

The Global Talent Competitiveness Index **2021**

*Talent Competitiveness
in Times of COVID*



Bruno Lanvin and Felipe Monteiro, Editors



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Preface

This eighth edition of the *Global Talent Competitiveness Index* (GTCI) report is a special one in more than one respect. Four important changes have happened over the last year.

The first two are a result of the pandemic. On one hand, this report comes out in the fall, as opposed to previous editions, for which the ‘Davos context’ of late January/early February had become a tradition. We had to adapt to various constraints (including through the organisation of a virtual launch as opposed to a physical one) and needed additional time to fathom the possible consequences of the crisis on talent competitiveness and how it should be measured. On the other hand, due to the report’s altered production cycle, this year’s GTCI does not include external chapters. We have also pursued our strategy of minimising the environmental impact of GTCI production and dissemination and are proud to underline that the report is again produced exclusively in electronic format. It also remains accessible for free through dedicated websites hosted by INSEAD and Portulans Institute.

The other two changes had been anticipated long before COVID struck. One was that the report is now co-produced by INSEAD and Portulans Institute, a thinktank with bases in Washington, DC and Geneva. The last change is that we welcome this year our new knowledge partner and sponsor: Accenture.

From a methodological point of view, the GTCI framework and indicators have not changed significantly from previous years. While continuity in this respect is important to benefit from solid time series (which have become a core basis of the GTCI’s analyses), we always strive to keep the index current, and benefit from the best available data sources. With its global coverage and wide range of variables, the GTCI continues to broaden its readership and to be used as a reference of choice by governments, business, and talent experts around the world. Its city component is also rapidly gathering a large audience.

This new GTCI report looks at *Talent Competitiveness in Times of COVID*. Although available data and indicators still come short of fully describing the ways in which the pandemic has changed the local and global talent scenes, it is clear that many of the changes we have seen will have a deep and lasting impact on labour markets and talent strategies. Whether we consider it from the point of view of national economies (as is done in Chapter 1) or from that of cities (Chapter 3), the transformations

that have been triggered and/or accelerated by the global health crisis touch the very fundamentals of how we work and interact. Businesses and entire sectors will be reshaped as a result.

The 2021 GTCI report also offers some insights on how the possible shapes of the recovery may affect the future of employment, with the resulting additional demands on education, life-long learning, and re-skilling. It also warns about the growing inequalities that recent shifts may entail and suggests ways in which they could be mitigated.

Once again, the purpose of the GTCI is to be a tool for action. It continues to be our hope that the data, inputs, and considerations contained in the following pages can be of value to the decision makers of private and public organisations involved in talent and job creation.

As in previous years, we wish to direct special thanks to the European Commission Joint Research Centre (JRC), which has continued its highly professional and constructive evaluation of the strengths and weaknesses of the GTCI model. The results of its audit are presented in Chapter 2.

The GTCI continues to be a work in progress, fed by the reactions, suggestions, and criticisms received from its increasing circle of readers and users. We hence look forward to hearing more from you about the report, and how we can make it even better in the future.

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Accenture | Foreword

ADAPTING TO A NEW WORLD FOR TALENT

The COVID-19 pandemic has changed the global workforce forever.

At its peak, the outbreak triggered the loss of hundreds of millions of jobs, disproportionately impacting vulnerable groups such as women, youth, and informal workers. Governments sought to soften the blow by implementing social protection packages to help people get through an unprecedented crisis.

While these measures were temporary, the GTCI report suggests that the pandemic has also had longer-term and even permanent effects. As business and governments adapted to the realities of lockdowns and social distancing, a large proportion of the workforce left the office and began working from home. And is still doing so.

This mass experiment in location-independent working has opened up an opportunity to reimagine the way we work. After all, the traditional approach to when, where, and how most people work was largely defined by the conventions of a world dominated by manufacturing shifts, based on rigid control-driven management models and with no digital communication platforms.

Hence the scale of the impact of the pandemic on how work is organised could be comparable to the advent of mass production and automation. As could the potential societal effects in areas such as urbanisation, gender inclusion, environmental sustainability, and the worldwide division of labour—the ‘shockwaves’ that the GTCI highlights across the global talent landscape.

A new workforce segment emerges . . .

Today, between 30% and 40% of the workforce in advanced economies can operate in a hybrid environment, where part of the work is performed on-site and part remotely. This potential has been pushed to its limit by the pandemic. The result? A new workforce segment is emerging that can be productive anywhere.

In our recent Accenture Future of Work Study 2021, the vast majority of employees we spoke to said that, compared with fully on-site and fully remote working, they see a hybrid model as the best arrangement in terms of productivity, mental health, and connection with co-workers. We also found that hybrid workers are more likely to be optimistic and energised than those who are fully on-site or fully remote, and they are also less likely to suffer burnout.

At the root, people like hybrid because it brings the best of both worlds, combining the benefits of on-site working—access to corporate technology, face-to-face interactions, settled routine, non-traditional communal spaces—with those of remote,

such as safety, higher quality of life, freedom in time management, and your own workspace.

Since business growth depends on having a happy and productive workforce, it is little surprise then that a large majority of high-growth companies have already adopted hybrid formulas.

. . . prompting a new operating model

Now that vaccine roll outs are allowing a return to the workplace, employers need to define a new operating model to cater permanently for the huge new segment of hybrid workers. This is no easy task, as workforce policies have traditionally been built around an assumption that people will work on-site. And in reframing these policies for the new world, companies must take into account that their employees are stressed, worried, and uncertain—as demonstrated by today’s globally increasing attrition rates, often termed *the great resignation*. All this is in a context where one-third of those who have been working remotely declare that they would consider resigning if forced into a full return to the office.

What will the new operating models look like? This is very much work in progress, but certainly employers should focus on the one question that really matters: What makes people healthy and productive *regardless* of where they work?

In our research, we at Accenture have observed what makes people productive and healthy as opposed to feeling disconnected, frustrated, and inefficient. The difference is not stress, fatigue, and dissatisfaction: the ‘productive anywhere’ workforce is not immune from these experiences. Rather, what makes individuals healthy and effective is access to the right resources.

On the one hand are *personal resources*—such as autonomy in managing one’s tasks within a framework of realistic expectations and continuous feedback; opportunities to develop deep skills through online courses; mentoring and apprenticeships; and a high degree of digital skills to foster collaboration and productivity everywhere.

On the other hand are *organisational resources*—such as transparency and awareness of plans to address unexpected issues; technology and processes to keep employees safe in a crisis; systematic adoption of health policies, including information and access to vaccines; and leadership that listens to employees—and that actively demonstrates care and support for their well-being, productivity, and personal development.

What leaders should do: Make work personal

No one knows exactly what the future will look like. But we do know what workers need to thrive anywhere. As location is no longer the focus for leaders, resources should be.

Guided by this principle, leaders can begin by redefining work policies and strengthening worker-employer relationships. These efforts should include designing work around people to respond more flexibly to different workers' needs, communicating and listening openly, building digital fluency at all levels of the organisation, and rethinking how traditional socio-emotional and project management skills need to evolve in a location-independent working environment.

As leaders read and absorb the GTCI 2021 findings, it is important for them to bear in mind that now, more than ever before, it pays to make work—and business—personal. In a

post-pandemic world where employees expect more from their employers, leaders will need to take more responsibility for workers' holistic well-being and strive actively to earn their trust. Of all the pandemic's impacts on the global workforce, that may ultimately be the most enduring.

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CHAPTER 1

Talent Competitiveness in Times of COVID

Bruno Lanvin, Felipe Monteiro, and Michael Bratt

I have no idea what's awaiting me, or what will happen when this all ends. For the moment I know this: there are sick people and they need curing.

— Albert Camus,
The Plague, 1947

This eighth edition of the *Global Talent Competitiveness Index* (GTCI) report comes at a time when the COVID-19 pandemic is still far from being behind us. The last 18 months have seen massive changes on the labour and employment scene. As lockdown measures started to spread, public and private organisations learned to rely more and more on teleworking, but also to manage and combine available talents in different and often innovative ways.

In the span of few months, the learning curve got significantly steeper. Both governments and business, as well as academic institutions, started to appreciate the merits and possibilities of new methods of work. What had initially been identified as 'temporary measures' soon became the basis of new strategies, applicable to what was expected to be the (post-COVID) 'new normal'.

As companies (plan to) return to the office, they have the opportunity to draw from the lessons learned during the pandemic. Most of them are rethinking their workplaces and reorganising their work practices, processes, and training—with the support of digital infrastructure—to boost productivity and engagement. The switch to hybrid setups that allow for more remote work seems to be here to stay, with companies planning to accommodate a variety of work environments and arrangements. Some of them, like Microsoft, allow their workforce to work from home half of the time. Apple plans to require its workers to be in the office on specific days with the option of working from home a couple of days a week with manager approval. Twitter and Spotify, for example, have made any return to office life completely optional.

In more than one respect, 2020–2021 will be remembered as the time of a rapid but fundamental transition. Some of the

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trends identified in previous editions of the GTCI have been confirmed and accelerated by the pandemic. Digital talent will continue to be in high demand, but so will entrepreneurial talent as new business models emerge and new ways of organising work take shape. As new ways to organise and manage virtual teams emerge and spread, the proportion of free agents is likely to affect a majority of activities, at least in services. Questions about the future of work are at the top of the list of most chief human resources officers worldwide.

In all parts of the world, governments have been called to re-take centre stage, both by injecting financial resources to prevent a massive collapse of businesses and employment and by designing specific legal and regulatory measures to protect their populations' health and social cohesion. And all this is occurring as new types of inequalities have started to loom larger.

Internationally, the consequences of COVID still have not taken their full dimension. Disparities in vaccination rates and pace are clearly playing against Africa and some other lower-income regions of the planet. In many parts of the world, the time lost in education and learning will remain a handicap for an entire generation, creating an unmendable dent in local talent pyramids.

Yet, based on the data available, quantifiable assessments can be made about several key questions: Did COVID change the global picture of talent competitiveness in the short term? How will such changes affect future talent strategies? And what do this year's GTCI data and analysis tell us about the key dimensions and global landscape of talent competitiveness?

WHAT DID COVID CHANGE FOR TALENT COMPETITION?

During the past 18 months, the talent strategies of all types of economies have been impacted by at least three factors, namely (1) limitations to travel, both nationally and internationally; (2) the

growing importance of online and virtual meetings and cooperation, as opposed to more traditional face-to-face interactions; and (3) the reordering of local and national priorities in the face of multiple emergencies (sanitary, economic, social) and limited resources.

Limitations to Travel

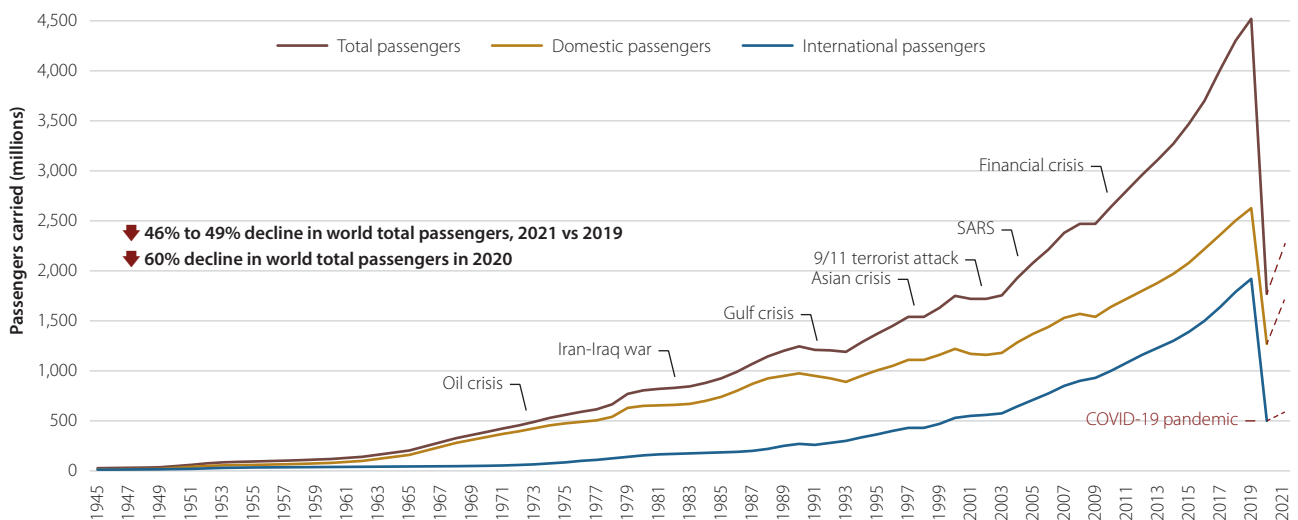
As expected, the COVID pandemic has taken a hard toll on all kinds of air transport, as tourism was literally voided out and business trips were cancelled as early as March 2020. According to the International Civil Aviation Organization (ICAO), world passenger traffic has seen a reduction of 50% of seats offered by airlines in 2020 (and, so far, an estimated 39% in 2021; see Figure 1). Countries that had established themselves as touristic or business destinations have been most severely affected by this trend.

The Growing Importance of Online and Virtual

The pandemic has led to mass teleworking, where the top priority was to keep workers safe and employed while simultaneously containing the spread of the COVID-19 virus without freezing the global economy. On one hand, there was an unprecedented need for online collaboration and therefore for video-conferencing tools, as well as messaging apps and online collaboration platforms. On the other hand, this shift led governments and policymakers to adapt or revise existing laws, regulations, and policies (or to imagine new ones) to protect both the interests of employers and those of employees in this new environment. This phenomenon had several implications, internationally and domestically.

From an international point of view, this phenomenon has had important consequences for the mobility of talent across borders (e.g., expatriation, virtual assignment versus relocation). According to Lasserre and Monteiro (Forthcoming), with more people working from home because of COVID, and

Figure 1
World passenger traffic evolution, 1945–2021



Source: Authors, based on ICAO reporting and estimates, <https://www.icao.int/Aviation-API-Data-Service/Pages/default.aspx>
Note: ICAO = International Civil Aviation Organization.

in conjunction with recent developments in video-conferencing technologies, many employees in multinational corporations are no longer required to relocate while working on international projects. This has had an important impact on the global talent strategies of large global companies. At the same time, those expatriated during COVID times had to deal with an unprecedented level of complexity—border rules were constantly changing to keep pace with different waves of the pandemic reaching different regions of the world in distinct moments.

At the national level, and with the notable exception of the European Union, the lack of government regulation regarding telework in the pre-COVID era frequently led to confusion and frustration (e.g., ambiguity about what categories were eligible to be teleworking, doubts about working time monitoring, uncertainty about reimbursable expenses). It also rapidly became clear that reduced social interaction among workers had important consequences not only for the organisation of work, but for the mental health and life-work balance of many. As far as productivity is concerned, it is still too early to assess the full effects of the increase in teleworking. However, it is clear that all organisations have been affected directly or indirectly, and that some of the new habits developed during the pandemic will not disappear: post-COVID talent management will be different from what it was two years ago (see Figure 2).

Schools and universities have also been affected in their core missions and operating rules. Since not all children/students have the same access to connected equipment and knowledge resources in general, inequalities often were emphasised as online or mixed education accentuated some of the digital divides—both nationally (e.g., between urban and rural areas) and, even more, internationally.

From a global economic point of view, it is becoming clear that productivity, efficiency, and cost reduction are now linked by a new dynamic that, according to the International Labour Organization (ILO), requires ‘a new framework to manage and balance the needs of workers and employers’. This trend will most likely have a lasting impact on professional relationships moving forward, and this ‘behavioral change will stick, even after the crisis ebbs.’¹ Moreover, researchers believe that ‘companies that focus on outcomes and flexibility will attract the best and the brightest.’²

TALENT STRATEGIES BEYOND COVID

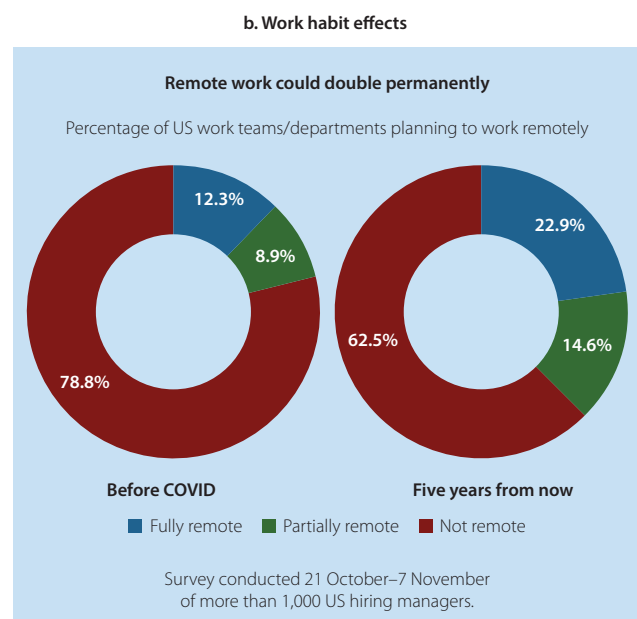
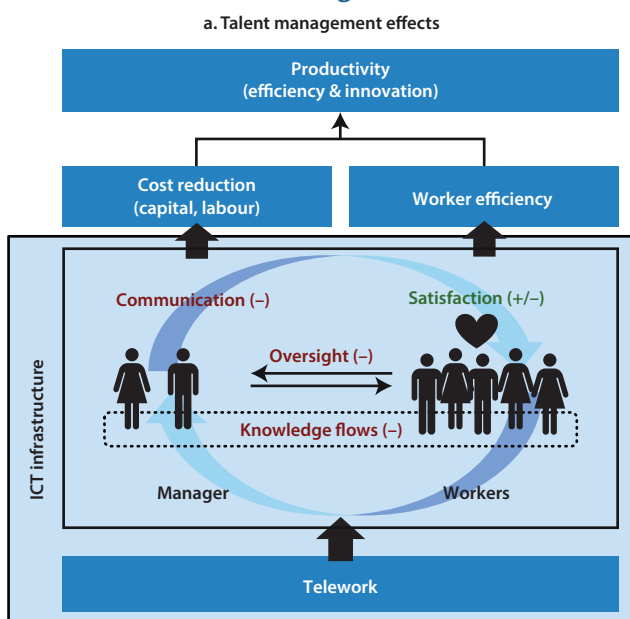
Clearly, when faced with a crisis of the scope and magnitude that COVID represented, governments and business leaders have to make rapid and multiple decisions addressing the immediate needs of their populations, their staff, and their operations. In such a situation, strategic objectives (including around talents) run a risk of being pushed to the back burner.

Short-Term and Longer-Term Effects of a Pandemic

Governments had to inject fresh resources to support and strengthen local health systems. But at the same time, they also had to mobilise funding to prevent massive layoffs and business failures (see Figure 3), as well as modify existing laws and regulations to guarantee everyone’s safety. Employers had to cancel orders when inventories ran out, or when conditions did not allow delivery of goods or services (e.g., travel or hospitality).

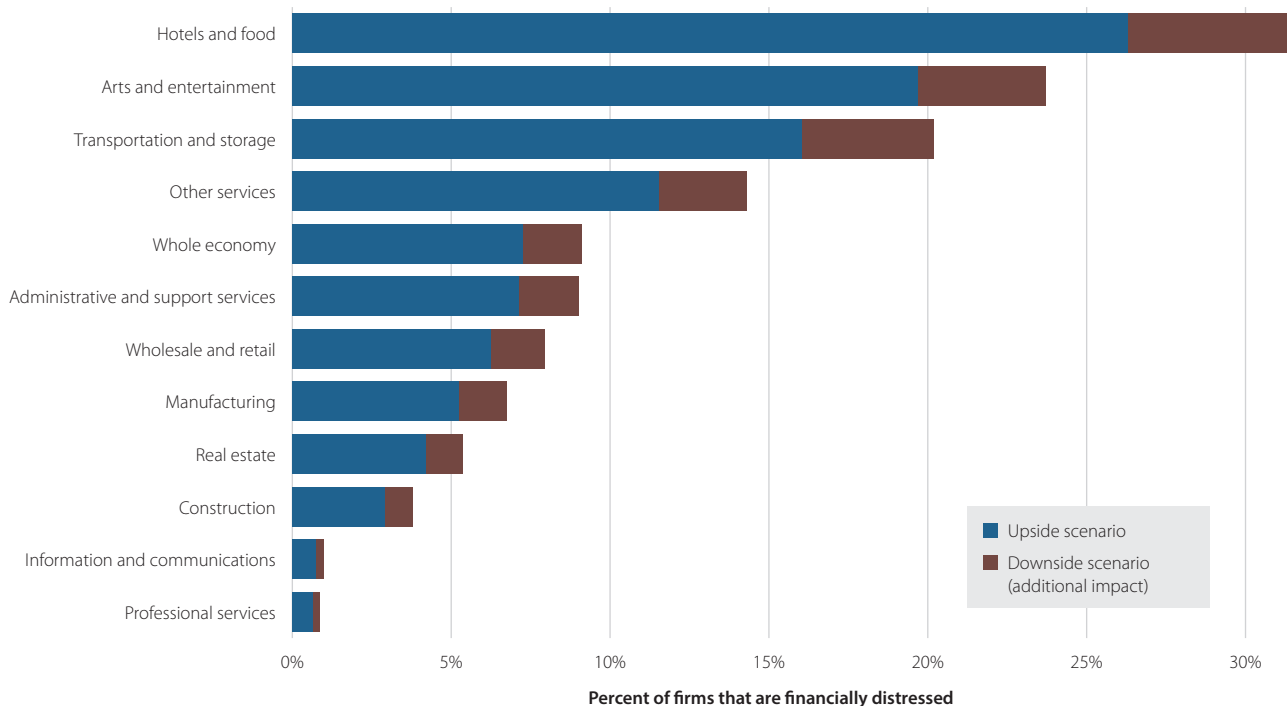
One could legitimately expect that, when so many immediate measures have to be taken, longer-term objectives might be seen to be less important, or even less relevant. Talent strategies would typically fall victim to such a reordering of priorities.

Figure 2
COVID’s effect on talent management and work habits



Source: Authors, based on OECD (2020b) (panel a) and Statista (2020) (panel b).
Note: ICT = information and communication technologies.

Figure 3
The threat of massive business failure in OECD countries, by sector



Source: Authors, based on OECD (2020a).

Fortunately, most public entities around the world reacted with rapidity and force, irrigating national economies with the financial resources required, often beyond the limits of budgetary orthodoxy. This allowed many companies to stay afloat financially and to stay the course towards their strategic objectives, including in the talent area. The relatively rapid manner in which major economies resumed growth is now even creating some employment scarcity in key sectors and activities.

This means that it is now time for both employers and employees (including new entrants to the labour market) to think beyond COVID. If the largest recovery packages are of any indication here, it is highly probable that jobs linked to digital transformation, along with the greening of most sectors (from energy to transport, manufacturing, and agriculture), will be a significant component of the post-COVID *'build back better'* era.

Post-COVID Recovery Can Deepen Inequalities for Talents and Jobs

On the employment front, national economies have been affected in different ways, depending on their economic structure, their dependence on foreign markets, and their ability to adapt to the new conditions. In summary fashion, one can say that (1) the labour markets of emerging economies have been struck harder than those of advanced economies, and that (2), in all countries, younger and less qualified workers have been affected most severely.

Job losses, however, are not the only indicator of a new divergence between rich and poor economies. World Bank calculations indicate that in 2020–2021, poverty increased worldwide, bringing an additional 125 million people below

the absolute poverty line (less than US\$1.90 per day).³ The total number of malnourished individuals was 135 million in 2019; this jumped to 165 million in 2020. Longer-term negative effects of the pandemic are not limited to poorer countries: in a recent article, Bianchi et al. (2021) underline that growing unemployment will cost some 800,000 lives in the United States due to suicides, alcoholism, and drug addictions. In June 2021, the United States' Federal Reserve Chairman Jerome Powell said during congressional testimony that low-income households had experienced *'the sharpest drop in employment'*, with Black Americans, Hispanics, and women experiencing far greater losses in the workforce. *'If not contained and reversed, the downturn could further widen gaps in economic well-being that the long expansion had made some progress in closing'*, Powell said.⁴

Data seem to indicate that, worldwide, jobs held by women have generally been 19% more threatened by COVID adjustments (including layoffs) than jobs held by men. In many cases, this trend may be difficult to reverse.⁵

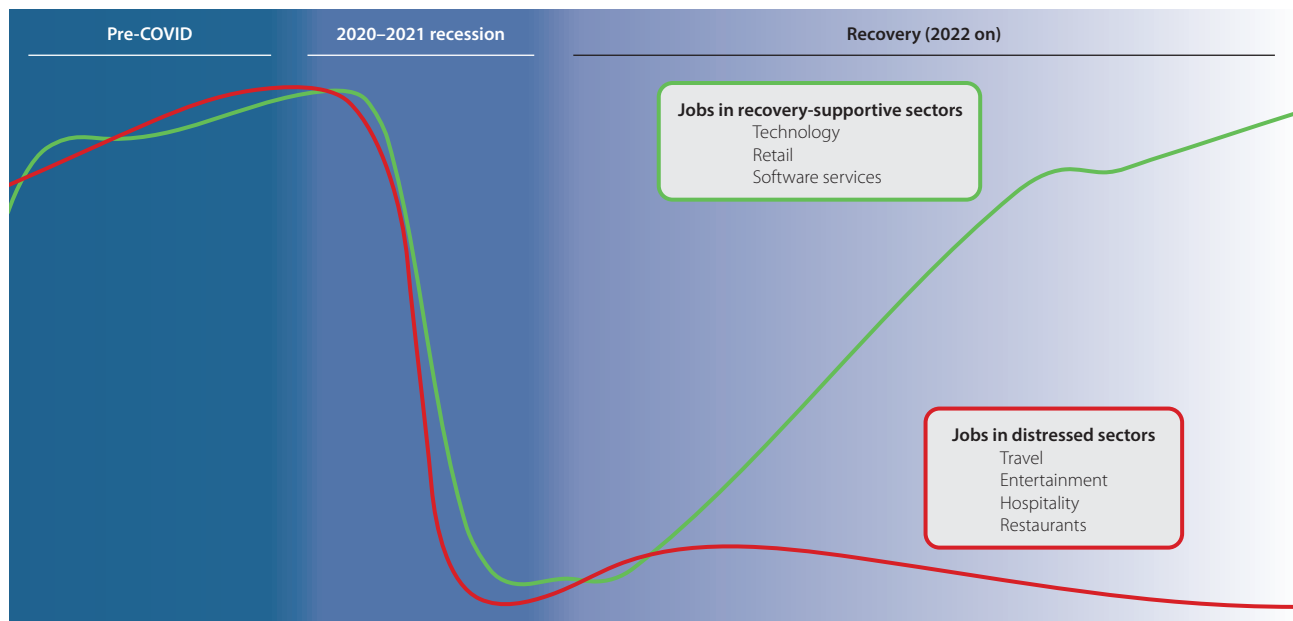
The growing inequalities anticipated among workers have often been described as a distinctive trait of a K-shaped recovery (see Figure 4)—one in which workers employable in recovery-supportive sectors such as technology, retail, or software services would find more employment opportunities (and better remuneration) than those locked in other (often distressed) activities such as travel or entertainment.

However, one should not underestimate the ability of enterprises (and sometimes entire sectors) to reinvent themselves when faced with major crises. Innovation and agility can play a critical role in redressing the lower branch of the K.

So can recovery packages.

Figure 4

What a K-shaped recovery could mean in the United States



Source: Authors, based on personal communication with Ernie Tedeschi, policy economist at Evercore ISI; Akhtar (2020).

Why Recovery Packages Will Make a Big Difference

In many parts of the world, the volume of the recovery packages announced are unprecedented. On 17 December 2020, the European Union announced the finalisation of a €806.9 billion recovery package (NextGenerationEU) to boost research and innovation and digitalisation while fighting climate change.⁶ The overall purpose of the package is to help rebuild a post-COVID Europe by making it *'healthier, greener, more resilient and more digital'*.⁷ This is the largest stimulus package ever financed on the European continent. On 11 March 2021, US President Joe Biden announced a US\$1.9 trillion economic stimulus package,⁸ aiming to help mostly low-income and middle-class Americans. China's package (US\$506 billion) is similarly ambitious,⁹ while those announced by many other countries are of impressive sizes relative to their national income. For instance, on 26 March 2021, Brazil announced that its own economic stimulus package would amount to R\$750 billion (US\$150 billion):¹⁰ in order to help the most vulnerable population recover from the impacts of COVID, the package would focus on taxes and employment, but would also help the airline industry and small and medium-sized enterprises (SMEs). Germany too plans on deploying a total of €130 billion (in addition to the European package),¹¹ largely to help its medium-sized manufacturing companies.

One possible consequence of the adoption of such packages is a greater divergence between growth rates in advanced/rich countries and those prevailing in low-income countries, for at least two reasons. First, budgetary support capabilities have been very uneven: in proportion to the number of their inhabitants, rich countries could mobilise four times the resources available to emerging economies, and about eight times those of poor ones. Second, ongoing rearrangements in global logistics

and international trade flows (among other things, because of resilience and national self-sufficiency strategies) could be particularly detrimental to poorer and more isolated economies, with harsh consequences for their local labour markets.

Another impact of recovery packages can be seen in the shape of a post-COVID world economy. If the trends identified in the EU package (green & digital) are replicated around the world, the jobs and skills required to design and implement digital transformation strategies and environment-related transitions (de-carbonisation, for example) would clearly be in high demand in all sectors and geographies.

The pace and extent by which such talent shifts will happen remain difficult to assess, however. The current recovery is showing signs of strength, but it remains largely pulled by mature economies and China. Massive challenges loom ahead: preventing the growth of inequalities (and a resumption of poverty), offering enough opportunities for a massive up-skilling and re-skilling of the work force, and maintaining social cohesion will not be among the easiest tasks of the coming years, and possibly decades.

From such contextual evidence, and from the data and analysis mobilised for this year's edition of GTCI, several key messages can be identified.

KEY MESSAGES EMERGING FROM THE GTCI 2021

- **Message 1: The pandemic shook organisations in ways that may become permanent features of tomorrow's workplace.** The accelerated adoption of collaborative tools has redefined the ways in which individuals and teams can bring value to private businesses and

public entities. From a company's perspective, this phenomenon has had important consequences, leading to redefining hierarchies, identifying sources of value, and sometimes adjusting strategic objectives. In that process, many opportunities have been offered to countries and cities to experiment with novel ways of attracting talent (e.g., digital nomads). Some of them were even able to test new proofs of concept.

- **Message 2: COVID generated a series of shockwaves across the global talent landscape, which will have long-term effects on labour markets.** To a large extent, the international mobility of talents has been redefined by the pandemic. For employees, new parameters emerged about when, where, and for whom to work: as online tools opened new doors to better work-life balance and to working from anywhere, new inequalities surfaced between those who could contribute online and those who had to be physically present at the workplace. Individuals are now rethinking their careers, their location choices, and the ways in which they prefer to work. International ventures and activities (including conferences, advanced education, and entire value chains) have been deeply affected, as new business models (based on virtual or hybrid cooperation) have started to respond to new limitations on travel and trade.
- **Message 3: Governments are back on centre stage, and recovery packages will have a significant importance in shaping labour markets and talent competition in the coming years.** Faced with a significant threat of economic collapse and social disruptions, governments have generally been quick to react and mobilise exceptional resources, mostly through public debt and disregard for the previous orthodoxy of budgetary restraint. The crisis contributed to putting governments back on centre stage. However, such packages are not all shaped in the same fashion: the ways in which the resources identified are being spent and attributed will largely influence the ways in which national economies and businesses operate and how different talents will be valued (and remunerated) in the future. For example, it is to be expected that health-related talents will be in higher demand worldwide. However, it is equally clear that the emphasis put by some of the largest recovery packages on digital transformation (e.g., in the United States or Europe) will generate additional demands for key talents in infrastructure (re) building, digital transformation, or environmental activities.
- **Message 4: In the post-COVID new normal, inequalities may grow among workers, depending on their sector of activity and their level of qualification.** A predictable consequence is that a K-shaped recovery is likely to happen in the next few years, whereby the resumption of growth and employment will not be even across socioeconomic categories, sectors, or levels of qualification. There is also a danger that some governments might be tempted to prioritise the allocation of support funding towards ailing sectors and activities that concentrate a high proportion of the labour force, as opposed to future-ready organisations and innovative sectors. In the absence of massive re-skilling and up-skilling efforts, recruitment gluts may slow recovery efforts (some of these gluts have already started to appear), while a growing share of the population may feel disenfranchised as their qualifications lose relevance. Educational systems and training institutions will need to adapt quickly to their new objectives and requirements, giving additional attention to lifelong learning and apprenticeship, among others.
- **Message 5: In the emerging post-COVID economy, international inequalities have started to widen again.** As underlined in previous editions of the GTCI report, emerging economies are still lacking the digital skills that would allow them to fully participate in the digital transformation of the world economy. The pandemic has emphasised the importance of this skill gap. In many sectors and areas of activity, digitalisation has moved from being a priority to being an imperative. Across entire global value chains and international companies, the economies that will not be able to accelerate their digital transformation may quickly be left behind. The rapid increase of digital divides, however, is only one part of the return of growing inequalities at the international level: all indicators show that many of the gains made over the last few decades in fighting poverty are swiftly eroding, with a visible reduction of life expectancy in Africa and many other parts of the world. Disruptions in schooling have also created a significant and worrying dent in the path of many poorer regions to escape the trap of underdevelopment, especially for girls.
- **Message 6: There is, however, encouraging news on the global talent competitiveness scene, as a number of middle-income economies show significant progress and dynamism.** China and Russia join the GTCI league of *'talent champions'* (they were both among GTCI's *'talent movers'* last year). It is also worth noting that, for the first time, a country from the Latin America and the Caribbean region (Chile) appears in the top quartile of the rankings. In the Middle East, the United Arab Emirates remains the strongest talent champion, and it offers innovative ways to attract and retain talents.
- **Message 7: Cities took on new responsibilities during the pandemic, and megalopolises are back on the talent scene.** In many parts of the world, cities often took the initiative when central governments were either hesitant or unable to take quick action to limit or mitigate the effects of the pandemic. This resulted in a variety of measures combining creativity, agility, and responsiveness to

citizens’ needs. Altogether, large cities (due mainly to their higher level of resources) adapted better to the COVID challenges than smaller ones, which partly explains why they generally rank better in GTCI than last year. It is important to note, however, that, in large cities, central areas suffered more economically from lockdowns and downturns.

THE GTCI CONCEPTUAL FRAMEWORK

As underlined in the previous editions of the GTCI, countries are competing globally to grow better talent; attract the talent they need; and retain those workers who contribute to competitiveness, innovation, and growth. Countries seek to put economic and social policies in place that will facilitate this. In such a context, governments, businesses, and various other stakeholders need quantitative instruments that can inform their decisions (as investors, employers, employees, or jobseekers) and can help them design and implement better policies in areas such as education, employment, and immigration, to name a few. This is the purpose of the GTCI.

Who Is Expected to Use the GTCI and Why?

Decisions regarding the development, attraction, and empowerment of talent are remarkably complex and multi-layered. They involve a multi-disciplinary endeavour to tackle talent dilemmas that have been raised in the fields of economics, education, human resource management and organisational behaviour,

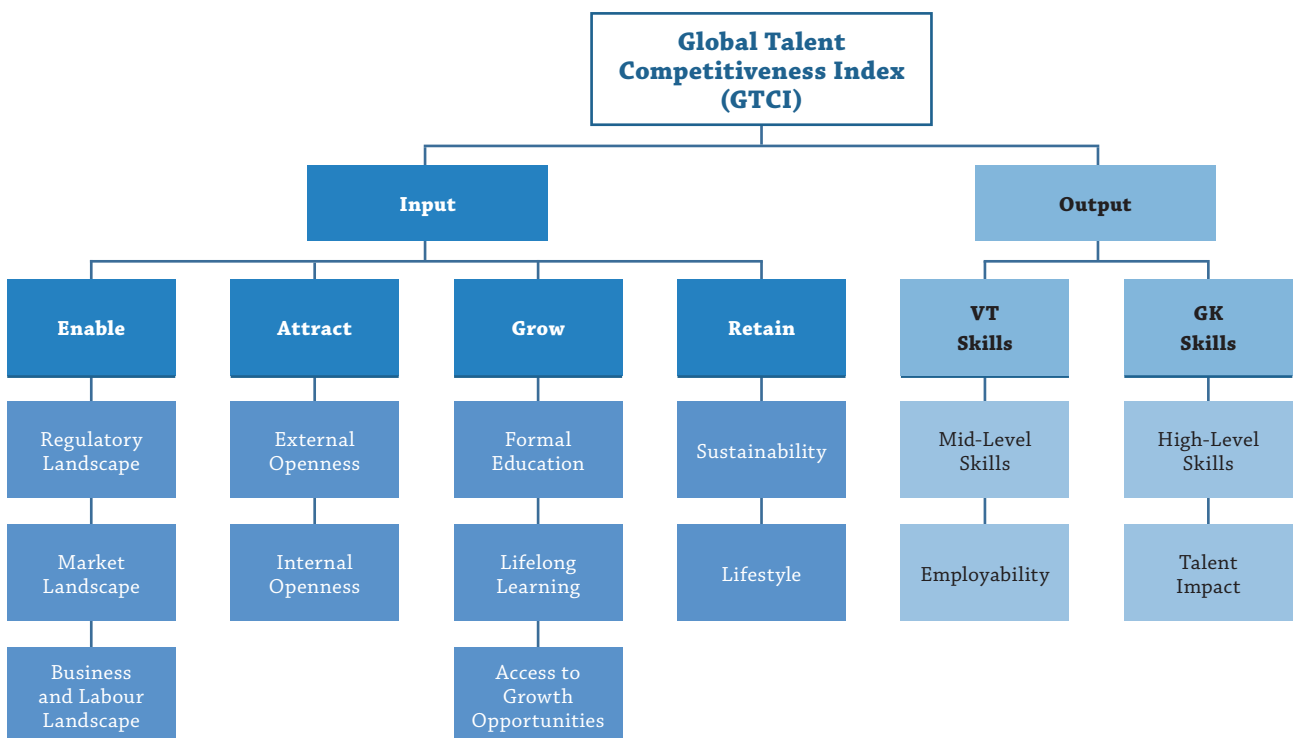
entrepreneurship, innovation, and strategy. At the policy level, this complexity is compounded by emotional dimensions and the international consequences of choices to be made in terms of immigration, social equity, and fiscal incentives, among other issues.

Faced with such intricate issues, decision-makers—both public and private—need quantitative tools that will enable them to benchmark the efforts made and results obtained in different socioeconomic environments in terms of talent management and talent competitiveness. The GTCI has been designed to help address this challenge by providing a composite view of talent competitiveness applicable to a large number of countries (134 this year). Although several composite indices concerning skills, talent, and human capital have been developed in recent years, both private and public players in the field see the need for a neutral, global, and respected index that would enable them to assess the effectiveness of talent-related policies and practices, identify priorities for action in relevant areas, and inform international and local debate in this arena.

The Structure of the GTCI Model

In the context of the GTCI, *talent competitiveness* refers to the set of policies and practices that enable a country to develop, attract, and empower the human capital that contributes to productivity and prosperity. The GTCI is an Input-Output model (see Figure 5) in the sense that it combines an assessment of what countries do to produce and acquire talents (Input) and the kind of skills that

Figure 5
The GTCI 2021 model



Note: GK Skills = Global Knowledge Skills; VT Skills = Vocational and Technical Skills.

are available to them as a result (Output). Feedback received on previous editions, additional research, and the availability of new data have allowed refinements to the model, though its basic structure is robust and unchanged.

The Input pillars of the GTCI are inspired by the Attract-Grow-Retain framework used by corporations to steer talent management. Multinational corporations frame talent management in these terms, defining talent management as an organisation's efforts to attract, select, develop, and retain talented employees to meet their strategic needs.¹² The GTCI focuses on efforts by countries and thus the model is fed by macroeconomic and country-level variables. **Attracting** talent, in the context of national competitiveness, is viewed from two perspectives: (1) as a draw towards external (i.e., foreign) valuable resources—both productive businesses (through foreign direct investment and the like) and creative people (through high-skilled migration)—and (2) as an internal attraction that is focused on removing barriers to entering the talent pool for groups such as those from underprivileged backgrounds, women, and non-native people. **Growing** talent has traditionally meant education, but its definition should be broadened to include apprenticeships, training, and continuous education as well as experience and access to growth opportunities (although we may acknowledge that most skill development occurs through experience, much remains to be done to conceptualise and measure its role). **Retaining** talent is necessary because the more talented the person, the wider the global opportunities he or she can find elsewhere. Two key components of retention are sustainability (both personal and national) and quality of life. In addition, the regulatory, market, business, and labour landscapes within a country facilitate or impede talent attraction and growth; the GTCI classifies these elements as parts of the **Enable** pillar. Together, Enable, Attract, Grow, and Retain constitute the four Input pillars of the GTCI model.

Regarding Output, the GTCI differentiates between two levels of talent, which can be broadly thought of as mid-level and high-level skills. Mid-level skills, labelled *Vocational and Technical Skills* (or VT Skills), describes skills that have a technical or professional base acquired through vocational or professional training and experience. The impact of VT Skills is measured by the degree of employability to which they lead. Employability is measured by indicators of skills gaps and labour market mismatches and by the adequacy of education systems. High-level skills, labelled *Global Knowledge Skills* (or GK Skills), deal with knowledge workers in professional, managerial, or leadership roles that require creativity and problem solving. Their economic impact is evaluated by indicators of innovation, entrepreneurship, and the development of high-value industries. Together, VT Skills and GK Skills constitute the two Output pillars of the GTCI model.

The GTCI attempts to offer an approach to talent competitiveness issues that is comprehensive, action-oriented, analytical, and practical. As described earlier, the GTCI is a composite index, relying on a simple but robust Input-Output model, composed of six pillars (four on the Input side and two on the Output side),

as illustrated in Figure 5. As such, the GTCI generates three main indices that are the most visible focus for analysis, namely:

- 1. The Talent Competitiveness Input sub-index**, which is composed of four pillars describing the policies, resources, and efforts that a particular country can harness to foster its talent competitiveness. Enable (Pillar 1) reflects the extent to which the regulatory and business environment—including issues about competition, management practices, and the functioning of labour markets—create a favourable climate for talent to develop and thrive. The other three pillars describe the three levers of talent competitiveness, which focus respectively on what countries are doing to Attract (Pillar 2), Grow (Pillar 3), and Retain (Pillar 4) talent. The Input sub-index is the simple arithmetic average of the scores registered on these four pillars.
- 2. The Talent Competitiveness Output sub-index**, which aims to describe and measure the quality of talent in a country that results from the above policies, resources, and efforts. It is composed of two pillars describing the current situation of a particular country in terms of Vocational and Technical Skills (Pillar 5) and Global Knowledge Skills (Pillar 6). The Output sub-index is the simple arithmetic average of the scores obtained on these two pillars.
- 3. The Global Talent Competitiveness Index (GTCI)**, which is computed as the simple arithmetic average of the scores registered on each of the six pillars described above.

The GTCI model has been refined in this 2021 edition with respect to last year. Four notable changes have been made. First, several questions from the Executive Opinion Survey (EOS) of the World Economic Forum (WEF) have been discontinued and the associated indicators in the GTCI have been replaced in this year's edition (or will be replaced in the future). This is, for instance, the case with indicator 3.3.3 Use of virtual social networks, which is now sourced from We Are Social and Hootsuite. Moreover, the values of the latest available WEF EOS indicators (2020) are, in certain cases, dramatically different from previous years. This might partly be due to the timing of the survey and the COVID situation in a country at the particular time period in which the survey was carried out. To reduce such a COVID effect, the relevant WEF EOS indicators refer to the weighted average of the most recent four-year period rather than the usual two-year period (with greater weight for the most recent years).

Second, a few variables have been added, removed, replaced, or otherwise modified. This choice was made for various reasons, including the discontinuation of certain variables, improved country coverage, and better conceptual fit. More specifically, the changes include the following:

- Four new indicators have been included: 1.3.1 Labour rights, 3.2.4 Formal and non-formal studies, 3.3.2 Youth inclusion, and 5.2.3 Skills matching.

- Six indicators have been dropped: 1.3.1 Unemployment with tertiary education, 1.3.2 Active labour market policies, 3.3.5 Collaboration within organisations, 3.3.6 Collaboration across organisations, 5.2.3 Skills matching with secondary education, and 5.2.4 Skills matching with tertiary education.
- Three indicators have been replaced: 1.3.7 Robot density replaced by Firms with website, 2.2.4 Female graduated replaced by Women in tertiary education, and 2.2.5 Gender development gap replaced by Women in high-skilled jobs.

Third, indicators 3.3.2 Personal rights and 4.2.1 Environmental performance have been moved to the sub-pillars related to Lifestyle and Sustainability, as indicators 4.2.1 and 4.1.4, respectively. Fourth, eight indicators have been log transformed before their computation because of the skewness of their distribution and in order to put a premium on improvements of low values. The indicators in question are: 2.1.3 Migrant stock, 2.1.4 International students, 3.1.3 Tertiary education expenditure, 5.1.4 Labour productivity per employee, 6.1.4 Researchers, 6.2.2 High-value exports, 6.2.4 New business density, and 6.2.5 Scientific journal articles.

All in all, this year's model includes 68 variables, which are two fewer than the 70 indicators used in the GTCI 2020. However, the reduction in the number of indicators—and all the associated changes just discussed—has resulted in a more robust index. Indeed, the audit carried out by the JRC of the European Commission (see Chapter 2) finds that, for the first time, in this edition of the GTCI all variables *'have a noteworthy impact on the GTCI variance'*. Country coverage in the GTCI has increased slightly—from 132 to 134 countries—representing almost 98% of the world's GDP and more than 94% of its population. Further details of the variable definitions and the method of calculation can be found in the Sources and Definitions and Technical Notes appendices. Improvements will continue to be made to the GTCI model in the future, based on further discussions with academics and business and government leaders, as well as feedback from users of the GTCI.

GLOBAL TALENT COMPETITIVENESS INDEX 2021: MAIN FINDINGS

There is a high correlation between GDP per capita and GTCI scores (see Figure 6 on pages 12–13), and the top positions in the ranking of the GTCI scores continue to be dominated by developed, high-income countries (see Table 1 on pages 14–16). European countries continue to dominate the GTCI rankings; 17 of them are in the top 25. Switzerland maintains its position at the top again this year, followed by Singapore and the United States. France (19) enters the top 20 this year. The other non-European countries that make it into the top 25 are Australia, Canada, New Zealand, Japan, Israel, and the United Arab Emirates. Two notable features in this year's rankings are that, for the first time, the region of Latin America and the Caribbean is

represented in the top quartile of the GTCI (by Chile) and China breaks into the top 40.

An assessment of the top 15 countries in this ranking can be found in the Statistical Annex to this chapter, along with an analysis and commentary on performances in the GTCI by income group and by region.

LONGER-TERM TRENDS IN TALENT COMPETITIVENESS

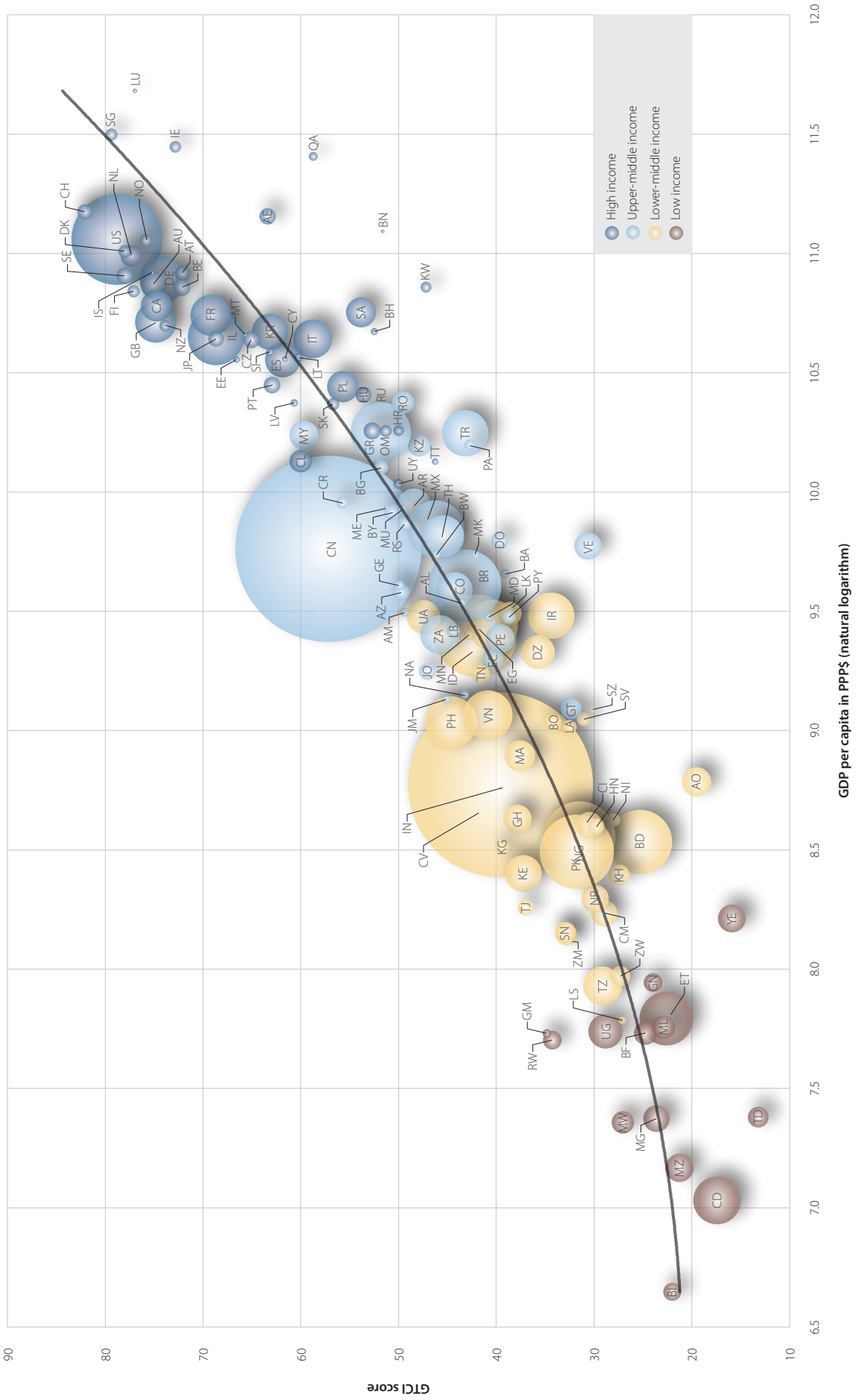
This third time-series analysis of the GTCI reaffirms the longer-term trends identified in the previous two reports. Above all, it suggests that the most talent-competitive countries are pulling away from the rest of the countries and that the gap between the two groups is, if anything, widening.

The approach used to analyse the time-series on the whole follows the method of previous years. It is based on comparing performances in the GTCI over two three-year periods: 2016–2018 against 2019–2021.¹³ Focusing on these two averages yields several advantages. For instance, it can make it easier to spot general trends that might be missed in a year-by-year analysis. In addition, it allows for some smoothing of annual fluctuations in the data that, in turn, results in more reliable conclusions. Related to this is that the aggregation absorbs year-to-year changes because of improvements in the methodology of GTCI.¹⁴

The one methodological change this year concerns country coverage. Previously, only countries that featured in all relevant GTCI editions were included in the analysis. This year, however, a more inclusive approach has been adopted, whereby countries covered in the GTCI in two of the three years that make up a period have been included in the time-series analysis. As a result, the number of countries covered has jumped from 88 countries last year to 113 countries this year. The increase in low-income countries is particularly noteworthy, rising from only two in GTCI 2020 to seven in this year's edition. As for the other income groups, 45 are classified as high-income countries, 35 are upper-middle-income countries, and 26 are lower-middle-income countries. The regional breakdown, meanwhile, is the following: 7 are in Central and Southern Asia; 13 in Eastern, Southeastern Asia and Oceania; 38 in Europe; 18 in Latin America and the Caribbean; 18 in Northern Africa and Western Asia; 2 in Northern America; and 17 in Sub-Saharan Africa.

The calculation of the averages of the two three-year periods is based on the GTCI scores that the countries have achieved. More specifically, the calculation comprises two steps: (1) averaging overall GTCI scores for 2016–2018 and 2019–2021, respectively, and (2) computing country rankings based on the resulting averages. The advantage of this approach is that it is straightforward and yields distinct rankings for each country. The drawback is that the scores are not necessarily fully comparable from one year to the next because of changes in data or methodological improvements. An alternative approach, whereby three-year average rankings are computed based on the ranks (rather than scores) of countries in different GTCI editions, is used to corroborate the findings.¹⁵

Figure 6
GTCI scores versus GDP per capita



Note: GDP per capita in PPP\$ and population data (represented by the size of the bubbles) are for 2020 or the latest year available. The data are drawn from the World Bank's World Development Indicators database. The trend line is a polynomial of degree two ($R^2 = 0.78$).

Figure 6 (continued)
GTCI scores versus GDP per capita: ISO-2 country codes

CODE	COUNTRY	CODE	COUNTRY	CODE	COUNTRY	CODE	COUNTRY
AE	United Arab Emirates	CO	Colombia	IE	Ireland	ML	Mali
AL	Albania	CR	Costa Rica	IL	Israel	MN	Mongolia
AM	Armenia	CV	Cabo Verde	IN	India	MT	Malta
AO	Angola	CY	Cyprus	IR	Iran, Islamic Rep.	MU	Mauritius
AR	Argentina	CZ	Czech Republic	IS	Iceland	MW	Malawi
AT	Austria	DE	Germany	IT	Italy	MX	Mexico
AU	Australia	DK	Denmark	JM	Jamaica	MY	Malaysia
AZ	Azerbaijan	DO	Dominican Republic	JO	Jordan	MZ	Mozambique
BA	Bosnia and Herzegovina	DZ	Algeria	JP	Japan	NA	Namibia
BD	Bangladesh	EC	Ecuador	KE	Kenya	NG	Nigeria
BE	Belgium	EE	Estonia	KG	Kyrgyzstan	NI	Nicaragua
BF	Burkina Faso	EG	Egypt	KH	Cambodia	NL	Netherlands
BG	Bulgaria	ES	Spain	KR	Korea, Rep.	NO	Norway
BH	Bahrain	ET	Ethiopia	KW	Kuwait	NP	Nepal
BI	Burundi	FI	Finland	KZ	Kazakhstan	NZ	New Zealand
BN	Brunei Darussalam	FR	France	LA	Lao PDR	OM	Oman
BO	Bolivia, Plurinational St.	GB	United Kingdom	LB	Lebanon	PA	Panama
BR	Brazil	GE	Georgia	LK	Sri Lanka	PE	Peru
BW	Botswana	GH	Ghana	LS	Lesotho	PH	Philippines
BY	Belarus	GM	Gambia	LT	Lithuania	PK	Pakistan
CA	Canada	GN	Guinea	LU	Luxembourg	PL	Poland
CD	Congo, Dem. Rep.	GR	Greece	LV	Latvia	PT	Portugal
CH	Switzerland	GT	Guatemala	MA	Morocco	PY	Paraguay
CI	Côte d'Ivoire	HN	Honduras	MD	Moldova, Rep.	QA	Qatar
CL	Chile	HR	Croatia	ME	Montenegro	RO	Romania
CM	Cameroon	HU	Hungary	MG	Madagascar	RS	Serbia
CN	China	ID	Indonesia	MK	North Macedonia	RU	Russian Federation
RW	Rwanda	SA	Saudi Arabia	SE	Sweden	SG	Singapore
SA	Saudi Arabia	SE	Sweden	SI	Slovenia	SK	Slovakia
SE	Sweden	SI	Slovenia	SN	Senegal	SV	El Salvador
SG	Singapore	SN	Senegal	SZ	Eswatini	TD	Chad
SI	Slovenia	SZ	Eswatini	TH	Thailand	TH	Thailand
SK	Slovakia	TH	Thailand	TJ	Tajikistan	TJ	Tajikistan
SN	Senegal	TJ	Tajikistan	TN	Tunisia	TN	Tunisia
SV	El Salvador	TN	Tunisia	TR	Turkey	TR	Turkey
SZ	Eswatini	TR	Turkey	TT	Trinidad and Tobago	TT	Trinidad and Tobago
TD	Chad	TT	Trinidad and Tobago	TZ	Tanzania, United Rep.	TZ	Tanzania, United Rep.
TH	Thailand	TZ	Tanzania, United Rep.	UA	Ukraine	UA	Ukraine
TH	Thailand	UA	Ukraine	UG	Uganda	UG	Uganda
TJ	Tajikistan	UG	Uganda	US	United States of America	US	United States of America
TN	Tunisia	US	United States of America	UY	Uruguay	UY	Uruguay
TN	Tunisia	UY	Uruguay	VE	Venezuela, Bolivarian Rep.	VE	Venezuela, Bolivarian Rep.
TR	Turkey	VE	Venezuela, Bolivarian Rep.	VN	Viet Nam	VN	Viet Nam
TR	Turkey	VN	Viet Nam	YE	Yemen	YE	Yemen
TT	Trinidad and Tobago	YE	Yemen	ZA	South Africa	ZA	South Africa
TT	Trinidad and Tobago	ZA	South Africa	ZM	Zambia	ZM	Zambia
TZ	Tanzania, United Rep.	ZM	Zambia	ZW	Zimbabwe	ZW	Zimbabwe
TZ	Tanzania, United Rep.	ZW	Zimbabwe				

Table 1

Global Talent Competitiveness Index 2021 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Switzerland	82.09	1	High income	Europe	1
Singapore	79.38	2	High income	Eastern, Southeastern Asia and Oceania	1
United States of America	78.81	3	High income	Northern America	1
Denmark	77.98	4	High income	Europe	2
Sweden	77.98	5	High income	Europe	3
Netherlands	77.31	6	High income	Europe	4
Finland	77.07	7	High income	Europe	5
Luxembourg	76.96	8	High income	Europe	6
Norway	75.84	9	High income	Europe	7
Iceland	75.21	10	High income	Europe	8
Australia	75.06	11	High income	Eastern, Southeastern Asia and Oceania	2
United Kingdom	74.84	12	High income	Europe	9
Canada	74.77	13	High income	Northern America	2
Germany	74.13	14	High income	Europe	10
New Zealand	73.86	15	High income	Eastern, Southeastern Asia and Oceania	3
Ireland	72.82	16	High income	Europe	11
Belgium	72.18	17	High income	Europe	12
Austria	72.10	18	High income	Europe	13
France	69.18	19	High income	Europe	14
Japan	68.68	20	High income	Eastern, Southeastern Asia and Oceania	4
Israel	68.65	21	High income	Northern Africa and Western Asia	1
Estonia	66.57	22	High income	Europe	15
Malta	65.72	23	High income	Europe	16
Czech Republic	65.03	24	High income	Europe	17
United Arab Emirates	63.38	25	High income	Northern Africa and Western Asia	2
Slovenia	63.16	26	High income	Europe	18
Korea, Rep.	63.16	27	High income	Eastern, Southeastern Asia and Oceania	5
Portugal	62.95	28	High income	Europe	19
Spain	61.85	29	High income	Europe	20
Cyprus	61.63	30	High income	Northern Africa and Western Asia	3
Latvia	60.68	31	High income	Europe	21
Lithuania	60.25	32	High income	Europe	22
Chile	60.00	33	High income	Latin America and the Caribbean	1
Malaysia	59.70	34	Upper-middle income	Eastern, Southeastern Asia and Oceania	6
Italy	58.79	35	High income	Europe	23
Qatar	58.73	36	High income	Northern Africa and Western Asia	4
China	57.17	37	Upper-middle income	Eastern, Southeastern Asia and Oceania	7
Slovakia	56.70	38	High income	Europe	24
Costa Rica	55.75	39	Upper-middle income	Latin America and the Caribbean	2
Poland	55.69	40	High income	Europe	25
Saudi Arabia	53.85	41	High income	Northern Africa and Western Asia	5
Hungary	53.57	42	High income	Europe	26
Greece	52.70	43	High income	Europe	27
Bahrain	52.46	44	High income	Northern Africa and Western Asia	6
Russian Federation	51.82	45	Upper-middle income	Europe	28

(continued on next page)

Table 1 (continued)

Global Talent Competitiveness Index 2021 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Bulgaria	51.76	46	Upper-middle income	Europe	29
Brunei Darussalam	51.61	47	High income	Eastern, Southeastern Asia and Oceania	8
Oman	51.30	48	High income	Northern Africa and Western Asia	7
Montenegro	51.28	49	Upper-middle income	Europe	30
Belarus	50.67	50	Upper-middle income	Europe	31
Uruguay	50.02	51	High income	Latin America and the Caribbean	3
Croatia	49.99	52	High income	Europe	32
Georgia	49.94	53	Upper-middle income	Northern Africa and Western Asia	8
Azerbaijan	49.77	54	Upper-middle income	Northern Africa and Western Asia	9
Romania	49.58	55	Upper-middle income	Europe	33
Mauritius	49.52	56	Upper-middle income	Sub-Saharan Africa	1
Armenia	49.39	57	Upper-middle income	Northern Africa and Western Asia	10
Serbia	49.35	58	Upper-middle income	Europe	34
Argentina	48.46	59	Upper-middle income	Latin America and the Caribbean	4
Kazakhstan	47.94	60	Upper-middle income	Central and Southern Asia	1
Ukraine	47.42	61	Lower-middle income	Europe	35
Kuwait	47.18	62	High income	Northern Africa and Western Asia	11
Jordan	47.08	63	Upper-middle income	Northern Africa and Western Asia	12
Trinidad and Tobago	46.25	64	High income	Latin America and the Caribbean	5
Mexico	46.20	65	Upper-middle income	Latin America and the Caribbean	6
Botswana	46.16	66	Upper-middle income	Sub-Saharan Africa	2
South Africa	45.82	67	Upper-middle income	Sub-Saharan Africa	3
Thailand	45.46	68	Upper-middle income	Eastern, Southeastern Asia and Oceania	9
Jamaica	45.12	69	Upper-middle income	Latin America and the Caribbean	7
Philippines	44.63	70	Lower-middle income	Eastern, Southeastern Asia and Oceania	10
Lebanon	44.42	71	Upper-middle income	Northern Africa and Western Asia	13
Colombia	44.27	72	Upper-middle income	Latin America and the Caribbean	8
Albania	43.55	73	Upper-middle income	Europe	36
Namibia	43.24	74	Upper-middle income	Sub-Saharan Africa	4
Brazil	43.23	75	Upper-middle income	Latin America and the Caribbean	9
Turkey	43.19	76	Upper-middle income	Northern Africa and Western Asia	14
Mongolia	42.82	77	Lower-middle income	Eastern, Southeastern Asia and Oceania	11
Panama	42.71	78	Upper-middle income	Latin America and the Caribbean	10
North Macedonia	42.17	79	Upper-middle income	Europe	37
Indonesia	42.09	80	Lower-middle income	Eastern, Southeastern Asia and Oceania	12
Tunisia	41.56	81	Lower-middle income	Northern Africa and Western Asia	15
Viet Nam	40.85	82	Lower-middle income	Eastern, Southeastern Asia and Oceania	13
Moldova, Rep.	40.79	83	Upper-middle income	Europe	38
Egypt	40.39	84	Lower-middle income	Northern Africa and Western Asia	16
Ecuador	40.34	85	Upper-middle income	Latin America and the Caribbean	11
Dominican Republic	39.66	86	Upper-middle income	Latin America and the Caribbean	12
Peru	39.61	87	Upper-middle income	Latin America and the Caribbean	13
India	39.57	88	Lower-middle income	Central and Southern Asia	2
Kyrgyzstan	39.38	89	Lower-middle income	Central and Southern Asia	3
Cabo Verde	39.38	90	Lower-middle income	Sub-Saharan Africa	5

(continued on next page)

Table 1 (continued)

Global Talent Competitiveness Index 2021 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Bosnia and Herzegovina	39.12	91	Upper-middle income	Europe	39
Paraguay	38.72	92	Upper-middle income	Latin America and the Caribbean	14
Sri Lanka	38.63	93	Lower-middle income	Central and Southern Asia	4
Ghana	37.82	94	Lower-middle income	Sub-Saharan Africa	6
Morocco	37.58	95	Lower-middle income	Northern Africa and Western Asia	17
Kenya	37.24	96	Lower-middle income	Sub-Saharan Africa	7
Tajikistan	37.02	97	Lower-middle income	Central and Southern Asia	5
Algeria	35.73	98	Lower-middle income	Northern Africa and Western Asia	18
Gambia	34.83	99	Low income	Sub-Saharan Africa	8
Iran, Islamic Rep.	34.38	100	Lower-middle income	Central and Southern Asia	6
Rwanda	34.26	101	Low income	Sub-Saharan Africa	9
Bolivia, Plurinational St.	34.17	102	Lower-middle income	Latin America and the Caribbean	15
Senegal	32.94	103	Lower-middle income	Sub-Saharan Africa	10
Zambia	32.82	104	Lower-middle income	Sub-Saharan Africa	11
Lao PDR	32.49	105	Lower-middle income	Eastern, Southeastern Asia and Oceania	14
Guatemala	32.36	106	Upper-middle income	Latin America and the Caribbean	16
Pakistan	31.76	107	Lower-middle income	Central and Southern Asia	7
Nigeria	31.47	108	Lower-middle income	Sub-Saharan Africa	12
El Salvador	31.04	109	Lower-middle income	Latin America and the Caribbean	17
Venezuela, Bolivarian Rep.	30.64	110	Upper-middle income	Latin America and the Caribbean	18
Côte d'Ivoire	30.49	111	Lower-middle income	Sub-Saharan Africa	13
Eswatini	30.11	112	Lower-middle income	Sub-Saharan Africa	14
Nepal	29.90	113	Lower-middle income	Central and Southern Asia	8
Honduras	29.76	114	Lower-middle income	Latin America and the Caribbean	19
Tanzania, United Rep.	29.12	115	Lower-middle income	Sub-Saharan Africa	15
Cameroon	28.97	116	Lower-middle income	Sub-Saharan Africa	16
Uganda	28.82	117	Low income	Sub-Saharan Africa	17
Nicaragua	28.02	118	Lower-middle income	Latin America and the Caribbean	20
Cambodia	27.43	119	Lower-middle income	Eastern, Southeastern Asia and Oceania	15
Zimbabwe	27.30	120	Lower-middle income	Sub-Saharan Africa	18
Lesotho	27.09	121	Lower-middle income	Sub-Saharan Africa	19
Malawi	27.06	122	Low income	Sub-Saharan Africa	20
Bangladesh	25.30	123	Lower-middle income	Central and Southern Asia	9
Burkina Faso	24.74	124	Low income	Sub-Saharan Africa	21
Guinea	23.97	125	Low income	Sub-Saharan Africa	22
Madagascar	23.61	126	Low income	Sub-Saharan Africa	23
Mali	22.87	127	Low income	Sub-Saharan Africa	24
Ethiopia	22.61	128	Low income	Sub-Saharan Africa	25
Burundi	21.98	129	Low income	Sub-Saharan Africa	26
Mozambique	21.25	130	Low income	Sub-Saharan Africa	27
Angola	19.51	131	Lower-middle income	Sub-Saharan Africa	28
Congo, Dem. Rep.	17.41	132	Low income	Sub-Saharan Africa	29
Yemen	15.90	133	Low income	Northern Africa and Western Asia	19
Chad	13.21	134	Low income	Sub-Saharan Africa	30

From Talent Champions to Talent Laggards

Figure 7 depicts visually how the relative positions of countries in the GTCI have changed in the two periods 2016–2018 and 2019–2021. The left-hand and right-hand columns of the figure rank the countries according to their GTCI scores in the earlier and later periods, respectively. Hence, an upward (downward) slope implies an improvement (deterioration) in the ranking over the two periods, which in turn suggests strengthening (weakening) talent competitiveness.

Overall, talent competitiveness of the highest-ranked countries is stable despite some minor changes in rankings between the two three-year periods. For instance, all countries but one that were in the top 10 in the 2016–2018 period were also there in the 2019–2021 period. The exception is the United Kingdom, which dropped four positions (from 7th to 11th) between the two periods. The Netherlands made it into the top 10 at the United Kingdom's expense, climbing from 11th in the earlier period to 6th in the later. Two other notable climbers in the top quartile are Germany, which improved its rank 17th to 12th over the two periods, and Israel, whose rank improved six positions (from 25th in the earlier period to 19th in the later).

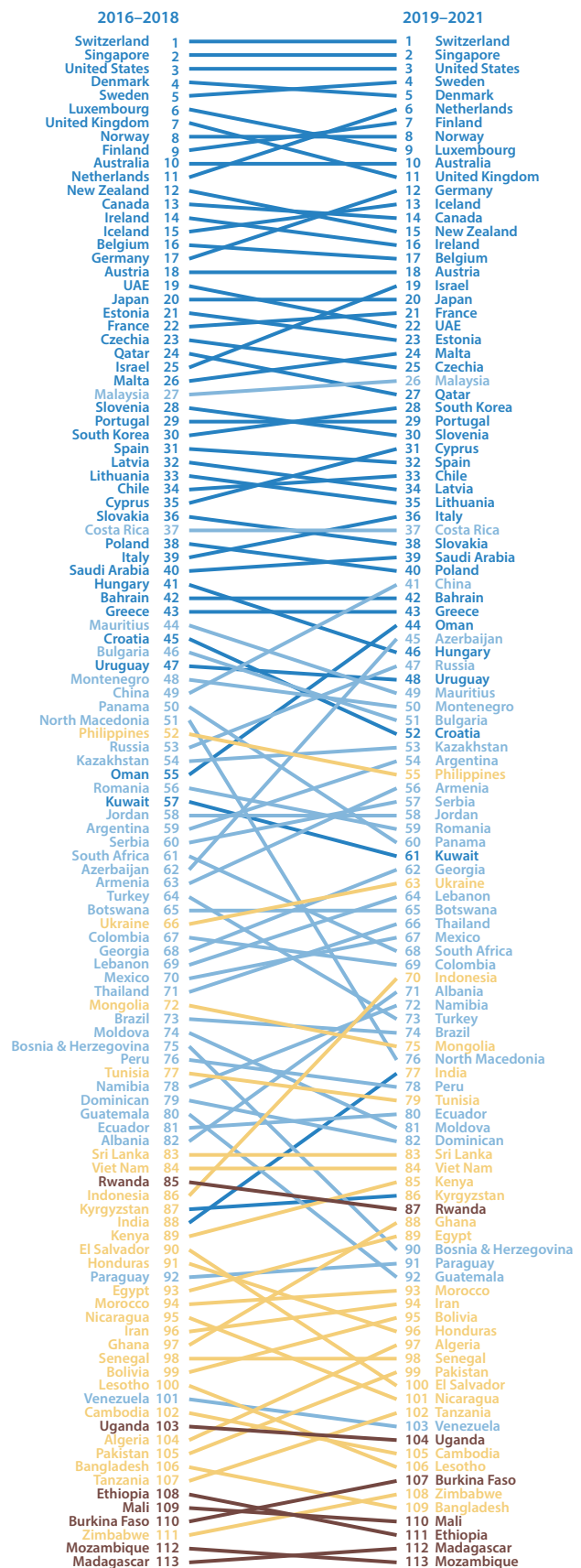
The changes in ranks fluctuate more strongly further down the rankings. Among the countries with the greatest improvements over the two periods are China (from 49th to 41st), Oman (55th to 44th), Azerbaijan (62nd to 45th), Albania (82nd to 71st), Indonesia (86th to 70th), and India (88th to 77th). Several of these countries appear to have strengthened in all or most dimensions of talent competitiveness, but in some cases the improved rankings are more clearly a result of specific improvements. For instance, China and Indonesia have higher scores in the later period in almost all six pillars (although scores in Vocational and Technical Skills have improved the most in both countries), whereas the better performance of India seems to be primarily due to progress in the pillars related to Attract, Retain, and Global Knowledge Skills.

Countries that have seen their ranks drop over the two periods include North Macedonia (from 51st to 76th), Bosnia and Herzegovina (from 75th to 90th), and Guatemala (80th to 92nd). In the case of Guatemala, the lower rank can be attributed to a decrease in scores in all six pillars. As for the two former countries, their slip in the rankings is the result of lower scores in all pillars bar Global Knowledge Skills.

Figure 7 shows how ranks over the two three-year periods have changed, but it does not provide any information about how scores have evolved. Figure 8 does so by showing two aspects of each country's scores: (1) the change (in percent) of its average GTCI scores from 2016–2018 to 2019–2021 and (2) what score it achieved in this year's ranking. Plotting this information yields a growth-performance matrix that shows how countries fare against a combined benchmark of, on one hand, no change (i.e., neither increase nor decrease) in scores over the two three-year periods and, on the other hand, the average 2021 score (50.2) for this set of countries. The resulting four quadrants are meant to indicate whether a country is primarily a *talent champion* (with an improved score over the two periods and a high score in the GTCI 2021), a *talent mover* (an improved score over

Figure 7

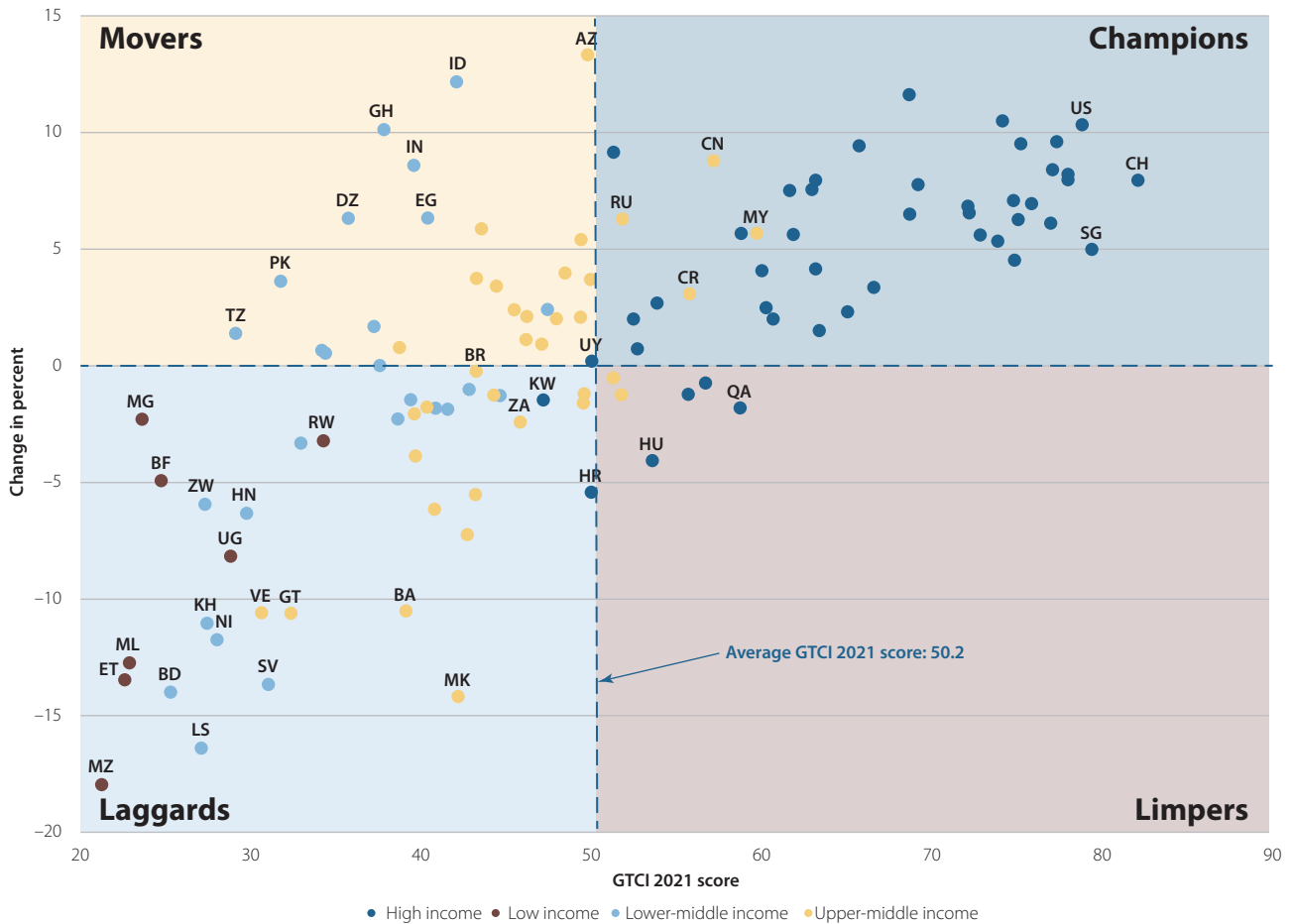
GTCI rankings in 2016–2018 and 2019–2021



Note: Colours refer to income groups, which range from dark blue (high income) to light blue (upper-middle income), light brown (lower-middle income), and dark brown (low income).

Figure 8

Change in scores for 2016–2018 vs 2019–2021 and GTCI 2021 score



Note: A complete ISO-2 country code key can be found as part of Figure 6, page 13.

time, but a lower-than-average score this year), a *talent limper* (a worsened score over time, but a higher-than-average score this year), or a *talent laggard* (a worsened score over time and a lower-than-average score this year).

One of the features of Figure 8 is that it denotes what income group classification a country belongs to. From that perspective, the growth-performance matrix makes it visually clear that high-income countries tend to be talent champions, that all low-income countries are talent laggards, and that upper-middle-income and lower-middle-income countries are primarily talent movers or talent laggards.

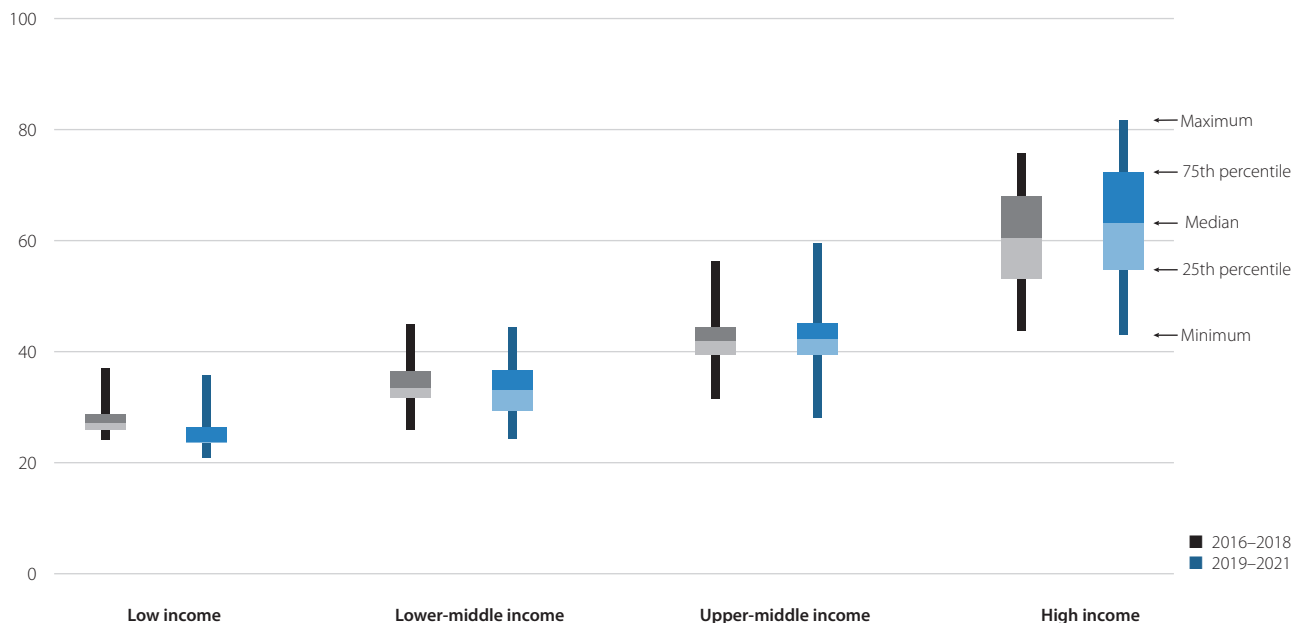
As discussed in detail in the Statistical Annex, the GTCI rankings are dominated by high-income countries; it is therefore not surprising that all but three countries of that income group have GTCI scores above the sample average. Similarly, 39 of the 45 high-income countries included in the time-series analysis have improved their scores over the two three-year periods, and the large majority of them are, hence, talent champions. Even countries that have slipped in the rankings, such as the United Kingdom and New Zealand, have nevertheless increased their GTCI scores over time. Two of the high-income countries find themselves in the quadrant of talent laggards: Croatia and Kuwait. In

both countries, this can primarily be attributed to weaker performances in the Input-related pillars.

Four upper-middle-income countries are regarded as talent champions: China, Costa Rica, Malaysia, and Russia. The strong all-around performance of China was mentioned above, while Costa Rica has primarily increased its scores in the pillars Retain and Vocational and Technical Skills. Both Malaysia and Russia have seen improvements mainly in Attract and in the two Output-related pillars. Two upper-middle-income countries—Bulgaria and Montenegro—have higher-than-average GTCI scores but negative growth over the two periods, which means that they are regarded as talent limpers. Fourteen upper-middle-income countries with lower-than-average GTCI scores have made progress over the two periods and are therefore seen as talent movers, including Azerbaijan—the fastest-growing country in the time-series analysis. Finally, 15 upper-middle-income countries are positioned in the quadrant of talent laggards, including South Africa, where scores have decreased in the pillars related to Enable, Grow, and Retain.

The fastest-growing lower-middle-income country is Indonesia, which finds itself in the quadrant of talent movers. Another 11 lower-middle-income countries are also talent movers,

Figure 9

GTCI scores in 2016–2018 and 2019–2021 by income group

Note: Narrow bars indicate maximum and minimum values; wide bars indicate 25th, 50th, and 75th percentiles. Black bars indicate 2016–2018 values and blue bars indicate 2019–2021 values.

including Ghana and India, both of which have improved their scores in the pillars Attract, Retain, Vocational and Technical Skills, and Global Knowledge Skills over the two periods. GTCI scores in the remaining 14 lower-middle-income countries decreased in the later three-year period and, in combination with lower-than-average scores in GTCI 2021, this means that they fall into the category of talent laggards. Among the weakest performers in this group are Bangladesh and Lesotho, which have seen their scores worsen across the board over the two three-year periods (the only exception is Lesotho's ability to Retain talent).

All seven low-income countries are deemed talent laggards. The trend is particularly negative for Ethiopia, Mali, and Mozambique, where scores have worsened by more than 10% over both periods because of weaker performances in five of the six pillars (Ethiopia's pool of Global Knowledge Skills has slightly strengthened, while Mali and Mozambique have seen small improvements in the Retain pillar). Madagascar and Rwanda are among the better performers in the group of low-income countries, both of which have achieved higher scores in the pillars related to Attract, Retain, and Global Knowledge Skills. Rwanda has also strengthened its pool of Vocational and Technical Skills.

Did COVID Worsen Existing Talent Gaps?

The time-series analyses of previous years have suggested that the gap between the most talent-competitive countries and the rest is widening. Figures 9 and 10 support the validity of this impression by showing how GTCI scores in higher-income countries have increased, while the opposite has occurred in lower-income countries.

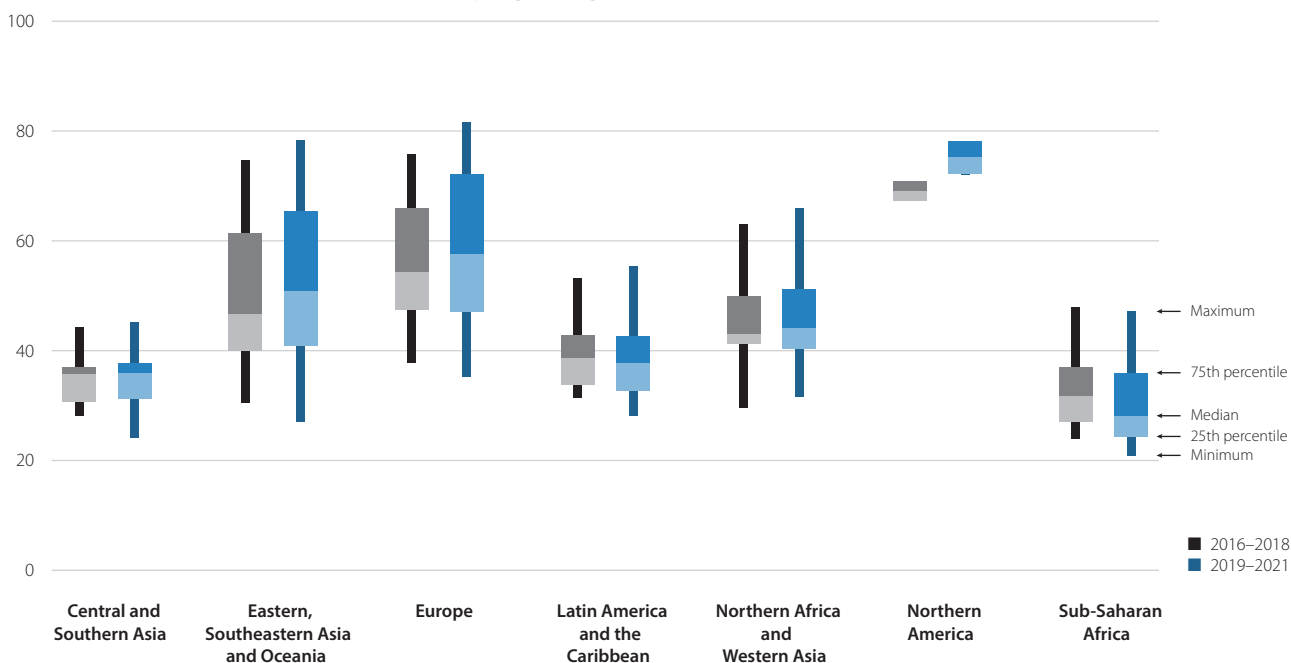
For instance, Figure 9 summarises the performances of the four income groups in the two three-year periods. Contrasting

the evolution of scores in low-income countries and high-income countries shows clearly that the latter group has experienced an overall improvement, while the former group has seen a deterioration of scores. The contrast between upper-middle-income countries and lower-middle-income countries is much smaller, but the general tendency of a widening gap remains: average and median scores in the former group have stayed flat or increased ever so slightly, whereas they have slipped a little in the latter group.

In terms of regional groups, Figure 10 shows that the greatest growth in GTCI scores has taken place in the three highest-scoring regions: Eastern, Southeastern Asia and Oceania; Europe; and Northern America. For instance, median scores in those regions increased by 4.1, 3.3, and 6.0 points, respectively, over the two three-year periods. Median scores also increased somewhat in the regions of Central and Southern Asia and Northern Africa and Western Asia, whereas they dropped in Latin America and the Caribbean and Sub-Saharan Africa. A growing gap also seems to be occurring within regions, and it is telling that it is frequently the less talent-competitive countries in most regions that have seen scores either improve at a lower rate or even worsen. For instance, in both Europe and Eastern, Southeastern Asia and Oceania, performances at the 50th, 75th, and maximum percentiles far outpaced those at the minimum and 25th percentiles.

It is too soon to say what effect COVID might have on talent competitiveness in the long run. However, as discussed earlier in the chapter, the initial indications are that the pandemic has exacerbated pre-existing inequalities. The time-series analysis suggests that, if anything, this might indeed be the case. The policy implication is clear: stakeholders should take steps to

Figure 10
GTCI scores in 2016–2018 and 2019–2021 by regional group



Note: Narrow bars indicate maximum and minimum values; wide bars indicate 25th, 50th, and 75th percentiles. Black bars indicate 2016–2018 values and blue bars indicate 2019–2021 values.

ensure that the underlying dimensions of talent competitiveness are strengthened, especially for countries and those segments of the population already under pressure.

ENDNOTES

- 1 See ILO (2021b).
- 2 See Younger (2020).
- 3 See World Bank (2021).
- 4 See Powell (2021).
- 5 See ILO (2021a).
- 6 See European Commission (2020).
- 7 See EC (2021).
- 8 See Edelberg & Sheiner (2021).
- 9 See Tang (2020).
- 10 See KPMG (2020).
- 11 See German Ministry of Finance (2020).
- 12 See Cappelli & Keller (2014); Stahl et al. (2012).
- 13 The year 2016 refers to the results reported in *The Global Talent Competitiveness Index 2015–16*. The years 2017–2021 refer to the respective reports that include the year in question—that is, the year 2017 relates to *The Global Talent Competitiveness Index 2017*, the year 2018 to *The Global Talent Competitiveness Index 2018*, and so on.
- 14 One caveat to the results discussed in this section is that the GTCI model has evolved over the years, with the possible implication that a score that changes from one year to the next might primarily reflect a methodological adjustment rather than new data. This is less of a concern from the second GTCI edition onwards (which is analysed here), since the model has become increasingly stable over the years. Moreover, this potential problem is addressed by averaging the scores across three years

(as it implies some smoothing of modifications to the GTCI model) and by focusing the analysis on aggregate overall GTCI scores (which entails a degree of cancelling-out effects).

- 15 More concretely, the country with the best average rank for a three-year period would be ranked 1st, the country with the next-best rank would be ranked 2nd, and so on.

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Statistical Annex to Chapter 1

OVERVIEW

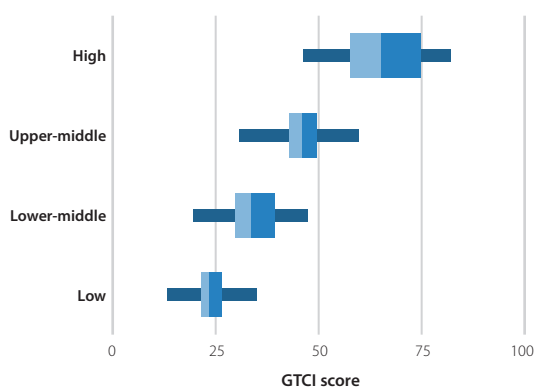
The statistics in this annex analyse country performance in the GTCI 2021 in terms of its overall score and also in terms of its pillars and sub-pillars. Performance data are broken down in different ways: by top performers (the top 15 GTCI score leaders) and by region and income group (high, upper-middle, lower-middle, and low income).¹

In total, there are 134 countries included in this year's GTCI, up from last year's 132. Of these, 47 are high-income countries, 36 are upper-middle-income countries, 36 are lower-middle-income countries, and 14 are low-income countries. One country—the Bolivarian Republic of Venezuela—is temporarily unclassified because of a lack of updated data.² The regional distribution, meanwhile, is as follows: 9 countries from Central and Southern Asia, 15 countries from Eastern, Southeastern Asia and Oceania, 39 countries from Europe, 20 countries from Latin America and the Caribbean, 19 countries from Northern Africa and Western Asia, 2 countries from Northern America, and 30 countries from Sub-Saharan Africa. Four of the covered countries are new since the GTCI 2020 (Belarus, Chad, Guinea, and Lebanon), while two countries (Bhutan and Liberia) have dropped out of this year's index because of a lack of available data.

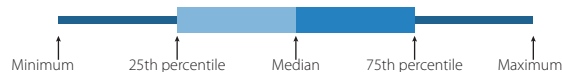
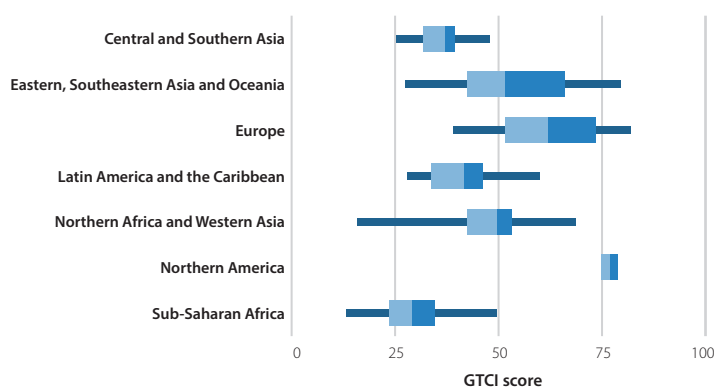
Figure A1 presents the dispersion of GTCI scores by income group and region. Two points are immediately clear when comparing the performances across income groups. First, the degree of variation of scores is clearly related to the number of countries within each income group. Thus, the income group with the greatest number of countries—the high-income-country group—has the greatest dispersion, whereas the opposite holds for the low-income-country group that includes the fewest countries. Second, the positive strong correlation of GTCI score and GDP per capita is reflected by the relative performances of the income groups. The group of high-income countries outscores that of upper-middle-income countries in all percentiles, and the same can be said regarding the lower-middle-income-country and low-income-country groups. As for performance by region, it is again the case that the dispersion of scores is related to the number of countries situated in each region. For instance, the region with the fewest countries—Northern America (2 countries)—has a low variation, while the region with the most countries—Europe (39 countries)—has a greater variation. However, the dispersion of scores among regions is also a function of country income levels. Regions with a greater diversity of countries at different income levels (e.g., Eastern, Southeastern

Figure A1
Country dispersion of GTCI scores

By income group



By region



Note: The figure for Northern America has only two bars because it contains only two countries: Canada and the United States.

Asia and Oceania and Northern Africa and Western Asia) also have a higher variation of GTCI scores.

At the country level, year-on-year changes in rankings are to be expected given data updates and the refinements to the GTCI model. Usually, the changes tend to be small and only a few countries experience dramatic climbs or drops in the rankings. GTCI 2021 is different in this regard, as there are more countries than usual with considerable year-on-year differences in their rankings. To some extent, this is due to methodological changes, but there can also be no doubt that a major part of the explanation is COVID and the impact it has had on labour markets—or, more broadly, economies and societies—around the world. That said, it should be noted that the impact is by no means uniform and that some countries have been more affected than others. For instance, whereas the group of countries in the top 25 is identical to last year’s—albeit with permutations within the group—there are 16 countries in the second and third quartiles that have moved 10 positions or more compared with the GTCI 2020 rankings.

The top 25 in the GTCI 2021 rankings predominantly consists of European countries, including the world’s most talent-competitive country: Switzerland. All Nordic countries make it into the top 10 (Denmark, 4th; Sweden, 5th; Finland, 7th; Norway, 9th; and Iceland, 10th), while Western European countries such as the Netherlands (6th), Luxembourg (8th), and the United Kingdom (12th) are also among the top performers.

Four other regions are also represented in the top 25: Northern America (United States of America, 3rd; Canada, 13th), Eastern and Southeastern Asia (Singapore, 2nd; Japan, 20th), Oceania (Australia, 11th; New Zealand, 15th), and Western Asia (Israel, 21st; the United Arab Emirates, 25th).

Analysing scores by pillar sheds some light on what might be driving these overall results. For instance, Figure A2 suggests

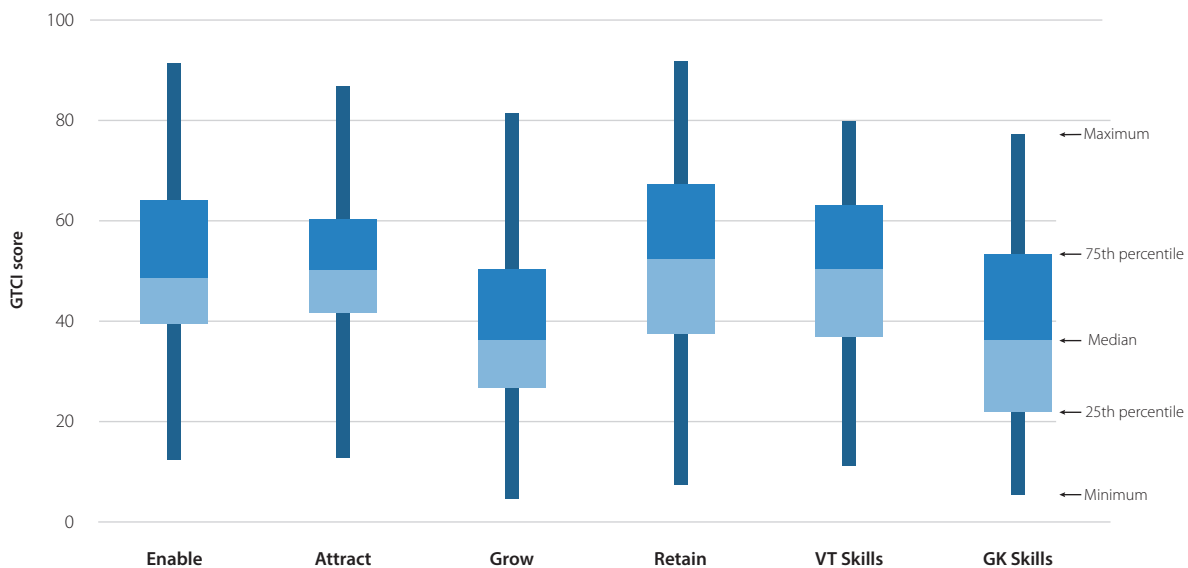
that the dispersion of scores in the Attract pillar is lower than the variability in the Retain pillar. This is also corroborated by more detailed analysis: the standard deviation of country scores in the Attract pillar is 13.8, which can be contrasted with a standard deviation of 20.7 in Retain. The corollary is that the ability of countries to retain talent appears to be more important in differentiating overall talent competitiveness than their capacity to attract talent.

A detailed overview of country-level performances is provided by the heatmap of Figure A3 on pages 26–27, which presents the overall rankings in the GTCI and those in each pillar, coloured by the quartile to which the rankings of each of the 134 countries belong. A quick glance at the heatmap is sufficient to give the impression that countries often have similar rankings in several pillars. For instance, 88% of all top quartile positions in the six pillars are held by countries that are in the top quartile in the overall GTCI rankings. By the same token, most second quartile positions in each of the six pillars are held by countries in the second quartile (65%)—and likewise for third quartile and bottom quartile positions (59% and 80%, respectively).

TOP 15 COUNTRIES IN THE GTCI 2021

The top 3 positions in the GTCI have been held by the same three countries—Switzerland, Singapore, and the United States—since 2018, and this year is no different. The most talent-competitive country is, yet again, Switzerland, as has been the case ever since the first GTCI was launched in 2013. Singapore returns to 2nd place, which it has occupied in all editions of the GTCI apart from last year when the United States pushed it down one rank. The United States, therefore, drops one place in the GTCI 2021 compared with last year, although there is not much separating it from Singapore.

Figure A2
Dispersion of country scores for each pillar



Note: Narrow bars indicate maximum and minimum values; wide bars indicate 25th, 50th, and 75th percentiles. GK Skills = Global Knowledge Skills; VT Skills = Vocational and Technical Skills.

It was mentioned above that the top 25 of this year's index contains the same countries as in the GTCI 2020. Something very similar can be said about the top 15 in the GTCI 2021 because all countries but one were also in the top 15 in last year's index. More specifically, New Zealand has swapped places with Ireland, which means that the former country is ranked 15th in the GTCI 2021 and the latter has dropped one place to 16th. This is a reversal of last year when Ireland made it into the top 15 at the expense of New Zealand.

The top 15 performers are not only the most talent-competitive countries overall; they are also dominant in all of the key dimensions of the GTCI. As a matter of fact, all the top 3 countries in each of the six pillars are among the top 15 in the overall GTCI 2021 rankings (Table A1). Switzerland and Singapore—the two top-ranked countries overall—feature in the top 3 in four of the six pillars, while the United States and Denmark make it into the top 3 in three and two pillars, respectively. The other countries that are among the highest-scoring performers in a key dimension are Finland, Luxembourg, Norway, Iceland, and New Zealand, each of which has one top 3 rank at the pillar level.

Such is the dominance of the top 15 countries this year that they occupy the five highest ranks in each of the six pillars. There are a few countries outside the top 15 overall that do well in specific dimensions. For instance, both Ireland (16th) and Austria (18th) make it into the top 10 in two pillars: Attract and Global Knowledge Skills in the former case; Retain and Vocational and Technical Skills in the latter. Japan (20th) is one of the better performers in terms of enabling talent, while Israel (21st) has a strong pool of Vocational and Technical Skills. Two other countries that stand out in certain pillars are the United Arab Emirates (25th) and Qatar (36th), which are among the top 10 countries when it comes attracting talent.

Switzerland (1st) remains the global leader in the GTCI rankings. The country stands out in that it has impressive performances in virtually all aspects of talent competitiveness. It is the highest-ranked country in three of the six pillars—Enable, Retain, and Vocational and Technical Skills—and is among the top 5 in the other three: Grow (3rd), Attract (4th), and Global Knowledge Skills (5th). Switzerland is equally impressive at a more disaggregated level, making it into the top 10 in 12 of 14 sub-pillars and the global leader in three of them: Market Landscape, Business and Labour Landscape, and Sustainability. Mid-Level Skills (11th) and Internal Openness (12th) are the two sub-pillars where it ranks outside the top 10, but only just. The area where Switzerland could improve the most is gender equality, including by supporting more women to gain high-skilled jobs.

