IPS
NATIONAL COMPETETIVENESS RESEARCH
2023

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The Institute for Policy & Strategy on National Competitiveness (IPSNC) and Korea Trade-Investment Promotion Agency (KOTRA) jointly conducted research on competitiveness. KOTRA leveraged its extensive global network to collect survey data from more than sixty countries, and IPSNC conducted the remainder of the research.

- The report is abstracted from Cho and Moon (2024). For more information, please refer to the following reference.
- Cho, Dong-sung and Moon, Hwy-chang. 2024. The Competitiveness of Nations 3: Emerging Technologies in the Fourth Industrial Revolution. Singapore: World Scientific Publishing.
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IPS
National Competitiveness Research Team

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Literature on National Competitiveness

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 important bases in this regard. There was though little change until 1990 when the field experienced a significant breakthrough with Michael Porter's introduction of a novel competitive theory: the Diamond Model. This model has since been adapted and expanded by subsequent scholars to construct various extended models and conduct empirical studies. This chapter evaluates how the eight determinants of the most recently extended model or the IPS model have evolved in the current era by examining the recent literature on each determinant. Furthermore, this chapter presents a case study of technological disruption brought about by ChatGPT, which is perceived as a "chance event" within the IPS model's framework. The study explores how this technology could substantially influence national competitiveness, as conceptualized by the eight factors of the IPS model. While acknowledging the potential adverse effects of technology development, this chapter primarily emphasizes the positive impact of ChatGPT. Nonetheless, to take advantage of such developments, concerted efforts from various stakeholders, including individuals, firms, and governments, are necessary.

The subsequent section begins with an outline of the historical context and the effectiveness of the IPS model in assessing national competitiveness due to its comprehensive nature. This chapter explains how the IPS model has evolved by integrating the extensions of Porter's original Diamond Model. The IPS model serves as a fundamental framework for evaluating and measuring national competitiveness in the context of IPS National Competitiveness Research. Later in this chapter, we elucidate how each determinant of the IPS model can contribute to the augmentation of national competitiveness, drawing upon recent studies. Finally, this chapter employs the IPS model to systematically scrutinize the impact of ChatGPT, specifically focusing on its positive implications for national competitiveness. This approach underscores the practicality of the model when it comes to systematically and comprehensively analyzing real-world cases.

Theoretical evolution on national competitiveness[1]

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

[1] This section is an abstract and summary of Chapter 1 from Cho and Moon (2022).

approaches, many studies on national competitiveness tend to solely focus on productivity as the primary indicator of national competitiveness (Fainshmidt et al., 2016).

Porter (1990: p. 6) indicated that the only meaningful concept of competitiveness at the national level is national 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 assess a nation's competitiveness in comparison to other nations with similar comparativeness structure (Cho and Moon, 1998). In this respect, 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 – releases intra-group rankings for comparative evaluation among economies of similar levels of competitiveness and size as well as overall rankings among all countries.

Research on national competitiveness began in the early 1980s, but the theoretical background is based on many important concepts of works from traditional economists which includes trade theories such as mercantilism, Adam Smith's absolute advantage, David Ricardo's comparative advantage, HO model by Heckscher and Ohlin, Leontief's paradox, and Vernon's product cycle. Traditional trade theorists argued 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 have not experienced such a comparative level of development.

Porter (1990) argued that the traditional model, whose origins date back to Adam Smith and David Ricardo and is embedded in classical economics, is at best incomplete and at worst incorrect. He then introduced the Diamond Model in his book entitled *The Competitive Advantage of Nations*, to capture the fundamental sources of national competitiveness and address the problems of traditional theories.

There are two prerequisites for a good competitiveness theory. One is that it 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 properly grasp the changing nature of national competitiveness; this condition has not been effectively fulfilled by the classical theories such as absolute advantage and comparative advantage principles. Porter's Diamond Model satisfies both of these conditions. It consists of four comprehensive variables - factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. In addition, Porter demonstrated that it 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.

Since the introduction of the Diamond Model, it has been widely used to analyze the strength of a single or a few countries to suggest ways to pursue further development (Fainshmidt et al., 2016). Results from many of the studies have confirmed the validity of Porter's idea on the competitive advantage of nations and the strengths of major industries (Kharub and Sharma, 2017). Nonetheless, Porter's Diamond Model is not free from criticism.

Grant (1991) argued that most of the existing studies adopted a case approach, much in line with Porter's original approach, which may lack accuracy and generalizability. However, such criticism mainly points at the limitations of the quantification and operational problems of the Diamond Model, rather than a 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.

Moreover, some international business scholars have criticized that the Diamond Model only identifies home country factors as the source of national competitiveness while ignoring the role of multinational activities and their influence upon competitiveness enhancement. Hence, the single diamond is not effective when analyzing small economies because their domestic variables are very limited (Rugman, 1991) while its geographical constituency must be established using very different criteria (Dunning, 1993). In the era of globalization, international factors cannot be ignored given the extent to which they influence a nation's competitiveness. To address these issues, the Double Diamond Model (Rugman and D'Cruz, 1993) and the Generalized Double Diamond Model (Moon et al., 1998) were proposed.

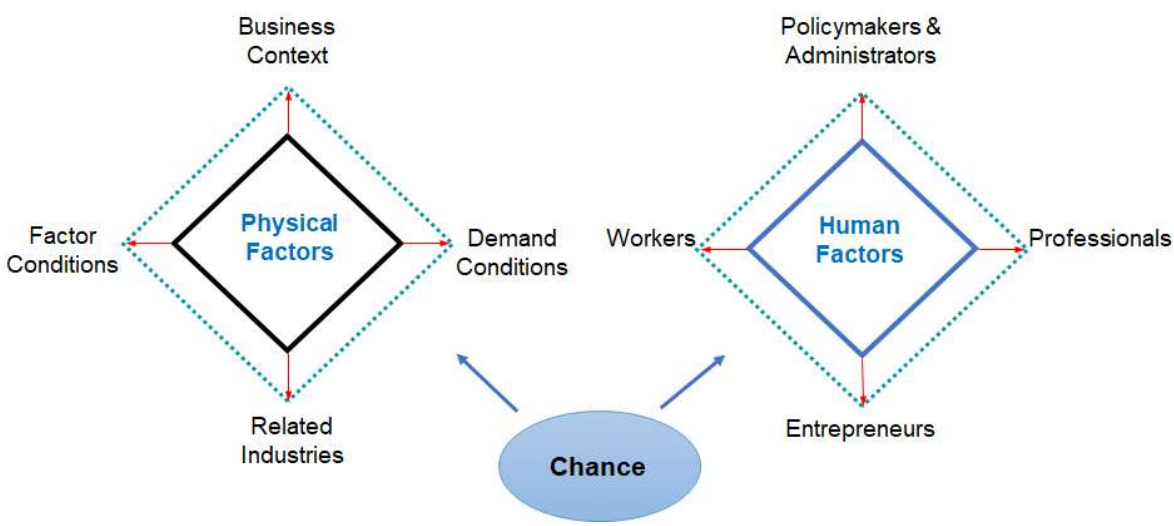
The Double Diamond Model, developed by Rugman and D'Cruz (1993), recommends that managers build upon both domestic and foreign diamonds to become globally competitive in terms of survival, profitability, and growth. While Rugman & D'Cruz's North American diamond framework fits well for countries like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

Another limitation with the Single Diamond Model is the lack of distinction between human factors and physical factors. Porter duly explains the sources of national competitiveness possessed by the economies of advanced nations but is limited in its applicability especially when explaining the levels and dynamic changes of economies in less developed or developing countries. To address this, Cho (1994) proposed the nine-factor model by incorporating the role of human factors, which was not included in Porter's Diamond Model. In this model, the human

factors include workers, politicians and bureaucrats, entrepreneurs, and professionals and physical factors include endowed resources, domestic demand, related and supporting industries, and other business environments. An external factor, chance event, was added to these eight internal factors, making a new paradigm entitled 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 to obtain international competitiveness. The role of human factors is particularly important in developing countries because physical factors are not sufficiently developed at this stage.

These two models (double diamond and nine-factor) are meaningful as they extend the scope and sources of national competitiveness. At the same time, they need to be incorporated into a single framework to analyze and explain national competitiveness more thoroughly. The IPS report incorporates both extensions into a single framework referred to as the IPS model (see Figure 1), which analyzes national competitiveness by physical factors and human factors in terms of the domestic and international context. This model is an effective way to explain 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 nine-factor model when it comes to explaining the country-specific advantage of nations with heterogeneous attributes.

Figure 1. 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 being overly orientated toward the home country and the crucial influences of national institutions (Fainshmidt et al., 2016). In this respect, Fainshmidt et al. (2016), suggested two additional variables including multinational firms and governance quality, to enhance the explaining power of Porter's Diamond Model. Such an attempt

though overlaps with the above-mentioned extended models, such as Moon et al. (1998), Cho, (1994), and the IPS model (Cho, 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, which further provides the justification for adopting the IPS model for the analysis and evaluation of national competitiveness for our research. The following section delves into the evolution of the impacts of the eight components of the IPS model, as informed by recent academic literature.

The Literature on the Eight Factors of the IPS Model

Factor conditions

The factor conditions component of the IPS model evaluates the abundance of natural resources and their exploitation through the processing of them. Although natural reserves have a positive influence on a nation's overall economic performance, their mere possession does not guarantee superior national competitiveness. Such a trend has been demonstrated clearly by the phenomenon known as the "resource curse" (James and Aadland, 2011). There are other crucial factors required to fully leverage natural resources for economic benefits. For example, Ambriško et al. (2015) emphasized the need to lower transportation costs within the mining industry, which makes up 20-30 percent of total production costs. More specifically, Andrejiová et al. (2015) underscored the role of belt conveyors in improving operational efficiency within mining industries. This example showcases the importance of refining transportation systems and reducing operational costs tied to the processing of raw materials. Similarly, Madzík et al. (2011) identified a significant correlation between natural resources and national competitiveness. However, they also stressed the necessity for strategic resource management, which includes efficient resource transportation.

Demand conditions

Demand conditions include two aspects of a country's market: size and quality. Both elements play a crucial role in economic growth and development. Arai (2022) found that construction companies involved in a bidding process across larger geographical areas (i.e., spanning multiple market areas) tend to bid at lower prices than those operating within smaller geographical areas (i.e., a single market area). This validates the concept of economies of scale and implies that a larger market size can enhance cost competitiveness. In another study, Gabaix and Laibson (2006) analyzed consumer behavior and concluded that helping consumers circumvent myopic behavior boosts their welfare. As consumers become more educated and sophisticated, thereby exhibiting less biased behavior, companies may risk losing clients who previously demonstrated myopic tendencies. This shift highlights the need for companies to improve their efficiency. In the same vein, Lee et al. (2021) found that consumer sophistication fosters innovative purchasing behavior, which is characterized by the consumption of a wider variety of products and an increased interest

in newly introduced items. Such evolving consumer behavior induces firms to innovate and meet the escalating demand for diverse goods.

Related industries

The component of related industries refers to both industrial and residential infrastructure, which collectively underpin business development. Palei (2015) underscored the positive influence of infrastructure on businesses, suggesting that it reduces input costs by facilitating transportation and boosting worker productivity. Górniak (2022) elaborated on the crucial role of the logistics sector in preserving business competitiveness by ensuring an efficient supply chain. This observation accentuates the vital role of industrial infrastructure in enhancing national competitiveness by bolstering business competitiveness. Lau et al. (2009) highlighted the importance of the cluster effect in strengthening industry competitiveness, as it offers access to specialized suppliers and a wealth of information, thereby enhancing overall efficiency. On the other hand, Verner (2011) emphasized the need to develop residential infrastructure, such as the education sector. This development reinforces the positive relationship observed between education expenditure, research and development (R&D) expenditure, and national competitiveness.

Business context

The business context assesses the international business environment and its impact on a firm's strategy, structure, and competitive conditions. Dang and Nguyen (2021) discussed the benefits of market openness through foreign direct investment (FDI), acknowledging its role in capital inflows and associated spillover effects, such as technology transfers and the enhancement of managerial skills. Consequently, FDI enhances the competitiveness of the domestic economy while creating additional job opportunities. In a similar vein, Aurangzeb and Stengos (2014) corroborated the positive influence of FDI inflow on a country's economic growth. They elaborated on the immediate effects of FDI on the domestic economy, such as increasing the productivity of the export sector. They also discussed secondary effects, which include the establishment of globally competitive industries, investment in research and development, and the promotion of specialization.

Workers

Worker productivity and working conditions are pivotal factors in determining national competitiveness. Dong et al. (2020) pinpointed labor productivity as a vital element for enhancing national competitiveness, as it sets the stage for generating more income from given resources. Interestingly, when labor productivity is improved, for instance through digitalization, it can more effectively meet labor market demands, thereby reducing the gap between worker supply and demand (Novoskoltseva et al. 2021). Despite the clear importance of labor efficiency in driving

national competitiveness, Harmider et al. (2019) emphasized the significance of labor resource management in boosting regional competitiveness as it reduces labor costs. This highlights the importance of not only worker productivity but also the improvement of working conditions.

Politicians and administrators

The stability of institutions, including political entities, is often recognized as a key factor in national competitiveness. For instance, Novoskoltseva et al. (2021) highlighted the importance of overcoming institutional erosion and ensuring transparency in public services as essential conditions for economic growth. Similarly, Mushibah (2017) pinpointed the level of political stability as a crucial moderating factor in shaping the business environment, which can be measured by the inflow of foreign direct investment (FDI). Additionally, Ulman (2013) found a significant positive correlation between a country's competitiveness index and its corruption rate, asserting that highly competitive countries tend to have lower corruption rates. These findings suggest that a lower rate of corruption in the government or public sectors is a strong determinant in creating a favorable business environment, which subsequently influences national competitiveness.

Entrepreneurs

The extent to which a country provides conducive conditions for entrepreneurs to establish businesses is another vital factor in determining national competitiveness. For instance, Milanović (2020) highlighted the role of Small and Medium Enterprises (SMEs) in enhancing national competitiveness, attributing this to their innovative nature and agility to adapt swiftly to changes. In line with other studies emphasizing the significant role entrepreneurs play in driving national competitiveness, Nicolae et al. (2016) observed that the environmental conditions of a region impact an entrepreneur's inclination to initiate new business there. Barriers to entrepreneurship include regional or national characteristics such as a preference for routine or a value placed on financial stability (i.e., job security). Moreover, Kane (2010) pointed out the job creation that arises from start-up businesses each year, thus stressing the importance of entrepreneurs in fueling a country’s economic growth. In this context, Kane (2010) concluded that policymakers should formulate more policies aimed at attracting start-up businesses rather than traditional, large, and mature businesses to expand a nation's job market.

Professionals

Professional competence is a critical aspect of an economy, particularly in those driven by knowledge. Morozova and Mashentseva (2018) argued for professional standards to ensure that employee training aligns with employer expectations, spotlighting the role of professional managers and the necessity to establish training standards to boost competitiveness. In the same vein, Suntharasaj and Kocaoglu (2008) addressed the issue of brain drain, a situation where

talented professionals migrate to other countries, thereby negatively affecting national competitiveness. As an example, they discussed the US National Competitiveness Investment Act, a policy crafted to attract global talent in science, technology, engineering, and mathematics (STEM). Harvey (2014) proposed several conditions necessary to create a favorable institutional context to attract foreign talent, citing China as an example. The study emphasized factors such as the quality of life in the recipient country (including air quality), the openness of local communities, and the presence of institutional challenges and risks in retaining talented employees. Hence, implementing policies to meet these conditions is a significant strategy for attracting talent and constitutes a crucial step towards enhancing national competitiveness.

A Case Study of ChatGPT and Its Impacts on the National Competitiveness

Compared to previous artificial intelligence (AI) models, ChatGPT has garnered significant attention from the public and multiple industries (McKinsey & Company, 2023). Within just five days of its launch in November 2022, the number of its users soared to 1 million, expanding exponentially to a staggering 100 million within two months. This growth rate made it the fastest-growing application in history (Reuters, 2023a). ChatGPT, having been trained on extensive, high-quality textual data, can generate more complex and accurate responses than other existing language models (The Economist, 2023c). The popularity of ChatGPT can be attributed to its versatility—it can automate a range of tasks from simple administrative ones such as drafting emails to more complex tasks like identifying programming errors in codes. Moreover, its wide applicability across various industries further enhances its appeal.

While ChatGPT holds potential for significant contributions across various industries, its initial success has sparked controversy over its potential to replace human labor, particularly with knowledge-intensive tasks like coding, which have never been under threat before (The Economist, 2023b). Moreover, the rapid advancement of recent AI technologies has amplified fears of the most extreme risks, such as losing control of the technology or having it become clever enough to outsmart humanity (The Economist, 2023d). In response, hundreds of technologists and researchers have highlighted the potential dangers of AI in multiple open letters, advocating for a six-month “pause” to allow for the development of safer technology (Reuters, 2023b). Such an action though may prove to be too drastic, rather a collective effort should be made to establish constructive regulations that prohibits the misuse of AI.

In light of these considerations, this chapter specifically focuses on discussing the potential positive impacts of using ChatGPT, or AI technology more broadly, for enhancing national competitiveness. Specifically, we employ the IPS model—a framework for analyzing national competitiveness—to systematically investigate the influence and usefulness of such technologies with regard to the eight components of the IPS model. The following provides a summary of how the IPS model can be applied to explore an external factor such as the release of ChatGPT.

Table 1. The application of the IPS model on the impacts of ChatGPT

Eight Factors	Impact of ChatGPT/ or generative AI technology
Factor conditions	• Improving oil production process and enabling automation of tasks: example of Devon Energy • Development of alternative resources: sustainable energy
Demand conditions	• Improving products and services quality: examples of Netflix and Buzzfeed • Use of generative AI in expanding existing markets
Related industries	• Improving industrial infrastructure: implication on the logistics sector • Improving living infrastructure: example of education
Business context	• AI facilitates market trend analysis • Use of AI in the recruitment process
Workers	• Demands for new jobs amid the emergence of generative AI • Improvement in the productivity of workers: example of client services roles
Policymakers and administrators	• Data analysis capability of AI facilitates the legislation • AI enables the strategic movement of policymakers
Entrepreneurs	• AI helps business decisions: identifying investment opportunities and risk factors • Starting a business using ChatGPT
Professionals	• Use of AI in the medical industry: diagnosis of the patients • Use of AI in the customer accounting profession

Factor conditions

Although the application of AI technology like ChatGPT might not seem so clear when it comes to the realm of natural resources, its vast potential is actually evident across various stages of oil production, ranging from data analysis and exploration, to maintenance, safety management, and operations during production. For instance, AI technology is being deployed to analyze geographic information, assisting with tasks such as classification, segmentation, and prediction (Geo Weeks News, 2023). By harnessing AI's analytical prowess, firms can identify prospective exploration sites to augment their natural resource reserves. Furthermore, AI technology plays a pivotal role in supporting maintenance work during the phases of oil production. Devon Energy,

an oil production company, has used AI technology integration for system automation, leading to enhanced efficiency and reduced operational costs. ChatGPT's capabilities could also be harnessed to expand the scope of resource development, particularly in driving innovation in sustainable resources. AI technology, given its capacity to process vast data sets, emerges as a potent tool for business analysis, thereby enabling a more efficient identification and evaluation of green investment opportunities (GreenBiz, 2023). By doing so, companies can elevate their efficacy in spearheading sustainable energy solutions. This, in turn, assists nations in diversifying their natural resource base, thereby fortifying their factor conditions.

Demand conditions

Generative AI technology can profoundly enhance business operations by augmenting the quality of products and services. Specifically, AI has the potential to uplift customer support services by delivering accurate, timely responses and personalized product recommendations. For instance, Poshmark, a second-hand retail platform, showcased AI's effectiveness in suggesting products to customers and streamlining order fulfillment processes (NYT, 2023b). Through the integration of AI technology, companies can more adeptly address customer needs and widen their customer base. The implementation of ChatGPT can further intensify personalization for each consumer. It utilizes individual customer data, such as previous purchases and interactions, to better predict consumer needs and preferences (Mollick, 2022). Moreover, ChatGPT aids firms in identifying opportunities for new businesses by accurately targeting the needs of customers and addressing the gaps in the market (LinkedIn, 2023). Demonstrated as an efficient market research tool, ChatGPT simplifies the market research process, assisting companies in identifying competitors and defining target audiences (GapScout, 2023). With its capacity to process vast amounts of textual information online, ChatGPT emerges as a robust market research tool that aids firms in concentrating on vital information and discerning market trends (Jain et al. 2023).

Related industries

The utilization of ChatGPT is anticipated to significantly enhance the efficiency of logistical tasks, a critical aspect of business operations and supply chain management. The benefits of incorporating ChatGPT in the logistics sector are expansive. This AI tool streamlines communication among customers, logistics providers, and warehouses, while simultaneously automating administrative tasks such as shipment monitoring and management (ShipLilly, 2023). Furthermore, ChatGPT can be leveraged to suggest optimized routes by analyzing shipping data, including shipping patterns and demands, thereby augmenting efficiency and reducing operational costs (Medium, 2023; Sjh, 2023). As an illustration, DHL utilizes AI technology to monitor real-time shipment data, enabling them to determine the optimal route and maintain a vigilant watch over their supply chains (Freight Connections, 2023). When it comes to the realm of education, despite the initial resistance toward integrating ChatGPT into the classroom, teachers and instructors are now beginning to acknowledge the opportunities it presents as an effective teaching

tool, fostering greater interactivity within the classroom (MIT Technology Review, 2023). ChatGPT has proven its efficacy in assisting with class preparation and planning. For instance, it can be employed to generate multiple-choice questions for students, serving as a valuable resource for both teachers and learners (NYT, 2023d).

Business context

Employing generative AI to enhance business capabilities among firms has many advantages as it can streamline processes and provide diverse strategy options across borders. The use of generative AI is found to be effective in innovating existing business processes and promoting firm strategy for internationalizing existing businesses. This is made possible due to the core competence of ChatGPT to search and extract information from a vast pool of data. With such a function, companies can expand their business scope without the need to hire and educate new employees in every business area. Unlike AI tools with specific functions, such as Google Translate, ChatGPT is a general-purpose AI technology that can be applied to multiple tasks, including translation, logistics processes, and market research (as discussed in the previous paragraph). By overcoming language barriers in information search and advertising, firms can gain better knowledge of foreign markets and broaden their business scope to the international market.

Workers

While there are concerns that ChatGPT may automate certain jobs—stirring anxieties about potential job displacement—it also generates demand for new roles and enhances overall workforce efficiency. Historically, the advent of new technologies has often been accompanied by apprehension over job displacement, particularly among low-skilled workers who are most susceptible to being replaced by automation. AI, however, has shown itself to be instrumental in enhancing workforce productivity. By harnessing AI technologies, businesses can streamline administrative processes, thereby allowing employees to concentrate on more strategic and complex tasks. The automation and assistance that AI tools provide free up valuable time and resources, enabling the workforce to focus their efforts on higher-value activities, ultimately boosting productivity and fueling growth. The use of ChatGPT not only enhances work performance but also improves the quality of services provided by the human labor force. This collaboration between AI technology and human workers serves as a potent tool to boost efficiency in the current and future labor market, laying a solid foundation for enhancing national competitiveness. Importantly, improved worker efficiency positively impacts the quality of their work, leading to superior services provided to customers.

Policymakers and administrators

The incorporation of AI technology into the regulatory framework streamlines the process of data analysis, empowering policymakers to identify areas requiring specific regulations. By leveraging AI's analytical prowess, policymakers can identify crucial areas to prioritize, leading to the design of more effective interventions. Pham et al. (2020) underscored the effectiveness of AI technology across various stages in combating COVID-19, including diagnosis, tracking, and patient number prediction. This facilitates timely and appropriate policy implementation. Consequently, a data-driven approach enhances the ability of policymakers to make informed decisions and efficiently allocate resources, leading to more effective and targeted regulations. AI further ensures that the appropriate message reaches each audience at the optimal time (NYT, 2023c). ChatGPT plays a pivotal role in facilitating effective communication between administrators and the public. By leveraging the accelerated text generation capabilities of ChatGPT, policymakers can produce a significantly larger volume of comments. In fact, the usage of AI tools for comment generation predates the development of ChatGPT itself. For instance, in 2018 it was revealed that at least a million comments submitted to the Federal Communications Commission were auto-generated (NYT, 2023c). This demonstrates the government's potential to successfully integrate this technology into its systems, enabling more active and effective public engagement.

Entrepreneurs

AI technology offers a prime example of how it can be utilized to process vast amounts of data with exceptional precision and in significantly less time compared to human labor. This capability can be harnessed to identify and develop business opportunities for firms that require extensive information about existing industries and companies. Furthermore, ChatGPT can play a crucial role in identifying potential risk factors associated with investments, thereby facilitating investors' decision-making (Despallieres, 2023). Specifically, ChatGPT can be used to analyze information from audit reports or incident reports to identify risk factors relevant to a particular business domain (Security Intelligence, 2023). Moreover, it can be employed to detect customer complaints posted on social media platforms, which can pose a risk to a company's reputation and identify patterns for effective mitigation strategies (Security Intelligence, 2023). The utilization of ChatGPT proves particularly beneficial in supporting the operations of startups, which often face limitations in terms of information and resources. This application of ChatGPT saves valuable time for startup companies and enables them to function with a smaller workforce. Additionally, ChatGPT can be employed for branding purposes, including tasks such as designing company logos, crafting slogans, writing content for advertisements on blogs, and even creating websites from scratch (Fast Company, 2023). These functionalities offered by ChatGPT empower startups to streamline their operations and enhance their brand presence while optimizing resource allocation.

Professionals

In various industries, ChatGPT has emerged as a valuable tool for professionals who require extensive qualifications, rigorous training, and informed judgment. ChatGPT facilitates the automation of routine administrative tasks for professionals, while also enhancing their knowledge in their respective fields. A prominent example of this is the utilization of AI technology in the medical industry, where AI algorithms are employed to improve the identification of patients with potential diseases like heart failure. This can be done with the AI detecting abnormal symptoms such as irregular heart rhythms (WSJ, 2023). While qualified doctors can perform this task as well, medical professionals can still benefit from the adoption of generative AI technology by enhancing efficiency and accuracy in carrying out these tasks. Despite ChatGPT's ability to process vast amounts of information quickly, it is important to acknowledge the limitations of AI technology when making moral judgments or self-correcting biases in its responses. Technology industry experts further emphasize that companies require individuals who possess the expertise to effectively utilize powerful data-centric tools, interpret raw data, and make informed decisions – tasks that can only be accomplished by experienced human professionals (NYT, 2023a). In other words, the management and decision-making responsibilities in many areas still rest with humans. Instead, ChatGPT serves as a complementary tool to enhance the capabilities of workers.

Implications and Conclusion

After analyzing the impact of emerging technologies like ChatGPT across eight different factors, this chapter concludes that the enhancement of national competitiveness stems not only from the inherent benefits of these new technologies, but also from their spillover effects on existing businesses and their potential to stimulate the growth of related industries. Yet, despite its impressive performance in generating sophisticated and coherent responses, it is crucial to recognize that ChatGPT is still a work in progress. For instance, it cannot be considered entirely reliable due to potential biases in the information it draws from, and its inability to make moral judgments. Consequently, a consensus on how to regulate such technologies is yet to be reached, underscoring the need for more attention from policymakers.

Nevertheless, it is indisputable that the advent of ChatGPT, and generative AI technology, represents a significant milestone in the business realm. When applied thoughtfully across industries, the advantages—such as amplified productivity and efficiency—tend to surpass the limitations inherent in the technology. Companies must then adopt nimble strategies and prudent management skills to effectively assimilate these technologies into their operations. Balancing the risks associated with adopting potentially unfinished technology, as some argue, while maximizing the benefits of these innovative advancements for businesses, calls for the implementation of regulations. In this case, a collaborative discourse among government bodies, corporations, and educational institutions should be established. Evaluating the pros and cons of adopting such technology from a range of perspectives is crucial. Through these consultations, a

holistic framework can be devised to steer the responsible and advantageous use of AI tools while alleviating potential risks.

In conclusion, the adoption of generative AI technologies such as ChatGPT represents a significant shift in the business landscape, offering immense potential while posing various challenges. Drawing upon the literature review of the IPS model, these AI technologies have demonstrated profound implications for the eight factors that influence national competitiveness, ranging from natural resources to business context, professional competencies, and institutional stability. These applications have shown substantial potential in enhancing productivity, efficiency, and innovation, thus bolstering national competitiveness. However, concerns over labor displacement, data biases, and the lack of moral judgement call for a more comprehensive regulatory framework. The importance of achieving a delicate balance between harnessing the benefits of these new technologies and mitigating associated risks underscores the need for collaborative efforts among all stakeholders, including governments, businesses, and educational institutions. Moving forward, these discussions will aid in establishing an inclusive framework that promotes responsible and beneficial use of AI technologies, thereby fostering sustainable growth and enhanced national competitiveness. A thoughtful, multi-faceted approach to AI integration can ensure the transformative power of these technologies is harnessed responsibly and effectively for the benefit of all.

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02

Highlights of National Competitiveness Research

Highlights[1]

Overall Rankings

Three key global institutions release national competitiveness ranking reports annually: the International Institute for Management Development (IMD), the World Economic Forum (WEF), and IPS Switzerland. Both the IMD and WEF each release a single overall competitiveness ranking, while IPS Switzerland differs by releasing two distinct strategy rankings—one based on cost leadership and another grounded in differentiation strategies. These fluctuations in rankings, influenced by strategic choices, underscore the dynamic nature of national competitiveness. Instead of perceiving competitiveness as static, based solely on the existing stock of resources, economies can adopt a more proactive stance. They can leverage both domestic and international resources more effectively to bolster their overall rankings.

Tables 1 and 2 show the results of the two strategy rankings. In fact, the ranking based on cost strategy (CS) and differentiation strategy (DS) offer markedly different outcomes. Under CS, the top four economies are Canada (1), Australia (2), United Arab Emirates (UAE) (3), and New Zealand (4), which are all featured with relatively rich resources. By contrast, in DS ranking, developed economies such as Denmark (1), Switzerland (2), Singapore (3), and the Netherlands (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 eighth in the CS ranking, but it rose to fifth in the DS ranking. For its part, China ranks sixth in the CS ranking, yet falls to nineteenth in the DS ranking.

Among the 62 economies, Russia exhibited the most significant difference between cost and differentiation rankings, a gap of 22 places. Seven other countries—Malaysia, New Zealand, China, Saudi Arabia, Oman, Kuwait, and Pakistan—also showed considerable differences of 10 places or more. These eight nations all achieved higher rankings with CS. In total, 24 countries, including the aforementioned eight, displayed improved rankings when adopting CS. In contrast, 35 countries registered higher rankings when pursuing DS. Three countries—Vietnam, Thailand, and Peru—demonstrated identical rankings for both strategies.

Table 1. Two-strategy rankings

Country/ Region	CSR	CSI	Country/ Region	DSR	DSI
Canada	1	54.51	Denmark	1	71.86
Australia	2	52.03	Switzerland	2	69.29

[1] This chapter presents the highlights of IPS National Competitiveness Research 2023. To see more information about the rankings of economies in factor and sub-factor, please visit the IPSNC website (https://www.ipsncr.org/).

UAE	3	50.29	Singapore	3	69.26
New Zealand	4	48.91	Netherlands	4	69.02
Singapore	5	48.65	United States	5	67.50
China	6	47.44	Sweden	6	66.92
Denmark	7	47.38	Finland	7	66.44
United States	8	46.58	Canada	8	65.30
Sweden	9	46.43	UAE	9	64.64
Netherlands	10	45.80	Belgium	10	62.41
Finland	11	45.67	Australia	11	61.95
Switzerland	12	44.96	Hong Kong SAR	12	61.57
Kuwait	13	43.51	United Kingdom	13	60.88
Belgium	14	42.04	Taiwan, China	14	59.87
Saudi Arabia	15	40.88	Austria	15	58.71
Austria	16	40.62	Germany	16	58.16
Hong Kong SAR	17	40.56	New Zealand	17	58.10
Germany	18	40.55	Korea	18	56.80
Taiwan, China	19	40.38	China	19	53.68
United Kingdom	20	39.77	France	20	51.30
Korea	21	39.30	Italy	21	50.79
India	22	39.09	Japan	22	50.01
Chile	23	38.47	Czechia	23	48.87
Malaysia	24	38.18	Kuwait	24	48.54
Vietnam	25	37.34	Vietnam	25	48.19
Panama	26	37.15	Poland	26	48.14
Czechia	27	36.23	Saudi Arabia	27	47.95
Italy	28	36.14	Israel	28	47.90
Poland	29	35.95	Indonesia	29	47.26
Israel	30	35.92	India	30	46.03
Indonesia	31	35.87	Chile	31	46.01
Japan	32	35.69	Slovenia	32	45.35
Philippines	33	35.49	Colombia	33	44.60
France	34	35.48	Panama	34	44.34
Thailand	35	35.32	Thailand	35	44.07
Greece	36	33.81	Spain	36	43.95
Mexico	37	33.81	Philippines	37	43.69
Russia	38	33.49	Greece	38	43.43
Colombia	39	33.33	Malaysia	39	43.41
Slovenia	40	33.03	Dominican Republic	40	42.81
Peru	41	33.00	Peru	41	42.04
Oman	42	32.42	Croatia	42	40.25
Argentina	43	32.05	Turkey	43	39.93
Jordan	44	31.97	Mexico	44	39.24
Dominican Republic	45	31.81	Argentina	45	38.66
Egypt	46	31.23	Hungary	46	38.43
Spain	47	31.21	Jordan	47	37.53
Brazil	48	30.92	Nigeria	48	37.44
Cambodia	49	30.33	Egypt	49	36.34

Guatemala	50	30.14	Brazil	50	35.02
Pakistan	51	29.15	South Africa	51	34.89
Nigeria	52	28.66	Ukraine	52	33.47
Hungary	53	28.61	Slovak Republic	53	32.55
Ukraine	54	27.75	Oman	54	32.10
Croatia	55	27.73	Cambodia	55	32.00
Turkey	56	26.04	Bangladesh	56	31.68
Bangladesh	57	25.69	Kenya	57	30.72
Kenya	58	24.56	Sri Lanka	58	29.94
Slovak Republic	59	22.86	Guatemala	59	29.85
Sri Lanka	60	22.50	Russia	60	28.86
Morocco	61	19.70	Pakistan	61	27.88
South Africa	62	17.65	Morocco	62	27.12

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	11	Switzerland	2	12
UAE	3	9	Singapore	3	5
New Zealand	4	17	Netherlands	4	10
Singapore	5	3	United States	5	8
China	6	19	Sweden	6	9
Denmark	7	1	Finland	7	11
United States	8	5	Canada	8	1
Sweden	9	6	UAE	9	3
Netherlands	10	4	Belgium	10	14
Finland	11	7	Australia	11	2
Switzerland	12	2	Hong Kong SAR	12	17
Kuwait	13	24	United Kingdom	13	20
Belgium	14	10	Taiwan, China	14	19
Saudi Arabia	15	27	Austria	15	16
Austria	16	15	Germany	16	18
Hong Kong SAR	17	12	New Zealand	17	4
Germany	18	16	Korea	18	21
Taiwan, China	19	14	China	19	6
United Kingdom	20	13	France	20	34
Korea	21	18	Italy	21	28
India	22	30	Japan	22	32
Chile	23	31	Czechia	23	27
Malaysia	24	39	Kuwait	24	13
Vietnam	25	25	Vietnam	25	25
Panama	26	34	Poland	26	29
Czechia	27	23	Saudi Arabia	27	15

Italy	28	21	Israel	28	30
Poland	29	26	Indonesia	29	31
Israel	30	28	India	30	22
Indonesia	31	29	Chile	31	23
Japan	32	22	Slovenia	32	40
Philippines	33	37	Colombia	33	39
France	34	20	Panama	34	26
Thailand	35	35	Thailand	35	35
Greece	36	38	Spain	36	47
Mexico	37	44	Philippines	37	33
Russia	38	60	Greece	38	36
Colombia	39	33	Malaysia	39	24
Slovenia	40	32	Dominican Republic	40	45
Peru	41	41	Peru	41	41
Oman	42	54	Croatia	42	55
Argentina	43	45	Turkey	43	56
Jordan	44	47	Mexico	44	37
Dominican Republic	45	40	Argentina	45	43
Egypt	46	49	Hungary	46	53
Spain	47	36	Jordan	47	44
Brazil	48	50	Nigeria	48	52
Cambodia	49	55	Egypt	49	46
Guatemala	50	59	Brazil	50	48
Pakistan	51	61	South Africa	51	62
Nigeria	52	48	Ukraine	52	54
Hungary	53	46	Slovak Republic	53	59
Ukraine	54	52	Oman	54	42
Croatia	55	42	Cambodia	55	49
Turkey	56	43	Bangladesh	56	57
Bangladesh	57	56	Kenya	57	58
Kenya	58	57	Sri Lanka	58	60
Slovak Republic	59	53	Guatemala	59	50
Sri Lanka	60	58	Russia	60	38
Morocco	61	62	Pakistan	61	51
South Africa	62	51	Morocco	62	61

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

2023 IPS Competitiveness Ranking Changes by Cost and Differentiation Strategies

This section divides the 62 economies into four categories based on the shifts in ranking under cost and differentiation strategies relative to the base data rankings. As outlined in Chapter 2, the IPS model comprises eight factors: four physical ones (Factor Conditions, Demand Conditions,

Related Industries, and Business Context) and four human-centric ones (Workers, Policymakers & Administrators, Entrepreneurs, and Professionals). The base data ranking assigns uniform weights to all eight factors, while cost and differentiation strategies use distinct weights for these factors. For instance, when a cost strategy is employed, greater weights are inherently given to cost-driven ones such as factor conditions. In contrast, if a country utilizes a differentiation strategy, varied weights are allocated to each of the eight factors, and more weights are given to demand conditions and professionals.[2] As illustrated in Figure 1, the two strategy rankings could ascend or descend relative to their base data rankings, contingent on whether the cost or differentiation strategy is selected.

Figure 1. Ranking changes by cost and differentiation strategies

CS \ DS

DOWN

1

	CS	DS
Jordan	-1	-4
Israel	-5	-3
Greece	-1	-3
Hungary	-9	-2
Czech Rep.	-5	-1
Austria	-2	-1
Singapore	-4	-2

UP

2

	CS	DS
Netherlands	-6	0
Dominican Rep.	-5	0
United States	-3	0
Germany	-2	0
France	-13	1
Spain	-10	1
Denmark	-5	1
Hong Kong	-4	1
Nigeria	-3	1
Sweden	-2	1
Korea	-2	1
Poland	-2	1
Slovenia	-6	2

	CS	DS
United Kingdom	-5	2
Belgium	-2	2
Ukraine	0	2
Croatia	-10	3
Italy	-4	3
Colombia	-3	3
Slovak Republic	-3	3
Taiwan	-2	3
Finland	-1	3
Switzerland	-6	4
Japan	-6	4
Turkey	-8	5
South Africa	-5	6

DOWN

3

	CS	DS
Malaysia	7	-8
Russia	14	-8
Oman	5	-7
New Zealand	7	-6
Canada	2	-5
Guatemala	5	-4
Kuwait	7	-4
Saudi Arabia	8	-4
Mexico	4	-3

	CS	DS
Chile	5	-3
Cambodia	4	-2
Australia	7	-2
U.A.E.	5	-1
Panama	7	-1
Pakistan	9	-1
China	12	-1
Morocco	1	0
Brazil	2	0
India	8	0

UP

4

	CS	DS
Peru	1	1
Argentina	3	1
Bangladesh	1	2
Kenya	1	2
Egypt	5	2
Philippines	6	2
Indonesia	1	3
Sri Lanka	1	3
Thailand	3	3
Vietnam	4	4

Note: CS: Cost Strategy, DS: Differentiation Strategy

Figure 1 presents four potential scenarios, with the 62 economies categorized into four groups: Groups 1, 2, 3, and 4. It is apparent that Group 1 should implement both cost and differentiation strategies. The economies in Group 1 have lower national competitiveness rankings, irrespective of whether cost or differentiation strategies are adopted. Instead, their competitiveness and sustainable development largely depend on external factors such as resources from other economies, given their relatively small size. As such, promoting either CS or DS solely by leveraging their own resources presents a significant challenge. Group 1 countries should then encourage internationalization or regional clustering, fostering collaborations to improve either CS or DS, which in turn would enhance their competitiveness depending on the specific areas.

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

For instance, since it might be difficult for Group 1 countries to promote CS independently, they could form partnerships with neighboring countries that excel in CS.

Countries classified under Group 2 should adopt DS to enhance their competitiveness ranking, given that their DSR is higher than their BSR. Conversely, as the CS would reduce their competitiveness ranking, it is crucial for Group 2 countries to adjust their resources toward a differentiation strategy, aiding them in advancing from their current developmental level. Examining the performance of Group 2 countries in various sub-factors, they demonstrate strengths in the areas of Demand Conditions and Professionals, factors associated with DS. Consequently, these economies, typically characterized as developed or innovation-based, rely on continuous innovation for sustainable growth. It is recommended that these economies pursue a differentiation strategy that will help consolidate their leading positions.

For Group 3 countries, CS plays a more significant role than the DS. Predominantly composed of developing countries rich in resources, along with a few resource-based developed countries, Group 3 economies heavily rely on their abundant natural resources to pursue higher rankings. As a result, they are advised to favor a cost strategy over a differentiation strategy. Evaluating the performance of Group 3 countries in different sub-factors, these nations show strength in the criteria of Factor Conditions and Workers, factors that are typically associated with CS.

Lastly, the economies in Group 4 are characterized by their significant potential for future development. Most of these are developing economies, classified as either weak or intermediate in our group ranking. Both strategies could boost their competitiveness, due to their vast room for improvement by adopting either one. However, despite the considerable potential for advancement through either CS or DS, our analysis indicates that initiating with CS before transitioning to DS could accelerate development. This is because DS tends to be more effective for advanced countries that already have a strong economic development foundation.

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 fifteen and twenty-seven countries are classified in the intermediate group and the weak group, respectively. Similarly, under CS, twenty-one countries are classified in the large group; twenty-three countries in the medium group; the rest (eighteen countries) in the small group.

By contrast, under DS, nineteen 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-one countries belong to the large group; twenty-three countries to the medium group; eighteen countries in the small group under DS. 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 CS instead of DS. By contrast, the group classification of Korea would change from a medium-intermediate group to a medium-strong group where the country chooses DS over CS.

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 which strategy they adopt. Contrarily, if Saudi Arabia adopts the differentiation strategy, it drops to the large-intermediate group from the large-strong group. Similarly, if Russia belongs to the intermediate cluster under CS but is classified in the large-weak group under DS simulation.

Medium group

In the case CS, only six countries/regions, including New Zealand, Sweden, Finland, Germany, Taiwan, China, and the United Kingdom are classified in the medium-strong group. However, under DS, Korea would be added to the medium-strong group. This shows that the employment of the different strategies affects the overall national competitiveness ranking and the classification of most countries/ regions. For example, Ukraine ranks sixth place in the medium-weak group under CS but would move up to second place if the country adopts DS.

Small group

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

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

Size / CSI & DSI	Small	Medium	Large
Strong	CS Ranking: 1 U.A.E., 2. Singapore, 3. Denmark, 4. Netherlands, 5. Switzerland, 6. Kuwait, 7. Belgium, 8. Austria, 9. Hong Kong SAR DS Ranking: 1. Denmark, 2. Switzerland, 3. Singapore, 4. Netherlands, 5. U.A.E., 6. Belgium, 7. Austria, 8. Hong Kong SAR	CS Ranking: 1. New Zealand, 2. Sweden, 3. Finland, 4. Germany, 5. Taiwan, China, 6. United Kingdom DS Ranking: 1. Sweden, 2. Finland, 3. United Kingdom, 4. Taiwan, China, 5. Germany, 6. New Zealand, 7. Korea	CS Ranking: 1. Canada, 2. Australia, 3. China, 4. United States, 5. Saudi Arabia DS Ranking: 1. United States, 2. Canada, 3. Australia, 4. China
Intermediate	CS Ranking: 1. Panama, 2. Czech Republic, 3. Israel DS Ranking: 1. Czech Republic, 2. Kuwait, 3. Israel, 4. Slovenia, 5. Panama, 6. Greece	CS Ranking: 1. Korea, 2. Chile, 3. Malaysia, 4. Vietnam, 5. Italy, 6. Poland, 7. France, 8. Thailand DS Ranking: 1. France, 2. Italy, 3. Vietnam, 4. Poland, 5. Chile, 6. Thailand, 7. Spain, 8. Malaysia	CS Ranking: 1. India, 2. Indonesia, 3. Japan, 4. Philippines DS Ranking: 1. Japan, 2. Saudi Arabia, 3. Indonesia, 4. India, 5. Colombia, 6. Philippines
Weak	CS Ranking: 1. Greece, 2. Slovenia, 3. Dominican Republic, 4. Hungary, 5. Croatia, 6. Slovak Republic DS Ranking: 1. Dominican Republic, 2. Croatia, 3. Hungary, 4. Slovak Republic	CS Ranking: 1. Oman, 2. Jordan, 3. Spain, 4. Cambodia, 5. Guatemala, 6. Ukraine, 7. Kenya, 8. Sri Lanka, 9. Morocco DS Ranking: 1. Jordan, 2. Ukraine, 3. Oman, 4. Cambodia, 5. Kenya, 6. Sri Lanka, 7. Guatemala, 8. Morocco	CS Ranking: 1. Mexico, 2. Russia, 3. Colombia, 4. Peru, 5. Argentina, 6. Egypt, 7. Brazil, 8. Pakistan, 9. Nigeria, 10. Türkiye, 11. Bangladesh, 12. South Africa DS Ranking: 1. Peru, 2. Türkiye, 3. Mexico, 4. Argentina, 5. Nigeria, 6. Egypt, 7. Brazil, 8. South Africa, 9. Bangladesh, 10. Russia, 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 two choices: 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 tenth if it adopts CS. Yet, its ranking will rise back to the fourth when it adopts DS. By contrast, Canada shows a slightly higher rank when adopting CS to the first, but drops to the eighth if it pursues DS.

Table 3. Base data and two strategy rankings

Country/Region	Base Data	Cost Strategy	Differentiation Strategy
Singapore	1	5	3
Denmark	2	7	1
Canada	3	1	8
Netherlands	4	10	4
United States	5	8	5
Switzerland	6	12	2
Sweden	7	9	6
UAE	8	3	9
Australia	9	2	11
Finland	10	11	7
New Zealand	11	4	17
Belgium	12	14	10
Hong Kong SAR	13	17	12
Austria	14	16	15
United Kingdom	15	20	13
Germany	16	18	16
Taiwan, China	17	19	14
China	18	6	19
Korea	19	21	18
Kuwait	20	13	24
France	21	34	20
Czechia	22	27	23
Saudi Arabia	23	15	27
Italy	24	28	21
Israel	25	30	28
Japan	26	32	22
Poland	27	29	26
Chile	28	23	31
Vietnam	29	25	25
India	30	22	30
Malaysia	31	24	39
Indonesia	32	31	29

Panama	33	26	34
Slovenia	34	40	32
Greece	35	36	38
Colombia	36	39	33
Spain	37	47	36
Thailand	38	35	35
Philippines	39	33	37
Dominican Republic	40	45	40
Mexico	41	37	44
Peru	42	41	41
Jordan	43	44	47
Hungary	44	53	46
Croatia	45	55	42
Argentina	46	43	45
Oman	47	42	54
Turkey	48	56	43
Nigeria	49	52	48
Brazil	50	48	50
Egypt	51	46	49
Russia	52	38	60
Cambodia	53	49	55
Ukraine	54	54	52
Guatemala	55	50	59
Slovak Republic	56	59	53
South Africa	57	62	51
Bangladesh	58	57	56
Kenya	59	58	57
Pakistan	60	51	61
Sri Lanka	61	60	58
Morocco	62	61	62

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

Quantification of qualitative data through ChatGPT

For 2023, we made a strategic addition to our approach by incorporating ChatGPT to delve deeper into and measure the competitiveness across the 41 survey criteria. ChatGPT has been instrumental in enhancing the quality of our data, thanks to its comprehensive database and advanced linguistic modeling abilities. It has been particularly beneficial in circumstances where data collection through conventional means is hampered, as in the case of our overseas offices in Russia and Ukraine. With geopolitical tensions, such as the Russia-Ukraine War, affecting the operations of our on-ground teams, the capacity of ChatGPT to independently conduct surveys has proven invaluable.

To efficiently quantify qualitative data, we devised specific prompts for 41 survey questions across 62 countries. For example, consider a survey question aimed at understanding the sensitivity of Argentine consumers toward product quality. We posed the question to ChatGPT as follows:

Please evaluate the sensitivity of Argentine consumers to product quality. Provide a score on a scale up to 10, where a higher score indicates greater sensitivity to product quality. Please provide the score only.

This type of questioning was used to interrogate ChatGPT about all 62 countries, covering the 41 survey items. The results obtained from ChatGPT were combined with the KOTRA survey data by calculating an average score from both sources for each survey question for every country.

The adoption of this method has brought about significant improvement in the precision of our findings. It has allowed us to extract insightful data while overcoming obstacles such as military conflicts that could otherwise impede comprehensive research. This hybrid approach, blending human intelligence with artificial intelligence, symbolizes the potential of technology in aiding in-depth, large-scale studies and contributing to more accurate and reliable outcomes.

03

Conceptual Framework and Analytical Methodologies

Conceptual Framework and Analytical Methodologies[1]

In Chapter 1, we examined existing studies related to each factor comprising the eight elements of the IPS model and illustrated their significance in boosting national competitiveness. Additionally, we validated the usefulness and applicability of the IPS model through real-world cases, such as evaluating the impact of ChatGPT on national competitiveness. This chapter presents the theoretical background of IPS National Competitiveness Research and the MASI methodology that is used in our research and discuss 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 these two models into one framework (Cho et al., 2008, 2009; IPS, 2006), which was labeled as the IPS Model and became the underlying analytical framework for IPS National Competitiveness Research.

It is very important to note that the reliability of national competitiveness rankings should be based on 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. However, despite the extensive history and the two renewed reports on national competitiveness, there are several limitations to the national competitiveness research methodologies and findings of IMD and WEF.[2] 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. This section will present a careful examination of their methodologies that reveals some notable limitations.

[1] This chapter is abstracted and extended from IPSNC (2022).
[2] Please refer to Cho and Moon (2000, 2013) for the discussion on these 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 and 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.

