24.34	53	Argentina	34.19
54	Argentina	28.66	54	Argentina	23.14	54	South Africa	32.91
55	Brazil	27.56	55	Egypt	22.81	55	Nigeria	31.32
56	Morocco	26.29	56	Sri Lanka	15.99	56	Brazil	30.78
57	Guatemala	25.14	57	Bangladesh	15.90	57	Pakistan	29.38
58	Bangladesh	22.41	58	Kenya	15.41	58	Bangladesh	28.92
59	Kenya	21.49	59	Cambodia	15.22	59	Kenya	27.56
60	Pakistan	21.06	60	Guatemala	14.62	60	Croatia	24.65
61	Cambodia	19.47	61	Morocco	14.56	61	Cambodia	23.72
62	Sri Lanka	17.31	62	Pakistan	12.73	62	Sri Lanka	18.63

The top five countries for *Entrepreneurs* are the United States, Sweden, Denmark, Finland, and Canada. The strengths of the United States in the sub-factor *Personal Competence of Entrepreneurs*, has particularly contributed to its high competitiveness in *Entrepreneurs*. Canada was also listed in the top five, due to its strength in *Personal Competence of Entrepreneurs* despite its relative weakness in *Social Context of Entrepreneurs*. The sub-factor, *Personal Competence of Entrepreneurs*, is measured by the process of decision making, entrepreneur's core competence, education level, and international experience. *Social Context of Entrepreneurs* consists of criteria such as availability of entrepreneurs, support of the social system, openness to foreign entrepreneurs, new business development, and social status of entrepreneurs.

## World Rankings: Professionals

Professionals			Personal Competence of Professionals			Social Context of Entrepreneurs		
1	Denmark	86.28	1	Denmark	85.43	1	Netherlands	88.82
2	Sweden	83.54	2	Singapore	83.51	2	Denmark	87.12
3	Netherlands	83.01	3	Sweden	81.95	3	Switzerland	85.58
4	Switzerland	82.37	4	Switzerland	79.15	4	Sweden	85.12
5	Singapore	80.89	5	Finland	77.31	5	Belgium	81.21
6	Canada	76.19	6	Netherlands	77.19	6	Singapore	78.26
7	United States	75.15	7	Canada	75.65	7	Australia	77.14
8	Australia	75.03	8	New Zealand	74.30	8	Canada	76.73
9	Belgium	74.92	9	United States	73.99	9	Hong Kong	76.53
10	Hong Kong	74.57	10	Australia	72.92	10	United States	76.32
11	Finland	74.33	11	China	72.87	11	China	73.59
12	China	73.23	12	Hong Kong	72.62	12	India	72.96
13	New Zealand	72.91	13	India	69.88	13	New Zealand	71.53
14	India	71.42	14	Austria	69.14	14	Finland	71.35
15	Germany	67.63	15	Philippines	68.80	15	U.A.E.	70.29
16	U.A.E.	67.40	16	Belgium	68.62	16	Germany	67.46
17	Austria	67.04	17	Germany	67.80	17	Austria	64.95
18	Philippines	64.91	18	Korea	66.20	18	Korea	62.88
19	Korea	64.54	19	Taiwan	66.14	19	Dominican Republic	62.63
20	Thailand	62.47	20	U.A.E.	64.50	20	Malaysia	62.36
21	Taiwan	62.16	21	Thailand	64.13	21	Philippines	61.03
22	Malaysia	62.01	22	Hungary	63.68	22	Thailand	60.80
23	Saudi Arabia	59.42	23	Poland	62.71	23	Indonesia	60.14
24	Poland	58.19	24	Malaysia	61.66	24	Italy	58.70
25	Indonesia	57.95	25	Saudi Arabia	61.57	25	Taiwan	58.19
26	Italy	57.06	26	Nigeria	60.75	26	Saudi Arabia	57.27
27	Nigeria	57.02	27	Indonesia	55.77	27	Israel	55.46
28	Hungary	56.32	28	Czech Republic	55.55	28	Kuwait	54.46
29	Dominican Republic	56.10	29	Italy	55.42	29	Colombia	54.06
30	Israel	55.13	30	Israel	54.81	30	Poland	53.66
31	Czech Republic	54.12	31	Vietnam	54.25	31	Nigeria	53.30
32	Jordan	53.04	32	Jordan	53.36	32	Panama	52.95
33	Bangladesh	52.49	33	Bangladesh	52.12	33	Bangladesh	52.87
34	Vietnam	52.16	34	Greece	51.48	34	Jordan	52.72
35	Greece	51.79	35	Mexico	49.81	35	Czech Republic	52.69
36	Colombia	51.34	36	Dominican Republic	49.57	36	Chile	52.43
37	United Kingdom	50.55	37	United Kingdom	49.27	37	Turkey	52.22
38	Kuwait	50.33	38	Colombia	48.62	38	Greece	52.09
39	Turkey	48.41	39	Slovenia	47.04	39	United Kingdom	51.83
40	Panama	47.88	40	Russia	46.92	40	Egypt	51.05
41	Slovenia	47.45	41	Slovak Republic	46.89	41	Vietnam	50.08
42	Russia	46.30	42	Ukraine	46.48	42	Hungary	48.96
43	Mexico	45.95	43	Kuwait	46.21	43	Slovenia	47.86
44	Egypt	45.22	44	South Africa	46.12	44	Japan	46.10
45	Japan	45.09	45	Turkey	44.61	45	Russia	45.68
46	Ukraine	44.92	46	France	44.31	46	Morocco	43.75
47	Chile	43.66	47	Japan	44.08	47	Ukraine	43.37
48	France	43.61	48	Panama	42.81	48	Argentina	42.99
49	South Africa	42.81	49	Croatia	41.22	49	France	42.91
50	Slovak Republic	42.05	50	Egypt	39.40	50	Mexico	42.08
51	Argentina	40.82	51	Argentina	38.65	51	Spain	40.57
52	Spain	37.68	52	Sri Lanka	37.03	52	South Africa	39.49
53	Croatia	36.46	53	Guatemala	36.09	53	Slovak Republic	37.20
54	Guatemala	36.41	54	Cambodia	35.64	54	Guatemala	36.74
55	Cambodia	35.98	55	Chile	34.89	55	Cambodia	36.32
56	Morocco	35.62	56	Spain	34.79	56	Peru	35.37
57	Brazil	34.14	57	Brazil	34.50	57	Pakistan	34.47
58	Peru	33.37	58	Peru	31.38	58	Brazil	33.77
59	Pakistan	32.23	59	Pakistan	29.98	59	Croatia	31.70
60	Sri Lanka	31.56	60	Morocco	27.49	60	Sri Lanka	26.09
61	Kenya	19.22	61	Kenya	19.96	61	Kenya	18.48
62	Oman	13.09	62	Oman	18.76	62	Oman	7.42

The top five countries in *Professionals* are Denmark, Sweden, the Netherlands, Switzerland, and Singapore. Each of these countries showed strengths in both sub-factors, *Personal Competence* and *Social Context of Professionals*. The sub-factor, *Personal Competence of Professionals*, is measured by the five survey criteria, including decision making among professionals, the ability to manage opportunities, core competences among professionals, education level, and international experiences. Social Context of Professionals is measured by five survey data, including availability, mobility, compensation, social status of professionals, and market openness to foreign professionals.

# 06

## Snapshot of Top 30 Economies

## Snapshot of Top 30 Economies

### #1. Denmark (+1)

With public debt at around 33 percent of GDP (as of 2019), a figure much lower than the OECD average; Denmark had room to finance support for its businesses. Denmark's GDP contracted by -3.3 percent in 2020, which is smaller than the average contraction among EU countries, -6.1 percent. Exports of services dropped, while exports of goods held up slightly better, mainly thanks to record-high sales of pharmaceutical products. Denmark shows a relatively fast pace of economic recovery as mobility data and consumption covered by credit card transactions have returned to the levels in 2019 by June. In addition, international travel restrictions gave a boost to domestic tourism and the increase of domestic tourism partially offset the losses.

### #2. Canada (-1)

The scale of Canada's GDP loss was -5.4 percent in 2020, which is larger than the world's average scale of loss, -3.3 percent. The export sector was damaged due to the reliance on the U.S. exports (the U.S. accounts for 73.5 percent of total Canadian exports in 2020). Additionally, Canadian crude oil exports plunged as North American fuel demand dropped due to measures taken to control the COVID-19 pandemic (oil revenue accounts for about 10 percent of Canada's GDP and 20 percent of merchandise exports). However, economic activity picked up following the start of de-confinement in May 2020. Monthly GDP troughed at 18 percent below pre-crisis levels in April; by July, the gap was only around 6 percent. Activity in some sectors, including retail and wholesale trade, is already back to pre-crisis levels. The large injection of support to household income has played an important role, but income increases have also outstripped consumption and the household saving rate has risen substantially.

### #3. Netherlands (+4)

The scale of GDP loss (-3.8 percent) in the Netherlands was smaller than the EU average (-6.1 percent). Although the infection rate proliferated in the Netherlands from September towards the end of 2020, the COVID-19 situation in the Netherlands remained relatively stable over half of the year of 2020 (until August). In other areas, the Netherlands is benefitting from companies exiting the UK due to Brexit. According to the Netherlands Foreign Investment Agency (NFIA), 140 companies have made the move from the UK to the Netherlands since the Brexit referendum and another 420 internationally operating firms that have their European base in the UK are discussing possible plans to move to the Netherlands. Digital connectivity in the Netherlands has always ranked amongst the best in the world, which has facilitated the seamless transition to home-working (the Netherlands has one of the highest internet user penetration rates in the EU at 96 percent).

### #4. Sweden (+1)

Due to the government's herd immunity approach to the COVID-19 pandemic, Sweden only went through mild lockdown measures. Despite the mass disruption brought about by the pandemic, the damage to the Swedish economy was limited. It recorded a GDP growth rate of -2.8 percent in 2020 while its contraction was a lot smaller than the average among

EU countries, -6.1 percent. On top of this, the Swedish economy expanded at a far superior rate (increased by 0.1 percent) than many of its European counterparts over the first three months of 2020 following the government's decision not to impose a full lockdown. The level of consumption in May was close to December 2019 level. For the whole year, private consumption expanded by 6.3 percent in the third quarter in 2020 and fell just by 0.8 percent in the fourth quarter of 2020. Consumer confidence is recovering since the summer of 2020 (domestic tourism during the summer months supported by private consumption and card transactions have increased since the end of June, including for non-grocery goods). On the external front, exports of goods and services increased 4.5 percent on a seasonally-adjusted quarterly basis in the fourth quarter, which was below the third quarter's 14.9 percent expansion.

#### **#5. Singapore (-2)**

Ever since the outbreak of the COVID-19 pandemic, Singapore managed to keep the infection rate under control. However, Singapore recorded a GDP growth rate of -5.4 percent in 2020, which is lower than the world's average GDP growth rate, -3.3 percent. This is mainly due to Singapore's high dependency on both trade and cross-border flows of people. Foreigners without permanent residence make up roughly 30 percent of Singapore's population. In the first six months of 2020, Singapore's foreign workforce shrank by 75,700. The foreign direct investment (FDI) flows into Singapore fell by 37 percent (Singapore's fall in FDI was steeper than that for ASEAN as a whole, where FDI fell by 31 percent). The escalation of the trade conflict between the United States (US) and China disrupted the trade flows of Singapore's open economy; bilateral trade between the US and China indirectly contributes to 1.1 percent of Singapore's GDP. Singapore is a very open economy and it depends not only on what happens domestically, but also on how the whole global economy changes. And until the virus is contained globally, it will be very difficult to say how Singapore alone can recover.

#### **#6. Switzerland (-2)**

The lockdown triggered a large decline in GDP in the second quarter of 2020, albeit to a lesser extent than in many other European countries. Switzerland experienced dramatic decline in both imports and exports (Switzerland exports of goods and services as a percentage of GDP is 66.13 percent). The tourism sector was largely damaged due to lockdown measures, for example only 8 percent of hotels in eastern Switzerland remained open. Furthermore, it is the world's biggest gold refining center and a major transit hub. A collapse in shipments to China and India, whose vast jewelry markets were partially shut down by the COVID-19 pandemic, drove Swiss exports of gold in 2020 to the lowest point since at least 2012. China, once the biggest buyer, received no gold at all from Switzerland for the third straight month in December of 2020. The value of Swiss watch exports declined by almost 22 percent in 2020 compared to 2019, and accommodation and food services recorded a 54.2 percent drop in economic output.

#### **#7. Australia (+3)**

The Australian economy has been hit by the pandemic less severely than many other countries. The export sector remained resilient as 75 percent of its goods exports are to East Asia, a region that is growing faster than Europe or the US and which, in most cases, has handled the pandemic well. However, Australia is weathering diplomatic and trade tensions following sanctions imposed by China on several export products.

Specifically, seven categories of products barley, sugar, lobster, wine, timber, coal, and copper ore and concentrate have been refused by customs since 6 November 2020. Nevertheless, the overall contraction in exports has been mitigated by the continued strong performance of certain mineral commodity exports.

#### **#8. United States (-2)**

The US GDP growth rate in 2020 was -3.5 percent, which is slightly lower than the world's average GDP growth rate of -3.3 percent. Throughout the year, the spending on most services remained weak. After the country entered an emergency in March 2020, most states issued "stay-at-home" orders, and the peak of social distancing behavior took place in the first half of April (during this period, mobility inflow decreased by about 35 percent). By late April 2020, even after several states announced partial reopening, nationally, mobility inflow has only recovered to the level 20 percent lower than the typical inflow observed in January 2020. As a result, consumer spending, which accounts for more than two-thirds of the economy, plunged by 3.9 percent in 2020, the worst performance since 1932. The COVID-19 crisis has damaged the nation's industrial production (i.e., output in the manufacturing, mining, and utility sectors). The manufacturing sector employs nearly 13 million workers. And as the unemployment rate surged, the number of people filing for weekly unemployment claims remained over four times as high as they were before the pandemic, the unemployment rate peaked in April 2020 at 14.8 percent before declining to a still-elevated level in December 2020 at 6.7 percent. The US also recorded a 49 percent drop in FDI, falling to an estimated \$134 billion. The sharp decline took place in wholesale trade, financial services, and manufacturing. Plus, cross-border M&A sales of US assets to foreign investors in 2020 fell by 41 percent, mostly in the primary sector.

#### **#9. Finland (+2)**

The GDP contraction in Finland was -2.9 percent, which is a lot smaller than the EU average contraction of -6.1 percent in 2020. The Finnish economy has undergone one of the mildest of all eurozone contractions in the first half of 2020 as the restrictive measures imposed were relatively lenient (Google mobility data indicates that Finland has seen just a modest drop from the peak in activity in early October), which was in line with a relatively small number of infections. Finland took the top spot for digital skills so that it was well-prepared for a shift in working practices in the wake of the COVID-19 pandemic. Before the outbreak, 14.1 percent of Finland's workforce already reported working from home, compared with just 3.6 percent in the US. Despite the Eurozone crisis, the Finnish industry fared better than expected: production in the electrical and electronics industry has remained on the rise and the industrial manufacturing of machinery and equipment has performed better than the European reference group. The manufacturing sector, in particular, has shown good resilience: the turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment, and medical technology) grew by approximately 6 percent; the turnover of information technology companies (IT services and software) grew by 5 percent in 2020. Finally, Finnish exports in the food and beverage sector increased by 7 percent year-on-year in 2020.

#### **#10. New Zealand (-2)**

New Zealand has reported only a handful of new cases. As a result, the pace of recovery for its domestic economy was relatively fast (electronic card spending bounced back quickly

from a sharp fall in April and remains robust). However, international tourism, which represented 20 percent of total exports in New Zealand (as of 2019), has been constrained to nil as the border remains closed to foreign non-residents, although this impact was partially offset by the increase in domestic tourism. This generated a direct contribution of 5.5 percent to GDP and the indirect value added of industries supporting tourism generated an additional 3.8 percent of GDP. Beyond this, the supply chain disruption in China had some effects on New Zealand as that country is one of its top trading partner, accounting for about 28 percent of New Zealand's total exports. Amid the COVID-19 pandemic, New Zealand's exports have taken a major hit since the epidemic, with everything from timber to meat and fruit facing delays and cancellations. For example, from January to October 2020, food service consumption also dropped 21 percent, compared to 2019. Furthermore, factory closures in China have left New Zealand outlets short of vacuums, televisions, and iPhones.

### **#11. Hong Kong SAR (-2)**

Hong Kong's GDP growth rate in 2020 was -6.1 percent, which is lower than the world's average, -3.3 percent. Economic activity in Hong Kong weakened significantly since 2019 as rising trade tensions between the US and China and heightened uncertainty took a toll on exports and investment while private consumption and visitor arrivals have declined due to the demonstrations throughout the summer of 2019 and this negative trend continued throughout the year of 2020. The same dynamics are visible in the fund flows. For example, the foreign currency deposits at banks operating in Singapore have nearly doubled since July; economists see this as a signal that money has started to flow out of Hong Kong and into Singapore. According to the American Chamber of Commerce in Singapore survey, 23 percent of companies with offices in Hong Kong, were thinking of leaving to escape the ongoing turmoil related to the demonstrations. Hong Kong lost its title as the world's freest economy to Singapore for the first time since 1995 in a global survey, as social unrest and uncertainties rattled its reputation as a global financial hub. Hong Kong's overall economic freedom score fell primarily due to a decline in its marks for investment freedom, according to the 2020 Index of Economic Freedom published by the Heritage Foundation.

### **#12. Belgium (+1)**

Belgium recorded a GDP growth rate of -6.4 percent in 2020, which is slightly lower than the average GDP contraction of EU countries, -6.1 percent. On the demand side, the household consumption was almost 10 percent below its pre-crisis level at the end of 2020 due to the stringent lockdown measures. However, the other components of demand are lagging far less behind. It is particularly noteworthy that after a strong rebound of 20 percent in the third quarter, productive investment continued its recovery in the fourth quarter (+4.6 percent), so that by the end of 2020, it only lags 3.6 percent behind its pre-crisis level. Alongside this, the employment level remained resilient despite lockdown. After having lost 50,000 jobs during the first and second quarters of the last year, the labor market has regained jobs: more than 7,000 in the third and more than 20,000 in the fourth, mainly in the scientific, technical, and administrative support professions (+11,600 jobs in Q4) and the healthcare sector (+6,500 jobs).

### **#13. United Arab Emirates (-1)**

The GDP contraction in United Arab Emirates (UAE) was -5.9 percent in 2020, which is

smaller than the average contraction among Gulf Cooperation Council (GCC) countries (-7.6 percent). The UAE has been largely successful in containing the spread of the virus as its vaccination rate is the world's second-highest after Israel. However, as the region has had one of the strictest lockdowns in the world, such travel restrictions and strict lockdown measures have had a serious impact on tourism, businesses, and the supply chain of businesses in the UAE (the travel and tourism sector has a total contribution of around 12 percent of GDP). Emirates Airlines, hotels, and other tourism-related businesses have experienced significant material losses. In particular, the drop in 82 percent of scheduled departure flights from the UAE was particularly damaging. The impact of low oil prices due to OPEC + oil production cuts, lower oil prices, and reduced global oil demand is another key reason for the decline in the UAE economy (the UAE is the world's eighth largest oil producer).

#### **#14. China (+2)**

The coronavirus outbreak seems largely under control in China, and thus it was able to record a positive GDP growth rate of 2.3 percent in 2020. China is expected to be the only major economy to have grown in 2020. Exports rose 3.6 percent over the full year; exports have boomed on the back of pent-up demand for masks and other COVID-19-related materials: medical appliances (+41 percent), textiles (+29 percent; for personal protective equipment (PPE), and home appliances accounting for +24percent). Booming sales of fridges, toasters, and microwaves to households across the locked-down world have helped propel China's manufacturing engine back to life. The highest export value item, automated machinery, and parts grew by 11 percent from a year ago. This is a good result bearing in mind that some Chinese technology companies were banned from selling their products to major markets, in particular, the US.

#### **#15. Austria (+2)**

Austria's GDP contracted by 6.6 percent in 2020. Nevertheless, private consumption has proven remarkably resilient, thanks to the very favorable labor market situation, with unemployment registering at the 5 percent mark (the unemployment rate stood at 5.7 percent, which is 1.3 percent above the pre-pandemic level). Inflation has also recently slowed down to below 2 percent, supporting household purchasing power. Investment activity has proven rather robust despite the weaker export performance. Austria's government took quick, decisive measures to combat the spread of COVID-19, closing much of the retail sector and mandating a strict stay-at-home policy in March 2020. As a result of the success in reducing infection rates, Austria was one of the first Western countries to reopen their economy in stages beginning in April 2020. Moreover, Austria's agricultural exports managed growth of 4 percent in the first six months of 2020 by comparison with the same period in 2019, with imports rising by 1 percent (the agricultural sector employs 3.5 percent of the active population and represents 1.1 percent of GDP). Simultaneously, Austria's trading relationships in the agricultural sector have become more international than ever before: The proportion of trade with European third countries (including Russia) has risen and exports to the US and Asia have continued to follow an upward trend.

#### **#16. Germany (-1)**

Germany's economy shrank by 4.9 percent in 2020; this is a smaller contraction than many countries in the eurozone. Germany is benefiting from a marked rebound as exports to



China, Germany's second-largest trading partner, increased by 15.4 percent in June compared with the same month a year earlier. However, the manufacturing sector saw a strong reduction in its activity due to limited demand from both the internal and external markets. Production in Germany's key automotive industry was rebounding in June, but this remains about 20 percent below production levels in February—before the virus struck. Compared with February 2020 (the month before restrictions were imposed), manufacturing production in October 2020 was 4.9 percent lower with production in the automotive industry recording a decrease of 6 percent. Furthermore, the COVID-19 pandemic had a strong impact on all of the services sub-sectors, with tourism being particularly affected due to a significant decline in the number of international tourists. The restaurant industry was also hit hard, with the overall turnover from March to August 2020 being 40.5 percent lower than the same period a year earlier.

### **#17. Israel (-3)**

Israel's economic performance was one of the weakest among developed countries. Private consumption fell by 9.4 percent (due to its stringent lockdown), which is a greater decline than the fall of 3.9 percent in the US, 4.9 percent in South Korea, and 6.4 percent in Japan. Even in France, which suffered greatly from the pandemic and lockdowns, the decline in private consumption was smaller, at 7.1 percent. On top of this, the fall in employment in Israel was almost the steepest among the OECD countries. By April, Israel's unemployment rate jumped from 4 percent (before the outbreak) to 24.4 percent. Although Israel had the fastest rollout of vaccinations in the world (54 percent of the population is vaccinated as of March 2020), the country went through a series of stringent lockdowns before it launched the vaccination campaign in December 2020. The first lockdown ran from late March until early May; the second lockdown began in September and lasted for three weeks (Israel was the first country in the world to announce the second national coronavirus lockdown; Israel instituted its third national lockdown in late December, which lasted for 6 weeks. The economy has been devastated by these lockdowns and many young Israelis have lost their jobs. To add to the difficulties, Prime Minister Benjamin Netanyahu is on trial for fraud, breach of trust, and accepting bribes for his role in a series of scandals, and there have been demonstrators staged weekly for many months demanding his resignation. As a result, there have been several elections held in Israel without a clear winner.

### **#18. Taiwan, China (0)**

Taiwan's economy recorded a GDP growth of 2.98 percent in 2020, outpacing China's growth rate of 2.3 percent. Taiwan is one of the few countries to record positive growth amid the COVID-19 pandemic. Taiwan's domestic demand has held up better than many other economies—thanks to the early containment of the pandemic—as Taiwan has been able to maintain most of its domestic economic activities without implementing any lockdown measures. Although the uncertainty surrounding US-China relations poses great challenges to Taiwan's economic prospects, goods exports grew by 4.9 percent in 2020 compared to a year ago. Exports of electronic components registered especially high growth (technology products account for more than half of Taiwan's total exports) due to the fact that the restriction on people's activities and business interactions as well as the increase in remote work and online learning boosted the demand for 5G communication applications, high-performance computing devices, electronic components, video component, and other information communications technology-related products. Taiwan Semiconductor Manufacturing Company (TSMC) has been another major contributor to export growth as

there were many surging orders from Huawei before the US ban on such sales in September 2020.

### **#19. United Kingdom (+1)**

Over the first half of the year, the economic impact on the United Kingdom (UK) was the second worst (after Spain) among all OECD countries. The GDP contraction of the UK in 2020 (-9.9 percent) exceeds the contraction of its neighboring countries (the Netherlands, Denmark, and Belgium). Brexit adds further uncertainty to Britain's economic outlook. On the positive side, the UK technology sector has been showing solid growth: investment into the UK tech sector hit \$15bn in 2020 – \$200m higher than the previous record set in 2019 (this puts the UK in third place globally behind only the US and China). It is also notable that deep-tech investments into research and development (R&D)-intensive companies rose by 17 percent, the highest growth rate globally. Nearly two-thirds (63 percent) of the investment (\$9.4bn) into UK tech came from abroad, which shows Britain's tech sector is solidifying its position as one of the world's top tech hubs. Furthermore, the lockdown imposed in the UK amid the second wave of the COVID-19 pandemic was less stringent than the first one.

### **#20. Kuwait (-1)**

Kuwait's GDP contracted by 8.1 percent in 2020, which is a larger contraction than the average among GCC countries (-7.6 percent). The pandemic came as a double whammy to Kuwait's economy—with global lockdowns creating an almost overnight drop in demand and oil prices and local lockdowns impacting economic activity. The global COVID-19 pandemic has substantially reduced external demand for Kuwaiti exports while domestic lockdown measures adversely affected non-oil GDP. Public spending and the plunge in oil revenues will lead to a fiscal deficit of 7.3 percent of GDP as about 90 percent of the Kuwaiti government's revenues are derived from oil. The restriction measures on movement have drastically reduced the usage of automobiles, industrial activity, shipping, and transportation and this impact was immediately felt with Kuwait's oil and gas demand. The lack of physical demand for crude oil saw prices collapse quickly. LNG prices, which were already under pressure from weak fundamentals have also fallen further as working from home has caused a sharp decline in Kuwait's electricity usage.

### **#21. Saudi Arabia (+4)**

Saudi Arabia recorded a GDP growth rate of -4.1 percent in 2020, which is far less than the average GDP decline of GCC countries of -7.6 percent. The oil prices have been hit hard by the spread of COVID-19 around the world, as the pandemic disrupted supply chains. However, the non-oil sector remained strong (+1.6 percent in Q1; -8.2 percent in Q2; -2.1 percent in Q3) despite the major decline in the oil sector (-4.6 percent in Q1; -5.3 percent in Q2; -8.2 percent in Q3) which had partially offset the economic loss. Saudi Arabia has also had room to provide fiscal support as its debt to GDP for 2019 was at 24 percent, the second-lowest in the G20. Saudi Arabia's FDI increased by 12 percent in the first half of 2020 compared with the same period last year; FDI to Saudi Arabia is estimated at \$4.7 billion in 2020, a rise of 4 percent compared to a year earlier.

Saudi Arabia has revamped over half of the 400 foreign direct investment (FDI) regulations. As a result, Saudi Arabia ranked 62nd out of 190 economies in the World Bank's 2020 Doing Business Report, up by 30 places from a year earlier. Moreover, Saudi Arabia is in the process of diversifying its economy through the "Vision 2030" program

by investing in the tourism and entertainment sectors. This should strengthen the non-oil sector of the economy, and therefore a revival in growth is expected as the economy diversifies.

#### **#22. Japan (-1)**

As Japan's large trading partners were recovering rapidly towards the end of 2020, its exports have started to pick up since the second half of 2020. However, Japan has shown a larger contraction in its economy compared to its neighboring countries, South Korea and China. Japan was the first major country to slide into a recession as of Q1 of 2020 since the country had already posted negative GDP growth figures in late 2019 before the outbreak of the COVID-19 pandemic. As a result, consumer spending was already weakening in late 2019. Ongoing difficulties in bringing COVID-19 infections under control further held back the recovery of domestic demand. The country's exports in 2020 plunged by 11.1 percent as the pandemic battered global demand for industrial products such as cars (Japan's car exports plummeted by 20 percent). The declines in automobiles and parts manufacturing were significant, reflecting factory suspensions and weak consumer demand due to the pandemic.

#### **#23. France (0)**

The French economy contracted by 8.2 percent in 2020, which is larger than the average contraction of EU countries (-6.1 percent). The spread of the COVID-19 pandemic has affected the whole production capability of the country coupled with a slowdown in global demand, and concerns regarding the availability of raw materials; the manufacturing and other industries in the country have been temporarily shut down their industrial operations. The French lockdown was stringently enforced until May, with non-essential shops closed, and was only gradually lifted over the second quarter, with cafes and restaurants being allowed to open in June. The massive decline in the number of international travelers and tourists visiting France resulted in international visitors spending dropping by a staggering 82 percent (travel & tourism accounts for 8.5 percent of the French economy). Contrary to this, France remained a popular destination of foreign investment despite the pandemic. France recorded 1,215 new foreign direct investment projects in 2020; this was 17 percent less than the 1,468 new projects the year before; the drop was smaller than feared after the pandemic forced the economy into a near standstill last spring. The number of jobs created or preserved as a direct result of these investments: 34,567 in total, of which 29,809 were new jobs (the number of jobs created or preserved was 13 percent less than in 2019, but represented a 14 percent rise compared to 2020).

#### **#24. South Korea (+2)**

Effective measures to contain the spread of the COVID-19 pandemic have limited the estimated fall in GDP to just by 1 percent in 2020, the smallest decline among the OECD countries. The government has introduced massive policy support (spending 15 percent of GDP) to minimize the loss. Exports of goods began to improve in the second half as key export markets started to recover. In the third quarter exports to the US rebounded by 10.1 percent, with similar or stronger growth to Taiwan, Germany, and Canada. In the fourth quarter, exports returned to growth with key partners in South and Southeast Asia such as India, Vietnam, Malaysia, Indonesia, and Thailand. The sales of IT

products boosted overall growth. Notably, some areas, such as non-memory chips, OLED, COVID-19 test kits, and eco-friendly automobiles have posted a record-high performance for 2020. Semiconductor exports were exceptionally strong as overseas sales of semiconductors surged 30 percent from a year earlier. Other major items such as mobile devices, displays, and computers also soared 39.8 percent, 28.0 percent, and 14.7 percent year-on-year. Exports in the second half of 2020 came to a \$272.2 billion surplus. This helped trim the losses of the first half when exports had plunged more than 10 percent.

### **#25. Slovenia (-3)**

Slovenia recorded a GDP growth of -5.5 percent in 2020, which is higher than the average GDP growth rate of EU countries (-6.1 percent). In the first quarter of 2020, the economy was already contracting by 2.4 percent year-on-year, one of the steepest falls in the region. In the second quarter, as the country felt the full effect of the crisis, the contraction reached almost 13 percent year-on-year as lockdown measures resulted in a significant drop in domestic demand. Furthermore, as the economy is highly integrated into EU value chains (Slovenia exports goods and services as a percentage of GDP is 85.38 percent), the outlook remains highly uncertain. Exports of goods dropped by 12 percent year-on-year in the first half of 2020 mostly due to the weak performance of Slovenia's main trading partners (the neighboring countries). Slovenian exports to the EU have plummeted by 30 percent since March, especially automotive and capital goods exports to Italy, France, and Germany. The tourism sector has also received considerable damage from the COVID-19 pandemic and tourism revenue accounts for about 8.4 percent of the total GDP. The number of foreign tourists decreased by as much as 74 percent, and overnight stays by 71 percent.

### **#26. Czech Republic (+5)**

The economic contraction in the Czech Republic (-5.6 percent) was less severe than the average contraction of the EU countries (-6.1 percent). The Czech Republic benefited from a relatively strong starting economic position going into the crisis, with unemployment at 1.8 percent in February 2020, strong wage growth (2019: 6.4 percent), high household savings (1Q20: 13.5 percent of gross disposable income), and low debt levels overall. The fiscal balance posted annual surpluses from 2016 to 2019 and total public debt fell from a peak of 45 percent of GDP in 2013 to just 31 percent in 2019. Therefore, although we expect fiscal deficits of approximately -6 percent of GDP in 2020 and 2021, respectively, and a rise of public debt, the figure of the fiscal deficit would still be fairly low as compared to peers. Alongside this, the unemployment rate remained resilient: the unemployment rate increased to 2.9 percent in October 2020, from 2.0 percent a year before, but remained the lowest in the EU. Moreover, despite the downfall of the FDI inflow in 2020 due to the disruption of the manufacturing industry, the country remained the second-largest recipient of FDI inflows in Central Europe. In the Global Innovation Index (GII), the Czech Republic ranked 24th out of 131 economies in 2020, outperforming the average of European countries in five out of seven GII pillars.

### **#27. India (-3)**

India's GDP fell by 8 percent in 2020, far exceeding the world's average contraction of -3.3 percent. As of June 2021, India is the second-worst affected country by the COVID-19 pandemic in terms of overall case numbers (India recorded 20 million cases as of

May 2021). India is susceptible to a rapid spread of the virus, due among other things to high population density in combination with health care services that are less abundant than in many developed countries. As of September 2020, approximately 21 million salaried jobs in the country have since been lost. According to a survey by Local Circles, within the first eight months after the pandemic began, 78 percent of Indian startups and SMEs had reduced their workforces to supply chain disruptions, lockdowns, and economic losses. The credit information company Experian in October 2020 estimated that 43 percent of Indian consumers witnessed a decline in their household income due to the impact caused by the pandemic. In March 2021, India imposed a nationwide lockdown that remained in effect until May. The lockdown in India was one of the most stringent in the world: except for some essential services and activities, the rest of India's \$2.9 trillion economies remained closed during the lockdown period. For the Indian economy, private consumption and investment are the two biggest engines for growth. However, during the first quarter of 2020, private consumption declined by 27 percent, while investments by private businesses fell by 47 percent.

