

Global Findings

In the long run, a country's economic fortunes are the result of proactive choices. The Global Competitiveness Index 4.0 (GCI 4.0) provides stakeholders with a detailed map of the factors and attributes that drive productivity, growth and human development (see Box 1). By systematically measuring these intertwined and complex factors across countries and over time, the GCI offers direction for policy intervention.

This chapter summarizes the global findings of the 2019 edition of the GCI 4.0. It is followed by regional and country analyses in Chapter 2 and a thematic exploration on the relationship between competitiveness, equality and sustainability in Chapter 3. The report's website (www.weforum.org/gcr) offers a wealth of complementary materials: interactive scorecards and rankings, additional information on each index component, downloads, infographics and articles.

Enhancing competitiveness is still key for improving living standards

Sustained economic growth remains a critical pathway out of poverty and a core driver of human development. There is overwhelming evidence that growth has been the most effective way to lift people out of poverty and improve their quality of life. For least-developed countries (LDCs) and emerging countries, economic growth is critical for expanding education, health, nutrition and survival across populations.

The importance and policy relevance of growth has been re-affirmed in the United Nations' 2030 Agenda for Sustainable Development, adopted by all UN member states in 2015, which identified 17 Sustainable Development Goals (SDGs) to be achieved by 2030. Goal 8 calls for "sustained, inclusive and sustainable economic growth". Growth is also a means or a pre-requisite for achieving many of the other SDGs, including ending poverty in all its forms everywhere (Goal 1).

For most of the past decade, growth has been subdued and remained below potential in many developing countries, hampering progress on several SDGs. The competitiveness landscape painted by the GCI in 2019 demands more effort to restore productivity and growth to lift living standards. A recent UN progress report warns that the world is not on track to meet several SDGs.¹ On Goal 8, LDCs have missed the target of 7% growth every year since 2015. Extreme poverty reduction is decelerating. At current pace, it is estimated that by 2030 the rate will stand at about twice the 3% target set in Goal 1. The World Bank estimated that, as of 2015, 3.4 billion people—or 46% of the world's population—lived on less than \$5.50 a day and struggled to meet basic needs.²

After years of steady decline, hunger (Goal 2) has increased and now affects 826 million—or one in nine people—up from 784 million in 2015. Twenty percent of

Box 1: Introducing the Global Competitiveness Index 4.0

Introduced in 2018, the GCI 4.0 is the fourth and latest iteration of the methodology used by the *Global Competitiveness Report*, which has been assessing countries every year since its first edition in 1979.¹ The GCI 4.0 is a compass for policy-makers and other stakeholders: it provides guidance on what matters for long-term growth. It can inform policy choices, help shape holistic economic strategies and monitor progress over time.

By competitiveness, we mean the attributes and qualities of an economy that allow for a more efficient use of factors of production. The concept is anchored in growth accounting theory, which measures growth as the sum of growth in the factors of production—that is, labour and capital—and of total factor productivity (TFP), which measures factors that cannot be explained by labour, capital or other inputs. The GCI measures what drives TFP.

Productivity gains are the most important determinant of long-term economic growth. An empirical study conducted in 2018 found that the GCI 4.0 explains over 81% of cross-country variation in income levels (Figure 1.2), and 70% of cross-country variation in long-term growth when accounting for the catch-up effect.²

The GCI 4.0 framework is organized into 12 main drivers of productivity, or ‘pillars’ (Figure 1.1). It places a premium on

factors that will grow in significance as the Fourth Industrial Revolution (4IR) gathers pace: human capital, agility, resilience and innovation.

The GCI 4.0 is a “composite indicator”; its computation is based on successive aggregations of scores, from the indicator level (the most disaggregated level) to the overall score (the highest level). At every aggregation level, each measure is computed by taking the average of the scores of its components (see Appendix A for the detailed composition and methodology). The overall GCI 4.0 score is the average of the scores of the 12 pillars. In total, there are 103 indicators distributed across the 12 pillars. Indicators are sourced from international organizations, academic institutions and non-governmental organizations. Forty-seven indicators, accounting for 30% of the overall GCI score, are derived from the World Economic Forum’s Executive Opinion Survey (see Appendix B). The survey is a unique, global study that surveys every year approximately 15,000 business executives with the help of 150 Partner Institutes (see Acknowledgments for the full list).