On the other hand, WEF measured competitiveness using eight variables, but since 2000 it has changed the number of variables frequently. Up until 2007, WEF showed frequent changes in the indices from Current Competitiveness Index (CCI) to Microeconomic Competitiveness Index (MICI) and Business Competitiveness Index (BCI). It also 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 (2023)	WEF Global Competitiveness Report (2019)	IPS National Competitiveness Research (2023)
Sponsoring institute	International Institute for Management Development	World Economic Forum	IPSNC
Location	Lausanne (Switzerland)	Geneva (Switzerland)	Seoul (Korea, Republic of)/Geneva (Switzerland)
First Publication	1989	1996	2001

Year			
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	256 (computed in the rankings)	103	98
Data base	Hard data: 164 Soft data: 92	Hard data: 56 Soft data: 47	Hard data: 57 Soft data: 41
Weights	Hard data: 64.1% Soft data: 35.9 %	The same weight for factors, sub-factors, and criteria	Different weights for different strategies
Partner institutes	A global network of 57 partner institutes	Local partner institutes	KOTRA offices abroad Partner scholars
Number of Economies	64 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 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 important to provide the implications of these findings. For example, in the WEF Global Competitiveness Report 2019, Singapore ranked first, while the Philippines ranked sixty-fourth among one hundred and forty-one countries measured. This raises questions such as: Will such a result help the Philippines change its policy to enhance its competitiveness? Does this mean that the country has to invest more capital and effort in developing technologies in the hope that someday it might catch up with Singapore?

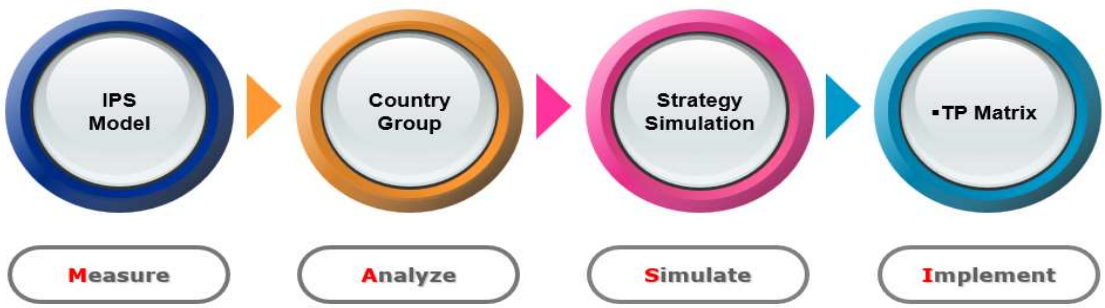
In our research, we argue that a nation's competitiveness is more relevant when it is compared with nations holding similar comparative advantages. For example, the comparison between Singapore and Switzerland would be a better comparison than the comparison between Singapore and the US. Therefore, to 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 can support a solid analytical framework. One is whether it is comprehensive enough to explain the complexity of the real world through key variables. Another is to assess whether such a framework 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.

Despite its advantages, Porter's Diamond Model is not free from criticism. Specifically, it is limited to be 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 and 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.

These two models, the Double Diamond and 9-Factor, are significant 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 1 in Chapter 1).

We use the 98 criteria in measuring the national competitiveness of 62 countries in 2023 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 figures published by international and government organizations. We collected the soft data with the assistance of our partner institution, the Korea Trade-Investment Promotion Agency (KOTRA), which operates more than a hundred offices internationally. Additionally, for 2023 we employed ChatGPT as a supplementary tool for measuring the 41-survey data. Please refer to the relevant section in the Highlights (Chapter 3) for more details.

Analyzing national competitiveness

Table 3 illustrates a 3x3 matrix of country groups. By considering both the size and competitive structure under both cost and differentiation strategies, we can now more realistically compare the relative positions of each country. Depending upon which strategic choice is made, the rankings of competitiveness among countries/regions would change. For instance, Kuwait ranks thirteenth when utilizing the cost strategy. However, it would drop to twenty-fourth 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

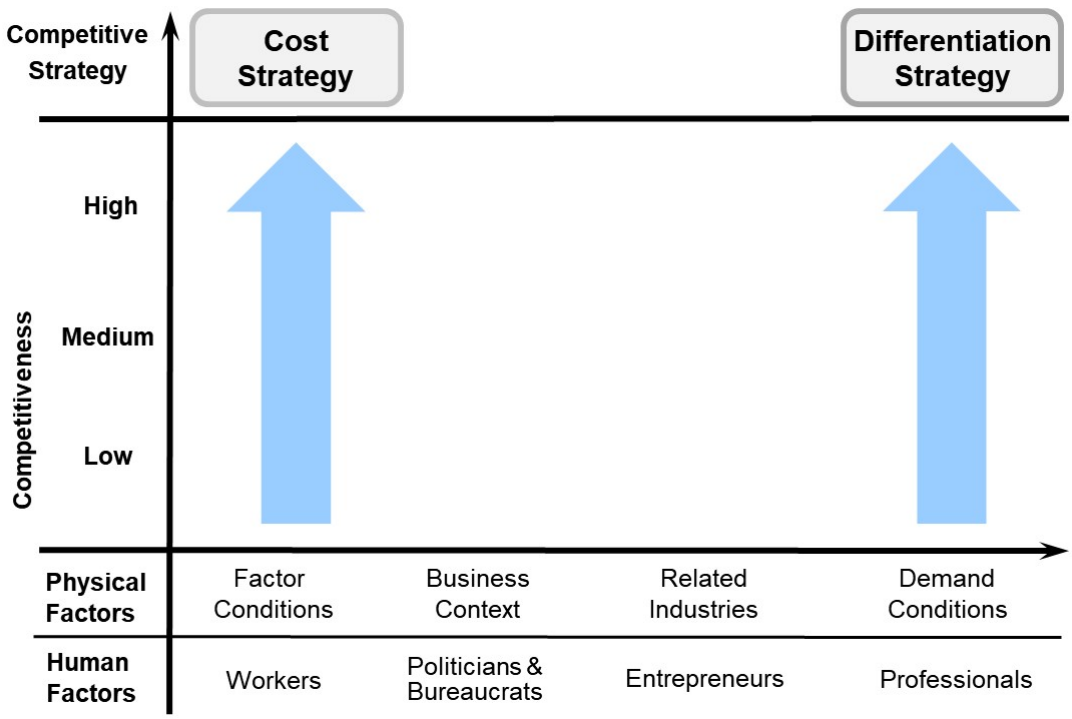
Weak	Small-Weak countries	Medium-Weak countries	Large-Weak countries

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 impose different weights on 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 and Leisten, 2006). For both cost and differentiation strategies, equal weight (50 percent) is imposed on physical and human factors. However, factors and sub-factors are given different weights. For differentiation strategy, more

weight is given to Demand Conditions and Professionals, whereas more weight is 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 highlights that a country should choose carefully 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

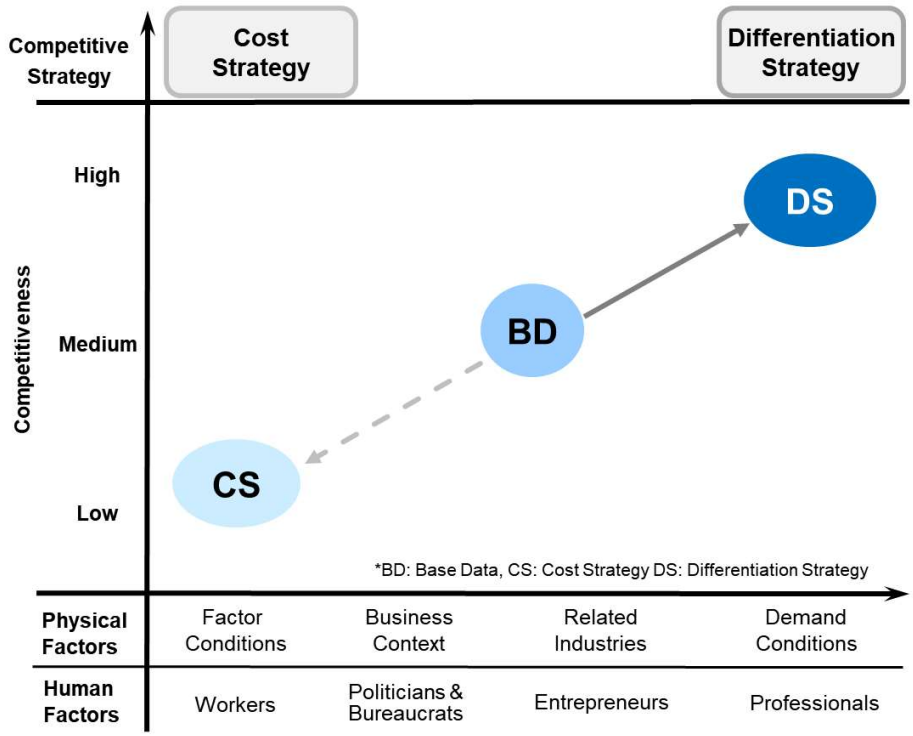
	CSI - BD (Model 1)	DSI - BD (Model 2)
Size	0.044	-0.022
(*p*-value)	(0. 000)	(0.006)
Competitiveness (BD)	-0.313	0.143
(*p*-value)	(0.000)	(0.000)
Constant	7.141	0.540
(*p*-value)	(0.000)	(0.559)
N (observations)	62	62
R^2	0.659	0.463
Adjust R^2	0.647	0.444
F statistic	57.019 (df = 2; 59)	25.400 (df = 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 has two scenarios, either cost or differentiation strategy to choose from. As Figure 3 illustrates, the Base Data (BS) is the starting point. The rankings that result from the choice of a Cost Strategy (CS) are shown on the left, and the rankings as a result of choosing a Differentiation Strategy (DS) are listed on the right. Table 6 demonstrates the indices of the cost strategy and differentiation strategy. For example, the Philippines ranks thirty-third with a cost strategy, while falling to thirty-seventh with a differentiation strategy. The difference in France's case is even larger. It ranks 20th with a differentiation strategy but falls to thirty-fourth with a cost strategy. Therefore, choosing the appropriate 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

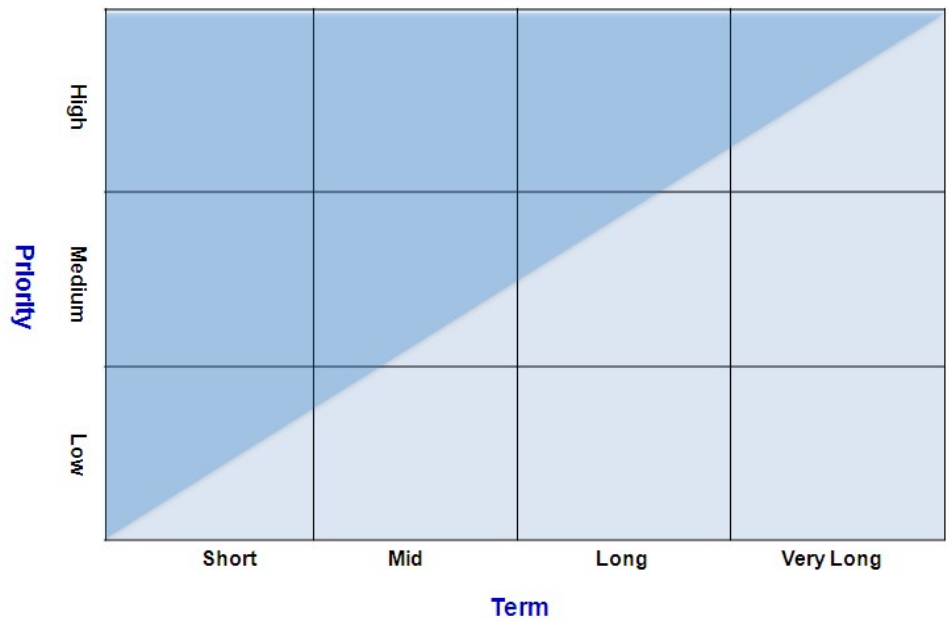
Country	BDR	BDI	CSR	CSI	DSR	DSI	Country	BDR	BDI	CSR	CSI	DSR	DSI
Singapore	1	61.31	5	48.65	3	69.26	Indonesia	32	39.88	31	35.87	29	47.26
Denmark	2	60.76	7	47.38	1	71.86	Panama	33	39.36	26	37.15	34	44.34
Canada	3	59.72	1	54.51	8	65.30	Slovenia	34	39.32	40	33.03	32	45.35
Netherlands	4	59.61	10	45.80	4	69.02	Greece	35	38.46	36	33.81	38	43.43
United States	5	58.83	8	46.58	5	67.50	Colombia	36	38.32	39	33.33	33	44.60
Switzerland	6	58.36	12	44.96	2	69.29	Spain	37	38.31	47	31.21	36	43.95
Sweden	7	57.99	9	46.43	6	66.92	Thailand	38	37.73	35	35.32	35	44.07
U.A.E.	8	56.91	3	50.29	9	64.64	Philippines	39	37.55	33	35.49	37	43.69
Australia	9	56.49	2	52.03	11	61.95	Dominican	40	35.38	45	31.81	40	42.81
Finland	10	56.40	11	45.67	7	66.44	Mexico	41	34.99	37	33.81	44	39.24
New Zealand	11	53.91	4	48.91	17	58.10	Peru	42	34.89	41	33.00	41	42.04
Belgium	12	53.18	14	42.04	10	62.41	Jordan	43	34.00	44	31.97	47	37.53
Hong Kong	13	52.99	17	40.56	12	61.57	Hungary	44	33.83	53	28.61	46	38.43
Austria	14	51.05	16	40.62	15	58.71	Croatia	45	33.44	55	27.73	42	40.25
United Kingdom	15	50.99	20	39.77	13	60.88	Argentina	46	33.26	43	32.05	45	38.66
Germany	16	50.56	18	40.55	16	58.16	Oman	47	32.75	42	32.42	54	32.10
Taiwan	17	50.30	19	40.38	14	59.87	Turkey	48	32.48	56	26.04	43	39.93
China	18	48.81	6	47.44	19	53.68	Nigeria	49	31.74	52	28.66	48	37.44
Korea	19	47.70	21	39.30	18	56.80	Brazil	50	31.32	48	30.92	50	35.02
Kuwait	20	44.59	13	43.51	24	48.54	Egypt	51	31.24	46	31.23	49	36.34
France	21	44.27	34	35.48	20	51.30	Russia	52	29.72	38	33.49	60	28.86
Czech Republic	22	43.83	27	36.23	23	48.87	Cambodia	53	28.29	49	30.33	55	32.00
Saudi Arabia	23	43.29	15	40.88	27	47.95	Ukraine	54	28.14	54	27.75	52	33.47
Italy	24	43.22	28	36.14	21	50.79	Guatemala	55	28.10	50	30.14	59	29.85
Israel	25	42.82	30	35.92	28	47.90	Slovak Republic	56	28.00	59	22.86	53	32.55
Japan	26	42.78	32	35.69	22	50.01	South Africa	57	26.54	62	17.65	51	34.89
Poland	27	41.18	29	35.95	26	48.14	Bangladesh	58	26.39	57	25.69	56	31.68
Chile	28	41.08	23	38.47	31	46.01	Kenya	59	26.29	58	24.56	57	30.72
Vietnam	29	40.96	25	37.34	25	48.19	Pakistan	60	26.18	51	29.15	61	27.88
India	30	40.65	22	39.09	30	46.03	Sri Lanka	61	24.54	60	22.50	58	29.94
Malaysia	31	39.90	24	38.18	39	43.41	Morocco	62	22.54	61	19.70	62	27.12

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 a 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 the US and China

Application of MASI: The Cases of the US and China

This chapter examines the cases of the US and China to assess the application of the MASI framework (Cho and Moon, 2013) that was introduced in Chapter 3 and its implications for the dynamic relationship between these two countries. Despite their differences and conflicts over sensitive issues, such as political systems, culture, and ideology (Center for Strategic & International Studies [CSIS], 2019; Mitter and Johnson, 2021), both countries can explore common ground and areas of shared interests to foster cooperation. By doing so, they can establish a mutually beneficial relationship that leads to a win-win outcome. This chapter seeks to analyze the competitiveness of the two countries, investigating their strengths and weaknesses to explore the potential for enhanced partnership. The comprehensive study of these countries provides a valuable blueprint for other economies, inspiring them to assess their competitive areas and establish cooperative relationships with each other.

The Case of the US

Measurement

In 2023, the US is fifth place in the overall competitiveness ranking with regards to the base data. Out of the eight factors of the IPS model, the US shows higher competitiveness, particularly in the four factors – Demand Conditions (1), Related Industries (10), Entrepreneurs, (1) and Professionals (6) (see Table 1). On the other hand, the US has a relatively lower ranking in Business Context (18) and Workers (25).

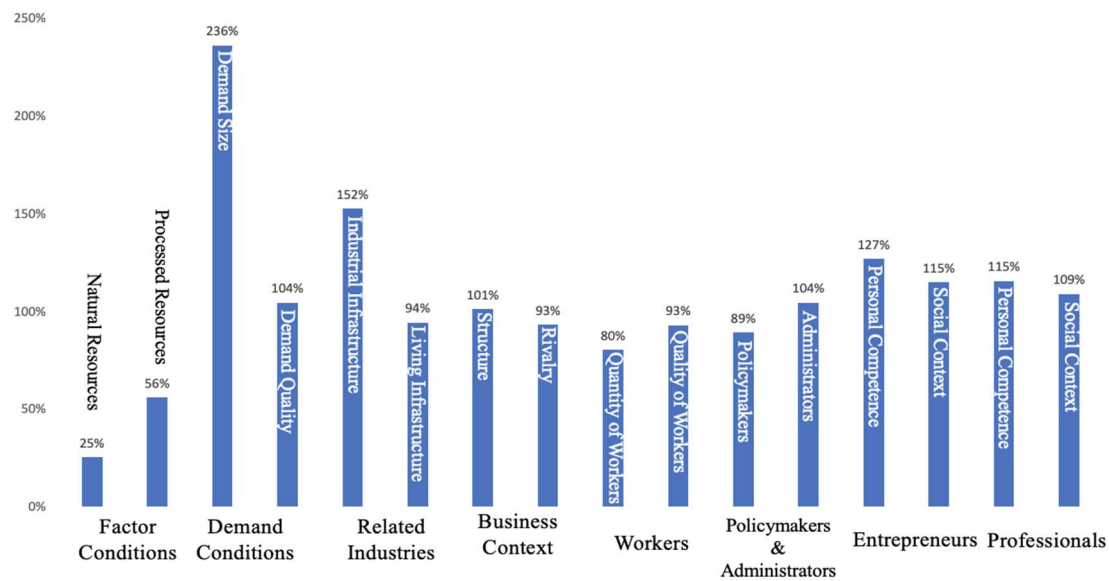
Table 1. Structure of the US national competitiveness

Factors	Rank
Factor Conditions	11
Demand Conditions	**1**
Related Industries	**10**
Business Context	18
Workers	25
Policymakers & Administrators	14
Entrepreneurs	**1**
Professionals	**6**

Analysis at the sub-factor level[1]

As the US is categorized in the large-strong group, its strengths and weaknesses should be compared with the other large-strong economies (Australia, Canada, and China) rather than with every other country from the overall competitiveness ranking. Figure 1 shows that the US performed weaker than the average large-strong economies in the two sub-factors under Factor Conditions. In addition, for Quantity of Labor Force, the US was 80 percent of the average level of the other large-strong economies, thus its performance was relatively weaker in this sub-factor as well. However, for other sub-factors (Demand Size, Industrial Infrastructure, Personal Competence and Social Context of both Entrepreneurs and Professionals), the US demonstrated a very strong performance with higher competitiveness when compared to the average of the rest three large-strong economies.

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



Simulation

The US ranked fifth in the overall national competitiveness ranking (Base Data). Yet, if it pursues a cost strategy (CS), its overall ranking will drop to eighth place. By contrast, under a differentiation strategy (DS), the US rank will stay the same at fifth place. As Table 1 shows, the US has a competitive structure with relative strength in criteria from the factors of Demand

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

Conditions, Related Industries, and Entrepreneurs which are improved by DS and therefore helps to strengthen its national competitiveness.

Implementation

Identification of weak criteria

The weak criteria of the US are summarized in Table 2. If the rank of a certain criterion (e.g., wood production) is lower than that of the sub-factors (e.g., processed resources) it belongs to, we identify it as a weak area for the US. Fifteen out of sixteen sub-factors under the eight factors are categorized as weak criteria and will be included in the term-priority matrix. The subfactor of energy resources is excluded given its nature of uncontrollability, meaning that it will be less likely to be influenced by the strategic operations of policymakers. Out of 98 criteria, 43 criteria under 14 sub-factors are classified as weak areas for the US, which demands improvement through the support of relevant policies (see Table 2). The following illustrates the strengths and weaknesses of the US with regard to the sixteen subfactors.

- Factor Conditions

Natural Resources (15): The US ranked fifteenth in this sub-factor, achieving high competitiveness in most criteria such as coal reserves (6), natural gas reserves (8), land area (13), and freshwater resources (15).

Processed Resources (12): The US ranked twelfth in this sub-factor, showing high competitiveness in the criteria including oil production (7), natural gas production (7), coal production (8), and wood production (13), despite its relative weakness in livestock (18).

- Demand Conditions

Demand Size (1): The US holds exceptionally high competitiveness in all criteria of this sub-factor such as GDP (1), goods and services: import (1), goods and services: export (2), and GDP per capita (3).

Demand Quality (9): The US showed high performance in most criteria of consumer sophistication on design (7), new technology (7), quality (10), and health and environmental issues (11). However, the US revealed relative weakness in the criterion of consumer sophistication on international standard of Intellectual Property Rights (IPR) (26).

- Related Industries

Industrial Infrastructure (1): In this sub-factor, the US outperformed in the criteria that are related to scientific technology such as total scientific research institutions (1),

international patents granted (1), and total expenditure on R&D (6). By contrast, it displayed a relatively lower competitiveness in criteria indicating communication and transportation such as maritime transport (26), and mobile phone subscribers (47).

Living Infrastructure (29): The US ranked twenty-ninth in this sub-factor, achieving medium-level competitiveness. Among the 12 criteria, the criteria in which the US demonstrated its relative strength include Leisure, sports, and cultural facilities (1), tertiary enrollment rate (9), HDI index (16), and social safety net (19). On the other hand, the Gini index (34), secondary enrollment rate (36), student international mobility (38), personal security (45), and CO2 emission (56) are classified as weak criteria of the US.

- Business Context

Structure (10): The US recorded high-level competitiveness in most criteria, including unique brands (4), social value (4), health, safety, and environmental concerns (8), and global standards (9). Comparatively, the US performed slightly weaker in criteria such as firm's decision process (11), ethical practices (13), equal treatment (18), and firm's decision structure (22). Still, the overall performance of the US in this factor remained strong.

Rivalry (43): The US showed low-level competitiveness in both goods (59) and services openness of imports (62). In addition, the US performance in a criterion of goods openness of exports (61) was particularly low. Still, the US revealed a slightly stronger performance in criteria such as portfolio openness with regards to outflows (10) and inflows (19) and FDI openness in terms of outflow (21).

- Workers

Quantity of Workers (38): In most criteria, the US demonstrated medium-level competitiveness including criteria of working hours (23), employment rate (35), and monthly compensation for manufacturing workers (42). However, the US achieved higher competitiveness in the criterion, number of labor force (3).

Quality of Workers (18): The US exhibited high-level competitiveness in most criteria of this sub-factor including literacy rate (7) and attitude and motivation (7), education (13), and the openness of labor market (13). Yet, the US showed a slightly weaker performance on the criterion of management business relationship (19).

- Policymakers & Administrators

Policymakers (15): The US displayed high competitiveness in most criteria of this sub-factor, such as the process of legislature (2), the result of legislation (7), education level (7), and international experience (8). Compared to this, the US showed a slightly lower competitiveness in ethics (e.g., bribery and corruption) (28).

Administrators (13): The US possessed high-level competitiveness in areas including educational level (7), international experience (9), but recorded slightly lower rankings in policy implementation (14), the process of policy implementation (16), and ethics (e.g., bribery and corruption) (19).

- Entrepreneurs

Personal Competence (1): The US demonstrated an exceptionally strong standing in this sub-factor, indicating strong performance in most criteria including the result of decision making (1), entrepreneur's international experience (1), the process of decision making (3), and lower rankings in entrepreneur's core competence (14), and entrepreneur's education level (14).

Social Context (3): The US recorded a very high-level competitiveness in all of the following criteria, availability of entrepreneurs (1), support of the social system (2), openness to foreign entrepreneurs (2), new business (6), and social status of entrepreneurs (9).

- Professionals

Personal Competence (6): The US showed strong performance in this sub-factor, achieving strong performance in most criteria including professionals' core competences (3), the ability to manage opportunities (8), decision making (9), professionals' education level (9) although its performance in a criterion, professionals' international experience (22) was only moderate.

Social Context (7): The US exhibited high competitiveness in all criteria of this sub-factor, including the mobility of professionals (4), availability of professionals (6), professionals' compensation (12), openness to foreign professionals (14), and social status of professionals (16).

Table 2. Weak criteria for US public policy formulation

Factor Conditions	Demand Conditions	Related Industries
Processed Resources (12) - Wood production (13) - Livestock (18)	**Demand Quality (9)** - Consumer Sophistication: quality (10) - Consumer Sophistication: health and environment (11) - Consumer Sophistication: international standard of IPR (26)	**Industrial Infrastructure (1)** - Vehicles (2) - Total expenditure on R&D (6) - Civil aviation (8) - Internet users (18) - International travel (22) - Capital accessibility (24) - Maritime transport (26) - Capital value (28) - Mobile phone subscriber (47) **Living Infrastructure (29)** - Gini index (34) - Secondary enrollment rate (36) - Student international mobility (38) - Personal security (45) - CO_2 emissions (56)
Business Context	**Workers**	**Policymakers & Administrators**
Structure (10) - Firm's decision structure (11) - Ethical practices (13) - Equal treatment (18) - Firm's decision structure (22) **Rivalry (43)** - Goods imports as % of GDP (59) - Goods exports as % of GDP (61) - Services imports as % of GDP (62)	**Quantity of Workers (38)** - Monthly compensation for manufacturing workers (42) **Quality of Workers (18)** - Management business relationship (19)	**Policymakers (15)** - Ethics (28) **Administrators (13)** - The result of policy implementation (14) - The process of policy implementation (16) - Ethics (19)
Entrepreneurs	**Professionals**	
Personal Competence (1) - The process of decision making (3) - Entrepreneur's core competence (14) - Entrepreneur's education level (14) **Social Context (3)** - New business (6) - Social status of entrepreneurs (9)	**Personal Competence (6)** - The ability to manage opportunities (8) - Decision making (9) - Processionals' education level (9) - Professionals' international experience (22) **Social Context (7)** - Professional's compensation (12) - Openness to foreign professionals (14) - Social status of professionals (16)	

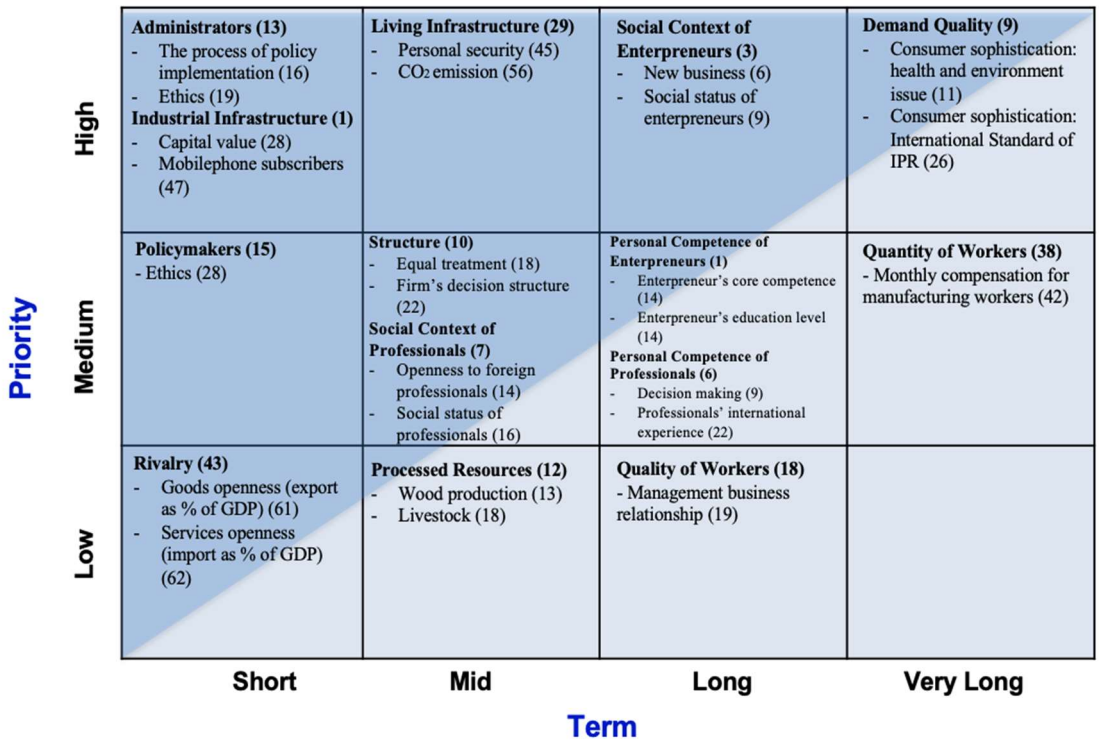
Constructing a Term-Priority Matrix

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

Table 3. Correlation with GDP per capita (2022)

Priority	Term 1		Term 2		Term 3		Term 4	
	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.	Sub-factor	r.
High	Administrators	0.901 (0.000)	Living Infrastructure	0.809 (0.000)	Social Context of Entrepreneurs	0.836 (0.000)	Demand Quality	0.719 (0.000)
	Industrial Infrastructure	0.875 (0.000)						
Medium	Policy-makers	0.780 (0.000)	Structure	0.761 (0.000)	Personal Competence of Entrepreneurs	0.791 (0.000)	Demand Size	0.655 (0.000)
			Social Context of Professionals	0.736 (0.000)	Personal Competence of Professionals	0.650 (0.000)		
Low	Rivalry	0.572 (0.000)	Processed Resources	0.400 (0.002)	Quality of Workers	0.602 (0.000)	Quantity of Workers	-0.427 (0.000)

Figure 2. Term-priority matrix: The case of the US



The Case of China

Measurement

Out of the 62 economies, China ranked eighteenth in the overall competitiveness ranking with regard to base data. Looking at its performance in each factor, China performed exceptionally strong in factors such as Workers (1) and Demand Conditions (2) while performing moderately in the other six factors (see Table 4).

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

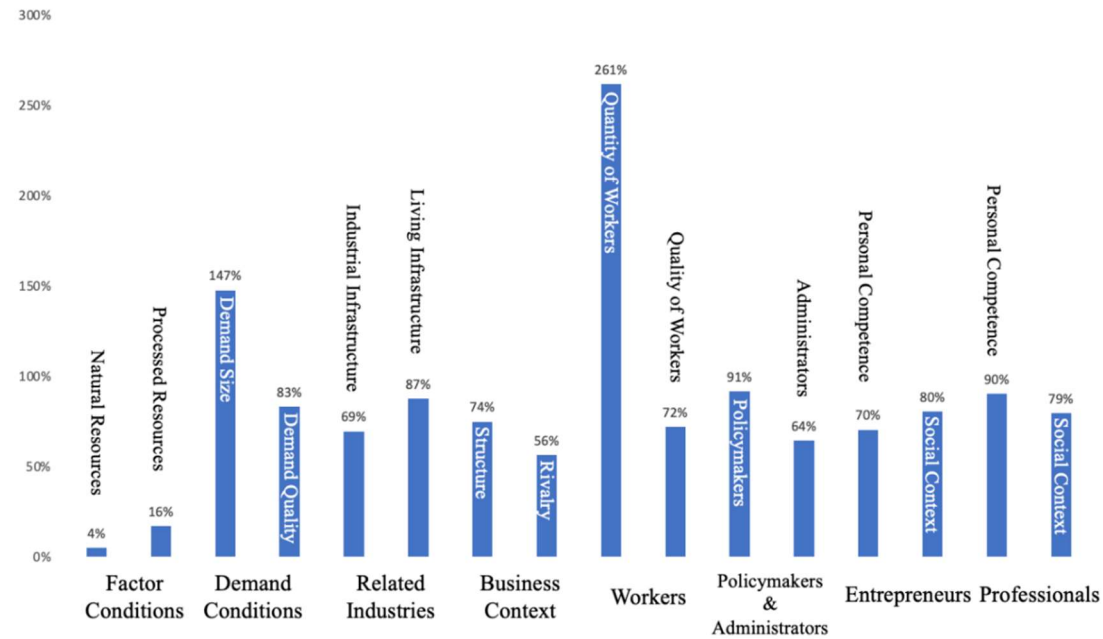
Factors	Rank
Factor Conditions	30
Demand Conditions	**2**
Related Industries	33
Business Context	38
Workers	**1**
Policymakers & Administrators	22
Entrepreneurs	21
Professionals	22

Analysis at the sub-factor level[2]

China was categorized in the large-strong group. Hence, it would be more relevant to compare it with the other large-strong economies (Australia, Canada, and the US) when analyzing the relative strengths and weaknesses. Figure 3 shows that China's performance was weaker than the average of the other large-strong economies in many sub-factors. It was particularly weaker in the sub-factors of Natural Resources and Processed Resources under Factor Conditions, where it was less than 20 percent of the average level of all the other large-strong economies. However, for some sub-factors such as Demand Size and Quantity of Workers, China recorded stronger performance than the average of the other large-strong economies.

[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.

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



Simulation

Although China ranked eighteenth in the overall national competitiveness rankings (Base Data), its ranking will rise to sixth place if it pursues CS. In addition, under DS, its ranking will move down to nineteenth place, which is slightly lower than its current ranking (18). China has a competitive structure with relatively high scores in criteria from factors of Demand Conditions and Related Industries in the physical factors and Workers and Policymakers & Administrators in the human factors. Therefore, China should pursue a cost strategy for further enhancement of its national competitiveness.

Implementation

Identification of weak criteria

The weak criteria that China 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 a weak area. Fifteen 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 uncontrollable variables such as natural resources under Factor Conditions. Accordingly, 46 criteria under 15 sub-factors—or about 47 percent of the total 98 criteria—are classified as China's weak area.

- Factor Conditions

Natural Resources (38): China ranked thirty-eighth in this sub-factor, showing medium-level performance in most criteria such as natural gas reserves (23), freshwater resources (36), and land area (39). Compared to this, China showed a relatively stronger performance in the other two criteria, coal reserves (15) and crude oil reserves (19).

Processed Resources (23): China holds a moderate level of competitiveness in this sub-factor. Specifically, China showed moderate to high performance in all criteria such as coal production (5), oil production (22), wood production (24), and natural gas production. (27). However, as an exception, China was very weak in the criterion of livestock (52).

- Demand Conditions

Demand Size (2): China performed exceptionally strong in this sub-factor, recording a high performance in most criteria including goods and services: export (1), goods and services: import (2), and GDP (2) although China was weaker in terms of GDP per capita (35).

Demand Quality (24): China's performance in Demand Quality was moderate, which was highlighted by its moderate or weak performance in most criteria such as consumer sophistication on quality (35), health and environmental concerns (36), international standard of IPR (43), and new technology (43).

- Related Industries

Industrial Infrastructure (33): China exhibited moderate performance in all criteria for transportation and communication. For example, China recorded average in maritime transport (24), civil aviation (33), vehicles (40), and mobile phone subscribers (40). It was slightly stronger in the criteria for technological development such as international patents granted (3) and total expenditure on R&D (12).

Living Infrastructure (34): China ranked thirty-fourth in this sub-factor. Among all criteria, China showed moderate performance in most such as student per teacher (elementary) (27), social safety net (28), tertiary enrollment rate (29), leisure, sports, and cultural facilities (30), medical service (32), and Gini index (32).

- Business Context

Structure (24): China revealed medium or relatively weak performance in most criteria of this sub-factor measuring business strategy and governance among firms, such as unique brands (27), social value (28), equal treatment (30), ethical practices (31), and firm's decision structure (38).

Rivalry (59): China showed low-level competitiveness in this sub-factor. Particularly, China's performance on most of the criteria was weak, and particularly weak performance is captured in

the criteria such as services openness exports (54), goods openness imports (57), and services openness imports (60).

- Workers

Quantity of Workers (1): China demonstrated a remarkably strong performance in this sub-factor. China performed particularly strongly in the area of number of the labor force (1) although its performance in the criterion such as monthly compensation for manufacturing workers (25) was relatively lower compared to its performance in other criteria of this sub-factor.

Quality of Workers (41): China indicated medium-level competitiveness in most criteria of this sub-factor including the openness of labor market (31), education (33), literacy rate (33), and attitude and motivation (36).

- Policymakers & Administrators

Policymakers (14): China revealed high-level competitiveness in this sub-factor. Its strong performance is highlighted in the areas of the result of the legislature (11) education level (11), ethics (e.g., bribery and corruption) (15), and international experience (17).

Administrators (30): China displayed medium-level competitiveness in this sub-factor. In this sub-factor, the relatively competitive criteria of China include education level (11) and international experience (18).

- Entrepreneurs

Personal Competence (24): China exhibited a moderate standing in this sub-factor, performing relatively stronger in entrepreneur's education level (7) and entrepreneur's core competence (11). However, China's performance in most other criteria remained relatively weaker including the process of decision making (29), entrepreneur's international experience (30), and the result of decision making (46).

Social Context (17): In most criteria, China showed high-level competitiveness such as openness to foreign entrepreneurs (14), support for the social system (15), and availability of entrepreneurs (17). However, the country demonstrated slightly lower competitiveness in the areas such as new business (21) and the social status of entrepreneurs (31).

- Professionals

Personal Competence (19): China was classified as the high-performing group in this sub-factor. China showed strong performance in the criteria such as professionals' international experience (18) and decision-making (20) although it only showed moderate performance in many other criteria such as the ability to manage opportunities (29), professionals' core competences (29), and professional's education level (30).

Social Context (23): China had a medium-level performance in this sub-factor, showing moderate performance in all criteria in this sub-factor including openness to foreign professionals (20), professionals' compensation (20), availability of professionals (22), mobility of professionals (30), and social status of professionals (31).

Table 5. Weak criteria for public policy formulation of China

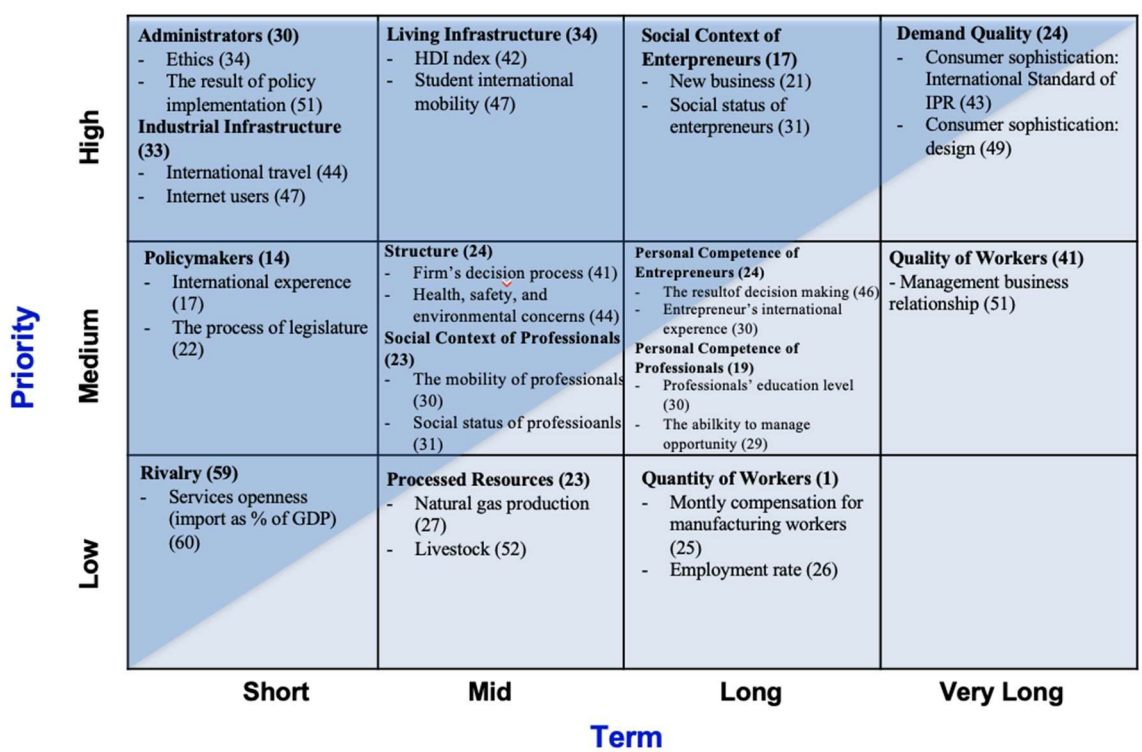
Factor Conditions	Demand Conditions	Related Industries
Natural Resources (38) - Land area (39) **Processed Resources (23)** - Wood production (24) - Natural gas production (27) - Livestock (52)	**Demand Quality (24)** - Consumer sophistication: quality (35) - Consumer sophistication: health and environment issues (36) - Consumer sophistication: international standard of IPR (43) - Consumer sophistication: new technology (43) - Consumer sophistication: design (49)	**Industrial Infrastructure (33)** - Capital value (36) - Scientific research institutions (38) - Vehicles (40) - Mobile phone subscribers (40) - International travel (44) Internet users (47) **Living Infrastructure (34)** - CO2 emission (40) - HDI index (42) - Student international mobility (47)
Business Context	**Workers**	**Policymakers & Administrators**
Structure (24) - Unique brands (27) - Social value (28) - Equal treatment (30) - Ethical practices (31) - Firms' decision structure (38) - Global standards (39) - Firm's decision process (41) - Health, safety, and environmental concerns (44) **Rivalry (59)** - Services openness (import as % of GDP) (60)	**Quantity of Workers (1)** - Monthly compensation for manufacturing workers (25) - Employment rate (26) **Quality of Workers (41)** - Management business relationship (51)	**Policymakers (14)** - Ethics (15) - International experience (17) - The process of legislature (22) **Administrators (30)** - Ethics (34) -The result of policy implementation (51)
Entrepreneurs	**Professionals**	
Personal Competence (24) - The process of decision making (29) - Entrepreneur's international experience (30) - The result of decision making (46) **Social Context (17)** - New business (21)	**Personal Competence (19)** - Decision making (20) - Professionals' education level (29) - The ability to manage opportunities (29) - Professionals' education level (30)	

- Social status of entrepreneurs (31)	**Social Context (23)** - The mobility of professionals (30) - Social status of professionals (31)	

Constructing a Term-Priority Matrix

The fifteen sub-factors listed in Table 6 are organized into a 4 x 3 matrix (Figure 4) to provide an overview for policy recommendations. The sub-factors in the short term (Term 1) in the order of correlation are Administrations, Industrial Infrastructure, Policymakers, and Rivalry. The sub-factors under the midterm (Term 2) are Living Infrastructure, Structure of Business Context, and Processed Resources. The sub-factors in the long term (Term 3) are Social Context of Entrepreneurs, Personal Competence of Entrepreneurs and Professionals, and Social Context of Entrepreneurs, and Quantity of Workers. The sub-factors in the very long term (Term 4) are Demand Quality and Quality of Workers. In this respect, like the explanation in the previous section on the US, it would be more effective for the Chinese government to pay strategic attention to the areas in the upper-left-hand corner of Figure 4.

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



The US and China: Enhanced Competitiveness through Cooperation

Comparing the competitiveness of the two countries, the US outperformed China in more than 80 percent of the 93 criteria. This was very evident with regards to entrepreneurs (e.g., decision-making), firm strategy (e.g., health, safety, and environmental concerns, global standards), consumer sophistication (e.g., design, new technology), and science and technology (e.g., scientific research institutions), in which the US recorded more than 30 places higher. On the other hand, China showed stronger performance in 20 percent of the total criteria, particularly those with regards to energy resources (e.g., coal production), demand size (e.g., exports of goods and services), personal security, and the size of labor force (see Table 6).

To investigate this further, we classify the competitiveness of a country for each criterion as "high" when its ranking is between 1 and 20, "moderate" when its ranking lies between 21 and 40, and "low" when its ranking is between 41 and 62. This is more apparent when we compare the rankings between the US and China among the total of 98 criteria, 70 criteria of the US are classified in the "high" group, and 18 criteria US are in the "moderate" group. By contrast, for China, only 25 criteria are classified in "high" group while more than 50 percent are classified in "moderate."

Table 6. The key areas of strengths and weaknesses for the US and China

Criteria of NCR 2022	Rank of the US	Rank of China
Livestock	18	52
Consumer sophistication: design	7	49
Consumer sophistication: new technology	7	43
Vehicles	2	40
Scientific research institutions	1	38
Firm's decision process	11	41
Global standards	9	39
Health, safety, and environmental concerns	8	44
Portfolio openness (Financial outflows as % of GDP)	10	49
The result of decision making (e.g., the ability to seize opportunities)	1	46
Coal production	8	5
Goods and services: export	2	1
Personal security	45	17
Number of labor force	3	1

Despite the competitive relationship, the competitiveness structure between the two countries suggests many areas for further potential cooperation, in which one can leverage the strengths to complement the other's weaknesses. However, the growing conflict between the two countries seemingly make it more difficult to exploit the benefits of economic cooperation. For example, in August 2022, the US passed the Inflation Reduction Act, which provides subsidies for electric vehicles that were produced in the US. This aims to reshore the supply chains back to the US from China (The Economist, 2022). Regardless of such efforts, China has been rapidly catching up with the dominant position of the US in certain areas of technological development. For example, China now has a larger e-commerce and mobile payments industries than the US and China publishes as much research on artificial intelligence (AI) as the US does (The Economist, 2018b). Yet, Chinese technology firms Baidu, Alibaba, and Tencent (BATs) have mainly focused on the domestic market, but still lack international competitiveness and global brands, which can compete against American technology firms such as Facebook, Amazon, Apple, Netflix, and Google's parent, Alphabet.

Such a rivalry over technological development between the two countries is well reflected in our rankings for the related criteria from the sub-factor of Industrial Infrastructure. In the 2022 NCR rankings, the US was ranked in sixth and first place for the criteria of total expenditure on R&D and international patents granted respectively while China was placed in twelfth and third in the two criteria. The exceptional performance of the US in these two criteria indicates the dominant position of the US in leading technological development in the world. At the same time, China is rapidly catching up with the position of the US but is still behind the US in many other criteria as of now. This implies that China needs to undergo some structural adjustments and changes which would only likely be achieved in the long term. In doing so, strategically collaborating with the US or other countries that hold strengths in areas where China has weaknesses would facilitate it to achieve such goals quickly and efficiently.

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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	42.78	1	Australia	49.04	1	Australia	36.51
2	Canada	35.69	2	Canada	41.82	2	New Zealand	31.02
3	Kuwait	31.23	3	Kuwait	32.78	3	Kuwait	29.69
4	New Zealand	28.60	4	Russia	29.57	4	Canada	29.57
5	UAE	27.34	5	UAE	29.50	5	Oman	26.41
6	Russia	25.71	6	New Zealand	26.18	6	UAE	25.18
7	Oman	18.26	7	Saudi Arabia	18.15	7	Finland	22.03
8	Saudi Arabia	17.30	8	Peru	16.23	8	Russia	21.85
9	Finland	15.33	9	Chile	15.26	9	Sweden	19.25
10	Sweden	13.11	10	Colombia	13.17	10	Saudi Arabia	16.45
11	United States	10.45	11	Oman	10.11	11	Austria	13.51
12	Chile	10.04	12	Brazil	9.81	12	United States	13.13
13	Peru	8.88	13	Panama	9.68	13	Czechia	8.70
14	Austria	7.88	14	Finland	8.63	14	Slovenia	7.16
15	Colombia	7.86	15	United States	7.78	15	Malaysia	6.96
16	Malaysia	6.74	16	Sweden	6.97	16	Netherlands	6.69
17	Brazil	5.80	17	Malaysia	6.53	17	Denmark	5.90
18	Slovenia	5.36	18	Argentina	6.04	18	Poland	5.90
19	Czechia	5.25	19	Ukraine	4.56	19	Germany	5.19
20	Panama	5.02	20	Slovenia	3.57	20	South Africa	4.98
21	Argentina	4.94	21	Croatia	3.49	21	Chile	4.83

22	Poland	4.65	22	Poland	3.41	22	Croatia	4.43
23	Ukraine	3.97	23	Indonesia	3.15	23	China	4.35
24	Croatia	3.96	24	Greece	3.09	24	Belgium	4.23
25	Netherlands	3.83	25	Cambodia	2.66	25	Argentina	3.84
26	Germany	3.64	26	Austria	2.24	26	Slovak Republic	3.81
27	South Africa	3.56	27	Guatemala	2.15	27	Ukraine	3.37
28	Denmark	3.43	28	South Africa	2.14	28	Indonesia	3.28
29	Indonesia	3.21	29	Germany	2.08	29	United Kingdom	3.10
30	China	2.90	30	Mexico	1.97	30	France	3.01
31	Slovak Republic	2.74	31	Czechia	1.80	31	Türkiye	2.79
32	Greece	2.41	32	Türkiye	1.79	32	Thailand	2.64
33	Belgium	2.33	33	Hungary	1.78	33	Israel	2.60
34	Türkiye	2.29	34	Slovak Republic	1.67	34	Colombia	2.55
35	France	2.16	35	Nigeria	1.57	35	Switzerland	2.49
36	Hungary	2.13	36	Vietnam	1.57	36	Hungary	2.49
37	Thailand	2.03	37	Switzerland	1.53	37	Brazil	1.79
38	Switzerland	2.01	38	China	1.45	38	Egypt	1.73
39	United Kingdom	2.00	39	Thailand	1.42	39	Greece	1.73
40	Mexico	1.73	40	Spain	1.39	40	Peru	1.53
41	Israel	1.68	41	Philippines	1.36	41	Mexico	1.50
42	Vietnam	1.51	42	France	1.30	42	Vietnam	1.45
43	Egypt	1.46	43	Egypt	1.18	43	Italy	1.21
44	Cambodia	1.37	44	Italy	1.13	44	Dominican Republic	1.20

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(*Continued*)

1. Factor conditions			1.1. Natural resources			1.2. Processed resources		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
45	Nigeria	1.30	45	Japan	1.08	45	Spain	1.18
46	Spain	1.29	46	Morocco	1.01	46	Nigeria	1.03
47	Guatemala	1.20	47	Netherlands	0.98	47	Japan	0.96
48	Italy	1.17	48	Denmark	0.95	48	Korea, Republic of	0.89
49	Dominican Republic	1.03	49	United Kingdom	0.91	49	India	0.85
50	Japan	1.02	50	Dominican Republic	0.86	50	Philippines	0.51
51	Philippines	0.94	51	Kenya	0.82	51	Pakistan	0.50
52	India	0.78	52	Sri Lanka	0.82	52	Bangladesh	0.44
53	Korea, Republic of	0.74	53	Israel	0.76	53	Panama	0.35
54	Morocco	0.65	54	India	0.71	54	Singapore	0.30
55	Sri Lanka	0.55	55	Jordan	0.61	55	Sri Lanka	0.29
56	Kenya	0.52	56	Korea, Republic of	0.58	56	Morocco	0.28
57	Pakistan	0.46	57	Belgium	0.44	57	Guatemala	0.26
58	Bangladesh	0.34	58	Pakistan	0.41	58	Kenya	0.23
59	Jordan	0.34	59	Taiwan, China	0.32	59	Taiwan, China	0.19
60	Taiwan, China	0.26	60	Bangladesh	0.24	60	Jordan	0.08
61	Singapore	0.16	61	Singapore	0.03	61	Cambodia	0.07
62	Hong Kong SAR	0.03	62	Hong Kong SAR	0.00	62	Hong Kong SAR	0.05

Notes: *Factor Conditions* comprise two sub-factors: *Natural Resources* and *Processed Resources*. Overall, Australia, Canada, Kuwait, New Zealand, and UAE demonstrated high competitiveness in both sub-factors, highlighting their strengths. The sub-factor *Natural Resources* is evaluated based on per capita reserves of resources such as oil, natural gas, and coal. Additionally, measurements include land area and freshwater resources to assess the overall *Natural Resources* factor. The sub-factor *Processed Resources* is evaluated based on the per capita volume of processed energy resources, including oil, natural gas, coal, wood, and meat. This measurement provides insights into the competitiveness of countries in utilizing and processing these resources.