Singapore (2nd) makes it into the top 3 in four of the six pillars: Enable (2nd), Attract (2nd), Grow (2nd), and Global Knowledge Skills (3rd). It also has one of the world's best pools of Vocational and Technical Skills (4th), where its ability to match labour market demand and workforce supply (1st in Employability) is offset by weaker Mid-Level Skills (25th). However, the city-state's ability to Retain (35th) talent remains its main weakness, and more needs to be done to improve issues related to both Sustainability (36th) and Lifestyle (35th). At the sub-pillar level, Singapore features in the top 10 in ten of the 14 sub-pillars, and

Table A1

Countries with highest GTCI scores by pillar

PILLAR	TOP 3 COUNTRIES
Enable	Switzerland, Singapore, Denmark
Attract	Luxembourg, Singapore, New Zealand
Grow	United States, Singapore, Switzerland
Retain	Switzerland, Norway, Denmark
Vocational and Technical (VT) Skills	Switzerland, Finland, United States
Global Knowledge (GK) Skills	Iceland, United States, Singapore

it is the world's best performer in Regulatory Landscape, Formal Education, Employability, and High-Level Skills.

The United States (3rd) is the global leader in growing talent, primarily by virtue of its outstanding performances in Lifelong Learning (1st) and Formal Education (2nd). The country is also a top 3 performer in the two Output-related pillars—Vocational and Technical Skills (3rd) and Global Knowledge Skills (2nd)—both of which benefit from strong showings in all their sub-pillars: Mid-Level Skills (9th) and Employability (6th) in the former case; High-Level Skills (2nd) and Talent Impact (6th) in the latter. The United States also has high scores in the pillars that relate to enabling (10th) talent—boosted by a favourable Market Landscape (3rd)—and to attracting (12th) talent—mainly benefiting from high External Openness (11th). The country's weakest pillar concerns retaining (20th) talent, where improving the Lifestyle (43rd) should be a priority.

Denmark (4th) makes it into the top 3 in two pillars: Enable and Retain (3rd in both). In the former case, it benefits from strong performances in all three sub-pillars (Market Landscape, 3rd; Regulatory Landscape, 6th; Business and Labour Landscape, 5th); in the latter case, it primarily enjoys a high level of Sustainability (3rd). Denmark's strongest sub-pillar relates to Talent Impact (1st), where a high degree of entrepreneurship and innovation are the main contributing factors to its pool of Global Knowledge Skills (10th). However, the same pillar also includes the country's weakest sub-pillar—High-Level Skills (26th)—which would be boosted if the share of senior officials and managers were to increase. The only pillar where Denmark is ranked outside the top 10 (albeit only just) is in attracting (11th) talent, where there is particular scope to strengthen its role as a magnet for talented people (External Openness: 17th).

Sweden (5th) stands out in that it performs well in virtually all aspects of talent competitiveness. Rather than dominating in any particular area—for instance, it does not feature in the top 3 in any pillar—it is the only country in the GTCI 2021 that ranks better than 50 in each and every indicator. That said, Sweden performs better in some pillars than others. Its best showing is in Enable (4th) due to strong performances in all three sub-pillars. It also has an excellent ability to Grow and Retain (5th in both) talent, primarily as a result of impressive Lifelong Learning and Access to Growth Opportunities (6th in both) in the former case and a high level of Sustainability in the latter (7th). Sweden's

Figure A3

Heatmap: Rankings on GTCI overall and by pillar

COUNTRY	GTCI RANKING	ENABLE	ATTRACT	GROW	RETAIN	VT SKILLS	GK SKILLS
Countries ABOVE the median in the overall GTCI score							
Switzerland	1	1	4	3	1	1	5
Singapore	2	2	2	2	35	4	3
United States	3	10	12	1	20	3	2
Denmark	4	3	11	9	3	8	10
Sweden	5	4	9	5	5	12	6
Netherlands	6	5	13	4	8	11	14
Finland	7	6	14	10	4	2	16
Luxembourg	8	11	1	16	6	21	8
Norway	9	7	18	11	2	6	15
Iceland	10	14	16	18	15	7	1
Australia	11	19	5	8	11	26	9
United Kingdom	12	15	15	6	9	33	4
Canada	13	16	6	7	16	13	13
Germany	14	9	19	13	10	5	24
New Zealand	15	13	3	14	14	28	18
Ireland	16	21	8	20	18	19	7
Belgium	17	17	20	15	13	15	20
Austria	18	12	22	12	7	10	29
France	19	23	34	19	12	17	21
Japan	20	8	42	17	17	22	27
Israel	21	20	31	27	21	9	12
Estonia	22	22	24	26	28	29	11
Malta	23	31	17	22	26	51	17
Czech Republic	24	26	29	24	23	14	30
United Arab Emirates	25	18	7	28	55	40	36
Slovenia	26	30	54	25	27	16	28
South Korea	27	25	73	29	24	35	22
Portugal	28	32	23	31	22	48	31
Spain	29	29	43	23	19	57	35
Cyprus	30	43	35	34	30	34	19
Latvia	31	33	40	32	36	32	26
Lithuania	32	28	36	38	34	45	25
Chile	33	36	44	30	29	31	38
Malaysia	34	27	28	33	51	24	32
Italy	35	35	67	37	25	30	42
Qatar	36	24	10	36	73	25	62
China	37	39	78	21	70	50	23
Slovakia	38	42	46	35	33	59	41
Costa Rica	39	40	25	41	38	55	59
Poland	40	41	68	44	41	20	45
Saudi Arabia	41	34	32	39	81	27	66
Hungary	42	46	76	40	45	43	43
Greece	43	57	92	46	31	61	37
Bahrain	44	38	21	52	60	54	79
Russia	45	66	66	43	62	46	33
Bulgaria	46	48	79	64	43	44	40
Brunei Darussalam	47	52	48	56	47	37	60
Oman	48	37	27	58	52	52	82
Montenegro	49	59	52	76	53	23	47
Belarus	50	81	57	62	39	53	48
Uruguay	51	44	37	54	32	93	71
Croatia	52	61	99	51	48	47	44
Georgia	53	49	63	91	46	39	53
Azerbaijan	54	51	39	81	56	18	83
Romania	55	60	83	63	42	49	50
Mauritius	56	47	49	79	37	64	74
Armenia	57	55	53	95	50	36	56
Serbia	58	64	72	53	63	38	55
Argentina	59	82	64	55	40	62	69
Kazakhstan	60	78	60	60	54	89	34
Ukraine	61	85	80	57	59	69	39
Kuwait	62	50	41	59	58	79	76
Jordan	63	45	51	78	57	68	78
Trinidad and Tobago	64	92	50	96	44	41	81
Mexico	65	67	93	47	49	78	63
Botswana	66	62	45	67	61	86	64
South Africa	67	58	56	72	87	72	54

(continued on next page)

Figure A3 (continued)

Heatmap: Rankings on GTCI overall and by pillar

COUNTRY	GTCI RANKING	ENABLE	ATTRACT	GROW	RETAIN	VT SKILLS	GK SKILLS
Countries BELOW the median in the overall GTCI score							
Thailand	68	53	65	66	74	87	61
Jamaica	69	54	30	68	88	92	72
Philippines	70	79	55	48	97	90	51
Lebanon	71	88	84	69	98	60	46
Colombia	72	73	105	45	77	70	73
Albania	73	63	70	73	65	65	103
Namibia	74	74	38	94	80	71	86
Brazil	75	77	106	49	66	82	75
Turkey	76	75	119	42	79	95	57
Mongolia	77	90	81	85	69	98	49
Panama	78	76	33	88	68	106	80
North Macedonia	79	83	104	101	71	66	70
Indonesia	80	56	86	75	86	73	89
Tunisia	81	87	107	84	72	96	52
Viet Nam	82	65	95	65	94	80	77
Moldova	83	91	90	93	83	76	67
Egypt	84	95	111	90	99	56	65
Ecuador	85	98	112	61	64	83	88
Dominican Republic	86	71	47	105	96	77	97
Peru	87	84	85	50	91	100	90
India	88	69	121	71	95	99	58
Kyrgyzstan	89	105	59	108	75	67	99
Cabo Verde	90	72	74	111	67	85	105
Bosnia and Herzegovina	91	102	113	89	84	63	87
Paraguay	92	101	58	70	76	104	104
Sri Lanka	93	93	116	102	85	58	96
Ghana	94	70	71	92	106	75	109
Morocco	95	80	97	83	93	107	85
Kenya	96	89	82	80	116	74	91
Tajikistan	97	115	88	125	78	42	115
Algeria	98	103	117	104	89	84	92
Gambia	99	94	26	122	105	97	129
Iran	100	116	133	77	104	91	68
Rwanda	101	68	75	119	101	112	106
Bolivia	102	122	130	74	82	101	94
Senegal	103	86	61	121	100	115	118
Zambia	104	99	62	128	119	81	100
Lao PDR	105	97	101	120	112	109	84
Guatemala	106	96	110	87	109	111	102
Pakistan	107	109	120	86	111	108	95
Nigeria	108	112	87	97	126	88	111
El Salvador	109	106	123	99	102	110	114
Venezuela	110	131	128	82	92	103	93
Côte d'Ivoire	111	100	69	114	123	113	108
Eswatini	112	111	89	109	107	118	122
Nepal	113	125	126	112	90	102	121
Honduras	114	113	96	100	110	117	123
Tanzania	115	104	91	106	113	124	119
Cameroon	116	118	103	113	121	105	107
Uganda	117	110	77	98	125	122	120
Nicaragua	118	120	102	107	108	120	125
Cambodia	119	108	94	110	120	123	127
Zimbabwe	120	127	122	116	130	94	101
Lesotho	121	121	118	118	103	128	116
Malawi	122	114	114	117	117	125	110
Bangladesh	123	119	127	123	114	116	128
Burkina Faso	124	124	98	129	122	130	98
Guinea	125	107	109	103	131	131	131
Madagascar	126	123	100	127	128	126	126
Mali	127	117	124	126	118	129	130
Ethiopia	128	128	129	124	124	127	112
Burundi	129	130	108	115	132	121	132
Mozambique	130	126	115	133	115	134	124
Angola	131	129	125	132	127	133	117
Congo, Dem. Rep.	132	132	131	130	133	119	133
Yemen	133	134	134	134	129	114	113
Chad	134	133	132	131	134	132	134

Note: The darkest blue means the country belongs to the 4th quartile (best performers); medium colour = 3rd quartile; pale colour = 2nd quartile; palest colour = 1st quartile (worst performers). GK Skills = Global Knowledge Skills; VT Skills = Vocational and Technical Skills.

weakest sub-pillar is Employability (20th), which reflects the growing concern about skills gaps in the country and has a dampening effect on Vocational and Technical Skills (12th).

The Netherlands (6th) is ranked in the top 10 in three of the six pillars: Grow (4th), Enable (5th), and Retain (8th). Its ability to enable and grow talent rests on excellent performances in all related sub-pillars, although its top 3 positions in, respectively, Business and Labour Landscape (3rd) and Access to Growth Opportunities (2nd) are particularly impressive. As for retaining talent, the Netherlands enjoys a high level of Sustainability (6th) and a somewhat lower Lifestyle (17th). The two Output-related pillars—Vocational and Technical Skills (11th) and Global Knowledge Skills (14th)—include the country's weakest sub-pillars: Mid-Level Skills (29th) and High-Level Skills (21st), respectively. As for Attract (13th), there is scope to raise External Openness (13th) through greater attraction of foreign talent and increased Internal Openness (14th) by boosting support of women in the labour market.

Finland (7th) makes it into the top 3 in the pillar related to Vocational and Technical Skills (2nd), which is primarily the result of it being one of the leaders in matching people's education and skills with the needs of the economy (2nd in Employability). The country also has a strong ability to Retain (4th) and Enable (6th) talent: the former pillar is mainly boosted by a high degree of Sustainability (5th) and the latter pillar benefits from a conducive Regulatory Landscape (5th) and Business and Labour Landscape (6th). Finland's weakest pillar is Global Knowledge Skills (16th), where more efforts to foster entrepreneurship would raise Talent Impact (20th). The weakest sub-pillar, however, is External Openness (34th) in the pillar related to attracting (14th) talent, which stands in stark contrast to Internal Openness (2nd)—one of Finland's highest-ranked sub-pillars.

Luxembourg (8th) claims the top spot when it comes to attracting talent, which is primarily a result of its world-beating External Openness (1st), but also of its high degree of Internal Openness (7th). The country is also a top performer in the Retain (6th) pillar, where its world-class pension system, environmental performance, and social protection contribute to excellent Sustainability (2nd). The country enjoys a high degree of entrepreneurship, which contributes to an impressive showing in the Talent Impact (3rd) sub-pillar and, ultimately, to a strong pool of Global Knowledge Skills (8th). Luxembourg's pool of Vocational and Technical Skills (21st), meanwhile, is its main weakness, where improving Mid-Level Skills (34th) is a priority.

Norway (9th) remains one of the world's best countries with respect to retaining (2nd) talent, thanks to the country's social welfare system (4th in Sustainability) and its high level of personal rights and safety (5th in Lifestyle). Norway also boasts an impressive pool of Vocational and Technical Skills (6th)—mainly due to the high Employability (7th) of its domestic talent—and an excellent enabling (7th) environment, where its Regulatory Landscape (4th) is particularly robust. As before, Norway's main weakness relates to attracting (18th) talent—despite its very high level of Internal Openness (5th)—and more could be done to encourage a greater inflow of overseas business and talent, which would raise the degree of External Openness (33rd).

Iceland (10th) has the world's foremost pool of Global Knowledge Skills, which is a result of both excellent High-Level Skills (3rd) and significant Talent Impact (2nd). Iceland is also a global leader in the sub-pillars related to Internal Openness and Access to Growth Opportunities, but the dimensions with which they are associated—Attract (16th) and Grow (18th)—are the country's lowest-ranked pillars because of its weak attraction to overseas business (47th in External Openness) and relatively low levels of Formal Education (33rd) and Lifelong Learning (27th). Iceland makes it into the top 10 in one other pillar—Vocational and Technical Skills (7th)—which can be attributed to its strong ability to match labour market demand and workforce supply (5th in Employability).

Australia (11th) makes it into the top 10 in three of the six pillars: Attract (5th), Grow (8th), and Global Knowledge Skills (9th). In the case of attracting talent, the country primarily enjoys a high degree of External Openness (7th) towards foreign business and people, whereas its best performance in terms of growing talent relates to the Access to Growth Opportunities (7th). As for Global Knowledge Skills, its high share of researchers, senior officials, and managers contribute to a strong pool of High-Level Skills (7th). Although Australia has a conducive Regulatory Landscape (10th), its ability to Enable (19th) talent is hampered by a Market Landscape (21st) that would benefit from more competition and a Business and Labour Landscape (23rd) that would improve with better labour-employer cooperation. The country's main weakness remains Vocational and Technical Skills (26th), where there is a need to increase Mid-Level Skills (43rd) and to address concerns of skills gaps and skills matching (21st in Employability).

The United Kingdom (12th) is one of the top countries in terms of Global Knowledge Skills (4th), which can be attributed to excellent High-Level Skills (4th) and an innovative economy with a significant Talent Impact (9th). The country also has a strong ability to Grow (6th) and Retain (9th) talent, where the former pillar benefits from high levels of Lifelong Learning (7th) and Formal Education (8th) and the latter dimension rests on strong performances in both sub-pillars (Sustainability, 10th; Lifestyle, 9th). The pillar related to attracting (15th) talent is the one with the largest contrasts: whereas the United Kingdom ranks 6th in terms of External Openness, it ranks 29th in Internal Openness, where there is scope to improve social inclusion and gender equality. Most room for improvement is, however, found in the Vocational and Technical Skills (33rd) pillar, where more could be done to improve secondary education and make it more relevant for the labour market.

Canada (13th) is ranked in the top 10 in two pillars: Attract (6th) and Grow (7th). In the former case, widespread social inclusion contributes to a high degree of Internal Openness (6th), whereas world-class Formal Education (4th) and good Lifelong Learning (8th) opportunities have a positive impact on the latter. Canada ranks equally well in the Output-related dimensions—it comes in 13th in both Vocational and Technical Skills and Global Knowledge Skills—where the former pillar sees strong Employability (8th) offset a relatively weak level of Mid-Level Skills (44th), while the impressive pool of High-Level Skills (5th) in the latter pillar stands in contrast to the moderate Talent Impact (26th) that

would rise with greater entrepreneurship. The country's weakest pillars are Enable and Retain (16th in both), where the two lowest-ranked sub-pillars are Market Landscape (23rd) and Lifestyle (24th), respectively.

Germany (14th) has two widely contrasting performances in the Output-related pillars. On one hand, it achieves its best pillar-level ranking in Vocational and Technical Skills (5th), which is primarily due to impressive Mid-Level Skills (3rd). On the other hand, its lowest-ranked pillar is Global Knowledge Skills (24th), where greater entrepreneurship would raise Talent Impact (24th) and an increase in professionals with tertiary education would boost High-Level Skills (29th). Germany's strongest Input-related pillar is Enable (9th), primarily because of its favourable Market Landscape (7th) and Business and Labour Landscape (9th). It also makes it into the top 10 in the Retain (10th) pillar thanks to solid levels in both sub-pillars (Sustainability, 9th; Lifestyle, 12th). As for attracting (19th) and growing (13th) talent, there is room for improvement in areas related to gender equality and the use of virtual tools for collaboration, among others.

New Zealand (15th) returns to the top 15—at the expense of Ireland—in the GTCI 2021. Its best-performing pillar is Attract (3rd)—the country's only top-10 ranking at the pillar level—which stems from high degrees of both External and Internal Openness (8th and 3rd, respectively). It also has solid performances in the other Input-related pillars: Enable (13th), Grow (14th), and Retain (14th). The pillar related to enabling talent includes New Zealand's highest-ranked sub-pillar—Regulatory Landscape (2nd)—while the Grow pillar benefits from good Access to Growth Opportunities (9th) and the Retain pillar includes high marks in both sub-pillars (Sustainability, 14th; Lifestyle, 16th). The country's main weakness relates to talent Output, where a greater pool of High-Level Skills (25th) would strengthen Global Knowledge Skills (18th) and a better ability to match labour supply and market demand (42nd in Employability) would raise Vocational and Technical Skills (28th).

ANALYSIS BY INCOME AND REGIONAL GROUPS

Figure 6 on pages 12–13 clearly illustrates that there is a strong, positive correlation between talent competitiveness and income. This relationship is also reflected in an analysis of quartile performance by income group. For instance, the dominance of high-income countries is such that all of them are ranked in the upper half of the GTCI 2021 and they occupy all positions in the top quartile bar one. The exception is Malaysia (34th)—the top-ranked upper-middle-income country (Table A2). Most upper-middle-income countries are ranked in the second and third quartiles (18 and 16 countries, respectively), with China (37th) and Costa Rica (39th) being the top performers after Malaysia. Two upper-middle-income countries find themselves in the bottom quartile (Guatemala, 106th; and Venezuela, 110th). Only one lower-middle-income country makes it into the second quartile in this year's rankings: Ukraine (61st). The remaining lower-middle-income countries are found in the third quartile (16 countries) and the bottom quartile (19 countries). All the low-income countries are ranked in the lower half of the rankings, with only two of them—Gambia (99th) and Rwanda (101st)—positioned

in the third quartile and the remaining 12 countries found in the bottom quartile.

Northern America only consists of two countries—the United States and Canada—both of which feature in the top 15 in the GTCI 2021. The best-performing countries are otherwise predominantly European; that region is represented by 22 countries in the top quartile of 34 economies. The remaining European countries are primarily in the second quartile (13 countries) and, to a lesser extent, in the third quartile (four countries). The region with the second-most countries in the top quartile is Eastern, Southeastern Asia and Oceania, which has six countries represented there. Two countries from the region are in the second quartile, while the third and bottom quartiles include, respectively, six and two countries from the region. Israel (21st), the United Arab Emirates (25th), and Cyprus (30th) are the three countries from the region of Northern Africa and Western Asia that make it into the top quartile. An additional nine countries (likewise from Western Asia) feature in the second quartile, while the lower half of the rankings include six countries in the third quartile and one country in the bottom quartile. Latin America and the Caribbean has one country in the top quartile for the first time in the GTCI series: Chile (33rd). Five countries are in the second quartile, but most countries from the region are in the third quartile (eight countries). Six countries from Latin America and the Caribbean are in the bottom quartile. Neither Central and Southern Asia nor Sub-Saharan Africa are represented in the top quartile, but feature, respectively, one country (Kazakhstan, 60th) and three countries (Mauritius, 56th; Botswana, 66th; South Africa, 67th) in the second quartile. Central and Southern Asia have five countries in the third quartile and three in the bottom quartile, whereas Sub-Saharan Africa has six countries in the third quartile and 21 countries in the bottom quartile.

Table A2

Countries with highest GTCI scores by income and regional group

COMPARISON GROUP	TOP 3 COUNTRIES
By region	
Central and Southern Asia	Kazakhstan, India, Kyrgyzstan
Eastern, Southeastern Asia and Oceania	Singapore, Australia, New Zealand
Europe	Switzerland, Denmark, Sweden
Latin America and the Caribbean	Chile, Costa Rica, Uruguay
Northern Africa and Western Asia	Israel, United Arab Emirates, Cyprus
Northern America	United States, Canada
Sub-Saharan Africa	Mauritius, Botswana, South Africa
By income group	
High-income countries	Switzerland, Singapore, United States
Upper-middle-income countries	Malaysia, China, Costa Rica
Lower-middle-income countries	Ukraine, Philippines, Mongolia
Low-income countries	Gambia, Rwanda, Uganda

Income Groups

The association between performance in the GTCI 2021 and income is also evident at the pillar level (Figure A4). In each pillar, the average of a higher-income group outperforms that of a lower-income group. Above all, high-income countries have a significant advantage over the other income groups in all six pillars, and the gap between the average score of high-income countries and upper-middle-income countries ranges from 14.6 (Vocational and Technical Skills) to 22.0 (Retain).

The difference in scores among the other income groups is not as large across the six pillars. That said, the average score between income groups differs by 10 points or more in most cases. The pillar with the largest gap is Retain, where the difference in average score between upper-middle-income countries and lower-middle-income countries is 15.1 and the gap between lower-middle-income countries and low-income countries is 12.0. The pillar with the smallest gap is Attract, where the difference in average score between upper-middle-income countries and lower-middle-income countries is 6.3 and the gap between lower-middle-income countries and low-income countries is 3.7.

One aspect of talent competitiveness highlighted in previous years is the complementarity across its various dimensions. That is, the six pillars—albeit measuring distinct facets of talent competitiveness—mutually reinforce (or mutually undermine, as the case may be) one another. This can be seen in how often the most talent-competitive countries in each income group are also among the top performers in several pillars (Table A3a–A3d on pages 31–32). For instance, the countries that are best in class in their respective income groups—Singapore, Malaysia, Ukraine, and Gambia—are in the top 3 in at least three of the six pillars. This is to be expected insofar as the calculation of the GTCI is based on average pillar scores, but it also suggests the degree to which synergies occur across pillars.

As for country-level performances in each income group, the previous section analysed in detail the top 15 countries, all of which are high-income countries. At the other end of the scale, one finds only four high-income countries outside the top 50: **Uruguay** (51st), **Croatia** (52nd), **Kuwait** (62nd), and **Trinidad and Tobago** (64th). Uruguay and Kuwait do relatively better in the Input-related pillars (enabling, attracting, growing, and retaining talent) than in the Output-related ones, whereas the opposite seems to be the case with respect to Croatia. As for Trinidad and Tobago, it has a relative strength in the Retain (44th) and Vocational and Technical Skills (41st) pillars, while most scope for improvement is in the Enable (92nd) and Grow (96th) pillars.

The leading upper-middle-income country in the GTCI 2021—**Malaysia** (34th)—features in the top quartile in five of the six pillars. Its best performance relates to Vocational and Technical Skills (24th), primarily because of its impressive ability to match labour market demand and workforce supply (11th in Employability). The country’s strongest Input-related pillars are Enable (27th) and Attract (28th). In the former case, it enjoys a favourable Market Landscape and Business and Labour Landscape (both 26th), but more needs to be done to improve the Regulatory Landscape (41st). In the latter case, a high degree of External Openness (19th)—especially towards overseas business—is offset by lower Internal Openness (63rd), where encouraging greater tolerance towards minorities and immigrants is a priority. Malaysia’s weakest pillar relates to retaining (51st) talent, where improved access to the pension system and health professionals would raise the levels of Sustainability (59th) and Lifestyle (56th). **Costa Rica** (39th) drops one position within its income group and, hence, is the third-best-performing upper-middle-income country in the GTCI 2021. Its strengths clearly lie in the Input-related pillars, especially with respect to attracting (25th) talent, whose two dimensions—External Openness (24th)

Figure A4
Average pillar scores, by income group



Note: The figure shows the average scores for each pillar of all countries within each group. GK Skills = Global Knowledge Skills; VT Skills = Vocational and Technical Skills.

Table A3a

Best performers by income group: High-income countries (47 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Switzerland (1)	Switzerland (1)	Luxembourg (1)	United States (1)	Switzerland (1)	Switzerland (1)	Iceland (1)
Singapore (2)	Singapore (2)	Singapore (2)	Singapore (2)	Norway (2)	Finland (2)	United States (2)
United States (3)	Denmark (3)	New Zealand (3)	Switzerland (3)	Denmark (3)	United States (3)	Singapore (3)
Denmark (4)	Sweden (4)	Switzerland (4)	Netherlands (4)	Finland (4)	Singapore (4)	United Kingdom (4)
Sweden (5)	Netherlands (5)	Australia (5)	Sweden (5)	Sweden (5)	Germany (5)	Switzerland (5)
Netherlands (6)	Finland (6)	Canada (6)	United Kingdom (6)	Luxembourg (6)	Norway (6)	Sweden (6)
Finland (7)	Norway (7)	UAE (7)	Canada (7)	Austria (7)	Iceland (7)	Ireland (7)
Luxembourg (8)	Japan (8)	Ireland (8)	Australia (8)	Netherlands (8)	Denmark (8)	Luxembourg (8)
Norway (9)	Germany (9)	Sweden (9)	Denmark (9)	United Kingdom (9)	Israel (9)	Australia (9)
Iceland (10)	United States (10)	Qatar (10)	Finland (10)	Germany (10)	Austria (10)	Denmark (10)

Note: Numbers in parentheses are global ranks in the associated dimension.

and Internal Openness (23rd)—are the country's highest-ranked sub-pillars. Costa Rica also does relatively well in the three pillars related to Enable (40th), Grow (41st), and Retain (38th), with solid performances in all associated sub-pillars. As for the two Output-related pillars, a good ability to match job skills to the needs of the economy (30th in Employability) boosts Vocational and Technical Skills (55th); but this is cancelled out by weak Mid-Level Skills (72nd), whereas sub-par performances in Talent Impact (53rd) and, above all, High-Level Skills (70th) render Global Knowledge Skills (59th) the country's lowest-ranked pillar.

China (37th) has overtaken Costa Rica this year and is consequently the second-best performer in the middle-income-country group. It is also the most talent-competitive BRICS (Brazil, Russia, India, China, and South Africa) member. The

country makes it into the top quartile in two pillars—Grow (21st) and Global Knowledge Skills (23rd)—mainly as a result of its strong Lifelong Learning (3rd) and its highly innovative and entrepreneurial economy (15th in Talent Impact). A conducive Market Landscape (19th) contributes to China's ability to Enable (39th) talent, while its good level of Employability (12th) has a positive impact on its pool of Vocational and Technical Skills (50th). The greatest scope for improvement relates to the country's ability to Attract (78th) and Retain (70th) talent, especially with respect to External Openness (87th) towards foreigners and issues related to Lifestyle (102nd).

Russia (45th) is the second-highest-ranking BRICS member in the GTCI 2021, whose strong pool of High-Level Skills (11th) contributes to a position in the top quartile when it comes to

Table A3b

Best performers by income group: Upper-middle-income countries (36 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Malaysia (34)	Malaysia (27)	Costa Rica (25)	China (21)	Mauritius (37)	Azerbaijan (18)	China (23)
China (37)	China (39)	Malaysia (28)	Malaysia (33)	Costa Rica (38)	Montenegro (23)	Malaysia (32)
Costa Rica (39)	Costa Rica (40)	Jamaica (30)	Costa Rica (41)	Belarus (39)	Malaysia (24)	Russia (33)
Russia (45)	Jordan (45)	Panama (33)	Turkey (42)	Argentina (40)	Armenia (36)	Kazakhstan (34)
Bulgaria (46)	Mauritius (47)	Namibia (38)	Russia (43)	Romania (42)	Serbia (38)	Bulgaria (40)
Montenegro (49)	Bulgaria (48)	Azerbaijan (39)	Colombia (45)	Bulgaria (43)	Georgia (39)	Lebanon (46)
Belarus (50)	Georgia (49)	Botswana (45)	Mexico (47)	Georgia (46)	Bulgaria (44)	Montenegro (47)
Georgia (53)	Azerbaijan (51)	Dominican Rep. (47)	Brazil (49)	Mexico (49)	Russia (46)	Belarus (48)
Azerbaijan (54)	Thailand (53)	Mauritius (49)	Peru (50)	Armenia (50)	Romania (49)	Romania (50)
Romania (55)	Jamaica (54)	Jordan (51)	Serbia (53)	Malaysia (51)	China (50)	Georgia (53)

Note: Numbers in parentheses are global ranks in the associated dimension.

Table A3c

Best performers by income group: Lower-middle-income countries (36 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Ukraine (61)	Indonesia (56)	Philippines (55)	Philippines (48)	Ukraine (59)	Tajikistan (42)	Ukraine (39)
Philippines (70)	Viet Nam (65)	Kyrgyzstan (59)	Ukraine (57)	Cabo Verde (67)	Egypt (56)	Mongolia (49)
Mongolia (77)	India (69)	Senegal (61)	Viet Nam (65)	Mongolia (69)	Sri Lanka (58)	Philippines (51)
Indonesia (80)	Ghana (70)	Zambia (62)	India (71)	Tunisia (72)	Kyrgyzstan (67)	Tunisia (52)
Tunisia (81)	Cabo Verde (72)	Côte d'Ivoire (69)	Bolivia (74)	Kyrgyzstan (75)	Ukraine (69)	India (58)
Viet Nam (82)	Philippines (79)	Ghana (71)	Indonesia (75)	Tajikistan (78)	Indonesia (73)	Egypt (65)
Egypt (84)	Morocco (80)	Cabo Verde (74)	Iran (77)	Bolivia (82)	Kenya (74)	Iran (68)
India (88)	Ukraine (85)	Ukraine (80)	Kenya (80)	Sri Lanka (85)	Ghana (75)	Viet Nam (77)
Kyrgyzstan (89)	Senegal (86)	Mongolia (81)	Morocco (83)	Indonesia (86)	Viet Nam (80)	Lao PDR (84)
Cabo Verde (90)	Tunisia (87)	Kenya (82)	Tunisia (84)	Algeria (89)	Zambia (81)	Morocco (85)

Note: Numbers in parentheses are global ranks in the associated dimension.

Global Knowledge Skills (33rd). The country also enjoys a high level of Formal Education (24th), but its ability to Grow (43rd) talent is hampered by lower Access to Growth Opportunities (58th) and insufficient possibilities in Lifelong Learning (64th). Russia's pool of Vocational and Technical Skills (46th) can be described as solid, thanks to robust Employability (44th) and Mid-Level Skills (49th). Its weakest pillars, meanwhile, relate to retaining (62nd), enabling (66th), and attracting (66th) talent. With respect to Retain, the country's level of Sustainability (49th) is offset by a Lifestyle (77th) that would improve with greater personal safety. As for Enable and Attract, there is mainly a need to, respectively, increase External Openness (81st) towards foreign business and improve the Regulatory Landscape (95th).

South Africa (67th) is just inside the upper half of this year's rankings in no small part thanks to the Talent Impact (43rd) of its entrepreneurial economy on Global Knowledge Skills (54th). The country also finds itself in the upper half in dimension related to attracting (56th) and enabling (58th) talent, where the former pillar is boosted by the External Openness (50th) towards international business and the latter pillar benefits from the encouraging Business and Labour Landscape (50th), especially with respect to the technology adoption of firms. The sub-pillar where South Africa lags behind the most is Employability (100th), but the country's pool of Vocational and Technical Skills (72nd) is boosted by solid Mid-Level Skills (55th). At the pillar level, a case can be made that most efforts should be focused on retaining (87th) talent, where a better environment would improve

Table A3d

Best performers by income group: Low-income countries (14 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Gambia (99)	Rwanda (68)	Gambia (26)	Uganda (98)	Rwanda (101)	Gambia (97)	Burkina Faso (98)
Rwanda (101)	Gambia (94)	Rwanda (75)	Guinea (103)	Gambia (105)	Rwanda (112)	Rwanda (106)
Uganda (117)	Guinea (107)	Uganda (77)	Burundi (115)	Mozambique (115)	Yemen (114)	Malawi (110)
Malawi (122)	Uganda (110)	Burkina Faso (98)	Malawi (117)	Malawi (117)	DR Congo (119)	Ethiopia (112)
Burkina Faso (124)	Malawi (114)	Madagascar (100)	Rwanda (119)	Mali (118)	Burundi (121)	Yemen (113)
Guinea (125)	Mali (117)	Burundi (108)	Gambia (122)	Burkina Faso (122)	Uganda (122)	Uganda (120)
Madagascar (126)	Madagascar (123)	Guinea (109)	Ethiopia (124)	Ethiopia (124)	Malawi (125)	Mozambique (124)
Mali (127)	Burkina Faso (124)	Malawi (114)	Mali (126)	Uganda (125)	Madagascar (126)	Madagascar (126)
Ethiopia (128)	Mozambique (126)	Mozambique (115)	Madagascar (127)	Madagascar (128)	Ethiopia (127)	Gambia (129)
Burundi (129)	Ethiopia (128)	Mali (124)	Burkina Faso (129)	Yemen (129)	Mali (129)	Mali (130)

Note: Numbers in parentheses are global ranks in the associated dimension.

Sustainability (73rd) and advancements in health and safety would benefit the Lifestyle (92nd).

Brazil (75th) has a clear strength in growing (49th) talent, where training in firms and the use of social media contribute to Lifelong Learning (43rd) and Access to Growth Opportunities (55th), respectively. Its level of Sustainability (53rd) is a contributing factor to the country's ability to Retain (66th) talent, the performance of which is, however, dragged down by the negative impact of personal safety on Lifestyle (81st). Brazil also has a favourable Market Landscape (55th), but its sub-optimal Regulatory Landscape (83rd) and Business and Labour Landscape (100th) result in a mediocre ability to Enable (77th) talent. The pillar related to Vocational and Technical Skills (82nd) similarly include contrasting performances in its sub-pillars. Whereas Brazil has a fair level of Mid-Level Skills (61st), it has a poor ability to match the skills of people with the needs of the economy (108th in Employability). However, the dimension that checks Brazil's overall talent competitiveness the most is its poor ability to Attract (106th) talent, a weakness that stems primarily from a low level of External Openness (122nd) towards foreigners.

The lowest-ranked BRICS country in the GTCI 2021 is **India** (88th), although it outperforms the average of its associated income group (lower-middle-income countries). The country makes it into the top quartile in one pillar—Global Knowledge Skills (58th)—which can be partly attributed to the role of entrepreneurial activity in boosting Talent Impact (47th). It also has a relatively high level of Lifelong Learning (47th) and strong universities that support its Formal Education (59th), but the ability to Grow (71st) talent is held back by a low Access to Growth Opportunities (108th). A sub-optimal Lifestyle (97th) and weak Mid-Level Skills (107th) dampen the pillars related to, respectively, Retain (95th) and Vocational and Technical Skills (99th). However, India's greatest challenge is to Attract (121st) talent. Further efforts should be made to raise External Openness (102nd) by encouraging a greater inflow of foreign talent and to increase Internal Openness (123rd) through greater tolerance towards minorities and better gender equality.

Ukraine (61st) is the best-performing lower-middle-income country and the only economy of its income group that is positioned in the upper half of the GTCI 2021 rankings. This is primarily due to the positive impact of High-Level Skills (24th) on its pool of Global Knowledge Skills (39th). The country's Formal Education (46th) boosts its ability to Grow (57th) talent, which is hampered by weaker Lifelong Learning (60th) and lower Access to Growth Opportunities (72nd). Ukraine has a solid Business and Labour Landscape (52nd), but in order to strengthen the enabling (85th) environment for talent further, there is a need to encourage greater competition in the Market Landscape (75th) and, above all, take steps to improve the Regulatory Landscape (109th)—its lowest-ranked pillar. **The Philippines** (70th) is particularly impressive when it comes to Lifelong Learning (26th), which, coupled with decent Access to Growth Opportunities (41st), renders Grow (48th) its highest-ranked pillar notwithstanding its disappointing showing in Formal Education (99th). At the sub-pillar level, the country also makes it into the top quartile with respect to Internal Openness (31st), but its low External

Openness (79th) towards foreigners reduces its ability to Attract (55th) talent. The greatest challenges facing the Philippines, though, are to improve its pool of Vocational and Technical Skills (90th) and its capacity to Retain (97th) talent. In the former pillar, a good ability to match labour market demands with workforce (40th in Employability) stands in stark contrast to inferior Mid-Level Skills (117th). In the latter pillar, more efforts are needed to promote Sustainability (96th) and raise Lifestyle (93rd), especially through measures that improve personal safety and health.

Mongolia (77th) makes it into the upper half of the GTCI 2021 in one pillar: Global Knowledge Skills (49th). This stems from strong performances in the two related sub-pillars—High-Level Skills (43rd) and Talent Impact (46th)—although they would both be even higher with greater encouragement of science. Mongolia also does relatively well in retaining (69th) talent, primarily by virtue of its Lifestyle (52nd). Its highest-ranked sub-pillar is Internal Openness (25th), but the ability to Attract (81st) talent is hampered by the country's worst-ranked sub-pillar: External Openness (123rd). Most scope for improvement can be found in the pillars related to Enable (90th) and Vocational and Technical Skills (98th), where efforts should mainly focus on promoting a more competitive environment for the Market Landscape (110th) and addressing skills shortages that stymie Employability (114th).

The best performer of the low-income-country group in the GTCI 2021 is **Gambia** (99th), which is the result of its impressive ability to Attract (26th) talent, primarily because of its External Openness (20th) towards international business and talent but also because of how its high tolerance of minorities and immigrants affects Internal Openness (52nd). Relatively high Employability (70th) contributes to the country's pool of Vocational and Technical Skills (97th), but secondary education needs to be expanded to raise Mid-Level Skills (104th). The greatest challenges facing Gambia in terms of talent competitiveness relate to growing (122nd) human capital and strengthening Global Knowledge Skills (129th). In the Grow pillar, there is particular scope to improve Access to Growth Opportunities (122nd) and Formal Education (125th). In Global Knowledge Skills, Gambia primarily needs to raise its Talent Impact (132nd). **Rwanda** (101st) is ranked in the third quartile in two pillars: Enable (68th) and Attract (75th). The country's conducive Regulatory Landscape (53rd) and Business and Labour Landscape (55th) are particularly noteworthy in the former case, whereas its External Openness (55th)—especially when it comes to foreign talent—stands out in the latter pillar. Rwanda also has good Employability (67th), but its position in the Vocational and Technical Skills (112th) pillar is held back by a lack of Mid-Level Skills (122nd). The main priority should be to strengthen the ability to Grow (119th) talent, where the country finds itself in the bottom quartile in all three sub-pillars (Formal Education, 119th; Lifelong Learning, 102nd; and Access to Growth Opportunities, 120th). The greatest asset of **Uganda** (117th)—the third-highest-ranking low-income country—is its ability to Attract (77th) talent, which is thanks to its External Openness (45th) towards foreign business and human capital. It also has an encouraging level of Lifelong Learning (58th) and, up to a point, Formal Education (84th), although there is a need to expand its Access to Growth Opportunities (119th) in

order to boost its ability to Grow (98th) talent. Uganda finds itself in the bottom quartile in the four remaining pillars and faces a particular challenge to increase Vocational and Technical Skills (122nd) by raising Mid-Level Skills (124th) through expanded secondary education and to improve its capacity to Retain (125th) talent by addressing weakness in terms of both Sustainability (121st) and Lifestyle (128th).

Regional Groups

It was seen above that Northern America and Europe dominate the top of GTCI 2021 rankings. The same can be said about these two regions at the pillar level as well, as Northern America is unquestionably the region with the highest average in each pillar and Europe has a clear advantage over the other regions (Figure A5). That Northern America outperforms, by far, all other regions is hardly surprising given that it consists of only Canada and the United States, both of which are among the top 15 in the rankings. Nor is it surprising that Europe has higher averages than regions other than Northern America in view of the larger share of high-income countries there (72%) and the strong, positive correlation between GTCI score and income level.

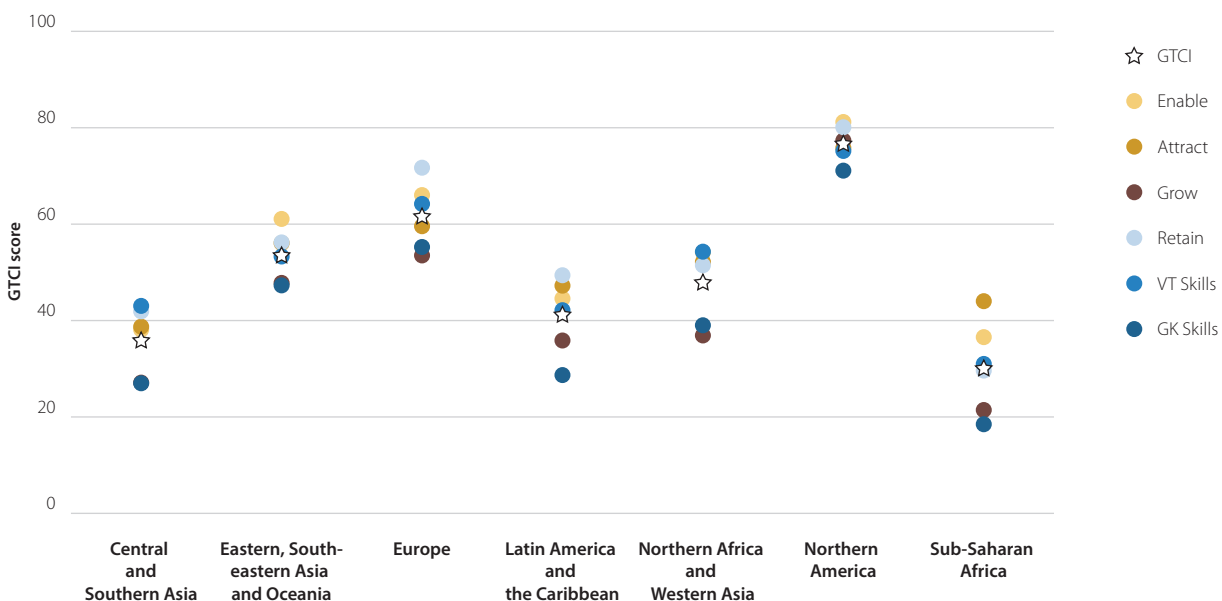
As for the other regions, relative pillar performances tend to be in line with overall GTCI rankings. Hence, Eastern, Southeastern Asia and Oceania is usually the third-best-performing region in the six pillars and followed, in descending order, by Northern Africa and Western Asia, Latin America and the Caribbean, Central and Southern Asia, and Sub-Saharan Africa. There are, however, a few exceptions in the pillars related to Attract and to Vocational and Technical Skills. In the former case, Sub-Saharan Africa has a higher average GTCI score than Central and Southern Asia—the result of greater External Openness and Internal Openness. In the latter case, Northern Africa and Western Asia

has a better regional average than Eastern, Southeastern Asia and Oceania because of its superior Mid-Level Skills, while the region comprising Central and Southern Asia outperforms that of Latin America and the Caribbean because it generally has a higher level of Employability.

Table A4 lists the top 10 performers by regional group. The remainder of this section looks at each in turn, with a focus on the top-ranked countries in each group.

Central and Southern Asia (9 countries): Eight countries in this region are classified as belonging to the lower-middle-income group, whereas one belongs to the upper-middle-income category. As might be expected, it is the region's sole upper-middle-income country that is its best performer: **Kazakhstan** (60th). More than anything, it has a strength in Global Knowledge Skills (34th), where the high share of a tertiary-educated population results in an impressive pool of High-Level Skills (8th), although more needs to be done to translate this into greater Talent Impact (59th). Going forward, Kazakhstan primarily needs to strengthen its pool of Vocational and Technical Skills (89th), including by addressing skills shortages (98th in Employability). India (88th) is the region's second-best performer, which, as already discussed in the previous section, is mainly due to how its Global Knowledge Skills (58th) benefits from a high Talent Impact (47th). **Kyrgyzstan** (89th) is positioned just below India and consequently has the third-highest score in the region. Of particular note is the country's strong pool of Mid-Level Skills (22nd) and high degree of Internal Openness (27th), but the associated pillars—Vocational and Technical Skills (67th) and Attract (59th)—are held back by a discouraging level of Employability (118th) and the low External Openness (97th) towards foreign business. The country's greatest challenges relate to enabling (105th) and growing (108th) talent, where the main priority

Figure A5
Average pillar scores, by regional group



Note: The figure shows the average scores for each pillar of all countries within each group. GK Skills = Global Knowledge Skills; VT Skills = Vocational and Technical Skills.

should be on strengthening the Regulatory Landscape (106th) and the Market Landscape (111th) in the former pillar and improving the Formal Education (121st) in the latter.

Eastern, Southeastern Asia and Oceania (15 countries):

This is one of the more heterogeneous regions in the GTCI, with 6 high-income countries, 3 upper-middle-income countries, and 6 lower-middle-income countries. Three of the countries—Singapore (2nd), Australia (11th), and New Zealand (15th)—feature in the top 15 and have therefore been discussed above. They are followed by **Japan** (20th), whose impressive Market Landscape (4th) and Business and Labour Landscape (8th) give it an edge in enabling (8th) talent. It also has world-class Formal Education (3rd) and an encouraging level of Lifelong Learning (16th), but its ability to Grow (17th) talent is slightly hampered by a weaker Access to Growth Opportunities (34th). A strong social safety net and excellent personal safety contribute to the high levels Sustainability and Lifestyle (19th in both) that play a role in retaining (17th) talent. As in previous years, Japan's weakest pillar is Attract (42nd), and further efforts need to be made to increase External Openness (36th) towards foreign talent and boost Internal Openness (47th) by addressing gender inequality. Relatively low gender equality also remains one of the main challenges facing the **Republic of Korea (South Korea, 27th)**, which is ranked 75th in Internal Openness and 73rd in Attract—the country's weakest sub-pillar and pillar, respectively. Its strongest pillar, by contrast, is Global Knowledge Skills (22nd), which stems primarily from the Talent Impact (18th) of its innovative economy. Its highest-ranked sub-pillar is Market Landscape (10th), which benefits above all from a conducive business climate and high R&D spending. The associated pillar—Enable (25th)—is, however, held back by a lacklustre Business and Labour Landscape (43rd).

Europe (39 countries): The region with the most countries in the GTCI, Europe includes 28 high-income countries, 10 upper-middle-income countries, and 1 lower-middle-income country. Ten of these feature in the top 15 and have therefore been discussed above. An additional four are just outside the top 15. **Ireland** (16th) makes it into the top quartile in all six pillars. Its most impressive performances relate to its Global Knowledge Skills (7th) and its ability to Attract (8th) talent, with strong showings in all associated sub-pillars. Ireland's weakest sub-pillar is Mid-Level Skills (45th)—the only one where it does not feature in the top quartile—although its pool of Vocational and Technical Skills (19th) is boosted by how well it matches labour force demand and workforce supply (14th in Employability). **Belgium** (17th) also finds itself in the top quartile in all six pillars. Of particular note is its superior Lifestyle (4th), which boosts its ability to Retain (13th) talent. It also makes it into the top 10 in the sub-pillars related to Market Landscape and Formal Education (9th in both), which has a positive impact on the country's enabling (17th) environment and its ability to Grow (15th) talent. The lowest-ranked pillars are Attract and Global Knowledge Skills (20th in both), which would benefit from wider social inclusion leading to higher Internal Openness (26th) in the former case and from greater entrepreneurship raising Talent Impact (21st) in the latter. **Austria** (18th) makes it into the top 10 in two pillars: Retain (7th) and Vocational and Technical Skills (10th). In the

former case, it enjoys excellent Sustainability and Lifestyle (8th in both); in the latter case, it has a world-class pool of Mid-Level Skills (4th) that is offset by weaker Employability (26th). The country's weakest pillar is Global Knowledge Skills (29th), which also includes its two lowest sub-pillars—High-Level Skills (33rd) and Talent Impact (29th)—that would increase with a higher share of senior official and managers and greater entrepreneurship, respectively. Both **France** (19th) and neighbouring **Italy** (35th) are among the global leaders when it comes to Lifestyle (3rd and 1st, respectively), with the consequence that their best pillar is Retain (France: 12th; Italy: 25th). The two countries also have their weakest pillar in common: Attract (France: 34th; Italy: 67th), where they both need to address issues related to Internal Openness (France: 61st; Italy: 77th), including greater tolerance of minorities and encouraging more leadership opportunities for women.

Latin America and the Caribbean (20 countries): This region consists primarily of upper-middle-income countries: 13 in total. The 7 remaining countries consists of 3 high-income countries and 4 lower-middle-income countries. For the first time, a country from the region makes it into the top quartile in the GTCI rankings—**Chile** (33rd). This can partly be attributed to the country's solid all-round performances, ranging from 29th in the Retain pillar to 44th in the Attract pillar. Its strongest sub-pillar is Lifelong Learning (24th), especially through training in firms, which boosts its ability to Grow (30th) talent. It also has a conducive Regulatory Landscape (27th), although the performance in the Enable (36th) pillar is tempered by Chile's weakest sub-pillar: Market Landscape (58th). The most scope for improvement, however, relates to attracting (44th) talent, where greater External Openness (46th) towards foreign people and increased Internal Openness (41st) through greater gender equality would boost pillar performance. The performances of both Costa Rica (39th)—the second-strongest performer in the region—and Brazil (75th)—one of the region's economic powerhouses—were discussed above. The other economic giant of the region—**Mexico** (65th)—makes it into the upper half of the rankings this year. Of particular note is its ability to Grow (47th) and Retain (49th) talent, which can primarily be attributed to its good opportunities for Lifelong Learning (42nd), especially in firms, and the country's level of Sustainability (44th). The greatest challenges facing Mexico relate to attracting (93rd) talent, mainly as a result of low External Openness (85th) towards foreign talent and weak Internal Openness (102nd) on issues of social inclusion and gender equality.

Northern Africa and Western Asia (19 countries): This is the only region that includes countries from all income groups: 8 high-income economies, 6 upper-middle-income economies, 4 lower-middle-income economies, and 1 low-income economy. The best performer in the region is **Israel** (21st), which makes it into the top quartile in all six pillars. Its most impressive showings are in the Output-related pillars—Vocational and Technical Skills (9th) and Global Knowledge Skills (12)—where its highly educated and skilled workforce contribute to excellent Employability (9th) and High-Level Skills (12th). Israel also has a favourable Business and Labour Landscape (11th) and Market Landscape (13th) that foster the enabling (20th) of talent, which is dragged

Table A4
Ten best performers by regional group

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Central and Southern Asia (9 countries)						
Kazakhstan (60)	India (69)	Kyrgyzstan (59)	Kazakhstan (60)	Kazakhstan (54)	Tajikistan (42)	Kazakhstan (34)
India (88)	Kazakhstan (78)	Kazakhstan (60)	India (71)	Kyrgyzstan (75)	Sri Lanka (58)	India (58)
Kyrgyzstan (89)	Sri Lanka (93)	Tajikistan (88)	Iran (77)	Tajikistan (78)	Kyrgyzstan (67)	Iran (68)
Sri Lanka (93)	Kyrgyzstan (105)	Sri Lanka (116)	Pakistan (86)	Sri Lanka (85)	Kazakhstan (89)	Pakistan (95)
Tajikistan (97)	Pakistan (109)	Pakistan (120)	Sri Lanka (102)	Nepal (90)	Iran (91)	Sri Lanka (96)
Iran (100)	Tajikistan (115)	India (121)	Kyrgyzstan (108)	India (95)	India (99)	Kyrgyzstan (99)
Pakistan (107)	Iran (116)	Nepal (126)	Nepal (112)	Iran (104)	Nepal (102)	Tajikistan (115)
Nepal (113)	Bangladesh (119)	Bangladesh (127)	Bangladesh (123)	Pakistan (111)	Pakistan (108)	Nepal (121)
Bangladesh (123)	Nepal (125)	Iran (133)	Tajikistan (125)	Bangladesh (114)	Bangladesh (116)	Bangladesh (128)
Eastern, Southeastern Asia and Oceania (15 countries)						
Singapore (2)	Singapore (2)	Singapore (2)	Singapore (2)	Australia (11)	Singapore (4)	Singapore (3)
Australia (11)	Japan (8)	New Zealand (3)	Australia (8)	New Zealand (14)	Japan (22)	Australia (9)
New Zealand (15)	New Zealand (13)	Australia (5)	New Zealand (14)	Japan (17)	Malaysia (24)	New Zealand (18)
Japan (20)	Australia (19)	Malaysia (28)	Japan (17)	South Korea (24)	Australia (26)	South Korea (22)
South Korea (27)	South Korea (25)	Japan (42)	China (21)	Singapore (35)	New Zealand (28)	China (23)
Malaysia (34)	Malaysia (27)	Brunei Darussalam (48)	South Korea (29)	Brunei Darussalam (47)	South Korea (35)	Japan (27)
China (37)	China (39)	Philippines (55)	Malaysia (33)	Malaysia (51)	Brunei Darussalam (37)	Malaysia (32)
Brunei Darussalam (47)	Brunei Darussalam (52)	Thailand (65)	Philippines (48)	Mongolia (69)	China (50)	Mongolia (49)
Thailand (68)	Thailand (53)	South Korea (73)	Brunei Darussalam (56)	China (70)	Indonesia (73)	Philippines (51)
Philippines (70)	Indonesia (56)	China (78)	Viet Nam (65)	Thailand (74)	Viet Nam (80)	Brunei Darussalam (60)
Europe (39 countries)						
Switzerland (1)	Switzerland (1)	Luxembourg (1)	Switzerland (3)	Switzerland (1)	Switzerland (1)	Iceland (1)
Denmark (4)	Denmark (3)	Switzerland (4)	Netherlands (4)	Norway (2)	Finland (2)	United Kingdom (4)
Sweden (5)	Sweden (4)	Ireland (8)	Sweden (5)	Denmark (3)	Germany (5)	Switzerland (5)
Netherlands (6)	Netherlands (5)	Sweden (9)	United Kingdom (6)	Finland (4)	Norway (6)	Sweden (6)
Finland (7)	Finland (6)	Denmark (11)	Denmark (9)	Sweden (5)	Iceland (7)	Ireland (7)
Luxembourg (8)	Norway (7)	Netherlands (13)	Finland (10)	Luxembourg (6)	Denmark (8)	Luxembourg (8)
Norway (9)	Germany (9)	Finland (14)	Norway (11)	Austria (7)	Austria (10)	Denmark (10)
Iceland (10)	Luxembourg (11)	United Kingdom (15)	Austria (12)	Netherlands (8)	Netherlands (11)	Estonia (11)
United Kingdom (12)	Austria (12)	Iceland (16)	Germany (13)	United Kingdom (9)	Sweden (12)	Netherlands (14)
Germany (14)	Iceland (14)	Malta (17)	Belgium (15)	Germany (10)	Czech Republic (14)	Norway (15)

(continued on next page)

Table A4 (continued)

Ten best performers by regional group

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
Latin America and the Caribbean (20 countries)						
Chile (33)	Chile (36)	Costa Rica (25)	Chile (30)	Chile (29)	Chile (31)	Chile (38)
Costa Rica (39)	Costa Rica (40)	Jamaica (30)	Costa Rica (41)	Uruguay (32)	Trinidad and Tobago (41)	Costa Rica (59)
Uruguay (51)	Uruguay (44)	Panama (33)	Colombia (45)	Costa Rica (38)	Costa Rica (55)	Mexico (63)
Argentina (59)	Jamaica (54)	Uruguay (37)	Mexico (47)	Argentina (40)	Argentina (62)	Argentina (69)
Trinidad and Tobago (64)	Mexico (67)	Chile (44)	Brazil (49)	Trinidad and Tobago (44)	Colombia (70)	Uruguay (71)
Mexico (65)	Dominican Rep. (71)	Dominican Rep. (47)	Peru (50)	Mexico (49)	Dominican Rep. (77)	Jamaica (72)
Jamaica (69)	Colombia (73)	Trinidad and Tobago (50)	Uruguay (54)	Ecuador (64)	Mexico (78)	Colombia (73)
Colombia (72)	Panama (76)	Paraguay (58)	Argentina (55)	Brazil (66)	Brazil (82)	Brazil (75)
Brazil (75)	Brazil (77)	Argentina (64)	Ecuador (61)	Panama (68)	Ecuador (83)	Panama (80)
Panama (78)	Argentina (82)	Peru (85)	Jamaica (68)	Paraguay (76)	Jamaica (92)	Trinidad and Tobago (81)
Northern Africa and Western Asia (19 countries)						
Israel (21)	UAE (18)	UAE (7)	Israel (27)	Israel (21)	Israel (9)	Israel (12)
UAE (25)	Israel (20)	Qatar (10)	UAE (28)	Cyprus (30)	Azerbaijan (18)	Cyprus (19)
Cyprus (30)	Qatar (24)	Bahrain (21)	Cyprus (34)	Georgia (46)	Qatar (25)	UAE (36)
Qatar (36)	Saudi Arabia (34)	Oman (27)	Qatar (36)	Armenia (50)	Saudi Arabia (27)	Lebanon (46)
Saudi Arabia (41)	Oman (37)	Israel (31)	Saudi Arabia (39)	Oman (52)	Cyprus (34)	Tunisia (52)
Bahrain (44)	Bahrain (38)	Saudi Arabia (32)	Turkey (42)	UAE (55)	Armenia (36)	Georgia (53)
Oman (48)	Cyprus (43)	Cyprus (35)	Bahrain (52)	Azerbaijan (56)	Georgia (39)	Armenia (56)
Georgia (53)	Jordan (45)	Azerbaijan (39)	Oman (58)	Jordan (57)	UAE (40)	Turkey (57)
Azerbaijan (54)	Georgia (49)	Kuwait (41)	Kuwait (59)	Kuwait (58)	Oman (52)	Qatar (62)
Armenia (57)	Kuwait (50)	Jordan (51)	Lebanon (69)	Bahrain (60)	Bahrain (54)	Egypt (65)
Northern America (2 countries)						
United States (3)	United States (10)	Canada (6)	United States (1)	Canada (16)	United States (3)	United States (2)
Canada (13)	Canada (16)	United States (12)	Canada (7)	United States (20)	Canada (13)	Canada (13)
Sub-Saharan Africa (30 countries)						
Mauritius (56)	Mauritius (47)	Gambia (26)	Botswana (67)	Mauritius (37)	Mauritius (64)	South Africa (54)
Botswana (66)	South Africa (58)	Namibia (38)	South Africa (72)	Botswana (61)	Namibia (71)	Botswana (64)
South Africa (67)	Botswana (62)	Botswana (45)	Mauritius (79)	Cabo Verde (67)	South Africa (72)	Mauritius (74)
Namibia (74)	Rwanda (68)	Mauritius (49)	Kenya (80)	Namibia (80)	Kenya (74)	Namibia (86)
Cabo Verde (90)	Ghana (70)	South Africa (56)	Ghana (92)	South Africa (87)	Ghana (75)	Kenya (91)
Ghana (94)	Cabo Verde (72)	Senegal (61)	Namibia (94)	Senegal (100)	Zambia (81)	Burkina Faso (98)
Kenya (96)	Namibia (74)	Zambia (62)	Nigeria (97)	Rwanda (101)	Cabo Verde (85)	Zambia (100)
Gambia (99)	Senegal (86)	Côte d'Ivoire (69)	Uganda (98)	Lesotho (103)	Botswana (86)	Zimbabwe (101)
Rwanda (101)	Kenya (89)	Ghana (71)	Guinea (103)	Gambia (105)	Nigeria (88)	Cabo Verde (105)
Senegal (103)	Gambia (94)	Cabo Verde (74)	Tanzania (106)	Ghana (106)	Zimbabwe (94)	Rwanda (106)

Note: Numbers in parentheses are global ranks in the associated dimension.

down slightly by the Regulatory Landscape (37th). The country's weakest pillar is Attract (31st), where greater social inclusion would benefit Internal Openness (65th). By contrast, the key asset of **the United Arab Emirates** (UAE, 25th) is its ability to Attract (7th) talent, primarily thanks to its excellent External Openness (2nd). It also boasts a top 10 position in the sub-pillar related to Access to Growth Opportunities (8th) and has good possibilities for Lifelong Learning (22nd), but its ability to Grow (28th) talent is tempered by a weaker level of Formal Education (74th). The third pillar where the UAE makes it into the top quartile is Enable (18th), which can be attributed partly to the role of competition on its Market Landscape (12th), its solid Business and Labour Landscape (17th), and its Regulatory Landscape (22nd). Its most lacklustre performance relates to Retain (55th), where the priority should be to improve Lifestyle (78th) indicators, including on safety and health. The third country in the region that is ranked in the top quartile is **Cyprus** (30th), which enjoys a strong pool of Global Knowledge Skills (19th) that is mainly thanks to the role entrepreneurship plays on its Talent Impact (8th). More discouraging is the country's enabling (43rd) environment, where its greatest challenges include raising R&D spending to boost the Market Landscape (50th) and improving management practice for a better Business and Labour Landscape (47th).

Northern America (2 countries): Both Northern American economies—the United States (3rd) and Canada (13th)—feature in the top 15 high performers of this year's GTCI and have therefore been discussed in detail above. In terms of relative performance, the United States outperforms its northern neighbour in four of the six pillars, with Canada achieving higher scores in the dimensions related to attract and retaining talent.

Sub-Saharan Africa (30 countries): The region with the weakest performance on average is also the one with the largest number of low-income countries: 13 in total (the only other low-income country outside Sub-Saharan Africa is Yemen). Four of the countries in the region are classified in the upper-middle-income group, while another 13 are lower-middle-income countries. **Mauritius** (56th) remains the top performer in the

region. Above all, it has an advantage in retaining (37th) talent, mainly thanks to strong personal rights and safety that benefit the Lifestyle (34th) sub-pillar. It also has a high degree of Internal Openness (34th), especially towards immigrants, but its ability to Attract (49th) talent would increase with greater External Openness (54th) towards foreign business and people. The dimension with most scope for improvement is Grow (79th), especially as it relates to Lifelong Learning (93rd) and Formal Education (106th). **Botswana** (66th) is the second of three countries in the region that makes it into the upper half of the GTCI 2021 rankings. Its key asset relates to attracting (45th) talent, where its encouraging level of gender equality contributes to its high Internal Openness (30th). It also enjoys a solid Regulatory Landscape (40th), but its enabling (62nd) environment is hampered by a disappointing Market Landscape (91st) and Business and Labour Landscape (96th). The country's weakest pillar is Vocational and Technical Skills (86th), which would advance if secondary education were expanded (85th in Mid-Level Skills) and if improvements were made in matching job skills to the needs of the economy (85th in Employability). South Africa (67th) is positioned just below Botswana, also in the upper half of the rankings. As discussed above, its strengths relate to attracting (56th) and enabling (58th) talent, whereas more could be done to improve its ability to Retain (87th) talent.

ENDNOTES

- 1 Countries are grouped according to the World Bank Income Classifications. Economies are divided based on their 2020 gross national income (GNI) per capita, calculated using the World Bank Atlas method (see <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>). The groups are: low income; lower-middle income; upper-middle income; and high income. Regional groups are based on United Nations Regional Classifications: Central and Southern Asia; Eastern, Southeastern Asia and Oceania; Europe; Latin America and the Caribbean; Northern Africa and Western Asia; Northern America; and Sub-Saharan Africa.
- 2 When necessary for the analysis, Venezuela is compared against the group of upper-middle-income countries, which is the income group to which it belonged most recently.

CHAPTER 2

JRC Statistical Audit of the Global Talent Competitiveness Index 2021

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Individual skills and talents, more than capital, are the driving forces that guide human beings towards the future. From 2013 through 2020, the business school INSEAD advanced the Global Talent Competitiveness Index (GTCI): this year it is released by INSEAD and Portulans Institute. The index aims to summarise complex and versatile concepts related to human capital and talent competitiveness at the national scale worldwide. In so doing, it raises conceptual and practical challenges that are discussed in the GTCI 2021 report. This chapter focuses on the practical challenges related to the data quality and the methodological choices made in the grouping of 68 variables into 14 sub-pillars, six pillars, two sub-indices, and an overall index for 134 countries.

The GTCI 2021 has a very high statistical reliability (it has a Cronbach's alpha value of 0.97) and captures the single latent phenomenon underlying the six main dimensions of the GTCI conceptual framework. Country ranks are also robust to methodological choices related to the treatment of missing values, weighting, and aggregation rule (with a shift less than or equal to ± 2 positions with respect to the simulated median in 93% of

the countries). The added value of the GTCI lies in its ability to summarise different aspects of talent competitiveness in a more efficient and parsimonious manner than is possible with the variables and pillars taken separately. In fact, the overall ranking differs from any of the six pillar rankings by 10 positions or more in at least 32% of the countries included in this year's GTCI.

The European Commission's Competence Centre on Composite Indicators and Scoreboards at the Joint Research Centre (JRC) has been invited to assess the statistical properties of the GTCI each year since its first release in 2013. This audit represents the eighth analysis of the GTCI performed by the JRC. Overall, the JRC concluded that the GTCI 2021 framework is robust and reliable, with a statistically coherent and balanced multi-level structure. The analysis has been performed in order to ensure the transparency and reliability of the GTCI and thus to enable policymakers to derive more accurate and meaningful conclusions about human capital and national competitiveness, and potentially to guide their choices on priority setting and policy formulation.

As in the previous audits, the present JRC assessment of the 2021 edition of the GTCI focuses on two main issues: (1) the statistical coherence of the GTCI structure and (2) the impact of key modelling assumptions on the GTCI scores and ranks.¹ The JRC analysis complements the reported country rankings for the GTCI, and for the Input and Output sub-indices, with confidence intervals in order to better appreciate the robustness of these ranks to the computation methodology (in particular, the missing data estimation, weights, and aggregation formula). Furthermore, the JRC analysis includes an assessment of the added value of the GTCI and a comparison with other global measures of human capital, competitiveness, and innovation. The version of the GTCI model presented in 2021 is consistent with other international indicator frameworks measuring global innovation, global competitiveness, and human capital. Nevertheless, the GTCI 2021 is proven to offer additional insights into nations' human capital and competitiveness compared to the other Indices.

The practical items addressed in this chapter relate to the statistical soundness of the GTCI, which should be considered to be a necessary (though not necessarily sufficient) condition for a sound index. Given that the present statistical analysis of the GTCI will mostly, though not exclusively, be based on correlations, the correspondence of the GTCI to a real-world phenomenon needs to be critically addressed because *'correlations need not necessarily represent the real influence of the individual indicators on the phenomenon being measured'*.² The point is that the validity of the GTCI relies on the combination of both statistical and conceptual soundness. In this respect, the GTCI has been developed following an iterative process that went back and forth between the theoretical understanding of human capital and talent competitiveness on the one hand, and empirical observations on the other.

STATISTICAL COHERENCE IN THE GTCI FRAMEWORK

The JRC undertook an initial assessment of the GTCI 2021 data set in May–July 2021. The latest GTCI model provided by the development team largely incorporated the issues identified and discussed in previous editions of the audit with particular attention to the substitution of variables that were previously proven to be not influential on the final values of the index. No critical issues were identified in the 2021 model during this preliminary phase of the audit.

The underlying concepts and indicator framework that are used to describe global talent competitiveness in the GTCI 2021 have remained largely the same as those in the previous edition, although there are some adjustments in this year's GTCI edition (see the Technical Notes for details). Following the iterative process during which the index was fine-tuned, the current assessment of the statistical coherence in this final version of the GTCI 2021 followed four steps:

Step 1: Relevance

Variables were selected for their relevance to a specific pillar on the basis of the literature review, expert opinion, country coverage, and timeliness. To represent a fair picture of country

differences, variables were scaled either at the source or by the GTCI team as appropriate and where needed.

Step 2: Data Checks

The data used are the most recently released. The cut-off year was set to 2009. Countries were included if data availability was at least 80% at the index level and at least 40% at the sub-pillar level. As a result, the GTCI 2021 data set comprises 134 countries and 68 variables and has a 94.3% data coverage. Data availability is at least 84% at the Input sub-index level and 61% at the Output sub-index level. Potentially problematic variables that could bias the overall results were identified by the GTCI development team as those having absolute skewness greater than 2 and kurtosis greater than 3.5,³ and were treated either by Winsorisation or by taking the natural logarithm (in the case of five or more outliers). These criteria have been adopted since the first release of the GTCI, following the JRC-COIN recommendation.

Step 3: Statistical Coherence

This section presents the JRC's analysis of the statistical coherence of the GTCI 2021, which consists of a principal component analysis to study the structure of the data, a multi-level analysis of the correlations of variables, and a comparison of GTCI rankings with its pillars and with other similar indices. This latter investigation demonstrates the added value of the GTCI both against its component pillars and vis-à-vis other relevant indices on competitiveness, innovation, and human capital.

1. Principal Component Analysis and Reliability Item Analysis

Principal component analysis (PCA) was used to assess the extent to which the conceptual framework is compatible with statistical properties of the data. PCA confirms the presence of a single statistical dimension (i.e., one principal component with an eigenvalue significantly greater than 1.0) in all 14 sub-pillars, which captures 42% (Internal Openness) to 91% (Regulatory Landscape) of the total variance in the underlying variables. A more detailed analysis of the correlation structure within and across the six GTCI pillars confirms the expectation that the sub-pillars are more correlated with their own pillar than with any other. This result suggests that the allocation of sub-pillars to pillars in the GTCI is consistent from both conceptual and statistical perspectives. Furthermore, all correlations within a pillar are positive and similar, and well above 0.7, which suggests that roughly 50% (or more) of the variance in the GTCI pillar scores can be explained by an underlying sub-pillar (see Table 1). These results suggest that the GTCI conceptual grouping of sub-pillars into pillars is statistically confirmed and that the six pillars are statistically well balanced.

The six pillars also share a single statistical dimension that summarises 88% of the total variance, and the six loadings (correlation coefficients) are quite high and very similar to each other, ranging from 0.87 (Attract pillar) to 0.97 (Enable pillar). The latter suggests that the six pillars contribute in a balanced way to the variation of the GTCI scores, as envisaged by the development team: all six pillars are assigned equal weights. The

Table 1

Statistical coherence in the GTCI: Correlations between sub-pillars and pillars

SUB-PILLAR		ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE SKILLS
INPUT	1.1 Regulatory Landscape	0.95	0.87	0.87	0.90	0.79	0.85
	1.2 Market Landscape	0.95	0.79	0.91	0.86	0.86	0.87
	1.3 Business and Labour Landscape	0.96	0.89	0.89	0.81	0.81	0.82
	2.1 External Openness	0.83	0.93	0.74	0.65	0.65	0.67
	2.2 Internal Openness	0.81	0.90	0.73	0.77	0.72	0.70
	3.1 Formal Education	0.83	0.63	0.92	0.85	0.79	0.89
	3.2 Lifelong Learning	0.87	0.77	0.94	0.76	0.72	0.81
	3.3 Access to Growth Opportunities	0.89	0.82	0.92	0.86	0.79	0.85
	4.1 Sustainability	0.90	0.80	0.90	0.96	0.84	0.87
	4.2 Lifestyle	0.81	0.67	0.79	0.96	0.83	0.83
OUTPUT	5.1 Mid-Level Skills	0.71	0.57	0.70	0.82	0.90	0.76
	5.2 Employability	0.81	0.75	0.75	0.69	0.84	0.72
	6.1 High-Level Skills	0.84	0.72	0.87	0.85	0.85	0.95
	6.2 Talent Impact	0.86	0.70	0.89	0.86	0.78	0.97

Source: European Commission Joint Research Centre (2021).

Note: The values are the bivariate Pearson correlation coefficients ($n = 134$). Shaded values represent the coefficients between sub-pillars and the respective pillar based on the GTCI conceptual framework. Values greater than 0.70 within the shaded areas are desirable as they imply that the pillar captures at least 50% ($\approx 0.70 \times 0.70$) of the variation in the underlying sub-pillars and vice-versa.

reliability of the GTCI, measured by the Cronbach’s alpha value, is very high at 0.97—well above the 0.70 threshold for a reliable aggregate.⁴

An important part of the analysis relates to clarifying the importance of the Input and Output sub-indices with respect to the variation of the GTCI scores. As mentioned above, the GTCI is built as the simple arithmetic average of the four Input sub-pillars and the two Output sub-pillars, which implies that the Input sub-index has a weight of 4/6 versus a weight of 2/6 for the Output sub-index. Yet this does not imply that the Input aspect is twice as important as the Output aspect in determining the variation of the GTCI scores. In fact, the correlation coefficient between the GTCI scores and the Input or Output sub-index is 0.99 and 0.97, respectively, which suggests that the sub-indices are effectively placed on an equal footing, as envisaged by the developers. Overall, the tests so far show that the grouping of variables into sub-pillars, pillars, and an overall index is statistically coherent, and that the GTCI has a balanced structure, whereby all six pillars are equally important in determining the variation in the GTCI scores.

2. Importance of the Variables in the GTCI Framework

The GTCI and its components are simple arithmetic averages of the underlying variables. Developers and users of composite indicators often consider that the weights assigned to the variables coincide with the variables’ importance in the index. However, in practice, the correlation structure of the variables and their different variances do not always allow the weights assigned to the variables to be considered equivalent to their importance.

This section assesses the importance of all 68 variables at the various levels of aggregation in the GTCI structure. The squared Pearson correlation coefficient (otherwise known as the *coefficient of determination* R^2) is used as a statistical measure of the importance of variables in an index. The importance of the selected variables is taken to be equivalent to the contribution of those variables to the variation of the aggregate scores, be those sub-pillars, pillars, sub-indices, or the overall GTCI. The overarching consideration made by the GTCI development team was that all variables should be important at all levels of aggregation. The results of this analysis appear in Table 2. Examining the importance measures of the 68 variables, all variables are important at all levels of aggregation.

For example, country variations in 1.1.1 Government effectiveness scores can capture 95% of the variance in the respective sub-pillar score (Regulatory Landscape), 93% of the variance in the respective pillar (Enable), 92% of the variance in the Input sub-index, and 90% of the variance in the overall GTCI scores. Similarly, country variations in 2.1.1 Foreign direct investment (FDI) and technology transfer scores can capture 68%, 64%, 62%, and 58% of the variance in the External Openness sub-pillar, Attract pillar, Input sub-index, and GTCI scores, respectively.

It is reassuring that all 68 variables in this 2021 edition are found to have a noteworthy impact on the GTCI variance (i.e., at least 10%). This is a remarkable improvement compared to past GTCI versions, where a small number of variables were found not to be influential at all levels of the GTCI framework. This improvement is the direct result of the careful revision of the GTCI framework undertaken by the developers.

Table 2

Importance measures for the variables at the various levels of the GTCI structure

PILLAR	SUB-PILLAR	VARIABLE NAME	SUB-PILLAR	PILLAR	INPUT/OUTPUT	GTCI INDEX	
INPUT	1. Enable	1.1 Regulatory Landscape	1.1.1 Government effectiveness	95%	93%	92%	90%
			1.1.2 Rule of law	96%	89%	87%	84%
			1.1.3. Political stability	76%	58%	60%	55%
			1.1.4 Regulatory quality	92%	87%	86%	83%
			1.1.5 Corruption	94%	86%	85%	81%
		1.2 Market Landscape	1.2.1 Extent of market dominance	66%	55%	48%	47%
			1.2.2 Ease of doing business	63%	68%	65%	67%
			1.2.3 Cluster development	71%	64%	55%	53%
			1.2.4 R&D expenditure	59%	56%	53%	54%
			1.2.5 ICT infrastructure	81%	77%	78%	81%
			1.2.6 Urbanisation	54%	45%	49%	49%
		1.3 Business Landscape	1.3.1 Labour rights	24%	24%	21%	20%
			1.3.2 Labour-employer cooperation	69%	56%	50%	46%
			1.3.3 Professional management	80%	73%	69%	66%
			1.3.4 Relationship of pay to productivity	71%	61%	54%	55%
	1.3.5 Technology utilisation		87%	82%	76%	73%	
	1.3.6 Investment in emerging technologies		80%	72%	64%	62%	
	1.3.7 Firms with website		57%	61%	66%	67%	
	2. Attract	2.1 External Openness	2.1.1 FDI and technology transfer	66%	64%	62%	58%
			2.1.2 Prevalence of foreign ownership	61%	53%	41%	36%
			2.1.3 Migrant stock	57%	47%	37%	36%
2.1.4 International students			64%	56%	44%	43%	
2.1.5 Brain gain			64%	56%	34%	29%	
2.2 Internal Openness		2.2.1 Tolerance to minorities	55%	40%	35%	31%	
		2.2.2 Tolerance to immigrants	26%	26%	16%	13%	
		2.2.3 Social mobility	57%	74%	67%	63%	
		2.2.4 Women in tertiary education	35%	18%	23%	24%	
		2.2.5 Women in high-skilled jobs	26%	8%	12%	14%	
		2.2.6 Business leadership opportunities for women	50%	50%	35%	35%	

*(continued on next page)***3. Added Value of the GTCI**

A very high statistical reliability among the main components of an index can be the result of redundancy of information. This is not the case in the GTCI. In fact, the overall GTCI 2021 ranking differs from any of the six pillar rankings by 10 positions or more in at least one-third of the 134 countries included in the 2021 edition, peaking at 60% of the countries in the case of the Attract pillar (see Table 3). This is a desired outcome because it evidences the added value of the GTCI ranking, which helps to highlight other components of human capital and talent competitiveness that do not emerge directly by looking into the six pillars separately. At the same time, this result also points towards

the value of duly taking into account the individual pillars, sub-pillars, and variables on their own merit. By doing so, country-specific strengths and bottlenecks in human capital and talent competitiveness can be identified and serve as an input for evidence-based policymaking.

In addition, the GTCI 2021 is compared with three relevant international indices—the World Economic Forum's 2019 Global Competitiveness Index; the World Bank's 2020 Human Capital Index; and the World Intellectual Property Organization (WIPO)'s 2021 Global Innovation Index—using the most recent rankings extracted from these projects' websites (see Table 4). The rank correlation between GTCI 2021 with all three indices

Table 2 (continued)

Importance measures for the variables at the various levels of the GTCI structure

	PILLAR	SUB-PILLAR	VARIABLE NAME	SUB-PILLAR	PILLAR	INPUT/OUTPUT	GTCI INDEX
INPUT	3. Grow	3.1 Formal Education	3.1.1 Vocational enrolment	59%	37%	31%	35%
			3.1.2 Tertiary enrolment	60%	54%	51%	55%
			3.1.3 Tertiary education expenditure	58%	48%	48%	47%
			3.1.4 Reading, maths, and science	76%	62%	54%	58%
			3.1.5 University ranking	72%	74%	60%	62%
		3.2 Lifelong Learning	3.2.1 Business and economics subject ranking	76%	72%	58%	59%
			3.2.2 Prevalence of training in firms	40%	22%	13%	11%
			3.2.3 Employee development	69%	66%	70%	66%
			3.2.4 Formal and non-formal education and training	81%	76%	70%	70%
		3.3 Access to Growth Opportunities	3.3.1 Delegation of authority	62%	64%	69%	66%
			3.3.2 Youth inclusion	54%	44%	37%	35%
			3.3.3 Use of virtual social networks	75%	56%	59%	60%
	3.3.4 Use of virtual professional networks		73%	63%	66%	64%	
	4. Retain	4.1 Sustainability	4.1.1 Pension coverage	63%	64%	43%	45%
			4.1.2 Social protection	76%	64%	74%	70%
			4.1.3 Brain retention	41%	27%	47%	42%
4.1.4 Environmental performance			79%	85%	78%	80%	
4.2 Lifestyle		4.2.1 Personal rights	58%	47%	37%	36%	
		4.2.2 Personal safety	69%	67%	63%	63%	
		4.2.3 Physician density	70%	65%	49%	52%	
		4.2.4 Sanitation	65%	61%	50%	54%	
OUTPUT	5. Vocational and Technical Skills	5.1 Mid-level Skills	5.1.1 Secondary-educated workforce	72%	46%	34%	23%
			5.1.2 Secondary-educated population	78%	50%	37%	27%
			5.1.3 Technicians and associate professionals	74%	69%	72%	72%
			5.1.4 Labour productivity per employee	70%	74%	79%	77%
		5.2 Employability	5.2.1 Ease of finding skilled employees	67%	29%	26%	30%
			5.2.2 Relevance of education system to the economy	83%	49%	48%	53%
	6. Global Knowledge Skills	6.1 Higher-Level Skills	6.1.1 Tertiary-educated workforce	83%	72%	68%	62%
			6.1.2 Tertiary-educated population	74%	57%	55%	51%
			6.1.3 Professionals	77%	78%	78%	75%
			6.1.4 Researchers	80%	80%	83%	77%
			6.1.5 Senior officials and managers	56%	47%	42%	36%
			6.1.6 Availability of scientists and engineers	50%	47%	51%	51%
6.2 Talent Impact		6.2.1 Innovation output	83%	80%	74%	76%	
		6.2.2 High-value exports	49%	40%	29%	26%	
		6.2.3 New product entrepreneurial activity	37%	29%	25%	25%	
		6.2.4 New business density	52%	47%	43%	43%	
		6.2.5 Scientific journal articles	82%	85%	85%	84%	

Source: European Commission Joint Research Centre (2021).

Note: The values are the squared Pearson correlation coefficients, expressed as percentages ($n = 134$ countries). It is reassuring that all 68 variables in this 2021 edition are found to have a noteworthy impact (i.e., at least 10%) on the GTCI variance and the variances of the respective sub-indices and sub-pillars, and nearly all the pillars. The single case where the coefficient is less than 10% is shaded in a lighter color.

Table 3

Distribution of differences between pillar and GTCI rankings

UNCERTAINTY REALM Rank differences	GTCI INPUT SUB-INDEX				GTCI OUTPUT SUB-INDEX	
	Enable	Attract	Grow	Retain	Vocational and Technical Skills	Global Knowledge Skills
More than 30 positions	1%	17%	4%	4%	3%	4%
20 to 29 positions	6%	20%	14%	7%	17%	10%
10 to 19 positions	25%	22%	18%	23%	27%	25%
10 or more positions*	32%	60%	36%	34%	47%	40%
5 to 9 positions	22%	20%	17%	27%	23%	30%
Less than 5 positions	37%	19%	41%	33%	27%	26%
0 positions	9%	1%	6%	7%	3%	4%
Total	100%	100%	100%	100%	100%	100%

Source: European Commission Joint Research Centre (2021).

Note: * This row is the sum of the prior three rows.

Table 4

Rank differences between the GTCI 2021 and other international rankings

Rank differences with respect to the GTCI 2021	Global Innovation Index 2021 (Cornell, INSEAD, WIPO)	Human Capital Index 2020 (World Bank)	Global Competitiveness Index 2019 (World Economic Forum)
More than 30 positions	7%	6%	1%
20 to 29 positions	10%	11%	7%
10 to 19 positions	24%	33%	24%
More than 10 positions*	41%	50%	31%
5 to 9 positions	26%	23%	30%
Less than 5 positions	25%	21%	31%
0 positions	8%	6%	8%
Total	100%	100%	100%
Pearson correlation coefficient with the GTCI	0.93	0.91	0.96
Spearman rank correlation coefficient with the GTCI	0.92	0.92	0.96
Common countries with the GTCI	126	131	123

Source: European Commission Joint Research Centre (2021).

Notes: The comparison between the GTCI and the other indices was based on the common set of countries. *This row is the rounded sum of the prior three rows.

is substantially high (correlation ≈ 0.9), which suggests that the GTCI framework is consistent with the frameworks on global innovation, global competitiveness, and human capital. At the same time, looking at the shifts in rankings, 31%, 41%, and 50% of the countries included in the GTCI 2021 that feature in the other three indices differ in ranking by more than 10 positions when comparing the GTCI 2021 with the three selected international indices. This indicates that the GTCI 2021 offers additional insights into nations' human capital and competitiveness compared to the 2019 Global Competitiveness Index, the 2020 Human Capital Index, and the 2021 Global Innovation Index.

Step 4: Qualitative Review

Finally, the GTCI results, including overall country classifications and relative performances in terms of the Input and Output sub-indices, were evaluated by the development team and external experts to verify that the overall results are, to a great extent, consistent with current evidence, existing research, or prevailing theory.

Notwithstanding these statistical tests and the positive outcomes regarding the statistical soundness of the GTCI, it is important to mention that the GTCI has to remain open to future improvements as better data, more comprehensive surveys and assessments, and new relevant research studies and data become available.

IMPACT OF MODELLING ASSUMPTIONS ON THE GTCI RESULTS

Every country score on the overall GTCI and its two sub-indices depends on modelling choices: the six-pillar structure, the selected variables, the imputation or not of missing data, and the weights and aggregation method, among other elements. These choices are based on expert opinion (e.g., selection of variables) or common practice (e.g., min-max normalisation in the [0,100] range) and driven by statistical analysis (e.g., treatment of outliers) or simplicity (e.g., no imputation of missing data). The robustness analysis aims at assessing the simultaneous and joint impact of these modelling choices on the rankings. The data are

assumed to be error-free since potential outliers and any errors and typos were corrected during the computation phase.

As suggested in the relevant literature on composite indicators,⁵ the robustness assessment of the GTCI was based on a combination of a Monte Carlo experiment and a multi-modelling approach that dealt with three issues: pillar weights, missing data, and the aggregation formula. In general, the uncertainty analysis aims to respond to some extent to possible criticisms that the country scores associated with aggregate measures are generally not calculated under conditions of certainty, even though they are frequently presented as such.

While the term *multi-modelling* refers to testing alternative assumptions—that is, alternative aggregation methods and missing data estimation methods—the Monte Carlo simulation explored the issue of weighting and comprised 1,000 runs, each corresponding to a different set of weights for the six pillars, randomly sampled from uniform continuous distributions centred in the reference values. The choice of the range for the weights’ variation was driven by two opposite needs: to ensure a wide enough interval to have meaningful robustness checks, and to respect the rationale of the GTCI that places equal importance on all six pillars. Given these considerations, the limit values of uncertainty intervals for the pillar weights are 15% to 35% for the four Input pillars for the calculation of the Input sub-index, and 40% to 60% for the two Output pillars for the calculation of the Output sub-index (see Table 5). For the calculation of the GTCI, the limit values of uncertainty intervals for all six pillar weights are 12% to 20%. In all simulations, sampled weights are rescaled so that they always sum to 1.

The GTCI development team, for transparency and replicability, opted not to estimate the missing data (only 5.7% of data were missing in the data set of 134 countries for all 68 variables). The ‘no imputation’ choice, which is common in similar contexts, might encourage countries not to report low data values. The consequence of the ‘no imputation’ choice in an arithmetic average is that it is equivalent to replacing an indicator’s missing value for a given country with the respective mean of the other indicators that are being aggregated. Hence the available data

(indicators) in the incomplete pillar may dominate, sometimes biasing the ranks up or down. To test the impact of this assumption, the JRC also estimated missing data using the Expectation Maximisation (EM) algorithm.⁶

Regarding the aggregation formula, decision-theory practitioners have challenged the use of simple arithmetic averages because of their fully compensatory nature, in which a comparatively high advantage for a few variables can compensate for a comparative disadvantage for many variables.⁷ Despite the arithmetic averaging formula receiving statistical support for the development of the GTCI, as discussed in the previous section, the geometric average was considered as a possible alternative. This alternative average is a partially compensatory approach that rewards countries with similar performance in all pillars; it motivates those countries with uneven performance to improve in those pillars in which they perform poorly, and not just in any pillar.

Four models were tested based on the combination of no imputation versus EM imputation, and arithmetic versus geometric average, combined with 1,000 simulations per model (random weights versus fixed weights), for a total of 4,000 simulations for the GTCI and each of the two sub-indices (see Table 5 for a summary of the uncertainties considered in the GTCI 2021).

Uncertainty Analysis Results

The main results of the robustness analysis are shown in Figures 1a–1c, with median ranks and 90% confidence intervals computed across the 4,000 Monte Carlo simulations for the GTCI and the two sub-indices. Countries are ordered from best to worst according to their reference rank, the blue dot being the simulated median rank. Error bars represent, for each country, the 90% interval across all simulations. Table 6 reports the published rankings and the 90% confidence intervals that account for uncertainties in the missing data estimation, the pillar weights, and the aggregation formula. All published country ranks lay within the simulated intervals, and these are narrow enough for most countries (less than or equal to 10 positions) to allow meaningful inferences to be drawn.

Table 5

Uncertainty analysis for the GTCI 2021: Missing data, aggregation, and pillar weights

		REFERENCE	ALTERNATIVE
I. Uncertainty in the treatment of missing values		No estimation of missing data	Expectation Maximisation (EM)
II. Uncertainty in the aggregation formula at pillar level		Arithmetic average	Geometric average
III. Uncertainty in the weights			
GTCI sub-index	Pillar	Reference value for the weight (within the sub-index)	Distribution assigned for robustness analysis (within the sub-index)
Input	Enable	0.25	U[0.15, 0.35]
	Attract	0.25	U[0.15, 0.35]
	Grow	0.25	U[0.15, 0.35]
	Retain	0.25	U[0.15, 0.35]
Output	Vocational and Technical Skills	0.50	U[0.40, 0.60]
	Global Knowledge Skills	0.50	U[0.40, 0.60]

Source: European Commission Joint Research Centre (2021).

Table 6

Country ranks and 90% confidence intervals for the GTCI 2021 and its Input/Output sub-indices

COUNTRY	GTCI 2021		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Switzerland	1	[1, 1]	1	[1, 1]	4	[2, 4]
Singapore	2	[2, 8]	6	[2, 13]	2	[2, 3]
United States	3	[2, 7]	7	[5, 11]	1	[1, 1]
Denmark	4	[2, 6]	4	[2, 6]	6	[5, 6]
Sweden	5	[2, 5]	3	[3, 5]	7	[6, 7]
Netherlands	6	[4, 8]	2	[2, 6]	11	[10, 13]
Finland	7	[5, 9]	8	[6, 10]	5	[5, 7]
Luxembourg	8	[3, 9]	5	[2, 7]	12	[12, 14]
Norway	9	[8, 12]	10	[7, 13]	8	[8, 9]
Iceland	10	[9, 14]	16	[15, 17]	3	[3, 4]
Australia	11	[9, 13]	9	[7, 11]	16	[13, 16]
United Kingdom	12	[9, 15]	12	[9, 13]	15	[11, 16]
Canada	13	[10, 14]	13	[10, 14]	14	[13, 16]
Germany	14	[10, 16]	14	[13, 14]	13	[10, 16]
New Zealand	15	[12, 16]	11	[8, 13]	20	[20, 21]
Ireland	16	[14, 18]	18	[15, 18]	10	[9, 12]
Belgium	17	[16, 18]	17	[16, 18]	17	[17, 17]
Austria	18	[16, 18]	15	[15, 17]	21	[20, 22]
France	19	[19, 21]	20	[19, 21]	18	[18, 19]
Japan	20	[19, 23]	19	[19, 20]	26	[24, 27]
Israel	21	[19, 21]	21	[21, 24]	9	[8, 10]
Estonia	22	[21, 23]	23	[22, 25]	19	[18, 19]
Malta	23	[22, 25]	22	[21, 24]	27	[24, 28]
Czech Republic	24	[23, 25]	25	[23, 26]	25	[24, 26]
United Arab Emirates	25	[23, 31]	24	[20, 29]	34	[33, 36]
Slovenia	26	[25, 29]	29	[28, 30]	23	[23, 25]
South Korea	27	[24, 29]	28	[27, 30]	24	[23, 26]
Portugal	28	[25, 29]	26	[24, 27]	35	[32, 37]
Spain	29	[28, 33]	27	[25, 28]	39	[39, 39]
Cyprus	30	[27, 31]	34	[31, 35]	22	[21, 22]
Latvia	31	[30, 32]	33	[31, 35]	28	[27, 28]
Lithuania	32	[31, 35]	32	[31, 34]	30	[29, 31]
Chile	33	[31, 35]	31	[30, 32]	33	[31, 34]
Malaysia	34	[31, 36]	37	[33, 38]	29	[29, 30]
Italy	35	[33, 37]	35	[31, 39]	37	[35, 38]
Qatar	36	[30, 39]	30	[27, 36]	45	[43, 54]
China	37	[35, 42]	40	[36, 44]	31	[31, 51]
Slovakia	38	[35, 39]	38	[35, 38]	44	[32, 47]
Costa Rica	39	[38, 41]	36	[35, 39]	56	[55, 58]
Poland	40	[37, 40]	44	[41, 45]	32	[31, 36]
Saudi Arabia	41	[40, 49]	43	[40, 48]	49	[46, 56]
Hungary	42	[40, 44]	45	[44, 48]	41	[40, 41]
Greece	43	[41, 50]	46	[43, 50]	43	[43, 46]
Bahrain	44	[41, 52]	39	[38, 42]	62	[61, 65]
Russia	45	[42, 51]	55	[49, 60]	38	[35, 38]

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Table 6 (continued)

Country ranks and 90% confidence intervals for the GTCI 2019 and its Input/Output sub-indices

COUNTRY	GTCI 2021		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Bulgaria	46	[44, 50]	50	[50, 54]	40	[40, 41]
Brunei Darussalam	47	[40, 48]	48	[42, 48]	53	[49, 54]
Oman	48	[44, 57]	42	[40, 45]	64	[63, 73]
Montenegro	49	[44, 52]	61	[56, 64]	36	[33, 38]
Belarus	50	[46, 54]	51	[50, 58]	48	[43, 50]
Uruguay	51	[46, 61]	41	[39, 43]	85	[82, 88]
Croatia	52	[47, 58]	63	[55, 69]	42	[42, 43]
Georgia	53	[50, 60]	58	[53, 69]	46	[45, 48]
Azerbaijan	54	[46, 62]	54	[50, 61]	55	[43, 59]
Romania	55	[51, 58]	59	[55, 65]	52	[48, 52]
Mauritius	56	[50, 60]	47	[45, 50]	65	[64, 67]
Armenia	57	[52, 63]	62	[57, 74]	50	[45, 51]
Serbia	58	[51, 59]	64	[56, 66]	47	[46, 49]
Argentina	59	[55, 62]	52	[50, 57]	60	[60, 61]
Kazakhstan	60	[51, 64]	65	[58, 66]	57	[53, 59]
Ukraine	61	[55, 65]	70	[65, 72]	54	[50, 55]
Kuwait	62	[53, 65]	49	[46, 50]	80	[77, 80]
Jordan	63	[60, 68]	53	[50, 61]	73	[69, 75]
Trinidad and Tobago	64	[59, 74]	69	[64, 78]	59	[56, 64]
Mexico	65	[61, 69]	60	[52, 66]	71	[68, 76]
Botswana	66	[63, 70]	56	[54, 64]	76	[74, 81]
South Africa	67	[62, 69]	71	[66, 74]	61	[58, 63]
Thailand	68	[64, 70]	66	[57, 66]	75	[71, 78]
Jamaica	69	[66, 82]	57	[51, 71]	86	[83, 95]
Philippines	70	[65, 80]	75	[66, 80]	66	[62, 77]
Lebanon	71	[65, 79]	87	[83, 92]	51	[46, 54]
Colombia	72	[67, 76]	73	[66, 76]	69	[68, 76]
Albania	73	[69, 82]	68	[67, 72]	87	[79, 90]
Namibia	74	[70, 84]	72	[69, 80]	84	[80, 88]
Brazil	75	[71, 79]	74	[65, 76]	83	[80, 85]
Turkey	76	[66, 80]	76	[68, 81]	74	[66, 76]
Mongolia	77	[70, 81]	80	[77, 82]	67	[63, 73]
Panama	78	[70, 84]	67	[61, 75]	94	[87, 96]
North Macedonia	79	[73, 83]	86	[83, 92]	63	[61, 65]
Indonesia	80	[75, 84]	77	[73, 79]	88	[86, 89]
Tunisia	81	[75, 86]	85	[83, 90]	68	[62, 73]
Vietnam	82	[78, 87]	84	[79, 87]	82	[81, 85]
Moldova	83	[80, 87]	89	[87, 91]	72	[68, 73]
Egypt	84	[77, 91]	99	[94, 100]	58	[57, 59]
Ecuador	85	[80, 91]	82	[77, 86]	91	[88, 96]
Dominican Republic	86	[82, 93]	83	[79, 90]	93	[91, 93]
Peru	87	[80, 92]	79	[74, 83]	100	[93, 100]
India	88	[82, 95]	92	[85, 95]	79	[76, 86]
Kyrgyzstan	89	[80, 95]	88	[84, 94]	90	[69, 92]
Cabo Verde	90	[83, 96]	81	[77, 90]	98	[96, 103]

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Table 6 (continued)

Country ranks and 90% confidence intervals for the GTCI 2019 and its Input/Output sub-indices

COUNTRY	GTCI 2021		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Bosnia and Herzegovina	91	[86, 94]	95	[92, 98]	70	[67, 79]
Paraguay	92	[85, 96]	78	[74, 80]	106	[106, 108]
Sri Lanka	93	[87, 96]	97	[93, 99]	77	[69, 85]
Ghana	94	[90, 99]	91	[85, 93]	95	[94, 103]
Morocco	95	[89, 97]	90	[83, 91]	99	[95, 101]
Kenya	96	[91, 99]	98	[92, 102]	89	[87, 92]
Tajikistan	97	[89, 104]	101	[98, 116]	78	[66, 96]
Algeria	98	[95, 100]	100	[97, 102]	92	[89, 94]
Gambia	99	[96, 111]	93	[85, 105]	111	[105, 119]
Iran	100	[95, 105]	113	[104, 119]	81	[77, 84]
Rwanda	101	[98, 105]	94	[91, 100]	110	[109, 113]
Bolivia	102	[97, 105]	102	[94, 109]	102	[99, 104]
Senegal	103	[101, 113]	96	[94, 103]	115	[114, 117]
Zambia	104	[101, 113]	112	[105, 122]	96	[95, 101]
Laos	105	[101, 109]	111	[109, 117]	97	[94, 99]
Guatemala	106	[101, 109]	103	[99, 105]	108	[107, 111]
Pakistan	107	[101, 113]	110	[105, 117]	105	[104, 106]
Nigeria	108	[104, 115]	116	[110, 119]	103	[102, 105]
El Salvador	109	[105, 113]	105	[101, 110]	112	[112, 115]
Venezuela	110	[101, 117]	119	[106, 122]	104	[97, 104]
Côte d'Ivoire	111	[107, 115]	108	[102, 117]	113	[110, 113]
Eswatini	112	[106, 114]	104	[103, 108]	117	[110, 117]
Nepal	113	[107, 118]	117	[108, 121]	109	[107, 111]
Honduras	114	[109, 115]	107	[104, 109]	116	[115, 116]
Tanzania	115	[113, 118]	106	[104, 110]	124	[120, 124]
Cameroon	116	[112, 118]	121	[118, 121]	107	[107, 109]
Uganda	117	[113, 121]	109	[104, 118]	119	[119, 124]
Nicaragua	118	[113, 120]	114	[102, 115]	122	[118, 124]
Cambodia	119	[118, 122]	115	[111, 117]	126	[126, 127]
Zimbabwe	120	[116, 123]	128	[125, 130]	101	[100, 102]
Lesotho	121	[117, 122]	118	[113, 119]	125	[119, 125]
Malawi	122	[118, 122]	120	[118, 122]	118	[115, 123]
Bangladesh	123	[122, 125]	123	[122, 126]	120	[119, 125]
Burkina Faso	124	[123, 127]	124	[123, 128]	121	[118, 128]
Guinea	125	[123, 128]	122	[117, 124]	132	[129, 132]
Madagascar	126	[125, 128]	126	[123, 127]	128	[127, 130]
Mali	127	[125, 129]	125	[123, 126]	131	[130, 131]
Ethiopia	128	[124, 129]	129	[126, 130]	123	[120, 125]
Burundi	129	[126, 130]	130	[126, 130]	127	[126, 129]
Mozambique	130	[128, 131]	127	[125, 130]	133	[133, 134]
Angola	131	[130, 132]	131	[131, 131]	130	[128, 132]
Democratic Republic of the Congo	132	[131, 133]	132	[132, 132]	129	[121, 132]
Yemen	133	[132, 134]	134	[133, 134]	114	[113, 115]
Chad	134	[133, 134]	133	[133, 134]	134	[133, 134]

Source: European Commission Joint Research Centre (2021).