Competitiveness, as defined in the context of the GCI 4.0, does not imply zero-sum competition among nations. Our concept of competitiveness is about productivity, and all countries can become more productive at the same time.

(Continued on next page)

Figure 1.1: The Global Competitiveness Index 4.0 framework

Enabling Environment



Pillar 1
Institutions



Pillar 2
Infrastructure



Pillar 3
ICT adoption



Pillar 4
Macroeconomic stability

Human Capital



Pillar 5
Health



Pillar 6
Skills

Markets



Pillar 7
Product market



Pillar 8
Labour market



Pillar 9
Financial system



Pillar 10
Market size

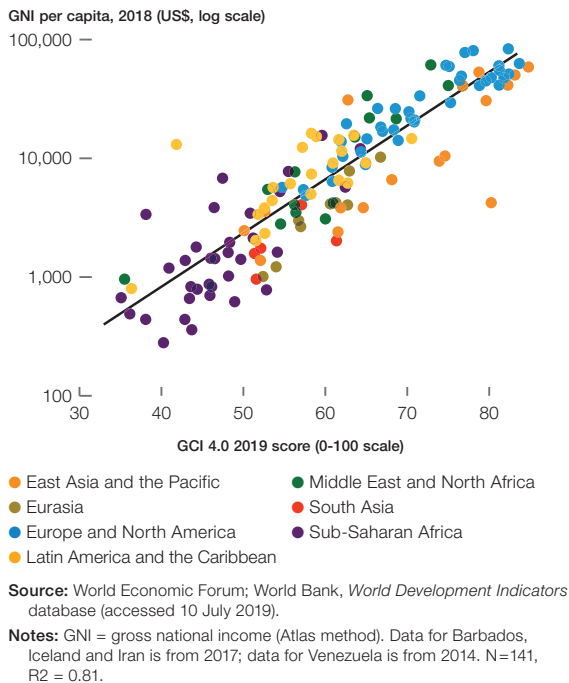
Innovation Ecosystem



Pillar 11
Business dynamism



Pillar 12
Innovation capability

Box 1: Introducing the Global Competitiveness Index 4.0 (cont'd.)
Figure 1.2: Competitiveness and income


At a time when globalization and global governance are being put to the test, it is especially critical to understand that the pursuit of national competitiveness does not undermine global cooperation—indeed, the opposite is true. Openness contributes to competitiveness.

Readers are encouraged to focus less on the rankings, which are derived from comparing countries with other countries, than with their own potential. A country's performance on the overall GCI results and each of its components is reported as a 'progress score' on a 0-to-100 scale, where 100 represents the frontier, an ideal state where an issue ceases to be a constraint to productivity growth. Readers should look at whether their country is moving closer to the frontier in a given area—in particular, where its distance to the frontier is the largest—and what it can learn from those who are performing best in selected areas. Additionally, the GCI results should always be put in context—and complemented, compared and contrasted with additional data when available. Interpretation of the index results should always be made with a consideration for the idiosyncratic cultural, sociological and cultural attributes of a country or region to best enable its use as a policy tool.

Notes

- 1 For a detailed introduction to the GCI 4.0, its history, main features, and theoretical underpinnings, see Chapter 3 of *The Global Competitiveness Report 2018*.
- 2 Ibid, see Box 3.

Africa's population is undernourished. The "zero hunger" target set by Goal 2 will almost certainly be missed.