#### **#28. Poland (0)**

The economic contraction of Poland in 2020 (-2.7 percent) was a lot smaller compared to the average contraction of EU countries (-6.1 percent). The Polish economy was strong when the COVID-19 pandemic hit (the country performed well during the 2014-19 period, with the real GDP growth rate generally exceeding 3 percent, driven by private consumption). Poland has the second-lowest unemployment rate compared to other EU member states. Real estate projects continue to make up the bulk of FDI into Poland, but it was renewable energy investments that drove the growth compared to a year earlier (foreign investors announced 16 new projects in the renewables sector in the January to April period). While the unemployment rate has been structurally low (just above 3 percent), more than one in four employees in Poland have temporary contracts, twice the EU average. The industrial sector in Poland accounts for 17 percent of Poland's GDP according to 2019 data. Amongst the industrial sectors, the automotive sector has been the worst-hit domestic sector amid the COVID-19 pandemic, with passenger car production down 99 percent on an annual basis after the first wave of the pandemic. Furthermore, the tourism sector has been largely damaged as the number of tourists fell by 54.3 percent in the first half of 2020 compared to the previous year.

#### **#29. Italy (0)**

Italy's GDP decline in 2020 (-8.9 percent) was sharper than the average decline of EU countries (-6.1 percent). Italy entered the crisis with a very high public debt, the second-highest in the Eurozone. The weak public balances imply that the government has to strike a difficult balance between supporting the economy and preserving debt sustainability. On the other hand, there is one sector that has grown despite the impact of the COVID-19 pandemic, food and beverage (Italy is one of the main agricultural players in the EU, being the biggest European producer of rice, fruits, vegetables, and wine; the agricultural sector represents 1.9 percent of Italian GDP). The turnover of the food and beverage sector grew by 3.1 percent in Italy. The food and beverage industry have accelerated production to respond to the growing demand of end consumers, who have returned to the kitchen and are forced to eat at home due to lockdown measures. Many food and beverage companies in Italy are increasing their production capacity and investing in new automation equipment to allow for more flexible production and to keep up with potential demand variation during the coming years. However, the Italian economy showed

weak performance overall as industrial production shrank by 31 percent compared to the same quarter in 2019 and car sales by 57 percent. Alongside this, international tourism is expected to remain muted, which is very troublesome for the economy as it contributes to 13 percent of GDP).

### **#30. Malaysia (0)**

Malaysia's GDP contracted by 5.6 percent in 2020, which is larger than the world's average contraction of 3.3 percent. Malaysia has continued to perform strongly in recent years thanks to strong global demand for electronics, increased demand for commodities, such as oil and gas (Malaysia is a major outsourcing destination for components manufacturing, after China and India). Despite the unprecedented nature of the pandemic, Malaysia's external trade performed fairly well with exports rebounding in the second half of 2020 as rubber products, electrical and electronics (E&E) products, as well as palm oil and palm oil-based agriculture products registered strong export expansion. Malaysia recorded a significant year-over-year expansion in shipments to major trading partners China (46.8 percent) and the U.S. (27.6 percent). Exports of machinery and appliances also grew by 29 percent year-over-year as of June 2020. Meanwhile, imports fell by 5.6 percent year-over-year for that month, leaving the country with its largest trade surplus on record at RM20.9bn (\$4.9bn); Malaysia's trade surplus widened by 26.9 percent in 2020, the largest trade surplus ever recorded thus far, while total trade amounted to RM1.8 trillion, down 3.6 percent year-on-year. However, despite the strong performance of exports, the foreign investment inflows to Malaysia fell by 68 percent in 2020, the worst rate in Southeast Asia (FDI in Southeast Asia decreased by 31 percent on average).

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# 07

## Appendix

## LIST OF CRITERIA OF IPS NCR 2021

Factor	Sub factor	Criteria
1. Factor Conditions	1.1. Natural Resources	1.1.1 Crude oil reserves 1.1.2 Natural gas reserves 1.1.3 Coal reserves 1.1.4 Land area 1.1.5 Freshwater resources
	1.2. Processed Resources	1.2.1 Oil production 1.2.2 Natural gas production 1.2.3 Coal production 1.2.4 Wood production 1.2.5 Meat indigenous
2. Demand Conditions	2.1. Demand Size	2.1.1.GDP 2.1.2. GDP per capita 2.1.3a Goods and services: Export 2.1.3b Goods and services: Import
	2.2. Demand Quality	2.2.1 Consumer sophistication: quality * 2.2.2 Consumer sophistication: design * 2.2.3 Consumer sophistication: health and environment issues * 2.2.4 Consumer sophistication: international standard of IPR * 2.2.5 Consumer sophistication: new technology *
3. Related Industries	3.1. Industrial Infrastructure	3.1.1 Vehicles 3.1.2 Civil aviation 3.1.3 Maritime transport 3.1.4 International travel 3.1.5 Mobile phone subscribers 3.1.6 Internet users 3.1.7 Capital value 3.1.8 Capital accessibility 3.1.9 Scientists & engineers 3.1.10 Scientific research institutions * 3.1.11 Total expenditure on R&D 3.1.12 International patents granted
	3.2. Living Infrastructure	3.2.1 Public spending on education 3.2.2 Students per teacher (elementary) 3.2.3 Secondary enrollment rate 3.2.4 Tertiary enrollment rate 3.2.5 Student international mobility 3.2.6 Personal security 3.2.7 Social safety net * 3.2.8 Medical service 3.2.9 GINI index 3.2.10 HDI index 3.2.11 CO <sub>2</sub> emissions 3.2.12 Leisure, sports, and cultural facilities*

Factor	Sub factor	Criteria	
4. Business Context	4.1. Structure	4.1.1 Firm's decision process *	
		4.1.2 Firm's decision structure *	
		4.1.3 Unique brands *	
		4.1.4 Equal treatment *	
		4.1.5 Global standards *	
		4.1.6 Shared value *	
		4.1.7 Ethical and legal practices *	
		4.1.8 Health, safety & environmental concerns *	
		4.2. Rivalry	4.2.1 FDI openness (FDI inflows as % of GDP)
	4.2.2 Portfolio openness (Financial inflows as % of GDP)		
	4.2.3 Goods openness (import as % of GDP)		
	4.2.4 Services openness (import as % of GDP)		
	4.2.5 FDI openness (FDI outflows as % of GDP)		
	4.2.6 Portfolio openness (Financial outflows as % of GDP)		
	4.2.7 Goods openness (export as % of GDP)		
	4.2.8 Services openness (export as % of GDP)		
	5. (Unskilled) Workers		5.1. Quantity of Labor Force
		5.1.2 Employment rate	
5.1.3 Working hours			
5.1.4 Monthly compensation for manufacturing workers			
5.2. Quality of Labor Force		5.2.1 Literacy rate	
		5.2.2 Attitude & motivation *	
		5.2.3 Education *	
		5.2.4 The openness of labor market *	
		5.2.5 Management labor relationships *	
6. Policymakers & Administrators	6.1. Policymakers	6.1.1 The process of parliament/congress*	
		6.1.2 The result of legislation*	
		6.1.3 Ethics (e.g., bribery & corruption) *	
		6.1.4 Education level *	
		6.1.5 International experience *	
	6.2. Administrators	6.2.1 The process of government	
		6.2.2 The result of policy implementation	
		6.2.3 Ethics (Bribery & corruption)	
		6.2.4 Education level *	
		6.2.5 International experience *	

Factor	Sub factor	Criteria
7. Entrepreneurs	7.1. Personal Competence	7.1.1 The process of decision making *
		7.1.2 The result of decision making (e.g., the ability to seize opportunities)
		7.1.3 Entrepreneur's core competence
		7.1.4 Entrepreneur's education level
		7.1.5 Entrepreneur's international experience
	7.2. Social Context	7.2.1 Availability of entrepreneurs *
		7.2.2 New business
		7.2.3 Support of the social system *
		7.2.4 Social status of entrepreneurs
		7.2.5 Openness to foreign entrepreneurs *
8. Professionals	8.1. Personal Competence	8.1.1 The process of decision making *
		8.1.2 The ability to manage opportunities *
		8.1.3 The professional's core competences *
		8.1.4 The professional's education level *
		8.1.5 The professional's international experience *
	8.2. Social Context	8.2.1 Availability of professionals *
		8.2.2 The mobility of professionals *
		8.2.3 Professional's compensation *
		8.2.4 Social status of professionals *
		8.2.5 Openness to foreign professionals *

Note: \* survey data

## STATISTICAL TABLES BY CRITERION

### 1 Factor Conditions

#### 1.1 Natural Resources

##### 1.1.1 Crude oil reserves (2020)

Hard data: barrels per capita

RANK	COUNTRY	UNIT	INDEX
1	Kuwait	24,532.85	100.00
2	U.A.E.	10,154.75	41.39
3	Saudi Arabia	7,899.36	32.20
4	Canada	4,601.87	18.76
5	Iran	1,921.75	7.83
6	Russia	553.72	2.26
7	Nigeria	191.21	0.78
8	United States	128.34	0.52
9	Malaysia	114.18	0.47
10	Australia	97.87	0.40
11	Denmark	75.72	0.31
12	Brazil	60.31	0.25
13	Mexico	57.21	0.23
14	Argentina	48.59	0.20
15	Vietnam	46.05	0.19
16	Peru	38.28	0.16
17	United Kingdom	37.60	0.15
18	Egypt	36.27	0.15
19	Colombia	33.55	0.14
20	China	18.40	0.08
21	Croatia	17.36	0.07
22	Indonesia	12.37	0.05
23	New Zealand	12.02	0.05
24	Ukraine	8.85	0.04
25	Italy	8.07	0.03
26	Chile	8.01	0.03
27	Thailand	5.03	0.02
28	Guatemala	4.82	0.02
29	Netherlands	4.71	0.02
30	Austria	4.66	0.02
31	Turkey	4.15	0.02
32	Poland	3.37	0.01
33	India	3.32	0.01
34	Spain	3.21	0.01
35	Hungary	2.09	0.01
36	Slovak Republic	1.65	0.01
37	Pakistan	1.57	0.01
38	Germany	1.56	0.01
39	Israel	1.43	0.01
40	Czech Republic	1.41	0.01
41	Philippines	1.30	0.01
42	France	1.00	0.00
43	Greece	0.93	0.00
44	Japan	0.35	0.00
45	South Africa	0.26	0.00
46	Bangladesh	0.17	0.00
47	Taiwan	0.10	0.00
48	Jordan	0.10	0.00
49	Morocco	0.02	0.00
50	Belgium	0.00	0.00
50	Cambodia	0.00	0.00
50	Dominican Republic	0.00	0.00
50	Finland	0.00	0.00
50	Hong Kong	0.00	0.00
50	Kenya	0.00	0.00
50	Korea	0.00	0.00
50	Panama	0.00	0.00
50	Singapore	0.00	0.00
50	Slovenia	0.00	0.00
50	Sri Lanka	0.00	0.00
50	Sweden	0.00	0.00
50	Switzerland	0.00	0.00

##### 1.1.2 Natural gas reserves (2020)

Hard data: 1000 cubic feet per capita

RANK	COUNTRY	UNIT	INDEX
1	U.A.E.	22,334.02	100.00
2	Kuwait	15,227.29	68.18
3	Iran	14,557.78	65.18
4	Russia	11,685.01	52.32
5	Saudi Arabia	9,032.12	40.44
6	Australia	4,542.59	20.34
7	Canada	1,959.05	8.77
8	Netherlands	1,642.45	7.35
9	United States	1,340.17	6.00
10	Malaysia	1,324.67	5.93
11	Nigeria	987.12	4.42
12	Ukraine	874.00	3.91
13	Israel	699.70	3.13
14	Egypt	640.09	2.87
15	Peru	503.01	2.25
16	Indonesia	378.16	1.69
17	Argentina	267.20	1.20
18	Vietnam	258.53	1.16
19	New Zealand	243.58	1.09
20	Croatia	215.19	0.96
21	Chile	184.74	0.83
22	China	149.51	0.67
23	Thailand	98.37	0.44
24	Pakistan	97.99	0.44
25	United Kingdom	95.96	0.43
26	Slovak Republic	91.79	0.41
27	Colombia	81.05	0.36
28	Denmark	78.31	0.35
29	Poland	76.04	0.34
30	Brazil	63.63	0.28
31	Mexico	55.34	0.25
32	Bangladesh	40.66	0.18
33	India	33.67	0.15
34	Philippines	32.63	0.15
35	Austria	26.00	0.12
36	Hungary	23.85	0.11
37	Italy	22.27	0.10
38	Jordan	21.39	0.10
39	Germany	16.82	0.08
40	Czech Republic	13.18	0.06
41	Taiwan	9.33	0.04
42	Japan	5.83	0.03
43	Korea	4.84	0.02
44	France	4.43	0.02
45	Greece	3.26	0.01
46	Turkey	2.19	0.01
47	Spain	1.93	0.01
48	Morocco	1.42	0.01
49	Belgium	0.00	0.00
49	Cambodia	0.00	0.00
49	Dominican Republic	0.00	0.00
49	Finland	0.00	0.00
49	Guatemala	0.00	0.00
49	Hong Kong	0.00	0.00
49	Kenya	0.00	0.00
49	Panama	0.00	0.00
49	Singapore	0.00	0.00
49	Slovenia	0.00	0.00
49	South Africa	0.00	0.00
49	Sri Lanka	0.00	0.00
49	Sweden	0.00	0.00
49	Switzerland	0.00	0.00

## 1 Factor Conditions

### 1.1 Natural Resources

#### 1.1.3 Coal reserves (2020)

Hard Data: tonnes per capita

RANK	COUNTRY	UNIT	INDEX
1	Australia	6,598.94	100.00
2	New Zealand	1,779.17	26.96
3	Russia	1,224.66	18.56
4	Ukraine	841.96	12.76
5	United States	786.81	11.92
6	Poland	749.32	11.36
7	South Africa	623.69	9.45
8	Germany	483.34	7.32
9	Czech Republic	379.74	5.75
10	Hungary	326.74	4.95
11	Greece	294.20	4.46
12	Canada	200.93	3.04
13	Slovenia	198.04	3.00
14	Turkey	156.78	2.38
15	Colombia	111.69	1.69
16	China	108.67	1.65
17	Indonesia	95.24	1.44
18	India	81.33	1.23
19	Chile	71.49	1.08
20	Vietnam	39.55	0.60
21	Brazil	35.27	0.53
22	Netherlands	32.17	0.49
23	Spain	28.15	0.43
24	Slovak Republic	27.40	0.42
25	Thailand	16.99	0.26
26	Iran	16.67	0.25
27	Pakistan	16.59	0.25
28	Argentina	12.64	0.19
29	Mexico	10.82	0.16
30	Korea	7.01	0.11
31	Malaysia	6.47	0.10
32	Peru	3.64	0.06
33	Philippines	3.36	0.05
34	Japan	3.04	0.05
35	Bangladesh	2.04	0.03
36	Nigeria	2.04	0.03
37	United Kingdom	1.17	0.02
38	Morocco	0.44	0.01
39	Italy	0.31	0.00
40	Egypt	0.19	0.00
41	Sweden	0.11	0.00
42	Taiwan	0.05	0.00
43	Austria	0.00	0.00
43	Belgium	0.00	0.00
43	Cambodia	0.00	0.00
43	Croatia	0.00	0.00
43	Denmark	0.00	0.00
43	Dominican Republic	0.00	0.00
43	Finland	0.00	0.00
43	France	0.00	0.00
43	Guatemala	0.00	0.00
43	Hong Kong	0.00	0.00
43	Israel	0.00	0.00
43	Jordan	0.00	0.00
43	Kenya	0.00	0.00
43	Kuwait	0.00	0.00
43	Panama	0.00	0.00
43	Saudi Arabia	0.00	0.00
43	Singapore	0.00	0.00
43	Sri Lanka	0.00	0.00
43	Switzerland	0.00	0.00
43	U.A.E.	0.00	0.00

#### 1.1.4 Land area (2020)

Hard Data: sq km per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	Australia	307.77	100.00
2	Canada	245.38	79.72
3	Russia	113.35	36.80
4	Saudi Arabia	63.79	20.69
5	Argentina	61.51	19.95
6	Finland	55.08	17.86
7	New Zealand	53.90	17.48
8	Peru	40.01	12.97
9	Sweden	40.00	12.96
10	Brazil	39.90	12.93
11	Chile	39.70	12.86
12	United States	27.96	9.05
13	Colombia	22.35	7.22
14	South Africa	21.00	6.78
15	Iran	19.91	6.43
16	Panama	17.80	5.74
17	Mexico	15.40	4.97
18	Croatia	13.68	4.41
19	Ukraine	12.98	4.18
20	Morocco	12.39	3.99
21	Greece	12.02	3.86
22	Kenya	11.07	3.56
23	Cambodia	10.86	3.49
24	Spain	10.69	3.43
25	Malaysia	10.42	3.35
26	Egypt	10.11	3.25
27	Slovenia	9.74	3.13
28	Turkey	9.35	3.00
29	Austria	9.33	2.99
30	Hungary	9.27	2.97
31	Jordan	8.92	2.86
32	Slovak Republic	8.83	2.83
33	France	8.17	2.62
34	Poland	8.06	2.58
35	U.A.E.	7.37	2.36
36	Thailand	7.36	2.35
37	Czech Republic	7.27	2.32
38	Denmark	7.24	2.31
39	Indonesia	6.77	2.16
40	China	6.74	2.15
41	Guatemala	6.21	1.98
42	Italy	4.87	1.54
43	Nigeria	4.65	1.47
44	Switzerland	4.64	1.47
45	Dominican Republic	4.55	1.44
46	Kuwait	4.31	1.36
47	Germany	4.21	1.33
48	United Kingdom	3.64	1.14
49	Pakistan	3.63	1.14
50	Vietnam	3.25	1.01
51	Sri Lanka	2.89	0.90
52	Japan	2.88	0.90
53	Philippines	2.80	0.87
54	Belgium	2.65	0.82
55	Israel	2.44	0.75
56	India	2.20	0.67
57	Netherlands	1.96	0.59
58	Korea	1.89	0.57
59	Taiwan	1.53	0.46
60	Bangladesh	0.81	0.22
61	Hong Kong	0.14	0.00
62	Singapore	0.13	0.00

## 1 Factor Conditions

### 1.1 Natural Resources

#### 1.1.5 Freshwater resources (2020)

Hard Data: cubic meters per capita

RANK	COUNTRY	UNIT	INDEX
1	Canada	80,423.43	100.00
2	New Zealand	72,510.37	90.16
3	Peru	54,535.74	67.81
4	Chile	49,834.00	61.96
5	Colombia	45,668.22	56.78
6	Panama	35,013.84	43.54
7	Russia	29,981.99	37.28
8	Brazil	27,919.19	34.72
9	Australia	20,957.85	26.06
10	Finland	19,591.64	24.36
11	Malaysia	19,419.71	24.15
12	Sweden	17,635.94	21.93
13	Slovenia	9,054.40	11.26
14	Croatia	8,894.89	11.06
15	United States	8,850.88	11.01
16	Indonesia	7,913.64	9.84
17	Cambodia	7,895.51	9.82
18	Guatemala	6,857.90	8.53
19	Argentina	6,843.30	8.51
20	Austria	6,435.49	8.00
21	Greece	5,324.81	6.62
22	Switzerland	4,933.66	6.13
23	Philippines	4,765.55	5.93
24	Vietnam	3,918.68	4.87
25	Mexico	3,398.28	4.23
26	Japan	3,378.48	4.20
27	Thailand	3,280.31	4.08
28	France	3,015.86	3.75
29	Italy	3,002.18	3.73
30	Turkey	2,939.20	3.65
31	Sri Lanka	2,541.15	3.16
32	Spain	2,392.38	2.97
33	Slovak Republic	2,325.30	2.89
34	Dominican Republic	2,311.81	2.87
35	United Kingdom	2,244.12	2.79
36	China	2,061.91	2.56
37	Iran	1,658.80	2.06
38	Poland	1,410.09	1.75
39	Germany	1,321.27	1.64
40	Korea	1,277.92	1.59
41	Nigeria	1,252.80	1.56
42	Czech Republic	1,249.36	1.55
43	Ukraine	1,217.09	1.51
44	India	1,116.08	1.39
45	Belgium	1,070.56	1.33
46	Denmark	1,063.17	1.32
47	Taiwan	856.00	1.06
48	Morocco	848.14	1.05
49	South Africa	821.33	1.02
50	Bangladesh	679.52	0.84
51	Netherlands	652.24	0.81
52	Hungary	608.12	0.76
53	Kenya	443.25	0.55
54	Pakistan	281.61	0.35
55	Singapore	109.69	0.14
56	Israel	91.29	0.11
57	Saudi Arabia	77.63	0.10
58	Jordan	76.46	0.10
59	Egypt	19.91	0.02
60	U.A.E.	16.28	0.02
61	Hong Kong	0.00	0.00
61	Kuwait	0.00	0.00

## 1 Factor Conditions

### 1.2 Processed Resources

#### 1.2.1 Oil production (2020)

Hard data: barrels per 1000 people (per day)

RANK	COUNTRY	UNIT	INDEX
1	Kuwait	737.19	100.00
2	U.A.E.	394.66	53.54
3	Saudi Arabia	366.56	49.72
4	Canada	140.45	19.05
5	Russia	79.56	10.79
6	Iran	56.10	7.61
7	United States	47.32	6.42
8	Malaysia	22.68	3.08
9	Denmark	19.66	2.67
10	Colombia	17.56	2.38
11	United Kingdom	16.59	2.25
12	Mexico	16.46	2.23
13	Australia	13.68	1.86
14	Argentina	13.04	1.77
15	Brazil	12.88	1.75
16	Nigeria	10.53	1.43
17	Egypt	6.60	0.90
18	New Zealand	6.14	0.83
19	Thailand	6.05	0.82
20	Peru	4.16	0.56
21	Croatia	3.67	0.50
22	Indonesia	3.00	0.41
23	China	2.76	0.37
24	Vietnam	2.59	0.35
25	Hungary	2.35	0.32
26	Italy	1.65	0.22
27	South Africa	1.61	0.22
28	Austria	1.47	0.20
29	Netherlands	1.33	0.18
30	Ukraine	1.14	0.16
31	Germany	0.84	0.11
32	Poland	0.82	0.11
33	Turkey	0.67	0.09
34	India	0.62	0.08
35	France	0.61	0.08
36	Czech Republic	0.56	0.08
37	Korea	0.56	0.08
38	Slovak Republic	0.55	0.07
39	Chile	0.48	0.07
40	Guatemala	0.41	0.06
41	Pakistan	0.38	0.05
42	Greece	0.37	0.05
43	Philippines	0.12	0.02
44	Japan	0.09	0.01
45	Spain	0.04	0.01
46	Bangladesh	0.02	0.00
47	Belgium	0.00	0.00
47	Cambodia	0.00	0.00
47	Dominican Republic	0.00	0.00
47	Finland	0.00	0.00
47	Hong Kong	0.00	0.00
47	Israel	0.00	0.00
47	Jordan	0.00	0.00
47	Kenya	0.00	0.00
47	Morocco	0.00	0.00
47	Panama	0.00	0.00
47	Singapore	0.00	0.00
47	Slovenia	0.00	0.00
47	Sri Lanka	0.00	0.00
47	Sweden	0.00	0.00
47	Switzerland	0.00	0.00
47	Taiwan	0.00	0.00

## 1 Factor Conditions

### 1.1 Processed Resources

#### 1.2.2 Natural gas production (2020)

Hard data: cubic meters per capita

RANK	COUNTRY	UNIT	INDEX
1	U.A.E.	6,717.92	100.00
2	Australia	5,205.59	77.49
3	Canada	4,983.96	74.19
4	Russia	4,633.92	68.98
5	Kuwait	4,229.80	62.96
6	Saudi Arabia	3,326.41	49.52
7	Iran	2,927.86	43.58
8	United States	2,542.43	37.85
9	Malaysia	2,299.50	34.23
10	Netherlands	1,874.53	27.90
11	Israel	1,100.88	16.39
12	Argentina	885.50	13.18
13	New Zealand	882.20	13.13
14	Denmark	741.71	11.04
15	United Kingdom	610.63	9.09
16	Egypt	595.39	8.86
17	Thailand	543.00	8.08
18	Ukraine	445.96	6.64
19	Peru	400.13	5.96
20	Mexico	296.38	4.41
21	Croatia	288.55	4.30
22	Indonesia	273.48	4.07
23	Colombia	259.83	3.87
24	Nigeria	251.18	3.74
25	Hungary	173.00	2.58
26	Bangladesh	170.43	2.54
27	Pakistan	161.16	2.40
28	Brazil	120.30	1.79
29	China	115.96	1.73
30	Austria	113.03	1.68
31	Poland	105.32	1.57
32	Vietnam	100.48	1.50
33	Italy	86.05	1.28
34	Chile	79.56	1.18
35	Germany	66.32	0.99
36	Philippines	37.60	0.56
37	Japan	21.42	0.32
38	India	20.33	0.30
39	Czech Republic	19.76	0.29
40	Slovak Republic	16.52	0.25
41	South Africa	14.88	0.22
42	Slovenia	9.67	0.14
43	Taiwan	9.33	0.14
44	Jordan	8.04	0.12
45	Korea	6.20	0.09
46	Turkey	4.98	0.07
47	Morocco	1.94	0.03
48	Spain	1.93	0.03
49	Greece	0.93	0.01
50	France	0.15	0.00
51	Belgium	0.00	0.00
51	Cambodia	0.00	0.00
51	Dominican Republic	0.00	0.00
51	Finland	0.00	0.00
51	Guatemala	0.00	0.00
51	Hong Kong	0.00	0.00
51	Kenya	0.00	0.00
51	Panama	0.00	0.00
51	Singapore	0.00	0.00
51	Sri Lanka	0.00	0.00
51	Sweden	0.00	0.00
51	Switzerland	0.00	0.00

#### 1.2.3 Coal production (2020)

Hard data: tonnes per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	Australia	22,450.34	100.00
2	South Africa	4,879.14	21.73
3	Czech Republic	4,653.20	20.73
4	Greece	3,831.63	17.07
5	Poland	3,673.12	16.36
6	Russia	3,111.34	13.86
7	China	2,739.45	12.20
8	Germany	2,335.42	10.40
9	Colombia	2,016.11	8.98
10	Indonesia	1,921.20	8.56
11	Canada	1,851.16	8.25
12	Turkey	1,041.73	4.64
13	Hungary	895.79	3.99
14	New Zealand	671.06	2.99
15	Ukraine	594.21	2.65
16	India	590.50	2.63
17	Vietnam	445.57	1.98
18	Slovak Republic	372.11	1.66
19	Thailand	258.95	1.15
20	United States	208.04	0.93
21	Chile	148.89	0.66
22	Philippines	125.06	0.56
23	Mexico	104.03	0.46
24	Malaysia	102.97	0.46
25	Spain	65.70	0.29
26	United Kingdom	50.74	0.23
27	Korea	31.83	0.14
28	Brazil	25.55	0.11
29	Pakistan	23.55	0.10
30	Peru	16.82	0.07
31	Iran	16.73	0.07
32	Japan	11.49	0.05
33	Bangladesh	8.02	0.04
34	Argentina	0.70	0.00
35	Nigeria	0.27	0.00
36	Austria	0.00	0.00
36	Belgium	0.00	0.00
36	Cambodia	0.00	0.00
36	Croatia	0.00	0.00
36	Denmark	0.00	0.00
36	Dominican Republic	0.00	0.00
36	Egypt	0.00	0.00
36	Finland	0.00	0.00
36	France	0.00	0.00
36	Guatemala	0.00	0.00
36	Hong Kong	0.00	0.00
36	Israel	0.00	0.00
36	Italy	0.00	0.00
36	Jordan	0.00	0.00
36	Kenya	0.00	0.00
36	Kuwait	0.00	0.00
36	Morocco	0.00	0.00
36	Netherlands	0.00	0.00
36	Panama	0.00	0.00
36	Saudi Arabia	0.00	0.00
36	Singapore	0.00	0.00
36	Slovenia	0.00	0.00
36	Sri Lanka	0.00	0.00
36	Sweden	0.00	0.00
36	Switzerland	0.00	0.00
36	Taiwan	0.00	0.00
36	U.A.E.	0.00	0.00



# 1 Factor Conditions

## 1.2 Processed Resources

### 1.2.4 Wood production (2020)

Hard data: cubic meters per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	Finland	2,145.69	100.00
2	Sweden	1,804.25	84.09
3	Canada	1,264.41	58.93
4	Austria	1,175.65	54.79
5	New Zealand	903.49	42.11
6	Chile	443.54	20.67
7	Czech Republic	428.21	20
8	Croatia	396.61	18.48
9	Slovenia	391.80	18.26
10	Slovak Republic	317.61	14.80
11	Russia	295.55	13.77
12	Germany	286.31	13.34
13	United States	250.98	11.70
14	Australia	185.46	8.64
15	Poland	136.66	6.37
16	Belgium	135.70	6.32
17	Switzerland	133.80	6.24
18	France	119.98	5.59
19	Malaysia	107.65	5.02
20	Turkey	99.67	4.65
21	Ukraine	91.88	4.28
22	Argentina	90.32	4.21
23	Japan	72.73	3.39
24	Denmark	66.73	3.11
25	China	64.84	3.02
26	Thailand	64.81	3.02
27	Vietnam	62.80	3
28	United Kingdom	55.93	2.61
29	Spain	54.13	2.52
30	Hungary	50.84	2.37
31	Brazil	48.89	2.28
32	Korea	42.37	1.97
33	South Africa	39.16	1.82
34	Mexico	26.64	1.24
35	Italy	24.82	1
36	Cambodia	21.66	1.01
37	Guatemala	16.87	1
38	Indonesia	15.58	0.73
39	Peru	14.50	0.68
40	Nigeria	10.22	0.48
41	Greece	10.07	0.47
42	Netherlands	8.14	0.38
43	Colombia	7.36	0.34
44	Pakistan	6.51	0.30
45	Kenya	5.76	0.27
46	Panama	5.75	0.27
47	India	5.09	0.24
48	Singapore	4.43	0.21
49	Philippines	3.47	0.16
50	Dominican Republic	2.45	0.11
51	Bangladesh	2.40	0.11
52	Morocco	2.30	0.11
53	Hong Kong	2.01	0.09
54	Taiwan	1.60	0.07
55	Sri Lanka	1.43	0.07
56	Iran	0.26	0.01
57	Egypt	0.12	0.01
58	Israel	0.00	0.00
58	Jordan	0.00	0.00
58	Kuwait	0.00	0.00
58	Saudi Arabia	0.00	0.00
58	U.A.E.	0.00	0.00

### 1.2.5 Meat indigenous (2020)

Hard data: tonnes per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	Denmark	372.16	100.00
2	New Zealand	278.54	74.84
3	Australia	203.08	54.57
4	Netherlands	201.14	54.05
5	Belgium	147.91	39.74
6	Canada	131.34	35.29
7	United States	130.58	35.09
8	Brazil	130.40	35.04
9	Argentina	122.24	32.84
10	Spain	114.27	30.70
11	Austria	113.13	30.40
12	Poland	94.99	25.52
13	France	93.66	25.16
14	Germany	93.33	25.08
15	Hungary	86.85	23.34
16	Chile	82.70	22.22
17	Israel	78.65	21.13
18	Finland	70.42	18.92
19	Panama	68.72	18.46
20	Taiwan	65.76	17.67
21	China	62.36	16.75
22	Malaysia	59.22	15.91
23	Italy	59.17	15.90
24	Switzerland	57.35	15.41
25	Slovenia	56.73	15.24
26	Russia	56.39	15.15
27	United Kingdom	56.07	15.06
28	Czech Republic	56.03	15.05
29	Peru	53.61	14.40
30	Mexico	53.05	14.25
31	Colombia	52.36	14.07
32	Sweden	50.74	13.63
33	South Africa	49.92	13.41
34	Ukraine	48.82	13.12
35	Vietnam	46.68	12.54
36	Dominican Republic	44.88	12.06
37	Korea	40.29	10.82
38	Thailand	39.04	10.49
39	Greece	38.00	10.21
40	Turkey	37.55	10.09
41	Iran	32.94	8.85
42	Slovak Republic	32.41	8.71
43	Philippines	31.46	8.45
44	Morocco	30.70	8.25
45	Jordan	27.47	7.38
46	Croatia	27.15	7.29
47	Japan	25.61	6.88
48	Egypt	22.79	6.12
49	Saudi Arabia	22.45	6.03
50	Guatemala	20.65	5.55
51	Kuwait	18.93	5.08
52	Pakistan	15.82	4.25
53	Kenya	13.61	3.65
54	Indonesia	12.88	3.46
55	Cambodia	12.37	3.32
56	U.A.E.	11.61	3.12
57	Nigeria	7.15	1.92
58	Sri Lanka	6.71	1.80
59	India	4.71	1.26
60	Bangladesh	4.10	1.10
61	Hong Kong	1.11	0.30
62	Singapore	0.01	0.00