Figure 1a

Robustness analysis (GTCI rank vs. median rank, 90% confidence intervals)

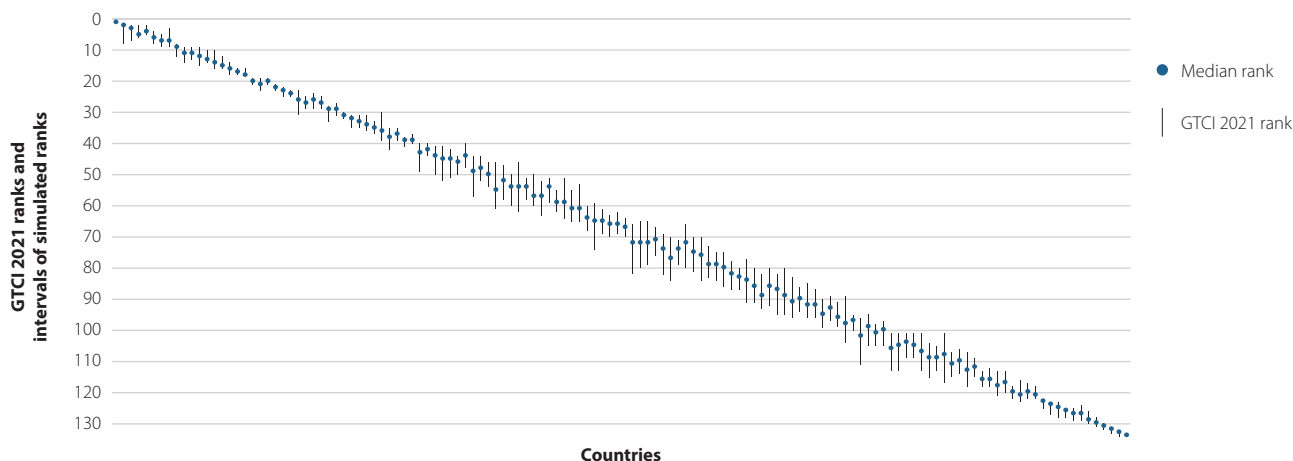


Figure 1b

Robustness analysis (Input rank vs. median rank, 90% confidence intervals)

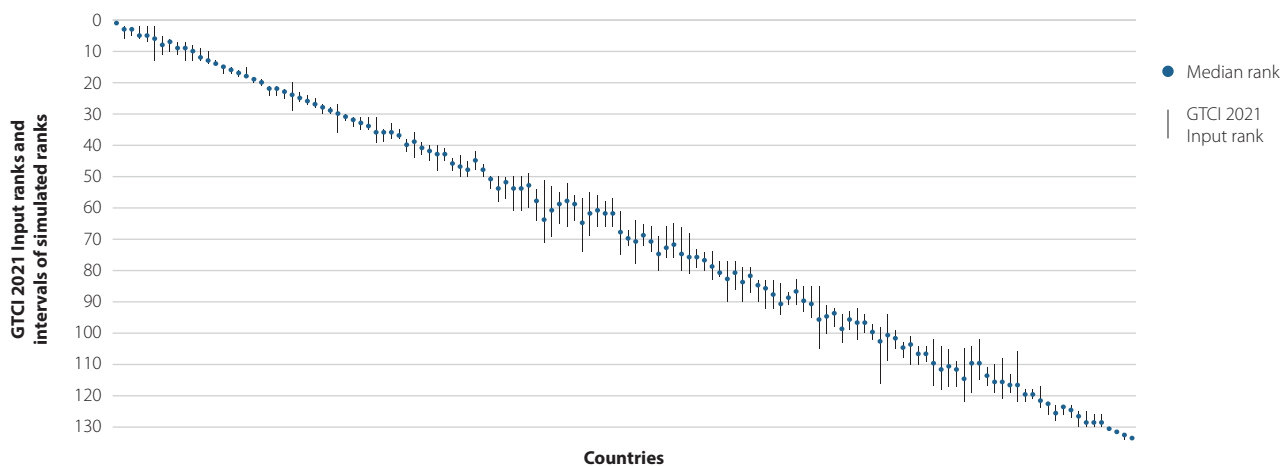
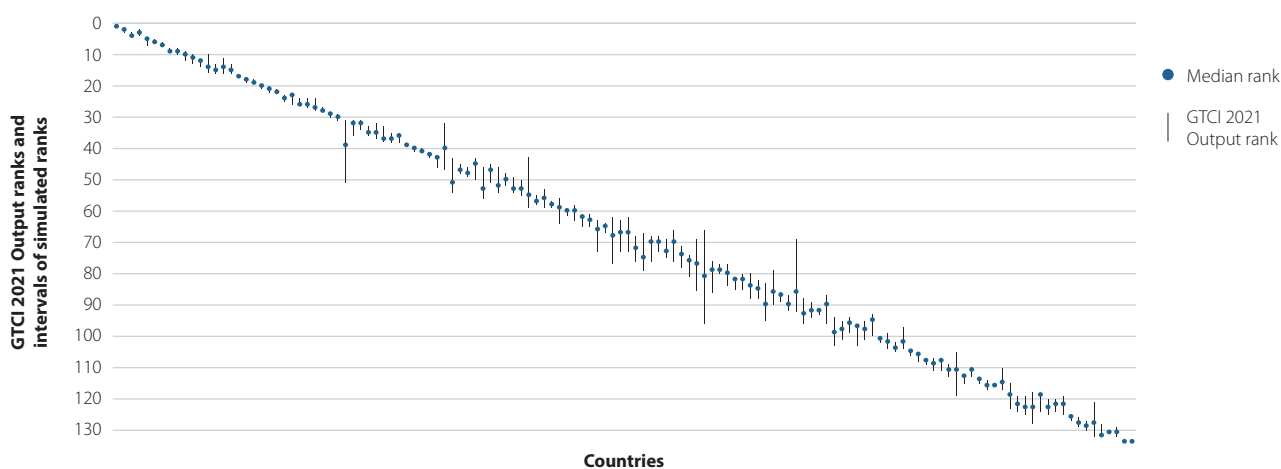


Figure 1c

Robustness analysis (Output rank vs. median rank, 90% confidence intervals)



Source: European Commission Joint Research Centre (2021).

Notes: The Spearman rank correlation between the median rank and the GTCI 2021 rank is 0.999 ($n = 134$); between the median rank and the GTCI 2021 Input rank it is 0.999; and between the median rank and the GTCI 2021 Output rank it is 0.999. Median ranks and intervals are calculated over 4,000 simulated scenarios combining random weights, imputation versus no imputation of missing values, and geometric versus arithmetic average at the pillar level.

GTCl ranks are shown to be both representative of a plurality of scenarios and robust to changes in the imputation method, the pillar weights, and the aggregation formula. If one considers the median rank across the simulated scenarios as being representative of these scenarios, then the fact that the GTCl rank is close to the median rank (differing by two positions or less) for 93% of the countries suggests that the GTCl is a suitable summary measure. Furthermore, the narrow confidence intervals for the majority of the countries' ranks (less than or equal to 10 positions for 75% of the countries) imply that the GTCl ranks are also, for the vast majority of the countries, robust to changes in the pillar weights, the imputation method, and the aggregation formula.

Results for the Input and Output sub-indices are also robust and representative of the plurality of scenarios considered. The Input rank is close to the median rank (less than or equal to two positions away) for 87% of the countries, and the rank intervals are less than or equal to 10 positions for 79% of the countries. Similarly, the Output rank is close to the median rank (less than or equal to two positions away) for 85% of the countries, and the rank intervals are less than or equal to 10 positions for 90% of the countries.

Overall, country ranks in the GTCl and its two sub-indices are fairly robust to changes in the pillar weights, the imputation method, and the aggregation formula for the majority of the countries considered. For full transparency and information, Table 6 reports the GTCl country ranks (and those of the sub-indices) together with the simulated intervals (90% of the 4,000 scenarios) in order to better appreciate the robustness of these ranks to the computation methodology.

Sensitivity Analysis Results

Complementary to the uncertainty analysis, sensitivity analysis has been used to identify which of the modelling assumptions have the highest impact on certain country ranks. Figure 2 plots the GTCl and both sub-index rankings versus one-at-a-time changes of either the EM imputation method or the geometric aggregation formula (assuming equal weights for the six pillars as in the GTCl).

The most influential methodological assumption turns out to be the choice of not imputing missing data, particularly in the case of the Output sub-index (given that a lower rank correlation indicates greater sensitivity). This choice has the largest impact on differences in ranking for the Output sub-index; it has less impact on differences for the Input sub-index or the overall GTCl 2021. For example, in the most extreme case, by estimating missing data with the EM algorithm, China falls by 19 positions in the Output ranking (from 31 down to 50); instead Kyrgyzstan improves by 17 positions (from rank 90 up to 73). Note, however, that these assumptions concern methodological choices only and might overall be less influential than choices related to the background assumptions in the conceptual framework.⁸

Overall, the ranges of uncertainty in the final rankings are fairly modest. Consequently, the JRC recommendation is not to alter the GTCl methodology, but to consider country ranks in the GTCl 2021 and in the Input and Output sub-indices within

the 90% confidence intervals, as reported in Table 6, in order to better appreciate to what degree a country's rank depends on the modelling choices. It is reassuring that, for an overwhelming majority of the countries included in the GTCl, their ranks in the overall GTCl 2021 and the Input and Output sub-indices are the result of the underlying data and not of modelling choices.⁹

CONCLUSIONS

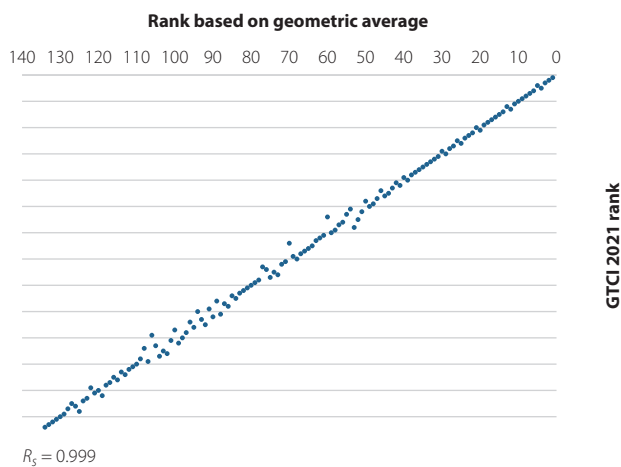
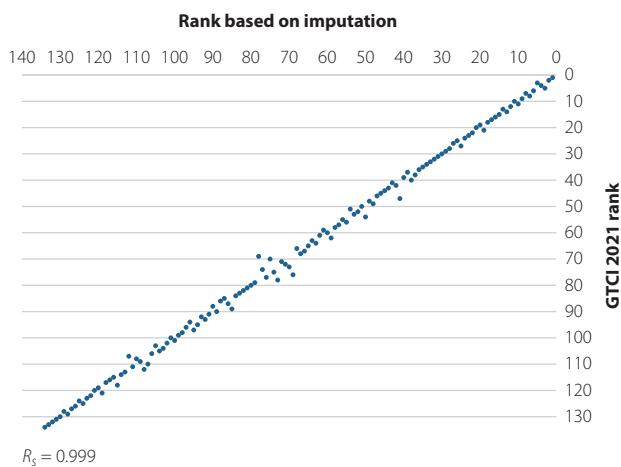
This eighth edition of the Global Talent Competitiveness Index (GTCl) intends to bring attention to the growing challenges of talent attraction, development, and retention faced by countries worldwide. The JRC statistical audit has investigated the workings of the GTCl framework to assess the statistical properties of the data and the methodology used in constructing the index. The JRC analysis suggests that the conceptualised structure on multiple levels of the GTCl 2021 is statistically coherent and balanced. It is not dominated by any pillar or sub-pillar; all variables contribute to the variation of the respective Input/Output sub-indices and to the overall GTCl. Furthermore, the analysis has offered statistical justification for the use of equal weights and arithmetic averaging at the various levels of aggregation. It has shown that the GTCl is statistically reliable in its current form as the simple average of the six pillars (as measured by a very high Cronbach's alpha value of 0.97, well above the recommended 0.70 threshold for a reliable aggregate).

It is reassuring that all 68 variables in this 2021 edition are found to have a noteworthy impact on the GTCl variance (i.e., at least 10%). This is a remarkable improvement compared with past GTCl versions, where a small number of variables were found not to be influential at all levels of the GTCl framework. This improvement is the direct result of the careful revision of the GTCl framework undertaken by the developers.

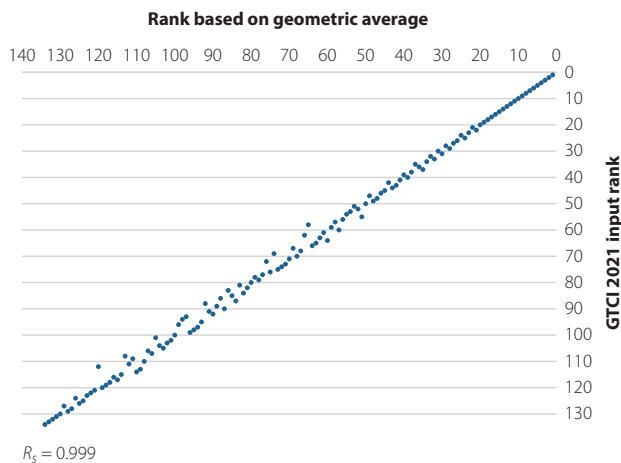
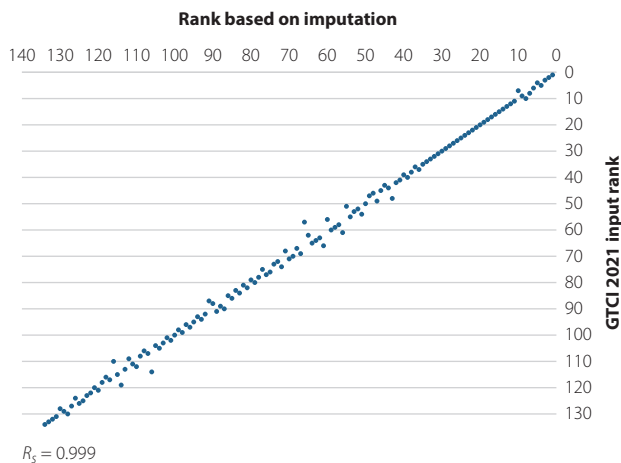
The GTCl and both sub-index country ranks are relatively robust to methodological assumptions related to the estimation of missing data, weighting, and aggregation formula. It is reassuring that for a large majority of the countries included in the GTCl, the overall rank and those in the Input and Output sub-indices are the result of the underlying data and not of the modelling choices. Consequently, inferences can be drawn for most countries in the GTCl, although some caution may be needed for one country—Tajikistan—this year.¹⁰ Note that perfect robustness would have been undesirable because this would have implied that the GTCl components are perfectly correlated and hence redundant, which is not the case for the GTCl 2021. In fact, one way in which the GTCl helps to highlight other components of human capital and talent competitiveness is by pinpointing the differences in rankings that emerge from a comparison between the GTCl and each of the six pillars. In the analysis, the GTCl ranking differs from any of the six pillar rankings by 10 positions or more for at least 32% (up to almost 60%) of the countries. This outcome both evidences the added value of the GTCl ranking and points to the importance of taking into account the individual pillars, sub-pillars, and variables on their own merit. By doing so, country-specific strengths and bottlenecks in human capital and talent competitiveness can be identified and serve as an input for evidence-based policymaking.

Figure 2
Sensitivity analysis: Impact of modelling choices

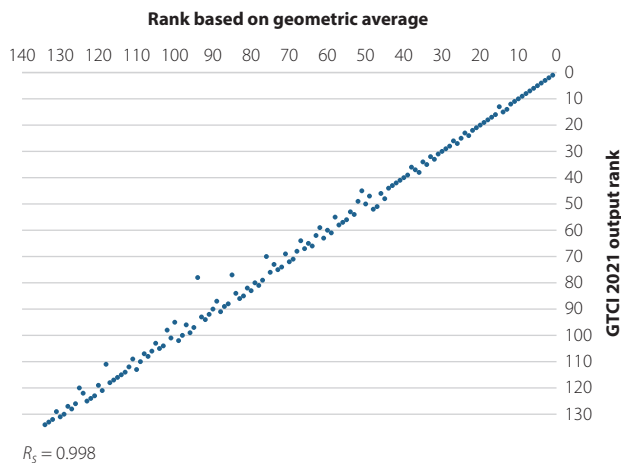
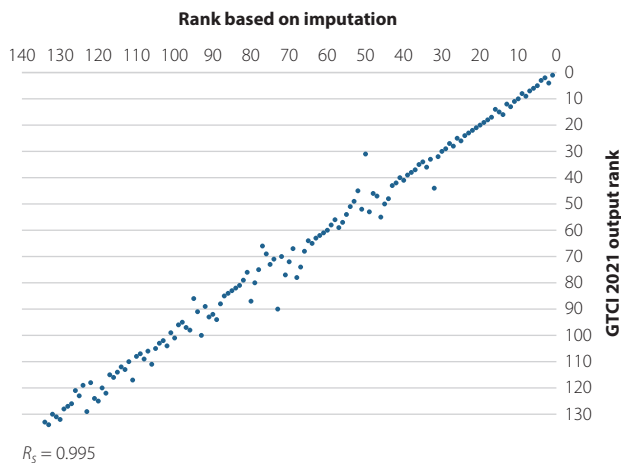
Global Talent Competitiveness 2021



GTCI 2021 Input sub-index



GTCI 2021 Output sub-index



Source: European Commission Joint Research Centre (2021).
 Note: R_s represents the Spearman rank correlation coefficient ($n = 134$).

The auditing conducted herein has shown the potential of the GTCI 2021 for reliably identifying weaknesses and best practices and ultimately monitoring national performance in human capital and competitiveness issues around the world. Readers and policy analysts should also go beyond the overall GTCI scores and ranks and duly consider the individual indicators and pillars on their own merit. By doing so, country-specific strengths and challenges in attracting, developing, and retaining talent can be identified and serve as an input for data-informed policy analysis. The GTCI cannot possibly serve as the ultimate and definitive yardstick of monitoring progress and performance on talent and competitiveness. Instead, the GTCI best represents an ongoing attempt by INSEAD and Portulans Institute to contribute to policy discussions on the very many challenges that national systems face in a world that is increasingly dependent on talent, continuously adapting the GTCI framework to reflect improved and new data sources and the theoretical advances on how to leverage talent as a tool for competitiveness.

ENDNOTES

- 1 The JRC analysis was based on the recommendations of the OECD & EC JRC (2008) *Handbook on Constructing Composite Indicators* and on more recent research from the JRC. The JRC auditing studies of composite indicators are available at https://knowledge4policy.ec.europa.eu/composite-indicators_en and <https://composite-indicators.jrc.ec.europa.eu> (all audits were carried out upon request of the index developers).
- 2 OECD & EC JRC (2008).
- 3 Groeneveld & Meeden (1984) set the criteria for absolute skewness above 1 and kurtosis above 3.5. The skewness criterion was relaxed herein to account for the small sample (134 countries).
- 4 See Nunnally (1978).
- 5 Becker et al. (2017); Paruolo et al. (2013); Saisana et al. (2005), (2011); Saisana & Saltelli (2011); Saltelli et al. (2008); Vértésy (2016); Vértésy & Deiss (2016).
- 6 The Expectation-Maximization (EM) algorithm (Little & Rubin, 2002) is an iterative procedure that finds the maximum likelihood estimates of the parameter vector by repeating two steps: (1) The expectation E-step: Given a set of parameter estimates, such as a mean vector and covariance matrix for a multivariate normal distribution, the E-step calculates the conditional expectation of the complete-data log likelihood given the observed data and the parameter estimates. (2) The maximization M-step: Given a complete-data log likelihood, the M-step finds the parameter estimates to maximize the complete-data log likelihood from the E-step. The two steps are iterated until the iterations converge.
- 7 Munda (2008).
- 8 Saltelli & Funtowicz (2014).
- 9 As already mentioned in the uncertainty analysis, about 93% of the simulated median ranks for the GTCI are fewer than two positions away from the reported 2021 rank—this percentage drops only to 87% in the Input sub-index and 84% in the Output sub-index.
- 10 Caution is needed when drawing inference on the relative standing of Tajikistan vis-a-vis other countries because of the very wide range of the confidence intervals—30 positions in the GTCI Output sub-index.

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CHAPTER 3

Cities' Talent Competitiveness in 2021: What Differences Did COVID Make?

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Portulans Institute

In 2020–2021, cities emerged as frontline players in efforts to fend off a global and deadly virus. As many nation states seemed to hesitate between various containment and mitigation strategies, local authorities took action at sub-national levels. Mayors were often the leaders in adopting city-wide measures regarding confinement and quarantine measures, sometimes going against national authorities. When vaccines started to become available, national authorities regained part of their leadership but cities kept vital roles in organising vaccination centres.

TALENT-RELATED EFFECTS OF COVID ON CITIES

The key trends identified for national economies (see Chapter 1) have also affected cities, but in different ways.

Whether we consider cities' talent strategies from the point of view of limitations to travel or the growing importance of online and virtual meetings and cooperation, cities have reacted in vastly different ways, depending on their political, economic,

and sometimes geographic environment. In many cases, this unprecedented situation has led to a significant reordering of local and national priorities in the face of multiple emergencies (sanitary, economic, social) and limited resources.

Cities Have Not Been Isolated from the Emergence of New National Constraints

As described earlier in this report, lockdown measures have contributed to the closing of national borders and have produced massive disruptions in international travel. Although cities across the world have been affected by such changes in widely different proportions, all of them have had to adapt to the new challenges (and sometimes to the opportunities) that these changes have raised.

It is important to note that travel bans have often been implemented at the local level with as much (if not more) stringency as they have at the national level. Many cities have also

The authors are grateful to Anna Henry (Portulans Institute) for valuable input and background research used in this chapter.

been subject to cordoning measures (like the city of Wuhan at the beginning of the pandemic), which literally isolated them from the rest of the world.

One of the visible consequences of lockdown measures (which were both more stringent and overall more difficult to bear in cities than in rural or less populated areas) has been the physical movement of workers and talent away from cities. What was still seen in the middle of 2020 as a temporary (pendular) migration is now taking on the characteristics of a more permanent shift, away from city centres.

Depending on their economic structure, and on their specific reliance on inflows and outflows of goods, services, and people, cities around the world have been affected differently. In a recent article, *The Economist* underlined how metropolises as different from one another as London, Paris, and Tokyo had to face challenges of different amplitudes from an economic activity point of view (see Figure 1). The same article also indicated that ‘As national economies come back to life, cities are lagging seriously behind’.¹

Whether this centrifuge movement benefitted suburban areas (as *The Economist* suggests) or less populated areas in rural or touristic parts of the countries studied, the result remains the same: those workers who could pursue their activities at a distance (by choice or by obligation) have discovered new ways to balance their lives between work, family, and transport, and a significant proportion of them are not going back to their old habits. City centres are the first clear victims if this shift, but they may not be the only ones.

As COVID measures started to expand in space and time, daily life also began to look different in many cities around the world. Large portions of office buildings have often been reallocated to shared spaces, where living and working quarters mix. Mobility has been transformed as bicycles and other means of ‘soft’ mobility started to outnumber trucks and vans to deliver meals and goods to individual city residents, as opposed to larger deliveries to stores and restaurants that required motorised transport.

Reordering Priorities

In 2020–2021, states and cities around the world have undergone severe budget shortfalls. In many cases, central governments

have had to step in to provide aid to help local communities face rising public health emergencies (for instance, by transferring COVID patients from highly affected to less affected cities and regions) and growing expenses (including vaccine distribution), record unemployment, and dwindling tax revenues. On their side, like many central governments, cities and regions had to postpone or reduce their spending projections on infrastructure and education, to lay off workers, and to draw down or exhaust whatever ‘rainy day’ funds they could use.² As resources often dropped in dramatic proportions, large infrastructure plans have been delayed or postponed indefinitely.

Faced with unprecedented levels of indebtedness and increasingly insistent signals that central government support would end soon, cities are now being held responsible for leveraging private sector funding where appropriate, encouraging companies (including small and medium-sized enterprises, or SMEs) to enhance their resilience. As a report from the Organisation for Economic Co-operation and Development (OECD) notes, this often takes the shape of preparing business continuity plans that consider the ‘risk of health crises and systemic shocks, and foresee, amongst others, flexible and remote working and digitalisation’. Many cities also began to explore innovative participatory budgeting for citizens to have a say on how public funds are spent ‘in particular for programmes and infrastructure projects pursuing inclusive objectives...’.³

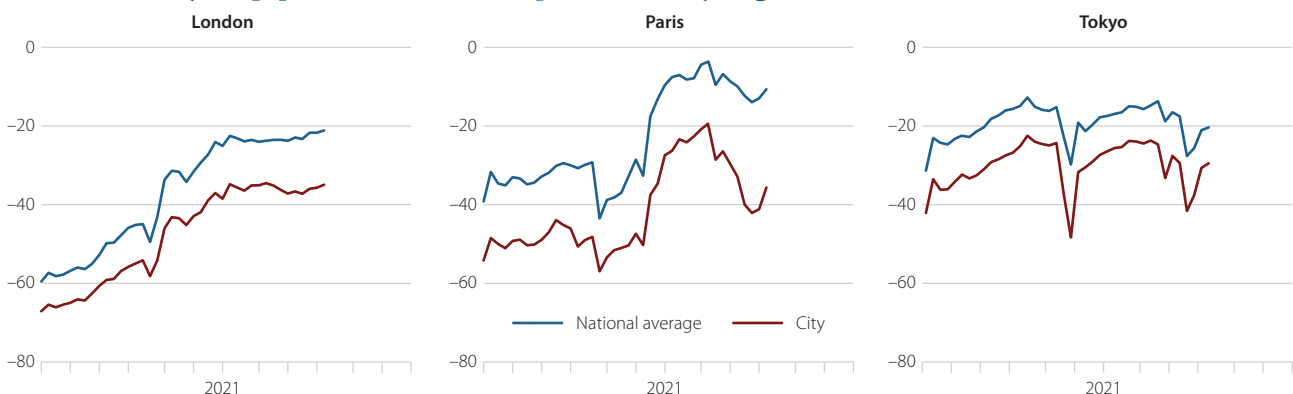
As highlighted in *The Economist*’s article mentioned above, ‘mayors are shifting their focus from attracting firms to attracting residents, and thus the property and consumption taxes they bring, by improving quality of life’.⁴ New green spaces (parks and recreational facilities) and extended car-free zones are part of this trend, as well as efforts to enhance connectivity, including through 5G.

Even in the Face of the Pandemic, Cities’ Agility and Innovation Prevailed

Altogether, cities around the world proved agile and imaginative in mobilising available talents to identify and implement solutions to unprecedented and complex situations (see Box 1).

In 2020–2021, faced with massive and unexpected challenges, cities around the world confirmed that their agility and

Figure 1
Economic activity and population in three metropolises, January–August 2021



Source: Authors, based on *The Economist* (2021), which uses Google data.

BOX 1: CITIES STEP UP

Cities are agile and particularly well situated to understand the needs of their populations. They have stepped up in a multitude of ways during the pandemic when federal measures are insufficient. This box presents a few of them, based on OECD (2020) case studies.

Barcelona (Spain)'s recovery project, *Barcelona Never Stops*, is a series of measures to regenerate the city's economic and social texture. It aims to make Barcelona more resilient by promoting new business models, encouraging local consumption, protecting and boosting employment, and relaunching the city's international reputation. It addresses grants and funding, capacity building, promotion and communication, economic instruments, and adapting existing legislation.

Bilbao (also in Spain) approved *Bilbao Aurrera*, a plan with more than 50 measures funded by the City Council with a budget of €15 million to address social cohesion (€2.2 million), economic recovery and employment (€11.5 million), and culture (€1.3 million). The plan is expected to lower certain taxes and fees for a total of €3 million; Bilbao will create €2.5 million in bonds to stimulate local commerce, hotels, and tourism.

In June 2021, **Chicago** (United States) presented a vision and guidelines to reopen its economy. US\$8.5 billion will be invested to modernise O'Hare Airport and accelerate zoning and planning approval for major infrastructure projects. The city is also pushing to support companies seeking to build local data centres.

Copenhagen (Denmark) is creating roughly 50–100 jobs in city administration by accelerating the pace of municipal construction projects.

Dublin (Ireland) embarked on a 'living' framework of mobility proposals with the National Transport Authority to provide additional space for pedestrians, safe cycling facilities, and various bus routes. This enhanced mobility is expected to boost employment.

Frankfurt (Germany) is promoting local shops with a campaign that advertises local businesses and restaurants to boost support and encourages citizens to take advantage of the numerous delivery options. The city aims to maintain employment rates in endangered sectors such as tourism.

Ghent (Belgium) created a special budget line allowing local schools to tailor assistance during the end of the 2020–2021 school year and during the summer holidays to prepare for the next one. During the Easter holidays, the city provided and coordinated childcare for about 600 vulnerable children in 51 locations. Together with its IT-support Digipolis Ghent, it made laptops, tablets, and relevant content available at no charge to vulnerable resident pupils.

Houston (United States) established the *Greater Houston Business Recovery Center* to provide guidance on policy and financing tied to recovery programmes. The business-led recovery initiative emphasises job creation.

In May 2021, **Madrid** (Spain)'s city council lowered taxes

to promote the recovery of commerce, leisure, hospitality, and culture. This will lead to a drop of more than €66 million in the city's business taxes.

In **Malmö** (Sweden), previous crises and shocks had strengthened its resilience with measures such as expanded green spaces to mitigate flooding and efforts towards better food security. It is now adding resilience criteria to planning development and municipal procurement processes.

Mexico City (Mexico) decided to invest US\$1 billion to create some 1 million new jobs in construction. This will cover public infrastructure and social housing to help redevelop 13 urban corridors with housing projects in areas with good transport connections. Such investment is considered to have a multiplier effect, including by creating indirect jobs.

In France, **Nice** decided to support its economic recovery with a '*pact for employment*'. In Spring 2021, an additional €3.5 million was budgeted for the most vulnerable entrepreneurs and public authorities, along with strategic regional SMEs. To strengthen its economic attractiveness, the city's programme targets the most strongly impacted sectors, such as tourism and trade, but also industry and innovation.

Paraty (Brazil)'s COVID-19 economic recovery plan includes a municipal programme to support informal workers, a specific project for street commerce, and an incentive programme based on public-private partnerships. Mid-term measures focus on decentralising the tourism sector; long-term measures involve renovating and refurbishing public areas and improving the sewage network where it is absent.

In Latvia, **Riga** designated one day a week as a remote working day with webinars on city planning documents rather than in-person meetings.

San Francisco (United States)'s *COVID-19 Economic Recovery Task Force* is designing a strategy to guide the city's economic recovery efforts in three main areas: (1) jobs and business support for SMEs, (2) vulnerable populations, and (3) economic development. Research was conducted through interviews, focus groups, town halls, and surveys.

Tirana (Albania) has developed digital learning platforms and uploaded all classes online onto a free platform, broadcasting them on national television.

Tokyo (Japan)'s recovery roadmap includes guidelines for businesses to prevent the spread of viruses, accompanied by subsidies for SMEs to invest in appropriate facilities and equipment. In parallel, the city set up a programme matching hotels that provide teleworking facilities with employees who cannot telework at home.

Vienna (Austria) plans to build seven new municipal housing sites with 1,000 apartments. The projects aim to provide pedestrian zones, green spaces, and sports and cultural facilities within walking distance of each other. Construction is planned to begin in 2022.

Vilnius (Lithuania)'s plan for recovery, *Vilnius' Plan 4x3*, includes aid measures focused on individuals, businesses, and culture; it prioritises culture and employment.

capacity to organise rapidly around innovative strategies could be a force to be reckoned with. Local talents, combined with international expertise, have been a core asset of approaches that were sometimes ahead of those of central governments.

What will the main components of post-COVID talent strategies of cities be? It is still too early to say which of the approaches adopted (sometimes in the urgency of the moment) will prevail in the coming years. It is becoming clear, however, that **green & digital strategies** will guide many efforts, and that smart cities will constitute a kind of *avant-garde* of changes to come. How *smartness* will be defined in the post-COVID era remains to be seen, but it seems likely that it will be more people-centric and more talent-focused than it was before the pandemic.

What Do the Data Tell Us?

This year's version of the GCTCI model follows to a large degree the structure and methodology used in previous years. The key difference between the data collected and analysed this year and the data from previous GCTCI reports is the more consistent approach of treating cities as functional urban areas that encompass both the city proper and its surrounding commuting zone. This more comprehensive definition of cities is consistent with GCTCI's objective of considering them to be integrated and dynamic local labour markets that act as magnets for talent, and that allow that talent to grow and prosper.

The 2021 GCTCI model and its structure, as well as the resulting data and rankings, are described in greater detail below. As in previous editions of the index, methodological improvements explain a non-negligible part of the changes in rankings from one year to the next.

Key Findings Emerging from the GCTCI 2021

All these *caveat emptors* considered, and in addition to the detailed findings described later in this chapter, some main findings emerge from this year's GCTCI data and related analyses:

- Largely because of data availability, the geographical distribution of GCTCI cities this year continues to be dominated by the United States and Europe. This year's most talent-competitive city is San Francisco. Two other US cities also make it into the top 10 (Boston and Seattle), while the remaining 7 are located in Europe (Geneva, Zurich, Luxembourg, Dublin, London, and Helsinki) and Asia (Singapore).
- A comparison of GTCI rankings and GCTCI rankings confirms the clear (and expected) link between talent competitiveness at the country level and at the city level. Hence it is all the more remarkable to see that cities follow distinct paths towards talent competitiveness: many US cities have high ranks in enabling talent, while many northern European cities do well in factors that retain talent.
- Altogether, cities are dynamic actors in their own right and have the power to influence their talent competitiveness

with social, cultural, and economic tools. In a number of cases, cities outperform the countries that host them. For instance, Bengaluru has been successful in creating strong innovation linkages among public-private-academic actors, which has had a positive impact on the city's talent pool and the attraction of FDI, among others.

- As already underlined last year, cities with a proven ability for future readiness tend to dominate the rankings. Activity in fields such as Artificial Intelligence (AI) or advanced technologies (including fintech, healthtech, and medtech) clearly favour the talent performance of cities such as San Francisco, Boston, and Singapore, and to a lesser but still significant extent that of Luxembourg, Geneva, Dublin, and Zurich.
- Quality of life remains a strong advantage in the global competition for talents. Medium-sized cities such as Geneva, Copenhagen, and Dublin benefit from their high scores in areas such as environment, safety, and social/professional binding.
- International connectivity continues to be an even stronger advantage for cities competing for highly mobile talents. Ubiquitous broadband and good availability of international transport hubs (airports, railways, and roadways) are key tools to the productivity of local and foreign talents, and to allowing cities to become hubs by attracting visitors and conferences, for example.
- Small cities show a growing ability to develop innovative solutions to grow, attract, and retain talents. This ability is globally amplified as exchanges of experiences and meetings continue to grow in number among such cities. In many countries, 'secondary cities' have taken advantage of this additional agility to outperform their larger competitors, sometimes by grabbing 'niche talent'.

In addition, analysis of the GCTCI 2021 data suggests several ways in which cities can spur talent competitiveness. Three key messages that emerge from this year's results and analyses are the following:

COVID Strengthened the Talent Advantages of Larger Cities

Compared with previous editions of GCTCI, this year's global talent competitiveness rankings include an even higher proportion of large cities from rich countries (the United States, Switzerland). As confinement strategies encouraged more online interaction and working from home, cities benefitting from better infrastructure (especially broadband access) were faster and more efficient at leveraging their talent advantage. In cities where a pre-existing culture of teleworking was already strong (e.g., San Francisco and Boston), that advantage was even reinforced (see Box 2). To some extent, COVID and its lockdown and travel ban consequences also reduced the relative disadvantage

BOX 2: SAN FRANCISCO AND THE BAY AREA AS A TALENT HUB: A USER/PRODUCER POINT OF VIEW

An interview with Peter Zemsky, INSEAD's Deputy Dean and Dean of Innovation, and Eli Lilly Chaired Professor of Strategy and Innovation

Inaugurated in early 2020, INSEAD's facilities in San Francisco (known as 'The Hub') marks the school's first permanent facility in Northern America. By opening its doors in San Francisco, INSEAD's intention was to tap into the cutting edge of tech, venture finance, entrepreneurship, and sustainability in the Bay Area. Historically, INSEAD has opened locations at the right place at the right time—in centres of growth and innovation. The 1st place ranking of San Francisco in this year's GCTCI seems to confirm that, once again, the school was well inspired in its choice of location. We asked Peter Zemsky, who has overall responsibility of the San Francisco Hub at INSEAD, about his views on how INSEAD had been attracted to San Francisco, and how the Bay Area's position as a leader in talent competitiveness may evolve in the future.

What were the main reasons that led INSEAD to choose San Francisco as the location for its Northern American hub?

Peter Zemsky:

Even as tech has gone global in a big way over the last five years, we saw a significant advantage to having a presence in the Bay Area. As the original and still leading international business school—the mission of the school is to connect diverse talent globally—we see ourselves as uniquely positioned to build bridges between tech ecosystems.

A founding value of INSEAD is entrepreneurial spirit. Today, our alumni stand out as tech innovators and entrepreneurs. INSEAD alumni have raised over US\$10 billion in venture capital over the last decade. In a recent ranking of European Universities based on alumni startups and unicorns using data from Dealroom, INSEAD was number two, behind only the University of Cambridge.

We believe that by being more active in the San Francisco and Bay Area ecosystem we have even more to offer when we engage in London, Paris, and Singapore.

How did COVID-related measures affect the activities of the Hub? What kind of role did you see the city of San Francisco play in that unprecedented situation?

Peter Zemsky:

It has been fascinating to watch how Bay Area companies have adapted to the pandemic disruption. The agility and creativity of the leadership talent is impressive. One of my favorite new case studies from 2021 looks at how a unicorn in the travel space—a classic digital disruptor—managed to

enhance its valuation even as its core revenues collapsed through an impressive pivot into payments.

Given the prominent role of INSEAD as a talent producer, what do you think the key takeaway of your experience in San Francisco has been so far? Can it be emulated in other parts of the world?

Peter Zemsky:

We have seen an enduring interest in the Bay Area from the global INSEAD community. We are counting the days until the US relaxes its travel ban and we can dramatically scale up our current activities in connecting INSEAD tech and entrepreneurial talents with opportunities for exchange and learning in the original and still-leading tech ecosystem.

One of the important roles of an instrument like the GTCI is to assess talent performance on a worldwide scale. This year again, we see that the dynamics of cities and clusters is constantly offering new success stories about the ability of local ecosystems to attract and retain talent. We believe that business schools and universities have a key role to play in helping such local ecosystems to also produce the talent they need. Our capacity to do so is naturally enhanced when we have a local presence.

How do you see San Francisco evolving as a talent hub in the next five years?

Peter Zemsky:

Our view is that that the Bay Area will sustain its position as a pre-eminent tech hub. Given the high fixed costs of tech innovation, value creation is fundamentally about scaling, and this depends in turn on two factors: capital and talent. This creates tremendous momentum in leading tech ecosystems, whether in the Bay Area, London, or Toronto. In part, money tends to get reinvested locally. More importantly, successful ventures spin off the critical talent with experience in scaling an enterprise. The best place to learn about rapid and effective scaling is still the Bay Area.

That said, tech and entrepreneurship is far too big to be contained in any one ecosystem. Just as the industrial revolution had numerous differentiated centres (e.g., Detroit for automotive, New York for finance, Chicago for meat and commodity processing), the digital age is seeing the emergence of a wide variety of specialised ecosystems. The Bay Area will benefit from taking an increasingly global perspective on learning and partnering.

(underlined in last year's GCTCI) that larger cities typically face with regard to the Retain pillar of the GTCI.

COVID Increased the Importance of National Policies at the City Level

In all parts of the world, the pandemic affected cities in different ways. With the (relatively rapid) adoption of massive recovery packages, central governments re-took centre stage. In addition, measures regarding lockdown, working regulations, and health-related limitations to travel and local commuting (see above) were often taken at the national level, limiting the ability of cities to pursue or implement their talent strategies with the same degree of autonomy as previously. As a result, a number of them had to scale down their ambitions in that respect (especially smaller cities), and many local talent initiatives have been postponed or even cancelled altogether. Competition for available funds did not often play in favour of such initiatives, as health and sanitary emergencies needed addressing.

COVID Showed, However, that Cities Can Pursue Original Strategies

In spite of the overall trend towards 're-centralisation', the examples mentioned earlier of cities taking innovative steps to address COVID-related challenges (sometimes in directions different from the ones selected by central government authorities) has also spilled over into the talent arena. For example, because many international meetings and conferences were being switched from face-to-face to virtual, smaller cities were able to attract high-level events.

Cities' Talent Performance Will Increasingly Depend on How 'Smart' They Want To Be

As a post-COVID 'new normal' is shaping up, it is becoming clear that those organisations (including cities) that managed to get a head start in digital transformation will be sprinting ahead in terms of talents. The ability of a city to become smarter will therefore continue to be a strong advantage in terms of talent competitiveness, as already underlined in previous editions of the GTCI report. However, experiences gathered across the wide array of cities covered by the GCTCI indicates that there is more than one way to be a smart city. The COVID crisis has given more visibility to notions such as resilience, but also to citizens' autonomy (especially in the face of tracing and surveillance, including through the use of 'health passes'). In this regard, cities are also likely to pave the way in exploring new ways to develop smartness beyond the sole realm of technology.

Architecture of the GCTCI Model

The underlying GCTCI model for the 2021 index remains the same as last year's. This means that the methodology is similar to that of the GTCI and that it is based on an input-output framework. Indeed, the input-related pillars are identical to the GTCI model in that they measure how cities (1) Enable, (2) Attract, (3) Grow, and (4) Retain talent. The output-related pillar is referred to as *Global Knowledge Skills* and focuses on talent impact and the degree of internationalisation of cities.

The GCTCI model contains 16 indicators in total, with each pillar including at least three variables (the Retain pillar has four variables). For this year's edition, there has only been one change in the variables that populate the index: indicator 4.4 Affordability has been replaced with an indicator that measures happiness. The reason for dropping affordability is twofold. First, the values for a large number of the cities included in the index had to be proxied by national estimates for the GCTCI 2019 and no new reliable estimates at the city level have been found since then. Second, there are no updated data for those cities that had values in last year's index. The new indicator on happiness refers to the Gallup World Poll and the Gallup US poll question regarding life evaluation.⁵ Figure 2 presents the architecture of the GCTCI 2021 model and the indicators populating it.

Data sources for populating the GCTCI 2021 include the following:⁶

- Eurostat has been frequently used for European Union (EU) countries.
- The American Community Survey has been frequently sourced for the United States.
- Publicly available global rankings and data sets have been used for all cities for certain variables or to obtain specific values (e.g., UN-Habitat, Forbes Global 2000, fDi Markets, and the TomTom Traffic Index).
- Local sources, including government agency websites, reports, and related press releases, have been consulted to obtain and/or verify specific values.

Usually, missing values have been denoted 'n/a'. For three indicators, it has been deemed that proxied estimates were the better option. In the case of indicator 1.3 Ease of doing business, which itself is based on the largest cities, the values have been applied to smaller cities within the country or sub-national Doing Business reports have been used to calculate estimates. For indicator 4.1 Safety, regional or national estimates have been used for 15 cities. In the case of 4.4 Happiness, city-level data were not available for 67 cities; these were therefore proxied by national estimates from the same source.

This year again, the computation of the GCTCI involved seven main steps. First, data were collected at the city level. Second, data not available at the city level were either kept as missing (designated 'n/a') or, where needed and appropriate, were proxied by regional or national values or by mapping comparable sources. Third, the data set was tested for missing data points using the double threshold approach. More specifically, each city had to have data points for at least 50% of all variables and for at least two indicators per pillar, while each variable had to include observations for at least 50% of all cities. Fourth, using the same methodology as the GTCI, the presence of outliers in the data set was tested and, where needed, the outliers were treated (see Appendix I for details on the detection and treatment of outliers). Fifth, the resulting data set was normalised. Sixth, pillar scores

Figure 2

GCTCI 2021 model and indicators

and ranks were computed by averaging their respective variables. Seventh, the overall GCTCI score and rank was calculated by averaging the scores of the five pillars.

The Definition of a City

As opposed to countries (barring a few exceptions), the definition of what constitutes a *city* presents a considerable challenge. For the purpose of this year's edition, it is the *functional urban area* (FUA) that was used, as developed and defined by the OECD and the European Commission (EC). The FUA encompasses both the core city and its surrounding commuting zone, which results in an urban area that is an integrated labour market.⁷ The relevant OECD and EC webpages include files with detailed information on what municipalities are part of any given FUA.⁸ However, the FUAs covered in these sources are restricted to OECD and EU members. For cities in other countries, the GCTCI primarily looks for data relevant at the metropolitan level.

Even when the boundaries of a city are clearly delineated, the challenge of identifying reliable data remains. Again, the OECD and EC provide much data for the FUAs that they cover, but there are still GCTCI indicators for which these sources do not provide data. In these cases, data have been collected in line with the FUA definitions and, for other countries, the metropolitan areas (e.g., in the collection of patent data). In other cases, values at the municipality level have had to serve as proxied estimates for the cities in question (e.g., data on FDI flows).

City Coverage

This fifth edition of the GCTCI offers the same global coverage as last year, namely 155 cities from 75 economies around the world

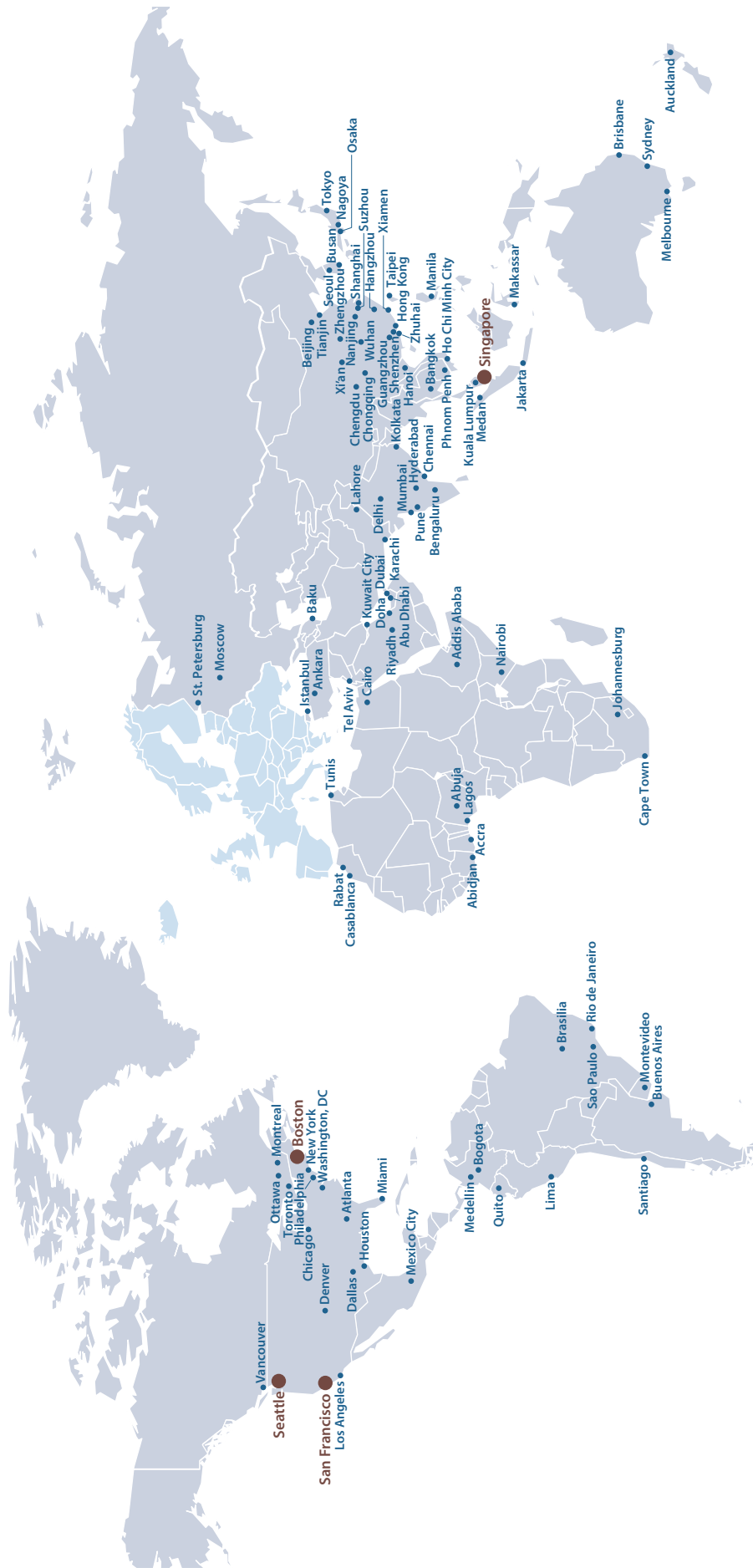
(Figure 3). However, the definition of a city as an FUA has been made more consistent, with the implication that cities such as Gurgaon (India) and Yokohama (Japan) have disappeared from the GCTCI rankings because they form part of the urban regions of Delhi and Tokyo, respectively. The two new cities that have been included are Indian metropole Chennai and Chinese sub-provincial city Xiamen.

As a result, the GCTCI coverage remains largely European (61 cities out of 155; Figure 4), primarily because of the greater availability of high-quality data that stem from the work produced by Eurostat in collecting data at the city level. The geographic breakdown this year for non-European cities is as follows: 9 cities in Central and Southern Asia; 36 in Eastern, Southeastern Asia and Oceania; 11 in Latin America and the Caribbean; 13 in Northern Africa and Western Asia; 17 in Northern America; and 8 in Sub-Saharan Africa.

As in previous years, the cities included in the GCTCI represent a mix of large and small urban centres, some of which are national capitals or leading urban centres while others could be seen as secondary hubs or even remote locations. The cities were identified on the basis of their reputation and growing footprint in attracting global talent rather than as a function of their size or national-capital status. The availability and comparability of data obviously also played a key role in this selection.

As underlined in previous editions of the GCTCI, Europe is conspicuously over-represented in the coverage of the index. This is due to two main factors: the remarkably high 'urban density' of the continent (the result of a combination of geographical and historical factors) on one hand, and the high quality and coverage of city-related data (largely a result of the EC's

Figure 3
Cities included in GTCI 2021*



Note: Highlighted cities are those in the top 10 of this year's GTCI.
 *European cities are displayed separately (see Figure 3 below).

Figure 4

A closer look at European cities

Note: Highlighted cities are those in the top 10 of this year's GCTCI.

statistical efforts of the last few decades). This year's methodological change (harmonising cities' definitions by using FUAs) has clearly played against cities such as New York and Paris because it takes into account the commuting zone outside the talent hubs traditionally located in very central parts of the city. This means that some cities are not primarily analysed based on the firms and organisations it hosts, but also by the wider talent pool that it attracts, grows, and retains—whether in the city centre or in surrounding areas. Analysing the labour market of the whole urban area has the added advantage of allowing for better like-for-like comparisons among cities of various sizes and structures.

GCTCI DETAILED FINDINGS

The top-ranked city in GCTCI 2021 is San Francisco, which more or less refers to the Bay Area (Table 1). The Swiss cities of Geneva and Zurich occupy 2nd and 4th place, respectively, while Boston squeezes in between them in the 3rd position. The remaining cities in the top 10 include Singapore (7th), Seattle (8th), and four more from Europe (Luxembourg, 5th; Dublin, 6th; London, 9th; Helsinki, 10th).

Four of the cities that are in this year's top 10 were also there in the GCTCI 2020 (San Francisco, Boston, Singapore, and

London). A number of significant differences exist, however, between the 2020 top GCTCI rankings and those of 2021. Most notably, last year's most talent-competitive city, New York, is ranked 17th this year. This is primarily a reflection of methodological changes, including the approach to how cities are defined that was discussed above.

Yet, overall, the differences between this year's rankings and those of last year should not be exaggerated. For one thing, several cities have retained similar ranks, including Copenhagen (11th, up from 15th), Stockholm (14th, up from 18th), and Amsterdam (16th, up from 20th). For another, the regional locations of the cities in the various quartiles follow very similar patterns. For instance, **the top quartile of GCTCI 2021 (i.e., cities ranked 39th or better)** includes 17 cities in Europe, 17 in Northern America, 3 in Australia, and 2 in Eastern and Southeastern Asia. All are located in high-income economies.

The second quartile (cities ranked between 40th and 78th) is slightly more diverse. The majority of these cities are in Europe (26 in total), while the rest are located in Eastern and Southeastern Asia (8 cities), Western Asia (4), and Oceania (1). Three of these cities are in China (Beijing, 64th; Nanjing, 76th; Shanghai, 77th). They are also the highest-ranked cities located

Table 1
Global Cities Talent Competitiveness Index rankings and overall scores

RANK	CITY	OVERALL SCORE	RANK	CITY	OVERALL SCORE	RANK	CITY	OVERALL SCORE	RANK	CITY	OVERALL SCORE
1	<i>San Francisco (United States)</i>	76.3	40	Gothenburg (Sweden)	53.0	79	Riga (Latvia)	42.5	118	Skopje (North Macedonia)	31.2
2	Geneva (Switzerland)	71.0	41	<i>Auckland (New Zealand)</i>	52.9	80	Tallinn (Estonia)	42.4	119	Lima (Peru)	30.8
3	<i>Boston (United States)</i>	70.6	42	Vienna (Austria)	52.2	81	Bucharest (Romania)	42.2	120	Minsk (Belarus)	30.5
4	Zurich (Switzerland)	70.5	43	Madrid (Spain)	52.1	82	<i>Sfenzhen (China)</i>	42.1	121	<i>Mumbai (India)</i>	30.2
5	Luxembourg (Luxembourg)	68.3	44	Warsaw (Poland)	51.9	83	Turin (Italy)	41.9	122	<i>Jakarta (Indonesia)</i>	30.0
6	Dublin (Ireland)	67.6	45	Lisbon (Portugal)	51.2	84	Bratislava (Slovakia)	41.6	123	<i>Johannesburg (South Africa)</i>	29.9
7	<i>Singapore (Singapore)</i>	67.2	46	<i>Tokyo (Japan)</i>	50.8	85	Moscow (Russia)	41.5	124	<i>Casablanca (Morocco)</i>	29.8
8	<i>Seattle (United States)</i>	65.8	47	<i>Abu Dhabi (United Arab Emirates)</i>	50.7	86	Zaragoza (Spain)	41.2	125	<i>Hyderabad (India)</i>	29.7
9	London (United Kingdom)	65.5	48	Antwerp (Belgium)	50.2	87	<i>Kuala Lumpur (Malaysia)</i>	41.1	126	<i>Pune (India)</i>	29.6
10	Helsinki (Finland)	65.5	49	Hanover (Germany)	49.9	88	<i>Hangzhou (China)</i>	41.1	127	<i>Bogota (Colombia)</i>	28.8
11	Copenhagen (Denmark)	65.4	50	The Hague (Netherlands)	49.6	89	Marseille (France)	41.0	128	<i>Manila (Philippines)</i>	28.7
12	<i>Washington, DC (United States)</i>	65.3	51	<i>Taipei (Taiwan)</i>	49.5	90	Brno (Czech Republic)	40.8	129	<i>Ho Chi Minh City (Viet Nam)</i>	28.5
13	<i>Atlanta (United States)</i>	63.7	52	Milan (Italy)	49.5	91	Wuhan (China)	40.2	130	<i>Makassar (Indonesia)</i>	27.9
14	Stockholm (Sweden)	63.5	53	Bologna (Italy)	49.1	92	Suzhou (China)	39.8	131	<i>Baku (Azerbaijan)</i>	27.6
15	Munich (Germany)	63.0	54	<i>Seoul (Korea, Rep.)</i>	49.0	93	<i>Busan (South Korea)</i>	39.6	132	<i>Medellin (Colombia)</i>	27.5
16	Amsterdam (Netherlands)	62.0	55	<i>Tel Aviv (Israel)</i>	48.9	94	Belgrade (Serbia)	39.6	133	<i>Montevideo (Uruguay)</i>	27.4
17	<i>New York (United States)</i>	61.0	56	<i>Osaka (Japan)</i>	48.8	95	Sofia (Bulgaria)	38.1	134	<i>Rio de Janeiro (Brazil)</i>	27.1
18	<i>Denver (United States)</i>	60.9	57	<i>Doha (Qatar)</i>	48.4	96	<i>Zhuhai (China)</i>	37.9	135	<i>Nairobi (Kenya)</i>	26.9
19	<i>Miami (United States)</i>	60.5	58	Frankfurt (Germany)	48.2	97	Valetta (Malta)	37.7	136	<i>Rabat (Morocco)</i>	26.2
20	<i>Hong Kong (SAR, China)</i>	59.9	59	Lyon (France)	48.0	98	<i>Guangzhou (China)</i>	37.3	137	<i>Brasilia (Brazil)</i>	26.0
21	<i>Toronto (Canada)</i>	59.5	60	Rotterdam (Netherlands)	47.9	99	<i>Bangkok (Thailand)</i>	37.3	138	Kiev (Ukraine)	25.9
22	Düsseldorf (Germany)	58.4	61	Ljubljana (Slovenia)	47.7	100	<i>Xiamen (China)</i>	36.9	139	<i>Zhengzhou (China)</i>	25.5
23	<i>Chicago (United States)</i>	58.0	62	Cardiff (United Kingdom)	47.6	101	St. Petersburg (Russia)	36.1	140	<i>Medan (Indonesia)</i>	25.1
24	Oslo (Norway)	57.8	63	<i>Dubai (United Arab Emirates)</i>	47.5	102	Athens (Greece)	36.0	141	<i>Kolkata (India)</i>	24.4
25	<i>Houston (United States)</i>	57.7	64	<i>Beijing (China)</i>	47.4	103	<i>Buenos Aires (Argentina)</i>	35.6	142	<i>Chennai (India)</i>	24.3
26	<i>Vancouver (Canada)</i>	57.7	65	Berlin (Germany)	47.3	104	<i>Riyadh (Saudi Arabia)</i>	35.6	143	<i>Quito (Ecuador)</i>	23.6
27	<i>Edinburgh (United Kingdom)</i>	57.5	66	Hamburg (Germany)	47.0	105	<i>Istanbul (Turkey)</i>	35.4	144	<i>Tunis (Tunisia)</i>	23.4
28	<i>Melbourne (Australia)</i>	57.4	67	Krakow (Poland)	46.8	106	<i>Tianjin (China)</i>	35.3	145	<i>Ha Noi (Viet Nam)</i>	23.4
29	<i>Sydney (Australia)</i>	56.7	68	Kiel (Germany)	46.6	107	<i>Santiago (Chile)</i>	35.1	146	<i>Lagos (Nigeria)</i>	23.1
30	<i>Philadelphia (United States)</i>	56.7	69	Birmingham (United Kingdom)	45.8	108	<i>Kuwait City (Kuwait)</i>	35.1	147	<i>Delhi (India)</i>	22.7
31	<i>Los Angeles (United States)</i>	56.6	70	Vilnius (Lithuania)	45.8	109	<i>Chengdu (China)</i>	34.8	148	<i>Accra (Ghana)</i>	22.6
32	Paris (France)	56.0	71	Prague (Czech Republic)	45.4	110	Zagreb (Croatia)	34.4	149	<i>Phnom Penh (Cambodia)</i>	22.3
33	<i>Dallas (United States)</i>	55.5	72	<i>Nagoya (Japan)</i>	45.4	111	<i>Xian (China)</i>	33.8	150	<i>Abuja (Nigeria)</i>	21.7
34	<i>Brisbane (Australia)</i>	55.3	73	Nantes (France)	45.1	112	<i>Mexico City (Mexico)</i>	33.2	151	<i>Abidjan (Côte d'Ivoire)</i>	20.4
35	<i>Montreal (Canada)</i>	55.1	74	Bilbao (Spain)	44.9	113	<i>Sao Paulo (Brazil)</i>	33.0	152	<i>Lahore (Pakistan)</i>	19.2
36	Barcelona (Spain)	53.9	75	Rome (Italy)	44.2	114	<i>Bangalore (India)</i>	31.9	153	<i>Addis Ababa (Ethiopia)</i>	17.4
37	Eindhoven (Netherlands)	53.9	76	<i>Nanjing (China)</i>	43.5	115	<i>Ankara (Turkey)</i>	31.8	154	<i>Cairo (Egypt)</i>	17.3
38	Brussels (Belgium)	53.7	77	<i>Shanghai (China)</i>	43.2	116	<i>Cape Town (South Africa)</i>	31.3	155	<i>Karachi (Pakistan)</i>	17.1
39	<i>Ottawa (Canada)</i>	53.5	78	Budapest (Hungary)	43.1	117	<i>Chongqing (China)</i>	31.3			

Note: Non-European cities are italicised. Colours indicate quartile and range from dark (the top quartile) to light (the bottom quartile).

in an upper-middle-income country. All the other cities in this quartile are located in high-income economies.

The third quartile (cities ranked between 79th and 117th) shows a greater variation with respect to both geographic location and income levels. It includes the best-performing cities from Latin America (Buenos Aires, 103rd; Santiago, 107th; Mexico City, 112th; São Paulo, 113th), from Central and Southern Asia (Bengaluru, 115th), and from Sub-Saharan Africa (Cape Town, 116th). The number of cities in Europe (15) slightly outnumbers those located in Eastern and Southeastern Asia (14). Apart from the regions mentioned, there are also 4 cities located in Western Asia (Riyadh, 104th; Istanbul, 105th; Kuwait City, 108th; Ankara, 114th). In terms of income groups, 14 of these cities are in high-income countries, 24 in upper-middle-income countries, and 1 (Bengaluru) in a lower-middle-income country.

The bottom quartile (cities ranked 118th and beyond) is the only quartile that features Northern African cities: Casablanca (124th), Rabat (136th), Tunis (143rd), and Cairo (154th). As for the other regions, we find eight cities from Eastern and South-eastern Asia and Central and Southern Asia, seven cities each from Latin America and Sub-Saharan Africa, three in Europe, and one in Western Asia (Baku, 131st). Most cities are found in lower-middle-income countries (25) and in upper-middle-income countries (11). In addition, this fourth quartile also features one city from a high-income country (Montevideo, 133rd) and one from a low-income country (Addis Ababa, 153rd).

Table 2 shows that the most talent-competitive cities often are among the best performers in individual pillars as well. For instance, five of the top-10 cities in the index are in the top 10 in two out of the five pillars of the GCTCI model. Two cities—Boston

and San Francisco—even appear among the top-10 cities in four and three pillars, respectively. Besides these seven cities, there are three cities outside the top 10 in the overall rankings that are among the best performers in two pillars: Copenhagen (11th altogether) is 6th in the Retain pillar and 9th in Skills; Denver (18th altogether) is 10th in Enable and 10th in Global Knowledge Skills, and Hong Kong (20th altogether) is 6th in Enable and 9th in Attract.

There appears to be a clear link between talent inputs and talent outputs—the pillar-level performances show that the cities that do well in Global Knowledge Skills also do well in one or more input-related pillars. Indeed, seven of the top-10 performers in the former pillar also feature in at least one of the latter pillars.

The fact that the four highest-ranked cities in the GCTCI are in Switzerland and the United States suggests that there is a high, positive correlation between the country index (GTCI) and the city index (GCTCI). Figure 5 illustrates that this is clearly the case by plotting country scores derived from the GCTCI against GTCI scores, where the former scores are estimated by computing average city scores by country. Conceptually, this is hardly surprising. Even though a city has its own dynamics and the power to influence its talent competitiveness, it does not exist in a vacuum and operates within a national environment that limits (and sometimes stimulates) what can be achieved. That said, it is equally clear that cities from the same countries differ in their ability to acquire, nurture, and benefit from talent. Local leadership and conditions do matter.

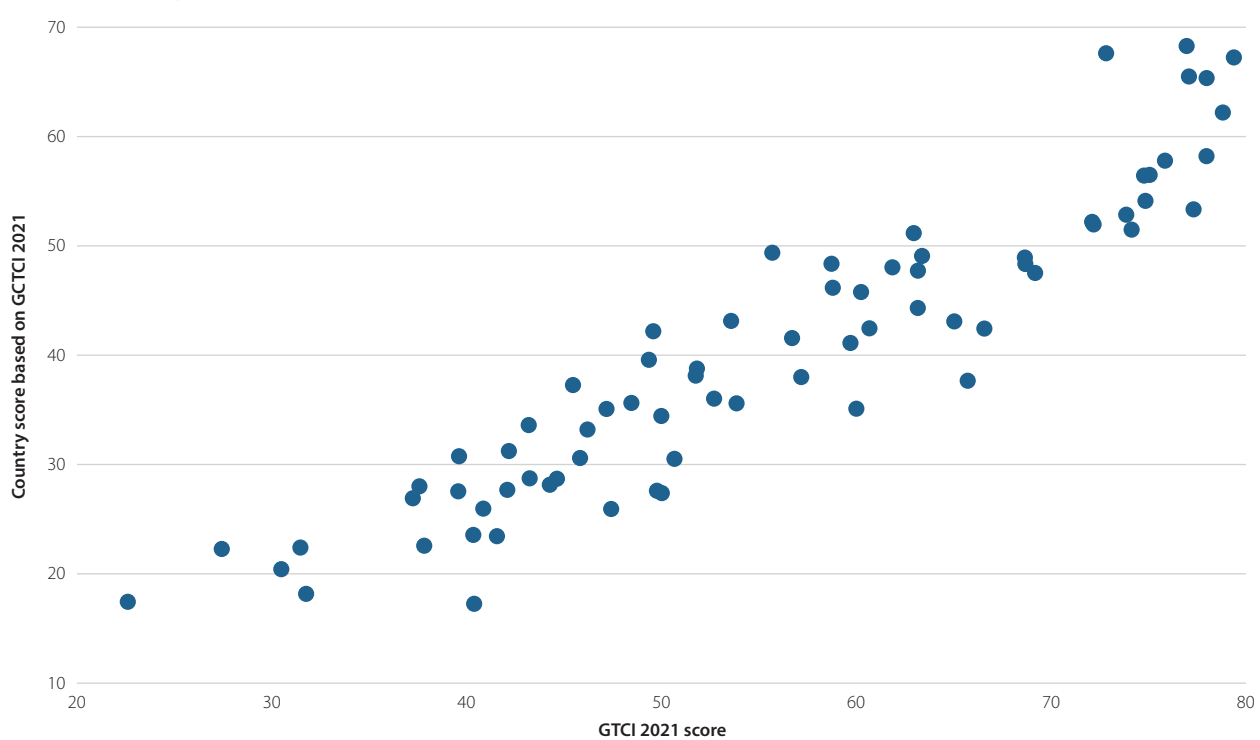
Details about the GCTCI rankings overall and by variable are presented in Annex 2 at the end of this chapter.

Table 2

Top 10 city rankings and scores, by GCTCI pillar

Pillar 1: Enable			Pillar 2: Attract			Pillar 3: Grow			Pillar 4: Retain			Pillar 5: Global Knowledge Skills		
RANK	CITY	SCORE	RANK	CITY	SCORE	RANK	CITY	SCORE	RANK	CITY	SCORE	RANK	CITY	SCORE
1	Singapore	89.2	1	Luxembourg	82.5	1	London	95.0	1	Helsinki	92.6	1	Geneva	88.1
2	San Francisco	87.8	2	Dublin	69.7	2	Beijing	89.6	2	Eindhoven	89.4	2	San Francisco	76.3
3	Washington, DC	82.9	3	Geneva	68.9	3	Zurich	82.1	3	Oslo	88.0	3	Stockholm	69.5
4	Seattle	77.3	4	San Francisco	67.8	4	Boston	81.1	4	Bilbao	87.7	4	Munich	68.1
5	Dublin	76.1	5	Zurich	67.7	5	Nanjing	75.8	5	Gothenburg	87.5	5	Helsinki	67.0
6	Hong Kong	72.3	6	Miami	62.4	6	Moscow	75.2	6	Copenhagen	86.7	6	Boston	65.2
7	Houston	69.4	7	Dusseldorf	56.7	7	Bengaluru	74.5	7	Rotterdam	86.4	7	Seattle	64.0
8	Philadelphia	69.4	8	Amsterdam	55.6	8	Lisbon	74.5	8	Montreal	86.1	8	Osaka	63.8
9	Los Angeles	68.6	9	Hong Kong	55.1	9	Brisbane	74.4	9	Valletta	86.0	9	Copenhagen	62.7
10	Denver	67.7	10	Boston	54.9	10	New York	73.6	10	Boston	86.0	10	Denver	62.4

Figure 5

Derived country scores from GCTCI vs GTCI scores**ENDNOTES**

- 1 The Economist (2021).
- 2 In the United States alone, by the end of 2020, state and local governments had shed 1.3 million jobs—the overwhelming majority of these were in education and tourism. Also in the United States alone, according to the National League of Cities (2020), ‘37% of cities indicated they’ve made cuts their municipal workforce, including hiring freezes, wage holds, layoffs, furloughs, reduced hours or forced early retirement of municipal employees.’
- 3 See OECD (2020). Inclusion at city level also happened to be at the core of the initiative launched in Bilbao in 2019, called ‘Prosperity and Inclusive City Seal and Award’ (PICSA). See <https://www.picsaindex.com/>
- 4 The Economist (2021).
- 5 The question is formulated thus: ‘Please imagine a ladder, with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?’ See Helliwell et al. (2020).
- 6 A complete list of sources is provided in Annex 1 at the end of the chapter.
- 7 See Dijkstra et al. (2019).
- 8 For detailed information on the municipalities included in a given FUA, see <https://www.oecd.org/cfe/regionaldevelopment/functionalurbanareasbycountry.htm> and <https://ec.europa.eu/eurostat/web/regions-and-cities>

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Annexes to Chapter 3

Annex 1

Definition and sources of GCTCI variables

PILLAR	VARIABLE	SOURCE
Enable	1.1 GDP per capita, PPP (current international \$)	Eurostat, OECD, local and national statistics and studies, World Development Indicators, Euromonitor
	1.2 Internet speed (average megabits per second, Mbps)	Nomad List
	1.3 Ease of doing business	Ease of Doing Business Index (World Bank)
Attract	2.1 Presence of Forbes Global 2000 companies (HQ presence, % of population)	Forbes
	2.2 Foreign-born population (% of total)	Eurostat, American Community Survey, World Cities Culture Forum, New York City Global Partners database
	2.3 FDI projects (% of population)	fDi Markets, a service from the Financial Times Ltd
Grow	3.1 Major universities (average score of top universities—up to three universities)	Times Higher Education (THE) World University Rankings 2021
	3.2 Tertiary enrolment (%)	Eurostat, American Community Survey, New York City Global Partners database
	3.3 FDI jobs created (total)	fDi Markets, a service from the Financial Times Ltd
Retain	4.1 Safety (homicide rate per 100,000 inhabitants)	United Nations Office on Drugs and Crime, UN-Habitat, Eurostat, FBI
	4.2 Environmental quality (annual mean of PM10 concentrations)	Ambient Air Quality Database, WHO, April 2018
	4.3 Traffic travel times	TomTom Traffic Index
	4.4 Happiness	The Gallup World Poll (2005–2019), sourced from Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020. <i>World Happiness Report 2020</i> . New York: Sustainable Development Solutions Network
Global Knowledge Skills	5.1 Population with tertiary education (%)	Eurostat, local and national statistics, UNESCO UIS, New York City Global Partners database
	5.2 Patent applications (% of population)	Patentscope database (World Intellectual Property Organization)
	5.3 Airport connectivity (total number of passengers, % of population)	anna.aero, Airports Council International, national statistics

Note: FBI = Federal Bureau of Investigation (United States); FDI = foreign direct investment; OECD = Organisation for Economic Co-operation and Development; UNESCO UIS = UNESCO (United Nations Educational, Scientific and Cultural Organization) Institute for Statistics; WHO = World Health Organization.

Annex 2

GCTCI rankings and scores: Overall and by variable

Rank	City	GCTCI OVERALL	1. ENABLE			2. ATTRACT		
			1.1 GDP per capita	1.2 Internet speed	1.3 Ease of doing business	2.1 Presence of Forbes Global 2000 companies	2.2 Foreign-born population	2.3 FDI projects
1	San Francisco	76.3	90.6	80.0	92.8	83.6	42.1	77.7
2	Geneva	71.0	58.9	38.9	73.7	77.3	61.5	67.9
3	Boston	70.6	70.1	34.4	92.8	58.7	25.7	80.2
4	Zurich	70.5	60.3	34.4	73.7	100.0	43.8	59.3
5	Luxembourg	68.3	89.4	35.6	55.7	88.1	59.3	100.0
6	Dublin	67.6	82.6	64.4	81.4	84.0	25.0	100.0
7	Singapore	67.2	69.2	100.0	98.5	40.5	46.4	53.2
8	Seattle	65.8	68.1	71.1	92.8	45.8	24.6	47.9
9	London	65.5	49.6	23.3	91.5	61.6	36.3	42.5
10	Helsinki	65.5	46.6	40.0	83.0	67.6	16.3	75.3
11	Copenhagen	65.4	50.8	47.8	96.1	56.5	25.6	66.1
12	Washington, DC	65.3	81.5	74.4	92.8	42.0	25.9	49.8
13	Atlanta	63.7	50.0	38.9	92.8	41.2	18.6	100.0
14	Stockholm	63.5	53.7	38.9	87.6	84.6	31.3	22.7
15	Munich	63.0	63.1	31.1	81.7	53.8	26.3	54.1
16	Amsterdam	62.0	57.6	23.3	72.4	57.6	25.0	84.1
17	New York	61.0	64.7	38.9	95.9	56.8	36.3	24.3
18	Denver	60.9	50.3	60.0	92.8	56.1	15.0	56.3
19	Miami	60.5	41.1	38.9	92.8	36.2	51.0	100.0
20	Hong Kong	59.9	40.8	80.0	96.1	75.2	49.6	40.4
21	Toronto	59.5	38.2	27.8	81.4	52.6	57.6	21.6
22	Dusseldorf	58.4	54.3	38.9	81.7	49.3	23.8	97.0
23	Chicago	58.0	52.0	45.6	92.8	54.3	21.3	27.6
24	Oslo	57.8	49.3	47.8	89.2	57.8	23.8	15.1
25	Houston	57.7	47.7	67.8	92.8	48.5	29.6	25.5
26	Vancouver	57.7	32.8	34.4	81.4	31.8	51.0	29.2
27	Edinburgh	57.5	39.9	27.8	91.5	25.6	13.8	39.1
28	Melbourne	57.4	33.4	57.8	85.6	35.7	42.2	12.9
29	Sydney	56.7	39.5	30.0	85.6	51.5	45.9	16.3
30	Philadelphia	56.7	52.0	63.3	92.8	48.2	14.6	13.2
31	Los Angeles	56.6	48.8	68.9	88.1	23.5	37.4	17.9
32	Paris	56.0	53.4	35.6	74.2	56.9	27.5	20.8
33	Dallas	55.5	47.9	45.6	92.8	46.5	24.0	38.5
34	Brisbane	55.3	36.4	22.2	85.6	11.6	32.5	7.4
35	Montreal	55.1	27.7	28.9	81.4	47.0	42.5	13.5
36	Barcelona	53.9	30.8	38.9	74.2	26.8	23.8	47.3
37	Eindhoven	53.9	48.8	60.0	72.4	0.0	16.3	20.0
38	Brussels	53.7	57.6	41.1	69.6	40.3	36.3	20.1
39	Ottawa	53.5	35.8	26.7	81.4	17.3	24.6	5.9
40	Gothenburg	53.0	39.0	34.4	87.6	47.5	25.0	8.3
41	Auckland	52.9	36.7	34.4	100.0	0.0	51.3	9.3
42	Vienna	52.2	40.8	45.6	79.1	41.6	n/a	16.0
43	Madrid	52.1	35.7	32.2	77.1	39.9	23.8	24.8
44	Warsaw	51.9	49.8	27.8	73.2	36.2	n/a	31.8
45	Lisbon	51.2	30.1	27.8	73.5	23.7	17.5	46.4
46	Tokyo	50.8	34.4	34.4	76.8	54.8	4.0	6.8
47	Abu Dhabi	50.7	100.0	8.9	84.8	29.3	100.0	20.1
48	Antwerp	50.2	45.1	62.2	78.9	0.0	25.0	33.4
49	Hanover	49.9	40.1	41.1	81.7	40.6	23.8	10.1
50	The Hague	49.6	42.9	35.6	72.4	0.0	31.3	10.8
51	Taipei	49.5	43.7	20.0	84.8	61.2	0.1	9.2
52	Milan	49.5	45.2	16.7	58.2	37.6	17.6	30.0

3. GROW			4. RETAIN				5. GLOBAL KNOWLEDGE SKILLS		
3.1 Major universities	3.2 Tertiary enrolment	3.3 FDI jobs created	4.1 Safety	4.2 Environmental quality	4.3 Traffic travel times	4.4 Happiness	5.1 Tertiary educated population	5.2 Patent applications	5.3 Airport connectivity
100.0	33.6	82.0	59.1	97.3	75.0	79.1	88.9	90.3	49.8
60.7	52.7	62.8	81.0	96.3	56.8	93.7	n/a	76.2	100.0
99.9	63.5	79.9	74.3	98.4	88.6	82.7	85.8	83.6	26.2
92.6	86.4	67.2	87.2	97.3	61.4	93.3	n/a	68.2	55.5
54.6	n/a	67.4	84.5	95.2	65.9	86.1	71.4	76.0	17.1
60.4	22.5	87.5	83.3	98.9	36.4	82.8	82.0	57.1	41.3
88.0	13.0	100.0	95.6	89.8	61.4	68.6	70.9	60.5	31.9
84.8	39.6	75.2	69.0	99.5	79.5	79.1	81.2	76.2	34.4
94.2	n/a	95.7	79.9	93.6	52.3	75.4	84.7	48.2	34.7
65.5	37.8	71.5	87.2	94.7	88.6	100.0	82.0	86.1	33.0
67.3	51.0	70.8	78.8	93.0	81.8	93.0	77.6	69.0	41.6
94.0	40.7	73.0	46.7	97.9	84.1	84.9	88.1	48.0	33.8
79.9	51.9	86.3	49.2	93.6	84.1	81.3	72.3	41.5	50.6
80.1	24.2	66.5	83.3	95.2	70.5	89.3	80.9	88.3	39.3
82.4	29.7	77.8	75.1	95.2	68.2	82.3	70.2	89.3	44.7
72.5	24.6	82.5	71.9	94.7	81.8	91.1	70.4	44.7	61.2
96.5	28.3	96.1	64.7	98.4	63.6	79.7	73.6	54.5	19.0
49.6	26.3	76.3	61.0	96.8	88.6	79.1	81.4	45.1	60.6
53.8	33.9	81.3	53.9	97.3	70.5	81.2	64.0	47.9	38.7
79.3	15.2	95.4	91.9	87.7	54.5	44.0	33.0	56.1	28.2
90.7	28.7	84.3	72.6	97.3	72.7	87.5	98.6	41.5	21.4
0.0	41.6	73.0	75.1	94.1	79.5	82.3	51.3	70.8	45.9
95.2	30.0	84.9	41.3	94.1	84.1	81.3	70.6	39.2	31.1
62.7	30.6	61.4	87.2	96.3	77.3	91.4	n/a	48.4	61.8
63.0	26.8	80.6	49.2	92.5	86.4	83.1	61.5	66.8	22.2
80.5	40.1	76.0	76.0	99.5	54.5	86.0	93.5	50.8	26.3
83.7	46.7	71.4	85.8	100.0	50.0	84.4	88.7	50.6	43.4
83.2	16.5	88.8	82.1	95.7	70.5	87.5	94.3	38.6	20.6
74.7	28.7	85.3	82.1	96.8	59.1	83.7	91.2	36.9	23.9
93.8	33.6	70.1	47.0	95.2	84.1	80.6	70.2	54.5	13.9
99.6	35.2	81.8	56.2	92.5	61.4	79.5	64.4	45.6	21.1
77.6	27.6	86.3	81.0	90.9	50.0	72.0	74.2	60.9	24.9
48.1	20.7	80.9	56.6	96.8	93.2	84.2	65.5	42.8	31.7
73.1	n/a	75.7	84.6	97.9	72.7	88.5	93.2	33.3	27.1
79.2	32.7	76.5	83.3	97.9	77.3	86.0	83.6	42.3	12.2
60.5	53.6	87.5	87.2	93.0	72.7	66.0	67.7	33.7	24.7
57.9	25.0	56.0	88.9	95.7	81.8	91.1	62.1	100.0	21.2
55.9	37.4	71.4	78.8	92.0	56.8	72.9	70.1	43.7	37.1
61.1	70.8	63.5	78.8	99.5	79.5	86.0	100.0	48.4	9.7
57.7	30.1	59.7	80.5	96.3	90.9	82.4	65.3	65.7	11.4
61.0	n/a	71.6	87.2	98.4	56.8	86.0	n/a	41.6	35.7
59.5	39.9	73.7	90.2	95.7	63.6	80.5	n/a	48.8	24.8
48.5	29.3	85.1	90.2	95.7	88.6	68.8	74.7	30.0	23.5
31.4	70.2	93.1	71.1	88.2	52.3	61.4	86.5	23.9	16.1
47.1	99.6	76.8	90.2	92.0	70.5	49.0	52.6	19.1	27.1
80.1	22.0	87.9	87.2	86.6	29.5	56.8	n/a	84.3	26.4
46.1	14.4	78.6	90.8	25.7	100.0	76.0	21.9	17.3	19.6
59.0	38.7	67.9	76.0	93.6	68.2	77.3	59.1	46.9	0.5
41.5	39.1	60.6	64.1	95.7	79.5	82.3	44.8	71.2	12.8
70.3	23.7	58.1	81.0	95.2	68.2	91.1	71.7	72.5	2.9
65.7	41.3	78.0	85.6	90.9	38.6	69.2	76.4	26.7	22.0
53.0	60.8	80.7	84.5	86.6	70.5	66.1	38.6	43.9	29.3

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Annex 2 (continued)

GCTCI rankings and scores: Overall and by variable

Rank	City	GCTCI OVERALL	1. ENABLE			2. ATTRACT		
			1.1 GDP per capita	1.2 Internet speed	1.3 Ease of doing business	2.1 Presence of Forbes Global 2000 companies	2.2 Foreign-born population	2.3 FDI projects
53	Bologna	49.1	39.8	18.9	69.3	28.0	14.6	5.2
54	Seoul	49.0	30.7	25.6	92.8	38.6	3.4	3.9
55	Tel Aviv	48.9	33.7	14.4	74.0	48.0	34.0	54.1
56	Osaka	48.8	26.9	27.8	78.4	28.8	3.5	0.8
57	Doha	48.4	63.0	12.2	53.4	38.3	98.4	5.9
58	Frankfurt	48.2	52.4	23.3	81.7	35.9	27.5	0.0
59	Lyon	48.0	41.1	38.9	74.2	0.0	18.8	13.8
60	Rotterdam	47.9	47.0	42.2	72.4	0.0	21.3	10.0
61	Ljubljana	47.7	38.9	63.3	73.5	0.0	18.8	14.0
62	Cardiff	47.6	24.4	25.6	91.5	25.1	8.8	13.0
63	Dubai	47.5	42.2	14.4	84.8	31.2	n/a	62.7
64	Beijing	47.4	26.9	1.1	77.8	50.6	0.4	4.4
65	Berlin	47.3	33.3	31.1	81.7	15.3	18.8	20.1
66	Hamburg	47.0	45.4	30.0	81.7	8.9	20.0	27.6
67	Krakow	46.8	28.5	36.7	75.8	0.0	n/a	23.0
68	Kiel	46.6	33.1	n/a	81.7	0.0	15.0	2.7
69	Birmingham	45.8	24.6	27.8	91.5	0.0	17.5	14.2
70	Vilnius	45.8	29.0	28.9	86.6	0.0	12.5	45.5
71	Prague	45.4	47.3	24.4	72.9	12.6	16.0	18.7
72	Nagoya	45.4	33.6	28.9	77.3	27.8	n/a	1.2
73	Nantes	45.1	32.5	40.0	74.2	0.0	8.8	15.1
74	Bilbao	44.9	31.9	27.8	71.4	23.3	12.5	11.7
75	Rome	44.2	36.1	16.7	64.2	32.1	15.0	3.7
76	Nanjing	43.5	26.5	1.1	77.1	15.5	n/a	2.1
77	Shanghai	43.2	25.4	1.1	76.5	32.5	0.9	9.3
78	Budapest	43.1	34.4	41.1	65.5	17.3	11.3	11.1
79	Riga	42.5	29.2	25.6	83.2	0.0	20.0	13.8
80	Tallinn	42.4	25.3	42.2	84.0	0.0	22.5	15.6
81	Bucharest	42.2	50.0	56.7	65.2	0.0	n/a	19.3
82	Shenzhen	42.1	33.7	1.1	77.1	32.6	0.4	6.7
83	Turin	41.9	31.8	20.0	68.3	25.7	11.9	3.0
84	Bratislava	41.6	35.3	24.4	71.1	0.0	6.3	15.5
85	Moscow	41.5	47.4	16.7	78.1	25.4	10.5	3.6
86	Zaragoza	41.2	29.2	n/a	61.1	0.0	17.5	9.1
87	Kuala Lumpur	41.1	21.6	16.7	86.3	24.0	n/a	24.8
88	Hangzhou	41.1	23.6	1.1	77.1	21.1	0.0	0.8
89	Marseille	41.0	32.0	25.6	74.2	0.0	22.5	9.8
90	Brno	40.8	26.6	25.6	69.3	0.0	3.9	12.4
91	Wuhan	40.2	22.9	1.1	77.1	7.9	n/a	0.9
92	Suzhou	39.8	3.9	2.2	77.1	10.1	0.0	3.6
93	Busan	39.6	23.4	33.3	92.8	6.6	n/a	1.4
94	Belgrade	39.6	22.1	35.6	71.4	0.0	n/a	16.9
95	Sofia	38.1	30.4	33.3	61.9	0.0	3.8	19.0
96	Zhuhai	37.9	27.3	1.1	77.1	23.2	0.4	1.4
97	Valletta	37.7	30.2	40.0	46.6	0.0	n/a	0.0
98	Guangzhou	37.3	21.0	1.1	77.1	17.8	0.4	1.6
99	Bangkok	37.3	24.2	24.4	82.7	22.1	10.8	5.3
100	Xiamen	36.9	22.1	1.1	77.1	17.8	0.4	2.4
101	St. Petersburg	36.1	25.9	23.3	77.1	18.8	n/a	3.0
102	Athens	36.0	25.8	12.2	52.6	29.7	17.5	9.1
103	Buenos Aires	35.6	17.3	18.9	28.4	4.4	16.9	7.9
104	Riyadh	35.6	39.6	8.9	60.8	35.5	n/a	2.2

3. GROW			4. RETAIN				5. GLOBAL KNOWLEDGE SKILLS		
3.1 Major universities	3.2 Tertiary enrolment	3.3 FDI jobs created	4.1 Safety	4.2 Environmental quality	4.3 Traffic travel times	4.4 Happiness	5.1 Tertiary educated population	5.2 Patent applications	5.3 Airport connectivity
59.3	71.0	58.5	89.1	93.0	81.8	66.1	45.1	55.1	23.3
73.5	17.0	82.1	79.9	80.2	n/a	55.8	n/a	75.0	25.9
57.7	18.8	73.0	58.2	71.7	38.6	91.4	55.4	60.5	15.3
47.9	n/a	68.8	83.3	86.1	43.2	54.0	n/a	81.5	46.1
49.6	n/a	71.8	90.2	47.1	n/a	63.1	n/a	11.2	36.6
50.9	39.1	0.0	60.5	95.2	77.3	82.3	52.4	53.9	69.4
51.9	62.1	63.9	82.1	94.1	65.9	72.6	72.0	32.1	15.8
69.8	17.4	64.8	79.9	95.2	79.5	91.1	54.0	58.6	1.7
31.6	61.7	56.9	84.5	92.0	84.1	61.2	66.1	41.1	8.8
57.6	48.0	65.9	85.8	98.4	75.0	84.4	65.6	27.5	3.5
36.3	3.9	93.2	84.5	25.7	79.5	73.2	14.1	8.0	77.2
89.3	n/a	89.9	96.4	56.7	68.2	38.9	4.4	67.4	13.4
69.0	21.2	79.1	65.8	93.6	54.5	82.3	59.1	40.7	18.2
61.8	19.5	74.0	64.7	95.7	56.8	82.3	47.3	48.6	15.3
38.5	100.0	81.5	74.3	83.4	40.9	61.4	73.3	27.7	11.2
51.6	60.0	19.1	82.1	95.7	70.5	82.3	47.6	39.6	n/a
64.6	28.9	71.4	79.9	97.3	79.5	84.4	50.4	26.3	14.6
28.0	39.5	79.8	67.1	91.4	63.6	60.9	85.5	25.7	13.4
42.5	38.7	81.4	77.9	93.6	70.5	71.6	51.1	23.7	16.7
47.5	n/a	68.3	87.2	87.7	47.7	54.0	n/a	63.2	14.2
42.0	55.3	55.5	85.8	96.3	72.7	72.6	63.4	32.6	11.1
32.0	23.7	55.8	91.2	97.9	95.5	66.5	76.8	30.9	12.5
55.6	28.9	71.3	87.2	91.4	61.4	66.1	43.3	35.2	31.3
64.3	n/a	87.2	89.8	60.4	70.5	36.4	n/a	57.8	9.7
70.3	13.3	97.9	96.4	74.3	72.7	55.5	31.4	51.5	13.2
44.5	34.8	80.4	85.8	90.9	61.4	48.6	58.9	20.3	12.4
34.0	43.3	74.4	63.0	92.0	72.7	61.1	65.8	13.5	17.4
26.8	22.5	64.1	69.0	99.5	63.6	49.5	77.4	32.1	12.8
33.0	32.7	97.1	85.8	89.3	27.3	56.4	58.5	0.8	16.0
53.0	4.7	84.9	89.8	83.4	70.5	36.4	23.9	92.7	10.6
43.9	50.2	55.2	89.1	87.7	77.3	66.1	31.3	42.5	5.1
25.9	49.3	76.7	71.1	93.6	61.4	66.0	69.0	22.3	8.5
58.9	n/a	91.4	55.8	90.9	0.0	57.7	18.8	24.3	18.5
29.0	20.8	61.6	85.8	95.2	93.2	66.5	62.1	25.9	1.1
49.2	n/a	87.5	59.1	80.7	59.1	42.6	n/a	17.2	4.5
65.9	n/a	74.9	89.8	49.7	77.3	36.4	n/a	50.4	10.7
47.6	24.6	58.3	61.5	92.0	54.5	72.6	56.1	45.3	8.2
32.0	68.5	65.9	81.0	93.6	72.7	78.4	42.2	19.8	0.9
49.7	n/a	82.2	89.8	56.7	86.4	36.4	n/a	53.3	6.0
40.1	n/a	83.3	89.8	67.4	86.4	36.4	n/a	66.5	3.5
30.0	n/a	63.9	75.1	82.4	n/a	47.3	n/a	44.5	13.8
33.2	n/a	84.5	83.3	88.2	n/a	58.7	n/a	12.2	9.5
18.8	31.8	79.8	75.2	87.7	54.5	46.8	68.5	15.5	11.0
0.0	n/a	70.1	89.8	84.0	61.4	36.4	n/a	68.6	17.0
33.1	25.4	26.6	100.0	82.9	n/a	75.2	42.4	23.2	39.3
50.7	38.2	84.7	89.8	75.9	68.2	51.4	0.0	39.2	13.2
36.8	47.1	91.1	68.3	84.0	22.7	64.8	n/a	5.7	17.5
41.1	8.8	85.6	89.8	80.7	72.7	36.4	n/a	40.3	17.8
48.8	26.8	83.2	57.0	n/a	22.7	56.9	63.4	14.9	8.6
42.4	19.9	52.8	87.2	84.0	45.5	41.6	62.3	5.0	17.4
21.6	68.5	79.6	57.8	91.4	68.2	64.7	52.3	2.8	4.5
53.0	n/a	74.0	80.2	0.0	72.7	63.4	n/a	2.1	8.1

(continued on next page)

Annex 2 (continued)

GCTCI rankings and scores: Overall and by variable

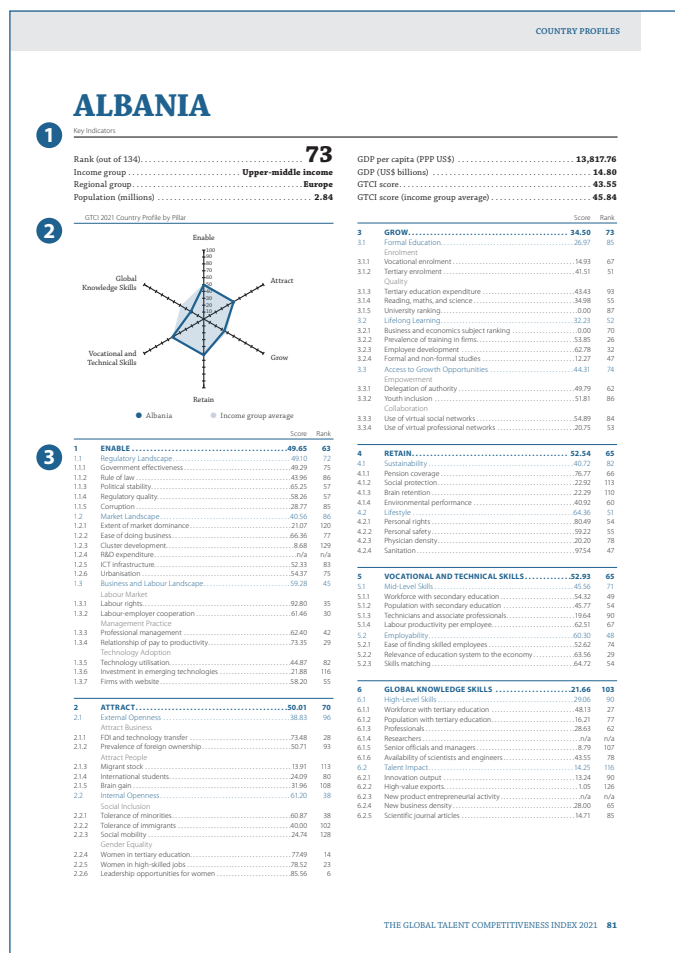
Rank	City	GCTCI OVERALL	1. ENABLE			2. ATTRACT		
			1.1 GDP per capita	1.2 Internet speed	1.3 Ease of doing business	2.1 Presence of Forbes Global 2000 companies	2.2 Foreign-born population	2.3 FDI projects
105	Istanbul	35.4	33.5	13.3	74.2	14.3	4.3	1.6
106	Tianjin	35.3	13.5	2.2	77.1	7.6	n/a	1.0
107	Santiago	35.1	15.7	11.1	63.4	11.3	n/a	4.0
108	Kuwait City	35.1	35.5	6.7	50.0	18.1	90.1	1.3
109	Chengdu	34.8	15.7	1.1	77.1	5.5	n/a	0.9
110	Zagreb	34.4	26.0	22.2	66.0	0.0	20.0	11.7
111	Xi'an	33.8	13.7	1.1	77.1	8.6	n/a	0.8
112	Mexico City	33.2	17.0	22.2	61.1	9.9	12.7	7.2
113	Sao Paulo	33.0	16.8	15.6	27.8	20.0	n/a	3.5
114	Bangalore	31.9	15.5	26.7	59.3	9.2	n/a	8.9
115	Ankara	31.8	26.1	12.2	74.2	0.0	n/a	1.2
116	Cape Town	31.3	10.1	13.3	58.5	13.2	n/a	31.0
117	Chongqing	31.3	11.8	2.2	77.1	3.1	n/a	0.3
118	Skopje	31.2	15.3	33.3	84.3	0.0	n/a	7.5
119	Lima	30.8	10.7	14.4	53.4	6.0	n/a	2.5
120	Minsk	30.5	17.0	26.7	67.8	0.0	n/a	3.4
121	Mumbai	30.2	15.2	10.0	57.0	26.3	n/a	3.6
122	Jakarta	30.0	17.8	14.4	56.2	4.2	n/a	2.7
123	Johannesburg	29.9	14.6	12.2	49.0	26.8	16.4	6.2
124	Casablanca	29.8	6.8	10.0	65.5	8.3	n/a	5.0
125	Hyderabad	29.7	7.6	15.6	59.3	0.0	n/a	5.2
126	Pune	29.6	8.8	10.0	59.3	14.3	n/a	9.3
127	Bogota	28.8	14.5	13.3	57.0	13.1	0.9	5.2
128	Manila	28.7	16.5	7.8	38.1	14.1	n/a	11.8
129	Ho Chi Minh City	28.5	15.0	14.4	56.2	0.0	n/a	7.7
130	Makassar	27.9	17.4	10.0	55.7	0.0	n/a	0.4
131	Baku	27.6	32.7	4.4	74.0	0.0	n/a	7.7
132	Medellin	27.5	11.3	12.2	55.7	7.5	n/a	3.2
133	Montevideo	27.4	18.6	31.1	34.8	0.0	n/a	3.1
134	Rio de Janeiro	27.1	15.5	11.1	29.6	15.6	0.9	1.6
135	Nairobi	26.9	6.9	8.9	64.9	7.2	n/a	7.5
136	Rabat	26.2	4.7	7.8	65.5	0.0	n/a	4.7
137	Brasilia	26.0	24.8	10.0	22.7	9.5	n/a	0.7
138	Kiev	25.9	29.2	37.8	57.2	0.0	n/a	0.0
139	Zhengzhou	25.5	17.3	1.1	77.1	5.9	n/a	0.2
140	Medan	25.1	14.1	10.0	55.7	0.0	n/a	0.3
141	Kolkata	24.4	4.4	10.0	59.3	11.3	n/a	1.0
142	Chennai	24.3	15.7	10.0	59.3	2.9	0.7	4.4
143	Quito	23.6	11.0	10.0	25.0	0.0	n/a	1.7
144	Tunis	23.4	8.2	5.6	53.4	0.0	n/a	6.3
145	Hanoi	23.4	9.0	15.6	56.2	14.3	n/a	0.0
146	Lagos	23.1	5.7	4.4	21.9	2.6	n/a	1.2
147	Delhi	22.7	10.5	12.2	61.6	13.2	n/a	2.8
148	Accra	22.6	0.0	4.4	30.9	0.0	n/a	4.6
149	Phnom Penh	22.3	5.5	7.8	14.9	0.0	n/a	6.0
150	Abuja	21.7	2.7	5.6	35.1	0.0	n/a	1.4
151	Abidjan	20.4	5.2	1.1	32.7	0.0	25.6	3.1
152	Lahore	19.2	6.0	4.4	40.2	0.0	n/a	0.4
153	Addis Ababa	17.4	3.0	0.0	0.0	0.0	n/a	1.2
154	Cairo	17.3	11.3	5.6	31.2	1.4	n/a	1.8
155	Karachi	17.1	7.6	4.4	29.6	0.0	n/a	0.6

3. GROW			4. RETAIN				5. GLOBAL KNOWLEDGE SKILLS		
3.1 Major universities	3.2 Tertiary enrolment	3.3 FDI jobs created	4.1 Safety	4.2 Environmental quality	4.3 Traffic travel times	4.4 Happiness	5.1 Tertiary educated population	5.2 Patent applications	5.3 Airport connectivity
42.5	n/a	73.1	67.7	85.6	6.8	43.9	11.2	33.9	18.1
47.6	n/a	85.5	89.8	50.8	75.0	36.4	n/a	20.1	3.7
43.7	n/a	73.9	67.1	70.1	52.3	75.1	n/a	17.9	7.9
25.9	10.2	62.5	81.0	39.0	84.1	64.3	11.7	3.6	9.4
40.1	n/a	81.7	89.8	49.7	59.1	36.4	n/a	30.7	8.8
22.7	39.9	68.4	79.9	86.6	n/a	46.1	n/a	10.9	7.0
43.7	n/a	80.4	89.8	32.6	n/a	36.4	n/a	25.1	12.4
36.4	n/a	85.1	31.4	85.0	40.9	73.3	n/a	2.8	5.6
54.4	32.6	82.2	48.4	90.9	54.5	66.0	n/a	10.7	13.4
49.3	n/a	99.7	65.2	54.5	6.8	0.0	n/a	15.8	5.6
44.4	11.3	59.6	69.1	69.5	59.1	51.1	27.3	25.8	8.1
60.4	n/a	66.4	0.0	n/a	70.5	39.8	n/a	7.0	7.3
35.0	n/a	83.4	89.8	64.7	27.3	36.4	n/a	18.3	3.4
0.0	n/a	75.6	77.9	69.0	n/a	40.6	n/a	7.2	8.4
39.9	17.3	82.6	47.5	74.9	27.3	61.8	65.0	1.1	5.8
19.7	n/a	64.0	65.2	92.5	n/a	50.3	n/a	2.6	2.4
35.6	n/a	88.9	84.5	50.3	2.3	0.0	n/a	14.3	9.9
29.5	n/a	80.1	93.7	62.0	40.9	40.2	n/a	0.0	6.4
56.6	6.0	70.6	15.9	60.4	75.0	42.0	18.8	13.4	12.2
20.2	n/a	76.7	73.4	82.9	n/a	37.8	n/a	2.4	1.3
35.1	n/a	92.4	65.2	61.0	n/a	0.0	n/a	19.2	5.6
33.5	n/a	91.1	65.2	58.3	27.3	0.0	n/a	16.3	3.8
43.9	6.0	85.8	35.0	85.6	2.3	71.4	30.0	6.5	10.2
43.6	n/a	79.7	53.9	42.8	2.3	52.6	21.5	0.4	8.9
18.5	20.5	95.8	79.9	57.8	n/a	37.2	n/a	1.4	12.8
0.0	n/a	47.8	86.3	96.3	n/a	40.2	n/a	0.0	26.6
0.0	n/a	63.6	65.2	71.1	n/a	47.0	n/a	3.0	5.4
18.8	n/a	74.0	23.8	73.8	n/a	60.9	n/a	7.9	5.1
0.0	n/a	67.4	40.5	92.0	n/a	67.7	n/a	9.3	4.2
32.3	16.3	73.7	31.4	83.4	50.0	65.9	n/a	14.1	10.8
33.2	7.6	74.7	52.5	88.2	n/a	37.1	n/a	0.4	4.7
20.8	n/a	59.6	72.6	73.3	n/a	35.8	n/a	3.9	0.0
29.2	n/a	52.7	25.9	42.8	86.4	65.9	n/a	3.3	16.1
16.3	78.2	0.0	65.2	87.2	6.8	34.7	n/a	6.3	10.2
0.0	n/a	59.9	89.8	29.4	n/a	36.4	n/a	14.6	6.9
0.0	n/a	43.3	87.8	84.5	n/a	40.2	n/a	0.0	13.0
36.5	n/a	64.2	65.2	33.2	n/a	0.0	n/a	6.0	10.8
17.9	10.4	86.2	65.2	63.1	n/a	0.0	n/a	14.5	5.0
0.0	n/a	59.7	50.2	85.6	n/a	67.3	n/a	2.7	5.4
21.3	n/a	59.8	66.4	57.8	n/a	20.7	n/a	0.0	5.7
28.2	28.9	0.0	88.3	51.3	n/a	38.1	n/a	0.5	8.7
39.5	n/a	74.5	26.0	82.9	n/a	27.0	n/a	0.1	1.5
34.6	10.1	84.9	66.0	0.0	15.9	10.3	n/a	12.8	9.5
25.1	n/a	61.8	79.9	46.0	n/a	39.8	n/a	0.0	0.2
0.0	n/a	79.3	75.1	80.7	n/a	20.4	n/a	0.0	1.2
0.0	n/a	63.8	66.4	85.0	n/a	27.0	n/a	0.0	3.8
0.0	0.0	73.6	38.1	95.7	n/a	29.9	n/a	0.0	0.9
27.3	n/a	62.6	60.0	0.0	n/a	40.8	n/a	0.0	0.9
0.0	n/a	70.2	47.8	75.4	n/a	14.4	n/a	0.0	9.3
33.4	9.3	70.1	70.4	0.0	40.9	12.1	n/a	0.5	0.0
0.0	n/a	72.7	60.0	0.0	n/a	43.7	n/a	0.0	0.9

Note: n/a = not available.

