

Summary of Key Findings

In the midst of rapid technological change, political polarization and a fragile economic recovery, it is critical that we define, assess and implement new pathways to growth and prosperity. With productivity the most important determinant of long-term growth and income, the new Global Competitiveness Index 4.0 featured in this report sheds light on a newly emerging set of factors critical for productivity in the Fourth Industrial Revolution (4IR) and provides a tool for assessing them. The key findings below summarize the new tool as well as its results as revealed by global, regional and country level analysis.

A NEW TOOL FOR UNDERSTANDING AND ASSESSING COMPETITIVENESS

New concepts. With the inclusion of new concepts and extensive new data gathering efforts, the GCI 4.0 provides novel and more nuanced insights on the factors that will grow in significance as the 4IR gathers pace: human capital, innovation, resilience and agility. These qualities are captured through a number of new, critically important concepts (e.g. entrepreneurial culture, companies embracing disruptive ideas, multistakeholder collaboration, critical thinking, meritocracy, social trust) complementing more traditional components (e.g. ICT and physical infrastructure, macroeconomic stability, property rights, years of schooling).

New benchmarks. The GCI 4.0 introduces a new progress score ranging from 0 to 100. The frontier (100) corresponds to the goal post for each indicator and typically represents a policy target. Each country should aim to maximize its score on each indicator, and the score indicates its current progress against the frontier as well as its remaining distance. This approach emphasizes that competitiveness is not a not a zero-sum game between countries—it is achievable for all countries.

Twelve pillars of competitiveness. There are a total of 98 indicators in the index, derived from a combination of data from international organizations as well as from the World Economic Forum's Executive Opinion Survey. These are organized into 12 pillars in the GCI 4.0, reflecting the extent and complexity of the drivers of productivity and the competitiveness ecosystem. These are: Institutions; Infrastructure; ICT adoption; Macroeconomic stability; Health; Skills; Product market; Labour market; Financial system; Market size; Business dynamism; and Innovation capability.

A level playing field for all economies. For the second half of the 20th century, the pathway to development seemed relatively clear: lower-income economies would be expected to develop through progressive industrialization by leveraging low-skilled labour. In the context of the 4IR the sequence has become less clear, particularly as the cost of technology and capital are lower than ever but their successful use relies on a number of other factors. The GCI 4.0 reflects this growing complexity of policy prioritization by weighting pillars equally rather than according to a country's current stage of development. In essence, the index offers each economy a level playing field to define its path to growth. While sequencing is dependent on the priority of each economy, the index contends that economies need to be holistic in their approach to competitiveness rather than focusing on a particular factor alone. A strong performance in one pillar cannot make up for a weak performance in another. For instance, investing in technology without investing in digital skills will not yield meaningful productivity gains. In order to increase competitiveness, no area can be neglected.

REGIONAL AND COUNTRY RESULTS

Top ten economies. The United States is the closest economy to the frontier, the ideal state, where a country would obtain the perfect score on every component of the index. With a competitiveness score of 85.6, it is 14 points away from the frontier mark of 100, implying that even the top-ranked economy among the 140 has room for improvement. It is followed by Singapore (83.5) and Germany (82.8). Switzerland (82.6) comes in at 4th place, followed by Japan (82.5), Netherlands (82.4), Hong Kong SAR (82.3). The United Kingdom (82.0), Sweden (81.7) and Denmark (80.6) round out the top ten.

Regional highlights. Globally, the median score is 60.0. Between the US (85.6, 1st) and Chad (35.5, 140th) there is a wide range of performance across regions and countries. Europe and North America are, combined, home to seven of the 10 most competitive economies. East Asia and the Pacific region, home to the other three top ten economies, achieves the highest median score (72.6) among all regions, ahead of Europe and North America (70.8). At the other end of the spectrum, 17 of the 34 sub-Saharan African economies studied are among the bottom 20 globally, and the region's median is a low 45.2, less than halfway to the frontier. While regional averages are helpful for global comparisons, there are vast disparities within regions, implying that economies are not necessarily hampered by geography in their quest for competitiveness. The existence of pockets of over- or under-performance within each region suggests the need for proactive policies and leadership. For example, in Europe, there are four very distinct groups of countries with very different competitiveness levels and, within the EU, Germany's overall competitiveness score (82.8, 3rd) is 20 points higher than Greece (62.1, 57th). In Latin America, Chile's score (70.3, 33rd) is nearly twice that of Haiti (36.5, 138th). Mauritius (63.7, 49th), Sub-Saharan Africa's best performer, is nearly 30 points and over 91 places ahead of Chad. In South-East Asia, Singapore (2nd, 83.5) is 34 points closer to the frontier than Lao PDR (49.3, 112th). In some cases, the score differential between two neighbouring countries is large; there are approximately 20 points between the Dominican Republic (57.4) and Haiti (36.5), between Colombia (61.6) and Venezuela (43.2), and between Thailand (67.5) and Cambodia (50.2).