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	79.97	1	United States	89.44	1	Finland	93.05
2	China	62.96	2	China	66.86	2	Denmark	85.58
3	Switzerland	56.72	3	Germany	46.64	3	Switzerland	79.92
4	Germany	54.71	4	Switzerland	33.52	4	Sweden	78.21
5	Finland	54.59	5	Japan	31.93	5	Canada	73.79
6	Denmark	53.47	6	United Kingdom	29.64	6	Taiwan, China	72.72
7	United Kingdom	49.40	7	Singapore	29.39	7	Korea, Republic of	71.57
8	Sweden	49.21	8	France	28.49	8	Austria	71.26
9	Japan	49.17	9	Netherlands	28.19	9	United States	70.50
10	Canada	49.11	10	Hong Kong SAR	24.78	10	Belgium	70.30
11	Singapore	47.81	11	Canada	24.42	11	Australia	69.74
12	France	47.54	12	Australia	22.33	12	United Kingdom	69.17
13	Hong Kong SAR	46.93	13	Korea, Republic of	21.49	13	Hong Kong SAR	69.08
14	Korea, Republic of	46.53	14	Belgium	21.44	14	France	66.59
15	Australia	46.03	15	Italy	21.39	15	Japan	66.41
16	Belgium	45.87	16	Denmark	21.36	16	Singapore	66.23
17	Netherlands	45.76	17	Sweden	20.21	17	UAE	66.16
18	Austria	44.97	18	Austria	18.69	18	Italy	64.77
19	Taiwan, China	44.35	19	UAE	17.41	19	Netherlands	63.33
20	Italy	43.08	20	Spain	16.74	20	Germany	62.78

(*Continued*)

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2. Demand conditions			2.1. Demand size			2.2. Demand quality		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
21	UAE	41.78	21	Finland	16.14	21	Colombia	61.90
22	New Zealand	37.54	22	Taiwan, China	15.99	22	New Zealand	61.59
23	Saudi Arabia	33.69	23	Israel	15.50	23	Peru	60.11
24	Poland	33.52	24	New Zealand	13.48	24	China	59.07
25	Spain	33.38	25	India	13.07	25	Croatia	58.60
26	Kuwait	32.73	26	Mexico	11.53	26	Thailand	57.44
27	India	32.64	27	Russia	11.30	27	Nigeria	57.30
28	Colombia	32.13	28	Saudi Arabia	10.34	28	Saudi Arabia	57.04
29	Thailand	32.08	29	Poland	10.32	29	Vietnam	57.01
30	Israel	31.92	30	Czechia	9.77	30	Poland	56.73
31	Croatia	31.55	31	Kuwait	8.85	31	Kuwait	56.61
32	Vietnam	31.39	32	Brazil	8.02	32	Indonesia	55.95
33	Mexico	31.30	33	Slovenia	7.97	33	Panama	55.72
34	Peru	31.24	34	Türkiye	7.00	34	Philippines	55.57
35	Indonesia	30.61	35	Slovak Republic	6.96	35	Greece	53.92
36	Greece	30.19	36	Hungary	6.76	36	Türkiye	53.11
37	Türkiye	30.06	37	Thailand	6.71	37	India	52.20
38	Panama	29.86	38	Malaysia	6.59	38	Chile	51.38
39	Nigeria	29.32	39	Greece	6.47	39	Dominican Republic	51.31
40	Philippines	29.16	40	Vietnam	5.77	40	Mexico	51.06
41	Chile	28.36	41	Oman	5.41	41	Spain	50.01
42	Slovenia	27.06	42	Chile	5.33	42	Argentina	48.93

43	Czechia	27.02	43	Indonesia	5.27	43	Israel	48.33
44	Malaysia	26.72	44	Croatia	4.50	44	Guatemala	48.31
45	Dominican Republic	26.71	45	Panama	4.00	45	Egypt	46.94
46	Argentina	26.38	46	Argentina	3.83	46	Malaysia	46.85
47	Brazil	26.28	47	South Africa	3.36	47	Slovenia	46.15
48	Guatemala	24.71	48	Philippines	2.74	48	Sri Lanka	45.97
49	Egypt	24.35	49	Peru	2.37	49	Bangladesh	45.48
50	Hungary	23.88	50	Colombia	2.35	50	Brazil	44.53
51	South Africa	23.47	51	Dominican Republic	2.10	51	Czechia	44.26
52	Sri Lanka	23.44	52	Ukraine	1.89	52	South Africa	43.57
53	Bangladesh	23.40	53	Egypt	1.77	53	Ukraine	42.70
54	Ukraine	22.30	54	Nigeria	1.35	54	Hungary	40.99
55	Jordan	20.60	55	Bangladesh	1.33	55	Jordan	40.33
56	Slovak Republic	20.02	56	Morocco	1.30	56	Cambodia	36.24
57	Oman	18.94	57	Guatemala	1.11	57	Kenya	34.52
58	Russia	18.93	58	Sri Lanka	0.91	58	Slovak Republic	33.09
59	Cambodia	18.18	59	Jordan	0.87	59	Oman	32.46
60	Kenya	17.41	60	Pakistan	0.85	60	Pakistan	28.53
61	Pakistan	14.69	61	Kenya	0.29	61	Russia	26.55
62	Morocco	13.60	62	Cambodia	0.12	62	Morocco	25.89

Notes: The countries showing strong competitiveness for *Demand Conditions* are the United Sates (US), China, Switzerland, Germany, and Finland. Particularly, the US demonstrated a robust performance in this factor, primarily due to its superior advantage in *Demand Size*. Despite its small domestic market size, Switzerland ranks among the top five for *Demand Conditions*. This achievement is driven by 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. It is important to note that this sub-factor is not solely determined by the domestic market size but also by the degree of openness to international 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 boast sophisticated and discerning consumers, motivating firms to continuously innovate and enhance 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	Finland	62.71	1	United States	60.16	1	Finland	79.57
2	Denmark	62.31	2	Singapore	53.11	2	Taiwan, China	77.65
3	Austria	62.07	3	Austria	51.92	3	Denmark	75.69
4	Switzerland	61.14	4	Switzerland	49.69	4	Sweden	74.26
5	Sweden	60.24	5	Hong Kong SAR	49.68	5	Netherlands	74.24
6	Taiwan, China	59.72	6	Korea, Republic of	49.65	6	Belgium	73.99
7	Singapore	59.70	7	Denmark	48.92	7	Switzerland	72.60
8	Netherlands	58.42	8	Hungary	46.98	8	Austria	72.22
9	Belgium	58.17	9	Israel	46.90	9	Czechia	69.02
10	United States	58.15	10	Sweden	46.22	10	New Zealand	68.47
11	Czechia	57.28	11	Finland	45.85	11	Australia	67.28
12	Korea, Republic of	56.47	12	Czechia	45.55	12	Slovenia	67.26
13	Hong Kong SAR	56.13	13	UAE	45.50	13	Spain	66.69
14	New Zealand	55.59	14	Australia	43.63	14	Singapore	66.30
15	Australia	55.45	15	France	43.28	15	France	66.23
16	France	54.76	16	Japan	42.93	16	Germany	65.81
17	UAE	54.40	17	New Zealand	42.72	17	United Kingdom	65.37
18	Germany	54.02	18	Netherlands	42.59	18	Japan	64.58
19	Japan	53.75	19	Belgium	42.35	19	UAE	63.30
20	Israel	53.48	20	Germany	42.24	20	Korea, Republic of	63.29
21	Slovenia	52.68	21	Taiwan, China	41.79	21	Hong Kong SAR	62.58

22	United Kingdom	52.01	22	Canada	41.33	22	Greece	60.45
23	Spain	51.82	23	Italy	40.99	23	Israel	60.06
24	Hungary	51.24	24	United Kingdom	38.65	24	Italy	58.86
25	Canada	49.98	25	Slovenia	38.10	25	Poland	58.68
26	Italy	49.93	26	Kuwait	38.01	26	Canada	58.63
27	Greece	48.78	27	Saudi Arabia	37.89	27	Croatia	58.03
28	Croatia	46.93	28	Malaysia	37.87	28	Slovak Republic	57.03
29	Kuwait	46.35	29	Greece	37.12	29	United States	56.14
30	Poland	45.95	30	Spain	36.95	30	Hungary	55.50
31	Saudi Arabia	45.65	31	Croatia	35.84	31	Kuwait	54.70
32	Slovak Republic	44.91	32	Russia	33.62	32	Ukraine	53.94
33	China	43.13	33	China	33.39	33	Saudi Arabia	53.41
34	Thailand	42.72	34	Poland	33.21	34	China	52.87
35	Malaysia	42.36	35	Oman	33.20	35	Thailand	52.71
36	Oman	39.37	36	Slovak Republic	32.79	36	Chile	52.00
37	Chile	39.22	37	Thailand	32.72	37	Argentina	51.72
38	Panama	37.87	38	Panama	31.57	38	Türkiye	49.01
39	Ukraine	37.50	39	South Africa	28.01	39	Dominican Republic	47.53
40	Russia	37.07	40	Mexico	27.68	40	Peru	47.04
41	Dominican Republic	37.06	41	Colombia	26.95	41	Malaysia	46.85
42	Colombia	36.14	42	Dominican Republic	26.59	42	Vietnam	46.54
43	Vietnam	36.09	43	Chile	26.44	43	Oman	45.55
44	Peru	35.33	44	Brazil	25.87	44	Colombia	45.33

(*Continued*)

(*Continued*)

3. Related infrastructure			3.1. Industrial infrastructure			3.2. Living infrastructure		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
45	Argentina	35.26	45	Vietnam	25.64	45	Jordan	45.19
46	Mexico	34.92	46	Peru	23.63	46	Indonesia	44.99
47	Indonesia	34.12	47	Indonesia	23.26	47	Sri Lanka	44.89
48	Jordan	33.82	48	Morocco	22.73	48	Panama	44.17
49	Brazil	33.41	49	Jordan	22.45	49	Philippines	42.99
50	Türkiye	33.37	50	India	21.38	50	India	42.46
51	South Africa	32.70	51	Ukraine	21.06	51	Mexico	42.17
52	India	31.92	52	Guatemala	19.59	52	Brazil	40.95
53	Philippines	30.83	53	Kenya	19.49	53	Russia	40.51
54	Sri Lanka	30.35	54	Egypt	18.99	54	Egypt	40.37
55	Egypt	29.68	55	Argentina	18.80	55	South Africa	37.39
56	Morocco	27.55	56	Philippines	18.68	56	Guatemala	34.51
57	Guatemala	27.05	57	Bangladesh	18.58	57	Morocco	32.36
58	Nigeria	24.11	58	Cambodia	18.04	58	Nigeria	31.48
59	Bangladesh	23.16	59	Türkiye	17.74	59	Pakistan	28.37
60	Kenya	23.00	60	Nigeria	16.75	60	Bangladesh	27.74
61	Pakistan	21.25	61	Sri Lanka	15.82	61	Kenya	26.52
62	Cambodia	20.30	62	Pakistan	14.13	62	Cambodia	22.56

Notes: The countries that showed a strong performance in *Related Industries* include Finland, Denmark, Austria, Switzerland, and Sweden. The measurement of *Related Industries* encompasses various aspects of infrastructure, including 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 and technology (the number of scientists and engineers, the quality of scientific research institutions, research and development expenditure, and international patents granted). *Living Infrastructure* consists of indices related to education, social security, and quality of life. Education is evaluated based on public spending on education, student-to-teacher ratio, secondary and tertiary enrollment rates, and international student mobility. Quality of life is measured using indicators such as the Gini index, the Human Development Index, CO2 emissions, and the availability of 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	71.72	1	Finland	90.58	1	Hong Kong SAR	76.52
2	Hong Kong SAR	68.36	2	Denmark	83.89	2	Singapore	73.41
3	Netherlands	60.76	3	Netherlands	83.30	3	UAE	39.59
4	Finland	58.92	4	Canada	83.09	4	Netherlands	38.23
5	Denmark	58.70	5	Sweden	81.79	5	Belgium	36.19
6	Belgium	55.65	6	Switzerland	78.03	6	Denmark	33.51
7	Sweden	54.94	7	Belgium	75.11	7	Switzerland	29.32
8	Switzerland	53.67	8	New Zealand	74.71	8	Vietnam	28.56
9	UAE	53.01	9	Australia	71.87	9	Sweden	28.09
10	Canada	52.39	10	United States	71.05	10	Finland	27.27
11	Austria	47.37	11	Singapore	70.03	11	Cambodia	25.95
12	Germany	45.85	12	Austria	69.75	12	Slovenia	25.60
13	New Zealand	45.19	13	Germany	69.24	13	Hungary	25.20
14	United Kingdom	44.43	14	UAE	66.44	14	Slovak Republic	25.00
15	Australia	44.17	15	Italy	65.20	15	Austria	25.00
16	Taiwan, China	44.11	16	Taiwan, China	65.10	16	United Kingdom	23.80
17	Vietnam	43.48	17	United Kingdom	65.07	17	Taiwan, China	23.12
18	United States	42.98	18	Korea, Republic of	64.64	18	Germany	22.47
19	Italy	41.14	19	Hong Kong SAR	60.19	19	France	22.36
20	Korea, Republic of	40.99	20	Vietnam	58.39	20	Czechia	22.28
21	France	40.20	21	Indonesia	58.12	21	Canada	21.69

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4. Business context			4.1. Structure			4.2. Rivalry		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
22	Czechia	38.94	22	France	58.04	22	Oman	21.57
23	Slovenia	37.01	23	India	56.55	23	Malaysia	21.36
24	Malaysia	36.78	24	China	56.07	24	Thailand	19.58
25	Greece	36.64	25	Czechia	55.60	25	Greece	19.45
26	Panama	36.12	26	Peru	55.45	26	Spain	18.87
27	Thailand	35.42	27	Philippines	54.94	27	Croatia	18.67
28	Chile	34.90	28	Colombia	54.92	28	Poland	18.40
29	Spain	34.69	29	Panama	54.07	29	Kuwait	18.23
30	Philippines	34.33	30	Greece	53.83	30	Panama	18.17
31	Indonesia	34.19	31	Chile	53.04	31	Israel	17.49
32	Poland	34.11	32	Malaysia	52.21	32	Korea, Republic of	17.33
33	Kuwait	34.00	33	Thailand	51.26	33	Italy	17.09
34	Peru	33.85	34	Nigeria	51.04	34	Chile	16.77
35	India	33.79	35	Japan	50.58	35	Australia	16.46
36	Colombia	33.43	36	Spain	50.51	36	Ukraine	16.26
37	Japan	33.26	37	Poland	49.82	37	Japan	15.95
38	China	32.98	38	Kuwait	49.78	38	Saudi Arabia	15.76
39	Israel	32.85	39	Argentina	49.27	39	New Zealand	15.66
40	Hungary	32.84	40	Slovenia	48.43	40	Jordan	15.55
41	Jordan	31.81	41	Israel	48.22	41	South Africa	15.26
42	Saudi Arabia	31.29	42	Jordan	48.07	42	Mexico	14.97

43	Dominican Republic	30.29	43	Dominican Republic	47.98	43	United States	14.90
44	Nigeria	30.02	44	Saudi Arabia	46.81	44	Morocco	14.70
45	Argentina	29.60	45	Türkiye	46.02	45	Philippines	13.71
46	South Africa	29.21	46	Brazil	45.08	46	Dominican Republic	12.59
47	Türkiye	29.03	47	South Africa	43.16	47	Russia	12.29
48	Cambodia	28.94	48	Egypt	42.92	48	Peru	12.25
49	Mexico	28.89	49	Mexico	42.81	49	Türkiye	12.04
50	Croatia	28.85	50	Guatemala	41.84	50	Colombia	11.94
51	Brazil	27.98	51	Hungary	40.48	51	Kenya	11.75
52	Slovak Republic	27.27	52	Pakistan	39.05	52	Sri Lanka	11.22
53	Egypt	26.88	53	Croatia	39.02	53	India	11.03
54	Guatemala	26.37	54	Sri Lanka	36.61	54	Guatemala	10.90
55	Oman	25.10	55	Bangladesh	35.77	55	Brazil	10.88
56	Ukraine	24.71	56	Ukraine	33.16	56	Egypt	10.85
57	Sri Lanka	23.91	57	Kenya	33.15	57	Indonesia	10.26
58	Pakistan	23.71	58	Cambodia	31.93	58	Argentina	9.92
59	Kenya	22.45	59	Russia	30.03	59	China	9.88
60	Bangladesh	22.04	60	Slovak Republic	29.53	60	Nigeria	9.01
61	Russia	21.16	61	Oman	28.63	61	Pakistan	8.38
62	Morocco	14.82	62	Morocco	14.94	62	Bangladesh	8.32

Notes: The countries that revealed strengths in the factor of *Business Context* are Singapore, Hong Kong SAR, Netherlands, Finland, and Denmark. The sub-factor *Structure* evaluates the efficiency of business governance and ethical practices within firms. Survey data, including aspects like a firm's decision-making process, the development of unique brands, and equal treatment of domestic and foreign firms, were used to measure these components. Business morality encompasses indices such as social value, ethical practices, health and safety performance, and environmental concerns. *Rivalry* focuses on market openness concerning foreign direct investment, financial portfolio, and trade. Countries with strengths in this sub-factor are more likely to have a higher degree of both domestic and international competition, making them attractive destinations for multinational companies to conduct 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	72.60	1	China	92.61	1	Denmark	86.73
2	Philippines	63.35	2	India	69.91	2	Netherlands	85.58
3	India	63.13	3	Cambodia	68.29	3	Canada	83.43
4	Singapore	62.35	4	Pakistan	67.63	4	Sweden	79.91
5	Mexico	62.30	5	Thailand	64.75	5	Switzerland	79.85
6	Thailand	61.65	6	Mexico	63.83	6	Singapore	77.84
7	Denmark	60.98	7	Guatemala	62.74	7	Taiwan, China	74.49
8	Kuwait	59.91	8	Malaysia	60.80	8	Kuwait	74.28
9	Vietnam	59.83	9	Philippines	60.78	9	Belgium	73.34
10	Poland	59.58	10	Egypt	59.42	10	Australia	72.44
11	Taiwan, China	59.31	11	Ukraine	56.64	11	Italy	67.83
12	Malaysia	59.15	12	Vietnam	56.16	12	New Zealand	67.82
13	Canada	58.88	13	Dominican Republic	54.36	13	Spain	66.71
14	Netherlands	58.16	14	Saudi Arabia	54.08	14	Poland	66.35
15	Panama	57.93	15	Argentina	53.84	15	Philippines	65.92
16	Guatemala	57.76	16	Panama	53.23	16	Austria	65.73
17	Indonesia	56.30	17	Poland	52.81	17	United Kingdom	65.71
18	Switzerland	56.15	18	Indonesia	52.39	18	United States	64.56
19	Sweden	55.58	19	Chile	50.78	19	Germany	64.42
20	Argentina	55.33	20	Brazil	50.49	20	Colombia	63.69
21	Belgium	54.79	21	Jordan	50.24	21	Czechia	63.61

22	Italy	54.12	22	Russia	47.04	22	Nigeria	63.59
23	Korea, Republic of	53.95	23	Singapore	46.86	23	Vietnam	63.49
24	New Zealand	53.69	24	Bangladesh	46.63	24	Panama	62.63
25	United States	53.28	25	Korea, Republic of	46.50	25	Korea, Republic of	61.40
26	Brazil	53.06	26	Oman	46.37	26	Hong Kong SAR	61.37
27	Peru	52.42	27	UAE	46.12	27	Mexico	60.78
28	Hong Kong SAR	52.21	28	Japan	46.02	28	Indonesia	60.20
29	UAE	51.96	29	Kuwait	45.55	29	Peru	59.60
30	Japan	51.91	30	Peru	45.25	30	Israel	59.20
31	United Kingdom	51.62	31	Taiwan, China	44.14	31	Thailand	58.56
32	Chile	51.46	32	Israel	43.56	32	UAE	57.80
33	Israel	51.38	33	Greece	43.15	33	Japan	57.79
34	Nigeria	51.31	34	Hong Kong SAR	43.06	34	Malaysia	57.51
35	Dominican Republic	51.27	35	Slovenia	42.91	35	Türkiye	57.00
36	Australia	51.19	36	Kenya	42.90	36	Argentina	56.82
37	Germany	50.94	37	Sri Lanka	42.43	37	India	56.34
38	Czechia	50.92	38	United States	41.99	38	Greece	56.29
39	Saudi Arabia	50.83	39	Italy	40.41	39	Brazil	55.63
40	Spain	49.91	40	New Zealand	39.56	40	Guatemala	52.78
41	Greece	49.72	41	Nigeria	39.03	41	China	52.60
42	Cambodia	49.16	42	Hungary	38.32	42	Chile	52.14
43	Ukraine	48.29	43	Czechia	38.23	43	Slovenia	51.82
44	Austria	48.16	44	Croatia	38.18	44	Croatia	50.52

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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
45	Jordan	47.79	45	United Kingdom	37.53	45	France	50.39
46	Slovenia	47.37	46	Germany	37.46	46	Dominican Republic	48.18
47	Pakistan	47.17	47	Finland	37.28	47	Saudi Arabia	47.58
48	Colombia	47.06	48	Belgium	36.24	48	Kenya	47.58
49	Oman	46.28	49	Denmark	35.22	49	Oman	46.19
50	Kenya	45.24	50	Canada	34.34	50	Jordan	45.34
51	Egypt	44.92	51	Slovak Republic	33.52	51	Sri Lanka	43.77
52	Croatia	44.35	52	Morocco	33.46	52	Hungary	40.40
53	Sri Lanka	43.10	53	France	33.46	53	Ukraine	39.93
54	Türkiye	42.21	54	Spain	33.11	54	Bangladesh	34.55
55	France	41.92	55	Switzerland	32.46	55	South Africa	34.03
56	Bangladesh	40.59	56	Sweden	31.25	56	Finland	33.97
57	Russia	39.86	57	Netherlands	30.75	57	Russia	32.68
58	Hungary	39.36	58	Austria	30.60	58	Egypt	30.41
59	Finland	35.62	59	Colombia	30.42	59	Cambodia	30.02
60	Morocco	29.65	60	Australia	29.93	60	Pakistan	26.71
61	Slovak Republic	27.10	61	Türkiye	27.42	61	Morocco	25.85
62	South Africa	17.72	62	South Africa	1.40	62	Slovak Republic	20.68

Notes: China, the Philippines, India, Singapore, and Mexico showed a strong performance in *(Unskilled) Workers*. They all demonstrated strong competitiveness in this factor due to their advantage in either the *Quantity of Workers* and *Quality of Workers,* or both. The sub-factor *Quantity of Workers* is evaluated based on factors such as the size of the labor force, employment rate, working hours, and monthly compensation for manufacturing workers. *Quality of Workers* is measured by indicators including literacy rate, attitude and motivation, education, the openness of the labor market, and the relationship between managers and workers. Countries with strengths in this sub-factor are considered to have a relatively favorable attitude among workers and conducive working conditions. Overall, these countries demonstrate strong competitiveness in *(Unskilled) Workers*, benefiting from either a large and productive labor force or a high-quality workforce.

6. Policymakers and administrators			6.1. Policymakers			6.2. Administrators		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Singapore	92.15	1	Singapore	88.38	1	Singapore	95.91
2	Denmark	88.01	2	Denmark	87.85	2	Switzerland	88.50
3	Switzerland	86.22	3	Switzerland	83.94	3	Denmark	88.17
4	Netherlands	85.91	4	Netherlands	83.68	4	Netherlands	88.15
5	Sweden	83.38	5	Canada	83.23	5	Finland	85.18
6	Finland	81.80	6	Sweden	83.13	6	Hong Kong SAR	83.84
7	Canada	81.60	7	Finland	78.43	7	Sweden	83.64
8	Australia	78.60	8	UAE	78.33	8	Australia	81.45
9	New Zealand	78.47	9	New Zealand	75.76	9	New Zealand	81.18
10	UAE	76.38	10	Australia	75.75	10	Canada	79.97
11	Austria	73.68	11	Austria	74.07	11	Japan	77.16
12	Belgium	71.26	12	Belgium	70.53	12	UAE	74.43
13	Germany	71.08	13	Germany	69.08	13	United States	73.69
14	United States	70.72	14	China	68.96	14	Austria	73.29
15	United Kingdom	69.92	15	United States	67.76	15	Taiwan, China	73.13
16	Taiwan, China	68.88	16	United Kingdom	66.97	16	Germany	73.09
17	Hong Kong SAR	67.29	17	Vietnam	65.80	17	United Kingdom	72.87
18	Japan	67.15	18	Taiwan, China	64.64	18	Belgium	71.99
19	France	66.62	19	France	63.49	19	France	69.75
20	Korea, Republic of	65.53	20	Korea, Republic of	63.05	20	Korea, Republic of	68.01
21	Israel	60.20	21	Saudi Arabia	60.55	21	Israel	63.78

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6. Policymakers and administrators			6.1. Policymakers			6.2. Administrators		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
22	China	59.55	22	Japan	57.13	22	Chile	60.53
23	Saudi Arabia	58.09	23	Israel	56.63	23	Czechia	55.96
24	Chile	57.61	24	Egypt	55.77	24	Saudi Arabia	55.63
25	Vietnam	54.78	25	India	55.37	25	Slovenia	54.32
26	Czechia	53.32	26	Kuwait	54.89	26	Malaysia	51.76
27	Italy	52.06	27	Chile	54.69	27	Spain	51.38
28	Kuwait	51.40	28	Jordan	52.96	28	Italy	51.32
29	Greece	51.17	29	Italy	52.80	29	Greece	50.36
30	India	50.02	30	Greece	51.99	30	China	50.14
31	Malaysia	49.37	31	Panama	51.61	31	Poland	49.97
32	Panama	48.23	32	Hong Kong SAR	50.74	32	Kuwait	47.91
33	Jordan	47.89	33	Czechia	50.67	33	Panama	44.86
34	Poland	46.84	34	Indonesia	49.87	34	Philippines	44.84
35	Spain	46.67	35	Russia	49.09	35	India	44.68
36	Slovenia	46.49	36	Malaysia	46.98	36	Vietnam	43.76
37	Philippines	45.88	37	Oman	46.91	37	Oman	43.12
38	Indonesia	45.14	38	Philippines	46.91	38	Jordan	42.81
39	Oman	45.02	39	Cambodia	46.84	39	Colombia	42.21
40	Colombia	43.93	40	Colombia	45.65	40	Indonesia	40.41
41	Egypt	43.01	41	Bangladesh	44.89	41	Hungary	39.65
42	Russia	40.24	42	Poland	43.71	42	Slovak Republic	38.95

43	Hungary	37.56	43	Spain	41.97	43	Croatia	36.60
44	Argentina	37.33	44	Argentina	39.52	44	Thailand	35.84
45	Thailand	36.42	45	Slovenia	38.67	45	Argentina	35.15
46	Dominican Republic	35.67	46	Nigeria	38.31	46	Dominican Republic	34.94
47	Cambodia	35.26	47	Pakistan	38.22	47	Türkiye	34.72
48	Türkiye	35.08	48	Thailand	37.00	48	Brazil	32.10
49	Bangladesh	33.85	49	Dominican Republic	36.40	49	Russia	31.40
50	Peru	31.78	50	Hungary	35.47	50	Peru	31.16
51	Pakistan	31.49	51	Türkiye	35.45	51	Egypt	30.25
52	Brazil	30.84	52	Mexico	32.85	52	Kenya	27.44
53	Nigeria	30.67	53	Morocco	32.84	53	Morocco	26.55
54	Slovak Republic	30.59	54	Ukraine	32.65	54	South Africa	26.52
55	Morocco	29.70	55	Peru	32.41	55	Ukraine	25.51
56	Croatia	29.26	56	Kenya	30.66	56	Pakistan	24.76
57	Ukraine	29.08	57	Guatemala	29.67	57	Sri Lanka	24.48
58	Kenya	29.05	58	Brazil	29.59	58	Mexico	24.38
59	Mexico	28.62	59	Slovak Republic	22.23	59	Cambodia	23.69
60	Guatemala	25.67	60	Croatia	21.93	60	Nigeria	23.04
61	South Africa	24.01	61	South Africa	21.50	61	Bangladesh	22.81
62	Sri Lanka	19.28	62	Sri Lanka	14.08	62	Guatemala	21.66

Notes: The countries that showed strengths in the factor *Policymakers & Administrators* are Singapore, Denmark, Switzerland, Netherlands, and Sweden. *Policymakers* are evaluated based on five criteria, which include (1) the effectiveness of parliament/congress processes, (2) legislative outcomes, (3) ethics, (4) education level, and (5) the international experience of policymakers. Similarly, *Administrators* are measured using five criteria, which encompass (1) the efficiency of policy implementation processes, (2) the effectiveness of policy outcomes, (3) ethics, (4) education level, and (5) the international experience of bureaucrats. Economies that exhibit strengths in both sub-factors are recognized for their high competitiveness in terms of ethical standards, international experience, quality regulations, and efficient policy 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	80.76	1	United States	80.86	1	Netherlands	89.13
2	Netherlands	80.05	2	Denmark	76.51	2	Denmark	83.32
3	Denmark	79.91	3	Canada	75.40	3	United States	80.67
4	Canada	76.82	4	New Zealand	72.92	4	Sweden	80.25
5	Sweden	75.91	5	Switzerland	72.29	5	Singapore	79.58
6	Singapore	74.48	6	Belgium	72.21	6	UAE	79.30
7	Switzerland	73.53	7	Finland	72.09	7	Canada	78.24
8	Finland	71.76	8	Sweden	71.58	8	United Kingdom	76.98
9	UAE	70.64	9	Netherlands	70.96	9	Switzerland	74.77
10	United Kingdom	70.59	10	Singapore	69.37	10	Finland	71.43
11	New Zealand	70.26	11	Hong Kong SAR	67.93	11	Australia	71.09
12	Hong Kong SAR	68.15	12	Czechia	65.76	12	Hong Kong SAR	68.37
13	Belgium	67.84	13	Australia	64.34	13	New Zealand	67.61
14	Australia	67.71	14	United Kingdom	64.19	14	Taiwan, China	66.15
15	Germany	62.63	15	Colombia	62.90	15	Germany	65.36
16	Austria	61.95	16	Austria	62.55	16	Belgium	63.48
17	Czechia	59.13	17	UAE	61.98	17	China	61.36
18	Taiwan, China	58.63	18	Germany	59.90	18	Austria	61.36
19	Israel	58.48	19	Israel	57.15	19	Korea, Republic of	60.43
20	Chile	57.07	20	Chile	56.58	20	Israel	59.82
21	China	56.41	21	France	56.45	21	Poland	57.68

22	France	55.58	22	Saudi Arabia	55.38	22	Chile	57.56
23	Colombia	55.06	23	India	54.23	23	France	54.72
24	Korea, Republic of	53.35	24	China	51.47	24	Vietnam	52.93
25	Saudi Arabia	52.94	25	Mexico	51.44	25	Czechia	52.49
26	India	51.40	26	Taiwan, China	51.11	26	Slovenia	52.44
27	Indonesia	50.48	27	Indonesia	50.64	27	Saudi Arabia	50.50
28	Slovenia	50.29	28	Italy	48.75	28	Indonesia	50.32
29	Poland	49.86	29	Croatia	48.75	29	Italy	49.90
30	Italy	49.33	30	Malaysia	48.49	30	India	48.56
31	Malaysia	48.06	31	Slovenia	48.15	31	Malaysia	47.62
32	Mexico	47.27	32	Dominican Republic	46.90	32	Colombia	47.22
33	Dominican Republic	46.92	33	Korea, Republic of	46.28	33	Kuwait	47.21
34	Panama	45.41	34	Slovak Republic	44.98	34	Dominican Republic	46.93
35	Kuwait	45.04	35	Jordan	44.63	35	Thailand	46.91
36	Spain	43.23	36	Panama	44.10	36	Panama	46.71
37	Jordan	43.14	37	Oman	43.25	37	Türkiye	46.26
38	Türkiye	41.47	38	Spain	43.17	38	Japan	44.71
39	Oman	40.70	39	Kuwait	42.86	39	Spain	43.30
40	Thailand	40.30	40	Poland	42.03	40	Mexico	43.10
41	Slovak Republic	39.98	41	Hungary	41.17	41	Peru	42.54
42	Croatia	38.61	42	South Africa	40.65	42	Philippines	41.97
43	Hungary	38.26	43	Nigeria	39.09	43	Jordan	41.65
44	Japan	38.16	44	Guatemala	38.98	44	Egypt	41.49

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7. Entrepreneurs			7.1. Personal competence			7.2. Social context		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
45	Peru	37.49	45	Greece	37.13	45	Oman	38.15
46	Philippines	37.33	46	Türkiye	36.68	46	Kenya	38.12
47	Greece	37.07	47	Brazil	35.16	47	Morocco	37.28
48	Egypt	37.06	48	Thailand	33.70	48	Greece	37.01
49	South Africa	36.93	49	Pakistan	33.35	49	Russia	35.98
50	Nigeria	35.42	50	Philippines	32.69	50	Hungary	35.36
51	Vietnam	34.95	51	Egypt	32.63	51	Slovak Republic	34.99
52	Guatemala	34.31	52	Peru	32.44	52	South Africa	33.22
53	Morocco	33.12	53	Japan	31.61	53	Argentina	33.13
54	Brazil	32.10	54	Morocco	28.96	54	Nigeria	31.74
55	Kenya	31.94	55	Kenya	25.77	55	Ukraine	31.36
56	Pakistan	31.58	56	Bangladesh	25.52	56	Pakistan	29.80
57	Argentina	27.80	57	Sri Lanka	24.89	57	Guatemala	29.65
58	Russia	25.68	58	Argentina	22.47	58	Cambodia	29.09
59	Bangladesh	24.97	59	Cambodia	17.21	59	Brazil	29.03
60	Cambodia	23.15	60	Vietnam	16.98	60	Croatia	28.47
61	Sri Lanka	21.82	61	Russia	15.39	61	Bangladesh	24.41
62	Ukraine	20.77	62	Ukraine	10.18	62	Sri Lanka	18.76

Notes: The countries that showed strong performance in the factor *Entrepreneurs* include the US, Netherlands, Denmark, Canada, and Sweden. The sub-factor, *Personal Competence*, is evaluated based on criteria such as the decision-making process, core competencies of entrepreneurs, education level, and international experience. These factors contribute to the overall competence and capability of entrepreneurs. *Social Context* consists of criteria such as the availability of entrepreneurs, support from the social system, openness to foreign entrepreneurs, new business development, and the social status of entrepreneurs. These factors assess the broader social environment in which entrepreneurship thrives. Overall, these countries exhibit strong competitiveness in the *Entrepreneurs* factor, leveraging the personal competence of entrepreneurs and the supportive social contexts for entrepreneurial endeavors.

8. Professionals			8.1. Personal competence			8.2. Social context		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
1	Netherlands	83.96	1	Netherlands	81.82	1	Netherlands	86.11
2	Singapore	82.10	2	Singapore	81.77	2	Denmark	83.29
3	UAE	79.80	3	Finland	80.10	3	Switzerland	82.65
4	Denmark	79.29	4	UAE	77.48	4	Singapore	82.43
5	Switzerland	77.40	5	Denmark	75.28	5	UAE	82.11
6	United States	74.35	6	United States	73.39	6	Canada	76.93
7	Canada	73.26	7	Switzerland	72.14	7	United States	75.32
8	Sweden	71.52	8	Canada	69.60	8	Belgium	75.05
9	Finland	70.46	9	Taiwan, China	69.58	9	Sweden	74.15
10	Belgium	69.50	10	Sweden	68.89	10	Australia	71.62
11	United Kingdom	67.90	11	Vietnam	67.65	11	United Kingdom	69.55
12	Taiwan, China	67.11	12	United Kingdom	66.26	12	New Zealand	65.90
13	Australia	65.96	13	Indonesia	64.82	13	Hong Kong SAR	65.16
14	Vietnam	65.66	14	Hong Kong SAR	64.41	14	Indonesia	65.10
15	Indonesia	64.96	15	Belgium	63.94	15	Taiwan, China	64.65
16	Hong Kong SAR	64.78	16	Korea, Republic of	63.48	16	Germany	64.56
17	Korea, Republic of	64.01	17	Austria	63.40	17	Korea, Republic of	64.54
18	Austria	62.31	18	India	61.30	18	Vietnam	63.67
19	New Zealand	61.96	19	China	60.83	19	India	61.72
20	Germany	61.59	20	Philippines	60.37	20	Austria	61.22
21	India	61.51	21	Nigeria	60.31	21	Finland	60.82

(*Continued*)

(*Continued*)

8. Professionals			8.1. Personal competence			8.2. Social context		
Rank	Country/Region	Index	Rank	Country/Region	Index	Rank	Country/Region	Index
22	China	59.93	22	Australia	60.30	22	Kuwait	59.72
23	Czechia	58.81	23	Czechia	58.84	23	China	59.03
24	Philippines	58.57	24	Saudi Arabia	58.70	24	Czechia	58.78
25	Saudi Arabia	56.53	25	Germany	58.63	25	Dominican Republic	58.72
26	Kuwait	56.03	26	Greece	58.34	26	Italy	58.24
27	Poland	54.94	27	New Zealand	58.01	27	Philippines	56.77
28	Italy	54.91	28	Panama	55.99	28	Poland	55.37
29	Panama	54.44	29	Poland	54.50	29	Chile	55.19
30	Dominican Republic	54.07	30	Israel	52.43	30	Saudi Arabia	54.37
31	Israel	52.53	31	Kuwait	52.34	31	Malaysia	53.42
32	Nigeria	51.75	32	Colombia	52.34	32	Panama	52.89
33	Greece	51.71	33	Italy	51.58	33	Israel	52.64
34	Thailand	51.21	34	Thailand	51.36	34	Slovenia	52.51
35	Colombia	50.96	35	Argentina	50.60	35	Peru	52.11
36	Malaysia	50.04	36	Cambodia	50.40	36	Thailand	51.06
37	Cambodia	49.97	37	Dominican Republic	49.43	37	Colombia	49.59
38	Chile	49.95	38	Türkiye	48.57	38	Cambodia	49.53
39	Argentina	49.40	39	Croatia	47.57	39	Japan	48.73
40	Slovenia	48.25	40	Hungary	47.39	40	South Africa	48.52
41	Peru	48.10	41	Jordan	47.38	41	Argentina	48.20
42	Japan	47.86	42	Japan	46.99	42	France	47.72
43	Jordan	46.61	43	Malaysia	46.67	43	Egypt	46.81

44	Türkiye	46.35	44	Mexico	46.62	44	Jordan	45.84
45	Spain	45.53	45	Spain	45.66	45	Spain	45.39
46	Hungary	45.40	46	Chile	44.71	46	Greece	45.07
47	France	45.34	47	Peru	44.09	47	Bangladesh	44.55
48	Mexico	44.93	48	Slovenia	43.99	48	Türkiye	44.13
49	South Africa	44.70	49	France	42.95	49	Kenya	43.57
50	Croatia	44.02	50	Bangladesh	41.04	50	Hungary	43.41
51	Bangladesh	42.80	51	South Africa	40.88	51	Mexico	43.25
52	Egypt	42.56	52	Brazil	39.31	52	Nigeria	43.19
53	Brazil	41.13	53	Pakistan	38.31	53	Brazil	42.96
54	Kenya	40.73	54	Egypt	38.31	54	Croatia	40.46
55	Pakistan	39.10	55	Kenya	37.89	55	Pakistan	39.88
56	Ukraine	38.55	56	Ukraine	37.23	56	Ukraine	39.88
57	Sri Lanka	33.84	57	Sri Lanka	34.97	57	Morocco	39.00
58	Slovak Republic	31.40	58	Guatemala	30.19	58	Slovak Republic	33.89
59	Morocco	31.27	59	Slovak Republic	28.92	59	Sri Lanka	32.72
60	Russia	29.09	60	Oman	28.47	60	Russia	30.98
61	Oman	28.36	61	Russia	27.20	61	Oman	28.24
62	Guatemala	27.71	62	Morocco	23.54	62	Guatemala	25.22

Notes: The competitive countries for the factor *Professionals* are Netherlands, Singapore, UAE, Denmark, and Finland. The sub-factor *Personal Competence* of Professionals is evaluated based on five survey criteria, which include (1) decision-making abilities among professionals, (2) opportunity management skills, (3) core competencies of professionals, (4) education level, and (5) international experiences. These criteria gauge the overall competence and capabilities of professionals. *Social Context* is measured using five survey data points, including (1) availability of professionals, (2) mobility within the professional field, (3) compensation levels, (4) social status of professionals, and (5) market openness to foreign professionals. These factors provide insights into the supportive social environment and opportunities available for professionals. Overall, these countries excel in the factor Professionals due to their competent professionals and favorable social contexts that facilitate professional development and attract talent from around the world.

06

Snapshot of Top 30 Economies

Snapshot of Top 30 Economies[1]

#1. Singapore [2]

Singapore demonstrated exceptional performance in the overall national competitiveness ranking, particularly excelling in the areas of Business Context (1), Policymakers and Administrators (1), and Professionals (2). Its economy achieved remarkable GDP growth of 3.6 percent. The retail sector remained strong as the country recovered from the COVID-19 pandemic while the accommodation sector grew by 7.4 percent and the construction sector experienced a 6.7 percent growth rate compared to the previous year, contributing to the overall GDP growth. One of the driving factors behind Singapore's strong performance in the hospitality sector was the influx of international travelers throughout the year. The labor market in Singapore also exhibited strength, and the youth unemployment rate dropped by an impressive 7.3 percent compared to the previous year, largely attributed to the retail sector regaining its strength.

#2. Denmark [3]

Denmark showcased strengths in the areas of Policymakers and Administrations (2) and Entrepreneurs (3) as the economy experienced GDP growth of 3.8 percent in 2022. At the same time, its labor market remained strong throughout the year, experiencing improvement in employment rates. This strengthened business performance resulted in increased personal and income tax revenue, leading to a government surplus of 3.3 percent. Notably, the pharmaceutical and maritime transport sectors demonstrated robust performance, leading to significant export growth, and thus contributing to overall net export expansion. Investment in construction has also grown due to the strong housing market. Moreover, Denmark is characterized by its leading renewable industries which have attracted much investment and thus signifies the country's commitment to establishing the necessary infrastructure for producing renewable energy.

#3. Canada [4]

[1] The rankings of top 30 economies are based on the base data without weights across the eight factors of the IPS Model.
[2] This information is abstracted and organized from United Overseas Bank (UOB) (2022), Ministry of Trade and Industry Singapore (2022, 2023), HRM Asia (2023), and ISG (2023)
[3] This information is abstracted and organized from European Commission (2023b) and Reuters (2022b)
[4] This information is abstracted and organized from Forbes (2023), Proof Point (2023), Statistics Canada (2023), and The Real Economy Blog (2022)

Canada's economy demonstrated resilience in 2022 as it recorded GDP growth of 3.4 percent. This was driven by several positive factors which are attributed to Factor Conditions (2) and Entrepreneurs (4). Notably, the wholesale sector, consisting of industries such as food and beverage and machinery and equipment, expanded by an impressive 11 percent compared to the previous year. On the demand side, a notable aspect was the significant increase in household spending, which played a crucial role in boosting economic activity. Additionally, employee compensation witnessed a considerable increase, with wages rising by 3.8 percent compared to the previous year. An important milestone was the successful reopening of the economy, enabling a rapid restoration of employment levels to pre-pandemic figures. Moreover, the business outlook in Canada remained positive throughout 2022, indicating a robust recovery in the business sector.

#4. Netherlands [5]

The Dutch economy performed strongly in 2022 as it experienced a robust expansion of 4.5 percent. This can be attributed to the areas Professionals (1), Entrepreneurs (2), and Business Context (3). Despite the rapid rise in inflation, household consumption displayed remarkable resilience, driven by an increase in income and working hours. On the other hand, the Netherlands experienced negative growth in exports, mainly due to a slowdown in GDP growth among its main trading partners, such as Germany and the United Kingdom. Moreover, its heavy reliance on European countries for gas imports makes the Netherlands vulnerable to fluctuations in the gas price.

#5. United States [6]

The United States (US) demonstrated exceptional performance across various areas, including Demand Conditions (1) and Entrepreneurs (1), which has contributed to it recording GDP growth of 2.1 percent in 2022. Reflecting the strong performance of the economy throughout the year, the US experienced a historic job market expansion, marking the second-highest job growth record in the past 40 years. The overall business outlook in the US remained robust with regards to both outward and inward foreign direct investment. Foreign investment by US multinational corporations increased by 3.6 percent compared to the previous year. On the other hand, foreign multinational corporations showed increased interest in the US as well, with the growth of inward FDI rising by 1.7 percent.

[5] This information is abstracted and organized from Coface (2023), CBS (2023), European Commission (2023f), and Statistics Netherlands (2023)

[6] This information is abstracted and organized from Economic Policy Institute (2023), Bureau of Economic Analysis (2023), and Washington Post (2023)

#6. Switzerland [7]

Switzerland's relative strengths can be seen in various areas, including Policymakers and Administrators (3), Related Infrastructure (4), and Entrepreneurs (7). In 2022, its economy experienced GDP growth of 2.1 percent and was able to boast robust fundamentals that underpin its economic stability, particularly in areas such as regulatory quality, rule of law, and control of corruption. However, following Russia's invasion of Ukraine, the stock market remained volatile and the bond markets stagnated due to economic slowdown and rising interest rates. Swiss banks also witnessed a decrease in the volume of transactions. In addition to these challenges, the situation of the country's second-largest bank Credit Suisse deteriorated significantly throughout 2022 as it recorded its worst annual losses since financial crisis.

#7. Sweden [8]

Sweden exceled in several key areas, including Related Infrastructure (5), Policymakers and Administrators (5), Entrepreneurs (5), and Business Context (7). Although it experienced GDP growth of 2.6 percent, there was a slowdown in economic growth. Particularly, the country's performance in factors such as workers (19) was lower due to its relatively high unemployment rate which increased to 7.4 percent. This was due to adverse economic conditions affecting the construction and real estate sectors. The surge in energy prices had a detrimental impact on domestic demand, causing stagnation and a decline in real wages. Moreover, this negatively affected the housing market with higher mortgage rates and lower purchasing power. As a result, private consumption faced pressure, leading to a contraction of the overall economy.

#8. UAE [9]

The United Arab Emirates (UAE) holds strengths in areas such as Professionals (3) and Factor Conditions (5) as its economy achieved a remarkable growth rate of 7.4 percent in 2022, which was double the rate recorded in the previous year. This is attributed to higher energy prices and the active implementation of various strategies to cultivate a diverse economy, including trade agreements, investments in energy transition, and the promotion of foreign trade. Moreover, in 2022, the UAE's foreign trade exhibited significant growth, with a 17 percent increase compared to the previous year. These developments highlight the UAE's proactive efforts and successful initiatives aimed at driving economic expansion and enhancing international trade relations.

[7] This information is abstracted and organized from SWI (2022), IMF (2023), Allianz (2023), International Monetary Fund (2023), and Reuters (2023).
[8] This information is abstracted and organized from European Commission (2023g) and Statista (2023).
[9] This information is abstracted and organized from Reuters (2023)

#9. Australia [10]

Australia revealed a robust performance in areas such as Factor Conditions (1) and Policymakers and Administrators (8) as its economy remained positive in 2022 with signs of recovery, overall recording GDP growth of 3.6 percent. Throughout the year, higher exports and lower imports contributed to a favorable net export situation. However, Australia's heavy reliance on low-complexity categories such as mining and agriculture for primary exports created risk, especially considering the potential decline in demand for coal, gas, and iron ore due to the COVID-19 pandemic. In addition, high inflation and low wage growth were significant concerns. These inflationary pressures and increasing interest rates affected the spending power of individuals and businesses, potentially leading to a decline in economic activity. The combination of these factors, including lower savings rates and declining property prices, has dampened the likelihood of a significant increase in household spending for the near term.

