IPS
NATIONAL COMPETETIVENESS RESEARCH
2022

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Published by the Institute for Policy & Strategy on National Competitiveness (IPSNC), in cooperation with the Institute for Industrial Policy Studies (IPS), aSSIST University, Taylor Institute at Franklin University Switzerland (FUS), and United Nations Institute for Training and Research (UNITAR).

- The report is abstracted from Cho and Moon (2022). For more information, please refer to the following reference.
- Cho, Dong-sung and Moon, Hwy-chang. 2022. *The Competitiveness of Nations 2: Government Policies and Business Strategies for Environmental, Social, and Governance (ESG).* Singapore: World Scientific Publishing.
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IPS
National Competitiveness Research Team

Dong-sung Cho	Chairman	Institute for Industrial Policy Studies
	Professor Emeritus	Seoul National University
Hwy-chang Moon	Chairman	Institute for Policy & Strategy on National Competitiveness
	Professor Emeritus	Seoul National University
Wenyan Yin	Researcher	Institute for Policy & Strategy on National Competitiveness
Dilong Huang	Researcher	Institute for Policy & Strategy on National Competitiveness
Minji Hong	Researcher	Institute for Policy & Strategy on National Competitiveness

Professor Dong-Sung Cho

Professor Hwy-Chang Moon

About the Authors

Dong-sung Cho is Professor Emeritus and former Dean of the College of Business Administration at Seoul National University. After he received a doctoral degree from Harvard Business School (HBS) in 1977, he worked at Boston Consulting Group in Tokyo and Gulf Oil Corporation in Pittsburgh before joining Seoul National University. He has been a visiting professor at Harvard Business School, University of Michigan, Boston University, Duke University, INSEAD, Helsinki School of Economics (currently Aalto University), University of Sydney, the University of Tokyo, and Peking University. He has published 120+ research articles in major journals, and authored and coauthored 60+ monographs such as The General Trading Company: Concept and Strategy (1988, Lexington Books), Tiger Technology: The Creation of a Semiconductor Industry in East Asia (2000, Cambridge University Press), and The Mechanism-Based View (2014, SEBA). He is a frequent speaker at international conferences such as Davos Forum, World Knowledge Forum, and QS Conference. He is Chairman of the Board of Inspection at the Supreme Prosecutors' Office in the Republic of Korea and Honorary Consul General of Finland in Korea. He served as the President of Incheon National University from 2016 to 2020. He is the Second President of the Hanseatic League of Universities which is a society of 120 plus universities from around the world. He also tops the list of "Representative Management Gurus" in Korea.

Hwy-chang Moon (Ph.D. from University of Washington) is Professor Emeritus and former Dean in the Graduate School of International Studies at Seoul National University. Professor Moon is currently the Chairperson of the Institute for Policy and Strategy on National Competitiveness (IPSNC) in Seoul, Korea, a consultant to the United Nations Conference on Trade and Development (UNCTAD), and an Honorary Ambassador of Foreign Investment Promotion for South Korea. He has been frequently invited to deliver lectures at various universities including Stockholm University and Helsinki School of Economics (currently Aalto University) in Europe, Keio University and Beijing Normal University in Asia, and The State University of New York at Stony Brook and Stanford University in the United States. Alongside this, he has conducted many consulting/research projects for multinational companies (e.g., Samsung Electronics), international organizations (e.g., UNCTAD), and governments (e.g., Korea, Malaysia, Dubai, Azerbaijan, Guangdong Province of China, and India). Professor Moon has also been invited by international newspapers and media for interviews and debates, including New York Times, NHK World TV, and Reuters. He has published numerous articles and books, including The Strategy for Korea's Economic Success (2016, Oxford University Press) and The Art of Strategy: Sun Tzu, Michael Porter, and Beyond (2018, Cambridge University Press).

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Extant Literature on National Competitiveness

Extant Literature on National Competitiveness

"National competitiveness" has long been a source of focus in economics with traditional scholars such as Adam Smith and David Ricardo having laid down some of the important bases in this regard. The real breakthrough though came in 1990, when Michael Porter introduced a new competitive theory: the diamond model, which was further adapted by later scholars to develop many extended models and conduct new empirical studies. In order to better understand the concept of national competitiveness, this chapter first conducts a historical review of the definition and models conceptualizing and measuring national competitiveness. Next, the literature review explains how the IPS model is more comprehensive by integrating extended models of Porter's single diamond model. The IPS model is the basis for evaluating and measuring the national competitiveness of IPS National Competitiveness Research. This chapter then applies the IPS model to systematically analyze the impact of the Russia-Ukraine War, and such analysis verifies the comprehensiveness of the model in capturing the various impacts in a systematic manner.

DEFINITION OF NATIONAL COMPETITIVENESS

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

In this perspective, the most popular definition of competitiveness at the national level is 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.

This approach has 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, Moon (2010) argued that competitiveness and productivity are conceptually different. 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 (Cho & Moon, 1998). Therefore, a nation's competitiveness can 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 – release intra-group rankings for comparative evaluation among economies of similar levels of competitiveness and size as well as overall rankings among all countries.

Krugman (1994), though, 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 that decisions based on competitiveness are not always wrong or dangerous. Instead, it could provoke a passion for economic development in a world-class economy with a higher living standard. In doing so, benchmarking the country's model with higher competitiveness is not to declare economic warfare on foreign competitors but to emulate them and elevate a country's standards of performance. Hence, this explains that competitiveness is essential in measuring the economic performance of 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, prohibit imports, and subsidize exports. A tax policy is often utilized to achieve 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. 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 though. 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 trading partners. Still, this model is incomplete, and one of the critical limitations is that it does not sufficiently explain why the differences in productivity levels between countries exist.

Heckscher & 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 in 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.

Despite this, Leontief (1953) found a paradoxical result. He expected that the United States (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 that require more capital per worker than its exports do. 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. He 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 and the product cycle model is useful in reconciling the Leontief Paradox. Suppose the US has a comparative advantage in newly 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 receive market feedback. A large amount of fixed capital can now be invested; the production process may be quite capital intensive. The Leontief Paradox can be reconciled because US exports are in the introduction stage, where the production is labor-intensive and imports are 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 establish 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 far 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 those in Western Europe and Japan, have prospered without abundant natural resources, and many resource-rich countries like those in Latin America are not as developed. On a similar note, developed countries usually have expensive labor costs while less developed countries have cheaper ones. As such, it is fair to say that the reality is almost the opposite of what traditional theorists have predicted.

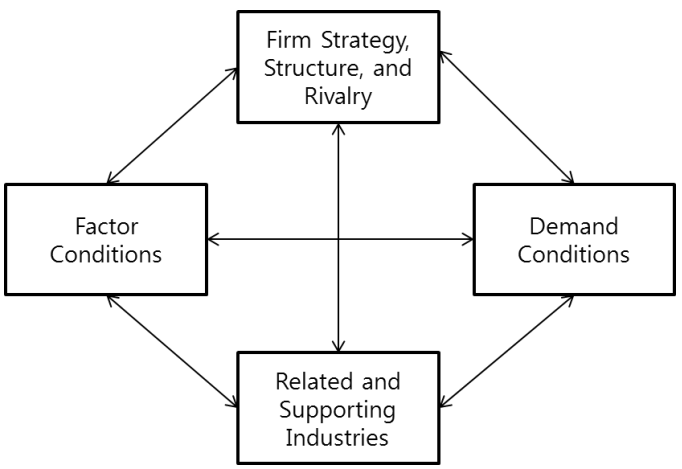
As Porter (1990) mentions in his book, the traditional model, whose origins date back to Adam Smith and David Ricardo and that is embedded in classical economics, is at best incomplete and at worst incorrect. Other economists see national competitiveness as a macroeconomic or financial phenomenon. They 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 refer to the nation's strong position in factors of production, such as skilled labor or infrastructure, which is necessary to compete in an industry. Basic factors,

such as a pool of labor or a local raw-material source, do not necessarily place the nation in an advantageous 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 and more difficult for foreign firms to imitate.

Demand conditions stress 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 firm 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 represent 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 refer 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. The competitiveness of an industry results from a convergence of the management practices and organizational modes favored in the country and the sources of competitive advantage in the industry. Porter particularly identified 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 countries 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), Mexico (Hodgetts, 1993), Ireland (Clancy et al., 2001), Turkey (Oz, 2002), the United Kingdom (Porter & Ketels, 2003), 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 & Sharma, 2017). Nonetheless, Porter's Diamond Model is not free from criticism.

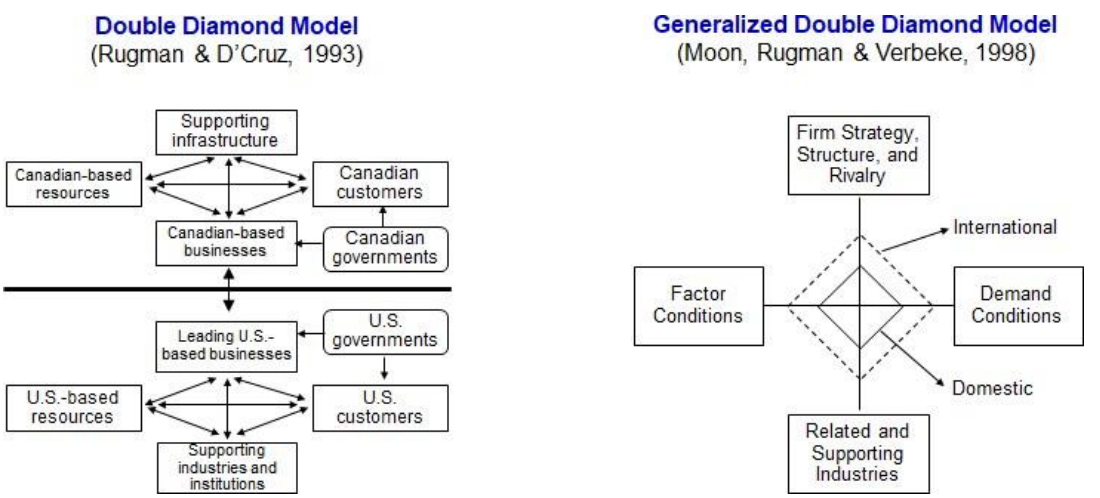
Grant (1991) argued that most of the existing studies adopted a case approach, much in line with Porter's original approach, which may lack accuracy and generalizability. Rigorous examinations of the Diamond Model have been rare, and there have been few empirical attempts that support a broad assortment of national outcomes (Fainshmidt et al., 2016). For example, Greign & 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 later 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 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 on how they appropriately influence a nation's competitiveness. To solve this problem, the Double Diamond Model (Rugman & 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

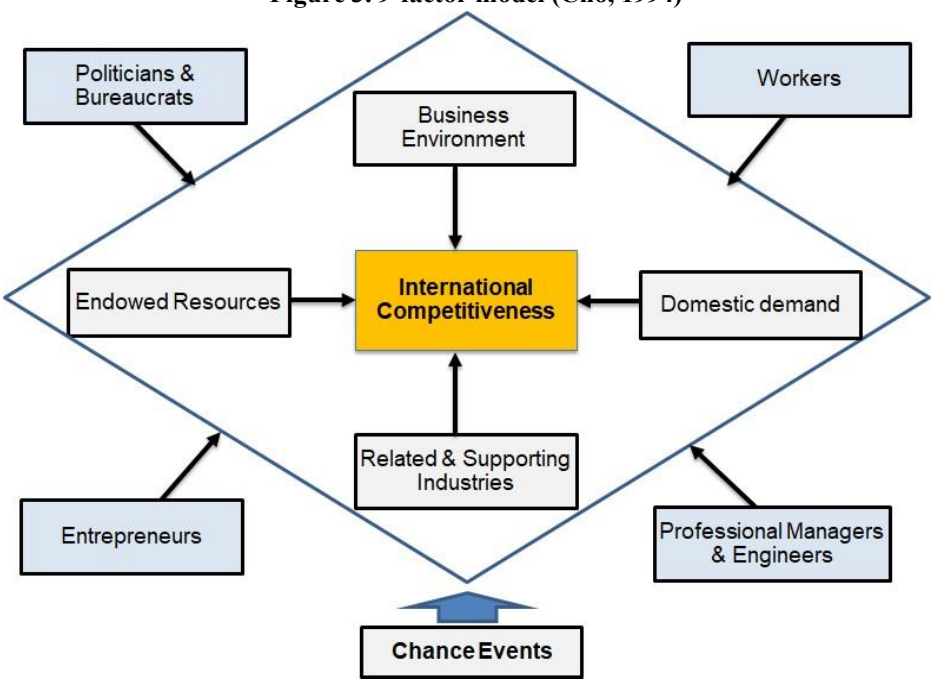


The Double Diamond Model, developed by Rugman & D'Cruz (1993), suggests that managers build upon both domestic and foreign diamonds to become globally competitive in terms of survival, profitability, and growth. While Rugman & D'Cruz's North American diamond framework fits well for Canada and New Zealand, 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 smaller 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

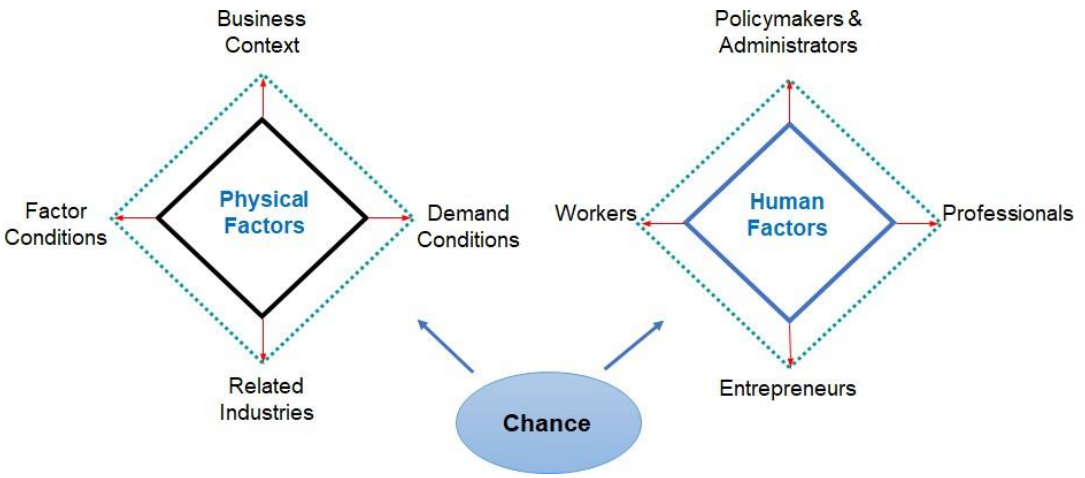
matter, Cho (1994) proposed the nine-factor model by incorporating the role of human factors, which was not explicit in Porter's Diamond Model (see Figure 3). In this model, the human factors include workers, politicians and bureaucrats, entrepreneurs, and professionals; physical factors include endowed 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 extend the scope and sources of national competitiveness. Still, they need to be incorporated into a single framework 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 et al. (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). In this respect, Fainshmidt et al. (2016), suggest two additional variables including multinational firm and governance quality, to enhance the explaining power of Porter's Diamond Model. However, such an attempt overlaps 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 approach among the extended models of Porter's single diamond framework, and this further provides the justification for adopting the IPS model to the analysis and evaluation of national competitiveness for our research.

THE IPS MODEL AND ITS APPLICATIONS TO THE RUSSIA-UKRAINE WAR

The 2022 Russia-Ukraine War has had a significant impact upon the Russian and Ukraine economies, as well as the rest of the world. The following shows how the IPS model is useful in understanding the effect of the Russia-Ukraine War in a comprehensive and systematic way (See Table 1).

Table 1. The application of the IPS model to the Russia-Ukraine war

8 Factors	Impact of the Russia-Ukraine War
Factor Conditions	● Disruption to the world's energy supply. ● Disruption to world's food supplies (e.g., wheat, oats).
Demand Conditions	● Growing demand for the alternative oil suppliers such as Saudi Arabia. ● Growing demand for grain substitutes such as rice.
Related Industries	● Disrupted trade routes from Asia to Europe and increased logistical costs. ● Cyberattack and threats to the network infrastructure in many countries, beyond Russia and Ukraine.
Business Context	● Western-led sanctions and disruption to economic activities in Russia. ● The growing rivalry between the East and West.
Workers	● A loss of employment in Russia as multinational companies suspend activities or leave Russia. ● Disincentivizing foreign workers in Russia to transfer money to their home countries due to the depreciation of the Russian ruble.
Policymakers and administrators	● Securing international assistance by Ukraine policymakers. ● Shunning away from the internationalization by Russian policymakers.
Entrepreneurs	● Accelerating the investment of EU countries in renewable energy. ● Diversifying environment-friendly energy sources to accelerate climate change goals.
Professionals	● Technology isolation in Russia due to the West sanctions. ● Brain-drain degrading the availability of professionals in Russia.

Factor conditions

The impact on *Factor Conditions* from the Russia-Ukraine War has predominantly disrupted the global oil and food supply chain. For example, an estimated 3 percent of the global oil supply has been removed (Killlian & Plante, 2022). Moreover, the war between Russia and Ukraine has disrupted the food supply chain—which was already disrupted by increasing prices (USDA, 2022a)—mainly due to the trade embargo imposed by Russia and Ukraine as part of the war. Russia banned grain exports to both former Soviet and Eurasian countries, and as a result, the wheat exports of Russia have been reduced by 45 percent. (Reidy, 2022). Additionally, the quantity supply of grain crops in Ukraine has decreased due to the war which has destroyed six large granaries (*New York Times*, 2022a). Moreover, Ukraine has announced an export embargo on wheat and oats to secure food supply for its people during wartime, which adds to the uncertainty over grain supply to the rest of the world (*New York Times*, 2022a). Further deteriorating the situation, some other countries (e.g., Egypt, India, and Turkey) have also joined in on the trade embargo to secure their own food supply.

Demand conditions

As a result of the import restrictions on Russian oil, this is expected to decrease rapidly (Offshore Energy, 2022). Additionally, Ukraine is likely to face a more than 50 percent

drop in oil demand due to the destruction of its infrastructure; for example, a fall in road and air traffic will shave off 65,000 daily barrels of oil demand in Ukraine (AIA Energy, 2022). Contrary to this, as European and Asian countries search for possible alternative oil suppliers, the demand for Saudi Arabian or Emirati oil has increased (Middle East Institute, 2022; CNN, 2022). On the other hand, the Russia-Ukraine War has accelerated the decarbonization efforts of many countries, which seek to decrease their oil demand in the long run. The European Union (EU) has announced its plan to triple the renewable energy capacity by 2030 (Green Biz, 2022). Hence, in the long run, oil energy is likely to be replaced by other renewable sources of energy. For grain supply, the demand for substitutes—such as rice—for Russian and Ukraine grain exports has increased as the price volatility of wheat becomes worse (International Food Policy, 2022).

Related industries

The related business of many countries is likely to be affected by the ongoing war between Russia and Ukraine as the industrial infrastructure such as transportation routes to or through Russia has largely been disrupted. In fact, on top of the inflationary pressure presented by the increased oil prices, the conflict between the two countries disrupted traditional sea and air trading routes, adding to logistics costs (Deloitte, 2022). As the air routes connecting Europe-Asia and Asia-North America through Russia were cut off, the prices to transport to Europe or North America from Asia are becoming more expensive (European Parliament, 2022), thus disrupting the supply chains for many firms. Moreover, the threat of cyberattacks from the war may have spillover effects on other European companies and countries (McKinsey & Company, 2022). For example, the leading satellite internet company, Viasat stated tens of thousands of terminals were damaged beyond repair, affecting many internet users in Central European and Russia (BBC, 2022).

Business context

The business context of Russia has significantly deteriorated due to Western sanctions and intensified the creation of economic blocs between the East and West. The US imposed powerful sanctions on Russia that banned business by freezing the assets of Russia's largest financial institutions and banks (The White House, 2022). Moreover, US President Joseph Biden announced his plan to implement a new executive order to prevent US citizens from making new investments in Russia (The White House, 2022). Thus, US sanctions are expected to significantly deteriorate the role Russia plays in the global economy. In response to this, Russia has been moving closer to China which it now characterizes as a "limitless friendship." In fact, China has long been one of the major suppliers of semiconductors and consumer electronics, thus playing a large role in Russian technology imports and this is likely to reduce to some extent the impact of US-led technology sanctions on Russia. However, this complicates the relationship between Russia and the West and intensifies the formation of economic blocs and an increasing sense of a global divide. This will likely pose a negative impact on Russia's business context. (Hankyoreh, 2022; Carnegie Europe, 2022).

Workers

Workers are also substantially affected by the war. Since the beginning of the war, many

large multinational corporations are escaping from the Russian market. For example, Ikea and Nike announced a temporary suspension of their operations in Russia. Apple, Samsung, and Microsoft declared the suspension of the sales of their products in Russia, to name a few corporations among more than 300 corporations that announced the suspension of their business in the Russian market after the breakout of the Russia-Ukraine war (The Conversation, 2022). Upon the departure of many multinational companies, it is forecasted that about one million employees in Russia will lose their jobs (Reuters, 2022). Moreover, the West's sanctions on Russia are likely to affect the labor mobility in Russia as the Russian currency is now facing a significant depreciation, thus disincentivizing foreign workers in Russia to send money back to their home countries (Organized Crime and Corruption, 2022).

Policymakers and administrators

Russia and Ukraine are pursuing opposite courses as Moscow moves farther away from internationalization while Kyiv utilizes internationalization strategically. Since the outbreak of the war, Ukraine has been actively communicating its needs with the international community, asking for more support such as weapons and infrastructure (ABC News, 2022; NBC, 2022). Additionally, the frequent media presence of Ukrainian President Volodymyr Zelensky since the outbreak of the war has placed him in the position of wartime leader and hero, captivating global attention to what is going on in his country (*Washington Post*, 2022). Contrarily, Russia seems to be shunning away from international society, tightening its control over its territory by enhancing censorship of the media (The Nation, 2022). Reflecting the stronger control over the internet in Russia, the demand for Virtual Private Networks (VPN) has surged since March 2022 (CNBC, 2022).