Country Profiles

How to Read the Country Profiles



1 The first section introduces the country's key indicators. It comprises its rank within the GTCI (out of 134 countries), its income group (based on the World Bank's Income Group Classification as of July 2021), and its regional group (based on the United Nations' sub-regional groups). Additionally, basic country statistics are presented. These include population (in millions), GDP per capita (PPP US\$), and GDP (current US\$ in billions) from the World Bank's World Development Indicators. Finally, the section presents the country's GTCI score and income group average GTCI score.

2 The second section presents a radar chart that outlines the respective country's performance along the six pillars of the GTCI and its position with respect to its income group peers. The dark blue line plots the country's score on each of the six pillars, while the shaded area represents the average scores for its corresponding income group.

3 The third section lays out the country's normalised scores and ranks across all pillars, sub-pillars, and variables. The pillars are identified by a bold single digit notation (e.g., 1 ENABLE) and sub-pillars by a two-digit notation (e.g., 1.2 Market Landscape). Under selected sub-pillars, components are provided in grey. There are no values attached to the components, as they only contextualise the theoretical framework. The 68 variables are indicated by a three-digit notation (e.g., 1.2.3 Cluster development).

For more information about the method of calculation and variable definitions, please refer to Appendix I: Technical Notes and Appendix II: Sources and Definitions, respectively.

The country profiles provide more granular information on how each of the 134 countries performs in the various dimensions of the Global Talent Competitiveness Index (GTCI).

Each country profile consists of three parts:

- 1** Key indicators,
- 2** Radar chart, and
- 3** Scores and Ranks.

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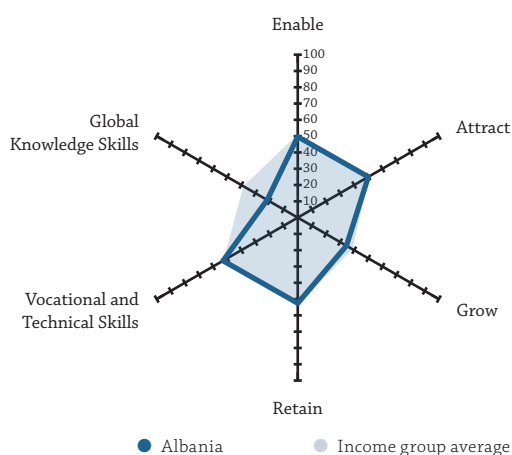
ALBANIA

Key Indicators

Rank (out of 134).....	73
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	2.84

GDP per capita (PPP US\$).....	13,817.76
GDP (US\$ billions).....	14.80
GTCI score.....	43.55
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	49.65	63
1.1 Regulatory Landscape.....	49.10	72
1.1.1 Government effectiveness.....	49.29	75
1.1.2 Rule of law.....	43.96	86
1.1.3 Political stability.....	65.25	57
1.1.4 Regulatory quality.....	58.26	57
1.1.5 Corruption.....	28.77	85
1.2 Market Landscape.....	40.56	86
1.2.1 Extent of market dominance.....	21.07	120
1.2.2 Ease of doing business.....	66.36	77
1.2.3 Cluster development.....	8.68	129
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	52.33	83
1.2.6 Urbanisation.....	54.37	75
1.3 Business and Labour Landscape.....	59.28	45
Labour Market		
1.3.1 Labour rights.....	92.80	35
1.3.2 Labour-employer cooperation.....	61.46	30
Management Practice		
1.3.3 Professional management.....	62.40	42
1.3.4 Relationship of pay to productivity.....	73.35	29
Technology Adoption		
1.3.5 Technology utilisation.....	44.87	82
1.3.6 Investment in emerging technologies.....	21.88	116
1.3.7 Firms with website.....	58.20	55
2. ATTRACT	50.01	70
2.1 External Openness.....	38.83	96
Attract Business		
2.1.1 FDI and technology transfer.....	73.48	28
2.1.2 Prevalence of foreign ownership.....	50.71	93
Attract People		
2.1.3 Migrant stock.....	13.91	113
2.1.4 International students.....	24.09	80
2.1.5 Brain gain.....	31.96	108
2.2 Internal Openness.....	61.20	38
Social Inclusion		
2.2.1 Tolerance of minorities.....	60.87	38
2.2.2 Tolerance of immigrants.....	40.00	102
2.2.3 Social mobility.....	24.74	128
Gender Equality		
2.2.4 Women in tertiary education.....	77.49	14
2.2.5 Women in high-skilled jobs.....	78.52	23
2.2.6 Leadership opportunities for women.....	85.56	6

	Score	Rank
3. GROW	34.50	73
3.1 Formal Education.....	26.97	85
Enrolment		
3.1.1 Vocational enrolment.....	14.93	67
3.1.2 Tertiary enrolment.....	41.51	51
Quality		
3.1.3 Tertiary education expenditure.....	43.43	93
3.1.4 Reading, maths, and science.....	34.98	55
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	32.23	52
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	53.85	26
3.2.3 Employee development.....	62.78	32
3.2.4 Formal and non-formal studies.....	12.27	47
3.3 Access to Growth Opportunities.....	44.31	74
Empowerment		
3.3.1 Delegation of authority.....	49.79	62
3.3.2 Youth inclusion.....	51.81	86
Collaboration		
3.3.3 Use of virtual social networks.....	54.89	84
3.3.4 Use of virtual professional networks.....	20.75	53

4. RETAIN	52.54	65
4.1 Sustainability.....	40.72	82
4.1.1 Pension coverage.....	76.77	66
4.1.2 Social protection.....	22.92	113
4.1.3 Brain retention.....	22.29	110
4.1.4 Environmental performance.....	40.92	60
4.2 Lifestyle.....	64.36	51
4.2.1 Personal rights.....	80.49	54
4.2.2 Personal safety.....	59.22	55
4.2.3 Physician density.....	20.20	78
4.2.4 Sanitation.....	97.54	47

5. VOCATIONAL AND TECHNICAL SKILLS	52.93	65
5.1 Mid-Level Skills.....	45.56	71
5.1.1 Workforce with secondary education.....	54.32	49
5.1.2 Population with secondary education.....	45.77	54
5.1.3 Technicians and associate professionals.....	19.64	90
5.1.4 Labour productivity per employee.....	62.51	67
5.2 Employability.....	60.30	48
5.2.1 Ease of finding skilled employees.....	52.62	74
5.2.2 Relevance of education system to the economy.....	63.56	29
5.2.3 Skills matching.....	64.72	54

6. GLOBAL KNOWLEDGE SKILLS	21.66	103
6.1 High-Level Skills.....	29.06	90
6.1.1 Workforce with tertiary education.....	48.13	27
6.1.2 Population with tertiary education.....	16.21	77
6.1.3 Professionals.....	28.63	62
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	8.79	107
6.1.6 Availability of scientists and engineers.....	43.55	78
6.2 Talent Impact.....	14.25	116
6.2.1 Innovation output.....	13.24	90
6.2.2 High-value exports.....	1.05	126
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	28.00	65
6.2.5 Scientific journal articles.....	14.71	85

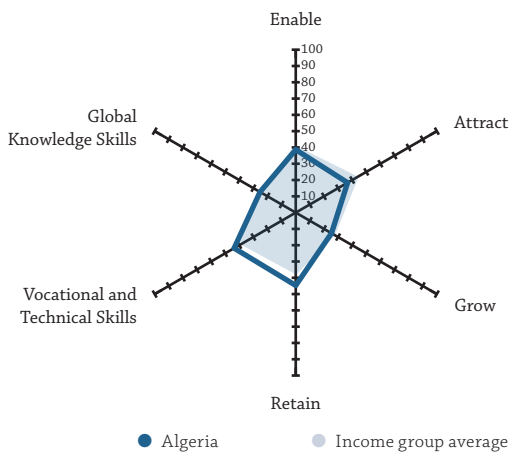
ALGERIA

Key Indicators

Rank (out of 134).....	98
Income group.....	Lower-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	43.85

GDP per capita (PPP US\$).....	11,268.26
GDP (US\$ billions).....	145.16
GTCI score.....	35.73
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	38.62	103
1.1 Regulatory Landscape.....	33.17	114
1.1.1 Government effectiveness.....	39.18	97
1.1.2 Rule of law.....	34.65	112
1.1.3 Political stability.....	39.89	116
1.1.4 Regulatory quality.....	23.35	129
1.1.5 Corruption.....	28.77	85
1.2 Market Landscape.....	42.10	83
1.2.1 Extent of market dominance.....	55.97	41
1.2.2 Ease of doing business.....	32.48	124
1.2.3 Cluster development.....	39.84	73
1.2.4 R&D expenditure.....	10.76	60
1.2.5 ICT infrastructure.....	45.03	92
1.2.6 Urbanisation.....	68.53	50
1.3 Business and Labour Landscape.....	40.60	112
Labour Market		
1.3.1 Labour rights.....	77.00	74
1.3.2 Labour-employer cooperation.....	35.44	88
Management Practice		
1.3.3 Professional management.....	26.34	128
1.3.4 Relationship of pay to productivity.....	44.53	91
Technology Adoption		
1.3.5 Technology utilisation.....	26.37	119
1.3.6 Investment in emerging technologies.....	33.92	85
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....	36.74	117
2.1 External Openness.....	22.77	130
Attract Business		
2.1.1 FDI and technology transfer.....	37.96	114
2.1.2 Prevalence of foreign ownership.....	28.23	125
Attract People		
2.1.3 Migrant stock.....	11.63	117
2.1.4 International students.....	10.29	94
2.1.5 Brain gain.....	25.73	118
2.2 Internal Openness.....	50.72	82
Social Inclusion		
2.2.1 Tolerance of minorities.....	27.17	88
2.2.2 Tolerance of immigrants.....	38.46	103
2.2.3 Social mobility.....	40.93	101
Gender Equality		
2.2.4 Women in tertiary education.....	81.29	10
2.2.5 Women in high-skilled jobs.....	52.72	96
2.2.6 Leadership opportunities for women.....	63.74	32

	Score	Rank
3 GROW.....	25.32	104
3.1 Formal Education.....	26.58	86
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	36.47	59
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	11.28	76
3.1.5 University ranking.....	32.00	61
3.2 Lifelong Learning.....	13.24	121
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	26.49	99
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	36.13	99
Empowerment		
3.3.1 Delegation of authority.....	18.34	127
3.3.2 Youth inclusion.....	61.43	75
Collaboration		
3.3.3 Use of virtual social networks.....	55.82	83
3.3.4 Use of virtual professional networks.....	8.94	88

4 RETAIN.....	44.70	89
4.1 Sustainability.....	39.11	85
4.1.1 Pension coverage.....	63.23	76
4.1.2 Social protection.....	40.16	68
4.1.3 Brain retention.....	19.53	118
4.1.4 Environmental performance.....	33.51	75
4.2 Lifestyle.....	50.30	88
4.2.1 Personal rights.....	38.42	110
4.2.2 Personal safety.....	55.07	64
4.2.3 Physician density.....	21.10	76
4.2.4 Sanitation.....	86.61	81

5 VOCATIONAL AND TECHNICAL SKILLS.....	43.66	84
5.1 Mid-Level Skills.....	45.60	70
5.1.1 Workforce with secondary education.....	49.08	59
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	19.64	89
5.1.4 Labour productivity per employee.....	68.08	59
5.2 Employability.....	41.73	99
5.2.1 Ease of finding skilled employees.....	48.89	82
5.2.2 Relevance of education system to the economy.....	34.56	91
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	25.31	92
6.1 High-Level Skills.....	36.84	72
6.1.1 Workforce with tertiary education.....	27.41	65
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	22.94	71
6.1.4 Researchers.....	65.09	53
6.1.5 Senior officials and managers.....	23.50	73
6.1.6 Availability of scientists and engineers.....	45.29	74
6.2 Talent Impact.....	13.77	119
6.2.1 Innovation output.....	2.24	123
6.2.2 High-value exports.....	16.23	112
6.2.3 New product entrepreneurial activity.....	17.57	83
6.2.4 New business density.....	8.33	101
6.2.5 Scientific journal articles.....	24.48	77

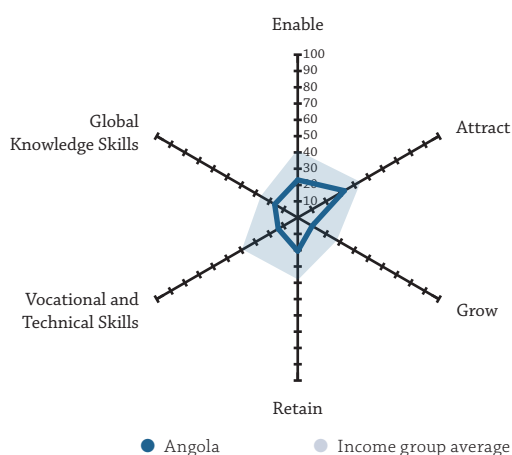
ANGOLA

Key Indicators

Rank (out of 134)	131
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	32.87

GDP per capita (PPP US\$)	6,538.45
GDP (US\$ billions)	62.31
GTCI score	19.51
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	23.13	129
1.1 Regulatory Landscape	31.87	118
1.1.1 Government effectiveness	25.83	127
1.1.2 Rule of law	29.15	123
1.1.3 Political stability	55.54	81
1.1.4 Regulatory quality	32.41	123
1.1.5 Corruption	16.44	115
1.2 Market Landscape	17.26	131
1.2.1 Extent of market dominance	0.00	134
1.2.2 Ease of doing business	19.55	130
1.2.3 Cluster development	0.00	134
1.2.4 R&D expenditure	0.40	119
1.2.5 ICT infrastructure	23.29	121
1.2.6 Urbanisation	60.35	67
1.3 Business and Labour Landscape	20.25	132
Labour Market		
1.3.1 Labour rights	79.10	71
1.3.2 Labour-employer cooperation	15.65	123
Management Practice		
1.3.3 Professional management	8.23	133
1.3.4 Relationship of pay to productivity	9.46	133
Technology Adoption		
1.3.5 Technology utilisation	6.84	130
1.3.6 Investment in emerging technologies	0.00	132
1.3.7 Firms with website	22.45	104
2 ATTRACT	33.03	125
2.1 External Openness	36.30	106
Attract Business		
2.1.1 FDI and technology transfer	31.76	125
2.1.2 Prevalence of foreign ownership	36.87	118
Attract People		
2.1.3 Migrant stock	36.23	76
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	40.32	86
2.2 Internal Openness	29.76	127
Social Inclusion		
2.2.1 Tolerance of minorities	17.39	104
2.2.2 Tolerance of immigrants	46.15	91
2.2.3 Social mobility	15.23	133
Gender Equality		
2.2.4 Women in tertiary education	48.60	104
2.2.5 Women in high-skilled jobs	35.95	113
2.2.6 Leadership opportunities for women	15.22	120

	Score	Rank
3 GROW	10.21	132
3.1 Formal Education	4.21	129
Enrolment		
3.1.1 Vocational enrolment	6.64	83
3.1.2 Tertiary enrolment	5.99	113
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	10.14	128
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	22.10	75
3.2.3 Employee development	0.00	134
3.2.4 Formal and non-formal studies	18.48	45
3.3 Access to Growth Opportunities	16.27	130
Empowerment		
3.3.1 Delegation of authority	7.96	133
3.3.2 Youth inclusion	47.70	89
Collaboration		
3.3.3 Use of virtual social networks	6.44	125
3.3.4 Use of virtual professional networks	2.98	117

4 RETAIN	20.57	127
4.1 Sustainability	12.29	130
4.1.1 Pension coverage	13.64	112
4.1.2 Social protection	8.26	130
4.1.3 Brain retention	20.39	117
4.1.4 Environmental performance	6.88	122
4.2 Lifestyle	28.85	123
4.2.1 Personal rights	48.92	102
4.2.2 Personal safety	18.33	122
4.2.3 Physician density	2.24	110
4.2.4 Sanitation	45.92	111

5 VOCATIONAL AND TECHNICAL SKILLS	13.81	133
5.1 Mid-Level Skills	22.95	113
5.1.1 Workforce with secondary education	15.37	113
5.1.2 Population with secondary education	18.70	97
5.1.3 Technicians and associate professionals	14.88	105
5.1.4 Labour productivity per employee	42.84	93
5.2 Employability	4.67	134
5.2.1 Ease of finding skilled employees	0.00	134
5.2.2 Relevance of education system to the economy	0.00	134
5.2.3 Skills matching	14.02	92

6 GLOBAL KNOWLEDGE SKILLS	16.34	117
6.1 High-Level Skills	6.67	133
6.1.1 Workforce with tertiary education	3.75	121
6.1.2 Population with tertiary education	2.12	104
6.1.3 Professionals	12.29	108
6.1.4 Researchers	8.22	107
6.1.5 Senior officials and managers	13.64	96
6.1.6 Availability of scientists and engineers	0.00	133
6.2 Talent Impact	26.00	87
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	46.15	73
6.2.3 New product entrepreneurial activity	31.86	64
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	0.00	134

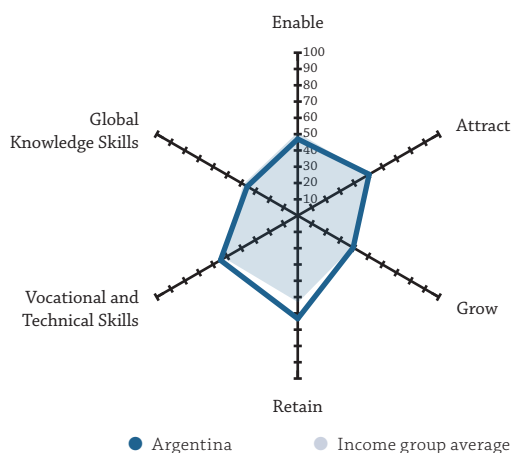
ARGENTINA

Key Indicators

Rank (out of 134) **59**
 Income group **Upper-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **45.38**

GDP per capita (PPP US\$) **20,767.61**
 GDP (US\$ billions) **383.07**
 GTCI score **48.46**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 47.01		82
1.1 Regulatory Landscape 46.07		81
1.1.1 Government effectiveness 48.73		78
1.1.2 Rule of law 43.51		90
1.1.3 Political stability 59.86		72
1.1.4 Regulatory quality 41.29		101
1.1.5 Corruption 36.99		64
1.2 Market Landscape 47.62		71
1.2.1 Extent of market dominance 39.88		81
1.2.2 Ease of doing business 50.82		106
1.2.3 Cluster development 30.17		97
1.2.4 R&D expenditure 9.76		66
1.2.5 ICT infrastructure 64.42		71
1.2.6 Urbanisation 90.65		9
1.3 Business and Labour Landscape 47.33		76
Labour Market		
1.3.1 Labour rights 73.20		79
1.3.2 Labour-employer cooperation 21.09		117
Management Practice		
1.3.3 Professional management 53.12		67
1.3.4 Relationship of pay to productivity 36.05		114
Technology Adoption		
1.3.5 Technology utilisation 44.03		87
1.3.6 Investment in emerging technologies 34.66		83
1.3.7 Firms with website 69.20		38
2 ATTRACT 50.62		64
2.1 External Openness 41.59		86
Attract Business		
2.1.1 FDI and technology transfer 41.79		107
2.1.2 Prevalence of foreign ownership 56.60		70
Attract People		
2.1.3 Migrant stock 43.32		59
2.1.4 International students 33.94		67
2.1.5 Brain gain 32.33		106
2.2 Internal Openness 59.64		43
Social Inclusion		
2.2.1 Tolerance of minorities 64.13		34
2.2.2 Tolerance of immigrants 83.08		20
2.2.3 Social mobility 35.71		115
Gender Equality		
2.2.4 Women in tertiary education 81.65		9
2.2.5 Women in high-skilled jobs 68.35		61
2.2.6 Leadership opportunities for women 24.90		106

	Score	Rank
3 GROW 39.30		55
3.1 Formal Education 41.18		50
Enrolment		
3.1.1 Vocational enrolment n/a		n/a
3.1.2 Tertiary enrolment 63.91		6
Quality		
3.1.3 Tertiary education expenditure 55.60		68
3.1.4 Reading, maths, and science 24.86		68
3.1.5 University ranking 20.32		80
3.2 Lifelong Learning 22.13		88
3.2.1 Business and economics subject ranking 0.00		70
3.2.2 Prevalence of training in firms 45.45		33
3.2.3 Employee development 34.49		72
3.2.4 Formal and non-formal studies 8.59		52
3.3 Access to Growth Opportunities 54.59		45
Empowerment		
3.3.1 Delegation of authority 45.87		70
3.3.2 Youth inclusion 64.82		66
Collaboration		
3.3.3 Use of virtual social networks 79.52		28
3.3.4 Use of virtual professional networks 28.15		36

4 RETAIN 63.28		40
4.1 Sustainability 57.35		42
4.1.1 Pension coverage 89.70		58
4.1.2 Social protection 45.06		55
4.1.3 Brain retention 48.08		48
4.1.4 Environmental performance 46.56		52
4.2 Lifestyle 69.22		46
4.2.1 Personal rights 88.84		40
4.2.2 Personal safety 44.66		85
4.2.3 Physician density 49.57		28
4.2.4 Sanitation 93.81		62

5 VOCATIONAL AND TECHNICAL SKILLS 54.75		62
5.1 Mid-Level Skills 55.17		54
5.1.1 Workforce with secondary education 57.96		43
5.1.2 Population with secondary education 52.53		40
5.1.3 Technicians and associate professionals 40.10		50
5.1.4 Labour productivity per employee 70.08		54
5.2 Employability 54.34		64
5.2.1 Ease of finding skilled employees 55.25		67
5.2.2 Relevance of education system to the economy 34.04		92
5.2.3 Skills matching 73.74		38

6 GLOBAL KNOWLEDGE SKILLS 35.78		69
6.1 High-Level Skills 38.31		65
6.1.1 Workforce with tertiary education 27.78		64
6.1.2 Population with tertiary education 25.95		58
6.1.3 Professionals 23.27		70
6.1.4 Researchers 71.06		48
6.1.5 Senior officials and managers 38.66		50
6.1.6 Availability of scientists and engineers 43.14		81
6.2 Talent Impact 33.24		69
6.2.1 Innovation output 20.06		72
6.2.2 High-value exports 44.04		78
6.2.3 New product entrepreneurial activity 64.35		17
6.2.4 New business density 4.49		107
6.2.5 Scientific journal articles 33.28		63

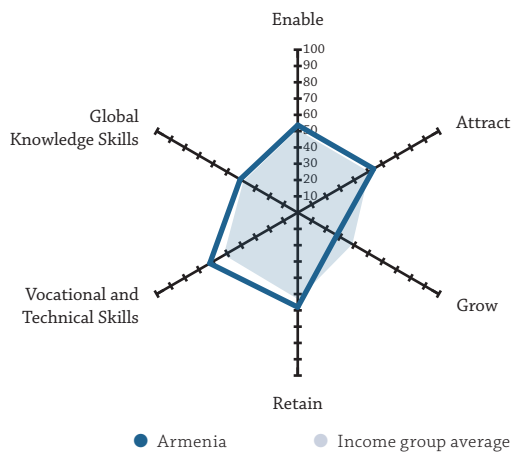
ARMENIA

Key Indicators

Rank (out of 134).....	57
Income group.....	Upper-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	2.96

GDP per capita (PPP US\$).....	13,284.16
GDP (US\$ billions).....	12.65
GTCI score.....	49.39
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	53.71	55
1.1 Regulatory Landscape.....	51.00	62
1.1.1 Government effectiveness.....	49.16	76
1.1.2 Rule of law.....	50.41	69
1.1.3 Political stability.....	51.13	94
1.1.4 Regulatory quality.....	57.71	58
1.1.5 Corruption.....	46.58	50
1.2 Market Landscape.....	51.53	62
1.2.1 Extent of market dominance.....	59.18	35
1.2.2 Ease of doing business.....	78.29	45
1.2.3 Cluster development.....	38.55	76
1.2.4 R&D expenditure.....	3.57	95
1.2.5 ICT infrastructure.....	71.99	61
1.2.6 Urbanisation.....	57.63	71
1.3 Business and Labour Landscape.....	58.61	46
Labour Market		
1.3.1 Labour rights.....	86.00	55
1.3.2 Labour-employer cooperation.....	57.56	34
Management Practice		
1.3.3 Professional management.....	53.99	62
1.3.4 Relationship of pay to productivity.....	62.35	51
Technology Adoption		
1.3.5 Technology utilisation.....	48.58	70
1.3.6 Investment in emerging technologies.....	46.26	51
1.3.7 Firms with website.....	55.54	59
2 ATTRACT.....	53.78	53
2.1 External Openness.....	46.36	70
Attract Business		
2.1.1 FDI and technology transfer.....	51.72	84
2.1.2 Prevalence of foreign ownership.....	43.29	104
Attract People		
2.1.3 Migrant stock.....	48.74	50
2.1.4 International students.....	47.66	41
2.1.5 Brain gain.....	40.37	85
2.2 Internal Openness.....	61.21	37
Social Inclusion		
2.2.1 Tolerance of minorities.....	47.83	56
2.2.2 Tolerance of immigrants.....	56.92	71
2.2.3 Social mobility.....	52.61	62
Gender Equality		
2.2.4 Women in tertiary education.....	66.68	56
2.2.5 Women in high-skilled jobs.....	83.09	14
2.2.6 Leadership opportunities for women.....	60.14	38

	Score	Rank
3 GROW.....	27.71	95
3.1 Formal Education.....	23.77	93
Enrolment		
3.1.1 Vocational enrolment.....	23.00	55
3.1.2 Tertiary enrolment.....	35.67	61
Quality		
3.1.3 Tertiary education expenditure.....	36.39	103
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	19.55	98
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	27.69	63
3.2.3 Employee development.....	30.95	84
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	39.83	88
Empowerment		
3.3.1 Delegation of authority.....	41.66	89
3.3.2 Youth inclusion.....	46.75	97
Collaboration		
3.3.3 Use of virtual social networks.....	60.19	78
3.3.4 Use of virtual professional networks.....	10.71	80

4 RETAIN.....	58.00	50
4.1 Sustainability.....	44.51	75
4.1.1 Pension coverage.....	64.85	74
4.1.2 Social protection.....	33.60	81
4.1.3 Brain retention.....	32.85	86
4.1.4 Environmental performance.....	46.74	51
4.2 Lifestyle.....	71.50	41
4.2.1 Personal rights.....	78.40	61
4.2.2 Personal safety.....	59.71	51
4.2.3 Physician density.....	54.74	19
4.2.4 Sanitation.....	93.14	65

5 VOCATIONAL AND TECHNICAL SKILLS.....	62.32	36
5.1 Mid-Level Skills.....	63.59	38
5.1.1 Workforce with secondary education.....	86.21	7
5.1.2 Population with secondary education.....	65.84	25
5.1.3 Technicians and associate professionals.....	38.71	54
5.1.4 Labour productivity per employee.....	63.62	66
5.2 Employability.....	61.04	45
5.2.1 Ease of finding skilled employees.....	47.29	88
5.2.2 Relevance of education system to the economy.....	43.53	68
5.2.3 Skills matching.....	92.31	3

6 GLOBAL KNOWLEDGE SKILLS.....	40.81	56
6.1 High-Level Skills.....	39.82	61
6.1.1 Workforce with tertiary education.....	17.25	91
6.1.2 Population with tertiary education.....	58.26	10
6.1.3 Professionals.....	39.55	45
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	25.86	70
6.1.6 Availability of scientists and engineers.....	58.18	48
6.2 Talent Impact.....	41.80	52
6.2.1 Innovation output.....	35.83	46
6.2.2 High-value exports.....	57.37	50
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	43.00	46
6.2.5 Scientific journal articles.....	30.98	66

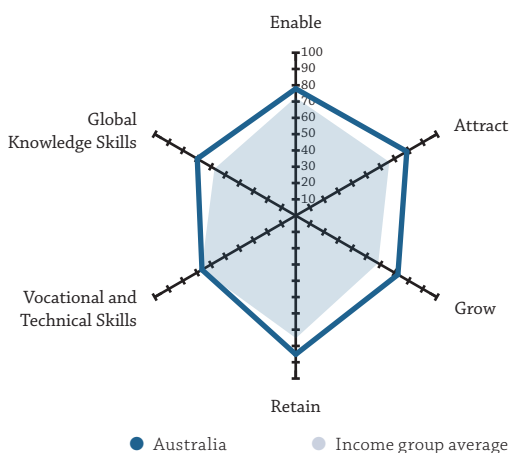
AUSTRALIA

Key Indicators

Rank (out of 134).....	11
Income group.....	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	25.69

GDP per capita (PPP US\$).....	52,518.32
GDP (US\$ billions).....	1,330.90
GTCI score.....	75.06
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE.....77.87		19
1.1 Regulatory Landscape.....	88.93	10
1.1.1 Government effectiveness.....	85.58	13
1.1.2 Rule of law.....	93.37	13
1.1.3 Political stability.....	87.13	10
1.1.4 Regulatory quality.....	93.63	3
1.1.5 Corruption.....	84.93	11
1.2 Market Landscape.....	70.52	21
1.2.1 Extent of market dominance.....	56.82	39
1.2.2 Ease of doing business.....	90.18	13
1.2.3 Cluster development.....	58.42	34
1.2.4 R&D expenditure.....	37.78	20
1.2.5 ICT infrastructure.....	96.03	8
1.2.6 Urbanisation.....	83.92	23
1.3 Business and Labour Landscape.....	74.16	23
Labour Market		
1.3.1 Labour rights.....	83.80	60
1.3.2 Labour-employer cooperation.....	47.71	52
Management Practice		
1.3.3 Professional management.....	91.88	7
1.3.4 Relationship of pay to productivity.....	72.05	31
Technology Adoption		
1.3.5 Technology utilisation.....	75.91	25
1.3.6 Investment in emerging technologies.....	65.76	23
1.3.7 Firms with website.....	82.01	18
2. ATTRACT.....78.70		5
2.1 External Openness.....	79.93	7
Attract Business		
2.1.1 FDI and technology transfer.....	77.79	20
2.1.2 Prevalence of foreign ownership.....	82.47	14
Attract People		
2.1.3 Migrant stock.....	79.63	10
2.1.4 International students.....	84.81	4
2.1.5 Brain gain.....	74.96	17
2.2 Internal Openness.....	77.46	10
Social Inclusion		
2.2.1 Tolerance of minorities.....	71.74	23
2.2.2 Tolerance of immigrants.....	93.85	6
2.2.3 Social mobility.....	90.64	7
Gender Equality		
2.2.4 Women in tertiary education.....	71.05	42
2.2.5 Women in high-skilled jobs.....	72.14	44
2.2.6 Leadership opportunities for women.....	65.34	31

	Score	Rank
3. GROW.....72.40		8
3.1 Formal Education.....	65.80	12
Enrolment		
3.1.1 Vocational enrolment.....	37.65	35
3.1.2 Tertiary enrolment.....	75.33	3
Quality		
3.1.3 Tertiary education expenditure.....	71.43	30
3.1.4 Reading, maths, and science.....	67.32	19
3.1.5 University ranking.....	77.27	8
3.2 Lifelong Learning.....	71.90	9
3.2.1 Business and economics subject ranking.....	70.14	8
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	71.23	19
3.2.4 Formal and non-formal studies.....	74.32	12
3.3 Access to Growth Opportunities.....	79.50	7
Empowerment		
3.3.1 Delegation of authority.....	86.37	9
3.3.2 Youth inclusion.....	85.15	21
Collaboration		
3.3.3 Use of virtual social networks.....	80.15	26
3.3.4 Use of virtual professional networks.....	66.34	5

4. RETAIN.....85.14		11
4.1 Sustainability.....	85.27	12
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	82.17	14
4.1.3 Brain retention.....	72.30	18
4.1.4 Environmental performance.....	86.60	13
4.2 Lifestyle.....	85.02	10
4.2.1 Personal rights.....	99.32	4
4.2.2 Personal safety.....	94.09	6
4.2.3 Physician density.....	46.68	32
4.2.4 Sanitation.....	99.99	11

5. VOCATIONAL AND TECHNICAL SKILLS.....66.45		26
5.1 Mid-Level Skills.....	61.48	43
5.1.1 Workforce with secondary education.....	53.91	50
5.1.2 Population with secondary education.....	48.25	50
5.1.3 Technicians and associate professionals.....	55.33	32
5.1.4 Labour productivity per employee.....	88.41	20
5.2 Employability.....	71.42	21
5.2.1 Ease of finding skilled employees.....	73.18	33
5.2.2 Relevance of education system to the economy.....	69.66	18
5.2.3 Skills matching.....	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS.....69.78		9
6.1 High-Level Skills.....	67.61	7
6.1.1 Workforce with tertiary education.....	46.44	31
6.1.2 Population with tertiary education.....	57.92	11
6.1.3 Professionals.....	52.18	21
6.1.4 Researchers.....	91.20	21
6.1.5 Senior officials and managers.....	84.72	7
6.1.6 Availability of scientists and engineers.....	73.19	19
6.2 Talent Impact.....	71.96	12
6.2.1 Innovation output.....	47.91	30
6.2.2 High-value exports.....	75.10	18
6.2.3 New product entrepreneurial activity.....	56.07	31
6.2.4 New business density.....	85.35	8
6.2.5 Scientific journal articles.....	95.37	4

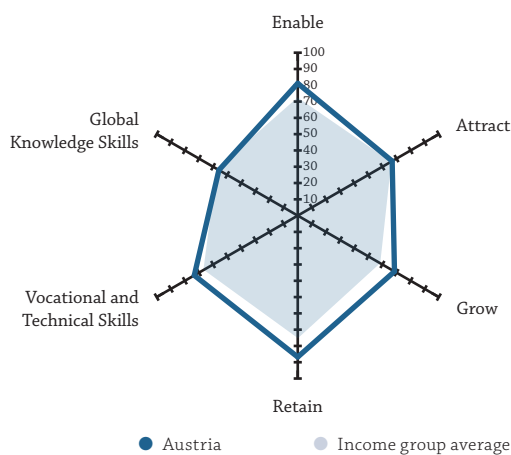
AUSTRIA

Key Indicators

Rank (out of 134).....	18
Income group.....	High income
Regional group.....	Europe
Population (millions).....	8.92

GDP per capita (PPP US\$).....	55,097.46
GDP (US\$ billions).....	428.96
GTCI score.....	72.10
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	81.17	12
1.1 Regulatory Landscape.....	86.66	13
1.1.1 Government effectiveness.....	83.78	15
1.1.2 Rule of law.....	96.80	7
1.1.3 Political stability.....	84.73	17
1.1.4 Regulatory quality.....	84.46	16
1.1.5 Corruption.....	83.56	14
1.2 Market Landscape.....	75.38	15
1.2.1 Extent of market dominance.....	84.04	6
1.2.2 Ease of doing business.....	85.81	25
1.2.3 Cluster development.....	79.84	13
1.2.4 R&D expenditure.....	64.89	6
1.2.5 ICT infrastructure.....	85.66	34
1.2.6 Urbanisation.....	52.05	80
1.3 Business and Labour Landscape.....	81.46	14
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	80.86	9
Management Practice		
1.3.3 Professional management.....	79.36	20
1.3.4 Relationship of pay to productivity.....	74.69	25
Technology Adoption		
1.3.5 Technology utilisation.....	77.21	20
1.3.6 Investment in emerging technologies.....	64.42	25
1.3.7 Firms with website.....	93.64	5
2 ATTRACT.....	66.92	22
2.1 External Openness.....	67.73	21
Attract Business		
2.1.1 FDI and technology transfer.....	66.28	46
2.1.2 Prevalence of foreign ownership.....	68.97	43
Attract People		
2.1.3 Migrant stock.....	68.85	19
2.1.4 International students.....	74.57	10
2.1.5 Brain gain.....	59.96	31
2.2 Internal Openness.....	66.12	21
Social Inclusion		
2.2.1 Tolerance of minorities.....	63.04	35
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	85.66	12
Gender Equality		
2.2.4 Women in tertiary education.....	63.55	71
2.2.5 Women in high-skilled jobs.....	66.25	70
2.2.6 Leadership opportunities for women.....	52.06	49

	Score	Rank
3 GROW.....	68.56	12
3.1 Formal Education.....	68.99	6
Enrolment		
3.1.1 Vocational enrolment.....	78.03	2
3.1.2 Tertiary enrolment.....	60.46	14
Quality		
3.1.3 Tertiary education expenditure.....	85.05	9
3.1.4 Reading, maths, and science.....	64.07	27
3.1.5 University ranking.....	57.35	18
3.2 Lifelong Learning.....	70.08	14
3.2.1 Business and economics subject ranking.....	50.16	20
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	78.94	10
3.2.4 Formal and non-formal studies.....	81.13	7
3.3 Access to Growth Opportunities.....	66.61	21
Empowerment		
3.3.1 Delegation of authority.....	76.12	19
3.3.2 Youth inclusion.....	87.10	18
Collaboration		
3.3.3 Use of virtual social networks.....	80.15	26
3.3.4 Use of virtual professional networks.....	23.07	46

4 RETAIN.....	86.78	7
4.1 Sustainability.....	88.31	8
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	97.40	4
4.1.3 Brain retention.....	60.94	34
4.1.4 Environmental performance.....	94.89	6
4.2 Lifestyle.....	85.26	8
4.2.1 Personal rights.....	90.34	36
4.2.2 Personal safety.....	85.87	17
4.2.3 Physician density.....	64.88	9
4.2.4 Sanitation.....	99.97	12
5 VOCATIONAL AND TECHNICAL SKILLS.....	73.31	10
5.1 Mid-Level Skills.....	77.25	4
5.1.1 Workforce with secondary education.....	68.46	25
5.1.2 Population with secondary education.....	72.41	20
5.1.3 Technicians and associate professionals.....	77.20	9
5.1.4 Labour productivity per employee.....	90.92	11
5.2 Employability.....	69.37	26
5.2.1 Ease of finding skilled employees.....	67.51	44
5.2.2 Relevance of education system to the economy.....	65.56	22
5.2.3 Skills matching.....	75.05	35

6 GLOBAL KNOWLEDGE SKILLS.....	55.88	29
6.1 High-Level Skills.....	53.55	33
6.1.1 Workforce with tertiary education.....	43.64	35
6.1.2 Population with tertiary education.....	37.55	34
6.1.3 Professionals.....	48.39	26
6.1.4 Researchers.....	94.79	8
6.1.5 Senior officials and managers.....	38.30	52
6.1.6 Availability of scientists and engineers.....	58.63	47
6.2 Talent Impact.....	58.22	29
6.2.1 Innovation output.....	57.38	22
6.2.2 High-value exports.....	60.90	41
6.2.3 New product entrepreneurial activity.....	75.31	11
6.2.4 New business density.....	14.58	90
6.2.5 Scientific journal articles.....	82.93	17

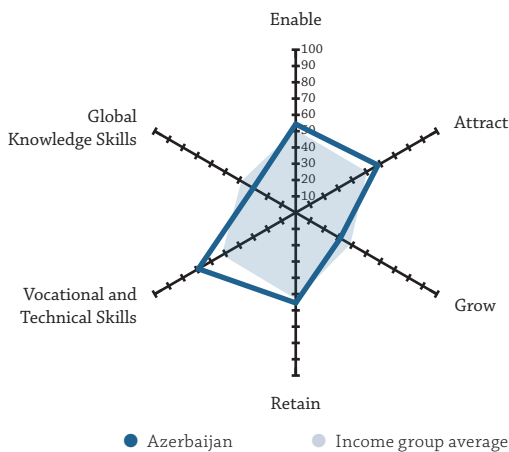
AZERBAIJAN

Key Indicators

Rank (out of 134).....	54
Income group	Upper-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	10.11

GDP per capita (PPP US\$)	14,451.98
GDP (US\$ billions)	42.61
GTCI score	49.77
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	54.32	51
1.1 Regulatory Landscape	40.52	97
1.1.1 Government effectiveness	47.56	82
1.1.2 Rule of law	40.14	101
1.1.3 Political stability	47.18	104
1.1.4 Regulatory quality	47.17	88
1.1.5 Corruption	20.55	107
1.2 Market Landscape	53.74	52
1.2.1 Extent of market dominance	72.73	18
1.2.2 Ease of doing business	82.21	32
1.2.3 Cluster development	63.31	31
1.2.4 R&D expenditure	3.48	96
1.2.5 ICT infrastructure	51.70	84
1.2.6 Urbanisation	49.04	88
1.3 Business and Labour Landscape	68.69	30
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	66.89	21
Management Practice		
1.3.3 Professional management	63.47	38
1.3.4 Relationship of pay to productivity	84.93	9
Technology Adoption		
1.3.5 Technology utilisation	64.06	44
1.3.6 Investment in emerging technologies	67.18	22
1.3.7 Firms with website	65.61	45
2 ATTRACT	58.23	39
2.1 External Openness	54.90	40
Attract Business		
2.1.1 FDI and technology transfer	72.44	30
2.1.2 Prevalence of foreign ownership	66.12	49
Attract People		
2.1.3 Migrant stock	31.43	80
2.1.4 International students	29.53	73
2.1.5 Brain gain	74.97	16
2.2 Internal Openness	61.55	35
Social Inclusion		
2.2.1 Tolerance of minorities	39.13	69
2.2.2 Tolerance of immigrants	53.85	79
2.2.3 Social mobility	61.44	41
Gender Equality		
2.2.4 Women in tertiary education	59.62	85
2.2.5 Women in high-skilled jobs	83.94	12
2.2.6 Leadership opportunities for women	71.33	22

	Score	Rank
3 GROW	31.54	81
3.1 Formal Education	29.11	80
Enrolment		
3.1.1 Vocational enrolment	42.59	32
3.1.2 Tertiary enrolment	21.63	83
Quality		
3.1.3 Tertiary education expenditure	53.50	76
3.1.4 Reading, maths, and science	27.81	64
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	30.13	54
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	36.64	49
3.2.3 Employee development	53.74	40
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	35.38	102
Empowerment		
3.3.1 Delegation of authority	59.00	39
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	40.96	99
3.3.4 Use of virtual professional networks	6.18	100

4 RETAIN	55.43	56
4.1 Sustainability	59.11	38
4.1.1 Pension coverage	72.53	69
4.1.2 Social protection	59.87	38
4.1.3 Brain retention	67.52	26
4.1.4 Environmental performance	36.51	67
4.2 Lifestyle	51.75	80
4.2.1 Personal rights	24.82	121
4.2.2 Personal safety	47.49	78
4.2.3 Physician density	42.75	36
4.2.4 Sanitation	91.92	68

5 VOCATIONAL AND TECHNICAL SKILLS	68.99	18
5.1 Mid-Level Skills	68.89	21
5.1.1 Workforce with secondary education	89.53	5
5.1.2 Population with secondary education	89.15	4
5.1.3 Technicians and associate professionals	39.51	53
5.1.4 Labour productivity per employee	57.39	78
5.2 Employability	69.09	28
5.2.1 Ease of finding skilled employees	76.33	29
5.2.2 Relevance of education system to the economy	61.84	34
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	30.11	83
6.1 High-Level Skills	34.78	78
6.1.1 Workforce with tertiary education	32.38	55
6.1.2 Population with tertiary education	33.42	38
6.1.3 Professionals	29.21	57
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	8.48	109
6.1.6 Availability of scientists and engineers	70.43	25
6.2 Talent Impact	25.43	89
6.2.1 Innovation output	14.46	85
6.2.2 High-value exports	40.42	85
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	29.67	62
6.2.5 Scientific journal articles	17.19	83

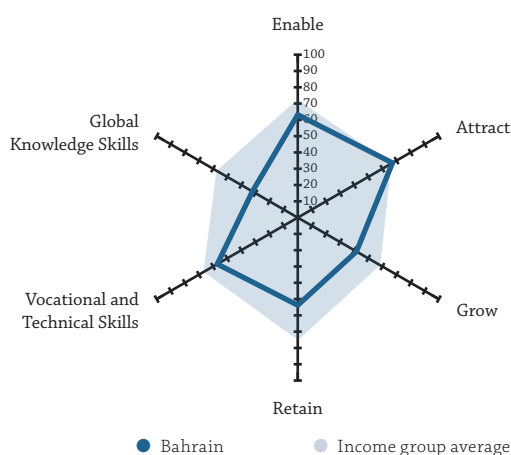
BAHRAIN

Key Indicators

Rank (out of 134).....	44
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	1.70

GDP per capita (PPP US\$)	43,181.21
GDP (US\$ billions)	38.47
GTCI score	52.46
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	63.15	38
1.1 Regulatory Landscape	53.93	57
1.1.1 Government effectiveness	57.29	54
1.1.2 Rule of law	64.82	44
1.1.3 Political stability	47.62	103
1.1.4 Regulatory quality	62.92	50
1.1.5 Corruption	36.99	64
1.2 Market Landscape	61.83	34
1.2.1 Extent of market dominance	51.93	48
1.2.2 Ease of doing business	81.00	41
1.2.3 Cluster development	64.68	28
1.2.4 R&D expenditure	1.79	109
1.2.5 ICT infrastructure	83.87	40
1.2.6 Urbanisation	87.68	14
1.3 Business and Labour Landscape	73.69	25
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	76.24	11
Management Practice		
1.3.3 Professional management	68.65	30
1.3.4 Relationship of pay to productivity	79.43	15
Technology Adoption		
1.3.5 Technology utilisation	70.44	31
1.3.6 Investment in emerging technologies	n/a	n/a
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	67.12	21
2.1 External Openness	77.76	10
Attract Business		
2.1.1 FDI and technology transfer	69.65	39
2.1.2 Prevalence of foreign ownership	81.33	16
Attract People		
2.1.3 Migrant stock	90.46	4
2.1.4 International students	69.43	11
2.1.5 Brain gain	77.92	13
2.2 Internal Openness	56.49	55
Social Inclusion		
2.2.1 Tolerance of minorities	1.09	126
2.2.2 Tolerance of immigrants	76.92	28
2.2.3 Social mobility	76.37	21
Gender Equality		
2.2.4 Women in tertiary education	76.17	18
2.2.5 Women in high-skilled jobs	29.23	117
2.2.6 Leadership opportunities for women	79.14	12

	Score	Rank
3 GROW	41.61	52
3.1 Formal Education	30.60	75
Enrolment		
3.1.1 Vocational enrolment	9.97	78
3.1.2 Tertiary enrolment	38.59	53
Quality		
3.1.3 Tertiary education expenditure	73.83	28
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	33.37	50
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	66.73	26
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	60.86	32
Empowerment		
3.3.1 Delegation of authority	64.80	30
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	87.53	8
3.3.4 Use of virtual professional networks	30.24	32

4 RETAIN	53.77	60
4.1 Sustainability	63.28	30
4.1.1 Pension coverage	72.93	68
4.1.2 Social protection	70.65	24
4.1.3 Brain retention	65.10	29
4.1.4 Environmental performance	44.44	54
4.2 Lifestyle	44.26	95
4.2.1 Personal rights	21.62	124
4.2.2 Personal safety	44.27	86
4.2.3 Physician density	11.16	90
4.2.4 Sanitation	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS	57.00	54
5.1 Mid-Level Skills	43.07	75
5.1.1 Workforce with secondary education	12.42	117
5.1.2 Population with secondary education	46.03	53
5.1.3 Technicians and associate professionals	25.90	75
5.1.4 Labour productivity per employee	87.95	21
5.2 Employability	70.93	22
5.2.1 Ease of finding skilled employees	78.79	24
5.2.2 Relevance of education system to the economy	63.07	31
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	32.13	79
6.1 High-Level Skills	39.32	63
6.1.1 Workforce with tertiary education	11.50	102
6.1.2 Population with tertiary education	31.36	42
6.1.3 Professionals	17.36	88
6.1.4 Researchers	52.93	71
6.1.5 Senior officials and managers	62.20	23
6.1.6 Availability of scientists and engineers	60.55	43
6.2 Talent Impact	24.94	90
6.2.1 Innovation output	13.38	88
6.2.2 High-value exports	8.94	118
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	43.45	43
6.2.5 Scientific journal articles	33.97	62

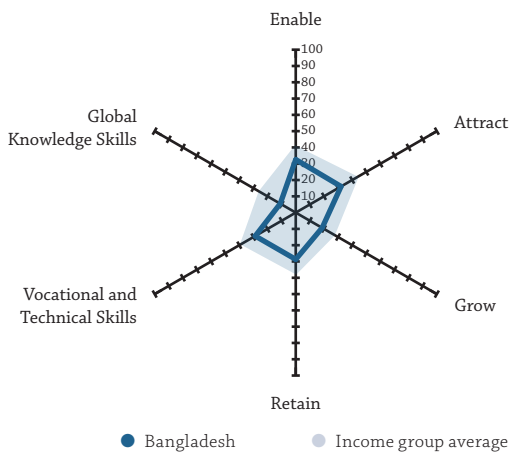
BANGLADESH

Key Indicators

Rank (out of 134) **123**
 Income group **Lower-middle income**
 Regional group **Central and Southern Asia**
 Population (millions) **164.69**

GDP per capita (PPP US\$) **5,082.68**
 GDP (US\$ billions) **324.24**
 GTCI score **25.30**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	32.57	119
1.1 Regulatory Landscape	32.30	117
1.1.1 Government effectiveness	34.22	112
1.1.2 Rule of law	38.78	104
1.1.3 Political stability	41.82	113
1.1.4 Regulatory quality	31.64	124
1.1.5 Corruption	15.07	117
1.2 Market Landscape	30.55	115
1.2.1 Extent of market dominance	22.63	115
1.2.2 Ease of doing business	26.20	129
1.2.3 Cluster development	37.81	78
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	38.95	101
1.2.6 Urbanisation	27.14	112
1.3 Business and Labour Landscape	34.84	119
Labour Market		
1.3.1 Labour rights	25.00	99
1.3.2 Labour-employer cooperation	32.78	93
Management Practice		
1.3.3 Professional management	43.03	92
1.3.4 Relationship of pay to productivity	49.16	77
Technology Adoption		
1.3.5 Technology utilisation	45.43	81
1.3.6 Investment in emerging technologies	29.07	98
1.3.7 Firms with website	19.44	106
2 ATTRACT	32.10	127
2.1 External Openness	30.51	120
Attract Business		
2.1.1 FDI and technology transfer	44.51	101
2.1.2 Prevalence of foreign ownership	41.69	109
Attract People		
2.1.3 Migrant stock	19.23	106
2.1.4 International students	1.76	110
2.1.5 Brain gain	45.37	71
2.2 Internal Openness	33.70	125
Social Inclusion		
2.2.1 Tolerance of minorities	11.96	110
2.2.2 Tolerance of immigrants	56.92	71
2.2.3 Social mobility	45.42	85
Gender Equality		
2.2.4 Women in tertiary education	38.50	116
2.2.5 Women in high-skilled jobs	24.29	119
2.2.6 Leadership opportunities for women	25.09	105

	Score	Rank
3 GROW	18.71	123
3.1 Formal Education	19.13	107
Enrolment		
3.1.1 Vocational enrolment	8.40	81
3.1.2 Tertiary enrolment	16.33	93
Quality		
3.1.3 Tertiary education expenditure	30.68	106
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	21.12	78
3.2 Lifelong Learning	11.30	125
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	19.86	80
3.2.3 Employee development	14.03	123
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	25.71	116
Empowerment		
3.3.1 Delegation of authority	25.67	120
3.3.2 Youth inclusion	48.71	88
Collaboration		
3.3.3 Use of virtual social networks	25.36	107
3.3.4 Use of virtual professional networks	3.09	115

4 RETAIN	28.70	114
4.1 Sustainability	22.89	113
4.1.1 Pension coverage	38.38	89
4.1.2 Social protection	13.83	124
4.1.3 Brain retention	33.69	84
4.1.4 Environmental performance	5.64	124
4.2 Lifestyle	34.51	109
4.2.1 Personal rights	39.73	108
4.2.2 Personal safety	46.61	80
4.2.3 Physician density	7.53	99
4.2.4 Sanitation	44.15	112

5 VOCATIONAL AND TECHNICAL SKILLS	28.71	116
5.1 Mid-Level Skills	19.97	116
5.1.1 Workforce with secondary education	27.49	101
5.1.2 Population with secondary education	29.94	77
5.1.3 Technicians and associate professionals	7.06	119
5.1.4 Labour productivity per employee	15.39	110
5.2 Employability	37.46	109
5.2.1 Ease of finding skilled employees	36.33	111
5.2.2 Relevance of education system to the economy	34.68	89
5.2.3 Skills matching	41.35	82

6 GLOBAL KNOWLEDGE SKILLS	10.98	128
6.1 High-Level Skills	16.79	114
6.1.1 Workforce with tertiary education	7.33	112
6.1.2 Population with tertiary education	12.42	80
6.1.3 Professionals	10.68	115
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	11.46	99
6.1.6 Availability of scientists and engineers	42.06	83
6.2 Talent Impact	5.17	131
6.2.1 Innovation output	7.25	113
6.2.2 High-value exports	6.47	121
6.2.3 New product entrepreneurial activity	6.94	90
6.2.4 New business density	0.05	117
6.2.5 Scientific journal articles	5.16	104

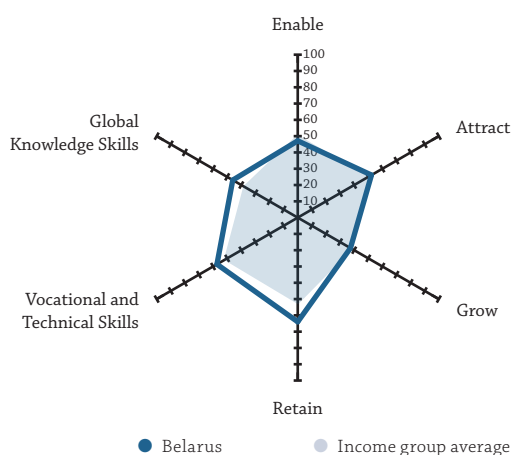
BELARUS

Key Indicators

Rank (out of 134).....	50
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	9.40

GDP per capita (PPP US\$).....	20,199.70
GDP (US\$ billions).....	60.26
GTCI score.....	50.67
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	47.12	81
1.1 Regulatory Landscape.....	46.96	77
1.1.1 Government effectiveness.....	46.57	84
1.1.2 Rule of law.....	35.13	111
1.1.3 Political stability.....	69.11	53
1.1.4 Regulatory quality.....	40.16	103
1.1.5 Corruption.....	43.84	53
1.2 Market Landscape.....	51.24	63
1.2.1 Extent of market dominance.....	36.14	89
1.2.2 Ease of doing business.....	77.93	47
1.2.3 Cluster development.....	31.15	95
1.2.4 R&D expenditure.....	12.01	55
1.2.5 ICT infrastructure.....	74.83	57
1.2.6 Urbanisation.....	75.39	39
1.3 Business and Labour Landscape.....	43.14	103
Labour Market		
1.3.1 Labour rights.....	0.00	100
1.3.2 Labour-employer cooperation.....	32.77	94
Management Practice		
1.3.3 Professional management.....	45.29	86
1.3.4 Relationship of pay to productivity.....	63.60	48
Technology Adoption		
1.3.5 Technology utilisation.....	n/a	n/a
1.3.6 Investment in emerging technologies.....	n/a	n/a
1.3.7 Firms with website.....	74.06	31
2 ATTRACT.....	52.24	57
2.1 External Openness.....	46.84	67
Attract Business		
2.1.1 FDI and technology transfer.....	n/a	n/a
2.1.2 Prevalence of foreign ownership.....	n/a	n/a
Attract People		
2.1.3 Migrant stock.....	59.63	39
2.1.4 International students.....	42.51	53
2.1.5 Brain gain.....	38.40	93
2.2 Internal Openness.....	57.64	49
Social Inclusion		
2.2.1 Tolerance of minorities.....	41.30	65
2.2.2 Tolerance of immigrants.....	32.31	115
2.2.3 Social mobility.....	50.56	71
Gender Equality		
2.2.4 Women in tertiary education.....	63.43	72
2.2.5 Women in high-skilled jobs.....	100.00	1
2.2.6 Leadership opportunities for women.....	58.23	39

	Score	Rank
3 GROW.....	37.37	62
3.1 Formal Education.....	43.85	45
Enrolment		
3.1.1 Vocational enrolment.....	28.02	48
3.1.2 Tertiary enrolment.....	60.98	12
Quality		
3.1.3 Tertiary education expenditure.....	54.10	74
3.1.4 Reading, maths, and science.....	56.42	35
3.1.5 University ranking.....	19.74	81
3.2 Lifelong Learning.....	24.33	76
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	33.29	55
3.2.3 Employee development.....	39.70	60
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	43.94	77
Empowerment		
3.3.1 Delegation of authority.....	48.20	66
3.3.2 Youth inclusion.....	78.95	36
Collaboration		
3.3.3 Use of virtual social networks.....	40.02	102
3.3.4 Use of virtual professional networks.....	8.61	89

4 RETAIN.....	63.95	39
4.1 Sustainability.....	60.71	35
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	34.15	80
4.1.3 Brain retention.....	n/a	n/a
4.1.4 Environmental performance.....	47.97	47
4.2 Lifestyle.....	67.20	48
4.2.1 Personal rights.....	44.89	103
4.2.2 Personal safety.....	61.66	47
4.2.3 Physician density.....	64.62	10
4.2.4 Sanitation.....	97.62	45
5 VOCATIONAL AND TECHNICAL SKILLS.....	57.26	53
5.1 Mid-Level Skills.....	54.19	57
5.1.1 Workforce with secondary education.....	59.59	40
5.1.2 Population with secondary education.....	45.37	55
5.1.3 Technicians and associate professionals.....	44.63	46
5.1.4 Labour productivity per employee.....	67.16	62
5.2 Employability.....	60.34	47
5.2.1 Ease of finding skilled employees.....	73.88	32
5.2.2 Relevance of education system to the economy.....	46.80	58
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	46.06	48
6.1 High-Level Skills.....	63.27	18
6.1.1 Workforce with tertiary education.....	66.35	4
6.1.2 Population with tertiary education.....	69.44	4
6.1.3 Professionals.....	50.34	23
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	66.93	17
6.1.6 Availability of scientists and engineers.....	n/a	n/a
6.2 Talent Impact.....	28.85	79
6.2.1 Innovation output.....	25.16	60
6.2.2 High-value exports.....	39.99	86
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	25.68	73
6.2.5 Scientific journal articles.....	24.55	76

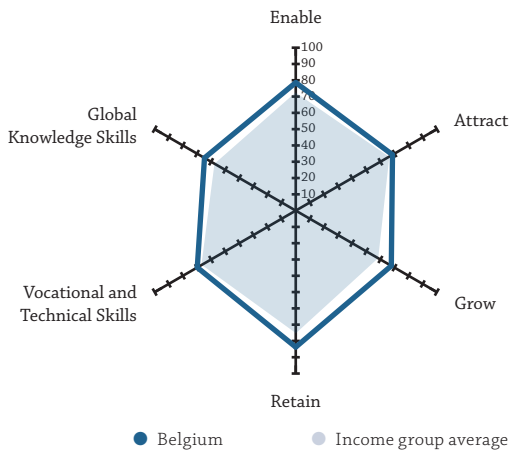
BELGIUM

Key Indicators

Rank (out of 134).....	17
Income group.....	High income
Regional group.....	Europe
Population (millions).....	11.56

GDP per capita (PPP US\$).....	51,968.19
GDP (US\$ billions).....	515.33
GTCI score.....	72.18
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	78.57	17
1.1 Regulatory Landscape.....	79.24	19
1.1.1 Government effectiveness.....	73.58	30
1.1.2 Rule of law.....	84.84	20
1.1.3 Political stability.....	73.45	42
1.1.4 Regulatory quality.....	80.75	21
1.1.5 Corruption.....	83.56	14
1.2 Market Landscape.....	79.77	9
1.2.1 Extent of market dominance.....	75.57	14
1.2.2 Ease of doing business.....	79.17	44
1.2.3 Cluster development.....	77.60	15
1.2.4 R&D expenditure.....	55.86	10
1.2.5 ICT infrastructure.....	92.72	16
1.2.6 Urbanisation.....	97.70	4
1.3 Business and Labour Landscape.....	76.71	21
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	52.14	47
Management Practice		
1.3.3 Professional management.....	80.99	17
1.3.4 Relationship of pay to productivity.....	73.39	28
Technology Adoption		
1.3.5 Technology utilisation.....	73.73	28
1.3.6 Investment in emerging technologies.....	67.50	20
1.3.7 Firms with website.....	89.24	8
2 ATTRACT.....	68.57	20
2.1 External Openness.....	72.76	15
Attract Business		
2.1.1 FDI and technology transfer.....	76.58	23
2.1.2 Prevalence of foreign ownership.....	90.39	6
Attract People		
2.1.3 Migrant stock.....	66.90	22
2.1.4 International students.....	62.21	19
2.1.5 Brain gain.....	67.71	22
2.2 Internal Openness.....	64.39	26
Social Inclusion		
2.2.1 Tolerance of minorities.....	60.87	38
2.2.2 Tolerance of immigrants.....	60.00	62
2.2.3 Social mobility.....	74.54	24
Gender Equality		
2.2.4 Women in tertiary education.....	69.00	48
2.2.5 Women in high-skilled jobs.....	68.73	60
2.2.6 Leadership opportunities for women.....	53.19	48

	Score	Rank
3 GROW.....	67.74	15
3.1 Formal Education.....	68.51	9
Enrolment		
3.1.1 Vocational enrolment.....	70.27	6
3.1.2 Tertiary enrolment.....	54.97	22
Quality		
3.1.3 Tertiary education expenditure.....	82.11	14
3.1.4 Reading, maths, and science.....	67.69	18
3.1.5 University ranking.....	67.49	14
3.2 Lifelong Learning.....	65.34	17
3.2.1 Business and economics subject ranking.....	55.60	15
3.2.2 Prevalence of training in firms.....	70.07	10
3.2.3 Employee development.....	74.54	16
3.2.4 Formal and non-formal studies.....	61.16	27
3.3 Access to Growth Opportunities.....	69.36	19
Empowerment		
3.3.1 Delegation of authority.....	68.50	24
3.3.2 Youth inclusion.....	84.61	23
Collaboration		
3.3.3 Use of virtual social networks.....	76.09	42
3.3.4 Use of virtual professional networks.....	48.23	17
4 RETAIN.....	83.75	13
4.1 Sustainability.....	81.41	17
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	84.46	13
4.1.3 Brain retention.....	57.41	36
4.1.4 Environmental performance.....	83.77	15
4.2 Lifestyle.....	86.08	4
4.2.1 Personal rights.....	99.19	7
4.2.2 Personal safety.....	71.49	29
4.2.3 Physician density.....	74.21	5
4.2.4 Sanitation.....	99.45	21
5 VOCATIONAL AND TECHNICAL SKILLS.....	69.79	15
5.1 Mid-Level Skills.....	63.40	40
5.1.1 Workforce with secondary education.....	51.04	56
5.1.2 Population with secondary education.....	48.10	51
5.1.3 Technicians and associate professionals.....	61.08	23
5.1.4 Labour productivity per employee.....	93.38	7
5.2 Employability.....	76.18	17
5.2.1 Ease of finding skilled employees.....	79.23	23
5.2.2 Relevance of education system to the economy.....	71.19	17
5.2.3 Skills matching.....	78.11	26
6 GLOBAL KNOWLEDGE SKILLS.....	64.67	20
6.1 High-Level Skills.....	63.81	17
6.1.1 Workforce with tertiary education.....	57.92	12
6.1.2 Population with tertiary education.....	46.73	20
6.1.3 Professionals.....	62.76	8
6.1.4 Researchers.....	92.77	15
6.1.5 Senior officials and managers.....	65.14	19
6.1.6 Availability of scientists and engineers.....	57.53	49
6.2 Talent Impact.....	65.52	21
6.2.1 Innovation output.....	56.54	24
6.2.2 High-value exports.....	61.89	40
6.2.3 New product entrepreneurial activity.....	81.42	8
6.2.4 New business density.....	45.37	39
6.2.5 Scientific journal articles.....	82.40	20

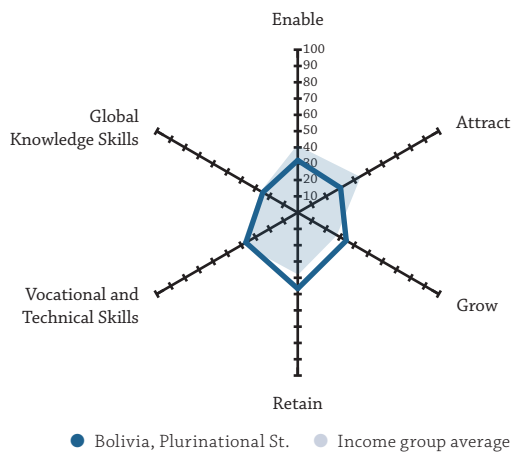
BOLIVIA, PLURINATIONAL ST.

Key Indicators

Rank (out of 134).....	102
Income group.....	Lower-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	11.67

GDP per capita (PPP US\$).....	8,367.33
GDP (US\$ billions).....	36.69
GTCI score.....	34.17
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	32.10	122
1.1 Regulatory Landscape.....	32.70	115
1.1.1 Government effectiveness.....	35.11	111
1.1.2 Rule of law.....	27.61	125
1.1.3 Political stability.....	48.66	101
1.1.4 Regulatory quality.....	30.21	126
1.1.5 Corruption.....	21.92	102
1.2 Market Landscape.....	32.07	112
1.2.1 Extent of market dominance.....	33.73	97
1.2.2 Ease of doing business.....	37.89	119
1.2.3 Cluster development.....	13.31	123
1.2.4 R&D expenditure.....	2.93	98
1.2.5 ICT infrastructure.....	39.71	99
1.2.6 Urbanisation.....	64.84	55
1.3 Business and Labour Landscape.....	31.52	122
Labour Market		
1.3.1 Labour rights.....	74.10	78
1.3.2 Labour-employer cooperation.....	12.57	127
Management Practice		
1.3.3 Professional management.....	31.38	119
1.3.4 Relationship of pay to productivity.....	19.99	128
Technology Adoption		
1.3.5 Technology utilisation.....	24.40	122
1.3.6 Investment in emerging technologies.....	12.03	128
1.3.7 Firms with website.....	46.17	71
2 ATTRACT.....	30.37	130
2.1 External Openness.....	23.55	129
Attract Business		
2.1.1 FDI and technology transfer.....	30.39	127
2.1.2 Prevalence of foreign ownership.....	25.92	126
Attract People		
2.1.3 Migrant stock.....	17.52	108
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	20.39	122
2.2 Internal Openness.....	37.19	121
Social Inclusion		
2.2.1 Tolerance of minorities.....	44.57	60
2.2.2 Tolerance of immigrants.....	58.46	65
2.2.3 Social mobility.....	23.53	131
Gender Equality		
2.2.4 Women in tertiary education.....	n/a	n/a
2.2.5 Women in high-skilled jobs.....	58.91	87
2.2.6 Leadership opportunities for women.....	0.46	133

	Score	Rank
3 GROW.....	34.38	74
3.1 Formal Education.....	38.45	56
Enrolment		
3.1.1 Vocational enrolment.....	76.91	3
3.1.2 Tertiary enrolment.....	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	18.22	103
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	59.02	22
3.2.3 Employee development.....	6.79	128
3.2.4 Formal and non-formal studies.....	7.08	56
3.3 Access to Growth Opportunities.....	46.46	68
Empowerment		
3.3.1 Delegation of authority.....	24.99	121
3.3.2 Youth inclusion.....	75.75	42
Collaboration		
3.3.3 Use of virtual social networks.....	69.65	57
3.3.4 Use of virtual professional networks.....	15.45	69

4 RETAIN.....	46.68	82
4.1 Sustainability.....	46.55	69
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	29.00	94
4.1.3 Brain retention.....	24.58	105
4.1.4 Environmental performance.....	32.63	78
4.2 Lifestyle.....	46.82	89
4.2.1 Personal rights.....	65.41	80
4.2.2 Personal safety.....	51.78	70
4.2.3 Physician density.....	12.46	88
4.2.4 Sanitation.....	57.62	103
5 VOCATIONAL AND TECHNICAL SKILLS.....	36.73	101
5.1 Mid-Level Skills.....	34.26	92
5.1.1 Workforce with secondary education.....	43.87	69
5.1.2 Population with secondary education.....	26.31	82
5.1.3 Technicians and associate professionals.....	21.16	87
5.1.4 Labour productivity per employee.....	45.68	91
5.2 Employability.....	39.21	103
5.2.1 Ease of finding skilled employees.....	34.69	115
5.2.2 Relevance of education system to the economy.....	19.68	116
5.2.3 Skills matching.....	63.25	56

6 GLOBAL KNOWLEDGE SKILLS.....	24.75	94
6.1 High-Level Skills.....	24.74	98
6.1.1 Workforce with tertiary education.....	21.13	78
6.1.2 Population with tertiary education.....	31.47	41
6.1.3 Professionals.....	21.05	76
6.1.4 Researchers.....	40.58	81
6.1.5 Senior officials and managers.....	10.22	102
6.1.6 Availability of scientists and engineers.....	24.00	123
6.2 Talent Impact.....	24.75	91
6.2.1 Innovation output.....	6.64	116
6.2.2 High-value exports.....	48.27	70
6.2.3 New product entrepreneurial activity.....	54.65	38
6.2.4 New business density.....	11.85	95
6.2.5 Scientific journal articles.....	2.37	117

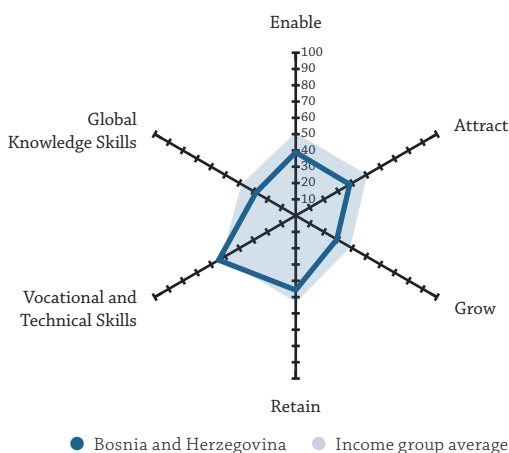
BOSNIA AND HERZEGOVINA

Key Indicators

Rank (out of 134).....	91
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	3.28

GDP per capita (PPP US\$).....	15,611.79
GDP (US\$ billions).....	19.79
GTCI score.....	39.12
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	38.85	102
1.1 Regulatory Landscape.....	42.68	90
1.1.1 Government effectiveness.....	36.55	104
1.1.2 Rule of law.....	48.05	73
1.1.3 Political stability.....	53.52	88
1.1.4 Regulatory quality.....	47.90	83
1.1.5 Corruption.....	27.40	91
1.2 Market Landscape.....	33.94	107
1.2.1 Extent of market dominance.....	27.13	104
1.2.2 Ease of doing business.....	62.28	84
1.2.3 Cluster development.....	22.27	114
1.2.4 R&D expenditure.....	3.70	94
1.2.5 ICT infrastructure.....	47.75	90
1.2.6 Urbanisation.....	40.49	100
1.3 Business and Labour Landscape.....	39.92	116
Labour Market		
1.3.1 Labour rights.....	89.50	46
1.3.2 Labour-employer cooperation.....	11.69	128
Management Practice		
1.3.3 Professional management.....	22.54	129
1.3.4 Relationship of pay to productivity.....	34.04	118
Technology Adoption		
1.3.5 Technology utilisation.....	36.85	106
1.3.6 Investment in emerging technologies.....	16.99	124
1.3.7 Firms with website.....	67.81	41
2 ATTRACT.....	38.24	113
2.1 External Openness.....	30.44	121
Attract Business		
2.1.1 FDI and technology transfer.....	37.96	115
2.1.2 Prevalence of foreign ownership.....	40.49	112
Attract People		
2.1.3 Migrant stock.....	15.65	110
2.1.4 International students.....	53.32	35
2.1.5 Brain gain.....	4.79	133
2.2 Internal Openness.....	46.04	100
Social Inclusion		
2.2.1 Tolerance of minorities.....	33.70	79
2.2.2 Tolerance of immigrants.....	55.38	76
2.2.3 Social mobility.....	28.88	125
Gender Equality		
2.2.4 Women in tertiary education.....	74.95	22
2.2.5 Women in high-skilled jobs.....	65.29	71
2.2.6 Leadership opportunities for women.....	18.02	117

	Score	Rank
3 GROW.....	29.11	89
3.1 Formal Education.....	34.51	65
Enrolment		
3.1.1 Vocational enrolment.....	63.14	13
3.1.2 Tertiary enrolment.....	27.72	74
Quality		
3.1.3 Tertiary education expenditure.....	53.73	75
3.1.4 Reading, maths, and science.....	27.97	62
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	14.86	115
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	42.24	39
3.2.3 Employee development.....	5.61	129
3.2.4 Formal and non-formal studies.....	11.59	48
3.3 Access to Growth Opportunities.....	37.97	92
Empowerment		
3.3.1 Delegation of authority.....	26.24	119
3.3.2 Youth inclusion.....	60.99	76
Collaboration		
3.3.3 Use of virtual social networks.....	54.26	85
3.3.4 Use of virtual professional networks.....	10.38	82

4 RETAIN.....	45.68	84
4.1 Sustainability.....	29.18	104
4.1.1 Pension coverage.....	69.19	72
4.1.2 Social protection.....	11.39	128
4.1.3 Brain retention.....	1.55	132
4.1.4 Environmental performance.....	34.57	71
4.2 Lifestyle.....	62.18	55
4.2.1 Personal rights.....	68.11	72
4.2.2 Personal safety.....	58.95	57
4.2.3 Physician density.....	26.65	68
4.2.4 Sanitation.....	94.99	61

5 VOCATIONAL AND TECHNICAL SKILLS.....	54.61	63
5.1 Mid-Level Skills.....	70.71	18
5.1.1 Workforce with secondary education.....	95.38	2
5.1.2 Population with secondary education.....	74.45	17
5.1.3 Technicians and associate professionals.....	37.68	55
5.1.4 Labour productivity per employee.....	75.34	44
5.2 Employability.....	38.52	104
5.2.1 Ease of finding skilled employees.....	24.04	127
5.2.2 Relevance of education system to the economy.....	12.38	130
5.2.3 Skills matching.....	79.13	23

6 GLOBAL KNOWLEDGE SKILLS.....	28.21	87
6.1 High-Level Skills.....	29.09	89
6.1.1 Workforce with tertiary education.....	20.30	81
6.1.2 Population with tertiary education.....	13.38	79
6.1.3 Professionals.....	33.51	54
6.1.4 Researchers.....	56.66	69
6.1.5 Senior officials and managers.....	19.87	84
6.1.6 Availability of scientists and engineers.....	30.85	114
6.2 Talent Impact.....	27.33	82
6.2.1 Innovation output.....	19.34	74
6.2.2 High-value exports.....	44.27	77
6.2.3 New product entrepreneurial activity.....	16.32	84
6.2.4 New business density.....	22.08	82
6.2.5 Scientific journal articles.....	34.66	61

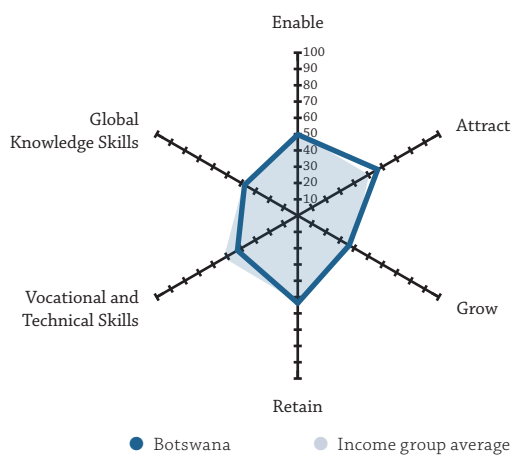
BOTSWANA

Key Indicators

Rank (out of 134).....	66
Income group.....	Upper-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	2.35

GDP per capita (PPP US\$).....	16,920.85
GDP (US\$ billions).....	15.78
GTCI score.....	46.16
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	49.73	62
1.1 Regulatory Landscape.....	66.51	40
1.1.1 Government effectiveness.....	60.18	46
1.1.2 Rule of law.....	64.91	43
1.1.3 Political stability.....	85.43	15
1.1.4 Regulatory quality.....	60.37	53
1.1.5 Corruption.....	61.64	29
1.2 Market Landscape.....	38.81	91
1.2.1 Extent of market dominance.....	21.33	119
1.2.2 Ease of doing business.....	63.62	82
1.2.3 Cluster development.....	24.40	112
1.2.4 R&D expenditure.....	10.64	61
1.2.5 ICT infrastructure.....	48.03	89
1.2.6 Urbanisation.....	64.87	54
1.3 Business and Labour Landscape.....	43.86	96
Labour Market		
1.3.1 Labour rights.....	68.90	83
1.3.2 Labour-employer cooperation.....	41.73	64
Management Practice		
1.3.3 Professional management.....	58.67	50
1.3.4 Relationship of pay to productivity.....	38.56	109
Technology Adoption		
1.3.5 Technology utilisation.....	36.97	105
1.3.6 Investment in emerging technologies.....	30.84	95
1.3.7 Firms with website.....	31.36	94
2 ATTRACT.....	56.65	45
2.1 External Openness.....	49.77	58
Attract Business		
2.1.1 FDI and technology transfer.....	42.99	105
2.1.2 Prevalence of foreign ownership.....	72.12	38
Attract People		
2.1.3 Migrant stock.....	46.55	54
2.1.4 International students.....	29.78	72
2.1.5 Brain gain.....	57.41	37
2.2 Internal Openness.....	63.53	30
Social Inclusion		
2.2.1 Tolerance of minorities.....	63.04	35
2.2.2 Tolerance of immigrants.....	64.62	56
2.2.3 Social mobility.....	49.97	74
Gender Equality		
2.2.4 Women in tertiary education.....	76.67	16
2.2.5 Women in high-skilled jobs.....	76.30	29
2.2.6 Leadership opportunities for women.....	50.59	53

	Score	Rank
3 GROW.....	36.43	67
3.1 Formal Education.....	43.95	44
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	17.08	91
Quality		
3.1.3 Tertiary education expenditure.....	95.84	2
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	18.94	82
3.2 Lifelong Learning.....	25.84	71
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	61.82	20
3.2.3 Employee development.....	37.25	68
3.2.4 Formal and non-formal studies.....	4.29	61
3.3 Access to Growth Opportunities.....	39.49	89
Empowerment		
3.3.1 Delegation of authority.....	51.17	58
3.3.2 Youth inclusion.....	37.23	110
Collaboration		
3.3.3 Use of virtual social networks.....	49.58	91
3.3.4 Use of virtual professional networks.....	19.98	55

4 RETAIN.....	53.71	61
4.1 Sustainability.....	52.62	57
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	38.68	70
4.1.3 Brain retention.....	46.05	49
4.1.4 Environmental performance.....	25.75	87
4.2 Lifestyle.....	54.80	74
4.2.1 Personal rights.....	81.33	51
4.2.2 Personal safety.....	59.22	55
4.2.3 Physician density.....	3.18	109
4.2.4 Sanitation.....	75.47	91
5 VOCATIONAL AND TECHNICAL SKILLS.....	42.73	86
5.1 Mid-Level Skills.....	37.82	85
5.1.1 Workforce with secondary education.....	24.65	105
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	27.93	70
5.1.4 Labour productivity per employee.....	60.86	73
5.2 Employability.....	47.65	85
5.2.1 Ease of finding skilled employees.....	49.50	80
5.2.2 Relevance of education system to the economy.....	36.89	85
5.2.3 Skills matching.....	56.55	65

6 GLOBAL KNOWLEDGE SKILLS.....	37.70	64
6.1 High-Level Skills.....	40.42	59
6.1.1 Workforce with tertiary education.....	39.55	41
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	21.99	73
6.1.4 Researchers.....	42.44	80
6.1.5 Senior officials and managers.....	61.71	24
6.1.6 Availability of scientists and engineers.....	36.40	100
6.2 Talent Impact.....	34.98	67
6.2.1 Innovation output.....	9.91	104
6.2.2 High-value exports.....	7.85	119
6.2.3 New product entrepreneurial activity.....	37.44	60
6.2.4 New business density.....	95.14	2
6.2.5 Scientific journal articles.....	24.56	75

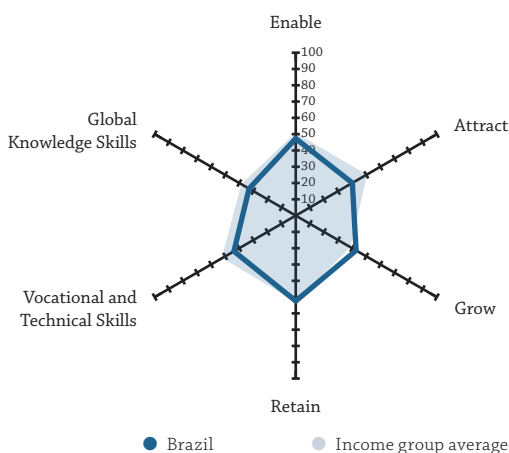
BRAZIL

Key Indicators

Rank (out of 134) **75**
 Income group **Upper-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **212.56**

GDP per capita (PPP US\$) **14,836.31**
 GDP (US\$ billions) **1,444.73**
 GTCI score **43.23**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	47.27	77
1.1 Regulatory Landscape.....	45.15	83
1.1.1 Government effectiveness.....	46.50	85
1.1.2 Rule of law.....	49.26	71
1.1.3 Political stability.....	50.22	99
1.1.4 Regulatory quality.....	48.25	81
1.1.5 Corruption.....	31.51	76
1.2 Market Landscape.....	53.29	55
1.2.1 Extent of market dominance.....	48.63	55
1.2.2 Ease of doing business.....	51.03	104
1.2.3 Cluster development.....	48.26	48
1.2.4 R&D expenditure.....	23.29	33
1.2.5 ICT infrastructure.....	64.01	72
1.2.6 Urbanisation.....	84.56	20
1.3 Business and Labour Landscape.....	43.37	100
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	20.15	118
Management Practice		
1.3.3 Professional management.....	58.68	49
1.3.4 Relationship of pay to productivity.....	38.81	108
Technology Adoption		
1.3.5 Technology utilisation.....	53.43	57
1.3.6 Investment in emerging technologies.....	38.96	65
1.3.7 Firms with website.....	50.22	65
2 ATTRACT	40.10	106
2.1 External Openness.....	29.52	122
Attract Business		
2.1.1 FDI and technology transfer.....	61.16	57
2.1.2 Prevalence of foreign ownership.....	48.57	95
Attract People		
2.1.3 Migrant stock.....	7.21	126
2.1.4 International students.....	4.89	106
2.1.5 Brain gain.....	25.79	117
2.2 Internal Openness.....	50.67	83
Social Inclusion		
2.2.1 Tolerance of minorities.....	21.74	97
2.2.2 Tolerance of immigrants.....	81.54	23
2.2.3 Social mobility.....	41.79	97
Gender Equality		
2.2.4 Women in tertiary education.....	71.77	37
2.2.5 Women in high-skilled jobs.....	73.99	37
2.2.6 Leadership opportunities for women.....	13.20	123

	Score	Rank
3 GROW	42.77	49
3.1 Formal Education.....	36.44	62
Enrolment		
3.1.1 Vocational enrolment.....	10.78	77
3.1.2 Tertiary enrolment.....	36.92	58
Quality		
3.1.3 Tertiary education expenditure.....	62.73	53
3.1.4 Reading, maths, and science.....	26.91	67
3.1.5 University ranking.....	44.83	34
3.2 Lifelong Learning.....	40.51	43
3.2.1 Business and economics subject ranking.....	37.61	31
3.2.2 Prevalence of training in firms.....	48.25	30
3.2.3 Employee development.....	35.66	70
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	51.36	55
Empowerment		
3.3.1 Delegation of authority.....	52.27	54
3.3.2 Youth inclusion.....	52.66	85
Collaboration		
3.3.3 Use of virtual social networks.....	70.17	56
3.3.4 Use of virtual professional networks.....	30.35	31

4 RETAIN	52.42	66
4.1 Sustainability.....	53.33	53
4.1.1 Pension coverage.....	91.41	50
4.1.2 Social protection.....	37.37	71
4.1.3 Brain retention.....	39.72	69
4.1.4 Environmental performance.....	44.80	53
4.2 Lifestyle.....	51.51	81
4.2.1 Personal rights.....	69.18	70
4.2.2 Personal safety.....	20.95	118
4.2.3 Physician density.....	28.52	64
4.2.4 Sanitation.....	87.37	79

5 VOCATIONAL AND TECHNICAL SKILLS	43.79	82
5.1 Mid-Level Skills.....	50.11	61
5.1.1 Workforce with secondary education.....	59.41	41
5.1.2 Population with secondary education.....	43.66	57
5.1.3 Technicians and associate professionals.....	35.77	58
5.1.4 Labour productivity per employee.....	61.62	71
5.2 Employability.....	37.46	108
5.2.1 Ease of finding skilled employees.....	28.21	122
5.2.2 Relevance of education system to the economy.....	14.78	126
5.2.3 Skills matching.....	69.40	45

6 GLOBAL KNOWLEDGE SKILLS	33.07	75
6.1 High-Level Skills.....	35.12	77
6.1.1 Workforce with tertiary education.....	29.22	60
6.1.2 Population with tertiary education.....	21.22	67
6.1.3 Professionals.....	29.43	56
6.1.4 Researchers.....	66.31	51
6.1.5 Senior officials and managers.....	30.58	62
6.1.6 Availability of scientists and engineers.....	33.96	110
6.2 Talent Impact.....	31.02	73
6.2.1 Innovation output.....	24.64	63
6.2.2 High-value exports.....	64.11	34
6.2.3 New product entrepreneurial activity.....	0.00	91
6.2.4 New business density.....	25.02	75
6.2.5 Scientific journal articles.....	41.32	53

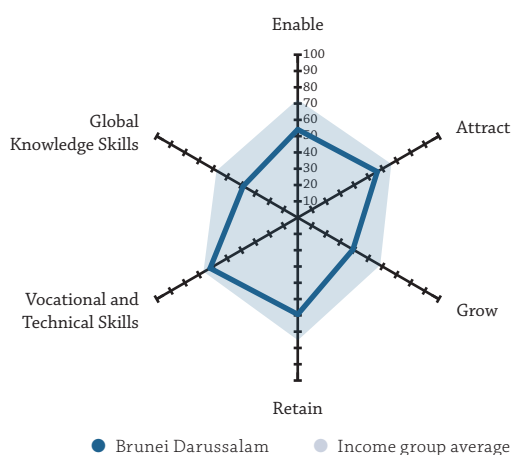
BRUNEI DARUSSALAM

Key Indicators

Rank (out of 134).....	47
Income group.....	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	0.44

GDP per capita (PPP US\$).....	65,661.69
GDP (US\$ billions).....	12.02
GTCI score.....	51.61
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	54.09	52
1.1 Regulatory Landscape.....	72.89	29
1.1.1 Government effectiveness.....	79.94	22
1.1.2 Rule of law.....	67.58	37
1.1.3 Political stability.....	89.07	7
1.1.4 Regulatory quality.....	66.22	41
1.1.5 Corruption.....	61.64	29
1.2 Market Landscape.....	43.64	81
1.2.1 Extent of market dominance.....	32.34	98
1.2.2 Ease of doing business.....	70.46	62
1.2.3 Cluster development.....	35.77	87
1.2.4 R&D expenditure.....	5.37	85
1.2.5 ICT infrastructure.....	n/a	n/a
1.2.6 Urbanisation.....	74.28	41
1.3 Business and Labour Landscape.....	45.73	83
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	56.74	36
Management Practice		
1.3.3 Professional management.....	48.97	76
1.3.4 Relationship of pay to productivity.....	53.48	67
Technology Adoption		
1.3.5 Technology utilisation.....	46.25	77
1.3.6 Investment in emerging technologies.....	23.20	113
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....	56.33	48
2.1 External Openness.....	54.85	41
Attract Business		
2.1.1 FDI and technology transfer.....	52.68	80
2.1.2 Prevalence of foreign ownership.....	48.68	94
Attract People		
2.1.3 Migrant stock.....	79.09	12
2.1.4 International students.....	37.57	63
2.1.5 Brain gain.....	56.23	39
2.2 Internal Openness.....	57.82	48
Social Inclusion		
2.2.1 Tolerance of minorities.....	34.78	77
2.2.2 Tolerance of immigrants.....	n/a	n/a
2.2.3 Social mobility.....	56.44	48
Gender Equality		
2.2.4 Women in tertiary education.....	74.75	23
2.2.5 Women in high-skilled jobs.....	56.40	91
2.2.6 Leadership opportunities for women.....	66.72	28

	Score	Rank
3 GROW.....	39.13	56
3.1 Formal Education.....	41.98	48
Enrolment		
3.1.1 Vocational enrolment.....	19.54	59
3.1.2 Tertiary enrolment.....	21.58	84
Quality		
3.1.3 Tertiary education expenditure.....	85.65	8
3.1.4 Reading, maths, and science.....	36.31	52
3.1.5 University ranking.....	46.80	31
3.2 Lifelong Learning.....	13.92	119
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	39.90	59
3.2.4 Formal and non-formal studies.....	1.85	75
3.3 Access to Growth Opportunities.....	61.50	31
Empowerment		
3.3.1 Delegation of authority.....	54.42	46
3.3.2 Youth inclusion.....	63.12	69
Collaboration		
3.3.3 Use of virtual social networks.....	100.00	1
3.3.4 Use of virtual professional networks.....	28.48	34

4 RETAIN.....	59.40	47
4.1 Sustainability.....	60.90	34
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	48.83	51
4.1.3 Brain retention.....	43.63	58
4.1.4 Environmental performance.....	51.15	44
4.2 Lifestyle.....	57.89	68
4.2.1 Personal rights.....	n/a	n/a
4.2.2 Personal safety.....	n/a	n/a
4.2.3 Physician density.....	19.72	80
4.2.4 Sanitation.....	96.06	57

5 VOCATIONAL AND TECHNICAL SKILLS.....	62.10	37
5.1 Mid-Level Skills.....	67.02	26
5.1.1 Workforce with secondary education.....	73.35	20
5.1.2 Population with secondary education.....	70.43	22
5.1.3 Technicians and associate professionals.....	57.28	28
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	57.18	59
5.2.1 Ease of finding skilled employees.....	42.84	100
5.2.2 Relevance of education system to the economy.....	61.87	33
5.2.3 Skills matching.....	66.82	50

6 GLOBAL KNOWLEDGE SKILLS.....	38.63	60
6.1 High-Level Skills.....	36.74	74
6.1.1 Workforce with tertiary education.....	29.24	59
6.1.2 Population with tertiary education.....	16.59	76
6.1.3 Professionals.....	41.06	41
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	59.08	29
6.1.6 Availability of scientists and engineers.....	37.75	97
6.2 Talent Impact.....	40.51	57
6.2.1 Innovation output.....	7.59	112
6.2.2 High-value exports.....	54.30	53
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	37.11	53
6.2.5 Scientific journal articles.....	63.06	39

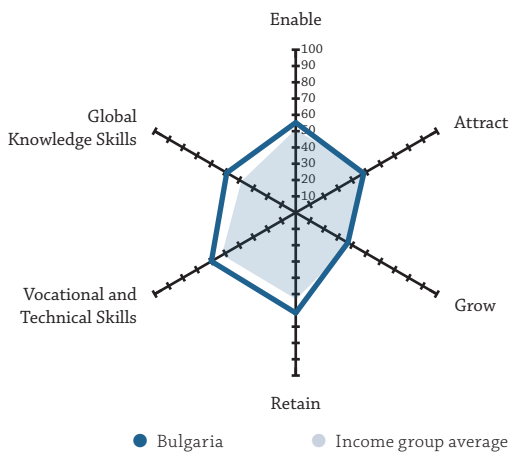
BULGARIA

Key Indicators

Rank (out of 134).....	46
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	6.93

GDP per capita (PPP US\$).....	24,367.32
GDP (US\$ billions).....	69.11
GTCI score.....	51.76
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 55.23 48		
1.1 Regulatory Landscape.....	58.18	50
1.1.1 Government effectiveness.....	58.18	52
1.1.2 Rule of law.....	54.26	61
1.1.3 Political stability.....	74.78	35
1.1.4 Regulatory quality.....	63.95	45
1.1.5 Corruption.....	39.73	57
1.2 Market Landscape.....	57.29	42
1.2.1 Extent of market dominance.....	51.02	51
1.2.2 Ease of doing business.....	73.84	58
1.2.3 Cluster development.....	52.91	41
1.2.4 R&D expenditure.....	15.07	47
1.2.5 ICT infrastructure.....	79.64	49
1.2.6 Urbanisation.....	71.26	45
1.3 Business and Labour Landscape.....	50.22	66
Labour Market		
1.3.1 Labour rights.....	89.20	48
1.3.2 Labour-employer cooperation.....	30.52	99
Management Practice		
1.3.3 Professional management.....	40.39	98
1.3.4 Relationship of pay to productivity.....	54.35	65
Technology Adoption		
1.3.5 Technology utilisation.....	48.58	71
1.3.6 Investment in emerging technologies.....	46.61	49
1.3.7 Firms with website.....	41.89	77
2 ATTRACT..... 48.16 79		
2.1 External Openness.....	42.69	82
Attract Business		
2.1.1 FDI and technology transfer.....	58.46	64
2.1.2 Prevalence of foreign ownership.....	55.49	72
Attract People		
2.1.3 Migrant stock.....	23.04	100
2.1.4 International students.....	50.98	37
2.1.5 Brain gain.....	25.46	119
2.2 Internal Openness.....	53.63	70
Social Inclusion		
2.2.1 Tolerance of minorities.....	59.78	41
2.2.2 Tolerance of immigrants.....	32.31	115
2.2.3 Social mobility.....	33.93	118
Gender Equality		
2.2.4 Women in tertiary education.....	65.09	61
2.2.5 Women in high-skilled jobs.....	81.14	18
2.2.6 Leadership opportunities for women.....	49.52	55

	Score	Rank
3 GROW..... 36.92 64		
3.1 Formal Education.....	42.77	47
Enrolment		
3.1.1 Vocational enrolment.....	46.77	28
3.1.2 Tertiary enrolment.....	49.78	28
Quality		
3.1.3 Tertiary education expenditure.....	60.75	58
3.1.4 Reading, maths, and science.....	37.78	49
3.1.5 University ranking.....	18.78	83
3.2 Lifelong Learning.....	19.59	97
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	17.20	88
3.2.3 Employee development.....	27.95	95
3.2.4 Formal and non-formal studies.....	33.18	38
3.3 Access to Growth Opportunities.....	48.42	64
Empowerment		
3.3.1 Delegation of authority.....	41.18	92
3.3.2 Youth inclusion.....	74.28	46
Collaboration		
3.3.3 Use of virtual social networks.....	61.64	75
3.3.4 Use of virtual professional networks.....	16.56	64

4 RETAIN..... 61.59 43		
4.1 Sustainability.....	50.51	60
4.1.1 Pension coverage.....	93.94	45
4.1.2 Social protection.....	31.99	82
4.1.3 Brain retention.....	21.08	115
4.1.4 Environmental performance.....	55.03	39
4.2 Lifestyle.....	72.67	38
4.2.1 Personal rights.....	83.37	49
4.2.2 Personal safety.....	70.11	34
4.2.3 Physician density.....	52.29	24
4.2.4 Sanitation.....	84.90	84

5 VOCATIONAL AND TECHNICAL SKILLS..... 59.77 44		
5.1 Mid-Level Skills.....	64.29	37
5.1.1 Workforce with secondary education.....	75.11	17
5.1.2 Population with secondary education.....	73.13	19
5.1.3 Technicians and associate professionals.....	39.67	51
5.1.4 Labour productivity per employee.....	69.25	57
5.2 Employability.....	55.26	63
5.2.1 Ease of finding skilled employees.....	34.49	116
5.2.2 Relevance of education system to the economy.....	42.49	71
5.2.3 Skills matching.....	88.79	8

6 GLOBAL KNOWLEDGE SKILLS..... 48.89 40		
6.1 High-Level Skills.....	45.54	44
6.1.1 Workforce with tertiary education.....	38.87	42
6.1.2 Population with tertiary education.....	32.44	40
6.1.3 Professionals.....	42.36	37
6.1.4 Researchers.....	81.12	34
6.1.5 Senior officials and managers.....	39.57	47
6.1.6 Availability of scientists and engineers.....	38.85	95
6.2 Talent Impact.....	52.24	40
6.2.1 Innovation output.....	48.14	29
6.2.2 High-value exports.....	59.62	44
6.2.3 New product entrepreneurial activity.....	25.28	74
6.2.4 New business density.....	74.86	13
6.2.5 Scientific journal articles.....	53.28	46