#10. Finland [11]

The Finnish economy recorded a moderate growth rate of 2.1 percent in 2022. This performance is attributed to Related Industries (1), Demand Conditions (5), and Policymakers and Administrators (6). However, the net export performance was weak, mainly due to subdued export growth, particularly in the services sector, which was influenced by weakening economic conditions in major export markets. In addition, Finland experienced an exceptionally high inflation rate of 7.2 percent. This had a negative effect on consumer confidence and posed difficulties for consumer purchasing power and cost competitiveness. The rise in inflation was driven by increases in energy and food prices, adding further pressure to the economy. Furthermore, after maintaining a policy of neutrality since the end of World War II, Finland recently became a member of NATO. This geopolitical shift has created increased risks, particularly concerning escalating tensions on the Finnish border near Russia. The evolving situation adds an additional layer of uncertainty to Finland's geopolitical landscape.

#11. New Zealand [12]

New Zealand demonstrated strength in several key areas, particularly in Factor Conditions (4) and Policymakers and Administrators (11), as it experienced robust economic growth in 2022 with a

[10] This information is abstracted and organized from ING (2023a), The Diplomat (2022), and ABC News (2022)
[11] This information is abstracted and organized from European Commission (2023c)
[12] This information is abstracted and organized from New Zealand Foreign Affairs & Trade (2022)

GDP growth rate of 2.2 percent. This positive performance was largely attributed to the trade sector, which witnessed a significant expansion of 21 percent compared to the previous year. The surge in crude oil exports was particularly noteworthy, doubling in value as oil prices rose due to the Russia-Ukraine war. Similarly, the value of aluminum exports increased, boosted by a 15 percent rise in aluminum prices. Additionally, the relaxation of COVID-19 restrictions played a crucial role in the recovery of services exports, which saw an impressive rise of 28 percent. By the end of December 2022, there was a remarkable surge in travel demands and transportation volume compared to the previous year.

#12. Belgium [13]

Belgium continues to recover from the impact of the COVID-19 pandemic as it achieved an economic growth rate of 3.1 percent in 2022 with strengths in key areas, including Business Context (6), Related Industries (9), and Professionals (10). This recovery was largely attributable to effective policy support measures implemented by the government. Notably, both private (household) and public consumption witnessed substantial growth, increasing by 4.3 percent and 1.4 percent, respectively. Additionally, the volume of exports also experienced a notable upswing, rising by 4.6 percent during the same year. Moreover, the labor market demonstrated robust performance with the creation of 100,000 jobs in 2022. This significant increase in employment further bolstered the overall economic stability and growth of Belgium, contributing to a favorable business environment.

#13. Hong Kong SAR [14]

Throughout 2022, Hong Kong SAR exhibited strengths in several areas, including Business Context (2), Entrepreneurs (12), Related Industries (13), and Demand Conditions (13). Its economy though faced significant challenges due to a new COVID-19 outbreak, resulting in negative GDP growth of -3.5 percent. In addition, the monetary policy of the United States imposed a negative impact on the economy, adding to the existing difficulties faced by Hong Kong. As a result, the return of tourists and short-term business travelers remained limited, offering little stimulation to the economy. Hong Kong maintained strict quarantine measures throughout the year 2022. Government revenue recorded its lowest quarterly level in over five years, primarily due to declines in tax revenues, duties, and land sales although government expenditure remained high as the administration implemented measures to address the impact of the pandemic.

[13] This information is abstracted and organized from ING (2023b), National Bank of Belgium (2023),Belga (2023)
[14] This information is abstracted and organized from Fitch Ratings (2022)

#14. Austria [15]

Gaining strength, Austria boasts advantages in Related Industries (3), Business Context (11), and Policymakers and Administrators (11). Throughout 2022, the Austrian economy successfully navigated challenges posed by high interest rates and labor costs, with an impressive GDP growth rate of 5.0 percent. Notably, this positive economic momentum was accompanied by a decrease in the unemployment rate, which signified improved conditions in the labor market. In addition to a robust economic performance, the improvement in the business environment is evident from the growth in income-based tax revenue. As a result, the budget deficit stabilized, and total debt decreased, which indicated positive progress in fiscal management. The tourism sector has also contributed to the country's economic growth. In 2022, overnight stays in Austria increased by an impressive 72 percent compared to the previous year, reflecting a robust revival in tourism.

#15. United Kingdom [16]

For the United Kingdom, Demand Conditions (7), Entrepreneurs (10), and Professionals (11) played pivotal roles as the economy made a notable recovery from the impact of COVID-19, recording GDP growth of 4.1 percent in 2022. This recovery was largely driven by private consumption, which demonstrated evidence of sustained consumer confidence and spending. British banks increased their loan loss provisions, reflecting the positive outlook on consumer behavior. Additionally, the labor market demonstrated resilience, with the unemployment rate falling below pre-pandemic levels. Alongside this, business confidence remained above pre-pandemic levels, which contributed to a significant surge in business investment. Indeed, business investment increased by 10 percent in 2022 compared to the previous year, signaling a favorable environment for companies to expand and actively contribute to the overall economic growth of the country.

#16. Germany [17]

The strengths of Germany were particularly evident in Demand Conditions (4), Business Context (12), and the actions of Policymakers and Administrators (13). As a result, Germany recorded modest economic growth of 1.8 percent in 2022, which was primarily driven by the improvement

[15] This information is abstracted and organized from OECD (2023a), Bank Austria (2023), Statistics Austria (2023), and European Commission (2023a)

[16] This information is abstracted and organized from CNBC (2023b) and OECD (2022d)

[17] This information is abstracted and organized from European Commission (2023e), Statistisches Bundesamt (2022), and DW (2023)

in household consumption, even amidst inflationary pressure. In response to the hike in energy prices, Germany implemented effective measures by imposing price caps on gas and electricity. This proactive approach helped mitigate the impact of rising energy costs and effectively decelerated the inflationary pressure on the economy. Resilient consumer spending also played a pivotal role in bolstering the economy. Additionally, the industrial sector demonstrated remarkable strength by efficiently managing increased production costs and strategically investing in equipment. The labor market remained robust throughout the year and the country achieved and sustained a historically low unemployment rate.

#17. Taiwan, China [18]

Taiwan, China (hereafter Taiwan) demonstrated strengths in the areas such as Related Industries (6), Workers (11), and Professionals (12) as the economy recorded GDP growth of 2.5 percent. Being an export-oriented economy, Taiwan faced challenges throughout the year due to factors such as tightening of monetary policies, the Russia-Ukraine war, and weakened consumer demand. Unlike many other economies, Taiwan managed to maintain a moderate inflation rate of 3.0 percent. However, Taiwan's economy, heavily reliant on trade with China, saw disruptions affecting industries like semiconductors, electronics, and IT, influenced by heightened geopolitical tensions between the two sides. Risks for businesses in Taiwan surged, including economic instability, trade disruptions, reduced investment opportunities, and a decline in the tourism and hospitality sectors.

#18. China [19]

China still performed exceptionally well in certain areas, particularly Workers (1) and Demand Conditions (2). GDP growth reached 3.0 percent in 2022, which is the second lowest growth rate over the past 50 years. Much of the year was characterized by China's ongoing zero-COVID policy, which is characterized by frequent quarantines, regional lockdowns, and significant government spending on testing equipment. Although the government decided to relax this approach in December 2022, it led to a sudden and sharp increase in COVID-19 cases which created uncertainty and challenges for economic recovery from the pandemic. Furthermore, China experienced a slowdown in FDI inflow in comparison to the previous year. This slowdown can be attributed to sporadic COVID-19 outbreaks and the stringent control measures implemented throughout the year, impacting business confidence in the Chinese market.

[18] This information is abstracted and organized from Reuters (2022a), Beroe (2023), ING (2023c), The Economist (2023), and National Statistics (2023)

[19] The information is abstracted and organized from BBC (2023a), NYT (2023), CNN (2023), RBC (2023), Rhodium Group (2023), OECD (2023b), and The World Bank (2023)

#19. Korea, Republic of [20]

Korea, Republic of (hereafter Korea) showcased robust performance in the areas of Related Industries (12) and Demand Conditions (14) as it achieved a commendable GDP growth of 2.6 percent in 2022. Throughout the year, it witnessed an increase in foreign investment, driven by the strong performance of computer chips and automobile industries. The value of foreign investments made by Korean companies improved compared to the previous year, with notable growth observed in the manufacturing sector, which saw a 28.9 percent increase. Additionally, FDI increased by 3.2 percent compared to the previous year. The property market experienced a 0.6 percent growth, signaling positive developments in the real estate sector. For 2023, the anticipated reopening of China is expected to mitigate supply disruptions, which will facilitate the recovery of demand for computer chips and electric components. This positive development presents a significant opportunity for Korea's high-tech industries to regain momentum and further enhance their position in the global market.

#20. Kuwait [21]

Kuwait showcased robust performance in key areas, particularly in Factor Conditions (3) and Workers (8). The country achieved an impressive economic growth rate in 2022, recording an 8.2 percent increase in GDP. The increase in oil prices significantly boosted government revenue compared to the previous year and contributed to the maintenance of macroeconomic stability. This surge in revenue also played a crucial role in reducing the government budget deficit, marking the first time such a significant improvement has been seen in the past three years. However, Kuwait's heavy reliance on oil revenue poses a significant risk due to market volatility. The improved economic conditions and the shrinkage of the budget deficit have created a conducive environment for investment. Consequently, Kuwait experienced an expansion in investment activities, with outward foreign direct investment increasing by an impressive 55.6 percent in 2022.

#21. France [22]

France's relative strengths lie in areas such as Demand Conditions (12) and Related Industries (16) as it recorded a GDP growth rate of 2.6 percent. Inflation surged to 5.9 percent in 2022 but

[20] The information is abstracted and organized from YNA (2023), Ministry of Trade (2023), Bloomberg (2022), and Yonhap News Agency (2023)

[21] The information is abstracted and organized from Oxford Business Group (2023), Arab News (2022), Union of Arab Chambers (2023), and Fitch Solutions (2022)

[22] The information is abstracted and organized from European Commission (2023d), INSEE (2023), CNBC (2023c), CNN (2023), and Statista (2023)

remained the lowest in the EU due to government interventions. The labor market in France was dynamic, and the unemployment rate in the fourth quarter was the lowest since 2008. Notably, France's fiscal conditions improved significantly, as the government deficit decreased from 6.5 percent of GDP in 2021 to 4.7 percent in 2022. This reduction was facilitated by a decrease in pandemic-related measures, enhanced tax revenues due to high inflation, and reduced expenditure under the "France Relance" initiative. As a result, France maintained stable macroeconomic conditions when compared with the previous year. External factors like global geopolitics and internal challenges, such as social unrest and supply chain disruptions, are anticipated to shape the country's economic trajectory in the next few years.

#22. Czech Republic [23]

The country holds strengths in the areas of Related Industries (11) and Entrepreneurs (17), which are driven by increased investment and inventories. Its economy has experienced a GDP growth of 2.5 percent, signaling a recovery from the impact of the COVID-19 pandemic. This positive trend was reflected across various sectors of the economy, including retail sales, fuel sales, and non-food sales and is an indicator a strong rebound in consumer confidence and spending. The unemployment rate, which had started declining after the easing of pandemic restrictions in 2021, continued to decrease, reflecting improved labor market conditions and economic stability. Furthermore, the country's trade sector performed well, with transaction volumes in the first quarter reaching 210 percent of the same period in 2021. Additionally, the investment volume for the first quarter exceeded the average of the past 12 quarters by 45 percent, showcasing a robust investment climate.

#23. Saudi Arabia [24]

Saudi Arabia demonstrated strengths in several key areas, including Factor Conditions (8), Policymakers and Administrators (23), and Demand Conditions (23). Notably, in 2022, the country experienced a robust GDP growth rate of 8.7 percent. Boosted by rising oil and gas prices and a growing non-oil sector, the nation has been witnessing record trade surpluses and is set to be among the fastest-growing economies in the G20. However, despite the economic growth Saudi Arabia achieved in 2022, the political situation remained negative, which is reflected in the ongoing domestic challenges surrounding political rights and freedom of speech. Moreover, Saudi Arabia's heavy dependence on oil revenue continues to pose a challenge for the country's economic diversification efforts. While progress has been made in recent years to reduce the

[23] The information is abstracted and organized from European Commission (2023d), INSEE (2023), CNBC (2023c), CNN (2023), and Statista (2023)

[24] The information is abstracted and organized from Freedom House (2023) and New Zealand Foreign Affairs % Trade (2022)

reliance on oil and promote other sectors, further steps are necessary to achieve a more balanced and sustainable economy.

#24. Italy [25]

Italy holds strengths in areas such as Business Context (19) and Demand Conditions (20) while it recorded a positive economic performance in 2022, achieving 3.7 percent of real GDP growth. The recovery in domestic demand was the primary driver for this growth while there was a notable improvement in gross fixed capital formation. This indicates a substantial increase in investment in fixed assets, reflecting heightened business confidence and a proactive approach to expanding and modernizing infrastructure. Moreover, a significant contributing factor to the positive economic activity in 2022 was the remarkable export growth in the country. The sales of non-durable consumer goods and intermediate goods played a crucial role, contributing to impressive export growth. The labor market in Italy also exhibited resilience and positive trends as the employment rate went through a notable increase, reflecting the creation of new jobs and opportunities for workers. Additionally, the unemployment rate showed a significant decrease, suggesting improved job market conditions.

#25. Israel [26]

Israel still managed to demonstrate its economic prowess in areas of Entrepreneurs (19) and Related Industries (20) as its economy achieved an economic growth rate of 6.5 percent in 2022. Israel though faces challenges due to rising prices as well as the high cost of living. This inflationary environment is expected to have a negative effect on private consumption growth and exports, as the demand from trading partners remains moderate. Additionally, the increase in interest rates is anticipated to slow down investment growth, as businesses face higher borrowing costs. This can potentially hinder investment projects and limit economic expansion. Moreover, the ongoing Israeli-Palestinian conflict added to the geopolitical risks faced by the country. The conflict escalated in March 2022, leading to a decrease of investment in start-ups, which poses a threat to the technological advancement of the country. Start-ups have been a driving force behind Israel's innovation and economic growth, and a decline in investment could impact the country's technological development.

[25] The information is abstracted and organized from Istat (2022) and Nova News (2023)
[26] The information is abstracted and organized from The Medialine (2023), OECD (2023c), United Nations (2023), BBC (2023b), and Ctech (2023)

#26. Japan [27]

Japan has demonstrated notable strengths in three critical areas - Demand Conditions (9), Policymakers and Administrators (18), and Related Industries (19). Its economy grew by 1.1 percent in 2022 over the previous year, making its second consecutive year of growth as the country bounced back from the ramifications of the COVID-19 pandemic. However, the growth rate was lower than that in 2021. Currently, Japan is investing heavily in renewable energy and climate technology, and sectors like pharmaceuticals, medical equipment, and healthcare services, especially those serving the aging population, are witnessing growth. While Japan showcased strengths such as a high savings rate, diversified industrial sector, and resilient domestic demand, it also faced significant challenges. These ranged from an ageing population and tensions with neighboring countries to economic stagnation and vulnerabilities associated with high global oil prices and reliance on China for manufacturing investments. The rise in fuel costs, prompted by the Russia-Ukraine war, and the depreciation of the Japanese currency contributed to higher import costs. These factors, in turn, impacted upon Japan's trade performance, with exports experiencing slower growth.

#27. Poland [28]

Poland has showcased notable strengths in two crucial areas, Workers (10) and Factor Conditions (22) as it witnessed robust economic growth of 4.9 percent in 2022, primarily propelled by a significant increase in private consumption and inventories. The country's stable macroeconomic framework and comparatively lower public debt levels compared to its peers contributed to its favorable economic performance. Both industrial output and retail sales experienced strong expansion during the first half of 2022, indicating a vibrant domestic market. Private consumption was further bolstered by spending from Ukrainian refugees and a rebound from the effects of the pandemic. Notably, Poland has maintained a low unemployment rate of around 3.0 percent in recent years, showcasing the resilience of its labor market in the face of challenging circumstances.

#28. Chile [29]

Chile has demonstrated relative strengths in two key areas, Factor Conditions (12) and Entrepreneurs (20). In 2022, it witnessed a remarkable expansion of its economy, recording a GDP growth of 2.4 percent, driven by a robust recovery from the COVID-19 pandemic and strong

[27] The information is abstracted and organized from Deloitte (2023), Humble Bunny (2022), Nikkei Asia (2023), The Japan Times (2023), and Xinhua News (2023).

[28] The information is abstracted and organized from Deloitte (2023), Humble Bunny (2022), Nikkei Asia (2023), The Japan Times (2023), and Xinhua News (2023).

[29] The information is abstracted and organized from Credit Agricole Group (2023a)

private consumption. Notably, the country's relatively high unemployment rate dropped to 7.9 percent, primarily due to the recovery of sectors such as construction, commerce, and transport that rebounded strongly after the pandemic. The government's efforts to stimulate private consumption and restore business activities have played a crucial role in revitalizing the economy. The construction sector's rebound has led to increased infrastructure projects, while the recovery of the commerce and transport sectors has provided employment opportunities and restored business confidence. These developments have had a positive impact on reducing the unemployment rate and fostering economic growth.

#29. Vietnam [30]

Vietnam has had a commendable performance in two crucial areas, Workers (9) and Professionals (14) while it experienced a remarkable economic rebound, achieving a growth rate of 8.0 percent. This strong economic performance in 2022 can be attributed to the recovery of domestic private consumption and the robust performance of the export-oriented manufacturing sector. Additionally, Vietnam witnessed a significant increase in the disbursement of FDI, with a growth rate of 13.5 percent compared to the previous year, the highest in the past five years. This influx of foreign capital has played a crucial role in stimulating investment and supporting the country's economic expansion. Vietnam's trade turnover reached a new record high in 2022, resulting in a trade surplus three times higher than that of 2021. This underscores the country's strong export performance and its ability to capitalize on global market opportunities. Furthermore, the tourism sector in Vietnam experienced a robust recovery after the country reopened its borders in March 2022. The influx of foreign visitors increased significantly after this date, with the number being 23 times higher than in 2021. This revival of tourism has provided a boost to the sector and contributed to the overall economic growth of Vietnam.

#30. India [31]

India possesses significant strengths in two areas, Workers (3) and Professionals (21). Although India achieved an impressive GDP growth of 7.0 percent in 2022, it faces significant challenges, particularly in the form of high inflation. This resulted in a 30-year-low household savings rate, as the cost of living increased. The surge in commodity prices, coupled with weak consumer demands, had a dampening effect on industrial output growth. Consequently, the manufacturing sector in India experienced a slowdown in growth during 2022. Additionally, India experienced a period of political turmoil in 2022, with a series of protests taking place on various issues,

[30] The information is abstracted and organized from World Bank (2023) and Vietnamplus (2022)
[31] The information is abstracted and organized from Trading Economics (2023), The Wire (2023), India Today (2022), The Times of India (2023), India CSR (2023), and Access Now (2023).

ranging from the hijab row to the Nupur Sharma and Agniveer protests. These disturbances reflected the diverse range of societal and political tensions within the country.

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07

Appendix

LIST OF CRITERIA OF IPS NCR 2023

Factor	Sub factor	Criteria
1. Factor Conditions	1.1. Natural Resources	1.1.1 Crude oil reserves 1.1.2 Natural gas reserves 1.1.3 Coal reserves 1.1.4 Land area 1.1.5 Freshwater resources
	1.2. Processed Resources	1.2.1 Oil production 1.2.2 Natural gas production 1.2.3 Coal production 1.2.4 Wood production 1.2.5 Meat indigenous
2. Demand Conditions	2.1. Demand Size	2.1.1.GDP 2.1.2. GDP per capita 2.1.3a Goods and services: Export 2.1.3b Goods and services: Import
	2.2. Demand Quality	2.2.1 Consumer sophistication: quality * 2.2.2 Consumer sophistication: design * 2.2.3 Consumer sophistication: health and environment issues * 2.2.4 Consumer sophistication: international standard of IPR * 2.2.5 Consumer sophistication: new technology *
3. Related Industries	3.1. Industrial Infrastructure	3.1.1 Vehicles 3.1.2 Civil aviation 3.1.3 Maritime transport 3.1.4 International travel 3.1.5 Mobile phone subscribers 3.1.6 Internet users 3.1.7 Capital value 3.1.8 Capital accessibility 3.1.9 Scientists & engineers 3.1.10 Scientific research institutions * 3.1.11 Total expenditure on R&D 3.1.12 International patents granted
	3.2. Living Infrastructure	3.2.1 Public spending on education 3.2.2 Students per teacher (elementary) 3.2.3 Secondary enrollment rate 3.2.4 Tertiary enrollment rate 3.2.5 Student international mobility 3.2.6 Personal security 3.2.7 Social safety net * 3.2.8 Medical service 3.2.9 GINI index 3.2.10 HDI index 3.2.11 CO_2 emissions 3.2.12 Leisure, sports, and cultural facilities*

Factor	Sub factor	Criteria
4. Business Context	4.1. Structure	4.1.1 Firm's decision process *
		4.1.2 Firm's decision structure *
		4.1.3 Unique brands *
		4.1.4 Equal treatment *
		4.1.5 Global standards *
		4.1.6 Shared value *
		4.1.7 Ethical and legal practices *
		4.1.8 Health, safety & environmental concerns *
	4.2. Rivalry	4.2.1 FDI openness (FDI inflows as % of GDP)
		4.2.2 Portfolio openness (Financial inflows as % of GDP)
		4.2.3 Goods openness (import as % of GDP)
		4.2.4 Services openness (import as % of GDP)
		4.2.5 FDI openness (FDI outflows as % of GDP)
		4.2.6 Portfolio openness (Financial outflows as % of GDP)
		4.2.7 Goods openness (export as % of GDP)
		4.2.8 Services openness (export as % of GDP)
5. (Unskilled) Workers	5.1. Quantity of Labor Force	5.1.1 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. Policymakers & Administrators	6.1. Policymakers	6.1.1 The process of parliament/congress*
		6.1.2 The result of legislation*
		6.1.3 Ethics (e.g., bribery & corruption) *
		6.1.4 Education level *
		6.1.5 International experience *
	6.2. Administrators	6.2.1 The process of government
		6.2.2 The result of policy implementation
		6.2.3 Ethics (Bribery & corruption)
		6.2.4 Education level *
		6.2.5 International experience *

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

Note: * survey data

1. Factor Conditions

1.1 Natural Resources

1.1.1 Crude oil reserves (2021)

Hard data: barrels per capita

Rank	Country/ Region	Unit	Index
1	Kuwait	23,881.71	100.00
2	U.A.E.	10,442.98	43.73
3	Saudi Arabia	7,193.24	30.12
4	Canada	4,452.74	18.64
5	Oman	1,188.59	4.98
6	Russia	557.69	2.34
7	Nigeria	172.87	0.72
8	Malaysia	107.23	0.45
9	Australia	95.22	0.40
10	Denmark	75.30	0.32
11	Brazil	59.32	0.25
12	Argentina	54.20	0.23
13	Mexico	45.67	0.19
14	Vietnam	45.14	0.19
15	Colombia	39.52	0.17
16	United Kingdom	37.13	0.16
17	Egypt	30.20	0.13
18	Peru	25.47	0.11
19	China	18.42	0.08
20	Croatia	18.21	0.08
21	Indonesia	9.06	0.04
22	Ukraine	9.02	0.04
23	Italy	8.42	0.04
24	New Zealand	8.00	0.03
25	Netherlands	7.86	0.03
26	Chile	7.69	0.03
27	Guatemala	5.03	0.02
28	Türkiye	4.32	0.02
29	Austria	3.93	0.02
30	Thailand	3.53	0.01
31	India	3.27	0.01
32	Spain	3.16	0.01
33	Poland	2.99	0.01
34	Pakistan	2.33	0.01
35	Czech Republic	1.43	0.01
36	Germany	1.38	0.01
37	Israel	1.36	0.01
38	Hungary	1.25	0.01
39	Philippines	1.22	0.01
40	Greece	0.94	0.00
41	France	0.91	0.00
42	Japan	0.35	0.00
43	South Africa	0.25	0.00
44	Bangladesh	0.17	0.00
45	Taiwan, China	0.10	0.00
46	Jordan	0.09	0.00
47	Morocco	0.02	0.00
-	Belgium	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Finland	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Korea	-	-
-	Panama	-	-
-	Singapore	-	-
-	Slovak Republic	-	-
-	Slovenia	-	-
-	Sri Lanka	-	-
-	Sweden	-	-
-	Switzerland	-	-
-	United States	-	-

1.1.2 Natural gas reserves (2021)

Hard data: 1000 cubic feet per capita

Rank	Country/ Region	Unit	Index
1	U.A.E.	22,967.93	100.00
2	Kuwait	14,823.13	64.54
3	Russia	11,768.81	51.24
4	Saudi Arabia	9,256.20	40.30
5	Oman	5,087.97	22.15
6	Australia	4,437.86	19.32
7	Canada	1,908.69	8.31
8	United States	1,403.93	6.11
9	Malaysia	1,250.97	5.45
10	Nigeria	953.34	4.15
11	Ukraine	890.56	3.88
12	Israel	663.82	2.89
13	Egypt	576.59	2.51
14	Peru	314.40	1.37
15	Argentina	305.64	1.33
16	Netherlands	267.10	1.16
17	Vietnam	253.42	1.10
18	Croatia	225.70	0.98
19	New Zealand	214.73	0.93
20	Indonesia	181.70	0.79
21	Denmark	178.09	0.78
22	Chile	177.50	0.77
23	China	166.38	0.72
24	United Kingdom	94.76	0.41
25	Slovak Republic	91.79	0.40
26	Pakistan	90.38	0.39
27	Poland	85.60	0.37
28	Thailand	68.18	0.30
29	Colombia	60.17	0.26
30	Brazil	59.97	0.26
31	Mexico	50.26	0.22
32	India	34.64	0.15
33	Philippines	30.56	0.13
34	Italy	27.34	0.12
35	Bangladesh	26.34	0.11
36	Austria	19.88	0.09
37	Jordan	19.11	0.08
38	Hungary	13.59	0.06
39	Czech Republic	13.33	0.06
40	Germany	9.93	0.04
41	Taiwan, China	9.41	0.04
42	Japan	5.87	0.03
43	Korea	4.83	0.02
44	France	4.06	0.02
45	Greece	3.29	0.01
46	Spain	1.90	0.01
47	Türkiye	1.58	0.01
48	Morocco	1.38	0.01
-	Belgium	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Finland	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Panama	-	-
-	Singapore	-	-
-	Slovenia	-	-
-	South Africa	-	-
-	Sri Lanka	-	-
-	Sweden	-	-
-	Switzerland	-	-

1. Factor Conditions

1.1 Natural Resources

1.1.3 Coal reserves (2020)

Hard data: tonnes per capita

Rank	Country/ Region	Unit	Index
1	Australia	6,454.68	100.00
2	New Zealand	1,640.41	25.41
3	Russia	1,240.74	19.22
4	Ukraine	858.60	13.30
5	Poland	825.88	12.80
6	United States	758.79	11.76
7	Germany	475.86	7.37
8	Czech Republic	370.43	5.74
9	Hungary	328.88	5.10
10	Greece	296.32	4.59
11	Slovenia	194.52	3.01
12	South Africa	185.46	2.87
13	Türkiye	151.00	2.34
14	Indonesia	141.38	2.19
15	China	111.86	1.73
16	Colombia	98.56	1.53
17	India	87.66	1.36
18	Chile	67.45	1.04
19	Vietnam	38.32	0.59
20	Brazil	34.10	0.53
21	Netherlands	31.41	0.49
22	Spain	27.62	0.43
23	Slovak Republic	27.26	0.42
24	Thailand	16.39	0.25
25	Pakistan	14.87	0.23
26	Argentina	12.15	0.19
27	Mexico	10.59	0.16
28	Malaysia	7.50	0.12
29	Korea	6.93	0.11
30	Philippines	3.55	0.05
31	Peru	3.38	0.05
32	Japan	3.06	0.05
33	Bangladesh	1.93	0.03
34	Nigeria	1.82	0.03
35	United Kingdom	0.43	0.01
36	Morocco	0.42	0.01
37	Italy	0.32	0.00
38	Egypt	0.16	0.00
39	Sweden	0.11	0.00
40	Taiwan, China	0.05	0.00
-	Austria	-	-
-	Belgium	-	-
-	Cambodia	-	-
-	Canada	-	-
-	Croatia	-	-
-	Denmark	-	-
-	Dominican Republic	-	-
-	Finland	-	-
-	France	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Oman	-	-
-	Israel	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Panama	-	-
-	Saudi Arabia	-	-
-	Singapore	-	-
-	Sri Lanka	-	-
-	Switzerland	-	-
-	U.A.E.	-	-

1.1.4 Land area (2020)

Hard data: sq km per 1000 people

Rank	Country/ Region	Unit	Index
1	Australia	299.45	100.00
2	Canada	239.27	79.89
3	Russia	113.65	37.93
4	Saudi Arabia	61.75	20.59
5	Oman	60.60	20.20
6	Argentina	60.31	20.11
7	Finland	54.95	18.32
8	New Zealand	51.79	17.26
9	Sweden	39.34	13.10
10	Brazil	39.32	13.09
11	Chile	38.90	12.95
12	Peru	38.82	12.93
13	United States	27.76	9.23
14	Colombia	21.80	7.24
15	South Africa	20.45	6.79
16	Panama	17.23	5.71
17	Mexico	15.08	5.00
18	Croatia	13.83	4.58
19	Ukraine	13.13	4.34
20	Morocco	12.09	4.00
21	Greece	12.03	3.98
22	Kenya	10.58	3.49
23	Cambodia	10.56	3.49
24	Spain	10.55	3.48
25	Malaysia	10.15	3.35
26	Egypt	9.73	3.21
27	Slovenia	9.59	3.16
28	Hungary	9.29	3.06
29	Austria	9.25	3.05
30	Türkiye	9.13	3.01
31	Slovak Republic	8.81	2.90
32	Jordan	8.70	2.87
33	France	8.12	2.67
34	Poland	8.07	2.65
35	Thailand	7.32	2.40
36	Czech Republic	7.22	2.37
37	Denmark	7.20	2.36
38	U.A.E.	7.18	2.36
39	China	6.70	2.20
40	Indonesia	6.62	2.17
41	Guatemala	6.36	2.08
42	Italy	4.94	1.61
43	Switzerland	4.58	1.49
44	Dominican Republic	4.45	1.45
45	Nigeria	4.42	1.43
46	Germany	4.20	1.36
47	Kuwait	4.17	1.35
48	United Kingdom	3.60	1.16
49	Pakistan	3.49	1.12
50	Vietnam	3.19	1.02
51	Japan	2.90	0.93
52	Sri Lanka	2.86	0.91
53	Philippines	2.72	0.87
54	Belgium	2.62	0.83
55	Israel	2.35	0.74
56	India	2.15	0.68
57	Netherlands	1.93	0.60
58	Korea	1.88	0.59
59	Taiwan, China	1.53	0.47
60	Bangladesh	0.79	0.22
61	Hong Kong SAR	0.14	0.01
62	Singapore	0.12	0.00

1. Factor Conditions

1.1 Natural Resources

1.1.5 Freshwater resources (2019)

Hard data: cubic meters per capita

Rank	Country/ Region	Unit	Index
1	Canada	75,795.39	100.00
2	New Zealand	65,673.20	86.65
3	Peru	49,992.60	65.96
4	Chile	46,482.35	61.33
5	Colombia	42,739.81	56.39
6	Panama	32,273.83	42.58
7	Russia	29,860.20	39.40
8	Brazil	26,730.21	35.27
9	Australia	19,415.78	25.62
10	Finland	19,378.42	25.57
11	Malaysia	17,680.76	23.33
12	Sweden	16,636.04	21.95
13	Croatia	9,273.72	12.24
14	Slovenia	8,939.92	11.79
15	United States	8,582.83	11.32
16	Indonesia	7,488.24	9.88
17	Cambodia	7,440.89	9.82
18	Guatemala	6,576.72	8.68
19	Argentina	6,497.74	8.57
20	Austria	6,193.75	8.17
21	Greece	5,409.65	7.14
22	Switzerland	4,711.22	6.22
23	Philippines	4,339.52	5.73
24	Vietnam	3,752.69	4.95
25	Japan	3,395.64	4.48
26	Mexico	3,269.77	4.31
27	Thailand	3,148.47	4.15
28	Italy	3,055.46	4.03
29	France	2,967.89	3.92
30	Türkiye	2,719.16	3.59
31	Sri Lanka	2,421.69	3.20
32	Spain	2,359.19	3.11
33	Slovak Republic	2,310.17	3.05
34	United Kingdom	2,169.48	2.86
35	Dominican Republic	2,159.55	2.85
36	China	1,998.16	2.64
37	Poland	1,411.81	1.86
38	Germany	1,287.71	1.70
39	Korea	1,252.78	1.65
40	Ukraine	1,241.38	1.64
41	Czech Republic	1,232.21	1.63
42	Nigeria	1,087.04	1.43
43	India	1,045.47	1.38
44	Belgium	1,044.48	1.38
45	Denmark	1,031.92	1.36
46	Taiwan, China	856.00	1.13
47	Morocco	798.80	1.05
48	South Africa	771.26	1.02
49	Bangladesh	634.38	0.84
50	Netherlands	634.19	0.84
51	Hungary	614.05	0.81
52	Kenya	406.27	0.54
53	Oman	304.16	0.40
54	Pakistan	246.31	0.32
55	Singapore	105.20	0.14
56	Israel	82.84	0.11
57	Saudi Arabia	66.99	0.09
58	Jordan	63.75	0.08
59	U.A.E.	16.28	0.02
60	Egypt	9.47	0.01
-	Hong Kong SAR	-	-
-	Kuwait	-	-

1.2 Processed Resources

1.2.1 Oil Production (2020)

Hard data: barrels per 1000 people (per day)

Rank	Country/ Region	Unit	Index
1	Kuwait	625.40	100.00
2	U.A.E.	395.70	63.27
3	Saudi Arabia	309.55	49.50
4	Oman	210.64	33.68
5	Canada	139.55	22.31
6	Russia	73.62	11.77
7	United States	49.98	7.99
8	Malaysia	18.19	2.91
9	Australia	18.09	2.89
10	United Kingdom	15.80	2.53
11	Colombia	15.47	2.47
12	Mexico	15.33	2.45
13	Brazil	14.29	2.29
14	Argentina	13.42	2.15
15	Denmark	12.86	2.06
16	Nigeria	8.93	1.43
17	Thailand	5.74	0.92
18	Egypt	5.56	0.89
19	New Zealand	4.71	0.75
20	Peru	3.75	0.60
21	Croatia	3.21	0.51
22	China	2.81	0.45
23	Indonesia	2.71	0.43
24	Vietnam	2.30	0.37
25	Hungary	2.05	0.33
26	Italy	1.87	0.30
27	South Africa	1.56	0.25
28	Netherlands	1.32	0.21
29	Austria	1.23	0.20
30	Ukraine	1.22	0.20
31	Germany	0.91	0.15
32	Poland	0.79	0.13
33	Czech Republic	0.75	0.12
34	Türkiye	0.74	0.12
35	Slovak Republic	0.73	0.12
36	Korea	0.66	0.10
37	India	0.54	0.09
38	France	0.53	0.09
39	Guatemala	0.47	0.08
40	Chile	0.47	0.07
41	Pakistan	0.44	0.07
42	Greece	0.19	0.03
43	Philippines	0.11	0.02
44	Japan	0.08	0.01
45	Bangladesh	0.07	0.01
46	Spain	0.02	0.00
-	Belgium	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Finland	-	-
-	Hong Kong SAR	-	-
-	Israel	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Morocco	-	-
-	Panama	-	-
-	Singapore	-	-
-	Slovenia	-	-
-	Sri Lanka	-	-
-	Sweden	-	-
-	Switzerland	-	-
-	Taiwan, China	-	-

1. Factor Conditions

1.2 Processed Resources

1.2.2 Natural gas production (2020)

Hard data: cubic meters per capita

Rank	Country/ Region	Unit	Index
1	Oman	8,326.37	100.00
2	Australia	5,768.79	69.28
3	U.A.E.	5,288.95	63.52
4	Russia	4,789.79	57.53
5	Canada	4,737.99	56.90
6	Kuwait	3,974.37	47.73
7	United States	2,737.52	32.88
8	Saudi Arabia	2,606.88	31.31
9	Malaysia	1,965.06	23.60
10	Netherlands	1,150.70	13.82
11	Israel	958.21	11.51
12	Argentina	875.78	10.52
13	New Zealand	693.49	8.33
14	United Kingdom	588.09	7.06
15	Egypt	571.63	6.87
16	Ukraine	393.36	4.72
17	Peru	384.63	4.62
18	Thailand	355.65	4.27
19	Mexico	251.59	3.02
20	Denmark	236.65	2.84
21	Indonesia	226.22	2.72
22	Nigeria	210.10	2.52
23	Croatia	202.59	2.43
24	Colombia	185.35	2.23
25	Hungary	155.90	1.87
26	Bangladesh	149.26	1.79
27	China	131.81	1.58
28	Pakistan	120.03	1.44
29	Brazil	117.83	1.42
30	Poland	103.70	1.25
31	Vietnam	101.81	1.22
32	Austria	81.87	0.98
33	Chile	70.98	0.85
34	Italy	65.78	0.79
35	Germany	51.59	0.62
36	Philippines	34.49	0.41
37	Japan	21.23	0.25
38	India	19.89	0.24
39	South Africa	18.71	0.22
40	Czech Republic	17.76	0.21
41	Slovak Republic	10.99	0.13
42	Türkiye	4.87	0.06
43	Slovenia	4.76	0.06
44	Taiwan, China	4.24	0.05
45	Korea	3.67	0.04
46	Jordan	2.75	0.03
47	Morocco	2.45	0.03
48	Spain	1.06	0.01
49	Greece	0.93	0.01
50	France	0.30	0.00
-	Belgium	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Finland	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Panama	-	-
-	Singapore	-	-
-	Sri Lanka	-	-
-	Sweden	-	-
-	Switzerland	-	-

1.2.3 Coal production (2020)

Hard data: tonnes per 1000 people

Rank	Country/ Region	Unit	Index
1	Australia	20,045.76	100.00
2	South Africa	4,241.55	21.16
3	Russia	3,353.44	16.73
4	Czech Republic	3,300.73	16.47
5	China	3,220.23	16.06
6	Poland	3,135.23	15.64
7	Indonesia	2,472.33	12.33
8	United States	1,739.81	8.68
9	Canada	1,367.92	6.82
10	Slovenia	1,365.82	6.81
11	Greece	1,252.93	6.25
12	Colombia	1,202.48	6.00
13	Türkiye	1,113.46	5.55
14	Ukraine	627.34	3.13
15	New Zealand	617.07	3.08
16	India	596.75	2.98
17	Hungary	566.26	2.82
18	Vietnam	541.10	2.70
19	Thailand	218.94	1.09
20	Slovak Republic	217.34	1.08
21	Philippines	139.17	0.69
22	Malaysia	102.41	0.51
23	Mexico	64.74	0.32
24	Pakistan	40.21	0.20
25	Brazil	34.28	0.17
26	Korea	19.13	0.10
27	United Kingdom	17.25	0.09
28	Peru	14.08	0.07
29	Bangladesh	6.84	0.03
30	Japan	5.92	0.03
31	Chile	1.05	0.01
32	Argentina	0.49	0.00
33	Nigeria	0.25	0.00
-	Austria	-	-
-	Belgium	-	-
-	Cambodia	-	-
-	Croatia	-	-
-	Denmark	-	-
-	Dominican Republic	-	-
-	Egypt	-	-
-	Finland	-	-
-	France	-	-
-	Germany	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Oman	-	-
-	Israel	-	-
-	Italy	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Morocco	-	-
-	Netherlands	-	-
-	Panama	-	-
-	Saudi Arabia	-	-
-	Singapore	-	-
-	Spain	-	-
-	Sri Lanka	-	-
-	Sweden	-	-
-	Switzerland	-	-
-	Taiwan, China	-	-
-	U.A.E.	-	-

1. Factor Conditions

1.2 Processed Resources

1.2.4 Wood production (2021)

Hard data: cubic meters per 1000 people

Rank	Country/ Region	Unit	Index
1	Finland	2,157.37	100.00
2	Sweden	1,862.55	86.33
3	Austria	1,201.90	55.71
4	Canada	1,129.61	52.36
5	New Zealand	882.04	40.88
6	Slovenia	511.40	23.70
7	Czech Republic	476.69	22.10
8	Chile	465.23	21.56
9	Russia	414.15	19.20
10	Croatia	333.94	15.48
11	Germany	319.72	14.82
12	Slovak Republic	309.38	14.34
13	United States	283.93	13.16
14	Australia	208.34	9.66
15	Belgium	157.26	7.29
16	Switzerland	143.56	6.65
17	Poland	141.76	6.57
18	Thailand	136.87	6.34
19	France	134.98	6.26
20	Ukraine	125.18	5.80
21	Malaysia	123.00	5.70
22	Denmark	122.46	5.68
23	Türkiye	119.02	5.52
24	China	92.79	4.30
25	Brazil	88.93	4.12
26	Hungary	82.42	3.82
27	Argentina	81.53	3.78
28	Japan	80.08	3.71
29	Spain	76.60	3.55
30	Vietnam	64.19	2.98
31	United Kingdom	60.66	2.81
32	Korea	55.91	2.59
33	South Africa	50.77	2.35
34	Philippines	30.21	1.40
35	Indonesia	29.74	1.38
36	Sri Lanka	28.80	1.33
37	Italy	25.92	1.20
38	Mexico	25.43	1.18
39	Colombia	23.19	1.07
40	Peru	22.22	1.03
41	Nigeria	20.63	0.96
42	Guatemala	18.81	0.87
43	India	17.30	0.80
44	Taiwan, China	17.01	0.79
45	Greece	12.51	0.58
46	Kenya	11.30	0.52
47	Netherlands	10.92	0.51
48	Pakistan	9.89	0.46
49	Cambodia	6.57	0.30
50	Bangladesh	2.82	0.13
51	Dominican Republic	2.34	0.11
52	Morocco	1.47	0.07
53	Panama	1.38	0.06
54	Egypt	1.34	0.06
55	Hong Kong SAR	1.08	0.05
56	Israel	0.78	0.04
57	Jordan	0.36	0.02
58	Singapore	0.18	0.01
-	Oman	-	-
-	Kuwait	-	-
-	Saudi Arabia	-	-
-	U.A.E.	-	-

1.2.5 Livestock (2019)

Hard data: tonnes per 1000 people

Rank	Country/ Region	Unit	Index
1	New Zealand	2,390.97	100.00
2	Denmark	395.32	16.53
3	Netherlands	355.34	14.86
4	Belgium	327.60	13.70
5	Germany	234.59	9.81
6	Finland	230.32	9.63
7	Austria	225.32	9.42
8	France	217.26	9.08
9	Sweden	160.29	6.70
10	Dominican Republic	157.74	6.59
11	Poland	153.72	6.43
12	Australia	146.42	6.12
13	Switzerland	136.99	5.73
14	Canada	130.10	5.44
15	Czech Republic	119.46	4.99
16	Slovenia	97.22	4.06
17	Croatia	96.19	4.02
18	United States	93.32	3.90
19	Italy	90.34	3.78
20	Slovak Republic	86.07	3.60
21	Türkiye	80.91	3.38
22	United Kingdom	68.36	2.86
23	Spain	66.31	2.77
24	Russia	58.24	2.43
25	Greece	53.76	2.25
26	Hungary	51.43	2.15
27	Ukraine	44.27	1.85
28	Argentina	41.87	1.75
29	Chile	39.00	1.63
30	Israel	37.92	1.58
31	Panama	35.87	1.50
32	Singapore	35.42	1.48
33	Saudi Arabia	33.99	1.42
34	Morocco	31.12	1.30
35	Korea	29.25	1.22
36	Brazil	22.55	0.94
37	Peru	21.25	0.89
38	Jordan	19.51	0.81
39	Egypt	16.25	0.68
40	Japan	15.31	0.64
41	Kenya	14.72	0.61
42	Colombia	13.43	0.56
43	Mexico	10.58	0.44
44	Malaysia	10.53	0.44
45	South Africa	8.38	0.35
46	India	6.46	0.27
47	Pakistan	5.81	0.24
48	Hong Kong SAR	4.73	0.19
49	Oman	4.00	0.16
50	Guatemala	3.91	0.16
51	Bangladesh	3.66	0.15
52	China	3.29	0.13
53	Thailand	2.48	0.10
54	Taiwan, China	1.75	0.07
55	Sri Lanka	1.64	0.07
56	Vietnam	1.56	0.06
57	U.A.E.	1.50	0.06
58	Nigeria	1.19	0.05
59	Indonesia	0.44	0.02
60	Philippines	0.26	0.01
61	Kuwait	0.17	-
62	Cambodia	0.08	-

2. Demand Conditions

2.1 Demand Size

2.1.1 GDP (2021)

Hard data: US$ billion

Rank	Country/ Region	Unit	Index
1	United States	23,315.08	100.00
2	China	17,734.06	76.03
3	Japan	4,940.88	21.10
4	Germany	4,259.93	18.18
5	India	3,176.30	13.52
6	United Kingdom	3,131.38	13.33
7	France	2,957.88	12.59
8	Italy	2,107.70	8.93
9	Canada	1,988.34	8.42
10	Korea	1,810.96	7.66
11	Russia	1,778.78	7.52
12	Brazil	1,608.98	6.79
13	Australia	1,552.67	6.55
14	Spain	1,427.38	6.01
15	Mexico	1,272.84	5.35
16	Indonesia	1,186.09	4.98
17	Netherlands	1,012.85	4.23
18	Saudi Arabia	833.54	3.46
19	Türkiye	819.04	3.40
20	Switzerland	800.64	3.32
21	Taiwan, China	774.94	3.21
22	Poland	679.44	2.80
23	Sweden	635.66	2.61
24	Belgium	594.10	2.44
25	Thailand	505.95	2.06
26	Israel	488.53	1.98
27	Argentina	487.23	1.98
28	Austria	480.37	1.95
29	Nigeria	440.83	1.78
30	South Africa	419.02	1.68
31	Bangladesh	416.26	1.67
32	U.A.E.	415.02	1.67
33	Egypt	404.14	1.62
34	Denmark	398.30	1.59
35	Singapore	396.99	1.59
36	Philippines	394.09	1.58
37	Malaysia	372.98	1.49
38	Hong Kong SAR	369.18	1.47
39	Vietnam	366.14	1.46
40	Pakistan	348.26	1.38
41	Chile	317.06	1.25
42	Colombia	314.46	1.23
43	Finland	297.30	1.16
44	Czech Republic	281.78	1.09
45	New Zealand	249.89	0.96
46	Peru	223.25	0.84
47	Greece	214.87	0.81
48	Ukraine	200.09	0.74
49	Hungary	181.85	0.67
50	Morocco	142.87	0.50
51	Slovak Republic	116.53	0.38
52	Kenya	110.35	0.36
53	Dominican Republic	94.24	0.29
54	Sri Lanka	88.93	0.27
55	Oman	88.19	0.26
56	Guatemala	85.99	0.25
57	Croatia	68.96	0.18
58	Panama	63.61	0.16
59	Slovenia	61.75	0.15
60	Jordan	45.74	0.08
61	Cambodia	26.96	-
-	Kuwait	-	-

2.1.2 GDP per capita (2021)

Hard data: US$

Rank	Country/ Region	Unit	Index
1	Switzerland	91,991.60	100.00
2	Singapore	72,794.00	78.78
3	United States	70,248.63	75.97
4	Denmark	68,007.76	73.49
5	Sweden	61,028.74	65.78
6	Australia	60,443.11	65.13
7	Netherlands	57,767.88	62.18
8	Finland	53,654.75	57.63
9	Austria	53,637.71	57.61
10	Israel	52,170.71	55.99
11	Canada	51,987.94	55.79
12	Belgium	51,247.01	54.97
13	Germany	51,203.55	54.92
14	Hong Kong SAR	49,800.54	53.37
15	New Zealand	48,781.03	52.25
16	United Kingdom	46,510.28	49.74
17	U.A.E.	44,315.55	47.31
18	France	43,658.98	46.59
19	Japan	39,312.66	41.78
20	Italy	35,657.50	37.74
21	Korea	34,997.78	37.01
22	Taiwan, China	33,011.00	34.82
23	Spain	30,103.51	31.61
24	Slovenia	29,291.40	30.71
25	Czech Republic	26,821.25	27.98
26	Saudi Arabia	23,185.87	23.96
27	Slovak Republic	21,391.93	21.98
28	Greece	20,192.60	20.65
29	Oman	19,509.47	19.90
30	Hungary	18,728.12	19.03
31	Poland	17,999.91	18.23
32	Croatia	17,685.33	17.88
33	Chile	16,265.10	16.31
34	Panama	14,617.60	14.49
35	China	12,556.33	12.21
36	Russia	12,194.78	11.81
37	Malaysia	11,109.26	10.61
38	Argentina	10,636.12	10.09
39	Mexico	10,045.68	9.44
40	Türkiye	9,661.24	9.01
41	Dominican Republic	8,476.75	7.70
42	Brazil	7,507.16	6.63
43	Thailand	7,066.19	6.15
44	South Africa	7,055.04	6.13
45	Peru	6,621.57	5.65
46	Colombia	6,104.14	5.08
47	Guatemala	5,025.54	3.89
48	Ukraine	4,835.57	3.68
49	Indonesia	4,332.71	3.12
50	Jordan	4,103.26	2.87
51	Sri Lanka	4,013.69	2.77
52	Morocco	3,795.38	2.53
53	Vietnam	3,756.49	2.49
54	Egypt	3,698.83	2.42
55	Philippines	3,460.53	2.16
56	Bangladesh	2,457.92	1.05
57	India	2,256.59	0.83
58	Kenya	2,081.80	0.64
59	Nigeria	2,065.75	0.62
60	Cambodia	1,625.24	0.13
61	Pakistan	1,505.01	-
-	Kuwait	-	-

2. Demand Conditions

2.1 Demand Size

2.1.3 Goods and services export (2021)

Hard data: US$ billion

Rank	Country/ Region	Unit	Index
1	China	3,553.51	100.00
2	United States	2,539.65	71.37
3	Germany	2,003.47	56.24
4	Japan	910.49	25.38
5	United Kingdom	875.20	24.38
6	France	871.06	24.26
7	Netherlands	840.46	23.40
8	Korea	761.24	21.16
9	Hong Kong SAR	751.36	20.88
10	Singapore	733.77	20.39
11	Italy	688.58	19.11
12	India	679.68	18.86
13	Taiwan, China	673.13	18.68
14	Canada	611.12	16.93
15	Switzerland	571.43	15.80
16	Russia	548.86	15.17
17	Mexico	522.53	14.42
18	Belgium	516.06	14.24
19	Spain	498.63	13.75
20	Poland	393.47	10.78
21	Australia	342.75	9.35
22	Vietnam	341.58	9.31
23	U.A.E.	335.24	9.14
24	Brazil	323.36	8.80
25	Thailand	294.51	7.99
26	Saudi Arabia	289.82	7.85
27	Sweden	289.19	7.84
28	Türkiye	289.14	7.83
29	Austria	268.53	7.25
30	Malaysia	256.76	6.92
31	Indonesia	255.73	6.89
32	Denmark	237.62	6.38
33	Czech Republic	204.94	5.46
34	Hungary	148.29	3.86
35	Israel	143.92	3.73
36	South Africa	130.71	3.36
37	Finland	117.19	2.98
38	Slovak Republic	109.30	2.76
39	Philippines	101.45	2.53
40	Chile	101.11	2.53
41	Argentina	87.87	2.15
42	Greece	87.83	2.15
43	Ukraine	81.53	1.97
44	Kuwait	72.58	1.72
45	Peru	64.93	1.50
46	New Zealand	56.31	1.26
47	Slovenia	51.64	1.13
48	Colombia	51.60	1.13
49	Nigeria	47.34	1.01
50	Morocco	47.05	1.00
51	Egypt	44.85	0.94
52	Bangladesh	44.39	0.92
53	Oman	35.72	0.68
54	Croatia	35.36	0.67
55	Panama	32.48	0.59
56	Pakistan	31.55	0.56
57	Dominican Republic	20.50	0.25
58	Cambodia	17.42	0.16
59	Guatemala	15.30	0.10
60	Sri Lanka	14.99	0.09
61	Jordan	13.86	0.06
62	Kenya	11.66	0.00

2.1.4 Goods and services import (2021)

Hard data: US$ billion

Rank	Country/ Region	Unit	Index
1	United States	3,401.36	100.00
2	China	3,091.26	90.83
3	Germany	1,776.91	51.98
4	France	928.51	26.91
5	Japan	908.59	26.32
6	United Kingdom	899.37	26.04
7	India	758.87	21.89
8	Netherlands	736.54	21.23
9	Hong Kong SAR	733.55	21.14
10	Korea	696.44	20.05
11	Italy	638.91	18.35
12	Singapore	609.27	17.47
13	Canada	609.19	17.47
14	Mexico	541.76	15.47
15	Belgium	509.81	14.53
16	Spain	477.43	13.57
17	Switzerland	476.22	13.54
18	Taiwan, China	381.49	10.74
19	Russia	379.08	10.67
20	Poland	370.53	10.41
21	Vietnam	341.15	9.55
22	Brazil	306.98	8.53
23	Thailand	295.72	8.20
24	Türkiye	291.02	8.06
25	Australia	276.30	7.63
26	Austria	265.75	7.32
27	Sweden	261.84	7.20
28	U.A.E.	246.89	6.76
29	Malaysia	230.24	6.27
30	Indonesia	223.72	6.07
31	Denmark	209.20	5.64
32	Saudi Arabia	202.95	5.46
33	Czech Republic	196.60	5.27
34	Philippines	148.80	3.86
35	Hungary	147.74	3.83
36	Israel	124.59	3.14
37	Finland	116.51	2.90
38	Slovak Republic	109.57	2.70
39	South Africa	104.86	2.56
40	Greece	104.40	2.55
41	Chile	103.18	2.51
42	Ukraine	83.78	1.94
43	Egypt	81.94	1.88
44	Colombia	76.86	1.73
45	Argentina	72.82	1.61
46	Bangladesh	71.02	1.56
47	Pakistan	62.66	1.31
48	Kuwait	61.14	1.27
49	Morocco	60.03	1.24
50	Peru	58.98	1.20
51	New Zealand	57.67	1.17
52	Nigeria	52.19	1.00
53	Slovenia	47.73	0.87
54	Croatia	36.37	0.54
55	Oman	34.02	0.47
56	Dominican Republic	29.20	0.32
57	Guatemala	27.58	0.28
58	Jordan	23.39	0.15
59	Kenya	22.18	0.12
60	Sri Lanka	21.53	0.10
61	Panama	18.61	0.01
62	Cambodia	18.23	0.00

2. Demand Conditions

2.2 Demand Quality

2.2.1 Consumer sophistication: quality (2022)

Survey: consumers are sensitive to the quality of products.