A mixed performance across the G20 and the BRICS. Within the G20, almost 30 points and 80 ranks separate the United States (85.6, 1st) from Argentina (57.5, 81st), the best and worst performing economies of the group, respectively. Of the BRICS grouping of large emerging markets, China is the most competitive, ranking 28th and with a score of 72.6. It is followed by the Russian Federation, which is ranked 43rd. These are the only two in the top 50. Next is India, which ranks 58th, up five places from 2017: with a score of 62.0, it registers the largest gain of any country in the G20. India is followed by South Africa, which falls five places this year to 67th. Last is Brazil, which slips three places to 72nd place. Within the G20, on health, the clear leader is Japan, which ranks first with a perfect score of 100, while South Africa is 127th with a score of 43.2. Differences on the Financial system pillar are small—there are fewer than 20 points between Canada (94.5, 6th) and Italy (76.3, 125th)—but the same cannot be said when it comes to the Macroeconomic stability pillar. While 11 of the 19 members obtain a score above 90 on this pillar, the context in Turkey (67.3, 116th), Brazil (64.6, 122nd) and Argentina (44.9, 136th) remains volatile. The Republic of Korea is the world's champion in terms of broad-based ICT adoption, with a near perfect score of 91.3 on this pillar. By contrast, India is among the weakest performers, with a score of 28.0 (117th), despite its vibrant IT sector. There is also a physical infrastructure gap among G20 economies (about 30 points between Japan and Indonesia, the best and worst performers, respectively). There are stark contrasts in terms of innovation capabilities, too. While Germany (87.5), the US (86.5), Japan (79.3), the United Kingdom (79.2) and Korea (79.2) are beacons of innovation, other G20 countries are significantly lower. China's innovation score (64.4) is similar to Italy's (65.8), not too far from Australia's (69.8), and more than 10 points above India's (53.8) and Russia's (50.7).

GLOBAL TRENDS AND IMPLICATIONS

All economies must invest in broader measures of competitiveness today to sustain growth and income in the future. The results demonstrate a strong correlation between competitiveness and income level. For instance, high-income economies make up the entire top 20 and only three non-high-income economies feature in the top 40: Malaysia (25th), China (28th), and Thailand (38th). However, some economies are over-performers and others under-performers when it comes to putting in place the building blocks of competitiveness at their current level of income. Economies that under-perform in competitiveness given their current income level may have difficulty sustaining that level without improving their competitiveness. Most of these outlying countries are mineral resource-rich—for example, Qatar, Brunei Darussalam, Kuwait, Trinidad and Tobago, and Venezuela. Despite having a similar level of income as Chile, Venezuela's GCI score is nearly 30 points lower. Countries who want sustained growth and rising income levels must invest beyond their current areas of strength.

Enhancing the fundamentals of competitiveness today will improve resilience to shocks. Building economic resilience through competitiveness is more important than ever in today's volatile context, with a wide range of vulnerabilities, technological change, geopolitical tensions and potential flash points around the world. The results reveal that countries that optimize their performance on the factors included in the GCI 4.0 are also more resilient to various shocks. Likewise, more competitive countries are also better equipped to address the challenges of the 4IR.

While openness is good for growth governments must support those who lose out to globalization. At a time of escalating trade tensions and backlash against globalization, the report reveals the importance of openness for competitiveness: more open economies are more innovative and their markets more competitive. However, while openness has been a 'win-win' between countries it is at times a 'win-lose' within countries. Attempting to address inequality by reversing globalization is counterproductive for sustained economic growth. Policies should, therefore, focus on improving the conditions of those specifically impacted by globalization rather than favouring protectionism. Combining GCI data with other sources suggests that redistributive policies, safety nets, investments in human capital, and more progressive taxation could help reduce inequality without compromising a country's level of competitiveness. Additionally, the definition of openness must look to concepts beyond trade, freedom of people's movement and ideas exchange. Using such a definition, we find that Singapore, Germany, Netherlands,

Sweden, Finland and the United States are some of the most open countries in the world, while the Islamic Republic of Iran and Ethiopia are among the least open. Brazil and India also emerge as relatively "closed".

Technology-based leapfrogging remains elusive.

The promise of leveraging technology for economic leapfrogging remains largely unfulfilled. There are, at most, 4.5 billion smartphones in use in the world and more than half of humanity has never gone online. While the promise of ICTs for productivity is high—and although ICTs can clearly be catalysts for other drivers of productivity, such as innovation and business dynamism—it would be misguided to rely on technology alone to solve all problems, in education, health, governance or transport infrastructure, for example. For many of the least competitive economies, the root causes of slow growth continue to be the 'old' developmental issues such as institutions, infrastructure and skills. For technology-based leapfrogging to offer a new path to development for low-income economies, these issues cannot be ignored.