The GCI shows that there is little determinism and fatalism in the process of economic development. Economic growth does not happen in a vacuum. Some basic building blocks are required to jumpstart the development process, and more are needed to sustain it. The GCI makes it possible to identify specific constraints to growth or bottlenecks, as well as the causes behind episodes of economic recession or high volatility. Indeed, performance on the GCI is a good indicator of resilience to shocks of various nature (e.g. related to global demand, commodity price, currency or credit conditions). Previous editions of this report series showed that the more competitive advanced economies rebounded from the Great Recession much more quickly, experiencing shorter and less severe hysteresis effects.³ In the current very volatile geopolitical context, and with a likely downturn ahead, building economic resilience through improved competitiveness is crucial, especially for low-income countries.

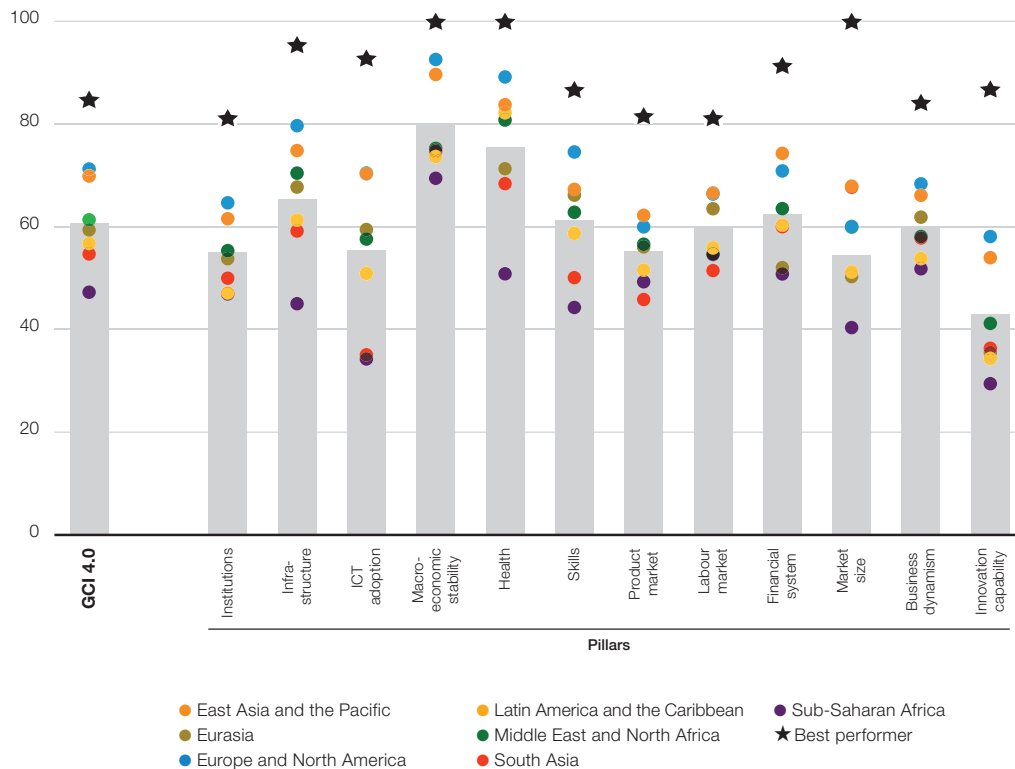
The global economy is ill-prepared for a downturn after a lost decade for productivity-enhancing measures

As the shadow of the Great Recession looms large, the global economy is predicted to be heading for a slowdown. Over the past decade, growth in advanced economies has been anaemic. Many emerging economies—including Argentina, India, Brazil, Russia and China—are experiencing some slowdown or stagnation. In least-developed economies, growth remains well below potential and highly volatile. Although several factors explain this lacklustre performance, persistent weaknesses in the drivers of productivity growth, highlighted by the GCI, are among the principal culprits.

Productivity growth started slowing down well before the financial crisis. Between 2000 and 2007, total factor productivity (TFP) annual growth averaged just 1% in advanced economies and 2.8% in emerging and developing economies. TFP then plummeted during the crisis. Between 2011 and 2016, TFP grew

Figure 1: The state of global competitiveness in 2019

Average score (0-100)



Source: World Economic Forum.