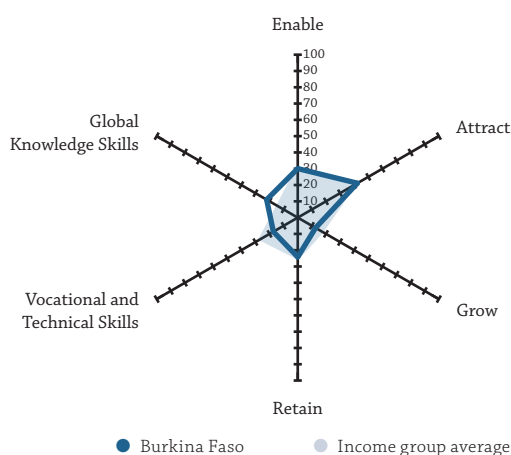
BURKINA FASO

Key Indicators

Rank (out of 134).....	124
Income group.....	Low income
Regional group.....	Sub-Saharan Africa
Population (millions).....	20.90

GDP per capita (PPP US\$).....	2,279.16
GDP (US\$ billions).....	17.37
GTCI score.....	24.74
GTCI score (income group average).....	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	30.09	124
1.1 Regulatory Landscape.....	38.24	104
1.1.1 Government effectiveness.....	33.79	114
1.1.2 Rule of law.....	43.61	89
1.1.3 Political stability.....	35.71	120
1.1.4 Regulatory quality.....	43.86	96
1.1.5 Corruption.....	34.25	69
1.2 Market Landscape.....	21.52	126
1.2.1 Extent of market dominance.....	36.06	91
1.2.2 Ease of doing business.....	37.44	120
1.2.3 Cluster development.....	11.17	126
1.2.4 R&D expenditure.....	12.14	54
1.2.5 ICT infrastructure.....	13.55	128
1.2.6 Urbanisation.....	18.77	121
1.3 Business and Labour Landscape.....	30.51	124
Labour Market		
1.3.1 Labour rights.....	91.20	41
1.3.2 Labour-employer cooperation.....	27.12	110
Management Practice		
1.3.3 Professional management.....	20.69	131
1.3.4 Relationship of pay to productivity.....	15.97	131
Technology Adoption		
1.3.5 Technology utilisation.....	25.79	120
1.3.6 Investment in emerging technologies.....	23.92	109
1.3.7 Firms with website.....	8.91	121
2 ATTRACT.....	42.25	98
2.1 External Openness.....	38.43	98
Attract Business		
2.1.1 FDI and technology transfer.....	41.08	108
2.1.2 Prevalence of foreign ownership.....	46.50	99
Attract People		
2.1.3 Migrant stock.....	43.84	58
2.1.4 International students.....	29.93	71
2.1.5 Brain gain.....	30.78	109
2.2 Internal Openness.....	46.08	99
Social Inclusion		
2.2.1 Tolerance of minorities.....	56.52	45
2.2.2 Tolerance of immigrants.....	78.46	26
2.2.3 Social mobility.....	54.37	56
Gender Equality		
2.2.4 Women in tertiary education.....	26.78	122
2.2.5 Women in high-skilled jobs.....	53.68	92
2.2.6 Leadership opportunities for women.....	6.64	129

	Score	Rank
3 GROW.....	12.62	129
3.1 Formal Education.....	17.77	113
Enrolment		
3.1.1 Vocational enrolment.....	2.09	93
3.1.2 Tertiary enrolment.....	4.42	117
Quality		
3.1.3 Tertiary education expenditure.....	64.57	46
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	9.15	130
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	23.92	71
3.2.3 Employee development.....	3.53	131
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	10.93	131
Empowerment		
3.3.1 Delegation of authority.....	13.37	131
3.3.2 Youth inclusion.....	21.83	116
Collaboration		
3.3.3 Use of virtual social networks.....	6.86	124
3.3.4 Use of virtual professional networks.....	1.66	125

4 RETAIN.....	24.17	122
4.1 Sustainability.....	19.17	124
4.1.1 Pension coverage.....	1.72	131
4.1.2 Social protection.....	23.28	109
4.1.3 Brain retention.....	29.63	97
4.1.4 Environmental performance.....	22.05	94
4.2 Lifestyle.....	29.16	120
4.2.1 Personal rights.....	60.46	86
4.2.2 Personal safety.....	42.41	90
4.2.3 Physician density.....	0.73	123
4.2.4 Sanitation.....	13.04	129

5 VOCATIONAL AND TECHNICAL SKILLS.....	17.28	130
5.1 Mid-Level Skills.....	11.24	120
5.1.1 Workforce with secondary education.....	2.68	127
5.1.2 Population with secondary education.....	3.97	112
5.1.3 Technicians and associate professionals.....	19.61	91
5.1.4 Labour productivity per employee.....	18.70	109
5.2 Employability.....	23.32	132
5.2.1 Ease of finding skilled employees.....	47.49	86
5.2.2 Relevance of education system to the economy.....	22.46	109
5.2.3 Skills matching.....	0.00	99

6 GLOBAL KNOWLEDGE SKILLS.....	22.02	98
6.1 High-Level Skills.....	16.93	113
6.1.1 Workforce with tertiary education.....	2.93	123
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	12.39	107
6.1.4 Researchers.....	21.92	96
6.1.5 Senior officials and managers.....	22.04	77
6.1.6 Availability of scientists and engineers.....	25.39	120
6.2 Talent Impact.....	27.11	83
6.2.1 Innovation output.....	2.64	121
6.2.2 High-value exports.....	79.30	12
6.2.3 New product entrepreneurial activity.....	42.48	52
6.2.4 New business density.....	7.75	103
6.2.5 Scientific journal articles.....	3.39	111

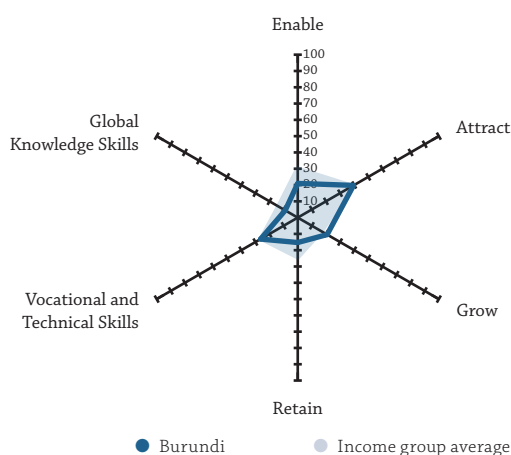
BURUNDI

Key Indicators

Rank (out of 134).....	129
Income group.....	Low income
Regional group.....	Sub-Saharan Africa
Population (millions).....	11.89

GDP per capita (PPP US\$).....	771.21
GDP (US\$ billions).....	3.26
GTCI score.....	21.98
GTCI score (income group average).....	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....21.00 130		
1.1 Regulatory Landscape.....	20.72	131
1.1.1 Government effectiveness.....	21.18	130
1.1.2 Rule of law.....	20.45	131
1.1.3 Political stability.....	25.30	128
1.1.4 Regulatory quality.....	31.18	125
1.1.5 Corruption.....	5.48	131
1.2 Market Landscape.....	18.71	130
1.2.1 Extent of market dominance.....	38.86	84
1.2.2 Ease of doing business.....	29.26	127
1.2.3 Cluster development.....	27.01	105
1.2.4 R&D expenditure.....	4.07	93
1.2.5 ICT infrastructure.....	13.06	129
1.2.6 Urbanisation.....	0.00	134
1.3 Business and Labour Landscape.....	23.59	131
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	38.75	73
Management Practice		
1.3.3 Professional management.....	33.48	115
1.3.4 Relationship of pay to productivity.....	25.63	127
Technology Adoption		
1.3.5 Technology utilisation.....	1.54	132
1.3.6 Investment in emerging technologies.....	23.48	111
1.3.7 Firms with website.....	18.63	108
2 ATTRACT.....39.54 108		
2.1 External Openness.....	36.21	107
Attract Business		
2.1.1 FDI and technology transfer.....	30.91	126
2.1.2 Prevalence of foreign ownership.....	28.88	124
Attract People		
2.1.3 Migrant stock.....	38.47	72
2.1.4 International students.....	44.50	47
2.1.5 Brain gain.....	38.29	95
2.2 Internal Openness.....	42.86	113
Social Inclusion		
2.2.1 Tolerance of minorities.....	26.09	90
2.2.2 Tolerance of immigrants.....	53.85	79
2.2.3 Social mobility.....	42.41	94
Gender Equality		
2.2.4 Women in tertiary education.....	32.53	120
2.2.5 Women in high-skilled jobs.....	59.05	86
2.2.6 Leadership opportunities for women.....	43.25	69

	Score	Rank
3 GROW.....20.83 115		
3.1 Formal Education.....	15.92	117
Enrolment		
3.1.1 Vocational enrolment.....	7.14	82
3.1.2 Tertiary enrolment.....	2.28	125
Quality		
3.1.3 Tertiary education expenditure.....	54.26	73
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	14.06	118
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	33.99	51
3.2.3 Employee development.....	20.42	116
3.2.4 Formal and non-formal studies.....	1.85	76
3.3 Access to Growth Opportunities.....	32.51	106
Empowerment		
3.3.1 Delegation of authority.....	36.00	106
3.3.2 Youth inclusion.....	90.58	8
Collaboration		
3.3.3 Use of virtual social networks.....	3.01	131
3.3.4 Use of virtual professional networks.....	0.44	130

4 RETAIN.....15.29 132		
4.1 Sustainability.....	13.58	128
4.1.1 Pension coverage.....	3.03	128
4.1.2 Social protection.....	30.07	90
4.1.3 Brain retention.....	19.11	120
4.1.4 Environmental performance.....	2.12	129
4.2 Lifestyle.....	17.00	132
4.2.1 Personal rights.....	14.53	126
4.2.2 Personal safety.....	11.14	126
4.2.3 Physician density.....	0.81	121
4.2.4 Sanitation.....	41.54	113

5 VOCATIONAL AND TECHNICAL SKILLS.....26.33 121		
5.1 Mid-Level Skills.....	4.75	133
5.1.1 Workforce with secondary education.....	2.62	128
5.1.2 Population with secondary education.....	5.60	108
5.1.3 Technicians and associate professionals.....	6.03	120
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	47.90	81
5.2.1 Ease of finding skilled employees.....	58.13	61
5.2.2 Relevance of education system to the economy.....	37.67	82
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....8.88 132		
6.1 High-Level Skills.....	6.42	134
6.1.1 Workforce with tertiary education.....	0.39	130
6.1.2 Population with tertiary education.....	0.75	109
6.1.3 Professionals.....	0.00	129
6.1.4 Researchers.....	11.43	105
6.1.5 Senior officials and managers.....	1.11	126
6.1.6 Availability of scientists and engineers.....	24.87	122
6.2 Talent Impact.....	11.34	124
6.2.1 Innovation output.....	n/a	n/a
6.2.2 High-value exports.....	22.39	102
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	0.28	131

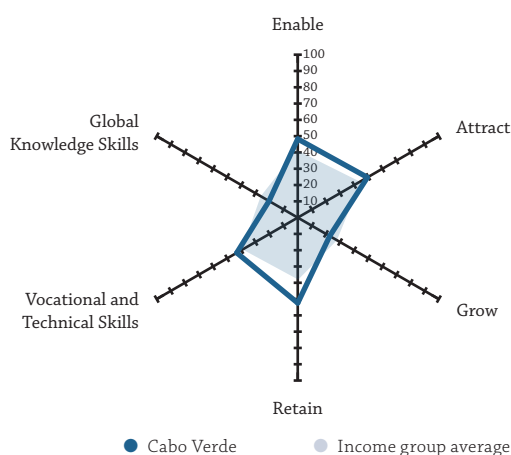
CABO VERDE

Key Indicators

Rank (out of 134).....	90
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	0.56

GDP per capita (PPP US\$).....	6,377.03
GDP (US\$ billions).....	1.70
GTCI score.....	39.38
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE..... 48.27 72		
1.1 Regulatory Landscape.....	62.21	45
1.1.1 Government effectiveness.....	57.16	55
1.1.2 Rule of law.....	65.30	42
1.1.3 Political stability.....	82.48	21
1.1.4 Regulatory quality.....	47.22	86
1.1.5 Corruption.....	58.90	34
1.2 Market Landscape.....	39.66	89
1.2.1 Extent of market dominance.....	47.36	59
1.2.2 Ease of doing business.....	43.88	111
1.2.3 Cluster development.....	35.68	89
1.2.4 R&D expenditure.....	1.22	113
1.2.5 ICT infrastructure.....	49.24	88
1.2.6 Urbanisation.....	60.60	66
1.3 Business and Labour Landscape.....	42.94	105
Labour Market		
1.3.1 Labour rights.....	95.30	26
1.3.2 Labour-employer cooperation.....	35.97	87
Management Practice		
1.3.3 Professional management.....	37.79	102
1.3.4 Relationship of pay to productivity.....	42.84	95
Technology Adoption		
1.3.5 Technology utilisation.....	43.37	90
1.3.6 Investment in emerging technologies.....	34.06	84
1.3.7 Firms with website.....	11.22	116
2. ATTRACT..... 49.38 74		
2.1 External Openness.....	41.75	84
Attract Business		
2.1.1 FDI and technology transfer.....	53.26	79
2.1.2 Prevalence of foreign ownership.....	54.22	78
Attract People		
2.1.3 Migrant stock.....	36.32	75
2.1.4 International students.....	22.32	81
2.1.5 Brain gain.....	42.63	80
2.2 Internal Openness.....	57.01	53
Social Inclusion		
2.2.1 Tolerance of minorities.....	n/a	n/a
2.2.2 Tolerance of immigrants.....	n/a	n/a
2.2.3 Social mobility.....	44.67	89
Gender Equality		
2.2.4 Women in tertiary education.....	76.12	19
2.2.5 Women in high-skilled jobs.....	66.35	69
2.2.6 Leadership opportunities for women.....	40.88	74

	Score	Rank
3. GROW..... 22.65 111		
3.1 Formal Education.....	17.35	114
Enrolment		
3.1.1 Vocational enrolment.....	3.67	88
3.1.2 Tertiary enrolment.....	16.05	95
Quality		
3.1.3 Tertiary education expenditure.....	49.69	82
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	12.01	123
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	12.45	98
3.2.3 Employee development.....	23.59	110
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	38.57	91
Empowerment		
3.3.1 Delegation of authority.....	36.75	105
3.3.2 Youth inclusion.....	47.52	92
Collaboration		
3.3.3 Use of virtual social networks.....	52.91	86
3.3.4 Use of virtual professional networks.....	17.11	63

4. RETAIN..... 52.41 67		
4.1 Sustainability.....	45.63	70
4.1.1 Pension coverage.....	84.65	62
4.1.2 Social protection.....	44.06	60
4.1.3 Brain retention.....	41.48	63
4.1.4 Environmental performance.....	12.35	115
4.2 Lifestyle.....	59.19	64
4.2.1 Personal rights.....	91.80	35
4.2.2 Personal safety.....	63.82	45
4.2.3 Physician density.....	9.35	96
4.2.4 Sanitation.....	71.79	98
5. VOCATIONAL AND TECHNICAL SKILLS..... 43.20 85		
5.1 Mid-Level Skills.....	33.09	94
5.1.1 Workforce with secondary education.....	62.20	35
5.1.2 Population with secondary education.....	14.51	100
5.1.3 Technicians and associate professionals.....	22.56	86
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	53.31	68
5.2.1 Ease of finding skilled employees.....	58.76	57
5.2.2 Relevance of education system to the economy.....	46.69	59
5.2.3 Skills matching.....	54.48	71

6. GLOBAL KNOWLEDGE SKILLS..... 20.35 105		
6.1 High-Level Skills.....	23.93	100
6.1.1 Workforce with tertiary education.....	16.86	92
6.1.2 Population with tertiary education.....	11.92	83
6.1.3 Professionals.....	18.93	80
6.1.4 Researchers.....	36.29	85
6.1.5 Senior officials and managers.....	25.49	72
6.1.6 Availability of scientists and engineers.....	34.08	109
6.2 Talent Impact.....	16.78	110
6.2.1 Innovation output.....	13.29	89
6.2.2 High-value exports.....	0.00	129
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	49.56	35
6.2.5 Scientific journal articles.....	4.26	106

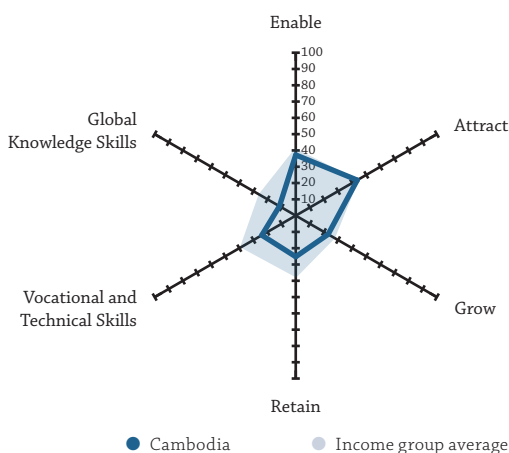
CAMBODIA

Key Indicators

Rank (out of 134) **119**
 Income group **Lower-middle income**
 Regional group **Eastern, Southeastern Asia and Oceania**
 Population (millions) **16.72**

GDP per capita (PPP US\$) **4,422.05**
 GDP (US\$ billions) **25.29**
 GTCI score **27.43**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	37.24	108
1.1 Regulatory Landscape	35.65	110
1.1.1 Government effectiveness	37.78	100
1.1.2 Rule of law	31.88	117
1.1.3 Political stability	60.74	68
1.1.4 Regulatory quality	39.60	105
1.1.5 Corruption	8.22	129
1.2 Market Landscape	33.50	109
1.2.1 Extent of market dominance	37.40	86
1.2.2 Ease of doing business	41.76	117
1.2.3 Cluster development	45.88	56
1.2.4 R&D expenditure	2.14	105
1.2.5 ICT infrastructure	61.92	75
1.2.6 Urbanisation	11.91	127
1.3 Business and Labour Landscape	42.56	107
Labour Market		
1.3.1 Labour rights	47.10	96
1.3.2 Labour-employer cooperation	41.80	63
Management Practice		
1.3.3 Professional management	44.74	88
1.3.4 Relationship of pay to productivity	62.33	52
Technology Adoption		
1.3.5 Technology utilisation	41.07	95
1.3.6 Investment in emerging technologies	43.85	54
1.3.7 Firms with website	17.01	109
2 ATTRACT	43.57	94
2.1 External Openness	45.33	72
Attract Business		
2.1.1 FDI and technology transfer	62.79	53
2.1.2 Prevalence of foreign ownership	52.74	85
Attract People		
2.1.3 Migrant stock	11.19	120
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	54.60	44
2.2 Internal Openness	41.82	115
Social Inclusion		
2.2.1 Tolerance of minorities	39.13	69
2.2.2 Tolerance of immigrants	9.23	128
2.2.3 Social mobility	43.54	91
Gender Equality		
2.2.4 Women in tertiary education	53.25	97
2.2.5 Women in high-skilled jobs	56.65	90
2.2.6 Leadership opportunities for women	49.11	57

	Score	Rank
3 GROW	22.96	110
3.1 Formal Education	3.27	130
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	9.80	101
Quality		
3.1.3 Tertiary education expenditure	0.00	114
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	14.99	114
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	20.28	78
3.2.3 Employee development	38.30	63
3.2.4 Formal and non-formal studies	1.38	78
3.3 Access to Growth Opportunities	50.62	56
Empowerment		
3.3.1 Delegation of authority	36.95	103
3.3.2 Youth inclusion	90.78	7
Collaboration		
3.3.3 Use of virtual social networks	71.21	53
3.3.4 Use of virtual professional networks	3.53	113

4 RETAIN	25.23	120
4.1 Sustainability	21.53	116
4.1.1 Pension coverage	5.66	123
4.1.2 Social protection	22.93	112
4.1.3 Brain retention	43.76	56
4.1.4 Environmental performance	13.76	111
4.2 Lifestyle	28.93	122
4.2.1 Personal rights	27.17	117
4.2.2 Personal safety	30.58	107
4.2.3 Physician density	1.97	112
4.2.4 Sanitation	56.01	106

5 VOCATIONAL AND TECHNICAL SKILLS	24.04	123
5.1 Mid-Level Skills	7.87	129
5.1.1 Workforce with secondary education	10.93	118
5.1.2 Population with secondary education	5.38	109
5.1.3 Technicians and associate professionals	5.03	124
5.1.4 Labour productivity per employee	10.14	113
5.2 Employability	40.21	101
5.2.1 Ease of finding skilled employees	32.59	118
5.2.2 Relevance of education system to the economy	43.11	70
5.2.3 Skills matching	44.93	78

6 GLOBAL KNOWLEDGE SKILLS	11.56	127
6.1 High-Level Skills	11.33	127
6.1.1 Workforce with tertiary education	6.56	116
6.1.2 Population with tertiary education	6.04	96
6.1.3 Professionals	7.22	119
6.1.4 Researchers	15.24	102
6.1.5 Senior officials and managers	4.66	119
6.1.6 Availability of scientists and engineers	28.26	117
6.2 Talent Impact	11.78	122
6.2.1 Innovation output	10.85	100
6.2.2 High-value exports	18.95	107
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	15.00	89
6.2.5 Scientific journal articles	2.34	118

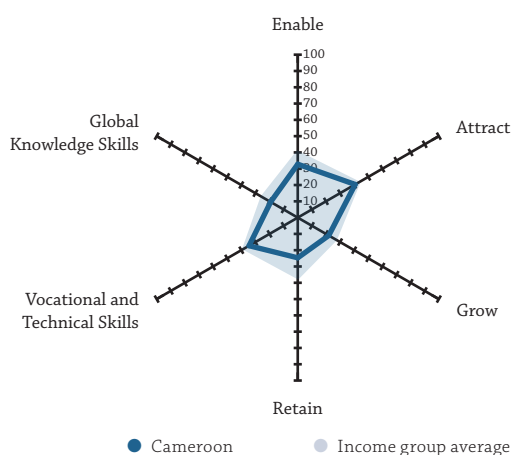
CAMEROON

Key Indicators

Rank (out of 134).....	116
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	26.55

GDP per capita (PPP US\$).....	3,772.74
GDP (US\$ billions).....	39.80
GTCI score.....	28.97
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	32.79	118
1.1 Regulatory Landscape.....	27.05	126
1.1.1 Government effectiveness.....	32.60	118
1.1.2 Rule of law.....	27.66	124
1.1.3 Political stability.....	27.42	126
1.1.4 Regulatory quality.....	33.89	119
1.1.5 Corruption.....	13.70	118
1.2 Market Landscape.....	40.63	85
1.2.1 Extent of market dominance.....	52.28	45
1.2.2 Ease of doing business.....	28.06	128
1.2.3 Cluster development.....	28.38	101
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	44.57	93
1.2.6 Urbanisation.....	49.84	85
1.3 Business and Labour Landscape.....	30.68	123
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	26.17	111
Management Practice		
1.3.3 Professional management.....	36.84	107
1.3.4 Relationship of pay to productivity.....	40.91	102
Technology Adoption		
1.3.5 Technology utilisation.....	31.79	113
1.3.6 Investment in emerging technologies.....	33.24	88
1.3.7 Firms with website.....	15.16	110
2 ATTRACT.....	40.69	103
2.1 External Openness.....	39.55	92
Attract Business		
2.1.1 FDI and technology transfer.....	38.05	113
2.1.2 Prevalence of foreign ownership.....	57.17	69
Attract People		
2.1.3 Migrant stock.....	28.65	87
2.1.4 International students.....	33.83	68
2.1.5 Brain gain.....	40.02	88
2.2 Internal Openness.....	41.83	114
Social Inclusion		
2.2.1 Tolerance of minorities.....	10.87	114
2.2.2 Tolerance of immigrants.....	61.54	59
2.2.3 Social mobility.....	46.14	83
Gender Equality		
2.2.4 Women in tertiary education.....	50.81	100
2.2.5 Women in high-skilled jobs.....	50.46	100
2.2.6 Leadership opportunities for women.....	31.15	92

	Score	Rank
3 GROW.....	21.98	113
3.1 Formal Education.....	13.69	122
Enrolment		
3.1.1 Vocational enrolment.....	20.12	57
3.1.2 Tertiary enrolment.....	9.47	103
Quality		
3.1.3 Tertiary education expenditure.....	25.16	109
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	23.55	81
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	41.82	40
3.2.3 Employee development.....	28.84	90
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	28.71	113
Empowerment		
3.3.1 Delegation of authority.....	26.85	118
3.3.2 Youth inclusion.....	69.21	56
Collaboration		
3.3.3 Use of virtual social networks.....	13.72	115
3.3.4 Use of virtual professional networks.....	5.08	106

4 RETAIN.....	24.68	121
4.1 Sustainability.....	19.35	123
4.1.1 Pension coverage.....	17.47	107
4.1.2 Social protection.....	21.50	114
4.1.3 Brain retention.....	24.68	104
4.1.4 Environmental performance.....	13.76	111
4.2 Lifestyle.....	30.01	116
4.2.1 Personal rights.....	49.34	101
4.2.2 Personal safety.....	35.77	99
4.2.3 Physician density.....	0.66	126
4.2.4 Sanitation.....	34.27	118

5 VOCATIONAL AND TECHNICAL SKILLS.....	34.49	105
5.1 Mid-Level Skills.....	21.33	114
5.1.1 Workforce with secondary education.....	19.58	111
5.1.2 Population with secondary education.....	23.64	92
5.1.3 Technicians and associate professionals.....	11.52	110
5.1.4 Labour productivity per employee.....	30.57	103
5.2 Employability.....	47.66	84
5.2.1 Ease of finding skilled employees.....	67.80	43
5.2.2 Relevance of education system to the economy.....	38.49	79
5.2.3 Skills matching.....	36.68	87

6 GLOBAL KNOWLEDGE SKILLS.....	19.21	107
6.1 High-Level Skills.....	15.97	117
6.1.1 Workforce with tertiary education.....	7.10	115
6.1.2 Population with tertiary education.....	0.48	110
6.1.3 Professionals.....	11.19	113
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	21.72	79
6.1.6 Availability of scientists and engineers.....	39.37	92
6.2 Talent Impact.....	22.44	99
6.2.1 Innovation output.....	6.34	117
6.2.2 High-value exports.....	46.98	72
6.2.3 New product entrepreneurial activity.....	27.56	70
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	8.86	94

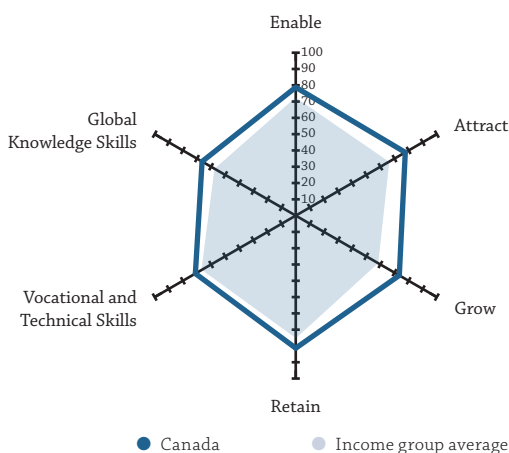
CANADA

Key Indicators

Rank (out of 134).....	13
Income group.....	High income
Regional group.....	Northern America
Population (millions).....	38.01

GDP per capita (PPP US\$).....	48,072.58
GDP (US\$ billions).....	1,643.41
GTCI score.....	74.77
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....78.74 16		
1.1 Regulatory Landscape.....88.80 11		
1.1.1 Government effectiveness.....89.12 9		
1.1.2 Rule of law.....93.96 12		
1.1.3 Political stability.....85.85 14		
1.1.4 Regulatory quality.....90.15 9		
1.1.5 Corruption.....84.93 11		
1.2 Market Landscape.....70.10 23		
1.2.1 Extent of market dominance.....62.60 28		
1.2.2 Ease of doing business.....87.40 21		
1.2.3 Cluster development.....73.14 20		
1.2.4 R&D expenditure.....31.04 22		
1.2.5 ICT infrastructure.....87.81 28		
1.2.6 Urbanisation.....78.63 31		
1.3 Business and Labour Landscape.....77.31 20		
Labour Market		
1.3.1 Labour rights.....86.10 54		
1.3.2 Labour-employer cooperation.....62.94 26		
Management Practice		
1.3.3 Professional management.....81.77 15		
1.3.4 Relationship of pay to productivity.....81.69 13		
Technology Adoption		
1.3.5 Technology utilisation.....76.74 22		
1.3.6 Investment in emerging technologies.....68.25 19		
1.3.7 Firms with website.....83.66 16		
2 ATTRACT.....77.63 6		
2.1 External Openness.....75.72 12		
Attract Business		
2.1.1 FDI and technology transfer.....74.71 26		
2.1.2 Prevalence of foreign ownership.....81.11 18		
Attract People		
2.1.3 Migrant stock.....72.36 17		
2.1.4 International students.....68.89 13		
2.1.5 Brain gain.....81.55 8		
2.2 Internal Openness.....79.54 6		
Social Inclusion		
2.2.1 Tolerance of minorities.....81.52 7		
2.2.2 Tolerance of immigrants.....98.46 2		
2.2.3 Social mobility.....82.87 14		
Gender Equality		
2.2.4 Women in tertiary education.....69.92 46		
2.2.5 Women in high-skilled jobs.....76.94 28		
2.2.6 Leadership opportunities for women.....67.51 27		

	Score	Rank
3 GROW.....73.39 7		
3.1 Formal Education.....71.99 4		
Enrolment		
3.1.1 Vocational enrolment.....n/a n/a		
3.1.2 Tertiary enrolment.....48.79 34		
Quality		
3.1.3 Tertiary education expenditure.....81.04 16		
3.1.4 Reading, maths, and science.....74.55 6		
3.1.5 University ranking.....83.57 3		
3.2 Lifelong Learning.....73.70 8		
3.2.1 Business and economics subject ranking.....73.56 6		
3.2.2 Prevalence of training in firms.....n/a n/a		
3.2.3 Employee development.....69.33 21		
3.2.4 Formal and non-formal studies.....78.20 9		
3.3 Access to Growth Opportunities.....74.48 14		
Empowerment		
3.3.1 Delegation of authority.....81.30 12		
3.3.2 Youth inclusion.....67.39 60		
Collaboration		
3.3.3 Use of virtual social networks.....85.34 10		
3.3.4 Use of virtual professional networks.....63.91 9		
4 RETAIN.....81.35 16		
4.1 Sustainability.....83.16 13		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....75.63 20		
4.1.3 Brain retention.....77.29 15		
4.1.4 Environmental performance.....79.72 20		
4.2 Lifestyle.....79.55 24		
4.2.1 Personal rights.....97.31 13		
4.2.2 Personal safety.....91.48 7		
4.2.3 Physician density.....30.17 60		
4.2.4 Sanitation.....99.23 24		
5 VOCATIONAL AND TECHNICAL SKILLS.....71.13 13		
5.1 Mid-Level Skills.....60.55 44		
5.1.1 Workforce with secondary education.....32.45 87		
5.1.2 Population with secondary education.....49.19 46		
5.1.3 Technicians and associate professionals.....72.09 15		
5.1.4 Labour productivity per employee.....88.46 18		
5.2 Employability.....81.71 8		
5.2.1 Ease of finding skilled employees.....87.06 10		
5.2.2 Relevance of education system to the economy.....76.37 8		
5.2.3 Skills matching.....n/a n/a		
6 GLOBAL KNOWLEDGE SKILLS.....66.38 13		
6.1 High-Level Skills.....72.14 5		
6.1.1 Workforce with tertiary education.....83.08 2		
6.1.2 Population with tertiary education.....66.71 5		
6.1.3 Professionals.....44.03 34		
6.1.4 Researchers.....90.49 23		
6.1.5 Senior officials and managers.....62.67 22		
6.1.6 Availability of scientists and engineers.....85.84 5		
6.2 Talent Impact.....60.63 26		
6.2.1 Innovation output.....58.42 21		
6.2.2 High-value exports.....69.04 29		
6.2.3 New product entrepreneurial activity.....84.99 6		
6.2.4 New business density.....3.57 109		
6.2.5 Scientific journal articles.....87.13 10		

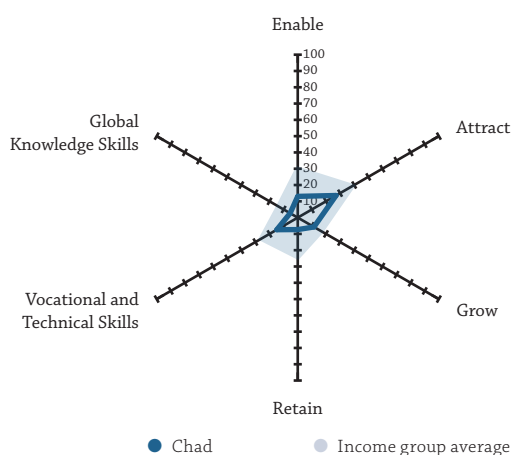
CHAD

Key Indicators

Rank (out of 134)	134
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	16.43

GDP per capita (PPP US\$)	1,603.38
GDP (US\$ billions)	10.09
GTCI score	13.21
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	13.04	133
1.1 Regulatory Landscape	21.52	130
1.1.1 Government effectiveness	15.80	131
1.1.2 Rule of law	23.87	130
1.1.3 Political stability	32.28	122
1.1.4 Regulatory quality	27.43	128
1.1.5 Corruption	8.22	129
1.2 Market Landscape	8.60	134
1.2.1 Extent of market dominance	4.97	132
1.2.2 Ease of doing business	11.85	131
1.2.3 Cluster development	8.58	130
1.2.4 R&D expenditure	5.84	82
1.2.5 ICT infrastructure	8.84	131
1.2.6 Urbanisation	11.53	128
1.3 Business and Labour Landscape	9.00	134
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	14.55	124
Management Practice		
1.3.3 Professional management	0.00	134
1.3.4 Relationship of pay to productivity	18.35	129
Technology Adoption		
1.3.5 Technology utilisation	8.33	129
1.3.6 Investment in emerging technologies	12.79	126
1.3.7 Firms with website	0.00	124
2 ATTRACT	27.16	132
2.1 External Openness	33.37	116
Attract Business		
2.1.1 FDI and technology transfer	23.20	128
2.1.2 Prevalence of foreign ownership	23.08	129
Attract People		
2.1.3 Migrant stock	42.94	61
2.1.4 International students	40.91	56
2.1.5 Brain gain	36.75	98
2.2 Internal Openness	20.95	133
Social Inclusion		
2.2.1 Tolerance of minorities	18.48	100
2.2.2 Tolerance of immigrants	60.00	62
2.2.3 Social mobility	28.71	126
Gender Equality		
2.2.4 Women in tertiary education	0.00	128
2.2.5 Women in high-skilled jobs	7.94	129
2.2.6 Leadership opportunities for women	10.58	124

	Score	Rank
3 GROW	11.49	131
3.1 Formal Education	18.33	110
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	1.71	126
Quality		
3.1.3 Tertiary education expenditure	53.29	77
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	8.73	131
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	21.26	77
3.2.3 Employee development	4.94	130
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	7.41	134
Empowerment		
3.3.1 Delegation of authority	0.00	134
3.3.2 Youth inclusion	29.63	115
Collaboration		
3.3.3 Use of virtual social networks	0.00	134
3.3.4 Use of virtual professional networks	0.00	133

4 RETAIN	7.34	134
4.1 Sustainability	8.19	133
4.1.1 Pension coverage	0.00	134
4.1.2 Social protection	9.45	129
4.1.3 Brain retention	21.71	113
4.1.4 Environmental performance	1.59	130
4.2 Lifestyle	6.48	134
4.2.1 Personal rights	24.60	122
4.2.2 Personal safety	0.00	131
4.2.3 Physician density	0.23	133
4.2.4 Sanitation	1.11	133

5 VOCATIONAL AND TECHNICAL SKILLS	14.86	132
5.1 Mid-Level Skills	5.34	132
5.1.1 Workforce with secondary education	5.90	123
5.1.2 Population with secondary education	4.83	110
5.1.3 Technicians and associate professionals	1.59	128
5.1.4 Labour productivity per employee	9.04	115
5.2 Employability	24.37	131
5.2.1 Ease of finding skilled employees	45.64	92
5.2.2 Relevance of education system to the economy	17.00	123
5.2.3 Skills matching	10.48	95

6 GLOBAL KNOWLEDGE SKILLS	5.39	134
6.1 High-Level Skills	9.71	131
6.1.1 Workforce with tertiary education	3.17	122
6.1.2 Population with tertiary education	0.81	108
6.1.3 Professionals	4.00	125
6.1.4 Researchers	24.86	93
6.1.5 Senior officials and managers	0.32	129
6.1.6 Availability of scientists and engineers	25.08	121
6.2 Talent Impact	1.07	133
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	n/a	n/a
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	2.14	113
6.2.5 Scientific journal articles	0.01	133

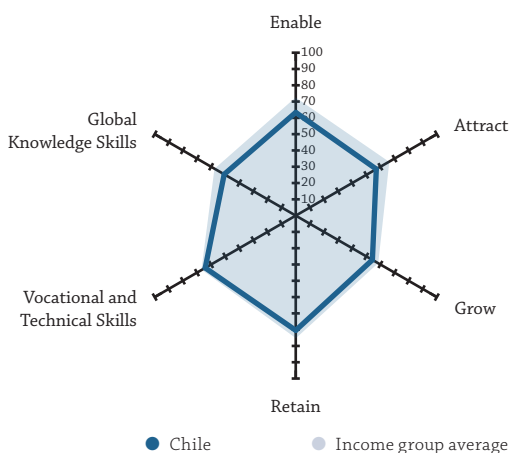
CHILE

Key Indicators

Rank (out of 134) **33**
 Income group **High income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **19.12**

GDP per capita (PPP US\$) **25,067.69**
 GDP (US\$ billions) **252.94**
 GTCI score **60.00**
 GTCI score (income group average) **65.28**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE 63.32		36
1.1 Regulatory Landscape 74.02		27
1.1.1 Government effectiveness 74.21		28
1.1.2 Rule of law 78.16		25
1.1.3 Political stability 67.24		54
1.1.4 Regulatory quality 79.27		24
1.1.5 Corruption 71.23		23
1.2 Market Landscape 52.31		58
1.2.1 Extent of market dominance 25.84		109
1.2.2 Ease of doing business 74.91		56
1.2.3 Cluster development 38.49		77
1.2.4 R&D expenditure 6.97		75
1.2.5 ICT infrastructure 81.96		42
1.2.6 Urbanisation 85.70		18
1.3 Business and Labour Landscape 63.63		38
Labour Market		
1.3.1 Labour rights 81.80		67
1.3.2 Labour-employer cooperation 45.56		55
Management Practice		
1.3.3 Professional management 63.93		37
1.3.4 Relationship of pay to productivity 68.67		39
Technology Adoption		
1.3.5 Technology utilisation 66.95		37
1.3.6 Investment in emerging technologies 38.42		68
1.3.7 Firms with website 80.07		23
2. ATTRACT 57.09		44
2.1 External Openness 54.06		46
Attract Business		
2.1.1 FDI and technology transfer 78.89		18
2.1.2 Prevalence of foreign ownership 81.24		17
Attract People		
2.1.3 Migrant stock 42.32		62
2.1.4 International students 8.93		100
2.1.5 Brain gain 58.93		33
2.2 Internal Openness 60.12		41
Social Inclusion		
2.2.1 Tolerance of minorities 70.65		24
2.2.2 Tolerance of immigrants 67.69		48
2.2.3 Social mobility 65.60		36
Gender Equality		
2.2.4 Women in tertiary education 63.66		70
2.2.5 Women in high-skilled jobs 69.47		57
2.2.6 Leadership opportunities for women 23.67		111

	Score	Rank
3. GROW 54.33		30
3.1 Formal Education 49.80		37
Enrolment		
3.1.1 Vocational enrolment 39.32		34
3.1.2 Tertiary enrolment 63.42		8
Quality		
3.1.3 Tertiary education expenditure 60.87		57
3.1.4 Reading, maths, and science 42.32		45
3.1.5 University ranking 43.06		36
3.2 Lifelong Learning 52.51		24
3.2.1 Business and economics subject ranking 33.58		39
3.2.2 Prevalence of training in firms 69.65		11
3.2.3 Employee development 43.07		55
3.2.4 Formal and non-formal studies 63.73		22
3.3 Access to Growth Opportunities 60.68		33
Empowerment		
3.3.1 Delegation of authority 56.06		43
3.3.2 Youth inclusion 61.58		74
Collaboration		
3.3.3 Use of virtual social networks 83.89		14
3.3.4 Use of virtual professional networks 41.17		21
4. RETAIN 70.43		29
4.1 Sustainability 61.64		33
4.1.1 Pension coverage 71.21		70
4.1.2 Social protection 47.05		53
4.1.3 Brain retention 76.28		16
4.1.4 Environmental performance 52.03		42
4.2 Lifestyle 79.21		26
4.2.1 Personal rights 93.88		30
4.2.2 Personal safety 58.46		59
4.2.3 Physician density 64.52		11
4.2.4 Sanitation 100.00		1
5. VOCATIONAL AND TECHNICAL SKILLS 64.15		31
5.1 Mid-Level Skills 62.69		41
5.1.1 Workforce with secondary education 70.24		23
5.1.2 Population with secondary education 52.37		41
5.1.3 Technicians and associate professionals 54.09		36
5.1.4 Labour productivity per employee 74.04		47
5.2 Employability 65.62		35
5.2.1 Ease of finding skilled employees 80.75		19
5.2.2 Relevance of education system to the economy 43.22		69
5.2.3 Skills matching 72.88		41
6. GLOBAL KNOWLEDGE SKILLS 50.70		38
6.1 High-Level Skills 41.69		56
6.1.1 Workforce with tertiary education 28.52		61
6.1.2 Population with tertiary education 28.76		47
6.1.3 Professionals 36.35		51
6.1.4 Researchers 57.35		67
6.1.5 Senior officials and managers 27.75		66
6.1.6 Availability of scientists and engineers 71.42		22
6.2 Talent Impact 59.71		28
6.2.1 Innovation output 24.29		65
6.2.2 High-value exports 51.68		59
6.2.3 New product entrepreneurial activity 99.19		2
6.2.4 New business density 75.46		11
6.2.5 Scientific journal articles 47.94		49

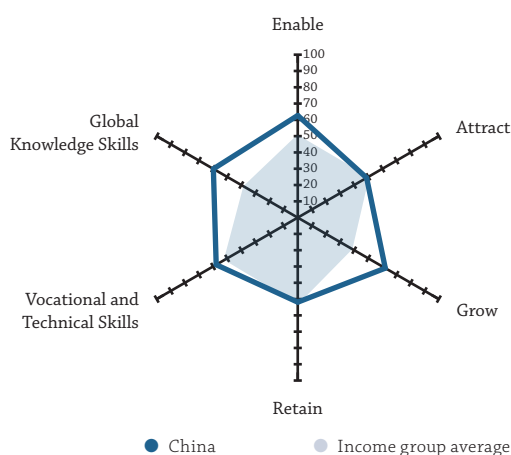
CHINA

Key Indicators

Rank (out of 134).....	37
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	1,402.11

GDP per capita (PPP US\$).....	17,312.00
GDP (US\$ billions).....	14,722.70
GTCI score.....	57.17
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE.....	62.69	39
1.1 Regulatory Landscape.....	50.03	67
1.1.1 Government effectiveness.....	62.16	42
1.1.2 Rule of law.....	47.10	76
1.1.3 Political stability.....	57.14	78
1.1.4 Regulatory quality.....	46.78	90
1.1.5 Corruption.....	36.99	64
1.2 Market Landscape.....	71.66	19
1.2.1 Extent of market dominance.....	82.12	8
1.2.2 Ease of doing business.....	84.37	29
1.2.3 Cluster development.....	83.79	8
1.2.4 R&D expenditure.....	43.18	14
1.2.5 ICT infrastructure.....	83.49	41
1.2.6 Urbanisation.....	53.03	77
1.3 Business and Labour Landscape.....	66.39	32
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	60.09	32
Management Practice		
1.3.3 Professional management.....	71.25	28
1.3.4 Relationship of pay to productivity.....	87.74	8
Technology Adoption		
1.3.5 Technology utilisation.....	54.03	56
1.3.6 Investment in emerging technologies.....	59.71	32
1.3.7 Firms with website.....	65.49	46
2. ATTRACT.....	48.82	78
2.1 External Openness.....	41.11	87
Attract Business		
2.1.1 FDI and technology transfer.....	64.42	51
2.1.2 Prevalence of foreign ownership.....	57.62	67
Attract People		
2.1.3 Migrant stock.....	0.00	134
2.1.4 International students.....	8.49	102
2.1.5 Brain gain.....	75.01	15
2.2 Internal Openness.....	56.53	54
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.26	84
2.2.2 Tolerance of immigrants.....	58.46	65
2.2.3 Social mobility.....	69.11	30
Gender Equality		
2.2.4 Women in tertiary education.....	61.34	82
2.2.5 Women in high-skilled jobs.....	n/a	n/a
2.2.6 Leadership opportunities for women.....	65.50	30

	Score	Rank
3. GROW.....	62.04	21
3.1 Formal Education.....	59.59	21
Enrolment		
3.1.1 Vocational enrolment.....	18.25	61
3.1.2 Tertiary enrolment.....	37.28	57
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	100.00	1
3.1.5 University ranking.....	82.83	4
3.2 Lifelong Learning.....	83.40	3
3.2.1 Business and economics subject ranking.....	80.68	3
3.2.2 Prevalence of training in firms.....	100.00	1
3.2.3 Employee development.....	69.50	20
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	43.13	79
Empowerment		
3.3.1 Delegation of authority.....	60.94	37
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	64.24	69
3.3.4 Use of virtual professional networks.....	4.19	112

4. RETAIN.....	51.89	70
4.1 Sustainability.....	62.97	31
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	68.88	27
4.1.3 Brain retention.....	62.71	32
4.1.4 Environmental performance.....	20.28	99
4.2 Lifestyle.....	40.82	102
4.2.1 Personal rights.....	10.44	128
4.2.2 Personal safety.....	44.89	84
4.2.3 Physician density.....	24.37	70
4.2.4 Sanitation.....	83.56	85
5. VOCATIONAL AND TECHNICAL SKILLS.....	57.80	50
5.1 Mid-Level Skills.....	36.10	88
5.1.1 Workforce with secondary education.....	n/a	n/a
5.1.2 Population with secondary education.....	19.09	95
5.1.3 Technicians and associate professionals.....	n/a	n/a
5.1.4 Labour productivity per employee.....	53.10	85
5.2 Employability.....	79.50	12
5.2.1 Ease of finding skilled employees.....	84.78	12
5.2.2 Relevance of education system to the economy.....	74.23	12
5.2.3 Skills matching.....	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS.....	59.80	23
6.1 High-Level Skills.....	50.47	39
6.1.1 Workforce with tertiary education.....	n/a	n/a
6.1.2 Population with tertiary education.....	10.60	88
6.1.3 Professionals.....	n/a	n/a
6.1.4 Researchers.....	72.22	46
6.1.5 Senior officials and managers.....	n/a	n/a
6.1.6 Availability of scientists and engineers.....	68.58	28
6.2 Talent Impact.....	69.14	15
6.2.1 Innovation output.....	78.90	6
6.2.2 High-value exports.....	83.41	7
6.2.3 New product entrepreneurial activity.....	66.36	15
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	47.88	50

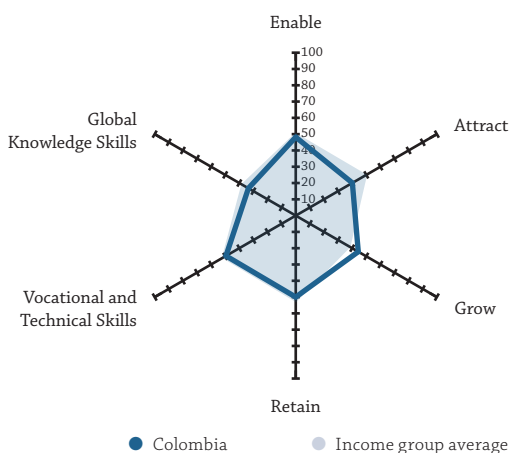
COLOMBIA

Key Indicators

Rank (out of 134).....	72
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	50.88

GDP per capita (PPP US\$).....	14,565.37
GDP (US\$ billions).....	271.35
GTCI score.....	44.27
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	48.16	73
1.1 Regulatory Landscape.....	46.42	80
1.1.1 Government effectiveness.....	52.23	66
1.1.2 Rule of law.....	43.83	87
1.1.3 Political stability.....	42.22	112
1.1.4 Regulatory quality.....	60.96	52
1.1.5 Corruption.....	32.88	74
1.2 Market Landscape.....	48.35	69
1.2.1 Extent of market dominance.....	34.54	95
1.2.2 Ease of doing business.....	70.45	63
1.2.3 Cluster development.....	39.59	74
1.2.4 R&D expenditure.....	4.50	90
1.2.5 ICT infrastructure.....	63.15	74
1.2.6 Urbanisation.....	77.90	33
1.3 Business and Labour Landscape.....	49.71	67
Labour Market		
1.3.1 Labour rights.....	55.20	89
1.3.2 Labour-employer cooperation.....	42.11	62
Management Practice		
1.3.3 Professional management.....	52.51	70
1.3.4 Relationship of pay to productivity.....	46.05	86
Technology Adoption		
1.3.5 Technology utilisation.....	45.74	80
1.3.6 Investment in emerging technologies.....	38.85	66
1.3.7 Firms with website.....	67.47	42
2 ATTRACT.....	40.13	105
2.1 External Openness.....	35.34	111
Attract Business		
2.1.1 FDI and technology transfer.....	56.46	68
2.1.2 Prevalence of foreign ownership.....	51.00	89
Attract People		
2.1.3 Migrant stock.....	25.22	95
2.1.4 International students.....	3.95	107
2.1.5 Brain gain.....	40.05	87
2.2 Internal Openness.....	44.93	103
Social Inclusion		
2.2.1 Tolerance of minorities.....	23.91	96
2.2.2 Tolerance of immigrants.....	60.00	62
2.2.3 Social mobility.....	38.42	108
Gender Equality		
2.2.4 Women in tertiary education.....	63.02	74
2.2.5 Women in high-skilled jobs.....	58.25	89
2.2.6 Leadership opportunities for women.....	25.96	104

	Score	Rank
3 GROW.....	44.31	45
3.1 Formal Education.....	37.17	61
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	38.13	55
Quality		
3.1.3 Tertiary education expenditure.....	47.92	84
3.1.4 Reading, maths, and science.....	29.15	61
3.1.5 University ranking.....	33.49	55
3.2 Lifelong Learning.....	43.91	40
3.2.1 Business and economics subject ranking.....	24.10	57
3.2.2 Prevalence of training in firms.....	77.34	7
3.2.3 Employee development.....	30.29	85
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	51.86	52
Empowerment		
3.3.1 Delegation of authority.....	49.49	63
3.3.2 Youth inclusion.....	55.50	81
Collaboration		
3.3.3 Use of virtual social networks.....	76.51	39
3.3.4 Use of virtual professional networks.....	25.94	41

4 RETAIN.....	50.00	77
4.1 Sustainability.....	45.34	72
4.1.1 Pension coverage.....	50.10	83
4.1.2 Social protection.....	42.61	62
4.1.3 Brain retention.....	40.85	65
4.1.4 Environmental performance.....	47.80	48
4.2 Lifestyle.....	54.66	75
4.2.1 Personal rights.....	60.56	85
4.2.2 Personal safety.....	21.55	116
4.2.3 Physician density.....	47.74	31
4.2.4 Sanitation.....	88.81	76

5 VOCATIONAL AND TECHNICAL SKILLS.....	49.45	70
5.1 Mid-Level Skills.....	48.55	63
5.1.1 Workforce with secondary education.....	42.91	71
5.1.2 Population with secondary education.....	40.31	60
5.1.3 Technicians and associate professionals.....	n/a	n/a
5.1.4 Labour productivity per employee.....	62.42	68
5.2 Employability.....	50.36	75
5.2.1 Ease of finding skilled employees.....	62.89	48
5.2.2 Relevance of education system to the economy.....	37.82	80
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	33.55	73
6.1 High-Level Skills.....	34.30	79
6.1.1 Workforce with tertiary education.....	35.12	47
6.1.2 Population with tertiary education.....	27.68	53
6.1.3 Professionals.....	n/a	n/a
6.1.4 Researchers.....	31.17	91
6.1.5 Senior officials and managers.....	n/a	n/a
6.1.6 Availability of scientists and engineers.....	43.21	80
6.2 Talent Impact.....	32.81	70
6.2.1 Innovation output.....	19.37	73
6.2.2 High-value exports.....	55.82	52
6.2.3 New product entrepreneurial activity.....	27.94	68
6.2.4 New business density.....	33.69	55
6.2.5 Scientific journal articles.....	27.24	69

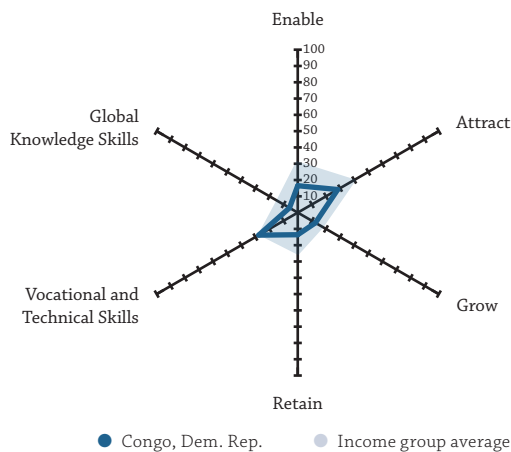
CONGO, DEM. REP.

Key Indicators

Rank (out of 134)	132
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	89.56

GDP per capita (PPP US\$)	1,131.09
GDP (US\$ billions)	49.87
GTCI score	17.41
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	16.52	132
1.1 Regulatory Landscape	14.28	132
1.1.1 Government effectiveness	14.49	132
1.1.2 Rule of law	12.30	133
1.1.3 Political stability	21.71	130
1.1.4 Regulatory quality	18.79	132
1.1.5 Corruption	4.11	132
1.2 Market Landscape	11.14	133
1.2.1 Extent of market dominance	10.18	130
1.2.2 Ease of doing business	10.57	132
1.2.3 Cluster development	1.96	133
1.2.4 R&D expenditure	7.99	70
1.2.5 ICT infrastructure	0.00	132
1.2.6 Urbanisation	36.14	103
1.3 Business and Labour Landscape	24.14	130
Labour Market		
1.3.1 Labour rights	66.60	84
1.3.2 Labour-employer cooperation	17.08	121
Management Practice		
1.3.3 Professional management	30.39	120
1.3.4 Relationship of pay to productivity	15.37	132
Technology Adoption		
1.3.5 Technology utilisation	13.38	128
1.3.6 Investment in emerging technologies	17.50	122
1.3.7 Firms with website	8.68	122
2. ATTRACT	28.32	131
2.1 External Openness	32.11	118
Attract Business		
2.1.1 FDI and technology transfer	34.92	121
2.1.2 Prevalence of foreign ownership	57.55	68
Attract People		
2.1.3 Migrant stock	23.53	97
2.1.4 International students	8.67	101
2.1.5 Brain gain	35.90	99
2.2 Internal Openness	24.53	132
Social Inclusion		
2.2.1 Tolerance of minorities	3.26	121
2.2.2 Tolerance of immigrants	46.15	91
2.2.3 Social mobility	36.39	113
Gender Equality		
2.2.4 Women in tertiary education	27.77	121
2.2.5 Women in high-skilled jobs	20.17	122
2.2.6 Leadership opportunities for women	13.45	122

	Score	Rank
3. GROW	12.53	130
3.1 Formal Education	10.42	128
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	4.07	119
Quality		
3.1.3 Tertiary education expenditure	27.19	107
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	6.82	132
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	13.01	96
3.2.3 Employee development	10.65	126
3.2.4 Formal and non-formal studies	3.62	65
3.3 Access to Growth Opportunities	20.34	128
Empowerment		
3.3.1 Delegation of authority	18.87	126
3.3.2 Youth inclusion	60.62	77
Collaboration		
3.3.3 Use of virtual social networks	1.66	132
3.3.4 Use of virtual professional networks	0.22	132

4. RETAIN	13.57	133
4.1 Sustainability	16.84	125
4.1.1 Pension coverage	14.14	110
4.1.2 Social protection	11.42	127
4.1.3 Brain retention	23.10	108
4.1.4 Environmental performance	18.69	102
4.2 Lifestyle	10.31	133
4.2.1 Personal rights	24.07	123
4.2.2 Personal safety	2.30	130
4.2.3 Physician density	0.68	125
4.2.4 Sanitation	14.18	128
5. VOCATIONAL AND TECHNICAL SKILLS	27.65	119
5.1 Mid-Level Skills	25.54	106
5.1.1 Workforce with secondary education	51.14	55
5.1.2 Population with secondary education	25.65	85
5.1.3 Technicians and associate professionals	23.14	83
5.1.4 Labour productivity per employee	2.21	118
5.2 Employability	29.77	124
5.2.1 Ease of finding skilled employees	35.21	114
5.2.2 Relevance of education system to the economy	16.07	124
5.2.3 Skills matching	38.03	85

6. GLOBAL KNOWLEDGE SKILLS	5.85	133
6.1 High-Level Skills	11.44	126
6.1.1 Workforce with tertiary education	7.20	114
6.1.2 Population with tertiary education	11.02	87
6.1.3 Professionals	4.87	122
6.1.4 Researchers	0.00	110
6.1.5 Senior officials and managers	9.12	106
6.1.6 Availability of scientists and engineers	36.43	99
6.2 Talent Impact	0.26	134
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	n/a	n/a
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	0.28	116
6.2.5 Scientific journal articles	0.24	132

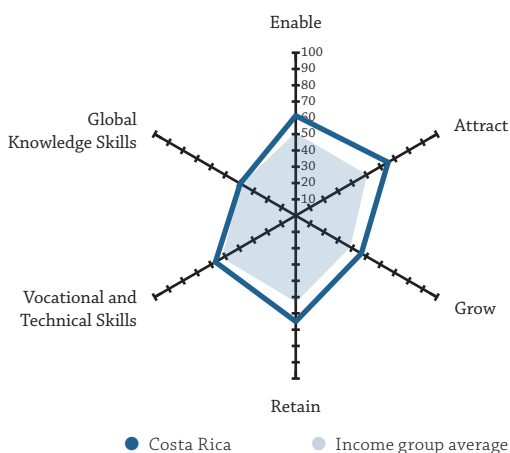
COSTA RICA

Key Indicators

Rank (out of 134) **39**
 Income group **Upper-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **5.09**

GDP per capita (PPP US\$) **21,031.82**
 GDP (US\$ billions) **61.52**
 GTCI score **55.75**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 61.32		40
1.1 Regulatory Landscape 63.94		42
1.1.1 Government effectiveness 60.05		47
1.1.2 Rule of law 65.96		41
1.1.3 Political stability 72.97		45
1.1.4 Regulatory quality 63.20		49
1.1.5 Corruption 57.53		35
1.2 Market Landscape 54.90		46
1.2.1 Extent of market dominance 61.10		31
1.2.2 Ease of doing business 69.00		69
1.2.3 Cluster development 47.95		49
1.2.4 R&D expenditure 7.51		71
1.2.5 ICT infrastructure 67.61		66
1.2.6 Urbanisation 76.24		37
1.3 Business and Labour Landscape 65.12		36
Labour Market		
1.3.1 Labour rights 89.60		45
1.3.2 Labour-employer cooperation 67.45		20
Management Practice		
1.3.3 Professional management 66.17		36
1.3.4 Relationship of pay to productivity 67.23		45
Technology Adoption		
1.3.5 Technology utilisation 65.53		41
1.3.6 Investment in emerging technologies 48.38		47
1.3.7 Firms with website 51.49		63
2 ATTRACT 65.44		25
2.1 External Openness 65.58		24
Attract Business		
2.1.1 FDI and technology transfer 77.71		21
2.1.2 Prevalence of foreign ownership 74.86		31
Attract People		
2.1.3 Migrant stock 53.95		46
2.1.4 International students n/a		n/a
2.1.5 Brain gain 55.80		41
2.2 Internal Openness 65.30		23
Social Inclusion		
2.2.1 Tolerance of minorities 72.83		21
2.2.2 Tolerance of immigrants 78.46		26
2.2.3 Social mobility 67.79		32
Gender Equality		
2.2.4 Women in tertiary education 65.72		58
2.2.5 Women in high-skilled jobs 63.96		75
2.2.6 Leadership opportunities for women 43.03		71

	Score	Rank
3 GROW 46.49		41
3.1 Formal Education 41.19		49
Enrolment		
3.1.1 Vocational enrolment 26.19		50
3.1.2 Tertiary enrolment 40.03		52
Quality		
3.1.3 Tertiary education expenditure 67.48		43
3.1.4 Reading, maths, and science 32.95		58
3.1.5 University ranking 39.28		45
3.2 Lifelong Learning 40.18		44
3.2.1 Business and economics subject ranking 0.00		70
3.2.2 Prevalence of training in firms 65.73		15
3.2.3 Employee development 54.81		39
3.2.4 Formal and non-formal studies n/a		n/a
3.3 Access to Growth Opportunities 58.09		39
Empowerment		
3.3.1 Delegation of authority 62.18		34
3.3.2 Youth inclusion 62.99		70
Collaboration		
3.3.3 Use of virtual social networks 76.30		41
3.3.4 Use of virtual professional networks 30.91		30
4 RETAIN 64.99		38
4.1 Sustainability 59.64		37
4.1.1 Pension coverage 55.76		81
4.1.2 Social protection 72.21		22
4.1.3 Brain retention 63.50		31
4.1.4 Environmental performance 47.09		50
4.2 Lifestyle 70.35		44
4.2.1 Personal rights 95.57		23
4.2.2 Personal safety 52.35		68
4.2.3 Physician density 35.83		47
4.2.4 Sanitation 97.65		44
5 VOCATIONAL AND TECHNICAL SKILLS 56.92		55
5.1 Mid-Level Skills 45.35		72
5.1.1 Workforce with secondary education 31.24		92
5.1.2 Population with secondary education 24.58		88
5.1.3 Technicians and associate professionals 54.56		35
5.1.4 Labour productivity per employee 71.01		53
5.2 Employability 68.50		30
5.2.1 Ease of finding skilled employees 82.52		16
5.2.2 Relevance of education system to the economy 58.20		36
5.2.3 Skills matching 64.77		53
6 GLOBAL KNOWLEDGE SKILLS 39.34		59
6.1 High-Level Skills 37.08		70
6.1.1 Workforce with tertiary education 25.34		69
6.1.2 Population with tertiary education 29.03		45
6.1.3 Professionals 24.82		67
6.1.4 Researchers 51.91		72
6.1.5 Senior officials and managers 28.92		64
6.1.6 Availability of scientists and engineers 62.45		39
6.2 Talent Impact 41.61		53
6.2.1 Innovation output 33.10		50
6.2.2 High-value exports 70.44		25
6.2.3 New product entrepreneurial activity 44.02		51
6.2.4 New business density 39.25		50
6.2.5 Scientific journal articles 21.24		78

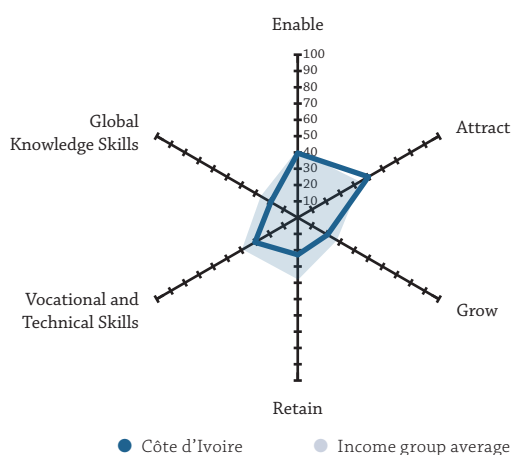
CÔTE D'IVOIRE

Key Indicators

Rank (out of 134)	111
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	26.38

GDP per capita (PPP US\$)	5,458.24
GDP (US\$ billions)	61.35
GTCI score	30.49
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	39.58	100
1.1 Regulatory Landscape	39.34	98
1.1.1 Government effectiveness	39.93	96
1.1.2 Rule of law	40.37	100
1.1.3 Political stability	40.82	115
1.1.4 Regulatory quality	46.81	89
1.1.5 Corruption	28.77	85
1.2 Market Landscape	33.66	108
1.2.1 Extent of market dominance	39.79	83
1.2.2 Ease of doing business	53.87	96
1.2.3 Cluster development	28.24	102
1.2.4 R&D expenditure	1.17	115
1.2.5 ICT infrastructure	35.46	107
1.2.6 Urbanisation	43.40	96
1.3 Business and Labour Landscape	45.75	82
Labour Market		
1.3.1 Labour rights	94.50	30
1.3.2 Labour-employer cooperation	52.54	46
Management Practice		
1.3.3 Professional management	43.84	91
1.3.4 Relationship of pay to productivity	34.91	117
Technology Adoption		
1.3.5 Technology utilisation	56.04	54
1.3.6 Investment in emerging technologies	28.47	99
1.3.7 Firms with website	9.95	120
2 ATTRACT	50.06	69
2.1 External Openness	56.40	39
Attract Business		
2.1.1 FDI and technology transfer	53.74	78
2.1.2 Prevalence of foreign ownership	74.98	29
Attract People		
2.1.3 Migrant stock	68.09	20
2.1.4 International students	29.09	75
2.1.5 Brain gain	56.11	40
2.2 Internal Openness	43.73	107
Social Inclusion		
2.2.1 Tolerance of minorities	26.09	90
2.2.2 Tolerance of immigrants	76.92	28
2.2.3 Social mobility	50.61	70
Gender Equality		
2.2.4 Women in tertiary education	42.73	110
2.2.5 Women in high-skilled jobs	25.01	118
2.2.6 Leadership opportunities for women	40.99	73

	Score	Rank
3 GROW	21.09	114
3.1 Formal Education	18.69	109
Enrolment		
3.1.1 Vocational enrolment	5.56	84
3.1.2 Tertiary enrolment	6.43	112
Quality		
3.1.3 Tertiary education expenditure	62.77	52
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	20.57	95
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	38.88	47
3.2.3 Employee development	39.63	62
3.2.4 Formal and non-formal studies	3.78	64
3.3 Access to Growth Opportunities	24.02	121
Empowerment		
3.3.1 Delegation of authority	35.94	108
3.3.2 Youth inclusion	34.01	111
Collaboration		
3.3.3 Use of virtual social networks	20.06	111
3.3.4 Use of virtual professional networks	6.07	102

4 RETAIN	22.81	123
4.1 Sustainability	16.23	126
4.1.1 Pension coverage	6.77	120
4.1.2 Social protection	25.96	103
4.1.3 Brain retention	32.18	89
4.1.4 Environmental performance	0.00	133
4.2 Lifestyle	29.39	118
4.2.1 Personal rights	59.02	89
4.2.2 Personal safety	30.19	108
4.2.3 Physician density	1.59	115
4.2.4 Sanitation	26.78	121
5 VOCATIONAL AND TECHNICAL SKILLS	30.29	113
5.1 Mid-Level Skills	24.52	110
5.1.1 Workforce with secondary education	26.96	103
5.1.2 Population with secondary education	8.30	104
5.1.3 Technicians and associate professionals	17.79	97
5.1.4 Labour productivity per employee	45.02	92
5.2 Employability	36.06	111
5.2.1 Ease of finding skilled employees	71.20	37
5.2.2 Relevance of education system to the economy	30.10	97
5.2.3 Skills matching	6.87	97

6 GLOBAL KNOWLEDGE SKILLS	19.08	108
6.1 High-Level Skills	16.59	116
6.1.1 Workforce with tertiary education	7.33	113
6.1.2 Population with tertiary education	5.79	97
6.1.3 Professionals	10.48	116
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	8.09	110
6.1.6 Availability of scientists and engineers	51.25	63
6.2 Talent Impact	21.57	102
6.2.1 Innovation output	7.04	114
6.2.2 High-value exports	60.38	42
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	16.26	88
6.2.5 Scientific journal articles	2.60	116

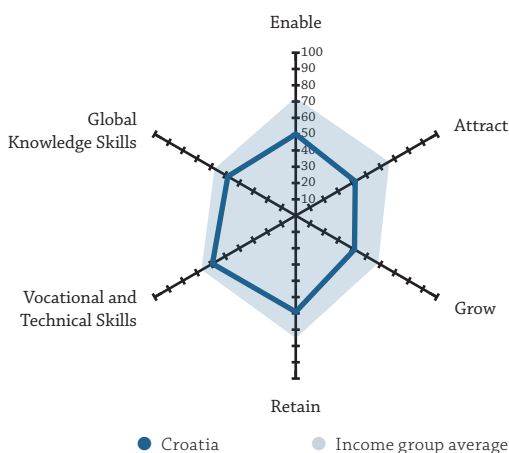
CROATIA

Key Indicators

Rank (out of 134).....	52
Income group.....	High income
Regional group.....	Europe
Population (millions).....	4.05

GDP per capita (PPP US\$).....	28,503.88
GDP (US\$ billions).....	55.97
GTCI score.....	49.99
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....49.95 61		
1.1 Regulatory Landscape.....	62.07	48
1.1.1 Government effectiveness.....	59.76	48
1.1.2 Rule of law.....	61.86	47
1.1.3 Political stability.....	79.65	27
1.1.4 Regulatory quality.....	65.26	43
1.1.5 Corruption.....	43.84	53
1.2 Market Landscape.....	43.86	80
1.2.1 Extent of market dominance.....	25.64	111
1.2.2 Ease of doing business.....	76.75	49
1.2.3 Cluster development.....	10.73	127
1.2.4 R&D expenditure.....	19.46	38
1.2.5 ICT infrastructure.....	80.09	48
1.2.6 Urbanisation.....	50.50	84
1.3 Business and Labour Landscape.....	43.92	95
Labour Market		
1.3.1 Labour rights.....	88.80	51
1.3.2 Labour-employer cooperation.....	5.21	131
Management Practice		
1.3.3 Professional management.....	31.65	118
1.3.4 Relationship of pay to productivity.....	36.00	115
Technology Adoption		
1.3.5 Technology utilisation.....	44.79	83
1.3.6 Investment in emerging technologies.....	25.34	107
1.3.7 Firms with website.....	75.68	30
2 ATTRACT.....42.17 99		
2.1 External Openness.....	40.45	89
Attract Business		
2.1.1 FDI and technology transfer.....	39.20	111
2.1.2 Prevalence of foreign ownership.....	53.42	83
Attract People		
2.1.3 Migrant stock.....	61.80	35
2.1.4 International students.....	35.33	65
2.1.5 Brain gain.....	12.50	131
2.2 Internal Openness.....	43.89	105
Social Inclusion		
2.2.1 Tolerance of minorities.....	52.17	50
2.2.2 Tolerance of immigrants.....	23.08	123
2.2.3 Social mobility.....	35.11	116
Gender Equality		
2.2.4 Women in tertiary education.....	72.07	36
2.2.5 Women in high-skilled jobs.....	71.93	46
2.2.6 Leadership opportunities for women.....	8.98	126

	Score	Rank
3 GROW.....41.64 51		
3.1 Formal Education.....	51.02	35
Enrolment		
3.1.1 Vocational enrolment.....	61.56	15
3.1.2 Tertiary enrolment.....	47.05	37
Quality		
3.1.3 Tertiary education expenditure.....	63.39	49
3.1.4 Reading, maths, and science.....	56.24	36
3.1.5 University ranking.....	26.87	66
3.2 Lifelong Learning.....	24.98	75
3.2.1 Business and economics subject ranking.....	17.44	66
3.2.2 Prevalence of training in firms.....	25.87	66
3.2.3 Employee development.....	13.66	125
3.2.4 Formal and non-formal studies.....	42.96	34
3.3 Access to Growth Opportunities.....	48.90	62
Empowerment		
3.3.1 Delegation of authority.....	27.26	117
3.3.2 Youth inclusion.....	78.63	37
Collaboration		
3.3.3 Use of virtual social networks.....	68.19	63
3.3.4 Use of virtual professional networks.....	21.52	51

4 RETAIN.....59.06 48		
4.1 Sustainability.....	46.91	67
4.1.1 Pension coverage.....	89.70	58
4.1.2 Social protection.....	27.72	98
4.1.3 Brain retention.....	4.43	130
4.1.4 Environmental performance.....	65.78	34
4.2 Lifestyle.....	71.21	42
4.2.1 Personal rights.....	86.40	46
4.2.2 Personal safety.....	65.03	41
4.2.3 Physician density.....	37.15	44
4.2.4 Sanitation.....	96.27	55

5 VOCATIONAL AND TECHNICAL SKILLS.....59.02 47		
5.1 Mid-Level Skills.....	75.01	8
5.1.1 Workforce with secondary education.....	85.57	8
5.1.2 Population with secondary education.....	73.95	18
5.1.3 Technicians and associate professionals.....	61.55	22
5.1.4 Labour productivity per employee.....	78.98	42
5.2 Employability.....	43.02	96
5.2.1 Ease of finding skilled employees.....	21.82	130
5.2.2 Relevance of education system to the economy.....	17.75	121
5.2.3 Skills matching.....	89.49	4

6 GLOBAL KNOWLEDGE SKILLS.....48.12 44		
6.1 High-Level Skills.....	41.62	57
6.1.1 Workforce with tertiary education.....	35.16	46
6.1.2 Population with tertiary education.....	23.62	65
6.1.3 Professionals.....	43.51	36
6.1.4 Researchers.....	78.09	39
6.1.5 Senior officials and managers.....	38.32	51
6.1.6 Availability of scientists and engineers.....	31.03	113
6.2 Talent Impact.....	54.62	35
6.2.1 Innovation output.....	37.79	42
6.2.2 High-value exports.....	53.78	54
6.2.3 New product entrepreneurial activity.....	47.21	45
6.2.4 New business density.....	59.64	27
6.2.5 Scientific journal articles.....	74.69	28

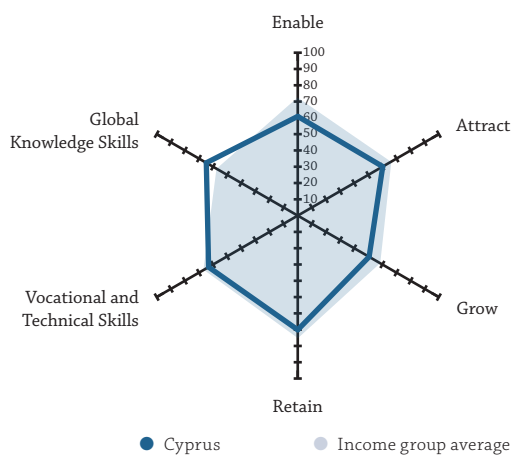
CYPRUS

Key Indicators

Rank (out of 134).....	30
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	1.21

GDP per capita (PPP US\$)	38,458.19
GDP (US\$ billions)	23.80
GTCI score	61.63
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	60.90	43
1.1 Regulatory Landscape.....	70.00	34
1.1.1 Government effectiveness.....	72.70	33
1.1.2 Rule of law.....	70.93	34
1.1.3 Political stability.....	74.25	41
1.1.4 Regulatory quality.....	74.58	31
1.1.5 Corruption.....	57.53	35
1.2 Market Landscape.....	54.35	50
1.2.1 Extent of market dominance.....	51.51	49
1.2.2 Ease of doing business.....	76.27	52
1.2.3 Cluster development.....	45.21	57
1.2.4 R&D expenditure.....	10.86	59
1.2.5 ICT infrastructure.....	80.44	46
1.2.6 Urbanisation.....	61.84	64
1.3 Business and Labour Landscape.....	58.36	47
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	54.58	40
Management Practice		
1.3.3 Professional management.....	38.59	101
1.3.4 Relationship of pay to productivity.....	53.88	66
Technology Adoption		
1.3.5 Technology utilisation.....	58.34	51
1.3.6 Investment in emerging technologies.....	31.37	92
1.3.7 Firms with website.....	71.74	35
2 ATTRACT.....	60.22	35
2.1 External Openness.....	65.47	25
Attract Business		
2.1.1 FDI and technology transfer.....	57.07	65
2.1.2 Prevalence of foreign ownership.....	71.33	39
Attract People		
2.1.3 Migrant stock.....	65.96	24
2.1.4 International students.....	82.24	5
2.1.5 Brain gain.....	50.73	56
2.2 Internal Openness.....	54.98	62
Social Inclusion		
2.2.1 Tolerance of minorities.....	50.00	53
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	57.11	45
Gender Equality		
2.2.4 Women in tertiary education.....	63.88	67
2.2.5 Women in high-skilled jobs.....	70.86	50
2.2.6 Leadership opportunities for women.....	37.26	82

	Score	Rank
3 GROW.....	50.58	34
3.1 Formal Education.....	45.65	41
Enrolment		
3.1.1 Vocational enrolment.....	19.21	60
3.1.2 Tertiary enrolment.....	56.69	19
Quality		
3.1.3 Tertiary education expenditure.....	70.26	33
3.1.4 Reading, maths, and science.....	42.42	44
3.1.5 University ranking.....	39.69	43
3.2 Lifelong Learning.....	47.62	34
3.2.1 Business and economics subject ranking.....	34.43	37
3.2.2 Prevalence of training in firms.....	44.76	35
3.2.3 Employee development.....	46.20	48
3.2.4 Formal and non-formal studies.....	65.10	19
3.3 Access to Growth Opportunities.....	58.45	37
Empowerment		
3.3.1 Delegation of authority.....	41.85	87
3.3.2 Youth inclusion.....	74.44	45
Collaboration		
3.3.3 Use of virtual social networks.....	82.85	17
3.3.4 Use of virtual professional networks.....	34.66	26

4 RETAIN.....	70.10	30
4.1 Sustainability.....	67.81	26
4.1.1 Pension coverage.....	97.78	40
4.1.2 Social protection.....	52.94	43
4.1.3 Brain retention.....	51.75	43
4.1.4 Environmental performance.....	68.78	31
4.2 Lifestyle.....	72.39	40
4.2.1 Personal rights.....	95.06	26
4.2.2 Personal safety.....	71.40	31
4.2.3 Physician density.....	24.01	71
4.2.4 Sanitation.....	99.09	26

5 VOCATIONAL AND TECHNICAL SKILLS.....	63.17	34
5.1 Mid-Level Skills.....	59.39	46
5.1.1 Workforce with secondary education.....	51.21	54
5.1.2 Population with secondary education.....	49.74	45
5.1.3 Technicians and associate professionals.....	53.17	37
5.1.4 Labour productivity per employee.....	83.43	29
5.2 Employability.....	66.95	32
5.2.1 Ease of finding skilled employees.....	78.58	25
5.2.2 Relevance of education system to the economy.....	51.16	49
5.2.3 Skills matching.....	71.11	43

6 GLOBAL KNOWLEDGE SKILLS.....	64.80	19
6.1 High-Level Skills.....	54.86	32
6.1.1 Workforce with tertiary education.....	57.17	13
6.1.2 Population with tertiary education.....	50.40	16
6.1.3 Professionals.....	45.81	30
6.1.4 Researchers.....	71.61	47
6.1.5 Senior officials and managers.....	30.86	59
6.1.6 Availability of scientists and engineers.....	73.29	18
6.2 Talent Impact.....	74.75	8
6.2.1 Innovation output.....	55.70	25
6.2.2 High-value exports.....	73.27	22
6.2.3 New product entrepreneurial activity.....	78.95	10
6.2.4 New business density.....	91.13	4
6.2.5 Scientific journal articles.....	74.72	27

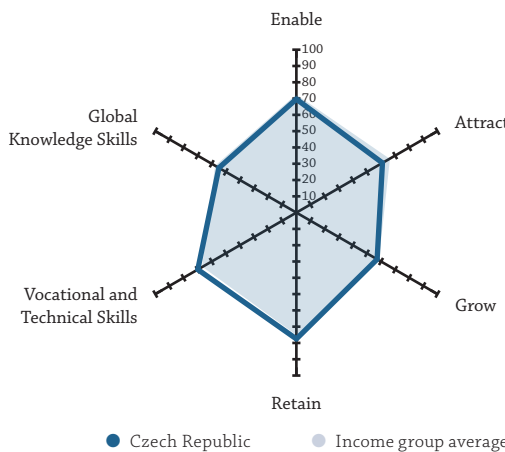
CZECH REPUBLIC

Key Indicators

Rank (out of 134).....	24
Income group.....	High income
Regional group.....	Europe
Population (millions).....	10.70

GDP per capita (PPP US\$)	41,737.42
GDP (US\$ billions)	243.53
GTCI score.....	65.03
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....69.64 26		
1.1 Regulatory Landscape.....	73.02	28
1.1.1 Government effectiveness.....	70.33	34
1.1.2 Rule of law.....	77.53	27
1.1.3 Political stability.....	84.09	19
1.1.4 Regulatory quality.....	79.73	23
1.1.5 Corruption.....	53.42	40
1.2 Market Landscape.....	63.86	30
1.2.1 Extent of market dominance.....	60.01	34
1.2.2 Ease of doing business.....	81.56	39
1.2.3 Cluster development.....	46.42	55
1.2.4 R&D expenditure.....	38.91	18
1.2.5 ICT infrastructure.....	86.42	32
1.2.6 Urbanisation.....	69.86	49
1.3 Business and Labour Landscape.....	72.05	27
Labour Market		
1.3.1 Labour rights.....	98.20	15
1.3.2 Labour-employer cooperation.....	53.52	42
Management Practice		
1.3.3 Professional management.....	74.92	26
1.3.4 Relationship of pay to productivity.....	69.32	37
Technology Adoption		
1.3.5 Technology utilisation.....	67.76	34
1.3.6 Investment in emerging technologies.....	55.17	35
1.3.7 Firms with website.....	85.42	12
2 ATTRACT.....61.00 29		
2.1 External Openness.....	62.98	29
Attract Business		
2.1.1 FDI and technology transfer.....	70.25	38
2.1.2 Prevalence of foreign ownership.....	94.05	5
Attract People		
2.1.3 Migrant stock.....	40.51	67
2.1.4 International students.....	68.48	14
2.1.5 Brain gain.....	41.62	83
2.2 Internal Openness.....	59.02	44
Social Inclusion		
2.2.1 Tolerance of minorities.....	n/a	n/a
2.2.2 Tolerance of immigrants.....	35.38	108
2.2.3 Social mobility.....	69.98	28
Gender Equality		
2.2.4 Women in tertiary education.....	72.13	35
2.2.5 Women in high-skilled jobs.....	61.93	79
2.2.6 Leadership opportunities for women.....	55.68	46

	Score	Rank
3 GROW.....57.24 24		
3.1 Formal Education.....	58.27	23
Enrolment		
3.1.1 Vocational enrolment.....	74.13	4
3.1.2 Tertiary enrolment.....	44.32	44
Quality		
3.1.3 Tertiary education expenditure.....	70.51	32
3.1.4 Reading, maths, and science.....	65.89	22
3.1.5 University ranking.....	36.48	49
3.2 Lifelong Learning.....	51.56	28
3.2.1 Business and economics subject ranking.....	35.86	35
3.2.2 Prevalence of training in firms.....	50.21	28
3.2.3 Employee development.....	57.78	35
3.2.4 Formal and non-formal studies.....	62.38	23
3.3 Access to Growth Opportunities.....	61.91	28
Empowerment		
3.3.1 Delegation of authority.....	66.88	26
3.3.2 Youth inclusion.....	89.75	12
Collaboration		
3.3.3 Use of virtual social networks.....	68.81	59
3.3.4 Use of virtual professional networks.....	22.19	49
4 RETAIN.....77.51 23		
4.1 Sustainability.....	72.39	24
4.1.1 Pension coverage.....	91.21	51
4.1.2 Social protection.....	69.50	25
4.1.3 Brain retention.....	49.12	47
4.1.4 Environmental performance.....	79.72	20
4.2 Lifestyle.....	82.64	18
4.2.1 Personal rights.....	94.12	29
4.2.2 Personal safety.....	86.22	14
4.2.3 Physician density.....	51.14	26
4.2.4 Sanitation.....	99.07	28
5 VOCATIONAL AND TECHNICAL SKILLS.....69.86 14		
5.1 Mid-Level Skills.....	87.89	1
5.1.1 Workforce with secondary education.....	94.82	3
5.1.2 Population with secondary education.....	98.53	2
5.1.3 Technicians and associate professionals.....	74.96	11
5.1.4 Labour productivity per employee.....	83.24	30
5.2 Employability.....	51.83	72
5.2.1 Ease of finding skilled employees.....	23.57	128
5.2.2 Relevance of education system to the economy.....	44.51	66
5.2.3 Skills matching.....	87.41	12
6 GLOBAL KNOWLEDGE SKILLS.....54.92 30		
6.1 High-Level Skills.....	44.45	46
6.1.1 Workforce with tertiary education.....	30.07	58
6.1.2 Population with tertiary education.....	27.06	56
6.1.3 Professionals.....	39.75	44
6.1.4 Researchers.....	88.76	24
6.1.5 Senior officials and managers.....	32.27	57
6.1.6 Availability of scientists and engineers.....	48.81	68
6.2 Talent Impact.....	65.39	22
6.2.1 Innovation output.....	62.50	16
6.2.2 High-value exports.....	74.32	19
6.2.3 New product entrepreneurial activity.....	53.81	41
6.2.4 New business density.....	52.03	33
6.2.5 Scientific journal articles.....	84.27	15

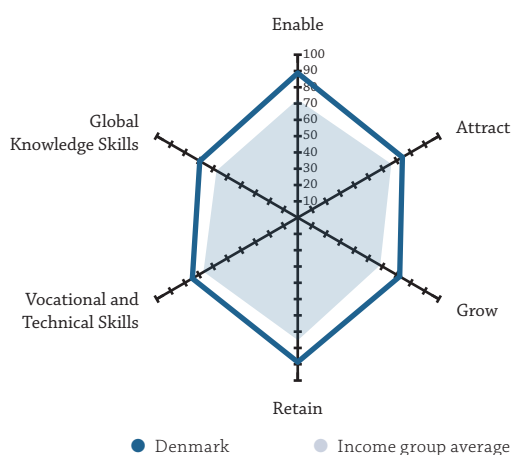
DENMARK

Key Indicators

Rank (out of 134).....	4
Income group.....	High income
Regional group.....	Europe
Population (millions).....	5.83

GDP per capita (PPP US\$).....	60,398.45
GDP (US\$ billions).....	355.18
GTCI score.....	77.98
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 88.69		3
1.1 Regulatory Landscape.....	92.61	6
1.1.1 Government effectiveness.....	93.71	3
1.1.2 Rule of law.....	97.15	5
1.1.3 Political stability.....	85.37	16
1.1.4 Regulatory quality.....	86.81	15
1.1.5 Corruption.....	100.00	1
1.2 Market Landscape.....	84.08	2
1.2.1 Extent of market dominance.....	90.64	3
1.2.2 Ease of doing business.....	97.39	3
1.2.3 Cluster development.....	75.44	18
1.2.4 R&D expenditure.....	61.29	8
1.2.5 ICT infrastructure.....	93.65	12
1.2.6 Urbanisation.....	86.06	17
1.3 Business and Labour Landscape.....	89.40	5
Labour Market		
1.3.1 Labour rights.....	94.70	28
1.3.2 Labour-employer cooperation.....	93.93	3
Management Practice		
1.3.3 Professional management.....	93.24	5
1.3.4 Relationship of pay to productivity.....	78.90	16
Technology Adoption		
1.3.5 Technology utilisation.....	91.77	8
1.3.6 Investment in emerging technologies.....	76.91	14
1.3.7 Firms with website.....	96.35	2
2 ATTRACT..... 74.17		11
2.1 External Openness.....	70.84	17
Attract Business		
2.1.1 FDI and technology transfer.....	82.89	13
2.1.2 Prevalence of foreign ownership.....	84.12	11
Attract People		
2.1.3 Migrant stock.....	59.54	40
2.1.4 International students.....	62.77	18
2.1.5 Brain gain.....	64.88	26
2.2 Internal Openness.....	77.50	9
Social Inclusion		
2.2.1 Tolerance of minorities.....	65.22	33
2.2.2 Tolerance of immigrants.....	84.62	15
2.2.3 Social mobility.....	91.82	5
Gender Equality		
2.2.4 Women in tertiary education.....	70.99	43
2.2.5 Women in high-skilled jobs.....	69.14	59
2.2.6 Leadership opportunities for women.....	83.23	8

	Score	Rank
3 GROW..... 72.26		9
3.1 Formal Education.....	62.31	18
Enrolment		
3.1.1 Vocational enrolment.....	33.67	40
3.1.2 Tertiary enrolment.....	56.58	20
Quality		
3.1.3 Tertiary education expenditure.....	89.77	5
3.1.4 Reading, maths, and science.....	68.16	16
3.1.5 University ranking.....	63.37	15
3.2 Lifelong Learning.....	70.62	12
3.2.1 Business and economics subject ranking.....	59.03	11
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	84.61	7
3.2.4 Formal and non-formal studies.....	68.22	18
3.3 Access to Growth Opportunities.....	83.86	3
Empowerment		
3.3.1 Delegation of authority.....	100.00	1
3.3.2 Youth inclusion.....	88.11	16
Collaboration		
3.3.3 Use of virtual social networks.....	83.99	13
3.3.4 Use of virtual professional networks.....	63.36	11

4 RETAIN..... 88.64		3
4.1 Sustainability.....	92.96	3
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	100.00	1
4.1.3 Brain retention.....	71.85	21
4.1.4 Environmental performance.....	100.00	1
4.2 Lifestyle.....	84.31	14
4.2.1 Personal rights.....	99.26	6
4.2.2 Personal safety.....	85.92	15
4.2.3 Physician density.....	52.51	23
4.2.4 Sanitation.....	99.57	19
5 VOCATIONAL AND TECHNICAL SKILLS..... 74.68		8
5.1 Mid-Level Skills.....	70.90	16
5.1.1 Workforce with secondary education.....	56.34	47
5.1.2 Population with secondary education.....	57.82	32
5.1.3 Technicians and associate professionals.....	77.57	8
5.1.4 Labour productivity per employee.....	91.89	10
5.2 Employability.....	78.46	13
5.2.1 Ease of finding skilled employees.....	79.39	22
5.2.2 Relevance of education system to the economy.....	75.57	10
5.2.3 Skills matching.....	80.40	21

6 GLOBAL KNOWLEDGE SKILLS..... 69.44		10
6.1 High-Level Skills.....	57.75	26
6.1.1 Workforce with tertiary education.....	46.83	30
6.1.2 Population with tertiary education.....	49.47	17
6.1.3 Professionals.....	67.56	4
6.1.4 Researchers.....	100.00	1
6.1.5 Senior officials and managers.....	20.20	81
6.1.6 Availability of scientists and engineers.....	62.43	40
6.2 Talent Impact.....	81.14	1
6.2.1 Innovation output.....	73.95	9
6.2.2 High-value exports.....	61.93	38
6.2.3 New product entrepreneurial activity.....	96.38	4
6.2.4 New business density.....	74.59	15
6.2.5 Scientific journal articles.....	98.82	2

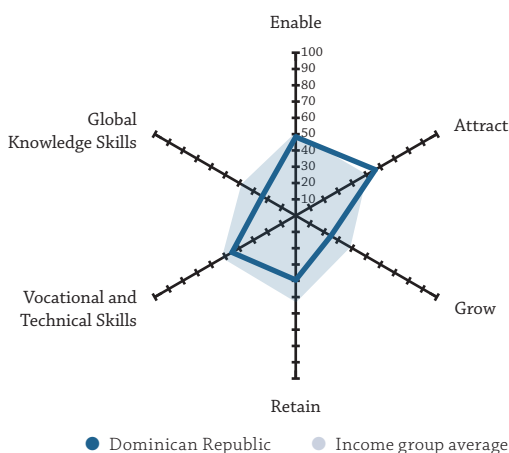
DOMINICAN REPUBLIC

Key Indicators

Rank (out of 134) **86**
 Income group **Upper-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **10.85**

GDP per capita (PPP US\$) **17,936.73**
 GDP (US\$ billions) **78.84**
 GTCI score **39.66**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	48.29	71
1.1 Regulatory Landscape	43.99	84
1.1.1 Government effectiveness	42.71	90
1.1.2 Rule of law	45.42	82
1.1.3 Political stability	63.00	64
1.1.4 Regulatory quality	51.00	73
1.1.5 Corruption	17.81	112
1.2 Market Landscape	52.81	56
1.2.1 Extent of market dominance	34.90	94
1.2.2 Ease of doing business	52.63	98
1.2.3 Cluster development	46.85	54
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	51.42	85
1.2.6 Urbanisation	78.24	32
1.3 Business and Labour Landscape	48.08	73
Labour Market		
1.3.1 Labour rights	85.50	58
1.3.2 Labour-employer cooperation	45.27	56
Management Practice		
1.3.3 Professional management	47.00	83
1.3.4 Relationship of pay to productivity	42.00	98
Technology Adoption		
1.3.5 Technology utilisation	50.03	68
1.3.6 Investment in emerging technologies	29.14	97
1.3.7 Firms with website	37.61	85
2 ATTRACT	56.38	47
2.1 External Openness	52.18	49
Attract Business		
2.1.1 FDI and technology transfer	68.81	40
2.1.2 Prevalence of foreign ownership	69.26	42
Attract People		
2.1.3 Migrant stock	46.02	55
2.1.4 International students	25.17	78
2.1.5 Brain gain	51.66	53
2.2 Internal Openness	60.58	40
Social Inclusion		
2.2.1 Tolerance of minorities	55.43	46
2.2.2 Tolerance of immigrants	67.69	48
2.2.3 Social mobility	43.97	90
Gender Equality		
2.2.4 Women in tertiary education	86.44	3
2.2.5 Women in high-skilled jobs	81.40	17
2.2.6 Leadership opportunities for women	28.55	98

	Score	Rank
3 GROW	24.91	105
3.1 Formal Education	13.58	123
Enrolment		
3.1.1 Vocational enrolment	12.73	71
3.1.2 Tertiary enrolment	41.61	50
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	0.00	78
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	16.88	108
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	21.96	76
3.2.3 Employee development	37.27	67
3.2.4 Formal and non-formal studies	8.30	53
3.3 Access to Growth Opportunities	44.28	75
Empowerment		
3.3.1 Delegation of authority	43.43	80
3.3.2 Youth inclusion	53.98	83
Collaboration		
3.3.3 Use of virtual social networks	63.83	72
3.3.4 Use of virtual professional networks	15.89	68
4 RETAIN	39.49	96
4.1 Sustainability	28.12	106
4.1.1 Pension coverage	10.40	114
4.1.2 Social protection	31.94	83
4.1.3 Brain retention	33.99	82
4.1.4 Environmental performance	36.16	69
4.2 Lifestyle	50.87	86
4.2.1 Personal rights	70.21	69
4.2.2 Personal safety	32.88	103
4.2.3 Physician density	17.75	83
4.2.4 Sanitation	82.62	87
5 VOCATIONAL AND TECHNICAL SKILLS	45.14	77
5.1 Mid-Level Skills	43.85	74
5.1.1 Workforce with secondary education	47.41	62
5.1.2 Population with secondary education	37.64	63
5.1.3 Technicians and associate professionals	24.85	78
5.1.4 Labour productivity per employee	65.50	64
5.2 Employability	46.43	87
5.2.1 Ease of finding skilled employees	50.49	78
5.2.2 Relevance of education system to the economy	20.14	114
5.2.3 Skills matching	68.64	47
6 GLOBAL KNOWLEDGE SKILLS	23.74	97
6.1 High-Level Skills	24.13	99
6.1.1 Workforce with tertiary education	16.26	94
6.1.2 Population with tertiary education	28.67	48
6.1.3 Professionals	18.76	82
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	18.85	87
6.1.6 Availability of scientists and engineers	38.09	96
6.2 Talent Impact	23.36	94
6.2.1 Innovation output	14.74	84
6.2.2 High-value exports	50.13	63
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	27.46	68
6.2.5 Scientific journal articles	1.09	129

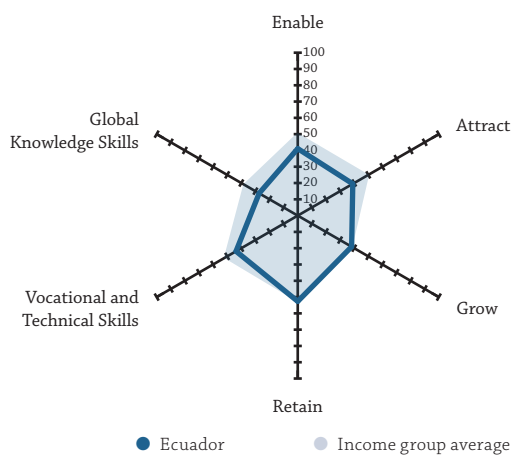
ECUADOR

Key Indicators

Rank (out of 134).....	85
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	17.64

GDP per capita (PPP US\$).....	10,896.43
GDP (US\$ billions).....	98.81
GTCI score.....	40.34
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	41.12	98
1.1 Regulatory Landscape.....	41.41	94
1.1.1 Government effectiveness.....	41.79	93
1.1.2 Rule of law.....	40.13	102
1.1.3 Political stability.....	58.30	75
1.1.4 Regulatory quality.....	33.97	118
1.1.5 Corruption.....	32.88	74
1.2 Market Landscape.....	35.52	102
1.2.1 Extent of market dominance.....	26.35	107
1.2.2 Ease of doing business.....	48.62	108
1.2.3 Cluster development.....	26.61	107
1.2.4 R&D expenditure.....	8.72	68
1.2.5 ICT infrastructure.....	44.42	94
1.2.6 Urbanisation.....	58.40	69
1.3 Business and Labour Landscape.....	46.42	80
Labour Market		
1.3.1 Labour rights.....	58.10	86
1.3.2 Labour-employer cooperation.....	37.60	81
Management Practice		
1.3.3 Professional management.....	36.89	106
1.3.4 Relationship of pay to productivity.....	42.99	93
Technology Adoption		
1.3.5 Technology utilisation.....	46.44	75
1.3.6 Investment in emerging technologies.....	23.33	112
1.3.7 Firms with website.....	79.61	24
2 ATTRACT.....	39.01	112
2.1 External Openness.....	28.35	124
Attract Business		
2.1.1 FDI and technology transfer.....	36.46	118
2.1.2 Prevalence of foreign ownership.....	30.09	123
Attract People		
2.1.3 Migrant stock.....	25.34	94
2.1.4 International students.....	14.13	92
2.1.5 Brain gain.....	35.76	100
2.2 Internal Openness.....	49.67	86
Social Inclusion		
2.2.1 Tolerance of minorities.....	39.13	69
2.2.2 Tolerance of immigrants.....	58.46	65
2.2.3 Social mobility.....	38.19	109
Gender Equality		
2.2.4 Women in tertiary education.....	62.75	75
2.2.5 Women in high-skilled jobs.....	74.87	34
2.2.6 Leadership opportunities for women.....	24.63	107

	Score	Rank
3 GROW.....	38.19	61
3.1 Formal Education.....	32.01	71
Enrolment		
3.1.1 Vocational enrolment.....	29.59	44
3.1.2 Tertiary enrolment.....	32.93	66
Quality		
3.1.3 Tertiary education expenditure.....	65.51	45
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	30.06	55
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	92.31	2
3.2.3 Employee development.....	23.64	109
3.2.4 Formal and non-formal studies.....	4.29	62
3.3 Access to Growth Opportunities.....	52.51	48
Empowerment		
3.3.1 Delegation of authority.....	36.78	104
3.3.2 Youth inclusion.....	68.20	58
Collaboration		
3.3.3 Use of virtual social networks.....	79.00	30
3.3.4 Use of virtual professional networks.....	26.05	40

4 RETAIN.....	52.63	64
4.1 Sustainability.....	46.93	66
4.1.1 Pension coverage.....	60.20	78
4.1.2 Social protection.....	44.09	59
4.1.3 Brain retention.....	38.97	71
4.1.4 Environmental performance.....	44.44	54
4.2 Lifestyle.....	58.34	66
4.2.1 Personal rights.....	79.20	58
4.2.2 Personal safety.....	39.74	93
4.2.3 Physician density.....	27.38	66
4.2.4 Sanitation.....	87.04	80