Agility and future-readiness are key in a changing world. Amidst the transformations and disruptions brought about by the 4IR, adaptability and agility of all stakeholders—individuals, governments and businesses—will be key features in successful economies. These concepts are captured through several indicators in the GCI 4.0. The results show, for example, that Singapore's government is the most 'future-ready' (85.6), followed by Luxembourg's (79.0) and the United States' (78.3). The United Arab Emirates (76.7) and four other Gulf countries appear in the top 10, which also features Malaysia (71.0, 9th). The governments of Brazil (24.9, 129th), Greece (19.4, 135th) and Venezuela (7.8, 140th and last) are perceived as among the least 'future-ready'. The skillset of the population is another criterion of adaptability. With the right skills, workers can become the actors of the economic transformation rather than becoming victims of it. The results suggest that Sweden's workforce is the most technology-savvy (80.6), while vocational training in Switzerland is by far the most advanced in the world (92.3). Switzerland is also the most effective with active labour market policies encouraging reskilling and retraining, while American companies are the most ready to embrace risk or disruptive business ideas (77.5).

Weak institutions continue to hamper competitiveness.

Weak institutions—defined as including security, property rights, social capital, checks and balances, transparency and ethics, public-sector performance and corporate governance—continue to hinder competitiveness, development and well-being in many countries. The Institutions pillar is the second-lowest

scoring pillar of the 12 GCI pillars (after the Innovation capability pillar), with a median score of 53—just over halfway to the frontier. For 117 of the 140 economies studied, their Institutions pillar performance is a drag on their overall competitiveness score. Governments must pay attention to both traditional and emerging knowledge about strengthening the institutional environment as a factor of productivity. For example social capital—a broad concept that captures the quality of personal and social relationships, the strength of social norms and the level of civic participation in society—creates more cohesion within society and more trust among people, thus reducing transaction costs. Australia (66.2) and New Zealand (66.0) boast the highest levels of social capital, China (41.0, 125th) and Russia (43.9, 117th) have lower levels of social capital, and Burundi (35.2) and Yemen (37.8) place last.

A formula for innovation remains obscure for most economies. Once the preserve of the most advanced economies, innovation has become an imperative for all advanced economies and a priority for a growing number of emerging countries. And yet the vast majority of them are struggling to make innovation a meaningful engine of growth. The results show that there are only a few innovation powerhouses in the world, including Germany, the United States and Switzerland. The global median score on the Innovation capability pillar is 36, by far the lowest score across the 12 pillars. For 77 of the 140 economies studied, Innovation capability is the weakest pillar. In the vast majority of countries, innovation capacity remains extremely limited, very localized and/or restricted to very few sectors. In order to help countries crack the innovation conundrum, the GCI 4.0 sheds new light on the drivers of the innovation process, from idea generation to product commercialization. Many of these factors are intangible, often underpinned by cultural factors. For example, the index notably captures the attitude towards entrepreneurial risk. The results show that this attitude is most positive in Israel (83.1) and the United States (79.4), and tends to be more negative in most Asian societies, notably in Korea (47.5, 77th). As an important enabler of creativity, diversity is also captured in the index. Canada (81.5) has the most diverse workforce, ahead of Singapore and the United States. The right corporate culture can also promote creativity by empowering employee and encouraging them to create, challenge and experiment. Corporate culture is the least hierarchical in Denmark (84.9), Sweden (83.8) and other Nordic countries, whereas the patriarchal society of several Asian economies translates into more hierarchical structures, for instance in Korea (51.0, 88th) and China (58.5, 50th).

The financial system continues to be a source of weakness in some economies. The GCI 4.0 introduces a new measure of financial stability. Building on the learning from the global financial crisis, this composite indicator captures the sturdiness of the banking sector, using measures such as the soundness of banks, nonperforming loans, the difference between the credit supply and its trend, and banks' regulatory capital ratio. According to this methodology, Finland, Hong Kong SAR, Switzerland, Luxembourg and Norway have the most stable financial markets (all scoring above 95), while India, China, Russia and Italy—all with a score of 84 or less—are among the G20 economies that present specific vulnerabilities in their financial systems. More specifically: India's financial system stability (83.2) is mainly held back by relatively low performance on soundness of banks and regulatory capital ratios; China's stability (80.1, 113th) is threatened by the rapid growth of private credit; Russia's financial system stability (79.5) is somewhat limited by the relative fragility of its banks; and Italy's performance (76.4) is mainly explained by high share of non-performing loans on 2016 banks' balance sheets.

Achieving equality, sustainability and growth together is possible but needs proactive, far-sighted leadership. There is a worldwide consensus on the need for a more holistic model of economic progress that promotes higher living standards for all, respects planetary boundaries, and does not disadvantage future generations. The results suggest that there is no inherent trade-off between equality and growth: it is possible to be both pro-growth and 'pro-equity', as shown by the strong performance of several northern European countries in terms of both competitiveness and inclusion. The relationship between performance on the GCI 4.0 and on environmental measures is less conclusive. The most competitive economies have the largest ecological footprints, but they are the most efficient (their footprint per unit of GDP is the lowest). It is therefore incumbent upon leaders to set longer-term priorities and proactive efforts to create virtuous cycles between equality, sustainability and growth.