## 2 Demand Conditions

### 2.1 Demand Size

#### 2.1.1 GDP (2020)

Hard data: US\$ billion

RANK	COUNTRY	UNIT	INDEX
1	United States	20,544.34	100.00
2	China	13,608.15	66.20
3	Japan	4,971.32	24.11
4	Germany	3,947.62	19.12
5	United Kingdom	2,855.30	13.80
6	France	2,777.54	13.42
7	India	2,718.73	13.13
8	Italy	2,083.86	10.04
9	Brazil	1,868.63	8.99
10	Canada	1,713.34	8.23
11	Russia	1,657.55	7.96
12	Korea	1,619.42	7.77
13	Australia	1,433.90	6.87
14	Spain	1,419.04	6.80
15	Mexico	1,220.70	5.83
16	Indonesia	1,042.17	4.96
17	Netherlands	913.66	4.33
18	Saudi Arabia	786.52	3.71
19	Turkey	771.35	3.64
20	Switzerland	705.14	3.32
21	Taiwan	590.00	2.76
22	Poland	585.66	2.73
23	Sweden	556.09	2.59
24	Belgium	542.76	2.53
25	Argentina	519.87	2.41
26	Thailand	504.99	2.34
27	Austria	455.29	2.10
28	Iran	454.01	2.09
29	U.A.E.	414.18	1.90
30	Nigeria	397.27	1.82
31	Israel	370.59	1.69
32	South Africa	368.29	1.68
33	Singapore	364.16	1.66
34	Hong Kong	362.68	1.65
35	Malaysia	358.58	1.63
36	Denmark	355.68	1.61
37	Colombia	331.05	1.49
38	Philippines	330.91	1.49
39	Pakistan	314.59	1.41
40	Chile	298.23	1.33
41	Finland	276.74	1.23
42	Bangladesh	274.02	1.22
43	Egypt	250.89	1.10
44	Czech Republic	245.23	1.08
45	Vietnam	245.21	1.08
46	Peru	222.04	0.96
47	Greece	218.03	0.94
48	New Zealand	204.92	0.88
49	Hungary	157.88	0.65
50	Kuwait	140.65	0.57
51	Ukraine	130.83	0.52
52	Morocco	117.92	0.46
53	Slovak Republic	105.90	0.40
54	Sri Lanka	88.90	0.31
55	Kenya	87.91	0.31
56	Dominican Republic	85.56	0.30
57	Guatemala	78.46	0.26
58	Panama	65.06	0.20
59	Croatia	60.97	0.18
60	Slovenia	54.01	0.14
61	Jordan	42.23	0.09
62	Cambodia	24.54	0.00

#### 2.1.2 GDP per capita (2020)

Hard data: US\$

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	82,796.55	100.00
2	Singapore	64,581.94	77.60
3	United States	62,794.59	75.40
4	Denmark	61,350.35	73.63
5	Australia	57,373.69	68.74
6	Sweden	54,608.36	65.33
7	Netherlands	53,024.06	63.39
8	Austria	51,461.95	61.46
9	Finland	50,152.34	59.85
10	Hong Kong	48,675.62	58.04
11	Germany	47,603.03	56.72
12	Belgium	47,518.64	56.62
13	Canada	46,232.99	55.03
14	U.A.E.	43,004.95	51.06
15	United Kingdom	42,943.90	50.99
16	New Zealand	41,945.33	49.76
17	Israel	41,715.03	49.48
18	France	41,463.64	49.17
19	Japan	39,289.96	46.50
20	Italy	34,483.20	40.58
21	Kuwait	33,994.41	39.98
22	Korea	31,362.75	36.75
23	Spain	30,370.89	35.53
24	Slovenia	26,123.97	30.30
25	Taiwan	25,026.00	28.95
26	Saudi Arabia	23,338.96	26.88
27	Czech Republic	23,078.57	26.56
28	Greece	20,324.25	23.17
29	Slovak Republic	19,442.71	22.09
30	Hungary	16,161.98	18.05
31	Chile	15,923.36	17.76
32	Panama	15,575.07	17.33
33	Poland	15,420.91	17.14
34	Croatia	14,909.69	16.51
35	Argentina	11,683.95	12.55
36	Malaysia	11,373.23	12.16
37	Russia	11,288.87	12.06
38	China	9,770.85	10.19
39	Mexico	9,673.44	10.07
40	Turkey	9,370.18	9.70
41	Brazil	8,920.76	9.15
42	Dominican Republic	8,050.63	8.08
43	Thailand	7,273.56	7.12
44	Peru	6,941.24	6.71
45	Colombia	6,667.79	6.38
46	South Africa	6,374.03	6.02
47	Iran	5,627.75	5.10
48	Guatemala	4,549.01	3.77
49	Jordan	4,241.79	3.39
50	Sri Lanka	4,102.48	3.22
51	Indonesia	3,893.60	2.97
52	Morocco	3,237.88	2.16
53	Philippines	3,102.71	1.99
54	Ukraine	3,095.17	1.98
55	Vietnam	2,566.60	1.33
56	Egypt	2,549.13	1.31
57	Nigeria	2,028.18	0.67
58	India	2,009.98	0.65
59	Kenya	1,710.51	0.28
60	Bangladesh	1,698.26	0.27
61	Cambodia	1,510.32	0.03
62	Pakistan	1,482.40	0.00

## 2 Demand Conditions

### 2.1 Demand Size

#### 2.1.3 Goods and services export (2020)

Hard data: US\$ billion

RANK	COUNTRY	UNIT	INDEX
1	China	2,655.61	100.00
2	United States	2,510.25	94.50
3	Germany	1,871.81	70.36
4	Japan	917.12	34.25
5	France	870.41	32.48
6	United Kingdom	856.78	31.97
7	Netherlands	770.41	28.70
8	Korea	712.71	26.52
9	Hong Kong	682.87	25.39
10	Italy	655.45	24.35
11	Singapore	642.29	23.85
12	Canada	550.51	20.38
13	India	536.62	19.86
14	Russia	509.55	18.83
15	Spain	498.32	18.41
16	Mexico	479.60	17.70
17	Switzerland	466.31	17.20
18	Belgium	448.19	16.51
19	Taiwan	403.16	14.81
20	U.A.E.	388.75	14.27
21	Thailand	337.43	12.32
22	Poland	325.57	11.88
23	Saudi Arabia	313.84	11.43
24	Australia	312.66	11.39
25	Brazil	276.66	10.03
26	Vietnam	259.51	9.38
27	Sweden	254.62	9.19
28	Austria	253.85	9.16
29	Malaysia	246.55	8.89
30	Turkey	227.78	8.18
31	Indonesia	218.50	7.83
32	Denmark	197.90	7.05
33	Czech Republic	192.22	6.83
34	Hungary	134.10	4.63
35	Iran	113.24	3.84
36	South Africa	110.14	3.73
37	Israel	109.12	3.69
38	Finland	106.72	3.60
39	Philippines	104.85	3.53
40	Slovak Republic	101.76	3.41
41	Chile	85.93	2.81
42	Kuwait	79.77	2.58
43	Greece	78.77	2.54
44	Argentina	74.24	2.37
45	Nigeria	61.55	1.89
46	Ukraine	59.15	1.80
47	New Zealand	57.64	1.74
48	Peru	56.35	1.69
49	Colombia	52.72	1.56
50	Egypt	47.45	1.36
51	Slovenia	46.11	1.31
52	Morocco	45.68	1.29
53	Bangladesh	40.56	1.10
54	Croatia	30.80	0.73
55	Pakistan	27.66	0.61
56	Panama	26.32	0.56
57	Sri Lanka	20.26	0.33
58	Dominican Republic	20.15	0.32
59	Cambodia	15.12	0.13
60	Jordan	15.05	0.13
61	Guatemala	14.22	0.10
62	Kenya	11.58	0.00

#### 2.1.4 Goods and services import (2020)

Hard data: US\$ billion

RANK	COUNTRY	UNIT	INDEX
1	United States	3,148.46	100.00
2	China	2,548.99	80.87
3	Germany	1,628.58	51.49
4	United Kingdom	907.12	28.46
5	Japan	904.43	28.37
6	France	891.89	27.97
7	Hong Kong	682.64	21.29
8	Netherlands	670.00	20.89
9	India	642.70	20.02
10	Korea	631.47	19.66
11	Italy	603.37	18.76
12	Canada	584.13	18.15
13	Singapore	545.56	16.92
14	Mexico	502.43	15.54
15	Spain	459.81	14.18
16	Belgium	449.07	13.84
17	Switzerland	380.09	11.64
18	Russia	344.26	10.49
19	Taiwan	341.70	10.41
20	Australia	306.68	9.29
21	Poland	305.45	9.25
22	Thailand	285.26	8.61
23	U.A.E.	281.55	8.49
24	Brazil	266.78	8.02
25	Vietnam	251.28	7.52
26	Sweden	240.71	7.19
27	Austria	236.91	7.07
28	Turkey	236.24	7.04
29	Indonesia	229.86	6.84
30	Malaysia	221.41	6.57
31	Saudi Arabia	209.72	6.20
32	Czech Republic	176.57	5.14
33	Denmark	176.40	5.13
34	Philippines	146.84	4.19
35	Hungary	127.20	3.56
36	South Africa	108.88	2.98
37	Finland	108.74	2.98
38	Iran	108.23	2.96
39	Israel	107.54	2.94
40	Slovak Republic	99.62	2.68
41	Chile	85.65	2.24
42	Argentina	85.36	2.23
43	Greece	79.34	2.04
44	Egypt	73.68	1.86
45	Ukraine	70.40	1.75
46	Nigeria	69.55	1.72
47	Colombia	68.94	1.70
48	Bangladesh	64.24	1.55
49	Pakistan	62.13	1.49
50	Kuwait	61.56	1.47
51	Morocco	58.08	1.36
52	New Zealand	57.94	1.35
53	Peru	52.26	1.17
54	Slovenia	41.64	0.83
55	Croatia	31.32	0.50
56	Panama	28.22	0.40
57	Sri Lanka	26.79	0.36
58	Dominican Republic	24.39	0.28
59	Jordan	23.04	0.24
60	Guatemala	21.72	0.20
61	Kenya	20.22	0.15
62	Cambodia	15.54	0.00

## 2 Demand Conditions

### 2.2 Demand Quality

#### 2.2.1 Consumer sophistication: quality (2019)

Survey: consumers are sensitive to the quality of products.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	9.04	100.00
2	Canada	8.73	92.23
3	Japan	8.43	84.44
4	United States	8.26	80.35
5	Hong Kong	8.25	79.98
5	Sweden	8.25	79.98
7	Belgium	8.21	79.07
8	Austria	8.20	78.71
9	Italy	8.13	76.96
10	Korea	8.11	76.29
11	Iran	7.94	72.11
12	Singapore	7.94	72.07
13	France	7.84	69.59
14	Panama	7.81	68.83
15	Thailand	7.80	68.51
16	Denmark	7.79	68.30
17	India	7.73	66.75
18	Netherlands	7.71	66.33
19	Colombia	7.67	65.12
19	Russia	7.67	65.12
21	Germany	7.64	64.51
22	Croatia	7.59	63.26
23	Australia	7.57	62.69
24	Vietnam	7.52	61.45
25	Spain	7.52	61.26
26	Guatemala	7.47	60.07
27	Nigeria	7.45	59.55
28	Philippines	7.42	58.94
29	Egypt	7.42	58.86
30	New Zealand	7.37	57.59
31	Taiwan	7.35	57.17
32	China	7.27	55.11
33	Mexico	7.27	54.92
34	Israel	7.25	54.50
35	Poland	7.21	53.46
36	Indonesia	7.14	51.77
37	Slovenia	7.14	51.68
38	Brazil	7.13	51.31
39	Hungary	7.06	49.77
39	Peru	7.06	49.77
41	U.A.E.	7.05	49.34
42	Kuwait	7.00	48.13
42	Morocco	7.00	48.13
44	Bangladesh	6.96	47.11
45	Slovak Republic	6.91	45.95
46	Jordan	6.89	45.40
47	Turkey	6.88	45.13
48	South Africa	6.76	41.95
49	Saudi Arabia	6.65	39.27
50	Argentina	6.64	38.86
51	Malaysia	6.56	36.80
52	Greece	6.35	31.47
53	Dominican Republic	6.20	27.75
54	Czech Republic	6.19	27.58
55	Kenya	6.14	26.12
56	Pakistan	5.38	6.83
57	Cambodia	5.11	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 2.2.2 Consumer sophistication: design (2019)

Survey: consumers are sensitive to the design of products.

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	8.25	100.00
2	Korea	8.13	96.55
3	Croatia	8.13	96.36
4	Italy	8.05	94.25
5	United States	7.96	91.43
6	Sweden	7.95	91.26
7	Colombia	7.94	90.89
8	Japan	7.90	89.80
9	Switzerland	7.89	89.59
10	Panama	7.81	87.25
11	Denmark	7.79	86.64
12	Germany	7.76	85.64
13	Thailand	7.72	84.56
14	Iran	7.71	84.14
15	France	7.66	82.75
16	Nigeria	7.62	81.66
17	Belgium	7.61	81.27
18	Guatemala	7.53	79.06
19	Netherlands	7.52	78.84
20	Canada	7.50	78.15
20	Russia	7.50	78.15
22	Singapore	7.48	77.70
23	Philippines	7.36	74.17
23	Spain	7.36	74.17
25	Israel	7.30	72.32
26	Vietnam	7.30	72.19
27	Indonesia	7.29	71.90
28	Mexico	7.27	71.35
29	Australia	7.19	69.13
30	Slovenia	7.19	69.00
31	Poland	7.16	68.32
32	Taiwan	7.16	68.28
33	Turkey	7.15	67.86
34	Brazil	7.15	67.83
35	Saudi Arabia	7.13	67.38
36	Austria	7.12	67.07
37	China	7.11	66.86
38	India	7.09	66.19
39	Kuwait	7.00	63.58
40	Slovak Republic	6.97	62.74
41	U.A.E.	6.95	62.19
42	New Zealand	6.94	61.91
43	Peru	6.87	59.82
44	Bangladesh	6.82	58.33
45	Malaysia	6.78	57.10
46	South Africa	6.67	53.86
47	Greece	6.65	53.49
48	Hungary	6.65	53.24
49	Morocco	6.62	52.37
50	Argentina	6.58	51.21
51	Jordan	6.57	51.09
52	Czech Republic	6.39	45.72
53	Pakistan	6.03	35.44
54	Dominican Republic	5.90	31.52
55	Egypt	5.74	26.77
56	Cambodia	5.30	13.93
57	Kenya	4.82	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 2 Demand Conditions

### 2.2 Demand Quality

#### 2.2.3 Consumer sophistication: health and environment issues (2019)

Survey: consumers are sensitive to health and environmental issues.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.89	100.00
2	Canada	8.50	92.03
3	Belgium	8.32	88.41
4	Sweden	8.30	87.97
5	New Zealand	8.20	85.95
6	Denmark	7.88	79.35
7	Nigeria	7.76	76.99
8	Hong Kong	7.75	76.82
9	France	7.63	74.42
9	Italy	7.63	74.42
11	Korea	7.47	71.21
12	Thailand	7.40	69.72
13	Australia	7.38	69.33
13	Netherlands	7.38	69.33
15	Japan	7.38	69.21
16	Colombia	7.27	67.14
17	Taiwan	7.26	66.84
18	Israel	7.25	66.68
19	Germany	7.19	65.37
20	Singapore	7.18	65.29
21	Spain	7.15	64.68
22	Brazil	7.15	64.56
23	Slovenia	7.14	64.43
24	Malaysia	7.11	63.86
25	China	7.10	63.66
26	United States	7.09	63.39
27	India	7.01	61.86
28	Austria	7.00	61.60
29	Kuwait	6.92	60.04
30	Vietnam	6.91	59.76
31	U.A.E.	6.81	57.74
32	Philippines	6.79	57.30
33	Panama	6.75	56.53
34	Hungary	6.71	55.72
35	Morocco	6.69	55.36
36	Guatemala	6.69	55.27
37	Poland	6.65	54.53
38	Peru	6.58	53.10
39	Russia	6.57	52.81
40	Argentina	6.36	48.70
41	Croatia	6.31	47.66
42	Mexico	6.29	47.18
43	Egypt	6.26	46.66
44	Saudi Arabia	6.26	46.61
45	Bangladesh	6.24	46.19
46	Iran	6.21	45.50
47	Slovak Republic	6.09	43.06
48	South Africa	6.00	41.32
49	Greece	5.96	40.54
50	Kenya	5.91	39.48
51	Czech Republic	5.87	38.70
52	Indonesia	5.71	35.52
53	Jordan	5.68	34.80
54	Turkey	5.59	32.97
55	Pakistan	5.45	30.13
56	Dominican Republic	5.23	25.77
57	Cambodia	3.96	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 2.2.4 Consumers sophistication: international standard of IPR (2019)

Survey: consumers rarely purchase illegally copied products.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.57	100.00
2	Hong Kong	7.65	86.13
3	Austria	7.44	82.97
4	New Zealand	7.29	80.65
5	Denmark	7.13	78.23
6	Italy	7.11	77.94
7	Belgium	7.00	76.35
8	Kuwait	6.77	72.88
9	Singapore	6.64	70.88
10	Japan	6.60	70.33
11	U.A.E.	6.50	68.83
12	Canada	6.42	67.67
13	Sweden	6.40	67.32
14	Netherlands	6.38	67.04
15	Korea	6.30	65.79
16	Australia	6.29	65.61
17	United States	6.12	63.08
18	Slovenia	6.12	63.06
19	France	6.08	62.49
20	China	6.08	62.44
21	Taiwan	6.06	62.28
22	Germany	5.93	60.23
23	Thailand	5.88	59.50
24	Saudi Arabia	5.87	59.34
25	India	5.82	58.60
26	Israel	5.80	58.30
27	Pakistan	5.79	58.19
28	Hungary	5.74	57.42
29	Greece	5.46	53.20
30	Poland	5.37	51.86
31	Guatemala	5.25	50.02
32	Egypt	5.21	49.39
33	Spain	5.15	48.54
34	Nigeria	5.10	47.81
35	Morocco	5.08	47.42
36	Colombia	5.05	46.94
37	Brazil	5.00	46.26
38	Bangladesh	4.86	44.15
39	Philippines	4.85	43.98
40	Dominican Republic	4.83	43.75
41	Jordan	4.79	43.03
42	Panama	4.78	42.97
43	Malaysia	4.78	42.91
44	Russia	4.73	42.25
45	Vietnam	4.73	42.15
46	Czech Republic	4.55	39.46
47	Peru	4.52	38.98
48	Argentina	4.52	38.96
49	Turkey	4.50	38.73
50	Slovak Republic	4.49	38.52
51	South Africa	4.36	36.68
52	Mexico	4.16	33.55
53	Croatia	4.00	31.21
54	Indonesia	3.71	26.91
55	Iran	3.62	25.46
56	Kenya	3.45	23.00
57	Cambodia	1.93	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 2 Demand Conditions

### 2.2 Demand Quality

#### 2.2.5 Consumer sophistication: new technology (2019)

Survey: consumers are early adopters for new- technology products.

RANK	COUNTRY	UNIT	INDEX
1	Israel	9.05	100.00
2	Hong Kong	8.10	77.57
3	Korea	7.86	71.89
4	Switzerland	7.79	70.15
5	United States	7.63	66.53
6	Sweden	7.60	65.76
7	Panama	7.56	64.88
8	U.A.E.	7.52	63.96
9	Singapore	7.39	60.90
10	Denmark	7.29	58.48
11	Colombia	7.25	57.50
12	Austria	7.24	57.26
13	Slovenia	7.21	56.54
14	Saudi Arabia	7.13	54.68
15	Kuwait	7.08	53.41
16	Belgium	7.00	51.60
16	Netherlands	7.00	51.60
18	Brazil	6.96	50.61
19	China	6.94	50.19
20	Philippines	6.94	50.16
21	India	6.91	49.48
22	Argentina	6.91	49.45
23	Indonesia	6.86	48.22
24	Spain	6.85	48.02
25	Guatemala	6.81	47.17
26	Italy	6.79	46.63
27	Thailand	6.72	44.98
28	New Zealand	6.71	44.85
29	Mexico	6.71	44.77
30	Iran	6.71	44.65
31	Vietnam	6.64	43.01
32	Japan	6.60	42.15
33	Poland	6.47	38.97
34	Russia	6.43	38.22
35	Jordan	6.43	38.10
36	Greece	6.42	37.97
37	Turkey	6.41	37.71
38	Australia	6.36	36.42
38	Germany	6.36	36.42
40	Nigeria	6.28	34.50
41	Croatia	6.22	33.15
42	Slovak Republic	6.20	32.71
43	France	6.18	32.33
44	Kenya	6.18	32.28
45	Taiwan	6.16	31.79
46	Pakistan	6.10	30.43
47	Morocco	6.08	29.80
48	Peru	6.06	29.51
49	Canada	6.04	28.89
50	Malaysia	6.00	27.98
51	Bangladesh	5.82	23.73
52	Czech Republic	5.81	23.41
53	Hungary	5.71	21.13
54	Egypt	5.68	20.53
55	Dominican Republic	5.53	16.97
56	South Africa	5.27	10.81
57	Cambodia	4.81	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.1 Vehicles (2015)

Hard data: motor vehicles per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	United States	821.00	100.00
2	New Zealand	819.00	99.76
3	Australia	718.00	87.39
4	Italy	706.00	85.92
5	Canada	646.00	78.58
6	Poland	628.00	76.38
7	Austria	609.00	74.05
7	Japan	609.00	74.05
9	France	598.00	72.71
10	Spain	595.00	72.34
11	Germany	593.00	72.09
11	Switzerland	593.00	72.09
13	United Kingdom	587.00	71.36
14	Belgium	569.00	69.16
15	Greece	566.00	68.79
16	Czech Republic	559.00	67.93
17	Netherlands	555.00	67.44
18	Sweden	540.00	65.61
19	Slovenia	527.10	64.03
20	Denmark	501.00	60.83
21	Finland	492.00	59.73
22	Kuwait	482.00	58.51
23	Malaysia	439.00	53.24
24	Korea	417.00	50.55
25	Croatia	392.00	47.49
26	Hungary	377.00	45.65
27	Slovak Republic	375.71	45.50
28	Israel	367.00	44.43
29	Russia	358.00	43.33
30	Taiwan	327.00	39.53
31	Argentina	316.00	38.19
32	Mexico	294.00	35.50
33	Chile	248.00	29.87
34	U.A.E.	234.00	28.15
35	Thailand	228.00	27.42
36	Saudi Arabia	209.00	25.09
37	Brazil	206.00	24.72
38	Ukraine	203.00	24.36
39	Turkey	195.00	23.38
40	Iran	179.00	21.42
41	South Africa	176.00	21.05
42	Panama	172.00	20.56
43	Dominican Republic	153.00	18.24
44	Jordan	149.00	17.75
45	Singapore	145.00	17.26
46	China	118.00	13.95
47	Guatemala	114.00	13.46
48	Colombia	111.00	13.10
49	Morocco	104.00	12.24
50	Hong Kong	93.00	10.89
51	Indonesia	87.00	10.16
52	Peru	78.00	9.06
53	Sri Lanka	68.00	7.83
54	Egypt	63.00	7.22
55	Philippines	38.00	4.16
56	Kenya	30.00	3.18
57	Vietnam	23.00	2.33
58	India	22.00	2.20
59	Cambodia	21.00	2.08
59	Nigeria	21.00	2.08
61	Pakistan	17.00	1.59
62	Bangladesh	4.00	0.00

##### 3.1.2 Civil aviation (2020)

Hard data: passengers per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	U.A.E.	9,919.37	100.00
2	Singapore	7,165.07	72.23
3	Hong Kong	6,321.54	63.72
4	New Zealand	3,530.66	35.58
5	Switzerland	3,388.46	34.15
6	Hungary	3,196.59	32.22
7	Panama	3,097.86	31.22
8	Australia	3,027.63	30.51
9	Taiwan	2,921.02	29.44
10	United States	2,717.33	27.38
11	Netherlands	2,553.31	25.73
12	United Kingdom	2,487.46	25.07
13	Finland	2,422.02	24.41
14	Canada	2,411.84	24.30
15	Malaysia	1,918.32	19.33
16	Spain	1,726.58	17.39
17	Korea	1,707.31	17.20
18	Kuwait	1,562.57	15.74
19	Austria	1,462.13	14.73
20	Greece	1,409.99	14.20
21	Turkey	1,404.23	14.14
22	Germany	1,324.00	13.33
23	Belgium	1,194.13	12.03
24	Saudi Arabia	1,161.48	11.70
25	Thailand	1,095.41	11.03
26	France	1,047.78	10.55
27	Chile	1,042.07	10.49
28	Japan	998.88	10.06
29	Israel	833.47	8.39
30	Russia	687.49	6.92
31	Colombia	678.85	6.83
32	Peru	555.14	5.58
33	Czech Republic	539.00	5.42
34	Slovenia	529.54	5.32
35	Croatia	511.95	5.15
36	Mexico	511.68	5.14
37	Vietnam	492.46	4.95
38	Brazil	487.47	4.90
39	Italy	457.22	4.60
40	China	439.02	4.41
41	Indonesia	430.22	4.32
42	South Africa	414.02	4.16
43	Argentina	406.39	4.08
44	Philippines	403.93	4.06
45	Jordan	339.88	3.41
46	Iran	313.02	3.14
47	Sri Lanka	271.45	2.72
48	Poland	244.28	2.45
49	Morocco	225.73	2.26
50	Ukraine	176.03	1.76
51	Egypt	125.38	1.25
52	India	121.27	1.21
53	Kenya	115.50	1.15
54	Cambodia	86.84	0.86
55	Nigeria	41.71	0.41
56	Bangladesh	37.09	0.36
57	Pakistan	32.42	0.31
58	Guatemala	8.45	0.07
59	Slovak Republic	1.46	0.00
-	Denmark	-	-
-	Dominican Republic	-	-
-	Sweden	-	-

### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.3 Maritime transport (2020)

Hard data: container port traffic per 1000 people (TEU: 20 foot equivalent units)

RANK	COUNTRY	UNIT	INDEX
1	Singapore	6,490.89	100.00
2	Hong Kong	2,636.02	40.55
3	U.A.E.	1,978.41	30.41
4	Panama	1,645.35	25.28
5	Belgium	1,110.32	17.03
6	Netherlands	860.42	13.17
7	Malaysia	791.54	12.11
8	Kuwait	749.12	11.46
9	New Zealand	681.34	10.41
10	Korea	560.57	8.55
11	Greece	496.29	7.56
12	Slovenia	478.14	7.28
13	Spain	367.90	5.58
14	Australia	349.99	5.30
15	Israel	331.61	5.02
16	Sri Lanka	323.03	4.89
17	Denmark	289.08	4.36
18	Finland	288.52	4.35
19	Saudi Arabia	257.27	3.87
20	Chile	248.97	3.74
21	Germany	236.32	3.55
22	Dominican Republic	180.87	2.69
23	Canada	179.81	2.68
24	Japan	177.30	2.64
25	United Kingdom	175.90	2.62
26	Italy	174.53	2.60
27	Vietnam	171.39	2.55
28	United States	167.16	2.48
29	China	162.15	2.41
30	Thailand	161.10	2.39
31	Sweden	156.44	2.32
32	Morocco	132.21	1.94
33	Turkey	120.79	1.77
34	France	95.08	1.37
35	Guatemala	88.74	1.27
36	South Africa	84.67	1.21
37	Peru	83.40	1.19
38	Colombia	83.09	1.19
39	Jordan	81.89	1.17
40	Philippines	80.99	1.15
41	Poland	74.63	1.06
42	Croatia	64.68	0.90
43	Egypt	62.50	0.87
44	Mexico	55.32	0.76
45	Brazil	49.23	0.66
46	Indonesia	48.02	0.65
47	Cambodia	45.67	0.61
48	Russia	43.85	0.58
49	Argentina	40.48	0.53
50	Austria	32.50	0.41
51	Iran	29.08	0.35
52	Ukraine	26.42	0.31
53	Kenya	25.30	0.29
54	Bangladesh	17.52	0.17
55	Pakistan	15.43	0.14
56	India	12.11	0.09
57	Switzerland	12.08	0.09
58	Nigeria	6.18	0.00
-	Czech Republic	-	-
-	Hungary	-	-
-	Slovak Republic	-	-
-	Taiwan	-	-

##### 3.1.4 International travel (2017)

Hard data: travellers per 1000 people

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	16,124.57	100.00
2	Austria	4,654.81	28.82
3	Croatia	4,246.79	26.29
4	Singapore	4,239.30	26.24
5	Denmark	3,442.34	21.30
6	Greece	3,243.15	20.06
7	Slovenia	3,193.50	19.75
8	Switzerland	2,982.43	18.44
9	Sweden	2,812.37	17.39
10	Hungary	2,650.91	16.39
11	Finland	2,271.15	14.03
12	Spain	2,120.84	13.10
13	Belgium	1,805.51	11.14
14	France	1,733.58	10.69
15	Poland	1,710.55	10.55
16	United Kingdom	1,693.04	10.44
17	Czech Republic	1,598.48	9.86
18	Germany	1,571.00	9.69
19	Italy	1,487.66	9.17
20	Canada	1,473.94	9.08
21	New Zealand	1,336.70	8.23
22	Israel	1,286.54	7.92
23	Saudi Arabia	1,123.29	6.91
24	Slovak Republic	1,108.98	6.82
25	Netherlands	1,046.27	6.43
26	Ukraine	907.12	5.57
27	Malaysia	834.21	5.11
28	Australia	802.66	4.92
29	Korea	773.94	4.74
30	Panama	672.06	4.11
31	Thailand	643.77	3.93
32	Dominican Republic	638.25	3.90
33	Turkey	573.20	3.49
34	Jordan	555.82	3.39
35	Chile	545.20	3.32
36	United States	506.37	3.08
37	Mexico	467.70	2.84
38	Cambodia	459.35	2.79
39	Russia	443.05	2.69
40	Argentina	430.88	2.61
41	Morocco	370.93	2.24
42	Japan	367.39	2.22
43	Peru	219.66	1.30
44	Guatemala	203.43	1.20
45	Iran	191.02	1.12
46	South Africa	180.44	1.06
47	Colombia	166.25	0.97
48	Sri Lanka	165.80	0.97
49	China	146.98	0.85
50	Vietnam	136.60	0.78
51	Indonesia	86.52	0.47
52	Egypt	84.58	0.46
53	Brazil	77.21	0.42
54	Philippines	62.95	0.33
55	India	29.50	0.12
56	Kenya	27.16	0.11
57	Nigeria	10.16	0.00
-	Bangladesh	-	-
-	Kuwait	-	-
-	Pakistan	-	-
-	Taiwan	-	-
-	U.A.E.	-	-



### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.5 Mobile phone subscribers (2020)

Hard data: per 100 people

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	259.43	100.00
2	U.A.E.	208.50	72.75
3	Thailand	180.18	57.59
4	Kuwait	178.59	56.74
5	Russia	157.43	45.42
6	South Africa	153.25	43.18
7	Vietnam	147.20	39.94
8	Singapore	145.71	39.15
9	Japan	139.20	35.66
10	Italy	137.47	34.74
11	New Zealand	134.93	33.38
12	Poland	134.75	33.28
13	Malaysia	134.53	33.16
14	Chile	134.44	33.11
15	Slovak Republic	132.80	32.24
16	Finland	132.18	31.91
17	Argentina	132.09	31.86
18	Panama	130.07	30.78
19	Colombia	129.91	30.69
20	Korea	129.67	30.56
21	Switzerland	129.61	30.53
22	Germany	129.32	30.38
23	Israel	127.66	29.49
24	Sweden	125.12	28.13
25	Denmark	125.12	28.13
26	Netherlands	124.27	27.67
27	Morocco	124.17	27.62
28	Taiwan	123.95	27.50
29	United States	123.69	27.36
30	Austria	123.54	27.28
31	Saudi Arabia	122.57	26.77
32	Ukraine	122.55	26.75
33	Indonesia	119.84	25.30
34	Cambodia	119.49	25.12
35	Czech Republic	119.17	24.95
36	Slovenia	118.67	24.68
37	Guatemala	118.67	24.68
38	United Kingdom	117.55	24.08
39	Spain	115.87	23.18
40	Greece	115.67	23.07
41	Sri Lanka	115.06	22.75
42	China	114.95	22.69
43	Australia	113.58	21.95
44	Iran	108.46	19.21
45	France	108.41	19.19
46	Croatia	105.58	17.67
47	Hungary	103.45	16.53
48	Belgium	103.44	16.53
49	Brazil	98.84	14.07
50	Turkey	97.30	13.24
51	Bangladesh	97.28	13.23
52	Kenya	96.32	12.72
53	Egypt	95.29	12.16
54	Mexico	93.01	10.94
55	Canada	89.23	8.92
56	Nigeria	88.18	8.36
57	Jordan	87.62	8.06
58	India	86.94	7.70
59	Dominican Republic	84.10	6.18
60	Pakistan	72.56	0.00
-	Peru	-	-
-	Philippines	-	-

##### 3.1.6 Internet users (broad band) (2017)

Hard data: individuals using the Internet (% of population)