Entrepreneurs

The Russia-Ukraine War has affected *Entrepreneurs* in many European countries through the disclosed weakness of relying upon Russian oil imports. Hence, by announcing the plan to be independent of Russian fossil fuels by 2030, Europe is seeking opportunities to accelerate its investments in renewable energy (European Commission, 2022; World Economic Forum, 2022). In an effort to reduce reliance on Russian oil and gas, Germany has scuttled its approval for the planned Nord Stream 2 gas pipeline from Russia and disclosed its plan to import natural gas from other sources such as Qatar and the US (Tollefson, 2022). Furthermore, Germany accelerated its climate goal to achieve 100 percent renewable energy by 2035 instead of 2050 (Green Biz, 2022). Italy, the Netherlands, and the United Kingdom also stated the plan to expand the installation of wind power (Tollefson, 2022).

Professionals

The Western-led sanctions on Russia to prevent it from accessing high technology are likely to affect the economy by degrading the availability of professionals. In February 2022, the US announced it would impose Russia-wide restrictions on semiconductors,

telecommunication, encryption security, lasers, sensors, navigation, avionics, and maritime technologies (Science Business, 2022). This will disrupt the supply of the products using this technology from the areas of aircraft, avionics, telecommunications, maritime, computers, and microelectronics (*New York Times*, 2022b). Overall, this will cut Russia's access to basic high technology, and disrupt its efforts to modernize the economy. The brain drain of professionals in Russia has been inevitable amid the growing fear of isolation due to the sanctions and fear of growing censorship in Russia; as of February 2022, about 44,000 Russians have fled to Finland, the number increased from 27,000 compared to the previous year (*Wall Street Journal*, 2022).

The above analysis of the Russia-Ukraine War based on the IPS model shows that it has not only severely disrupted the economies of both countries but has also hit badly the economies of the world. As the interconnectivity among nations and regions is growing, the spillover impact on each other has deepened more than before. This thus clearly shows how economies are closely tied with each other and prove that an individual country's competitiveness is not only determined by its home-based resources but is also dependent on the global resources via the eight factors of the IPS model. Moreover, the exogenous factor such as the *chance event* in the diamond model heavily influences national competitiveness, thereby either weakening or strengthening it. Each nation or region has been required to establish strategic approaches to enhance its overall competitiveness that would help them to build resilience to the external challenges and sustain its development in the long run.

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02

Highlights

Highlights[1]

OVERALL RANKINGS

There are three key institutions that release national competitiveness ranking reports annually, they are International Institute for Management Development (IMD), World Economic Forum (WEF), and IPS Switzerland. Unlike the International Institute for Management Development (IMD) and World Economic Forum (WEF) which release only one ranking per year, IPS National Competitiveness Research (by IPS Switzerland) releases two rankings, one based on cost leadership and another based on differentiation strategies. Tables 1 and 2 show the results of the two rankings. In fact, the ranking based on cost and differentiation strategies offers markedly different outcomes. Under cost strategy, economies with relatively rich resources, such as Canada (1), Australia (2), United Arab Emirates (UAE) (3), and China (4), are ranked higher. By contrast, in differentiation strategy ranking, developed economies such as Denmark (1), Switzerland (2), Netherlands (3), and Finland (4) tend to dominate the top rankings. On the other hand, the United States (US) and China show a stark difference depending on their strategic choice. The US ranked twelfth under the cost strategy ranking, but it rose to sixth in the differentiation strategy ranking. For its part, China ranks fourth in the cost strategy ranking, yet falls to nineteenth in a differentiation strategy ranking.

Table 1. Strategy rankings

Country/ Region	CSR	CSI	Country/ Region	DSR	DSI
Canada	1	53.77	Denmark	1	71.66
Australia	2	52.96	Switzerland	2	71.24
UAE	3	49.80	Netherlands	3	69.27
China	4	48.61	Finland	4	69.23
New Zealand	5	48.23	Singapore	5	67.66
Singapore	6	47.91	United States	6	67.63
Denmark	7	47.04	Sweden	7	67.30
Netherlands	8	46.41	Canada	8	66.01
Sweden	9	46.30	Belgium	9	64.2
Finland	10	46.10	Hong Kong SAR	10	64.07
Switzerland	11	46.02	UAE	11	63.43
United States	12	43.75	Australia	12	63.03
Saudi Arabia	13	42.78	United Kingdom	13	59.43
Kuwait	14	42.45	New Zealand	14	58.54
Hong Kong SAR	15	41.73	Korea, Republic of	15	57.97
Belgium	16	41.20	Taiwan, China	16	57.66
Taiwan, China	17	40.33	Austria	17	57.58
Austria	18	40.06	Germany	18	57.03
United Kingdom	19	38.98	China	19	55.46
Germany	20	38.51	Italy	20	53.85
India	21	38.15	Israel	21	50.72
Korea, Republic of	22	37.63	Saudi Arabia	22	49.62
Israel	23	37.47	France	23	49.5
Malaysia	24	37.45	Japan	24	48.11
Panama	25	36.48	Vietnam	25	47.81

[1] This chapter presents the highlights of IPS National Competitiveness Research 2022. To see more information about the rankings of economies in factor and sub-factor, please visit the IPSNC website (https://www.ipsncr.org/).

Italy	26	36.36	India	26	47.21
Chile	27	35.94	Kuwait	27	46.28
Philippines	28	35.78	Indonesia	28	46.16
Indonesia	29	35.14	Czech Republic	29	46.11
Japan	30	34.73	Poland	30	45.55
Thailand	31	34.72	Philippines	31	45.07
Russia	32	34.19	Greece	32	44.92
France	33	34.14	Panama	33	44.36
Poland	34	34.13	Slovenia	34	44.27
Czech Republic	35	34.02	Thailand	35	43.71
Greece	36	32.81	Chile	36	43.12
Slovenia	37	32.43	Colombia	37	43.02
Colombia	38	31.91	Malaysia	38	42.62
Egypt	39	31.05	Spain	39	42.24
Peru	40	30.95	Dominican Republic	40	41.76
Dominican Republic	41	30.79	Croatia	41	39.21
Jordan	42	30.58	Peru	42	39.11
Guatemala	43	30.52	Türkiye	43	39.05
Vietnam	44	30.43	Nigeria	44	38.94
Mexico	45	30.43	Mexico	45	38.68
Argentina	46	30.36	Hungary	46	37.70
Cambodia	47	29.87	Jordan	47	37.29
Spain	48	29.72	Ukraine	48	36.98
Hungary	49	29.06	Egypt	49	36.93
Türkiye	50	28.94	Argentina	50	36.53
Nigeria	51	28.88	Russia	51	36.19
Brazil	52	28.27	Slovak Republic	52	34.93
Oman	53	27.93	Bangladesh	53	34.27
Ukraine	54	27.92	Guatemala	54	33.64
Pakistan	55	27.43	Brazil	55	32.55
Bangladesh	56	26.47	South Africa	56	32.28
Croatia	57	24.57	Cambodia	57	30.81
Slovak Republic	58	22.51	Sri Lanka	58	28.67
Kenya	59	21.48	Pakistan	59	27.61
Sri Lanka	60	21.36	Morocco	60	25.86
Morocco	61	18.58	Kenya	61	24.51
South Africa	62	16.93	Oman	62	22.05

Note: CSR: Cost Strategy Ranking, DSR: Differentiation Strategy Ranking

Table 2. Matching two strategy rankings

Country/ Region	CSR	DSR	Country/ Region	DSR	CSR
Canada	1	8	Denmark	1	7
Australia	2	12	Switzerland	2	11
UAE	3	11	Netherlands	3	8
China	4	19	Finland	4	10
New Zealand	5	14	Singapore	5	6
Singapore	6	5	United States	6	12
Denmark	7	1	Sweden	7	9

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

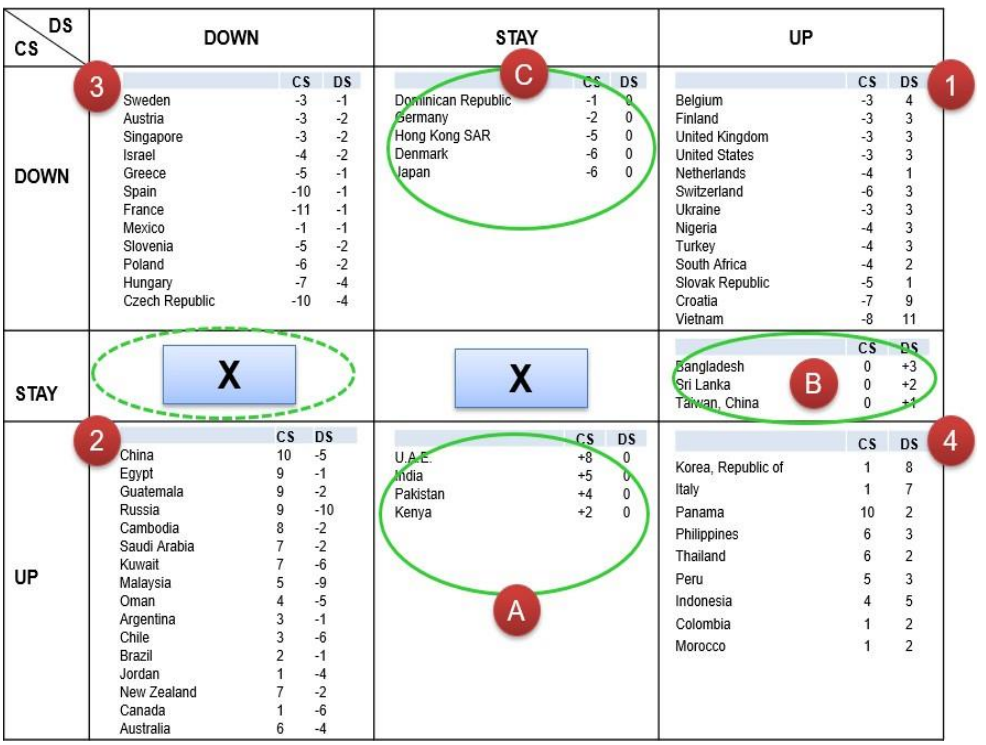
Kenya	59	61	Pakistan	59	55
Sri Lanka	60	58	Morocco	60	61
Morocco	61	60	Kenya	61	59
South Africa	62	56	Oman	62	53

Note: CSR: Cost Strategy Ranking, DSR: Differentiation Strategy Ranking

2022 IPS COMPETITIVENESS RANKING CHANGES BY COST AND DIFFERENTIATION STRATEGIES

This section classifies the 62 economies into seven groups based on the ranking changes under cost and differentiation strategies against the base data rankings. We highlight the key features of each group, thus establishing future development strategies. As Figure 1 shows, the overall competitiveness ranking changes, depending on whether the cost or differentiation strategy is adopted. As explained in Chapter 2, the eight factors of the IPS model include four physical factors (Factor Conditions, Demand Conditions, Related Industries, and Business Context), and four human factors (Workers, Policymakers and Administrators, Entrepreneurs, and Professionals). The base data ranking applies equal weights to all eight factors, whereas cost and differentiation strategies adopt different weights for the eight factors. For instance, when we adopt a cost strategy, the higher weights on cost-driven factors such as factor conditions would be implied. By contrast, if a country employs a differentiation strategy, different weights will be imposed on each of the eight factors.[2] Consequently, the overall national competitiveness ranking could move up or down or stay the same depending on the strategy adopted.

Figure 1. Ranking changes by cost and differentiation strategies



Note: CS: Cost Strategy, DS: Differentiation Strategy

[2] Please refer to Chapter 2 for the details about the weights.

Figure 1 shows the nine possible scenarios. The four cells marked with circles represent economies whose ranking would change only if one of the two strategies is adopted. Accordingly, twelve economies are classified in three circles labeled Groups A, B, and C in Figure 1. It is evident that Group A should adopt a cost strategy while Group B should adopt a differentiation strategy as their rankings move up whereas there would be no ranking change when the alternative strategy is adopted. On the other hand, as the cost strategy will lower the competitiveness ranking, Group C needs to adjust to reallocate their resources toward a differentiation strategy and this would help them achieve further development from the current development level.

The majority of the 62 economies are categorized in one of the Groups 1 to 4, which all represent the economies that would be better off, were they to adopt both cost and differentiation strategies. We label Group 1 economies as "innovation-based economies," as this is a group of economies for which the significance of cost strategy is low whereas the importance of a differentiation strategy is high. Hence, these economies are characterized as developed economies (or innovation-based economies) that rely on continuous innovation for sustainable development. And these economies are recommended to pursue a differentiation strategy that helps them secure their leading positions.

The second group is featured as "resource-based economies." In these countries, the cost strategy plays a larger role than the differentiation strategy. Group 2 is mainly comprised of developing countries with rich resources and a few resource-based developed countries. Hence, contrary to Group 1, Group 2 economies rely heavily upon abundant endowed resources for pursuing higher rankings and thus are recommended to pursue a cost strategy over a differentiation strategy.

The Group 3 economies are those that will have lower national competitiveness rankings regardless of whether the cost or differentiation strategies are adopted. These economies are thus labeled as "over-performing economies." It is noticeable that their competitiveness and sustainable development are very much dependent upon external factors such as the resources of other economies. Therefore, a cost or differentiation strategy at the national economic level will not increase national competitiveness and would result in even lower competitiveness rankings. It is important for them to devote continuous efforts toward collaborating and making synergies with other economies.

Lastly, the Group 4 economies are characterized by their great potential for future development. Most of them are developing economies, and both cost and differentiation strategies will help them achieve higher competitiveness. These are, thus, labeled as "under-performing economies" as there is much more room for advancement by adopting both cost and differentiation strategies.

INTRA-GROUP RANKINGS

In Figure 2, the 62 economies are categorized into nine groups according to their size (large, medium, and small) and competitiveness levels (strong, intermediate, and weak). Under the cost strategy simulation, twenty countries are classified in the strong group, while eighteen and twenty-four countries are classified in the intermediate group and the weak group, respectively. Similarly, under the cost strategy, twenty-two countries are classified in the large group; twenty-three countries in the medium group; the rest

(seventeen countries) in the small group.

By contrast, under the differentiation strategy, twenty countries are classified in the strong group. While twenty and twenty-two countries are classified in the intermediate and weak groups, respectively. According to the classification based on size, twenty-two countries belong to the large group; twenty-five countries to the medium group; fourteen countries in the small group under the differentiation strategy. Moreover, it is important to note that the classifications ultimately depend upon the strategies the countries adopt. For example, the classification of Kuwait would change from a small-strong group to a small intermediate group were it to adopt the cost strategy instead of a differentiation strategy. By contrast, the group classification of Korea would change from a medium-intermediate group to a medium-strong group were the country to choose the differentiation strategy over the cost strategy.

Large group

Although the overall competitiveness rankings change, the list of the top four countries belonging to the large-strong group remains the same: Canada, Australia, China, and the US regardless of whether they adopt the cost or differentiation strategy. Saudi Arabia though is classified as one of the top five large-strong countries, were it to adopt the cost strategy simulation, but drops to the large-intermediate group under the differentiation strategy. Similarly, Russia belongs to the intermediate cluster under the cost strategy, but is classified in the large-weak group under the differentiation strategy simulation.

Medium group

In the case of cost strategy, only seven countries/regions, including New Zealand, Netherlands, Sweden, Finland, Taiwan, China, United Kingdom, and Germany, are classified in the medium-strong group. However, under the differentiation strategy, Korea and Italy would be added to the medium-strong group. Hence, the employment of the different strategies affects the overall national competitiveness ranking and the classification of most countries/ regions. For example, Ukraine ranks fifth place in the medium-weak group under the cost strategy but would move up to first place if the country adopts the differentiation strategy.

Small group

In the cost strategy rankings, UAE, Singapore, Denmark, Switzerland, Kuwait, Hong Kong SAR, Belgium, and Austria take the top positions as strong countries/regions. However, under the differentiation strategy rankings, Kuwait would be classified in the small-intermediate group instead of the small-strong group. Moreover, Israel belongs to the intermediate cluster in both cost and differentiation strategies. Yet, the Dominican Republic would rise to the small-intermediate group from the small-weak group when the economy chooses the differentiation strategy.

Figure 2. Intra-Group rankings based on cost and differentiation strategy

Size / CSI & DSI	Small		Medium		Large	
	CS	DS	CS	DS	CS	DS
Strong	1. U.A.E. 2. Singapore 3. Denmark 4. Switzerland 5. Kuwait 6. Hong Kong SAR 7. Belgium 8. Austria	1. Denmark 2. Switzerland 3. Singapore 4. Belgium 5. Hong Kong SAR 6. U.A.E. 7. Austria	1. New Zealand 2. Netherlands 3. Sweden 4. Finland 5. Taiwan, China 6. United Kingdom 7. Germany	1. Netherlands 2. Finland 3. Sweden 4. United Kingdom 5. New Zealand 6. Korea, Republic of 7. Taiwan, China 8. Germany 9. Italy	1. Canada 2. Australia 3. China 4. United States 5. Saudi Arabia	1. United States 2. Canada 3. Australia 4. China
Intermediate	1. Israel 2. Panama 3. Czech Republic 4. Slovenia	1. Israel 2. Kuwait 3. Czech Republic 4. Panama 5. Slovenia 6. Dominican Republic	1. Korea, Republic of 2. Malaysia 3. Italy 4. Chile 5. Thailand 6. France 7. Poland 8. Greece	1. France 2. Poland 3. Greece 4. Thailand 5. Chile 6. Malaysia 7. Spain	1. India 2. Philippines 3. Indonesia 4. Japan 5. Russia 6. Colombia	1. Saudi Arabia 2. Japan 3. Vietnam 4. India 5. Indonesia 6. Philippines 7. Colombia
Weak	1. Dominican Republic 2. Jordan 3. Hungary 4. Croatia 5. Slovak Republic	1. Croatia 2. Hungary 3. Jordan 4. Slovak Republic	1. Guatemala 2. Cambodia 3. Spain 4. Oman 5. Ukraine 6. Kenya 7. Sri Lanka 8. Morocco	1. Ukraine 2. Guatemala 3. Cambodia 4. Sri Lanka 5. Kenya 6. Morocco 7. Oman	1. Egypt 2. Peru 3. Vietnam 4. Mexico 5. Argentina 6. Turkey 7. Nigeria 8. Brazil 9. Pakistan 10. Bangladesh 11. South Africa	1. Peru 2. Turkey 3. Nigeria 4. Mexico 5. Egypt 6. Argentina 7. Russia 8. Bangladesh 9. Brazil 10. South Africa 11. Pakistan

Note: CS: Cost Strategy, DS: Differentiation Strategy, CSI: Cost Strategy Index, DSI: Differentiation Strategy Index

SIMULATION

In this simulation, economies are given one of the two choices to choose from: cost or differentiation. The results from choosing the two strategies are summarized in Table 3. For example, the Netherlands' ranking will fall from fourth to eighth if it adopts a cost strategy. Yet, its ranking will rise to the third when it adopts a differentiation strategy. On the contrary, Canada shows a slightly higher rank when adopting a cost strategy to the first, but drops to the eighth if it pursues a differentiation strategy.

Table 3. Base data and two strategy rankings

Country/Region	Base Data	Cost Strategy	Differentiation Strategy
Denmark	1	7	1
Canada	2	1	8
Singapore	3	6	5
Netherlands	4	8	3
Switzerland	5	11	2
Sweden	6	9	7
Finland	7	10	4
Australia	8	2	12
United States	9	12	6
Hong Kong	10	15	10
UAE	11	3	11
New Zealand	12	5	14
Belgium	13	16	9
China	14	4	19
Austria	15	18	17
United Kingdom	16	19	13
Taiwan	17	17	16
Germany	18	20	18
Israel	19	23	21
Saudi Arabia	20	13	22
Kuwait	21	14	27
France	22	33	23
Korea	23	22	15
Japan	24	30	24
Czech Republic	25	35	29
India	26	21	26
Italy	27	26	20
Poland	28	34	30
Malaysia	29	24	38
Chile	30	27	36
Greece	31	36	32
Slovenia	32	37	34
Indonesia	33	29	28
Philippines	34	28	31
Panama	35	25	33
Vietnam	36	44	25
Thailand	37	31	35

Spain	38	48	39
Colombia	39	38	37
Dominican Republic	40	41	40
Russia	41	32	51
Hungary	42	49	46
Jordan	43	42	47
Mexico	44	45	45
Peru	45	40	42
Türkiye	46	50	43
Nigeria	47	51	44
Egypt	48	39	49
Argentina	49	46	50
Croatia	50	57	41
Ukraine	51	54	48
Guatemala	52	43	54
Slovak Republic	53	58	52
Brazil	54	52	55
Cambodia	55	47	57
Bangladesh	56	56	53
Oman	57	53	62
South Africa	58	62	56
Pakistan	59	55	59
Sri Lanka	60	60	58
Kenya	61	59	61
Morocco	62	61	60

Note: BD: Base Data, CS: Cost Strategy, DS: Differentiation Strategy

THE TEXT INFORMATION ANALYSIS (TIA) METHOD

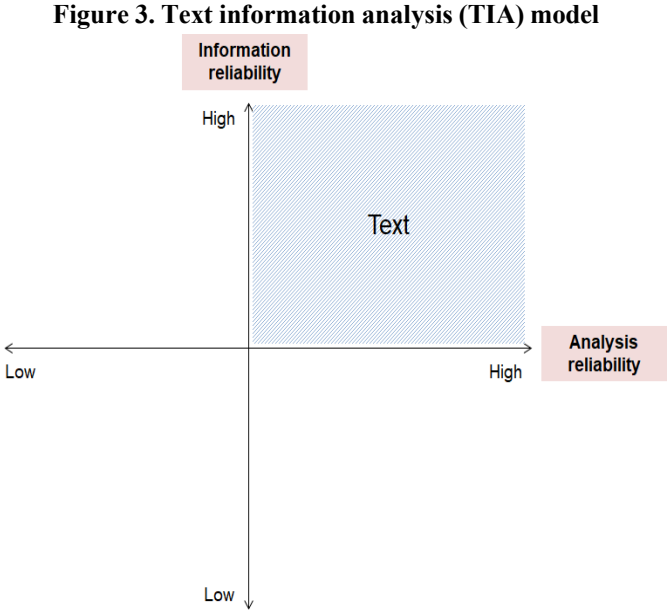
Our research has so far used traditional methods to collect hard and soft data for evaluating national competitiveness. Despite their strengths and complementarity, these two types of data collection have their own shortcomings. For hard data, despite its strengths in objectivity toward measuring competitiveness, due to the time lag, it is often insufficient in 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 not the most adequate approach given the mainly subjective nature of the data which creates complexity and difficulty over its validity and reliability. There is always the risk of biased data with surveys, especially when the response rate is relatively low. To mitigate this problem, we have used content analysis of text information to complement the limitations of both hard and soft data.