Note: See page xiii for regional classifications.

by 0.3% in advanced economies and 1.3% in emerging and developing economies.⁴ The financial crisis may actually have contributed to this deceleration through “productivity hysteresis”⁵ – the long-lasting delayed effects of investments being undermined by uncertainty, low aggregate demand and tighter credit conditions.⁶ Furthermore, beyond strengthening financial system regulations, many of the structural reforms designed to revive productivity that were promised by policy-makers in the heat of the crisis did not materialize.

The 2019 results of the GCI 4.0 reveal the size of the deficit in global competitiveness measures. The average GCI score across the 141 economies studied is 60.7, measured on a scale of 0 to 100, where 100 is the “frontier”, an ideal—and hypothetical—situation where a country achieves the perfect score on every component of the index. In other words, the global competitiveness gap—measured as the distance to the frontier—stands at almost 40 points (Figure 1).

The gap is wide across all 12 pillars: on only two, Health and Macroeconomic stability, it is less than 30 points globally. Advanced economies perform consistently better than the rest of the world, but overall, they still fall 30 points short of the frontier—and on the Innovation capability pillar, their average gap is over 40 points. Singapore, the best performer overall, still falls 15

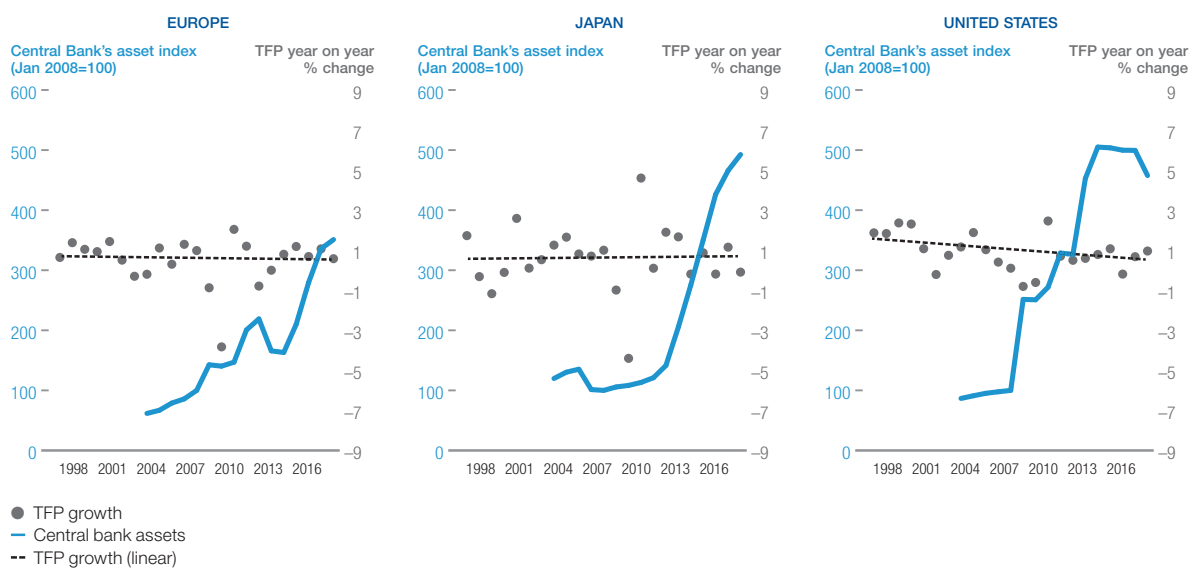
points short of the ideal (see page xiii for the full GCI 4.0 2019 rankings).

In all but three pillars, even the best-in-class has room for improvement—as much as 20 points in the Product market pillar. This pillar is also the only one on which performance has fallen back since last year (down by 0.6 points), reflecting the rise in international trade tensions: barriers to trade reduce the extent of the markets that countries can access.