Rank	Country/ Region	Unit	Index
1	Thailand	9.02	100.00
2	Kuwait	8.94	97.18
3	Japan	8.76	89.81
4	Taiwan, China	8.67	86.25
5	Hong Kong SAR	8.63	84.62
6	Denmark	8.60	83.51
7	Finland	8.56	82.16
8	Switzerland	8.52	80.33
9	Austria	8.47	78.64
10	Singapore	8.38	75.11
11	United Kingdom	8.34	73.52
12	U.A.E.	8.30	71.83
13	Netherlands	8.25	69.87
14	Chile	8.11	64.34
15	Sweden	8.11	64.25
16	Belgium	8.09	63.49
17	United States	8.06	62.28
18	Panama	8.03	61.19
19	France	8.02	60.97
20	Colombia	8.00	60.03
20	Israel	8.00	60.03
20	Slovenia	8.00	60.03
23	Türkiye	7.99	59.59
24	Hungary	7.98	59.05
25	Australia	7.96	58.35
26	Indonesia	7.93	57.22
27	Canada	7.92	57.01
28	Poland	7.92	56.84
29	Malaysia	7.91	56.37
30	Germany	7.90	55.94
31	China	7.88	55.47
32	Vietnam	7.88	55.12
33	Nigeria	7.85	54.09
34	Mexico	7.81	52.51
35	Peru	7.79	51.84
36	Greece	7.78	51.48
37	Argentina	7.75	50.20
37	Brazil	7.75	50.20
37	India	7.75	50.20
37	Italy	7.75	50.20
41	Philippines	7.74	49.71
42	Morocco	7.68	47.47
43	New Zealand	7.67	46.92
44	Spain	7.65	46.15
45	Egypt	7.63	45.42
46	Dominican Republic	7.62	44.99
47	Guatemala	7.58	43.64
48	Jordan	7.53	41.71
48	Kenya	7.53	41.71
50	Sri Lanka	7.53	41.68
51	South Africa	7.53	41.49
52	Cambodia	7.52	41.15
53	Korea	7.50	40.37
54	Bangladesh	7.46	38.73
55	Croatia	7.38	35.83
56	Oman	7.38	35.45
57	Czech Republic	7.33	33.81
58	Slovak Republic	7.27	31.29
59	Ukraine	7.00	20.70
60	Russia	6.75	10.87
61	Saudi Arabia	6.50	1.04
62	Pakistan	6.47	0.00

2.2.2 Consumer sophistication: design (2022)

Survey: consumers are sensitive to the design of products.

Rank	Country/ Region	Unit	Index
1	Denmark	8.66	100.00
2	Finland	8.47	93.00
3	Kuwait	8.39	90.10
4	Italy	8.27	85.62
5	Saudi Arabia	8.25	85.06
6	Switzerland	8.19	83.00
7	Hong Kong SAR	8.15	81.42
8	China	8.12	80.19
9	Peru	8.10	79.50
10	U.A.E.	8.04	77.43
11	Colombia	8.00	75.97
12	Japan	7.94	73.95
13	Thailand	7.94	73.70
14	United Kingdom	7.91	72.86
15	France	7.90	72.51
16	Nigeria	7.90	72.38
17	Mexico	7.88	71.70
18	Austria	7.86	71.06
19	Türkiye	7.86	71.02
20	Belgium	7.81	68.91
21	Poland	7.77	67.63
22	United States	7.74	66.37
23	Panama	7.74	66.35
24	Canada	7.69	64.79
25	Sweden	7.69	64.55
26	Singapore	7.68	64.47
27	Hungary	7.68	64.16
27	Philippines	7.68	64.16
29	Vietnam	7.66	63.64
30	India	7.65	63.36
31	Spain	7.57	60.48
32	Germany	7.56	60.08
33	Brazil	7.54	59.10
34	Egypt	7.51	58.32
35	Korea	7.50	57.81
36	Taiwan, China	7.48	57.18
37	Indonesia	7.40	54.17
38	Australia	7.39	53.65
39	New Zealand	7.35	52.25
40	Malaysia	7.33	51.47
41	Greece	7.30	50.70
42	Dominican Republic	7.29	50.32
43	Cambodia	7.24	48.36
44	South Africa	7.23	47.94
45	Guatemala	7.22	47.71
46	Argentina	7.19	46.63
47	Croatia	7.15	45.23
48	Israel	7.00	39.64
49	Chile	6.98	39.07
50	Sri Lanka	6.97	38.43
51	Bangladesh	6.93	37.11
52	Jordan	6.91	36.33
53	Pakistan	6.89	35.81
54	Slovak Republic	6.87	34.75
55	Oman	6.75	30.55
56	Netherlands	6.50	21.47
56	Slovenia	6.50	21.47
58	Czech Republic	6.33	15.41
58	Morocco	6.33	15.41
60	Russia	6.00	3.30
60	Ukraine	6.00	3.30
62	Kenya	5.91	0.00

2. Demand Conditions

2.2 Demand Quality

2.2.3 Consumer sophistication: health and environment issues (2022)

Survey: consumers are sensitive to health and environmental

Rank	Country/ Region	Unit	Index
1	Denmark	8.83	100.00
2	Finland	8.78	98.63
3	Switzerland	8.72	96.86
4	Sweden	8.57	92.79
5	New Zealand	8.54	91.96
6	Belgium	8.50	90.80
7	Germany	8.44	89.06
8	Japan	8.27	84.44
9	China	8.25	83.84
10	Canada	8.13	80.63
11	United States	8.06	78.48
12	Singapore	8.05	78.28
13	Hong Kong SAR	8.04	77.90
14	Colombia	8.00	76.89
15	Austria	7.95	75.38
16	France	7.94	75.23
17	United Kingdom	7.89	73.71
18	Panama	7.87	73.20
19	Korea	7.75	69.93
20	Taiwan, China	7.72	69.21
21	Italy	7.70	68.63
22	U.A.E.	7.69	68.26
23	Poland	7.65	67.11
24	Egypt	7.65	67.07
25	Brazil	7.63	66.45
25	Thailand	7.63	66.45
27	Croatia	7.56	64.58
28	Vietnam	7.52	63.47
29	Mexico	7.51	63.38
30	Nigeria	7.51	63.30
31	Kuwait	7.50	62.97
31	Peru	7.50	62.97
31	Sri Lanka	7.50	62.97
34	Australia	7.49	62.58
35	Chile	7.48	62.54
36	Argentina	7.48	62.44
37	India	7.46	61.81
38	Philippines	7.43	60.94
39	Spain	7.40	60.11
40	Greece	7.09	51.48
41	South Africa	7.06	50.85
42	Malaysia	7.05	50.36
43	Czech Republic	7.04	50.22
44	Hungary	7.00	49.06
44	Israel	7.00	49.06
44	Netherlands	7.00	49.06
44	Slovenia	7.00	49.06
44	Ukraine	7.00	49.06
49	Türkiye	6.98	48.43
50	Morocco	6.97	48.27
51	Indonesia	6.91	46.48
52	Bangladesh	6.90	46.36
53	Jordan	6.88	45.58
53	Kenya	6.88	45.58
55	Slovak Republic	6.73	41.57
56	Oman	6.65	39.21
57	Guatemala	6.56	36.69
58	Cambodia	6.26	28.47
59	Dominican Republic	6.21	26.96
60	Russia	5.50	7.32
60	Saudi Arabia	5.50	7.32
62	Pakistan	5.24	0.00

2.2.4 Consumer sophistication: Intellectual Property Rights (2

Survey: consumers rarely purchase illegally copied products.

Rank	Country/ Region	Unit	Index
1	Thailand	8.63	100.00
2	Finland	8.59	99.17
3	Israel	8.50	96.66
3	Saudi Arabia	8.50	96.66
3	Slovenia	8.50	96.66
6	Switzerland	8.43	94.72
7	Japan	8.39	93.69
8	Sweden	8.39	93.61
9	Denmark	8.29	91.06
10	Korea	8.25	89.98
11	Germany	8.08	85.53
12	Colombia	8.00	83.30
13	New Zealand	7.92	81.08
14	Austria	7.88	80.14
15	Singapore	7.85	79.30
16	Malaysia	7.76	76.93
17	Kuwait	7.67	74.40
18	Hong Kong SAR	7.65	73.86
19	Canada	7.60	72.52
20	Belgium	7.59	72.41
21	U.A.E.	7.59	72.35
22	Czech Republic	7.58	72.17
23	Panama	7.54	71.13
24	United Kingdom	7.54	71.09
25	Poland	7.54	71.03
26	United States	7.49	69.57
27	Australia	7.33	65.37
28	Türkiye	7.31	64.79
29	Greece	7.26	63.56
30	Chile	7.23	62.85
31	Argentina	7.21	62.24
32	Italy	7.16	60.76
33	Mexico	7.10	59.34
34	Jordan	7.08	58.72
34	Kenya	7.08	58.72
36	Netherlands	7.00	56.59
37	Spain	6.99	56.20
38	Nigeria	6.94	55.07
39	Taiwan, China	6.93	54.81
40	Egypt	6.87	53.16
41	Croatia	6.85	52.48
42	Oman	6.83	52.14
43	India	6.79	50.87
44	Morocco	6.75	49.91
45	China	6.65	47.29
46	Peru	6.54	44.35
47	Hungary	6.53	43.90
48	Russia	6.50	43.23
49	South Africa	6.49	42.85
50	Bangladesh	6.47	42.49
51	Dominican Republic	6.46	42.06
52	Sri Lanka	6.43	41.23
53	Slovak Republic	6.42	41.18
54	France	6.37	39.74
55	Philippines	6.15	33.79
56	Brazil	6.13	33.22
56	Guatemala	6.13	33.22
58	Indonesia	5.93	27.97
59	Vietnam	5.91	27.49
60	Ukraine	5.50	16.52
61	Cambodia	5.40	13.85
62	Pakistan	4.88	0.00

2. Demand Conditions

2.2 Demand Quality

2.2.5 Consumer sophistication: new technology (2022)

Survey: consumers are early adopters for new-technology

Rank	Country/ Region	Unit	Index
1	Korea	8.50	100.00
2	Kuwait	8.44	98.44
3	Brazil	8.07	87.96
4	Israel	8.00	85.96
5	Denmark	7.94	84.14
6	Finland	7.88	82.44
7	United States	7.81	80.58
8	Spain	7.68	76.87
9	Singapore	7.65	76.12
10	Chile	7.63	75.42
11	Indonesia	7.62	75.21
12	China	7.61	74.92
13	Sweden	7.60	74.72
14	Hong Kong SAR	7.59	74.31
15	India	7.56	73.47
16	Nigeria	7.55	73.19
17	Taiwan, China	7.53	72.85
18	France	7.51	72.24
19	Colombia	7.50	71.91
20	Belgium	7.45	70.43
21	Canada	7.42	69.75
22	Philippines	7.35	67.80
23	Türkiye	7.27	65.53
24	Australia	7.27	65.49
24	United Kingdom	7.27	65.49
26	Peru	7.22	64.11
27	Argentina	7.17	62.73
28	Sri Lanka	7.14	61.84
29	Dominican Republic	7.10	60.76
30	Germany	7.02	58.45
31	Netherlands	7.00	57.87
31	New Zealand	7.00	57.87
31	Vietnam	7.00	57.87
34	Mexico	6.97	57.04
35	Croatia	6.96	56.78
36	Kenya	6.94	56.27
37	Malaysia	6.92	55.63
38	Switzerland	6.92	55.60
39	Austria	6.91	55.28
40	Poland	6.89	54.83
41	Hungary	6.88	54.35
42	Egypt	6.67	48.64
43	Japan	6.64	47.72
44	Greece	6.63	47.48
45	Panama	6.60	46.71
46	Italy	6.59	46.45
47	Oman	6.54	44.99
48	U.A.E.	6.52	44.38
49	Slovenia	6.50	43.82
49	Thailand	6.50	43.82
49	Ukraine	6.50	43.82
52	Jordan	6.44	42.22
53	South Africa	6.43	41.81
54	Morocco	6.25	36.80
55	Guatemala	6.22	36.02
56	Pakistan	6.05	31.25
57	Czech Republic	5.96	28.60
58	Bangladesh	5.83	25.09
59	Russia	5.50	15.73
59	Saudi Arabia	5.50	15.73
61	Slovak Republic	5.19	7.09
62	Cambodia	4.94	0.00

3. Related Industries

3.1 Industrial Infrastructure

3.1.1 Vehicles (2020)

Hard data: motor vehicles per 1000 people

Rank	Country/ Region	Unit	Index
1	New Zealand	837.00	100.00
2	United States	821.00	98.08
3	Australia	789.00	94.24
4	Italy	668.21	79.74
5	Poland	662.65	79.07
6	Finland	652.41	77.84
7	Japan	649.00	77.43
8	Canada	624.24	74.46
9	Germany	580.18	69.17
10	Austria	571.03	68.07
11	France	567.50	67.65
12	Czech Republic	565.46	67.40
13	Slovenia	556.83	66.37
14	Switzerland	539.28	64.26
15	United Kingdom	526.00	62.67
16	Spain	521.83	62.16
17	Greece	513.35	61.15
18	Belgium	510.34	60.78
19	Netherlands	504.18	60.05
20	Kuwait	482.00	57.38
21	Sweden	477.45	56.84
22	Korea	475.00	56.54
23	Denmark	467.07	55.59
24	Slovak Republic	446.98	53.18
25	Malaysia	439.00	52.22
26	Croatia	431.43	51.31
27	Hungary	402.13	47.79
28	Russia	381.00	45.26
29	Brazil	364.00	43.22
30	Israel	346.77	41.15
31	Taiwan, China	333.00	39.50
32	Argentina	316.00	37.45
33	Mexico	294.00	34.81
34	Chile	248.00	29.29
35	U.A.E.	234.00	27.61
36	Thailand	228.00	26.89
37	Ukraine	219.00	25.81
38	Oman	218.00	25.69
39	Saudi Arabia	209.00	24.61
40	China	196.00	23.05
41	South Africa	176.00	20.65
42	Panama	172.00	20.17
43	Singapore	170.00	19.93
44	Türkiye	155.69	18.21
45	Dominican Republic	153.00	17.89
45	Morocco	153.00	17.89
47	Jordan	149.00	17.41
48	Colombia	126.00	14.65
49	Guatemala	114.00	13.21
50	Egypt	109.00	12.61
51	Indonesia	100.00	11.52
52	Hong Kong SAR	93.00	10.68
53	Peru	78.00	8.88
54	Kenya	70.00	7.92
55	Sri Lanka	68.00	7.68
56	Nigeria	64.00	7.20
57	India	41.00	4.44
58	Philippines	38.00	4.08
59	Vietnam	23.00	2.28
60	Cambodia	21.00	2.04
61	Pakistan	17.00	1.56
62	Bangladesh	4.00	0.00

3.1.2 Civil Aviation (2020)

Hard data: passengers per 1000 people

Rank	Country/ Region	Unit	Index
1	U.A.E.	2,812.11	100.00
2	Slovak Republic	2,669.00	94.91
4	New Zealand	1,673.14	59.49
5	Hungary	1,497.14	53.23
6	Austria	1,489.92	52.97
7	Singapore	1,386.68	49.30
9	United States	1,114.63	39.62
10	Switzerland	1,043.00	37.07
11	Australia	920.95	32.73
12	Netherlands	845.60	30.05
13	Hong Kong SAR	785.80	27.92
14	Saudi Arabia	749.72	26.64
15	Canada	726.13	25.80
16	Panama	715.86	25.43
17	Finland	633.02	22.49
18	Korea	579.39	20.58
19	Spain	560.68	19.92
20	Oman	549.38	19.51
21	Türkiye	531.56	18.88
22	Greece	527.91	18.75
23	Malaysia	478.73	17.00
24	United Kingdom	461.64	16.39
25	Russia	433.44	15.39
26	Kuwait	418.21	14.85
27	Chile	415.52	14.75
28	Japan	404.96	14.38
29	Thailand	394.25	14.00
30	France	369.33	13.11
31	Vietnam	328.73	11.66
32	Germany	309.74	10.99
33	Belgium	305.14	10.83
34	China	295.70	10.49
35	Mexico	270.90	9.61
36	Colombia	240.99	8.54
37	Brazil	212.98	7.55
38	Peru	171.30	6.06
39	Croatia	150.32	5.32
40	South Africa	141.23	5.00
41	Indonesia	138.03	4.88
42	Israel	135.58	4.79
43	Italy	131.25	4.64
44	Czech Republic	126.99	4.49
45	Philippines	99.64	3.52
46	Morocco	82.10	2.89
47	Argentina	81.12	2.86
48	Jordan	74.69	2.63
49	Poland	70.88	2.49
50	Sri Lanka	56.59	1.98
51	India	49.38	1.73
52	Egypt	43.16	1.51
53	Ukraine	40.57	1.41
54	Slovenia	37.37	1.30
55	Cambodia	37.18	1.29
56	Kenya	35.89	1.25
57	Bangladesh	17.82	0.61
58	Pakistan	16.34	0.55
59	Nigeria	16.33	0.55
60	Dominican Republic	2.85	0.07
61	Guatemala	1.50	0.02
-	Denmark	-	-
-	Sweden	-	-
-	Taiwan, China	-	-

3. Related Industries

3.1 Industrial Infrastructure

3.1.3 Maritime transport (2020)

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

Rank	Country/ Region	Unit	Index
1	Singapore	6,484.73	100.00
2	Hong Kong SAR	2,401.95	36.97
3	U.A.E.	2,077.86	31.97
4	Panama	1,800.96	27.69
5	Belgium	1,219.09	18.71
6	Oman	1,131.71	17.36
7	Netherlands	832.62	12.74
8	Malaysia	803.12	12.29
9	New Zealand	623.61	9.51
10	Korea	548.36	8.35
11	Greece	538.01	8.19
12	Slovenia	449.48	6.83
13	Spain	366.77	5.55
14	Australia	337.44	5.10
15	Israel	324.90	4.90
16	Sri Lanka	312.51	4.71
17	Finland	277.16	4.17
18	Saudi Arabia	260.97	3.92
19	Chile	217.20	3.24
20	Germany	216.79	3.23
21	Kuwait	198.06	2.94
22	Morocco	190.28	2.82
23	Dominican Republic	179.96	2.66
24	China	173.70	2.57
25	Japan	169.38	2.50
26	United States	165.80	2.45
27	Italy	164.88	2.43
28	Canada	162.91	2.40
29	Denmark	158.03	2.33
30	Sweden	154.37	2.27
31	Thailand	142.90	2.09
32	Türkiye	138.33	2.02
33	United Kingdom	129.58	1.89
34	Vietnam	128.53	1.87
35	Colombia	87.98	1.24
36	Guatemala	87.54	1.24
37	Croatia	85.83	1.21
38	Jordan	78.44	1.10
39	Peru	78.11	1.09
40	Poland	76.64	1.07
41	France	75.59	1.05
42	South Africa	68.52	0.94
43	Philippines	66.90	0.92
44	Egypt	55.17	0.74
45	Indonesia	51.59	0.68
46	Mexico	50.68	0.67
47	Brazil	48.67	0.64
48	Cambodia	46.57	0.61
49	Argentina	43.86	0.56
50	Russia	33.82	0.41
51	Austria	32.50	0.39
52	Kenya	25.22	0.28
53	Ukraine	23.46	0.25
54	Bangladesh	15.45	0.13
55	Pakistan	14.70	0.11
56	Switzerland	13.21	0.09
57	India	11.66	0.07
58	Nigeria	7.34	0.00
-	Czech Republic	-	-
-	Hungary	-	-
-	Slovak Republic	-	-
-	Taiwan, China	-	-

3.1.4 International travel (2020)

Hard data: travellers per 1000 people

Rank	Country/ Region	Unit	Index
1	Croatia	5,506.80	100.00
2	Hungary	4,550.56	82.64
3	Denmark	3,399.93	61.74
4	Austria	2,136.93	38.81
5	France	2,053.60	37.29
6	Hong Kong SAR	1,581.13	28.71
7	Slovenia	1,480.00	26.88
8	U.A.E.	1,470.37	26.70
9	Italy	1,005.26	18.25
10	Greece	907.99	16.49
11	Spain	900.62	16.35
12	Sweden	776.39	14.10
13	Singapore	753.61	13.69
14	Belgium	729.84	13.25
15	Mexico	676.20	12.28
16	Finland	648.35	11.77
17	United Kingdom	519.65	9.44
18	Kuwait	505.97	9.19
19	Oman	494.62	8.98
20	Netherlands	416.55	7.56
21	Ukraine	331.55	6.02
22	United States	320.46	5.82
23	New Zealand	296.42	5.38
24	Dominican Republic	272.68	4.95
25	Panama	242.87	4.41
26	Czech Republic	224.23	4.07
27	Türkiye	215.96	3.92
28	Australia	181.41	3.29
29	Jordan	161.33	2.93
30	Germany	149.55	2.72
31	Malaysia	133.88	2.43
32	Korea	131.23	2.38
33	Russia	129.91	2.36
34	Taiwan, China	99.09	1.80
35	Cambodia	97.61	1.77
36	Morocco	93.41	1.70
37	South Africa	65.53	1.19
38	Guatemala	65.36	1.19
39	Japan	57.93	1.05
40	Peru	57.93	1.05
41	Colombia	52.49	0.95
42	Vietnam	39.42	0.72
43	Sri Lanka	38.55	0.70
44	China	36.19	0.66
45	Philippines	27.07	0.49
46	Indonesia	25.49	0.46
-	Argentina	-	-
-	Bangladesh	-	-
-	Brazil	-	-
-	Canada	-	-
-	Chile	-	-
-	Egypt	-	-
-	India	-	-
-	Israel	-	-
-	Kenya	-	-
-	Nigeria	-	-
-	Pakistan	-	-
-	Poland	-	-
-	Saudi Arabia	-	-
-	Slovak Republic	-	-
-	Switzerland	-	-
-	Thailand	-	-

3. Related Industries

3.1 Industrial Infrastructure

3.1.5 Mobile phone subscribers (2021)

Hard data: per 100 people

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	319.43	100.00
2	U.A.E.	194.73	50.94
3	Russia	168.98	40.81
4	South Africa	168.92	40.79
5	Thailand	168.78	40.73
6	Kuwait	162.78	38.37
7	Japan	160.88	37.62
8	Singapore	145.78	31.68
9	Colombia	145.69	31.65
10	Philippines	143.44	30.76
11	Sri Lanka	141.29	29.91
12	Malaysia	140.59	29.64
13	Korea	140.57	29.63
14	Israel	140.45	29.58
15	Morocco	139.28	29.12
16	Vietnam	138.87	28.96
17	Panama	137.97	28.61
18	Chile	136.31	27.95
19	Slovak Republic	135.15	27.50
20	Oman	135.08	27.47
21	Ukraine	135.03	27.45
22	Indonesia	133.65	26.91
23	Poland	132.06	26.28
24	Italy	131.86	26.20
25	Argentina	130.46	25.65
26	Finland	129.15	25.14
27	Peru	127.92	24.65
28	Germany	127.56	24.51
29	Switzerland	127.26	24.39
30	Saudi Arabia	126.36	24.04
31	Guatemala	125.65	23.76
32	Netherlands	125.06	23.53
33	Czech Republic	124.92	23.47
34	Denmark	124.49	23.30
35	Taiwan, China	123.80	23.03
36	Slovenia	123.02	22.72
37	Kenya	122.79	22.63
38	Sweden	122.71	22.60
39	Austria	121.97	22.31
40	China	121.51	22.13
41	Cambodia	119.96	21.52
42	Spain	119.62	21.39
43	United Kingdom	118.57	20.97
44	New Zealand	113.96	19.16
45	Greece	110.04	17.62
46	Croatia	108.43	16.98
47	United States	107.31	16.54
48	Bangladesh	106.89	16.38
49	Hungary	105.55	15.85
50	Australia	104.51	15.44
51	Brazil	102.49	14.65
52	Türkiye	101.79	14.37
53	Belgium	101.11	14.10
54	Mexico	97.80	12.80
55	Egypt	94.68	11.57
56	Nigeria	91.44	10.30
57	Dominican Republic	87.56	8.78
58	Canada	85.76	8.07
59	India	81.99	6.58
60	Pakistan	81.55	6.41
61	Jordan	65.26	0.00
-	France	-	-

3.1.6 Internet users (2021)

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

Rank	Country/ Region	Unit	Index
1	U.A.E.	100.00	100.00
2	Kuwait	99.11	98.81
3	Saudi Arabia	97.86	97.16
4	Denmark	96.55	95.41
5	Korea	96.51	95.35
6	Oman	95.23	93.66
7	United Kingdom	94.82	93.11
8	Sweden	94.54	92.74
9	Switzerland	94.20	92.29
10	Spain	93.21	90.96
11	Hong Kong SAR	93.09	90.81
12	Canada	92.30	89.76
13	Finland	92.17	89.59
14	Singapore	92.00	89.37
15	Belgium	91.53	88.73
16	New Zealand	91.50	88.70
17	Netherlands	91.33	88.48
18	United States	90.90	87.90
19	Japan	90.22	86.99
20	Israel	90.13	86.87
21	Slovak Republic	89.92	86.60
22	Germany	89.81	86.45
23	Australia	89.60	86.17
24	Malaysia	89.56	86.11
25	Chile	88.30	84.44
26	Austria	87.53	83.42
27	Slovenia	86.60	82.18
28	Taiwan, China	86.60	82.18
29	Argentina	85.50	80.72
30	Russia	84.99	80.05
31	France	84.80	79.79
32	Hungary	84.77	79.75
33	Morocco	84.12	78.88
34	Poland	83.18	77.64
35	Brazil	81.34	75.19
36	Czech Republic	81.34	75.18
37	Croatia	78.32	71.17
38	Greece	78.12	70.90
39	Thailand	77.84	70.54
40	Türkiye	77.67	70.31
41	Dominican Republic	76.90	69.28
42	Ukraine	75.04	66.81
43	Mexico	71.97	62.72
44	Egypt	71.91	62.65
45	Italy	70.48	60.75
46	Vietnam	70.30	60.51
47	China	70.05	60.18
48	South Africa	70.00	60.11
49	Colombia	69.79	59.83
50	Peru	65.25	53.79
51	Jordan	65.20	53.72
52	Panama	64.25	52.46
53	Indonesia	53.73	38.47
54	Guatemala	49.97	33.47
55	Philippines	49.80	33.24
56	India	43.00	24.20
57	Nigeria	35.50	14.23
58	Sri Lanka	35.00	13.56
59	Cambodia	32.90	10.77
60	Kenya	29.50	6.25
61	Pakistan	25.00	0.27
62	Bangladesh	24.80	0.00

3. Related Industries

3.1 Industrial Infrastructure

3.1.7 capital value (2021)

Hard data: 1-inflation rate

Rank	Country/ Region	Unit	Index
1	U.A.E.	1.02	100.00
2	Panama	1.02	96.31
3	Greece	1.01	94.21
4	Malaysia	1.01	93.45
5	Oman	1.01	91.81
6	Thailand	1.01	91.41
7	Switzerland	1.01	90.57
8	Israel	1.01	89.62
9	Spain	1.00	87.77
10	Singapore	1.00	86.78
11	Italy	1.00	86.48
12	Slovenia	1.00	85.90
13	Japan	1.00	85.63
14	Finland	1.00	83.49
15	Hong Kong SAR	1.00	83.25
16	Jordan	1.00	83.20
17	Denmark	1.00	82.59
18	France	1.00	82.20
19	Sweden	1.00	82.05
20	Germany	0.99	81.99
21	Korea	0.99	81.78
22	Kuwait	0.99	81.74
23	Morocco	0.99	80.60
24	Canada	0.99	80.52
25	Belgium	0.99	80.36
26	Australia	0.99	79.62
27	United Kingdom	0.99	78.63
28	United States	0.99	76.93
29	Netherlands	0.99	76.66
30	Austria	0.99	75.89
31	Croatia	0.98	75.07
32	New Zealand	0.98	73.58
33	Peru	0.98	72.80
34	Indonesia	0.98	72.14
35	Slovak Republic	0.98	72.03
36	China	0.98	68.67
37	Cambodia	0.98	68.39
38	Colombia	0.97	67.93
39	Philippines	0.97	67.16
40	Ukraine	0.97	66.49
41	Chile	0.97	64.31
42	Czech Republic	0.97	63.50
43	Brazil	0.97	63.15
44	Guatemala	0.97	63.13
45	Vietnam	0.97	63.09
46	South Africa	0.97	63.06
47	Hungary	0.97	62.35
48	Poland	0.97	62.02
49	Russia	0.97	61.97
50	Mexico	0.97	61.86
51	Saudi Arabia	0.97	61.52
52	Dominican Republic	0.96	59.18
53	Taiwan, China	0.96	55.43
54	Egypt	0.95	50.38
55	Kenya	0.95	47.88
56	Bangladesh	0.94	45.88
57	Sri Lanka	0.94	42.66
58	India	0.93	39.39
59	Pakistan	0.90	17.68
60	Nigeria	0.88	1.28
61	Türkiye	0.88	0.00
-	Argentina	-	-

3.1.8 Capital accessibility (2020)

Hard data: 1-interest rate

Rank	Country/ Region	Unit	Index
1	Austria	0.99	100.00
1	France	0.99	100.00
1	Germany	0.99	100.00
1	Japan	0.99	100.00
1	Netherlands	0.99	100.00
6	Belgium	0.98	97.11
6	Finland	0.98	97.11
6	Poland	0.98	97.11
6	Slovak Republic	0.98	97.11
6	Slovenia	0.98	97.11
6	Spain	0.98	97.11
6	Sweden	0.98	97.11
13	Italy	0.98	97.03
14	Switzerland	0.97	95.25
15	Korea	0.97	94.55
16	Hungary	0.97	94.32
17	Canada	0.97	94.21
17	Croatia	0.97	94.21
17	Denmark	0.97	94.21
17	Taiwan, China	0.97	94.21
21	Thailand	0.97	94.03
22	Israel	0.97	93.92
23	Czech Republic	0.97	93.63
24	United States	0.97	93.49
25	Malaysia	0.97	92.93
26	Kuwait	0.96	92.17
27	Chile	0.96	91.32
27	United Kingdom	0.96	91.32
29	China	0.96	90.31
30	Mexico	0.95	88.74
31	Greece	0.95	88.43
31	Hong Kong SAR	0.95	88.43
31	New Zealand	0.95	88.43
34	Australia	0.95	88.13
35	Singapore	0.95	87.70
36	Oman	0.95	86.98
37	Morocco	0.94	85.53
37	U.A.E.	0.94	85.53
39	Panama	0.93	82.82
40	Jordan	0.93	82.56
41	South Africa	0.93	82.52
42	Philippines	0.93	82.36
43	Russia	0.93	82.11
44	Bangladesh	0.93	81.70
45	Vietnam	0.92	80.29
46	Saudi Arabia	0.92	79.74
47	Pakistan	0.91	77.82
48	India	0.91	77.72
49	Indonesia	0.91	77.07
50	Colombia	0.91	75.87
51	Egypt	0.91	75.62
52	Dominican Republic	0.90	75.09
53	Peru	0.89	71.12
54	Cambodia	0.89	71.06
55	Sri Lanka	0.89	70.36
56	Nigeria	0.89	69.67
57	Kenya	0.88	67.94
58	Guatemala	0.88	67.63
59	Ukraine	0.87	64.43
60	Türkiye	0.74	27.66
61	Brazil	0.70	16.04
62	Argentina	0.64	0.00

3. Related Industries

3.1 Industrial Infrastructure

3.1.9 Scientists & engineers (2018)

Hard data: total R&D personnel per million inhabitants

Rank	Country/ Region	Unit	Index
1	Saudi Arabia	63.42	100.00
2	Denmark	30.61	48.06
3	Austria	28.63	44.91
4	Taiwan, China	27.17	42.60
5	Finland	26.80	42.02
6	Belgium	25.50	39.95
7	Switzerland	25.40	39.79
8	Sweden	25.08	39.29
9	Korea	24.65	38.61
10	New Zealand	24.20	37.90
11	Germany	22.44	35.11
12	Slovenia	21.27	33.25
13	France	21.11	33.00
14	Netherlands	21.09	32.98
15	Czech Republic	20.72	32.39
16	United Kingdom	20.38	31.85
17	Greece	19.98	31.21
18	Italy	18.53	28.92
19	Japan	17.60	27.44
20	Spain	15.35	23.89
21	Singapore	13.86	21.52
22	Hungary	13.00	20.16
23	Poland	12.98	20.13
24	Slovak Republic	12.97	20.12
25	U.A.E.	11.02	17.03
26	Croatia	10.62	16.39
27	Hong Kong SAR	10.10	15.56
28	Malaysia	9.81	15.11
29	Russia	9.17	14.09
30	Türkiye	8.34	12.78
31	China	8.18	12.53
32	Egypt	8.05	12.33
33	Thailand	5.64	8.51
34	Argentina	5.48	8.25
35	Ukraine	4.54	6.77
36	Morocco	4.50	6.70
37	Jordan	4.23	6.27
38	South Africa	3.71	5.45
39	Vietnam	3.05	4.41
40	Chile	2.71	3.86
41	Pakistan	2.68	3.83
42	Kuwait	2.66	3.79
43	Oman	2.29	3.20
44	Mexico	1.65	2.19
45	Indonesia	1.47	1.90
46	Sri Lanka	1.45	1.87
47	Philippines	0.89	0.98
48	Panama	0.73	0.73
49	Peru	0.31	0.07
50	Guatemala	0.27	0.00
-	Australia	-	-
-	Bangladesh	-	-
-	Brazil	-	-
-	Cambodia	-	-
-	Canada	-	-
-	Colombia	-	-
-	Dominican Republic	-	-
-	India	-	-
-	Israel	-	-
-	Kenya	-	-
-	Nigeria	-	-
-	United States	-	-

3.1.10 Scientific research institutions (2022)

Survey: scientific research institutions are good by global standa

Rank	Country/ Region	Unit	Index
1	Kuwait	8.89	100.00
2	Netherlands	8.75	97.17
3	Sweden	8.41	90.28
4	Austria	8.41	90.20
5	United States	8.31	88.19
6	United Kingdom	8.29	87.71
7	Canada	8.27	87.38
8	Israel	8.25	86.99
8	Korea	8.25	86.99
10	Switzerland	8.17	85.34
11	Singapore	8.15	84.95
12	Denmark	8.14	84.69
13	Finland	8.13	84.44
14	France	8.05	82.87
15	Germany	8.02	82.32
16	Belgium	7.91	80.02
17	Australia	7.65	74.77
18	Japan	7.64	74.54
19	Taiwan, China	7.58	73.41
20	Hong Kong SAR	7.56	72.95
21	China	7.52	72.08
22	Russia	7.50	71.71
23	Czech Republic	7.46	70.86
24	Greece	7.39	69.50
25	Hungary	7.30	67.64
26	New Zealand	7.28	67.19
27	Türkiye	7.21	65.79
28	Argentina	7.13	64.27
29	Spain	7.12	63.92
30	Poland	7.03	62.08
31	India	6.97	60.96
32	Brazil	6.84	58.25
33	Malaysia	6.77	56.79
34	South Africa	6.71	55.71
35	Mexico	6.69	55.24
36	Italy	6.67	54.84
37	Slovenia	6.50	51.34
38	Chile	6.38	48.80
39	Thailand	6.36	48.48
40	Croatia	6.33	47.82
41	U.A.E.	6.16	44.42
42	Kenya	6.15	44.17
43	Nigeria	6.09	42.97
44	Philippines	5.93	39.67
45	Vietnam	5.79	36.80
46	Pakistan	5.74	35.80
47	Peru	5.69	34.83
48	Oman	5.44	29.70
49	Jordan	5.40	28.89
50	Indonesia	5.31	27.19
51	Morocco	5.22	25.32
52	Sri Lanka	5.21	25.04
53	Guatemala	5.14	23.62
54	Egypt	5.01	21.08
55	Colombia	5.00	20.79
55	Dominican Republic	5.00	20.79
55	Saudi Arabia	5.00	20.79
55	Ukraine	5.00	20.79
59	Bangladesh	4.97	20.23
60	Panama	4.85	17.80
61	Slovak Republic	4.08	1.99
62	Cambodia	3.98	0.00

3. Related Industries

3.1 Industrial Infrastructure

3.1.11 Total expenditure on R&D (2019)

Hard data: % of GDP

Rank	Country/ Region	Unit	Index
1	Israel	5.14	100.00
2	Korea	4.63	90.02
3	Sweden	3.39	65.91
4	Japan	3.20	62.24
5	Germany	3.17	61.63
6	United States	3.17	61.60
7	Belgium	3.16	61.48
8	Switzerland	3.15	61.22
9	Austria	3.13	60.89
10	Denmark	2.89	56.19
11	Finland	2.80	54.41
12	China	2.24	43.67
13	France	2.19	42.64
14	Netherlands	2.18	42.50
15	Slovenia	2.05	39.83
16	Czech Republic	1.93	37.51
17	Singapore	1.89	36.78
18	Australia	1.83	35.59
19	United Kingdom	1.71	33.23
20	Canada	1.59	30.97
21	Hungary	1.48	28.74
22	Italy	1.46	28.46
23	New Zealand	1.41	27.39
24	Poland	1.32	25.69
25	U.A.E.	1.31	25.55
26	Greece	1.28	24.82
27	Spain	1.25	24.35
28	Brazil	1.21	23.50
29	Thailand	1.14	22.23
30	Croatia	1.08	21.03
31	Türkiye	1.06	20.71
32	Malaysia	1.04	20.24
33	Russia	1.04	20.21
34	Hong Kong SAR	0.93	18.01
35	Egypt	0.84	16.29
36	Slovak Republic	0.83	16.07
37	South Africa	0.62	11.97
38	Vietnam	0.53	10.35
39	Argentina	0.46	8.89
40	Ukraine	0.43	8.44
41	Chile	0.34	6.63
42	Philippines	0.32	6.27
43	Colombia	0.32	6.26
44	Oman	0.31	6.12
45	Mexico	0.28	5.52
46	Indonesia	0.27	5.28
47	Pakistan	0.20	3.91
48	Kuwait	0.19	3.73
49	Peru	0.16	3.05
50	Panama	0.15	2.86
51	Guatemala	0.03	0.51
52	India	-	-
52	Sri Lanka	-	-
-	Bangladesh	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Saudi Arabia	-	-
-	Taiwan, China	-	-

3.1.12 International patents granted (2019)

Hard data: patents issued by USPTO (number)

Rank	Country/ Region	Unit	Index
1	United States	399,055.00	100.00
2	Japan	55,899.00	14.01
3	China	26,176.00	6.56
4	Korea	24,218.00	6.07
5	Germany	19,799.00	4.96
6	Taiwan, China	13,390.00	3.36
7	United Kingdom	8,834.00	2.21
8	Canada	8,179.00	2.05
9	France	7,981.00	2.00
10	India	5,888.00	1.48
11	Israel	5,011.00	1.26
12	Italy	3,913.00	0.98
13	Netherlands	3,552.00	0.89
14	Sweden	3,495.00	0.88
15	Switzerland	3,394.00	0.85
16	Australia	2,298.00	0.58
17	Austria	1,650.00	0.41
18	Finland	1,641.00	0.41
19	Belgium	1,537.00	0.39
20	Denmark	1,425.00	0.36
21	Singapore	1,191.00	0.30
22	Spain	1,187.00	0.30
23	Hong Kong SAR	1,071.00	0.27
24	Saudi Arabia	1,007.00	0.25
25	Russia	711.00	0.18
26	Brazil	547.00	0.14
27	New Zealand	494.00	0.12
28	Poland	439.00	0.11
29	Mexico	394.00	0.10
30	Czech Republic	380.00	0.10
31	Malaysia	310.00	0.08
32	Türkiye	223.00	0.06
33	South Africa	221.00	0.06
34	Hungary	182.00	0.05
35	Thailand	138.00	0.03
36	Greece	137.00	0.03
37	U.A.E.	135.00	0.03
38	Argentina	111.00	0.03
39	Ukraine	100.00	0.03
40	Slovenia	91.00	0.02
41	Chile	83.00	0.02
42	Philippines	71.00	0.02
43	Slovak Republic	57.00	0.01
44	Colombia	51.00	0.01
45	Vietnam	41.00	0.01
46	Egypt	38.00	0.01
46	Kuwait	38.00	0.01
48	Kenya	26.00	0.01
49	Croatia	21.00	0.01
50	Pakistan	19.00	0.00
51	Indonesia	17.00	0.00
52	Jordan	15.00	0.00
53	Peru	14.00	0.00
54	Sri Lanka	11.00	0.00
55	Dominican Republic	5.00	0.00
55	Guatemala	5.00	0.00
55	Panama	5.00	0.00
58	Bangladesh	3.00	0.00
58	Morocco	3.00	0.00
60	Nigeria	2.00	0.00
61	Cambodia	1.00	0.00
-	Oman	-	-

3. Related Industries

3.2 Living Infrastructure

3.2.1 Public spending on education (2019)

Hard data: % of GDP

Rank	Country/ Region	Unit	Index
1	Sweden	9.81	100.00
2	Finland	9.33	94.95
3	Belgium	8.79	89.39
4	Denmark	8.77	89.22
5	Netherlands	8.28	84.09
6	France	8.04	81.63
7	Austria	7.67	77.72
8	Brazil	7.56	76.59
9	United Kingdom	7.41	75.04
10	Chile	7.29	73.86
11	Czech Republic	7.27	73.66
12	Germany	7.27	73.57
13	South Africa	7.25	73.39
14	U.A.E.	7.15	72.39
14	Ukraine	7.15	72.39
16	Türkiye	7.11	71.91
17	Australia	7.02	71.00
18	New Zealand	6.98	70.61
19	Switzerland	6.92	69.95
20	Slovenia	6.88	69.56
21	Slovak Republic	6.79	68.66
22	Israel	6.72	67.92
23	United States	6.72	67.89
24	Poland	6.69	67.65
25	Korea	6.59	66.61
26	Argentina	6.40	64.55
27	Colombia	6.34	64.02
28	India	6.14	61.93
29	Hungary	6.01	60.54
30	Italy	5.91	59.47
31	Spain	5.66	56.93
32	Oman	5.52	55.49
33	Mexico	5.50	55.23
34	Greece	5.15	51.61
35	Dominican Republic	4.55	45.38
36	Japan	4.44	44.27
37	Jordan	4.31	42.88
38	Malaysia	4.16	41.33
39	Croatia	3.92	38.85
40	Peru	3.83	37.89
41	Guatemala	3.48	34.26
42	Hong Kong SAR	3.47	34.26
43	Philippines	3.36	33.03
45	Canada	2.79	27.14
46	Singapore	2.38	22.94
47	Sri Lanka	2.35	22.56
48	Bangladesh	1.84	17.35
49	Cambodia	1.48	13.60
50	Russia	0.84	6.95
51	Pakistan	0.63	4.72
52	Thailand	0.17	0.00
-	China	-	-
-	Egypt	-	-
-	Indonesia	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Panama	-	-
-	Saudi Arabia	-	-
-	Taiwan, China	-	-
-	Vietnam	-	-

3.2.2 Students per teacher (2018)

Hard data: rate

Rank	Country/ Region	Unit	Index
1	Kuwait	8.88	100.00
2	Greece	9.38	98.58
3	Oman	9.67	97.75
4	Switzerland	9.93	97.02
5	Austria	10.02	96.77
6	Poland	10.18	96.31
7	Hungary	10.77	94.64
8	Belgium	11.28	93.19
9	Italy	11.48	92.61
10	Malaysia	11.66	92.12
11	Netherlands	11.81	91.69
12	Israel	12.07	90.94
13	Sweden	12.23	90.47
14	Germany	12.30	90.28
15	Ukraine	12.98	88.35
16	Spain	13.13	87.92
17	Croatia	13.51	86.86
18	Finland	13.67	86.40
19	Slovenia	13.80	86.02
20	Saudi Arabia	13.81	85.98
21	United States	14.20	84.89
22	Singapore	14.69	83.48
23	New Zealand	14.92	82.85
24	United Kingdom	15.13	82.24
25	Slovak Republic	15.54	81.08
26	Japan	15.66	80.74
27	China	16.43	78.56
28	Thailand	16.64	77.96
29	Indonesia	17.03	76.83
30	Peru	17.39	75.83
31	Chile	17.79	74.68
32	Jordan	18.54	72.56
33	Dominican Republic	18.92	71.47
34	Brazil	20.22	67.77
35	Guatemala	20.26	67.66
36	Vietnam	20.28	67.62
37	Sri Lanka	21.74	63.47
38	Panama	21.96	62.83
39	Colombia	23.30	59.03
40	Mexico	26.55	49.79
41	Morocco	26.80	49.09
42	Philippines	29.08	42.60
43	Bangladesh	30.05	39.84
44	India	32.75	32.18
45	Cambodia	41.70	6.74
46	Pakistan	44.08	0.00
-	Argentina	-	-
-	Australia	-	-
-	Nigeria	-	-
-	Canada	-	-
-	Czech Republic	-	-
-	Denmark	-	-
-	Egypt	-	-
-	France	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Korea	-	-
-	Russia	-	-
-	South Africa	-	-
-	Taiwan, China	-	-
-	Türkiye	-	-
-	U.A.E.	-	-