Recently, big data analytics has become a rising trend in both academic and business fields (Chen et al., 2012). Goes (2014: iii) defined big data 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 et al., 2014). Yet, data acquisition remains one of the main challenges for this approach (Labrinidis & Jagadish, 2012). As not all data will be pertinent, researchers or decision-makers must undertake efforts to filter useful data and information, which means establishing the credibility of the data source as a crucial first step.

Another challenge of using the big data analytics approach is that the information collected is not in a format appropriate for analysis (Labrinidis & Jagadish, 2012). Hence, a process for information extraction is necessary so that the required information can be sorted out to reproduce the data suitable for analysis (Labrinidis & Jagadish, 2012). Moreover, as Shah et al. (2012) have pointed out, good data does not necessarily guarantee a good decision. To make better use of the information, firms need to make a "big judgment," balancing the information available to them wisely.

Given these two challenges for big data analysis, we have introduced a new framework as can be seen in Figure 3. With this, we seek to collect more reliable text information and effectively analyze the text information. The framework comprises two variables: information and analysis reliability. The degree of *information reliability* is measured as high or low and is determined by the reliability of the information source. By contrast, *analysis reliability* assesses the capability of processing the data by extracting necessary information and gaining insights, which is measured as high or low as well. Despite the variety of the data format, our research focuses on text data from sources with high reliability. Hence, the text data are filtered by our researchers, and only useful information that will be suitable for analyzing national competitiveness (the upper-right shaded area) is extracted.

Figure 3. Text information analysis (TIA) model



To compile a collection of articles on the most recent economic issues in the world, we searched the keywords "(country/region name), competitiveness, 2021-2022" on Google. Next, based on the relevance to the research objective, we selected articles published in English and released by reliable media sources. Although the optimal sample size of the data collection often depends on the purpose of the study and the availability of data (Elo et al., 2014), Guthrie et al. (2004) suggested that the saturation of data could indicate that it has reached an optimal sample size. Morse et al. (2002) argued that saturated data ensures the replication in content categories, which can help verify and ensure comprehension and completeness. Hence, in our study, the top 100 articles listed in the Google search are

considered as the optimal sample size where we found the information tends to be repetitive when passing this number. The data source was targeted at the articles published within the last six months, thereby delivering recent issues and information that may have been missing in hard and soft data.

To ensure reliable data analysis, we used the technique of content analysis to extract useful information. Content analysis is broadly defined by Shapiro & Markoff (1997: 14) 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 & Palmer, 2008). First, it is unobtrusive and useful to manage a large volume of data. Second, it is a powerful technique for data reduction as it compresses 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 & Palmer, 2008). Among the three methods, we adopted the human scored system as this approach has particular strength in capturing the latent content in the given text. We scored the articles based on the level of positivity of the (economic) information in the texts. Using a scale ranging from -5 to +5 (e.g., if the article delivers very positive or optimistic contents, it will be given a higher score, with the highest score being +5). Data coding was completed by a trained coder and then monitored by two experienced senior researchers. Specifically, for the 2022 NCR report, we conducted TIA research methodology to assess the validity regarding the data of the economies, displaying a large change in their national competitiveness rankings that have either moved up or down by more than five places compared to the previous year for the top 40 economies in terms of the base data. The TIA results are shown in Table 3. By adding the adjusted scores to the overall competitiveness index for each of the coded economies, we strengthened the objectivity of our competitiveness rankings.

Table 3. Economies using the TIA method and the results

Rank	Country/Region	Adjusted score
11	UAE	-2.63
23	Korea, Republic of	-4.72
27	Italy	-4.12
32	Slovenia	+0.45
37	Thailand	+0.42

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03

Conceptual Framework and Analytical Methodologies

Conceptual Framework and Analytical Methodologies[1]

In Chapter 1 we reviewed the existing studies on national competitiveness and validated the comprehensiveness of the IPS model by comparing it to other analytical models of national competitiveness. This chapter presents the theoretical background of IPS National Competitiveness Research and the MASI methodology that is used in our research and discusses how it differs from other national competitiveness reports published by the International Institute for Management Development (IMD) and the World Economic Forum (WEF).

THE THEORETICAL EVOLUTION OF NATIONAL COMPETITIVENESS

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

While there are several reports on national competitiveness, there are several limitations in their methodologies and findings.[2] It is very important to note that the reliability of national competitiveness rankings should be based upon rigorous models and methodologies. Policymakers, who often become sensitive to the results of national competitiveness reports, may then pursue distorted policies based on misleading research results. To solve this problem, we address the theoretical and methodological problems of the existing reports. Hopefully, policymakers and business leaders will derive useful implications from our research.

CRITICAL REVIEW OF EXISTING REPORTS

The IMD and WEF are world-renowned institutions that publish national competitiveness reports annually. However, a careful examination of their methodologies reveals some notable limitations.

Theoretical background

These two reports provide different perspectives on defining competitiveness. 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 labels 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 contrast, both institutes adopt very similar factors when assessing competitiveness in their earlier reports (see Cho & Moon, 2013 for details). Regarding the evaluation model, IMD added "location attractiveness" to its original model in 1999 and introduced a completely new category in 2001, which consisted of four variables: economic performance, government efficiency, business efficiency, and infrastructure. Moreover, IMD formerly used a single index until 2002 but introduced customized rankings according to population size in 2003 and in the following year, it released two more rankings based on GDP per capita and geographic region.

[1] This chapter is abstracted and extended from IPSNC (2021).

[2] Please refer to Cho & Moon (2000, 2013) for the discussion on these limitations.

On the other hand, WEF measured competitiveness using eight variables, but since 2000 it has been changing the number of variables frequently. In addition, WEF showed frequent changes in the indices from Current Competitiveness Index (CCI) to Microeconomic Competitiveness Index (MICI) and Business Competitiveness Index (BCI) until 2007. Furthermore, it 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 WEF introduced the GCI 4.0 in 2018, which provides a series of factors and attributes that drive productivity growth and human development to address the Fourth Industrial Revolution (WEF, 2019: 7). However, careful observation will notice that these evaluation models and indices are not as rigorous as Porter's Diamond Model.

Table 1 summarizes the major differences among the three national competitiveness reports in measuring national competitiveness.

Table 1. Comparison of the three competitiveness reports

Report	IMD World Competitiveness Yearbook (2022)	WEF Global Competitiveness Report (2019)	IPS National Competitiveness Research (2022)
Sponsoring institute	International Institute for Management Development	World Economic Forum	IPSNC
Location	Lausanne (Switzerland)	Geneva (Switzerland)	Seoul (Korea, Republic of)/Geneva (Switzerland)
First Publication Year	1989	1996	2001/2021
Theoretical base	No particular theory	No particular theory	IPS model
Main factors	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 and Administrators - Entrepreneurs - Professionals
Criteria	255 (computed in the rankings)	103	98
Data base	Hard data: 163 Soft data: 92	Hard data: 56 Soft data: 47	Hard data: 57 Soft data: 41
Weights	Hard data: 64% Soft data: 36%	The same weight for factors, sub-factors, and criteria	Different weights for different strategies
Partner institutes	A global network of 66 partner institutes	Local partner institutes	KOTRA offices abroad Partner scholars
Number of Economies	63 economies	141 economies	62 economies

Strengths	- The first and largest survey on national competitiveness. - A collection of multiple variables for competitiveness.	- Like 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.
Weaknesses	- Weak theoretical basis. - Lack of consistency among partner institutions conducting the surveys.	- In general, like 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 rankings release have been suspended since 2020. Instead, the report suggests priorities for policymakers to consider in their decision-making process and overcome the COVID-19 pandemic.

Methodology

Although both IMD and WEF reports employed eight variables that are almost identical in their earlier publications, they produced contrasting results. This was because they applied different weights to the similar variables. For the IMD report, 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 the variables considering a country's development stage (see Table 2). In the 2006-2007 Report, the WEF classified countries by the level of GDP per capita. Following this classification, 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 (Stage 2); countries with a GDP per capita larger than US$17,000 are in the innovation-driven stage (Stage 3); countries between two of the three stages are regarded as in transition stage (WEF, 2006: 12). However, in the 2007-2008 Report, the WEF added another criterion in classifying the development stage, the share of exports of mineral goods in total exports (goods and services). As a result, the countries whose exports of mineral products exceeded 70 percent of total exports are categorized in the factor-driven group, regardless of other criteria that determine the development stage of the country.

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

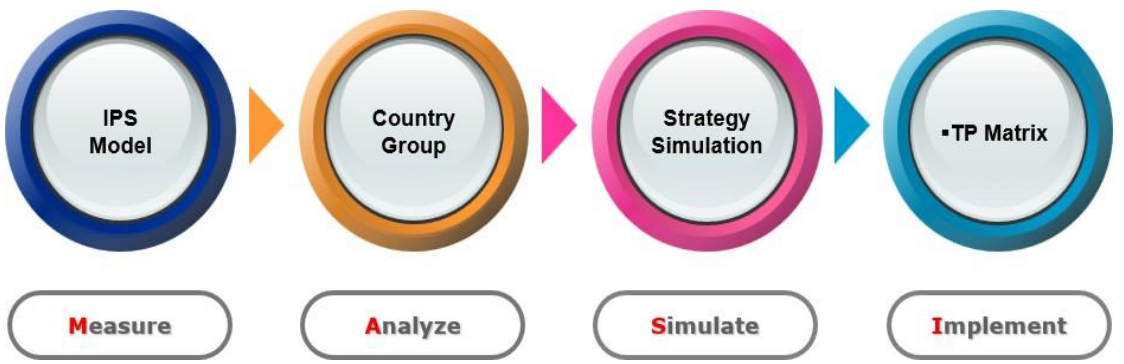
In addition to presenting the competitiveness rankings, it is also important to provide the implications from these findings. For example, in the WEF Global Competitiveness Report 2019, Singapore ranked number one, while the Philippines ranked sixty-fourth among one hundred and forty-one countries measured. 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?

In our research, we argue that a nation's competitiveness is more relevant when it is compared with nations holding similar comparative advantages. For example, the comparison between Korea and Taiwan would be a better comparison than the comparison between Korea and the US. Therefore, to derive useful policy implications, we also need to consider rankings in groups of similar countries (Intra-Group Ranking), along with the overall national competitiveness rankings. Hence, the IPS National Competitiveness Research (the IPS research) reports suggest both intra-group rankings and overall rankings based on cost and differentiation strategies.

IPS NATIONAL COMPETITIVENESS RESEARCH

By addressing the problems of existing studies, the IPS research introduces a four-step framework for the analysis. 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 Term-Priority (TP) Matrix. Figure 1 illustrates the MASI methodology of the IPS research.

Figure 1. The MASI Methodology



Measuring national competitiveness based on cost and differentiation strategies

There are two conditions that make a good analytical framework. One is the comprehensiveness to capture the most important variables to explain the complexity of the real world. Another is to assess whether it is dynamic enough to outline the changing nature of national competitiveness. Porter's (1990) Diamond Model satisfies both conditions; it incorporates four competitiveness variables: "Factor Conditions," "Demand Conditions," "Related and Supporting Industries," and "Firm Strategy, Structure, and Rivalry." Hence, Porter argues national competitiveness is not only dependent on resource endowments—as traditional economic theories suggest—but can be created by a combination of strategic choices along with the four determinants of the Diamond Model (see Figure 1 in Chapter 1).

Despite its advantages, Porter's Diamond Model is not free from criticism. Specifically, it is limited when applied in the international business context. As a result, the model demonstrated weaknesses in analyzing small economies whose domestic resources are very limited (Rugman, 1991). Especially, in the current era of globalization, international factors must be considered in assessing a nation's competitiveness. To address this problem, the Double Diamond Model (Rugman & D'Cruz, 1993) and the Generalized Double Diamond Model (Moon et al., 1998) were introduced.

Another issue is that the Single Diamond Model does not distinguish human factors from physical factors and includes labor in Factor Conditions. Still, the roles of different groups of human factors are important for countries at different levels of economic development. Human factors can mobilize, combine, and arrange physical factors with the aim of obtaining international competitiveness. In this regard, Cho (1994) proposed the 9-Factor Model by adding four human factors—workers, policymakers & administrators, entrepreneurs, and professionals—which are not well reflected in Porter's Diamond Model. Cho & Moon (2000, 2013) well summarize the related points.

These two models, the Double Diamond and 9-Factor, are meaningful as 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 the roles of both physical and human factors in domestic and international contexts (see Figure 4 in Chapter 1).

We use the 98 criteria in measuring the national competitiveness of 62 countries in 2022 IPS NCR research (see Appendix 2). Among these, 57 criteria are hard data and the other 41 criteria are soft data. The hard data were collected from various statistical data published by international and government organizations. The soft data were collected with help of our partner institution Korea Trade-Investment Promotion Agency (KOTRA), which has more than one hundred offices abroad and Pollfish Survey Tools to supplement the insufficient amount of data for a few countries.

Analyzing national competitiveness

Table 3 illustrates a 3x3 matrix of country groups. By considering both the size and competitive structure under both cost strategy and differentiation strategy, we can now more realistically compare the relative positions of countries. Under different strategic choices, the rankings of competitiveness among countries/regions would change. For instance, Kuwait ranks fifth in the Small-Strong country when utilizing the cost strategy. However, it would drop to the Small-Intermediate group and rank second place under the differentiation strategy.

Table 3. Typology of country groups under cost and differentiation strategies

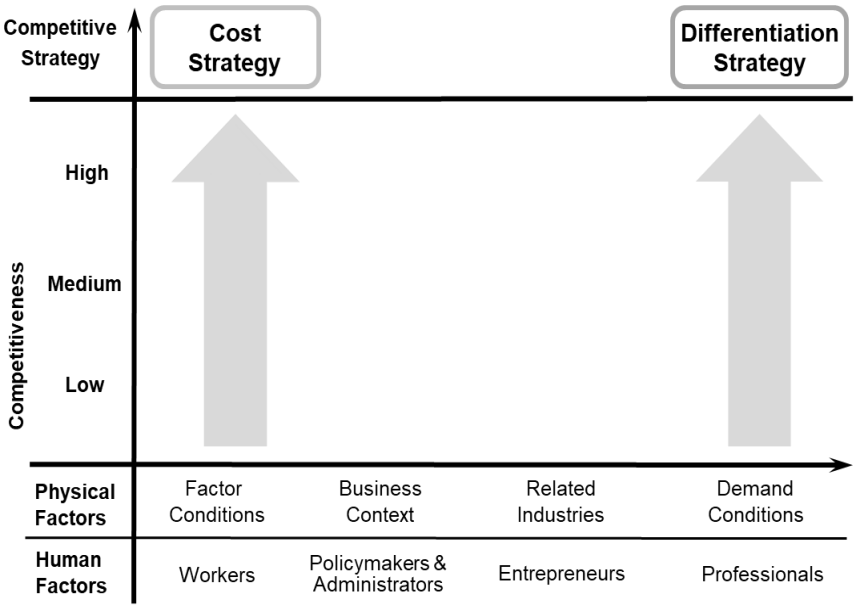
Size / CSI/DSI	Small	Medium	Large
Strong	Small-Strong countries	Medium-Strong countries	Large-Strong countries
Intermediate	Small-Intermediate countries	Medium-Intermediate countries	Large-Intermediate countries
Weak	Small-Weak countries	Medium-Weak countries	Large-Weak countries

Note: CSI: Cost Strategy Index, DSI: Differentiation Strategy Index

Simulation with two scenarios

To enhance their competitiveness for a higher standard of living and a better business environment, two generic strategies of cost and differentiation can be applied at the national level (Porter et al., 2000). The cost strategy strives to achieve a "lower cost and higher efficiency," mainly utilizing cheap workers and endowed natural resources. By contrast, the differentiation strategy emphasizes "higher cost but higher value-added," focusing more on Demand Conditions and Professionals. The differences are illustrated in Figure 2.

Figure 2. Competitive strategies of nations



We give different weights to the competitiveness variables for cost and differentiation strategies (see Table 4). 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 & Leisten, 2006). For both cost and differentiation strategies, equal weight (50 percent) is given to physical and human factors. However, factors and sub-factors are given different weights. For differentiation strategy, more weights are given to Demand Conditions and Professionals, whereas more weights are given to Factor Conditions and Workers.

Table 4. Weights for cost strategy and differentiation strategy

Main Factors		Weights		Sub-factors	Weights	
		CS	DS		CS	DS
Physical Factors						
	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
Human Factors						
	Workers	32/120	4/120	Quantity of Labor Force	3/4	1/4
				Quality of Labor Force	1/4	3/4
	Policymakers and 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: CS: Cost Strategy, DS: Differentiation Strategy

We can derive the following two simulations based on cost and differentiation strategies. This simulation shows the changes in the score of the competitiveness index when cost and differentiation strategies are applied. Specifically, the two strategies—cost and differentiation strategies—are applied to all countries. The indices of the two strategies are calculated to determine the relationship of the changes in the competitiveness index (CSI - BD, DSI - BD) with the size of a country or its competitiveness (BD). The results are summarized in Table 5. Some important implications are derived from this analysis. First, the cost strategy is more suitable for countries of larger size (e.g., Australia, China) or with lower competitiveness (e.g., Pakistan), (Model 1). Second, regardless of a country's size, the differentiation strategy is more appropriate for countries that have higher competitiveness (Model 2). This reveals that a country should carefully choose between cost and differentiation strategies to enhance its competitiveness through an accurate assessment of its current position.

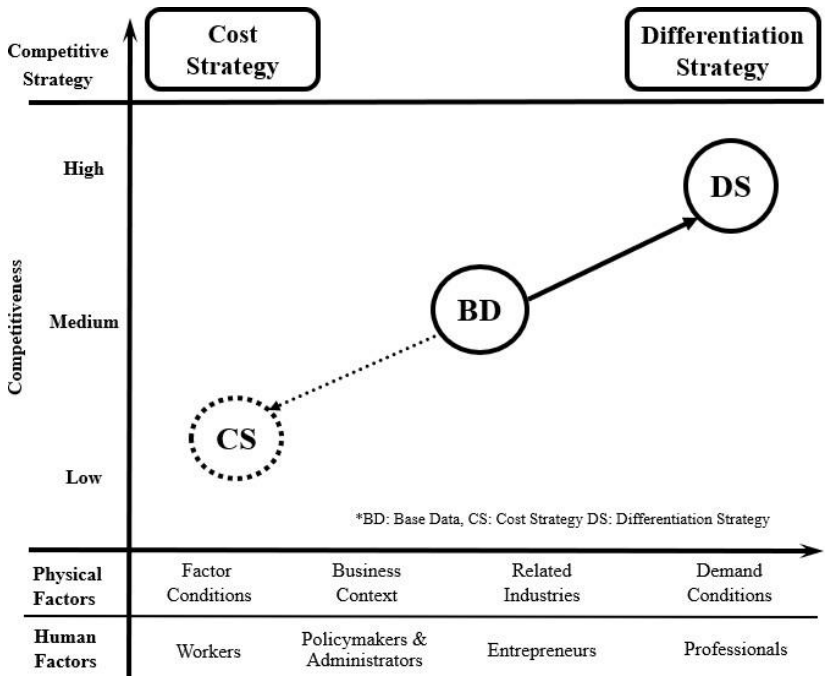
Table 5. Multiple linear regression model between the changes in variables

	CSI - BD (Model 1)	**DSI - BD (Model 2)**
Size	0.039	-0.015
(*p*-value)	(0. 001)	(0.150)
Competitiveness (BD)	-0.304	0.146
(*p*-value)	(0.000)	(0.000)
Constant	6.424	0.697
(*p*-value)	(0.000)	(0.566)
N (observations)	62	62
R^2	0.634	0.315
Adjust R^2	0.622	0.292
F statistic	51.086 (df = 2; 59)	13.581 (df = 2; 59)
(*p*-value)	(0.000)	(0.000)

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

Based on the previous illustration, an economy can thus have two scenarios, either cost or differentiation strategy. As Figure 3 illustrates the Base Data as the starting point. The rankings that result from the choice of a cost strategy are shown on the left, and the rankings as a result of choosing a differentiation strategy are listed on the right. Table 6 demonstrates the indices of the cost strategy and differentiation strategy. For example, the Philippines ranks 28th with a cost strategy, while falling to 31st with a differentiation strategy. The difference in France's case is even larger. It ranks 23rd with a differentiation strategy but falls to 33rd with a cost strategy. Therefore, choosing the right strategy is more crucial for France than for the Philippines, given the significant difference between the two extreme choices.