Overall, global competitiveness has improved by 1.3 points year on year, driven mainly by the increase in ICT adoption.⁷ While this is encouraging, the pace of change is modest, with a 40-point gap still to bridge. It shows that most productivity-enhancing structural reforms take years—if not decades—to yield tangible results. Despite the overall positive trend, over the past year 41 economies have become less competitive, including five of the G7 economies: United States, Japan, Germany, United Kingdom and Canada. The US’s decline is the largest, while Germany’s and the UK’s are among the largest 10.

While the imminent slowdown is unlikely to be nearly as severe as the Great Recession, policy-makers generally have fewer policy options today than they did back then to stimulate aggregate demand. Monetary policy, on which countries have largely relied upon in the

Figure 2: Monetary policy and TFP growth



past decade, seems to have run out steam and some countries are facing a liquidity trap—a situation in which savers respond to low interest rates and an uncertain economic outlook by preferring to hoard cash rather than invest. At the same time, fiscal policy has been under-utilized, either because of limited fiscal space and/or high levels of public debt—or simply because of fiscal prudence.

Furthermore, the geopolitical context is challenging. Throughout the Great Recession, governments resisted protectionism and international cooperation spared the world from an even deeper crisis. Today, gridlock in the international governance system, and escalating trade and geopolitical tensions are fuelling uncertainty, which holds back investments, and increase the risk of supply shocks—disruptions to global supply chains or sudden price spikes or interruptions in the availability of key resources.

Policy-makers must look beyond monetary policy to other policies, investments and incentives for reviving productivity growth

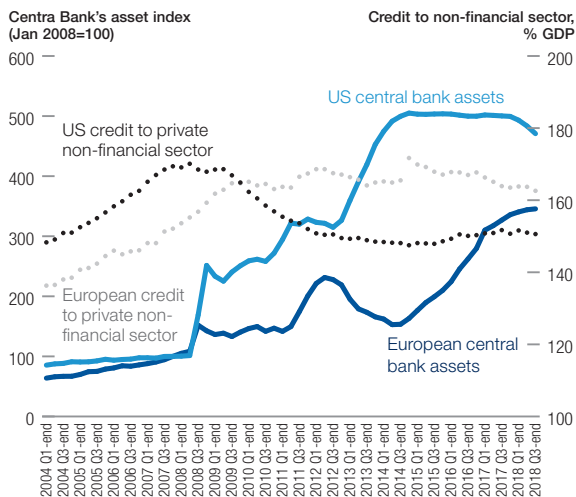
Since the Great Recession, policy-makers have kept the global economy afloat primarily through ultra-loose and unconventional monetary policy. But despite the massive injection of liquidity—four of the world's major central banks alone injected \$10 trillion between 2008 and 2017—productivity growth has continued to stagnate over the past decade (Figure 2).⁸

Although loose monetary policy mitigated the negative effects of the global financial crisis, it may have also contributed to reducing productivity growth by encouraging capital misallocation. With extremely low (or negative) interest rates and ongoing deleveraging, banks have become less interested in lending to businesses (Figure 3) and prioritized fee-generating and trading activities instead.⁹ Further, in allocating corporate loans, banks seems to have favoured firms that were not credit-constrained (and less risky) rather than credit-constrained ones that might have more productivity potential. As shown by recent studies, financial frictions that distort the adoption technologies may have significant negative effects on TFP.¹⁰

Excessive reliance on monetary policy has also meant that fiscal policy has been largely underutilized, as reflected in the steady decline in public investments (Figure 4). Despite the very low borrowing costs, the public sector has not stepped up investments—partly due, in many advanced economies, to concerns about the unsustainability of public debt.