3.2.3 Secondary enrollment rate (2020)

Hard data: %

Rank	Country/ Region	Unit	Index
1	Belgium	151.57	100.00
2	Sweden	145.62	94.49
3	Finland	144.23	93.20
4	Australia	134.45	84.15
5	Denmark	130.86	80.83
6	Spain	124.83	75.25
7	New Zealand	120.38	71.13
8	United Kingdom	116.88	67.89
9	Poland	115.24	66.38
10	Netherlands	115.17	66.31
11	Canada	114.87	66.03
12	Saudi Arabia	112.59	63.92
13	Slovenia	111.97	63.35
14	Peru	110.58	62.07
15	Argentina	110.13	61.65
16	Hong Kong SAR	108.37	60.01
17	Oman	107.05	58.80
18	Greece	105.55	57.41
19	Israel	104.94	56.84
20	France	104.63	56.56
21	Türkiye	104.41	56.35
22	Thailand	104.15	56.12
23	Brazil	104.13	56.09
24	Chile	103.64	55.64
25	Russia	103.60	55.61
26	U.A.E.	103.37	55.39
27	Singapore	103.20	55.23
28	Hungary	103.05	55.09
29	Switzerland	102.56	54.64
30	South Africa	102.10	54.22
31	Mexico	101.84	53.97
32	Colombia	101.80	53.94
33	Czech Republic	100.94	53.14
34	Italy	100.91	53.12
35	Japan	100.87	53.08
36	United States	100.51	52.75
37	Croatia	100.40	52.64
38	Austria	100.37	52.62
39	Sri Lanka	100.34	52.59
40	Germany	97.11	49.60
41	Korea	96.04	48.61
42	Philippines	91.99	44.86
43	Slovak Republic	90.60	43.57
44	Egypt	89.48	42.54
45	Indonesia	88.91	42.01
46	Malaysia	82.46	36.04
47	Morocco	82.45	36.04
48	Dominican Republic	79.77	33.56
49	India	75.48	29.58
50	Bangladesh	74.36	28.55
51	Jordan	67.82	22.49
52	Cambodia	54.83	10.47
53	Guatemala	50.44	6.41
54	Pakistan	44.87	1.26
55	Nigeria	43.51	0.00
-	China	-	-
-	Kenya	-	-
-	Kuwait	-	-
-	Panama	-	-
-	Taiwan, China	-	-
-	Ukraine	-	-
-	Vietnam	-	-

3.2.4 Tertiary enrollment rate (2020)

Hard data: %

Rank	Country/ Region	Unit	Index
1	Greece	150.88	100.00
2	Australia	114.19	73.95
3	Argentina	99.17	63.28
4	Spain	95.96	61.01
5	Finland	95.05	60.36
6	Singapore	93.13	59.00
7	Netherlands	92.01	58.20
8	Chile	91.67	57.96
9	United States	87.57	55.05
10	Austria	87.21	54.80
11	Sweden	84.52	52.88
12	Denmark	82.84	51.69
13	Belgium	80.89	50.31
14	Slovenia	79.92	49.62
15	New Zealand	79.91	49.61
16	Canada	79.52	49.33
17	Germany	72.99	44.70
18	Saudi Arabia	70.63	43.02
19	Poland	70.48	42.91
20	United Kingdom	69.48	42.21
21	Italy	69.47	42.20
22	France	69.35	42.11
23	Croatia	68.10	41.22
24	Switzerland	65.33	39.26
25	Japan	64.62	38.75
26	Dominican Republic	61.16	36.30
27	Kuwait	61.13	36.28
28	Israel	61.07	36.24
29	China	58.42	34.35
30	Hungary	55.16	32.03
31	Brazil	54.57	31.62
32	Colombia	54.24	31.38
33	Slovak Republic	47.62	26.69
34	Oman	45.48	25.16
35	Mexico	44.81	24.69
36	Panama	44.38	24.39
37	Thailand	42.64	23.15
38	Malaysia	42.57	23.10
39	Morocco	40.62	21.72
40	Indonesia	36.31	18.65
41	Jordan	33.56	16.70
42	Philippines	33.37	16.56
43	India	29.44	13.78
44	Vietnam	28.64	13.21
45	South Africa	24.24	10.08
46	Bangladesh	23.97	9.89
47	Guatemala	22.14	8.59
48	Sri Lanka	21.61	8.22
49	Cambodia	12.89	2.03
50	Pakistan	12.22	1.55
52	Kenya	10.04	0.00
-	Czech Republic	-	-
-	Egypt	-	-
-	Hong Kong SAR	-	-
-	Korea	-	-
-	Nigeria	-	-
-	Peru	-	-
-	Russia	-	-
-	Taiwan, China	-	-
-	Türkiye	-	-
-	U.A.E.	-	-
-	Ukraine	-	-

3.2.5 Student international mobility (2020)

Hard data: average inbound and outbound mobility rat

Rank	Country/ Region	Unit	Index
1	U.A.E.	38.97	100.00
2	Kuwait	18.94	48.13
3	Slovak Republic	16.31	41.32
4	Hong Kong SAR	14.16	35.76
5	Australia	13.39	33.74
6	Switzerland	11.99	30.11
7	Austria	11.83	29.72
8	United Kingdom	10.81	27.06
9	Jordan	10.67	26.70
10	Canada	10.55	26.38
11	New Zealand	9.75	24.33
12	Czech Republic	9.41	23.44
13	Hungary	9.14	22.75
14	Oman	7.93	19.60
15	Netherlands	7.69	18.99
16	Germany	7.50	18.51
17	Belgium	6.83	16.77
18	France	6.57	16.09
19	Denmark	6.10	14.86
20	Malaysia	6.06	14.76
21	Slovenia	6.04	14.70
22	Finland	5.84	14.18
23	Sweden	5.19	12.50
24	Ukraine	4.62	11.03
25	Croatia	4.57	10.91
26	Sri Lanka	4.49	10.69
27	Israel	4.09	9.66
28	Saudi Arabia	3.99	9.41
29	Greece	3.91	9.21
30	Morocco	3.72	8.70
31	Korea	3.54	8.25
32	Italy	3.52	8.19
33	Vietnam	3.38	7.81
34	Poland	3.19	7.32
35	Cambodia	3.15	7.22
36	Japan	3.03	6.93
37	Spain	3.01	6.87
38	Russia	2.95	6.71
39	United States	2.85	6.44
40	Panama	2.65	5.94
41	Pakistan	2.31	5.05
42	Kenya	2.20	4.78
43	South Africa	2.04	4.36
44	Argentina	1.90	3.99
45	Türkiye	1.48	2.91
46	Bangladesh	1.40	2.69
47	Colombia	1.32	2.48
48	China	1.31	2.46
49	Chile	1.28	2.39
50	Egypt	1.21	2.21
51	Mexico	0.79	1.13
52	India	0.78	1.08
53	Philippines	0.77	1.06
54	Brazil	0.62	0.68
55	Guatemala	0.52	0.41
56	Indonesia	0.36	0.00
-	Dominican Republic	-	-
-	Nigeria	-	-
-	Peru	-	-
-	Singapore	-	-
-	Taiwan, China	-	-
-	Thailand	-	-

3.2.6 Personal safety (2022)

Hard data: score

Rank	Country/ Region	Unit	Index
1	U.A.E.	84.90	100.00
2	Taiwan, China	84.10	98.69
3	Oman	80.00	91.97
4	Switzerland	78.30	89.18
5	Hong Kong SAR	78.10	88.85
6	Japan	77.90	88.52
7	Slovenia	77.30	87.54
8	Croatia	75.90	85.25
9	Saudi Arabia	75.30	84.26
10	Czech Republic	74.50	82.95
11	Austria	73.90	81.97
12	Korea	73.50	81.31
13	Denmark	73.40	81.15
14	Finland	72.70	80.00
15	Singapore	72.40	79.51
16	Netherlands	72.10	79.02
17	China	70.60	76.56
18	Poland	70.20	75.90
19	Slovak Republic	69.80	75.25
20	Israel	67.90	72.13
21	Kuwait	66.60	70.00
22	Spain	66.10	69.18
23	Hungary	65.70	68.52
24	Germany	63.60	65.08
25	Thailand	60.70	60.33
26	Russia	60.40	59.84
27	Türkiye	60.30	59.67
28	Jordan	59.80	58.85
29	Sri Lanka	58.80	57.21
30	Pakistan	58.00	55.90
31	Philippines	57.70	55.41
32	Canada	57.10	54.43
33	New Zealand	56.70	53.77
34	Australia	56.20	52.95
35	Panama	56.10	52.79
36	India	55.40	51.64
37	Italy	54.80	50.66
38	Belgium	54.60	50.33
39	Vietnam	54.20	49.67
40	Indonesia	53.90	49.18
41	United Kingdom	53.50	48.52
42	Egypt	53.40	48.36
43	Ukraine	53.10	47.87
44	Greece	52.60	47.05
45	United States	51.80	45.74
46	Sweden	51.00	44.43
47	Morocco	50.90	44.26
48	France	47.60	38.85
49	Mexico	46.30	36.72
50	Chile	46.00	36.23
51	Malaysia	44.30	33.44
52	Kenya	43.80	32.62
53	Colombia	42.30	30.16
54	Bangladesh	36.60	20.82
55	Nigeria	36.20	20.16
56	Argentina	35.90	19.67
57	Brazil	33.00	14.92
58	Peru	32.90	14.75
59	South Africa	23.90	0.00
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Guatemala	-	-

3.2.7 Social safety net (2022)

Survey: the social safety net is well developed.

Rank	Country/ Region	Unit	Index
1	Sweden	9.01	100.00
2	Netherlands	9.00	99.73
3	Finland	8.84	96.88
4	France	8.63	92.99
5	Denmark	8.61	92.66
6	Switzerland	8.40	88.83
7	Canada	8.39	88.59
8	Kuwait	8.22	85.52
9	Germany	8.21	85.23
10	Slovenia	8.00	81.46
11	Belgium	7.92	80.02
12	New Zealand	7.85	78.67
13	Singapore	7.82	78.11
14	United Kingdom	7.79	77.68
15	Taiwan, Chuna	7.75	76.89
16	Austria	7.63	74.73
17	Japan	7.63	74.67
18	Korea	7.50	72.32
19	Spain	7.37	69.91
20	Australia	7.23	67.36
21	Czech Republic	7.08	64.71
22	Argentina	6.92	61.78
23	Hong Kong SAR	6.85	60.51
24	China	6.74	58.46
25	Hungary	6.73	58.16
26	Brazil	6.71	57.97
27	Chile	6.58	55.48
28	Greece	6.58	55.44
29	Italy	6.53	54.62
30	Colombia	6.50	54.05
30	Israel	6.50	54.05
32	United States	6.34	51.18
33	Türkiye	6.31	50.52
34	Poland	6.28	49.98
35	Vietnam	6.23	49.16
36	Peru	6.04	45.66
37	Saudi Arabia	6.00	44.92
38	Croatia	5.96	44.21
39	India	5.86	42.38
40	Mexico	5.71	39.54
41	Sri Lanka	5.69	39.28
42	Philippines	5.56	36.90
43	Thailand	5.50	35.78
44	Malaysia	5.40	33.91
45	Oman	5.31	32.36
46	Jordan	5.16	29.55
46	Kenya	5.16	29.55
48	Morocco	5.13	28.93
49	Slovak Republic	5.08	28.05
50	Russia	5.00	26.65
50	Ukraine	5.00	26.65
52	Nigeria	4.97	26.04
53	South Africa	4.96	25.86
54	Egypt	4.93	25.34
55	Bangladesh	4.90	24.87
56	Pakistan	4.82	23.28
57	Dominican Republic	4.56	18.58
58	Panama	4.47	16.97
59	U.A.E.	4.42	16.05
60	Indonesia	4.23	12.55
61	Guatemala	4.06	9.39
62	Cambodia	3.54	-

3.2.8 Medical service (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Taiwan, China	86.40	100.00
2	Korea	82.30	90.62
3	France	81.00	87.64
4	Japan	80.70	86.96
5	Denmark	80.00	85.35
6	Spain	78.80	82.61
7	Austria	78.40	81.69
8	Thailand	78.10	81.01
9	Australia	77.70	80.09
10	Finland	76.40	77.12
11	Netherlands	75.80	75.74
12	Czech Republic	75.40	74.83
13	Belgium	75.20	74.37
14	United Kingdom	74.90	73.68
15	Switzerland	74.50	72.77
16	Germany	73.80	71.17
16	Israel	73.80	71.17
18	New Zealand	73.60	70.71
19	Sri Lanka	72.60	68.42
20	Mexico	72.50	68.19
21	Canada	71.80	66.59
22	Singapore	70.90	64.53
23	Türkiye	70.70	64.07
24	Malaysia	69.60	61.56
25	United States	69.00	60.18
26	Sweden	68.80	59.73
27	Argentina	68.60	59.27
28	U.A.E.	68.00	57.89
29	Philippines	67.10	55.84
30	Italy	66.80	55.15
31	Colombia	66.70	54.92
32	China	66.40	54.23
33	Hong Kong SAR	66.30	54.00
34	India	66.20	53.78
35	Jordan	65.40	51.95
36	Slovenia	65.30	51.72
37	Croatia	64.20	49.20
38	South Africa	63.90	48.51
39	Chile	63.70	48.05
40	Slovak Republic	60.90	41.65
41	Saudi Arabia	60.70	41.19
42	Indonesia	60.50	40.73
42	Pakistan	60.50	40.73
44	Panama	60.40	40.50
45	Kuwait	59.00	37.30
46	Oman	58.40	35.93
46	Russia	58.40	35.93
48	Poland	58.30	35.70
48	Vietnam	58.30	35.70
50	Brazil	57.30	33.41
51	Greece	57.00	32.72
52	Peru	56.40	31.35
53	Kenya	55.80	29.98
54	Ukraine	53.40	24.49
55	Hungary	51.60	20.37
56	Nigeria	48.90	14.19
57	Egypt	46.20	8.01
58	Morocco	45.80	7.09
59	Bangladesh	42.70	0.00
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Guatemala	-	-

3.2.9 GINI index (2019)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Slovak Republic	23.20	100.00
2	Slovenia	24.40	96.04
3	Czech Republic	25.30	93.07
4	U.A.E.	26.00	90.76
5	Ukraine	26.60	88.78
6	Belgium	27.20	86.80
7	Denmark	27.70	85.15
7	Finland	27.70	85.15
9	Croatia	28.90	81.19
10	Netherlands	29.20	80.20
11	Sweden	29.30	79.87
12	Pakistan	29.60	78.88
13	Hungary	30.00	77.56
14	Austria	30.20	76.90
14	Poland	30.20	76.90
16	Egypt	31.50	72.61
17	Germany	31.70	71.95
18	France	32.40	69.64
19	Greece	33.10	67.33
19	Switzerland	33.10	67.33
21	Canada	33.30	66.67
22	Australia	34.30	63.37
22	Spain	34.30	63.37
24	Thailand	34.90	61.39
25	Nigeria	35.10	60.73
25	United Kingdom	35.10	60.73
27	Italy	35.20	60.40
28	India	35.70	58.75
28	Vietnam	35.70	58.75
30	Indonesia	37.60	52.48
31	Russia	37.70	52.15
32	China	38.20	50.50
33	Israel	38.60	49.17
34	United States	41.50	39.60
35	Peru	41.60	39.27
36	Dominican Republic	41.90	38.28
36	Türkiye	41.90	38.28
38	Philippines	42.30	36.96
39	Argentina	42.90	34.98
40	Chile	44.40	30.03
41	Mexico	46.70	22.44
42	Panama	49.80	12.21
43	Colombia	51.30	7.26
44	Brazil	53.50	0.00
-	Bangladesh	-	-
-	Cambodia	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Oman	-	-
-	Japan	-	-
-	Jordan	-	-
-	Kenya	-	-
-	Korea	-	-
-	Kuwait	-	-
-	Malaysia	-	-
-	Morocco	-	-
-	New Zealand	-	-
-	Saudi Arabia	-	-
-	Singapore	-	-
-	South Africa	-	-
-	Sri Lanka	-	-
-	Taiwan, China	-	-

3.2.10 HDI (2020)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Switzerland	0.96	100.00
2	Hong Kong SAR	0.95	98.34
3	Australia	0.95	97.86
3	Denmark	0.95	97.86
5	Germany	0.94	97.15
6	Sweden	0.94	96.67
7	Netherlands	0.94	95.96
7	Singapore	0.94	95.96
9	Finland	0.94	95.72
10	New Zealand	0.94	95.25
11	Canada	0.93	94.06
12	Belgium	0.93	93.35
13	United Kingdom	0.92	92.40
14	Japan	0.92	92.16
15	Korea	0.92	91.92
16	United States	0.92	91.45
17	Israel	0.92	90.74
18	Austria	0.91	89.79
18	Slovenia	0.91	89.79
20	U.A.E.	0.91	89.55
21	Spain	0.90	86.46
22	France	0.90	86.22
23	Czech Republic	0.89	84.80
24	Italy	0.89	84.09
25	Greece	0.89	83.37
26	Poland	0.88	81.00
27	Saudi Arabia	0.87	79.57
28	Slovak Republic	0.86	76.48
29	Croatia	0.86	76.01
30	Chile	0.85	75.30
31	Hungary	0.85	74.58
32	Argentina	0.84	72.45
33	Türkiye	0.83	70.78
34	Russia	0.83	70.07
35	Oman	0.83	69.36
36	Kuwait	0.82	68.17
37	Malaysia	0.81	64.37
38	Thailand	0.80	63.42
39	Panama	0.80	63.18
40	Sri Lanka	0.78	58.19
41	Ukraine	0.78	57.01
42	China	0.76	54.39
42	Dominican Republic	0.76	54.39
44	Peru	0.76	53.92
45	Brazil	0.76	52.97
46	Colombia	0.76	52.49
46	Mexico	0.76	52.49
48	Egypt	0.73	47.27
49	South Africa	0.73	45.61
50	Jordan	0.72	44.66
51	Philippines	0.71	41.57
51	Vietnam	0.71	41.57
53	Indonesia	0.71	41.33
54	Morocco	0.68	34.20
55	Bangladesh	0.66	28.50
56	India	0.64	25.42
57	Guatemala	0.64	23.75
58	Cambodia	0.60	14.49
59	Kenya	0.58	10.21
60	Pakistan	0.54	1.90
61	Nigeria	0.54	0.00
-	Taiwan, China	-	-

3. Related Industries

3.2 Living Infrastructure

3.2.11 CO2 emission (2019)

Hard data: tonnes per capita

Rank	Country/ Region	Unit	Index
1	Kenya	0.31	100.00
2	Nigeria	0.48	99.24
3	Bangladesh	0.56	98.85
4	Cambodia	0.77	97.84
5	Pakistan	0.78	97.82
6	Sri Lanka	1.03	96.63
7	Guatemala	1.08	96.41
8	Philippines	1.25	95.61
9	Colombia	1.49	94.48
10	Peru	1.61	93.93
11	India	1.67	93.64
12	Morocco	1.81	92.98
13	Egypt	1.93	92.39
14	Brazil	1.95	92.33
15	Indonesia	2.11	91.56
16	Jordan	2.18	91.23
17	Dominican Republic	2.20	91.16
18	Vietnam	2.94	87.65
19	Panama	2.96	87.57
20	Sweden	3.27	86.11
21	Mexico	3.37	85.67
22	Argentina	3.61	84.51
23	Thailand	3.61	84.50
24	Croatia	3.77	83.74
25	Ukraine	3.84	83.44
26	Switzerland	4.16	81.95
27	France	4.34	81.11
28	Hungary	4.73	79.24
29	Chile	4.76	79.10
30	Denmark	4.87	78.58
31	Spain	4.94	78.25
32	United Kingdom	5.08	77.61
33	Italy	5.18	77.14
34	Greece	5.28	76.66
35	Slovak Republic	5.43	75.95
36	Hong Kong SAR	5.68	74.79
37	Slovenia	6.31	71.82
38	New Zealand	6.66	70.17
39	Israel	6.77	69.66
40	China	7.06	68.33
41	Austria	7.07	68.28
42	Malaysia	7.23	67.49
43	Finland	7.32	67.10
44	Poland	7.48	66.32
45	South Africa	7.53	66.08
46	Germany	7.77	64.98
47	Belgium	7.85	64.60
48	Singapore	7.92	64.28
49	Japan	8.31	62.44
50	Netherlands	8.41	61.95
51	Czech Republic	8.97	59.32
52	Taiwan, china	10.77	50.89
53	Korea	11.36	48.12
54	Russia	11.36	48.11
55	Oman	13.84	36.43
56	United States	14.44	33.62
57	Saudi Arabia	14.54	33.18
58	Canada	14.81	31.91
59	Australia	15.35	29.35
60	U.A.E.	18.21	15.95
61	Kuwait	21.60	0.00
-	Türkiye	-	-

3.2.12 Leisure, sports, and cultural facilities (2022)

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

Rank	Country/ Region	Unit	Index
1	Netherlands	8.75	100.00
2	Switzerland	8.64	97.57
3	Korea	8.50	94.63
4	Denmark	8.47	93.93
5	Finland	8.44	93.28
6	Japan	8.40	92.41
7	New Zealand	8.24	88.96
8	Sweden	8.22	88.62
9	Singapore	8.22	88.51
10	Canada	8.21	88.43
11	Austria	8.09	85.86
12	Czech Republic	8.08	85.67
13	United Kingdom	8.05	84.96
13	United States	8.05	84.96
15	Spain	8.01	84.20
16	Slovenia	8.00	83.88
17	France	7.95	82.83
18	Belgium	7.91	81.90
19	Israel	7.75	78.51
20	Hong Kong SAR	7.63	76.02
21	Taiwan, China	7.62	75.73
22	U.A.E.	7.60	75.28
23	Australia	7.56	74.52
24	Italy	7.53	73.81
25	Kuwait	7.53	73.73
26	Germany	7.46	72.24
27	Hungary	7.38	70.45
28	Argentina	7.27	68.17
29	Chile	7.16	65.75
30	Poland	7.12	65.00
31	Brazil	7.02	62.77
32	Thailand	6.95	61.38
33	Greece	6.91	60.52
34	China	6.87	59.51
35	Oman	6.85	59.25
36	Croatia	6.77	57.43
37	Malaysia	6.67	55.31
38	South Africa	6.56	52.87
39	Türkiye	6.48	51.15
40	Panama	6.44	50.38
41	India	6.36	48.66
42	Mexico	6.31	47.53
43	Peru	6.09	42.93
44	Dominican Republic	6.03	41.53
45	Colombia	6.00	40.90
45	Ukraine	6.00	40.90
45	Vietnam	6.00	40.90
48	Philippines	5.83	37.23
49	Morocco	5.78	36.12
50	Russia	5.75	35.52
51	Jordan	5.63	32.84
52	Sri Lanka	5.43	28.72
53	Egypt	5.41	28.31
54	Slovak Republic	5.29	25.60
55	Nigeria	5.02	19.88
56	Bangladesh	4.74	13.73
57	Cambodia	4.69	12.69
58	Kenya	4.63	11.34
59	Saudi Arabia	4.50	8.66
60	Indonesia	4.49	8.35
61	Pakistan	4.30	4.41
62	Guatemala	4.10	0.00

4. Business Context

4.1 Structure

4.1.1 Firms' decision process (2022)

Survey: firms decision processes are transparent.

Rank	Country/ Region	Unit	Index
1	Denmark	8.34	100.00
2	Sweden	8.27	98.94
3	Colombia	8.00	94.66
3	Netherlands	8.00	94.66
5	New Zealand	7.76	90.93
6	Finland	7.66	89.23
7	United Kingdom	7.64	89.02
8	Kuwait	7.56	87.64
9	Hong Kong SAR	7.52	87.15
10	Switzerland	7.48	86.51
11	Canada	7.48	86.47
12	Singapore	7.47	86.24
13	Austria	7.46	86.15
14	Peru	7.32	84.00
15	Australia	7.31	83.84
16	Jordan	7.15	81.21
17	Germany	7.13	80.85
18	Türkiye	7.02	79.24
19	Korea	7.00	78.88
19	Slovenia	7.00	78.88
21	United States	6.94	77.98
22	Chile	6.91	77.40
23	Hungary	6.90	77.30
24	France	6.88	77.00
25	Belgium	6.84	76.39
26	Greece	6.83	76.14
27	Oman	6.71	74.28
28	Czech Republic	6.67	73.62
29	Malaysia	6.63	72.96
30	Croatia	6.62	72.81
31	U.A.E.	6.56	71.94
32	South Africa	6.56	71.89
33	Taiwan,China	6.52	71.26
34	Japan	6.49	70.77
35	Spain	6.47	70.53
36	Italy	6.45	70.25
37	Nigeria	6.43	69.94
38	Mexico	6.34	68.44
39	Kenya	6.30	67.77
40	Argentina	6.29	67.66
41	Vietnam	6.29	67.61
42	Poland	6.16	65.66
43	Thailand	6.16	65.57
44	Philippines	6.12	65.03
45	India	6.04	63.76
46	Israel	6.00	63.10
46	Pakistan	6.00	63.10
48	Brazil	5.91	61.70
49	Sri Lanka	5.77	59.42
50	Dominican Republic	5.76	59.39
51	Egypt	5.65	57.54
52	China	5.61	56.91
53	Indonesia	5.49	54.99
54	Panama	5.41	53.82
55	Guatemala	5.33	52.59
56	Bangladesh	5.33	52.59
57	Morocco	5.21	50.61
58	Slovak Republic	4.92	46.11
59	Cambodia	4.62	41.33
60	Russia	4.50	39.44
61	Ukraine	4.00	31.55
62	Saudi Arabia	2.00	0.00

4.1.2 Firm's decision structure (2022)

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

Rank	Country/ region	Unit	Index
1	Finland	8.03	100.00
2	Israel	8.00	98.94
3	Canada	7.90	95.69
4	Denmark	7.84	93.48
5	Kenya	7.77	91.07
6	India	7.75	90.48
7	Argentina	7.69	88.53
8	Greece	7.67	87.90
9	Sweden	7.67	87.82
10	Kuwait	7.67	87.66
11	New Zealand	7.65	87.19
12	Hong Kong SAR	7.60	85.32
13	United Kingdom	7.59	84.92
14	Belgium	7.53	82.91
15	United States	7.51	82.50
16	Slovenia	7.50	82.02
17	Spain	7.49	81.52
18	Switzerland	7.48	81.47
19	Türkiye	7.39	78.17
20	Singapore	7.38	78.07
21	Vietnam	7.34	76.58
22	Peru	7.32	76.07
23	Jordan	7.27	74.15
24	Germany	7.21	72.15
25	Austria	7.11	68.85
26	Chile	7.06	67.28
27	Australia	7.06	67.03
28	France	7.02	65.90
29	Brazil	7.00	65.09
29	Colombia	7.00	65.09
29	Italy	7.00	65.09
29	Korea	7.00	65.09
29	Netherlands	7.00	65.09
34	Thailand	6.97	64.04
35	Taiwan, China	6.97	63.97
36	Egypt	6.89	61.23
37	Mexico	6.88	61.11
38	Panama	6.79	58.12
39	Guatemala	6.79	58.04
40	Malaysia	6.78	57.62
41	China	6.73	55.86
42	Hungary	6.70	54.94
43	Pakistan	6.68	54.40
44	Czech Republic	6.67	53.81
45	Philippines	6.51	48.58
46	U.A.E.	6.44	46.14
47	Nigeria	6.43	45.91
48	Dominican Republic	6.29	41.20
49	Poland	6.26	39.94
50	Oman	6.25	39.71
51	Indonesia	6.20	38.01
52	Sri Lanka	6.13	35.76
53	Russia	6.00	31.24
53	Saudi Arabia	6.00	31.24
53	Ukraine	6.00	31.24
56	South Africa	5.86	26.41
57	Bangladesh	5.83	25.60
58	Japan	5.78	23.72
59	Cambodia	5.56	16.35
60	Morocco	5.56	16.20
61	Croatia	5.38	10.41
62	Slovak Republic	5.08	0.00

4. Business Context

4.1 Structure

4.1.3 Unique brands (2022)

Survey: domestic firms develop their own international brands

Rank	Country/ Region	Unit	Index
1	Korea	8.00	100.00
2	Switzerland	7.81	94.47
3	United Kingdom	7.71	91.84
4	Denmark	7.68	90.78
5	Germany	7.58	88.10
6	Thailand	7.58	87.95
7	Sweden	7.57	87.76
8	Hong Kong SAR	7.54	86.76
9	Canada	7.50	85.71
10	Italy	7.38	82.14
11	Vietnam	7.30	80.10
12	Panama	7.29	79.83
13	Malaysia	7.27	79.07
14	Peru	7.24	78.38
15	Nigeria	7.21	77.46
16	Kuwait	7.17	76.19
17	Poland	7.15	75.68
18	New Zealand	7.14	75.40
19	United States	7.13	75.10
20	Türkiye	7.13	75.00
21	France	7.12	74.83
22	Singapore	7.07	73.33
23	India	7.06	73.02
24	Belgium	7.04	72.59
25	Hungary	7.00	71.43
25	Netherlands	7.00	71.43
27	Brazil	6.89	68.37
28	Japan	6.86	67.46
29	Dominican Republic	6.74	63.87
30	Australia	6.73	63.67
31	U.A.E.	6.72	63.43
32	Chile	6.72	63.39
33	Mexico	6.71	63.03
34	Austria	6.70	62.78
35	Kenya	6.68	62.34
36	Argentina	6.67	62.09
37	South Africa	6.66	61.76
38	Sri Lanka	6.66	61.67
39	Spain	6.65	61.47
40	Pakistan	6.64	61.28
41	Finland	6.53	58.04
42	Israel	6.50	57.14
42	Taiwan, China	6.50	57.14
44	Indonesia	6.49	56.73
45	China	6.35	52.81
46	Greece	6.09	45.34
47	Philippines	6.09	45.30
48	Bangladesh	6.07	44.84
48	Morocco	6.07	44.84
50	Colombia	6.00	42.86
50	Saudi Arabia	6.00	42.86
50	Ukraine	6.00	42.86
53	Egypt	5.80	37.14
54	Croatia	5.77	36.26
55	Jordan	5.68	33.77
56	Cambodia	5.56	30.29
57	Russia	5.50	28.57
58	Guatemala	5.44	26.98
59	Slovenia	5.00	14.29
60	Oman	4.94	12.50
61	Czech Republic	4.63	3.57
62	Slovak Republic	4.50	0.00

4.1.4 Equal treatment (2022)

Survey: foreign and domestic firms are treated equally

Rank	Country/ region	Unit	Index
1	Netherlands	9.00	100.00
2	United Kingdom	8.09	79.68
3	Denmark	8.06	79.03
4	Slovenia	8.00	77.78
5	Belgium	7.99	77.48
6	Canada	7.87	74.79
7	Sweden	7.74	71.90
8	Singapore	7.73	71.85
9	Germany	7.73	71.76
10	Switzerland	7.71	71.33
11	New Zealand	7.69	70.99
12	Spain	7.56	67.97
13	Panama	7.32	62.75
14	Poland	7.28	61.86
15	Taiwan, China	7.18	59.63
16	Austria	7.16	59.06
17	Jordan	7.14	58.59
18	Greece	7.13	58.45
19	United States	7.13	58.41
20	Peru	7.12	58.26
21	Czech Republic	7.08	57.41
22	Chile	7.08	57.29
23	Finland	7.06	56.94
24	Colombia	7.00	55.56
24	Israel	7.00	55.56
24	Korea	7.00	55.56
27	Australia	6.89	53.02
28	Italy	6.88	52.78
29	Türkiye	6.85	52.27
30	Hong Kong SAR	6.83	51.76
31	Nigeria	6.83	51.73
32	Croatia	6.81	51.28
33	Argentina	6.77	50.43
34	U.A.E.	6.64	47.56
35	Kuwait	6.56	45.68
36	Hungary	6.45	43.33
37	Oman	6.42	42.59
38	Sri Lanka	6.36	41.30
39	Guatemala	6.35	41.05
40	France	6.33	40.74
41	Kenya	6.14	36.36
42	Thailand	6.11	35.76
43	Japan	6.06	34.57
44	Cambodia	6.04	34.22
45	Mexico	6.03	33.99
46	Malaysia	6.01	33.59
47	Brazil	5.79	28.57
48	India	5.76	28.09
49	Slovak Republic	5.58	23.93
50	South Africa	5.54	23.17
51	Philippines	5.49	22.09
52	Vietnam	5.48	21.83
53	Pakistan	5.45	21.05
54	Morocco	5.33	18.52
55	China	5.29	17.58
56	Egypt	5.27	17.14
57	Dominican Republic	5.18	15.03
58	Russia	5.00	11.11
59	Bangladesh	4.81	6.79
60	Indonesia	4.64	3.17
61	Saudi Arabia	4.50	-
61	Ukraine	4.50	-

4. Business Context

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4.1.5. Global brands (2022)

Survey: firms are open to global best practices.

Rank	Country/ Region	Unit	Index
1	Sweden	8.49	100.00
2	Switzerland	8.21	89.24
3	Singapore	8.13	86.26
4	Germany	8.04	82.69
5	Colombia	8.00	81.06
5	Netherlands	8.00	81.06
7	Hong Kong SAR	7.85	75.11
8	Denmark	7.73	70.65
9	Philippines	7.73	70.33
10	Belgium	7.72	70.28
11	United Kingdom	7.67	68.24
12	Türkiye	7.65	67.31
13	Hungary	7.60	65.45
14	Chile	7.59	65.20
15	U.A.E.	7.59	65.06
16	Austria	7.58	64.63
17	Canada	7.58	64.55
18	New Zealand	7.53	62.63
19	Greece	7.52	62.39
20	France	7.46	60.15
21	United States	7.41	58.20
22	Thailand	7.39	57.28
23	Taiwan, China	7.38	56.99
24	China	7.36	55.97
25	Jordan	7.33	54.89
26	Guatemala	7.32	54.50
27	Nigeria	7.24	51.57
28	Argentina	7.21	50.29
29	Finland	7.16	48.13
30	Oman	7.15	47.72
31	Sri Lanka	7.11	46.26
32	Brazil	7.11	46.21
33	Poland	7.08	45.20
34	Kenya	7.08	45.14
35	Slovak Republic	7.08	45.03
36	South Africa	7.07	44.82
37	Egypt	7.06	44.33
37	Panama	7.06	44.33
39	Czech Republic	7.00	42.03
39	Israel	7.00	42.03
39	Korea	7.00	42.03
39	Kuwait	7.00	42.03
39	Slovenia	7.00	42.03
44	Spain	6.98	41.44
45	Dominican Republic	6.97	40.88
46	Japan	6.96	40.40
47	Mexico	6.94	39.74
48	Peru	6.88	37.28
49	Italy	6.86	36.54
50	India	6.78	33.36
51	Malaysia	6.77	32.95
52	Australia	6.76	32.55
53	Vietnam	6.70	30.18
54	Pakistan	6.68	29.71
55	Indonesia	6.60	26.42
56	Bangladesh	6.60	26.31
57	Russia	6.50	22.52
57	Saudi Arabia	6.50	22.52
57	Ukraine	6.50	22.52
60	Morocco	6.29	14.39
61	Cambodia	6.20	10.81
62	Croatia	5.92	0.00

4.1.6 Social value (2022)

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

Rank	Country/ region	Unit	Index
1	Finland	8.50	100.00
2	Netherlands	8.25	92.94
3	Switzerland	8.11	89.07
4	Canada	8.10	88.59
5	Denmark	7.95	84.46
6	Sweden	7.88	82.55
7	Malaysia	7.81	80.62
8	Germany	7.75	78.81
9	Argentina	7.73	78.27
10	Thailand	7.64	75.72
11	Austria	7.62	75.10
12	Brazil	7.59	74.27
13	Spain	7.57	73.83
14	Korea	7.50	71.75
15	India	7.49	71.36
16	Kuwait	7.44	70.18
17	Japan	7.40	68.93
18	Taiwan, China	7.37	67.98
19	Mexico	7.34	67.18
20	China	7.33	66.96
21	Panama	7.29	65.94
22	Peru	7.26	64.88
23	New Zealand	7.22	63.90
24	Nigeria	7.19	62.96
25	Jordan	7.14	61.48
26	Australia	7.12	61.06
27	Singapore	7.07	59.51
28	Chile	7.06	59.39
29	Hong Kong SAR	7.06	59.35
30	Philippines	7.03	58.33
31	Israel	7.00	57.63
32	Indonesia	6.97	56.82
33	Czech Republic	6.96	56.45
34	United Kingdom	6.92	55.41
35	Kenya	6.89	54.42
36	Dominican Republic	6.88	54.30
37	Greece	6.87	53.94
38	United States	6.86	53.79
39	South Africa	6.83	52.78
40	Vietnam	6.82	52.58
41	France	6.79	51.57
42	Belgium	6.67	48.33
43	Sri Lanka	6.57	45.39
44	Russia	6.50	43.50
44	Slovenia	6.50	43.50
46	Italy	6.42	41.30
47	Egypt	6.41	41.08
48	Guatemala	6.40	40.76
49	U.A.E.	6.32	38.42
50	Poland	6.22	35.49
51	Morocco	6.17	34.09
52	Bangladesh	6.13	32.91
53	Colombia	6.00	29.38
53	Saudi Arabia	6.00	29.38
55	Hungary	5.93	27.26
56	Türkiye	5.77	22.96
57	Oman	5.71	21.14
58	Pakistan	5.64	19.34
59	Slovak Republic	5.38	11.72
60	Croatia	5.08	3.30
61	Ukraine	5.00	1.13
62	Cambodia	4.96	0.00

4. Business Context

4.1 Structure

4.1.7 Ethical and legal practices (2022)

Survey: ethical practices are well implemented by firms.

Rank	Country/ Region	Unit	Index
1	Kuwait	8.22	100.00
2	Canada	8.21	99.72
3	Switzerland	8.10	96.70
4	Denmark	8.04	95.22
5	Korea	8.00	94.16
6	Sweden	7.91	91.84
7	Austria	7.88	91.05
8	India	7.79	88.69
9	Germany	7.75	87.59
10	Jordan	7.60	83.71
11	Malaysia	7.57	82.90
12	Hong Kong SAR	7.53	81.82
13	Japan	7.53	81.77
14	Netherlands	7.50	81.02
14	Slovenia	7.50	81.02
16	Türkiye	7.49	80.72
17	Singapore	7.48	80.58
18	Finland	7.44	79.38
19	China	7.35	77.03
20	Italy	7.34	76.92
21	New Zealand	7.32	76.28
22	Hungary	7.30	75.77
23	United Kingdom	7.26	74.64
24	Israel	7.25	74.45
24	Taiwan, China	7.25	74.45
26	Belgium	7.16	72.03
27	France	7.15	71.95
28	Australia	7.09	70.32
29	Panama	7.03	68.66
30	Brazil	6.98	67.41
31	United States	6.97	67.13
32	Philippines	6.83	63.40
33	Indonesia	6.81	62.86
34	Kenya	6.70	60.12
35	Mexico	6.69	59.77
36	Peru	6.68	59.49
37	Greece	6.65	58.74
38	Poland	6.62	57.94
39	Chile	6.61	57.62
40	Nigeria	6.59	57.08
41	Vietnam	6.58	56.93
42	Egypt	6.57	56.68
43	South Africa	6.57	56.62
44	Czech Republic	6.46	53.65
45	Oman	6.42	52.55
46	Thailand	6.40	52.20
47	Argentina	6.37	51.21
48	U.A.E.	6.32	50.01
49	Croatia	6.08	43.63
50	Saudi Arabia	6.00	41.61
50	Ukraine	6.00	41.61
52	Dominican Republic	5.82	36.97
53	Guatemala	5.81	36.50
54	Spain	5.43	26.53
55	Bangladesh	5.36	24.82
56	Morocco	5.17	19.71
57	Pakistan	5.11	18.09
58	Sri Lanka	5.10	17.96
59	Colombia	5.00	15.33
59	Russia	5.00	15.33
61	Cambodia	4.92	13.23
62	Slovak Republic	4.42	0.00

4.1.8 Health, safety, environmental concerns (2022)

Survey: firms adquetely address health, safety, and environment concerns.

Rank	Country/ region	Unit	Index
1	Netherlands	8.50	100.00
1	Sweden	8.50	100.00
3	Finland	8.41	97.79
4	Denmark	8.39	97.34
5	Canada	8.23	93.65
6	Germany	8.21	93.12
7	Kuwait	8.17	92.14
8	Japan	8.11	90.83
9	New Zealand	8.06	89.52
10	Slovenia	8.00	88.21
11	Belgium	7.86	84.79
12	Nigeria	7.74	82.18
13	United Kingdom	7.74	82.14
14	Chile	7.73	81.93
15	Austria	7.70	81.07
16	Switzerland	7.66	80.22
17	U.A.E.	7.65	79.95
18	Singapore	7.62	79.17
19	United States	7.54	77.43
20	Spain	7.51	76.76
21	Hong Kong SAR	7.49	76.13
22	Czech Republic	7.42	74.45
23	France	7.33	72.48
24	India	7.29	71.50
25	Hungary	7.10	66.98
26	Brazil	7.00	64.62
26	Colombia	7.00	64.62
26	Israel	7.00	64.62
26	Korea	7.00	64.62
26	Saudi Arabia	7.00	64.62
26	South Africa	7.00	64.62
32	Italy	6.95	63.52
33	Poland	6.93	63.03
34	Oman	6.92	62.66
34	Taiwan, China	6.92	62.66
36	Argentina	6.90	62.35
37	Thailand	6.84	60.94
38	Jordan	6.84	60.87
39	Vietnam	6.84	60.83
40	Malaysia	6.81	60.23
41	Sri Lanka	6.77	59.12
42	Kenya	6.59	54.97
43	Australia	6.56	54.35
44	Panama	6.56	54.22
45	Egypt	6.49	52.49
46	Morocco	6.46	51.85
47	Türkiye	6.45	51.76
48	Philippines	6.45	51.65
49	Mexico	6.41	50.75
50	Croatia	6.37	49.66
51	Peru	6.30	48.05
52	Slovak Republic	6.29	47.84
53	Greece	6.26	47.19
54	Indonesia	6.20	45.75
55	China	6.03	41.67
56	Russia	6.00	41.04
57	Guatemala	5.67	33.18
58	Dominican Republic	5.38	26.47
59	Pakistan	5.25	23.35
60	Ukraine	5.00	17.45
61	Bangladesh	4.54	6.64
62	Cambodia	4.26	0.00

4. Business Context

4.2 Rivalry

4.2.1 FDI openness (2021)

Hard data: FDI inflows as % of GDP

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	37.99	100.00
2	Singapore	25.73	73.36
3	Cambodia	13.03	45.78
4	South Africa	10.86	41.07
5	Israel	6.32	31.21
6	Vietnam	5.50	29.43
7	U.A.E.	4.94	28.22
8	Oman	4.90	28.14
9	Sweden	4.34	26.91
10	Belgium	4.33	26.90
11	Ukraine	4.21	26.63
12	Guatemala	4.13	26.45
13	Chile	4.04	26.26
14	Poland	3.71	25.55
15	Dominican Republic	3.31	24.68
16	Finland	3.19	24.41
17	Brazil	3.14	24.31
18	Malaysia	3.14	24.31
19	Panama	3.08	24.19
20	Hungary	3.02	24.05
21	Canada	3.00	24.00
22	Colombia	3.00	24.00
23	Greece	2.71	23.37
24	Philippines	2.71	23.37
25	Peru	2.71	23.37
26	Slovenia	2.53	22.99
27	Mexico	2.47	22.86
28	Saudi Arabia	2.32	22.53
29	Thailand	2.26	22.41
30	Russia	2.16	22.18
31	Czech Republic	2.05	21.94
32	Indonesia	1.69	21.17
33	Morocco	1.65	21.08
34	United States	1.59	20.94
35	Türkiye	1.55	20.86
36	New Zealand	1.48	20.70
37	Australia	1.46	20.66
38	India	1.41	20.55
39	Denmark	1.41	20.54
40	Argentina	1.36	20.44
41	Jordan	1.36	20.44
42	Egypt	1.26	20.23
43	Austria	1.22	20.15
44	Nigeria	1.06	19.78
45	China	1.05	19.76
46	Korea	0.94	19.52
47	Croatia	0.87	19.38
48	United Kingdom	0.86	19.36
49	Bangladesh	0.79	19.21
50	Germany	0.74	19.09
51	Sri Lanka	0.73	19.07
52	Pakistan	0.72	19.04
53	Spain	0.69	18.99
54	Taiwan, China	0.69	18.99
55	Japan	0.50	18.57
56	France	0.48	18.54
57	Kenya	0.42	18.40
58	Italy	0.41	18.37
59	Kuwait	0.14	17.80
60	Switzerland	0.12	17.76
61	Slovak Republic	0.05	17.60
62	Netherlands	(8.05)	0.00

4.2.2 Portfolio openness (2021)

Hard data: financial inflows as of % of GDP

Rank	Country/ region	Unit	Index
1	Hong Kong SAR	578.26	100.00
2	Singapore	421.63	72.91
3	Netherlands	245.84	42.51
4	Switzerland	223.29	38.61
5	Denmark	182.42	31.55
6	Belgium	168.24	29.09
7	Finland	158.80	27.46
8	Sweden	153.22	26.50
9	United Kingdom	143.70	24.85
10	Canada	131.15	22.68
11	France	111.40	19.26
12	Germany	107.67	18.62
13	Japan	102.49	17.72
14	Greece	100.82	17.44
15	Italy	99.93	17.28
16	Austria	91.23	15.78
17	Spain	75.97	13.14
18	Australia	75.22	13.01
19	United States	69.95	12.10
20	New Zealand	64.06	11.08
21	Chile	62.16	10.75
22	South Africa	53.40	9.23
23	Israel	52.04	9.00
24	Slovak Republic	50.02	8.65
25	Slovenia	46.16	7.98
26	Saudi Arabia	46.16	7.98
27	Korea	46.09	7.97
28	Malaysia	37.17	6.43
29	Panama	32.43	5.61
30	Colombia	24.81	4.29
31	Kuwait	19.59	3.39
32	Thailand	18.07	3.12
33	Argentina	16.56	2.86
34	Czech Republic	15.88	2.75
35	Croatia	13.77	2.38
36	Peru	13.62	2.36
37	Hungary	10.82	1.87
38	Philippines	9.28	1.61
39	Mexico	7.70	1.33
40	Russia	6.60	1.14
41	Poland	5.85	1.01
42	China	5.52	0.96
43	Brazil	3.25	0.56
44	Cambodia	3.04	0.53
45	Indonesia	2.08	0.36
46	Jordan	1.64	0.28
47	Morocco	0.92	0.16
48	Nigeria	0.67	0.12
49	Guatemala	0.50	0.09
50	Egypt	0.34	0.06
51	Ukraine	0.31	0.05
52	India	0.30	0.05
53	Türkiye	0.28	0.05
54	Dominican Republic	0.16	0.03
55	Pakistan	0.13	0.02
56	Kenya	0.12	0.02
-	Bangladesh	-	-
-	Sri Lanka	-	-
-	Oman	-	-
-	Taiwan, China	-	-
-	U.A.E.	-	-
-	Vietnam	-	-

4. Business Context

4.2 Rivalry

4.2.3 Goods openness (2021)

Hard data: import as % of GDP

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	181.97	100.00
2	Cambodia	113.97	60.14
3	Singapore	97.16	50.29
4	Vietnam	87.02	44.35
5	Slovak Republic	82.98	41.98
6	Hungary	70.06	34.41
7	U.A.E.	66.04	32.05
8	Slovenia	65.75	31.88
9	Belgium	62.81	30.15
10	Czech Republic	60.92	29.05
11	Netherlands	56.66	26.55
12	Malaysia	52.18	23.92
13	Poland	48.79	21.94
14	Thailand	45.59	20.06
15	Croatia	45.00	19.71
16	Jordan	42.04	17.98
17	Austria	41.41	17.61
18	Taiwan, China	40.35	16.99
19	Switzerland	40.24	16.93
20	Mexico	39.75	16.64
21	Morocco	36.06	14.48
22	Greece	36.05	14.47
23	Ukraine	34.86	13.77
24	Germany	32.61	12.45
25	Panama	32.02	12.10
26	Denmark	31.86	12.01
27	Oman	31.80	11.98
28	Korea	31.69	11.91
29	Sweden	28.99	10.33
30	Spain	28.17	9.85
31	Philippines	27.16	9.26
32	Guatemala	27.10	9.22
33	Finland	26.99	9.16
34	Chile	26.54	8.89
35	Dominican Republic	25.62	8.35
36	Canada	25.34	8.19
37	Italy	24.72	7.83
38	France	23.66	7.20
39	Kuwait	23.44	7.08
40	South Africa	21.77	6.10
41	Peru	21.64	6.02
42	United Kingdom	20.95	5.62
43	New Zealand	19.70	4.89
44	Pakistan	19.12	4.54
45	Sri Lanka	18.81	4.36
46	Israel	18.75	4.33
47	India	18.23	4.03
48	Colombia	18.04	3.91
49	Bangladesh	17.88	3.82
50	Egypt	17.55	3.62
51	Russia	17.09	3.36
52	Türkiye	17.06	3.34
53	Australia	16.59	3.06
54	Kenya	16.18	2.82
55	Indonesia	15.94	2.68
56	Brazil	15.39	2.36
57	China	14.96	2.11
58	Japan	14.84	2.04
59	United States	12.23	0.51
60	Argentina	12.17	0.47
61	Nigeria	11.37	0.00
-	Saudi Arabia	-	-

4.2.4 Services openness (2021)

Hard data: import as % of GDP

Rank	Country/ region	Unit	Index
1	Singapore	56.32	100.00
2	U.A.E.	23.86	39.85
3	Belgium	22.87	38.02
4	Denmark	20.41	33.45
5	Switzerland	19.77	32.26
6	Kuwait	18.09	29.16
7	Hong Kong SAR	16.72	26.61
8	Netherlands	16.03	25.33
9	Austria	13.92	21.43
10	Thailand	12.87	19.47
11	Sweden	12.42	18.64
12	Finland	12.14	18.12
13	Greece	12.13	18.10
14	Slovenia	11.44	16.84
15	Hungary	11.08	16.16
16	Oman	9.59	13.39
17	Malaysia	9.54	13.31
18	Slovak Republic	9.12	12.52
19	Jordan	9.10	12.49
20	Germany	9.06	12.42
21	Saudi Arabia	8.79	11.91
22	France	8.72	11.78
23	Czech Republic	8.71	11.77
24	Cambodia	7.80	10.09
25	United Kingdom	7.75	10.00
26	Croatia	7.69	9.88
27	Poland	7.25	9.06
28	Ukraine	7.21	8.99
29	Korea	6.87	8.35
30	Israel	6.74	8.12
31	Panama	6.70	8.05
32	Morocco	5.96	6.67
33	Egypt	5.72	6.23
34	Chile	5.66	6.11
35	Taiwan, China	5.66	6.11
36	Italy	5.54	5.89
37	New Zealand	5.45	5.73
38	Vietnam	5.30	5.45
39	Canada	5.29	5.44
40	Spain	5.21	5.29
41	Philippines	4.94	4.79
42	Guatemala	4.75	4.44
43	Dominican Republic	4.67	4.27
44	Peru	4.62	4.18
45	Colombia	4.50	3.96
46	India	4.34	3.67
47	Russia	4.27	3.53
48	Japan	4.22	3.44
49	Kenya	3.64	2.36
50	Nigeria	3.63	2.35
51	Türkiye	3.61	2.32
52	South Africa	3.24	1.63
53	Brazil	3.12	1.41
54	Mexico	3.05	1.28
55	Pakistan	2.82	0.85
56	Argentina	2.68	0.60
57	Australia	2.65	0.54
58	Bangladesh	2.61	0.47
59	Sri Lanka	2.60	0.44
60	China	2.48	0.21
61	Indonesia	2.41	0.09
62	United States	2.36	0.00