Figure 3. Changing rankings with different strategy simulation



Note*:* BD: Base Data, CS: Cost Strategy, DS: Differentiation Strategy

Table 6. Base data and two-strategy rankings

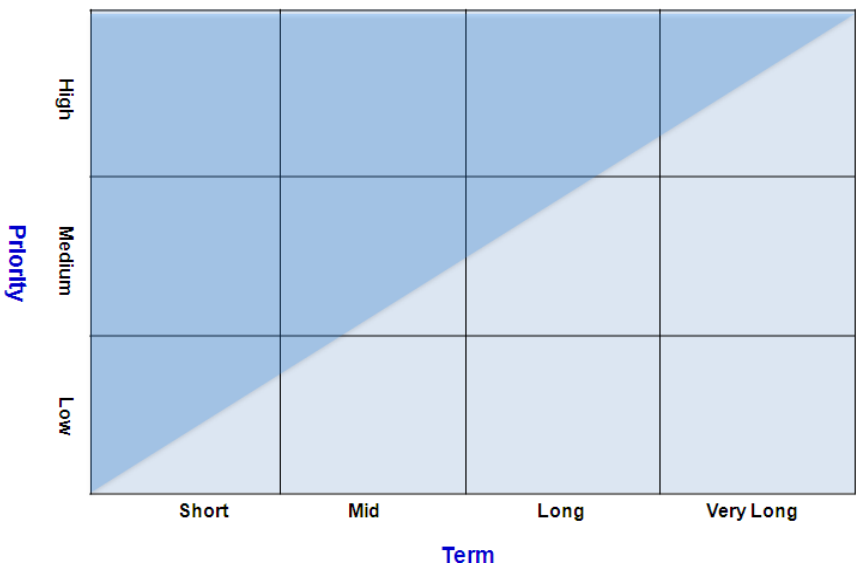
Country	BDR	BDI	CSR	CSI	DSR	DSI	Country	BDR	BDI	CSR	CSI	DSR	DSI
Denmark	1	61.11	7	47.04	1	71.66	Slovenia	32	38.91	37	32.43	34	44.27
Canada	2	60.37	1	53.77	8	66.01	Indonesia	33	38.82	29	35.14	28	46.16
Singapore	3	60.24	6	47.91	5	67.66	Philippines	34	38.65	28	35.78	31	45.07
Netherlands	4	59.87	8	46.41	3	69.27	Panama	35	38.65	25	36.48	33	44.36
Switzerland	5	59.77	11	46.02	2	71.24	Vietnam	36	38.31	44	30.43	25	47.81
Sweden	6	58.26	9	46.30	7	67.30	Thailand	37	37.98	31	34.72	35	43.71
Finland	7	58.15	10	46.10	4	69.23	Spain	38	36.86	48	29.72	39	42.24
Australia	8	57.75	2	52.96	12	63.03	Colombia	39	36.39	38	31.91	37	43.02
United States	9	57.42	12	43.75	6	67.63	Dominican Republic	40	34.54	41	30.79	40	41.76
Hong Kong SAR	10	54.70	15	41.73	10	64.07	Russia	41	33.82	32	34.19	51	36.19
U.A.E.	11	53.90	3	49.80	11	63.43	Hungary	42	33.44	49	29.06	46	37.70
New Zealand	12	53.88	5	48.23	14	58.54	Jordan	43	33.24	42	30.58	47	37.29
Belgium	13	53.59	16	41.20	9	64.20	Mexico	44	32.93	45	30.43	45	38.68
China	14	50.24	4	48.61	19	55.46	Peru	45	32.86	40	30.95	42	39.11
Austria	15	50.07	18	40.06	17	57.58	Turkey	46	32.71	50	28.94	43	39.05
United Kingdom	16	49.97	19	38.98	13	59.43	Nigeria	47	32.62	51	28.88	44	38.94
Taiwan	17	49.68	17	40.33	16	57.66	Egypt	48	31.73	39	31.05	49	36.93
Germany	18	49.32	20	38.51	18	57.03	Argentina	49	31.64	46	30.36	50	36.53
Israel	19	45.35	23	37.47	21	50.72	Croatia	50	31.51	57	24.57	41	39.21
Saudi Arabia	20	44.98	13	42.78	22	49.62	Ukraine	51	29.73	54	27.92	48	36.98
Kuwait	21	43.18	14	42.45	27	46.28	Guatemala	52	29.64	43	30.52	54	33.64
France	22	43.01	33	34.14	23	49.50	Slovak Republic	53	29.28	58	22.51	52	34.93
Korea, Republic of	23	43.00	22	37.63	15	57.97	Brazil	54	29.00	52	28.27	55	32.55
Japan	24	42.17	30	34.73	24	48.11	Cambodia	55	28.37	47	29.87	57	30.81
Czech Republic	25	41.46	35	34.02	29	46.11	Bangladesh	56	28.14	56	26.47	53	34.27
India	26	40.22	21	38.15	26	47.21	Oman	57	26.48	53	27.93	62	22.05
Italy	27	40.21	26	36.36	20	53.85	South Africa	58	25.36	62	16.93	56	32.28
Poland	28	39.48	34	34.13	30	45.55	Pakistan	59	24.71	55	27.43	59	27.61
Malaysia	29	39.36	24	37.45	38	42.62	Sri Lanka	60	23.20	60	21.36	58	28.67
Chile	30	39.02	27	35.94	36	43.12	Kenya	61	21.62	59	21.48	61	24.51
Greece	31	38.92	36	32.81	32	44.92	Morocco	62	21.12	61	18.58	60	25.86

Note: BDR: Base Data Ranking, BDI: Base Data Index, CSR: Cost Strategy Ranking, CSI: Cost Strategy Index, DSR: Differentiation Strategy Ranking, DSI: Differentiation Strategy Index

Implementation using term-priority matrix

The Term-Priority Matrix is a policy tool to improve weak criteria. First, the ninety-eight criteria are classified into strong (criteria in which a country displays relative strengths) and weak categories (criteria in which a country shows relative weaknesses). The strong and weak criteria are classified according to their relative performance against the sub-factor ranking which they belong to. If the criterion ranking is higher than the sub-factor ranking, the criterion is classified as strong one, and vice versa. 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 degree of the correlation coefficient 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 4).

Figure 4. The term-priority matrix



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04

Application of MASI: The Cases of Switzerland and Korea

Application of MASI: The Cases of Switzerland and Korea[1]

This chapter examines the cases of Switzerland and the Republic of Korea (hereafter Korea) to assess the application of the MASI framework (Cho & Moon, 2013) that was introduced in Chapter 3. Despite their differences in some areas, such as the size of their economies, cultural backgrounds, and geographic characteristics, the two countries hold similarities in many areas. In fact, the two countries are both developed economies that are classified as a strong group in the overall competitiveness index under the differentiation strategy. Switzerland plays an important role as a business hub in Europe, and similarly, and Korea also seeks to play a bridging role in East Asia. In this respect, this chapter aims to analyze the two countries from the competitiveness perspective and examine their complementarity in the areas where each holds strengths and weaknesses, thus suggesting the possibility of a further partnership between the two. The analysis of the two countries will serve as a good example to inspire other economies to analyze their competitiveness and cooperative relationship with other economies.

THE CASE OF SWITZERLAND

Measurement

Looking at this year's ranking, the overall competitiveness of Switzerland could rise to second place if it adopts the differentiation strategy; but falls to eleventh place under the cost strategy. The possibility of such dramatic changes is demonstrated in the eight components of the IPS model (see Table 1). It is worth noting that Switzerland ranked particularly low in Workers (33) under the cost strategy, while there are no significant changes predicted in rankings for the other seven factors.

Table 1. Structure of Switzerland's national competitiveness under cost and differentiation strategies

Factors	Rank in cost strategy	Rank in differentiation strategy
Factor Conditions	36	36
Demand Conditions	4	3
Related Industries	3	5
Business Context	9	8
Workers	33	7
Policymakers & Administrators	3	3
Entrepreneurs	5	6
Professionals	4	2

Analysis at the sub-factor level[2]

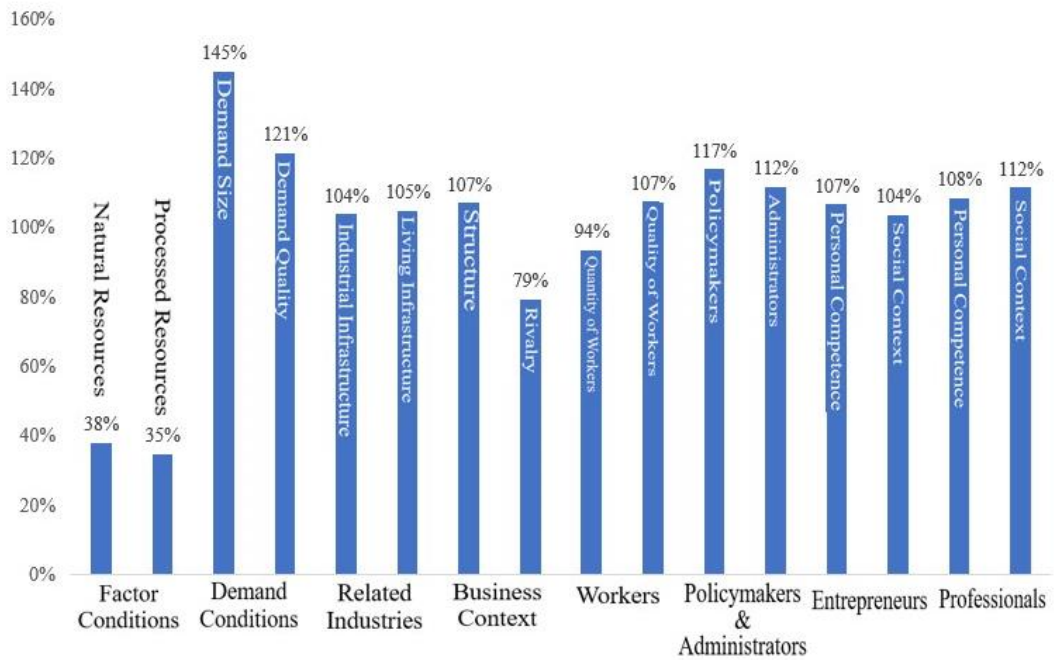
As Switzerland is categorized in the small-strong group, its strengths and weaknesses should be compared with the other eight small-strong economies (Austria, Belgium, Demark, Hong Kong SAR, Israel, Netherlands, Singapore, and UAE) rather than with the overall competitiveness ranking. Figure 1 shows that Switzerland was weaker than the average small-strong economies in some of the sub-factors. It was particularly weak in the sub-factors of Energy Resources and Processed Resources under Factor Conditions, where Switzerland was less than 40 percent in terms of competitiveness index to the average level of the other small-strong economies. In addition, for Rivalry of Business Context and Quantity of Workers, Switzerland was between 75 to 95 percent of the average level of the other

[1] This chapter is abstracted and extended from Chapter 4 of Cho and Moon (2021).

[2] The comparative analysis at the sub-factor level using the base data which gives the same weights for the eight factors of the IPS model.

small-strong economies. However, in respect of the other sub-factors (Demand Size and Quality, Industrial and Living Infrastructure, Quality of Workers, Structure of Business Context, Policymakers and Administrators, and Personal Competence and Social Context of both Entrepreneurs and Professionals), Switzerland showed higher competitiveness when compared to the average of the nine small-strong economies.

Figure 1. Relative position of Switzerland (Sub-factor level)



Simulation

Switzerland ranked fifth in the overall national competitiveness rankings (Base Data). Yet, if it pursues a cost strategy, its overall ranking will drop to eleventh place. On the other hand, under a differentiation strategy, Switzerland will move up to second place, which is higher than its current ranking (5). The country has a competitive structure with relatively high scores on Demand Conditions and Related Industries in the physical factors and Policymakers & Administrators, Entrepreneurs, and Professionals in the human factors. Therefore, Switzerland should pursue a differentiation strategy to strengthen its national competitiveness.

Implementation

Identification of weak criteria

The weak criteria of Switzerland that need to be improved are summarized in Table 2. If the rank of a certain criterion is lower than that of the sub-factors it belongs to, we categorize it as a weak area for Switzerland. Fifteen sub-factors under Factor Conditions, Business Context, and Workers are categorized as weak criteria and will be included in the term-priority matrix. In doing so, we excluded the uncontrollable variables such as natural resources under Factor Conditions. Accordingly, 63 criteria under 15 sub-factors— about 64 percent of the total 98 criteria—are classified as Switzerland's weak area.

- Factor Conditions

Energy Resources (36): Switzerland ranked thirty-sixth in this sub-factor due to its relatively

small land area per capita (43) and poor endowment of natural resources. Switzerland had low competitiveness in the criteria such as oil reserves (50) and natural gas reserves per capita (49). And it was placed in the low-level group in coal reserves per capita (42).

Processed Resources (32): Except for oil production per capita (47) and natural gas production per capita (51), in which Switzerland was classified in the low-level group, it revealed medium-level competitiveness in the criterion of coal production per capita (36).

- Demand Conditions

Demand Size (4): Switzerland holds high competitiveness in GDP per capita (1), while it possessed relatively weaker performance in the following areas: GDP (18), export of goods and services (14), and import of goods and services (16).

Demand Quality (2): Switzerland indicated relatively strong performance in all criteria of consumer sophistication, including quality (5), design (9), health and environment issues (4), international standard of Intellectual Property Rights (3), and new technology (13).

- Related Industries

Industrial Infrastructure (4): In criteria of total expenditure on R&D (3), vehicles (4), civil aviation (7), scientists & engineers (7), internet users (10), scientific research institutions (12), international patents granted (14), Switzerland was classified as the high-level group, performing relatively strong. Instead, it displayed low- or medium-level competitiveness in criteria such as maritime transport (57), mobile phone subscribers (30), and capital accessibility (31).

Living Infrastructure (7): In the following criteria, Human Development Index (1), personal security (3), students per teacher (4), leisure, sports, and cultural facilities (4), student international mobility (6), and social safety net (8), Switzerland was classified as the high-level group, showing robust performance. Instead, it showed medium-level competitiveness in the areas of medical service (19), Gini index (20), CO_2 emissions (26), public spending on education (31), secondary enrollment rate (33), tertiary enrollment rate (33), and HDI (19).

- Business Context

Structure (7): Switzerland recorded high-level competitiveness in all the criteria, including shared value (3), unique brands (3), ethical and legal practices (5), global standards (brands) (5), equal treatment (6), firm's decision process (6), health, safety & environmental concerns (6), and firm's decision structure (12).

Rivalry (6): Switzerland recorded low-level competitiveness in Foreign Direct Investment (FDI) openness of inflows as a percentage of GDP (61) but secured a relatively strong position in FDI openness of outflows as a percentage of GDP (11). For trade openness, Switzerland conveyed relatively high-level competitiveness in goods exports (15) and imports (16) openness as a percentage of GDP. Additionally, Switzerland ranked relatively high in services openness of exports as a percentage of GDP (9).

- Workers

Quantity of Workers (43): Switzerland showed low-level competitiveness in the following criteria including the number of workers (45) and working wages (45). It also performed relatively weak in the criteria of employment rate (23) and working hours (26), in which the country was categorized in the medium-level group.

Quality of Workers (5): Switzerland exhibited high-level competitiveness in all criteria of this sub-factor including attitude & motivation (2), education (6), management business

relationship (6), the openness of labor market (7), and literacy rate (10).

- Policymakers & Administrators

Policymakers (3): Switzerland displayed high-level competitiveness in all criteria of this sub-factor, such as international experience (3), ethics (4), the result of legislation (5), education level (9), and the process of parliament/congress (10).

Administrators (4): Switzerland possessed high-level competitiveness in all areas, including the process of government (2), international experience (3), educational level (6), ethics (6), and the result of policy implementation (10).

- Entrepreneurs

Personal Competence (7): Switzerland demonstrated an exceptionally strong standing in the criterion of entrepreneur's international experience (1) and established high-level competitiveness in the areas of the process of decision making (6), education level (9), the result of decision making (10), and entrepreneurs' core competence (20). Together this demonstrates its favorable business environment.

Social Context (8): Switzerland recorded high-level competitiveness in the following criteria, availability of entrepreneurs (3), support of the social system (6), openness to foreign entrepreneurs (8), and social status of entrepreneurs (11). However, Switzerland showed a weaker position in the criterion on new business (25), in which it was classified in the medium-level group.

- Professionals

Personal Competence (5): Switzerland was classified into the high-level group in all criteria under this sub-factor, including professional's international experience (3), education level (8), the ability to manage opportunities (13), decision making (14), and the professional's core competences (17).

Social Context (2): Switzerland had high-level competitiveness in criteria including professional's compensation (4), openness to foreign professionals (4), availability of professionals (5), social status of professionals (6), and the mobility of professionals (9).

Table 2. Weak criteria for public policy formulation of Switzerland

Factor Conditions	Demand Conditions	Related Industries
Processed Resources (32) - Coal production per capita (36) - Oil production per capita (47) - Natural gas production per capita (51)	**Demand Size (4)** - Goods and services export (14) - Goods and services import (16) - GDP (18) **Demand Quality (2)** - Consumer Sophistication: IPR (3) - Consumer Sophistication: health and environment (4) - Consumer Sophistication: quality (5) - Consumer Sophistication: design (9) - Consumer Sophistication: new tech (13)	**Industrial Infrastructure (4)** - Civil aviation (7) - Capital value (7) - Scientists & engineers (7) - Internet users (10) - Scientific research institutions (12) - International patents granted (14) - International travel (18) - Mobile phone subscriber (30) - Capital accessibility (31) - Maritime transport (57) **Living Infrastructure (7)** - Social safety net (8) - Medical service (19) - Gini index (20) - CO_2 emissions (26) - Public spending on education (31) - Secondary enrollment rate (33) - Tertiary enrollment rate (33)
Business Context	**Workers**	**Policymakers & Administrators**
Structure (7) - Firm's decision structure (12) **Rivalry (6)** - FDI outflows as % of GDP (11) - Goods exports as % of GDP (15) - Services exports as % of GDP (15) - Goods imports as % of GDP (16) - FDI inflows as % of GDP (61)	**Quantity of Workers (43)** - Employment rate (23) - Working hours (26) - Number of workers (45) - Working wage (45) **Quality of Workers (5)** - Education (6) - Management business relationship (6) - The openness of labor market (7) - Literacy rate (10)	**Policymakers (3)** - Policymakers' ethics (4) - The result of legislation (5) - Education level (9) - The process of parliament/congress (10) **Administrators (4)** - Administrators' ethics (6) - Education level (6) - The result of policy implementation (10)
Entrepreneurs	**Professionals**	
Personal Competence (7) - Entrepreneur's education level (9) - The result of decision making (10) - Entrepreneur's core competence (20) **Social Context (8)** - Entrepreneurs' social status (11) - New business (25)	**Personal Competence (5)** - Professional's education level (8) - The ability to manage opportunities (13) - The process of decision making (14) - The professionals' core competences (17)	
	Social Context (2) - Professional's compensation (4) - Openness to foreign professionals (4) - Availability of professionals (5) - Social status of professionals (6) - The mobility of professionals (9)	

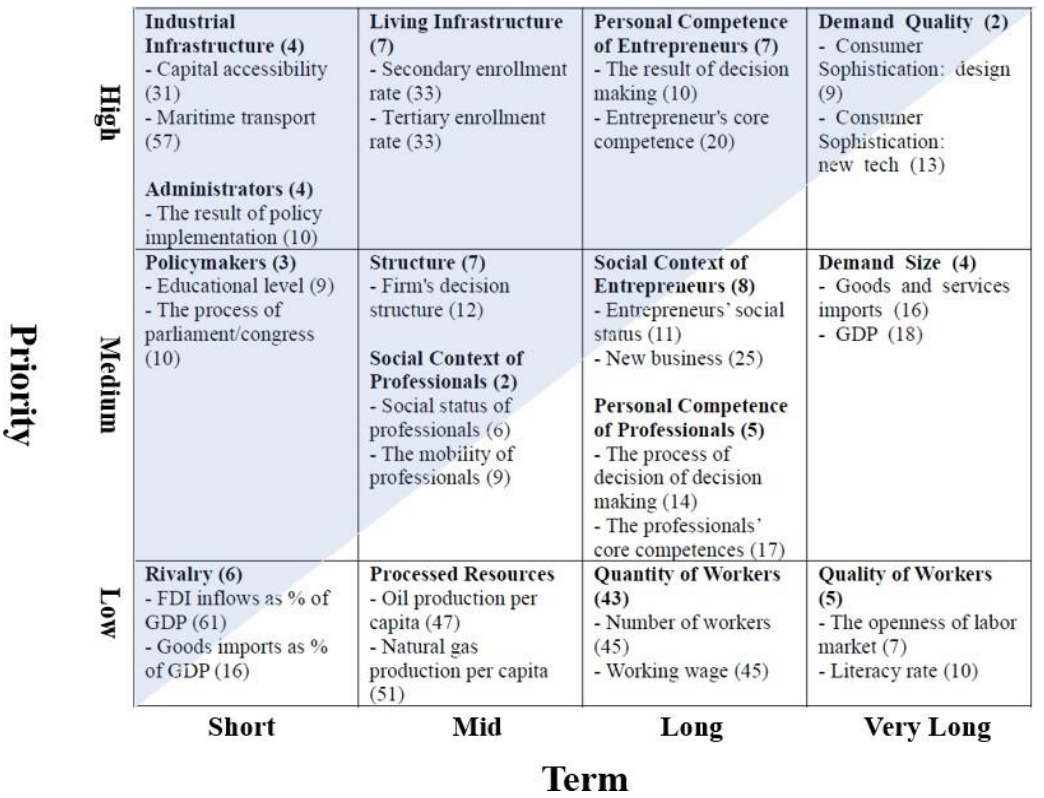
Constructing a Term-Priority Matrix

The fifteen sub-factors listed in Table 3 are organized into a 4 x 3 matrix to provide an overview for policy recommendations. The sub-factors in the short term (Term 1) listed in the order of correlation with GDP per capita for priority include Industrial Infrastructure, Administrations, Policymakers, and Rivalry. Hence, the higher correlation represents the areas which could have a stronger influence on the competitiveness of Korea. The sub-factors under the midterm (Term 2) are Living Structure, Structure and Social Context of Professionals, and Produced Resources. The sub-factors in the long term (Term 3) include Personal Competence of Entrepreneurs, Social Context of Entrepreneurs, Personal Competence of Professionals, and Quantity of Workers. The sub-factors in the very long term (Term 4) are Demand Quality and Size, and Quality of Workers. As shown in Figure 2, sub-factors covered by the upper-left-hand corner represent the areas which can be handled and improved easily by government or public sectors and have higher influences on economic development. Therefore, it would be more effective for the Swiss government to pay more attention to the areas in the upper-left-hand corner in Figure 2.