RANK	COUNTRY	UNIT	INDEX
1	Kuwait	99.60	100.00
2	U.A.E.	98.45	98.64
3	Denmark	97.64	97.69
4	Korea	95.90	95.62
5	United Kingdom	94.90	94.44
6	Netherlands	94.71	94.22
7	Saudi Arabia	93.31	92.57
8	Sweden	92.14	91.18
9	Canada	91.00	89.83
10	New Zealand	90.81	89.61
11	Germany	89.74	88.34
12	Switzerland	89.69	88.28
13	Hong Kong	89.42	87.96
14	Finland	88.89	87.34
15	Belgium	88.66	87.06
16	Singapore	88.17	86.48
17	Austria	87.71	85.95
18	United States	87.27	85.42
19	Australia	86.55	84.57
20	Spain	86.11	84.05
21	Japan	84.59	82.26
22	Chile	82.33	79.58
23	France	82.04	79.25
24	Israel	81.58	78.70
25	Malaysia	81.20	78.25
26	Russia	80.86	77.85
27	Czech Republic	80.69	77.65
28	Slovak Republic	80.66	77.61
29	Slovenia	79.75	76.54
30	Poland	77.54	73.93
31	Hungary	76.07	72.19
32	Dominican Republic	74.82	70.71
33	Italy	74.39	70.20
34	Argentina	74.29	70.09
35	Greece	72.95	68.50
36	Croatia	72.69	68.19
37	Turkey	71.04	66.24
38	Vietnam	70.35	65.43
39	Iran	70.00	65.02
40	Brazil	67.47	62.02
41	Jordan	66.79	61.22
42	Mexico	65.77	60.01
43	Guatemala	65.00	59.10
44	Morocco	64.80	58.87
45	Colombia	62.26	55.86
46	Philippines	60.05	53.26
47	Ukraine	58.89	51.88
48	Panama	57.87	50.67
49	Thailand	56.82	49.43
50	South Africa	56.17	48.66
51	China	54.30	46.45
52	Peru	52.54	44.37
53	Egypt	46.92	37.74
54	Nigeria	42.00	31.91
55	Cambodia	40.00	29.55
56	Indonesia	39.79	29.30
57	India	34.45	22.99
58	Sri Lanka	34.11	22.59
59	Kenya	17.83	3.34
60	Pakistan	15.51	0.60
61	Bangladesh	15.00	0.00
-	Taiwan	-	-

### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.7 Capital value (2020)

Hard data: 1-inflation rate

RANK	COUNTRY	UNIT	INDEX
1	Singapore	1.00	100.00
2	Greece	0.99	99.36
3	Panama	0.99	98.89
4	Denmark	0.99	98.71
5	Israel	0.99	98.71
6	Malaysia	0.99	98.46
7	Switzerland	0.99	98.29
8	Japan	0.99	98.14
9	Thailand	0.99	97.85
10	Finland	0.99	97.78
11	Italy	0.99	97.60
12	Peru	0.99	96.98
13	Taiwan	0.99	96.69
14	Korea	0.99	96.43
15	Croatia	0.98	96.35
16	New Zealand	0.98	96.01
17	Spain	0.98	95.75
18	Netherlands	0.98	95.65
19	Germany	0.98	95.55
20	Slovenia	0.98	95.53
21	Poland	0.98	95.27
22	France	0.98	95.14
23	Australia	0.98	94.93
24	Morocco	0.98	94.93
25	Sweden	0.98	94.79
26	Austria	0.98	94.63
27	Belgium	0.98	94.44
28	China	0.98	94.37
29	Sri Lanka	0.98	94.16
30	Czech Republic	0.98	94.11
31	Kuwait	0.98	94.04
32	Canada	0.98	93.70
33	United Kingdom	0.98	93.62
34	Hong Kong	0.98	93.22
35	Chile	0.98	93.13
36	United States	0.98	93.10
37	Saudi Arabia	0.98	93.02
38	Slovak Republic	0.97	92.86
39	Hungary	0.97	91.70
40	Russia	0.97	91.61
41	Cambodia	0.97	91.56
42	U.A.E.	0.97	90.95
43	Indonesia	0.97	90.50
44	Colombia	0.97	90.36
45	Vietnam	0.96	89.33
46	Dominican Republic	0.96	89.24
47	Brazil	0.96	88.90
48	Guatemala	0.96	88.60
49	Jordan	0.96	86.16
50	South Africa	0.95	86.01
51	Kenya	0.95	85.37
52	India	0.95	84.78
53	Mexico	0.95	84.65
54	Pakistan	0.95	84.04
55	Philippines	0.95	83.58
56	Bangladesh	0.94	82.43
57	Iran	0.90	67.15
58	Ukraine	0.89	63.83
59	Nigeria	0.88	59.89
60	Turkey	0.84	45.31
61	Egypt	0.70	0.00
-	Argentina	-	-

##### 3.1.8 Capital accessibility (2020)

Hard data: 1-interest rate

RANK	COUNTRY	UNIT	INDEX
1	Japan	0.99	100.00
2	France	0.99	99.22
3	Netherlands	0.99	99.12
4	Hungary	0.99	98.75
5	Austria	0.98	98.49
6	Finland	0.98	98.38
7	Germany	0.98	98.23
8	Sweden	0.98	97.54
9	Spain	0.98	97.28
10	Belgium	0.98	97.15
11	Slovak Republic	0.98	96.20
12	Taiwan	0.97	95.84
13	Slovenia	0.97	95.81
14	Switzerland	0.97	95.71
15	Italy	0.97	95.57
16	Canada	0.97	95.52
17	Denmark	0.97	95.15
18	Israel	0.97	93.48
19	Czech Republic	0.96	93.31
20	Korea	0.96	92.99
21	Thailand	0.96	91.72
22	Chile	0.96	91.64
23	Croatia	0.96	91.50
24	China	0.96	91.19
25	United Kingdom	0.96	91.11
26	New Zealand	0.95	90.11
27	Poland	0.95	90.01
28	Kuwait	0.95	89.94
29	United States	0.95	89.73
30	Malaysia	0.95	89.67
31	Hong Kong	0.95	89.37
32	Greece	0.95	88.83
33	Australia	0.95	88.80
34	Singapore	0.95	88.62
35	Morocco	0.94	87.91
36	U.A.E.	0.94	86.86
37	Philippines	0.94	86.55
38	Vietnam	0.93	83.17
39	Panama	0.92	82.88
40	Mexico	0.92	81.39
41	Saudi Arabia	0.92	80.82
42	Pakistan	0.91	80.21
43	Jordan	0.91	79.87
44	Russia	0.91	79.33
45	India	0.91	77.79
46	Bangladesh	0.90	77.27
47	South Africa	0.90	76.14
48	Indonesia	0.89	74.95
49	Cambodia	0.89	73.94
50	Sri Lanka	0.88	72.28
51	Colombia	0.88	70.80
52	Guatemala	0.87	68.68
53	Kenya	0.87	68.32
54	Dominican Republic	0.85	62.14
55	Turkey	0.84	61.21
56	Peru	0.83	59.03
57	Nigeria	0.83	58.23
58	Iran	0.82	55.35
59	Egypt	0.82	54.52
60	Ukraine	0.81	52.71
61	Argentina	0.63	4.44
62	Brazil	0.61	0.00

### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.9 Scientists & engineers (2017)

Hard data: total R&D personnel per million inhabitants

RANK	COUNTRY	UNIT	INDEX
1	Saudi Arabia	63.42	100.00
2	Denmark	29.01	45.50
3	Austria	28.17	44.16
4	Finland	26.89	42.13
5	Taiwan	26.88	42.11
6	Sweden	26.82	42.03
7	Switzerland	25.70	40.24
8	Korea	23.43	36.66
9	Belgium	22.66	35.43
10	Germany	21.40	33.43
11	Netherlands	20.80	32.49
12	France	20.64	32.24
13	United Kingdom	20.58	32.13
14	Slovenia	19.95	31.14
15	Czech Republic	19.82	30.93
16	Greece	18.86	29.42
17	New Zealand	18.51	28.87
18	Japan	17.73	27.62
19	Italy	17.34	27.00
20	Singapore	15.32	23.80
21	Spain	14.89	23.13
22	Slovak Republic	12.00	18.54
23	Hungary	11.72	18.10
24	Croatia	10.07	15.48
25	Malaysia	9.64	14.81
26	Russia	9.56	14.68
27	Poland	9.26	14.21
28	Hong Kong	9.00	13.80
29	Turkey	8.36	12.78
30	China	7.74	11.79
31	Egypt	7.61	11.59
32	Brazil	5.87	8.84
33	Argentina	5.50	8.25
34	Iran	5.28	7.90
35	Jordan	5.17	7.73
36	Ukraine	4.85	7.21
37	Thailand	4.81	7.15
38	Morocco	4.48	6.63
39	South Africa	3.69	5.38
40	Vietnam	3.03	4.34
41	Chile	2.83	4.01
42	Pakistan	2.77	3.93
43	Kuwait	2.61	3.67
44	Panama	2.06	2.80
45	Sri Lanka	1.45	1.83
46	Mexico	1.42	1.79
47	Indonesia	1.38	1.73
48	Philippines	0.89	0.94
49	Cambodia	0.33	0.05
50	Peru	0.31	0.03
51	Guatemala	0.29	0.00
-	Australia	-	-
-	Bangladesh	-	-
-	Canada	-	-
-	Colombia	-	-
-	Dominican Republic	-	-
-	India	-	-
-	Israel	-	-
-	Kenya	-	-
-	Nigeria	-	-
-	U.A.E.	-	-
-	United States	-	-

##### 3.1.10 Scientific research institutions (2019)

Survey: scientific research institutions are good by global standard.

RANK	COUNTRY	UNIT	INDEX
1	Israel	9.40	100.00
2	Switzerland	9.04	94.41
3	Belgium	8.21	81.79
4	United States	8.07	79.63
5	Sweden	8.05	79.27
6	Denmark	7.83	75.94
7	Hong Kong	7.75	74.66
8	France	7.71	74.05
9	Germany	7.70	73.89
10	Singapore	7.70	73.84
11	Netherlands	7.67	73.38
12	Slovenia	7.65	73.14
13	Canada	7.62	72.59
14	Japan	7.60	72.35
15	Hungary	7.55	71.56
16	Korea	7.47	70.41
17	China	7.43	69.79
18	New Zealand	7.43	69.72
19	Italy	7.42	69.61
20	Kuwait	7.38	69.05
21	Nigeria	7.21	66.32
22	Thailand	7.16	65.60
23	Spain	7.09	64.54
24	Austria	7.08	64.37
25	Australia	7.05	63.87
26	India	7.03	63.63
27	U.A.E.	6.90	61.68
28	Taiwan	6.87	61.16
29	Argentina	6.82	60.35
30	Colombia	6.67	58.02
31	Bangladesh	6.60	57.00
32	Brazil	6.58	56.74
33	Czech Republic	6.52	55.71
34	Guatemala	6.47	54.98
35	Russia	6.47	54.95
36	Peru	6.45	54.72
37	Malaysia	6.44	54.61
38	Panama	6.44	54.50
39	Mexico	6.40	53.92
40	Poland	6.37	53.50
41	Greece	6.35	53.10
42	Croatia	6.34	53.06
43	Philippines	6.33	52.90
44	Turkey	6.29	52.30
45	Egypt	6.21	51.01
46	Indonesia	6.14	49.98
47	Saudi Arabia	6.04	48.45
48	South Africa	6.03	48.25
49	Jordan	5.89	46.14
50	Kenya	5.86	45.69
51	Vietnam	5.82	44.99
52	Slovak Republic	5.80	44.71
53	Iran	5.26	36.49
54	Morocco	4.71	28.04
55	Pakistan	4.55	25.54
56	Dominican Republic	4.43	23.72
57	Cambodia	2.89	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

### 3 Related Industries

#### 3.1 Industrial Infrastructure

##### 3.1.11 Total expenditure on R&D (2017)

Hard data: % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Korea	4.55	100.00
2	Israel	4.54	99.78
3	Sweden	3.40	74.56
4	Switzerland	3.37	73.89
5	Taiwan	3.30	72.35
6	Japan	3.21	70.35
7	Austria	3.16	69.25
8	Denmark	3.05	66.82
9	Germany	3.04	66.59
10	United States	2.79	61.06
11	Finland	2.76	60.40
12	Belgium	2.70	59.07
13	France	2.19	47.79
14	China	2.15	46.90
15	Netherlands	1.99	43.36
16	Singapore	1.95	42.48
17	Australia	1.92	41.88
18	Slovenia	1.86	40.49
19	Czech Republic	1.79	38.94
20	United Kingdom	1.66	36.06
21	Canada	1.53	33.18
22	New Zealand	1.37	29.65
23	Hungary	1.35	29.21
23	Italy	1.35	29.21
25	Malaysia	1.30	28.11
26	Brazil	1.27	27.34
27	Spain	1.21	26.11
28	Greece	1.13	24.34
29	Russia	1.11	23.90
30	Poland	1.03	22.13
31	U.A.E.	0.96	20.66
32	Turkey	0.88	18.84
33	Slovak Republic	0.88	18.81
34	Croatia	0.85	18.05
35	South Africa	0.82	17.48
36	Saudi Arabia	0.82	17.37
37	Hong Kong	0.80	17.03
38	Thailand	0.78	16.62
39	India	0.62	13.05
40	Egypt	0.61	12.74
41	Argentina	0.54	11.29
42	Mexico	0.49	10.10
43	Ukraine	0.45	9.26
44	Vietnam	0.44	9.10
45	Chile	0.36	7.30
46	Jordan	0.33	6.68
47	Iran	0.25	4.93
48	Pakistan	0.25	4.78
49	Colombia	0.24	4.74
50	Philippines	0.14	2.39
51	Peru	0.12	2.01
52	Cambodia	0.12	1.95
53	Sri Lanka	0.11	1.74
54	Indonesia	0.08	1.21
55	Kuwait	0.08	1.13
56	Panama	0.06	0.71
57	Guatemala	0.03	0.00
-	Bangladesh	-	-
-	Dominican Republic	-	-
-	Kenya	-	-
-	Morocco	-	-
-	Nigeria	-	-

##### 3.1.12 International patents granted (2019)

Hard data: patents issued by USPTO (number)

RANK	COUNTRY	UNIT	INDEX
1	United States	177,053.00	100.00
2	Japan	53,176.00	30.03
3	Korea	22,427.00	12.67
4	Germany	18,761.00	10.60
5	Taiwan	11,857.00	6.70
6	United Kingdom	8,493.00	4.80
7	Canada	7,793.00	4.40
8	France	7,532.00	4.25
9	India	5,075.00	2.87
10	Israel	4,630.00	2.61
11	Italy	3,718.00	2.10
12	Netherlands	3,340.00	1.89
13	Sweden	3,321.00	1.88
14	Switzerland	3,198.00	1.81
15	Australia	2,136.00	1.21
16	Austria	1,618.00	0.91
17	Finland	1,545.00	0.87
18	Belgium	1,447.00	0.82
19	Denmark	1,320.00	0.74
20	Singapore	1,102.00	0.62
21	Hong Kong	1,073.00	0.61
22	Spain	1,058.00	0.60
23	Saudi Arabia	871.00	0.49
24	Russia	615.00	0.35
25	New Zealand	435.00	0.25
26	Brazil	432.00	0.24
27	Mexico	411.00	0.23
28	Czech Republic	383.00	0.22
29	Poland	337.00	0.19
30	Malaysia	296.00	0.17
31	Turkey	252.00	0.14
32	South Africa	202.00	0.11
33	Hungary	145.00	0.08
34	Greece	133.00	0.07
35	Thailand	128.00	0.07
36	Argentina	115.00	0.06
37	U.A.E.	98.00	0.05
38	Philippines	88.00	0.05
39	Iran	86.00	0.05
40	Slovenia	79.00	0.04
41	Ukraine	71.00	0.04
42	Slovak Republic	58.00	0.03
43	Vietnam	57.00	0.03
44	Colombia	46.00	0.03
45	Egypt	45.00	0.02
46	Kuwait	44.00	0.02
47	Chile	41.00	0.02
48	China	27.00	0.01
49	Pakistan	26.00	0.01
50	Croatia	22.00	0.01
51	Jordan	19.00	0.01
52	Indonesia	13.00	0.01
53	Kenya	12.00	0.01
54	Bangladesh	10.00	0.01
54	Peru	10.00	0.01
54	Sri Lanka	10.00	0.01
57	Morocco	7.00	0.00
58	Panama	6.00	0.00
59	Guatemala	5.00	0.00
60	Dominican Republic	4.00	0.00
61	Cambodia	1.00	0.00
61	Nigeria	1.00	0.00

### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.1 Public spending on education (2017)

Hard data: % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Sweden	7.67	100.00
2	Denmark	7.63	99.39
3	Finland	6.90	86.59
4	Belgium	6.54	80.46
5	New Zealand	6.43	78.44
6	Brazil	6.24	75.20
7	South Africa	6.13	73.19
8	Israel	5.85	68.39
9	Czech Republic	5.59	63.85
10	Argentina	5.51	62.47
11	Austria	5.50	62.34
12	United Kingdom	5.49	62.10
13	Netherlands	5.48	61.98
14	France	5.43	61.16
15	Chile	5.42	60.87
16	Ukraine	5.41	60.84
17	Australia	5.28	58.52
18	Kenya	5.24	57.80
19	Switzerland	5.11	55.62
20	Taiwan	5.10	55.39
21	United States	4.96	52.99
22	Mexico	4.91	52.09
23	Germany	4.80	50.20
24	Slovenia	4.80	50.10
25	Malaysia	4.74	49.15
26	Hungary	4.71	48.63
27	Poland	4.64	47.39
28	Croatia	4.56	45.96
29	Colombia	4.50	44.94
30	Canada	4.37	42.71
31	Vietnam	4.34	42.28
32	Spain	4.21	39.92
33	Korea	4.13	38.46
34	Thailand	4.12	38.44
35	Peru	3.92	34.97
36	Slovak Republic	3.90	34.60
37	India	3.84	33.60
38	Italy	3.83	33.33
39	Iran	3.79	32.65
40	Turkey	3.77	32.28
41	Russia	3.74	31.83
42	Jordan	3.60	29.34
43	Japan	3.59	29.18
44	Indonesia	3.58	29.06
45	Greece	3.39	25.62
46	Hong Kong	3.31	24.31
47	Pakistan	2.90	17.19
48	Singapore	2.90	17.16
49	Sri Lanka	2.80	15.49
50	Guatemala	2.80	15.38
51	Bangladesh	2.47	9.78
52	Cambodia	1.91	0.00
-	China	-	-
-	Dominican Republic	-	-
-	Egypt	-	-
-	Kuwait	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Panama	-	-
-	Philippines	-	-
-	Saudi Arabia	-	-
-	U.A.E.	-	-

##### 3.2.2 Students per teacher (2020)

Hard data: rate

RANK	COUNTRY	UNIT	INDEX
1	Canada	7.08	100.00
2	Kuwait	8.88	95.16
3	Greece	9.38	93.82
4	Switzerland	9.93	92.34
5	Austria	10.02	92.11
6	Poland	10.18	91.67
7	Denmark	10.74	90.17
8	Hungary	10.77	90.09
9	Belgium	11.28	88.72
10	Italy	11.48	88.17
11	Malaysia	11.66	87.70
12	Netherlands	11.81	87.30
13	Taiwan	12.00	86.78
14	Israel	12.07	86.59
15	Sweden	12.23	86.15
16	Germany	12.30	85.96
17	Ukraine	12.98	84.14
18	Spain	13.13	83.73
19	Hong Kong	13.35	83.15
20	Croatia	13.51	82.73
21	Finland	13.67	82.30
22	Slovenia	13.80	81.93
23	Saudi Arabia	13.81	81.90
24	United States	14.20	80.87
25	Singapore	14.69	79.53
26	New Zealand	14.92	78.94
27	United Kingdom	15.13	78.36
28	Slovak Republic	15.54	77.26
29	Japan	15.66	76.94
30	Thailand	16.22	75.43
31	Korea	16.29	75.25
32	China	16.43	74.88
33	Turkey	16.98	73.40
34	Indonesia	17.03	73.24
35	Peru	17.39	72.30
36	Chile	17.79	71.20
37	France	18.18	70.17
38	Jordan	18.54	69.20
39	Dominican Republic	18.92	68.18
40	Czech Republic	18.93	68.14
41	Brazil	20.22	64.67
42	Guatemala	20.26	64.57
43	Vietnam	20.28	64.53
44	Russia	21.26	61.89
45	Panama	21.96	60.00
46	Sri Lanka	22.93	57.39
47	Colombia	23.60	55.59
48	Egypt	23.68	55.38
49	U.A.E.	24.52	53.11
50	Mexico	26.55	47.66
51	Morocco	26.80	46.99
52	Iran	28.52	42.36
53	Philippines	29.08	40.86
54	Bangladesh	30.05	38.25
55	South Africa	30.33	37.50
56	Kenya	30.65	36.64
57	India	32.75	31.00
58	Cambodia	41.70	6.93
59	Pakistan	44.28	0.00
-	Argentina	-	-
-	Australia	-	-
-	Nigeria	-	-

### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.3 Secondary enrollment rate (2020)

Hard data: %

RANK	COUNTRY	UNIT	INDEX
1	Belgium	158.54	100.00
2	Finland	153.96	96.07
3	Sweden	152.86	95.13
4	Australia	150.31	92.94
5	Netherlands	135.58	80.29
6	Denmark	129.08	74.72
7	Spain	126.00	72.08
8	United Kingdom	125.85	71.95
9	Saudi Arabia	117.84	65.07
10	Thailand	116.73	64.13
11	Slovenia	115.60	63.15
12	New Zealand	114.59	62.29
13	Canada	113.76	61.58
14	Poland	109.93	58.29
15	Argentina	108.73	57.26
16	Singapore	107.57	56.27
17	Hong Kong	107.49	56.19
18	Peru	106.45	55.30
19	Turkey	105.99	54.91
20	Israel	105.08	54.13
21	U.A.E.	104.95	54.01
22	South Africa	104.70	53.80
23	Greece	104.50	53.62
24	Mexico	104.39	53.53
25	France	103.76	52.99
26	Czech Republic	103.49	52.76
27	Hungary	103.49	52.76
28	Russia	103.38	52.67
29	Switzerland	102.49	51.90
30	Chile	101.83	51.34
31	Italy	101.27	50.86
32	Brazil	100.83	50.48
33	Austria	100.46	50.16
34	Korea	100.34	50.06
35	Taiwan	99.89	49.67
36	United States	98.95	48.87
37	Croatia	98.87	48.80
38	Germany	98.41	48.40
39	Sri Lanka	98.03	48.07
40	Kuwait	97.83	47.90
41	Colombia	97.51	47.63
42	Ukraine	96.00	46.33
43	Slovak Republic	91.07	42.10
44	Indonesia	88.91	40.25
45	Egypt	87.91	39.39
46	Iran	86.31	38.02
47	Philippines	86.16	37.89
48	Malaysia	81.99	34.31
49	Morocco	80.23	32.80
50	Dominican Republic	79.74	32.38
51	Panama	76.14	29.29
52	India	73.48	27.01
53	Bangladesh	72.69	26.33
54	Jordan	63.12	18.12
55	Guatemala	52.72	9.20
56	Pakistan	42.78	0.67
57	Nigeria	42.00	0.00
-	Cambodia	-	-
-	China	-	-
-	Japan	-	-
-	Kenya	-	-
-	Vietnam	-	-

##### 3.2.4 Tertiary enrollment rate (2020)

Hard data: %

RANK	COUNTRY	UNIT	INDEX
1	Greece	136.60	100.00
2	Australia	113.14	81.60
3	Korea	94.35	66.87
4	Taiwan	94.30	66.83
5	Argentina	89.96	63.42
6	Spain	88.85	62.56
7	Chile	88.46	62.25
8	Finland	88.20	62.04
9	United States	88.17	62.02
10	Austria	85.06	59.58
11	Netherlands	84.98	59.52
12	Singapore	84.79	59.37
13	Ukraine	82.67	57.71
14	New Zealand	82.03	57.21
15	Russia	81.91	57.11
16	Denmark	80.62	56.10
17	Belgium	79.66	55.35
18	Slovenia	78.59	54.51
19	Hong Kong	76.92	53.20
20	Peru	70.74	48.35
21	Germany	70.25	47.97
22	Iran	69.64	47.49
23	Canada	68.92	46.93
24	Saudi Arabia	68.04	46.23
25	Poland	67.83	46.07
26	Sweden	66.99	45.41
27	Croatia	66.53	45.05
28	France	65.63	44.34
29	Czech Republic	64.08	43.13
30	Israel	63.35	42.56
31	Italy	61.93	41.45
32	United Kingdom	60.00	39.93
33	Dominican Republic	59.92	39.86
34	Switzerland	59.56	39.59
35	Colombia	55.33	36.27
36	Kuwait	54.36	35.51
37	Brazil	51.34	33.14
38	China	50.60	32.56
39	Thailand	49.29	31.53
40	Hungary	48.50	30.91
41	Panama	47.80	30.36
42	Slovak Republic	46.63	29.45
43	Malaysia	45.13	28.27
44	Mexico	40.23	24.43
45	Indonesia	36.31	21.35
46	Morocco	35.94	21.06
47	Philippines	35.48	20.70
48	Egypt	35.16	20.45
49	Jordan	34.42	19.87
50	Vietnam	28.54	15.26
51	India	28.06	14.88
52	South Africa	22.37	10.42
53	Guatemala	21.78	9.96
54	Bangladesh	20.57	9.01
55	Sri Lanka	19.63	8.27
56	Cambodia	13.13	3.18
57	Kenya	11.46	1.87
58	Pakistan	9.08	0.00
-	Japan	-	-
-	Nigeria	-	-
-	Turkey	-	-
-	U.A.E.	-	-

### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.5 Student mobility (2017)

Hard data: average inbound and outbound mobility rate

RANK	COUNTRY	UNIT	INDEX
1	U.A.E.	19.73	100.00
2	Kuwait	19.61	99.36
3	Slovak Republic	13.83	69.56
4	Hong Kong	11.79	59.03
5	Jordan	11.34	56.71
6	Switzerland	11.26	56.30
7	Australia	11.12	55.57
8	Austria	10.82	54.03
9	New Zealand	10.69	53.36
10	United Kingdom	9.68	48.16
11	Czech Republic	8.14	40.18
12	Canada	7.98	39.36
13	Hungary	7.13	34.97
14	France	6.87	33.62
15	Malaysia	6.57	32.08
16	Netherlands	6.55	32.01
17	Denmark	6.23	30.34
18	Germany	6.16	30.00
19	Finland	5.93	28.81
20	Belgium	5.69	27.57
21	Sweden	5.32	25.63
22	Saudi Arabia	4.84	23.16
23	Italy	4.68	22.33
24	Greece	4.22	19.98
25	Slovenia	3.93	18.46
26	Ukraine	3.91	18.38
27	Israel	3.88	18.25
28	Sri Lanka	3.79	17.78
29	Morocco	3.53	16.41
30	Croatia	3.06	13.98
31	Poland	2.87	12.99
32	Cambodia	2.86	12.93
33	United States	2.82	12.74
34	Korea	2.81	12.69
35	Pakistan	2.73	12.29
36	Spain	2.64	11.84
37	Russia	2.61	11.67
38	Japan	2.54	11.33
39	South Africa	2.39	10.55
40	Panama	2.11	9.08
41	Bangladesh	2.09	8.97
42	Vietnam	1.91	8.07
43	Kenya	1.80	7.48
44	Peru	1.71	7.05
45	Argentina	1.56	6.24
46	Thailand	1.29	4.87
47	Dominican Republic	1.27	4.73
48	China	1.23	4.55
49	Egypt	1.20	4.38
50	Turkey	1.07	3.73
51	Colombia	1.00	3.37
52	Guatemala	0.91	2.90
53	Chile	0.83	2.51
54	Iran	0.82	2.44
55	Mexico	0.68	1.70
56	India	0.57	1.13
57	Philippines	0.48	0.67
58	Brazil	0.46	0.60
59	Indonesia	0.35	0.00
-	Nigeria	-	-
-	Singapore	-	-
-	Taiwan	-	-

##### 3.2.6 Personal safety (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Taiwan	84.35	100.00
2	U.A.E.	84.30	99.92
3	Japan	79.34	91.90
4	Hong Kong	79.30	91.83
5	Slovenia	78.93	91.24
6	Switzerland	78.40	90.38
7	Finland	76.68	87.60
8	Austria	76.27	86.93
9	Croatia	75.29	85.35
10	Denmark	74.90	84.72
11	Czech Republic	74.48	84.04
12	Saudi Arabia	73.82	82.97
13	Netherlands	72.38	80.64
14	Korea	71.98	80.00
15	Poland	71.50	79.22
16	Slovak Republic	70.78	78.06
17	Israel	70.40	77.44
18	Singapore	69.43	75.87
19	China	68.17	73.84
20	Spain	68.04	73.63
21	Kuwait	65.25	69.11
22	Germany	65.19	69.02
23	Hungary	64.92	68.58
24	Turkey	60.51	61.45
25	Canada	60.33	61.16
26	Sri Lanka	59.78	60.27
27	Greece	59.68	60.11
28	Thailand	59.52	59.85
29	Jordan	59.17	59.28
30	New Zealand	59.07	59.12
31	Russia	58.88	58.81
32	Australia	58.64	58.42
33	Philippines	57.84	57.13
34	India	56.68	55.26
35	United Kingdom	56.29	54.62
36	Belgium	56.02	54.19
37	Pakistan	55.92	54.03
38	Italy	55.74	53.74
39	Chile	54.77	52.17
40	Vietnam	54.65	51.97
41	Indonesia	54.16	51.18
42	France	53.21	49.64
43	Egypt	53.08	49.43
44	Sweden	52.93	49.19
45	Panama	52.81	49.00
46	United States	52.80	48.98
47	Morocco	51.31	46.57
48	Ukraine	51.15	46.31
49	Iran	50.75	45.67
50	Mexico	46.03	38.03
51	Colombia	45.21	36.71
52	Malaysia	41.16	30.16
53	Kenya	38.34	25.60
54	Argentina	38.23	25.42
55	Nigeria	36.23	22.19
56	Bangladesh	36.06	21.91
57	Peru	31.85	15.10
58	Brazil	31.12	13.92
59	South Africa	22.51	0.00
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Guatemala	-	-

### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.7 Social safety net (2019)

Survey: the social safety net is well developed.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.96	100.00
2	Denmark	8.25	88.52
3	Belgium	8.07	85.65
4	Netherlands	8.00	84.51
5	Canada	7.96	83.89
6	Sweden	7.95	83.70
7	Australia	7.86	82.21
7	Germany	7.86	82.21
7	New Zealand	7.86	82.21
10	Hong Kong	7.70	79.69
11	Spain	7.70	79.64
12	Czech Republic	7.65	78.80
13	France	7.47	76.05
14	Austria	7.40	74.87
15	Singapore	7.39	74.77
16	Italy	7.37	74.36
17	China	7.16	71.08
18	Japan	6.98	68.04
19	Israel	6.95	67.63
20	Kuwait	6.85	65.97
21	Korea	6.84	65.90
22	Slovenia	6.72	63.95
23	Thailand	6.48	60.08
24	Taiwan	6.45	59.63
25	Russia	6.43	59.33
26	Egypt	6.37	58.29
27	Nigeria	6.24	56.25
28	Saudi Arabia	6.13	54.47
29	Hungary	6.13	54.44
30	India	6.12	54.25
31	Panama	6.06	53.37
32	Jordan	6.04	52.94
33	United States	6.01	52.61
34	Argentina	5.88	50.42
35	Poland	5.84	49.75
36	U.A.E.	5.81	49.31
37	Greece	5.77	48.66
38	Philippines	5.70	47.50
39	Brazil	5.50	44.34
40	Colombia	5.45	43.61
41	Indonesia	5.43	43.19
42	Kenya	5.36	42.14
43	Turkey	5.26	40.56
44	Slovak Republic	5.23	39.97
45	Bangladesh	5.00	36.30
45	Malaysia	5.00	36.30
47	Peru	4.97	35.78
48	Guatemala	4.91	34.80
49	Vietnam	4.82	33.38
50	Dominican Republic	4.70	31.48
51	Morocco	4.67	30.95
52	Mexico	4.64	30.59
53	Iran	4.62	30.16
54	Croatia	4.38	26.26
55	Pakistan	4.31	25.22
56	South Africa	4.12	22.18
57	Cambodia	2.74	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

##### 3.2.8 Medical service (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Taiwan	86.71	100.00
2	Korea	81.97	89.21
3	Japan	81.14	87.31
4	Denmark	80.00	84.72
5	France	79.99	84.70
6	Spain	78.88	82.17
7	Austria	78.73	81.83
8	Thailand	77.95	80.05
9	Australia	77.38	78.75
10	Finland	75.79	75.13
11	Netherlands	74.65	72.53
12	Czech Republic	74.62	72.47
13	United Kingdom	74.46	72.10
14	Belgium	74.34	71.83
15	New Zealand	73.81	70.62
16	Germany	73.32	69.51
17	Israel	73.29	69.44
18	Sri Lanka	72.53	67.71
19	Switzerland	72.44	67.50
20	Canada	71.58	65.54
21	Singapore	70.84	63.86
22	Mexico	70.12	62.22
23	Turkey	69.80	61.49
24	United States	69.27	60.28
25	Argentina	69.25	60.24
26	Sweden	69.23	60.19
27	Malaysia	68.10	57.62
28	Philippines	67.47	56.18
29	Colombia	67.24	55.66
30	India	67.13	55.41
31	U.A.E.	67.04	55.20
32	Italy	66.59	54.18
33	Hong Kong	66.08	53.02
34	Chile	65.44	51.56
35	Jordan	64.60	49.65
36	Slovenia	64.58	49.60
37	China	64.48	49.37
38	South Africa	64.14	48.60
39	Croatia	62.68	45.27
40	Poland	61.01	41.47
41	Pakistan	60.59	40.51
42	Indonesia	60.48	40.26
43	Slovak Republic	60.02	39.22
44	Panama	59.93	39.01
45	Saudi Arabia	59.11	37.14
46	Vietnam	57.70	33.93
47	Russia	57.59	33.68
48	Brazil	56.29	30.72
49	Greece	56.21	30.54
49	Kuwait	56.21	30.54
51	Peru	56.15	30.40
52	Kenya	55.59	29.13
53	Ukraine	52.33	21.70
54	Iran	51.70	20.27
55	Nigeria	51.59	20.02
56	Hungary	47.80	11.39
57	Egypt	45.84	6.92
58	Morocco	45.72	6.65
59	Bangladesh	42.80	0.00
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Guatemala	-	-



### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.9 GINI index (2017)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Ukraine	25.00	100.00
2	Slovenia	25.40	98.93
3	Czech Republic	25.90	97.60
4	Slovak Republic	26.50	96.00
5	Finland	27.20	94.13
6	Belgium	27.70	92.80
7	Netherlands	28.20	91.47
8	Denmark	29.00	89.33
9	Sweden	29.20	88.80
10	France	29.30	88.53
11	Australia	30.30	85.87
12	Hungary	30.40	85.60
13	Austria	30.50	85.33
14	Croatia	31.10	83.73
15	Germany	31.70	82.13
16	Egypt	31.80	81.87
16	Poland	31.80	81.87
18	Canada	32.10	81.07
19	Switzerland	32.30	80.53
20	Bangladesh	32.40	80.27
21	United Kingdom	33.20	78.13
22	Pakistan	33.50	77.33
23	Taiwan	33.70	76.80
24	India	35.20	72.80
25	Vietnam	35.30	72.53
26	Italy	35.40	72.27
27	Korea	35.70	71.47
28	Greece	36.00	70.67
29	New Zealand	36.20	70.13
29	Spain	36.20	70.13
31	Thailand	36.50	69.33
32	Russia	37.70	66.13
33	Cambodia	37.90	65.60
33	Japan	37.90	65.60
35	Indonesia	38.10	65.07
36	Israel	38.90	62.93
37	Jordan	39.70	60.80
38	Sri Lanka	39.80	60.53
39	Iran	40.00	60.00
40	Morocco	40.90	57.60
41	Malaysia	41.00	57.33
42	Argentina	41.20	56.80
43	United States	41.50	56.00
44	Turkey	41.90	54.93
45	Peru	43.30	51.20
46	Philippines	44.40	48.27
47	Dominican Republic	45.70	44.80
48	Saudi Arabia	45.90	44.27
48	Singapore	45.90	44.27
50	China	46.50	42.67
51	Chile	46.60	42.40
52	Mexico	48.30	37.87
53	Kenya	48.50	37.33
54	Nigeria	48.80	36.53
55	Colombia	49.70	34.13
56	Panama	49.90	33.60
57	Guatemala	53.00	25.33
58	Brazil	53.30	24.53
59	Hong Kong	53.90	22.93
60	South Africa	62.50	0.00
-	Kuwait	-	-
-	U.A.E.	-	-

##### 3.2.10 HDI (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	0.95	100.00
2	Germany	0.94	98.30
2	Hong Kong	0.94	98.30
4	Australia	0.94	98.06
5	Sweden	0.94	97.82
6	Singapore	0.94	97.33
7	Netherlands	0.93	97.09
8	Denmark	0.93	96.12
9	Finland	0.93	94.90
10	Canada	0.92	94.17
11	New Zealand	0.92	93.93
12	United Kingdom	0.92	93.69
12	United States	0.92	93.69
14	Belgium	0.92	93.45
15	Japan	0.92	92.48
16	Austria	0.91	92.23
17	Israel	0.91	90.29
17	Korea	0.91	90.29
19	Slovenia	0.90	89.32
20	Spain	0.89	87.14
21	Czech Republic	0.89	86.65
21	France	0.89	86.65
23	Italy	0.88	84.71
24	Greece	0.87	82.04
24	Poland	0.87	82.04
26	U.A.E.	0.87	80.58
27	Saudi Arabia	0.86	78.40
27	Slovak Republic	0.86	78.40
29	Chile	0.85	75.97
30	Hungary	0.85	75.49
31	Croatia	0.84	73.54
32	Argentina	0.83	71.84
33	Russia	0.82	70.39
34	Kuwait	0.81	66.50
35	Turkey	0.81	66.26
36	Malaysia	0.80	65.53
37	Iran	0.80	63.83
38	Panama	0.80	63.35
39	Sri Lanka	0.78	59.71
40	Mexico	0.77	56.55
41	Thailand	0.77	56.07
42	Brazil	0.76	55.10
42	Colombia	0.76	55.10
44	Peru	0.76	54.61
45	China	0.76	54.37
46	Ukraine	0.75	52.43
47	Dominican Republic	0.75	51.21
48	Jordan	0.72	45.87
49	Philippines	0.71	43.20
50	Indonesia	0.71	41.99
51	South Africa	0.71	41.50
52	Egypt	0.70	40.29
53	Vietnam	0.69	38.59
54	Morocco	0.68	34.47
55	Guatemala	0.65	28.40
56	India	0.65	27.43
57	Bangladesh	0.61	19.42
58	Cambodia	0.58	11.41
59	Kenya	0.58	10.92
60	Pakistan	0.56	6.31
61	Nigeria	0.53	0.00
-	Taiwan	-	-

### 3 Related Industries

#### 3.2 Living Infrastructure

##### 3.2.11 CO<sub>2</sub> emission (2017)

Hard data: tonnes per capita

RANK	COUNTRY	UNIT	INDEX
1	Kenya	0.33	100.00
2	Nigeria	0.45	99.42
3	Bangladesh	0.48	99.30
4	Cambodia	0.67	98.38
5	Guatemala	0.93	97.18
6	Pakistan	0.93	97.16
7	Sri Lanka	1.08	96.48
8	Philippines	1.21	95.87
9	Colombia	1.54	94.33
10	Peru	1.55	94.28
11	India	1.61	93.95
12	Morocco	1.63	93.89
13	Indonesia	1.88	92.70
14	Dominican Republic	1.99	92.19
15	Vietnam	2.00	92.13
16	Brazil	2.04	91.94
17	Egypt	2.15	91.46
18	Panama	2.35	90.52
19	Jordan	2.63	89.17
20	Thailand	3.54	84.92
21	Mexico	3.62	84.55
22	Sweden	3.74	83.95
23	Ukraine	3.82	83.59
24	Croatia	3.93	83.10
25	Argentina	4.14	82.08
26	Switzerland	4.39	80.90
27	France	4.57	80.09
28	Chile	4.65	79.70
29	Hungary	4.68	79.56
30	Turkey	4.71	79.39
31	Italy	5.31	76.59
32	Denmark	5.42	76.07
33	United Kingdom	5.43	76.02
34	Spain	5.45	75.95
35	Greece	5.88	73.92
36	Slovak Republic	5.92	73.71
37	Hong Kong	5.96	73.55
38	Slovenia	6.49	71.04
39	New Zealand	6.67	70.19
40	Malaysia	6.67	70.19
41	China	6.68	70.17
42	Iran	6.99	68.71
43	Israel	7.32	67.14
44	Austria	7.38	66.89
45	South Africa	7.44	66.61
46	Finland	7.73	65.21
47	Poland	7.96	64.14
48	Belgium	7.96	64.13
49	Singapore	8.45	61.86
50	Germany	8.70	60.69
51	Japan	8.94	59.55
52	Netherlands	9.08	58.88
53	Czech Republic	9.60	56.43
54	Russia	10.64	51.57
55	Taiwan	11.38	48.07
56	Korea	11.66	46.75
57	United States	14.61	32.92
58	Canada	14.99	31.11
59	Australia	15.63	28.11
60	Saudi Arabia	16.16	25.64
61	U.A.E.	20.91	3.34
62	Kuwait	21.62	0.00

##### 3.2.12 Leisure, sports, and culture facilities (2019)

Survey: leisures, sports, and cultural facilities are sufficient.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.82	100.00
2	Austria	8.68	97.49
3	Belgium	8.29	90.50
4	New Zealand	8.20	88.97
5	Netherlands	8.14	87.96
6	Australia	8.00	85.43
7	Canada	7.88	83.38
8	Sweden	7.85	82.76
9	United States	7.81	82.03
10	Germany	7.79	81.62
11	Italy	7.58	77.96
12	China	7.51	76.69
13	Japan	7.48	76.11
14	France	7.47	76.09
15	Hong Kong	7.45	75.67
16	Singapore	7.42	75.21
17	Denmark	7.42	75.08
18	Korea	7.39	74.53
19	Spain	7.27	72.52
20	Russia	7.23	71.82
21	Czech Republic	7.19	71.12
22	U.A.E.	7.19	71.06
23	Slovenia	7.14	70.16
24	Egypt	7.08	69.16
25	Greece	7.00	67.68
26	Hungary	6.81	64.25
27	Argentina	6.64	61.23
28	Thailand	6.56	59.88
29	Israel	6.55	59.70
30	Taiwan	6.52	59.10
31	Poland	6.49	58.61
32	Kuwait	6.46	58.13
33	India	6.29	55.04
34	Saudi Arabia	6.09	51.48
35	South Africa	6.03	50.48
36	Colombia	6.00	49.94
37	Brazil	5.94	48.83
38	Malaysia	5.89	47.97
39	Philippines	5.82	46.72
40	Panama	5.78	46.06
41	Indonesia	5.71	44.87
42	Kenya	5.64	43.49
43	Vietnam	5.59	42.68
44	Turkey	5.53	41.59
45	Slovak Republic	5.51	41.32
46	Bangladesh	5.42	39.65
47	Jordan	5.36	38.54
48	Croatia	5.31	37.74
49	Mexico	5.02	32.59
50	Peru	4.97	31.63
51	Guatemala	4.84	29.43
52	Pakistan	4.55	24.25
53	Nigeria	4.52	23.63
54	Iran	4.41	21.76
55	Dominican Republic	4.37	20.96
56	Morocco	4.19	17.84
57	Cambodia	3.19	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 4 Business Context

### 4.1 Structure

#### 4.1.1 Firm's decision process (2019)

Survey: firms decision processes are transparent.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.75	100.00
1	Israel	7.75	100.00
3	Canada	7.69	98.61
4	Hong Kong	7.65	97.59
5	Switzerland	7.63	97.10
6	Netherlands	7.33	89.98
7	Austria	7.28	88.69
8	Sweden	7.25	87.97
9	Singapore	7.18	86.33
10	New Zealand	7.14	85.40
11	Belgium	7.04	82.82
12	Italy	6.87	78.79
13	Kuwait	6.85	78.26
14	Australia	6.69	74.51
15	Guatemala	6.69	74.44
16	Thailand	6.64	73.30
17	Korea	6.46	69.09
18	China	6.25	63.92
19	India	6.22	63.28
20	Slovenia	6.21	62.94
21	Panama	6.19	62.42
22	Spain	6.18	62.28
23	United States	6.15	61.44
24	Indonesia	6.14	61.34
25	Poland	6.14	61.26
26	Germany	6.13	61.00
27	France	6.05	59.17
28	Nigeria	5.97	57.08
29	Jordan	5.96	57.05
30	U.A.E.	5.95	56.76
31	Russia	5.90	55.50
32	Philippines	5.88	54.99
33	Japan	5.85	54.30
34	Taiwan	5.84	54.03
35	Brazil	5.83	53.90
36	Egypt	5.79	52.84
37	Saudi Arabia	5.74	51.63
38	Greece	5.72	51.27
39	Vietnam	5.64	49.16
40	Hungary	5.52	46.27
41	Slovak Republic	5.46	44.85
42	Argentina	5.45	44.79
42	Kenya	5.45	44.79
44	Malaysia	5.44	44.54
45	Czech Republic	5.39	43.16
46	Mexico	5.36	42.41
47	Dominican Republic	5.27	40.27
48	Turkey	5.24	39.51
49	Morocco	5.08	35.70
50	South Africa	5.06	35.31
51	Bangladesh	4.96	32.89
52	Colombia	4.95	32.76
53	Croatia	4.94	32.35
54	Iran	4.85	30.32
55	Pakistan	4.79	28.88
56	Peru	4.71	26.87
57	Cambodia	3.59	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 4.1.2 Firm's decision structure (2019)

Survey: firm's decision structure is flexible to meet market changes.

RANK	COUNTRY	UNIT	INDEX
1	Israel	7.90	100.00
2	Denmark	7.67	93.10
3	Hong Kong	7.55	89.65
4	Sweden	7.50	88.17
5	Nigeria	7.41	85.62
6	Canada	7.38	84.76
6	Kuwait	7.38	84.76
8	Singapore	7.33	83.24
9	Netherlands	7.28	81.66
10	Thailand	7.24	80.48
11	Italy	7.08	75.72
12	Switzerland	7.07	75.50
13	United States	7.06	75.12
14	Belgium	7.04	74.44
15	Austria	7.00	73.38
16	India	6.85	68.98
17	Guatemala	6.81	67.84
18	Korea	6.79	67.16
19	New Zealand	6.71	64.94
20	Slovenia	6.63	62.38
21	Taiwan	6.52	59.08
22	Spain	6.52	59.05
23	Russia	6.47	57.61
24	China	6.44	56.96
25	Panama	6.41	55.83
26	Australia	6.40	55.78
27	Philippines	6.36	54.57
28	Poland	6.35	54.13
29	Vietnam	6.32	53.22
30	Brazil	6.29	52.44
31	Indonesia	6.21	50.15
32	Czech Republic	6.16	48.58
33	U.A.E.	6.14	48.04
34	Germany	6.04	45.08
35	Jordan	6.04	44.87
36	Greece	5.97	42.87
37	Hungary	5.94	41.90
38	Saudi Arabia	5.91	41.24
39	Turkey	5.91	41.20
40	Argentina	5.91	41.12
41	France	5.89	40.70
42	Mexico	5.78	37.24
43	Egypt	5.74	36.03
44	Iran	5.71	35.11
45	Slovak Republic	5.69	34.52
46	Kenya	5.68	34.40
47	Colombia	5.59	31.71
48	Peru	5.58	31.41
49	Malaysia	5.56	30.67
50	Morocco	5.54	30.16
51	Japan	5.53	29.76
52	Dominican Republic	5.50	29.03
53	Croatia	5.44	27.18
54	South Africa	5.42	26.78
55	Bangladesh	5.42	26.66
56	Pakistan	5.24	21.38
57	Cambodia	4.52	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

### 3 Business Context

#### 3.1 Structure

##### 4.1.3 Unique brands (2019)

Survey: domestic firms develop their own international brands.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.58	100.00
2	Netherlands	7.57	99.69
3	Sweden	7.55	99.13
4	Hong Kong	7.45	96.53
5	United States	7.40	95.15
6	Switzerland	7.38	94.83
7	Belgium	7.32	93.18
8	Italy	7.24	90.98
9	Germany	7.17	89.28
10	Korea	7.09	87.10
11	New Zealand	6.94	83.33
12	Japan	6.93	82.87
13	Kuwait	6.92	82.82
14	Slovenia	6.91	82.40
15	China	6.77	78.87
16	India	6.74	78.15
17	Spain	6.70	76.93
18	Guatemala	6.69	76.69
19	France	6.68	76.60
20	Canada	6.58	73.81
21	Austria	6.56	73.37
22	Singapore	6.55	72.99
23	Philippines	6.45	70.62
24	Israel	6.45	70.51
25	Malaysia	6.44	70.36
26	Egypt	6.37	68.38
27	Thailand	6.28	66.08
28	Bangladesh	6.22	64.52
29	Russia	6.17	63.13
30	Czech Republic	6.16	62.99
31	Taiwan	6.06	60.47
32	Australia	6.00	58.80
32	Poland	6.00	58.80
34	Panama	5.97	57.98
35	Mexico	5.91	56.53
36	Vietnam	5.89	55.84
37	Brazil	5.85	55.00
38	Saudi Arabia	5.70	50.87
39	Nigeria	5.69	50.72
40	Argentina	5.67	50.12
41	Greece	5.65	49.74
42	Peru	5.65	49.56
43	Indonesia	5.64	49.50
44	Slovak Republic	5.63	49.13
45	Turkey	5.53	46.55
46	Colombia	5.41	43.42
47	U.A.E.	5.38	42.78
48	Kenya	5.36	42.23
49	Hungary	5.35	42.01
50	South Africa	5.27	39.87
51	Croatia	5.13	36.02
52	Jordan	5.11	35.56
53	Iran	5.00	32.77
54	Dominican Republic	4.97	31.90
55	Morocco	4.92	30.77
56	Pakistan	4.41	17.52
57	Cambodia	3.74	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

##### 4.1.4 Equal treatment (2019)

Survey: foreign and domestic firms are treated equally.

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	7.85	100.00
2	Israel	7.80	98.67
3	Denmark	7.79	98.45
4	Netherlands	7.38	87.52
5	Italy	7.24	83.69
6	New Zealand	7.23	83.47
7	Belgium	7.18	82.14
8	Austria	7.12	80.58
9	Sweden	7.10	80.05
10	Switzerland	7.00	77.39
11	Canada	6.88	74.32
12	Spain	6.88	74.16
13	Singapore	6.76	70.94
14	China	6.65	68.14
15	Czech Republic	6.58	66.23
16	Germany	6.50	64.09
16	India	6.50	64.09
18	Slovenia	6.37	60.68
19	Egypt	6.33	59.65
20	Hungary	6.29	58.51
21	France	6.29	58.49
22	Greece	6.26	57.60
23	Dominican Republic	6.23	56.99
24	Panama	6.16	54.94
25	Australia	6.10	53.32
26	Korea	6.09	53.12
27	Morocco	6.08	52.83
28	Jordan	6.04	51.74
29	Taiwan	6.00	50.79
30	Poland	5.95	49.55
31	Kuwait	5.92	48.74
32	Guatemala	5.91	48.29
33	Japan	5.90	48.13
34	Argentina	5.88	47.56
35	Thailand	5.76	44.40
36	United States	5.69	42.57
37	Indonesia	5.64	41.29
38	Mexico	5.63	40.83
39	U.A.E.	5.62	40.65
40	Saudi Arabia	5.52	38.06
41	Brazil	5.44	35.82
42	Philippines	5.42	35.47
43	Colombia	5.41	35.07
44	Vietnam	5.39	34.46
45	Turkey	5.38	34.36
46	Slovak Republic	5.31	32.54
47	Russia	5.17	28.62
48	Croatia	4.91	21.69
49	Peru	4.90	21.61
50	Malaysia	4.89	21.23
51	Bangladesh	4.80	18.86
52	Nigeria	4.72	16.85
53	Cambodia	4.67	15.32
54	Iran	4.53	11.67
55	South Africa	4.48	10.48
56	Pakistan	4.31	5.84
57	Kenya	4.09	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 4 Business Context

### 4.1 Structure

#### 4.1.5 Global standards (2019)

Survey: firms are open to global best practices.

RANK	COUNTRY	UNIT	INDEX
1	Israel	8.35	100.00
2	Netherlands	8.00	91.52
3	Hong Kong	7.95	90.31
4	Singapore	7.82	87.12
5	Austria	7.72	84.74
6	Denmark	7.67	83.45
7	Sweden	7.65	83.04
8	Canada	7.54	80.34
8	Kuwait	7.54	80.34
10	Belgium	7.50	79.41
11	Italy	7.34	75.58
12	Switzerland	7.26	73.58
13	New Zealand	7.17	71.45
14	Thailand	7.08	69.23
15	Spain	7.03	68.03
16	Philippines	7.00	67.29
17	Korea	6.99	67.08
18	Germany	6.99	66.95
19	Czech Republic	6.94	65.73
20	India	6.92	65.43
21	Poland	6.91	65.04
22	Guatemala	6.91	65.02
23	Australia	6.90	64.99
24	Brazil	6.90	64.77
25	United States	6.88	64.44
26	China	6.86	63.78
27	Indonesia	6.79	62.10
28	Malaysia	6.67	59.22
29	Panama	6.63	58.21
30	Taiwan	6.61	57.92
31	Hungary	6.58	57.14
32	U.A.E.	6.57	56.91
33	Mexico	6.53	55.96
34	Nigeria	6.45	53.93
35	Slovenia	6.40	52.65
36	Jordan	6.32	50.86
37	Egypt	6.32	50.72
38	Argentina	6.30	50.41
39	Slovak Republic	6.26	49.30
40	France	6.24	48.81
41	Russia	6.17	47.11
42	Greece	6.14	46.46
43	Colombia	6.14	46.37
44	Japan	6.13	46.10
45	Saudi Arabia	6.09	45.18
46	Peru	6.06	44.63
47	South Africa	6.06	44.54
48	Bangladesh	6.06	44.52
49	Turkey	5.91	40.93
50	Vietnam	5.89	40.32
51	Morocco	5.85	39.34
52	Croatia	5.31	26.41
53	Kenya	5.27	25.45
54	Iran	5.24	24.54
55	Dominican Republic	5.07	20.46
56	Pakistan	4.86	15.50
57	Cambodia	4.22	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 4.1.6 Social values (2019)

Survey: social value is clear and well recognized by firms.

RANK	COUNTRY	UNIT	INDEX
1	Netherlands	7.86	100.00
2	Switzerland	7.83	99.40
3	Denmark	7.75	97.30
4	Belgium	7.61	93.70
5	Hong Kong	7.60	93.52
6	Canada	7.58	92.94
7	Sweden	7.55	92.26
8	Austria	7.48	90.50
9	Israel	7.45	89.74
10	Singapore	7.33	86.80
11	New Zealand	7.20	83.44
12	Kuwait	7.15	82.28
13	Germany	7.10	80.92
14	Thailand	7.00	78.40
15	Australia	6.98	77.80
16	United States	6.91	76.18
17	China	6.89	75.52
18	Japan	6.88	75.25
19	Italy	6.87	75.08
20	India	6.83	74.20
21	Nigeria	6.83	74.06
22	Philippines	6.79	73.05
23	Korea	6.76	72.43
24	Spain	6.76	72.29
25	Guatemala	6.72	71.31
26	Brazil	6.56	67.38
27	U.A.E.	6.52	66.40
28	Panama	6.44	64.23
29	Russia	6.43	64.12
30	Slovenia	6.37	62.58
31	Indonesia	6.36	62.20
32	Malaysia	6.33	61.60
33	Taiwan	6.26	59.70
34	Poland	6.19	57.89
35	Egypt	6.16	57.18
36	Mexico	6.15	56.94
37	France	6.13	56.52
38	Greece	6.10	55.82
39	Hungary	6.03	54.01
40	Saudi Arabia	5.96	52.10
41	Morocco	5.92	51.26
42	Argentina	5.88	50.15
43	Czech Republic	5.81	48.32
44	Colombia	5.77	47.47
45	Vietnam	5.75	46.90
46	Jordan	5.71	46.00
47	Dominican Republic	5.60	43.12
48	Peru	5.58	42.63
49	South Africa	5.52	40.98
50	Bangladesh	5.30	35.56
51	Slovak Republic	5.29	35.20
52	Iran	5.26	34.67
53	Turkey	5.24	33.93
54	Pakistan	5.17	32.34
55	Croatia	5.03	28.79
56	Kenya	5.00	28.00
57	Cambodia	3.89	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 4 Business Context

### 4.1 Structure

#### 4.1.7 Ethical practices (2019)

Survey: ethical practices are well implemented by firms.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	7.95	100.00
2	Hong Kong	7.90	98.78
3	Israel	7.75	95.28
4	Belgium	7.71	94.44
5	Canada	7.69	93.93
6	Netherlands	7.67	93.33
7	Singapore	7.58	91.21
8	Sweden	7.45	88.28
9	Austria	7.28	84.31
10	New Zealand	7.20	82.44
11	Australia	7.17	81.67
12	Kuwait	7.15	81.37
13	Denmark	7.13	80.69
14	Thailand	7.00	77.78
15	Japan	6.93	76.03
16	Italy	6.89	75.32
17	China	6.82	73.66
18	Nigeria	6.69	70.54
19	Spain	6.61	68.59
20	Taiwan	6.58	67.99
21	Philippines	6.58	67.88
22	Germany	6.57	67.78
23	Guatemala	6.53	66.84
24	Korea	6.46	65.09
25	India	6.45	64.91
26	Russia	6.40	63.78
27	Poland	6.35	62.58
28	United States	6.31	61.65
29	Indonesia	6.29	61.11
30	Czech Republic	6.19	58.96
31	U.A.E.	6.19	58.89
32	Brazil	6.08	56.39
33	Egypt	6.00	54.44
33	Panama	6.00	54.44
33	Saudi Arabia	6.00	54.44
33	Slovenia	6.00	54.44
37	Argentina	5.97	53.74
38	France	5.89	51.99
39	Greece	5.87	51.36
40	Malaysia	5.78	49.26
41	Vietnam	5.73	48.08
42	Colombia	5.68	47.02
43	Morocco	5.62	45.47
44	Hungary	5.58	44.66
45	Mexico	5.53	43.56
46	Slovak Republic	5.49	42.44
47	Turkey	5.47	42.09
48	Jordan	5.46	41.94
49	Iran	5.44	41.41
50	South Africa	5.36	39.60
51	Peru	5.23	36.38
52	Pakistan	5.10	33.52
53	Bangladesh	5.08	32.98
54	Dominican Republic	5.07	32.67
55	Croatia	4.91	28.92
56	Kenya	4.68	23.69
57	Cambodia	3.67	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 4.1.8 Health, safety, and environmental concerns (2019)

Survey: firms adequately address health, safety, and environmental concerns.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.29	100.00
2	New Zealand	8.17	97.66
3	Hong Kong	7.80	90.04
4	Belgium	7.68	87.55
5	Denmark	7.63	86.46
6	Netherlands	7.62	86.33
7	Israel	7.60	85.94
8	Canada	7.54	84.68
9	Singapore	7.52	84.20
10	Australia	7.45	82.92
11	Austria	7.44	82.66
12	Sweden	7.40	81.84
13	Japan	7.35	80.82
14	Italy	7.26	79.04
15	Kuwait	7.23	78.37
16	Nigeria	7.21	77.89
17	Germany	7.10	75.69
18	Guatemala	6.91	71.72
19	United States	6.90	71.53
20	China	6.86	70.67
21	Spain	6.85	70.54
22	U.A.E.	6.81	69.74
23	Korea	6.68	67.17
24	Thailand	6.68	67.08
25	India	6.64	66.29
26	Russia	6.63	66.13
27	Taiwan	6.48	63.06
28	Egypt	6.47	62.86
29	Philippines	6.33	59.98
30	Mexico	6.25	58.30
31	Slovenia	6.23	57.91
32	Panama	6.19	56.99
33	France	6.18	56.92
34	Indonesia	6.14	56.07
35	Saudi Arabia	6.13	55.82
36	Greece	6.11	55.44
37	Argentina	6.06	54.39
38	Brazil	6.02	53.57
39	Poland	6.00	53.15
40	Jordan	5.96	52.41
41	Czech Republic	5.90	51.16
42	Slovak Republic	5.89	50.80
43	Colombia	5.86	50.35
44	South Africa	5.85	50.04
45	Hungary	5.81	49.18
46	Dominican Republic	5.80	49.05
47	Peru	5.77	48.52
48	Malaysia	5.67	46.31
49	Turkey	5.38	40.48
50	Croatia	5.28	38.41
51	Morocco	5.15	35.80
52	Vietnam	5.14	35.44
53	Bangladesh	5.12	35.11
54	Pakistan	4.66	25.58
55	Kenya	4.55	23.33
56	Iran	4.38	19.99
57	Cambodia	3.41	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 4 Business Context

### 4.2 Rivalry

#### 4.2.1 FDI openness (2020)

Hard data: FDI inflows as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	31.87	100.00
2	Singapore	22.36	78.46
3	Cambodia	12.72	56.63
4	Panama	8.59	47.27
5	Netherlands	7.63	45.09
6	Vietnam	6.34	42.18
7	Israel	5.89	41.17
8	Australia	4.20	37.33
9	Hungary	4.11	37.12
10	Czech Republic	3.92	36.70
11	Colombia	3.33	35.37
12	Brazil	3.27	35.24
13	Dominican Republic	3.16	34.98
14	Morocco	3.08	34.81
15	Spain	3.06	34.75
16	Peru	2.78	34.11
17	Egypt	2.72	33.99
18	Slovenia	2.62	33.75
19	Mexico	2.58	33.67
20	U.A.E.	2.45	33.36
21	Chile	2.41	33.27
22	Argentina	2.36	33.18
23	Canada	2.32	33.08
24	United Kingdom	2.29	33.01
25	Malaysia	2.28	32.99
26	Jordan	2.25	32.91
27	Indonesia	2.11	32.60
28	Thailand	2.08	32.53
29	Sweden	2.02	32.40
30	Poland	1.96	32.26
31	Philippines	1.95	32.24
32	Greece	1.95	32.23
33	Kenya	1.93	32.19
34	Croatia	1.91	32.15
35	Ukraine	1.89	32.10
36	Sri Lanka	1.82	31.94
37	Turkey	1.69	31.65
38	Austria	1.67	31.59
39	India	1.54	31.31
40	South Africa	1.45	31.10
41	France	1.34	30.86
42	Bangladesh	1.34	30.86
43	Guatemala	1.34	30.85
44	United States	1.22	30.59
45	Taiwan	1.19	30.52
46	Italy	1.17	30.48
47	China	1.02	30.14
48	Belgium	0.92	29.89
49	Korea	0.89	29.85
50	Pakistan	0.84	29.72
51	Russia	0.82	29.68
52	Iran	0.70	29.41
53	New Zealand	0.69	29.38
54	Germany	0.64	29.28
55	Denmark	0.51	28.98
56	Nigeria	0.47	28.89
57	Slovak Republic	0.45	28.83
58	Finland	0.45	28.83
59	Saudi Arabia	0.41	28.76
60	Kuwait	0.25	28.38
61	Japan	0.20	28.27
62	Switzerland	-12.28	0.00

#### 4.2.2 Portfolio openness (2020)

Hard data: financial inflows as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	439.18	100.00
2	Singapore	335.14	76.31
3	Netherlands	209.70	47.75
4	Switzerland	186.08	42.37
5	Belgium	137.89	31.40
6	Denmark	135.30	30.81
7	Finland	131.96	30.05
8	United Kingdom	108.36	24.67
9	Sweden	103.36	23.53
10	France	98.04	22.32
11	Canada	93.37	21.26
12	Germany	83.56	19.03
13	Japan	81.83	18.63
14	Italy	74.37	16.93
15	Austria	72.70	16.55
16	Chile	56.32	12.82
17	United States	55.93	12.74
18	Australia	55.25	12.58
19	Greece	54.87	12.49
20	Spain	50.93	11.60
21	New Zealand	47.85	10.90
22	Slovenia	43.70	9.95
23	South Africa	39.91	9.09
24	Israel	38.24	8.71
25	Slovak Republic	36.82	8.38
26	Korea	28.14	6.41
27	Saudi Arabia	27.91	6.36
28	Malaysia	23.83	5.43
29	Panama	21.37	4.87
30	Peru	16.09	3.66
31	Colombia	14.24	3.24
32	Kuwait	13.62	3.10
33	Czech Republic	13.04	2.97
34	Argentina	11.69	2.66
35	Thailand	10.21	2.33
36	Hungary	7.94	1.81
37	Croatia	7.54	1.72
38	Philippines	6.44	1.47
39	Nigeria	6.33	1.44
40	Poland	5.98	1.36
41	Mexico	4.40	1.00
42	Russia	4.14	0.94
43	China	3.66	0.83
44	Cambodia	2.33	0.53
45	Brazil	2.19	0.50
46	Indonesia	2.12	0.48
47	Jordan	1.65	0.38
48	Bangladesh	1.21	0.28
49	Morocco	1.03	0.23
50	Guatemala	0.53	0.12
51	Egypt	0.38	0.09
52	Dominican Republic	0.16	0.04
53	Turkey	0.15	0.03
54	Pakistan	0.14	0.03
55	Ukraine	0.10	0.02
56	India	0.10	0.02
57	Kenya	0.06	0.01
58	Vietnam	0.02	0.01
59	Sri Lanka	0.00	0.00
-	Iran	-	-
-	Taiwan	-	-
-	U.A.E.	-	-

## 4 Business Context

### 4.2 Rivalry

#### 4.2.3 Goods openness (2020)

Hard data: import as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	165.87	100.00
2	Singapore	99.23	57.25
3	Vietnam	92.64	53.02
4	Slovak Republic	84.59	47.86
5	Cambodia	76.63	42.75
6	Hungary	67.51	36.91
7	U.A.E.	66.04	35.96
8	Slovenia	65.57	35.66
9	Czech Republic	61.87	33.29
10	Belgium	60.00	32.09
11	Taiwan	53.63	28.00
12	Netherlands	53.33	27.81
13	Malaysia	49.29	25.22
14	Thailand	45.29	22.65
15	Poland	44.68	22.26
16	Ukraine	42.84	21.08
17	Jordan	42.55	20.89
18	Croatia	41.67	20.33
19	Switzerland	39.02	18.63
20	Austria	38.37	18.21
21	Mexico	38.08	18.03
22	Morocco	37.99	17.97
23	Panama	36.84	17.23
24	Germany	32.03	14.15
25	Korea	31.71	13.94
26	Philippines	31.11	13.56
27	Sweden	30.49	13.16
28	Greece	29.69	12.65
29	Denmark	29.61	12.59
30	Turkey	28.07	11.60
31	Canada	27.35	11.14
32	Spain	26.60	10.66
33	Finland	26.54	10.62
34	South Africa	25.09	9.69
35	Sri Lanka	25.01	9.64
36	France	24.11	9.07
37	Chile	23.73	8.82
38	Dominican Republic	23.62	8.75
39	Guatemala	23.33	8.57
40	Egypt	22.97	8.33
41	Italy	22.89	8.28
42	United Kingdom	22.77	8.20
43	Kuwait	22.30	7.91
44	New Zealand	21.14	7.16
45	Israel	20.82	6.95
46	Kenya	20.31	6.62
47	Bangladesh	20.29	6.61
48	India	19.08	5.84
49	Peru	18.71	5.60
50	Pakistan	18.26	5.31
51	Indonesia	17.38	4.75
52	Australia	16.51	4.19
53	Saudi Arabia	15.97	3.84
54	Russia	15.00	3.22
55	Colombia	14.98	3.21
56	China	14.86	3.13
57	Japan	14.57	2.95
58	United States	12.47	1.60
59	Argentina	12.02	1.31
60	Nigeria	10.26	0.18
61	Iran	10.14	0.11
62	Brazil	9.98	0.00