4.2.5 FDI openness (2021)

Hard data: FDI outflows as % of GDP

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	23.62	100.00
2	Singapore	12.30	56.42
3	Belgium	7.73	38.78
4	Denmark	5.68	30.90
5	U.A.E.	5.39	29.78
6	Canada	4.52	26.42
7	Chile	3.88	23.96
8	Russia	3.59	22.86
9	Germany	3.59	22.84
10	Thailand	3.43	22.23
11	Korea	3.38	22.04
12	United Kingdom	3.37	22.00
13	Sweden	3.27	21.62
14	Japan	2.96	20.43
15	Saudi Arabia	2.87	20.08
16	Netherlands	2.87	20.06
17	Kuwait	2.62	19.09
18	Austria	2.27	17.75
19	Israel	2.07	16.99
20	Czech Republic	1.97	16.60
21	United States	1.74	15.73
22	Hungary	1.59	15.15
23	Slovenia	1.54	14.94
24	Brazil	1.44	14.55
25	Finland	1.39	14.36
26	Taiwan, China	1.29	13.98
27	Malaysia	1.28	13.95
28	Colombia	1.07	13.14
29	China	0.84	12.24
30	Oman	0.79	12.05
31	Philippines	0.62	11.39
32	Türkiye	0.62	11.38
33	Italy	0.56	11.17
34	Australia	0.54	11.08
35	India	0.49	10.90
36	Greece	0.44	10.70
37	Morocco	0.39	10.51
38	Panama	0.35	10.36
39	Cambodia	0.35	10.34
40	Slovak Republic	0.34	10.31
41	Indonesia	0.30	10.18
42	Argentina	0.28	10.10
43	Nigeria	0.27	10.05
44	Guatemala	0.19	9.75
45	Croatia	0.19	9.73
46	Dominican Republic	0.16	9.64
47	Vietnam	0.11	9.42
48	Egypt	0.09	9.36
49	Peru	0.09	9.34
50	Pakistan	0.08	9.33
51	Jordan	0.03	9.14
52	Poland	0.03	9.11
53	Bangladesh	0.03	9.11
54	Sri Lanka	0.02	9.09
55	South Africa	0.01	9.03
56	Kenya	(0.03)	8.89
57	Mexico	(0.06)	8.79
58	France	(0.10)	8.64
59	Spain	(0.11)	8.57
60	Ukraine	(0.13)	8.52
61	New Zealand	(0.80)	5.94
62	Switzerland	(2.34)	0.00

4.2.6 Portfolio openness (2021)

Hard data: financial outflows as % of GDP

Rank	Country/ region	Unit	Index
1	Netherlands	284.14	100.00
2	Switzerland	231.42	81.45
3	Finland	179.99	63.35
4	Denmark	175.27	61.69
5	United Kingdom	163.06	57.39
6	Sweden	156.09	54.94
7	France	151.04	53.16
8	Hong Kong SAR	142.64	50.20
9	Belgium	126.30	44.45
10	United States	122.15	42.99
11	Canada	112.03	39.43
12	Australia	101.03	35.56
13	Austria	100.81	35.48
14	Spain	98.01	34.49
15	Singapore	92.14	32.43
16	Germany	89.79	31.60
17	Japan	83.47	29.38
18	Italy	73.24	25.77
19	New Zealand	71.93	25.31
20	Korea	54.72	19.26
21	Israel	52.34	18.42
22	South Africa	49.72	17.50
23	Malaysia	44.32	15.60
24	Panama	42.40	14.92
25	Chile	41.98	14.77
26	Slovenia	41.70	14.68
27	Mexico	39.97	14.07
28	Peru	37.45	13.18
29	Slovak Republic	35.06	12.34
30	Hungary	31.32	11.02
31	Dominican Republic	30.46	10.72
32	Thailand	30.25	10.64
33	Colombia	28.12	9.90
34	Czech Republic	27.30	9.61
35	Brazil	27.10	9.54
36	Saudi Arabia	24.99	8.80
37	Greece	24.43	8.60
38	Philippines	23.25	8.18
39	Indonesia	22.74	8.00
40	Jordan	22.13	7.79
41	Croatia	19.58	6.89
42	Poland	19.37	6.82
43	Ukraine	19.16	6.74
44	Sri Lanka	19.10	6.72
45	Russia	15.38	5.41
46	Kuwait	14.72	5.18
47	Egypt	12.79	4.50
48	Argentina	12.73	4.48
49	China	12.15	4.28
50	Türkiye	11.72	4.12
51	Morocco	10.21	3.59
52	Guatemala	9.20	3.24
53	India	8.96	3.15
54	Nigeria	7.46	2.62
55	Kenya	6.02	2.12
56	Pakistan	3.23	1.14
57	Bangladesh	1.86	0.65
58	Cambodia	-	-
-	Oman	-	-
-	Taiwan, China	-	-
-	U.A.E.	-	-
-	Vietnam	-	-

4.2.7 Goods openness (2021)

Hard data: export as % of GDP

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	182.79	100.00
2	Singapore	126.93	68.37
3	Vietnam	91.89	48.53
4	U.A.E.	85.63	44.99
5	Slovak Republic	82.15	43.02
6	Cambodia	72.21	37.39
7	Slovenia	67.48	34.71
8	Hungary	67.10	34.50
9	Netherlands	64.15	32.83
10	Belgium	63.66	32.55
11	Malaysia	63.20	32.29
12	Czech Republic	62.10	31.67
13	Switzerland	54.02	27.09
14	Thailand	53.47	26.78
15	Taiwan, China	51.52	25.68
16	Oman	50.56	25.13
17	Poland	48.77	24.12
18	Austria	41.37	19.93
19	Mexico	38.98	18.58
20	Kuwait	37.97	18.00
21	Germany	37.96	18.00
22	Korea	35.91	16.84
23	Denmark	35.58	16.65
24	Saudi Arabia	33.12	15.26
25	Sweden	32.92	15.14
26	Ukraine	31.56	14.37
27	Chile	29.87	13.42
28	South Africa	29.06	12.96
29	Peru	28.32	12.54
30	Finland	28.16	12.45
31	Russia	27.77	12.23
32	Italy	27.72	12.20
33	Türkiye	27.43	12.04
34	Croatia	26.72	11.64
35	Spain	26.52	11.52
36	Panama	25.93	11.19
37	Canada	25.50	10.94
38	Australia	22.28	9.12
39	Morocco	22.11	9.02
40	Greece	21.51	8.68
41	France	20.95	8.37
42	Jordan	20.46	8.09
43	Indonesia	19.57	7.58
44	China	18.17	6.79
45	New Zealand	17.98	6.69
46	Brazil	17.64	6.49
47	Argentina	16.01	5.57
48	Japan	15.16	5.09
49	Guatemala	14.44	4.68
50	Israel	14.34	4.63
51	United Kingdom	14.20	4.55
52	Philippines	13.76	4.30
53	Colombia	13.61	4.21
54	Dominican Republic	13.22	3.99
55	India	12.65	3.67
56	Sri Lanka	11.78	3.17
57	Nigeria	10.63	2.52
58	Bangladesh	10.07	2.21
59	Egypt	9.02	1.61
60	Pakistan	8.35	1.23
61	United States	7.56	0.79
62	Kenya	6.17	0.00

4.2.8 services openness (2021)

Hard data: export as % of GDP

Rank	Country/ region	Unit	Index
1	Singapore	57.90	100.00
2	Croatia	24.48	41.36
3	Denmark	23.28	39.26
4	Belgium	23.14	39.01
5	Hong Kong SAR	20.80	34.91
6	Greece	19.20	32.10
7	Netherlands	18.98	31.71
8	U.A.E.	18.18	30.32
9	Switzerland	17.31	28.79
10	Panama	16.89	28.05
11	Slovenia	16.14	26.72
12	Israel	15.08	24.87
13	Austria	14.52	23.88
14	Hungary	14.34	23.58
15	United Kingdom	13.74	22.51
16	Sweden	12.80	20.88
17	Poland	11.85	19.20
18	Finland	11.21	18.07
19	Morocco	10.81	17.38
20	Czech Republic	10.52	16.86
21	France	10.16	16.23
22	Jordan	9.85	15.70
23	Slovak Republic	9.67	15.37
24	Ukraine	9.20	14.54
25	Germany	9.08	14.34
26	Dominican Republic	8.54	13.39
27	Philippines	8.52	13.36
28	Spain	8.30	12.97
29	India	7.57	11.69
30	Türkiye	7.50	11.57
31	Kuwait	6.76	10.28
32	Korea	6.70	10.16
33	Taiwan, China	6.15	9.20
34	Malaysia	5.61	8.25
35	Egypt	5.42	7.92
36	Canada	5.21	7.55
37	Thailand	5.03	7.23
38	Italy	4.88	6.98
39	Kenya	4.58	6.44
40	New Zealand	3.93	5.31
41	Sri Lanka	3.56	4.65
42	Japan	3.44	4.45
43	United States	3.41	4.40
44	Guatemala	3.38	4.34
45	Russia	3.13	3.90
46	Australia	2.87	3.44
47	Colombia	2.57	2.91
48	Cambodia	2.44	2.69
49	South Africa	2.17	2.23
50	Mexico	2.14	2.16
51	Brazil	2.06	2.02
52	Oman	1.97	1.86
53	Argentina	1.94	1.81
54	China	1.91	1.76
55	Chile	1.88	1.71
56	Pakistan	1.87	1.69
57	Bangladesh	1.80	1.56
58	Peru	1.32	0.73
59	Saudi Arabia	1.24	0.58
60	Indonesia	1.18	0.48
61	Vietnam	1.00	0.17
62	Nigeria	0.91	0.00

5. (Unskilled) Workers

5.1 Quantity of Workers

5.1.1 Labor force (2021)

Hard data: 1000 persons

Rank	Country/ Region	Unit	Index
1	China	791,382.59	100.00
2	India	476,670.19	60.23
3	United States	164,796.73	20.82
4	Indonesia	138,119.19	17.45
5	Brazil	99,470.10	12.57
6	Pakistan	73,133.16	9.24
7	Russia	72,443.66	9.15
8	Bangladesh	70,961.07	8.97
9	Japan	68,629.36	8.67
10	Nigeria	65,115.67	8.23
11	Vietnam	56,202.81	7.10
12	Mexico	56,132.49	7.09
13	Philippines	44,242.10	5.59
14	Germany	43,967.64	5.55
15	Thailand	40,213.21	5.08
16	United Kingdom	34,637.45	4.38
17	Türkiye	32,554.21	4.11
18	France	31,132.29	3.93
19	Egypt	30,178.75	3.81
20	Korea	28,673.67	3.62
21	Colombia	26,137.05	3.30
22	Italy	25,011.71	3.16
23	Kenya	23,915.48	3.02
24	Spain	23,381.69	2.95
25	South Africa	22,397.60	2.83
26	Argentina	21,206.03	2.68
27	Canada	21,017.31	2.65
28	Ukraine	20,462.79	2.58
29	Peru	18,351.93	2.32
30	Poland	18,211.90	2.30
31	Malaysia	16,739.69	2.11
32	Saudi Arabia	16,059.72	2.03
33	Australia	13,786.25	1.74
34	Morocco	11,813.73	1.49
35	Netherlands	9,902.47	1.25
36	Cambodia	9,345.43	1.18
37	Chile	8,684.42	1.10
38	Sri Lanka	8,267.76	1.04
39	Guatemala	6,670.63	0.84
40	U.A.E.	6,073.64	0.77
41	Sweden	5,555.56	0.70
42	Czech Republic	5,266.40	0.66
43	Belgium	5,240.31	0.66
44	Dominican Republic	5,027.11	0.63
45	Switzerland	4,963.48	0.63
46	Hungary	4,910.19	0.62
47	Austria	4,660.82	0.59
48	Greece	4,619.07	0.58
49	Israel	4,186.24	0.53
50	Hong Kong SAR	3,841.87	0.48
51	Singapore	3,289.68	0.41
52	Denmark	3,050.67	0.38
53	New Zealand	2,910.97	0.37
54	Jordan	2,864.76	0.36
55	Finland	2,819.54	0.35
56	Slovak Republic	2,766.44	0.35
57	Kuwait	2,363.17	0.30
58	Oman	2,258.73	0.28
59	Panama	1,966.36	0.25
60	Croatia	1,742.28	0.22
61	Slovenia	1,035.82	0.13
-	Taiwan, China	-	-

5.1.2 Employment rate (2021)

Hard data: 1-unemployment rate

Rank	Country/ Region	Unit	Index
1	Cambodia	0.99	100.00
2	Thailand	0.99	97.55
3	Vietnam	0.98	95.28
4	Philippines	0.98	94.55
5	Japan	0.97	93.36
6	Czech Republic	0.97	93.09
7	Oman	0.97	92.38
8	U.A.E.	0.97	91.67
9	Poland	0.97	91.64
10	Korea	0.96	91.14
11	Germany	0.96	91.13
12	Guatemala	0.96	91.02
13	Singapore	0.96	90.86
14	Kuwait	0.96	90.58
15	Taiwan, China	0.96	89.72
16	Netherlands	0.96	89.69
17	Hungary	0.96	89.36
18	New Zealand	0.96	89.34
19	Pakistan	0.96	88.65
20	Mexico	0.96	88.57
21	Indonesia	0.96	88.46
22	Slovenia	0.96	88.43
23	United Kingdom	0.95	88.12
24	Malaysia	0.95	87.87
25	Denmark	0.95	87.29
26	China	0.95	87.24
27	Peru	0.95	87.19
28	Russia	0.95	86.65
29	Israel	0.95	86.55
30	Australia	0.95	86.34
31	Bangladesh	0.95	85.99
32	Hong Kong SAR	0.95	85.73
33	Switzerland	0.95	85.71
34	Sri Lanka	0.95	85.48
35	United States	0.95	85.27
36	Kenya	0.94	84.43
37	India	0.94	83.71
38	Austria	0.94	82.73
39	Belgium	0.94	82.37
40	Slovak Republic	0.93	81.40
41	Saudi Arabia	0.93	79.52
42	Canada	0.92	79.06
43	Finland	0.92	79.02
44	France	0.92	77.38
45	Dominican Republic	0.92	76.07
46	Sweden	0.91	75.57
47	Croatia	0.91	75.50
48	Ukraine	0.91	74.91
49	Chile	0.91	74.15
50	Egypt	0.91	73.54
51	Nigeria	0.90	72.15
52	Italy	0.90	72.01
53	Argentina	0.89	68.77
54	Morocco	0.89	67.05
55	Panama	0.88	65.17
56	Türkiye	0.87	61.23
57	Colombia	0.86	58.35
58	Brazil	0.86	58.14
59	Spain	0.85	57.14
60	Greece	0.85	56.95
61	Jordan	0.81	43.42
-	South Africa	-	-

5. (Unskilled) Workers

5.1 Quantity of Workers

5.1.3 Working hours (2021)

Hard data: per week

Rank	Country/ Region	Unit	Index
1	India	57.78	100.00
2	Bangladesh	55.35	91.69
3	Pakistan	50.17	74.00
4	Cambodia	50.13	73.85
5	Kenya	48.87	69.55
6	Vietnam	48.26	67.45
7	Jordan	47.52	64.93
8	Colombia	45.13	56.75
9	Thailand	44.92	56.03
10	Mexico	44.33	54.02
11	Egypt	41.63	44.80
12	Dominican Republic	40.54	41.07
13	Peru	40.19	39.87
14	Chile	39.91	38.90
15	Korea	39.90	38.86
16	Brazil	39.40	37.16
17	Greece	39.26	36.67
18	Russia	39.04	35.94
19	Croatia	38.23	33.16
20	Poland	38.13	32.82
21	Philippines	37.55	30.84
22	Italy	37.53	30.78
23	United States	37.31	30.03
24	New Zealand	36.04	25.68
25	Hungary	35.36	23.34
26	Canada	35.10	22.48
27	Belgium	34.62	20.83
28	Finland	34.61	20.80
29	Denmark	34.49	20.37
30	Spain	34.19	19.34
31	Germany	34.06	18.90
32	Czech Republic	34.01	18.73
33	Japan	33.48	16.92
34	Slovenia	33.26	16.16
35	Slovak Republic	32.98	15.22
36	Türkiye	32.76	14.45
37	Switzerland	31.94	11.67
38	United Kingdom	31.20	9.11
39	Sweden	30.09	5.33
40	France	30.06	5.24
41	Australia	30.05	5.20
42	Israel	29.86	4.55
43	Netherlands	29.51	3.35
44	Austria	28.53	0.00
-	Argentina	-	-
-	China	-	-
-	Guatemala	-	-
-	Hong Kong SAR	-	-
-	Indonesia	-	-
-	Oman	-	-
-	Kuwait	-	-
-	Malaysia	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Panama	-	-
-	Saudi Arabia	-	-
-	Singapore	-	-
-	South Africa	-	-
-	Sri Lanka	-	-
-	Taiwan, China	-	-
-	U.A.E.	-	-
-	Ukraine	-	-

5.1.4 Monthly compensation for manufacturing workers (202

Hard data: US$

Rank	Country/ Region	Unit	Index
1	Nigeria	110.47	100.00
2	Kenya	130.61	99.72
3	Pakistan	135.02	99.66
4	Bangladesh	141.93	99.57
5	Egypt	167.30	99.22
6	Sri Lanka	169.21	99.19
7	India	193.41	98.85
8	Cambodia	252.31	98.04
9	Philippines	285.52	97.58
10	Dominican Republic	292.03	97.49
11	Guatemala	301.25	97.37
12	Colombia	317.28	97.14
13	Mexico	376.73	96.32
14	Peru	422.82	95.69
15	Jordan	432.36	95.56
16	Brazil	459.51	95.18
17	Thailand	463.04	95.13
18	Ukraine	492.26	94.73
19	Argentina	578.74	93.53
20	Malaysia	604.74	93.17
21	Panama	726.72	91.49
22	Chile	802.87	90.44
23	Türkiye	804.27	90.42
24	Greece	982.85	87.95
25	China	999.68	87.72
26	Hungary	1,172.92	85.33
27	Croatia	1,254.33	84.21
28	Poland	1,273.76	83.94
29	Saudi Arabia	1,562.88	79.94
30	Italy	2,466.00	67.47
31	France	2,593.89	65.71
32	Slovenia	2,640.17	65.07
33	Japan	2,686.91	64.42
34	Spain	3,410.40	54.43
35	Israel	3,433.17	54.12
36	United Kingdom	3,466.67	53.66
37	Singapore	3,644.26	51.20
38	New Zealand	3,663.02	50.94
39	Finland	4,060.51	45.46
40	Sweden	4,114.95	44.70
41	Australia	4,350.65	41.45
42	United States	5,160.84	30.26
43	Austria	5,410.77	26.81
44	Denmark	6,115.97	17.07
45	Netherlands	6,195.09	15.98
46	Germany	6,375.03	13.50
47	Belgium	7,346.54	0.08
48	Switzerland	7,352.39	0.00
-	Canada	-	-
-	Czech Republic	-	-
-	Hong Kong SAR	-	-
-	Indonesia	-	-
-	Oman	-	-
-	Korea	-	-
-	Kuwait	-	-
-	Morocco	-	-
-	Russia	-	-
-	Slovak Republic	-	-
-	South Africa	-	-
-	Taiwan, China	-	-
-	U.A.E.	-	-
-	Vietnam	-	-

5. (Unskilled) Workers

5.2 Quality of Workers

5.2.1 Literacy rate (2020)

Hard data: %

Rank	Country/ Region	Unit	Index
1	Russia	99.73	100.00
2	Ukraine	99.70	99.93
3	Slovenia	99.68	99.88
4	Italy	99.35	99.09
5	Poland	99.32	99.02
6	Argentina	99.00	98.26
7	Australia	99.00	98.25
7	Austria	99.00	98.25
7	Belgium	99.00	98.25
7	Canada	99.00	98.25
7	Czech Republic	99.00	98.25
7	Denmark	99.00	98.25
7	Finland	99.00	98.25
7	France	99.00	98.25
7	Germany	99.00	98.25
7	Hong Kong SAR	99.00	98.25
7	Japan	99.00	98.25
7	Korea	99.00	98.25
7	Netherlands	99.00	98.25
7	New Zealand	99.00	98.25
7	Slovak Republic	99.00	98.25
7	Sweden	99.00	98.25
7	Switzerland	99.00	98.25
7	United Kingdom	99.00	98.25
7	United States	99.00	98.25
26	Hungary	98.90	98.01
27	Croatia	98.75	97.65
28	Spain	98.59	97.28
29	Taiwan, China	98.50	97.05
30	Jordan	98.23	96.40
31	Greece	97.94	95.70
32	Saudi Arabia	97.59	94.86
33	China	97.15	93.82
34	Singapore	97.13	93.77
35	Türkiye	96.74	92.84
36	Kuwait	96.46	92.16
37	Philippines	96.28	91.73
38	Chile	96.00	91.06
39	Indonesia	96.00	91.06
40	Vietnam	95.75	90.47
41	Panama	95.74	90.43
42	Oman	95.65	90.23
43	Colombia	95.64	90.19
44	Mexico	95.25	89.26
45	U.A.E.	95.23	89.22
46	South Africa	95.02	88.72
47	Malaysia	94.97	88.60
48	Peru	94.50	87.46
49	Dominican Republic	93.78	85.74
50	Thailand	93.77	85.71
51	Brazil	93.23	84.42
52	Sri Lanka	92.38	82.39
53	Kenya	81.53	56.40
54	Guatemala	80.81	54.66
55	Cambodia	76.77	44.98
56	Bangladesh	74.91	40.52
57	India	74.37	39.24
58	Morocco	73.75	37.74
59	Egypt	71.17	31.56
60	Nigeria	62.02	9.63
61	Pakistan	58.00	0.00
-	Israel	-	-

5.2.2 Aittude & motivation (2022)

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

Rank	Country/ Region	Unit	Index
1	Korea	9.00	100.00
2	Kuwait	8.58	87.10
3	Denmark	8.31	78.53
4	Germany	8.29	78.08
5	Netherlands	8.25	76.79
6	Switzerland	8.13	73.04
7	Sweden	8.11	72.59
8	Canada	8.10	72.02
9	Japan	8.03	69.93
10	Colombia	8.00	69.05
10	Israel	8.00	69.05
10	Saudi Arabia	8.00	69.05
10	Ukraine	8.00	69.05
14	Austria	7.96	67.83
15	Singapore	7.93	66.98
16	New Zealand	7.90	66.04
17	United Kingdom	7.88	65.29
18	Malaysia	7.86	64.73
19	Finland	7.84	64.21
20	Mexico	7.79	62.68
21	Argentina	7.75	61.31
22	China	7.74	61.03
23	Czech Republic	7.71	60.02
24	India	7.69	59.59
25	United States	7.56	55.34
26	Belgium	7.54	54.79
27	Türkiye	7.53	54.63
28	Taiwan, China	7.53	54.60
29	Russia	7.50	53.57
29	Slovenia	7.50	53.57
31	Hong Kong SAR	7.48	52.82
32	Poland	7.47	52.73
33	Australia	7.46	52.24
34	Philippines	7.45	52.06
35	Guatemala	7.44	51.85
36	Chile	7.41	50.67
37	Jordan	7.36	49.35
37	Kenya	7.36	49.35
39	Italy	7.34	48.74
40	Peru	7.31	47.72
41	Panama	7.29	47.20
42	Croatia	7.25	45.83
43	Nigeria	7.24	45.66
44	Greece	7.22	44.82
45	Sri Lanka	7.16	43.00
46	Hungary	7.15	42.74
47	Brazil	7.09	40.86
48	Indonesia	7.00	38.10
49	Spain	6.99	37.64
50	Dominican Republic	6.94	36.27
51	Oman	6.94	36.16
52	Thailand	6.88	34.23
53	Pakistan	6.87	34.02
54	Vietnam	6.86	33.67
55	France	6.83	32.94
56	Bangladesh	6.74	29.93
57	Egypt	6.63	26.6
58	U.A.E.	6.56	24.5
59	Morocco	6.38	18.8
60	Cambodia	6.12	10.9
61	South Africa	6.03	8.0
62	Slovak Republic	5.77	0.0

5. (Unskilled) Workers

5.2 Quality of Workers

5.2.3 Education (2022)

Survey: low-skilled workers are educated.

Rank	Country/ Region	Unit	Index
1	Singapore	8.80	100.00
2	Netherlands	8.50	93.06
3	Kuwait	8.47	92.41
4	Sweden	8.29	88.10
5	Denmark	8.10	83.91
6	Switzerland	8.06	82.79
7	Belgium	7.95	80.26
8	Canada	7.92	79.70
9	Germany	7.90	79.07
10	Taiwan, China	7.88	78.78
11	Israel	7.75	75.69
11	Slovenia	7.75	75.69
13	Japan	7.74	75.53
14	Poland	7.66	73.50
15	Austria	7.59	72.04
16	Colombia	7.50	69.91
16	Korea	7.50	69.91
16	Saudi Arabia	7.50	69.91
19	Hungary	7.45	68.75
20	Spain	7.43	68.21
21	Argentina	7.40	67.68
22	Greece	7.39	67.39
23	France	7.32	65.77
24	Jordan	7.30	65.17
25	New Zealand	7.29	65.08
26	Australia	7.24	63.96
27	Nigeria	7.22	63.48
28	United States	7.13	61.31
29	Hong Kong SAR	7.12	61.16
30	China	7.04	59.37
31	Czech Republic	7.00	58.33
32	Türkiye	6.98	57.81
33	U.A.E.	6.92	56.40
35	Italy	6.89	55.80
36	Malaysia	6.88	55.64
37	Philippines	6.84	54.52
38	India	6.81	53.83
39	Kenya	6.80	53.60
40	Croatia	6.77	52.99
41	Peru	6.75	52.55
41	Russia	6.75	52.55
43	Panama	6.72	51.87
44	Vietnam	6.68	50.89
45	Mexico	6.66	50.50
46	Brazil	6.57	48.41
47	Thailand	6.52	47.12
48	Slovak Republic	6.44	45.42
49	Morocco	6.13	38.08
50	Dominican Republic	6.00	35.19
51	Indonesia	5.97	34.52
52	South Africa	5.59	25.60
53	Guatemala	5.50	23.61
54	Egypt	5.34	19.97
55	Pakistan	5.05	13.26
56	Bangladesh	4.99	11.72
57	Cambodia	4.48	0.00
-	Chile	6.94	-
-	Finland	7.97	-
-	Oman	6.92	56.40
-	Sri Lanka	6.60	-
-	Ukraine	7.00	-
-	United Kingdom	7.76	-

5.2.4 Openness of labor market (2022)

Survey: the labor market is open to foreign workers.

Rank	Country/ Region	Unit	Index
1	Kuwait	8.47	100.00
2	Belgium	8.38	97.70
3	Denmark	8.26	94.55
4	Hong Kong SAR	8.07	89.85
5	Colombia	8.00	87.99
6	Poland	7.82	83.53
7	Netherlands	7.75	81.64
7	Sweden	7.75	81.64
9	United States	7.72	80.91
10	United Kingdom	7.66	79.27
11	Spain	7.62	78.27
12	Chile	7.61	78.15
13	New Zealand	7.60	77.75
14	Switzerland	7.60	77.74
15	Singapore	7.58	77.40
16	Czech Republic	7.50	75.28
17	Türkiye	7.33	70.84
18	Australia	7.32	70.74
19	Taiwan, China	7.32	70.62
20	Canada	7.29	69.94
21	Austria	7.24	68.59
22	Thailand	7.16	66.54
23	Germany	7.15	66.27
24	Nigeria	7.13	65.74
25	Vietnam	7.11	65.39
26	Peru	7.09	64.97
27	Brazil	7.09	64.84
28	Malaysia	7.06	64.01
29	Kenya	7.03	63.43
30	Hungary	6.93	60.66
31	Bangladesh	6.86	59.03
32	India	6.72	55.50
33	Argentina	6.71	55.23
34	U.A.E.	6.70	54.94
35	Cambodia	6.66	53.92
36	Mexico	6.54	50.97
37	Guatemala	6.50	49.85
37	Slovenia	6.50	49.85
39	Oman	6.38	46.67
40	Dominican Republic	6.32	45.36
41	Indonesia	6.19	42.04
42	France	6.10	39.56
43	Sri Lanka	6.03	37.99
44	Panama	6.01	37.51
45	Finland	6.00	37.14
46	Philippines	5.98	36.52
47	Greece	5.83	32.72
48	Japan	5.54	25.48
49	Jordan	5.53	25.29
50	Korea	5.50	24.42
50	Ukraine	5.50	24.42
52	Croatia	5.46	23.45
53	South Africa	5.31	19.70
54	Italy	5.28	18.86
55	Israel	5.25	18.07
55	Morocco	5.25	18.07
57	Slovak Republic	5.17	15.95
58	Russia	5.00	11.71
58	Saudi Arabia	5.00	11.71
60	China	4.99	11.48
61	Egypt	4.96	10.62
62	Pakistan	4.54	-

5. (Unskilled) Workers

5.2 Quality of Workers

5.2.5 Management labor relationship (2022)

ırvey: the relationship between workers and managers is cooperati

Rank	Country/ Region	Unit	Index
1	Netherlands	8.50	100.00
2	Kuwait	8.33	95.83
3	Sweden	8.29	94.64
4	Finland	8.19	92.19
5	Canada	7.96	86.54
6	Italy	7.83	83.20
7	Switzerland	7.81	82.86
8	Denmark	7.81	82.66
9	Thailand	7.78	82.03
10	Poland	7.62	78.04
11	Singapore	7.62	77.92
12	Spain	7.60	77.57
13	Nigeria	7.60	77.50
13	Taiwan, China	7.60	77.50
15	France	7.55	76.19
16	Belgium	7.51	75.33
17	Austria	7.50	75.00
18	Germany	7.48	74.48
19	New Zealand	7.42	72.92
20	Türkiye	7.39	72.16
21	Australia	7.31	70.36
22	India	7.31	70.14
23	Japan	7.22	68.06
24	Brazil	7.18	66.96
25	United Kingdom	7.17	66.79
26	Vietnam	7.14	66.07
27	Panama	7.09	64.71
28	Guatemala	7.08	64.58
29	Philippines	7.06	64.06
30	Hong Kong SAR	7.05	63.72
31	Hungary	7.00	62.50
31	Korea	7.00	62.50
31	Mexico	7.00	62.50
31	Slovenia	7.00	62.50
35	Malaysia	6.93	60.80
36	Czech Republic	6.92	60.42
37	Kenya	6.84	58.52
38	United States	6.77	56.79
39	Argentina	6.71	55.29
40	Indonesia	6.70	55.00
41	Chile	6.69	54.69
42	China	6.68	54.46
43	Dominican Republic	6.59	52.21
44	Jordan	6.34	46.02
45	Greece	6.30	45.11
46	U.A.E.	6.28	44.50
47	Croatia	6.23	43.27
48	Sri Lanka	6.17	41.67
49	Colombia	6.00	37.50
49	Israel	6.00	37.50
49	Saudi Arabia	6.00	37.50
49	Ukraine	6.00	37.50
53	South Africa	5.94	36.07
54	Morocco	5.89	34.72
55	Oman	5.71	30.21
56	Egypt	5.66	28.93
57	Pakistan	5.64	28.62
58	Peru	5.51	25.34
59	Bangladesh	5.36	21.53
60	Cambodia	5.28	19.50
61	Slovak Republic	4.85	8.65
62	Russia	4.50	-

6. Policymakers &. Administrators

6.1 Policymakers

6.1.1 The process of legislature (2022)

Survey: the process of national legislature is active

Rank	Country/ Region	Unit	Index
1	Sweden	8.26	100.00
2	India	8.19	98.67
3	Panama	7.84	91.90
4	Denmark	7.73	89.91
5	Singapore	7.72	89.59
6	United Kingdom	7.64	88.19
7	Egypt	7.54	86.29
8	New Zealand	7.54	86.27
9	Korea	7.50	85.47
9	Netherlands	7.50	85.47
11	Poland	7.39	83.42
12	Taiwan, China	7.34	82.53
13	United States	7.31	81.95
14	Canada	7.29	81.46
15	France	7.24	80.50
16	Chile	7.22	80.13
17	Indonesia	7.21	80.05
18	Nigeria	7.21	79.99
19	Mexico	7.18	79.33
20	Italy	7.17	79.24
21	Austria	7.16	78.98
22	Dominican Republic	7.12	78.21
23	Kuwait	7.11	78.09
24	Spain	7.03	76.54
25	Colombia	7.00	75.98
25	Hong Kong SAR	7.00	75.98
25	Slovenia	7.00	75.98
28	Japan	6.99	75.71
29	China	6.97	75.47
30	Belgium	6.92	74.48
31	Australia	6.89	73.81
32	Pakistan	6.84	72.98
33	Malaysia	6.84	72.89
34	Thailand	6.78	71.82
35	Philippines	6.74	71.11
36	Cambodia	6.74	71.04
37	Brazil	6.73	70.89
38	Jordan	6.73	70.80
38	Kenya	6.73	70.80
40	Germany	6.67	69.65
41	Peru	6.62	68.79
42	Bangladesh	6.56	67.54
43	Czech Republic	6.50	66.48
43	Russia	6.50	66.48
43	Ukraine	6.50	66.48
46	Oman	6.46	65.69
47	Morocco	6.42	64.90
48	Hungary	6.35	63.63
49	South Africa	6.34	63.50
50	U.A.E.	6.32	63.06
51	Vietnam	6.25	61.73
52	Türkiye	6.17	60.22
53	Switzerland	6.13	59.43
54	Israel	6.00	56.98
54	Slovak Republic	6.00	56.98
56	Finland	5.88	54.61
57	Greece	5.87	54.51
58	Argentina	5.75	52.23
59	Sri Lanka	5.58	49.07
60	Guatemala	5.03	38.52
61	Croatia	4.27	24.11
62	Saudi Arabia	3.00	0.00

6.1.2 The result of legislation (2022)

Survey: the political system is stable and effective

Rank	Country/ Region	Unit	Index
1	Netherlands	9.00	100.00
2	Denmark	8.66	91.42
3	Canada	8.62	90.26
4	Switzerland	8.59	89.58
5	Singapore	8.57	89.02
6	New Zealand	8.31	82.41
7	Slovenia	8.25	81.00
8	Finland	8.19	79.42
9	Sweden	8.17	79.01
10	U.A.E.	8.17	78.97
11	Austria	8.04	75.67
12	Hong Kong SAR	8.00	74.67
12	Israel	8.00	74.67
12	Korea	8.00	74.67
12	Russia	8.00	74.67
16	Germany	7.96	73.61
17	India	7.69	66.93
17	Japan	7.69	66.93
19	Kuwait	7.61	64.81
20	Australia	7.60	64.53
21	China	7.59	64.26
22	Malaysia	7.54	63.03
23	United States	7.49	61.82
24	United Kingdom	7.44	60.55
25	Chile	7.41	59.63
26	Belgium	7.39	59.33
27	Spain	7.38	59.02
28	Panama	7.34	57.90
29	Taiwan, China	7.28	56.51
30	Czech Republic	7.25	55.67
31	Oman	7.17	53.56
32	Cambodia	7.10	51.87
33	Vietnam	7.04	50.24
34	Jordan	7.01	49.62
35	Colombia	7.00	49.33
35	Saudi Arabia	7.00	49.33
37	Philippines	6.93	47.48
38	Morocco	6.85	45.46
39	France	6.81	44.51
40	Egypt	6.79	44.12
41	Argentina	6.75	43.00
42	Hungary	6.68	41.10
43	Indonesia	6.66	40.83
44	Brazil	6.54	37.57
45	Greece	6.41	34.46
46	Peru	6.35	32.90
47	Poland	6.32	32.22
48	Mexico	6.31	31.82
49	Türkiye	6.31	31.77
50	Kenya	6.26	30.62
51	Bangladesh	6.13	27.17
52	Croatia	6.00	24.00
52	Ukraine	6.00	24.00
54	Dominican Republic	5.97	23.25
55	Sri Lanka	5.93	22.10
56	South Africa	5.91	21.83
57	Nigeria	5.91	21.75
58	Thailand	5.81	19.25
59	Italy	5.56	12.92
60	Slovak Republic	5.55	12.60
61	Guatemala	5.54	12.39
62	Pakistan	5.05	0.00

6. Policymakers &. Administrators

6.1 Policymakers

6.1.3 Ethics (e.g., bribery and corruption) (2022)

Survey: bribery and corruption among politicians are not serious.

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	9.00	100.00
2	Switzerland	8.69	94.80
3	Sweden	8.47	91.02
4	Denmark	8.38	89.46
5	Canada	8.06	84.04
6	New Zealand	8.00	83.02
6	Ukraine	8.00	83.02
8	U.A.E.	7.86	80.64
9	Finland	7.59	76.12
10	Singapore	7.50	74.53
11	Germany	7.46	73.82
12	Kuwait	7.25	70.28
13	Austria	7.13	68.27
14	United Kingdom	7.06	67.01
15	Japan	7.04	66.75
16	Oman	6.94	64.98
17	Chile	6.69	60.73
18	Belgium	6.61	59.33
19	Türkiye	6.27	53.69
20	India	6.26	53.42
21	Argentina	6.23	52.98
22	Poland	6.11	50.89
23	Jordan	6.09	50.60
24	Australia	6.09	50.51
25	Israel	6.00	49.06
26	France	5.99	48.85
27	Spain	5.97	48.56
28	Peru	5.95	48.14
29	Malaysia	5.93	47.90
30	Panama	5.88	47.06
31	United States	5.73	44.45
32	Egypt	5.66	43.31
33	Netherlands	5.50	40.57
34	Italy	5.45	39.77
35	Czech Republic	5.42	39.15
36	Hungary	5.35	38.02
37	Sri Lanka	5.27	36.60
38	Taiwan, China	5.20	35.47
39	China	5.17	34.96
40	Kenya	5.05	32.85
41	Mexico	5.04	32.82
42	Morocco	5.03	32.55
43	Korea	5.00	32.08
43	Russia	5.00	32.08
43	Saudi Arabia	5.00	32.08
46	Vietnam	4.93	30.86
47	Philippines	4.93	30.83
48	Croatia	4.62	25.54
49	Greece	4.61	25.43
50	Dominican Republic	4.59	25.08
51	Slovenia	4.50	23.58
52	Nigeria	4.49	23.40
53	Brazil	4.43	22.37
54	Thailand	4.28	19.87
55	Indonesia	4.19	18.25
56	Pakistan	4.17	18.00
57	Guatemala	3.96	14.39
58	Bangladesh	3.74	10.61
59	South Africa	3.73	10.49
60	Cambodia	3.68	9.66
61	Slovak Republic	3.11	0.00
-	Colombia	-	-

6.1.4 Education level (2022)

Survey: politicians are well educated.

Rank	Country/ Region	Unit	Index
1	Japan	8.07	100.00
2	Singapore	7.98	97.07
3	United Kingdom	7.86	92.96
4	Netherlands	7.75	89.47
5	Finland	7.72	88.46
6	Switzerland	7.71	88.16
7	New Zealand	7.53	82.24
8	France	7.50	81.34
8	Korea	7.50	81.34
8	Slovenia	7.50	81.34
11	Canada	7.44	79.46
12	Argentina	7.38	77.59
13	Taiwan, China	7.36	76.85
14	Austria	7.35	76.37
15	Sweden	7.22	72.25
16	Kuwait	7.17	70.49
17	United States	7.10	68.33
18	China	7.08	67.69
19	Denmark	7.06	67.17
20	Belgium	7.04	66.36
21	Jordan	7.02	65.83
22	Hong Kong SAR	7.00	65.07
22	Saudi Arabia	7.00	65.07
24	U.A.E.	6.96	63.77
25	Spain	6.94	63.16
26	Hungary	6.93	62.63
27	Chile	6.88	61.00
28	Czech Republic	6.63	52.87
29	Oman	6.60	52.19
30	Vietnam	6.57	51.13
31	Egypt	6.54	50.20
32	Kenya	6.52	49.56
33	Israel	6.50	48.80
33	Russia	6.50	48.80
35	Germany	6.46	47.45
36	Brazil	6.45	47.06
37	Australia	6.39	45.09
38	Bangladesh	6.33	43.38
39	Panama	6.31	42.58
40	Italy	6.22	39.65
40	Thailand	6.22	39.65
42	Mexico	6.18	38.28
43	Poland	6.11	36.05
44	Nigeria	6.04	33.98
45	India	6.01	32.99
46	Ukraine	6.00	32.54
47	Philippines	5.98	31.74
48	Pakistan	5.95	30.82
49	Indonesia	5.90	29.28
50	Malaysia	5.86	28.00
51	Croatia	5.81	26.28
52	Morocco	5.79	25.76
53	Greece	5.78	25.46
54	Cambodia	5.72	23.43
55	Türkiye	5.68	22.18
56	Sri Lanka	5.53	17.10
57	Guatemala	5.51	16.72
58	Peru	5.49	15.83
59	Slovak Republic	5.42	13.56
60	Dominican Republic	5.32	10.53
61	South Africa	5.01	0.46
62	Colombia	5.00	0.00

6. Policymakers &. Administrators

6.1 Policymakers

6.1.5 International experience (2022)

Survey: politicians have a lot of international experience.

Rank	Country/ Region	Unit	Index
1	Sweden	7.21	100.00
2	Switzerland	7.18	99.20
3	Denmark	7.10	96.94
4	Israel	7.00	94.23
4	Netherlands	7.00	94.23
6	Austria	6.84	89.81
7	U.A.E.	6.80	88.63
8	United Kingdom	6.67	85.03
9	Belgium	6.59	82.81
10	France	6.38	76.89
11	Vietnam	6.32	75.22
12	Germany	6.04	67.38
13	Korea	6.00	66.22
13	Russia	6.00	66.22
13	Slovenia	6.00	66.22
16	Finland	5.91	63.59
17	Kenya	5.86	62.40
18	Singapore	5.85	62.01
19	Poland	5.80	60.54
20	New Zealand	5.72	58.44
21	Australia	5.66	56.61
22	Chile	5.66	56.59
23	Argentina	5.62	55.44
24	Morocco	5.58	54.54
24	Taiwan, China	5.58	54.54
26	India	5.56	53.77
27	Peru	5.51	52.59
28	Spain	5.50	52.21
28	Ukraine	5.50	52.21
30	Nigeria	5.44	50.65
31	Canada	5.38	48.85
32	Jordan	5.36	48.39
33	United States	5.31	47.01
34	Czech Republic	5.25	45.21
34	Hungary	5.25	45.21
36	Malaysia	5.24	45.04
37	Kuwait	5.22	44.43
38	Panama	5.21	43.97
39	China	5.16	42.70
40	Pakistan	5.12	41.52
41	Japan	5.11	41.32
42	Oman	5.10	41.12
43	Brazil	5.07	40.20
44	Indonesia	5.06	39.80
45	Thailand	5.05	39.52
46	Egypt	5.04	39.40
47	Colombia	5.00	38.20
47	Croatia	5.00	38.20
47	Hong Kong SAR	5.00	38.20
47	Italy	5.00	38.20
51	Philippines	4.98	37.52
52	Greece	4.91	35.77
53	Türkiye	4.85	34.06
54	Mexico	4.62	27.49
55	Saudi Arabia	4.50	24.19
56	South Africa	4.44	22.59
57	Bangladesh	4.43	22.25
58	Dominican Republic	4.29	18.43
59	Guatemala	4.06	11.74
60	Sri Lanka	3.98	9.49
61	Cambodia	3.66	0.66
62	Slovak Republic	3.64	-

6.2 Administrators

6.2.1 The process of policy implementation (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Singapore	2.29	100.00
2	Switzerland	2.03	92.11
3	Denmark	2.00	91.26
4	Finland	1.96	89.93
5	Netherlands	1.77	84.04
6	Sweden	1.65	80.56
7	Canada	1.60	79.08
8	Austria	1.57	78.05
9	Hong Kong SAR	1.53	76.72
10	Australia	1.51	76.32
11	Taiwan, China	1.47	75.01
12	Korea	1.41	73.07
13	Japan	1.40	72.97
14	U.A.E.	1.40	72.84
15	New Zealand	1.35	71.38
16	United States	1.34	70.95
17	Germany	1.33	70.79
18	Israel	1.29	69.60
19	United Kingdom	1.28	69.22
20	France	1.27	68.85
21	Slovenia	1.18	66.14
22	Belgium	1.13	64.52
23	Czech Republic	1.11	64.07
24	Malaysia	0.99	60.46
25	Spain	0.95	59.11
26	China	0.84	55.87
27	Hungary	0.63	49.60
28	Chile	0.63	49.34
29	Croatia	0.59	48.28
30	Slovak Republic	0.53	46.39
31	Saudi Arabia	0.50	45.39
32	Greece	0.44	43.79
33	Indonesia	0.38	41.83
34	Italy	0.36	41.28
35	Poland	0.29	39.20
36	India	0.28	38.89
37	Vietnam	0.28	38.75
38	Thailand	0.25	38.00
39	Jordan	0.23	37.21
40	Panama	0.16	35.15
41	Philippines	0.07	32.44
42	Dominican Republic	0.03	31.24
43	Colombia	(0.01)	29.85
44	South Africa	(0.02)	29.77
45	Kuwait	(0.04)	29.13
46	Morocco	(0.07)	28.27
47	Sri Lanka	(0.08)	27.77
48	Türkiye	(0.09)	27.66
49	Oman	(0.12)	26.70
50	Russia	(0.18)	24.94
51	Peru	(0.26)	22.36
52	Mexico	(0.31)	20.80
53	Kenya	(0.33)	20.26
54	Argentina	(0.36)	19.45
55	Pakistan	(0.40)	18.05
56	Ukraine	(0.41)	17.86
57	Cambodia	(0.42)	17.44
58	Egypt	(0.43)	17.15
59	Brazil	(0.46)	16.30
60	Bangladesh	(0.63)	11.21
61	Guatemala	(0.75)	7.43
62	Nigeria	(1.00)	0.00

6. Policymakers &. Administrators

6.2 Administrators

6.2.2 The result of policy implementation (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Singapore	2.23	100.00
2	Finland	1.90	89.48
3	Australia	1.84	87.60
4	Denmark	1.81	86.65
5	New Zealand	1.81	86.63
6	Netherlands	1.75	84.88
7	Sweden	1.75	84.88
8	Switzerland	1.73	84.26
9	Germany	1.63	81.05
10	Canada	1.62	80.60
11	Hong Kong SAR	1.58	79.54
12	Taiwan, China	1.47	76.06
13	United Kingdom	1.47	75.81
14	United States	1.45	75.37
15	Japan	1.38	72.97
16	Austria	1.35	72.11
17	Czech Republic	1.35	72.10
18	Belgium	1.34	71.91
19	France	1.24	68.53
20	Israel	1.21	67.70
21	Korea	1.10	64.23
22	U.A.E.	1.01	61.53
23	Chile	0.95	59.61
24	Slovak Republic	0.87	57.11
25	Poland	0.84	56.03
26	Slovenia	0.83	55.85
27	Spain	0.81	55.11
28	Malaysia	0.72	52.31
29	Italy	0.55	46.71
30	Croatia	0.50	45.35
31	Hungary	0.50	45.16
32	Greece	0.44	43.44
33	Saudi Arabia	0.34	40.09
34	Oman	0.33	39.90
35	Indonesia	0.30	38.90
36	Colombia	0.22	36.44
37	Panama	0.19	35.57
38	Kuwait	0.17	35.00
39	Jordan	0.15	34.24
40	Thailand	0.09	32.46
41	Dominican Republic	0.09	32.30
42	Peru	0.08	32.09
43	Philippines	0.08	31.90
44	South Africa	(0.07)	27.17
45	India	(0.08)	26.99
46	Türkiye	(0.08)	26.89
47	Brazil	(0.11)	25.98
48	Morocco	(0.12)	25.63
49	Mexico	(0.23)	22.19
50	Ukraine	(0.28)	20.69
51	China	(0.31)	19.58
52	Guatemala	(0.32)	19.52
53	Sri Lanka	(0.37)	17.79
54	Vietnam	(0.40)	16.89
55	Kenya	(0.45)	15.40
56	Egypt	(0.51)	13.47
57	Russia	(0.53)	12.73
58	Argentina	(0.62)	9.94
59	Cambodia	(0.64)	9.12
60	Pakistan	(0.73)	6.35
61	Bangladesh	(0.85)	2.75
62	Nigeria	(0.93)	0.00

6.2.3 Ethics (bribery & corruption) (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Denmark	2.37	100.00
2	Finland	2.27	97.29
3	New Zealand	2.20	95.36
4	Singapore	2.17	94.51
5	Sweden	2.13	93.34
6	Netherlands	2.04	90.67
7	Switzerland	1.99	89.37
8	Germany	1.81	84.39
9	Australia	1.74	82.26
10	Hong Kong SAR	1.71	81.47
11	United Kingdom	1.67	80.37
12	Canada	1.65	79.68
13	Japan	1.57	77.40
14	Belgium	1.48	75.12
15	France	1.31	70.20
16	Austria	1.27	69.10
17	Taiwan, China	1.21	67.26
18	U.A.E.	1.18	66.47
19	United States	1.05	62.76
20	Chile	0.98	60.98
21	Israel	0.86	57.37
22	Korea	0.76	54.66
23	Spain	0.74	54.15
24	Slovenia	0.72	53.52
25	Czech Republic	0.64	51.31
26	Poland	0.57	49.36
27	Italy	0.54	48.53
28	Saudi Arabia	0.31	41.88
29	Slovak Republic	0.24	39.86
30	Greece	0.21	39.07
31	Malaysia	0.17	38.03
32	Oman	0.09	35.65
33	Croatia	0.06	34.95
34	China	0.05	34.73
35	Jordan	0.05	34.64
36	Hungary	0.04	34.22
37	South Africa	0.02	33.84
38	Kuwait	(0.03)	32.27
39	Vietnam	(0.29)	25.15
40	India	(0.29)	24.90
41	Sri Lanka	(0.33)	23.78
42	Colombia	(0.34)	23.51
43	Türkiye	(0.39)	22.32
44	Argentina	(0.40)	21.91
45	Indonesia	(0.43)	21.14
46	Morocco	(0.43)	20.97
47	Thailand	(0.46)	20.32
48	Brazil	(0.48)	19.73
49	Philippines	(0.51)	18.87
50	Dominican Republic	(0.57)	17.15
51	Panama	(0.57)	17.12
52	Peru	(0.63)	15.35
53	Egypt	(0.68)	13.89
54	Kenya	(0.71)	13.09
55	Ukraine	(0.77)	11.58
56	Pakistan	(0.79)	11.04
57	Russia	(0.90)	7.80
58	Bangladesh	(0.96)	6.07
59	Mexico	(1.00)	4.95
60	Nigeria	(1.07)	3.02
61	Guatemala	(1.17)	0.09
62	Cambodia	(1.18)	0.00

6.2.4 Education level (2022)

Survey: government officials are well educated.