Table 3. Correlation with GDP per capita (2021)

Priority	Term 1		Term 2		Term 3		Term 4	
	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.
High	Industrial Infrastructure	0.904 (0.000)	Living Infrastructure	0.835 (0.000)	Personal Competence of Entrepreneurs	0.895 (0.000)	Demand Quality	0.737 (0.000)
	Administrators	0.902 (0.000)						
Medium	Policymakers	0.760 (0.000)	Structure	0.757 (0.000)	Social Context of Entrepreneurs	0.837 (0.000)	Demand Size	0.671 (0.000)
			Social Context of Professionals	0.681 (0.000)	Personal Competence of Professionals	0.620 (0.000)		
Low	Rivalry	0.553 (0.000)	Processed Resources	0.317 (0.012)	Quantity of Workers	-0.437 (0.000)	Quality of Workers	0.540 (0.000)

Figure 2. Term-priority matrix: The case of Switzerland



THE CASE OF KOREA

Measurement

Out of the 62 economies, the overall competitiveness of Korea rises to fifteenth place if it adopts the differentiation strategy but falls to twenty-second place under the cost strategy. Such a dramatic change is explained by the eight components of the IPS model (see Table 4). Except for factors such as Related Industries, Business Context, and Professionals, Korea recorded lower rankings for all other factors under the cost strategy.

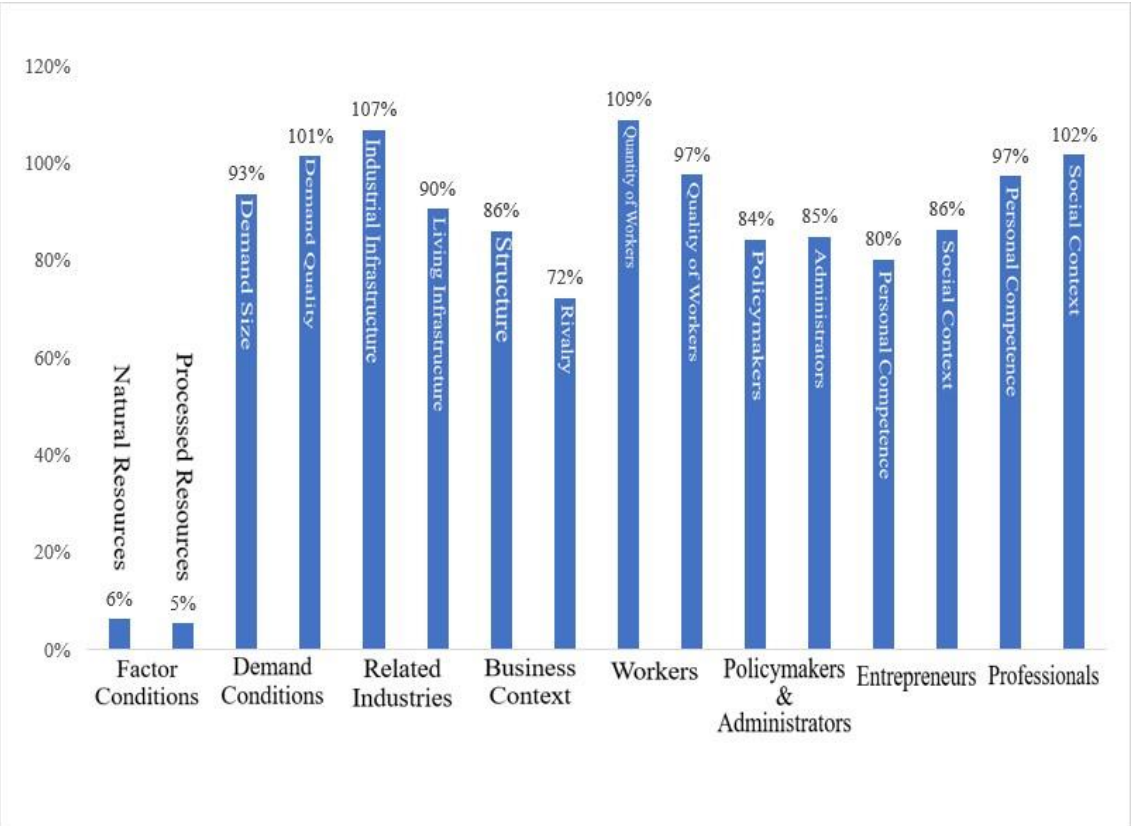
Table 4. Structure of Korea's national competitiveness under cost and differentiation strategies

Factors	Rank in cost strategy	Rank in differentiation strategy
Factor Conditions	56	52
Demand Conditions	14	7
Related Industries	9	14
Business Context	18	26
Workers	39	33
Policymakers & Administrators	20	19
Entrepreneurs	20	19
Professionals	16	16

Analysis at the sub-factor level[3]

Korea was categorized in the medium-intermediate group. Hence, it would be accurate to compare it with the six medium-strong economies (Finland, Germany, New Zealand, Sweden, Taiwan, China, and United Kingdom) when analyzing the relative strengths and weaknesses. Figure 3 shows that Korea's performance was weaker than the average of the other medium-strong economies in many of the sub-factors. Korea was particularly weaker in the sub-factors of Energy Resources and Processed Resources under Factor Conditions, where it was less than 10 percent of the average level of all the six medium-strong economies. For the six sub-factors under Business Context, Policymakers & Administrators, and Entrepreneurs, Korea showed a lower performance about 70 to 90 percent level of the average of the six medium-strong economies. However, for other sub-factors under Demand Conditions, Related Industries, Works, and Professionals, Korea revealed similar or even higher performance than the average of the six medium-strong economies.

Figure 3. Relative position of Korea (Sub-factor level)



Simulation

Although Korea ranked twenty-third in the overall national competitiveness rankings (Base Data), if it pursues a cost strategy, its ranking will rise to twenty-second place. In addition, under a differentiation strategy, its ranking will move up to fifteenth place, which is much

[3] The comparative analysis at the sub-factor level using the base data which gives the same weights for the eight factors of the IPS model.

higher than its current ranking (23). Korea has a competitive structure with relatively high scores on Demand Conditions and Related Industries in the physical factors and Workers and Professionals in the human factors. Therefore, Korea should pursue a differentiation strategy for further enhancement of its national competitiveness.

Implementation

Identification of weak criteria

The weak criteria that Korea needs to improve are summarized in Table 5. If a rank of a certain criterion is lower than that of the sub-factors it belongs to, we categorize it as the weak area. Twelve sub-factors under all eight Factors (Factor Conditions, Demand Conditions, Related Industries, Business Context, Workers, Policymakers & Administrators, Entrepreneurs, and Professionals) have weak criteria and will be included in the term-priority matrix. In doing so, we excluded the uncontrollable variables such as natural resources under Factor Conditions. Accordingly, 30 criteria under 10 sub-factors—or about 31 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 area per capita (58) and poor endowment of natural resources. Notably, Korea had low competitiveness in the criteria of oil reserves (50) and natural gas reserves per capit (43). And it was placed in the medium-level group in areas such as coal reserves per capita (30) and freshwater resources per capita (39).

Processed Resources (48): Korea had low- or medium-level competitiveness in this sub-factor. Specifically, except for the area of natural gas production (45), in which Korea was classified in the low-level group, it exhibited medium-level competitiveness in criteria including meat production (26) per capita, wood production per capita (32), coal production per capita (29), and oil production per capita (38).

- Demand Conditions

Demand Size (13): Korea conveyed high competitiveness in the following criteria including GDP (10), exports of goods and services (9), and imports of goods and services (9), while it demonstrated relatively weak performance in GDP per capita (21), classified as a medium-level group.

- Related Industries

Living Infrastructure (19): In criteria of education, such as public spending on education (31), students per teacher (32), and student mobility (33), Korea was classified as the medium-level group, performing relatively weak. It revealed high-level competitiveness in areas of tertiary enrollment rate (4), medical services (2), personal security (12), and Human Development Index (19). But it demonstrated relative weakness or very low-level competitiveness in areas of social safety net (21), leisure, sports, and culture facilities (24), the Gini index (25), and CO_2 emissions (55).

- Business Context

Structure (17): Korea showed high-level competitiveness in some criteria measuring business strategy and governance among firms, particularly in unique brands (8), firm's decision process (14), and health, safety, and environmental concerns (19). However, Korea expressed

relatively weak performance in most of the other criteria, such as global brands (21), shared value (22), equal treatment (22), ethical value (24), and firms' decision structure (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 (14) in investment openness, it recorded low-level competitiveness in inward FDI (48). In the criteria representing trade openness, Korea possessed medium-level competitiveness in goods exports (23) and imports (30) but had relatively weak positions in services exports (34) and imports (31) as a percentage of GDP. Regarding portfolio openness, Korea had medium-level competitiveness in terms of both financial inflows (27) and outflows (23) as a percentage of GDP.

- Workers

Quality of Workers (27): Korea ranked high as far as education (9), literacy rate (10), and attitude and motivation (27) are concerned. It revealed though low-level competitiveness in the criteria of relationship between managers and workers (32) and the openness of the labor market (43).

- Policymakers & Administrators

Policymakers (21): Korea demonstrated high-level competitiveness in the areas of education level of policymakers (16), international experience (16), and policymakers' ethics (20). While the country was classified as the medium-level group in the areas such as results of legislation (24), and the process of parliament/congress (27).

Administrators (19): Like the sub-factor for Policymakers, Korea displayed high-level competitiveness in the criteria of international experience (11), education level of administrators (16), and the process of government (14). Yet, it showed only medium-level competitiveness in the criteria of policy implementation (23) and administrators' ethics (23).

- Entrepreneurs

Personal Competence (21): Korea displayed an exceptionally strong standing in areas of entrepreneur's core competence (1) and established high-level competitiveness in the areas of the result for decision making (21), education level (20), and the process of decision making (23). Furthermore, Korea was classified as a medium-level country in the criterion of international experience (24), in which the ranking of the country was slightly lower than that of the other criteria for this sub-factor.

Social Context (18): Korea showed high-level competitiveness in areas such as new business (5), availability of entrepreneurs (13), and support for the social system (18). However, the country demonstrated weaker performance in the areas such as openness to foreign entrepreneurs (23) and entrepreneurs' social status (24), where it was classified as the medium-level group.

- Professionals

Personal Competence (16): Korea was classified into the medium-level group in all criteria under this sub-factor, including the professional's international experience (21), decision making (23), education level (25), the professional's core competences (26), and the ability to manage opportunities (35).

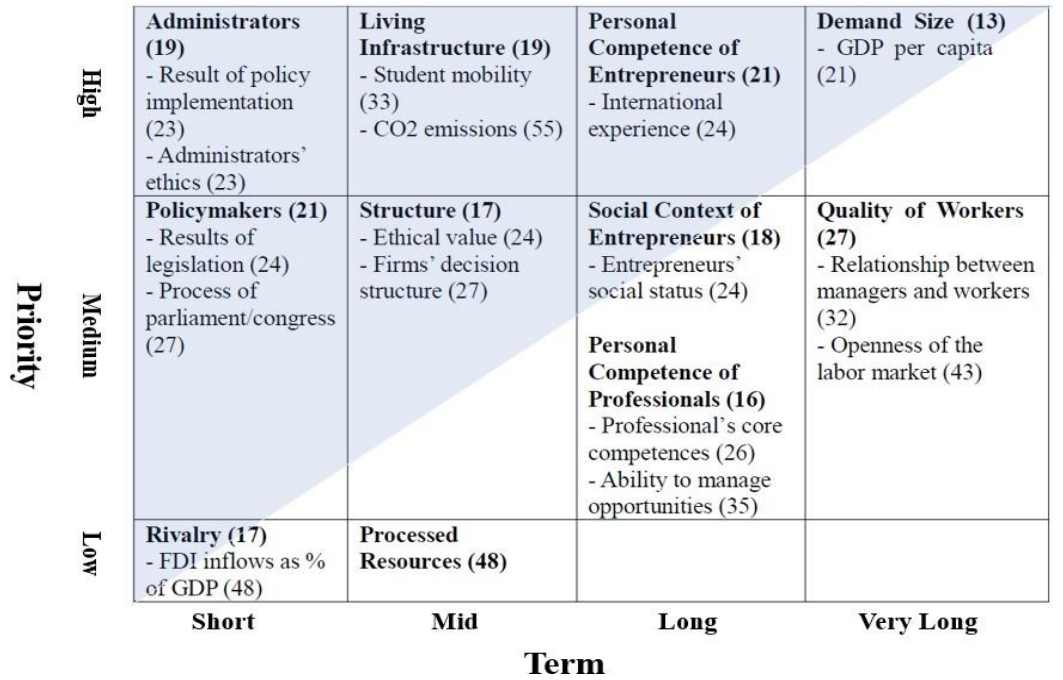
Table 5. Weak criteria for public policy formulation of Korea

Factor Conditions	Demand Conditions	Related Industries
Energy Resources (56) - Land area per capita (58)	**Demand Size (13)** - GDP per capita (21)	**Living Infrastructure (19)** - Social safety net (21) - Leisure, sports, and culture facilities (24) - Gini index (25) - Public spending on education (31) - Students per teacher (32) - Student mobility (33) - CO_2 emissions (55)
Business Context	**Workers**	**Policymakers & Administrators**
Structure (17) - Health, safety, and environmental concerns (19) - Global brands (21) - Shared value (22) - Equal treatment (22) - Ethical value (24) - Firms' decision structure (27) **Rivalry (17)** - FDI inflows as % of GDP (48)	**Quality of Workers (27)** - Relationship between managers and workers (32) - Openness of the labor market (43)	**Policymakers (21)** - Results of legislation (24) – Process of parliament/congress (27) **Administrators (19)** - Result of policy implementation (23) - Administrators' ethics (23)
Entrepreneurs	**Professionals**	
Personal Competence (21) - Process of decision making (23) - International experience (24) **Social Context (18)** - Openness to foreign entrepreneurs (23) - Entrepreneurs' social status (24)	**Personal Competence (16)** - Professional's international experience (21) - Decision making (23) - Education level (25) - Professional's core competences (26) - Ability to manage opportunities (35)	

Constructing a Term-Priority Matrix

The 11 sub-factors listed in Table 6 are organized into a 4 x 3 matrix to provide an overview for policy recommendations as shown in Figure 4. 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 Living Structure, Structure of Business Context, and Processed Resources. The sub-factors in the long term (Term 3) are Personal Competence of Entrepreneurs, Social Context of Entrepreneurs, and Personal Competence of Professionals. The sub-factors in the very long term (Term 4) are Demand Size and Quality of Workers. Therefore, like the explanation in the previous section on Switzerland, it would also be more effective for the Korean government to pay strategic attention to the areas in the upper-left-hand corner in Figure 4.

Figure 4. Term-priority matrix: The case of Korea



SWITZERLAND AND KOREA: ENHANCED COMPETITIVENESS THROUGH COOPERATION

Switzerland is categorized in the small-strong group under both cost and differentiation strategies. For its part, Korea belongs to the medium-intermediate group in cost strategy while it would move up to the medium-strong group under the differentiation strategy. Throughout the comparison, we can find some potential areas where both economies can complement each other to achieve a win-win outcome through partnership (See Table 6).

Table 6. The key areas of strengths and weaknesses for Switzerland and Korea

Criteria of NCR 2022	Rank of Switzerland	Rank of Korea
2.2.1 Consumer sophistication: quality	5	23
2.2.2 Consumer sophistication: design	9	18
2.2.3 Consumer sophistication: health and environment issues	4	19
2.2.4 Consumer sophistication: international standard of intellectual property rights	3	16
4.2.2 Portfolio openness (Financial inflows % of GDP)	4	27
4.2.4 Services openness (import % of GDP)	6	31
4.2.6 Portfolio openness (Financial outflows % of GDP)	2	23
4.2.8 Services openness (export % of GDP)	9	34
3.1.5 Mobile phone subscribers	30	12
3.1.6 Internet users (broad band)	10	5
3.1.12 International patents granted	14	3
3.2.8 Medical service	19	2
4.2.1 FDI openness (FDI inflows % of GDP)	61	48
7.1.3 Entrepreneur's core competence (networking)	20	1
7.2.2 New business (ease of doing business index)	25	5

Although both countries revealed robust performances in Demand Conditions, Switzerland holds comparative advantages in demand quality, such as consumer sophistication in design, health & environmental issues, and international standard of intellectual property rights. Yet, these criteria are categorized as weak for Korea. Hence, its market sophistication can be further improved by leveraging some of the strengths used by Switzerland. Similarly, regarding Business Context, Switzerland notably outperformed Korea on various criteria such as openness in financial portfolio and services. Although Korea is well-known for its leading global corporations such as Samsung and Hyundai that are actively engaged in overseas investment, Korea still showed underperformance in its global integration in services and financial market. Thus, to create a better business context for sustainable prosperity, Korea could learn from Switzerland and leverage some resources or knowledge to better structure its market in a more efficient manner.

By contrast, Korea has some globally competitive areas in which Switzerland shows weaknesses, and thus Switzerland can also learn from Korea to further enhance its overall competitiveness. For example, Korea has superior advantages in the sub-factor of industrial infrastructure where it could share its expertise and resources with Switzerland in fields such as mobile, internet, and medical services. For the area of Entrepreneurs, Korea holds strengths in entrepreneurs such as the criterion of networking and creating new business due to its conditions for ease of doing business, one of its core competences.

From the comparative analysis of Switzerland and Korea, it shows that despite their distant locations, cultural background, and size of economies, we can still find some complementary areas for partnership through which both countries can benefit from each other. Therefore, other countries can use similar analytical methods to discover their appropriate partner economies that can help them achieve economic development and other strategic goals.

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05

Factor and Sub-factor Rankings

1. Factor conditions			1.1. Natural resources			1.2. Processed resources		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Australia	37.69	1	Australia	49.31	1	New Zealand	31.59
2	Canada	35.66	2	Canada	42.02	2	Kuwait	30.90
3	Kuwait	32.39	3	Kuwait	33.87	3	Canada	29.30
4	New Zealand	29.26	4	Russia	29.86	4	UAE	26.76
5	Russia	28.20	5	UAE	28.77	5	Russia	26.53
6	UAE	27.77	6	New Zealand	26.94	6	Australia	26.08
7	Saudi Arabia	18.02	7	Saudi Arabia	18.83	7	Oman	25.60
8	Oman	17.71	8	Peru	16.51	8	Finland	21.84
9	Finland	15.20	9	Chile	15.31	9	Sweden	19.04
10	Sweden	13.04	10	Colombia	13.16	10	Saudi Arabia	17.20
11	United States	9.97	11	Oman	9.82	11	Austria	13.43
12	Chile	9.92	12	Brazil	9.80	12	South Africa	12.86
13	Peru	9.10	13	Panama	9.74	13	United States	12.13
14	Austria	7.83	14	Finland	8.56	14	Slovenia	9.22
15	South Africa	7.72	15	United States	7.80	15	China	8.03
16	Colombia	7.47	16	Sweden	7.03	16	Netherlands	7.77
17	Malaysia	7.19	17	Malaysia	6.78	17	Malaysia	7.60
18	Slovenia	6.37	18	Argentina	6.04	18	Czech Republic	6.74
19	Brazil	5.60	19	Ukraine	4.57	19	Indonesia	6.56
20	Panama	5.05	20	Slovenia	3.53	20	Germany	5.75
21	Argentina	5.03	21	Croatia	3.39	21	Denmark	5.30
22	Indonesia	4.86	22	Poland	3.36	22	Croatia	5.03
23	China	4.73	23	Indonesia	3.17	23	Chile	4.52
24	Netherlands	4.60	24	Greece	3.08	24	Belgium	4.21
25	Ukraine	4.33	25	Cambodia	2.64	25	Poland	4.19
26	Czech Republic	4.27	26	South Africa	2.57	26	Ukraine	4.09
27	Croatia	4.21	27	Austria	2.23	27	Argentina	4.03
28	Germany	3.90	28	Guatemala	2.09	28	Israel	3.34
29	Poland	3.77	29	Germany	2.05	29	United Kingdom	3.13
30	Denmark	3.11	30	Mexico	1.96	30	France	2.93
31	Belgium	2.32	31	Czech Republic	1.80	31	Slovak Republic	2.71
32	France	2.12	32	Türkiye	1.80	32	Switzerland	2.44
33	Israel	2.07	33	Hungary	1.78	33	Thailand	2.42

34	Greece	2.02	34	Nigeria	1.64	34	Vietnam	2.12
35	United Kingdom	2.02	35	Vietnam	1.57	35	Türkiye	2.05
36	Slovak Republic	2.02	36	Switzerland	1.52	36	Egypt	1.83
37	Switzerland	1.98	37	Thailand	1.44	37	Hungary	1.81
38	Thailand	1.93	38	China	1.43	38	Colombia	1.78
39	Türkiye	1.92	39	Netherlands	1.43	39	Peru	1.70
40	Vietnam	1.85	40	Philippines	1.39	40	India	1.69
41	Hungary	1.79	41	Spain	1.39	41	Mexico	1.42
42	Mexico	1.69	42	Slovak Republic	1.33	42	Brazil	1.40
43	Egypt	1.54	43	France	1.31	43	Italy	1.12
44	Cambodia	1.37	44	Egypt	1.25	44	Spain	1.12
45	Nigeria	1.31	45	Italy	1.11	45	Nigeria	0.98
46	Spain	1.25	46	Japan	1.06	46	Greece	0.96
47	India	1.20	47	Morocco	1.01	47	Japan	0.89
48	Guatemala	1.16	48	Denmark	0.92	48	Korea, Republic of	0.72
49	Italy	1.12	49	United Kingdom	0.91	49	Bangladesh	0.50
50	Japan	0.97	50	Dominican Republic	0.86	50	Philippines	0.47
51	Philippines	0.93	51	Sri Lanka	0.82	51	Pakistan	0.44
52	Morocco	0.64	52	Kenya	0.82	52	Panama	0.36
53	Korea, Republic of	0.59	53	Israel	0.80	53	Singapore	0.29
54	Kenya	0.49	54	India	0.71	54	Morocco	0.28
55	Dominican Republic	0.48	55	Jordan	0.61	55	Guatemala	0.24
56	Pakistan	0.43	56	Korea, Republic of	0.47	56	Kenya	0.17
57	Sri Lanka	0.43	57	Belgium	0.43	57	Dominican Republic	0.09
58	Bangladesh	0.38	58	Pakistan	0.42	58	Cambodia	0.09
59	Jordan	0.32	59	Taiwan, China	0.32	59	Taiwan, China	0.05
60	Taiwan, China	0.18	60	Bangladesh	0.25	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

Notes: *Factor Conditions* comprise two sub-factors — Natural Resources and Processed Resources. Australia, Canada, Kuwait, New Zealand, and Russia showed high competitiveness in both sub-factors of *Natural Resources* and *Processed Resources*. The sub-factor *Natural Resources* is measured by the number of reserves in natural resources per capita such as oil, natural gas, and coal. Land area and freshwater resources are also included in measuring *Natural Resources*. The other sub-factor, *Processed Resources*, is measured by the amount of energy resources processed per capita such as oil, natural gas, coal, wood, and meat.