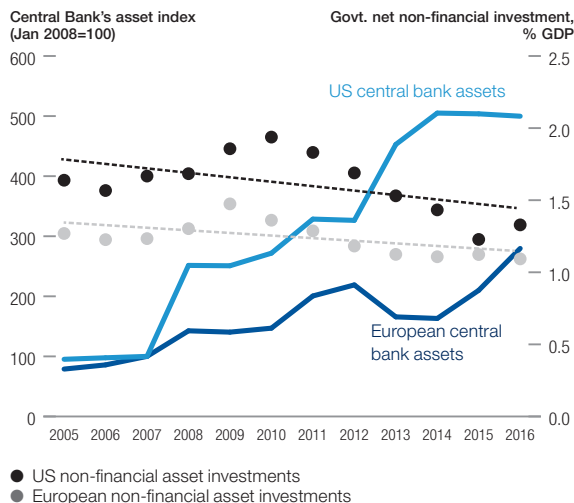
If indeed hysteresis has permanently lowered the growth path, then investment-led stimulus could be an appropriate action to re-start growth in stagnating advanced economies.¹¹ More specifically, fiscal policy that prioritizes stimulating productivity-enhancing investments in infrastructure, human capital and R&D can indeed help the economy to return to a higher growth trajectory. Crucially, fiscal policy should be complemented by structural reforms that make it

Figure 3: Monetary policy and credit to private non-financial sector



Source: Federal Reserve Bank of St. Louis, Economic Research Division.
Notes: Central bank's assets are total assets (less eliminations from consolidation), index Jan 2008=100, not seasonally adjusted. Credit is provided by domestic banks, all other sectors of the economy and non-residents. "Private non-financial sector" credit includes non-financial corporations (both private-owned and public-owned), households and non-profit institutions serving households as defined in the System of National Accounts, 2008. The series have quarterly frequency and capture the outstanding amount of credit at the end of the reference quarter. In terms of financial instruments, credit covers loans and debt securities.

Figure 4: Monetary policy and government non-financial investments



Sources: World Bank, *World Development Indicators* database and Federal Reserve Bank of St. Louis, Economic Research Division.
Notes: Central bank's assets are total assets (less eliminations from consolidation), index Jan 2008=100, not seasonally adjusted. Net investment in government non-financial assets includes fixed assets, inventories, valuables and non-produced assets. Non-financial assets are stores of value and provide benefits either through their use in the production of goods and services or in the form of property income and holding gains. Net investment in non-financial assets also includes consumption of fixed capital.

easier to innovate and enable responsible and inclusive businesses to thrive.

In addition, a revived fiscal policy that incentivizes investments in green R&D, green procurement programs and carbon taxes—further explored in Chapter 3—could offer an opportunity to bridge the competitiveness gap and re-direct the economy towards a more sustainable path.

It is possible for an economy to be growing, inclusive and environmentally sustainable—but few economies are on such a trajectory

It has become evident that policy-makers face a choice when it comes to setting the right direction for growth through the “quality” of policies and public investments to proactively address challenges such as inequality and climate change. The perceived trade-offs between economic, social and environmental factors may emerge from a short-term and narrow view of growth but can be mitigated by adopting a holistic and longer-term approach to growth.

For example, Sweden, Denmark and Finland have not only become among the world’s most technologically advanced, innovative and dynamic economies in the world, but are also providing better living conditions and better social protection, are more cohesive, and

more sustainable than their peers at a similar level of competitiveness. The GCI shows that other countries have very different results on social and environmental factors for the same level of current competitiveness and must begin work today to get on the path to creating not just growing but also low-carbon and inclusive economies. It will take proactive, bold efforts by economic policy-makers to choose a growth path that tackles the challenges of climate change and inequality.

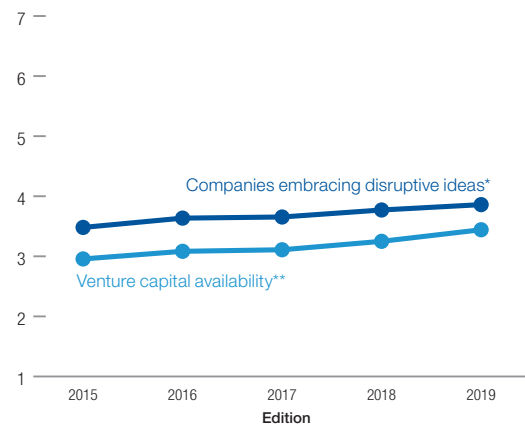
Finding a balance between technology integration and human capital investments will be critical to enhancing productivity in the next decade encourage creativity, manage the destruction

In most advanced and emerging economies, technology adoption and innovation have become priorities for governments and companies alike as a source of value creation, productivity growth and improved living standards. Technology can also improve access to basic services, working conditions, health outcomes and economic security.