5 VOCATIONAL AND TECHNICAL SKILLS.....	43.73	83
5.1 Mid-Level Skills.....	39.46	82
5.1.1 Workforce with secondary education.....	43.66	70
5.1.2 Population with secondary education.....	41.81	58
5.1.3 Technicians and associate professionals.....	18.62	93
5.1.4 Labour productivity per employee.....	53.77	84
5.2 Employability.....	48.00	80
5.2.1 Ease of finding skilled employees.....	53.99	70
5.2.2 Relevance of education system to the economy.....	32.00	95
5.2.3 Skills matching.....	58.00	62

6 GLOBAL KNOWLEDGE SKILLS.....	27.36	88
6.1 High-Level Skills.....	26.98	95
6.1.1 Workforce with tertiary education.....	18.46	86
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	19.09	79
6.1.4 Researchers.....	54.14	70
6.1.5 Senior officials and managers.....	6.93	114
6.1.6 Availability of scientists and engineers.....	36.29	101
6.2 Talent Impact.....	27.74	80
6.2.1 Innovation output.....	12.03	96
6.2.2 High-value exports.....	45.24	76
6.2.3 New product entrepreneurial activity.....	29.01	67
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	24.69	74

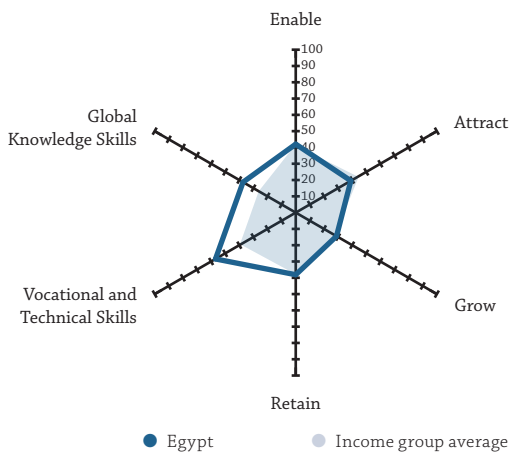
EGYPT

Key Indicators

Rank (out of 134).....	84
Income group.....	Lower-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	102.33

GDP per capita (PPP US\$).....	12,607.76
GDP (US\$ billions).....	363.07
GTCI score.....	40.39
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE.....42.02 95		
1.1 Regulatory Landscape.....36.40 107		
1.1.1 Government effectiveness.....41.24 94		
1.1.2 Rule of law.....43.74 88		
1.1.3 Political stability.....38.47 118		
1.1.4 Regulatory quality.....33.88 120		
1.1.5 Corruption.....24.66 97		
1.2 Market Landscape.....49.83 65		
1.2.1 Extent of market dominance.....68.88 21		
1.2.2 Ease of doing business.....52.75 97		
1.2.3 Cluster development.....72.38 21		
1.2.4 R&D expenditure.....14.43 48		
1.2.5 ICT infrastructure.....56.44 79		
1.2.6 Urbanisation.....34.12 105		
1.3 Business and Labour Landscape.....39.82 117		
Labour Market		
1.3.1 Labour rights.....0.00 100		
1.3.2 Labour-employer cooperation.....53.48 43		
Management Practice		
1.3.3 Professional management.....48.05 79		
1.3.4 Relationship of pay to productivity.....56.01 60		
Technology Adoption		
1.3.5 Technology utilisation.....46.09 79		
1.3.6 Investment in emerging technologies.....37.05 73		
1.3.7 Firms with website.....38.07 83		
2. ATTRACT.....39.05 111		
2.1 External Openness.....36.62 103		
Attract Business		
2.1.1 FDI and technology transfer.....57.05 66		
2.1.2 Prevalence of foreign ownership.....41.73 108		
Attract People		
2.1.3 Migrant stock.....11.04 121		
2.1.4 International students.....26.17 77		
2.1.5 Brain gain.....47.11 67		
2.2 Internal Openness.....41.47 117		
Social Inclusion		
2.2.1 Tolerance of minorities.....15.22 107		
2.2.2 Tolerance of immigrants.....43.08 95		
2.2.3 Social mobility.....42.02 96		
Gender Equality		
2.2.4 Women in tertiary education.....57.36 89		
2.2.5 Women in high-skilled jobs.....23.25 121		
2.2.6 Leadership opportunities for women.....67.90 26		

	Score	Rank
3. GROW.....28.90 90		
3.1 Formal Education.....33.96 67		
Enrolment		
3.1.1 Vocational enrolment.....32.73 42		
3.1.2 Tertiary enrolment.....26.81 76		
Quality		
3.1.3 Tertiary education expenditure.....n/a n/a		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....42.35 38		
3.2 Lifelong Learning.....16.06 111		
3.2.1 Business and economics subject ranking.....25.15 54		
3.2.2 Prevalence of training in firms.....0.28 106		
3.2.3 Employee development.....38.14 65		
3.2.4 Formal and non-formal studies.....0.67 84		
3.3 Access to Growth Opportunities.....36.67 95		
Empowerment		
3.3.1 Delegation of authority.....44.10 77		
3.3.2 Youth inclusion.....47.60 91		
Collaboration		
3.3.3 Use of virtual social networks.....46.36 96		
3.3.4 Use of virtual professional networks.....8.61 89		
4. RETAIN.....38.12 99		
4.1 Sustainability.....37.26 88		
4.1.1 Pension coverage.....37.37 90		
4.1.2 Social protection.....49.93 49		
4.1.3 Brain retention.....30.86 93		
4.1.4 Environmental performance.....30.86 81		
4.2 Lifestyle.....38.98 104		
4.2.1 Personal rights.....25.26 120		
4.2.2 Personal safety.....28.01 111		
4.2.3 Physician density.....8.91 97		
4.2.4 Sanitation.....93.73 63		
5. VOCATIONAL AND TECHNICAL SKILLS.....56.87 56		
5.1 Mid-Level Skills.....67.93 23		
5.1.1 Workforce with secondary education.....79.55 12		
5.1.2 Population with secondary education.....86.21 5		
5.1.3 Technicians and associate professionals.....32.60 62		
5.1.4 Labour productivity per employee.....73.38 48		
5.2 Employability.....45.81 89		
5.2.1 Ease of finding skilled employees.....57.07 62		
5.2.2 Relevance of education system to the economy.....26.53 102		
5.2.3 Skills matching.....53.83 72		
6. GLOBAL KNOWLEDGE SKILLS.....37.36 65		
6.1 High-Level Skills.....43.31 50		
6.1.1 Workforce with tertiary education.....25.02 71		
6.1.2 Population with tertiary education.....6.97 95		
6.1.3 Professionals.....27.37 64		
6.1.4 Researchers.....62.40 59		
6.1.5 Senior officials and managers.....77.88 12		
6.1.6 Availability of scientists and engineers.....60.21 45		
6.2 Talent Impact.....31.42 72		
6.2.1 Innovation output.....16.73 81		
6.2.2 High-value exports.....29.08 96		
6.2.3 New product entrepreneurial activity.....53.83 40		
6.2.4 New business density.....n/a n/a		
6.2.5 Scientific journal articles.....26.02 71		

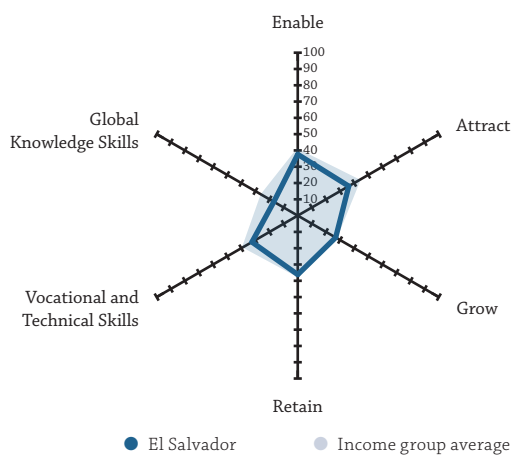
EL SALVADOR

Key Indicators

Rank (out of 134).....	109
Income group.....	Lower-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	6.49

GDP per capita (PPP US\$).....	8,498.97
GDP (US\$ billions).....	24.64
GTCI score.....	31.04
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....37.60 106		
1.1 Regulatory Landscape.....43.46 86		
1.1.1 Government effectiveness.....40.31 95		
1.1.2 Rule of law.....35.87 110		
1.1.3 Political stability.....59.69 73		
1.1.4 Regulatory quality.....52.67 68		
1.1.5 Corruption.....28.77 85		
1.2 Market Landscape.....35.52 101		
1.2.1 Extent of market dominance.....27.11 105		
1.2.2 Ease of doing business.....61.94 85		
1.2.3 Cluster development.....14.44 122		
1.2.4 R&D expenditure.....3.08 97		
1.2.5 ICT infrastructure.....38.73 103		
1.2.6 Urbanisation.....67.83 51		
1.3 Business and Labour Landscape.....33.81 120		
Labour Market		
1.3.1 Labour rights.....50.50 93		
1.3.2 Labour-employer cooperation.....29.94 100		
Management Practice		
1.3.3 Professional management.....35.60 109		
1.3.4 Relationship of pay to productivity.....27.63 126		
Technology Adoption		
1.3.5 Technology utilisation.....35.90 109		
1.3.6 Investment in emerging technologies.....18.90 121		
1.3.7 Firms with website.....38.19 82		
2 ATTRACT.....36.15 123		
2.1 External Openness.....27.62 125		
Attract Business		
2.1.1 FDI and technology transfer.....36.83 117		
2.1.2 Prevalence of foreign ownership.....52.26 86		
Attract People		
2.1.3 Migrant stock.....12.95 114		
2.1.4 International students.....10.00 95		
2.1.5 Brain gain.....26.05 115		
2.2 Internal Openness.....44.68 104		
Social Inclusion		
2.2.1 Tolerance of minorities.....45.65 59		
2.2.2 Tolerance of immigrants.....66.15 51		
2.2.3 Social mobility.....23.71 130		
Gender Equality		
2.2.4 Women in tertiary education.....65.34 60		
2.2.5 Women in high-skilled jobs.....60.94 81		
2.2.6 Leadership opportunities for women.....6.28 130		

	Score	Rank
3 GROW.....26.89 99		
3.1 Formal Education.....18.14 112		
Enrolment		
3.1.1 Vocational enrolment.....20.03 58		
3.1.2 Tertiary enrolment.....20.10 86		
Quality		
3.1.3 Tertiary education expenditure.....32.43 104		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 87		
3.2 Lifelong Learning.....22.56 85		
3.2.1 Business and economics subject ranking.....0.00 70		
3.2.2 Prevalence of training in firms.....64.48 17		
3.2.3 Employee development.....23.24 112		
3.2.4 Formal and non-formal studies.....2.53 70		
3.3 Access to Growth Opportunities.....39.98 87		
Empowerment		
3.3.1 Delegation of authority.....32.69 112		
3.3.2 Youth inclusion.....47.62 90		
Collaboration		
3.3.3 Use of virtual social networks.....65.80 67		
3.3.4 Use of virtual professional networks.....13.80 75		

4 RETAIN.....36.19 102		
4.1 Sustainability.....20.99 119		
4.1.1 Pension coverage.....19.29 103		
4.1.2 Social protection.....18.53 121		
4.1.3 Brain retention.....15.64 125		
4.1.4 Environmental performance.....30.51 82		
4.2 Lifestyle.....51.39 82		
4.2.1 Personal rights.....71.64 65		
4.2.2 Personal safety.....11.97 125		
4.2.3 Physician density.....35.53 49		
4.2.4 Sanitation.....86.44 82		
5 VOCATIONAL AND TECHNICAL SKILLS.....32.44 110		
5.1 Mid-Level Skills.....31.23 96		
5.1.1 Workforce with secondary education.....46.17 64		
5.1.2 Population with secondary education.....30.62 74		
5.1.3 Technicians and associate professionals.....16.90 100		
5.1.4 Labour productivity per employee.....n/a n/a		
5.2 Employability.....33.64 115		
5.2.1 Ease of finding skilled employees.....36.92 109		
5.2.2 Relevance of education system to the economy.....10.26 131		
5.2.3 Skills matching.....53.76 73		

6 GLOBAL KNOWLEDGE SKILLS.....16.96 114		
6.1 High-Level Skills.....14.29 122		
6.1.1 Workforce with tertiary education.....8.75 109		
6.1.2 Population with tertiary education.....9.42 92		
6.1.3 Professionals.....15.35 95		
6.1.4 Researchers.....27.97 92		
6.1.5 Senior officials and managers.....9.76 104		
6.1.6 Availability of scientists and engineers.....14.50 132		
6.2 Talent Impact.....19.63 105		
6.2.1 Innovation output.....14.39 86		
6.2.2 High-value exports.....43.71 79		
6.2.3 New product entrepreneurial activity.....25.30 73		
6.2.4 New business density.....12.94 91		
6.2.5 Scientific journal articles.....1.80 120		

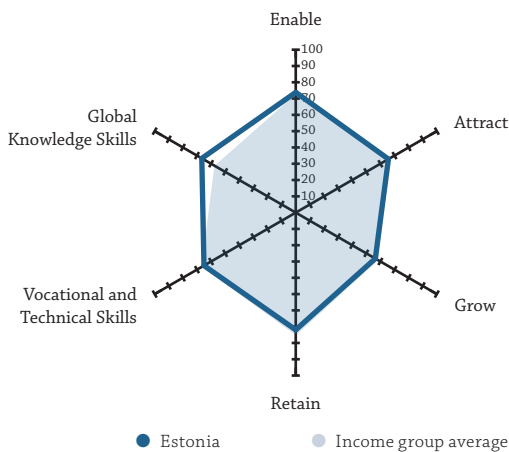
ESTONIA

Key Indicators

Rank (out of 134).....	22
Income group.....	High income
Regional group.....	Europe
Population (millions).....	1.33

GDP per capita (PPP US\$)	38,394.92
GDP (US\$ billions)	31.03
GTCI score.....	66.57
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	73.80	22
1.1 Regulatory Landscape.....	81.26	18
1.1.1 Government effectiveness.....	76.75	24
1.1.2 Rule of law.....	82.94	21
1.1.3 Political stability.....	77.01	32
1.1.4 Regulatory quality.....	87.39	14
1.1.5 Corruption.....	82.19	16
1.2 Market Landscape.....	60.96	35
1.2.1 Extent of market dominance.....	53.52	44
1.2.2 Ease of doing business.....	89.12	16
1.2.3 Cluster development.....	41.55	68
1.2.4 R&D expenditure.....	28.24	24
1.2.5 ICT infrastructure.....	89.10	25
1.2.6 Urbanisation.....	64.22	58
1.3 Business and Labour Landscape.....	79.18	18
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	73.42	13
Management Practice		
1.3.3 Professional management.....	81.12	16
1.3.4 Relationship of pay to productivity.....	82.83	11
Technology Adoption		
1.3.5 Technology utilisation.....	76.64	23
1.3.6 Investment in emerging technologies.....	58.91	34
1.3.7 Firms with website.....	81.34	19
2 ATTRACT.....	65.68	24
2.1 External Openness.....	67.29	22
Attract Business		
2.1.1 FDI and technology transfer.....	67.67	42
2.1.2 Prevalence of foreign ownership.....	86.50	8
Attract People		
2.1.3 Migrant stock.....	65.06	27
2.1.4 International students.....	60.19	23
2.1.5 Brain gain.....	57.01	38
2.2 Internal Openness.....	64.07	28
Social Inclusion		
2.2.1 Tolerance of minorities.....	25.00	95
2.2.2 Tolerance of immigrants.....	35.38	108
2.2.3 Social mobility.....	86.93	11
Gender Equality		
2.2.4 Women in tertiary education.....	75.52	21
2.2.5 Women in high-skilled jobs.....	79.28	21
2.2.6 Leadership opportunities for women.....	82.29	9

	Score	Rank
3 GROW.....	56.39	26
3.1 Formal Education.....	54.19	30
Enrolment		
3.1.1 Vocational enrolment.....	32.85	41
3.1.2 Tertiary enrolment.....	48.96	32
Quality		
3.1.3 Tertiary education expenditure.....	76.29	23
3.1.4 Reading, maths, and science.....	78.15	3
3.1.5 University ranking.....	34.72	52
3.2 Lifelong Learning.....	51.34	29
3.2.1 Business and economics subject ranking.....	34.03	38
3.2.2 Prevalence of training in firms.....	46.15	32
3.2.3 Employee development.....	65.65	28
3.2.4 Formal and non-formal studies.....	59.53	28
3.3 Access to Growth Opportunities.....	63.63	25
Empowerment		
3.3.1 Delegation of authority.....	69.62	22
3.3.2 Youth inclusion.....	85.31	20
Collaboration		
3.3.3 Use of virtual social networks.....	74.43	45
3.3.4 Use of virtual professional networks.....	25.17	43

4 RETAIN.....	71.95	28
4.1 Sustainability.....	66.69	28
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	55.34	40
4.1.3 Brain retention.....	41.74	61
4.1.4 Environmental performance.....	69.66	30
4.2 Lifestyle.....	77.21	30
4.2.1 Personal rights.....	95.75	21
4.2.2 Personal safety.....	71.06	32
4.2.3 Physician density.....	42.96	35
4.2.4 Sanitation.....	99.08	27

5 VOCATIONAL AND TECHNICAL SKILLS.....	65.04	29
5.1 Mid-Level Skills.....	70.41	19
5.1.1 Workforce with secondary education.....	66.61	29
5.1.2 Population with secondary education.....	66.91	24
5.1.3 Technicians and associate professionals.....	65.63	20
5.1.4 Labour productivity per employee.....	82.48	34
5.2 Employability.....	59.68	50
5.2.1 Ease of finding skilled employees.....	38.16	107
5.2.2 Relevance of education system to the economy.....	63.72	27
5.2.3 Skills matching.....	77.15	28

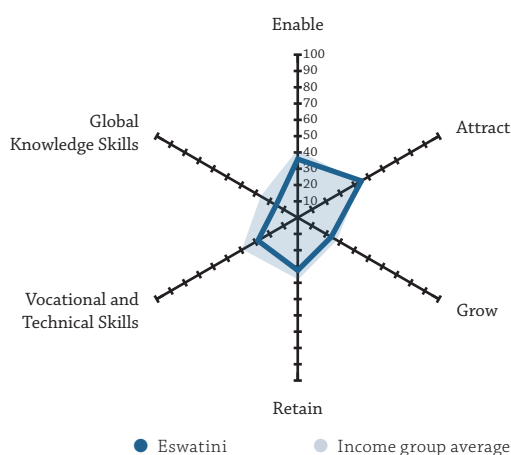
6 GLOBAL KNOWLEDGE SKILLS.....	66.58	11
6.1 High-Level Skills.....	64.56	15
6.1.1 Workforce with tertiary education.....	51.24	22
6.1.2 Population with tertiary education.....	53.83	13
6.1.3 Professionals.....	52.37	20
6.1.4 Researchers.....	88.33	25
6.1.5 Senior officials and managers.....	81.07	9
6.1.6 Availability of scientists and engineers.....	60.51	44
6.2 Talent Impact.....	68.61	16
6.2.1 Innovation output.....	59.81	19
6.2.2 High-value exports.....	48.03	71
6.2.3 New product entrepreneurial activity.....	59.89	24
6.2.4 New business density.....	100.00	1
6.2.5 Scientific journal articles.....	75.33	26

ESWATINI

Key Indicators

Rank (out of 134)	112
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	1.16

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	35.89	111
1.1 Regulatory Landscape	38.95	101
1.1.1 Government effectiveness	35.58	109
1.1.2 Rule of law	41.87	97
1.1.3 Political stability	54.01	86
1.1.4 Regulatory quality	38.64	107
1.1.5 Corruption	24.66	97
1.2 Market Landscape	24.57	122
1.2.1 Extent of market dominance	19.70	127
1.2.2 Ease of doing business	51.76	101
1.2.3 Cluster development	29.80	98
1.2.4 R&D expenditure	5.15	87
1.2.5 ICT infrastructure	28.60	115
1.2.6 Urbanisation	12.38	125
1.3 Business and Labour Landscape	44.14	94
Labour Market		
1.3.1 Labour rights	76.00	75
1.3.2 Labour-employer cooperation	29.55	104
Management Practice		
1.3.3 Professional management	61.04	44
1.3.4 Relationship of pay to productivity	45.86	89
Technology Adoption		
1.3.5 Technology utilisation	23.43	123
1.3.6 Investment in emerging technologies	11.76	129
1.3.7 Firms with website	61.33	52
2 ATTRACT	45.07	89
2.1 External Openness	38.30	100
Attract Business		
2.1.1 FDI and technology transfer	33.23	122
2.1.2 Prevalence of foreign ownership	70.48	40
Attract People		
2.1.3 Migrant stock	38.36	73
2.1.4 International students	9.91	96
2.1.5 Brain gain	39.50	90
2.2 Internal Openness	51.84	79
Social Inclusion		
2.2.1 Tolerance of minorities	n/a	n/a
2.2.2 Tolerance of immigrants	58.46	65
2.2.3 Social mobility	42.43	93
Gender Equality		
2.2.4 Women in tertiary education	59.38	86
2.2.5 Women in high-skilled jobs	70.33	53
2.2.6 Leadership opportunities for women	28.58	97

GDP per capita (PPP US\$)	8,853.60
GDP (US\$ billions)	3.96
GTCI score	30.11
GTCI score (income group average)	34.34

	Score	Rank
3 GROW	23.74	109
3.1 Formal Education	19.62	103
Enrolment		
3.1.1 Vocational enrolment	0.18	102
3.1.2 Tertiary enrolment	4.17	118
Quality		
3.1.3 Tertiary education expenditure	74.14	25
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	20.57	96
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	39.72	43
3.2.3 Employee development	39.68	61
3.2.4 Formal and non-formal studies	2.87	69
3.3 Access to Growth Opportunities	31.02	110
Empowerment		
3.3.1 Delegation of authority	52.00	56
3.3.2 Youth inclusion	32.77	113
Collaboration		
3.3.3 Use of virtual social networks	28.27	106
3.3.4 Use of virtual professional networks	11.04	79

	Score	Rank
4 RETAIN	32.38	107
4.1 Sustainability	42.23	81
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	22.98	111
4.1.3 Brain retention	31.82	91
4.1.4 Environmental performance	14.11	109
4.2 Lifestyle	22.52	127
4.2.1 Personal rights	8.11	129
4.2.2 Personal safety	26.16	113
4.2.3 Physician density	0.76	122
4.2.4 Sanitation	55.06	109

	Score	Rank
5 VOCATIONAL AND TECHNICAL SKILLS	28.22	118
5.1 Mid-Level Skills	8.61	127
5.1.1 Workforce with secondary education	0.58	130
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	16.63	101
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	47.83	82
5.2.1 Ease of finding skilled employees	47.33	87
5.2.2 Relevance of education system to the economy	34.61	90
5.2.3 Skills matching	61.54	59

	Score	Rank
6 GLOBAL KNOWLEDGE SKILLS	15.35	122
6.1 High-Level Skills	23.90	101
6.1.1 Workforce with tertiary education	17.74	88
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	27.75	63
6.1.4 Researchers	38.45	83
6.1.5 Senior officials and managers	14.22	95
6.1.6 Availability of scientists and engineers	21.35	128
6.2 Talent Impact	6.80	129
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	5.85	122
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	7.76	95

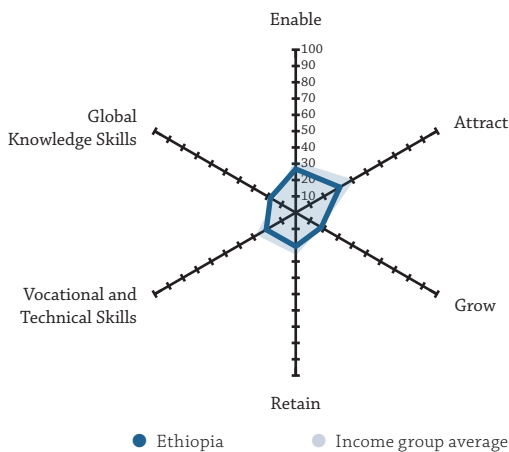
ETHIOPIA

Key Indicators

Rank (out of 134) **128**
 Income group **Low income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **114.96**

GDP per capita (PPP US\$) **2,422.96**
 GDP (US\$ billions) **107.64**
 GTCI score **22.61**
 GTCI score (income group average) **23.75**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 26.74		128
1.1 Regulatory Landscape 35.35		111
1.1.1 Government effectiveness 36.55		105
1.1.2 Rule of law 42.53		94
1.1.3 Political stability 33.65		121
1.1.4 Regulatory quality 32.52		122
1.1.5 Corruption 31.51		76
1.2 Market Landscape 19.08		129
1.2.1 Extent of market dominance 25.87		108
1.2.2 Ease of doing business 31.38		125
1.2.3 Cluster development 29.02		100
1.2.4 R&D expenditure 5.31		86
1.2.5 ICT infrastructure 13.99		127
1.2.6 Urbanisation 8.89		129
1.3 Business and Labour Landscape 25.78		128
Labour Market		
1.3.1 Labour rights n/a		n/a
1.3.2 Labour-employer cooperation 11.20		129
Management Practice		
1.3.3 Professional management 28.52		124
1.3.4 Relationship of pay to productivity 43.60		92
Technology Adoption		
1.3.5 Technology utilisation 13.80		127
1.3.6 Investment in emerging technologies 28.27		101
1.3.7 Firms with website 29.28		97
2 ATTRACT 31.22		129
2.1 External Openness 33.99		115
Attract Business		
2.1.1 FDI and technology transfer 39.09		112
2.1.2 Prevalence of foreign ownership 37.60		115
Attract People		
2.1.3 Migrant stock 16.99		109
2.1.4 International students n/a		n/a
2.1.5 Brain gain 42.30		81
2.2 Internal Openness 28.45		130
Social Inclusion		
2.2.1 Tolerance of minorities 2.17		125
2.2.2 Tolerance of immigrants 72.31		38
2.2.3 Social mobility 33.02		119
Gender Equality		
2.2.4 Women in tertiary education 20.33		124
2.2.5 Women in high-skilled jobs 35.38		115
2.2.6 Leadership opportunities for women 7.51		127

	Score	Rank
3 GROW 18.12		124
3.1 Formal Education 16.85		116
Enrolment		
3.1.1 Vocational enrolment 4.60		86
3.1.2 Tertiary enrolment 5.13		115
Quality		
3.1.3 Tertiary education expenditure 57.69		66
3.1.4 Reading, maths, and science n/a		n/a
3.1.5 University ranking 0.00		87
3.2 Lifelong Learning 12.19		122
3.2.1 Business and economics subject ranking 0.00		70
3.2.2 Prevalence of training in firms 18.32		84
3.2.3 Employee development 25.80		102
3.2.4 Formal and non-formal studies 4.63		59
3.3 Access to Growth Opportunities 25.33		118
Empowerment		
3.3.1 Delegation of authority 15.66		129
3.3.2 Youth inclusion 82.11		27
Collaboration		
3.3.3 Use of virtual social networks 3.12		130
3.3.4 Use of virtual professional networks 0.44		130

4 RETAIN 20.71		124
4.1 Sustainability 22.23		115
4.1.1 Pension coverage 2.93		129
4.1.2 Social protection 31.00		89
4.1.3 Brain retention 39.84		67
4.1.4 Environmental performance 15.17		107
4.2 Lifestyle 19.18		130
4.2.1 Personal rights 41.87		106
4.2.2 Personal safety 34.35		101
4.2.3 Physician density 0.52		130
4.2.4 Sanitation 0.00		134

5 VOCATIONAL AND TECHNICAL SKILLS 20.90		127
5.1 Mid-Level Skills 9.05		125
5.1.1 Workforce with secondary education 7.65		119
5.1.2 Population with secondary education 10.94		101
5.1.3 Technicians and associate professionals 4.62		125
5.1.4 Labour productivity per employee 12.97		111
5.2 Employability 32.75		119
5.2.1 Ease of finding skilled employees 36.13		112
5.2.2 Relevance of education system to the economy 41.12		73
5.2.3 Skills matching 21.01		90

6 GLOBAL KNOWLEDGE SKILLS 17.96		112
6.1 High-Level Skills 13.49		125
6.1.1 Workforce with tertiary education 0.81		128
6.1.2 Population with tertiary education 0.00		111
6.1.3 Professionals 5.25		121
6.1.4 Researchers 31.59		89
6.1.5 Senior officials and managers 3.71		122
6.1.6 Availability of scientists and engineers 39.57		91
6.2 Talent Impact 22.43		100
6.2.1 Innovation output 8.08		109
6.2.2 High-value exports 64.72		33
6.2.3 New product entrepreneurial activity 22.63		79
6.2.4 New business density 11.85		94
6.2.5 Scientific journal articles 4.86		105

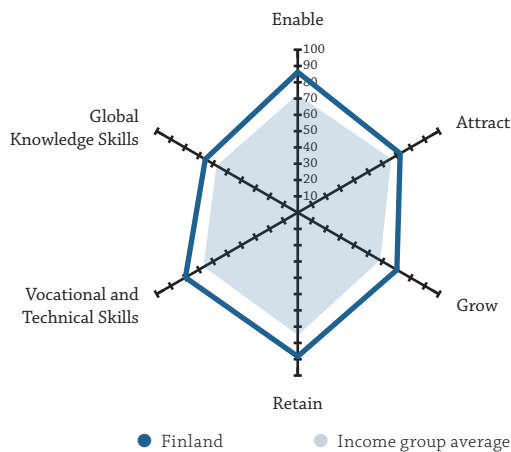
FINLAND

Key Indicators

Rank (out of 134).....	7
Income group.....	High income
Regional group.....	Europe
Population (millions).....	5.53

GDP per capita (PPP US\$).....	51,089.79
GDP (US\$ billions).....	271.23
GTCI score.....	77.07
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	86.20	6
1.1 Regulatory Landscape.....	93.13	5
1.1.1 Government effectiveness.....	93.52	4
1.1.2 Rule of law.....	100.00	1
1.1.3 Political stability.....	83.12	20
1.1.4 Regulatory quality.....	93.13	5
1.1.5 Corruption.....	95.89	3
1.2 Market Landscape.....	76.35	14
1.2.1 Extent of market dominance.....	61.26	30
1.2.2 Ease of doing business.....	88.35	18
1.2.3 Cluster development.....	76.20	16
1.2.4 R&D expenditure.....	55.66	11
1.2.5 ICT infrastructure.....	93.44	14
1.2.6 Urbanisation.....	83.19	24
1.3 Business and Labour Landscape.....	89.12	6
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	69.14	18
Management Practice		
1.3.3 Professional management.....	100.00	1
1.3.4 Relationship of pay to productivity.....	73.09	30
Technology Adoption		
1.3.5 Technology utilisation.....	93.73	6
1.3.6 Investment in emerging technologies.....	87.87	6
1.3.7 Firms with website.....	100.00	1
2 ATTRACT.....	72.58	14
2.1 External Openness.....	59.90	34
Attract Business		
2.1.1 FDI and technology transfer.....	72.05	32
2.1.2 Prevalence of foreign ownership.....	74.58	33
Attract People		
2.1.3 Migrant stock.....	46.80	53
2.1.4 International students.....	56.14	29
2.1.5 Brain gain.....	49.93	58
2.2 Internal Openness.....	85.25	2
Social Inclusion		
2.2.1 Tolerance of minorities.....	98.91	3
2.2.2 Tolerance of immigrants.....	76.92	28
2.2.3 Social mobility.....	100.00	1
Gender Equality		
2.2.4 Women in tertiary education.....	63.82	68
2.2.5 Women in high-skilled jobs.....	71.87	47
2.2.6 Leadership opportunities for women.....	100.00	1

	Score	Rank
3 GROW.....	70.26	10
3.1 Formal Education.....	66.56	11
Enrolment		
3.1.1 Vocational enrolment.....	57.85	18
3.1.2 Tertiary enrolment.....	62.97	9
Quality		
3.1.3 Tertiary education expenditure.....	80.48	18
3.1.4 Reading, maths, and science.....	74.44	7
3.1.5 University ranking.....	57.07	19
3.2 Lifelong Learning.....	71.35	11
3.2.1 Business and economics subject ranking.....	51.76	18
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	89.04	5
3.2.4 Formal and non-formal studies.....	73.25	13
3.3 Access to Growth Opportunities.....	72.88	17
Empowerment		
3.3.1 Delegation of authority.....	92.55	4
3.3.2 Youth inclusion.....	84.53	25
Collaboration		
3.3.3 Use of virtual social networks.....	80.67	23
3.3.4 Use of virtual professional networks.....	33.77	28

4 RETAIN.....	88.27	4
4.1 Sustainability.....	92.25	5
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	97.57	3
4.1.3 Brain retention.....	77.79	13
4.1.4 Environmental performance.....	93.65	7
4.2 Lifestyle.....	84.30	15
4.2.1 Personal rights.....	96.59	18
4.2.2 Personal safety.....	83.46	20
4.2.3 Physician density.....	57.72	16
4.2.4 Sanitation.....	99.40	22
5 VOCATIONAL AND TECHNICAL SKILLS.....	79.61	2
5.1 Mid-Level Skills.....	72.47	12
5.1.1 Workforce with secondary education.....	60.00	38
5.1.2 Population with secondary education.....	56.93	33
5.1.3 Technicians and associate professionals.....	83.62	6
5.1.4 Labour productivity per employee.....	89.30	16
5.2 Employability.....	86.76	2
5.2.1 Ease of finding skilled employees.....	89.92	8
5.2.2 Relevance of education system to the economy.....	90.77	3
5.2.3 Skills matching.....	79.59	22

6 GLOBAL KNOWLEDGE SKILLS.....	65.52	16
6.1 High-Level Skills.....	64.65	14
6.1.1 Workforce with tertiary education.....	55.92	14
6.1.2 Population with tertiary education.....	46.90	19
6.1.3 Professionals.....	68.75	3
6.1.4 Researchers.....	97.53	4
6.1.5 Senior officials and managers.....	20.14	82
6.1.6 Availability of scientists and engineers.....	98.64	2
6.2 Talent Impact.....	66.38	20
6.2.1 Innovation output.....	74.26	8
6.2.2 High-value exports.....	56.03	51
6.2.3 New product entrepreneurial activity.....	58.08	29
6.2.4 New business density.....	51.41	34
6.2.5 Scientific journal articles.....	92.14	8

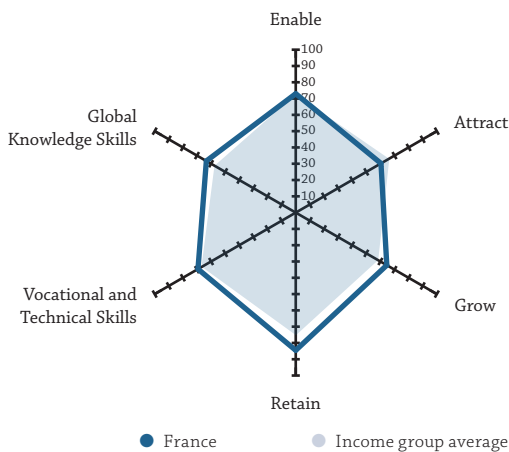
FRANCE

Key Indicators

Rank (out of 134).....	19
Income group.....	High income
Regional group.....	Europe
Population (millions).....	67.39

GDP per capita (PPP US\$).....	46,226.95
GDP (US\$ billions).....	2,603.00
GTCI score.....	69.18
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	72.97	23
1.1 Regulatory Landscape.....	79.01	20
1.1.1 Government effectiveness.....	81.41	18
1.1.2 Rule of law.....	85.95	18
1.1.3 Political stability.....	69.66	49
1.1.4 Regulatory quality.....	84.05	17
1.1.5 Corruption.....	73.97	22
1.2 Market Landscape.....	71.52	20
1.2.1 Extent of market dominance.....	65.29	26
1.2.2 Ease of doing business.....	82.38	30
1.2.3 Cluster development.....	69.12	25
1.2.4 R&D expenditure.....	44.24	12
1.2.5 ICT infrastructure.....	90.57	21
1.2.6 Urbanisation.....	77.51	34
1.3 Business and Labour Landscape.....	68.38	31
Labour Market		
1.3.1 Labour rights.....	96.40	20
1.3.2 Labour-employer cooperation.....	36.90	84
Management Practice		
1.3.3 Professional management.....	77.12	24
1.3.4 Relationship of pay to productivity.....	56.63	58
Technology Adoption		
1.3.5 Technology utilisation.....	73.86	27
1.3.6 Investment in emerging technologies.....	67.30	21
1.3.7 Firms with website.....	70.41	37
2 ATTRACT.....	60.40	34
2.1 External Openness.....	65.40	26
Attract Business		
2.1.1 FDI and technology transfer.....	71.67	33
2.1.2 Prevalence of foreign ownership.....	80.55	19
Attract People		
2.1.3 Migrant stock.....	61.85	34
2.1.4 International students.....	58.10	27
2.1.5 Brain gain.....	54.82	43
2.2 Internal Openness.....	55.40	61
Social Inclusion		
2.2.1 Tolerance of minorities.....	35.87	75
2.2.2 Tolerance of immigrants.....	61.54	59
2.2.3 Social mobility.....	67.11	34
Gender Equality		
2.2.4 Women in tertiary education.....	66.75	55
2.2.5 Women in high-skilled jobs.....	68.26	62
2.2.6 Leadership opportunities for women.....	32.87	88

	Score	Rank
3 GROW.....	64.54	19
3.1 Formal Education.....	63.35	15
Enrolment		
3.1.1 Vocational enrolment.....	54.58	21
3.1.2 Tertiary enrolment.....	47.03	38
Quality		
3.1.3 Tertiary education expenditure.....	79.48	19
3.1.4 Reading, maths, and science.....	65.14	24
3.1.5 University ranking.....	70.51	10
3.2 Lifelong Learning.....	64.71	18
3.2.1 Business and economics subject ranking.....	56.88	12
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	67.81	23
3.2.4 Formal and non-formal studies.....	69.45	17
3.3 Access to Growth Opportunities.....	65.57	24
Empowerment		
3.3.1 Delegation of authority.....	61.58	36
3.3.2 Youth inclusion.....	80.33	33
Collaboration		
3.3.3 Use of virtual social networks.....	75.99	43
3.3.4 Use of virtual professional networks.....	44.37	19

4 RETAIN.....	84.51	12
4.1 Sustainability.....	82.00	15
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	91.17	7
4.1.3 Brain retention.....	41.24	64
4.1.4 Environmental performance.....	95.59	5
4.2 Lifestyle.....	87.02	3
4.2.1 Personal rights.....	94.74	28
4.2.2 Personal safety.....	73.33	27
4.2.3 Physician density.....	81.46	3
4.2.4 Sanitation.....	98.54	37

5 VOCATIONAL AND TECHNICAL SKILLS.....	69.29	17
5.1 Mid-Level Skills.....	72.21	15
5.1.1 Workforce with secondary education.....	56.84	45
5.1.2 Population with secondary education.....	56.33	35
5.1.3 Technicians and associate professionals.....	85.15	4
5.1.4 Labour productivity per employee.....	90.51	13
5.2 Employability.....	66.38	34
5.2.1 Ease of finding skilled employees.....	67.96	42
5.2.2 Relevance of education system to the economy.....	57.47	37
5.2.3 Skills matching.....	73.70	39

6 GLOBAL KNOWLEDGE SKILLS.....	63.36	21
6.1 High-Level Skills.....	60.17	22
6.1.1 Workforce with tertiary education.....	52.57	18
6.1.2 Population with tertiary education.....	39.88	33
6.1.3 Professionals.....	47.54	28
6.1.4 Researchers.....	91.80	18
6.1.5 Senior officials and managers.....	59.92	26
6.1.6 Availability of scientists and engineers.....	69.32	26
6.2 Talent Impact.....	66.55	19
6.2.1 Innovation output.....	69.60	12
6.2.2 High-value exports.....	80.34	10
6.2.3 New product entrepreneurial activity.....	55.08	37
6.2.4 New business density.....	54.56	30
6.2.5 Scientific journal articles.....	73.17	30

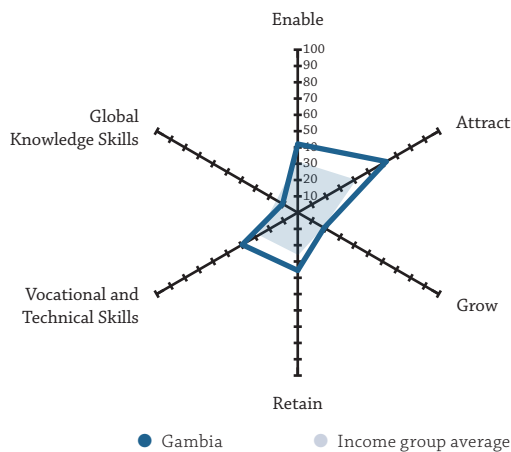
GAMBIA

Key Indicators

Rank (out of 134).....	99
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	2.42

GDP per capita (PPP US\$)	2,278.03
GDP (US\$ billions)	1.90
GTCI score	34.83
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	42.07	94
1.1 Regulatory Landscape	42.84	89
1.1.1 Government effectiveness	36.63	103
1.1.2 Rule of law	44.87	83
1.1.3 Political stability	65.09	59
1.1.4 Regulatory quality	37.48	110
1.1.5 Corruption	30.14	83
1.2 Market Landscape	34.90	104
1.2.1 Extent of market dominance	52.07	46
1.2.2 Ease of doing business	35.48	122
1.2.3 Cluster development	44.34	59
1.2.4 R&D expenditure	1.18	114
1.2.5 ICT infrastructure	20.85	124
1.2.6 Urbanisation	55.47	74
1.3 Business and Labour Landscape	48.46	71
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	54.61	39
Management Practice		
1.3.3 Professional management	61.43	43
1.3.4 Relationship of pay to productivity	71.96	32
Technology Adoption		
1.3.5 Technology utilisation	51.64	67
1.3.6 Investment in emerging technologies	36.20	75
1.3.7 Firms with website	14.93	112
2 ATTRACT	62.69	26
2.1 External Openness	68.23	20
Attract Business		
2.1.1 FDI and technology transfer	62.34	54
2.1.2 Prevalence of foreign ownership	81.36	15
Attract People		
2.1.3 Migrant stock	62.83	30
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	66.40	24
2.2 Internal Openness	57.15	52
Social Inclusion		
2.2.1 Tolerance of minorities	77.17	14
2.2.2 Tolerance of immigrants	89.23	12
2.2.3 Social mobility	53.34	59
Gender Equality		
2.2.4 Women in tertiary education	39.58	115
2.2.5 Women in high-skilled jobs	17.10	124
2.2.6 Leadership opportunities for women	66.44	29

	Score	Rank
3 GROW	18.72	122
3.1 Formal Education	13.23	125
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	1.34	128
Quality		
3.1.3 Tertiary education expenditure	38.36	99
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	19.17	99
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	24.48	70
3.2.3 Employee development	33.05	75
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	23.75	122
Empowerment		
3.3.1 Delegation of authority	68.60	23
3.3.2 Youth inclusion	4.94	122
Collaboration		
3.3.3 Use of virtual social networks	15.28	114
3.3.4 Use of virtual professional networks	6.18	100

4 RETAIN	35.47	105
4.1 Sustainability	29.97	99
4.1.1 Pension coverage	16.16	108
4.1.2 Social protection	41.29	65
4.1.3 Brain retention	58.73	35
4.1.4 Environmental performance	3.70	126
4.2 Lifestyle	40.96	100
4.2.1 Personal rights	79.55	57
4.2.2 Personal safety	48.96	77
4.2.3 Physician density	0.90	119
4.2.4 Sanitation	34.43	116

5 VOCATIONAL AND TECHNICAL SKILLS	39.33	97
5.1 Mid-Level Skills	26.24	104
5.1.1 Workforce with secondary education	32.95	85
5.1.2 Population with secondary education	21.54	93
5.1.3 Technicians and associate professionals	24.22	79
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	52.43	70
5.2.1 Ease of finding skilled employees	69.64	40
5.2.2 Relevance of education system to the economy	60.37	35
5.2.3 Skills matching	27.27	89

6 GLOBAL KNOWLEDGE SKILLS	10.71	129
6.1 High-Level Skills	18.95	109
6.1.1 Workforce with tertiary education	13.89	98
6.1.2 Population with tertiary education	8.80	93
6.1.3 Professionals	25.47	66
6.1.4 Researchers	23.51	94
6.1.5 Senior officials and managers	6.28	115
6.1.6 Availability of scientists and engineers	35.79	103
6.2 Talent Impact	2.46	132
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	0.97	127
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	3.95	108

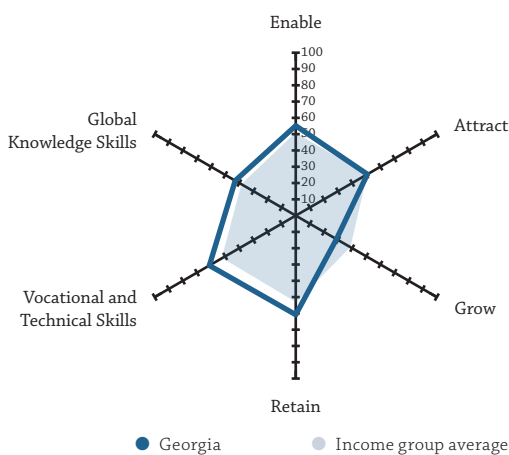
GEORGIA

Key Indicators

Rank (out of 134) **53**
 Income group **Upper-middle income**
 Regional group **Northern Africa and Western Asia**
 Population (millions) **3.71**

GDP per capita (PPP US\$) **14,863.02**
 GDP (US\$ billions) **15.89**
 GTCI score **49.94**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE55.16 49		
1.1 Regulatory Landscape.....63.07 44		
1.1.1 Government effectiveness69.09 37		
1.1.2 Rule of law60.57 50		
1.1.3 Political stability.....52.49 91		
1.1.4 Regulatory quality.....77.01 27		
1.1.5 Corruption56.16 38		
1.2 Market Landscape.....52.72 57		
1.2.1 Extent of market dominance.....45.37 64		
1.2.2 Ease of doing business.....94.64 6		
1.2.3 Cluster development.....36.56 84		
1.2.4 R&D expenditure.....5.43 84		
1.2.5 ICT infrastructure.....81.92 43		
1.2.6 Urbanisation52.43 78		
1.3 Business and Labour Landscape.....49.68 68		
Labour Market		
1.3.1 Labour rights.....91.40 39		
1.3.2 Labour-employer cooperation.....37.57 82		
Management Practice		
1.3.3 Professional management53.45 65		
1.3.4 Relationship of pay to productivity.....50.50 75		
Technology Adoption		
1.3.5 Technology utilisation.....36.65 107		
1.3.6 Investment in emerging technologies29.90 96		
1.3.7 Firms with website.....48.25 69		
2 ATTRACT.....50.75 63		
2.1 External Openness45.28 73		
Attract Business		
2.1.1 FDI and technology transfer48.64 90		
2.1.2 Prevalence of foreign ownership.....54.69 75		
Attract People		
2.1.3 Migrant stock23.06 99		
2.1.4 International students.....56.31 28		
2.1.5 Brain gain43.69 78		
2.2 Internal Openness.....56.23 57		
Social Inclusion		
2.2.1 Tolerance of minorities.....26.09 90		
2.2.2 Tolerance of immigrants72.31 38		
2.2.3 Social mobility51.52 64		
Gender Equality		
2.2.4 Women in tertiary education.....58.04 88		
2.2.5 Women in high-skilled jobs82.91 15		
2.2.6 Leadership opportunities for women46.52 64		

	Score	Rank
3 GROW.....28.86 91		
3.1 Formal Education.....25.86 88		
Enrolment		
3.1.1 Vocational enrolment9.33 80		
3.1.2 Tertiary enrolment44.42 43		
Quality		
3.1.3 Tertiary education expenditure40.15 96		
3.1.4 Reading, maths, and science21.46 69		
3.1.5 University ranking.....13.93 86		
3.2 Lifelong Learning.....15.24 113		
3.2.1 Business and economics subject ranking0.00 70		
3.2.2 Prevalence of training in firms.....33.99 51		
3.2.3 Employee development25.01 105		
3.2.4 Formal and non-formal studies1.97 74		
3.3 Access to Growth Opportunities45.48 71		
Empowerment		
3.3.1 Delegation of authority44.04 78		
3.3.2 Youth inclusion46.45 98		
Collaboration		
3.3.3 Use of virtual social networks77.96 36		
3.3.4 Use of virtual professional networks13.47 76		
4 RETAIN.....60.79 46		
4.1 Sustainability.....44.52 74		
4.1.1 Pension coverage90.81 53		
4.1.2 Social protection.....24.06 106		
4.1.3 Brain retention35.86 78		
4.1.4 Environmental performance27.34 86		
4.2 Lifestyle77.07 31		
4.2.1 Personal rights78.63 60		
4.2.2 Personal safety52.12 69		
4.2.3 Physician density.....88.28 2		
4.2.4 Sanitation.....89.24 74		
5 VOCATIONAL AND TECHNICAL SKILLS.....61.21 39		
5.1 Mid-Level Skills64.46 36		
5.1.1 Workforce with secondary education75.22 16		
5.1.2 Population with secondary education82.59 7		
5.1.3 Technicians and associate professionals.....39.67 52		
5.1.4 Labour productivity per employee.....60.37 76		
5.2 Employability.....57.96 55		
5.2.1 Ease of finding skilled employees47.83 84		
5.2.2 Relevance of education system to the economy37.15 83		
5.2.3 Skills matching88.88 7		
6 GLOBAL KNOWLEDGE SKILLS42.90 53		
6.1 High-Level Skills47.15 42		
6.1.1 Workforce with tertiary education48.50 26		
6.1.2 Population with tertiary education.....45.28 25		
6.1.3 Professionals41.16 40		
6.1.4 Researchers73.94 43		
6.1.5 Senior officials and managers.....51.32 35		
6.1.6 Availability of scientists and engineers22.69 126		
6.2 Talent Impact38.64 61		
6.2.1 Innovation output22.34 70		
6.2.2 High-value exports.....30.67 94		
6.2.3 New product entrepreneurial activity.....37.06 61		
6.2.4 New business density75.57 10		
6.2.5 Scientific journal articles27.59 68		

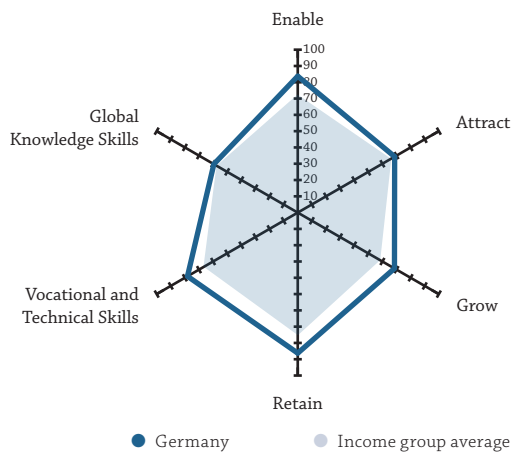
GERMANY

Key Indicators

Rank (out of 134).....	14
Income group	High income
Regional group	Europe
Population (millions)	83.24

GDP per capita (PPP US\$)	53,694.35
GDP (US\$ billions)	3,806.06
GTCI score	74.13
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	83.72	9
1.1 Regulatory Landscape.....	86.33	14
1.1.1 Government effectiveness.....	85.87	12
1.1.2 Rule of law.....	90.71	14
1.1.3 Political stability.....	75.75	34
1.1.4 Regulatory quality.....	90.30	8
1.1.5 Corruption.....	89.04	9
1.2 Market Landscape.....	80.53	7
1.2.1 Extent of market dominance.....	77.75	12
1.2.2 Ease of doing business.....	87.52	20
1.2.3 Cluster development.....	92.37	4
1.2.4 R&D expenditure.....	63.31	7
1.2.5 ICT infrastructure.....	88.31	26
1.2.6 Urbanisation.....	73.91	42
1.3 Business and Labour Landscape.....	84.30	9
Labour Market		
1.3.1 Labour rights.....	96.20	24
1.3.2 Labour-employer cooperation.....	62.27	29
Management Practice		
1.3.3 Professional management.....	77.93	22
1.3.4 Relationship of pay to productivity.....	89.21	6
Technology Adoption		
1.3.5 Technology utilisation.....	86.41	10
1.3.6 Investment in emerging technologies.....	86.85	7
1.3.7 Firms with website.....	91.24	7
2 ATTRACT	68.68	19
2.1 External Openness.....	72.08	16
Attract Business		
2.1.1 FDI and technology transfer.....	83.51	11
2.1.2 Prevalence of foreign ownership.....	77.98	24
Attract People		
2.1.3 Migrant stock.....	64.82	28
2.1.4 International students.....	61.09	20
2.1.5 Brain gain.....	73.01	19
2.2 Internal Openness.....	65.27	24
Social Inclusion		
2.2.1 Tolerance of minorities.....	61.96	37
2.2.2 Tolerance of immigrants.....	75.38	33
2.2.3 Social mobility.....	71.35	25
Gender Equality		
2.2.4 Women in tertiary education.....	55.01	94
2.2.5 Women in high-skilled jobs.....	66.54	65
2.2.6 Leadership opportunities for women.....	61.38	35

	Score	Rank
3 GROW	68.55	13
3.1 Formal Education.....	67.67	10
Enrolment		
3.1.1 Vocational enrolment.....	57.91	17
3.1.2 Tertiary enrolment.....	48.95	33
Quality		
3.1.3 Tertiary education expenditure.....	83.59	10
3.1.4 Reading, maths, and science.....	67.91	17
3.1.5 University ranking.....	79.98	7
3.2 Lifelong Learning.....	71.69	10
3.2.1 Business and economics subject ranking.....	69.89	9
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	74.79	15
3.2.4 Formal and non-formal studies.....	70.40	16
3.3 Access to Growth Opportunities.....	66.29	22
Empowerment		
3.3.1 Delegation of authority.....	79.79	14
3.3.2 Youth inclusion.....	88.13	15
Collaboration		
3.3.3 Use of virtual social networks.....	78.90	31
3.3.4 Use of virtual professional networks.....	18.32	60

4 RETAIN	86.25	10
4.1 Sustainability.....	87.99	9
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	78.62	15
4.1.3 Brain retention.....	82.68	8
4.1.4 Environmental performance.....	90.65	10
4.2 Lifestyle.....	84.52	12
4.2.1 Personal rights.....	99.55	2
4.2.2 Personal safety.....	85.92	15
4.2.3 Physician density.....	53.45	22
4.2.4 Sanitation.....	99.16	25

5 VOCATIONAL AND TECHNICAL SKILLS	78.14	5
5.1 Mid-Level Skills.....	79.30	3
5.1.1 Workforce with secondary education.....	62.42	34
5.1.2 Population with secondary education.....	81.38	9
5.1.3 Technicians and associate professionals.....	85.00	5
5.1.4 Labour productivity per employee.....	88.42	19
5.2 Employability.....	76.98	16
5.2.1 Ease of finding skilled employees.....	80.33	20
5.2.2 Relevance of education system to the economy.....	73.63	13
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	59.45	24
6.1 High-Level Skills.....	56.29	29
6.1.1 Workforce with tertiary education.....	46.21	32
6.1.2 Population with tertiary education.....	33.85	37
6.1.3 Professionals.....	52.76	19
6.1.4 Researchers.....	93.33	14
6.1.5 Senior officials and managers.....	31.07	58
6.1.6 Availability of scientists and engineers.....	80.50	11
6.2 Talent Impact.....	62.61	24
6.2.1 Innovation output.....	77.73	7
6.2.2 High-value exports.....	68.92	30
6.2.3 New product entrepreneurial activity.....	60.64	23
6.2.4 New business density.....	25.82	72
6.2.5 Scientific journal articles.....	79.93	23

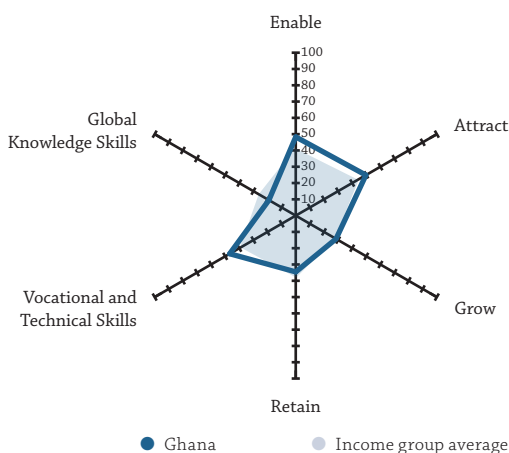
GHANA

Key Indicators

Rank (out of 134) **94**
 Income group **Lower-middle income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **31.07**

GDP per capita (PPP US\$) **5,596.31**
 GDP (US\$ billions) **72.35**
 GTCI score **37.82**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 48.30		70
1.1 Regulatory Landscape 50.67		63
1.1.1 Government effectiveness 45.98		87
1.1.2 Rule of law 54.51		60
1.1.3 Political stability 64.79		61
1.1.4 Regulatory quality 49.73		77
1.1.5 Corruption 38.36		63
1.2 Market Landscape 41.50		84
1.2.1 Extent of market dominance 51.04		50
1.2.2 Ease of doing business 52.58		100
1.2.3 Cluster development 53.40		39
1.2.4 R&D expenditure 7.38		72
1.2.5 ICT infrastructure 35.09		108
1.2.6 Urbanisation 49.48		87
1.3 Business and Labour Landscape 52.73		57
Labour Market		
1.3.1 Labour rights 83.80		60
1.3.2 Labour-employer cooperation 43.05		61
Management Practice		
1.3.3 Professional management 62.93		40
1.3.4 Relationship of pay to productivity 58.43		56
Technology Adoption		
1.3.5 Technology utilisation 44.06		86
1.3.6 Investment in emerging technologies 49.40		44
1.3.7 Firms with website 27.42		99
2 ATTRACT 49.72		71
2.1 External Openness 46.48		69
Attract Business		
2.1.1 FDI and technology transfer 54.06		77
2.1.2 Prevalence of foreign ownership 72.14		37
Attract People		
2.1.3 Migrant stock 26.04		93
2.1.4 International students 21.79		83
2.1.5 Brain gain 58.39		35
2.2 Internal Openness 52.95		73
Social Inclusion		
2.2.1 Tolerance of minorities 70.65		24
2.2.2 Tolerance of immigrants 72.31		38
2.2.3 Social mobility 44.71		88
Gender Equality		
2.2.4 Women in tertiary education 46.52		107
2.2.5 Women in high-skilled jobs 44.31		106
2.2.6 Leadership opportunities for women 39.21		78

	Score	Rank
3 GROW 28.56		92
3.1 Formal Education 22.52		96
Enrolment		
3.1.1 Vocational enrolment 3.53		89
3.1.2 Tertiary enrolment 11.55		100
Quality		
3.1.3 Tertiary education expenditure 49.87		81
3.1.4 Reading, maths, and science n/a		n/a
3.1.5 University ranking 25.13		69
3.2 Lifelong Learning 30.86		53
3.2.1 Business and economics subject ranking 31.61		42
3.2.2 Prevalence of training in firms 45.31		34
3.2.3 Employee development 44.32		51
3.2.4 Formal and non-formal studies 2.21		72
3.3 Access to Growth Opportunities 32.29		107
Empowerment		
3.3.1 Delegation of authority 53.02		50
3.3.2 Youth inclusion 42.64		102
Collaboration		
3.3.3 Use of virtual social networks 24.22		108
3.3.4 Use of virtual professional networks 9.27		85
4 RETAIN 34.54		106
4.1 Sustainability 29.33		102
4.1.1 Pension coverage 18.18		105
4.1.2 Social protection 40.96		67
4.1.3 Brain retention 55.00		41
4.1.4 Environmental performance 3.17		127
4.2 Lifestyle 39.75		103
4.2.1 Personal rights 88.56		41
4.2.2 Personal safety 57.53		61
4.2.3 Physician density 0.89		120
4.2.4 Sanitation 12.04		131
5 VOCATIONAL AND TECHNICAL SKILLS 46.80		75
5.1 Mid-Level Skills 24.50		111
5.1.1 Workforce with secondary education 27.99		98
5.1.2 Population with secondary education 24.64		87
5.1.3 Technicians and associate professionals 10.04		115
5.1.4 Labour productivity per employee 35.35		99
5.2 Employability 69.10		27
5.2.1 Ease of finding skilled employees 68.35		41
5.2.2 Relevance of education system to the economy 52.35		45
5.2.3 Skills matching 86.60		14
6 GLOBAL KNOWLEDGE SKILLS 19.02		109
6.1 High-Level Skills 20.99		104
6.1.1 Workforce with tertiary education 9.59		107
6.1.2 Population with tertiary education 2.80		102
6.1.3 Professionals 17.00		91
6.1.4 Researchers 31.36		90
6.1.5 Senior officials and managers 15.49		92
6.1.6 Availability of scientists and engineers 49.72		65
6.2 Talent Impact 17.04		109
6.2.1 Innovation output 12.77		92
6.2.2 High-value exports 18.32		109
6.2.3 New product entrepreneurial activity 24.92		76
6.2.4 New business density 18.54		84
6.2.5 Scientific journal articles 10.67		92

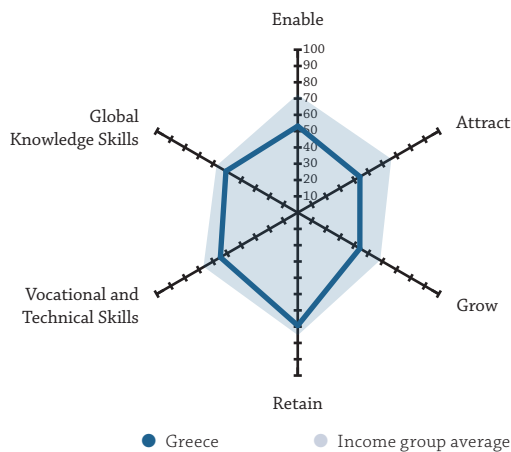
GREECE

Key Indicators

Rank (out of 134).....	43
Income group	High income
Regional group	Europe
Population (millions)	10.72

GDP per capita (PPP US\$)	28,463.79
GDP (US\$ billions)	189.41
GTCI score	52.70
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	53.09	57
1.1 Regulatory Landscape	59.73	49
1.1.1 Government effectiveness	59.66	49
1.1.2 Rule of law	58.01	53
1.1.3 Political stability	69.15	52
1.1.4 Regulatory quality	63.91	46
1.1.5 Corruption	47.95	49
1.2 Market Landscape	51.78	60
1.2.1 Extent of market dominance	43.58	71
1.2.2 Ease of doing business	67.55	74
1.2.3 Cluster development	15.17	121
1.2.4 R&D expenditure	23.63	32
1.2.5 ICT infrastructure	84.81	36
1.2.6 Urbanisation	75.92	38
1.3 Business and Labour Landscape	47.74	74
Labour Market		
1.3.1 Labour rights	91.50	38
1.3.2 Labour-employer cooperation	29.86	101
Management Practice		
1.3.3 Professional management	44.64	89
1.3.4 Relationship of pay to productivity	41.91	99
Technology Adoption		
1.3.5 Technology utilisation	44.22	85
1.3.6 Investment in emerging technologies	23.53	110
1.3.7 Firms with website	58.55	54
2 ATTRACT	44.07	92
2.1 External Openness	40.45	90
Attract Business		
2.1.1 FDI and technology transfer	39.85	109
2.1.2 Prevalence of foreign ownership	48.54	96
Attract People		
2.1.3 Migrant stock	58.60	41
2.1.4 International students	37.71	62
2.1.5 Brain gain	17.55	128
2.2 Internal Openness	47.69	93
Social Inclusion		
2.2.1 Tolerance of minorities	59.78	41
2.2.2 Tolerance of immigrants	32.31	115
2.2.3 Social mobility	41.47	99
Gender Equality		
2.2.4 Women in tertiary education	54.81	96
2.2.5 Women in high-skilled jobs	69.64	56
2.2.6 Leadership opportunities for women	28.13	99

	Score	Rank
3 GROW	44.01	46
3.1 Formal Education	55.40	29
Enrolment		
3.1.1 Vocational enrolment	36.68	36
3.1.2 Tertiary enrolment	100.00	1
Quality		
3.1.3 Tertiary education expenditure	49.46	83
3.1.4 Reading, maths, and science	48.73	42
3.1.5 University ranking	42.12	40
3.2 Lifelong Learning	24.21	77
3.2.1 Business and economics subject ranking	28.44	50
3.2.2 Prevalence of training in firms	19.44	83
3.2.3 Employee development	26.49	98
3.2.4 Formal and non-formal studies	22.46	44
3.3 Access to Growth Opportunities	52.43	49
Empowerment		
3.3.1 Delegation of authority	39.61	95
3.3.2 Youth inclusion	76.71	41
Collaboration		
3.3.3 Use of virtual social networks	71.10	54
3.3.4 Use of virtual professional networks	22.30	48

4 RETAIN	69.32	31
4.1 Sustainability	54.15	50
4.1.1 Pension coverage	95.76	43
4.1.2 Social protection	28.31	96
4.1.3 Brain retention	16.17	124
4.1.4 Environmental performance	76.37	25
4.2 Lifestyle	84.49	13
4.2.1 Personal rights	89.12	38
4.2.2 Personal safety	72.34	28
4.2.3 Physician density	77.60	4
4.2.4 Sanitation	98.90	32

5 VOCATIONAL AND TECHNICAL SKILLS	54.83	61
5.1 Mid-Level Skills	56.12	51
5.1.1 Workforce with secondary education	62.88	31
5.1.2 Population with secondary education	47.26	52
5.1.3 Technicians and associate professionals	36.02	57
5.1.4 Labour productivity per employee	78.31	43
5.2 Employability	53.54	66
5.2.1 Ease of finding skilled employees	56.08	64
5.2.2 Relevance of education system to the economy	23.54	107
5.2.3 Skills matching	80.99	19

6 GLOBAL KNOWLEDGE SKILLS	50.89	37
6.1 High-Level Skills	51.33	38
6.1.1 Workforce with tertiary education	43.43	36
6.1.2 Population with tertiary education	27.61	54
6.1.3 Professionals	47.47	29
6.1.4 Researchers	87.18	26
6.1.5 Senior officials and managers	22.87	76
6.1.6 Availability of scientists and engineers	79.42	12
6.2 Talent Impact	50.44	41
6.2.1 Innovation output	32.93	51
6.2.2 High-value exports	62.79	37
6.2.3 New product entrepreneurial activity	55.91	33
6.2.4 New business density	26.71	70
6.2.5 Scientific journal articles	73.87	29

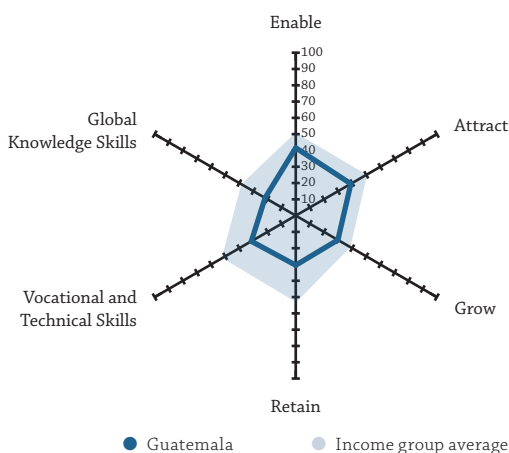
GUATEMALA

Key Indicators

Rank (out of 134).....	106
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	16.86

GDP per capita (PPP US\$)	8,854.20
GDP (US\$ billions)	77.60
GTCI score.....	32.36
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	41.60	96
1.1 Regulatory Landscape.....	35.19	112
1.1.1 Government effectiveness.....	35.61	107
1.1.2 Rule of law.....	29.20	122
1.1.3 Political stability.....	50.23	98
1.1.4 Regulatory quality.....	47.21	87
1.1.5 Corruption.....	13.70	118
1.2 Market Landscape.....	36.86	94
1.2.1 Extent of market dominance.....	44.70	66
1.2.2 Ease of doing business.....	57.24	88
1.2.3 Cluster development.....	40.51	70
1.2.4 R&D expenditure.....	0.34	120
1.2.5 ICT infrastructure.....	34.65	109
1.2.6 Urbanisation.....	43.72	95
1.3 Business and Labour Landscape.....	52.76	56
Labour Market		
1.3.1 Labour rights.....	49.60	94
1.3.2 Labour-employer cooperation.....	59.74	33
Management Practice		
1.3.3 Professional management.....	49.01	75
1.3.4 Relationship of pay to productivity.....	50.38	76
Technology Adoption		
1.3.5 Technology utilisation.....	66.96	36
1.3.6 Investment in emerging technologies.....	37.54	71
1.3.7 Firms with website.....	56.12	58
2 ATTRACT	39.06	110
2.1 External Openness.....	40.21	91
Attract Business		
2.1.1 FDI and technology transfer.....	56.20	69
2.1.2 Prevalence of foreign ownership.....	53.67	81
Attract People		
2.1.3 Migrant stock.....	11.32	119
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	39.64	89
2.2 Internal Openness.....	37.90	120
Social Inclusion		
2.2.1 Tolerance of minorities.....	3.26	121
2.2.2 Tolerance of immigrants.....	13.85	126
2.2.3 Social mobility.....	51.04	67
Gender Equality		
2.2.4 Women in tertiary education.....	64.85	64
2.2.5 Women in high-skilled jobs.....	66.42	66
2.2.6 Leadership opportunities for women.....	28.00	101

	Score	Rank
3 GROW	29.86	87
3.1 Formal Education.....	20.25	101
Enrolment		
3.1.1 Vocational enrolment.....	26.59	49
3.1.2 Tertiary enrolment.....	14.76	96
Quality		
3.1.3 Tertiary education expenditure.....	39.66	97
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	29.96	56
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	67.13	14
3.2.3 Employee development.....	49.39	46
3.2.4 Formal and non-formal studies.....	3.31	66
3.3 Access to Growth Opportunities.....	39.38	90
Empowerment		
3.3.1 Delegation of authority.....	50.40	60
3.3.2 Youth inclusion.....	47.13	94
Collaboration		
3.3.3 Use of virtual social networks.....	50.52	89
3.3.4 Use of virtual professional networks.....	9.49	84
4 RETAIN	30.44	109
4.1 Sustainability.....	26.50	108
4.1.1 Pension coverage.....	15.86	109
4.1.2 Social protection.....	29.27	92
4.1.3 Brain retention.....	50.30	44
4.1.4 Environmental performance.....	10.58	118
4.2 Lifestyle.....	34.38	110
4.2.1 Personal rights.....	55.24	93
4.2.2 Personal safety.....	15.96	123
4.2.3 Physician density.....	4.00	107
4.2.4 Sanitation.....	62.31	101
5 VOCATIONAL AND TECHNICAL SKILLS	31.47	111
5.1 Mid-Level Skills.....	27.28	101
5.1.1 Workforce with secondary education.....	20.07	110
5.1.2 Population with secondary education.....	25.54	86
5.1.3 Technicians and associate professionals.....	13.50	108
5.1.4 Labour productivity per employee.....	50.00	87
5.2 Employability.....	35.66	112
5.2.1 Ease of finding skilled employees.....	55.43	65
5.2.2 Relevance of education system to the economy.....	13.56	128
5.2.3 Skills matching.....	38.00	86
6 GLOBAL KNOWLEDGE SKILLS	21.73	102
6.1 High-Level Skills.....	13.64	123
6.1.1 Workforce with tertiary education.....	5.45	118
6.1.2 Population with tertiary education.....	10.21	90
6.1.3 Professionals.....	11.14	114
6.1.4 Researchers.....	2.78	109
6.1.5 Senior officials and managers.....	6.18	116
6.1.6 Availability of scientists and engineers.....	46.07	71
6.2 Talent Impact.....	29.82	76
6.2.1 Innovation output.....	12.39	95
6.2.2 High-value exports.....	42.88	81
6.2.3 New product entrepreneurial activity.....	80.15	9
6.2.4 New business density.....	12.16	93
6.2.5 Scientific journal articles.....	1.52	123

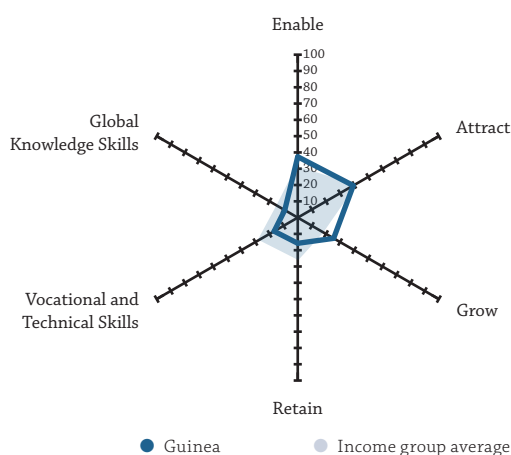
GUINEA

Key Indicators

Rank (out of 134)	125
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	13.13

GDP per capita (PPP US\$)	2,817.49
GDP (US\$ billions)	15.68
GTCI score	23.97
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	37.36	107
1.1 Regulatory Landscape	31.14	120
1.1.1 Government effectiveness	33.34	116
1.1.2 Rule of law	25.59	127
1.1.3 Political stability	43.80	109
1.1.4 Regulatory quality	35.16	117
1.1.5 Corruption	17.81	112
1.2 Market Landscape	36.15	97
1.2.1 Extent of market dominance	55.89	42
1.2.2 Ease of doing business	33.95	123
1.2.3 Cluster development	40.26	71
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	24.10	120
1.2.6 Urbanisation	26.57	114
1.3 Business and Labour Landscape	44.78	89
Labour Market		
1.3.1 Labour rights	93.30	32
1.3.2 Labour-employer cooperation	46.84	54
Management Practice		
1.3.3 Professional management	33.35	116
1.3.4 Relationship of pay to productivity	31.25	124
Technology Adoption		
1.3.5 Technology utilisation	51.88	65
1.3.6 Investment in emerging technologies	45.81	52
1.3.7 Firms with website	10.99	118
2 ATTRACT	39.36	109
2.1 External Openness	44.45	76
Attract Business		
2.1.1 FDI and technology transfer	60.31	58
2.1.2 Prevalence of foreign ownership	74.69	32
Attract People		
2.1.3 Migrant stock	18.12	107
2.1.4 International students	16.11	89
2.1.5 Brain gain	53.04	50
2.2 Internal Openness	34.26	124
Social Inclusion		
2.2.1 Tolerance of minorities	4.35	119
2.2.2 Tolerance of immigrants	75.38	33
2.2.3 Social mobility	46.53	79
Gender Equality		
2.2.4 Women in tertiary education	16.85	125
2.2.5 Women in high-skilled jobs	29.50	116
2.2.6 Leadership opportunities for women	32.96	87

	Score	Rank
3 GROW	25.44	103
3.1 Formal Education	13.43	124
Enrolment		
3.1.1 Vocational enrolment	2.11	92
3.1.2 Tertiary enrolment	7.56	106
Quality		
3.1.3 Tertiary education expenditure	44.05	92
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	25.83	72
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	11.61	99
3.2.3 Employee development	65.89	27
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	37.05	94
Empowerment		
3.3.1 Delegation of authority	52.09	55
3.3.2 Youth inclusion	81.55	30
Collaboration		
3.3.3 Use of virtual social networks	12.68	117
3.3.4 Use of virtual professional networks	1.88	123

4 RETAIN	15.77	131
4.1 Sustainability	11.82	131
4.1.1 Pension coverage	1.01	133
4.1.2 Social protection	23.06	110
4.1.3 Brain retention	22.16	112
4.1.4 Environmental performance	1.06	132
4.2 Lifestyle	19.71	129
4.2.1 Personal rights	40.58	107
4.2.2 Personal safety	21.06	117
4.2.3 Physician density	0.59	129
4.2.4 Sanitation	16.62	127
5 VOCATIONAL AND TECHNICAL SKILLS	16.71	131
5.1 Mid-Level Skills	2.30	134
5.1.1 Workforce with secondary education	1.14	129
5.1.2 Population with secondary education	1.67	115
5.1.3 Technicians and associate professionals	4.09	126
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	31.12	122
5.2.1 Ease of finding skilled employees	40.05	104
5.2.2 Relevance of education system to the economy	22.20	111
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	9.20	131
6.1 High-Level Skills	11.08	128
6.1.1 Workforce with tertiary education	11.81	100
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	12.14	109
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	4.86	118
6.1.6 Availability of scientists and engineers	15.50	130
6.2 Talent Impact	7.32	128
6.2.1 Innovation output	4.08	119
6.2.2 High-value exports	15.48	115
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	9.36	99
6.2.5 Scientific journal articles	0.38	130

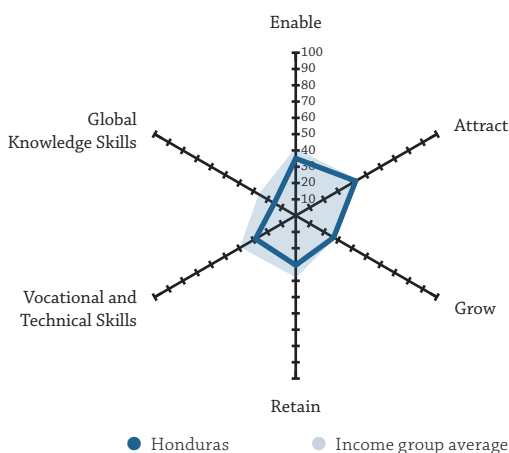
HONDURAS

Key Indicators

Rank (out of 134) **114**
 Income group **Lower-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **9.90**

GDP per capita (PPP US\$) **5,420.56**
 GDP (US\$ billions) **23.83**
 GTCI score **29.76**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	35.10	113
1.1 Regulatory Landscape	34.29	113
1.1.1 Government effectiveness	37.05	102
1.1.2 Rule of law	30.19	120
1.1.3 Political stability	50.58	95
1.1.4 Regulatory quality	41.29	100
1.1.5 Corruption	12.33	126
1.2 Market Landscape	28.47	117
1.2.1 Extent of market dominance	3.07	133
1.2.2 Ease of doing business	46.05	110
1.2.3 Cluster development	37.47	80
1.2.4 R&D expenditure	0.55	118
1.2.5 ICT infrastructure	33.00	112
1.2.6 Urbanisation	50.67	83
1.3 Business and Labour Landscape	42.54	109
Labour Market		
1.3.1 Labour rights	51.30	92
1.3.2 Labour-employer cooperation	38.37	76
Management Practice		
1.3.3 Professional management	36.93	105
1.3.4 Relationship of pay to productivity	40.07	104
Technology Adoption		
1.3.5 Technology utilisation	55.87	55
1.3.6 Investment in emerging technologies	35.90	77
1.3.7 Firms with website	39.34	80
2 ATTRACT	42.45	96
2.1 External Openness	36.03	108
Attract Business		
2.1.1 FDI and technology transfer	64.64	49
2.1.2 Prevalence of foreign ownership	57.65	65
Attract People		
2.1.3 Migrant stock	7.48	125
2.1.4 International students	16.43	87
2.1.5 Brain gain	33.95	103
2.2 Internal Openness	48.87	88
Social Inclusion		
2.2.1 Tolerance of minorities	51.09	52
2.2.2 Tolerance of immigrants	38.46	103
2.2.3 Social mobility	36.19	114
Gender Equality		
2.2.4 Women in tertiary education	72.51	33
2.2.5 Women in high-skilled jobs	70.65	52
2.2.6 Leadership opportunities for women	24.31	108

	Score	Rank
3 GROW	26.87	100
3.1 Formal Education	22.39	97
Enrolment		
3.1.1 Vocational enrolment	25.42	51
3.1.2 Tertiary enrolment	17.34	90
Quality		
3.1.3 Tertiary education expenditure	46.79	87
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	22.05	89
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	55.94	24
3.2.3 Employee development	28.00	94
3.2.4 Formal and non-formal studies	4.27	63
3.3 Access to Growth Opportunities	36.17	98
Empowerment		
3.3.1 Delegation of authority	42.26	86
3.3.2 Youth inclusion	47.28	93
Collaboration		
3.3.3 Use of virtual social networks	47.09	95
3.3.4 Use of virtual professional networks	8.06	94

4 RETAIN	30.41	110
4.1 Sustainability	22.87	114
4.1.1 Pension coverage	9.80	117
4.1.2 Social protection	19.01	120
4.1.3 Brain retention	41.50	62
4.1.4 Environmental performance	21.16	97
4.2 Lifestyle	37.95	106
4.2.1 Personal rights	54.12	95
4.2.2 Personal safety	14.49	124
4.2.3 Physician density	3.42	108
4.2.4 Sanitation	79.77	90

5 VOCATIONAL AND TECHNICAL SKILLS	28.53	117
5.1 Mid-Level Skills	24.86	109
5.1.1 Workforce with secondary education	30.22	95
5.1.2 Population with secondary education	18.73	96
5.1.3 Technicians and associate professionals	25.64	76
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	32.20	121
5.2.1 Ease of finding skilled employees	36.52	110
5.2.2 Relevance of education system to the economy	19.80	115
5.2.3 Skills matching	40.29	84

6 GLOBAL KNOWLEDGE SKILLS	15.22	123
6.1 High-Level Skills	17.89	110
6.1.1 Workforce with tertiary education	7.71	110
6.1.2 Population with tertiary education	11.89	84
6.1.3 Professionals	11.31	112
6.1.4 Researchers	17.21	99
6.1.5 Senior officials and managers	19.25	86
6.1.6 Availability of scientists and engineers	40.01	89
6.2 Talent Impact	12.55	121
6.2.1 Innovation output	10.30	101
6.2.2 High-value exports	26.22	101
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	1.11	128

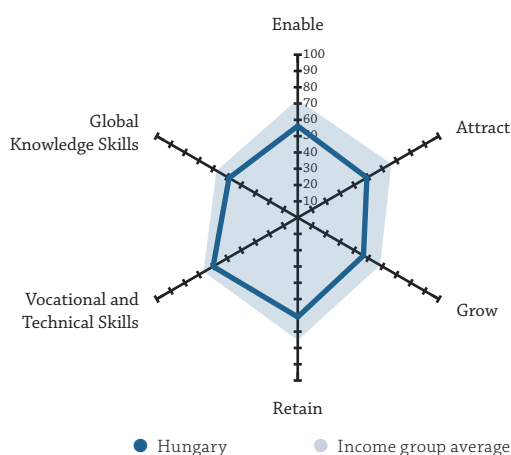
HUNGARY

Key Indicators

Rank (out of 134).....	42
Income group.....	High income
Regional group.....	Europe
Population (millions).....	9.75

GDP per capita (PPP US\$).....	33,084.10
GDP (US\$ billions).....	155.01
GTCI score.....	53.57
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	56.22	46
1.1 Regulatory Landscape.....	62.17	46
1.1.1 Government effectiveness.....	61.65	44
1.1.2 Rule of law.....	64.79	45
1.1.3 Political stability.....	79.13	28
1.1.4 Regulatory quality.....	65.54	42
1.1.5 Corruption.....	39.73	57
1.2 Market Landscape.....	55.32	45
1.2.1 Extent of market dominance.....	25.31	113
1.2.2 Ease of doing business.....	76.39	50
1.2.3 Cluster development.....	41.54	69
1.2.4 R&D expenditure.....	30.86	23
1.2.5 ICT infrastructure.....	90.76	20
1.2.6 Urbanisation.....	67.06	52
1.3 Business and Labour Landscape.....	51.17	63
Labour Market		
1.3.1 Labour rights.....	92.80	35
1.3.2 Labour-employer cooperation.....	37.28	83
Management Practice		
1.3.3 Professional management.....	47.35	82
1.3.4 Relationship of pay to productivity.....	41.40	101
Technology Adoption		
1.3.5 Technology utilisation.....	48.83	69
1.3.6 Investment in emerging technologies.....	28.34	100
1.3.7 Firms with website.....	62.17	50
2. ATTRACT	49.01	76
2.1 External Openness.....	54.57	42
Attract Business		
2.1.1 FDI and technology transfer.....	72.09	31
2.1.2 Prevalence of foreign ownership.....	63.17	55
Attract People		
2.1.3 Migrant stock.....	41.29	65
2.1.4 International students.....	64.28	16
2.1.5 Brain gain.....	32.02	107
2.2 Internal Openness.....	43.44	110
Social Inclusion		
2.2.1 Tolerance of minorities.....	66.30	30
2.2.2 Tolerance of immigrants.....	0.00	131
2.2.3 Social mobility.....	37.40	110
Gender Equality		
2.2.4 Women in tertiary education.....	65.47	59
2.2.5 Women in high-skilled jobs.....	75.30	31
2.2.6 Leadership opportunities for women.....	16.17	118

	Score	Rank
3. GROW	46.59	40
3.1 Formal Education.....	50.53	36
Enrolment		
3.1.1 Vocational enrolment.....	51.24	24
3.1.2 Tertiary enrolment.....	34.84	63
Quality		
3.1.3 Tertiary education expenditure.....	69.97	36
3.1.4 Reading, maths, and science.....	59.29	32
3.1.5 University ranking.....	37.32	47
3.2 Lifelong Learning.....	37.57	46
3.2.1 Business and economics subject ranking.....	20.07	63
3.2.2 Prevalence of training in firms.....	30.21	60
3.2.3 Employee development.....	24.59	107
3.2.4 Formal and non-formal studies.....	75.42	11
3.3 Access to Growth Opportunities.....	51.65	53
Empowerment		
3.3.1 Delegation of authority.....	38.86	97
3.3.2 Youth inclusion.....	79.68	34
Collaboration		
3.3.3 Use of virtual social networks.....	73.49	49
3.3.4 Use of virtual professional networks.....	14.57	71

4. RETAIN	60.98	45
4.1 Sustainability.....	49.33	63
4.1.1 Pension coverage.....	90.40	56
4.1.2 Social protection.....	17.80	122
4.1.3 Brain retention.....	22.26	111
4.1.4 Environmental performance.....	66.84	33
4.2 Lifestyle.....	72.63	39
4.2.1 Personal rights.....	81.06	52
4.2.2 Personal safety.....	69.36	35
4.2.3 Physician density.....	42.27	38
4.2.4 Sanitation.....	97.83	41
5. VOCATIONAL AND TECHNICAL SKILLS	59.98	43
5.1 Mid-Level Skills.....	75.12	7
5.1.1 Workforce with secondary education.....	81.53	11
5.1.2 Population with secondary education.....	77.27	12
5.1.3 Technicians and associate professionals.....	61.94	21
5.1.4 Labour productivity per employee.....	79.74	39
5.2 Employability.....	44.85	91
5.2.1 Ease of finding skilled employees.....	16.82	132
5.2.2 Relevance of education system to the economy.....	28.35	99
5.2.3 Skills matching.....	89.39	5

6. GLOBAL KNOWLEDGE SKILLS	48.67	43
6.1 High-Level Skills.....	43.97	48
6.1.1 Workforce with tertiary education.....	34.23	49
6.1.2 Population with tertiary education.....	27.88	50
6.1.3 Professionals.....	44.42	33
6.1.4 Researchers.....	86.06	27
6.1.5 Senior officials and managers.....	28.45	65
6.1.6 Availability of scientists and engineers.....	42.80	82
6.2 Talent Impact.....	53.37	37
6.2.1 Innovation output.....	47.83	31
6.2.2 High-value exports.....	70.30	26
6.2.3 New product entrepreneurial activity.....	37.73	59
6.2.4 New business density.....	47.94	37
6.2.5 Scientific journal articles.....	63.07	38

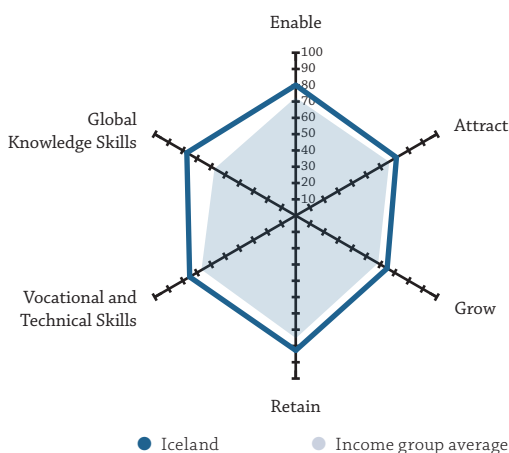
ICELAND

Key Indicators

Rank (out of 134).....	10
Income group.....	High income
Regional group.....	Europe
Population (millions).....	0.37

GDP per capita (PPP US\$).....	55,216.03
GDP (US\$ billions).....	21.71
GTCI score.....	75.21
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	80.05	14
1.1 Regulatory Landscape.....	88.65	12
1.1.1 Government effectiveness.....	84.38	14
1.1.2 Rule of law.....	94.12	11
1.1.3 Political stability.....	100.00	1
1.1.4 Regulatory quality.....	82.56	18
1.1.5 Corruption.....	82.19	16
1.2 Market Landscape.....	68.80	27
1.2.1 Extent of market dominance.....	44.93	65
1.2.2 Ease of doing business.....	86.20	24
1.2.3 Cluster development.....	51.58	44
1.2.4 R&D expenditure.....	41.16	16
1.2.5 ICT infrastructure.....	96.04	7
1.2.6 Urbanisation.....	92.89	7
1.3 Business and Labour Landscape.....	82.71	12
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	77.51	10
Management Practice		
1.3.3 Professional management.....	78.38	21
1.3.4 Relationship of pay to productivity.....	76.75	20
Technology Adoption		
1.3.5 Technology utilisation.....	96.05	4
1.3.6 Investment in emerging technologies.....	65.70	24
1.3.7 Firms with website.....	84.56	15
2. ATTRACT	71.37	16
2.1 External Openness.....	53.92	47
Attract Business		
2.1.1 FDI and technology transfer.....	56.48	67
2.1.2 Prevalence of foreign ownership.....	33.10	121
Attract People		
2.1.3 Migrant stock.....	63.30	29
2.1.4 International students.....	56.04	31
2.1.5 Brain gain.....	60.70	28
2.2 Internal Openness.....	88.82	1
Social Inclusion		
2.2.1 Tolerance of minorities.....	100.00	1
2.2.2 Tolerance of immigrants.....	83.08	20
2.2.3 Social mobility.....	94.86	3
Gender Equality		
2.2.4 Women in tertiary education.....	85.65	5
2.2.5 Women in high-skilled jobs.....	70.66	51
2.2.6 Leadership opportunities for women.....	98.65	2

	Score	Rank
3. GROW	64.77	18
3.1 Formal Education.....	52.88	33
Enrolment		
3.1.1 Vocational enrolment.....	25.37	52
3.1.2 Tertiary enrolment.....	50.89	26
Quality		
3.1.3 Tertiary education expenditure.....	80.52	17
3.1.4 Reading, maths, and science.....	60.14	29
3.1.5 University ranking.....	47.48	29
3.2 Lifelong Learning.....	51.78	27
3.2.1 Business and economics subject ranking.....	31.74	41
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	71.83	18
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	89.63	1
Empowerment		
3.3.1 Delegation of authority.....	82.50	11
3.3.2 Youth inclusion.....	90.89	6
Collaboration		
3.3.3 Use of virtual social networks.....	85.14	11
3.3.4 Use of virtual professional networks.....	100.00	1

4. RETAIN	82.71	15
4.1 Sustainability.....	79.89	18
4.1.1 Pension coverage.....	71.11	71
4.1.2 Social protection.....	86.61	9
4.1.3 Brain retention.....	79.82	10
4.1.4 Environmental performance.....	82.01	17
4.2 Lifestyle.....	85.53	6
4.2.1 Personal rights.....	95.06	26
4.2.2 Personal safety.....	96.92	3
4.2.3 Physician density.....	51.47	25
4.2.4 Sanitation.....	98.69	34

5. VOCATIONAL AND TECHNICAL SKILLS	75.18	7
5.1 Mid-Level Skills.....	65.31	35
5.1.1 Workforce with secondary education.....	48.53	61
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	57.15	29
5.1.4 Labour productivity per employee.....	90.25	14
5.2 Employability.....	85.04	5
5.2.1 Ease of finding skilled employees.....	93.94	3
5.2.2 Relevance of education system to the economy.....	73.40	14
5.2.3 Skills matching.....	87.79	10

6. GLOBAL KNOWLEDGE SKILLS	77.18	1
6.1 High-Level Skills.....	75.37	3
6.1.1 Workforce with tertiary education.....	48.55	24
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	60.86	11
6.1.4 Researchers.....	95.81	7
6.1.5 Senior officials and managers.....	100.00	1
6.1.6 Availability of scientists and engineers.....	71.60	21
6.2 Talent Impact.....	79.00	2
6.2.1 Innovation output.....	61.12	18
6.2.2 High-value exports.....	88.39	5
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	74.21	16
6.2.5 Scientific journal articles.....	92.27	7

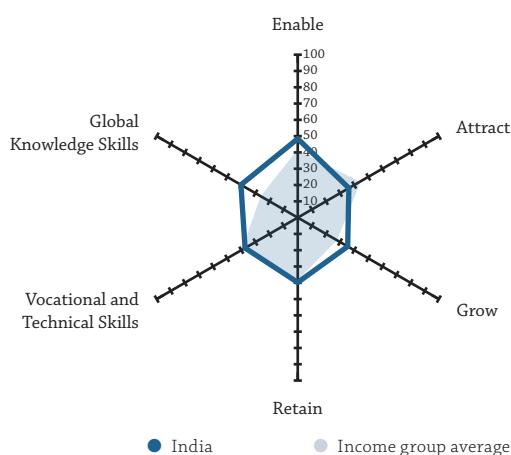
INDIA

Key Indicators

Rank (out of 134).....	88
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	1,380.00

GDP per capita (PPP US\$).....	6,454.35
GDP (US\$ billions).....	2,622.98
GTCI score.....	39.57
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	48.42	69
1.1 Regulatory Landscape.....	47.35	76
1.1.1 Government effectiveness.....	54.46	59
1.1.2 Rule of law.....	52.72	64
1.1.3 Political stability.....	46.69	105
1.1.4 Regulatory quality.....	48.64	80
1.1.5 Corruption.....	34.25	69
1.2 Market Landscape.....	44.65	76
1.2.1 Extent of market dominance.....	43.02	74
1.2.2 Ease of doing business.....	72.19	60
1.2.3 Cluster development.....	52.19	43
1.2.4 R&D expenditure.....	12.99	51
1.2.5 ICT infrastructure.....	63.39	73
1.2.6 Urbanisation.....	24.14	118
1.3 Business and Labour Landscape.....	53.26	54
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	36.22	86
Management Practice		
1.3.3 Professional management.....	58.95	48
1.3.4 Relationship of pay to productivity.....	54.88	62
Technology Adoption		
1.3.5 Technology utilisation.....	59.61	50
1.3.6 Investment in emerging technologies.....	64.29	26
1.3.7 Firms with website.....	45.59	72
2 ATTRACT.....	36.23	121
2.1 External Openness.....	36.68	102
Attract Business		
2.1.1 FDI and technology transfer.....	63.84	52
2.1.2 Prevalence of foreign ownership.....	61.24	58
Attract People		
2.1.3 Migrant stock.....	8.85	123
2.1.4 International students.....	2.56	109
2.1.5 Brain gain.....	46.89	69
2.2 Internal Openness.....	35.78	123
Social Inclusion		
2.2.1 Tolerance of minorities.....	16.30	106
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	52.73	61
Gender Equality		
2.2.4 Women in tertiary education.....	56.95	92
2.2.5 Women in high-skilled jobs.....	16.62	126
2.2.6 Leadership opportunities for women.....	21.31	113

	Score	Rank
3 GROW.....	35.39	71
3.1 Formal Education.....	37.88	59
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	19.54	88
Quality		
3.1.3 Tertiary education expenditure.....	47.11	86
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	46.99	30
3.2 Lifelong Learning.....	36.50	47
3.2.1 Business and economics subject ranking.....	26.27	51
3.2.2 Prevalence of training in firms.....	39.44	44
3.2.3 Employee development.....	43.78	54
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	31.81	108
Empowerment		
3.3.1 Delegation of authority.....	44.47	76
3.3.2 Youth inclusion.....	44.48	99
Collaboration		
3.3.3 Use of virtual social networks.....	30.67	104
3.3.4 Use of virtual professional networks.....	7.62	98

4 RETAIN.....	39.80	95
4.1 Sustainability.....	37.00	89
4.1.1 Pension coverage.....	41.92	85
4.1.2 Social protection.....	31.33	88
4.1.3 Brain retention.....	71.56	23
4.1.4 Environmental performance.....	3.17	127
4.2 Lifestyle.....	42.60	97
4.2.1 Personal rights.....	62.25	83
4.2.2 Personal safety.....	40.62	91
4.2.3 Physician density.....	11.19	89
4.2.4 Sanitation.....	56.35	105
5 VOCATIONAL AND TECHNICAL SKILLS.....	37.32	99
5.1 Mid-Level Skills.....	25.46	107
5.1.1 Workforce with secondary education.....	14.06	114
5.1.2 Population with secondary education.....	23.96	91
5.1.3 Technicians and associate professionals.....	17.35	98
5.1.4 Labour productivity per employee.....	46.47	90
5.2 Employability.....	49.17	78
5.2.1 Ease of finding skilled employees.....	48.34	83
5.2.2 Relevance of education system to the economy.....	52.14	46
5.2.3 Skills matching.....	47.02	77

6 GLOBAL KNOWLEDGE SKILLS.....	40.26	58
6.1 High-Level Skills.....	37.16	69
6.1.1 Workforce with tertiary education.....	16.46	93
6.1.2 Population with tertiary education.....	12.09	82
6.1.3 Professionals.....	9.39	117
6.1.4 Researchers.....	47.17	77
6.1.5 Senior officials and managers.....	64.90	20
6.1.6 Availability of scientists and engineers.....	72.98	20
6.2 Talent Impact.....	43.35	47
6.2.1 Innovation output.....	36.76	44
6.2.2 High-value exports.....	58.47	46
6.2.3 New product entrepreneurial activity.....	97.60	3
6.2.4 New business density.....	2.83	111
6.2.5 Scientific journal articles.....	21.07	80

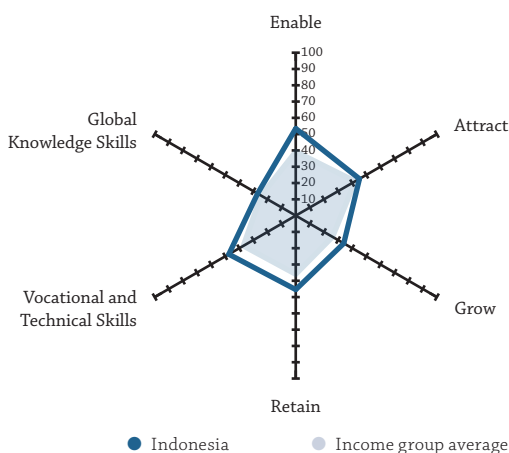
INDONESIA

Key Indicators

Rank (out of 134) **80**
 Income group **Lower-middle income**
 Regional group **Eastern, Southeastern Asia and Oceania**
 Population (millions) **273.52**

GDP per capita (PPP US\$) **12,073.46**
 GDP (US\$ billions) **1,058.42**
 GTCI score **42.09**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 53.45	56	
1.1 Regulatory Landscape 46.44	79	
1.1.1 Government effectiveness 54.71	58	
1.1.2 Rule of law 45.54	81	
1.1.3 Political stability 51.70	93	
1.1.4 Regulatory quality 50.12	75	
1.1.5 Corruption 30.14	83	
1.2 Market Landscape 54.16	51	
1.2.1 Extent of market dominance 64.40	27	
1.2.2 Ease of doing business 69.60	68	
1.2.3 Cluster development 70.92	23	
1.2.4 R&D expenditure 4.33	91	
1.2.5 ICT infrastructure 67.10	67	
1.2.6 Urbanisation 48.63	90	
1.3 Business and Labour Landscape 59.76	44	
Labour Market		
1.3.1 Labour rights 73.20	79	
1.3.2 Labour-employer cooperation 51.06	48	
Management Practice		
1.3.3 Professional management 67.28	33	
1.3.4 Relationship of pay to productivity 77.64	19	
Technology Adoption		
1.3.5 Technology utilisation 73.64	29	
1.3.6 Investment in emerging technologies 62.78	27	
1.3.7 Firms with website 12.73	115	
2 ATTRACT 45.16	86	
2.1 External Openness 38.95	93	
Attract Business		
2.1.1 FDI and technology transfer 66.69	44	
2.1.2 Prevalence of foreign ownership 58.61	64	
Attract People		
2.1.3 Migrant stock 1.73	132	
2.1.4 International students 1.65	111	
2.1.5 Brain gain 66.06	25	
2.2 Internal Openness 51.38	80	
Social Inclusion		
2.2.1 Tolerance of minorities 28.26	84	
2.2.2 Tolerance of immigrants 30.77	118	
2.2.3 Social mobility 62.24	40	
Gender Equality		
2.2.4 Women in tertiary education 62.48	76	
2.2.5 Women in high-skilled jobs 62.92	77	
2.2.6 Leadership opportunities for women 61.64	34	

	Score	Rank
3 GROW 34.05	75	
3.1 Formal Education 30.22	77	
Enrolment		
3.1.1 Vocational enrolment 36.08	37	
3.1.2 Tertiary enrolment 24.99	78	
Quality		
3.1.3 Tertiary education expenditure 46.34	88	
3.1.4 Reading, maths, and science 19.51	71	
3.1.5 University ranking 24.17	75	
3.2 Lifelong Learning 22.44	86	
3.2.1 Business and economics subject ranking 25.23	53	
3.2.2 Prevalence of training in firms 0.00	108	
3.2.3 Employee development 63.72	29	
3.2.4 Formal and non-formal studies 0.81	82	
3.3 Access to Growth Opportunities 49.50	60	
Empowerment		
3.3.1 Delegation of authority 67.69	25	
3.3.2 Youth inclusion 59.83	78	
Collaboration		
3.3.3 Use of virtual social networks 61.33	76	
3.3.4 Use of virtual professional networks 9.16	87	

4 RETAIN 45.39	86	
4.1 Sustainability 38.14	87	
4.1.1 Pension coverage 13.94	111	
4.1.2 Social protection 51.66	44	
4.1.3 Brain retention 65.81	27	
4.1.4 Environmental performance 21.16	97	
4.2 Lifestyle 52.64	79	
4.2.1 Personal rights 67.57	73	
4.2.2 Personal safety 66.62	38	
4.2.3 Physician density 5.38	103	
4.2.4 Sanitation 71.01	99	
5 VOCATIONAL AND TECHNICAL SKILLS 47.41	73	
5.1 Mid-Level Skills 30.78	97	
5.1.1 Workforce with secondary education 41.99	73	
5.1.2 Population with secondary education 34.78	68	
5.1.3 Technicians and associate professionals 11.55	109	
5.1.4 Labour productivity per employee 34.79	100	
5.2 Employability 64.04	37	
5.2.1 Ease of finding skilled employees 72.77	34	
5.2.2 Relevance of education system to the economy 62.22	32	
5.2.3 Skills matching 57.12	64	

6 GLOBAL KNOWLEDGE SKILLS 27.05	89	
6.1 High-Level Skills 28.58	91	
6.1.1 Workforce with tertiary education 15.06	96	
6.1.2 Population with tertiary education 12.22	81	
6.1.3 Professionals 13.46	105	
6.1.4 Researchers 44.78	79	
6.1.5 Senior officials and managers 17.53	89	
6.1.6 Availability of scientists and engineers 68.42	29	
6.2 Talent Impact 25.52	88	
6.2.1 Innovation output 19.07	75	
6.2.2 High-value exports 53.24	56	
6.2.3 New product entrepreneurial activity 26.34	72	
6.2.4 New business density 7.83	102	
6.2.5 Scientific journal articles 21.12	79	

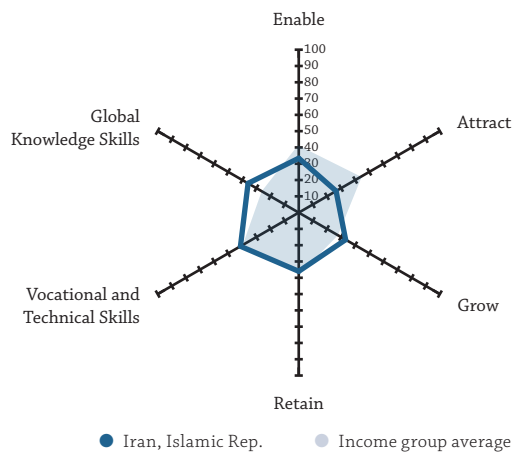
IRAN, ISLAMIC REP.