2. Demand conditions			2.1. Demand size			2.2. Demand quality		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	United States	80.28	1	United States	91.19	1	Finland	95.16
2	China	59.69	2	China	65.16	2	Switzerland	82.04
3	Switzerland	57.62	3	Germany	47.80	3	Denmark	77.96
4	Finland	55.77	4	Switzerland	33.20	4	Sweden	76.66
5	Germany	52.98	5	Japan	32.86	5	Canada	72.78
6	Denmark	49.69	6	United Kingdom	30.40	6	Korea, Republic of	71.54
7	Canada	48.72	7	France	29.76	7	Hong Kong SAR	69.81
8	United Kingdom	48.67	8	Singapore	29.47	8	United States	69.37
9	Sweden	48.44	9	Netherlands	28.73	9	Belgium	69.23
10	Hong Kong SAR	47.76	10	Hong Kong SAR	25.71	10	Austria	68.49
11	Japan	47.66	11	Canada	24.65	11	Australia	67.31
12	Netherlands	47.65	12	Australia	23.01	12	Italy	66.99
13	France	47.13	13	Korea, Republic of	22.20	13	United Kingdom	66.94
14	Korea, Republic of	46.87	14	Italy	22.14	14	Taiwan, China	66.87
15	Singapore	46.18	15	Belgium	21.57	15	Netherlands	66.57
16	Belgium	45.40	16	Denmark	21.43	16	France	64.50
17	Australia	45.16	17	Sweden	20.21	17	Singapore	62.88
18	Italy	44.56	18	Austria	19.19	18	UAE	62.49
19	Austria	43.84	19	UAE	18.56	19	Japan	62.45
20	Taiwan, China	40.63	20	Spain	17.62	20	New Zealand	59.90
21	UAE	40.52	21	Finland	16.38	21	Saudi Arabia	59.09
22	New Zealand	36.61	22	Israel	14.73	22	Germany	58.16
23	Saudi Arabia	35.07	23	Taiwan, China	14.40	23	Colombia	57.26
24	Spain	32.81	24	New Zealand	13.33	24	Croatia	57.12
25	Israel	31.96	25	India	12.86	25	Vietnam	55.52
26	India	31.80	26	Mexico	11.84	26	China	54.21
27	Poland	30.78	27	Russia	11.68	27	Philippines	54.11
28	Croatia	30.72	28	Saudi Arabia	11.05	28	Panama	54.08
29	Vietnam	30.40	29	Poland	10.32	29	Nigeria	54.04
30	Colombia	29.91	30	Kuwait	9.75	30	Peru	53.21
31	Thailand	29.59	31	Czech Republic	9.73	31	Guatemala	52.80
32	Panama	29.19	32	Brazil	8.46	32	Thailand	51.93
33	Mexico	28.71	33	Slovenia	7.94	33	Indonesia	51.64

34	Indonesia	28.52	34	Thailand	7.25	34	Poland	51.23
35	Philippines	28.49	35	Slovak Republic	7.00	35	India	50.74
36	Kuwait	28.27	36	Malaysia	6.98	36	Israel	49.19
37	Peru	27.86	37	Türkiye	6.98	37	Ukraine	49.17
38	Nigeria	27.84	38	Greece	6.72	38	Greece	48.50
39	Greece	27.61	39	Hungary	6.69	39	Spain	48.01
40	Slovenia	27.40	40	Chile	5.53	40	Slovenia	46.86
41	Guatemala	26.95	41	Indonesia	5.40	41	Kuwait	46.79
42	Türkiye	26.01	42	Vietnam	5.28	42	Mexico	45.58
43	Ukraine	25.44	43	Oman	4.78	43	Türkiye	45.03
44	Chile	25.25	44	Croatia	4.32	44	Chile	44.97
45	Brazil	24.98	45	Panama	4.30	45	Bangladesh	44.87
46	Russia	24.57	46	Argentina	4.16	46	Sri Lanka	43.95
47	Czech Republic	23.81	47	South Africa	3.26	47	Argentina	43.17
48	Malaysia	23.72	48	Philippines	2.88	48	Brazil	41.50
49	Argentina	23.67	49	Colombia	2.55	49	Malaysia	40.46
50	Bangladesh	23.02	50	Peru	2.51	50	Egypt	40.04
51	Sri Lanka	22.46	51	Dominican Republic	2.19	51	Dominican Republic	39.55
52	Hungary	21.66	52	Ukraine	1.71	52	South Africa	38.28
53	Slovak Republic	21.18	53	Egypt	1.71	53	Czech Republic	37.90
54	Egypt	20.88	54	Nigeria	1.63	54	Russia	37.46
55	Dominican Republic	20.87	55	Morocco	1.29	55	Jordan	37.19
56	South Africa	20.77	56	Bangladesh	1.17	56	Hungary	36.64
57	Jordan	19.09	57	Guatemala	1.10	57	Slovak Republic	35.37
58	Pakistan	16.72	58	Jordan	0.98	58	Pakistan	32.66
59	Morocco	13.82	59	Sri Lanka	0.96	59	Kenya	26.77
60	Kenya	13.51	60	Pakistan	0.78	60	Morocco	26.35
61	Cambodia	12.58	61	Kenya	0.26	61	Cambodia	25.05
62	Oman	7.46	62	Cambodia	0.11	62	Oman	10.13

Notes: The countries showing strong competitiveness for *Demand Conditions* are the US, China, Switzerland, Finland, and Germany. Thanks to its superior advantage in *Demand Size*, the US achieved a strong performance in this factor. In addition, Switzerland, despite its small domestic market size, was ranked in the top five for *Demand Conditions*, driven by the 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 openness to the international market, in terms of trade, financial, and investment flows. *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 incentivize the firms to continuously innovate and improve the competitiveness of their products and services.

3. Related infrastructure			3.1. Industrial infrastructure			3.2. Living infrastructure		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Denmark	63.18	1	United States	57.83	1	Finland	77.90
2	Finland	61.92	2	Singapore	52.54	2	Denmark	77.17
3	Sweden	60.71	3	Hong Kong SAR	51.43	3	Belgium	73.53
4	Switzerland	60.58	4	Switzerland	49.92	4	Sweden	73.16
5	Austria	59.65	5	Denmark	49.18	5	Netherlands	71.94
6	Belgium	58.95	6	Sweden	48.25	6	Austria	71.60
7	Netherlands	58.33	7	Korea, Republic of	48.02	7	Switzerland	71.24
8	Singapore	57.80	8	Austria	47.71	8	Taiwan, China	70.02
9	Taiwan, China	57.25	9	UAE	47.25	9	Australia	68.77
10	United States	57.04	10	Finland	45.95	10	New Zealand	68.07
11	Australia	56.93	11	Japan	45.82	11	Spain	65.84
12	New Zealand	56.54	12	Israel	45.69	12	Germany	64.69
13	Hong Kong SAR	56.22	13	Germany	45.17	13	France	64.53
14	Korea, Republic of	55.40	14	Australia	45.08	14	Slovenia	64.34
15	Germany	54.93	15	New Zealand	45.01	15	Canada	64.00
16	Canada	54.00	16	Netherlands	44.71	16	Czech Republic	63.74
17	Japan	53.83	17	Taiwan, China	44.48	17	Singapore	63.07
18	UAE	53.73	18	Belgium	44.37	18	United Kingdom	62.80
19	Israel	53.59	19	Canada	44.01	19	Korea, Republic of	62.78
20	Czech Republic	52.80	20	Saudi Arabia	41.98	20	Japan	61.83
21	France	52.77	21	Czech Republic	41.85	21	Israel	61.48
22	Slovenia	52.73	22	Hungary	41.81	22	Hong Kong SAR	61.02
23	Spain	52.60	23	United Kingdom	41.31	23	UAE	60.21
24	United Kingdom	52.06	24	Slovenia	41.12	24	Italy	57.93
25	Italy	48.33	25	France	41.01	25	Greece	57.83
26	Greece	48.21	26	Spain	39.36	26	Poland	57.05
27	Hungary	47.61	27	Italy	38.74	27	Croatia	56.47
28	Saudi Arabia	47.45	28	Greece	38.60	28	United States	56.24
29	Poland	46.40	29	Malaysia	36.71	29	Slovak Republic	55.82
30	Croatia	46.20	30	Kuwait	36.27	30	China	53.58
31	Slovak Republic	45.13	31	Croatia	35.92	31	Hungary	53.41
32	Kuwait	43.74	32	Poland	35.74	32	Saudi Arabia	52.91
33	China	42.42	33	Slovak Republic	34.43	33	Türkiye	52.82
34	Malaysia	41.67	34	Russia	32.75	34	Thailand	51.96

35	Thailand	41.55	35	Panama	31.46	35	Ukraine	51.53
36	Russia	41.04	36	China	31.26	36	Kuwait	51.21
37	Chile	40.37	37	Thailand	31.15	37	Argentina	50.80
38	Türkiye	39.44	38	Brazil	30.97	38	Chile	50.67
39	Panama	38.18	39	Oman	30.82	39	Russia	49.34
40	Ukraine	37.17	40	Chile	30.08	40	Vietnam	46.79
41	Vietnam	36.41	41	Colombia	28.16	41	Malaysia	46.64
42	Brazil	35.98	42	South Africa	27.28	42	Jordan	46.20
43	Jordan	35.91	43	Mexico	27.27	43	Indonesia	45.30
44	Colombia	35.43	44	Morocco	26.52	44	Panama	44.89
45	Argentina	35.19	45	Dominican Republic	26.09	45	Sri Lanka	44.55
46	Mexico	34.90	46	Türkiye	26.05	46	Egypt	43.69
47	Indonesia	34.85	47	Vietnam	26.04	47	Peru	43.44
48	Dominican Republic	34.33	48	Jordan	25.62	48	Philippines	42.94
49	Peru	34.27	49	Philippines	25.57	49	Colombia	42.69
50	Oman	34.27	50	Cambodia	25.25	50	India	42.67
51	Philippines	34.26	51	Peru	25.10	51	Dominican Republic	42.58
52	Sri Lanka	33.20	52	Indonesia	24.39	52	Mexico	42.53
53	India	33.14	53	Guatemala	23.89	53	Brazil	41.00
54	Egypt	31.92	54	India	23.62	54	Oman	37.72
55	South Africa	30.87	55	Nigeria	23.40	55	Guatemala	35.75
56	Morocco	30.20	56	Ukraine	22.82	56	South Africa	34.47
57	Guatemala	29.82	57	Sri Lanka	21.84	57	Morocco	33.89
58	Cambodia	27.92	58	Bangladesh	21.13	58	Kenya	33.24
59	Kenya	27.03	59	Kenya	20.81	59	Bangladesh	31.85
60	Nigeria	26.89	60	Egypt	20.14	60	Cambodia	30.60
61	Bangladesh	26.49	61	Argentina	19.57	61	Nigeria	30.37
62	Pakistan	23.57	62	Pakistan	17.37	62	Pakistan	29.76

Notes: The countries that showed a strong performance in the area of Related Industries include Denmark, Finland, Switzerland, Sweden, and Austria. Denmark was able to achieve strong performance in this factor mainly due to its superiority in Living Infrastructure. Finland took second place driven by its advantage in Industrial Infrastructure and Living Infrastructure. On the other hand, Sweden and Austria showed higher competitiveness in Living Industrial Infrastructure. This measures the infrastructure of transportation (such as motor vehicles, civil aviation, maritime transport, and international travel), communication (such as the number of mobile phone subscribers and internet users), finance (capital value and capital accessibility), and science & technology (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, the ratio of 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, CO_2 emissions, and leisure, sports, and cultural facilities.

4. Business context			4.1. Structure			4.2. Rivalry		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Singapore	71.42	1	Finland	96.52	1	Hong Kong SAR	78.47
2	Hong Kong SAR	70.38	2	Denmark	84.72	2	Singapore	72.55
3	Finland	62.08	3	Netherlands	83.98	3	UAE	41.02
4	Netherlands	61.62	4	Canada	82.71	4	Netherlands	39.25
5	Denmark	58.22	5	Sweden	80.02	5	Belgium	38.21
6	Belgium	58.18	6	Belgium	78.14	6	Switzerland	33.38
7	Switzerland	55.18	7	Switzerland	76.97	7	Denmark	31.73
8	Sweden	54.09	8	New Zealand	75.54	8	Vietnam	30.79
9	UAE	53.58	9	Australia	74.83	9	Cambodia	28.47
10	Canada	52.34	10	Austria	71.69	10	Sweden	28.16
11	Austria	48.71	11	United States	70.96	11	Hungary	28.05
12	New Zealand	46.13	12	Singapore	70.29	12	Finland	27.63
13	Australia	46.00	13	Italy	70.23	13	Slovenia	27.08
14	Taiwan, China	45.04	14	UAE	66.14	14	Slovak Republic	26.92
15	Italy	44.13	15	Germany	64.09	15	Taiwan, China	26.76
16	Vietnam	43.63	16	Taiwan, China	63.31	16	Austria	25.74
17	Germany	43.17	17	Korea, Republic of	62.70	17	United Kingdom	25.05
18	United States	42.88	18	Indonesia	62.34	18	Czech Republic	24.90
19	United Kingdom	41.77	19	Hong Kong SAR	62.28	19	France	23.85
20	Czech Republic	41.48	20	China	59.74	20	Oman	23.82
21	Korea, Republic of	40.17	21	United Kingdom	58.49	21	Malaysia	22.98
22	France	39.47	22	Czech Republic	58.07	22	Germany	22.25
23	Indonesia	36.86	23	Philippines	56.98	23	Thailand	21.98
24	Thailand	36.48	24	Vietnam	56.47	24	Canada	21.96
25	Slovenia	36.40	25	India	56.15	25	Croatia	20.68
26	Philippines	35.98	26	France	55.08	26	Spain	19.95
27	Panama	35.75	27	Saudi Arabia	53.64	27	Poland	19.65
28	Israel	35.54	28	Israel	52.88	28	Greece	19.33
29	China	35.19	29	Panama	52.35	29	Panama	19.15
30	Malaysia	35.15	30	Thailand	50.98	30	Ukraine	18.84
31	Spain	35.13	31	Colombia	50.69	31	Israel	18.21
32	Poland	34.71	32	Spain	50.32	32	Kuwait	18.14
33	Saudi Arabia	34.46	33	Poland	49.78	33	Italy	18.03

34	Greece	34.43	34	Greece	49.54	34	Jordan	17.63
35	India	34.02	35	Japan	49.36	35	Korea, Republic of	17.63
36	Japan	32.93	36	Nigeria	47.79	36	Australia	17.17
37	Kuwait	32.58	37	Guatemala	47.56	37	Morocco	17.04
38	Hungary	31.61	38	Malaysia	47.31	38	New Zealand	16.71
39	Colombia	31.53	39	Peru	47.23	39	Japan	16.50
40	Chile	31.46	40	Dominican Republic	47.14	40	Chile	16.45
41	Slovak Republic	31.22	41	Kuwait	47.02	41	South Africa	16.40
42	Dominican Republic	30.63	42	Chile	46.47	42	Mexico	15.92
43	Peru	30.01	43	Slovenia	45.72	43	Saudi Arabia	15.28
44	Jordan	29.83	44	Egypt	44.59	44	Philippines	14.98
45	Guatemala	29.47	45	Argentina	43.14	45	United States	14.79
46	Croatia	29.42	46	Brazil	42.37	46	Dominican Republic	14.13
47	Nigeria	29.07	47	Jordan	42.02	47	Türkiye	13.21
48	Cambodia	28.72	48	Bangladesh	41.58	48	Egypt	12.83
49	Egypt	28.71	49	Mexico	38.76	49	Russia	12.80
50	Ukraine	28.40	50	Croatia	38.16	50	Peru	12.79
51	Mexico	27.34	51	South Africa	38.00	51	Colombia	12.36
52	South Africa	27.20	52	Ukraine	37.97	52	Sri Lanka	12.18
53	Argentina	26.78	53	Türkiye	37.48	53	India	11.89
54	Brazil	26.43	54	Russia	35.94	54	Indonesia	11.39
55	Bangladesh	25.68	55	Slovak Republic	35.52	55	Guatemala	11.38
56	Türkiye	25.35	56	Pakistan	35.46	56	Kenya	11.09
57	Russia	24.37	57	Hungary	35.18	57	China	10.65
58	Pakistan	22.31	58	Sri Lanka	31.98	58	Brazil	10.50
59	Sri Lanka	22.08	59	Cambodia	28.96	59	Argentina	10.41
60	Oman	18.47	60	Kenya	22.02	60	Nigeria	10.36
61	Kenya	16.55	61	Morocco	14.99	61	Bangladesh	9.78
62	Morocco	16.01	62	Oman	13.11	62	Pakistan	9.16

Notes: The countries that had strengths in the factor of *Business Context* are Singapore, Hong Kong SAR, Finland, the Netherlands, and Denmark. The sub-factor *Structure* measures the efficiency of business governance and ethical practices among firms. These components were measured by survey data, such as a firm's decision-making process, the development process of unique brands, and equal treatment between domestic and foreign firms. Business morality consists of indices such as social value, ethical practice, health and safety performance, and environmental concerns. *Rivalry* is composed of market 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.

5. (Unskilled) workers			5.1. Quantity of workers			5.2. Quality of workers		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	China	77.26	1	China	92.03	1	Denmark	91.38
2	Philippines	64.00	2	India	70.57	2	Netherlands	85.47
3	India	62.10	3	Cambodia	66.09	3	Canada	84.75
4	Denmark	60.69	4	Pakistan	65.01	4	Australia	76.75
5	Singapore	59.75	5	Thailand	62.37	5	Switzerland	76.37
6	Thailand	59.22	6	Guatemala	61.57	6	Sweden	75.94
7	Netherlands	58.87	7	Malaysia	60.11	7	Singapore	74.41
8	Panama	58.77	8	Philippines	58.37	8	Belgium	73.84
9	Guatemala	58.53	9	Mexico	57.41	9	Taiwan, China	72.60
10	Taiwan, China	58.43	10	Panama	55.76	10	Italy	71.19
11	Mexico	56.95	11	Ukraine	55.30	11	Philippines	69.64
12	Indonesia	56.73	12	Egypt	55.27	12	New Zealand	67.77
13	Malaysia	56.45	13	Saudi Arabia	52.90	13	Kuwait	66.63
14	Canada	56.08	14	Argentina	52.53	14	Spain	65.99
15	Switzerland	55.72	15	Indonesia	51.56	15	Nigeria	65.66
16	Dominican Republic	55.17	16	Dominican Republic	49.93	16	Czech Republic	63.28
17	Kuwait	55.10	17	Türkiye	49.22	17	Hong Kong SAR	62.74
18	Poland	54.48	18	Poland	48.59	18	Colombia	62.54
19	Italy	54.24	19	Jordan	47.37	19	China	62.48
20	Sweden	53.87	20	Kenya	46.85	20	Indonesia	61.90
21	Argentina	53.83	21	Hungary	46.54	21	Panama	61.78
22	Australia	53.15	22	Bangladesh	46.40	22	Peru	61.76
23	Hong Kong SAR	53.12	23	Brazil	46.15	23	United Kingdom	61.07
24	Peru	52.33	24	Oman	45.33	24	Austria	61.05
25	Belgium	52.27	25	Singapore	45.08	25	Dominican Republic	60.41
26	Nigeria	52.17	26	UAE	45.05	26	Poland	60.38
27	New Zealand	51.71	27	Chile	44.40	27	Korea, Republic of	59.01
28	Israel	51.04	28	Taiwan, China	44.26	28	Israel	58.97
29	UAE	50.63	29	Slovenia	44.10	29	Germany	58.30
30	United Kingdom	50.42	30	Sri Lanka	43.88	30	Japan	57.85
31	Saudi Arabia	50.02	31	Kuwait	43.57	31	Greece	57.24
32	Brazil	50.00	32	Hong Kong SAR	43.49	32	Mexico	56.49
33	Korea, Republic of	49.11	33	Israel	43.11	33	UAE	56.20

34	Türkiye	49.10	34	Peru	42.90	34	Thailand	56.07
35	Spain	49.10	35	Japan	40.34	35	Guatemala	55.49
36	Japan	49.10	36	United Kingdom	39.78	36	Argentina	55.14
37	Jordan	48.87	37	Korea, Republic of	39.22	37	Vietnam	54.62
38	Czech Republic	48.85	38	Russia	39.14	38	Brazil	53.85
39	Cambodia	48.26	39	Nigeria	38.67	39	India	53.63
40	Egypt	48.04	40	Italy	37.30	40	United States	53.57
41	Chile	47.90	41	Greece	36.15	41	Malaysia	52.78
42	Pakistan	47.82	42	New Zealand	35.66	42	Chile	51.40
43	Ukraine	47.00	43	Switzerland	35.07	43	Jordan	50.36
44	Colombia	46.94	44	Czech Republic	34.43	44	Slovenia	49.72
45	Austria	46.92	45	Morocco	34.13	45	Türkiye	48.98
46	Slovenia	46.91	46	Finland	33.50	46	France	47.69
47	Greece	46.69	47	United States	33.23	47	Saudi Arabia	47.14
48	Germany	44.95	48	Austria	32.79	48	Croatia	46.23
49	United States	43.40	49	Netherlands	32.26	49	Sri Lanka	42.72
50	Sri Lanka	43.30	50	Spain	32.22	50	Egypt	40.80
51	Bangladesh	43.15	51	Sweden	31.79	51	Russia	40.31
52	Kenya	41.94	52	Germany	31.60	52	Bangladesh	39.91
53	Oman	40.02	53	Colombia	31.34	53	Ukraine	38.70
54	Vietnam	39.97	54	France	31.05	54	Kenya	37.03
55	Russia	39.72	55	Belgium	30.69	55	Oman	34.72
56	Hungary	39.43	56	Croatia	30.44	56	Hungary	32.33
57	France	39.37	57	Denmark	30.00	57	Pakistan	30.62
58	Croatia	38.34	58	Australia	29.54	58	Cambodia	30.43
59	Morocco	31.09	59	Canada	27.41	59	South Africa	29.24
60	Finland	30.58	60	Slovak Republic	26.69	60	Morocco	28.04
61	Slovak Republic	24.45	61	Vietnam	25.33	61	Finland	27.65
62	South Africa	15.31	62	South Africa	1.38	62	Slovak Republic	22.21

Notes: The five countries including China, the Philippines, India, Denmark, and Singapore showed a strong performance in the area of *(Unskilled) Workers*. They all demonstrated strong competitiveness in this factor due to their advantage in the *Quantity of Workers* and/or *Quality 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 managers and workers. Countries with strength in this sub-factor are considered to have a relatively favorable attitude of workers and working conditions.