#### 4.2.4 Services openness (2020)

Hard data: import as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Singapore	50.58	100.00
2	Kuwait	26.19	49.34
3	U.A.E.	23.86	44.51
4	Belgium	22.76	42.22
5	Hong Kong	22.35	41.36
6	Netherlands	20.39	37.30
7	Denmark	20.00	36.49
8	Switzerland	15.04	26.18
9	Austria	13.72	23.43
10	Sweden	13.08	22.11
11	Hungary	13.05	22.06
12	Finland	12.86	21.65
13	Malaysia	12.43	20.76
14	Cambodia	12.40	20.71
15	Slovenia	11.53	18.89
16	Jordan	11.35	18.52
17	Ukraine	11.04	17.88
18	Thailand	10.93	17.64
19	Taiwan	10.72	17.20
20	Saudi Arabia	10.66	17.08
21	Slovak Republic	10.33	16.40
22	Czech Republic	10.13	15.98
23	Greece	9.66	15.01
24	France	9.59	14.86
25	Germany	9.30	14.25
26	United Kingdom	9.00	13.63
27	Morocco	8.95	13.53
28	Croatia	8.79	13.20
29	Israel	8.13	11.84
30	Philippines	8.10	11.76
31	Korea	7.95	11.46
32	Nigeria	7.77	11.09
33	Vietnam	7.53	10.59
34	Poland	7.46	10.44
35	Panama	7.46	10.43
36	Egypt	7.45	10.42
37	New Zealand	6.85	9.17
38	Canada	6.57	8.59
39	Italy	6.06	7.53
40	Spain	5.81	7.01
41	Russia	5.71	6.79
42	Sri Lanka	5.18	5.71
43	Australia	5.11	5.55
44	Chile	4.78	4.88
45	Argentina	4.62	4.53
46	India	4.57	4.43
47	Guatemala	4.49	4.27
48	South Africa	4.48	4.25
49	Peru	4.46	4.20
50	Japan	4.04	3.34
51	Colombia	4.03	3.31
52	Dominican Republic	3.97	3.19
53	Kenya	3.93	3.10
54	China	3.86	2.97
55	Brazil	3.81	2.85
56	Bangladesh	3.62	2.47
57	Indonesia	3.37	1.93
58	Pakistan	3.32	1.83
59	Mexico	3.09	1.36
60	Turkey	2.98	1.14
61	United States	2.76	0.68
62	Iran	2.44	0.00



## 4 Business Context

### 4.2 Rivalry

#### 4.2.5 FDI openness (2020)

Hard data: FDI outflows as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	23.47	100.00
2	Singapore	10.69	47.91
3	Netherlands	6.46	30.62
4	Finland	3.99	20.56
5	Switzerland	3.79	19.75
6	France	3.68	19.30
7	Sweden	3.63	19.10
8	U.A.E.	3.55	18.77
9	Thailand	3.51	18.59
10	Taiwan	3.07	16.80
11	Canada	2.95	16.33
12	Japan	2.87	16.00
13	Saudi Arabia	2.73	15.42
14	Kuwait	2.67	15.19
15	Korea	2.40	14.08
16	Russia	2.24	13.41
17	Spain	2.22	13.33
18	Czech Republic	2.18	13.18
19	Germany	1.93	12.15
20	United Kingdom	1.77	11.51
21	Israel	1.62	10.91
22	Colombia	1.55	10.60
23	Malaysia	1.49	10.36
24	Belgium	1.30	9.58
25	Hungary	1.28	9.50
26	South Africa	1.24	9.33
27	Chile	1.02	8.43
28	Italy	0.99	8.33
29	China	0.95	8.17
30	Indonesia	0.78	7.47
31	Croatia	0.58	6.67
32	Morocco	0.56	6.58
33	Mexico	0.56	6.57
34	Cambodia	0.51	6.35
35	Turkey	0.47	6.20
36	India	0.40	5.92
37	Greece	0.39	5.87
38	Argentina	0.37	5.80
39	Nigeria	0.33	5.62
40	Guatemala	0.30	5.50
41	Australia	0.25	5.31
42	Vietnam	0.24	5.28
43	Panama	0.24	5.28
44	Slovak Republic	0.22	5.18
45	New Zealand	0.20	5.09
46	Kenya	0.20	5.08
47	Philippines	0.18	5.02
48	Dominican Republic	0.16	4.95
49	Slovenia	0.15	4.90
50	Poland	0.15	4.88
51	Egypt	0.13	4.81
52	Sri Lanka	0.08	4.59
53	Iran	0.01	4.34
54	Bangladesh	0.01	4.32
55	Peru	0.01	4.32
56	Pakistan	0.00	4.29
57	Ukraine	0.00	4.27
58	Jordan	-0.02	4.21
59	Austria	-0.16	3.62
60	United States	-0.31	3.02
61	Brazil	-0.70	1.44
62	Denmark	-1.05	0.00

#### 4.2.6 Portfolio Investment (2020)

Hard data: financial outflows as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Netherlands	263.64	100.00
2	Finland	156.03	59.18
3	Switzerland	150.76	57.18
4	Hong Kong	148.48	56.32
5	United Kingdom	147.21	55.83
6	France	127.61	48.40
7	Denmark	122.27	46.38
8	Sweden	121.64	46.14
9	Belgium	117.07	44.40
10	Canada	94.87	35.98
11	Australia	91.18	34.58
12	United States	91.10	34.55
13	Austria	89.52	33.95
14	Spain	87.29	33.11
15	New Zealand	70.28	26.66
16	Germany	67.65	25.66
17	Japan	63.75	24.18
18	South Africa	63.67	24.15
19	Italy	62.99	23.89
20	Singapore	60.07	22.78
21	Slovenia	44.24	16.78
22	Korea	41.26	15.65
23	Malaysia	40.36	15.31
24	Mexico	39.61	15.03
25	Hungary	33.79	12.82
26	Slovak Republic	33.16	12.58
27	Chile	32.13	12.19
28	Thailand	30.32	11.50
29	Israel	29.40	11.15
30	Panama	28.90	10.96
31	Poland	28.54	10.82
32	Peru	27.69	10.50
33	Jordan	26.69	10.12
34	Czech Republic	26.49	10.05
35	Philippines	26.48	10.04
36	Brazil	26.48	10.04
37	Indonesia	25.80	9.79
38	Ukraine	24.97	9.47
39	Greece	24.53	9.31
40	Colombia	24.26	9.20
41	Argentina	21.77	8.26
42	Nigeria	21.35	8.10
43	Dominican Republic	20.41	7.74
44	Croatia	19.14	7.26
45	Turkey	18.14	6.88
46	Sri Lanka	16.46	6.24
47	Russia	12.56	4.77
48	Saudi Arabia	12.04	4.57
49	Egypt	11.02	4.18
50	Kuwait	9.34	3.54
51	India	9.04	3.43
52	Morocco	8.96	3.40
53	China	8.06	3.06
54	Guatemala	5.71	2.16
55	Pakistan	3.74	1.42
56	Bangladesh	1.70	0.64
57	Kenya	0.60	0.23
58	Cambodia	0.01	0.00
59	Vietnam	0.00	0.00
-	Iran	-	-
-	Taiwan	-	-
-	U.A.E.	-	-

## 4 Business Context

### 4.2 Rivalry

#### 4.2.7 Goods openness (2020)

Hard data: export as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	156.93	100.00
2	Singapore	126.25	79.49
3	Vietnam	99.38	61.53
4	U.A.E.	85.63	52.33
5	Slovak Republic	84.38	51.49
6	Slovenia	68.06	40.59
7	Taiwan	66.33	39.43
8	Hungary	66.32	39.42
9	Czech Republic	66.00	39.21
10	Netherlands	62.89	37.13
11	Belgium	59.86	35.10
12	Malaysia	57.54	33.55
13	Kuwait	54.80	31.72
14	Cambodia	52.82	30.40
15	Thailand	49.73	28.33
16	Switzerland	47.59	26.90
17	Poland	43.71	24.31
18	Austria	39.33	21.38
19	Germany	38.68	20.94
20	Korea	38.62	20.90
21	Saudi Arabia	37.43	20.11
22	Mexico	36.95	19.79
23	Denmark	33.61	17.56
24	Ukraine	33.13	17.23
25	Sweden	32.05	16.51
26	Finland	26.90	13.07
27	Russia	26.73	12.96
28	Canada	26.36	12.71
29	Italy	25.57	12.18
30	South Africa	25.55	12.17
31	Chile	25.30	12.00
32	Spain	24.17	11.24
33	Croatia	23.66	10.90
34	Panama	22.68	10.25
35	Turkey	22.64	10.22
36	Peru	22.10	9.86
37	France	22.00	9.79
38	Morocco	20.85	9.02
39	New Zealand	19.43	8.07
40	Jordan	18.40	7.39
41	Australia	17.98	7.11
42	China	17.76	6.96
43	Greece	17.52	6.80
44	Indonesia	17.34	6.68
45	United Kingdom	16.12	5.86
46	Israel	15.89	5.71
47	Nigeria	15.88	5.70
48	Philippines	15.71	5.59
49	Iran	15.04	5.14
50	Japan	14.80	4.98
51	Bangladesh	14.12	4.52
52	Guatemala	14.10	4.51
53	Colombia	13.42	4.06
54	Sri Lanka	13.37	4.02
55	Brazil	12.82	3.65
56	Dominican Republic	12.75	3.61
57	India	12.21	3.25
58	Argentina	11.86	3.01
59	Egypt	11.18	2.56
60	United States	8.15	0.53
61	Pakistan	7.89	0.36
62	Kenya	7.35	0.00

#### 4.2.8 Services openness (2020)

Hard data: export as % of GDP

RANK	COUNTRY	UNIT	INDEX
1	Singapore	50.13	100.00
2	Hong Kong	31.36	61.63
3	Croatia	27.66	54.07
4	Belgium	22.76	44.05
5	Cambodia	22.21	42.93
6	Denmark	22.02	42.53
7	Netherlands	21.50	41.48
8	Greece	20.02	38.46
9	Panama	18.84	36.04
10	Hungary	18.68	35.70
11	U.A.E.	18.18	34.70
12	Switzerland	17.99	34.30
13	Slovenia	17.37	33.03
14	Jordan	17.24	32.77
15	Austria	16.42	31.09
16	Thailand	16.11	30.45
17	Morocco	15.72	29.67
18	United Kingdom	13.89	25.92
19	Israel	13.46	25.05
20	Sweden	13.38	24.88
21	Czech Republic	12.40	22.87
22	Ukraine	12.07	22.20
23	Finland	11.86	21.78
24	Poland	11.83	21.71
25	Philippines	11.61	21.25
26	Slovak Republic	11.37	20.76
27	Malaysia	11.20	20.41
28	Spain	10.95	19.91
29	Dominican Republic	10.85	19.71
30	France	10.59	19.18
31	Taiwan	9.59	17.13
32	Sri Lanka	9.42	16.78
33	Egypt	9.40	16.73
34	Germany	8.68	15.27
35	New Zealand	8.60	15.10
36	India	7.54	12.93
37	Turkey	6.33	10.47
38	Korea	6.12	10.03
39	Vietnam	6.03	9.85
40	Italy	5.90	9.59
41	Kenya	5.90	9.59
42	Kuwait	5.77	9.32
43	Canada	5.44	8.64
44	Australia	4.84	7.42
45	South Africa	4.34	6.39
46	United States	4.03	5.75
47	Russia	3.90	5.49
48	Japan	3.90	5.49
49	Guatemala	3.68	5.05
50	Chile	3.44	4.56
51	Peru	3.18	4.01
52	Colombia	2.89	3.43
53	Argentina	2.83	3.31
54	Indonesia	2.69	3.01
55	Saudi Arabia	2.50	2.63
56	Iran	2.44	2.50
57	Mexico	2.36	2.34
58	Bangladesh	2.00	1.61
59	Brazil	1.90	1.40
60	China	1.72	1.03
61	Pakistan	1.69	0.97
62	Nigeria	1.21	0.00

## 5 (Unskilled) Workers

### 5.1 Quantity of Workers

#### 5.1.1 Labor force data (2020)

Hard data: 1000 persons

RANK	COUNTRY	UNIT	INDEX
1	China	785,974.70	100.00
2	India	512,348.47	65.14
3	United States	164,949.53	20.88
4	Indonesia	131,962.82	16.68
5	Brazil	105,369.21	13.29
6	Russia	73,527.23	9.24
7	Pakistan	73,234.57	9.20
8	Bangladesh	68,501.96	8.60
9	Japan	67,086.93	8.42
10	Nigeria	60,698.49	7.60
11	Vietnam	56,830.83	7.11
12	Mexico	56,635.83	7.09
13	Philippines	44,059.00	5.48
14	Germany	43,422.77	5.40
15	Thailand	38,860.02	4.82
16	United Kingdom	34,109.22	4.22
17	Turkey	32,579.79	4.02
18	Egypt	31,324.56	3.86
19	France	30,259.16	3.73
20	Korea	28,295.13	3.47
21	Iran	27,212.76	3.34
22	Colombia	26,730.89	3.28
23	Italy	25,616.74	3.13
24	Spain	22,863.50	2.78
25	South Africa	22,756.50	2.77
26	Kenya	20,518.67	2.48
27	Canada	20,337.72	2.46
28	Ukraine	20,275.46	2.45
29	Argentina	20,252.06	2.45
30	Poland	18,342.83	2.21
31	Peru	18,335.79	2.21
32	Malaysia	15,479.07	1.84
33	Saudi Arabia	14,282.80	1.69
34	Australia	13,133.58	1.54
35	Morocco	11,894.17	1.39
36	Taiwan	11,874.00	1.38
37	Chile	9,383.02	1.07
38	Netherlands	9,160.98	1.04
39	Cambodia	9,069.70	1.03
40	Sri Lanka	8,622.28	0.97
41	Guatemala	7,043.70	0.77
42	U.A.E.	6,827.98	0.74
43	Czech Republic	5,403.50	0.56
44	Sweden	5,398.66	0.56
45	Belgium	5,047.17	0.51
46	Switzerland	4,946.71	0.50
47	Dominican Republic	4,901.54	0.49
48	Greece	4,867.55	0.49
49	Hungary	4,694.82	0.47
50	Austria	4,566.47	0.45
51	Israel	4,101.30	0.39
52	Hong Kong	3,955.89	0.37
53	Singapore	3,377.91	0.30
54	Denmark	3,000.17	0.25
55	Slovak Republic	2,751.14	0.22
56	New Zealand	2,747.54	0.22
57	Finland	2,708.55	0.22
58	Jordan	2,572.59	0.20
59	Kuwait	2,399.51	0.18
60	Panama	2,023.22	0.13
61	Croatia	1,806.95	0.10
62	Slovenia	1,018.23	0.00

#### 5.1.2 Employment rate (2020)

Hard data: 1-unemployment rate

RANK	COUNTRY	UNIT	INDEX
1	Thailand	0.99	100.00
2	Cambodia	0.99	98.54
3	Vietnam	0.98	95.34
4	Kuwait	0.98	94.63
5	Czech Republic	0.98	93.41
6	Japan	0.98	93.23
7	Philippines	0.97	92.96
8	India	0.97	92.83
9	U.A.E.	0.97	92.74
10	Guatemala	0.97	92.16
11	Hong Kong	0.97	91.96
12	Peru	0.97	91.71
13	Pakistan	0.97	90.97
14	Mexico	0.97	89.89
15	Malaysia	0.97	89.75
16	Germany	0.97	89.50
17	Hungary	0.96	88.60
18	Poland	0.96	88.56
19	Taiwan	0.96	88.46
20	Singapore	0.96	88.20
21	Korea	0.96	88.10
22	Netherlands	0.96	87.77
23	Panama	0.96	87.61
24	United States	0.96	87.57
25	Israel	0.96	87.51
26	United Kingdom	0.96	87.49
27	Indonesia	0.96	86.18
28	Bangladesh	0.96	86.14
29	Sri Lanka	0.96	85.80
30	China	0.96	85.73
31	New Zealand	0.95	85.33
32	Russia	0.95	84.49
33	Austria	0.95	84.33
34	Switzerland	0.95	83.96
35	Denmark	0.95	83.61
36	Australia	0.95	82.04
37	Slovenia	0.94	81.57
38	Dominican Republic	0.94	80.36
39	Saudi Arabia	0.94	80.02
40	Canada	0.94	80.01
41	Nigeria	0.94	79.61
42	Belgium	0.94	78.48
43	Sweden	0.94	78.02
44	Slovak Republic	0.93	76.83
45	Chile	0.93	75.06
46	Finland	0.92	73.03
47	Croatia	0.91	68.87
48	Morocco	0.91	68.15
49	Colombia	0.91	67.95
50	France	0.91	67.61
51	Kenya	0.91	67.11
52	Ukraine	0.91	66.85
53	Argentina	0.91	66.46
54	Italy	0.90	63.72
55	Turkey	0.89	61.09
56	Egypt	0.89	59.03
57	Iran	0.88	56.91
58	Brazil	0.87	54.82
59	Jordan	0.85	45.38
60	Spain	0.85	43.63
61	Greece	0.81	29.48
62	South Africa	0.73	0.00

## 5. (Unskilled) Workers

### 5.1 Quantity of Workers

#### 5.1.3 Working hours (2020)

Hard data: per week

RANK	COUNTRY	UNIT	INDEX
1	Bangladesh	55.34	100.00
2	Cambodia	52.27	85.14
3	Pakistan	51.28	80.31
4	Egypt	48.85	68.54
5	Thailand	48.74	68.01
6	Vietnam	48.26	65.69
7	Mexico	47.90	63.96
8	Sri Lanka	47.75	63.22
9	Philippines	47.66	62.80
10	Turkey	46.90	59.12
11	Indonesia	45.09	50.35
12	Panama	44.97	49.78
13	Dominican Republic	44.46	47.30
14	Taiwan	44.00	45.08
15	Korea	41.52	33.08
16	Brazil	41.50	32.98
17	United States	40.76	29.39
18	Chile	40.44	27.84
19	Israel	39.91	25.27
20	Switzerland	39.81	24.82
21	Poland	39.52	23.40
22	Greece	39.20	21.86
23	Spain	39.10	21.36
24	United Kingdom	39.10	21.34
25	Slovenia	38.80	19.92
26	Croatia	38.58	18.83
27	Italy	38.45	18.22
28	Czech Republic	38.35	17.75
29	Slovak Republic	37.96	15.83
30	Hungary	37.81	15.12
31	Sweden	37.67	14.46
32	Finland	37.43	13.27
33	Belgium	37.25	12.42
34	Germany	37.14	11.86
35	France	36.63	9.39
36	New Zealand	36.58	9.18
37	Austria	36.39	8.24
38	Netherlands	36.39	8.22
39	Denmark	36.17	7.19
40	Canada	35.58	4.34
41	Japan	35.00	1.51
42	Australia	34.69	0.00
-	Argentina	-	-
-	China	-	-
-	Colombia	-	-
-	Guatemala	-	-
-	Hong Kong	-	-
-	India	-	-
-	Iran	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Malaysia	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Peru	-	-
-	Russia	-	-
-	Saudi Arabia	-	-
-	Singapore	-	-
-	South Africa	-	-
-	U.A.E.	-	-
-	Ukraine	-	-

#### 5.1.4 Monthly compensation for manufacturing workers (2020)

Hard data: US\$

RANK	COUNTRY	UNIT	INDEX
1	Indonesia	123.86	100.00
2	Egypt	124.64	99.99
3	Bangladesh	141.93	99.75
4	Pakistan	142.53	99.74
5	Sri Lanka	160.32	99.50
6	Cambodia	183.72	99.17
7	Philippines	241.58	98.37
8	Vietnam	257.52	98.15
9	Dominican Republic	269.31	97.99
10	South Africa	302.09	97.53
11	Ukraine	338.08	97.04
12	Guatemala	374.64	96.53
13	Colombia	393.12	96.28
14	Thailand	442.04	95.60
15	Jordan	516.90	94.56
16	Mexico	617.95	93.16
17	Malaysia	635.67	92.92
18	Brazil	669.91	92.45
19	Russia	712.60	91.86
20	Argentina	713.36	91.84
21	Peru	722.53	91.72
22	Chile	740.27	91.47
23	China	745.86	91.40
24	Panama	768.04	91.09
25	Turkey	899.69	89.27
26	Greece	1020.55	87.60
27	Poland	1217.72	84.87
28	Croatia	1244.04	84.50
29	Hungary	1252.74	84.38
30	Saudi Arabia	1310.75	83.58
31	Slovak Republic	1451.63	81.63
32	Czech Republic	1563.93	80.08
33	Hong Kong	1932.43	74.98
34	Italy	2503.58	67.08
35	Spain	2659.39	64.92
36	Japan	2685.12	64.57
37	Israel	3147.97	58.16
38	Singapore	3469.64	53.71
39	Canada	3475.50	53.63
40	United Kingdom	3490.45	53.43
41	Korea	3499.14	53.31
42	France	3669.89	50.94
43	Belgium	3721.09	50.24
44	New Zealand	3757.11	49.74
45	Finland	3872.00	48.15
46	Austria	3902.42	47.73
47	Sweden	5182.21	30.02
48	Germany	5522.99	25.31
49	Denmark	6367.08	13.63
50	Switzerland	7352.39	0.00
-	Australia	-	-
-	India	-	-
-	Iran	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Morocco	-	-
-	Netherlands	-	-
-	Nigeria	-	-
-	Slovenia	-	-
-	Taiwan	-	-
-	U.A.E.	-	-
-	United States	-	-

## 5 (Unskilled) Workers

### 5.2 Quality of Workers

#### 5.2.1 Literacy rate (2020)

Hard data: %

RANK	COUNTRY	UNIT	INDEX
1	Russia	99.73	100.00
2	Ukraine	99.70	99.92
3	Slovenia	99.68	99.88
4	Poland	99.32	98.99
5	Italy	99.16	98.59
6	Argentina	99.00	98.21
7	Australia	99.00	98.20
7	Austria	99.00	98.20
7	Belgium	99.00	98.20
7	Canada	99.00	98.20
7	Czech Republic	99.00	98.20
7	Denmark	99.00	98.20
7	Finland	99.00	98.20
7	France	99.00	98.20
7	Germany	99.00	98.20
7	Hong Kong	99.00	98.20
7	Japan	99.00	98.20
7	Korea	99.00	98.20
7	Netherlands	99.00	98.20
7	New Zealand	99.00	98.20
7	Slovak Republic	99.00	98.20
7	Sweden	99.00	98.20
7	Switzerland	99.00	98.20
7	United Kingdom	99.00	98.20
7	United States	99.00	98.20
26	Hungary	98.90	97.95
27	Croatia	98.75	97.59
28	Taiwan	98.50	96.97
29	Spain	98.44	96.81
30	Jordan	98.23	96.30
31	Singapore	97.34	94.12
32	Greece	97.10	93.52
33	China	96.84	92.88
34	Chile	96.40	91.80
35	Turkey	96.15	91.18
36	Kuwait	96.06	90.95
37	Indonesia	95.66	89.97
38	Panama	95.41	89.36
39	Mexico	95.38	89.28
40	Saudi Arabia	95.33	89.16
41	Colombia	95.09	88.58
42	Vietnam	95.00	88.35
43	Peru	94.41	86.89
44	Thailand	94.22	86.42
45	U.A.E.	93.80	85.39
46	Dominican Republic	93.78	85.34
47	Malaysia	93.73	85.23
48	Philippines	93.40	84.41
49	Brazil	93.23	83.98
50	Sri Lanka	91.90	80.70
51	South Africa	87.05	68.76
52	Iran	85.54	65.06
53	Kenya	81.53	55.18
54	Cambodia	76.77	43.45
55	India	74.37	37.54
56	Bangladesh	73.91	36.41
57	Morocco	73.75	36.01
58	Guatemala	73.49	35.37
59	Egypt	71.17	29.65
60	Nigeria	62.02	7.10
61	Pakistan	59.13	0.00
-	Israel	-	-

#### 5.2.2 Attitude and motivation (2019)

Survey: low-skilled workers have good work ethics and are well motivated.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.54	100.00
2	Canada	6.88	82.01
3	Netherlands	6.88	81.95
4	Switzerland	6.75	78.33
5	China	6.58	73.55
6	Austria	6.56	73.13
7	Japan	6.53	72.17
8	Kuwait	6.46	70.43
9	Guatemala	6.41	68.92
10	Hong Kong	6.40	68.75
11	Singapore	6.36	67.75
12	Belgium	6.36	67.57
13	Korea	6.26	65.00
14	United States	6.19	63.03
15	Philippines	6.15	61.94
16	India	6.12	61.00
17	Nigeria	6.10	60.63
18	Australia	6.07	59.75
19	Slovenia	6.02	58.43
20	New Zealand	6.00	57.79
21	Italy	5.92	55.63
22	Spain	5.91	55.31
23	Egypt	5.84	53.47
24	Sweden	5.75	50.95
24	Vietnam	5.75	50.95
26	Taiwan	5.71	49.85
27	Greece	5.68	49.14
28	Jordan	5.68	49.00
29	France	5.61	46.99
30	Colombia	5.60	46.84
30	Israel	5.60	46.84
32	Czech Republic	5.58	46.31
33	Russia	5.47	43.19
34	Thailand	5.36	40.27
35	Germany	5.36	40.20
36	Saudi Arabia	5.30	38.75
37	Brazil	5.25	37.26
38	Mexico	5.23	36.69
39	Dominican Republic	5.20	35.89
40	Peru	5.16	34.83
41	Indonesia	5.14	34.33
42	Turkey	5.12	33.64
43	Poland	5.12	33.60
44	Bangladesh	5.06	32.06
45	Argentina	4.97	29.59
46	Hungary	4.97	29.54
47	U.A.E.	4.95	29.11
48	Panama	4.94	28.71
49	Croatia	4.84	26.14
50	Kenya	4.77	24.20
51	Morocco	4.69	21.99
52	Iran	4.62	19.95
53	Pakistan	4.31	11.54
54	Malaysia	4.22	9.13
55	South Africa	4.15	7.19
56	Slovak Republic	4.11	6.17
57	Cambodia	3.89	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 5 (Unskilled) Workers

### 5.2 Quality of Workers

#### 5.2.3 Education (2019)

Survey: low-skilled workers are educated.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.46	100.00
2	Switzerland	7.04	90.36
3	Nigeria	6.55	79.32
4	Netherlands	6.41	76.13
5	Japan	6.40	75.86
6	China	6.38	75.49
7	Spain	6.36	75.03
8	Hong Kong	6.35	74.72
9	Canada	6.35	74.63
10	Belgium	6.32	74.07
11	Taiwan	6.29	73.36
12	Korea	6.25	72.54
13	Jordan	6.11	69.18
14	Slovenia	6.09	68.86
15	Italy	6.03	67.34
16	Kuwait	6.00	66.74
17	Australia	5.88	64.02
18	Guatemala	5.78	61.75
19	Philippines	5.73	60.52
20	New Zealand	5.66	58.92
21	Sweden	5.65	58.75
22	Singapore	5.58	57.06
23	Greece	5.57	56.88
24	Vietnam	5.55	56.37
25	India	5.51	55.58
26	United States	5.46	54.33
27	Russia	5.43	53.81
28	France	5.37	52.33
29	Austria	5.32	51.23
30	Colombia	5.27	50.01
31	Poland	5.26	49.76
32	Germany	5.24	49.47
33	Israel	5.20	48.49
34	Argentina	5.12	46.69
35	Egypt	5.05	45.13
36	Thailand	5.04	44.84
37	Czech Republic	5.00	43.93
38	Brazil	4.96	42.98
39	Hungary	4.94	42.46
39	Peru	4.94	42.46
41	Mexico	4.85	40.40
42	Kenya	4.77	38.74
43	Morocco	4.77	38.66
44	Croatia	4.75	38.23
45	Pakistan	4.66	36.06
46	Saudi Arabia	4.65	35.99
47	Turkey	4.65	35.88
48	Panama	4.56	33.95
49	Indonesia	4.50	32.52
50	U.A.E.	4.38	29.81
51	Iran	4.35	29.17
52	Slovak Republic	4.23	26.33
53	Bangladesh	3.96	20.21
54	Malaysia	3.78	16.05
55	Dominican Republic	3.67	13.52
56	South Africa	3.24	3.84
57	Cambodia	3.07	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 5.2.4 Openness of labor market (2019)

Survey: the labor market is open to foreign workers.