Key Indicators

Rank (out of 134).....	100
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	83.99

GDP per capita (PPP US\$).....	13,116.07
GDP (US\$ billions).....	191.72
GTCI score.....	34.38
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	33.38	116
1.1 Regulatory Landscape.....	26.62	127
1.1.1 Government effectiveness.....	38.35	99
1.1.2 Rule of law.....	36.17	109
1.1.3 Political stability.....	24.19	129
1.1.4 Regulatory quality.....	20.71	130
1.1.5 Corruption.....	13.70	118
1.2 Market Landscape.....	48.13	70
1.2.1 Extent of market dominance.....	60.06	33
1.2.2 Ease of doing business.....	50.08	107
1.2.3 Cluster development.....	36.13	85
1.2.4 R&D expenditure.....	16.59	44
1.2.5 ICT infrastructure.....	54.81	81
1.2.6 Urbanisation.....	71.14	46
1.3 Business and Labour Landscape.....	25.37	129
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	13.28	125
Management Practice		
1.3.3 Professional management.....	26.91	126
1.3.4 Relationship of pay to productivity.....	31.35	123
Technology Adoption		
1.3.5 Technology utilisation.....	27.54	118
1.3.6 Investment in emerging technologies.....	27.77	102
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....	26.46	133
2.1 External Openness.....	24.50	128
Attract Business		
2.1.1 FDI and technology transfer.....	47.28	95
2.1.2 Prevalence of foreign ownership.....	14.70	132
Attract People		
2.1.3 Migrant stock.....	33.23	79
2.1.4 International students.....	10.92	93
2.1.5 Brain gain.....	16.39	129
2.2 Internal Openness.....	28.42	131
Social Inclusion		
2.2.1 Tolerance of minorities.....	4.35	119
2.2.2 Tolerance of immigrants.....	41.54	98
2.2.3 Social mobility.....	31.19	121
Gender Equality		
2.2.4 Women in tertiary education.....	50.37	101
2.2.5 Women in high-skilled jobs.....	38.95	110
2.2.6 Leadership opportunities for women.....	4.12	131

	Score	Rank
3 GROW.....	33.22	77
3.1 Formal Education.....	40.49	51
Enrolment		
3.1.1 Vocational enrolment.....	16.49	64
3.1.2 Tertiary enrolment.....	43.63	46
Quality		
3.1.3 Tertiary education expenditure.....	55.45	69
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	46.38	32
3.2 Lifelong Learning.....	25.58	73
3.2.1 Business and economics subject ranking.....	40.86	28
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	10.29	127
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	33.60	104
Empowerment		
3.3.1 Delegation of authority.....	16.66	128
3.3.2 Youth inclusion.....	42.76	101
Collaboration		
3.3.3 Use of virtual social networks.....	41.37	98
3.3.4 Use of virtual professional networks.....	n/a	n/a

4 RETAIN.....	36.02	104
4.1 Sustainability.....	29.87	100
4.1.1 Pension coverage.....	20.51	101
4.1.2 Social protection.....	36.70	73
4.1.3 Brain retention.....	23.12	106
4.1.4 Environmental performance.....	39.15	62
4.2 Lifestyle.....	42.17	98
4.2.1 Personal rights.....	25.41	119
4.2.2 Personal safety.....	36.34	98
4.2.3 Physician density.....	19.41	81
4.2.4 Sanitation.....	87.51	78

5 VOCATIONAL AND TECHNICAL SKILLS.....	41.30	91
5.1 Mid-Level Skills.....	39.17	83
5.1.1 Workforce with secondary education.....	31.83	90
5.1.2 Population with secondary education.....	35.79	65
5.1.3 Technicians and associate professionals.....	22.57	85
5.1.4 Labour productivity per employee.....	66.48	63
5.2 Employability.....	43.44	94
5.2.1 Ease of finding skilled employees.....	45.54	93
5.2.2 Relevance of education system to the economy.....	18.78	118
5.2.3 Skills matching.....	65.98	52

6 GLOBAL KNOWLEDGE SKILLS.....	35.92	68
6.1 High-Level Skills.....	42.32	53
6.1.1 Workforce with tertiary education.....	34.74	48
6.1.2 Population with tertiary education.....	30.17	43
6.1.3 Professionals.....	26.02	65
6.1.4 Researchers.....	74.06	42
6.1.5 Senior officials and managers.....	23.48	74
6.1.6 Availability of scientists and engineers.....	65.45	33
6.2 Talent Impact.....	29.51	77
6.2.1 Innovation output.....	33.52	49
6.2.2 High-value exports.....	14.57	116
6.2.3 New product entrepreneurial activity.....	30.57	66
6.2.4 New business density.....	9.80	98
6.2.5 Scientific journal articles.....	59.11	41

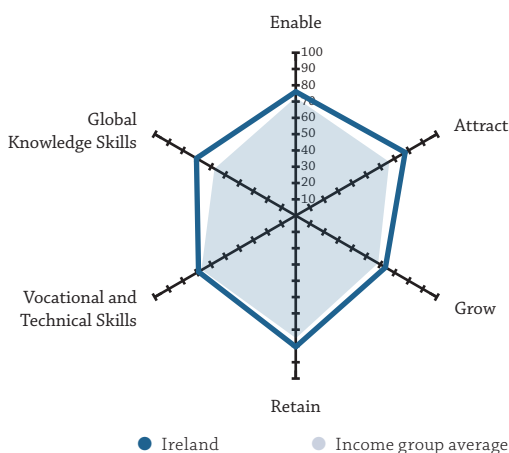
IRELAND

Key Indicators

Rank (out of 134).....	16
Income group.....	High income
Regional group.....	Europe
Population (millions).....	4.99

GDP per capita (PPP US\$).....	93,612.17
GDP (US\$ billions).....	418.82
GTCI score.....	72.82
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....76.05	21	
1.1 Regulatory Landscape.....	82.99	17
1.1.1 Government effectiveness.....	79.12	23
1.1.2 Rule of law.....	85.54	19
1.1.3 Political stability.....	84.57	18
1.1.4 Regulatory quality.....	87.62	13
1.1.5 Corruption.....	78.08	19
1.2 Market Landscape.....	64.93	29
1.2.1 Extent of market dominance.....	60.84	32
1.2.2 Ease of doing business.....	87.28	22
1.2.3 Cluster development.....	66.17	27
1.2.4 R&D expenditure.....	23.01	34
1.2.5 ICT infrastructure.....	94.64	10
1.2.6 Urbanisation.....	57.65	70
1.3 Business and Labour Landscape.....	80.24	16
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	65.54	23
Management Practice		
1.3.3 Professional management.....	91.52	8
1.3.4 Relationship of pay to productivity.....	78.86	17
Technology Adoption		
1.3.5 Technology utilisation.....	79.12	17
1.3.6 Investment in emerging technologies.....	70.53	17
1.3.7 Firms with website.....	76.10	29
2 ATTRACT.....77.53	8	
2.1 External Openness.....	77.86	9
Attract Business		
2.1.1 FDI and technology transfer.....	100.00	1
2.1.2 Prevalence of foreign ownership.....	87.52	7
Attract People		
2.1.3 Migrant stock.....	65.86	25
2.1.4 International students.....	60.30	22
2.1.5 Brain gain.....	75.64	14
2.2 Internal Openness.....	77.19	11
Social Inclusion		
2.2.1 Tolerance of minorities.....	100.00	1
2.2.2 Tolerance of immigrants.....	93.85	6
2.2.3 Social mobility.....	80.15	16
Gender Equality		
2.2.4 Women in tertiary education.....	61.53	80
2.2.5 Women in high-skilled jobs.....	67.17	64
2.2.6 Leadership opportunities for women.....	60.43	37

	Score	Rank
3 GROW.....63.57	20	
3.1 Formal Education.....	57.23	26
Enrolment		
3.1.1 Vocational enrolment.....	23.89	54
3.1.2 Tertiary enrolment.....	53.83	23
Quality		
3.1.3 Tertiary education expenditure.....	82.04	15
3.1.4 Reading, maths, and science.....	69.61	9
3.1.5 University ranking.....	56.77	20
3.2 Lifelong Learning.....	57.09	20
3.2.1 Business and economics subject ranking.....	47.29	22
3.2.2 Prevalence of training in firms.....	72.87	8
3.2.3 Employee development.....	75.27	14
3.2.4 Formal and non-formal studies.....	32.91	39
3.3 Access to Growth Opportunities.....	76.40	12
Empowerment		
3.3.1 Delegation of authority.....	82.81	10
3.3.2 Youth inclusion.....	79.06	35
Collaboration		
3.3.3 Use of virtual social networks.....	76.51	39
3.3.4 Use of virtual professional networks.....	67.22	4

4 RETAIN.....80.52	18	
4.1 Sustainability.....	81.79	16
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	71.99	23
4.1.3 Brain retention.....	72.27	19
4.1.4 Environmental performance.....	82.89	16
4.2 Lifestyle.....	79.25	25
4.2.1 Personal rights.....	98.00	11
4.2.2 Personal safety.....	86.90	11
4.2.3 Physician density.....	41.57	39
4.2.4 Sanitation.....	90.55	70

5 VOCATIONAL AND TECHNICAL SKILLS.....68.90	19	
5.1 Mid-Level Skills.....	60.16	45
5.1.1 Workforce with secondary education.....	48.66	60
5.1.2 Population with secondary education.....	45.24	56
5.1.3 Technicians and associate professionals.....	49.58	40
5.1.4 Labour productivity per employee.....	97.14	3
5.2 Employability.....	77.64	14
5.2.1 Ease of finding skilled employees.....	77.30	27
5.2.2 Relevance of education system to the economy.....	80.80	7
5.2.3 Skills matching.....	74.82	37

6 GLOBAL KNOWLEDGE SKILLS.....70.36	7	
6.1 High-Level Skills.....	66.36	10
6.1.1 Workforce with tertiary education.....	60.89	9
6.1.2 Population with tertiary education.....	48.84	18
6.1.3 Professionals.....	60.86	12
6.1.4 Researchers.....	93.42	13
6.1.5 Senior officials and managers.....	65.16	18
6.1.6 Availability of scientists and engineers.....	69.00	27
6.2 Talent Impact.....	74.37	10
6.2.1 Innovation output.....	70.49	11
6.2.2 High-value exports.....	79.45	11
6.2.3 New product entrepreneurial activity.....	72.44	12
6.2.4 New business density.....	65.01	22
6.2.5 Scientific journal articles.....	84.44	13

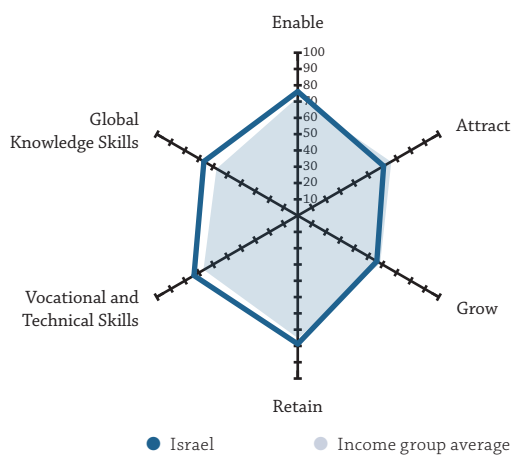
ISRAEL

Key Indicators

Rank (out of 134).....	21
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	9.22

GDP per capita (PPP US\$)	41,854.93
GDP (US\$ billions)	401.95
GTCI score	68.65
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	76.16	20
1.1 Regulatory Landscape	68.96	37
1.1.1 Government effectiveness	80.10	21
1.1.2 Rule of law	77.56	26
1.1.3 Political stability	44.97	108
1.1.4 Regulatory quality	80.52	22
1.1.5 Corruption	61.64	29
1.2 Market Landscape	76.37	13
1.2.1 Extent of market dominance	43.79	69
1.2.2 Ease of doing business	82.15	33
1.2.3 Cluster development	63.88	30
1.2.4 R&D expenditure	100.00	1
1.2.5 ICT infrastructure	77.13	52
1.2.6 Urbanisation	91.28	8
1.3 Business and Labour Landscape	83.16	11
Labour Market		
1.3.1 Labour rights	100.00	1
1.3.2 Labour-employer cooperation	63.89	24
Management Practice		
1.3.3 Professional management	80.03	19
1.3.4 Relationship of pay to productivity	79.57	14
Technology Adoption		
1.3.5 Technology utilisation	95.65	5
1.3.6 Investment in emerging technologies	96.21	2
1.3.7 Firms with website	66.77	43
2 ATTRACT	60.87	31
2.1 External Openness	67.21	23
Attract Business		
2.1.1 FDI and technology transfer	88.72	5
2.1.2 Prevalence of foreign ownership	75.26	28
Attract People		
2.1.3 Migrant stock	79.97	9
2.1.4 International students	33.59	69
2.1.5 Brain gain	58.53	34
2.2 Internal Openness	54.54	65
Social Inclusion		
2.2.1 Tolerance of minorities	32.61	80
2.2.2 Tolerance of immigrants	27.69	121
2.2.3 Social mobility	70.43	26
Gender Equality		
2.2.4 Women in tertiary education	72.87	32
2.2.5 Women in high-skilled jobs	73.84	38
2.2.6 Leadership opportunities for women	49.77	54

	Score	Rank
3 GROW	56.05	27
3.1 Formal Education	52.90	32
Enrolment		
3.1.1 Vocational enrolment	46.72	29
3.1.2 Tertiary enrolment	42.70	47
Quality		
3.1.3 Tertiary education expenditure	69.14	39
3.1.4 Reading, maths, and science	53.53	38
3.1.5 University ranking	52.41	26
3.2 Lifelong Learning	49.17	32
3.2.1 Business and economics subject ranking	42.64	26
3.2.2 Prevalence of training in firms	15.24	90
3.2.3 Employee development	67.66	24
3.2.4 Formal and non-formal studies	71.14	14
3.3 Access to Growth Opportunities	66.07	23
Empowerment		
3.3.1 Delegation of authority	77.20	17
3.3.2 Youth inclusion	73.83	47
Collaboration		
3.3.3 Use of virtual social networks	78.27	34
3.3.4 Use of virtual professional networks	34.99	25

4 RETAIN	78.78	21
4.1 Sustainability	76.36	22
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	63.09	35
4.1.3 Brain retention	71.80	22
4.1.4 Environmental performance	70.55	29
4.2 Lifestyle	81.21	21
4.2.1 Personal rights	87.75	44
4.2.2 Personal safety	68.99	36
4.2.3 Physician density	68.08	7
4.2.4 Sanitation	100.00	1
5 VOCATIONAL AND TECHNICAL SKILLS	73.53	9
5.1 Mid-Level Skills	65.85	33
5.1.1 Workforce with secondary education	74.17	18
5.1.2 Population with secondary education	48.54	49
5.1.3 Technicians and associate professionals	54.88	33
5.1.4 Labour productivity per employee	85.82	26
5.2 Employability	81.22	9
5.2.1 Ease of finding skilled employees	98.40	2
5.2.2 Relevance of education system to the economy	64.66	25
5.2.3 Skills matching	80.59	20

6 GLOBAL KNOWLEDGE SKILLS	66.51	12
6.1 High-Level Skills	65.19	12
6.1.1 Workforce with tertiary education	42.74	37
6.1.2 Population with tertiary education	63.15	6
6.1.3 Professionals	60.52	13
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	76.33	13
6.1.6 Availability of scientists and engineers	83.20	6
6.2 Talent Impact	67.84	17
6.2.1 Innovation output	69.32	13
6.2.2 High-value exports	76.73	15
6.2.3 New product entrepreneurial activity	66.00	16
6.2.4 New business density	44.65	41
6.2.5 Scientific journal articles	82.49	19

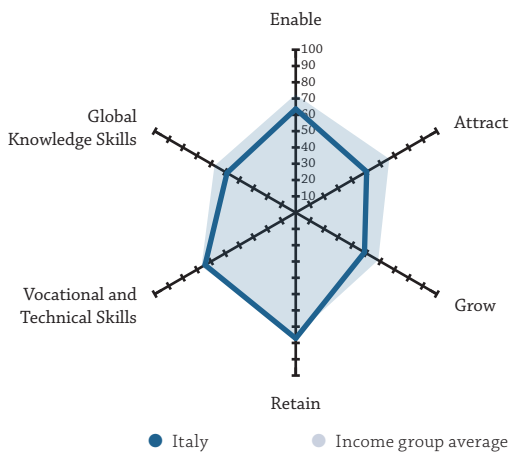
ITALY

Key Indicators

Rank (out of 134).....	35
Income group.....	High income
Regional group.....	Europe
Population (millions).....	59.55

GDP per capita (PPP US\$).....	41,839.99
GDP (US\$ billions).....	1,886.45
GTCI score.....	58.79
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....63.62	35	
1.1 Regulatory Landscape.....	63.84	43
1.1.1 Government effectiveness.....	60.91	45
1.1.2 Rule of law.....	59.88	51
1.1.3 Political stability.....	73.03	44
1.1.4 Regulatory quality.....	73.31	38
1.1.5 Corruption.....	52.05	43
1.2 Market Landscape.....	73.48	17
1.2.1 Extent of market dominance.....	94.20	2
1.2.2 Ease of doing business.....	75.39	55
1.2.3 Cluster development.....	95.90	2
1.2.4 R&D expenditure.....	27.98	25
1.2.5 ICT infrastructure.....	81.43	44
1.2.6 Urbanisation.....	66.01	53
1.3 Business and Labour Landscape.....	53.53	53
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	31.24	96
Management Practice		
1.3.3 Professional management.....	42.02	95
1.3.4 Relationship of pay to productivity.....	33.45	119
Technology Adoption		
1.3.5 Technology utilisation.....	53.33	59
1.3.6 Investment in emerging technologies.....	41.08	60
1.3.7 Firms with website.....	73.61	32
2 ATTRACT.....50.25	67	
2.1 External Openness.....	48.23	63
Attract Business		
2.1.1 FDI and technology transfer.....	52.30	81
2.1.2 Prevalence of foreign ownership.....	51.60	88
Attract People		
2.1.3 Migrant stock.....	55.20	45
2.1.4 International students.....	48.07	39
2.1.5 Brain gain.....	34.00	102
2.2 Internal Openness.....	52.26	77
Social Inclusion		
2.2.1 Tolerance of minorities.....	58.70	43
2.2.2 Tolerance of immigrants.....	73.85	36
2.2.3 Social mobility.....	44.74	87
Gender Equality		
2.2.4 Women in tertiary education.....	68.79	51
2.2.5 Women in high-skilled jobs.....	60.02	84
2.2.6 Leadership opportunities for women.....	7.48	128

	Score	Rank
3 GROW.....48.73	37	
3.1 Formal Education.....	59.25	22
Enrolment		
3.1.1 Vocational enrolment.....	60.17	16
3.1.2 Tertiary enrolment.....	44.69	42
Quality		
3.1.3 Tertiary education expenditure.....	73.98	27
3.1.4 Reading, maths, and science.....	58.33	33
3.1.5 University ranking.....	59.08	16
3.2 Lifelong Learning.....	36.39	48
3.2.1 Business and economics subject ranking.....	53.73	17
3.2.2 Prevalence of training in firms.....	6.85	103
3.2.3 Employee development.....	28.84	91
3.2.4 Formal and non-formal studies.....	56.14	31
3.3 Access to Growth Opportunities.....	50.57	57
Empowerment		
3.3.1 Delegation of authority.....	37.28	101
3.3.2 Youth inclusion.....	65.42	65
Collaboration		
3.3.3 Use of virtual social networks.....	67.67	64
3.3.4 Use of virtual professional networks.....	31.90	29

4 RETAIN.....77.20	25	
4.1 Sustainability.....	64.38	29
4.1.1 Pension coverage.....	94.34	44
4.1.2 Social protection.....	54.58	42
4.1.3 Brain retention.....	28.87	98
4.1.4 Environmental performance.....	79.72	20
4.2 Lifestyle.....	90.02	1
4.2.1 Personal rights.....	96.22	19
4.2.2 Personal safety.....	65.17	39
4.2.3 Physician density.....	100.00	1
4.2.4 Sanitation.....	98.68	35

5 VOCATIONAL AND TECHNICAL SKILLS.....64.25	30	
5.1 Mid-Level Skills.....	68.97	20
5.1.1 Workforce with secondary education.....	62.54	33
5.1.2 Population with secondary education.....	49.19	47
5.1.3 Technicians and associate professionals.....	75.61	10
5.1.4 Labour productivity per employee.....	88.55	17
5.2 Employability.....	59.53	51
5.2.1 Ease of finding skilled employees.....	58.50	58
5.2.2 Relevance of education system to the economy.....	44.83	65
5.2.3 Skills matching.....	75.26	33

6 GLOBAL KNOWLEDGE SKILLS.....48.71	42	
6.1 High-Level Skills.....	42.09	55
6.1.1 Workforce with tertiary education.....	27.95	63
6.1.2 Population with tertiary education.....	18.21	73
6.1.3 Professionals.....	36.86	48
6.1.4 Researchers.....	80.89	35
6.1.5 Senior officials and managers.....	26.98	68
6.1.6 Availability of scientists and engineers.....	61.64	41
6.2 Talent Impact.....	55.33	32
6.2.1 Innovation output.....	57.31	23
6.2.2 High-value exports.....	52.53	58
6.2.3 New product entrepreneurial activity.....	46.48	46
6.2.4 New business density.....	42.28	48
6.2.5 Scientific journal articles.....	78.06	24

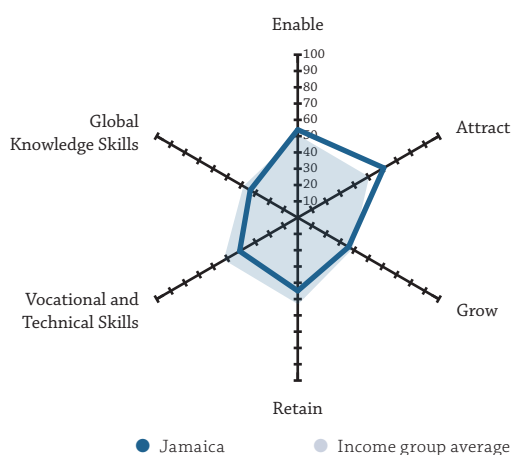
JAMAICA

Key Indicators

Rank (out of 134).....	69
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	2.96

GDP per capita (PPP US\$).....	9,221.59
GDP (US\$ billions).....	13.81
GTCI score.....	45.12
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	53.94	54
1.1 Regulatory Landscape.....	55.09	54
1.1.1 Government effectiveness.....	61.67	43
1.1.2 Rule of law.....	46.23	78
1.1.3 Political stability.....	71.94	47
1.1.4 Regulatory quality.....	55.89	59
1.1.5 Corruption.....	39.73	57
1.2 Market Landscape.....	54.67	47
1.2.1 Extent of market dominance.....	42.92	75
1.2.2 Ease of doing business.....	69.78	66
1.2.3 Cluster development.....	43.65	62
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	67.97	65
1.2.6 Urbanisation.....	49.03	89
1.3 Business and Labour Landscape.....	52.06	59
Labour Market		
1.3.1 Labour rights.....	87.70	52
1.3.2 Labour-employer cooperation.....	40.82	68
Management Practice		
1.3.3 Professional management.....	66.63	35
1.3.4 Relationship of pay to productivity.....	46.64	84
Technology Adoption		
1.3.5 Technology utilisation.....	53.41	58
1.3.6 Investment in emerging technologies.....	38.07	70
1.3.7 Firms with website.....	31.13	95
2. ATTRACT	60.98	30
2.1 External Openness.....	49.61	59
Attract Business		
2.1.1 FDI and technology transfer.....	70.73	37
2.1.2 Prevalence of foreign ownership.....	64.55	53
Attract People		
2.1.3 Migrant stock.....	11.35	118
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	51.80	52
2.2 Internal Openness.....	72.36	13
Social Inclusion		
2.2.1 Tolerance of minorities.....	81.52	7
2.2.2 Tolerance of immigrants.....	84.62	15
2.2.3 Social mobility.....	54.54	55
Gender Equality		
2.2.4 Women in tertiary education.....	83.58	7
2.2.5 Women in high-skilled jobs.....	84.63	11
2.2.6 Leadership opportunities for women.....	45.24	66

	Score	Rank
3. GROW	36.02	68
3.1 Formal Education.....	37.58	60
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	18.52	89
Quality		
3.1.3 Tertiary education expenditure.....	54.33	72
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	39.88	42
3.2 Lifelong Learning.....	23.11	84
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	25.45	67
3.2.3 Employee development.....	43.88	53
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	47.36	67
Empowerment		
3.3.1 Delegation of authority.....	66.23	27
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	49.69	90
3.3.4 Use of virtual professional networks.....	26.16	39

4. RETAIN	44.94	88
4.1 Sustainability.....	35.76	91
4.1.1 Pension coverage.....	39.70	87
4.1.2 Social protection.....	26.84	102
4.1.3 Brain retention.....	36.99	74
4.1.4 Environmental performance.....	39.51	61
4.2 Lifestyle.....	54.12	76
4.2.1 Personal rights.....	92.37	33
4.2.2 Personal safety.....	32.53	104
4.2.3 Physician density.....	5.25	104
4.2.4 Sanitation.....	86.31	83
5. VOCATIONAL AND TECHNICAL SKILLS	41.16	92
5.1 Mid-Level Skills.....	23.39	112
5.1.1 Workforce with secondary education.....	n/a	n/a
5.1.2 Population with secondary education.....	0.00	116
5.1.3 Technicians and associate professionals.....	23.35	82
5.1.4 Labour productivity per employee.....	46.82	89
5.2 Employability.....	58.92	53
5.2.1 Ease of finding skilled employees.....	62.08	50
5.2.2 Relevance of education system to the economy.....	55.76	39
5.2.3 Skills matching.....	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS	33.67	72
6.1 High-Level Skills.....	39.77	62
6.1.1 Workforce with tertiary education.....	n/a	n/a
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	20.49	77
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	54.55	32
6.1.6 Availability of scientists and engineers.....	44.26	76
6.2 Talent Impact.....	27.58	81
6.2.1 Innovation output.....	24.76	61
6.2.2 High-value exports.....	33.81	91
6.2.3 New product entrepreneurial activity.....	37.06	61
6.2.4 New business density.....	28.92	63
6.2.5 Scientific journal articles.....	13.34	88

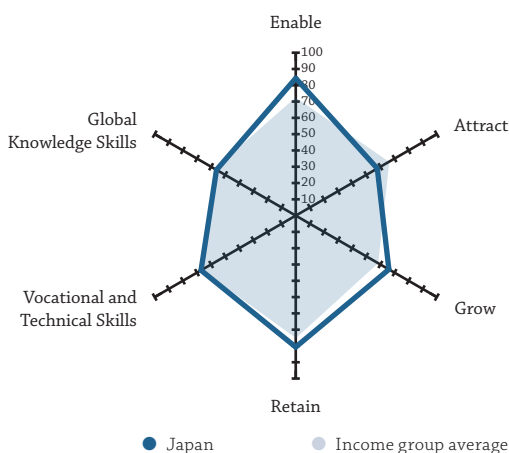
JAPAN

Key Indicators

Rank (out of 134).....	20
Income group.....	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	125.84

GDP per capita (PPP US\$).....	42,197.25
GDP (US\$ billions).....	5,064.87
GTCI score.....	68.68
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	84.28	8
1.1 Regulatory Landscape.....	84.64	15
1.1.1 Government effectiveness.....	85.90	11
1.1.2 Rule of law.....	88.85	16
1.1.3 Political stability.....	86.11	13
1.1.4 Regulatory quality.....	81.54	20
1.1.5 Corruption.....	80.82	18
1.2 Market Landscape.....	83.11	4
1.2.1 Extent of market dominance.....	89.85	4
1.2.2 Ease of doing business.....	84.49	27
1.2.3 Cluster development.....	82.12	11
1.2.4 R&D expenditure.....	66.20	5
1.2.5 ICT infrastructure.....	85.61	35
1.2.6 Urbanisation.....	90.36	10
1.3 Business and Labour Landscape.....	85.08	8
Labour Market		
1.3.1 Labour rights.....	88.90	50
1.3.2 Labour-employer cooperation.....	88.81	4
Management Practice		
1.3.3 Professional management.....	86.36	12
1.3.4 Relationship of pay to productivity.....	70.44	36
Technology Adoption		
1.3.5 Technology utilisation.....	86.16	11
1.3.6 Investment in emerging technologies.....	79.99	9
1.3.7 Firms with website.....	94.89	4
2 ATTRACT.....	57.81	42
2.1 External Openness.....	57.66	36
Attract Business		
2.1.1 FDI and technology transfer.....	82.67	14
2.1.2 Prevalence of foreign ownership.....	85.97	9
Attract People		
2.1.3 Migrant stock.....	23.89	96
2.1.4 International students.....	44.35	48
2.1.5 Brain gain.....	51.45	54
2.2 Internal Openness.....	57.96	47
Social Inclusion		
2.2.1 Tolerance of minorities.....	78.26	13
2.2.2 Tolerance of immigrants.....	56.92	71
2.2.3 Social mobility.....	78.43	19
Gender Equality		
2.2.4 Women in tertiary education.....	52.98	99
2.2.5 Women in high-skilled jobs.....	49.59	101
2.2.6 Leadership opportunities for women.....	31.59	91

	Score	Rank
3 GROW.....	66.01	17
3.1 Formal Education.....	72.00	3
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure.....	69.98	35
3.1.4 Reading, maths, and science.....	75.89	4
3.1.5 University ranking.....	70.12	11
3.2 Lifelong Learning.....	66.44	16
3.2.1 Business and economics subject ranking.....	60.99	10
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	81.84	8
3.2.4 Formal and non-formal studies.....	56.48	30
3.3 Access to Growth Opportunities.....	59.60	34
Empowerment		
3.3.1 Delegation of authority.....	65.19	28
3.3.2 Youth inclusion.....	96.66	2
Collaboration		
3.3.3 Use of virtual social networks.....	74.32	46
3.3.4 Use of virtual professional networks.....	2.21	120

4 RETAIN.....	80.68	17
4.1 Sustainability.....	79.67	19
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	76.03	19
4.1.3 Brain retention.....	55.70	40
4.1.4 Environmental performance.....	86.95	12
4.2 Lifestyle.....	81.69	19
4.2.1 Personal rights.....	96.22	19
4.2.2 Personal safety.....	100.00	1
4.2.3 Physician density.....	30.63	59
4.2.4 Sanitation.....	99.89	16

5 VOCATIONAL AND TECHNICAL SKILLS.....	67.12	22
5.1 Mid-Level Skills.....	76.45	5
5.1.1 Workforce with secondary education.....	67.72	27
5.1.2 Population with secondary education.....	56.41	34
5.1.3 Technicians and associate professionals.....	100.00	1
5.1.4 Labour productivity per employee.....	81.69	37
5.2 Employability.....	57.80	57
5.2.1 Ease of finding skilled employees.....	61.13	53
5.2.2 Relevance of education system to the economy.....	54.46	42
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	56.16	27
6.1 High-Level Skills.....	59.93	23
6.1.1 Workforce with tertiary education.....	60.75	10
6.1.2 Population with tertiary education.....	45.73	22
6.1.3 Professionals.....	n/a	n/a
6.1.4 Researchers.....	93.68	12
6.1.5 Senior officials and managers.....	13.55	97
6.1.6 Availability of scientists and engineers.....	85.93	4
6.2 Talent Impact.....	52.40	39
6.2.1 Innovation output.....	62.25	17
6.2.2 High-value exports.....	69.73	28
6.2.3 New product entrepreneurial activity.....	54.33	39
6.2.4 New business density.....	9.11	100
6.2.5 Scientific journal articles.....	66.59	35

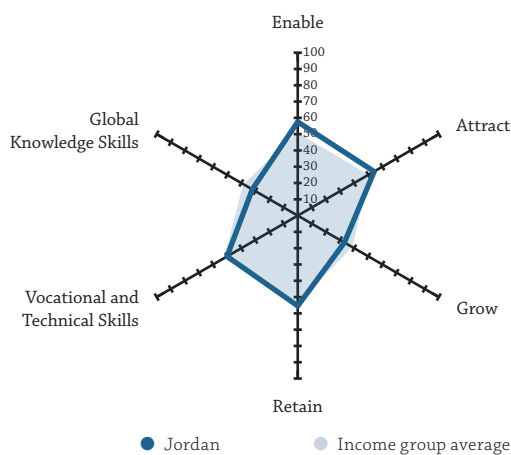
JORDAN

Key Indicators

Rank (out of 134).....	63
Income group.....	Upper-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	10.20

GDP per capita (PPP US\$).....	10,355.63
GDP (US\$ billions).....	43.70
GTCI score.....	47.08
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....57.53 45		
1.1 Regulatory Landscape.....	52.72	59
1.1.1 Government effectiveness.....	52.86	64
1.1.2 Rule of law.....	56.75	55
1.1.3 Political stability.....	54.48	83
1.1.4 Regulatory quality.....	52.95	67
1.1.5 Corruption.....	46.58	50
1.2 Market Landscape.....	58.46	40
1.2.1 Extent of market dominance.....	58.84	36
1.2.2 Ease of doing business.....	68.53	70
1.2.3 Cluster development.....	64.13	29
1.2.4 R&D expenditure.....	14.10	50
1.2.5 ICT infrastructure.....	55.52	80
1.2.6 Urbanisation.....	89.63	13
1.3 Business and Labour Landscape.....	61.41	42
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	56.70	37
Management Practice		
1.3.3 Professional management.....	51.99	72
1.3.4 Relationship of pay to productivity.....	68.34	41
Technology Adoption		
1.3.5 Technology utilisation.....	64.02	45
1.3.6 Investment in emerging technologies.....	49.20	45
1.3.7 Firms with website.....	78.22	26
2 ATTRACT.....54.14 51		
2.1 External Openness.....	61.73	31
Attract Business		
2.1.1 FDI and technology transfer.....	60.14	60
2.1.2 Prevalence of foreign ownership.....	54.54	76
Attract People		
2.1.3 Migrant stock.....	76.90	13
2.1.4 International students.....	69.10	12
2.1.5 Brain gain.....	47.95	63
2.2 Internal Openness.....	46.55	96
Social Inclusion		
2.2.1 Tolerance of minorities.....	11.96	110
2.2.2 Tolerance of immigrants.....	56.92	71
2.2.3 Social mobility.....	46.46	80
Gender Equality		
2.2.4 Women in tertiary education.....	64.96	62
2.2.5 Women in high-skilled jobs.....	48.27	103
2.2.6 Leadership opportunities for women.....	50.71	52

	Score	Rank
3 GROW.....33.07 78		
3.1 Formal Education.....	25.59	89
Enrolment		
3.1.1 Vocational enrolment.....	3.29	91
3.1.2 Tertiary enrolment.....	22.70	81
Quality		
3.1.3 Tertiary education expenditure.....	31.96	105
3.1.4 Reading, maths, and science.....	33.44	57
3.1.5 University ranking.....	36.58	48
3.2 Lifelong Learning.....	33.52	49
3.2.1 Business and economics subject ranking.....	36.51	33
3.2.2 Prevalence of training in firms.....	12.87	97
3.2.3 Employee development.....	51.18	44
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	40.09	86
Empowerment		
3.3.1 Delegation of authority.....	48.99	64
3.3.2 Youth inclusion.....	31.70	114
Collaboration		
3.3.3 Use of virtual social networks.....	61.02	77
3.3.4 Use of virtual professional networks.....	18.65	59

4 RETAIN.....55.42 57		
4.1 Sustainability.....	50.20	61
4.1.1 Pension coverage.....	56.87	80
4.1.2 Social protection.....	51.13	47
4.1.3 Brain retention.....	44.12	54
4.1.4 Environmental performance.....	48.68	46
4.2 Lifestyle.....	60.63	59
4.2.1 Personal rights.....	55.02	94
4.2.2 Personal safety.....	61.70	46
4.2.3 Physician density.....	28.68	63
4.2.4 Sanitation.....	97.13	51
5 VOCATIONAL AND TECHNICAL SKILLS.....50.10 68		
5.1 Mid-Level Skills.....	38.54	84
5.1.1 Workforce with secondary education.....	32.29	88
5.1.2 Population with secondary education.....	35.58	66
5.1.3 Technicians and associate professionals.....	16.37	102
5.1.4 Labour productivity per employee.....	69.91	55
5.2 Employability.....	61.66	43
5.2.1 Ease of finding skilled employees.....	79.90	21
5.2.2 Relevance of education system to the economy.....	56.38	38
5.2.3 Skills matching.....	48.69	76

6 GLOBAL KNOWLEDGE SKILLS.....32.20 78		
6.1 High-Level Skills.....	37.43	66
6.1.1 Workforce with tertiary education.....	27.40	66
6.1.2 Population with tertiary education.....	20.72	69
6.1.3 Professionals.....	40.06	43
6.1.4 Researchers.....	60.23	61
6.1.5 Senior officials and managers.....	0.79	127
6.1.6 Availability of scientists and engineers.....	75.37	17
6.2 Talent Impact.....	26.98	85
6.2.1 Innovation output.....	16.77	80
6.2.2 High-value exports.....	20.79	104
6.2.3 New product entrepreneurial activity.....	45.65	47
6.2.4 New business density.....	12.28	92
6.2.5 Scientific journal articles.....	39.41	54

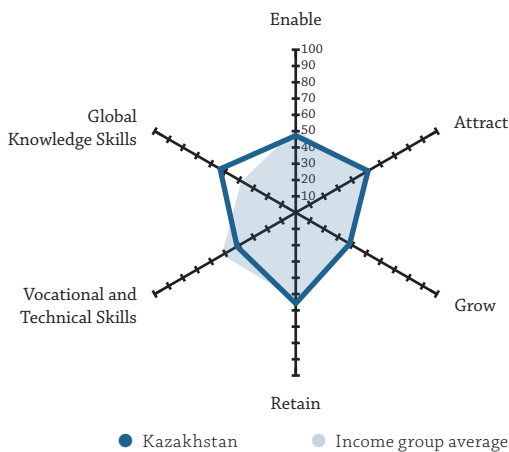
KAZAKHSTAN

Key Indicators

Rank (out of 134) **60**
 Income group **Upper-middle income**
 Regional group **Central and Southern Asia**
 Population (millions) **18.75**

GDP per capita (PPP US\$) **26,728.54**
 GDP (US\$ billions) **169.84**
 GTCI score **47.94**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE 47.25	47.25	78
1.1 Regulatory Landscape 48.86	48.86	74
1.1.1 Government effectiveness 53.42	53.42	62
1.1.2 Rule of law 43.47	43.47	91
1.1.3 Political stability 60.69	60.69	69
1.1.4 Regulatory quality 55.22	55.22	61
1.1.5 Corruption 31.51	31.51	76
1.2 Market Landscape 45.59	45.59	74
1.2.1 Extent of market dominance 38.53	38.53	85
1.2.2 Ease of doing business 87.25	87.25	23
1.2.3 Cluster development 16.90	16.90	119
1.2.4 R&D expenditure 2.11	2.11	106
1.2.5 ICT infrastructure 77.68	77.68	51
1.2.6 Urbanisation 51.05	51.05	82
1.3 Business and Labour Landscape 47.30	47.30	77
Labour Market		
1.3.1 Labour rights 69.20	69.20	82
1.3.2 Labour-employer cooperation 37.69	37.69	80
Management Practice		
1.3.3 Professional management 33.73	33.73	114
1.3.4 Relationship of pay to productivity 62.61	62.61	49
Technology Adoption		
1.3.5 Technology utilisation 43.48	43.48	88
1.3.6 Investment in emerging technologies 37.04	37.04	74
1.3.7 Firms with website 47.33	47.33	70
2. ATTRACT 51.19	51.19	60
2.1 External Openness 50.49	50.49	56
Attract Business		
2.1.1 FDI and technology transfer 45.77	45.77	99
2.1.2 Prevalence of foreign ownership 45.32	45.32	102
Attract People		
2.1.3 Migrant stock 73.53	73.53	16
2.1.4 International students 37.04	37.04	64
2.1.5 Brain gain 50.79	50.79	55
2.2 Internal Openness 51.89	51.89	78
Social Inclusion		
2.2.1 Tolerance of minorities 18.48	18.48	100
2.2.2 Tolerance of immigrants 43.08	43.08	95
2.2.3 Social mobility 50.37	50.37	72
Gender Equality		
2.2.4 Women in tertiary education 64.54	64.54	66
2.2.5 Women in high-skilled jobs 83.35	83.35	13
2.2.6 Leadership opportunities for women 51.50	51.50	51

	Score	Rank
3. GROW 38.28	38.28	60
3.1 Formal Education 39.70	39.70	52
Enrolment		
3.1.1 Vocational enrolment 52.53	52.53	22
3.1.2 Tertiary enrolment 49.18	49.18	31
Quality		
3.1.3 Tertiary education expenditure 47.34	47.34	85
3.1.4 Reading, maths, and science 27.87	27.87	63
3.1.5 University ranking 21.59	21.59	77
3.2 Lifelong Learning 25.37	25.37	74
3.2.1 Business and economics subject ranking 29.05	29.05	48
3.2.2 Prevalence of training in firms 19.72	19.72	81
3.2.3 Employee development 29.93	29.93	86
3.2.4 Formal and non-formal studies 22.79	22.79	43
3.3 Access to Growth Opportunities 49.77	49.77	59
Empowerment		
3.3.1 Delegation of authority 43.86	43.86	79
3.3.2 Youth inclusion 84.06	84.06	26
Collaboration		
3.3.3 Use of virtual social networks 63.10	63.10	73
3.3.4 Use of virtual professional networks 8.06	8.06	94
4. RETAIN 55.78	55.78	54
4.1 Sustainability 51.33	51.33	58
4.1.1 Pension coverage 99.60	99.60	38
4.1.2 Social protection 36.34	36.34	74
4.1.3 Brain retention 36.05	36.05	77
4.1.4 Environmental performance 33.33	33.33	76
4.2 Lifestyle 60.24	60.24	60
4.2.1 Personal rights 44.55	44.55	104
4.2.2 Personal safety 49.25	49.25	75
4.2.3 Physician density 49.44	49.44	29
4.2.4 Sanitation 97.71	97.71	43
5. VOCATIONAL AND TECHNICAL SKILLS 41.60	41.60	89
5.1 Mid-Level Skills 41.32	41.32	78
5.1.1 Workforce with secondary education 24.47	24.47	106
5.1.2 Population with secondary education 33.20	33.20	70
5.1.3 Technicians and associate professionals 34.49	34.49	60
5.1.4 Labour productivity per employee 73.10	73.10	49
5.2 Employability 41.88	41.88	98
5.2.1 Ease of finding skilled employees 46.74	46.74	90
5.2.2 Relevance of education system to the economy 37.01	37.01	84
5.2.3 Skills matching n/a	n/a	n/a
6. GLOBAL KNOWLEDGE SKILLS 53.54	53.54	34
6.1 High-Level Skills 67.28	67.28	8
6.1.1 Workforce with tertiary education 100.00	100.00	1
6.1.2 Population with tertiary education 100.00	100.00	1
6.1.3 Professionals 53.48	53.48	18
6.1.4 Researchers 61.95	61.95	60
6.1.5 Senior officials and managers 46.29	46.29	39
6.1.6 Availability of scientists and engineers 41.94	41.94	84
6.2 Talent Impact 39.79	39.79	59
6.2.1 Innovation output 12.75	12.75	93
6.2.2 High-value exports 82.63	82.63	9
6.2.3 New product entrepreneurial activity 44.83	44.83	49
6.2.4 New business density 33.51	33.51	56
6.2.5 Scientific journal articles 25.25	25.25	72

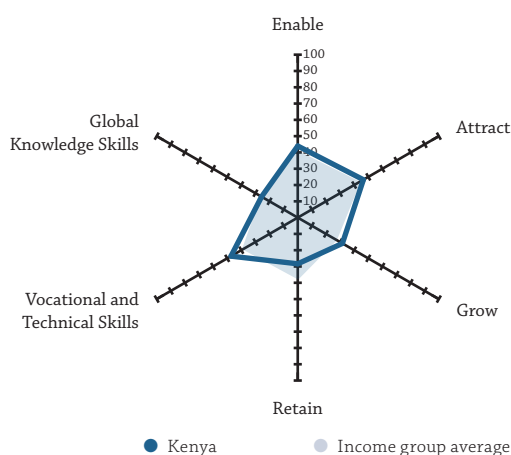
KENYA

Key Indicators

Rank (out of 134)	96
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	53.77

GDP per capita (PPP US\$)	4,452.21
GDP (US\$ billions)	98.84
GTCI score	37.24
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	43.95	89
1.1 Regulatory Landscape	38.05	105
1.1.1 Government effectiveness	42.13	91
1.1.2 Rule of law	42.97	92
1.1.3 Political stability	37.17	119
1.1.4 Regulatory quality	46.06	93
1.1.5 Corruption	21.92	102
1.2 Market Landscape	39.23	90
1.2.1 Extent of market dominance	35.99	92
1.2.2 Ease of doing business	76.03	54
1.2.3 Cluster development	52.30	42
1.2.4 R&D expenditure	15.69	46
1.2.5 ICT infrastructure	39.26	100
1.2.6 Urbanisation	16.10	124
1.3 Business and Labour Landscape	54.57	51
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	36.59	85
Management Practice		
1.3.3 Professional management	55.52	58
1.3.4 Relationship of pay to productivity	61.41	53
Technology Adoption		
1.3.5 Technology utilisation	70.07	32
1.3.6 Investment in emerging technologies	60.12	31
1.3.7 Firms with website	43.74	75
2 ATTRACT	46.51	82
2.1 External Openness	47.00	66
Attract Business		
2.1.1 FDI and technology transfer	64.55	50
2.1.2 Prevalence of foreign ownership	63.84	54
Attract People		
2.1.3 Migrant stock	29.88	82
2.1.4 International students	16.31	88
2.1.5 Brain gain	60.44	30
2.2 Internal Openness	46.02	101
Social Inclusion		
2.2.1 Tolerance of minorities	18.48	100
2.2.2 Tolerance of immigrants	67.69	48
2.2.3 Social mobility	55.11	54
Gender Equality		
2.2.4 Women in tertiary education	41.76	112
2.2.5 Women in high-skilled jobs	58.46	88
2.2.6 Leadership opportunities for women	34.64	85

	Score	Rank
3 GROW	31.66	80
3.1 Formal Education	30.61	73
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	7.49	107
Quality		
3.1.3 Tertiary education expenditure	51.14	80
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	33.20	57
3.2 Lifelong Learning	28.12	66
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	41.54	41
3.2.3 Employee development	42.82	56
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	36.24	96
Empowerment		
3.3.1 Delegation of authority	54.32	47
3.3.2 Youth inclusion	63.95	67
Collaboration		
3.3.3 Use of virtual social networks	18.09	113
3.3.4 Use of virtual professional networks	8.61	89

4 RETAIN	28.36	116
4.1 Sustainability	29.67	101
4.1.1 Pension coverage	12.32	113
4.1.2 Social protection	34.44	78
4.1.3 Brain retention	56.23	38
4.1.4 Environmental performance	15.70	105
4.2 Lifestyle	27.04	126
4.2.1 Personal rights	52.43	97
4.2.2 Personal safety	30.78	106
4.2.3 Physician density	1.51	116
4.2.4 Sanitation	23.45	124

5 VOCATIONAL AND TECHNICAL SKILLS	47.30	74
5.1 Mid-Level Skills	26.09	105
5.1.1 Workforce with secondary education	31.28	91
5.1.2 Population with secondary education	30.59	75
5.1.3 Technicians and associate professionals	8.26	117
5.1.4 Labour productivity per employee	34.24	101
5.2 Employability	68.51	29
5.2.1 Ease of finding skilled employees	82.58	15
5.2.2 Relevance of education system to the economy	54.44	43
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	25.64	91
6.1 High-Level Skills	27.93	93
6.1.1 Workforce with tertiary education	4.79	120
6.1.2 Population with tertiary education	1.50	105
6.1.3 Professionals	14.81	98
6.1.4 Researchers	45.15	78
6.1.5 Senior officials and managers	38.83	49
6.1.6 Availability of scientists and engineers	62.51	38
6.2 Talent Impact	23.35	95
6.2.1 Innovation output	17.94	77
6.2.2 High-value exports	41.51	84
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	27.58	67
6.2.5 Scientific journal articles	6.38	100

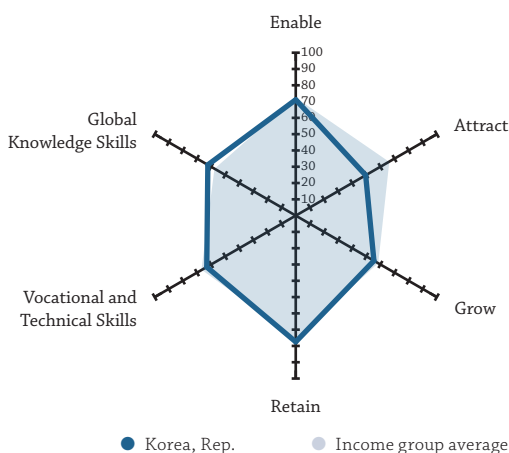
KOREA, REP.

Key Indicators

Rank (out of 134).....	27
Income group.....	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	51.78

GDP per capita (PPP US\$).....	43,124.29
GDP (US\$ billions).....	1,630.53
GTCI score.....	63.16
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	71.13	25
1.1 Regulatory Landscape.....	74.88	24
1.1.1 Government effectiveness.....	81.23	20
1.1.2 Rule of law.....	80.93	22
1.1.3 Political stability.....	73.38	43
1.1.4 Regulatory quality.....	75.85	28
1.1.5 Corruption.....	63.01	27
1.2 Market Landscape.....	78.42	10
1.2.1 Extent of market dominance.....	43.73	70
1.2.2 Ease of doing business.....	95.11	4
1.2.3 Cluster development.....	70.27	24
1.2.4 R&D expenditure.....	91.61	2
1.2.5 ICT infrastructure.....	91.11	19
1.2.6 Urbanisation.....	78.68	30
1.3 Business and Labour Landscape.....	60.10	43
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	16.77	122
Management Practice		
1.3.3 Professional management.....	57.89	53
1.3.4 Relationship of pay to productivity.....	82.99	10
Technology Adoption		
1.3.5 Technology utilisation.....	76.83	21
1.3.6 Investment in emerging technologies.....	59.48	33
1.3.7 Firms with website.....	66.65	44
2 ATTRACT.....	49.56	73
2.1 External Openness.....	46.67	68
Attract Business		
2.1.1 FDI and technology transfer.....	65.23	48
2.1.2 Prevalence of foreign ownership.....	53.63	82
Attract People		
2.1.3 Migrant stock.....	26.66	91
2.1.4 International students.....	33.39	70
2.1.5 Brain gain.....	54.46	45
2.2 Internal Openness.....	52.44	75
Social Inclusion		
2.2.1 Tolerance of minorities.....	80.43	10
2.2.2 Tolerance of immigrants.....	58.46	65
2.2.3 Social mobility.....	40.02	105
Gender Equality		
2.2.4 Women in tertiary education.....	41.32	113
2.2.5 Women in high-skilled jobs.....	66.35	68
2.2.6 Leadership opportunities for women.....	28.08	100

	Score	Rank
3 GROW.....	55.40	29
3.1 Formal Education.....	62.96	16
Enrolment		
3.1.1 Vocational enrolment.....	40.26	33
3.1.2 Tertiary enrolment.....	66.92	4
Quality		
3.1.3 Tertiary education expenditure.....	63.65	48
3.1.4 Reading, maths, and science.....	75.76	5
3.1.5 University ranking.....	68.19	13
3.2 Lifelong Learning.....	56.91	21
3.2.1 Business and economics subject ranking.....	54.17	16
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	59.64	34
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	46.34	69
Empowerment		
3.3.1 Delegation of authority.....	42.37	85
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	89.92	6
3.3.4 Use of virtual professional networks.....	6.73	99

4 RETAIN.....	77.47	24
4.1 Sustainability.....	75.00	23
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	60.02	37
4.1.3 Brain retention.....	68.21	25
4.1.4 Environmental performance.....	71.78	28
4.2 Lifestyle.....	79.94	23
4.2.1 Personal rights.....	95.39	24
4.2.2 Personal safety.....	94.63	5
4.2.3 Physician density.....	29.74	61
4.2.4 Sanitation.....	100.00	1
5 VOCATIONAL AND TECHNICAL SKILLS.....	63.07	35
5.1 Mid-Level Skills.....	63.49	39
5.1.1 Workforce with secondary education.....	44.04	68
5.1.2 Population with secondary education.....	51.09	43
5.1.3 Technicians and associate professionals.....	74.32	13
5.1.4 Labour productivity per employee.....	84.51	28
5.2 Employability.....	62.66	41
5.2.1 Ease of finding skilled employees.....	81.79	17
5.2.2 Relevance of education system to the economy.....	48.22	54
5.2.3 Skills matching.....	57.96	63

6 GLOBAL KNOWLEDGE SKILLS.....	62.30	22
6.1 High-Level Skills.....	57.46	27
6.1.1 Workforce with tertiary education.....	65.15	6
6.1.2 Population with tertiary education.....	53.85	12
6.1.3 Professionals.....	47.76	27
6.1.4 Researchers.....	99.84	2
6.1.5 Senior officials and managers.....	10.09	103
6.1.6 Availability of scientists and engineers.....	68.09	30
6.2 Talent Impact.....	67.15	18
6.2.1 Innovation output.....	72.34	10
6.2.2 High-value exports.....	84.61	6
6.2.3 New product entrepreneurial activity.....	59.30	26
6.2.4 New business density.....	38.95	51
6.2.5 Scientific journal articles.....	80.53	22

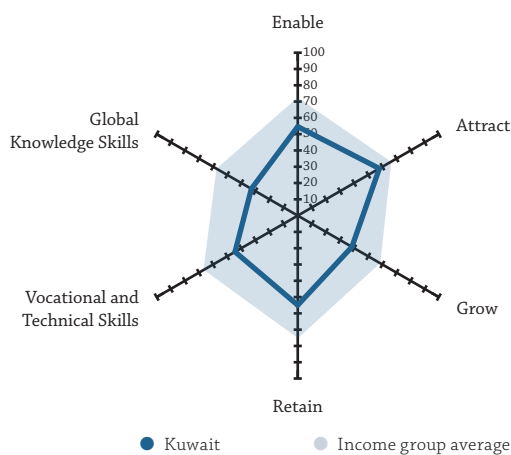
KUWAIT

Key Indicators

Rank (out of 134).....	62
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	4.27

GDP per capita (PPP US\$)	51,962.05
GDP (US\$ billions)	136.20
GTCI score	47.18
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	54.61	50
1.1 Regulatory Landscape	53.43	58
1.1.1 Government effectiveness	51.06	72
1.1.2 Rule of law	58.40	52
1.1.3 Political stability	67.10	55
1.1.4 Regulatory quality	53.62	66
1.1.5 Corruption	36.99	64
1.2 Market Landscape	58.60	38
1.2.1 Extent of market dominance	44.09	68
1.2.2 Ease of doing business	65.75	78
1.2.3 Cluster development	54.93	38
1.2.4 R&D expenditure	1.01	116
1.2.5 ICT infrastructure	85.85	33
1.2.6 Urbanisation	100.00	1
1.3 Business and Labour Landscape	51.78	60
Labour Market		
1.3.1 Labour rights	74.90	77
1.3.2 Labour-employer cooperation	52.68	45
Management Practice		
1.3.3 Professional management	37.05	104
1.3.4 Relationship of pay to productivity	50.66	73
Technology Adoption		
1.3.5 Technology utilisation	52.84	64
1.3.6 Investment in emerging technologies	42.57	56
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	57.83	41
2.1 External Openness	54.30	44
Attract Business		
2.1.1 FDI and technology transfer	43.76	103
2.1.2 Prevalence of foreign ownership	25.70	127
Attract People		
2.1.3 Migrant stock	97.05	3
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	50.68	57
2.2 Internal Openness	61.37	36
Social Inclusion		
2.2.1 Tolerance of minorities	60.87	38
2.2.2 Tolerance of immigrants	69.23	46
2.2.3 Social mobility	51.45	65
Gender Equality		
2.2.4 Women in tertiary education	85.97	4
2.2.5 Women in high-skilled jobs	53.21	94
2.2.6 Leadership opportunities for women	47.50	61

	Score	Rank
3 GROW	38.39	59
3.1 Formal Education	32.15	70
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	38.36	54
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	25.93	68
3.2 Lifelong Learning	28.21	63
3.2.1 Business and economics subject ranking	16.40	69
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	40.01	58
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	54.81	44
Empowerment		
3.3.1 Delegation of authority	39.36	96
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	99.79	3
3.3.4 Use of virtual professional networks	25.28	42

4 RETAIN	54.95	58
4.1 Sustainability	46.57	68
4.1.1 Pension coverage	25.66	98
4.1.2 Social protection	67.39	33
4.1.3 Brain retention	44.19	53
4.1.4 Environmental performance	49.03	45
4.2 Lifestyle	63.32	53
4.2.1 Personal rights	61.21	84
4.2.2 Personal safety	59.36	54
4.2.3 Physician density	32.72	52
4.2.4 Sanitation	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS	44.44	79
5.1 Mid-Level Skills	37.01	86
5.1.1 Workforce with secondary education	27.58	100
5.1.2 Population with secondary education	16.52	99
5.1.3 Technicians and associate professionals	31.51	65
5.1.4 Labour productivity per employee	72.41	50
5.2 Employability	51.88	71
5.2.1 Ease of finding skilled employees	58.90	56
5.2.2 Relevance of education system to the economy	44.86	64
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	32.86	76
6.1 High-Level Skills	33.03	81
6.1.1 Workforce with tertiary education	22.95	74
6.1.2 Population with tertiary education	11.57	85
6.1.3 Professionals	24.18	69
6.1.4 Researchers	57.97	66
6.1.5 Senior officials and managers	35.57	54
6.1.6 Availability of scientists and engineers	45.95	72
6.2 Talent Impact	32.69	71
6.2.1 Innovation output	17.84	78
6.2.2 High-value exports	15.51	114
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	59.83	26
6.2.5 Scientific journal articles	37.56	57

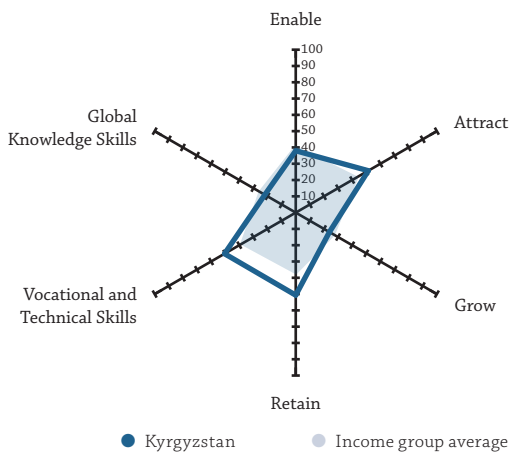
KYRGYZSTAN

Key Indicators

Rank (out of 134).....	89
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	6.59

GDP per capita (PPP US\$).....	4,965.03
GDP (US\$ billions).....	7.74
GTCI score.....	39.38
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	37.96	105
1.1 Regulatory Landscape.....	37.65	106
1.1.1 Government effectiveness.....	35.50	110
1.1.2 Rule of law.....	33.02	115
1.1.3 Political stability.....	53.31	89
1.1.4 Regulatory quality.....	44.50	94
1.1.5 Corruption.....	21.92	102
1.2 Market Landscape.....	32.38	111
1.2.1 Extent of market dominance.....	36.85	87
1.2.2 Ease of doing business.....	66.49	75
1.2.3 Cluster development.....	15.87	120
1.2.4 R&D expenditure.....	1.79	110
1.2.5 ICT infrastructure.....	46.49	91
1.2.6 Urbanisation.....	26.81	113
1.3 Business and Labour Landscape.....	43.85	97
Labour Market		
1.3.1 Labour rights.....	94.60	29
1.3.2 Labour-employer cooperation.....	30.73	98
Management Practice		
1.3.3 Professional management.....	28.31	125
1.3.4 Relationship of pay to productivity.....	62.44	50
Technology Adoption		
1.3.5 Technology utilisation.....	16.39	126
1.3.6 Investment in emerging technologies.....	19.32	119
1.3.7 Firms with website.....	55.20	60
2 ATTRACT.....	51.44	59
2.1 External Openness.....	38.67	97
Attract Business		
2.1.1 FDI and technology transfer.....	20.95	129
2.1.2 Prevalence of foreign ownership.....	40.38	113
Attract People		
2.1.3 Migrant stock.....	39.86	69
2.1.4 International students.....	58.64	26
2.1.5 Brain gain.....	33.52	104
2.2 Internal Openness.....	64.21	27
Social Inclusion		
2.2.1 Tolerance of minorities.....	n/a	n/a
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	46.17	81
Gender Equality		
2.2.4 Women in tertiary education.....	67.80	53
2.2.5 Women in high-skilled jobs.....	94.88	3
2.2.6 Leadership opportunities for women.....	46.03	65

	Score	Rank
3 GROW.....	23.87	108
3.1 Formal Education.....	13.72	121
Enrolment		
3.1.1 Vocational enrolment.....	16.96	62
3.1.2 Tertiary enrolment.....	29.22	70
Quality		
3.1.3 Tertiary education expenditure.....	8.69	113
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	22.25	87
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	47.13	31
3.2.3 Employee development.....	19.61	118
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	35.64	100
Empowerment		
3.3.1 Delegation of authority.....	29.51	115
3.3.2 Youth inclusion.....	62.24	72
Collaboration		
3.3.3 Use of virtual social networks.....	47.71	94
3.3.4 Use of virtual professional networks.....	3.09	115

4 RETAIN.....	50.67	75
4.1 Sustainability.....	43.10	78
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	27.13	100
4.1.3 Brain retention.....	20.57	116
4.1.4 Environmental performance.....	24.69	89
4.2 Lifestyle.....	58.24	67
4.2.1 Personal rights.....	55.47	92
4.2.2 Personal safety.....	53.96	65
4.2.3 Physician density.....	27.29	67
4.2.4 Sanitation.....	96.23	56

5 VOCATIONAL AND TECHNICAL SKILLS.....	50.45	67
5.1 Mid-Level Skills.....	68.00	22
5.1.1 Workforce with secondary education.....	100.00	1
5.1.2 Population with secondary education.....	100.00	1
5.1.3 Technicians and associate professionals.....	33.02	61
5.1.4 Labour productivity per employee.....	38.97	95
5.2 Employability.....	32.89	118
5.2.1 Ease of finding skilled employees.....	42.01	101
5.2.2 Relevance of education system to the economy.....	23.77	105
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	21.92	99
6.1 High-Level Skills.....	21.56	103
6.1.1 Workforce with tertiary education.....	21.82	76
6.1.2 Population with tertiary education.....	22.70	66
6.1.3 Professionals.....	21.61	75
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	11.24	101
6.1.6 Availability of scientists and engineers.....	30.41	115
6.2 Talent Impact.....	22.29	101
6.2.1 Innovation output.....	9.25	106
6.2.2 High-value exports.....	49.43	68
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	24.74	76
6.2.5 Scientific journal articles.....	5.73	102

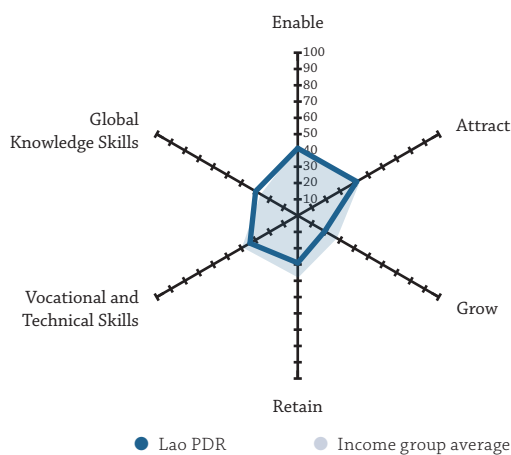
LAO PDR

Key Indicators

Rank (out of 134)	105
Income group	Lower-middle income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	7.28

GDP per capita (PPP US\$)	8,234.45
GDP (US\$ billions)	19.14
GTCI score	32.49
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	41.36	97
1.1 Regulatory Landscape	39.00	100
1.1.1 Government effectiveness	33.22	117
1.1.2 Rule of law	31.76	118
1.1.3 Political stability	74.44	38
1.1.4 Regulatory quality	36.41	114
1.1.5 Corruption	19.18	111
1.2 Market Landscape	40.10	88
1.2.1 Extent of market dominance	56.80	40
1.2.2 Ease of doing business	36.42	121
1.2.3 Cluster development	47.57	50
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	34.44	111
1.2.6 Urbanisation	25.26	117
1.3 Business and Labour Landscape	44.97	87
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	49.37	50
Management Practice		
1.3.3 Professional management	45.01	87
1.3.4 Relationship of pay to productivity	64.29	46
Technology Adoption		
1.3.5 Technology utilisation	40.00	97
1.3.6 Investment in emerging technologies	46.40	50
1.3.7 Firms with website	24.76	101
2 ATTRACT	41.72	101
2.1 External Openness	35.60	109
Attract Business		
2.1.1 FDI and technology transfer	51.24	85
2.1.2 Prevalence of foreign ownership	54.24	77
Attract People		
2.1.3 Migrant stock	15.22	111
2.1.4 International students	9.09	99
2.1.5 Brain gain	48.22	62
2.2 Internal Openness	47.84	91
Social Inclusion		
2.2.1 Tolerance of minorities	27.17	88
2.2.2 Tolerance of immigrants	7.69	130
2.2.3 Social mobility	53.76	58
Gender Equality		
2.2.4 Women in tertiary education	62.17	77
2.2.5 Women in high-skilled jobs	79.42	20
2.2.6 Leadership opportunities for women	56.80	43

	Score	Rank
3 GROW	19.13	120
3.1 Formal Education	14.80	118
Enrolment		
3.1.1 Vocational enrolment	12.30	73
3.1.2 Tertiary enrolment	9.60	102
Quality		
3.1.3 Tertiary education expenditure	37.29	102
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	14.35	117
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	23.36	72
3.2.3 Employee development	33.34	74
3.2.4 Formal and non-formal studies	0.72	83
3.3 Access to Growth Opportunities	28.23	115
Empowerment		
3.3.1 Delegation of authority	42.90	84
3.3.2 Youth inclusion	19.69	117
Collaboration		
3.3.3 Use of virtual social networks	48.13	92
3.3.4 Use of virtual professional networks	2.21	120

4 RETAIN	29.04	112
4.1 Sustainability	26.51	107
4.1.1 Pension coverage	5.35	124
4.1.2 Social protection	35.62	76
4.1.3 Brain retention	49.18	46
4.1.4 Environmental performance	15.87	104
4.2 Lifestyle	31.58	113
4.2.1 Personal rights	12.76	127
4.2.2 Personal safety	36.89	97
4.2.3 Physician density	4.22	106
4.2.4 Sanitation	72.44	95

5 VOCATIONAL AND TECHNICAL SKILLS	33.84	109
5.1 Mid-Level Skills	18.74	118
5.1.1 Workforce with secondary education	27.09	102
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	10.39	114
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	48.95	79
5.2.1 Ease of finding skilled employees	52.43	75
5.2.2 Relevance of education system to the economy	50.36	52
5.2.3 Skills matching	44.06	80

6 GLOBAL KNOWLEDGE SKILLS	29.84	84
6.1 High-Level Skills	37.21	68
6.1.1 Workforce with tertiary education	15.19	95
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	17.99	86
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	83.27	8
6.1.6 Availability of scientists and engineers	32.41	111
6.2 Talent Impact	22.46	98
6.2.1 Innovation output	12.45	94
6.2.2 High-value exports	74.10	20
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	0.00	118
6.2.5 Scientific journal articles	3.27	113

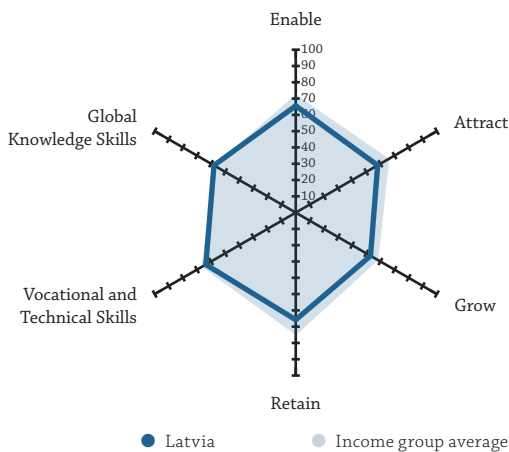
LATVIA

Key Indicators

Rank (out of 134).....	31
Income group.....	High income
Regional group.....	Europe
Population (millions).....	1.90

GDP per capita (PPP US\$).....	32,019.22
GDP (US\$ billions).....	33.51
GTCI score.....	60.68
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	65.54	33
1.1 Regulatory Landscape.....	72.16	30
1.1.1 Government effectiveness.....	75.20	26
1.1.2 Rule of law.....	76.78	29
1.1.3 Political stability.....	72.72	46
1.1.4 Regulatory quality.....	78.57	25
1.1.5 Corruption.....	57.53	35
1.2 Market Landscape.....	58.28	41
1.2.1 Extent of market dominance.....	56.85	38
1.2.2 Ease of doing business.....	88.53	17
1.2.3 Cluster development.....	44.06	61
1.2.4 R&D expenditure.....	12.75	53
1.2.5 ICT infrastructure.....	84.11	39
1.2.6 Urbanisation.....	63.37	60
1.3 Business and Labour Landscape.....	66.19	33
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	60.79	31
Management Practice		
1.3.3 Professional management.....	60.94	45
1.3.4 Relationship of pay to productivity.....	67.85	43
Technology Adoption		
1.3.5 Technology utilisation.....	67.45	35
1.3.6 Investment in emerging technologies.....	44.86	53
1.3.7 Firms with website.....	61.46	51
2 ATTRACT.....	58.04	40
2.1 External Openness.....	57.92	35
Attract Business		
2.1.1 FDI and technology transfer.....	62.09	55
2.1.2 Prevalence of foreign ownership.....	69.50	41
Attract People		
2.1.3 Migrant stock.....	61.87	33
2.1.4 International students.....	59.39	25
2.1.5 Brain gain.....	36.77	97
2.2 Internal Openness.....	58.15	46
Social Inclusion		
2.2.1 Tolerance of minorities.....	15.22	107
2.2.2 Tolerance of immigrants.....	30.77	118
2.2.3 Social mobility.....	62.24	39
Gender Equality		
2.2.4 Women in tertiary education.....	74.24	24
2.2.5 Women in high-skilled jobs.....	87.74	8
2.2.6 Leadership opportunities for women.....	78.69	13

	Score	Rank
3 GROW.....	53.01	32
3.1 Formal Education.....	51.74	34
Enrolment		
3.1.1 Vocational enrolment.....	48.04	27
3.1.2 Tertiary enrolment.....	64.92	5
Quality		
3.1.3 Tertiary education expenditure.....	58.53	63
3.1.4 Reading, maths, and science.....	62.57	28
3.1.5 University ranking.....	24.63	72
3.2 Lifelong Learning.....	45.14	37
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	63.22	19
3.2.3 Employee development.....	53.04	42
3.2.4 Formal and non-formal studies.....	64.29	21
3.3 Access to Growth Opportunities.....	62.17	27
Empowerment		
3.3.1 Delegation of authority.....	59.95	38
3.3.2 Youth inclusion.....	88.86	14
Collaboration		
3.3.3 Use of virtual social networks.....	73.49	49
3.3.4 Use of virtual professional networks.....	26.38	38

4 RETAIN.....	65.79	36
4.1 Sustainability.....	58.32	40
4.1.1 Pension coverage.....	91.92	49
4.1.2 Social protection.....	49.76	50
4.1.3 Brain retention.....	28.44	100
4.1.4 Environmental performance.....	63.14	36
4.2 Lifestyle.....	73.27	37
4.2.1 Personal rights.....	96.74	16
4.2.2 Personal safety.....	63.86	44
4.2.3 Physician density.....	40.94	40
4.2.4 Sanitation.....	91.53	69

5 VOCATIONAL AND TECHNICAL SKILLS.....	63.71	32
5.1 Mid-Level Skills.....	73.18	10
5.1.1 Workforce with secondary education.....	71.58	22
5.1.2 Population with secondary education.....	80.89	10
5.1.3 Technicians and associate professionals.....	60.77	24
5.1.4 Labour productivity per employee.....	79.49	41
5.2 Employability.....	54.23	65
5.2.1 Ease of finding skilled employees.....	43.47	98
5.2.2 Relevance of education system to the economy.....	43.91	67
5.2.3 Skills matching.....	75.32	32

6 GLOBAL KNOWLEDGE SKILLS.....	57.96	26
6.1 High-Level Skills.....	54.96	31
6.1.1 Workforce with tertiary education.....	47.39	29
6.1.2 Population with tertiary education.....	43.92	27
6.1.3 Professionals.....	45.53	31
6.1.4 Researchers.....	77.03	40
6.1.5 Senior officials and managers.....	79.03	11
6.1.6 Availability of scientists and engineers.....	36.84	98
6.2 Talent Impact.....	60.96	25
6.2.1 Innovation output.....	45.71	34
6.2.2 High-value exports.....	70.02	27
6.2.3 New product entrepreneurial activity.....	55.84	34
6.2.4 New business density.....	68.24	19
6.2.5 Scientific journal articles.....	64.97	37

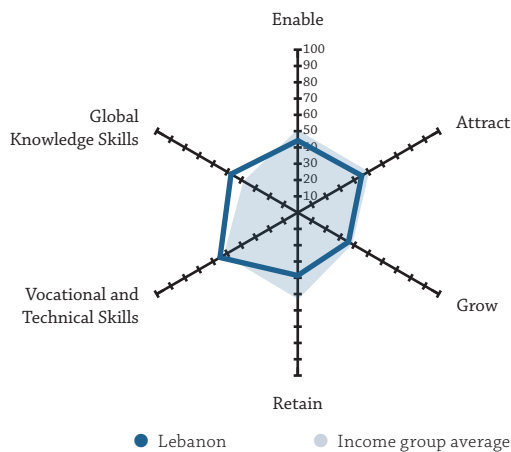
LEBANON

Key Indicators

Rank (out of 134).....	71
Income group.....	Upper-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	6.83

GDP per capita (PPP US\$).....	12,288.76
GDP (US\$ billions).....	33.38
GTCI score.....	44.42
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	44.23	88
1.1 Regulatory Landscape.....	29.56	121
1.1.1 Government effectiveness.....	32.14	121
1.1.2 Rule of law.....	33.66	114
1.1.3 Political stability.....	25.53	127
1.1.4 Regulatory quality.....	42.77	97
1.1.5 Corruption.....	13.70	118
1.2 Market Landscape.....	58.52	39
1.2.1 Extent of market dominance.....	43.32	73
1.2.2 Ease of doing business.....	42.63	116
1.2.3 Cluster development.....	44.25	60
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	75.52	56
1.2.6 Urbanisation.....	86.88	15
1.3 Business and Labour Landscape.....	44.60	93
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	32.74	95
Management Practice		
1.3.3 Professional management.....	39.74	99
1.3.4 Relationship of pay to productivity.....	53.01	70
Technology Adoption		
1.3.5 Technology utilisation.....	38.70	101
1.3.6 Investment in emerging technologies.....	40.91	61
1.3.7 Firms with website.....	62.49	48
2 ATTRACT.....	45.34	84
2.1 External Openness.....	47.46	65
Attract Business		
2.1.1 FDI and technology transfer.....	36.13	120
2.1.2 Prevalence of foreign ownership.....	37.42	117
Attract People		
2.1.3 Migrant stock.....	73.96	14
2.1.4 International students.....	60.18	24
2.1.5 Brain gain.....	29.61	111
2.2 Internal Openness.....	43.22	112
Social Inclusion		
2.2.1 Tolerance of minorities.....	19.57	99
2.2.2 Tolerance of immigrants.....	47.69	88
2.2.3 Social mobility.....	30.74	122
Gender Equality		
2.2.4 Women in tertiary education.....	69.34	47
2.2.5 Women in high-skilled jobs.....	62.31	78
2.2.6 Leadership opportunities for women.....	29.67	94

	Score	Rank
3 GROW.....	35.96	69
3.1 Formal Education.....	36.23	63
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure.....	54.81	71
3.1.4 Reading, maths, and science.....	17.44	72
3.1.5 University ranking.....	36.43	50
3.2 Lifelong Learning.....	27.50	68
3.2.1 Business and economics subject ranking.....	34.68	36
3.2.2 Prevalence of training in firms.....	18.32	84
3.2.3 Employee development.....	29.50	87
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	44.15	76
Empowerment		
3.3.1 Delegation of authority.....	37.38	100
3.3.2 Youth inclusion.....	56.31	80
Collaboration		
3.3.3 Use of virtual social networks.....	63.93	71
3.3.4 Use of virtual professional networks.....	18.98	57

4 RETAIN.....	38.61	98
4.1 Sustainability.....	21.43	117
4.1.1 Pension coverage.....	8.89	118
4.1.2 Social protection.....	11.79	126
4.1.3 Brain retention.....	30.49	94
4.1.4 Environmental performance.....	34.57	71
4.2 Lifestyle.....	55.79	73
4.2.1 Personal rights.....	59.55	88
4.2.2 Personal safety.....	39.35	94
4.2.3 Physician density.....	25.92	69
4.2.4 Sanitation.....	98.36	39
5 VOCATIONAL AND TECHNICAL SKILLS.....	55.09	60
5.1 Mid-Level Skills.....	34.79	91
5.1.1 Workforce with secondary education.....	22.57	107
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	20.59	88
5.1.4 Labour productivity per employee.....	61.22	72
5.2 Employability.....	75.39	19
5.2.1 Ease of finding skilled employees.....	92.01	5
5.2.2 Relevance of education system to the economy.....	71.61	16
5.2.3 Skills matching.....	62.56	58

6 GLOBAL KNOWLEDGE SKILLS.....	47.28	46
6.1 High-Level Skills.....	51.52	37
6.1.1 Workforce with tertiary education.....	40.63	39
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	37.02	46
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	52.44	34
6.1.6 Availability of scientists and engineers.....	75.98	15
6.2 Talent Impact.....	43.05	49
6.2.1 Innovation output.....	17.66	79
6.2.2 High-value exports.....	29.18	95
6.2.3 New product entrepreneurial activity.....	86.32	5
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	39.03	55

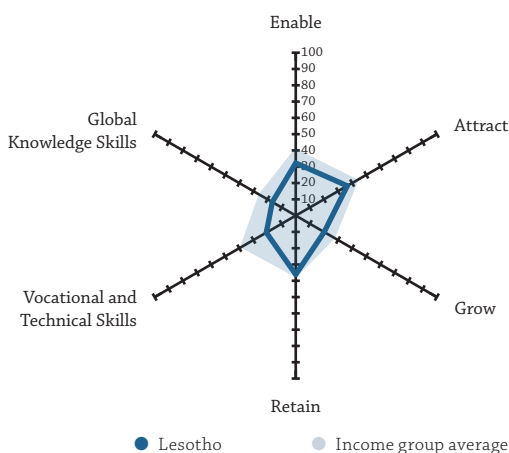
LESOTHO

Key Indicators

Rank (out of 134) **121**
 Income group **Lower-middle income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **2.14**

GDP per capita (PPP US\$) **2,405.10**
 GDP (US\$ billions) **1.84**
 GTCI score **27.09**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	32.27	121
1.1 Regulatory Landscape	41.47	93
1.1.1 Government effectiveness	32.16	120
1.1.2 Rule of law	44.67	85
1.1.3 Political stability	54.56	82
1.1.4 Regulatory quality	40.34	102
1.1.5 Corruption	35.62	68
1.2 Market Landscape	27.49	119
1.2.1 Extent of market dominance	30.01	102
1.2.2 Ease of doing business	51.64	102
1.2.3 Cluster development	26.73	106
1.2.4 R&D expenditure	0.77	117
1.2.5 ICT infrastructure	38.43	104
1.2.6 Urbanisation	17.39	122
1.3 Business and Labour Landscape	27.84	126
Labour Market		
1.3.1 Labour rights	85.60	57
1.3.2 Labour-employer cooperation	4.47	132
Management Practice		
1.3.3 Professional management	26.75	127
1.3.4 Relationship of pay to productivity	33.21	120
Technology Adoption		
1.3.5 Technology utilisation	2.77	131
1.3.6 Investment in emerging technologies	35.86	78
1.3.7 Firms with website	6.25	123
2 ATTRACT	36.52	118
2.1 External Openness	19.20	133
Attract Business		
2.1.1 FDI and technology transfer	18.96	131
2.1.2 Prevalence of foreign ownership	25.15	128
Attract People		
2.1.3 Migrant stock	7.83	124
2.1.4 International students	7.08	105
2.1.5 Brain gain	36.98	96
2.2 Internal Openness	53.84	69
Social Inclusion		
2.2.1 Tolerance of minorities	76.09	17
2.2.2 Tolerance of immigrants	55.38	76
2.2.3 Social mobility	29.77	123
Gender Equality		
2.2.4 Women in tertiary education	79.20	11
2.2.5 Women in high-skilled jobs	81.75	16
2.2.6 Leadership opportunities for women	0.85	132

	Score	Rank
3 GROW	20.15	118
3.1 Formal Education	11.99	126
Enrolment		
3.1.1 Vocational enrolment	3.48	90
3.1.2 Tertiary enrolment	6.60	108
Quality		
3.1.3 Tertiary education expenditure	37.89	100
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	17.71	105
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	32.87	56
3.2.3 Employee development	20.25	117
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	30.76	111
Empowerment		
3.3.1 Delegation of authority	14.21	130
3.3.2 Youth inclusion	81.10	32
Collaboration		
3.3.3 Use of virtual social networks	22.66	109
3.3.4 Use of virtual professional networks	5.08	106

4 RETAIN	36.13	103
4.1 Sustainability	42.92	79
4.1.1 Pension coverage	93.94	45
4.1.2 Social protection	29.26	93
4.1.3 Brain retention	44.62	51
4.1.4 Environmental performance	3.88	125
4.2 Lifestyle	29.33	119
4.2.1 Personal rights	68.96	71
4.2.2 Personal safety	9.72	127
4.2.3 Physician density	0.42	131
4.2.4 Sanitation	38.24	114

5 VOCATIONAL AND TECHNICAL SKILLS	20.84	128
5.1 Mid-Level Skills	9.22	123
5.1.1 Workforce with secondary education	0.00	131
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	18.43	94
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	32.47	120
5.2.1 Ease of finding skilled employees	27.13	123
5.2.2 Relevance of education system to the economy	37.81	81
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	16.62	116
6.1 High-Level Skills	17.21	112
6.1.1 Workforce with tertiary education	7.69	111
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	18.09	85
6.1.4 Researchers	11.84	104
6.1.5 Senior officials and managers	19.46	85
6.1.6 Availability of scientists and engineers	28.97	116
6.2 Talent Impact	16.03	114
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	4.57	124
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	41.24	49
6.2.5 Scientific journal articles	2.29	119

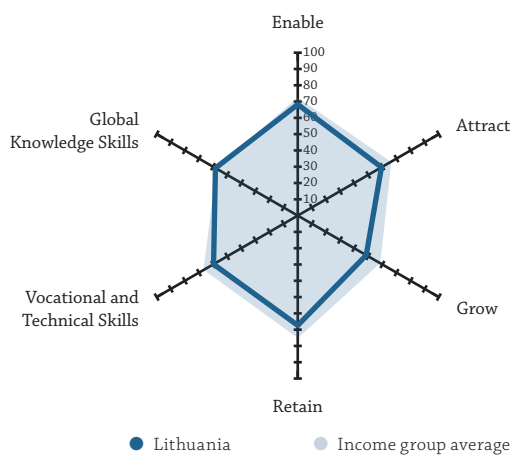
LITHUANIA

Key Indicators

Rank (out of 134).....	32
Income group	High income
Regional group	Europe
Population (millions)	2.79

GDP per capita (PPP US\$)	38,734.73
GDP (US\$ billions)	55.89
GTCI score	60.25
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	68.23	28
1.1 Regulatory Landscape.....	74.37	25
1.1.1 Government effectiveness.....	73.83	29
1.1.2 Rule of law.....	76.99	28
1.1.3 Political stability.....	81.61	23
1.1.4 Regulatory quality.....	77.79	26
1.1.5 Corruption.....	61.64	29
1.2 Market Landscape.....	56.38	44
1.2.1 Extent of market dominance.....	44.65	67
1.2.2 Ease of doing business.....	90.90	10
1.2.3 Cluster development.....	33.27	93
1.2.4 R&D expenditure.....	18.85	40
1.2.5 ICT infrastructure.....	87.77	29
1.2.6 Urbanisation.....	62.84	62
1.3 Business and Labour Landscape.....	73.92	24
Labour Market		
1.3.1 Labour rights.....	98.20	15
1.3.2 Labour-employer cooperation.....	53.63	41
Management Practice		
1.3.3 Professional management.....	71.61	27
1.3.4 Relationship of pay to productivity.....	74.77	24
Technology Adoption		
1.3.5 Technology utilisation.....	78.08	19
1.3.6 Investment in emerging technologies.....	61.76	28
1.3.7 Firms with website.....	79.41	25
2. ATTRACT	59.34	36
2.1 External Openness.....	51.53	51
Attract Business		
2.1.1 FDI and technology transfer.....	75.02	24
2.1.2 Prevalence of foreign ownership.....	57.62	66
Attract People		
2.1.3 Migrant stock.....	38.93	70
2.1.4 International students.....	46.89	44
2.1.5 Brain gain.....	39.21	91
2.2 Internal Openness.....	67.15	20
Social Inclusion		
2.2.1 Tolerance of minorities.....	69.57	26
2.2.2 Tolerance of immigrants.....	33.85	113
2.2.3 Social mobility.....	69.59	29
Gender Equality		
2.2.4 Women in tertiary education.....	70.79	44
2.2.5 Women in high-skilled jobs.....	86.09	9
2.2.6 Leadership opportunities for women.....	72.98	20

	Score	Rank
3. GROW	48.54	38
3.1 Formal Education.....	44.41	43
Enrolment		
3.1.1 Vocational enrolment.....	24.61	53
3.1.2 Tertiary enrolment.....	51.33	25
Quality		
3.1.3 Tertiary education expenditure.....	62.42	54
3.1.4 Reading, maths, and science.....	59.45	31
3.1.5 University ranking.....	24.27	74
3.2 Lifelong Learning.....	39.60	45
3.2.1 Business and economics subject ranking.....	25.89	52
3.2.2 Prevalence of training in firms.....	27.69	63
3.2.3 Employee development.....	67.14	25
3.2.4 Formal and non-formal studies.....	37.67	36
3.3 Access to Growth Opportunities.....	61.62	30
Empowerment		
3.3.1 Delegation of authority.....	65.18	29
3.3.2 Youth inclusion.....	81.55	30
Collaboration		
3.3.3 Use of virtual social networks.....	75.47	44
3.3.4 Use of virtual professional networks.....	24.28	44

4. RETAIN	67.37	34
4.1 Sustainability.....	56.08	46
4.1.1 Pension coverage.....	97.07	41
4.1.2 Social protection.....	38.73	69
4.1.3 Brain retention.....	23.10	107
4.1.4 Environmental performance.....	65.43	35
4.2 Lifestyle.....	78.66	27
4.2.1 Personal rights.....	95.18	25
4.2.2 Personal safety.....	63.91	43
4.2.3 Physician density.....	62.73	12
4.2.4 Sanitation.....	92.83	67
5. VOCATIONAL AND TECHNICAL SKILLS	59.65	45
5.1 Mid-Level Skills.....	66.80	27
5.1.1 Workforce with secondary education.....	67.79	26
5.1.2 Population with secondary education.....	74.59	15
5.1.3 Technicians and associate professionals.....	42.27	49
5.1.4 Labour productivity per employee.....	82.55	32
5.2 Employability.....	52.50	69
5.2.1 Ease of finding skilled employees.....	31.83	119
5.2.2 Relevance of education system to the economy.....	39.77	77
5.2.3 Skills matching.....	85.90	15

6. GLOBAL KNOWLEDGE SKILLS	58.34	25
6.1 High-Level Skills.....	62.26	20
6.1.1 Workforce with tertiary education.....	55.82	15
6.1.2 Population with tertiary education.....	45.93	21
6.1.3 Professionals.....	58.22	15
6.1.4 Researchers.....	85.84	28
6.1.5 Senior officials and managers.....	71.37	15
6.1.6 Availability of scientists and engineers.....	56.38	52
6.2 Talent Impact.....	54.42	36
6.2.1 Innovation output.....	39.14	41
6.2.2 High-value exports.....	61.91	39
6.2.3 New product entrepreneurial activity.....	58.42	28
6.2.4 New business density.....	45.08	40
6.2.5 Scientific journal articles.....	67.57	34

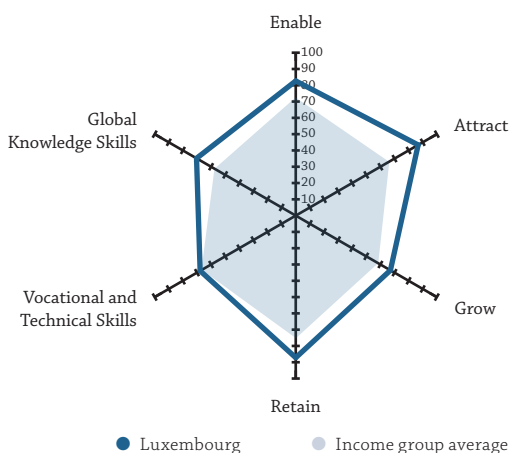
LUXEMBOURG

Key Indicators

Rank (out of 134).....	8
Income group.....	High income
Regional group.....	Europe
Population (millions).....	0.63

GDP per capita (PPP US\$).....	118,359.53
GDP (US\$ billions).....	73.26
GTCI score.....	76.96
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 82.64 11		
1.1 Regulatory Landscape.....	91.22	8
1.1.1 Government effectiveness.....	89.17	8
1.1.2 Rule of law.....	94.73	10
1.1.3 Political stability.....	93.36	4
1.1.4 Regulatory quality.....	89.79	10
1.1.5 Corruption.....	89.04	9
1.2 Market Landscape.....	72.93	18
1.2.1 Extent of market dominance.....	71.38	20
1.2.2 Ease of doing business.....	69.64	67
1.2.3 Cluster development.....	82.62	10
1.2.4 R&D expenditure.....	24.32	30
1.2.5 ICT infrastructure.....	100.00	1
1.2.6 Urbanisation.....	89.63	12
1.3 Business and Labour Landscape.....	83.78	10
Labour Market		
1.3.1 Labour rights.....	98.10	18
1.3.2 Labour-employer cooperation.....	81.59	8
Management Practice		
1.3.3 Professional management.....	80.68	18
1.3.4 Relationship of pay to productivity.....	71.42	35
Technology Adoption		
1.3.5 Technology utilisation.....	88.90	9
1.3.6 Investment in emerging technologies.....	79.58	10
1.3.7 Firms with website.....	86.19	10
2 ATTRACT..... 86.75 1		
2.1 External Openness.....	94.64	1
Attract Business		
2.1.1 FDI and technology transfer.....	91.33	4
2.1.2 Prevalence of foreign ownership.....	100.00	1
Attract People		
2.1.3 Migrant stock.....	89.48	5
2.1.4 International students.....	99.57	2
2.1.5 Brain gain.....	92.81	3
2.2 Internal Openness.....	78.85	7
Social Inclusion		
2.2.1 Tolerance of minorities.....	82.61	6
2.2.2 Tolerance of immigrants.....	95.38	3
2.2.3 Social mobility.....	90.82	6
Gender Equality		
2.2.4 Women in tertiary education.....	61.46	81
2.2.5 Women in high-skilled jobs.....	66.36	67
2.2.6 Leadership opportunities for women.....	76.48	15

	Score	Rank
3 GROW..... 67.10 16		
3.1 Formal Education.....	57.48	25
Enrolment		
3.1.1 Vocational enrolment.....	62.04	14
3.1.2 Tertiary enrolment.....	12.51	99
Quality		
3.1.3 Tertiary education expenditure.....	100.00	1
3.1.4 Reading, maths, and science.....	58.23	34
3.1.5 University ranking.....	54.65	25
3.2 Lifelong Learning.....	70.11	13
3.2.1 Business and economics subject ranking.....	43.99	24
3.2.2 Prevalence of training in firms.....	81.68	5
3.2.3 Employee development.....	89.67	3
3.2.4 Formal and non-formal studies.....	65.10	19
3.3 Access to Growth Opportunities.....	73.69	16
Empowerment		
3.3.1 Delegation of authority.....	78.44	16
3.3.2 Youth inclusion.....	89.87	11
Collaboration		
3.3.3 Use of virtual social networks.....	64.66	68
3.3.4 Use of virtual professional networks.....	61.81	12

4 RETAIN..... 87.18 6		
4.1 Sustainability.....	95.81	2
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	95.27	5
4.1.3 Brain retention.....	88.32	5
4.1.4 Environmental performance.....	99.65	2
4.2 Lifestyle.....	78.55	28
4.2.1 Personal rights.....	97.50	12
4.2.2 Personal safety.....	82.04	21
4.2.3 Physician density.....	37.25	43
4.2.4 Sanitation.....	97.41	49
5 VOCATIONAL AND TECHNICAL SKILLS..... 67.76 21		
5.1 Mid-Level Skills.....	65.46	34
5.1.1 Workforce with secondary education.....	41.53	75
5.1.2 Population with secondary education.....	49.18	48
5.1.3 Technicians and associate professionals.....	71.15	17
5.1.4 Labour productivity per employee.....	100.00	1
5.2 Employability.....	70.05	23
5.2.1 Ease of finding skilled employees.....	55.24	68
5.2.2 Relevance of education system to the economy.....	66.77	21
5.2.3 Skills matching.....	88.14	9

6 GLOBAL KNOWLEDGE SKILLS..... 70.31 8		
6.1 High-Level Skills.....	62.66	19
6.1.1 Workforce with tertiary education.....	59.26	11
6.1.2 Population with tertiary education.....	45.57	24
6.1.3 Professionals.....	100.00	1
6.1.4 Researchers.....	92.52	16
6.1.5 Senior officials and managers.....	25.83	71
6.1.6 Availability of scientists and engineers.....	52.76	57
6.2 Talent Impact.....	77.97	3
6.2.1 Innovation output.....	67.01	14
6.2.2 High-value exports.....	48.78	69
6.2.3 New product entrepreneurial activity.....	100.00	1
6.2.4 New business density.....	90.48	6
6.2.5 Scientific journal articles.....	83.56	16

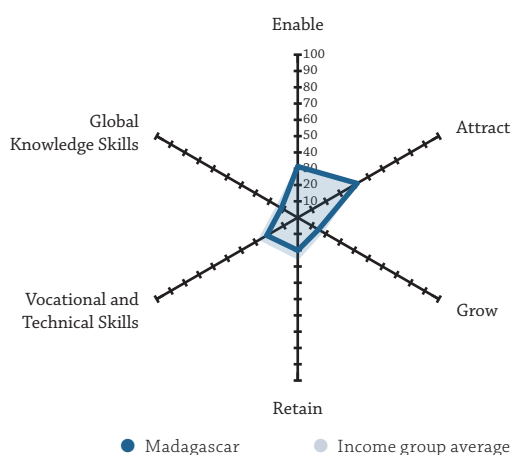
MADAGASCAR

Key Indicators

Rank (out of 134).....	126
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	27.69

GDP per capita (PPP US\$)	1,593.07
GDP (US\$ billions)	13.72
GTCI score	23.61
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	31.38	123
1.1 Regulatory Landscape	32.41	116
1.1.1 Government effectiveness	25.26	128
1.1.2 Rule of law	30.20	119
1.1.3 Political stability	56.86	79
1.1.4 Regulatory quality	36.04	116
1.1.5 Corruption	13.70	118
1.2 Market Landscape	21.44	127
1.2.1 Extent of market dominance	26.93	106
1.2.2 Ease of doing business	30.94	126
1.2.3 Cluster development	23.80	113
1.2.4 R&D expenditure	0.00	121
1.2.5 ICT infrastructure	19.20	125
1.2.6 Urbanisation	27.78	109
1.3 Business and Labour Landscape	40.27	114
Labour Market		
1.3.1 Labour rights	87.30	53
1.3.2 Labour-employer cooperation	33.22	92
Management Practice		
1.3.3 Professional management	32.02	117
1.3.4 Relationship of pay to productivity	28.05	125
Technology Adoption		
1.3.5 Technology utilisation	44.29	84
1.3.6 Investment in emerging technologies	33.88	86
1.3.7 Firms with website	23.14	103
2 ATTRACT	42.01	100
2.1 External Openness	34.38	114
Attract Business		
2.1.1 FDI and technology transfer	46.90	96
2.1.2 Prevalence of foreign ownership	55.18	73
Attract People		
2.1.3 Migrant stock	3.34	130
2.1.4 International students	22.12	82
2.1.5 Brain gain	44.36	74
2.2 Internal Openness	49.64	87
Social Inclusion		
2.2.1 Tolerance of minorities	69.57	26
2.2.2 Tolerance of immigrants	35.38	108
2.2.3 Social mobility	41.13	100
Gender Equality		
2.2.4 Women in tertiary education	54.98	95
2.2.5 Women in high-skilled jobs	59.31	85
2.2.6 Leadership opportunities for women	37.49	80