6. Policymakers and administrators			6.1. Policymakers			6.2. Administrators		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Singapore	92.87	1	Denmark	89.05	1	Singapore	96.86
2	Denmark	89.65	2	Singapore	88.87	2	Denmark	90.26
3	Switzerland	88.30	3	Switzerland	86.91	3	Netherlands	89.70
4	Netherlands	87.24	4	Netherlands	84.78	4	Switzerland	89.68
5	Finland	85.38	5	Canada	82.12	5	Finland	89.34
6	Canada	82.28	6	Finland	81.42	6	Sweden	84.74
7	Sweden	82.06	7	Sweden	79.37	7	New Zealand	83.39
8	Australia	80.45	8	Australia	77.96	8	Australia	82.94
9	New Zealand	79.12	9	New Zealand	74.86	9	Canada	82.43
10	UAE	73.85	10	UAE	73.92	10	Japan	77.61
11	Germany	71.95	11	Saudi Arabia	72.94	11	Hong Kong SAR	77.26
12	Belgium	70.83	12	China	72.55	12	Germany	74.55
13	Austria	69.28	13	Belgium	70.30	13	United Kingdom	74.44
14	Taiwan, China	68.39	14	Germany	69.36	14	UAE	73.77
15	United Kingdom	67.76	15	Austria	67.92	15	Taiwan, China	73.10
16	France	65.86	16	United States	66.15	16	Belgium	71.36
17	Japan	65.44	17	Taiwan, China	63.69	17	Austria	70.65
18	Hong Kong SAR	64.94	18	Vietnam	63.47	18	France	70.50
19	Saudi Arabia	64.05	19	France	61.22	19	Korea, Republic of	67.70
20	Korea, Republic of	63.95	20	United Kingdom	61.09	20	Israel	63.32
21	United States	63.61	21	Korea, Republic of	60.21	21	Chile	62.66
22	China	62.57	22	Greece	58.07	22	United States	61.08
23	Israel	59.53	23	Egypt	56.09	23	Czech Republic	55.89
24	Chile	56.45	24	Italy	56.02	24	Saudi Arabia	55.15
25	Italy	54.47	25	Israel	55.73	25	Slovenia	53.98
26	Greece	53.95	26	Kuwait	54.68	26	Italy	52.93
27	India	51.12	27	India	53.67	27	Malaysia	52.71
28	Czech Republic	50.63	28	Japan	53.26	28	China	52.59
29	Kuwait	49.53	29	Hong Kong SAR	52.63	29	Spain	50.99
30	Malaysia	49.19	30	Jordan	51.36	30	Greece	49.83
31	Vietnam	47.47	31	Chile	50.23	31	India	48.56
32	Jordan	47.34	32	Indonesia	47.02	32	Poland	48.48
33	Philippines	44.55	33	Philippines	45.89	33	Kuwait	44.37

34	Slovenia	44.23	34	Malaysia	45.67	34	Jordan	43.33
35	Panama	43.43	35	Panama	45.41	35	Philippines	43.22
36	Poland	43.24	36	Czech Republic	45.36	36	Panama	41.45
37	Egypt	42.57	37	Colombia	44.45	37	Oman	40.90
38	Indonesia	42.55	38	Russia	43.52	38	Slovak Republic	39.91
39	Colombia	41.83	39	Cambodia	43.18	39	Colombia	39.21
40	Spain	41.64	40	Bangladesh	41.23	40	Thailand	38.41
41	Oman	39.61	41	Nigeria	39.18	41	Indonesia	38.09
42	Thailand	37.99	42	Oman	38.32	42	Hungary	38.06
43	Russia	37.92	43	Poland	37.99	43	Argentina	34.10
44	Hungary	36.20	44	Thailand	37.58	44	Croatia	32.95
45	Cambodia	35.59	45	Pakistan	37.04	45	Türkiye	32.90
46	Bangladesh	35.23	46	Dominican Republic	35.78	46	Russia	32.31
47	Argentina	33.52	47	Slovenia	34.49	47	Vietnam	31.46
48	Türkiye	33.17	48	Hungary	34.35	48	Bangladesh	29.23
49	Nigeria	31.90	49	Türkiye	33.43	49	Egypt	29.05
50	Slovak Republic	31.86	50	Argentina	32.94	50	South Africa	28.55
51	Pakistan	31.34	51	Spain	32.29	51	Peru	28.39
52	Dominican Republic	31.04	52	Guatemala	31.89	52	Cambodia	28.00
53	Guatemala	27.45	53	Mexico	25.82	53	Brazil	27.73
54	Peru	26.49	54	Morocco	25.70	54	Mexico	26.87
55	Mexico	26.35	55	Peru	24.60	55	Dominican Republic	26.29
56	Morocco	25.49	56	Slovak Republic	23.81	56	Pakistan	25.64
57	Brazil	24.49	57	Ukraine	23.15	57	Morocco	25.29
58	South Africa	24.13	58	Brazil	21.24	58	Nigeria	24.62
59	Croatia	23.77	59	Kenya	20.81	59	Sri Lanka	24.05
60	Ukraine	22.90	60	South Africa	19.70	60	Guatemala	23.00
61	Kenya	21.39	61	Croatia	14.58	61	Ukraine	22.66
62	Sri Lanka	15.87	62	Sri Lanka	7.68	62	Kenya	21.96

Notes: The countries that showed strengths in *Policymakers and Administrators* are Singapore, Denmark, Switzerland, the Netherlands, and Finland. Singapore was competitive in this factor due to its strength in both *Policymakers* and *Administrators*. *Policymakers* are measured by five criteria including the process of parliament/congress, the result of legislation, ethics, education level, and the international experience of policymakers. *Administrators* are measured by five criteria including the process of policy implementation, the results of policy implementation, ethics, education level, and the international experience of bureaucrats. Economies with strength in the two sub-factors are known to hold relatively high competitiveness in morality, international experience, quality regulations, and efficient implementation capabilities.

7. Entrepreneurs			7.1. Personal competence			7.2. Social context		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	United States	85.38	1	United States	85.45	1	Netherlands	89.47
2	Denmark	81.62	2	Canada	82.45	2	United States	85.31
3	Sweden	81.32	3	Sweden	79.24	3	Denmark	84.63
4	Canada	80.31	4	Denmark	78.61	4	Sweden	83.41
5	Netherlands	78.95	5	Hong Kong SAR	76.91	5	UAE	80.11
6	Switzerland	76.92	6	Finland	76.53	6	Singapore	78.49
7	Finland	75.24	7	Switzerland	76.01	7	Canada	78.16
8	Hong Kong SAR	75.10	8	Israel	75.96	8	Switzerland	77.83
9	UAE	74.32	9	Australia	75.61	9	Finland	73.94
10	Singapore	73.82	10	United Kingdom	69.79	10	United Kingdom	73.70
11	Australia	73.35	11	Singapore	69.15	11	Hong Kong SAR	73.29
12	United Kingdom	71.75	12	UAE	68.53	12	Australia	71.09
13	Israel	69.77	13	Netherlands	68.42	13	New Zealand	70.79
14	New Zealand	68.10	14	New Zealand	65.40	14	Belgium	68.50
15	Belgium	66.74	15	Belgium	64.99	15	Germany	66.81
16	Austria	61.75	16	Austria	63.43	16	Taiwan, China	65.08
17	Germany	61.75	17	Taiwan, China	57.21	17	Israel	63.58
18	Taiwan, China	61.14	18	France	56.99	18	Korea, Republic of	62.35
19	Korea, Republic of	58.17	19	Germany	56.70	19	China	61.83
20	France	57.08	20	Chile	54.45	20	Austria	60.08
21	Chile	54.52	21	Korea, Republic of	53.99	21	Saudi Arabia	57.72
22	Saudi Arabia	54.34	22	Malaysia	53.15	22	France	57.16
23	Czech Republic	52.05	23	Saudi Arabia	50.96	23	Italy	56.54
24	China	51.08	24	Czech Republic	50.22	24	Chile	54.59
25	Poland	50.06	25	Japan	47.69	25	Poland	54.00
26	Malaysia	47.86	26	Colombia	47.33	26	Dominican Republic	53.95
27	Slovenia	47.69	27	Poland	46.12	27	Czech Republic	53.87
28	Italy	47.65	28	Kuwait	45.16	28	Indonesia	51.44
29	Kuwait	47.30	29	Slovenia	44.31	29	Thailand	51.43
30	Colombia	45.92	30	Hungary	44.17	30	Slovenia	51.08
31	Dominican Republic	45.42	31	China	40.33	31	India	50.11
32	Japan	43.53	32	Oman	40.06	32	Kuwait	49.44
33	Hungary	42.98	33	Slovak Republic	39.84	33	Türkiye	47.85

34	Panama	42.72	34	Italy	38.75	34	Panama	47.32
35	Greece	41.70	35	Panama	38.11	35	Vietnam	46.91
36	Thailand	40.86	36	Spain	36.98	36	Greece	46.79
37	Indonesia	40.25	37	Dominican Republic	36.89	37	Egypt	45.46
38	Türkiye	39.98	38	Croatia	36.79	38	Philippines	45.34
39	Spain	39.83	39	Greece	36.62	39	Colombia	44.51
40	India	39.41	40	Nigeria	35.41	40	Jordan	44.13
41	Mexico	38.96	41	Mexico	34.26	41	Mexico	43.66
42	Slovak Republic	38.65	42	South Africa	33.80	42	Peru	42.77
43	Jordan	38.06	43	Peru	32.71	43	Spain	42.68
44	Vietnam	37.94	44	Türkiye	32.10	44	Malaysia	42.56
45	Peru	37.74	45	Jordan	31.98	45	Hungary	41.80
46	Philippines	37.44	46	Thailand	30.28	46	Russia	41.75
47	Oman	37.17	47	Russia	29.81	47	Japan	39.38
48	Russia	35.78	48	Philippines	29.53	48	Slovak Republic	37.45
49	Nigeria	34.35	49	Indonesia	29.06	49	Morocco	36.38
50	Egypt	34.13	50	Vietnam	28.96	50	Ukraine	34.30
51	South Africa	32.72	51	India	28.70	51	Oman	34.27
52	Croatia	32.24	52	Ukraine	24.36	52	Nigeria	33.29
53	Ukraine	29.33	53	Brazil	24.06	53	Guatemala	32.68
54	Argentina	27.72	54	Argentina	23.87	54	South Africa	31.64
55	Brazil	26.39	55	Egypt	22.79	55	Argentina	31.58
56	Morocco	25.40	56	Cambodia	17.51	56	Bangladesh	29.63
57	Guatemala	24.06	57	Sri Lanka	17.12	57	Pakistan	29.48
58	Cambodia	23.21	58	Kenya	16.22	58	Cambodia	28.90
59	Bangladesh	22.77	59	Bangladesh	15.90	59	Brazil	28.72
60	Kenya	22.20	60	Guatemala	15.44	60	Kenya	28.18
61	Pakistan	21.36	61	Morocco	14.41	61	Croatia	27.69
62	Sri Lanka	16.45	62	Pakistan	13.23	62	Sri Lanka	15.77

Notes: The countries that showed strong performance in *Entrepreneurs* include the US, Denmark, Sweden, Canada, and the Netherlands. The strengths of the US lie in the sub-factor *Personal Competence of Entrepreneurs*, which has 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.

8. Professionals			8.1. Personal competence			8.2. Social context		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Denmark	82.70	1	Finland	91.29	1	Denmark	86.30
2	Switzerland	81.86	2	Denmark	79.10	2	Switzerland	85.79
3	Netherlands	81.72	3	Singapore	78.39	3	Netherlands	85.21
4	Singapore	79.97	4	Netherlands	78.23	4	Belgium	82.72
5	Finland	79.02	5	Switzerland	77.94	5	Singapore	81.55
6	UAE	77.80	6	UAE	75.59	6	UAE	80.02
7	United States	76.84	7	United States	75.44	7	United States	78.24
8	Belgium	74.05	8	Canada	70.83	8	Canada	76.28
9	Canada	73.55	9	Taiwan, China	70.77	9	Sweden	75.27
10	Sweden	72.56	10	Sweden	69.86	10	Australia	75.02
11	Hong Kong SAR	70.05	11	India	69.25	11	Hong Kong SAR	72.86
12	Australia	69.31	12	China	68.70	12	China	69.30
13	China	69.00	13	Vietnam	68.56	13	Vietnam	69.15
14	India	68.96	14	Hong Kong SAR	67.24	14	India	68.67
15	Vietnam	68.85	15	Philippines	66.82	15	Korea, Republic of	68.46
16	Korea, Republic of	67.52	16	Korea, Republic of	66.58	16	New Zealand	68.31
17	Taiwan, China	66.41	17	Indonesia	66.05	17	United Kingdom	67.77
18	Indonesia	65.90	18	Belgium	65.38	18	Italy	66.92
19	United Kingdom	65.35	19	Austria	64.34	19	Finland	66.75
20	New Zealand	63.58	20	Nigeria	63.67	20	Dominican Republic	66.24
21	Philippines	63.56	21	Australia	63.61	21	Indonesia	65.74
22	Austria	62.53	22	United Kingdom	62.94	22	Germany	64.48
23	Italy	61.86	23	Israel	61.37	23	Taiwan, China	62.05
24	Germany	60.95	24	Greece	59.53	24	Austria	60.71
25	Israel	59.28	25	Czech Republic	59.16	25	Kuwait	60.38
26	Dominican Republic	58.34	26	New Zealand	58.84	26	Philippines	60.29
27	Czech Republic	57.81	27	Germany	57.42	27	Israel	57.20
28	Nigeria	57.45	28	Italy	56.80	28	Malaysia	56.91
29	Greece	56.77	29	Saudi Arabia	56.39	29	Saudi Arabia	56.54
30	Kuwait	56.52	30	Panama	56.04	30	Czech Republic	56.47
31	Saudi Arabia	56.46	31	Croatia	55.10	31	Panama	56.12
32	Panama	56.08	32	Thailand	53.86	32	Greece	54.02
33	Malaysia	53.67	33	Poland	53.20	33	Colombia	53.07

34	Thailand	52.85	34	Kuwait	52.66	34	Egypt	52.58
35	Poland	52.40	35	Colombia	51.10	35	Thailand	51.85
36	Colombia	52.08	36	Dominican Republic	50.45	36	Poland	51.60
37	Cambodia	49.29	37	Malaysia	50.44	37	Nigeria	51.24
38	Mexico	48.58	38	Cambodia	49.94	38	Chile	50.81
39	Bangladesh	48.40	39	Hungary	49.89	39	Bangladesh	49.90
40	Argentina	47.38	40	Mexico	48.65	40	Slovenia	49.45
41	Croatia	47.22	41	Argentina	48.61	41	Cambodia	48.64
42	Türkiye	46.75	42	Türkiye	47.37	42	Mexico	48.51
43	Jordan	46.53	43	Bangladesh	46.89	43	Ukraine	48.35
44	Chile	46.32	44	South Africa	46.48	44	Peru	48.02
45	Hungary	46.19	45	Jordan	45.33	45	Jordan	47.73
46	Egypt	46.07	46	Guatemala	44.93	46	Argentina	46.14
47	Slovenia	45.91	47	Spain	43.69	47	Türkiye	46.13
48	Peru	45.08	48	Slovenia	42.37	48	Japan	45.81
49	South Africa	44.16	49	Peru	42.14	49	Russia	42.80
50	Japan	43.87	50	Japan	41.92	50	Hungary	42.49
51	Ukraine	43.25	51	Chile	41.83	51	France	42.16
52	Spain	42.54	52	Slovak Republic	41.33	52	South Africa	41.85
53	France	40.25	53	Egypt	39.56	53	Spain	41.38
54	Slovak Republic	39.77	54	Brazil	38.93	54	Pakistan	39.43
55	Guatemala	39.69	55	France	38.34	55	Croatia	39.33
56	Russia	38.97	56	Ukraine	38.15	56	Slovak Republic	38.21
57	Brazil	38.12	57	Russia	35.14	57	Brazil	37.30
58	Pakistan	34.17	58	Sri Lanka	31.14	58	Morocco	36.12
59	Sri Lanka	31.80	59	Kenya	28.98	59	Guatemala	34.45
60	Kenya	29.82	60	Pakistan	28.92	60	Sri Lanka	32.46
61	Morocco	26.27	61	Oman	20.84	61	Kenya	30.66
62	Oman	17.16	62	Morocco	16.42	62	Oman	13.48

Notes: The competitive countries in *Professionals* are Denmark, Switzerland, the Netherlands, Singapore, and Finland. 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 (0)

The strong performance of Denmark[1] in the 2022 NCR was attributed to its high performance in areas of Related Industries (1), Professionals (1), Entrepreneurs (2), and Policymakers and Administrators (2). The Danish economy remained strong throughout the pandemic, recording a growth of 4.1 percent in 2021, its fastest rate in the past three decades. The strong economic performance was driven by a rise in private consumption which had risen by 4.3 percent in 2021. Thanks to strong financial conditions, the Danish economy remained strong despite the negative impact from the COVID-19 pandemic. The employment rate remained on an uptrend, recovering fully to pre-pandemic levels in the second quarter of 2021. Denmark also recorded the lowest level of state debt since 2009. Furthermore, the economic recovery of its key trading partners, specifically Germany and the US, supported Denmark's recovery in net exports. Denmark has been putting efforts into cutting its greenhouse gas emissions through a rapid shift to renewable energy (green hydrogen) sources, which is expected to boost the country's energy security amid the growing uncertainty on energy prices brought on by the Russia-Ukraine War.

#2. Canada (0)

Canada[2]'s competitiveness lies in strong Factor Conditions (2) and Entrepreneurs (4). The Canadian economy showed a strong performance, recording 4.6 percent growth in 2021, which is a positive recovery from the COVID-19 pandemic-induced decline of -5.2 percent in 2020. Household spending and residential construction were the two largest contributors to GDP growth in 2021. More specifically, growth was driven by business investment in engineering structures and home ownership transfer (i.e., commission and land transfer taxes associated with the home resale and new inventories, which have increased by 14.3 percent). Many of the supply chain problems were also alleviated, accelerating the recovery of the economy. For example, the manufacturing sector, especially auto production, rebounded notably as global microchip shortages were alleviated. Finally, government investment in manufacturing through digitization and the provision of relief programs have accelerated a labor market recovery.

#3. Singapore (+2)

Singapore[3]'s strong performance is highlighted by the superior Business Context (1) and the competitive Policymakers and Administrators (1). The economy expanded by 7.6 percent in 2021, recording the fastest growth rate since 2010. Regarded as the most open in the world, Singapore continues to have some of the lowest tax rates in the world. Singapore's labor market broadly recovered in 2021 as local employment was expanded, recovering to pre-COVID levels. Moreover, Singapore benefited from the inward flow of Foreign Direct Investment (FDI), thanks to its highly attractive investment environment and a stable political environment in recent years. In this respect, Singapore is likely to reap long-term benefits

[1] This information is abstracted and organized from Bloomberg (2021), Fitch Rating (2022a), OECD (2021b), OECD (2021f), and The Local (2022).

[2] This information is abstracted and organized from OECD (2021a), Shelly (2021), Trading Economics (2021), Statistics Canada (2022), The Canadian Press (2022), and Thomson Reuters (2022).

[3] This information is abstracted and organized from Business Times (2022), Davina (2022), Low (2022), Ministry of Trade and Industry Singapore (2022), and Singapore Economic Development (2022).

under the Regional Comprehensive Economic Partnership (RCEP): reduction of tariffs, a common rule of origin, and expansion of services market access.

#4. Netherlands (-1)

The Netherlands[4] showed competitiveness in many fields, such as Professionals (3), Business Context (4), and Policymakers and Administrators (4). The Dutch economy demonstrated a faster recovery from the COVID-19 pandemic when compared to its neighbors. The economy grew by 5 percent in 2021, supported by a high value-added, flexible, and open economy, and effective institutions. The 2021 recovery was driven primarily by strong export performance and strong domestic demand. For the first time since the beginning of the pandemic, the Netherlands recovered its upward trend in private consumption. In April 2021, the Netherlands registered record high domestic household consumption, 11.9 percent. Domestic demand remained robust as household spending was supported by a tightening labor market and excess savings. Yet, private investment is recovering more slowly due to lingering uncertainty.

#5. Switzerland (+1)

Switzerland[5]'s strong performance was due to its core competencies that lie in the areas of Professionals (2), Demand Conditions (3), Policymakers and Administrators (3), and Related Industries (4). The service sector has come to play a significant economic role, particularly in the banking and tourism sectors. Like the Netherlands, Switzerland also showed a better performance when compared to its neighboring European peers. It has proven to be resilient throughout the COVID-19 pandemic, thanks to a diversified economy with a relatively lower reliance on hospitality and entertainment industries, which were especially vulnerable to the spread of COVID-19, and with significant fiscal support provided by households and firms. As a result, Switzerland recorded solid economic growth, 3.7 percent, in 2021. The inflation rate has risen but remains moderate, and therefore Switzerland's fiscal position remains strong.

#6. Sweden (-2)

Sweden[6]'s competitiveness lies in the areas of Related Industries (3) and Entrepreneurs (3). The Swedish economy is export-oriented, featuring a modern distribution system and excellent internal and external communications. The Swedish economy recovered to the pre-pandemic level; recorded a GDP growth of 4.8 percent in 2021, boosted by the elimination of COVID-19-related restrictions and a rebound in private consumption and investment. The increase in demand was supported by rising employment and wages. Moreover, Sweden's wealthy, well-diversified, and innovative economy has helped the country's economy to remain strong. Still, the uncertainty posed by social factors has impacted the Swedish economy. In fact, the Swedish economy contracted by -0.4 percent in the first quarter of 2022 due to a higher inflation rate and domestic riots over immigration

[4] This information is abstracted and organized from Fitch Rating (2022b), Focus Economics (2022), OECD. (2021d), and OECD (2021g).