RANK	COUNTRY	UNIT	INDEX
1	Nigeria	7.66	100.00
2	Netherlands	7.55	97.00
3	Dominican Republic	7.40	92.72
4	Denmark	7.38	92.00
5	Canada	7.31	90.08
5	Kuwait	7.31	90.08
7	Israel	7.20	87.01
8	Spain	7.18	86.49
9	Argentina	7.15	85.62
10	Belgium	7.11	84.36
11	Slovenia	7.07	83.29
12	Czech Republic	7.03	82.22
13	Sweden	7.00	81.30
14	Poland	6.93	79.31
15	United States	6.93	79.20
16	Germany	6.89	78.04
17	Hong Kong	6.80	75.59
18	Vietnam	6.77	74.81
19	Guatemala	6.66	71.49
20	Taiwan	6.65	71.17
21	Australia	6.62	70.43
22	Peru	6.58	69.33
23	China	6.53	68.01
24	Colombia	6.45	65.73
24	Singapore	6.45	65.73
26	Morocco	6.38	63.63
27	Malaysia	6.33	62.27
27	U.A.E.	6.33	62.27
29	Thailand	6.32	61.89
30	Italy	6.32	61.77
31	Mexico	6.29	61.00
32	New Zealand	6.29	60.91
33	Panama	6.25	59.89
34	Russia	6.23	59.42
35	Korea	6.18	58.02
36	Brazil	6.17	57.52
37	Greece	6.13	56.53
38	Philippines	6.12	56.22
39	India	5.92	50.56
40	Hungary	5.90	50.00
41	Egypt	5.89	49.75
41	France	5.89	49.75
43	Slovak Republic	5.89	49.50
44	Jordan	5.86	48.68
45	Cambodia	5.81	47.47
46	Croatia	5.75	45.62
47	Indonesia	5.71	44.60
48	Switzerland	5.68	43.58
49	Turkey	5.68	43.52
50	Saudi Arabia	5.65	42.83
51	Bangladesh	5.64	42.48
52	Austria	5.28	32.21
53	Japan	5.23	30.64
54	Kenya	5.14	28.11
55	Iran	4.53	10.79
56	Pakistan	4.38	6.50
57	South Africa	4.15	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 5 (Unskilled) Workers

### 5.2 Quality of Workers

#### 5.2.5 Management business relationship (2019)

Survey: the relationship between workers and managers is cooperative.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.83	100.00
2	Netherlands	7.63	93.22
3	Sweden	7.55	90.79
4	Israel	7.35	84.28
5	Kuwait	7.31	82.90
6	Canada	7.27	81.65
7	New Zealand	7.26	81.26
8	Belgium	7.07	75.22
9	Switzerland	6.96	71.74
10	Guatemala	6.88	68.83
11	Nigeria	6.86	68.41
12	Australia	6.86	68.25
13	Thailand	6.72	63.79
14	Philippines	6.70	63.04
15	India	6.67	62.06
16	Singapore	6.64	61.07
17	United States	6.50	56.64
18	Austria	6.48	55.99
19	Spain	6.42	54.17
20	Italy	6.42	54.07
21	Taiwan	6.42	54.01
22	Japan	6.38	52.57
23	Hong Kong	6.35	51.76
24	Germany	6.31	50.60
25	Greece	6.26	48.70
26	Russia	6.23	47.96
27	Indonesia	6.21	47.34
28	Vietnam	6.16	45.55
29	Argentina	6.15	45.30
30	China	6.12	44.38
31	Hungary	6.10	43.52
32	Korea	6.10	43.51
33	Colombia	6.09	43.33
34	Poland	6.07	42.64
35	Panama	6.06	42.41
36	Slovenia	5.95	38.86
37	U.A.E.	5.95	38.83
38	Brazil	5.92	37.66
39	Malaysia	5.89	36.76
40	Mexico	5.84	35.31
41	Czech Republic	5.84	35.13
42	Egypt	5.76	32.72
43	Iran	5.65	28.89
44	Peru	5.61	27.78
45	Jordan	5.54	25.27
46	Turkey	5.53	25.07
47	South Africa	5.48	23.62
48	Saudi Arabia	5.48	23.41
49	France	5.47	23.26
50	Dominican Republic	5.40	20.86
51	Kenya	5.32	18.20
52	Morocco	5.31	17.86
53	Croatia	5.22	14.96
54	Slovak Republic	5.20	14.36
55	Cambodia	5.00	7.85
56	Bangladesh	4.82	2.00
57	Pakistan	4.76	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 6 Policymakers & Administrators

### Policymakers

#### The process of legislature (2019)

Survey: the process of national legislature is active.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.00	100.00
2	Denmark	7.83	95.63
3	Netherlands	7.24	80.03
4	Sweden	7.15	77.72
5	New Zealand	7.09	76.03
6	Germany	7.04	74.91
7	Singapore	7.00	73.79
8	Canada	6.96	72.78
9	Australia	6.95	72.54
10	India	6.95	72.39
11	Hong Kong	6.90	71.17
12	Malaysia	6.89	70.87
13	Belgium	6.82	69.11
14	Kuwait	6.77	67.74
15	Slovenia	6.74	67.08
16	Austria	6.60	63.30
16	Israel	6.60	63.30
18	France	6.55	62.06
19	Japan	6.53	61.33
20	Taiwan	6.48	60.26
21	Korea	6.42	58.61
22	Hungary	6.39	57.72
23	United States	6.37	57.21
24	China	6.29	55.11
25	Guatemala	6.28	54.95
26	Saudi Arabia	6.22	53.27
27	Philippines	6.12	50.75
28	Russia	6.10	50.19
29	U.A.E.	6.05	48.82
30	Nigeria	6.03	48.48
31	Vietnam	6.00	47.57
32	Italy	5.95	46.19
33	Panama	5.94	45.93
34	Greece	5.88	44.53
35	Poland	5.88	44.52
36	Czech Republic	5.87	44.19
37	Indonesia	5.86	43.83
37	Jordan	5.86	43.83
39	Dominican Republic	5.80	42.33
40	Egypt	5.79	42.05
41	Colombia	5.77	41.62
42	Turkey	5.74	40.63
43	Thailand	5.64	38.14
44	Argentina	5.58	36.45
45	Kenya	5.45	33.27
45	South Africa	5.45	33.27
47	Iran	5.35	30.61
48	Brazil	5.31	29.55
49	Spain	5.30	29.30
50	Morocco	5.23	27.41
51	Bangladesh	5.20	26.60
51	Slovak Republic	5.20	26.60
53	Mexico	5.18	26.02
54	Peru	4.87	17.98
55	Croatia	4.84	17.26
56	Pakistan	4.24	1.47
57	Cambodia	4.19	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### The result of legislation (2019)

Survey: the political system is stable and effective.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.93	100.00
2	Denmark	8.17	86.08
3	Netherlands	7.62	76.08
4	Singapore	7.55	74.73
5	Kuwait	7.38	71.79
6	New Zealand	7.23	68.94
7	Saudi Arabia	7.17	67.95
8	Sweden	7.15	67.51
9	India	6.97	64.30
10	China	6.88	62.52
11	Austria	6.76	60.38
12	Australia	6.74	59.98
13	Canada	6.65	58.45
14	Germany	6.57	56.94
15	Vietnam	6.45	54.80
16	Belgium	6.43	54.33
16	U.A.E.	6.43	54.33
18	Egypt	6.37	53.23
19	Hong Kong	6.35	52.89
20	Jordan	6.32	52.37
21	Korea	6.31	52.11
22	Hungary	6.29	51.80
23	Japan	6.23	50.61
24	Taiwan	6.00	46.50
25	Greece	5.88	44.39
26	Slovenia	5.86	43.95
27	United States	5.81	43.01
28	France	5.81	42.99
29	Nigeria	5.76	42.09
30	Israel	5.70	41.02
31	Philippines	5.64	39.86
32	Italy	5.63	39.77
33	Russia	5.57	38.58
34	Panama	5.53	37.94
35	Colombia	5.50	37.37
36	Malaysia	5.44	36.35
37	Spain	5.27	33.21
38	Morocco	5.24	32.58
39	Indonesia	5.21	32.15
40	Bangladesh	5.18	31.52
41	Pakistan	5.07	29.49
42	Czech Republic	5.00	28.23
43	Poland	4.91	26.53
44	Peru	4.87	25.88
45	Thailand	4.84	25.31
46	Kenya	4.77	24.08
47	Dominican Republic	4.57	20.32
48	Turkey	4.56	20.17
49	Mexico	4.56	20.11
50	Argentina	4.55	19.93
51	Guatemala	4.53	19.67
52	Slovak Republic	4.49	18.84
53	Brazil	4.35	16.43
54	Cambodia	4.07	11.32
55	Iran	3.79	6.20
56	Croatia	3.59	2.54
57	South Africa	3.45	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-



## 6 Policymakers & Administrators

### 6.1 Policymakers

#### Ethics (e.g., bribery and corruption) (2019)

Survey: bribery and corruption among politicians are not serious.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	8.25	100.00
2	Sweden	7.80	92.69
3	Switzerland	7.68	90.72
4	Netherlands	7.57	88.98
5	Saudi Arabia	6.83	76.88
6	Singapore	6.76	75.77
7	Hong Kong	6.75	75.65
8	New Zealand	6.74	75.53
9	Belgium	6.43	70.43
10	Germany	6.36	69.27
11	Australia	6.33	68.88
12	U.A.E.	6.24	67.33
13	Canada	6.23	67.22
14	Austria	5.80	60.22
15	China	5.79	60.13
16	Kuwait	5.69	58.47
17	France	5.63	57.49
18	Italy	5.50	55.35
19	Greece	5.49	55.22
20	Slovenia	5.47	54.78
21	India	5.42	54.10
22	Taiwan	5.42	54.04
23	Korea	5.40	53.78
24	Japan	5.40	53.73
25	Israel	5.25	51.29
26	Egypt	5.21	50.65
27	Colombia	5.00	47.23
27	Turkey	5.00	47.23
29	Jordan	4.89	45.49
30	United States	4.81	44.13
31	Czech Republic	4.71	42.52
32	Dominican Republic	4.70	42.36
33	Hungary	4.58	40.42
34	Bangladesh	4.46	38.46
35	Nigeria	4.38	37.15
36	Poland	4.37	37.04
37	Argentina	4.27	35.42
38	Thailand	4.20	34.24
39	Vietnam	4.16	33.58
40	Panama	4.03	31.50
41	Morocco	3.92	29.75
42	Brazil	3.85	28.63
43	Spain	3.85	28.54
44	Peru	3.84	28.38
45	Philippines	3.67	25.58
46	Indonesia	3.64	25.20
47	Russia	3.63	25.04
48	Guatemala	3.59	24.40
49	Malaysia	3.56	23.78
50	Mexico	3.51	23.06
51	Pakistan	3.31	19.80
52	South Africa	3.27	19.19
53	Iran	2.85	12.37
54	Slovak Republic	2.63	8.73
55	Croatia	2.59	8.16
56	Cambodia	2.11	0.33
57	Kenya	2.09	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### Education level (2019)

Survey: politicians are well educated.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.64	100.00
2	Singapore	8.39	95.27
3	Netherlands	7.84	84.76
4	Denmark	7.63	80.68
5	New Zealand	7.60	80.20
6	China	7.48	77.92
7	Japan	7.43	76.88
8	Canada	7.35	75.38
9	Sweden	7.30	74.51
10	France	7.29	74.31
11	United States	7.16	71.88
12	Hong Kong	7.10	70.71
13	Belgium	7.00	68.81
13	Saudi Arabia	7.00	68.81
13	Taiwan	7.00	68.81
16	Germany	6.97	68.27
17	Israel	6.95	67.86
18	Korea	6.94	67.65
19	Jordan	6.75	64.07
20	U.A.E.	6.71	63.39
21	Australia	6.67	62.49
22	Kuwait	6.54	60.05
23	Egypt	6.53	59.82
24	Greece	6.50	59.25
25	Austria	6.40	57.42
26	Italy	6.21	53.83
27	Thailand	6.20	53.63
28	Czech Republic	5.90	47.99
29	Malaysia	5.89	47.72
30	Russia	5.80	46.03
31	Pakistan	5.79	45.90
32	Slovenia	5.74	44.97
33	Philippines	5.73	44.65
34	Vietnam	5.61	42.50
35	Cambodia	5.52	40.69
36	Argentina	5.45	39.48
37	Hungary	5.35	37.58
38	Poland	5.21	34.82
39	Spain	5.18	34.30
40	India	5.17	34.01
41	Nigeria	5.00	30.85
42	Colombia	4.95	29.98
43	Turkey	4.94	29.73
44	Indonesia	4.93	29.49
45	Iran	4.91	29.17
46	Panama	4.91	29.07
47	Slovak Republic	4.66	24.34
48	Dominican Republic	4.60	23.25
49	Kenya	4.50	21.36
50	Bangladesh	4.28	17.18
51	Mexico	4.20	15.66
52	South Africa	4.03	12.44
53	Guatemala	3.97	11.27
54	Brazil	3.81	8.31
55	Morocco	3.77	7.48
56	Peru	3.71	6.35
57	Croatia	3.38	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 6 Policymakers & Administrators

### 6.1 Policymakers

#### International experience (2019)

Survey: politicians have a lot of international experience.

RANK	COUNTRY	UNIT	INDEX
1	Singapore	7.64	100.00
2	Netherlands	7.48	96.42
3	Canada	7.35	93.52
4	Denmark	7.21	90.45
5	Saudi Arabia	7.17	89.68
6	Israel	7.05	86.91
7	Switzerland	6.96	85.00
8	China	6.89	83.35
9	New Zealand	6.66	78.14
10	Belgium	6.57	76.23
11	U.A.E.	6.52	75.17
12	Hong Kong	6.50	74.64
13	Sweden	6.45	73.52
14	Kuwait	6.15	66.91
15	Germany	6.14	66.66
16	Korea	6.07	65.04
17	Nigeria	6.03	64.24
18	Greece	6.00	63.47
19	United States	5.99	63.15
20	Italy	5.97	62.89
21	Egypt	5.95	62.30
22	Taiwan	5.94	62.03
23	France	5.89	61.13
24	Australia	5.83	59.75
25	Malaysia	5.78	58.51
26	Vietnam	5.66	55.87
27	Jordan	5.64	55.50
28	India	5.64	55.46
29	Austria	5.64	55.44
30	Slovenia	5.60	54.65
31	Argentina	5.45	51.30
32	Japan	5.40	50.08
33	Cambodia	5.37	49.42
34	Pakistan	5.34	48.85
35	Thailand	5.28	47.40
36	Hungary	5.23	46.19
37	Panama	5.22	46.04
38	Russia	5.17	44.87
39	Czech Republic	5.10	43.31
40	Philippines	5.06	42.51
41	Indonesia	4.71	34.78
42	Poland	4.70	34.41
43	Turkey	4.68	33.93
44	Colombia	4.64	33.04
45	Spain	4.45	28.98
46	Slovak Republic	4.43	28.40
47	Iran	4.41	28.02
48	South Africa	4.36	26.95
49	Peru	4.16	22.43
50	Dominican Republic	4.10	21.07
51	Bangladesh	4.08	20.62
52	Kenya	4.05	19.85
53	Mexico	4.02	19.33
54	Morocco	4.00	18.83
55	Guatemala	3.91	16.74
56	Brazil	3.60	10.00
57	Croatia	3.16	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 6 Policymakers & Administrators

### Administrators

#### The process of policy implementation (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Singapore	2.23	100.00
2	Switzerland	2.04	94.10
3	Finland	1.98	92.40
4	Hong Kong	1.90	89.92
5	Denmark	1.87	88.94
6	Netherlands	1.85	88.29
7	Sweden	1.83	87.69
8	Canada	1.72	84.16
9	Japan	1.68	82.92
10	New Zealand	1.67	82.75
11	Germany	1.62	81.20
12	Australia	1.60	80.49
13	United States	1.58	79.89
14	France	1.48	76.92
15	Austria	1.45	76.09
16	U.A.E.	1.43	75.41
17	Taiwan	1.36	73.29
18	United Kingdom	1.34	72.66
19	Israel	1.21	68.55
20	Korea	1.18	67.77
21	Belgium	1.17	67.43
22	Slovenia	1.13	66.02
23	Chile	1.08	64.74
24	Malaysia	1.08	64.47
25	Spain	1.00	62.22
26	Czech Republic	0.92	59.77
27	Slovak Republic	0.71	53.17
28	Poland	0.66	51.79
29	Hungary	0.49	46.40
30	China	0.48	46.09
31	Croatia	0.46	45.47
32	Italy	0.41	44.14
33	Thailand	0.35	42.18
34	South Africa	0.34	41.89
35	Greece	0.34	41.82
36	Saudi Arabia	0.32	41.37
37	India	0.28	40.12
38	Indonesia	0.18	36.95
39	Jordan	0.11	34.89
40	Philippines	0.05	32.95
41	Argentina	0.03	32.22
42	Turkey	0.01	31.61
43	Vietnam	0.00	31.32
44	Panama	-0.02	30.83
45	Russia	-0.06	29.55
46	Colombia	-0.09	28.81
47	Kuwait	-0.09	28.73
48	Mexico	-0.15	26.71
49	Morocco	-0.21	24.99
50	Sri Lanka	-0.24	24.19
51	Peru	-0.25	23.88
52	Dominican Republic	-0.40	19.12
53	Kenya	-0.41	18.80
54	Ukraine	-0.42	18.66
55	Iran	-0.43	18.20
56	Brazil	-0.45	17.67
57	Cambodia	-0.57	13.95
58	Egypt	-0.58	13.45
59	Pakistan	-0.63	11.95
60	Guatemala	-0.68	10.47
61	Bangladesh	-0.75	8.43
62	Nigeria	-1.02	0.00

## 6 Policymakers & Administrators

### 6.2 Administrators

The result of policy implementation (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	2.21	100.00
2	Singapore	2.13	97.87
3	Netherlands	2.02	94.64
4	New Zealand	1.98	93.51
5	Australia	1.93	92.10
6	Sweden	1.80	88.41
7	Finland	1.79	88.02
8	Switzerland	1.78	87.85
9	United Kingdom	1.76	87.32
10	Germany	1.75	86.96
11	Denmark	1.68	84.90
12	Canada	1.67	84.56
13	United States	1.58	82.07
14	Austria	1.54	81.12
15	Taiwan	1.36	75.72
16	Chile	1.34	75.37
17	Japan	1.33	74.97
18	Czech Republic	1.26	73.03
19	Israel	1.25	72.63
20	Belgium	1.23	72.24
21	France	1.17	70.51
22	Korea	1.09	68.28
23	Spain	0.95	64.00
24	U.A.E.	0.93	63.61
25	Poland	0.88	62.20
26	Slovak Republic	0.81	60.16
27	Slovenia	0.69	56.85
28	Malaysia	0.68	56.50
29	Italy	0.67	56.19
30	Hungary	0.60	54.21
31	Peru	0.52	51.81
32	Croatia	0.45	49.79
33	Panama	0.40	48.48
34	Colombia	0.33	46.37
35	Greece	0.30	45.44
36	South Africa	0.17	41.92
37	Mexico	0.15	41.33
38	Thailand	0.11	40.20
39	Jordan	0.08	39.40
40	Philippines	0.05	38.33
41	Kuwait	-0.04	36.00
42	Saudi Arabia	-0.05	35.70
43	Turkey	-0.05	35.66
44	Indonesia	-0.07	34.98
45	Dominican Republic	-0.08	34.81
46	China	-0.14	33.16
47	Sri Lanka	-0.15	32.67
48	India	-0.18	31.77
49	Guatemala	-0.20	31.43
50	Ukraine	-0.22	30.73
51	Kenya	-0.23	30.54
52	Morocco	-0.24	30.08
53	Argentina	-0.24	30.07
54	Brazil	-0.31	28.07
55	Vietnam	-0.39	26.00
56	Cambodia	-0.50	22.60
57	Russia	-0.54	21.58
58	Pakistan	-0.64	18.61
59	Bangladesh	-0.83	13.42
60	Egypt	-0.87	12.26
61	Nigeria	-0.88	11.82
62	Iran	-1.30	0.00

Ethics (bribery & corruption) (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Finland	2.21	100.00
2	New Zealand	2.17	98.93
3	Singapore	2.17	98.93
4	Denmark	2.15	98.17
5	Sweden	2.14	97.94
6	Switzerland	2.01	94.27
7	Netherlands	2.01	94.25
8	Germany	1.95	92.49
9	Canada	1.87	90.42
10	United Kingdom	1.83	89.09
11	Australia	1.81	88.52
12	Hong Kong	1.68	84.85
13	Austria	1.60	82.58
14	Belgium	1.51	80.15
15	Japan	1.42	77.74
16	United States	1.32	74.87
17	France	1.32	74.69
18	U.A.E.	1.15	70.02
19	Taiwan	1.03	66.51
20	Chile	1.01	66.07
21	Slovenia	0.87	62.06
22	Israel	0.79	59.70
23	Poland	0.64	55.60
24	Spain	0.61	54.81
25	Korea	0.60	54.54
26	Czech Republic	0.50	51.70
27	Slovak Republic	0.36	47.72
28	Saudi Arabia	0.36	47.63
29	Malaysia	0.31	46.34
30	Italy	0.24	44.13
31	Jordan	0.15	41.69
32	Croatia	0.13	41.19
33	Hungary	0.05	38.97
34	South Africa	-0.02	36.86
35	Greece	-0.07	35.60
36	Argentina	-0.08	35.11
37	India	-0.19	32.20
38	Morocco	-0.22	31.35
39	Indonesia	-0.25	30.36
40	China	-0.27	29.80
41	Kuwait	-0.29	29.29
42	Colombia	-0.30	28.95
43	Turkey	-0.34	27.99
44	Sri Lanka	-0.34	27.98
45	Thailand	-0.40	26.19
46	Brazil	-0.42	25.60
47	Vietnam	-0.49	23.75
48	Peru	-0.54	22.20
49	Philippines	-0.54	22.07
50	Panama	-0.57	21.44
51	Egypt	-0.59	20.88
52	Dominican Republic	-0.75	16.28
53	Pakistan	-0.79	15.12
54	Guatemala	-0.82	14.21
55	Russia	-0.85	13.58
56	Kenya	-0.85	13.38
57	Mexico	-0.86	13.08
58	Ukraine	-0.87	12.77
59	Bangladesh	-0.91	11.89
60	Iran	-0.96	10.37
61	Nigeria	-1.04	7.93
62	Cambodia	-1.33	0.00

## 6 Policymakers & Administrators

### 6.2 Administrators

#### Education level (2019)

Survey: government officials are well educated.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.43	100.00
2	Japan	8.18	94.79
3	Singapore	7.88	88.70
4	Denmark	7.75	86.06
5	Netherlands	7.62	83.36
6	China	7.46	80.15
7	France	7.45	79.84
8	Canada	7.38	78.55
9	Sweden	7.35	77.83
10	India	7.26	75.91
11	Taiwan	7.23	75.28
12	United States	7.13	73.36
13	New Zealand	7.11	72.99
14	Korea	7.10	72.63
15	Hong Kong	7.05	71.67
16	Saudi Arabia	6.87	67.96
17	U.A.E.	6.86	67.71
18	Australia	6.79	66.24
18	Belgium	6.79	66.24
20	Israel	6.70	64.48
21	Italy	6.53	60.91
22	Germany	6.51	60.66
23	Egypt	6.47	59.76
24	Kuwait	6.46	59.58
25	Slovenia	6.30	56.30
26	Greece	6.27	55.62
27	Nigeria	6.21	54.34
28	Jordan	6.14	53.03
29	Malaysia	6.11	52.38
30	Russia	6.07	51.46
31	Philippines	6.06	51.34
32	Argentina	5.91	48.22
33	Czech Republic	5.90	48.10
34	Thailand	5.88	47.63
35	Vietnam	5.82	46.36
36	Spain	5.70	43.86
37	Austria	5.68	43.52
37	Bangladesh	5.68	43.52
39	Hungary	5.65	42.80
40	Cambodia	5.63	42.48
41	Pakistan	5.52	40.17
42	Poland	5.37	37.19
43	Mexico	5.34	36.57
44	Turkey	5.18	33.17
45	Indonesia	5.07	31.01
46	Panama	4.91	27.61
47	Iran	4.88	27.12
48	Colombia	4.81	25.63
49	Dominican Republic	4.80	25.43
50	Kenya	4.73	23.94
51	Morocco	4.62	21.64
52	Slovak Republic	4.46	18.39
53	Brazil	4.35	16.27
54	Peru	4.29	14.96
55	Guatemala	4.06	10.28
56	South Africa	4.06	10.24
57	Croatia	3.56	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### International experience (2019)

Survey: government officials have a lot of international experiences.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.38	100.00
2	Netherlands	7.32	98.69
3	Singapore	7.30	98.28
4	Canada	7.00	91.04
5	Saudi Arabia	6.83	86.89
6	Switzerland	6.82	86.78
7	New Zealand	6.80	86.27
8	India	6.77	85.53
9	Israel	6.65	82.69
10	China	6.64	82.54
11	United States	6.59	81.21
12	Hong Kong	6.50	79.10
13	Sweden	6.40	76.72
14	Belgium	6.39	76.55
15	Kuwait	6.38	76.35
16	Korea	6.35	75.54
17	Australia	6.33	75.12
17	U.A.E.	6.33	75.12
19	Italy	6.29	74.08
20	Slovenia	6.14	70.50
21	Japan	6.10	69.55
22	France	5.97	66.54
23	Nigeria	5.97	66.34
24	Taiwan	5.94	65.62
25	Philippines	5.82	62.82
26	Germany	5.81	62.73
27	Malaysia	5.78	61.86
28	Jordan	5.64	58.64
29	Argentina	5.64	58.48
30	Russia	5.60	57.61
31	Egypt	5.59	57.33
32	Greece	5.58	57.06
33	Pakistan	5.45	53.99
34	Vietnam	5.41	53.05
35	Cambodia	5.41	53.01
36	Spain	5.30	50.52
37	Bangladesh	5.22	48.54
38	Austria	5.16	47.10
38	Thailand	5.16	47.10
40	Mexico	5.15	46.90
41	Czech Republic	5.10	45.59
42	Panama	5.06	44.78
43	Turkey	5.06	44.69
44	Poland	5.05	44.39
45	Colombia	4.81	38.73
46	Morocco	4.77	37.77
47	Iran	4.56	32.75
48	Indonesia	4.43	29.64
49	Hungary	4.39	28.65
49	Peru	4.39	28.65
51	South Africa	4.36	28.09
52	Dominican Republic	4.17	23.38
53	Brazil	4.13	22.39
53	Guatemala	4.13	22.39
55	Kenya	3.95	18.32
56	Slovak Republic	3.37	4.39
57	Croatia	3.19	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 7 Entrepreneurs

### 7.1 Personal competence

#### 7.1.1 The process of decision making (2019)

Survey: entrepreneurs' decision making in domestic firms is swift and precise.

RANK	COUNTRY	UNIT	INDEX
1	Israel	7.90	100.00
2	Denmark	7.83	98.08
3	Hong Kong	7.50	88.48
4	Switzerland	7.36	84.36
5	Netherlands	7.32	83.29
6	Nigeria	7.24	81.03
7	Belgium	7.21	80.25
8	India	7.15	78.36
9	United States	7.09	76.62
10	Singapore	7.03	74.95
11	Sweden	6.85	69.75
12	Kuwait	6.85	69.64
13	Korea	6.84	69.53
14	Czech Republic	6.84	69.43
15	Taiwan	6.81	68.50
16	China	6.78	67.76
17	Italy	6.71	65.84
18	Canada	6.69	65.21
19	Guatemala	6.69	65.07
20	Austria	6.60	62.55
21	Slovenia	6.58	62.02
22	Hungary	6.58	61.99
23	U.A.E.	6.57	61.73
24	Greece	6.56	61.51
25	Mexico	6.49	59.30
26	Thailand	6.48	59.09
27	Egypt	6.47	58.82
28	New Zealand	6.46	58.44
29	Philippines	6.42	57.49
30	Panama	6.34	55.17
31	Australia	6.33	54.87
32	Germany	6.33	54.73
33	Saudi Arabia	6.32	54.43
34	France	6.24	52.09
35	Brazil	6.23	51.87
36	Indonesia	6.21	51.44
37	Argentina	6.18	50.51
38	Malaysia	6.11	48.47
39	Bangladesh	6.10	48.15
40	Colombia	6.09	47.89
41	Jordan	6.07	47.33
42	Vietnam	6.05	46.58
43	Japan	5.98	44.55
44	Spain	5.97	44.39
45	Poland	5.93	43.26
46	Dominican Republic	5.90	42.39
47	Russia	5.87	41.43
48	Turkey	5.85	41.03
49	South Africa	5.70	36.54
50	Iran	5.68	35.95
51	Croatia	5.56	32.66
52	Peru	5.48	30.40
53	Slovak Republic	5.34	26.34
54	Kenya	5.05	17.77
55	Cambodia	4.89	13.26
56	Pakistan	4.86	12.49
57	Morocco	4.43	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 7.1.2 The result of decision making (2019)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	1.00	100.00
1	United States	1.00	100.00
3	Denmark	1.00	99.88
4	Sweden	0.95	94.04
5	Canada	0.91	89.24
6	Netherlands	0.81	77.19
7	Australia	0.80	76.14
8	United Kingdom	0.75	70.64
9	Israel	0.73	68.89
10	Switzerland	0.71	66.55
11	Nigeria	0.69	63.27
12	Austria	0.64	58.13
13	Colombia	0.63	56.96
14	Malaysia	0.60	53.68
15	Finland	0.595	52.63
16	Chile	0.59	52.05
17	Poland	0.58	51.23
18	Peru	0.55	47.49
19	U.A.E.	0.53	44.91
20	Korea	0.52	43.74
21	Kenya	0.52	43.51
22	Belgium	0.52	43.39
23	Singapore	0.50	41.75
24	Germany	0.49	40.12
25	South Africa	0.46	36.73
26	Kuwait	0.44	34.39
27	Vietnam	0.43	32.87
28	Slovenia	0.42	31.70
29	Dominican Republic	0.41	31.23
30	Bangladesh	0.41	31.11
31	Mexico	0.40	29.47
32	Thailand	0.40	29.36
33	Czech Republic	0.39	28.54
33	Philippines	0.39	28.54
35	Hungary	0.38	27.60
36	Sri Lanka	0.38	27.25
37	Spain	0.38	27.02
38	Taiwan	0.37	26.67
39	Panama	0.37	26.20
40	France	0.36	25.50
41	Turkey	0.35	24.44
42	Brazil	0.35	23.86
43	Indonesia	0.35	23.74
44	China	0.33	21.29
45	India	0.33	21.05
45	Jordan	0.33	21.05
47	Italy	0.32	20.94
48	Cambodia	0.32	19.88
49	Guatemala	0.31	19.77
50	Slovak Republic	0.29	17.08
51	Croatia	0.27	14.74
52	Egypt	0.27	14.50
53	Morocco	0.27	14.04
54	Pakistan	0.23	10.18
55	Argentina	0.23	9.36
56	Iran	0.22	9.01
57	Russia	0.20	6.32
58	Ukraine	0.20	6.08
59	Japan	0.18	4.21
60	Greece	0.15	0.00
-	New Zealand	-	-
-	Saudi Arabia	-	-

## 7 Entrepreneurs

### 7.1 Personal Competence

#### 7.1.3 Entrepreneur's core competence (2019)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	1.00	100.00
1	Israel	1.00	100.00
1	Korea	1.00	100.00
4	Netherlands	0.88	87.05
5	Finland	0.84	83.12
6	Chile	0.73	71.02
7	Canada	0.71	69.32
8	Panama	0.71	69.00
9	Sweden	0.71	68.79
10	Taiwan	0.69	66.99
11	Indonesia	0.68	66.03
12	Australia	0.65	63.06
13	United Kingdom	0.65	62.74
14	France	0.64	61.57
15	Malaysia	0.64	61.46
16	Iran	0.64	61.36
17	Spain	0.64	61.25
18	Denmark	0.61	58.70
19	United States	0.61	58.60
20	Switzerland	0.59	56.05
21	Brazil	0.58	54.99
22	Peru	0.57	54.03
23	Mexico	0.56	53.50
24	Russia	0.55	52.55
25	Austria	0.55	51.70
26	Dominican Republic	0.52	49.15
27	China	0.51	47.56
28	Poland	0.50	47.13
29	Colombia	0.49	45.86
30	Kuwait	0.45	42.04
31	Singapore	0.45	41.30
32	Morocco	0.44	40.34
33	Jordan	0.41	36.84
34	Argentina	0.38	34.39
35	Germany	0.38	33.86
36	Japan	0.37	32.91
37	Belgium	0.34	30.25
38	Slovenia	0.34	29.83
39	Ukraine	0.34	29.72
40	Turkey	0.33	28.34
41	Italy	0.31	26.96
42	Greece	0.30	25.80
43	Croatia	0.30	25.69
44	South Africa	0.30	25.48
45	Vietnam	0.29	24.73
46	Hungary	0.28	23.14
47	Nigeria	0.27	22.61
48	Thailand	0.26	21.76
49	Guatemala	0.26	21.55
50	Czech Republic	0.26	21.34
51	Slovak Republic	0.26	21.02
52	Philippines	0.19	14.12
53	Kenya	0.19	13.48
54	Pakistan	0.14	8.28
55	India	0.14	8.17
56	Bangladesh	0.11	5.84
57	Egypt	0.08	2.65
58	Cambodia	0.08	2.55
59	Sri Lanka	0.06	0.00
-	New Zealand	-	-
-	Saudi Arabia	-	-
-	U.A.E.	-	-

#### 7.1.4 Entrepreneur's education level (2019)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Denmark	1.00	100.00
1	Singapore	1.00	100.00
1	United States	1.00	100.00
4	Australia	1.00	99.68
5	Canada	0.99	98.71
6	U.A.E.	0.94	93.78
7	Japan	0.94	93.35
8	Hong Kong	0.94	93.14
9	Switzerland	0.89	87.78
10	Israel	0.86	85.42
11	Belgium	0.76	74.71
12	United Kingdom	0.75	72.78
13	Taiwan	0.73	70.74
14	France	0.68	65.49
15	Sweden	0.64	61.31
16	Kuwait	0.63	59.91
17	Russia	0.62	59.49
18	Chile	0.62	58.74
19	Korea	0.60	57.23
20	Colombia	0.60	57.02
21	Malaysia	0.58	54.66
22	Germany	0.57	53.48
23	Hungary	0.54	50.70
24	Thailand	0.54	50.27
25	China	0.52	48.77
25	Iran	0.52	48.77
27	Slovenia	0.52	48.55
28	Ukraine	0.51	47.37
29	Cambodia	0.49	45.12
30	Greece	0.47	43.09
31	Egypt	0.47	42.87
32	Vietnam	0.47	42.77
33	Finland	0.46	42.23
34	Nigeria	0.46	41.80
35	Netherlands	0.45	41.16
36	Poland	0.45	41.05
37	Spain	0.44	40.09
38	Philippines	0.42	37.94
39	Czech Republic	0.38	33.65
40	Slovak Republic	0.37	32.48
41	Austria	0.36	31.62
42	Dominican Republic	0.36	31.08
43	Saudi Arabia	0.34	29.69
44	Peru	0.33	28.08
45	Turkey	0.33	27.65
46	Argentina	0.31	26.37
47	Sri Lanka	0.31	25.72
48	Jordan	0.30	25.40
49	South Africa	0.28	22.51
50	India	0.25	19.51
51	Indonesia	0.24	18.65
52	Panama	0.24	18.11
53	Italy	0.23	17.68
54	Mexico	0.19	13.08
55	Croatia	0.18	11.79
56	Kenya	0.16	10.08
57	Morocco	0.15	8.36
58	Bangladesh	0.13	6.75
59	Guatemala	0.11	4.93
60	Brazil	0.08	1.07
61	Pakistan	0.07	0.00
-	New Zealand	-	-

## 7 Entrepreneurs

### 7.1 Personal Competence

#### 7.1.5 Entrepreneur's international experience (2016)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Austria	1.00	100.00
1	Belgium	1.00	100.00
1	Croatia	1.00	100.00
1	Czech Republic	1.00	100.00
1	Finland	1.00	100.00
1	France	1.00	100.00
1	Germany	1.00	100.00
1	Hungary	1.00	100.00
1	Japan	1.00	100.00
1	Singapore	1.00	100.00
1	Slovak Republic	1.00	100.00
1	Slovenia	1.00	100.00
1	Sweden	1.00	100.00
1	Switzerland	1.00	100.00
1	United Kingdom	1.00	100.00
1	United States	1.00	100.00
17	Israel	0.97	97.19
18	Italy	0.88	88.26
19	Canada	0.88	87.86
20	Poland	0.79	78.54
21	Hong Kong	0.75	75.23
22	Netherlands	0.69	69.21
23	Australia	0.58	58.27
24	Korea	0.54	54.06
25	South Africa	0.53	52.76
26	Taiwan	0.53	52.66
27	Denmark	0.52	51.96
28	Malaysia	0.48	47.34
29	China	0.42	42.03
30	Chile	0.40	40.22
31	Mexico	0.37	36.61
32	U.A.E.	0.34	33.70
33	Thailand	0.32	31.49
34	Colombia	0.31	31.19
35	Dominican Republic	0.31	31.09
36	Spain	0.31	30.79
36	Sri Lanka	0.31	30.79
38	Turkey	0.27	26.38
39	Greece	0.23	22.37
39	Panama	0.23	22.37
41	Pakistan	0.19	19.16
41	Ukraine	0.19	19.16
43	Egypt	0.19	18.96
44	Cambodia	0.19	18.46
45	India	0.18	17.35
46	Morocco	0.18	17.25
47	Iran	0.17	16.85
48	Vietnam	0.14	13.74
49	Kenya	0.12	11.74
50	Peru	0.12	11.53
51	Philippines	0.11	11.13
52	Kuwait	0.10	9.23
53	Nigeria	0.09	8.83
54	Argentina	0.08	7.32
55	Indonesia	0.06	5.72
56	Jordan	0.04	3.41
57	Russia	0.04	3.31
58	Bangladesh	0.01	1.10
59	Guatemala	0.01	0.90
60	Brazil	0.00	0.00
-	New Zealand	-	-
-	Saudi Arabia	-	-

## 7 Entrepreneurs

### 7.2 Social Context

#### 7.2.1 Availability of entrepreneurs (2019)

Survey: the number of entrepreneurs is sufficient.