Rank	Country/ Region	Unit	Index
1	Finland	8.28	100.00
2	Kuwait	8.22	97.81
3	Japan	8.19	96.46
4	Singapore	8.17	95.76
5	Colombia	8.00	89.59
5	Korea	8.00	89.59
5	Netherlands	8.00	89.59
5	Saudi Arabia	8.00	89.59
5	Slovenia	8.00	89.59
10	Canada	7.88	85.32
11	Taiwan, China	7.82	82.80
12	Austria	7.74	79.82
13	Sweden	7.66	77.07
14	Switzerland	7.66	77.05
15	Denmark	7.65	76.45
16	Argentina	7.60	74.64
17	France	7.60	74.60
18	Hungary	7.58	73.85
19	United States	7.57	73.72
20	Kenya	7.57	73.66
21	Belgium	7.55	73.03
22	China	7.54	72.42
23	Australia	7.54	72.40
24	Greece	7.52	71.88
25	Israel	7.50	71.08
26	Peru	7.48	70.33
27	U.A.E.	7.46	69.60
28	New Zealand	7.46	69.54
29	Chile	7.39	67.03
30	Panama	7.37	66.18
31	India	7.36	65.94
32	Poland	7.31	64.07
33	Germany	7.27	62.59
34	Spain	7.25	61.82
35	Nigeria	7.18	59.15
36	United Kingdom	7.16	58.39
37	Malaysia	7.10	56.23
38	Czech Republic	7.08	55.65
39	Jordan	7.07	55.15
40	Oman	7.02	53.34
41	Dominican Republic	7.00	52.57
41	Hong Kong SAR	7.00	52.57
41	Russia	7.00	52.57
41	Ukraine	7.00	52.57
45	Indonesia	6.97	51.51
46	Italy	6.97	51.41
47	Philippines	6.90	48.87
48	Pakistan	6.87	47.70
49	Türkiye	6.86	47.52
50	Brazil	6.84	46.62
51	Croatia	6.77	44.03
52	Vietnam	6.75	43.31
53	Mexico	6.65	39.50
54	Thailand	6.59	37.53
55	Egypt	6.46	32.47
56	South Africa	6.14	20.84
57	Morocco	6.07	18.12
58	Bangladesh	6.01	16.06
59	Sri Lanka	6.00	15.39
60	Guatemala	5.81	8.35
61	Slovak Republic	5.71	4.75
62	Cambodia	5.58	0.00

6.2.5 International experience (2022)

Survey: government officials have a lot of international experier

Rank	Country/ Region	Unit	Index
1	Switzerland	7.65	100.00
2	U.A.E.	7.04	83.40
3	Belgium	7.04	83.38
4	Israel	7.00	82.30
4	Netherlands	7.00	82.30
6	Singapore	6.85	78.19
7	New Zealand	6.79	76.59
8	Kuwait	6.78	76.20
9	Argentina	6.67	73.33
10	Philippines	6.67	73.27
11	Sweden	6.57	70.54
12	United Kingdom	6.51	68.98
13	Denmark	6.50	68.58
14	Japan	6.49	68.20
15	Egypt	6.47	67.80
16	Austria	6.45	67.14
17	France	6.44	66.95
18	United States	6.43	66.62
19	Türkiye	6.40	65.78
20	Chile	6.31	63.44
21	Canada	6.30	63.10
22	Dominican Republic	6.29	62.94
23	Italy	6.17	59.58
24	Vietnam	6.11	57.81
25	Germany	6.10	57.72
26	Australia	6.10	57.61
27	Morocco	6.07	56.77
28	Oman	6.06	56.58
29	Malaysia	6.04	55.98
30	Korea	6.00	54.87
30	Poland	6.00	54.87
30	Russia	6.00	54.87
30	Saudi Arabia	6.00	54.87
34	Kenya	5.98	54.24
35	Panama	5.87	51.24
36	Taiwan, China	5.85	50.75
37	Brazil	5.80	49.48
38	Nigeria	5.60	43.89
39	Spain	5.59	43.57
40	Slovenia	5.50	41.15
40	Ukraine	5.50	41.15
42	Jordan	5.48	40.53
43	Mexico	5.44	39.54
44	China	5.38	37.72
45	Greece	5.33	36.38
46	Thailand	5.28	35.15
47	Peru	5.26	34.67
48	Czech Republic	5.25	34.29
49	India	5.22	33.53
50	Sri Lanka	5.17	32.08
51	Colombia	5.00	27.43
52	South Africa	4.97	26.65
53	Pakistan	4.92	25.27
54	Cambodia	4.85	23.32
55	Guatemala	4.83	22.86
56	Hungary	4.78	21.26
57	Indonesia	4.76	20.77
58	Croatia	4.38	10.55
59	Finland	4.28	7.72
60	Bangladesh	4.25	6.86
61	Slovak Republic	4.21	5.72
62	Hong Kong SAR	4.00	0.00

7. Entrepreneurs

7.1. Personal competence

7.1.1 The process of decision making (2022)

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

Rank	Country/ Region	Unit	Index
1	Kuwait	8.44	100.00
2	Canada	8.23	94.56
3	Denmark	8.15	92.41
4	Israel	8.00	88.73
4	Netherlands	8.00	88.73
6	U.A.E.	7.84	84.68
7	Switzerland	7.82	84.23
8	Nigeria	7.81	83.80
9	India	7.78	83.10
10	Singapore	7.78	83.05
11	Sweden	7.74	82.21
12	New Zealand	7.69	80.99
13	Germany	7.67	80.47
14	Hungary	7.65	79.86
15	Hong Kong SAR	7.61	78.84
16	Panama	7.57	77.92
16	Spain	7.57	77.92
18	Korea	7.50	76.06
19	Austria	7.49	75.70
20	United States	7.49	75.69
21	Finland	7.47	75.26
22	United Kingdom	7.44	74.43
23	China	7.41	73.75
24	Belgium	7.41	73.72
25	Taiwan, China	7.40	73.52
26	Japan	7.38	72.89
26	Malaysia	7.38	72.89
28	Australia	7.34	72.07
29	Türkiye	7.34	72.02
30	Jordan	7.31	71.16
30	Kenya	7.31	71.16
32	Chile	7.30	70.91
33	Czech Republic	7.25	69.72
34	Brazil	7.20	68.36
35	Thailand	7.09	65.76
36	France	7.04	64.29
37	Colombia	7.00	63.38
37	Slovenia	7.00	63.38
39	Poland	6.99	63.04
40	Philippines	6.98	62.75
41	Italy	6.91	61.00
42	Mexico	6.88	60.40
43	Bangladesh	6.86	59.86
44	Indonesia	6.77	57.59
45	Peru	6.73	56.53
46	Argentina	6.67	55.09
47	Vietnam	6.64	54.33
48	Croatia	6.62	53.63
49	Morocco	6.58	52.82
50	Saudi Arabia	6.50	50.70
51	South Africa	6.47	49.98
52	Pakistan	6.45	49.37
53	Sri Lanka	6.28	45.21
54	Oman	6.25	44.37
55	Guatemala	6.21	43.31
56	Ukraine	6.00	38.03
57	Greece	5.87	34.72
58	Dominican Republic	5.71	30.57
59	Egypt	5.68	29.83
60	Cambodia	5.66	29.41
61	Slovak Republic	5.23	18.53
62	Russia	4.50	-

7.1.2 The result of decision making (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Hong Kong SAR	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	0.60	52.63
16	Chile	0.59	52.05
17	Poland	0.58	51.23
18	Peru	0.55	47.49
19	Saudi Arabia	0.55	47.19
20	U.A.E.	0.53	44.91
21	Korea	0.52	43.74
22	Kenya	0.52	43.51
23	Belgium	0.52	43.39
24	Singapore	0.50	41.75
25	Germany	0.49	40.12
26	South Africa	0.46	36.73
27	Oman	0.45	35.44
28	Kuwait	0.44	34.39
29	Vietnam	0.43	32.87
30	Slovenia	0.42	31.70
31	Dominican Republic	0.41	31.23
32	Bangladesh	0.41	31.11
33	Mexico	0.40	29.47
34	Thailand	0.40	29.36
35	Czech Republic	0.39	28.54
35	Philippines	0.39	28.54
37	Hungary	0.38	27.60
38	Sri Lanka	0.38	27.25
39	Spain	0.38	27.02
40	Taiwan, China	0.37	26.67
41	Panama	0.37	26.20
42	France	0.36	25.50
43	Türkiye	0.35	24.44
44	Brazil	0.35	23.86
45	Indonesia	0.35	23.74
46	China	0.33	21.29
47	India	0.33	21.05
47	Jordan	0.33	21.05
49	Italy	0.32	20.94
50	Cambodia	0.32	19.88
51	Guatemala	0.31	19.77
52	Slovak Republic	0.29	17.08
53	Croatia	0.27	14.74
54	Egypt	0.27	14.50
55	Morocco	0.27	14.04
56	Pakistan	0.23	10.18
57	Argentina	0.23	9.36
58	Russia	0.20	6.32
59	Ukraine	0.20	6.08
60	Japan	0.18	4.21
61	Greece	0.15	0.00
-	New Zealand	-	-

7. Entrepreneurs

7.1. Personal competence

7.1.3 Entrepreneur's core competence (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Saudi Arabia	90.50	100.00
2	Dominican Republic	88.70	97.70
3	India	86.00	94.25
4	Indonesia	79.00	85.29
5	Guatemala	76.30	81.84
6	Croatia	71.10	75.19
7	Chile	70.70	74.68
7	Mexico	70.70	74.68
9	Panama	69.80	73.53
10	South Africa	69.70	73.40
11	China	67.40	70.46
12	Brazil	66.70	69.57
13	Egypt	65.80	68.41
14	U.A.E.	65.10	67.52
15	United States	64.60	66.88
16	Kuwait	63.40	65.35
17	Pakistan	63.00	64.83
18	Jordan	61.70	63.17
19	Morocco	61.50	62.92
20	Poland	60.10	61.13
21	Türkiye	59.30	60.10
22	Oman	59.20	59.97
23	Canada	58.90	59.59
24	Slovenia	58.50	59.08
25	Colombia	56.20	56.14
26	Australia	56.00	55.88
27	Korea	54.00	53.32
28	Austria	53.30	52.43
29	Greece	53.10	52.17
30	United Kingdom	51.10	49.62
31	Sweden	49.90	48.08
32	Spain	49.80	47.95
33	Switzerland	49.60	47.70
34	France	48.60	46.42
35	Netherlands	45.40	42.33
36	Taiwan, China	44.80	41.56
37	Italy	44.70	41.43
38	Finland	42.80	39.00
39	Slovak Republic	41.80	37.72
40	Israel	37.50	32.23
41	Germany	37.10	31.71
42	Hungary	36.00	30.31
43	Russia	34.50	28.39
44	Japan	12.30	0.00
-	Ukraine		-
-	Argentina	-	-
-	Bangladesh	-	-
-	Belgium	-	-
-	Cambodia	-	-
-	Czech Republic	-	-
-	Denmark	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Malaysia	-	-
-	New Zealand	-	-
-	Nigeria	-	-
-	Peru	-	-
-	Philippines	-	-
-	Singapore	-	-
-	Sri Lanka	-	-
-	Thailand	-	-
-	Vietnam	-	-

7.1.4 Entrepreneur's education level (2021)

Hard data: score

Rank	Country/ Region	Unit	Index
1	Indonesia	7.20	100.00
2	U.A.E.	6.40	81.40
3	Netherlands	6.10	74.42
3	Spain	6.10	74.42
5	Finland	6.00	72.09
6	Colombia	5.90	69.77
7	China	5.74	66.05
8	France	5.70	65.12
9	Mexico	5.60	62.79
10	Guatemala	5.50	60.47
11	Taiwan, China	5.40	58.14
12	Jordan	5.35	56.98
13	Saudi Arabia	5.20	53.49
14	United Kingdom	5.00	48.84
14	United States	5.00	48.84
16	Japan	4.90	46.51
16	Switzerland	4.90	46.51
18	Thailand	4.81	44.42
19	Chile	4.80	44.19
19	Germany	4.80	44.19
19	Korea	4.80	44.19
22	Canada	4.70	41.86
23	Dominican Republic	4.60	39.53
23	Italy	4.60	39.53
25	India	4.50	37.21
25	Israel	4.50	37.21
25	Slovak Republic	4.50	37.21
28	Australia	4.46	36.28
29	Sweden	4.40	34.88
30	Austria	4.30	32.56
31	Pakistan	4.22	30.70
32	Brazil	4.20	30.23
32	Panama	4.20	30.23
34	Russia	4.10	27.91
34	Slovenia	4.10	27.91
36	Hungary	4.00	25.58
36	Morocco	4.00	25.58
38	Oman	3.90	23.26
38	Kuwait	3.90	23.26
40	Egypt	3.80	20.93
40	Greece	3.80	20.93
42	Türkiye	3.70	18.60
43	South Africa	3.60	16.28
44	Croatia	3.40	11.63
45	Poland	2.90	0.00
-	Argentina	-	-
-	Bangladesh	-	-
-	Belgium	-	-
-	Cambodia	-	-
-	Czech Republic	-	-
-	Denmark	-	-
-	Hong Kong SAR	-	-
-	Kenya	-	-
-	Malaysia	-	-
-	New Zealand	-	-
-	Nigeria	-	-
-	Peru	-	-
-	Philippines	-	-
-	Singapore	-	-
-	Sri Lanka	-	-
-	Ukraine	-	-
-	Vietnam	-	-

7. Entrepreneurs

7.1. Personal competence

7.1.5 Entrepreneur's international experience (2019)

Hard data: score

Rank	Country/ Region	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 SAR	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, China	0.53	52.66
27	Denmark	0.52	51.96
28	Malaysia	0.48	47.34
29	Oman	0.47	46.64
30	China	0.42	42.03
31	Chile	0.40	40.22
32	Saudi Arabia	0.37	37.05
33	Mexico	0.37	36.61
34	U.A.E.	0.34	33.70
35	Thailand	0.32	31.49
36	Colombia	0.31	31.19
37	Dominican Republic	0.31	31.09
38	Spain	0.31	30.79
38	Sri Lanka	0.31	30.79
40	Türkiye	0.27	26.38
41	Greece	0.23	22.37
41	Panama	0.23	22.37
43	Pakistan	0.19	19.16
43	Ukraine	0.19	19.16
45	Egypt	0.19	18.96
46	Cambodia	0.19	18.46
47	India	0.18	17.35
48	Morocco	0.18	17.25
49	Vietnam	0.14	13.74
50	Kenya	0.12	11.74
51	Peru	0.12	11.53
52	Philippines	0.11	11.13
53	Kuwait	0.10	9.23
54	Nigeria	0.09	8.83
55	Argentina	0.08	7.32
56	Indonesia	0.06	5.72
57	Jordan	0.04	3.41
58	Russia	0.04	3.31
59	Bangladesh	0.01	1.10
60	Guatemala	0.01	0.90
61	Brazil	-	-
-	New Zealand	-	-

7.2 Social Contex

7.2.1 Availability of entrepreneurs (2022)

Survey: the number of entrepreneurs is sufficient.

Rank	Country/ Region	Unit	Index
1	China	7.94	100.00
2	Kuwait	7.78	94.71
3	Canada	7.73	93.16
4	Switzerland	7.68	91.39
5	Hong Kong SAR	7.54	86.73
6	Taiwan, China	7.53	86.62
7	India	7.50	85.52
7	Netherlands	7.50	85.52
9	Poland	7.43	83.28
10	United Kingdom	7.43	83.15
11	Japan	7.40	82.30
12	Singapore	7.40	82.09
13	Denmark	7.39	81.78
14	U.A.E.	7.36	80.88
15	Czech Republic	7.33	80.00
16	Kenya	7.24	76.87
17	Austria	7.14	73.76
18	Australia	7.13	73.22
19	Chile	7.05	70.52
20	Sweden	7.04	70.38
21	Colombia	7.00	68.97
21	Egypt	7.00	68.97
21	Israel	7.00	68.97
21	Slovenia	7.00	68.97
25	United States	6.97	68.02
26	Panama	6.90	65.56
27	Spain	6.75	60.69
28	Jordan	6.74	60.31
29	Indonesia	6.71	59.51
29	Vietnam	6.71	59.51
31	Nigeria	6.69	58.67
32	Argentina	6.63	56.87
33	Belgium	6.63	56.77
34	Germany	6.63	56.55
35	Dominican Republic	6.56	54.36
36	New Zealand	6.53	53.33
37	Peru	6.53	53.31
38	Finland	6.47	51.38
39	Türkiye	6.43	50.16
40	Mexico	6.41	49.49
41	Philippines	6.38	48.28
42	Thailand	6.36	47.76
43	Guatemala	6.35	47.36
43	Morocco	6.35	47.36
45	Malaysia	6.34	47.15
46	Italy	6.22	43.10
47	Hungary	6.13	40.00
48	Oman	6.06	37.93
49	Korea	6.00	35.86
49	Russia	6.00	35.86
49	Ukraine	6.00	35.86
52	Brazil	5.93	33.50
53	France	5.83	30.34
54	Pakistan	5.79	28.89
55	Sri Lanka	5.74	27.31
56	Croatia	5.58	21.86
57	Greece	5.26	11.39
58	South Africa	5.26	11.27
59	Bangladesh	5.17	8.28
60	Cambodia	5.08	5.41
61	Saudi Arabia	5.00	2.76
62	Slovak Republic	4.92	-

7. Entrepreneurs

7.2 Social Context

7.2.2 New business (2020)

Hard data: score

Rank	Country/ Region	Unit	Index
1	New Zealand	86.76	100.00
2	Singapore	86.20	98.64
3	Hong Kong SAR	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,China	80.92	85.99
12	U.A.E.	80.91	85.98
13	Thailand	80.09	84.01
14	Finland	80.04	83.88
15	Germany	79.71	83.09
16	Canada	79.64	82.92
17	Austria	78.75	80.78
18	Russia	78.16	79.38
19	Japan	78.00	78.99
20	Spain	77.94	78.84
21	China	77.93	78.83
22	France	76.80	76.12
23	Türkiye	76.79	76.09
24	Israel	76.68	75.82
25	Switzerland	76.62	75.68
26	Slovenia	76.52	75.44
27	Poland	76.38	75.11
28	Czech Republic	76.34	75.01
29	Netherlands	76.10	74.44
30	Slovak Republic	75.59	73.20
31	Belgium	74.99	71.77
32	Croatia	73.62	68.49
33	Hungary	73.42	68.00
34	Morocco	73.38	67.92
35	Kenya	73.22	67.52
36	Italy	72.85	66.65
37	Mexico	72.36	65.46
38	Chile	72.32	65.37
39	Saudi Arabia	71.56	63.55
40	India	71.05	62.32
41	Ukraine	70.21	60.32
42	Colombia	70.06	59.96
43	Oman	69.98	59.78
44	Vietnam	69.77	59.25
45	Indonesia	69.58	58.80
46	Jordan	68.97	57.35
47	Peru	68.70	56.69
48	Greece	68.42	56.03
49	Kuwait	67.40	53.59
50	South Africa	67.02	52.67
51	Panama	66.56	51.57
52	Philippines	62.83	42.62
53	Guatemala	62.60	42.06
54	Sri Lanka	61.81	40.17
55	Pakistan	60.95	38.13
56	Egypt	60.05	35.97
57	Dominican Republic	59.99	35.81
58	Brazil	59.08	33.64
59	Argentina	58.96	33.35
60	Nigeria	56.88	28.35
61	Cambodia	53.84	21.09
62	Bangladesh	45.05	0.00

7.2.3 Support of the social system (2022)

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

Rank	Country/ Region	Unit	Index
1	Israel	8.50	100.00
1	Netherlands	8.50	100.00
3	Singapore	8.22	92.89
4	Denmark	8.16	91.27
5	Korea	8.00	87.12
5	Slovenia	8.00	87.12
7	Belgium	7.95	85.76
8	Finland	7.94	85.51
9	Canada	7.90	84.64
10	Sweden	7.86	83.62
11	China	7.83	82.75
12	U.A.E.	7.76	80.94
13	United Kingdom	7.66	78.29
14	Switzerland	7.65	77.98
15	Saudi Arabia	7.50	74.24
16	India	7.48	73.69
17	Austria	7.45	72.88
18	France	7.44	72.70
19	Hong Kong SAR	7.44	72.67
20	Germany	7.40	71.55
21	Taiwan, China	7.30	69.08
22	Australia	7.26	67.98
23	Malaysia	7.19	66.15
24	Kuwait	7.17	65.65
25	Argentina	7.13	64.82
26	New Zealand	7.10	63.86
27	Poland	7.04	62.40
28	Oman	6.94	59.75
29	Czech Republic	6.92	59.21
30	United States	6.81	56.57
31	Türkiye	6.80	56.09
32	Chile	6.75	54.92
33	Japan	6.72	54.20
34	Spain	6.56	49.99
35	Kenya	6.45	47.30
36	Brazil	6.43	46.63
37	Dominican Republic	6.41	46.20
37	Panama	6.41	46.20
39	Morocco	6.38	45.25
40	Thailand	6.25	42.03
41	Mexico	6.10	38.25
42	Slovak Republic	6.10	38.17
43	Italy	6.08	37.61
44	Philippines	6.07	37.48
45	Peru	6.07	37.38
46	Indonesia	6.06	37.07
47	South Africa	6.03	36.33
48	Colombia	6.00	35.59
49	Jordan	5.95	34.42
50	Egypt	5.87	32.28
51	Sri Lanka	5.87	32.16
52	Vietnam	5.79	30.07
53	Croatia	5.65	26.68
54	Bangladesh	5.63	25.93
55	Russia	5.50	22.71
55	Ukraine	5.50	22.71
57	Guatemala	5.46	21.64
58	Hungary	5.45	21.42
59	Nigeria	5.21	15.27
60	Cambodia	5.10	12.41
61	Greece	4.76	3.67
62	Pakistan	4.62	0.00

7. Entrepreneurs

7.2 Social Context

7.2.4 Social status of entrepreneurs (2019)

Hard data: score

Rank	Country/ Region	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 SAR	0.68	65.01
17	France	0.68	64.24
18	Chile	0.66	62.03
19	Taiwan, China	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	Oman	0.39	32.67
28	South Africa	0.38	31.13
29	Greece	0.37	29.91
30	Japan	0.34	27.04
31	China	0.34	26.71
32	Spain	0.33	26.27
33	Türkiye	0.33	25.61
34	Kuwait	0.32	24.94
35	Malaysia	0.31	24.17
36	Hungary	0.30	22.85
36	Indonesia	0.30	22.85
36	Morocco	0.30	22.85
39	Thailand	0.30	22.30
40	Slovak Republic	0.29	22.08
41	Croatia	0.28	20.86
42	Colombia	0.28	20.64
43	Philippines	0.28	20.42
44	Egypt	0.28	20.09
45	Dominican Republic	0.27	19.65
46	Vietnam	0.26	17.77
47	Peru	0.25	17.11
48	Bangladesh	0.24	16.34
49	Guatemala	0.23	15.45
50	Panama	0.23	14.46
51	Pakistan	0.20	11.59
52	Argentina	0.20	11.48
53	Ukraine	0.19	10.38
54	Kenya	0.18	9.71
55	India	0.18	9.16
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 (2022)

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

Rank	Country/ Region	Unit	Index
1	Netherlands	9.25	100.00
2	Colombia	8.50	81.25
3	Singapore	8.43	79.53
4	Canada	8.25	75.00
5	Switzerland	8.19	73.59
6	United Kingdom	8.17	73.04
7	Sweden	8.04	69.82
8	Israel	8.00	68.75
9	U.A.E.	7.82	64.25
10	United States	7.81	64.11
11	Chile	7.77	62.89
12	Korea	7.75	62.50
13	Thailand	7.66	60.16
14	New Zealand	7.61	59.03
15	Germany	7.56	57.81
16	Slovenia	7.50	56.25
17	Panama	7.49	55.88
18	Hong Kong SAR	7.48	55.64
19	Czech Republic	7.46	55.21
20	Mexico	7.38	53.31
21	Austria	7.36	52.63
22	Denmark	7.35	52.62
23	Kenya	7.35	52.56
24	Poland	7.34	52.36
25	Taiwan, China	7.32	51.67
26	Belgium	7.26	50.33
27	Cambodia	7.26	50.25
28	Nigeria	7.24	49.86
29	Peru	7.22	49.16
30	Türkiye	7.20	48.86
31	India	7.13	46.88
32	Egypt	7.10	46.25
33	Spain	7.07	45.59
34	Kuwait	7.06	45.14
35	Malaysia	7.05	45.06
36	Morocco	6.96	42.71
37	China	6.95	42.41
38	Argentina	6.90	41.35
39	France	6.87	40.48
40	Vietnam	6.86	40.18
41	Philippines	6.85	40.09
42	Indonesia	6.83	39.46
43	Brazil	6.68	35.71
44	Hungary	6.55	32.50
45	Dominican Republic	6.54	32.35
46	Japan	6.53	31.96
47	Pakistan	6.42	29.28
48	Jordan	6.35	27.56
49	South Africa	6.30	26.25
50	Finland	6.25	25.00
51	Bangladesh	6.17	22.92
52	Italy	6.16	22.66
53	Australia	6.14	22.32
54	Guatemala	6.10	21.18
55	Saudi Arabia	6.00	18.75
56	Greece	5.93	17.12
57	Slovak Republic	5.92	16.83
58	Oman	5.85	15.10
59	Sri Lanka	5.83	14.58
60	Croatia	5.71	11.54
61	Russia	5.50	6.25
62	Ukraine	5.25	-

8 Professionals

8.1 Personal competence

8.1.1 Decision making (2022)

Survey: professionals' decision making is swift and precise.

Rank	Country/ Region	Unit	Index
1	Israel	8.25	100.00
2	Singapore	8.23	99.43
3	Nigeria	8.16	96.79
4	Korea	8.00	91.50
4	Netherlands	8.00	91.50
4	Slovenia	8.00	91.50
7	Kuwait	7.94	89.62
8	Denmark	7.87	86.97
9	United States	7.84	85.92
10	Switzerland	7.69	80.81
11	Hong Kong SAR	7.68	80.73
12	France	7.57	76.94
13	Sweden	7.56	76.45
14	India	7.53	75.45
15	Saudi Arabia	7.50	74.51
15	Türkiye	7.50	74.51
17	United Kingdom	7.49	74.02
18	U.A.E.	7.48	73.83
19	Canada	7.42	71.90
20	Belgium	7.39	70.93
21	Austria	7.38	70.49
22	Germany	7.38	70.26
23	Japan	7.36	69.79
24	Taiwan, China	7.35	69.41
25	Czech Republic	7.33	68.85
26	New Zealand	7.32	68.37
27	Ukraine	7.25	66.01
28	China	7.20	64.19
29	Hungary	7.18	63.46
30	Philippines	7.17	63.32
31	Finland	7.16	62.83
32	Thailand	7.14	62.30
33	Spain	7.03	58.55
34	Greece	6.96	56.04
35	Panama	6.96	56.02
36	Chile	6.95	55.87
37	Australia	6.87	53.15
38	Malaysia	6.82	51.34
39	Argentina	6.73	48.37
40	Jordan	6.73	48.25
41	Pakistan	6.71	47.68
42	Bangladesh	6.71	47.60
43	Indonesia	6.69	46.83
44	Vietnam	6.57	42.95
45	Oman	6.54	41.94
46	Mexico	6.51	41.02
47	Kenya	6.45	38.98
48	Poland	6.36	35.70
49	Sri Lanka	6.35	35.42
50	Peru	6.31	34.09
51	Guatemala	6.25	32.03
52	Egypt	6.10	26.93
53	Russia	6.00	23.53
54	Dominican Republic	5.94	21.53
55	Italy	5.78	16.09
56	South Africa	5.77	15.76
57	Cambodia	5.74	14.69
58	Croatia	5.60	9.80
59	Brazil	5.57	8.96
60	Morocco	5.57	8.90
61	Colombia	5.50	6.54
62	Slovak Republic	5.31	0.00

8.1.2 The ability to manage opportunities (2022)

Survey: professionals are good at managing opportunities.

Rank	Country/ Region	Unit	Index
1	Singapore	8.38	100.00
2	Nigeria	8.18	93.61
3	Colombia	8.00	87.84
3	Kuwait	8.00	87.84
5	Mexico	7.97	86.91
6	Argentina	7.77	80.52
7	Canada	7.69	78.08
8	Türkiye	7.66	77.03
9	United Kingdom	7.66	76.97
10	Hungary	7.65	76.74
11	Hong Kong SAR	7.62	75.85
12	Switzerland	7.60	75.05
13	Brazil	7.57	74.25
14	Denmark	7.57	74.10
15	Netherlands	7.50	71.98
16	Belgium	7.47	71.15
17	Poland	7.47	71.12
18	Panama	7.47	71.05
19	Germany	7.40	68.68
20	Italy	7.36	67.52
21	Malaysia	7.35	67.29
22	Peru	7.34	66.84
23	Austria	7.33	66.55
24	U.A.E.	7.32	66.27
25	Philippines	7.29	65.40
26	Sweden	7.29	65.18
26	United States	7.29	65.18
28	India	7.28	64.93
29	Jordan	7.26	64.41
29	Kenya	7.26	64.41
31	Thailand	7.22	63.06
32	Morocco	7.19	62.29
33	Spain	7.18	61.72
34	Japan	7.15	60.97
35	Greece	7.13	60.26
36	Australia	7.13	60.20
37	Indonesia	7.11	59.75
38	France	7.07	58.39
39	Vietnam	7.04	57.25
40	Egypt	7.03	57.03
41	Israel	7.00	56.12
41	Korea	7.00	56.12
41	Slovenia	7.00	56.12
44	Czech Republic	6.92	53.48
45	Finland	6.88	52.16
46	Chile	6.86	51.66
47	Bangladesh	6.72	47.31
48	Guatemala	6.71	46.87
48	Sri Lanka	6.71	46.87
50	Dominican Republic	6.56	42.13
51	Pakistan	6.53	41.10
52	Cambodia	6.50	40.26
52	Saudi Arabia	6.50	40.26
54	New Zealand	6.47	39.38
55	Oman	6.33	34.97
55	Taiwan, China	6.33	34.97
57	Russia	6.00	24.40
57	Ukraine	6.00	24.40
59	China	5.98	23.83
60	South Africa	5.86	19.87
61	Croatia	5.62	12.20
62	Slovak Republic	5.23	0.00

8 Professionals

8.1 Personal competence

8.1.3 Professionals' core competences (2022)

Survey: professionals' have differentiated professional skills.

Rank	Country/ Region	Unit	Index
1	Kuwait	8.33	100.00
2	Singapore	8.32	99.55
3	Canada	8.04	92.08
4	Switzerland	7.74	84.11
5	New Zealand	7.69	82.84
5	Poland	7.69	82.84
7	Hong Kong SAR	7.66	81.87
8	United Kingdom	7.64	81.45
9	Germany	7.63	80.97
10	Japan	7.49	77.23
11	U.A.E.	7.43	75.73
12	Sweden	7.43	75.69
13	United States	7.40	74.93
14	France	7.36	73.77
15	Austria	7.36	73.72
16	Mexico	7.32	72.87
17	Finland	7.25	70.90
17	Netherlands	7.25	70.90
19	Thailand	7.23	70.48
20	Denmark	7.23	70.45
21	Türkiye	7.23	70.28
22	Hungary	7.23	70.22
23	Taiwan, China	7.21	69.74
24	Australia	7.20	69.55
25	Belgium	7.08	66.30
26	Egypt	7.03	64.95
27	Brazil	7.00	64.18
27	Korea	7.00	64.18
29	Indonesia	6.97	63.41
30	China	6.95	62.74
31	Italy	6.94	62.50
32	Panama	6.90	61.41
33	Vietnam	6.89	61.30
34	Czech Republic	6.88	60.82
35	Spain	6.84	59.83
36	South Africa	6.82	59.38
37	Jordan	6.82	59.29
38	Pakistan	6.76	57.82
39	Sri Lanka	6.70	56.12
40	Chile	6.69	55.78
41	Kenya	6.64	54.41
42	Dominican Republic	6.59	53.12
43	Argentina	6.58	52.81
44	Saudi Arabia	6.50	50.75
45	Greece	6.43	48.99
46	Nigeria	6.37	47.16
47	India	6.32	45.90
48	Philippines	6.27	44.52
49	Guatemala	6.25	44.03
50	Croatia	6.23	43.51
51	Morocco	6.18	42.16
52	Israel	6.00	37.31
52	Russia	6.00	37.31
52	Slovenia	6.00	37.31
52	Ukraine	6.00	37.31
56	Oman	5.92	35.07
57	Malaysia	5.86	33.65
58	Cambodia	5.84	33.01
59	Slovak Republic	5.54	24.91
60	Peru	5.36	20.25
61	Bangladesh	4.61	0.00
-	Colombia	-	-

8.1.4 Professionals' education level (2022)

Survey: professionals are well educated and trained.

Rank	Country/ Region	Unit	Index
1	Netherlands	9.00	100.00
2	Singapore	8.50	80.54
2	Slovenia	8.50	80.54
4	Poland	8.47	79.46
5	Canada	8.42	77.55
6	Germany	8.42	77.30
7	Switzerland	8.39	76.15
8	Sweden	8.39	76.09
9	Taiwan, China	8.35	74.84
10	Finland	8.28	72.03
11	Kuwait	8.28	71.89
12	Denmark	8.27	71.46
13	Austria	8.24	70.27
14	United States	8.21	69.09
15	Hong Kong SAR	8.12	65.59
16	U.A.E.	8.08	64.19
17	United Kingdom	8.05	63.03
18	New Zealand	8.03	62.16
19	Colombia	8.00	61.08
19	Israel	8.00	61.08
19	Korea	8.00	61.08
19	Russia	8.00	61.08
19	Saudi Arabia	8.00	61.08
24	France	7.99	60.62
25	India	7.94	58.92
25	Japan	7.94	58.92
27	Hungary	7.88	56.22
28	Malaysia	7.73	50.47
29	Belgium	7.71	49.82
30	Argentina	7.67	48.36
31	Czech Republic	7.67	48.11
32	China	7.64	47.18
33	Chile	7.60	45.39
34	Thailand	7.52	42.25
35	Italy	7.52	42.25
36	Greece	7.50	41.62
36	Ukraine	7.50	41.62
38	Oman	7.48	40.81
39	Spain	7.46	39.90
40	Vietnam	7.43	38.84
41	Jordan	7.38	36.76
42	Sri Lanka	7.32	34.49
43	Philippines	7.29	33.55
44	Türkiye	7.28	33.22
45	Bangladesh	7.14	27.57
46	Nigeria	7.11	26.58
47	Croatia	7.08	25.16
48	Mexico	7.06	24.45
49	Brazil	7.05	24.25
50	Egypt	7.03	23.27
51	Pakistan	6.97	21.14
52	Cambodia	6.93	19.44
53	Peru	6.91	18.48
54	Panama	6.90	18.16
55	Kenya	6.88	17.30
56	Australia	6.77	13.27
57	South Africa	6.74	12.15
58	Dominican Republic	6.68	9.57
59	Slovak Republic	6.67	9.19
60	Morocco	6.61	7.03
61	Indonesia	6.53	3.81
62	Guatemala	6.43	0.00

8 Professionals

8.1 Personal competence

8.1.5 Professionals' international experience (2022)

Survey: professionals have a lot of international experiences.

Rank	Country/ Region	Unit	Index
1	Sweden	8.12	100.00
2	Israel	7.75	88.05
2	Netherlands	7.75	88.05
4	Belgium	7.54	81.27
5	Hong Kong SAR	7.35	75.29
6	Singapore	7.28	73.03
7	United Kingdom	7.16	68.97
8	Taiwan, China	7.13	68.20
9	United States	7.11	67.59
10	U.A.E.	7.10	67.13
11	Denmark	7.05	65.52
12	Thailand	7.03	64.92
13	Germany	7.02	64.58
14	Spain	7.01	64.39
15	Argentina	6.96	62.67
16	Vietnam	6.89	60.46
17	Brazil	6.88	59.89
18	Czech Republic	6.83	58.55
19	Switzerland	6.77	56.65
20	Poland	6.68	53.48
21	Nigeria	6.67	53.19
22	France	6.63	52.04
23	Panama	6.62	51.61
24	Canada	6.59	50.72
25	Morocco	6.58	50.50
26	Italy	6.52	48.33
27	Korea	6.50	47.82
28	Philippines	6.49	47.43
29	China	6.46	46.67
30	Indonesia	6.44	45.98
31	Malaysia	6.44	45.95
32	Chile	6.37	43.67
33	Mexico	6.37	43.56
34	Jordan	6.33	42.34
35	New Zealand	6.32	42.01
36	Australia	6.27	40.47
37	Sri Lanka	6.27	40.31
38	Peru	6.24	39.56
39	Hungary	6.20	38.17
40	Dominican Republic	6.18	37.41
41	Colombia	6.00	31.73
41	Egypt	6.00	31.73
41	Saudi Arabia	6.00	31.73
41	Slovenia	6.00	31.73
45	Finland	5.97	30.73
46	India	5.96	30.39
47	Oman	5.88	27.71
48	Japan	5.86	27.26
49	Austria	5.84	26.65
50	Kenya	5.83	26.25
51	Slovak Republic	5.73	23.07
52	Kuwait	5.67	21.01
53	Türkiye	5.56	17.47
54	Russia	5.50	15.64
55	South Africa	5.44	13.80
56	Greece	5.37	11.45
57	Bangladesh	5.31	9.39
58	Ukraine	5.25	7.60
59	Pakistan	5.20	5.90
60	Croatia	5.08	2.03
61	Cambodia	5.02	0.20
62	Guatemala	5.01	0.00

8.2 Social context

8.2.1 Availability of professionals (2022)

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

Rank	Country/ Region	Unit	Index
1	Kuwait	8.11	100.00
2	Singapore	8.02	97.40
3	Germany	7.65	87.19
4	Canada	7.63	86.88
5	Denmark	7.63	86.84
6	Hong Kong SAR	7.63	86.61
7	Poland	7.61	86.15
8	Sweden	7.60	85.92
9	Belgium	7.57	84.98
10	Switzerland	7.47	82.28
11	Taiwan, China	7.40	80.42
12	India	7.39	80.11
13	France	7.32	78.25
14	Austria	7.29	77.37
15	U.A.E.	7.28	77.11
16	Netherlands	7.25	76.29
17	United Kingdom	7.22	75.48
18	Argentina	7.17	74.17
19	United States	7.17	74.12
20	Czech Republic	7.17	73.99
21	Thailand	7.13	72.84
22	Brazil	7.11	72.35
23	Hungary	7.10	72.15
24	Philippines	7.07	71.42
25	Korea	7.00	69.40
25	Slovenia	7.00	69.40
27	Japan	6.99	69.02
28	Italy	6.92	67.18
29	Jordan	6.80	63.77
30	China	6.73	62.02
31	Croatia	6.73	61.99
32	Egypt	6.69	60.74
33	Türkiye	6.68	60.64
34	Malaysia	6.67	60.43
35	Spain	6.65	59.80
36	Oman	6.63	59.07
37	Kenya	6.59	58.13
38	Finland	6.53	56.49
39	Australia	6.50	55.63
39	Israel	6.50	55.63
41	Morocco	6.39	52.57
42	Indonesia	6.31	50.52
43	Mexico	6.24	48.34
44	Peru	6.22	47.82
45	Vietnam	6.21	47.76
46	Chile	6.16	46.16
47	Bangladesh	6.14	45.69
48	Dominican Republic	6.12	45.10
49	Pakistan	6.11	44.76
50	Nigeria	6.04	43.08
51	Russia	6.00	41.86
51	Saudi Arabia	6.00	41.86
51	Ukraine	6.00	41.86
54	Panama	5.96	40.65
55	Guatemala	5.93	39.95
56	New Zealand	5.83	37.27
57	Slovak Republic	5.75	34.98
58	South Africa	5.74	34.78
59	Greece	5.52	28.69
60	Sri Lanka	5.47	27.17
61	Cambodia	4.48	0.00
#VALUE!	Colombia	-	-

8 Professionals

8.2 Social Context

8.2.2 The mobility of professionals (2022)

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

Rank	Country/ Region	Unit	Index
1	Netherlands	8.50	100.00
2	Denmark	8.26	94.45
3	Singapore	8.15	91.95
4	Sweden	8.13	91.46
5	Canada	7.94	87.17
6	New Zealand	7.88	85.63
7	United Kingdom	7.71	81.93
8	Switzerland	7.66	80.71
9	Hong Kong SAR	7.61	79.52
10	Taiwan, China	7.57	78.53
11	United States	7.54	77.99
12	Indonesia	7.28	71.93
13	Kuwait	7.17	69.33
14	Belgium	7.11	67.92
15	Australia	7.07	67.14
16	Israel	7.00	65.50
17	Poland	6.99	65.19
18	U.A.E.	6.94	64.12
19	Germany	6.88	62.63
20	India	6.81	61.03
21	Spain	6.79	60.76
22	Türkiye	6.73	59.23
23	Slovak Republic	6.69	58.42
24	Argentina	6.65	57.54
25	Philippines	6.61	56.52
26	Czech Republic	6.58	55.92
27	Slovenia	6.50	54.00
27	South Africa	6.50	54.00
29	Dominican Republic	6.44	52.65
30	Finland	6.44	52.56
31	Kenya	6.43	52.43
32	Thailand	6.42	52.20
33	Cambodia	6.36	50.78
34	France	6.35	50.44
35	Japan	6.34	50.39
36	Malaysia	6.29	49.19
37	Chile	6.29	49.18
38	Austria	6.11	45.06
39	Vietnam	6.07	44.14
40	Brazil	6.05	43.73
41	Morocco	6.04	43.46
42	Colombia	6.00	42.50
42	Panama	6.00	42.50
44	Egypt	5.91	40.53
45	China	5.90	40.24
46	Hungary	5.85	39.05
47	Peru	5.80	37.84
48	Mexico	5.71	35.74
49	Nigeria	5.62	33.81
50	Sri Lanka	5.55	32.15
51	Korea	5.50	31.00
52	Oman	5.44	29.56
53	Bangladesh	5.43	29.40
54	Croatia	5.42	29.23
55	Italy	5.34	27.41
56	Jordan	5.18	23.68
57	Russia	5.00	19.50
58	Guatemala	4.50	8.00
58	Saudi Arabia	4.50	8.00
58	Ukraine	4.50	8.00
61	Pakistan	4.18	0.74
62	Greece	4.15	0.00

8.2.3 Professionals' compensation (2022)

Survey: professionals are appropriately compensated.

Rank	Country/ Region	Unit	Index
1	Switzerland	8.54	100.00
2	Denmark	7.68	80.77
3	United States	7.59	78.58
4	Korea	7.50	76.66
4	Netherlands	7.50	76.66
4	Saudi Arabia	7.50	76.66
7	Canada	7.48	76.23
8	Singapore	7.47	75.91
9	U.A.E.	7.42	74.86
10	Kuwait	7.39	74.17
11	Chile	7.30	72.10
12	Israel	7.25	71.05
13	United Kingdom	7.17	69.29
14	Germany	7.15	68.71
15	Japan	7.14	68.56
16	Sweden	7.12	68.08
17	Belgium	7.04	66.33
18	China	6.97	64.84
19	Panama	6.97	64.78
20	France	6.95	64.37
21	South Africa	6.91	63.52
22	Taiwan, China	6.85	62.07
23	New Zealand	6.83	61.70
24	Hungary	6.83	61.51
25	Peru	6.76	59.98
26	Australia	6.74	59.67
27	India	6.69	58.58
28	Argentina	6.69	58.54
29	Austria	6.68	58.27
30	Thailand	6.66	57.73
31	Czech Republic	6.63	57.03
32	Italy	6.52	54.57
33	Brazil	6.48	53.82
34	Finland	6.41	52.12
35	Morocco	6.38	51.42
36	Spain	6.22	47.95
37	Indonesia	6.16	46.53
38	Oman	6.15	46.28
39	Hong Kong SAR	6.11	45.47
40	Kenya	6.09	45.04
41	Malaysia	6.08	44.79
42	Colombia	6.00	43.00
42	Slovenia	6.00	43.00
44	Sri Lanka	5.89	40.57
45	Egypt	5.87	40.12
46	Vietnam	5.86	39.80
47	Nigeria	5.79	38.27
48	Türkiye	5.78	38.16
49	Dominican Republic	5.74	37.06
50	Jordan	5.59	33.82
51	Philippines	5.59	33.70
52	Russia	5.50	31.79
53	Mexico	5.41	29.81
54	Poland	5.34	28.15
55	Greece	5.28	26.91
56	Croatia	5.27	26.61
57	Slovak Republic	5.00	20.57
57	Ukraine	5.00	20.57
59	Guatemala	4.90	18.39
60	Pakistan	4.38	6.69
61	Cambodia	4.32	5.31
62	Bangladesh	4.08	0.00

8 Professionals

8.2 Social Context

8.2.4 Social status of professionals (2022)

Survey: professionals are proud of their current professions.

Rank	Country/ Region	Unit	Index
1	Israel	8.50	100.00
2	Netherlands	8.25	90.00
3	Kuwait	8.22	88.89
4	Switzerland	8.21	88.39
5	Singapore	8.13	85.33
6	Canada	8.02	80.77
7	Slovenia	8.00	80.00
8	Germany	7.90	75.83
9	Poland	7.86	74.32
10	Spain	7.86	74.24
11	Chile	7.84	73.75
12	United States	7.81	72.57
13	Thailand	7.81	72.50
14	Japan	7.81	72.22
15	Austria	7.79	71.67
16	Sweden	7.74	69.71
17	Hong Kong SAR	7.69	67.50
18	United Kingdom	7.69	67.43
19	Brazil	7.68	67.14
20	Denmark	7.65	66.00
21	U.A.E.	7.65	65.83
22	Argentina	7.63	65.38
23	France	7.63	65.24
24	Taiwan, China	7.60	64.00
25	Egypt	7.56	62.29
26	Jordan	7.56	62.27
27	Hungary	7.53	61.00
28	Peru	7.52	60.81
29	New Zealand	7.51	60.56
30	Korea	7.50	60.00
31	Philippines	7.49	59.51
32	Italy	7.47	58.71
33	Guatemala	7.39	55.56
34	Czech Republic	7.38	55.00
35	Malaysia	7.36	54.42
36	Greece	7.35	53.91
37	South Africa	7.32	52.86
38	Mexico	7.29	51.76
39	Australia	7.23	49.14
40	Finland	7.22	48.75
41	India	7.19	47.78
42	Belgium	7.18	47.03
43	Bangladesh	7.13	45.00
44	Croatia	7.08	43.08
45	Panama	7.06	42.35
46	China	7.04	41.79
47	Saudi Arabia	7.00	40.00
48	Dominican Republic	6.94	37.65
49	Oman	6.92	36.67
50	Nigeria	6.90	36.00
51	Cambodia	6.88	35.20
52	Morocco	6.88	35.00
53	Pakistan	6.82	32.63
54	Indonesia	6.81	32.57
55	Kenya	6.81	32.27
55	Türkiye	6.81	32.27
57	Vietnam	6.79	31.43
58	Ukraine	6.75	30.00
59	Sri Lanka	6.07	2.67
60	Russia	6.00	-
60	Slovak Republic	6.00	-
#VALUE!	Colombia	-	-

8.2.5 Openness to foreign professionals (2022)

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

Rank	Country/ Region	Unit	Index
1	Netherlands	8.50	100.00
2	Sweden	8.10	88.57
3	U.A.E.	8.02	86.29
4	Slovenia	8.00	85.71
5	Australia	7.85	81.43
5	Singapore	7.85	81.43
7	Canada	7.82	80.57
8	Switzerland	7.80	79.95
9	Brazil	7.77	79.08
10	Chile	7.75	78.57
10	Hungary	7.75	78.57
12	Hong Kong SAR	7.70	77.00
13	Denmark	7.69	76.73
14	Thailand	7.67	76.34
15	Belgium	7.64	75.56
16	Austria	7.60	74.21
17	Czech Republic	7.58	73.81
18	India	7.50	71.43
18	Korea	7.50	71.43
18	United Kingdom	7.50	71.43
21	New Zealand	7.49	71.03
22	Türkiye	7.44	69.81
23	Philippines	7.43	69.34
24	United States	7.41	68.98
25	Morocco	7.36	67.35
26	Panama	7.32	66.39
27	Germany	7.31	66.07
28	Taiwan, China	7.27	64.76
29	Malaysia	7.25	64.29
30	Sri Lanka	7.23	63.57
31	Vietnam	7.14	61.22
32	Indonesia	7.14	61.22
33	Peru	7.11	60.42
34	Poland	7.05	58.69
35	Dominican Republic	7.04	58.40
36	Jordan	7.03	58.12
36	Kenya	7.03	58.12
38	Colombia	7.00	57.14
38	Israel	7.00	57.14
38	Saudi Arabia	7.00	57.14
41	Spain	6.96	55.88
42	Mexico	6.90	54.20
43	South Africa	6.89	53.88
44	Argentina	6.87	53.30
45	France	6.82	52.04
46	Cambodia	6.72	49.14
47	Kuwait	6.61	46.03
48	Pakistan	6.53	43.61
49	Oman	6.52	43.45
50	China	6.50	42.86
51	Nigeria	6.39	39.68
52	Italy	6.31	37.50
53	Bangladesh	6.25	35.71
54	Finland	6.22	34.82
55	Japan	6.08	30.95
56	Egypt	6.00	28.57
57	Croatia	5.94	26.92
58	Greece	5.83	23.60
59	Slovak Republic	5.58	16.67
60	Ukraine	5.50	14.29
61	Guatemala	5.06	1.59
62	Russia	5.00	-