[5] This information is abstracted and organized from The International Trade Administration (2019), OECD. (2021h), and SWI (2021).

[6] This information is abstracted and organized from OECD (2021e), Jon (2022), Ott (2022), and Reuters (2021a).

while the COVID-19 pandemic has exacerbated the income gap amid surging unemployment among immigrants.

#7. Finland (+2)

Finland[7]'s areas of competitiveness were Related Industries (2), Business Context (3), Demand Conditions (4), Policymakers and Administrators (5), and Professionals (5). Finland has a highly industrialized economy. Moreover, Finland has been ranked as the world's happiest country for five years in a row since 2017 which summarizes the high social support in the country. In 2021, Finland's economy expanded by 3.3 percent, recovering fully from the pandemic, which was driven by strong domestic demand. The high savings rate and consumer confidence have boosted growth in private consumption. Funding received from the EU's Recovery and Resilience Facility (RRF) has also boosted private investment. Furthermore, the imbalance between government expenditure and revenues declined sharply in 2021. The domestic labor market remains strong, and consumer spending is likely to drive growth in 2022.

#8. Australia (-1)

Australia[8] demonstrates high competitiveness, particularly in areas of Factor Conditions (1) and Policymakers and Administrators (8). As its international borders reopen, the Australian economy recovered from the COVID-19 pandemic by recording a GDP growth rate of 4.7 percent in 2021, far exceeding the negative growth rate of -2.4 percent in 2020. The wages of employees were lower in 2021 though, declining by 1.5 percent from two years earlier, lower than at any time in recorded history. This shows that although, in general, households are driving economic growth, the workers were not getting their fair share of rewards. Moreover, market turmoil and an increase in interest rates pose a threat to the recovery of the Australian economy. Specifically, soaring energy costs, stagflation fears, and calls for higher wages are the forecasted challenges.

#9. United States (-1)

The core competencies of the United States[9] (US) are in the areas of Demand Conditions (1) and Entrepreneurs (1). The US economy expanded by 5.7 percent in 2021 as the government pumped trillions of dollars in COVID-19 relief to protect the economy from the negative impact brought on by the pandemic. The US remained competent in many areas of technology; it expanded investment in technology growth by 91 percent in 2021 compared to the previous year to maintain its strong position in technological areas. In fact, GDP growth in the fourth quarter of 2021 was led by increased inventory investment in these leading sectors. Although the economic recovery resulted in strong nominal wage gains and productivity growth in 2021, the inflation rate increased relatively faster. Hence, the forecast for the economic growth of the US economy remains uncertain. In fact, it shrank in the first quarter of 2022, resulting from the geopolitical turbulence caused by the war in Ukraine, a global supply chain crisis, and increasing inflation due to the ongoing COVID-19 pandemic.

#10. Hong Kong SAR (+1)

[7] This information is abstracted and organized from OECD (2021c).

[8] This information is abstracted and organized from Peter (2022).

[9] This information is abstracted and organized from Furman and Powell III (2022), and Philipp et al. (2022).

The key strengths of Hong Kong[10] include a favorable Business Context (2) and the strong performance of Entrepreneurs (8). The economy of Hong Kong experienced a strong year-on-year expansion, recording a 7.8 percent growth in the first half of 2021, thanks to a sharp rebound in global demand. The expansion continued throughout 2021, recording solid growth of 5.5 percent and 4.8 percent in the third and fourth quarters, respectively, as the local spread of COVID-19 remained under control. Moreover, to support the local economy, the Hong Kong administrative government provided subsidies worth 30 billion Hong Kong dollars (3.85 billion US dollars). Overall, reflecting a rebound in household spending, the economy of Hong Kong grew by 6.4 percent in 2021, marking its first annual rise after experiencing two years of negative growth.

#11. United Arab Emirates (+2)

The competitiveness of the United Arab Emirates[11] (UAE) was mainly driven by strong Factor Conditions (6) and Professionals (6). The UAE's economy recorded a 2.3 percent growth in 2021. Particularly, non-oil foreign trade expanded by 27 percent in the first half of the year. Moreover, the key drivers of the UAE's economy are summarized as the launch of an industrial strategy worth AED300 billion, the trade of Murban crude oil, the hosting of the Expo 2020 Dubai (Oct 1, 2021 – Mar 31, 2022), increase in tourism, and legislative reform. As a result, the contribution of the UAE's non-oil sector to GDP exceeded 72 percent in 2021. Hotels and restaurants, wholesale and retail, as well as health and social services, spur the growth of the country's non-oil economy. In addition, FDI into the UAE rose to US$20.7 billion in 2021, increasing by 4 percent from the previous year.

#12. New Zealand (-2)

New Zealand[12] ranked relatively high in Factor Conditions (4) and Policymakers and Administrators (9). New Zealand's GDP shrank by 3.7 percent in the third quarter of 2021 compared to the previous quarter. The Omicron outbreak later in 2021 disrupted the labor market and proliferated wages, exacerbating the ongoing labor shortages and causing higher inflation. For example, the employment data shows a major withdrawal from the labor force amid a plunge in the number of immigrants. Hence, lower population growth is likely to continually disrupt the expansion of private consumption. Moreover, New Zealand encountered a disruption in the supply chain amid pandemic-related travel disruption. This has revealed the danger of relying heavily on a single production network–specifically China—for New Zealand. In the past few years, New Zealand has been imposing stringent pandemic-related restrictions, which has brought a negative impact on the economy, especially the tourism industry.

#13. Belgium (-1)

Belgium[13] showed a strong performance in Related Industries (6), Business Context (6), and Professionals (8). Throughout 2021, there was a noticeable recovery momentum in Belgium's

[10] This information is abstracted and organized from The Government of the Hong Kong Special Administrative Region (2022).

[11] This information is abstracted and organized from Nagraj (2022), Rizvi (2022), and Reuters (2022).

[12] This information is abstracted and organized from Reuters (2021b), East Asia Forum (2022), and Jayden (2022).

[13] This information is abstracted and organized from NBB Economic Review (2021).

economy. Still, recovery was uneven across different industries. For instance, although many industries performed better in 2021, the service industry had not recovered to the pre-pandemic level. Business sentiment has improved, mainly driven by a rise in demand expectations, but uncertainty still deters further business investment. The COVID-19 restrictions were kept in place throughout 2021 which mandated the suspension of accommodation and catering, as well as the arts and entertainment. A gradual easing of these restrictions did take place in the third quarter of 2021, which helped to boost private consumption. Yet, the recovery in economic activity had slowed down again by the end of 2021 as a new wave of infections brought about renewed restrictions, as well as supply side constraints and higher input prices. In addition, Belgium's dependence on Russian gas adds an uncertain outlook to energy prices, which will add a burden to already high inflation.

#14. China (0)

China[14] holds strengths in Workers (1) and Demand Conditions (2). Its economic performance lived up to expectations in 2021, recording a growth of 8.1 percent as industrial production rose steadily through the end of the year, offsetting a drop-off in retail sales. Moreover, the FDI inflow expanded by 14.9 percent, accounting for 1.15 trillion yuan in 2021. Still, China's economic recovery is projected to slow in 2022 due to its strict zero-COVID policies. In addition, a crackdown on real estate debt in the second half of 2021 led to a slump in construction and housing sales. As a result, compared to the past years, a relatively lower economic growth target of 5.5 percent growth has been set. Businesses in China were already grappling with rising energy and raw material costs as COVID-19 lockdowns into 2022 further disrupted business operations, leading to a second sharpest contraction in the history of China's service sector.

#15. Austria (0)

Austria[15]'s relatively strong performance was due to its core competence in Related Industries (5). The country entered the COVID-19 pandemic with a strong health system, robust public finances, low unemployment, and a strong social safety net. Swift and decisive government support has been effective in securing job opportunities and investment. As a result, Austria recorded a GDP growth of 4.5 percent in 2021 which was driven by growth in almost all sectors. The Austrian economy recovered rapidly, especially in the first and second quarters of 2021. In the fourth quarter of 2021, however, GDP declined significantly due to the reestablishment of lockdown measures. Furthermore, the COVID-19 pandemic has created a different scale of impact in different regions, therefore supply bottlenecks and high commodity prices have slowed economic recovery in 2021.

#16. United Kingdom (+3)

The United Kingdom[16] was relatively competitive in areas of Demand Conditions (8), Entrepreneurs (12), and Policymakers and Administrators (15). The economy has been recovering and is expected to reach pre-crisis levels by the beginning of 2022. Its GDP rose by 7.4 percent in 2021, with consumption as the main driver of growth. The services growth in February 2022 was mainly driven by tourism-related industries, measured by the increased revenues of both travel agencies, tour operators, and other reservation services and related

[14] This information is abstracted and organized from Cheng (2022) and Laura (2022).

[15] This information is abstracted and organized from Marton (2021) and Stefan & Stefan (2022).

[16] This information is abstracted and organized from Bloomberg (2022).

activities as well as accommodation. In February 2022, 8 of the 14 service sectors performed above their pre-pandemic levels. For example, the industry of human health and social work activities expanded 9.8 percent in 2021 compared to the year before. Investment is expected to continually improve but the long-term prospects look uncertain. Notably, the increased border costs following the exit from the EU Single Market are weighing up on imports and exports.

#17. Taiwan, China (+1)

The main strength of Taiwan[17], China (Hereafter Taiwan) was in Related Industries (9), Workers (10), Business Context (14), and Policymakers and Administrators (14). Taiwan's economy has outshined many others in the last two years (2020-2021). While the COVID-19 recession was hard, Taiwan's economy enjoyed a moderate expansion of 3.1 percent in 2020 and it expanded by 6.3 percent in 2021, driven by strong tech exports. Taiwan is the home country of the largest semiconductor chip maker in the world, TSMC which is essential to many household electronics such as laptops, phones, and refrigerators to name a few. The tech and chip demands were exceptional during the COVID-19 to support work-from-home demands. A global shortage of semiconductors has also boosted export growth among Taiwan chip makers. As a result, Taiwan's exports rose 29.4 percent in 2021 and the economy continues to benefit from strong global demand for its high-tech goods and chips. Moreover, Taiwan's greater involvement in regional and global economic agreements is expected to enhance the economic security of the country, protecting it from possible sanctions by China on the Taiwanese economy.

#18. Germany (-2)

Germany[18] holds competence in areas of Demand Conditions (5), Policymakers and Administrators (11), and Related Industries (15). Thanks to its reliable manufacturing sector, Germany has remained strong amid a financial downturn and its economy has expanded by 2.8 percent in 2021. A slight recovery in industry and services and increased government spending and investments were the two key drivers of its economic recovery. Nevertheless, Germany's economy remains below the pre-pandemic level as the global supply bottlenecks have hindered industries and led to shortages of key manufacturing inputs, although the situation seems to be improving as supply constraints ease. Meanwhile, the pandemic induced the second highest government deficit in its history. Provisional calculations showed the deficit at €153.9 billion by the end of 2021, an increase from €145.2 billion in 2020.

#19. Israel (-2)

Israel[19]'s strengths lie in its relatively high competitiveness in Entrepreneurs (13) and Related Industries (19). Its skilled workforce and concentration of venture capital allowed a strong performance in innovative industries such as high-tech, cleantech, and the life sciences. In 2021, the Israeli economy grew by 8.2 percent, surpassing the previous year's forecasts. Growth in Israel in 2021 was one of the strongest in the world and exceptional compared with an OECD average of 5.3 percent. The country's expansive booster vaccination campaign

[17] This information is abstracted and organized from Time (2021), Country Economy (2022c), and Jeanny & Meg (2022).

[18] This information is abstracted and organized from Country Economy (2022b) and Johanna (2022).

[19] This information is abstracted and organized from Consulate General of Israel to the Pacific Northwest San Francisco (2022), and Steven (2022).

facilitated the recovery of the labor market and supported domestic demand. Additionally, the strong growth of high-tech service exports continued. Still, in 2021, due to the outbreak of the Omicron variant, tight restrictions and lockdowns were reimposed. Hence, the COVID-19 crisis threatens to aggravate Israel's long-standing challenges of high poverty, imbalance in income distribution, and wide productivity disparity between its vibrant high-tech (modern) sector and traditional sectors, which employ the majority of the country's workforce.

#20. Saudi Arabia (+1)

Saudi Arabia[20]'s competitiveness is driven by its strong Factor Conditions (7). It has the second-largest proven petroleum reserves and it is the largest exporter of petroleum in the world, taking a leadership position among the OPEC countries. In 2021, Saudi Arabia recorded a 3.2 percent GDP growth rate, the highest in seven years, largely driven by surging oil production and eased oil exports, as well as the decrease in unemployment rates, budget surplus, and falling inflation. In addition, Saudi Arabia's non-oil sector has also made progress. Hence, all economic activities showed positive growth in the fourth quarter of 2021. Petroleum refining activities expanded at the highest rates by 15.8 percent, followed by other mining and quarrying activities that expanded by 11.5 percent. Moreover, crude petroleum and natural gas activities grew by 10.4 percent. The prospect of the Saudi Arabian economy remains positive for 2022, due to higher oil demands and processes amid the ongoing Russia-Ukraine War as well as growing oil production and easing of pandemic pressures.

#21. Kuwait (-1)

Kuwait[21]'s competitiveness was mainly driven by Factor Conditions (3). It has a resource-based economy, which has crude oil reserves of about 102 billion barrels (accounting for about 7 percent of the world's known reserves). Moreover, Kuwait's geographic location enables access to key markets such as East Asia and Europe. As many countries began to recover from the pandemic in 2021, oil prices began to rebound. Consequently, Kuwait's real annual GDP growth was 1.3 percent in 2021. Yet, Kuwait was not free from the global economic downturn amid the COVID-19 pandemic. Compared to other developed nations, the Kuwaiti economy tends to be less diversified, heavily relying on its rich oil resources. For example, the oil industry accounted for over half of GDP and 90 percent of government export revenues. Natural oil resources, oil refining, and downstream petrochemical processing related to crude oil production are all the country's dominant industries. Indeed, the pandemic exposed the vulnerability of only relying on oil production. COVID-related credit relief has lowered the banks' reserves, alarming the need for economic diversification.

#22. France (+1)

France[22] recorded a relatively high rank in Demand Conditions (13). The performance of its economy exceeded the previous year's forecasts, recording 7 percent growth in 2021. This was driven by the ease of COVID-19 restrictions, which led to the recovery of domestic demand, improved labor market outcomes, boosted private consumption, and increased investment. In the fourth quarter of 2021, the national wealth of France had completely recovered, exceeding pre-pandemic levels. Foreign trade continued to recover in 2021

[20] This information is abstracted and organized from Al-monitor (2022).

[21] This information is abstracted and organized from Eric (2021) and Eric (2022).

[22] This information is abstracted and organized from Xinhua (2022c).

although, on average, exports and imports remained below pre-pandemic levels. Inflation has been high, but the freeze of energy prices and persistent slack in the labor market has temporarily eased the pressure for wage increases.

#23. Korea, Republic of (+1)

The Republic of Korea[23]'s main areas of competitiveness include Demand Conditions (14), Related Industries (14), and Professionals (16). The Korean economy continued to expand, despite the disruptions of global value chains due to the COVID-19 pandemic, driven by recovered private consumption, strong export growth, and improved business investment. Korea's GDP growth hit an 11-year high of 4 percent in 2021. Manufacturing output recorded a strong growth of 6.6 percent and Korea's exports rose by 26 percent compared to the previous year. Furthermore, an expansionary fiscal policy helped support employment. Nevertheless, Korea reported the highest number of COVID-19 cases since 2019 due to the Omicron surge, in the first quarter of 2022, which possibly slowed down the ongoing economic recovery. Hence, the surge in virus infections together with elevated household debt and high housing prices pose downside risks to economic growth.

#24. Japan (-2)

Japan[24]'s competitiveness lies in Demand Conditions (11), Related Industries (17), and Policymakers and Administrators (17). Although the COVID-19 pandemic hit the economy hard, robust government support and the reopening of the economy led to a partial bounce-back in 2021. Still, Japan recorded a relatively weaker economic rebound of 1.6 percent in 2021. Recovery in private consumption and exports contributed to economic growth in Japan although the pace of recovery was relatively weaker as reflected by the decline in household spending in 2021 when compared to the previous year. Negative consumer sentiment continued; Japan recorded a 2.4% decline in the consumer sentiment index in January 2022, compared to the previous month. Moreover, Japan's economy in the first quarter of 2022 was under renewed pressure after the government enforced its COVID-19 semi-emergency measures in major business and industrial areas.

#25. Czech Republic (+1)

The Czech Republic[25]'s core competence is highlighted as Related Industries (20) and Business Context (20). After contracting sharply in 2020, the Czech economy expanded by 3.3 percent in 2021, exceeding forecasts, although this is still lower than the pre-pandemic level. Growth was mainly driven by domestic household spending and gross capital formation. Trade, transportation, and accommodation and food service industries showed strong performance. In addition, economic growth in 2021 was supported by the ease of COVID-19 restrictions, the disbursement of EU funds, accumulated savings, and boosted household consumption. As a result, GDP is projected to grow by 2.5 percent and 3 percent in 2022.

#26. India (+1)

[23] This information is abstracted and organized from S&P Global (2021), Rajiv (2022), Reuters (2022), and The Korea Herald (2022).

[24] This information is abstracted and organized from Argus (2022).

[25] This information is abstracted and organized from Raymond (2022).

India[26] showed strong performance in the areas of Workers (3). A positive business environment, robust industrial output, and rapid vaccination have laid a foundation for strong growth of India's economic recovery. In this case, the country recorded a GDP growth of 8.9 percent in 2021, surpassing pre-pandemic levels. This is reflected by the improved performance of many industries, especially the agriculture, mining, and manufacturing sectors. India's economic recovery was heavily supported by accommodative macroeconomic policies. The Reserve Bank of India is holding its policy repo rate steady at 4 percent, which reflects a significant monetary policy accommodation. In addition, government subsidies for relief programs and investment in infrastructure to support economic growth are substantial. Still, on the downside, this is likely to exacerbate the government's deficit. As the Indian economy is growing fast, problems still loom. In 2022, India will have to deal with worsened inflation of energy and food prices and the problem of rising urban unemployment.

#27. Italy (+2)

Italy[27]'s competitiveness was mainly driven by strong performance in areas of Business Context (15), Demand Conditions (18), and Workers (19). Italy is known for its diversified industrial economy and is divided into a developed industrial north, dominated by private companies, and a less-developed, highly-subsidized, agricultural south where unemployment is high. The Italian economy expanded by 6.6 percent in 2021 and has recovered most of the output losses from the COVID-19 pandemic by the end of 2021. Hence, labor market improvements have boosted private consumption. Domestic judicial reform in 2021 could improve Italy's attractiveness to foreign investors as it expects to increase the efficiency of public administration. However, soaring inflation, mainly through surging energy bills and higher food prices, largely due to the war in Ukraine, and a possible acceleration in European Central Bank (ECB) tapering pose downside risks.

#28. Poland (0)

Poland[28]'s main strength is driven by the strong performance of Workers (18). After a solid rebound during the first half of 2021, Polish GDP has surpassed its pre-pandemic level growth recording 5.7 percent in 2021. The increase in consumption and investment has mainly supported recovery. A withdrawal of savings as well as the disbursement of EU funds has also significantly contributed to growth. The well-diversified Polish economy has proven to be one of the most resilient economies among those of the European Union, with employment growth in 2020. Private consumption growth remained robust driven by a favorable situation in the labor market as well as policy support such as an adjustment in personal income tax rates. Still, although Poland reaps impressive gains in the economy, the growth has been unbalanced. For instance, its economic and labor market face strong regional disparities. Most of the new job opportunities were concentrated in urban centers, mainly Warsaw. By contrast, in the countryside, a large proportion of the labor force is either unemployed or underemployed.

#29. Malaysia (+1)

[26] This information is abstracted and organized from Charu (2021).

[27] This information is abstracted and organized from Barrons (2022).

[28] This information is abstracted and organized from Erste (2022).

Malaysia[29]'s core competitiveness includes Workers (13) and Factor Conditions (17). Its economy expanded by 3.1 percent in 2021, primarily driven by the growth in the manufacturing, services, and agriculture sectors. This is driven by the ease of COVID-19 restrictions by the third quarter of 2021, hence most economic activities resumed. The financial market also improved, thanks to a rebound in demands for loans as economic activities resumed. The central bank of Malaysia expects the domestic economy to remain on its recovery path, supported by the continued expansion in global demand and private consumption derived from the improved labor market conditions and ongoing policy support.

#30. Chile (+4)

Chile[30] showed a relatively high rank in Factor Conditions (12) and Entrepreneurs (21). Its economy showed strong growth. Sustained recovery during the year of 2021 managed to reverse the 6 percent contraction recorded in 2020. In 2021, the Chilean economy recorded historic 11.7 percent growth, fueled by a rapid vaccine rollout, a large fiscal stimulus, high commodity prices, and pension fund withdrawals on consumption. In particular, consumption in general increased by 18.2 percent, spurred by restaurant, hotel and health services, as well as in other retail sectors. And although the net exports decreased due to the fall in imports and exports, exports are expected to benefit from higher copper prices and a strong recovery in other developed economies as well as that of China. The increased liquidity due to monetary stimuli and pension fund withdrawals were also the contributors to the strong growth.

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07

Appendix

1 Factor Conditions

1.1 Natural Resources

1.1.1 Crude oil reserves (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 sevice (2021)

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 (2021)

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_2 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 adquetely 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 (2021)

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 (2021)

Hard data: financial inflows as of % 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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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 (2021)

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) (2021)

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 (2021)

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	-	-

LIST OF CRITERIA OF IPS NCR 2022

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 Livestock (processed)
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_2 emissions
		3.2.12 Leisure, sports, and cultural facilities*
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	5.1.1 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 *
	6.1. Politician	6.1.1 The process of parliament/congress*

6. Politicians &Bureaucrats		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. Bureaucrats	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 *
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