RANK	COUNTRY	UNIT	INDEX
1	Israel	7.50	100.00
2	Switzerland	7.46	98.95
3	Netherlands	7.33	95.09
4	Belgium	7.32	94.74
5	Hong Kong	7.30	94.11
6	U.A.E.	7.10	88.08
7	Sweden	7.00	85.28
8	United States	6.88	81.82
9	Egypt	6.82	80.08
10	Czech Republic	6.77	78.63
11	China	6.70	76.49
12	Kuwait	6.69	76.22
13	Canada	6.65	75.09
14	Korea	6.59	73.14
15	Denmark	6.58	73.01
16	Italy	6.54	71.82
17	India	6.54	71.81
18	Saudi Arabia	6.41	67.88
19	Thailand	6.40	67.61
20	Taiwan	6.35	66.28
21	Singapore	6.27	63.87
22	Germany	6.19	61.31
23	Slovenia	6.02	56.52
24	Greece	6.00	55.84
25	Hungary	5.94	53.94
26	Jordan	5.93	53.73
27	Vietnam	5.91	53.16
28	France	5.89	52.74
29	Philippines	5.88	52.27
30	New Zealand	5.86	51.63
31	Austria	5.84	51.13
32	Iran	5.82	50.64
33	Russia	5.80	49.95
34	Argentina	5.79	49.59
35	Dominican Republic	5.77	48.97
36	Mexico	5.72	47.48
37	Panama	5.69	46.64
38	Australia	5.67	46.02
39	Guatemala	5.63	44.80
40	Turkey	5.62	44.58
41	Peru	5.58	43.49
42	Colombia	5.50	41.12
43	Poland	5.40	38.04
44	Brazil	5.19	31.92
45	Spain	5.09	29.07
46	Slovak Republic	5.09	28.92
47	Kenya	5.05	27.73
48	Japan	4.95	24.92
49	Indonesia	4.93	24.29
50	Bangladesh	4.56	13.44
51	Morocco	4.54	12.81
52	South Africa	4.52	12.12
53	Croatia	4.50	11.68
54	Cambodia	4.41	8.95
55	Malaysia	4.33	6.77
56	Nigeria	4.14	1.02
57	Pakistan	4.10	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 7 Entrepreneurs

### 7.2 Social Context

#### 7.2.2 New business (2020)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	New Zealand	86.76	100.00
2	Singapore	86.20	98.64
3	Hong Kong	85.32	96.53
4	Denmark	85.29	96.46
5	Korea	84.00	93.37
6	United States	84.00	93.36
7	United Kingdom	83.55	92.29
8	Sweden	81.99	88.56
9	Malaysia	81.47	87.32
10	Australia	81.22	86.70
11	Taiwan	80.92	85.99
12	U.A.E.	80.91	85.98
13	Thailand	80.09	84.01
14	Germany	79.71	83.09
15	Canada	79.64	82.92
16	Austria	78.75	80.78
17	Russia	78.16	79.38
18	Japan	78.00	78.99
19	Spain	77.94	78.84
20	China	77.93	78.83
21	France	76.80	76.12
22	Turkey	76.79	76.09
23	Israel	76.68	75.82
24	Switzerland	76.62	75.68
25	Slovenia	76.52	75.44
26	Poland	76.38	75.11
27	Czech Republic	76.34	75.01
28	Netherlands	76.10	74.44
29	Slovak Republic	75.59	73.20
30	Belgium	74.99	71.77
31	Croatia	73.62	68.49
32	Hungary	73.42	68.00
33	Morocco	73.38	67.92
34	Kenya	73.22	67.52
35	Italy	72.85	66.65
36	Mexico	72.36	65.46
37	Saudi Arabia	71.56	63.55
38	India	71.05	62.32
39	Ukraine	70.21	60.32
40	Colombia	70.06	59.96
41	Vietnam	69.77	59.25
42	Indonesia	69.58	58.80
43	Jordan	68.97	57.35
44	Peru	68.70	56.69
45	Greece	68.42	56.03
46	Kuwait	67.40	53.59
47	South Africa	67.02	52.67
48	Panama	66.56	51.57
49	Philippines	62.83	42.62
50	Guatemala	62.60	42.06
51	Sri Lanka	61.81	40.17
52	Pakistan	60.95	38.13
53	Egypt	60.05	35.97
54	Dominican Republic	59.99	35.81
55	Brazil	59.08	33.64
56	Argentina	58.96	33.35
57	Iran	58.55	32.36
58	Nigeria	56.88	28.35
59	Cambodia	53.84	21.09
60	Bangladesh	45.05	0.00
-	Chile	-	-
-	Finland	-	-

#### 7.2.3 Support of the social system (2019)

Survey: entrepreneurs are well supported by the government and society.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	7.54	100.00
2	Netherlands	7.52	99.75
3	Hong Kong	7.45	98.22
4	Israel	7.35	96.14
5	Sweden	7.30	95.10
6	Canada	7.23	93.66
7	Belgium	7.14	91.83
8	United States	7.09	90.69
9	Kuwait	7.00	88.86
10	Singapore	6.85	85.71
11	Denmark	6.79	84.53
12	Korea	6.59	80.28
13	China	6.49	78.32
14	U.A.E.	6.48	77.97
15	India	6.43	76.91
16	New Zealand	6.40	76.38
17	Saudi Arabia	6.30	74.39
18	Germany	6.29	74.00
19	France	6.26	73.53
20	Thailand	6.24	73.05
21	Slovenia	6.14	70.96
22	Italy	6.11	70.44
23	Taiwan	6.03	68.73
24	Austria	6.00	68.06
25	Egypt	5.94	66.84
26	Vietnam	5.80	63.81
27	Turkey	5.76	63.17
28	Australia	5.76	63.11
29	Greece	5.69	61.66
30	Panama	5.50	57.66
31	Czech Republic	5.48	57.33
32	Philippines	5.45	56.72
33	Indonesia	5.43	56.18
34	Hungary	5.42	55.99
35	Dominican Republic	5.33	54.20
36	Argentina	5.30	53.57
37	Japan	5.30	53.50
38	Jordan	5.29	53.21
39	Spain	5.15	50.42
40	Mexico	5.14	50.15
41	Colombia	5.00	47.27
41	Nigeria	5.00	47.27
43	Russia	4.80	43.11
44	Iran	4.76	42.37
45	Guatemala	4.75	42.07
46	Morocco	4.69	40.87
47	Malaysia	4.67	40.33
48	Peru	4.65	39.89
49	Poland	4.60	39.04
50	Bangladesh	4.50	36.87
50	Brazil	4.50	36.87
52	South Africa	4.24	31.51
53	Slovak Republic	4.00	26.47
54	Croatia	3.84	23.22
55	Pakistan	3.83	22.88
56	Cambodia	3.63	18.77
57	Kenya	2.73	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-



## 7. Entrepreneurs

### 7.2 Social Context

#### 7.2.4 Social status (2019)

Hard data: score

RANK	COUNTRY	UNIT	INDEX
1	Mexico	1.00	100.00
1	Netherlands	1.00	100.00
1	U.A.E.	1.00	100.00
4	Canada	0.98	98.23
5	United Kingdom	0.92	91.06
6	Denmark	0.89	87.75
7	Germany	0.86	84.66
8	Sweden	0.84	82.78
9	United States	0.84	82.45
10	Finland	0.83	80.68
11	Switzerland	0.77	74.50
12	Australia	0.74	70.86
13	Singapore	0.72	69.32
14	Israel	0.71	67.66
15	Austria	0.69	65.45
16	Hong Kong	0.68	65.01
17	France	0.68	64.24
18	Chile	0.66	62.03
19	Taiwan	0.60	55.30
20	Belgium	0.55	50.00
21	Poland	0.54	49.67
22	Slovenia	0.52	47.35
23	Jordan	0.49	43.93
24	Korea	0.48	42.38
25	Saudi Arabia	0.48	42.16
26	Italy	0.42	35.65
27	South Africa	0.38	31.13
28	Greece	0.37	29.91
29	Japan	0.34	27.04
30	China	0.34	26.71
31	Spain	0.33	26.27
32	Turkey	0.33	25.61
33	Kuwait	0.32	24.94
34	Malaysia	0.31	24.17
35	Hungary	0.30	22.85
35	Indonesia	0.30	22.85
35	Morocco	0.30	22.85
38	Thailand	0.30	22.30
39	Slovak Republic	0.29	22.08
40	Croatia	0.28	20.86
41	Colombia	0.28	20.64
42	Philippines	0.28	20.42
43	Egypt	0.28	20.09
44	Dominican Republic	0.27	19.65
45	Vietnam	0.26	17.77
46	Peru	0.25	17.11
47	Bangladesh	0.24	16.34
48	Guatemala	0.23	15.45
49	Panama	0.23	14.46
50	Pakistan	0.20	11.59
51	Argentina	0.20	11.48
52	Ukraine	0.19	10.38
53	Kenya	0.18	9.71
54	India	0.18	9.16
55	Iran	0.17	8.39
56	Nigeria	0.17	8.06
57	Russia	0.16	7.62
57	Sri Lanka	0.16	7.62
59	Brazil	0.11	2.21
60	Cambodia	0.11	1.88
61	Czech Republic	0.09	0.00
-	New Zealand	-	-

#### 7.2.5 Openness to foreign entrepreneurs (2019)

Survey: business environment is open and attractive to foreign entrepreneurs.

RANK	COUNTRY	UNIT	INDEX
1	Dominican Republic	7.67	100.00
2	Nigeria	7.62	98.66
3	Israel	7.60	98.06
4	Hong Kong	7.55	96.61
5	Netherlands	7.52	95.85
6	Sweden	7.35	90.79
7	Switzerland	7.32	89.96
8	Singapore	7.27	88.55
9	Denmark	7.25	87.89
10	New Zealand	7.20	86.43
11	United States	7.18	85.75
12	Canada	7.08	82.85
13	Belgium	7.04	81.66
14	Vietnam	7.02	81.28
15	Hungary	7.00	80.62
15	India	7.00	80.62
17	China	6.89	77.43
18	Thailand	6.88	77.13
19	Kuwait	6.77	73.91
20	Panama	6.72	72.44
21	Germany	6.71	72.31
21	Indonesia	6.71	72.31
21	U.A.E.	6.71	72.31
24	Czech Republic	6.71	72.18
25	Turkey	6.68	71.21
26	Morocco	6.57	68.16
27	Philippines	6.55	67.40
27	Spain	6.55	67.40
29	Poland	6.49	65.74
30	Slovenia	6.44	64.39
31	Saudi Arabia	6.35	61.65
32	Greece	6.34	61.31
33	Austria	6.32	60.85
34	Korea	6.32	60.72
35	Italy	6.31	60.68
36	Egypt	6.29	60.09
37	Peru	6.29	59.98
38	Bangladesh	6.26	59.10
39	Russia	6.23	58.33
40	Colombia	6.18	56.83
41	Taiwan	6.16	56.23
42	Australia	6.10	54.31
43	France	6.08	53.84
44	Jordan	6.04	52.58
45	Mexico	6.01	51.92
46	Guatemala	5.91	48.82
47	Brazil	5.69	42.46
48	Cambodia	5.52	37.54
49	Slovak Republic	5.49	36.59
50	Argentina	5.48	36.56
51	Malaysia	5.44	35.39
52	Pakistan	5.28	30.49
53	Iran	5.15	26.74
54	Croatia	4.69	13.38
55	Japan	4.58	10.11
56	South Africa	4.45	6.61
57	Kenya	4.23	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.1 Personal competence

#### 8.1.1 Decision making (2019)

Survey: professionals' decision making is swift and precise.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.71	100.00
2	Israel	7.60	96.49
3	Switzerland	7.37	89.05
4	Singapore	7.36	88.84
5	Canada	7.31	87.02
6	Sweden	7.30	86.78
7	India	7.29	86.36
8	China	7.24	84.77
9	United States	7.22	84.20
10	Hong Kong	7.20	83.54
11	Nigeria	7.14	81.53
12	Belgium	7.07	79.37
13	Korea	7.00	77.06
13	Netherlands	7.00	77.06
15	Austria	6.92	74.47
16	Guatemala	6.81	70.99
17	Czech Republic	6.81	70.79
18	Kuwait	6.77	69.59
19	Slovenia	6.74	68.77
20	Poland	6.72	68.02
21	Taiwan	6.71	67.66
22	Philippines	6.70	67.24
23	Thailand	6.68	66.70
24	U.A.E.	6.67	66.26
25	Germany	6.64	65.49
26	Hungary	6.61	64.52
27	Italy	6.60	64.10
28	Australia	6.60	63.95
29	Malaysia	6.56	62.66
30	Panama	6.53	61.88
31	Greece	6.48	60.35
32	France	6.47	60.01
33	Argentina	6.45	59.39
34	Turkey	6.41	58.01
35	Mexico	6.39	57.31
36	Russia	6.37	56.55
37	Colombia	6.33	55.47
38	New Zealand	6.31	54.85
39	Brazil	6.31	54.79
40	Egypt	6.29	54.20
41	Saudi Arabia	6.27	53.50
41	Spain	6.27	53.50
43	Jordan	6.25	52.77
44	Vietnam	6.20	51.30
45	Dominican Republic	6.20	51.15
46	South Africa	6.18	50.56
47	Slovak Republic	6.11	48.37
48	Indonesia	6.00	44.67
49	Croatia	5.91	41.64
50	Japan	5.85	39.81
51	Iran	5.79	38.00
52	Peru	5.48	27.96
53	Bangladesh	5.40	25.24
54	Morocco	5.31	22.25
55	Cambodia	5.22	19.48
56	Kenya	5.00	12.28
57	Pakistan	4.62	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 8.1.2 The ability to manage opportunities (2019)

Survey: professionals are good at managing opportunities.

RANK	COUNTRY	UNIT	INDEX
1	Israel	8.10	100.00
2	Denmark	7.63	83.47
3	Switzerland	7.59	82.34
4	United States	7.54	80.65
5	Singapore	7.52	79.64
6	Kuwait	7.46	77.78
7	Sweden	7.40	75.63
8	India	7.31	72.45
9	Canada	7.23	69.74
10	Nigeria	7.21	68.91
11	Hong Kong	7.20	68.67
12	Belgium	7.18	67.92
13	China	7.17	67.51
14	Netherlands	7.11	65.58
15	Korea	7.03	62.62
16	Guatemala	7.00	61.71
17	Mexico	6.91	58.56
18	Hungary	6.90	58.34
19	Germany	6.90	58.23
20	Thailand	6.88	57.53
21	Italy	6.86	56.74
22	Austria	6.80	54.75
23	Malaysia	6.78	53.97
24	Taiwan	6.77	53.85
25	Dominican Republic	6.77	53.59
26	U.A.E.	6.76	53.42
27	Philippines	6.76	53.27
28	New Zealand	6.74	52.76
29	Russia	6.70	51.27
30	Poland	6.67	50.38
31	Brazil	6.65	49.38
32	Australia	6.62	48.45
33	Panama	6.59	47.57
34	Vietnam	6.59	47.47
35	Slovenia	6.56	46.33
36	Czech Republic	6.52	44.87
37	Turkey	6.50	44.30
38	Spain	6.45	42.72
39	Croatia	6.41	41.04
40	France	6.39	40.64
41	Argentina	6.33	38.50
42	Egypt	6.29	37.14
43	Greece	6.29	36.92
44	Saudi Arabia	6.27	36.39
45	Jordan	6.14	31.87
46	Colombia	6.14	31.65
47	Iran	6.09	29.97
48	Slovak Republic	6.09	29.88
49	Indonesia	6.07	29.39
50	South Africa	6.00	26.90
51	Bangladesh	5.98	26.20
52	Japan	5.98	26.03
53	Peru	5.97	25.78
54	Pakistan	5.62	13.69
55	Cambodia	5.59	12.72
56	Morocco	5.46	8.15
57	Kenya	5.23	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.1 Personal competence

#### 8.1.3 Professionals' core competences (2019)

Survey: professionals' have differentiated professional skills.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.19	100.00
2	Nigeria	7.93	91.63
3	United States	7.81	87.61
4	Hong Kong	7.70	84.02
5	Israel	7.65	82.38
6	Sweden	7.60	80.73
7	Canada	7.50	77.44
7	Denmark	7.50	77.44
7	Netherlands	7.50	77.44
10	India	7.47	76.39
11	Kuwait	7.46	76.17
12	Philippines	7.42	74.94
13	Russia	7.33	71.95
14	Guatemala	7.28	70.24
15	Singapore	7.27	69.96
16	Korea	7.26	69.64
17	Hungary	7.26	69.47
17	Taiwan	7.26	69.47
19	U.A.E.	7.19	67.25
20	Italy	7.17	66.62
21	Mexico	7.17	66.61
22	Germany	7.16	66.15
23	Belgium	7.14	65.68
24	China	7.12	64.85
25	New Zealand	7.11	64.74
26	Thailand	7.04	62.29
27	Czech Republic	7.03	62.04
28	Japan	7.03	61.80
29	Austria	6.96	59.66
30	Argentina	6.91	57.98
31	Vietnam	6.86	56.49
32	Australia	6.86	56.27
33	Spain	6.82	54.99
34	Poland	6.79	54.08
35	Greece	6.77	53.47
36	Slovak Republic	6.77	53.45
37	Panama	6.75	52.74
38	Colombia	6.73	52.20
39	Malaysia	6.67	50.00
40	Turkey	6.65	49.35
41	France	6.63	48.84
42	Brazil	6.56	46.57
42	Croatia	6.56	46.57
44	Slovenia	6.56	46.43
45	Bangladesh	6.52	45.17
46	Dominican Republic	6.50	44.51
46	Jordan	6.50	44.51
48	Peru	6.45	42.92
49	South Africa	6.39	41.02
50	Saudi Arabia	6.36	40.02
51	Indonesia	6.36	39.81
52	Egypt	6.35	39.67
53	Iran	6.15	32.89
54	Pakistan	5.72	18.97
55	Kenya	5.64	16.08
56	Morocco	5.15	0.19
57	Cambodia	5.15	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 8.1.4 Professionals' education level (2019)

Survey: professionals are well educated and trained.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	8.16	100.00
2	Israel	8.10	97.78
3	Hong Kong	8.05	95.86
4	Guatemala	7.91	90.34
5	India	7.87	89.04
6	Korea	7.83	87.55
7	United States	7.81	86.61
8	Canada	7.81	86.56
9	Denmark	7.79	85.95
10	Germany	7.77	85.17
11	Philippines	7.76	84.64
12	Sweden	7.70	82.43
13	Taiwan	7.68	81.56
14	Thailand	7.64	80.13
15	Singapore	7.64	79.99
16	Hungary	7.61	79.09
17	China	7.52	75.62
18	Belgium	7.50	74.76
18	Netherlands	7.50	74.76
20	New Zealand	7.49	74.21
21	Austria	7.40	70.92
22	Nigeria	7.34	68.80
23	U.A.E.	7.33	68.36
24	Italy	7.31	67.63
25	Mexico	7.30	67.21
26	Poland	7.28	66.28
27	Kuwait	7.23	64.43
28	Czech Republic	7.23	64.24
29	Indonesia	7.21	63.79
30	Spain	7.15	61.38
31	Australia	7.14	61.05
31	Slovak Republic	7.14	61.05
33	Russia	7.13	60.69
34	Malaysia	7.11	59.83
35	Bangladesh	7.10	59.41
35	Colombia	7.10	59.41
37	Vietnam	7.07	58.19
38	Japan	7.05	57.49
39	Argentina	7.03	56.73
40	Slovenia	6.98	54.68
41	France	6.84	49.51
42	Iran	6.79	47.67
43	Jordan	6.79	47.35
44	South Africa	6.73	45.11
45	Saudi Arabia	6.68	43.36
46	Croatia	6.66	42.38
47	Greece	6.66	42.37
48	Turkey	6.59	39.77
49	Panama	6.56	38.78
50	Brazil	6.54	37.98
51	Egypt	6.41	33.00
52	Cambodia	6.33	29.99
53	Peru	6.26	27.10
54	Dominican Republic	6.03	18.48
55	Kenya	6.00	17.20
56	Morocco	5.92	14.25
57	Pakistan	5.55	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.1 Personal competence

#### 8.1.5 Professionals' international experience (2019)

Survey: professionals have a lot of international experiences.

RANK	COUNTRY	UNIT	INDEX
1	Israel	8.05	100.00
2	Hong Kong	7.70	89.69
3	Switzerland	7.65	88.33
4	Kuwait	7.62	87.20
5	Singapore	7.48	83.35
6	Sweden	7.45	82.33
7	Denmark	7.33	78.89
7	Malaysia	7.33	78.89
9	Thailand	7.16	73.78
10	Netherlands	7.16	73.72
11	Belgium	7.14	73.28
12	Hungary	7.06	70.97
13	Philippines	7.06	70.86
14	India	7.05	70.64
15	Korea	7.04	70.36
16	China	7.03	69.95
17	Germany	6.99	68.65
18	Canada	6.96	67.94
19	Poland	6.84	64.28
20	U.A.E.	6.81	63.46
21	Turkey	6.79	63.01
22	Taiwan	6.77	62.42
23	Austria	6.76	62.00
24	Vietnam	6.73	61.04
25	Indonesia	6.71	60.65
25	New Zealand	6.71	60.65
27	Italy	6.69	59.81
28	Egypt	6.65	58.67
29	Panama	6.63	58.02
30	Nigeria	6.59	56.88
31	Slovenia	6.58	56.74
32	Australia	6.57	56.45
33	United States	6.50	54.34
34	France	6.47	53.57
35	Czech Republic	6.39	51.02
36	Guatemala	6.38	50.66
37	Slovak Republic	6.37	50.56
38	Argentina	6.36	50.33
38	Saudi Arabia	6.36	50.33
40	Mexico	6.34	49.59
41	Jordan	6.14	43.82
42	Greece	6.12	43.01
43	Spain	6.09	42.29
44	South Africa	6.06	41.40
45	Russia	6.03	40.60
46	Cambodia	5.96	38.52
47	Brazil	5.92	37.16
48	Bangladesh	5.82	34.31
49	Croatia	5.81	34.09
50	Japan	5.78	32.99
51	Colombia	5.77	32.92
52	Peru	5.55	26.31
53	Kenya	5.41	22.21
54	Iran	5.32	19.69
55	Morocco	5.31	19.22
56	Dominican Republic	4.87	6.23
57	Pakistan	4.66	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.2 Social context

#### 8.2.1 Availability of professionals (2019)

Survey: the number of professionals such as engineers, designers, scholars and lawyers is sufficient.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	7.80	100.00
2	Hong Kong	7.65	96.56
3	Belgium	7.64	96.39
3	Jordan	7.64	96.39
5	Denmark	7.50	93.11
6	Kuwait	7.38	90.46
7	U.A.E.	7.29	88.19
8	China	7.22	86.62
9	Taiwan	7.19	86.08
10	Korea	7.19	86.06
11	Canada	7.19	86.05
12	India	7.13	84.58
13	Netherlands	7.11	84.05
14	Singapore	7.09	83.72
15	United States	6.99	81.30
16	Dominican Republic	6.97	80.87
17	Sweden	6.95	80.48
18	Italy	6.91	79.66
19	Greece	6.86	78.51
20	Egypt	6.81	77.33
21	Russia	6.73	75.51
22	Spain	6.73	75.37
23	Iran	6.68	74.20
24	Philippines	6.64	73.28
25	Argentina	6.58	71.89
26	Malaysia	6.56	71.43
27	Slovenia	6.51	70.42
28	Panama	6.47	69.44
29	Australia	6.43	68.51
30	Thailand	6.36	66.94
31	Colombia	6.28	65.05
32	Austria	6.24	64.18
33	Brazil	6.23	63.93
34	Germany	6.21	63.59
35	Japan	6.20	63.27
36	Czech Republic	6.19	63.12
37	Saudi Arabia	6.18	62.85
38	Vietnam	6.14	61.80
39	Mexico	6.11	61.22
40	Turkey	6.03	59.35
41	France	5.95	57.47
42	Hungary	5.94	57.19
43	Poland	5.86	55.47
44	New Zealand	5.83	54.74
45	Kenya	5.73	52.41
46	Israel	5.70	51.79
47	Pakistan	5.62	49.96
48	Guatemala	5.56	48.63
49	Slovak Republic	5.54	48.18
50	Morocco	5.54	48.08
51	Peru	5.39	44.60
52	Indonesia	5.29	42.27
53	Bangladesh	5.28	42.14
54	Nigeria	4.90	33.34
55	Croatia	4.69	28.54
56	South Africa	4.36	21.10
57	Cambodia	3.44	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.2 Social context

#### 8.2.2 The mobility of professionals (2019)

Survey: professionals can easily and fairly move to different firms and institutions.

RANK	COUNTRY	UNIT	INDEX
1	Denmark	7.63	100.00
2	Switzerland	7.61	99.48
3	Hong Kong	7.60	99.20
3	Israel	7.60	99.20
5	Belgium	7.43	93.71
6	United States	7.40	92.71
7	Netherlands	7.37	91.79
8	India	7.26	88.17
9	Canada	7.19	86.15
10	Singapore	7.12	83.88
11	Malaysia	7.11	83.56
12	Kuwait	7.00	80.00
13	Australia	6.98	79.24
14	China	6.88	76.12
14	Philippines	6.88	76.12
16	Jordan	6.86	75.43
17	Sweden	6.85	75.20
18	New Zealand	6.83	74.51
19	Korea	6.80	73.54
20	Thailand	6.72	71.04
21	Italy	6.71	70.86
22	Mexico	6.67	69.37
23	U.A.E.	6.67	69.33
24	Panama	6.66	69.00
25	Austria	6.64	68.48
26	Argentina	6.61	67.39
27	Egypt	6.59	66.82
28	Taiwan	6.58	66.58
29	Hungary	6.42	61.42
30	Germany	6.41	61.26
31	Vietnam	6.39	60.36
32	Turkey	6.38	60.24
33	Colombia	6.28	56.89
34	Russia	6.23	55.47
35	Dominican Republic	6.20	54.40
36	Slovenia	6.14	52.47
37	Nigeria	6.14	52.41
38	Greece	6.12	51.69
39	Czech Republic	6.10	51.10
40	Slovak Republic	6.06	49.83
41	Poland	6.00	48.00
42	Peru	5.94	45.94
43	Guatemala	5.91	45.00
44	Brazil	5.88	44.00
45	Indonesia	5.86	43.43
46	South Africa	5.82	42.18
47	Morocco	5.77	40.62
48	Bangladesh	5.74	39.68
49	Saudi Arabia	5.68	37.82
50	Croatia	5.66	37.00
51	Spain	5.58	34.42
52	Japan	5.55	33.60
53	France	5.00	16.00
54	Iran	4.94	14.12
55	Cambodia	4.78	8.89
56	Pakistan	4.69	6.07
57	Kenya	4.50	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 8.2.3 Professionals' compensation (2019)

Survey: professionals are appropriately compensated.

RANK	COUNTRY	UNIT	INDEX
1	Switzerland	7.92	100.00
2	Denmark	7.63	91.73
3	Hong Kong	7.45	86.88
4	Belgium	7.43	86.28
5	Israel	7.30	82.72
6	Netherlands	7.26	81.69
7	Singapore	7.24	81.12
8	Sweden	7.15	78.55
9	Italy	7.14	78.36
10	Canada	7.12	77.59
11	China	7.09	76.95
12	United States	7.07	76.43
13	Kuwait	7.00	74.39
14	Australia	6.98	73.73
15	India	6.94	72.62
16	Germany	6.89	71.22
17	New Zealand	6.86	70.43
18	Korea	6.78	68.31
19	Austria	6.60	63.30
20	U.A.E.	6.48	59.86
21	Saudi Arabia	6.27	54.22
22	Thailand	6.24	53.31
23	Japan	6.18	51.51
24	France	6.16	51.03
25	Egypt	6.12	49.92
26	Slovenia	6.12	49.88
27	Czech Republic	6.00	46.65
27	Indonesia	6.00	46.65
29	Turkey	5.94	45.02
30	Panama	5.94	44.92
31	Taiwan	5.90	43.97
32	Malaysia	5.89	43.57
33	Philippines	5.88	43.29
34	Vietnam	5.82	41.61
35	Hungary	5.74	39.50
36	Colombia	5.70	38.33
37	Poland	5.67	37.62
38	Mexico	5.61	35.74
39	Brazil	5.56	34.52
40	Greece	5.54	33.85
41	Bangladesh	5.50	32.78
41	Dominican Republic	5.50	32.78
43	Argentina	5.48	32.36
44	Nigeria	5.48	32.31
45	Russia	5.47	31.86
46	Morocco	5.46	31.72
47	Guatemala	5.44	31.05
48	Spain	5.27	26.48
49	Slovak Republic	5.20	24.46
50	South Africa	5.18	23.96
51	Jordan	5.04	19.90
52	Cambodia	5.00	18.91
53	Croatia	4.97	18.05
54	Iran	4.82	14.02
55	Peru	4.81	13.54
56	Pakistan	4.66	9.35
57	Kenya	4.32	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

## 8 Professionals

### 8.2 Social context

#### 8.2.4 Social status of professionals (2019)

Survey: professionals are proud of their current professions.

RANK	COUNTRY	UNIT	INDEX
1	Israel	8.10	100.00
2	Nigeria	8.00	97.22
3	Switzerland	7.93	95.16
4	Hong Kong	7.70	88.89
4	Sweden	7.70	88.89
6	Belgium	7.68	88.29
7	Denmark	7.63	86.81
8	United States	7.53	84.15
9	Netherlands	7.52	83.99
10	India	7.47	82.62
11	Canada	7.42	81.20
12	Germany	7.41	80.95
13	China	7.38	80.07
14	Italy	7.31	78.17
15	Singapore	7.27	77.02
16	Philippines	7.24	76.18
17	New Zealand	7.23	75.79
18	Korea	7.22	75.54
19	Thailand	7.20	75.00
20	Colombia	7.17	74.07
21	Indonesia	7.14	73.41
22	Australia	7.12	72.75
23	Hungary	7.06	71.24
24	Guatemala	6.97	68.58
25	Japan	6.95	68.06
26	Czech Republic	6.94	67.65
27	Kuwait	6.92	67.31
28	Austria	6.80	63.89
29	Vietnam	6.73	61.87
30	Turkey	6.71	61.27
31	Dominican Republic	6.67	60.19
32	France	6.63	59.21
33	Argentina	6.61	58.50
34	Slovenia	6.60	58.46
35	Egypt	6.59	58.01
36	Taiwan	6.55	56.90
37	South Africa	6.52	55.98
38	Panama	6.50	55.56
39	Saudi Arabia	6.45	54.29
40	Russia	6.43	53.70
41	Mexico	6.40	52.78
42	U.A.E.	6.38	52.25
43	Jordan	6.25	48.61
44	Malaysia	6.22	47.84
45	Poland	6.19	46.83
46	Croatia	6.16	46.01
47	Cambodia	6.15	45.78
48	Greece	6.08	43.80
49	Peru	6.00	41.67
50	Slovak Republic	5.97	40.87
51	Brazil	5.90	38.77
52	Bangladesh	5.84	37.22
53	Spain	5.79	35.77
54	Iran	5.38	24.51
55	Pakistan	5.10	16.76
56	Morocco	5.00	13.89
57	Kenya	4.50	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-

#### 8.2.5 Openness to foreign professionals (2019)

Survey: the business environment is open and attractive to foreign professions.

RANK	COUNTRY	UNIT	INDEX
1	Hong Kong	7.90	100.00
2	Sweden	7.80	97.34
3	Nigeria	7.76	96.24
4	India	7.72	95.16
5	Singapore	7.64	93.00
6	Belgium	7.61	92.22
7	Netherlands	7.44	87.90
8	China	7.37	86.00
9	Israel	7.30	84.06
10	Switzerland	7.29	83.68
11	Colombia	7.23	82.29
12	Germany	7.23	82.16
13	United States	7.21	81.56
14	Vietnam	7.18	80.92
15	Mexico	7.13	79.63
16	Malaysia	7.11	79.04
17	Denmark	7.08	78.30
18	Dominican Republic	7.07	77.86
19	Thailand	7.04	77.15
20	New Zealand	7.03	76.85
21	Kuwait	7.00	76.09
22	Philippines	6.94	74.48
23	Morocco	6.86	72.29
24	Canada	6.81	70.98
25	Australia	6.76	69.76
26	Hungary	6.74	69.23
27	Guatemala	6.72	68.61
28	Italy	6.71	68.50
29	Poland	6.70	68.05
30	U.A.E.	6.67	67.23
31	Egypt	6.65	66.71
32	Indonesia	6.64	66.60
33	Spain	6.64	66.43
34	Panama	6.63	66.12
35	Turkey	6.56	64.36
36	Czech Republic	6.55	64.09
37	Korea	6.54	63.73
38	Peru	6.39	59.80
39	Greece	6.38	59.48
40	Austria	6.36	59.08
41	Bangladesh	6.30	57.49
42	Taiwan	6.29	57.23
43	Slovenia	6.21	55.08
44	Russia	6.17	53.95
45	Cambodia	6.15	53.45
46	Brazil	6.02	50.07
47	Argentina	5.94	47.91
48	Saudi Arabia	5.91	47.10
49	France	5.76	43.22
50	Croatia	5.69	41.21
51	Pakistan	5.62	39.44
52	Slovak Republic	5.34	32.06
53	Japan	5.30	30.92
54	Jordan	5.25	29.59
55	South Africa	4.73	15.70
56	Iran	4.35	5.75
57	Kenya	4.14	0.00
-	Chile	-	-
-	Finland	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	United Kingdom	-	-