The GCI 2019 results show that, globally, more and more companies are embracing disruptive ideas and availability of venture capital is on the rise. (see Figure 5). However, despite these efforts, the results

Figure 5: Creativity and venture capital on the rise

Global average



* Response to the survey question “In your country, to what extent do companies embrace risky or disruptive business ideas?” [1 = not at all; 7 = to a great extent]

** Response to the survey question “In your country, how easy is it for start-up entrepreneurs with innovative but risky projects to obtain equity funding?” [1 = extremely difficult; 7 = extremely easy]

Source: World Economic Forum, Executive Opinion Survey (various editions). See Appendix B for details. Averages based on a constant sample of 114 economies covered in every edition since 2015.

Note: Averages based on a constant sample of 114 economies covered in every edition since 2015.

also reveal there is a lot of scope to do better in both adopting technology and boosting innovation. Only four economies score above 80 on the Innovation capability pillar—Germany, United States, Switzerland and Taiwan (China)—and only one-quarter score above 50. Globally, the median score is just 38. These results are not surprising given the complexity and multitude of factors that make up the innovation ecosystem.

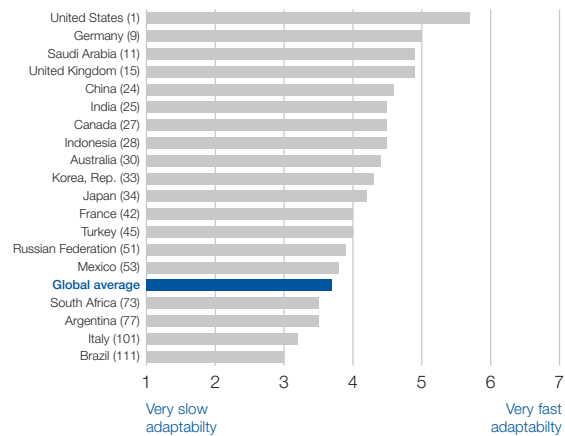
Making technology and innovation part of an economy’s DNA is challenging in itself but governments must also account for enabling this change through human capital investments and mitigating the unintended adverse impacts of technological advancements on income distribution and social cohesion through a holistic approach. In the Schumpeterian process of “creative destruction”, creativity must be encouraged, and the destruction must be managed. Increased precariousness of workers, the skills gap, excessive market concentration, corrosive effects on the social fabric, regulatory loopholes, data privacy issues and cyberwarfare are all but a few of the potential negative effects that governments must mitigate.

The current backlash against big technology companies, the platform economy and technology in general suggests that so far governments have not been particularly successful.

The GCI results suggest a similar conclusion. First, technology governance—the policy frameworks that

Figure 6: Technology governance

“In your country, how fast is the legal framework adapting to digital business models (e.g., e-commerce, sharing economy, FinTech, etc.)?” [1 = not fast at all; 7 = very fast].



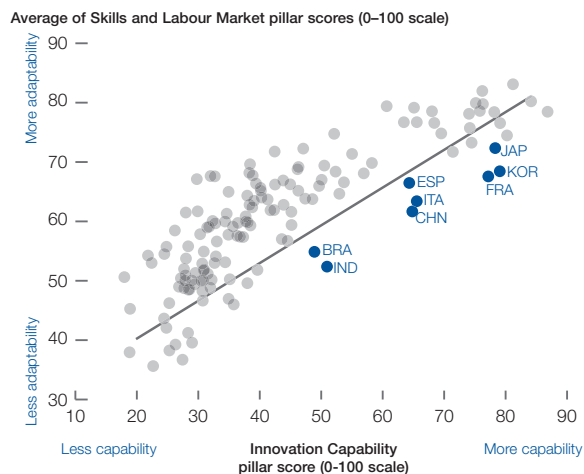
Source: World Economic Forum, Executive Opinion Survey (various editions). See Appendix B for details.

Note: Rank out of 141 in parentheses.

establish the ‘rules of the game’ for the development and use of technology—has not kept up with the pace of innovation in most countries, including some of the largest and most innovative (Figure 6). Governments must get much better at understanding and anticipating the effects of technology not only on the economy but on individuals and on society at large—and respond accordingly by implementing the appropriate regulation and safeguards.

Second, countries must improve *talent adaptability*; that is, enable the ability of their workforces to contribute to the creative destruction process *and* cope with its disruptions. Talent adaptability also requires a well-functioning labour market that protects workers rather than jobs. This imperative is embedded in the concept of “flexicurity”—the guarantee that the state will support them should they become unemployed—which is widely recognized as the best way of reconciling employers’ need for a flexible workforce and workers’ need for security. The key components underpinning flexicurity—flexible contractual arrangement, life-long learning, active labour-market policies, worker rights’ protection—are captured in the GCI through several indicators within the Labour market and the Skills pillars.

Figure 7 plots innovation capability, as measured by the corresponding GCI pillar, against talent adaptability, proxied as the average score of the Skills and the Labour market pillars. The relationship is not particularly close

Figure 7: Innovation capability and labour adaptability

Source: World Economic Forum.

Notes: BRA = Brazil; CHN = China; FRA = France; IND = India; ITA = Italy; JPN = Japan; KOR = Korea, Rep.; ESP = Spain. N = 141. R2 = 0.68.

and shows where countries need to improve: advanced economies such as Korea, Italy, France and, to some extent, Japan need to develop their skill base and tackle rigidities in their labour market. As innovation capacity grows in emerging economies such as China, India and Brazil, they need to strengthen their skills and labour market to minimize the risks of negative social spillovers. As innovation crosses borders, even countries with low innovation capability will need talent adaptability, making human capital investments one of the most critical factors of productivity in the coming decade.

Conclusion

The Global Competitiveness Index identifies and assesses the factors that underpin the process of economic growth and human development.

It highlights the necessity of addressing the spillover effects and externalities, positive and negative, intended or unintended, of a policy or strategy beyond the direct objective it pursues. The GCI encourages the application of systems thinking, an approach that leaders must adopt in order to apprehend and address today's complex global challenges. By conceiving of the economy as one of many interacting and interdependent parts that belong to a vast system, policy-makers have an opportunity to develop holistic solutions and strategies.

The GCI also encourages long-term, future-oriented and visionary decision-making. Productivity-enhancing measures must support—and at the very least be compatible with—efforts to combat climate change and to make society more inclusive by providing opportunity for all. The GCI shows that the combination of growth, equality and sustainability is indeed achievable—and must be the urgent work of policy-makers around the world over the next decade.

Notes

- 1 United Nations Economic and Social Council, 2019.
- 2 World Bank, 2018.
- 3 See for instance Chapter 1 of *The Global Competitiveness Report 2016-2017*.
- 4 Obstfeld and Duval, 2018.
- 5 Adler, et al., 2017.
- 6 Duval, et al., 2017.
- 7 Change in score was calculated by taking the average score across the 135 economies included in both editions.
- 8 Carney, 2017, <https://www.bis.org/review/r170920a.htm>.
- 9 Brei, et al., 2019, <https://www.bis.org/publ/work807.pdf>.
- 10 Midrigan, et al., 2014, and Gopinath et al., 2017.
- 11 Mourougane, et al., 2016, <https://www.oecd.org/eco/Can-an-increase-in-public-investment-sustainably-lift-economic-growth.pdf>.

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