	Score	Rank
3 GROW	14.70	127
3.1 Formal Education	1.27	132
Enrolment		
3.1.1 Vocational enrolment	1.89	95
3.1.2 Tertiary enrolment	3.19	122
Quality		
3.1.3 Tertiary education expenditure	0.00	114
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	9.58	129
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	6.99	102
3.2.3 Employee development	21.74	114
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	33.24	105
Empowerment		
3.3.1 Delegation of authority	34.33	109
3.3.2 Youth inclusion	89.41	13
Collaboration		
3.3.3 Use of virtual social networks	8.21	119
3.3.4 Use of virtual professional networks	0.99	128

4 RETAIN	20.09	128
4.1 Sustainability	11.18	132
4.1.1 Pension coverage	3.64	127
4.1.2 Social protection	12.88	125
4.1.3 Brain retention	26.97	103
4.1.4 Environmental performance	1.23	131
4.2 Lifestyle	29.01	121
4.2.1 Personal rights	66.81	76
4.2.2 Personal safety	43.95	87
4.2.3 Physician density	1.82	113
4.2.4 Sanitation	3.44	132
5 VOCATIONAL AND TECHNICAL SKILLS	21.91	126
5.1 Mid-Level Skills	7.27	130
5.1.1 Workforce with secondary education	19.11	112
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	2.72	127
5.1.4 Labour productivity per employee	0.00	119
5.2 Employability	36.55	110
5.2.1 Ease of finding skilled employees	44.87	95
5.2.2 Relevance of education system to the economy	21.94	112
5.2.3 Skills matching	42.84	81

6 GLOBAL KNOWLEDGE SKILLS	11.60	126
6.1 High-Level Skills	14.37	121
6.1.1 Workforce with tertiary education	5.28	119
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	4.03	123
6.1.4 Researchers	16.93	100
6.1.5 Senior officials and managers	4.52	120
6.1.6 Availability of scientists and engineers	41.07	87
6.2 Talent Impact	8.83	126
6.2.1 Innovation output	11.04	99
6.2.2 High-value exports	7.52	120
6.2.3 New product entrepreneurial activity	21.86	81
6.2.4 New business density	2.55	112
6.2.5 Scientific journal articles	1.16	124

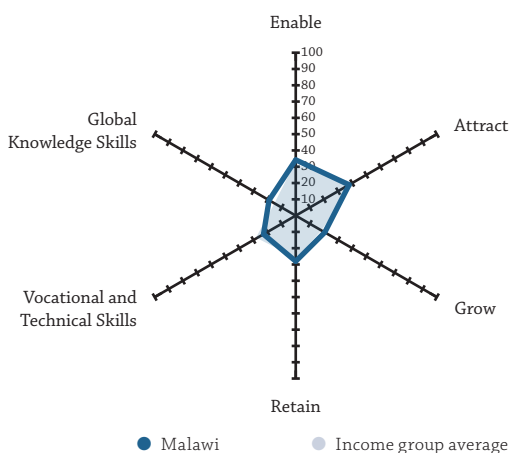
MALAWI

Key Indicators

Rank (out of 134) **122**
 Income group **Low income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **19.13**

GDP per capita (PPP US\$) **1,568.42**
 GDP (US\$ billions) **11.96**
 GTCI score **27.06**
 GTCI score (income group average) **23.75**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	34.22	114
1.1 Regulatory Landscape	38.71	102
1.1.1 Government effectiveness	34.00	113
1.1.2 Rule of law	45.80	80
1.1.3 Political stability	56.53	80
1.1.4 Regulatory quality	36.68	112
1.1.5 Corruption	20.55	107
1.2 Market Landscape	21.39	128
1.2.1 Extent of market dominance	12.18	129
1.2.2 Ease of doing business	54.31	95
1.2.3 Cluster development	20.59	117
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	15.37	126
1.2.6 Urbanisation	4.49	133
1.3 Business and Labour Landscape	42.55	108
Labour Market		
1.3.1 Labour rights	96.30	23
1.3.2 Labour-employer cooperation	29.55	103
Management Practice		
1.3.3 Professional management	52.56	69
1.3.4 Relationship of pay to productivity	41.52	100
Technology Adoption		
1.3.5 Technology utilisation	17.15	125
1.3.6 Investment in emerging technologies	19.79	117
1.3.7 Firms with website	40.96	79
2 ATTRACT	37.80	114
2.1 External Openness	38.41	99
Attract Business		
2.1.1 FDI and technology transfer	32.22	124
2.1.2 Prevalence of foreign ownership	64.88	52
Attract People		
2.1.3 Migrant stock	27.79	89
2.1.4 International students	18.88	85
2.1.5 Brain gain	48.31	61
2.2 Internal Openness	37.18	122
Social Inclusion		
2.2.1 Tolerance of minorities	54.35	49
2.2.2 Tolerance of immigrants	26.15	122
2.2.3 Social mobility	43.19	92
Gender Equality		
2.2.4 Women in tertiary education	34.91	119
2.2.5 Women in high-skilled jobs	36.61	112
2.2.6 Leadership opportunities for women	27.85	102

	Score	Rank
3 GROW	20.57	117
3.1 Formal Education	25.03	91
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	0.00	129
Quality		
3.1.3 Tertiary education expenditure	75.10	24
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	15.31	112
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	35.24	50
3.2.3 Employee development	25.09	104
3.2.4 Formal and non-formal studies	0.88	80
3.3 Access to Growth Opportunities	21.37	125
Empowerment		
3.3.1 Delegation of authority	45.51	73
3.3.2 Youth inclusion	37.82	108
Collaboration		
3.3.3 Use of virtual social networks	0.73	133
3.3.4 Use of virtual professional networks	1.43	126

4 RETAIN	28.03	117
4.1 Sustainability	20.21	120
4.1.1 Pension coverage	1.31	132
4.1.2 Social protection	20.53	116
4.1.3 Brain retention	36.94	75
4.1.4 Environmental performance	22.05	94
4.2 Lifestyle	35.84	108
4.2.1 Personal rights	66.89	75
4.2.2 Personal safety	56.08	63
4.2.3 Physician density	0.00	134
4.2.4 Sanitation	20.40	126
5 VOCATIONAL AND TECHNICAL SKILLS	22.84	125
5.1 Mid-Level Skills	8.08	128
5.1.1 Workforce with secondary education	21.31	109
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	0.00	129
5.1.4 Labour productivity per employee	2.94	116
5.2 Employability	37.60	107
5.2.1 Ease of finding skilled employees	43.16	99
5.2.2 Relevance of education system to the economy	32.04	94
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	18.92	110
6.1 High-Level Skills	13.62	124
6.1.1 Workforce with tertiary education	1.44	127
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	6.21	120
6.1.4 Researchers	22.77	95
6.1.5 Senior officials and managers	2.95	123
6.1.6 Availability of scientists and engineers	34.73	108
6.2 Talent Impact	24.23	93
6.2.1 Innovation output	10.08	102
6.2.2 High-value exports	50.90	61
6.2.3 New product entrepreneurial activity	55.39	36
6.2.4 New business density	1.38	115
6.2.5 Scientific journal articles	3.39	112

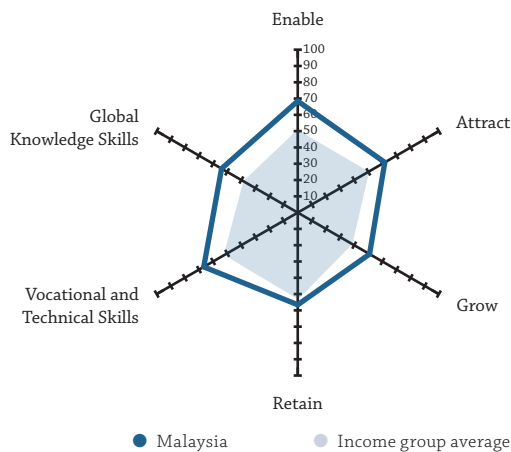
MALAYSIA

Key Indicators

Rank (out of 134).....	34
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	32.37

GDP per capita (PPP US\$).....	27,886.86
GDP (US\$ billions).....	336.66
GTCI score.....	59.70
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	68.46	27
1.1 Regulatory Landscape.....	64.27	41
1.1.1 Government effectiveness.....	72.84	32
1.1.2 Rule of law.....	67.04	38
1.1.3 Political stability.....	65.06	60
1.1.4 Regulatory quality.....	67.08	40
1.1.5 Corruption.....	49.32	47
1.2 Market Landscape.....	68.89	26
1.2.1 Extent of market dominance.....	65.76	25
1.2.2 Ease of doing business.....	90.64	11
1.2.3 Cluster development.....	83.49	9
1.2.4 R&D expenditure.....	20.86	35
1.2.5 ICT infrastructure.....	80.11	47
1.2.6 Urbanisation.....	72.44	43
1.3 Business and Labour Landscape.....	72.24	26
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	73.93	12
Management Practice		
1.3.3 Professional management.....	82.36	14
1.3.4 Relationship of pay to productivity.....	88.71	7
Technology Adoption		
1.3.5 Technology utilisation.....	84.09	14
1.3.6 Investment in emerging technologies.....	78.89	12
1.3.7 Firms with website.....	25.46	100
2 ATTRACT.....	61.68	28
2.1 External Openness.....	68.38	19
Attract Business		
2.1.1 FDI and technology transfer.....	84.98	9
2.1.2 Prevalence of foreign ownership.....	74.96	30
Attract People		
2.1.3 Migrant stock.....	55.79	44
2.1.4 International students.....	52.05	36
2.1.5 Brain gain.....	74.10	18
2.2 Internal Openness.....	54.98	63
Social Inclusion		
2.2.1 Tolerance of minorities.....	46.74	58
2.2.2 Tolerance of immigrants.....	9.23	128
2.2.3 Social mobility.....	76.04	22
Gender Equality		
2.2.4 Women in tertiary education.....	67.62	54
2.2.5 Women in high-skilled jobs.....	52.78	95
2.2.6 Leadership opportunities for women.....	77.45	14

	Score	Rank
3 GROW.....	50.90	33
3.1 Formal Education.....	38.33	58
Enrolment		
3.1.1 Vocational enrolment.....	13.22	70
3.1.2 Tertiary enrolment.....	29.74	69
Quality		
3.1.3 Tertiary education expenditure.....	67.55	42
3.1.4 Reading, maths, and science.....	39.53	47
3.1.5 University ranking.....	41.59	41
3.2 Lifelong Learning.....	46.55	35
3.2.1 Business and economics subject ranking.....	45.68	23
3.2.2 Prevalence of training in firms.....	15.10	91
3.2.3 Employee development.....	78.87	11
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	67.82	20
Empowerment		
3.3.1 Delegation of authority.....	79.93	13
3.3.2 Youth inclusion.....	78.17	39
Collaboration		
3.3.3 Use of virtual social networks.....	86.49	9
3.3.4 Use of virtual professional networks.....	26.71	37

4 RETAIN.....	56.56	51
4.1 Sustainability.....	51.31	59
4.1.1 Pension coverage.....	17.78	106
4.1.2 Social protection.....	67.64	29
4.1.3 Brain retention.....	80.86	9
4.1.4 Environmental performance.....	38.98	63
4.2 Lifestyle.....	61.80	56
4.2.1 Personal rights.....	63.79	81
4.2.2 Personal safety.....	65.08	40
4.2.3 Physician density.....	18.80	82
4.2.4 Sanitation.....	99.54	20

5 VOCATIONAL AND TECHNICAL SKILLS.....	66.61	24
5.1 Mid-Level Skills.....	53.68	58
5.1.1 Workforce with secondary education.....	58.93	42
5.1.2 Population with secondary education.....	55.82	36
5.1.3 Technicians and associate professionals.....	44.31	47
5.1.4 Labour productivity per employee.....	55.64	80
5.2 Employability.....	79.55	11
5.2.1 Ease of finding skilled employees.....	86.16	11
5.2.2 Relevance of education system to the economy.....	72.93	15
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	53.99	32
6.1 High-Level Skills.....	47.60	41
6.1.1 Workforce with tertiary education.....	28.36	62
6.1.2 Population with tertiary education.....	24.37	63
6.1.3 Professionals.....	29.09	58
6.1.4 Researchers.....	80.06	36
6.1.5 Senior officials and managers.....	34.79	55
6.1.6 Availability of scientists and engineers.....	88.90	3
6.2 Talent Impact.....	60.38	27
6.2.1 Innovation output.....	45.68	35
6.2.2 High-value exports.....	95.67	3
6.2.3 New product entrepreneurial activity.....	57.92	30
6.2.4 New business density.....	37.13	52
6.2.5 Scientific journal articles.....	65.51	36

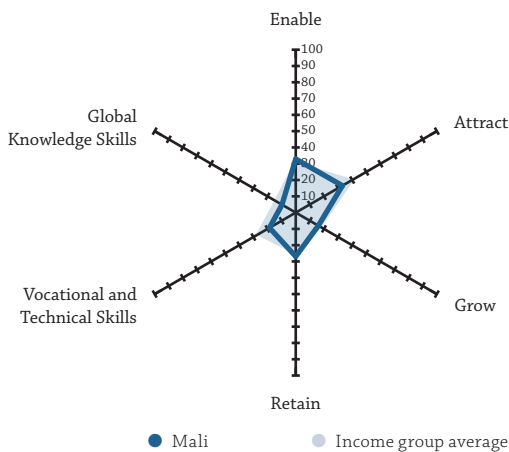
MALI

Key Indicators

Rank (out of 134) **127**
 Income group **Low income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **20.25**

GDP per capita (PPP US\$) **2,338.51**
 GDP (US\$ billions) **17.39**
 GTCI score **22.87**
 GTCI score (income group average) **23.75**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	32.90	117
1.1 Regulatory Landscape	27.07	125
1.1.1 Government effectiveness	27.17	125
1.1.2 Rule of law	34.22	113
1.1.3 Political stability	13.90	132
1.1.4 Regulatory quality	39.51	106
1.1.5 Corruption	20.55	107
1.2 Market Landscape	31.20	113
1.2.1 Extent of market dominance	47.88	57
1.2.2 Ease of doing business	40.17	118
1.2.3 Cluster development	38.87	75
1.2.4 R&D expenditure	5.66	83
1.2.5 ICT infrastructure	20.91	123
1.2.6 Urbanisation	33.72	107
1.3 Business and Labour Landscape	40.42	113
Labour Market		
1.3.1 Labour rights	91.20	41
1.3.2 Labour-employer cooperation	24.86	113
Management Practice		
1.3.3 Professional management	29.06	122
1.3.4 Relationship of pay to productivity	32.52	121
Technology Adoption		
1.3.5 Technology utilisation	34.26	111
1.3.6 Investment in emerging technologies	33.17	89
1.3.7 Firms with website	37.84	84
2 ATTRACT	33.06	124
2.1 External Openness	36.39	105
Attract Business		
2.1.1 FDI and technology transfer	39.53	110
2.1.2 Prevalence of foreign ownership	41.67	110
Attract People		
2.1.3 Migrant stock	38.49	71
2.1.4 International students	15.25	90
2.1.5 Brain gain	47.00	68
2.2 Internal Openness	29.73	128
Social Inclusion		
2.2.1 Tolerance of minorities	17.39	104
2.2.2 Tolerance of immigrants	66.15	51
2.2.3 Social mobility	40.66	102
Gender Equality		
2.2.4 Women in tertiary education	14.12	127
2.2.5 Women in high-skilled jobs	16.89	125
2.2.6 Leadership opportunities for women	23.17	112

	Score	Rank
3 GROW	16.02	126
3.1 Formal Education	17.14	115
Enrolment		
3.1.1 Vocational enrolment	9.87	79
3.1.2 Tertiary enrolment	3.29	121
Quality		
3.1.3 Tertiary education expenditure	55.39	70
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	10.37	127
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	13.99	94
3.2.3 Employee development	26.62	97
3.2.4 Formal and non-formal studies	0.87	81
3.3 Access to Growth Opportunities	20.55	126
Empowerment		
3.3.1 Delegation of authority	22.71	123
3.3.2 Youth inclusion	50.03	87
Collaboration		
3.3.3 Use of virtual social networks	7.69	122
3.3.4 Use of virtual professional networks	1.77	124
4 RETAIN	26.90	118
4.1 Sustainability	20.02	122
4.1.1 Pension coverage	6.36	121
4.1.2 Social protection	36.91	72
4.1.3 Brain retention	30.44	95
4.1.4 Environmental performance	6.35	123
4.2 Lifestyle	33.79	111
4.2.1 Personal rights	54.06	96
4.2.2 Personal safety	45.39	83
4.2.3 Physician density	1.16	117
4.2.4 Sanitation	34.55	115
5 VOCATIONAL AND TECHNICAL SKILLS	18.61	129
5.1 Mid-Level Skills	9.63	121
5.1.1 Workforce with secondary education	4.80	124
5.1.2 Population with secondary education	6.09	106
5.1.3 Technicians and associate professionals	8.27	116
5.1.4 Labour productivity per employee	19.35	108
5.2 Employability	27.60	129
5.2.1 Ease of finding skilled employees	47.65	85
5.2.2 Relevance of education system to the economy	25.49	104
5.2.3 Skills matching	9.67	96
6 GLOBAL KNOWLEDGE SKILLS	9.75	130
6.1 High-Level Skills	10.74	130
6.1.1 Workforce with tertiary education	2.59	125
6.1.2 Population with tertiary education	2.36	103
6.1.3 Professionals	3.88	126
6.1.4 Researchers	16.41	101
6.1.5 Senior officials and managers	0.00	130
6.1.6 Availability of scientists and engineers	39.21	94
6.2 Talent Impact	8.76	127
6.2.1 Innovation output	6.67	115
6.2.2 High-value exports	19.49	106
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	7.74	104
6.2.5 Scientific journal articles	1.12	126

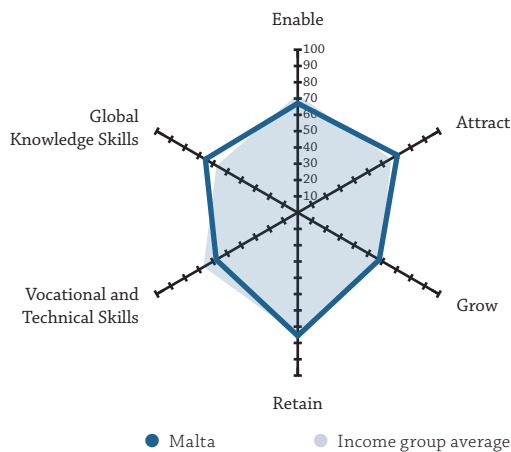
MALTA

Key Indicators

Rank (out of 134).....	23
Income group	High income
Regional group	Europe
Population (millions)	0.53

GDP per capita (PPP US\$)	42,640.12
GDP (US\$ billions)	14.65
GTCI score	65.72
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	67.08	31
1.1 Regulatory Landscape	71.54	33
1.1.1 Government effectiveness	69.72	36
1.1.2 Rule of law	75.36	31
1.1.3 Political stability	87.21	9
1.1.4 Regulatory quality	73.33	37
1.1.5 Corruption	52.05	43
1.2 Market Landscape	60.24	37
1.2.1 Extent of market dominance	49.73	53
1.2.2 Ease of doing business	63.51	83
1.2.3 Cluster development	56.26	37
1.2.4 R&D expenditure	11.36	58
1.2.5 ICT infrastructure	86.80	30
1.2.6 Urbanisation	93.80	6
1.3 Business and Labour Landscape	69.45	28
Labour Market		
1.3.1 Labour rights	83.50	63
1.3.2 Labour-employer cooperation	66.76	22
Management Practice		
1.3.3 Professional management	55.94	56
1.3.4 Relationship of pay to productivity	68.22	42
Technology Adoption		
1.3.5 Technology utilisation	72.70	30
1.3.6 Investment in emerging technologies	53.67	37
1.3.7 Firms with website	85.40	13
2 ATTRACT	70.54	17
2.1 External Openness	73.35	14
Attract Business		
2.1.1 FDI and technology transfer	85.75	7
2.1.2 Prevalence of foreign ownership	73.03	35
Attract People		
2.1.3 Migrant stock	67.76	21
2.1.4 International students	61.06	21
2.1.5 Brain gain	79.18	11
2.2 Internal Openness	67.74	18
Social Inclusion		
2.2.1 Tolerance of minorities	76.09	17
2.2.2 Tolerance of immigrants	75.38	33
2.2.3 Social mobility	74.66	23
Gender Equality		
2.2.4 Women in tertiary education	71.60	39
2.2.5 Women in high-skilled jobs	53.29	93
2.2.6 Leadership opportunities for women	55.40	47

	Score	Rank
3 GROW	57.80	22
3.1 Formal Education	48.08	40
Enrolment		
3.1.1 Vocational enrolment	28.55	46
3.1.2 Tertiary enrolment	45.10	41
Quality		
3.1.3 Tertiary education expenditure	82.69	13
3.1.4 Reading, maths, and science	50.93	41
3.1.5 University ranking	33.14	58
3.2 Lifelong Learning	49.63	31
3.2.1 Business and economics subject ranking	39.13	29
3.2.2 Prevalence of training in firms	59.02	22
3.2.3 Employee development	51.31	43
3.2.4 Formal and non-formal studies	49.07	32
3.3 Access to Growth Opportunities	75.68	13
Empowerment		
3.3.1 Delegation of authority	56.73	40
3.3.2 Youth inclusion	84.57	24
Collaboration		
3.3.3 Use of virtual social networks	95.84	5
3.3.4 Use of virtual professional networks	65.56	6

4 RETAIN	75.65	26
4.1 Sustainability	77.99	20
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	69.05	26
4.1.3 Brain retention	63.72	30
4.1.4 Environmental performance	79.19	23
4.2 Lifestyle	73.30	36
4.2.1 Personal rights	89.08	39
4.2.2 Personal safety	68.78	37
4.2.3 Physician density	35.40	50
4.2.4 Sanitation	99.95	14

5 VOCATIONAL AND TECHNICAL SKILLS	57.99	51
5.1 Mid-Level Skills	54.71	56
5.1.1 Workforce with secondary education	42.79	72
5.1.2 Population with secondary education	32.65	71
5.1.3 Technicians and associate professionals	58.60	26
5.1.4 Labour productivity per employee	84.80	27
5.2 Employability	60.87	46
5.2.1 Ease of finding skilled employees	38.48	106
5.2.2 Relevance of education system to the economy	65.13	24
5.2.3 Skills matching	79.01	24

6 GLOBAL KNOWLEDGE SKILLS	65.45	17
6.1 High-Level Skills	55.29	30
6.1.1 Workforce with tertiary education	40.65	38
6.1.2 Population with tertiary education	28.87	46
6.1.3 Professionals	49.36	24
6.1.4 Researchers	78.29	38
6.1.5 Senior officials and managers	88.93	5
6.1.6 Availability of scientists and engineers	45.66	73
6.2 Talent Impact	75.61	7
6.2.1 Innovation output	59.25	20
6.2.2 High-value exports	82.63	8
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	90.97	5
6.2.5 Scientific journal articles	69.58	33

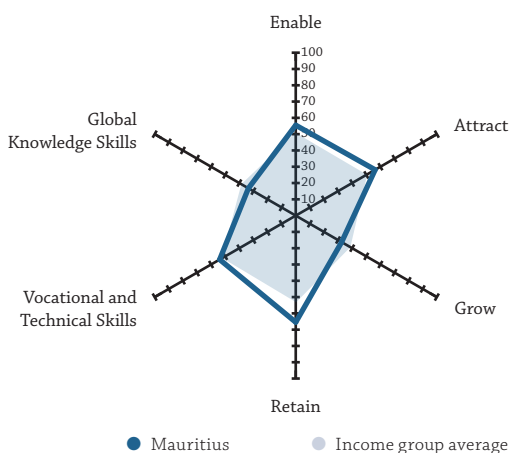
MAURITIUS

Key Indicators

Rank (out of 134).....	56
Income group.....	Upper-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	1.27

GDP per capita (PPP US\$).....	20,538.69
GDP (US\$ billions).....	10.91
GTCI score.....	49.52
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE.....55.49 47		
1.1 Regulatory Landscape.....69.69 35		
1.1.1 Government effectiveness.....70.00 35		
1.1.2 Rule of law.....71.02 33		
1.1.3 Political stability.....81.15 24		
1.1.4 Regulatory quality.....74.23 34		
1.1.5 Corruption.....52.05 43		
1.2 Market Landscape.....44.61 77		
1.2.1 Extent of market dominance.....21.43 118		
1.2.2 Ease of doing business.....90.63 12		
1.2.3 Cluster development.....47.14 52		
1.2.4 R&D expenditure.....6.78 77		
1.2.5 ICT infrastructure.....69.78 63		
1.2.6 Urbanisation.....31.92 108		
1.3 Business and Labour Landscape.....52.16 58		
Labour Market		
1.3.1 Labour rights.....78.70 72		
1.3.2 Labour-employer cooperation.....53.44 44		
Management Practice		
1.3.3 Professional management.....54.28 61		
1.3.4 Relationship of pay to productivity.....55.51 61		
Technology Adoption		
1.3.5 Technology utilisation.....57.67 53		
1.3.6 Investment in emerging technologies.....34.96 80		
1.3.7 Firms with website.....30.55 96		
2. ATTRACT.....56.25 49		
2.1 External Openness.....50.87 54		
Attract Business		
2.1.1 FDI and technology transfer.....56.16 70		
2.1.2 Prevalence of foreign ownership.....61.74 57		
Attract People		
2.1.3 Migrant stock.....28.73 86		
2.1.4 International students.....47.08 43		
2.1.5 Brain gain.....60.64 29		
2.2 Internal Openness.....61.63 34		
Social Inclusion		
2.2.1 Tolerance of minorities.....57.61 44		
2.2.2 Tolerance of immigrants.....84.62 15		
2.2.3 Social mobility.....62.42 37		
Gender Equality		
2.2.4 Women in tertiary education.....73.88 28		
2.2.5 Women in high-skilled jobs.....60.19 83		
2.2.6 Leadership opportunities for women.....31.06 93		

	Score	Rank
3. GROW.....32.52 79		
3.1 Formal Education.....19.22 106		
Enrolment		
3.1.1 Vocational enrolment.....4.08 87		
3.1.2 Tertiary enrolment.....28.00 72		
Quality		
3.1.3 Tertiary education expenditure.....44.81 90		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 87		
3.2 Lifelong Learning.....20.82 93		
3.2.1 Business and economics subject ranking.....0.00 70		
3.2.2 Prevalence of training in firms.....25.03 68		
3.2.3 Employee development.....56.18 37		
3.2.4 Formal and non-formal studies.....2.05 73		
3.3 Access to Growth Opportunities.....57.51 40		
Empowerment		
3.3.1 Delegation of authority.....55.42 44		
3.3.2 Youth inclusion.....67.09 62		
Collaboration		
3.3.3 Use of virtual social networks.....73.08 51		
3.3.4 Use of virtual professional networks.....34.44 27		

4. RETAIN.....65.42 37		
4.1 Sustainability.....57.34 43		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....51.31 46		
4.1.3 Brain retention.....44.02 55		
4.1.4 Environmental performance.....34.04 74		
4.2 Lifestyle.....73.49 34		
4.2.1 Personal rights.....92.70 31		
4.2.2 Personal safety.....74.82 25		
4.2.3 Physician density.....31.31 56		
4.2.4 Sanitation.....95.15 60		
5. VOCATIONAL AND TECHNICAL SKILLS.....53.91 64		
5.1 Mid-Level Skills.....51.48 60		
5.1.1 Workforce with secondary education.....41.66 74		
5.1.2 Population with secondary education.....53.47 38		
5.1.3 Technicians and associate professionals.....42.80 48		
5.1.4 Labour productivity per employee.....67.99 60		
5.2 Employability.....56.34 60		
5.2.1 Ease of finding skilled employees.....49.54 79		
5.2.2 Relevance of education system to the economy.....48.61 53		
5.2.3 Skills matching.....70.86 44		

6. GLOBAL KNOWLEDGE SKILLS.....33.55 74		
6.1 High-Level Skills.....29.79 87		
6.1.1 Workforce with tertiary education.....23.94 73		
6.1.2 Population with tertiary education.....5.74 98		
6.1.3 Professionals.....24.25 68		
6.1.4 Researchers.....56.74 68		
6.1.5 Senior officials and managers.....26.49 69		
6.1.6 Availability of scientists and engineers.....41.56 86		
6.2 Talent Impact.....37.32 65		
6.2.1 Innovation output.....28.24 59		
6.2.2 High-value exports.....27.62 100		
6.2.3 New product entrepreneurial activity.....n/a n/a		
6.2.4 New business density.....72.36 17		
6.2.5 Scientific journal articles.....21.06 81		

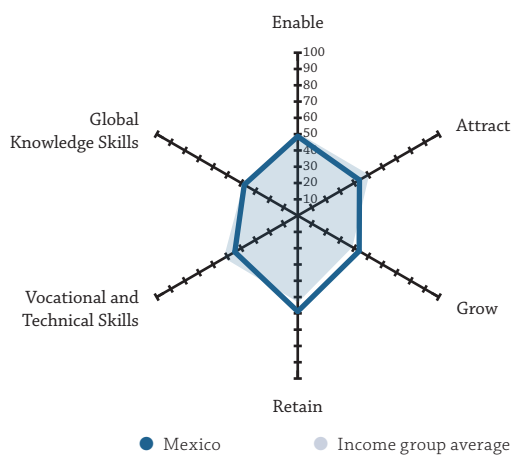
MEXICO

Key Indicators

Rank (out of 134).....	65
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	128.93

GDP per capita (PPP US\$).....	18,833.08
GDP (US\$ billions).....	1,076.16
GTCI score.....	46.20
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	48.62	67
1.1 Regulatory Landscape.....	41.65	91
1.1.1 Government effectiveness.....	47.16	83
1.1.2 Rule of law.....	38.27	105
1.1.3 Political stability.....	46.42	106
1.1.4 Regulatory quality.....	54.48	64
1.1.5 Corruption.....	21.92	102
1.2 Market Landscape.....	53.51	53
1.2.1 Extent of market dominance.....	39.84	82
1.2.2 Ease of doing business.....	74.51	57
1.2.3 Cluster development.....	58.06	35
1.2.4 R&D expenditure.....	6.09	80
1.2.5 ICT infrastructure.....	65.36	69
1.2.6 Urbanisation.....	77.18	36
1.3 Business and Labour Landscape.....	50.70	64
Labour Market		
1.3.1 Labour rights.....	80.60	68
1.3.2 Labour-employer cooperation.....	43.16	60
Management Practice		
1.3.3 Professional management.....	48.02	80
1.3.4 Relationship of pay to productivity.....	48.23	78
Technology Adoption		
1.3.5 Technology utilisation.....	58.16	52
1.3.6 Investment in emerging technologies.....	39.74	64
1.3.7 Firms with website.....	36.97	86
2 ATTRACT.....	43.75	93
2.1 External Openness.....	41.70	85
Attract Business		
2.1.1 FDI and technology transfer.....	74.80	25
2.1.2 Prevalence of foreign ownership.....	79.50	22
Attract People		
2.1.3 Migrant stock.....	7.10	127
2.1.4 International students.....	3.09	108
2.1.5 Brain gain.....	44.02	77
2.2 Internal Openness.....	45.80	102
Social Inclusion		
2.2.1 Tolerance of minorities.....	36.96	74
2.2.2 Tolerance of immigrants.....	58.46	65
2.2.3 Social mobility.....	40.55	103
Gender Equality		
2.2.4 Women in tertiary education.....	58.69	87
2.2.5 Women in high-skilled jobs.....	69.89	54
2.2.6 Leadership opportunities for women.....	10.23	125

	Score	Rank
3 GROW.....	43.54	47
3.1 Formal Education.....	38.50	55
Enrolment		
3.1.1 Vocational enrolment.....	35.58	39
3.1.2 Tertiary enrolment.....	28.66	71
Quality		
3.1.3 Tertiary education expenditure.....	61.55	56
3.1.4 Reading, maths, and science.....	33.50	56
3.1.5 University ranking.....	33.22	56
3.2 Lifelong Learning.....	40.64	42
3.2.1 Business and economics subject ranking.....	30.01	45
3.2.2 Prevalence of training in firms.....	60.28	21
3.2.3 Employee development.....	31.17	83
3.2.4 Formal and non-formal studies.....	41.09	35
3.3 Access to Growth Opportunities.....	51.47	54
Empowerment		
3.3.1 Delegation of authority.....	46.98	68
3.3.2 Youth inclusion.....	62.47	71
Collaboration		
3.3.3 Use of virtual social networks.....	77.34	37
3.3.4 Use of virtual professional networks.....	19.09	56

4 RETAIN.....	58.83	49
4.1 Sustainability.....	56.31	44
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	34.47	77
4.1.3 Brain retention.....	43.52	59
4.1.4 Environmental performance.....	47.27	49
4.2 Lifestyle.....	61.35	57
4.2.1 Personal rights.....	71.64	65
4.2.2 Personal safety.....	22.95	115
4.2.3 Physician density.....	60.34	15
4.2.4 Sanitation.....	90.49	71
5 VOCATIONAL AND TECHNICAL SKILLS.....	44.59	78
5.1 Mid-Level Skills.....	39.84	79
5.1.1 Workforce with secondary education.....	32.84	86
5.1.2 Population with secondary education.....	27.12	80
5.1.3 Technicians and associate professionals.....	30.40	67
5.1.4 Labour productivity per employee.....	68.99	58
5.2 Employability.....	49.34	77
5.2.1 Ease of finding skilled employees.....	53.12	73
5.2.2 Relevance of education system to the economy.....	26.85	101
5.2.3 Skills matching.....	68.05	49

6 GLOBAL KNOWLEDGE SKILLS.....	37.89	63
6.1 High-Level Skills.....	32.82	82
6.1.1 Workforce with tertiary education.....	22.87	75
6.1.2 Population with tertiary education.....	21.09	68
6.1.3 Professionals.....	22.68	72
6.1.4 Researchers.....	50.53	74
6.1.5 Senior officials and managers.....	22.88	75
6.1.6 Availability of scientists and engineers.....	56.87	50
6.2 Talent Impact.....	42.96	50
6.2.1 Innovation output.....	31.59	56
6.2.2 High-value exports.....	73.89	21
6.2.3 New product entrepreneurial activity.....	63.31	20
6.2.4 New business density.....	20.74	83
6.2.5 Scientific journal articles.....	25.25	73

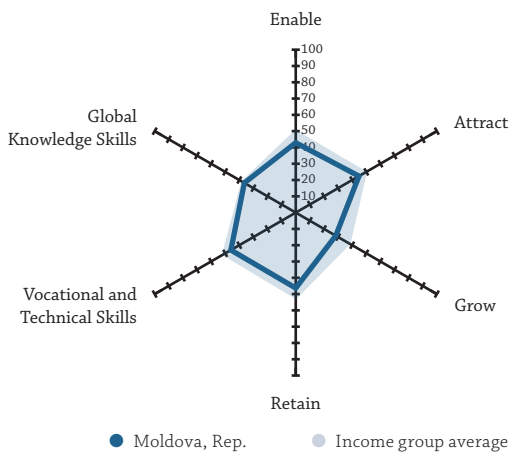
MOLDOVA, REP.

Key Indicators

Rank (out of 134).....	83
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	2.62

GDP per capita (PPP US\$).....	13,001.55
GDP (US\$ billions).....	11.91
GTCI score.....	40.79
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	42.89	91
1.1 Regulatory Landscape.....	43.86	85
1.1.1 Government effectiveness.....	42.13	92
1.1.2 Rule of law.....	44.84	84
1.1.3 Political stability.....	53.92	87
1.1.4 Regulatory quality.....	52.40	69
1.1.5 Corruption.....	26.03	95
1.2 Market Landscape.....	37.71	93
1.2.1 Extent of market dominance.....	28.84	103
1.2.2 Ease of doing business.....	78.11	46
1.2.3 Cluster development.....	4.13	131
1.2.4 R&D expenditure.....	4.85	88
1.2.5 ICT infrastructure.....	76.31	55
1.2.6 Urbanisation.....	34.03	106
1.3 Business and Labour Landscape.....	47.08	78
Labour Market		
1.3.1 Labour rights.....	91.10	43
1.3.2 Labour-employer cooperation.....	41.64	65
Management Practice		
1.3.3 Professional management.....	37.18	103
1.3.4 Relationship of pay to productivity.....	57.06	57
Technology Adoption		
1.3.5 Technology utilisation.....	38.40	102
1.3.6 Investment in emerging technologies.....	19.51	118
1.3.7 Firms with website.....	44.67	74
2 ATTRACT.....	44.78	90
2.1 External Openness.....	35.43	110
Attract Business		
2.1.1 FDI and technology transfer.....	47.39	94
2.1.2 Prevalence of foreign ownership.....	36.18	119
Attract People		
2.1.3 Migrant stock.....	28.09	88
2.1.4 International students.....	47.91	40
2.1.5 Brain gain.....	17.58	127
2.2 Internal Openness.....	54.13	68
Social Inclusion		
2.2.1 Tolerance of minorities.....	35.87	75
2.2.2 Tolerance of immigrants.....	41.54	98
2.2.3 Social mobility.....	36.75	112
Gender Equality		
2.2.4 Women in tertiary education.....	70.36	45
2.2.5 Women in high-skilled jobs.....	91.55	4
2.2.6 Leadership opportunities for women.....	48.74	58

	Score	Rank
3 GROW.....	28.36	93
3.1 Formal Education.....	30.11	78
Enrolment		
3.1.1 Vocational enrolment.....	28.71	45
3.1.2 Tertiary enrolment.....	27.03	75
Quality		
3.1.3 Tertiary education expenditure.....	57.96	65
3.1.4 Reading, maths, and science.....	36.85	50
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	21.25	92
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	42.52	38
3.2.3 Employee development.....	21.24	115
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	33.71	103
Empowerment		
3.3.1 Delegation of authority.....	38.70	98
3.3.2 Youth inclusion.....	47.01	95
Collaboration		
3.3.3 Use of virtual social networks.....	40.96	99
3.3.4 Use of virtual professional networks.....	8.17	93

4 RETAIN.....	46.32	83
4.1 Sustainability.....	33.52	94
4.1.1 Pension coverage.....	74.95	67
4.1.2 Social protection.....	20.01	117
4.1.3 Brain retention.....	6.29	128
4.1.4 Environmental performance.....	32.80	77
4.2 Lifestyle.....	59.12	65
4.2.1 Personal rights.....	80.27	55
4.2.2 Personal safety.....	50.17	73
4.2.3 Physician density.....	31.63	55
4.2.4 Sanitation.....	74.44	93

5 VOCATIONAL AND TECHNICAL SKILLS.....	45.96	76
5.1 Mid-Level Skills.....	47.50	67
5.1.1 Workforce with secondary education.....	49.67	58
5.1.2 Population with secondary education.....	58.98	31
5.1.3 Technicians and associate professionals.....	26.95	74
5.1.4 Labour productivity per employee.....	54.39	81
5.2 Employability.....	44.42	92
5.2.1 Ease of finding skilled employees.....	18.61	131
5.2.2 Relevance of education system to the economy.....	31.49	96
5.2.3 Skills matching.....	83.17	17

6 GLOBAL KNOWLEDGE SKILLS.....	36.42	67
6.1 High-Level Skills.....	43.40	49
6.1.1 Workforce with tertiary education.....	33.75	50
6.1.2 Population with tertiary education.....	44.52	26
6.1.3 Professionals.....	40.99	42
6.1.4 Researchers.....	62.60	58
6.1.5 Senior officials and managers.....	55.13	31
6.1.6 Availability of scientists and engineers.....	23.41	124
6.2 Talent Impact.....	29.45	78
6.2.1 Innovation output.....	35.18	47
6.2.2 High-value exports.....	33.21	93
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	32.02	59
6.2.5 Scientific journal articles.....	17.37	82

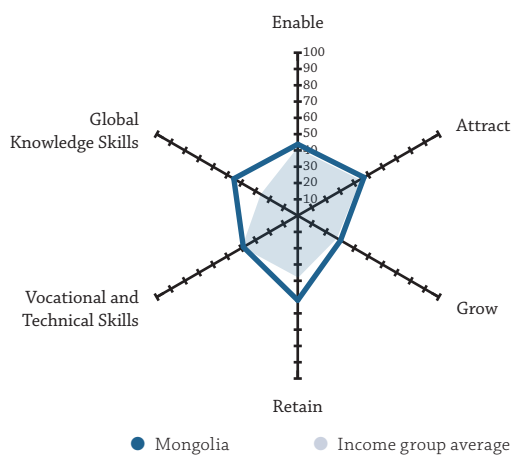
MONGOLIA

Key Indicators

Rank (out of 134)	77
Income group	Lower-middle income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	3.28

GDP per capita (PPP US\$)	12,100.59
GDP (US\$ billions)	13.14
GTCI score	42.82
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	43.80	90
1.1 Regulatory Landscape	50.01	68
1.1.1 Government effectiveness	46.32	86
1.1.2 Rule of law	47.30	75
1.1.3 Political stability	77.12	31
1.1.4 Regulatory quality	51.94	72
1.1.5 Corruption	27.40	91
1.2 Market Landscape	32.76	110
1.2.1 Extent of market dominance	5.88	131
1.2.2 Ease of doing business	66.40	76
1.2.3 Cluster development	17.42	118
1.2.4 R&D expenditure	1.81	108
1.2.5 ICT infrastructure	41.30	97
1.2.6 Urbanisation	63.72	59
1.3 Business and Labour Landscape	48.64	69
Labour Market		
1.3.1 Labour rights	98.50	14
1.3.2 Labour-employer cooperation	39.03	71
Management Practice		
1.3.3 Professional management	48.31	78
1.3.4 Relationship of pay to productivity	45.89	88
Technology Adoption		
1.3.5 Technology utilisation	43.44	89
1.3.6 Investment in emerging technologies	32.94	90
1.3.7 Firms with website	32.40	93
2 ATTRACT	46.95	81
2.1 External Openness	29.16	123
Attract Business		
2.1.1 FDI and technology transfer	43.29	104
2.1.2 Prevalence of foreign ownership	42.63	105
Attract People		
2.1.3 Migrant stock	12.76	115
2.1.4 International students	17.86	86
2.1.5 Brain gain	29.24	112
2.2 Internal Openness	64.74	25
Social Inclusion		
2.2.1 Tolerance of minorities	77.17	14
2.2.2 Tolerance of immigrants	30.77	118
2.2.3 Social mobility	57.78	43
Gender Equality		
2.2.4 Women in tertiary education	74.13	26
2.2.5 Women in high-skilled jobs	91.21	5
2.2.6 Leadership opportunities for women	57.36	42

	Score	Rank
3 GROW	30.36	85
3.1 Formal Education	19.36	105
Enrolment		
3.1.1 Vocational enrolment	16.57	63
3.1.2 Tertiary enrolment	45.60	40
Quality		
3.1.3 Tertiary education expenditure	15.25	112
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	27.91	67
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	81.82	4
3.2.3 Employee development	29.20	88
3.2.4 Formal and non-formal studies	0.63	85
3.3 Access to Growth Opportunities	43.80	78
Empowerment		
3.3.1 Delegation of authority	21.75	124
3.3.2 Youth inclusion	63.86	68
Collaboration		
3.3.3 Use of virtual social networks	78.90	31
3.3.4 Use of virtual professional networks	10.71	80

4 RETAIN	51.96	69
4.1 Sustainability	39.93	83
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	31.92	84
4.1.3 Brain retention	16.50	123
4.1.4 Environmental performance	11.29	117
4.2 Lifestyle	63.99	52
4.2.1 Personal rights	88.48	42
4.2.2 Personal safety	64.42	42
4.2.3 Physician density	47.84	30
4.2.4 Sanitation	55.20	108

5 VOCATIONAL AND TECHNICAL SKILLS	38.57	98
5.1 Mid-Level Skills	42.66	76
5.1.1 Workforce with secondary education	54.48	48
5.1.2 Population with secondary education	61.99	29
5.1.3 Technicians and associate professionals	11.49	111
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	34.49	114
5.2.1 Ease of finding skilled employees	3.06	133
5.2.2 Relevance of education system to the economy	19.26	117
5.2.3 Skills matching	81.15	18

6 GLOBAL KNOWLEDGE SKILLS	45.30	49
6.1 High-Level Skills	47.13	43
6.1.1 Workforce with tertiary education	48.51	25
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	41.46	39
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	54.21	33
6.1.6 Availability of scientists and engineers	44.32	75
6.2 Talent Impact	43.48	46
6.2.1 Innovation output	32.60	53
6.2.2 High-value exports	72.17	23
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	58.13	28
6.2.5 Scientific journal articles	11.00	91

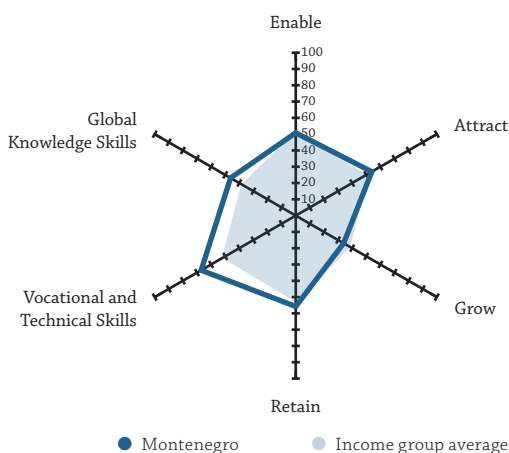
MONTENEGRO

Key Indicators

Rank (out of 134).....	49
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	0.62

GDP per capita (PPP US\$)	20,566.64
GDP (US\$ billions)	4.78
GTCI score.....	51.28
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	50.81	59
1.1 Regulatory Landscape.....	54.79	55
1.1.1 Government effectiveness.....	54.12	60
1.1.2 Rule of law.....	55.64	57
1.1.3 Political stability.....	62.81	65
1.1.4 Regulatory quality.....	60.27	54
1.1.5 Corruption.....	41.10	55
1.2 Market Landscape.....	49.50	67
1.2.1 Extent of market dominance.....	45.57	63
1.2.2 Ease of doing business.....	77.10	48
1.2.3 Cluster development.....	34.60	90
1.2.4 R&D expenditure.....	7.13	74
1.2.5 ICT infrastructure.....	70.75	62
1.2.6 Urbanisation.....	61.84	63
1.3 Business and Labour Landscape.....	48.15	72
Labour Market		
1.3.1 Labour rights.....	86.00	55
1.3.2 Labour-employer cooperation.....	34.75	90
Management Practice		
1.3.3 Professional management.....	47.54	81
1.3.4 Relationship of pay to productivity.....	52.29	72
Technology Adoption		
1.3.5 Technology utilisation.....	46.36	76
1.3.6 Investment in emerging technologies.....	33.65	87
1.3.7 Firms with website.....	36.45	87
2. ATTRACT	53.89	52
2.1 External Openness.....	53.17	48
Attract Business		
2.1.1 FDI and technology transfer.....	61.32	56
2.1.2 Prevalence of foreign ownership.....	58.90	63
Attract People		
2.1.3 Migrant stock.....	59.89	38
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	32.59	105
2.2 Internal Openness.....	54.60	64
Social Inclusion		
2.2.1 Tolerance of minorities.....	6.52	118
2.2.2 Tolerance of immigrants.....	70.77	42
2.2.3 Social mobility.....	52.19	63
Gender Equality		
2.2.4 Women in tertiary education.....	68.36	52
2.2.5 Women in high-skilled jobs.....	78.14	24
2.2.6 Leadership opportunities for women.....	51.59	50

	Score	Rank
3. GROW	33.95	76
3.1 Formal Education.....	38.79	54
Enrolment		
3.1.1 Vocational enrolment.....	65.65	9
3.1.2 Tertiary enrolment.....	37.56	56
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	35.86	54
3.1.5 University ranking.....	16.09	85
3.2 Lifelong Learning.....	14.63	116
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	11.33	100
3.2.3 Employee development.....	32.55	78
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	48.42	63
Empowerment		
3.3.1 Delegation of authority.....	37.93	99
3.3.2 Youth inclusion.....	68.60	57
Collaboration		
3.3.3 Use of virtual social networks.....	68.30	61
3.3.4 Use of virtual professional networks.....	18.87	58

4. RETAIN	55.79	53
4.1 Sustainability.....	48.97	64
4.1.1 Pension coverage.....	90.51	54
4.1.2 Social protection.....	34.24	79
4.1.3 Brain retention.....	34.99	79
4.1.4 Environmental performance.....	36.16	69
4.2 Lifestyle.....	62.61	54
4.2.1 Personal rights.....	67.02	74
4.2.2 Personal safety.....	51.73	71
4.2.3 Physician density.....	34.10	51
4.2.4 Sanitation.....	97.60	46
5. VOCATIONAL AND TECHNICAL SKILLS	67.03	23
5.1 Mid-Level Skills.....	70.79	17
5.1.1 Workforce with secondary education.....	82.87	10
5.1.2 Population with secondary education.....	74.72	14
5.1.3 Technicians and associate professionals.....	54.77	34
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	63.28	39
5.2.1 Ease of finding skilled employees.....	45.12	94
5.2.2 Relevance of education system to the economy.....	51.57	48
5.2.3 Skills matching.....	93.15	2

6. GLOBAL KNOWLEDGE SKILLS	46.20	47
6.1 High-Level Skills.....	43.27	51
6.1.1 Workforce with tertiary education.....	36.63	44
6.1.2 Population with tertiary education.....	25.38	59
6.1.3 Professionals.....	43.83	35
6.1.4 Researchers.....	63.42	55
6.1.5 Senior officials and managers.....	39.77	46
6.1.6 Availability of scientists and engineers.....	50.61	64
6.2 Talent Impact.....	49.13	42
6.2.1 Innovation output.....	34.88	48
6.2.2 High-value exports.....	34.34	90
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	78.07	9
6.2.5 Scientific journal articles.....	49.24	48

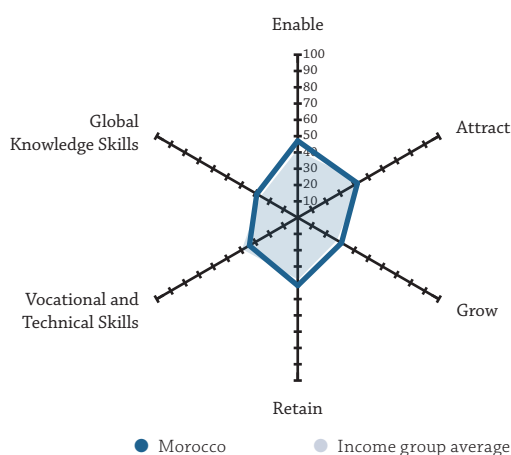
MOROCCO

Key Indicators

Rank (out of 134)	95
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	36.91

GDP per capita (PPP US\$)	7,296.16
GDP (US\$ billions)	112.87
GTCI score	37.58
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	47.12	80
1.1 Regulatory Landscape	46.86	78
1.1.1 Government effectiveness	48.00	81
1.1.2 Rule of law	50.31	70
1.1.3 Political stability	54.22	85
1.1.4 Regulatory quality	47.51	85
1.1.5 Corruption	34.25	69
1.2 Market Landscape	49.39	68
1.2.1 Extent of market dominance	45.94	62
1.2.2 Ease of doing business	76.32	51
1.2.3 Cluster development	37.66	79
1.2.4 R&D expenditure	14.24	49
1.2.5 ICT infrastructure	65.33	70
1.2.6 Urbanisation	56.83	72
1.3 Business and Labour Landscape	45.12	85
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	29.12	106
Management Practice		
1.3.3 Professional management	54.39	60
1.3.4 Relationship of pay to productivity	45.96	87
Technology Adoption		
1.3.5 Technology utilisation	53.23	60
1.3.6 Investment in emerging technologies	34.94	81
1.3.7 Firms with website	53.11	62
2. ATTRACT	42.30	97
2.1 External Openness	44.46	75
Attract Business		
2.1.1 FDI and technology transfer	66.15	47
2.1.2 Prevalence of foreign ownership	75.95	27
Attract People		
2.1.3 Migrant stock	5.06	128
2.1.4 International students	27.40	76
2.1.5 Brain gain	47.72	64
2.2 Internal Openness	40.14	118
Social Inclusion		
2.2.1 Tolerance of minorities	13.04	109
2.2.2 Tolerance of immigrants	38.46	103
2.2.3 Social mobility	55.63	50
Gender Equality		
2.2.4 Women in tertiary education	56.50	93
2.2.5 Women in high-skilled jobs	n/a	n/a
2.2.6 Leadership opportunities for women	37.06	83

	Score	Rank
3. GROW	31.04	83
3.1 Formal Education	28.52	83
Enrolment		
3.1.1 Vocational enrolment	16.13	65
3.1.2 Tertiary enrolment	26.56	77
Quality		
3.1.3 Tertiary education expenditure	61.65	55
3.1.4 Reading, maths, and science	13.80	74
3.1.5 University ranking	24.49	73
3.2 Lifelong Learning	27.05	69
3.2.1 Business and economics subject ranking	16.51	68
3.2.2 Prevalence of training in firms	39.16	46
3.2.3 Employee development	25.49	103
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	37.54	93
Empowerment		
3.3.1 Delegation of authority	41.52	91
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	58.73	80
3.3.4 Use of virtual professional networks	12.36	77

4. RETAIN	41.73	93
4.1 Sustainability	32.09	97
4.1.1 Pension coverage	39.19	88
4.1.2 Social protection	26.89	101
4.1.3 Brain retention	33.16	85
4.1.4 Environmental performance	29.10	85
4.2 Lifestyle	51.37	84
4.2.1 Personal rights	50.79	98
4.2.2 Personal safety	58.38	60
4.2.3 Physician density	8.71	98
4.2.4 Sanitation	87.60	77

5. VOCATIONAL AND TECHNICAL SKILLS	34.25	107
5.1 Mid-Level Skills	33.23	93
5.1.1 Workforce with secondary education	27.61	99
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	18.09	96
5.1.4 Labour productivity per employee	54.00	82
5.2 Employability	35.26	113
5.2.1 Ease of finding skilled employees	44.29	96
5.2.2 Relevance of education system to the economy	26.23	103
5.2.3 Skills matching	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS	29.02	85
6.1 High-Level Skills	27.86	94
6.1.1 Workforce with tertiary education	10.59	104
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	3.43	127
6.1.4 Researchers	69.21	49
6.1.5 Senior officials and managers	4.09	121
6.1.6 Availability of scientists and engineers	51.99	60
6.2 Talent Impact	30.18	75
6.2.1 Innovation output	23.71	68
6.2.2 High-value exports	42.80	82
6.2.3 New product entrepreneurial activity	25.25	75
6.2.4 New business density	32.47	57
6.2.5 Scientific journal articles	26.66	70

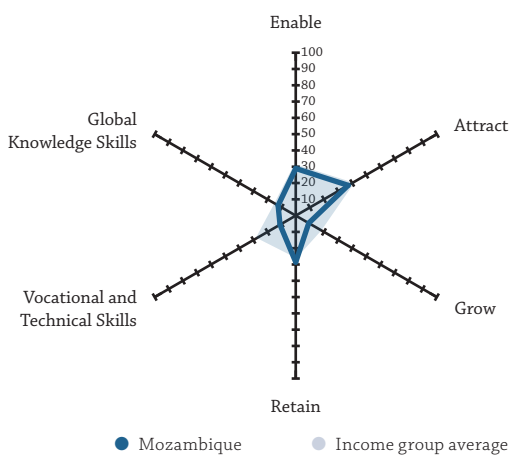
MOZAMBIQUE

Key Indicators

Rank (out of 134) **130**
 Income group **Low income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **31.26**

GDP per capita (PPP US\$) **1,296.58**
 GDP (US\$ billions) **14.02**
 GTCI score **21.25**
 GTCI score (income group average) **23.75**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	28.93	126
1.1 Regulatory Landscape	31.57	119
1.1.1 Government effectiveness	32.35	119
1.1.2 Rule of law	29.94	121
1.1.3 Political stability	45.72	107
1.1.4 Regulatory quality	36.15	115
1.1.5 Corruption	13.70	118
1.2 Market Landscape	23.62	125
1.2.1 Extent of market dominance	20.23	124
1.2.2 Ease of doing business	43.80	112
1.2.3 Cluster development	21.04	115
1.2.4 R&D expenditure	6.10	79
1.2.5 ICT infrastructure	24.15	119
1.2.6 Urbanisation	26.40	115
1.3 Business and Labour Landscape	31.60	121
Labour Market		
1.3.1 Labour rights	80.00	70
1.3.2 Labour-employer cooperation	12.69	126
Management Practice		
1.3.3 Professional management	21.50	130
1.3.4 Relationship of pay to productivity	17.72	130
Technology Adoption		
1.3.5 Technology utilisation	27.61	117
1.3.6 Investment in emerging technologies	26.00	106
1.3.7 Firms with website	35.64	89
2 ATTRACT	37.15	115
2.1 External Openness	34.74	113
Attract Business		
2.1.1 FDI and technology transfer	45.77	98
2.1.2 Prevalence of foreign ownership	53.35	84
Attract People		
2.1.3 Migrant stock	23.04	101
2.1.4 International students	7.22	104
2.1.5 Brain gain	44.32	75
2.2 Internal Openness	39.55	119
Social Inclusion		
2.2.1 Tolerance of minorities	42.39	64
2.2.2 Tolerance of immigrants	63.08	57
2.2.3 Social mobility	24.63	129
Gender Equality		
2.2.4 Women in tertiary education	47.35	105
2.2.5 Women in high-skilled jobs	39.82	109
2.2.6 Leadership opportunities for women	20.06	114

	Score	Rank
3 GROW	9.21	133
3.1 Formal Education	11.79	127
Enrolment		
3.1.1 Vocational enrolment	1.76	96
3.1.2 Tertiary enrolment	4.57	116
Quality		
3.1.3 Tertiary education expenditure	40.84	94
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	6.49	133
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	18.18	86
3.2.3 Employee development	1.29	133
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	9.34	132
Empowerment		
3.3.1 Delegation of authority	19.06	125
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	6.96	123
3.3.4 Use of virtual professional networks	1.99	122

4 RETAIN	28.56	115
4.1 Sustainability	29.28	103
4.1.1 Pension coverage	52.02	82
4.1.2 Social protection	20.96	115
4.1.3 Brain retention	29.86	96
4.1.4 Environmental performance	14.29	108
4.2 Lifestyle	27.85	125
4.2.1 Personal rights	58.14	91
4.2.2 Personal safety	28.85	109
4.2.3 Physician density	0.61	128
4.2.4 Sanitation	23.78	123

5 VOCATIONAL AND TECHNICAL SKILLS	11.15	134
5.1 Mid-Level Skills	6.28	131
5.1.1 Workforce with secondary education	7.35	120
5.1.2 Population with secondary education	9.49	103
5.1.3 Technicians and associate professionals	5.36	123
5.1.4 Labour productivity per employee	2.92	117
5.2 Employability	16.03	133
5.2.1 Ease of finding skilled employees	22.79	129
5.2.2 Relevance of education system to the economy	12.97	129
5.2.3 Skills matching	12.33	94

6 GLOBAL KNOWLEDGE SKILLS	12.50	124
6.1 High-Level Skills	8.62	132
6.1.1 Workforce with tertiary education	1.91	126
6.1.2 Population with tertiary education	1.21	106
6.1.3 Professionals	4.01	124
6.1.4 Researchers	20.40	97
6.1.5 Senior officials and managers	1.30	125
6.1.6 Availability of scientists and engineers	22.87	125
6.2 Talent Impact	16.37	112
6.2.1 Innovation output	2.33	122
6.2.2 High-value exports	45.68	74
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	1.12	127

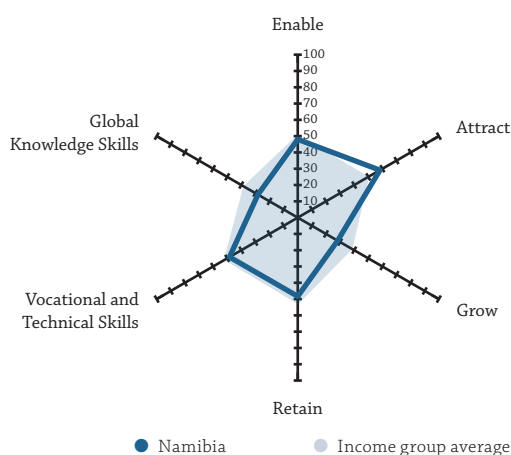
NAMIBIA

Key Indicators

Rank (out of 134).....	74
Income group.....	Upper-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	2.54

GDP per capita (PPP US\$).....	9,382.22
GDP (US\$ billions).....	10.70
GTCI score.....	43.24
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	48.02	74
1.1 Regulatory Landscape.....	57.42	51
1.1.1 Government effectiveness.....	52.80	65
1.1.2 Rule of law.....	60.57	49
1.1.3 Political stability.....	74.64	36
1.1.4 Regulatory quality.....	49.78	76
1.1.5 Corruption.....	49.32	47
1.2 Market Landscape.....	36.09	98
1.2.1 Extent of market dominance.....	36.50	88
1.2.2 Ease of doing business.....	55.04	91
1.2.3 Cluster development.....	36.84	83
1.2.4 R&D expenditure.....	6.89	76
1.2.5 ICT infrastructure.....	38.74	102
1.2.6 Urbanisation.....	42.55	98
1.3 Business and Labour Landscape.....	50.55	65
Labour Market		
1.3.1 Labour rights.....	92.70	37
1.3.2 Labour-employer cooperation.....	38.03	79
Management Practice		
1.3.3 Professional management.....	52.75	68
1.3.4 Relationship of pay to productivity.....	54.43	64
Technology Adoption		
1.3.5 Technology utilisation.....	46.50	74
1.3.6 Investment in emerging technologies.....	34.86	82
1.3.7 Firms with website.....	34.60	91
2 ATTRACT.....	58.24	38
2.1 External Openness.....	54.30	43
Attract Business		
2.1.1 FDI and technology transfer.....	54.09	76
2.1.2 Prevalence of foreign ownership.....	67.74	46
Attract People		
2.1.3 Migrant stock.....	47.42	52
2.1.4 International students.....	49.89	38
2.1.5 Brain gain.....	52.38	51
2.2 Internal Openness.....	62.19	33
Social Inclusion		
2.2.1 Tolerance of minorities.....	55.43	46
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	50.95	68
Gender Equality		
2.2.4 Women in tertiary education.....	92.59	2
2.2.5 Women in high-skilled jobs.....	75.21	32
2.2.6 Leadership opportunities for women.....	48.16	59

	Score	Rank
3 GROW.....	28.29	94
3.1 Formal Education.....	28.76	82
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	16.39	92
Quality		
3.1.3 Tertiary education expenditure.....	69.90	37
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	20.71	94
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	24.76	69
3.2.3 Employee development.....	48.60	47
3.2.4 Formal and non-formal studies.....	9.49	50
3.3 Access to Growth Opportunities.....	35.39	101
Empowerment		
3.3.1 Delegation of authority.....	53.85	48
3.3.2 Youth inclusion.....	40.08	105
Collaboration		
3.3.3 Use of virtual social networks.....	29.52	105
3.3.4 Use of virtual professional networks.....	18.10	61

4 RETAIN.....	48.31	80
4.1 Sustainability.....	54.49	48
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	43.39	61
4.1.3 Brain retention.....	49.19	45
4.1.4 Environmental performance.....	25.40	88
4.2 Lifestyle.....	42.12	99
4.2.1 Personal rights.....	85.12	48
4.2.2 Personal safety.....	47.07	79
4.2.3 Physician density.....	6.96	101
4.2.4 Sanitation.....	29.33	120
5 VOCATIONAL AND TECHNICAL SKILLS.....	48.37	71
5.1 Mid-Level Skills.....	52.69	59
5.1.1 Workforce with secondary education.....	77.07	15
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	22.67	84
5.1.4 Labour productivity per employee.....	58.32	77
5.2 Employability.....	44.05	93
5.2.1 Ease of finding skilled employees.....	43.53	97
5.2.2 Relevance of education system to the economy.....	36.89	86
5.2.3 Skills matching.....	51.73	75

6 GLOBAL KNOWLEDGE SKILLS.....	28.23	86
6.1 High-Level Skills.....	29.42	88
6.1.1 Workforce with tertiary education.....	13.43	99
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	17.43	87
6.1.4 Researchers.....	39.19	82
6.1.5 Senior officials and managers.....	37.75	53
6.1.6 Availability of scientists and engineers.....	39.32	93
6.2 Talent Impact.....	27.05	84
6.2.1 Innovation output.....	10.01	103
6.2.2 High-value exports.....	5.12	123
6.2.3 New product entrepreneurial activity.....	82.23	7
6.2.4 New business density.....	22.98	78
6.2.5 Scientific journal articles.....	14.88	84

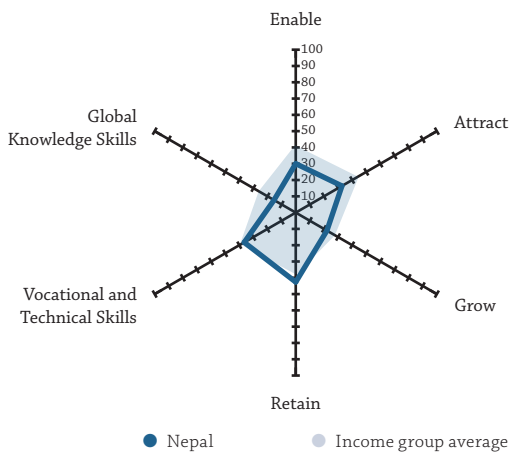
NEPAL

Key Indicators

Rank (out of 134) **113**
 Income group **Lower-middle income**
 Regional group **Central and Southern Asia**
 Population (millions) **29.14**

GDP per capita (PPP US\$) **4,008.75**
 GDP (US\$ billions) **33.66**
 GTCI score **29.90**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE 30.06		125
1.1 Regulatory Landscape 36.38		108
1.1.1 Government effectiveness 27.42		123
1.1.2 Rule of law 41.10		98
1.1.3 Political stability 52.05		92
1.1.4 Regulatory quality 36.67		113
1.1.5 Corruption 24.66		97
1.2 Market Landscape 25.08		121
1.2.1 Extent of market dominance 20.20		125
1.2.2 Ease of doing business 58.29		86
1.2.3 Cluster development 25.88		109
1.2.4 R&D expenditure 5.87		81
1.2.5 ICT infrastructure 32.51		113
1.2.6 Urbanisation 7.71		130
1.3 Business and Labour Landscape 28.71		125
Labour Market		
1.3.1 Labour rights n/a		n/a
1.3.2 Labour-employer cooperation 22.55		116
Management Practice		
1.3.3 Professional management 35.60		110
1.3.4 Relationship of pay to productivity 42.98		94
Technology Adoption		
1.3.5 Technology utilisation 25.63		121
1.3.6 Investment in emerging technologies 26.30		105
1.3.7 Firms with website 19.21		107
2. ATTRACT 32.74		126
2.1 External Openness 21.89		131
Attract Business		
2.1.1 FDI and technology transfer 32.35		123
2.1.2 Prevalence of foreign ownership 20.84		131
Attract People		
2.1.3 Migrant stock 29.39		84
2.1.4 International students 0.00		112
2.1.5 Brain gain 26.87		114
2.2 Internal Openness 43.58		109
Social Inclusion		
2.2.1 Tolerance of minorities 3.26		121
2.2.2 Tolerance of immigrants 84.62		15
2.2.3 Social mobility 40.41		104
Gender Equality		
2.2.4 Women in tertiary education 63.35		73
2.2.5 Women in high-skilled jobs 42.33		108
2.2.6 Leadership opportunities for women 27.53		103

	Score	Rank
3. GROW 22.10		112
3.1 Formal Education 20.50		100
Enrolment		
3.1.1 Vocational enrolment n/a		n/a
3.1.2 Tertiary enrolment 8.80		104
Quality		
3.1.3 Tertiary education expenditure 26.14		108
3.1.4 Reading, maths, and science n/a		n/a
3.1.5 University ranking 26.56		67
3.2 Lifelong Learning 17.48		106
3.2.1 Business and economics subject ranking 0.00		70
3.2.2 Prevalence of training in firms 33.85		54
3.2.3 Employee development 18.61		120
3.2.4 Formal and non-formal studies n/a		n/a
3.3 Access to Growth Opportunities 28.31		114
Empowerment		
3.3.1 Delegation of authority 32.93		111
3.3.2 Youth inclusion 32.98		112
Collaboration		
3.3.3 Use of virtual social networks 43.04		97
3.3.4 Use of virtual professional networks 4.30		111
4. RETAIN 42.61		90
4.1 Sustainability 34.65		92
4.1.1 Pension coverage 84.04		63
4.1.2 Social protection 19.39		119
4.1.3 Brain retention 23.00		109
4.1.4 Environmental performance 12.17		116
4.2 Lifestyle 50.56		87
4.2.1 Personal rights 73.08		63
4.2.2 Personal safety 60.42		50
4.2.3 Physician density 9.69		94
4.2.4 Sanitation 59.06		102
5. VOCATIONAL AND TECHNICAL SKILLS 36.50		102
5.1 Mid-Level Skills 26.84		103
5.1.1 Workforce with secondary education 45.14		65
5.1.2 Population with secondary education 17.13		98
5.1.3 Technicians and associate professionals 18.26		95
5.1.4 Labour productivity per employee n/a		n/a
5.2 Employability 46.16		88
5.2.1 Ease of finding skilled employees 46.79		89
5.2.2 Relevance of education system to the economy 39.79		76
5.2.3 Skills matching 51.91		74
6. GLOBAL KNOWLEDGE SKILLS 15.40		121
6.1 High-Level Skills 15.46		118
6.1.1 Workforce with tertiary education 10.92		103
6.1.2 Population with tertiary education 4.85		99
6.1.3 Professionals 18.74		83
6.1.4 Researchers n/a		n/a
6.1.5 Senior officials and managers 7.97		111
6.1.6 Availability of scientists and engineers 34.82		107
6.2 Talent Impact 15.34		115
6.2.1 Innovation output 9.51		105
6.2.2 High-value exports 18.84		108
6.2.3 New product entrepreneurial activity n/a		n/a
6.2.4 New business density 25.68		74
6.2.5 Scientific journal articles 7.34		97

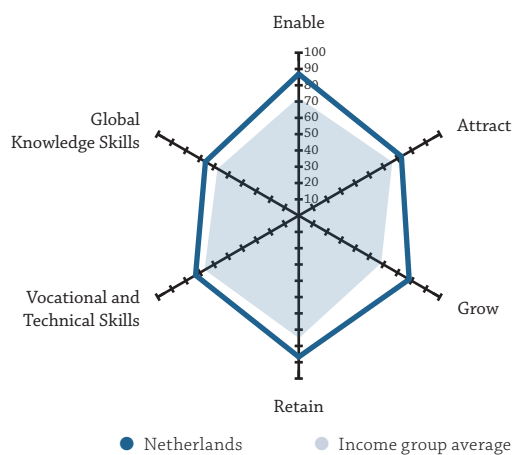
NETHERLANDS

Key Indicators

Rank (out of 134).....	6
Income group.....	High income
Regional group.....	Europe
Population (millions).....	17.44

GDP per capita (PPP US\$).....	59,228.83
GDP (US\$ billions).....	912.24
GTCI score.....	77.31
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	86.93	5
1.1 Regulatory Landscape.....	90.55	9
1.1.1 Government effectiveness.....	90.60	7
1.1.2 Rule of law.....	95.08	9
1.1.3 Political stability.....	81.95	22
1.1.4 Regulatory quality.....	93.36	4
1.1.5 Corruption.....	91.78	8
1.2 Market Landscape.....	80.60	6
1.2.1 Extent of market dominance.....	85.53	5
1.2.2 Ease of doing business.....	81.14	40
1.2.3 Cluster development.....	89.27	5
1.2.4 R&D expenditure.....	43.65	13
1.2.5 ICT infrastructure.....	93.79	11
1.2.6 Urbanisation.....	90.21	11
1.3 Business and Labour Landscape.....	89.63	3
Labour Market		
1.3.1 Labour rights.....	96.20	24
1.3.2 Labour-employer cooperation.....	88.76	5
Management Practice		
1.3.3 Professional management.....	97.92	2
1.3.4 Relationship of pay to productivity.....	77.79	18
Technology Adoption		
1.3.5 Technology utilisation.....	92.40	7
1.3.6 Investment in emerging technologies.....	87.95	5
1.3.7 Firms with website.....	86.37	9
2 ATTRACT.....	72.74	13
2.1 External Openness.....	74.03	13
Attract Business		
2.1.1 FDI and technology transfer.....	85.23	8
2.1.2 Prevalence of foreign ownership.....	76.69	26
Attract People		
2.1.3 Migrant stock.....	62.21	32
2.1.4 International students.....	64.86	15
2.1.5 Brain gain.....	81.19	9
2.2 Internal Openness.....	71.44	14
Social Inclusion		
2.2.1 Tolerance of minorities.....	66.30	30
2.2.2 Tolerance of immigrants.....	76.92	28
2.2.3 Social mobility.....	89.57	9
Gender Equality		
2.2.4 Women in tertiary education.....	61.74	79
2.2.5 Women in high-skilled jobs.....	65.25	72
2.2.6 Leadership opportunities for women.....	68.84	25

	Score	Rank
3 GROW.....	78.25	4
3.1 Formal Education.....	70.01	5
Enrolment		
3.1.1 Vocational enrolment.....	64.93	11
3.1.2 Tertiary enrolment.....	60.74	13
Quality		
3.1.3 Tertiary education expenditure.....	83.56	11
3.1.4 Reading, maths, and science.....	68.74	14
3.1.5 University ranking.....	72.10	9
3.2 Lifelong Learning.....	78.24	5
3.2.1 Business and economics subject ranking.....	73.41	7
3.2.2 Prevalence of training in firms.....	64.90	16
3.2.3 Employee development.....	87.82	6
3.2.4 Formal and non-formal studies.....	86.83	4
3.3 Access to Growth Opportunities.....	86.48	2
Empowerment		
3.3.1 Delegation of authority.....	91.75	5
3.3.2 Youth inclusion.....	93.88	4
Collaboration		
3.3.3 Use of virtual social networks.....	88.57	7
3.3.4 Use of virtual professional networks.....	71.74	3

4 RETAIN.....	86.71	8
4.1 Sustainability.....	90.71	6
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	90.56	8
4.1.3 Brain retention.....	84.98	6
4.1.4 Environmental performance.....	87.30	11
4.2 Lifestyle.....	82.71	17
4.2.1 Personal rights.....	98.82	8
4.2.2 Personal safety.....	88.45	10
4.2.3 Physician density.....	46.02	33
4.2.4 Sanitation.....	97.53	48

5 VOCATIONAL AND TECHNICAL SKILLS.....	73.12	11
5.1 Mid-Level Skills.....	66.58	29
5.1.1 Workforce with secondary education.....	52.73	52
5.1.2 Population with secondary education.....	52.94	39
5.1.3 Technicians and associate professionals.....	71.19	16
5.1.4 Labour productivity per employee.....	89.45	15
5.2 Employability.....	79.67	10
5.2.1 Ease of finding skilled employees.....	81.01	18
5.2.2 Relevance of education system to the economy.....	83.13	5
5.2.3 Skills matching.....	74.87	36

6 GLOBAL KNOWLEDGE SKILLS.....	66.13	14
6.1 High-Level Skills.....	60.95	21
6.1.1 Workforce with tertiary education.....	49.13	23
6.1.2 Population with tertiary education.....	43.87	28
6.1.3 Professionals.....	67.26	5
6.1.4 Researchers.....	94.44	9
6.1.5 Senior officials and managers.....	39.81	45
6.1.6 Availability of scientists and engineers.....	71.22	24
6.2 Talent Impact.....	71.31	13
6.2.1 Innovation output.....	82.56	4
6.2.2 High-value exports.....	76.70	16
6.2.3 New product entrepreneurial activity.....	45.49	48
6.2.4 New business density.....	62.11	24
6.2.5 Scientific journal articles.....	89.70	9

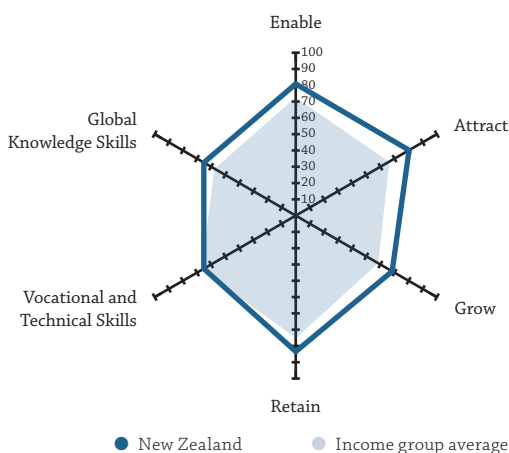
NEW ZEALAND

Key Indicators

Rank (out of 134) **15**
 Income group **High income**
 Regional group **Eastern, Southeastern Asia and Oceania**
 Population (millions) **5.08**

GDP per capita (PPP US\$) **44,251.79**
 GDP (US\$ billions) **212.48**
 GTCI score **73.86**
 GTCI score (income group average) **65.28**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	80.82	13
1.1 Regulatory Landscape	95.01	2
1.1.1 Government effectiveness	87.78	10
1.1.2 Rule of law	96.84	6
1.1.3 Political stability	96.65	3
1.1.4 Regulatory quality	93.80	2
1.1.5 Corruption	100.00	1
1.2 Market Landscape	68.57	28
1.2.1 Extent of market dominance	58.18	37
1.2.2 Ease of doing business	100.00	1
1.2.3 Cluster development	48.53	47
1.2.4 R&D expenditure	27.07	27
1.2.5 ICT infrastructure	93.10	15
1.2.6 Urbanisation	84.52	21
1.3 Business and Labour Landscape	78.88	19
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	71.53	15
Management Practice		
1.3.3 Professional management	93.35	4
1.3.4 Relationship of pay to productivity	75.47	22
Technology Adoption		
1.3.5 Technology utilisation	79.62	16
1.3.6 Investment in emerging technologies	68.51	18
1.3.7 Firms with website	84.77	14
2 ATTRACT	80.30	3
2.1 External Openness	78.04	8
Attract Business		
2.1.1 FDI and technology transfer	78.48	19
2.1.2 Prevalence of foreign ownership	82.63	13
Attract People		
2.1.3 Migrant stock	73.63	15
2.1.4 International students	77.45	6
2.1.5 Brain gain	77.99	12
2.2 Internal Openness	82.57	3
Social Inclusion		
2.2.1 Tolerance of minorities	77.17	14
2.2.2 Tolerance of immigrants	95.38	3
2.2.3 Social mobility	90.44	8
Gender Equality		
2.2.4 Women in tertiary education	74.08	27
2.2.5 Women in high-skilled jobs	n/a	n/a
2.2.6 Leadership opportunities for women	75.78	16

	Score	Rank
3 GROW	68.32	14
3.1 Formal Education	57.07	27
Enrolment		
3.1.1 Vocational enrolment	28.10	47
3.1.2 Tertiary enrolment	57.85	17
Quality		
3.1.3 Tertiary education expenditure	74.13	26
3.1.4 Reading, maths, and science	68.92	12
3.1.5 University ranking	56.35	21
3.2 Lifelong Learning	70.07	15
3.2.1 Business and economics subject ranking	50.28	19
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	68.87	22
3.2.4 Formal and non-formal studies	91.07	3
3.3 Access to Growth Opportunities	77.83	9
Empowerment		
3.3.1 Delegation of authority	87.16	8
3.3.2 Youth inclusion	77.27	40
Collaboration		
3.3.3 Use of virtual social networks	82.33	19
3.3.4 Use of virtual professional networks	64.57	8
4 RETAIN	83.43	14
4.1 Sustainability	82.70	14
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	84.86	12
4.1.3 Brain retention	65.70	28
4.1.4 Environmental performance	80.25	19
4.2 Lifestyle	84.17	16
4.2.1 Personal rights	99.51	3
4.2.2 Personal safety	94.72	4
4.2.3 Physician density	42.43	37
4.2.4 Sanitation	100.00	1
5 VOCATIONAL AND TECHNICAL SKILLS	65.14	28
5.1 Mid-Level Skills	67.81	24
5.1.1 Workforce with secondary education	68.82	24
5.1.2 Population with secondary education	51.66	42
5.1.3 Technicians and associate professionals	n/a	n/a
5.1.4 Labour productivity per employee	82.94	31
5.2 Employability	62.47	42
5.2.1 Ease of finding skilled employees	61.23	52
5.2.2 Relevance of education system to the economy	63.70	28
5.2.3 Skills matching	n/a	n/a
6 GLOBAL KNOWLEDGE SKILLS	65.12	18
6.1 High-Level Skills	59.59	25
6.1.1 Workforce with tertiary education	38.60	43
6.1.2 Population with tertiary education	42.87	30
6.1.3 Professionals	n/a	n/a
6.1.4 Researchers	94.23	10
6.1.5 Senior officials and managers	n/a	n/a
6.1.6 Availability of scientists and engineers	62.66	37
6.2 Talent Impact	70.64	14
6.2.1 Innovation output	46.48	32
6.2.2 High-value exports	57.52	49
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	91.57	3
6.2.5 Scientific journal articles	86.98	11

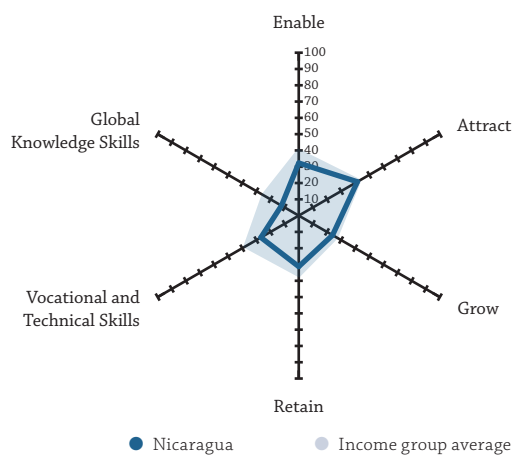
NICARAGUA

Key Indicators

Rank (out of 134)	118
Income group	Lower-middle income
Regional group	Latin America and the Caribbean
Population (millions)	6.62

GDP per capita (PPP US\$)	5,570.10
GDP (US\$ billions)	12.62
GTCI score	28.02
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	32.29	120
1.1 Regulatory Landscape	29.12	122
1.1.1 Government effectiveness	33.52	115
1.1.2 Rule of law	26.35	126
1.1.3 Political stability	39.18	117
1.1.4 Regulatory quality	36.94	111
1.1.5 Corruption	9.59	128
1.2 Market Landscape	26.14	120
1.2.1 Extent of market dominance	20.58	121
1.2.2 Ease of doing business	42.72	115
1.2.3 Cluster development	13.18	124
1.2.4 R&D expenditure	1.92	107
1.2.5 ICT infrastructure	n/a	n/a
1.2.6 Urbanisation	52.31	79
1.3 Business and Labour Landscape	41.61	110
Labour Market		
1.3.1 Labour rights	96.40	20
1.3.2 Labour-employer cooperation	49.51	49
Management Practice		
1.3.3 Professional management	29.69	121
1.3.4 Relationship of pay to productivity	35.57	116
Technology Adoption		
1.3.5 Technology utilisation	31.29	115
1.3.6 Investment in emerging technologies	13.37	125
1.3.7 Firms with website	35.41	90
2 ATTRACT	41.52	102
2.1 External Openness	35.26	112
Attract Business		
2.1.1 FDI and technology transfer	52.07	82
2.1.2 Prevalence of foreign ownership	53.97	79
Attract People		
2.1.3 Migrant stock	11.71	116
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	23.30	120
2.2 Internal Openness	47.78	92
Social Inclusion		
2.2.1 Tolerance of minorities	41.30	65
2.2.2 Tolerance of immigrants	70.77	42
2.2.3 Social mobility	29.46	124
Gender Equality		
2.2.4 Women in tertiary education	n/a	n/a
2.2.5 Women in high-skilled jobs	73.35	41
2.2.6 Leadership opportunities for women	24.03	109

	Score	Rank
3 GROW	23.97	107
3.1 Formal Education	0.71	134
Enrolment		
3.1.1 Vocational enrolment	1.42	98
3.1.2 Tertiary enrolment	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	23.20	83
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	69.37	12
3.2.3 Employee development	18.80	119
3.2.4 Formal and non-formal studies	4.63	58
3.3 Access to Growth Opportunities	48.00	66
Empowerment		
3.3.1 Delegation of authority	30.29	114
3.3.2 Youth inclusion	100.00	1
Collaboration		
3.3.3 Use of virtual social networks	51.66	88
3.3.4 Use of virtual professional networks	10.04	83

4 RETAIN	31.28	108
4.1 Sustainability	25.46	110
4.1.1 Pension coverage	27.88	97
4.1.2 Social protection	17.69	123
4.1.3 Brain retention	32.65	88
4.1.4 Environmental performance	23.63	90
4.2 Lifestyle	37.11	107
4.2.1 Personal rights	30.18	114
4.2.2 Personal safety	25.41	114
4.2.3 Physician density	20.42	77
4.2.4 Sanitation	72.42	96

5 VOCATIONAL AND TECHNICAL SKILLS	26.82	120
5.1 Mid-Level Skills	28.22	100
5.1.1 Workforce with secondary education	28.61	97
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	27.83	71
5.1.4 Labour productivity per employee	n/a	n/a
5.2 Employability	25.42	130
5.2.1 Ease of finding skilled employees	28.22	121
5.2.2 Relevance of education system to the economy	6.79	133
5.2.3 Skills matching	41.26	83

6 GLOBAL KNOWLEDGE SKILLS	12.24	125
6.1 High-Level Skills	14.90	119
6.1.1 Workforce with tertiary education	11.51	101
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	11.60	111
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	14.26	94
6.1.6 Availability of scientists and engineers	22.23	127
6.2 Talent Impact	9.58	125
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	17.46	110
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	1.71	122

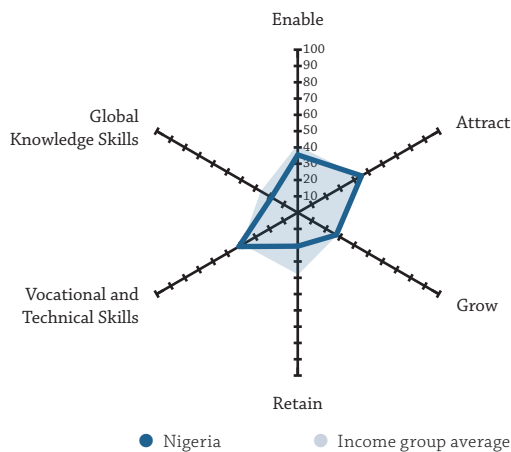
NIGERIA

Key Indicators

Rank (out of 134).....	108
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	206.14

GDP per capita (PPP US\$)	5,186.72
GDP (US\$ billions)	432.29
GTCI score.....	31.47
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....35.43 112		
1.1 Regulatory Landscape.....24.98 128		
1.1.1 Government effectiveness.....26.46 126		
1.1.2 Rule of law.....32.75 116		
1.1.3 Political stability.....18.84 131		
1.1.4 Regulatory quality.....33.14 121		
1.1.5 Corruption.....13.70 118		
1.2 Market Landscape.....40.43 87		
1.2.1 Extent of market dominance.....49.85 52		
1.2.2 Ease of doing business.....47.13 109		
1.2.3 Cluster development.....37.13 82		
1.2.4 R&D expenditure.....n/a n/a		
1.2.5 ICT infrastructure.....25.13 117		
1.2.6 Urbanisation.....42.90 97		
1.3 Business and Labour Landscape.....40.87 111		
Labour Market		
1.3.1 Labour rights.....71.00 81		
1.3.2 Labour-employer cooperation.....28.40 107		
Management Practice		
1.3.3 Professional management.....59.58 46		
1.3.4 Relationship of pay to productivity.....47.03 82		
Technology Adoption		
1.3.5 Technology utilisation.....42.41 91		
1.3.6 Investment in emerging technologies.....22.87 114		
1.3.7 Firms with website.....14.81 113		
2 ATTRACT.....45.15 87		
2.1 External Openness.....43.16 80		
Attract Business		
2.1.1 FDI and technology transfer.....47.57 93		
2.1.2 Prevalence of foreign ownership.....60.91 60		
Attract People		
2.1.3 Migrant stock.....14.29 112		
2.1.4 International students.....n/a n/a		
2.1.5 Brain gain.....49.89 59		
2.2 Internal Openness.....47.14 95		
Social Inclusion		
2.2.1 Tolerance of minorities.....9.78 115		
2.2.2 Tolerance of immigrants.....61.54 59		
2.2.3 Social mobility.....46.16 82		
Gender Equality		
2.2.4 Women in tertiary education.....37.08 117		
2.2.5 Women in high-skilled jobs.....95.57 2		
2.2.6 Leadership opportunities for women.....32.71 89		

	Score	Rank
3 GROW.....27.34 97		
3.1 Formal Education.....23.08 94		
Enrolment		
3.1.1 Vocational enrolment.....n/a n/a		
3.1.2 Tertiary enrolment.....6.58 109		
Quality		
3.1.3 Tertiary education expenditure.....n/a n/a		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....39.58 44		
3.2 Lifelong Learning.....29.90 57		
3.2.1 Business and economics subject ranking.....29.33 46		
3.2.2 Prevalence of training in firms.....32.17 57		
3.2.3 Employee development.....28.19 93		
3.2.4 Formal and non-formal studies.....n/a n/a		
3.3 Access to Growth Opportunities.....29.05 112		
Empowerment		
3.3.1 Delegation of authority.....56.46 41		
3.3.2 Youth inclusion.....40.81 104		
Collaboration		
3.3.3 Use of virtual social networks.....13.51 116		
3.3.4 Use of virtual professional networks.....5.41 105		
4 RETAIN.....20.60 126		
4.1 Sustainability.....12.81 129		
4.1.1 Pension coverage.....10.10 116		
4.1.2 Social protection.....0.00 134		
4.1.3 Brain retention.....31.97 90		
4.1.4 Environmental performance.....9.17 120		
4.2 Lifestyle.....28.38 124		
4.2.1 Personal rights.....71.46 67		
4.2.2 Personal safety.....3.36 128		
4.2.3 Physician density.....4.32 105		
4.2.4 Sanitation.....34.37 117		
5 VOCATIONAL AND TECHNICAL SKILLS.....41.66 88		
5.1 Mid-Level Skills.....55.64 53		
5.1.1 Workforce with secondary education.....37.58 80		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....90.50 3		
5.1.4 Labour productivity per employee.....38.85 96		
5.2 Employability.....27.67 128		
5.2.1 Ease of finding skilled employees.....40.75 103		
5.2.2 Relevance of education system to the economy.....14.59 127		
5.2.3 Skills matching.....n/a n/a		
6 GLOBAL KNOWLEDGE SKILLS.....18.64 111		
6.1 High-Level Skills.....20.10 108		
6.1.1 Workforce with tertiary education.....17.87 87		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....13.84 101		
6.1.4 Researchers.....n/a n/a		
6.1.5 Senior officials and managers.....7.74 112		
6.1.6 Availability of scientists and engineers.....40.95 88		
6.2 Talent Impact.....17.17 108		
6.2.1 Innovation output.....5.72 118		
6.2.2 High-value exports.....21.92 103		
6.2.3 New product entrepreneurial activity.....32.99 63		
6.2.4 New business density.....17.79 86		
6.2.5 Scientific journal articles.....7.43 96		

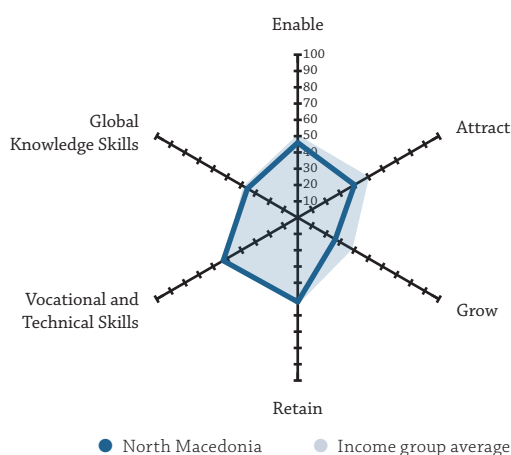
NORTH MACEDONIA

Key Indicators

Rank (out of 134).....	79
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	2.08

GDP per capita (PPP US\$).....	16,926.62
GDP (US\$ billions).....	12.27
GTCI score.....	42.17
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	45.99	83
1.1 Regulatory Landscape.....	50.14	65
1.1.1 Government effectiveness.....	50.59	73
1.1.2 Rule of law.....	47.82	74
1.1.3 Political stability.....	61.46	67
1.1.4 Regulatory quality.....	63.44	48
1.1.5 Corruption.....	27.40	91
1.2 Market Landscape.....	44.40	78
1.2.1 Extent of market dominance.....	20.51	122
1.2.2 Ease of doing business.....	89.36	15
1.2.3 Cluster development.....	25.53	111
1.2.4 R&D expenditure.....	7.15	73
1.2.5 ICT infrastructure.....	72.18	60
1.2.6 Urbanisation.....	51.66	81
1.3 Business and Labour Landscape.....	43.42	99
Labour Market		
1.3.1 Labour rights.....	96.80	19
1.3.2 Labour-employer cooperation.....	20.08	119
Management Practice		
1.3.3 Professional management.....	28.67	123
1.3.4 Relationship of pay to productivity.....	45.33	90
Technology Adoption		
1.3.5 Technology utilisation.....	33.16	112
1.3.6 Investment in emerging technologies.....	17.45	123
1.3.7 Firms with website.....	62.49	48
2 ATTRACT.....	40.21	104
2.1 External Openness.....	36.61	104
Attract Business		
2.1.1 FDI and technology transfer.....	37.49	116
2.1.2 Prevalence of foreign ownership.....	42.09	106
Attract People		
2.1.3 Migrant stock.....	45.81	56
2.1.4 International students.....	46.16	46
2.1.5 Brain gain.....	11.48	132
2.2 Internal Openness.....	43.81	106
Social Inclusion		
2.2.1 Tolerance of minorities.....	n/a	n/a
2.2.2 Tolerance of immigrants.....	35.38	108
2.2.3 Social mobility.....	24.86	127
Gender Equality		
2.2.4 Women in tertiary education.....	68.85	50
2.2.5 Women in high-skilled jobs.....	71.48	49
2.2.6 Leadership opportunities for women.....	18.49	116

	Score	Rank
3 GROW.....	26.61	101
3.1 Formal Education.....	18.90	108
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	29.78	68
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	26.92	66
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	19.00	101
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	43.78	36
3.2.3 Employee development.....	15.21	122
3.2.4 Formal and non-formal studies.....	17.02	46
3.3 Access to Growth Opportunities.....	41.94	82
Empowerment		
3.3.1 Delegation of authority.....	32.21	113
3.3.2 Youth inclusion.....	62.12	73
Collaboration		
3.3.3 Use of virtual social networks.....	56.96	82
3.3.4 Use of virtual professional networks.....	16.45	66

4 RETAIN.....	51.73	71
4.1 Sustainability.....	38.65	86
4.1.1 Pension coverage.....	68.28	73
4.1.2 Social protection.....	23.92	107
4.1.3 Brain retention.....	10.18	127
4.1.4 Environmental performance.....	52.20	41
4.2 Lifestyle.....	64.82	50
4.2.1 Personal rights.....	63.75	82
4.2.2 Personal safety.....	60.88	49
4.2.3 Physician density.....	35.57	48
4.2.4 Sanitation.....	99.06	29

5 VOCATIONAL AND TECHNICAL SKILLS.....	52.80	66
5.1 Mid-Level Skills.....	62.39	42
5.1.1 Workforce with secondary education.....	74.08	19
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	48.09	42
5.1.4 Labour productivity per employee.....	65.02	65
5.2 Employability.....	43.20	95
5.2.1 Ease of finding skilled employees.....	29.70	120
5.2.2 Relevance of education system to the economy.....	21.92	113
5.2.3 Skills matching.....	77.97	27

6 GLOBAL KNOWLEDGE SKILLS.....	35.67	70
6.1 High-Level Skills.....	36.24	75
6.1.1 Workforce with tertiary education.....	33.47	51
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	36.99	47
6.1.4 Researchers.....	64.71	54
6.1.5 Senior officials and managers.....	20.62	80
6.1.6 Availability of scientists and engineers.....	25.42	119
6.2 Talent Impact.....	35.09	66
6.2.1 Innovation output.....	24.69	62
6.2.2 High-value exports.....	39.86	87
6.2.3 New product entrepreneurial activity.....	26.66	71
6.2.4 New business density.....	47.23	38
6.2.5 Scientific journal articles.....	37.03	58

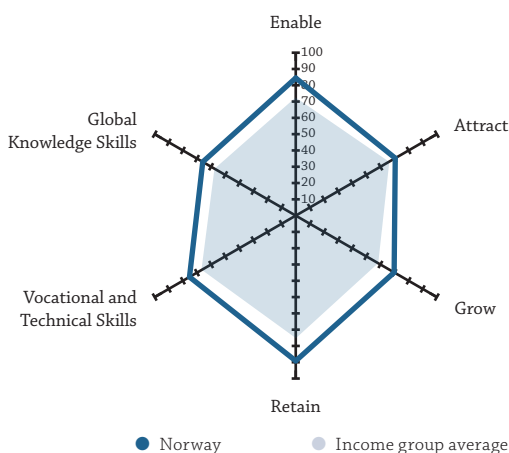
NORWAY

Key Indicators

Rank (out of 134).....	9
Income group.....	High income
Regional group.....	Europe
Population (millions).....	5.38

GDP per capita (PPP US\$).....	63,197.98
GDP (US\$ billions).....	362.01
GTCI score.....	75.84
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	84.44	7
1.1 Regulatory Landscape.....	93.43	4
1.1.1 Government effectiveness.....	92.03	5
1.1.2 Rule of law.....	99.14	2
1.1.3 Political stability.....	89.38	6
1.1.4 Regulatory quality.....	92.10	6
1.1.5 Corruption.....	94.52	7
1.2 Market Landscape.....	77.27	11
1.2.1 Extent of market dominance.....	75.25	15
1.2.2 Ease of doing business.....	92.68	8
1.2.3 Cluster development.....	77.65	14
1.2.4 R&D expenditure.....	41.80	15
1.2.5 ICT infrastructure.....	96.65	6
1.2.6 Urbanisation.....	79.59	29
1.3 Business and Labour Landscape.....	82.63	13
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	84.00	7
Management Practice		
1.3.3 Professional management.....	86.55	11
1.3.4 Relationship of pay to productivity.....	71.79	33
Technology Adoption		
1.3.5 Technology utilisation.....	82.39	15
1.3.6 Investment in emerging technologies.....	73.55	15
1.3.7 Firms with website.....	80.14	22
2 ATTRACT.....	70.52	18
2.1 External Openness.....	60.32	33
Attract Business		
2.1.1 FDI and technology transfer.....	70.98	36
2.1.2 Prevalence of foreign ownership.....	56.34	71
Attract People		
2.1.3 Migrant stock.....	65.58	26
2.1.4 International students.....	41.99	55
2.1.5 Brain gain.....	66.73	23
2.2 Internal Openness.....	80.72	5
Social Inclusion		
2.2.1 Tolerance of minorities.....	69.57	26
2.2.2 Tolerance of immigrants.....	95.38	3
2.2.3 Social mobility.....	87.70	10
Gender Equality		
2.2.4 Women in tertiary education.....	74.18	25
2.2.5 Women in high-skilled jobs.....	69.38	58
2.2.6 Leadership opportunities for women.....	88.10	4

	Score	Rank
3 GROW.....	69.74	11
3.1 Formal Education.....	63.71	14
Enrolment		
3.1.1 Vocational enrolment.....	49.20	26
3.1.2 Tertiary enrolment.....	57.87	16
Quality		
3.1.3 Tertiary education expenditure.....	90.25	3
3.1.4 Reading, maths, and science.....	66.48	21
3.1.5 University ranking.....	54.73	23
3.2 Lifelong Learning.....	64.16	19
3.2.1 Business and economics subject ranking.....	33.25	40
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	77.97	12
3.2.4 Formal and non-formal studies.....	81.26	6
3.3 Access to Growth Opportunities.....	81.34	4
Empowerment		
3.3.1 Delegation of authority.....	93.02	3
3.3.2 Youth inclusion.....	93.13	5
Collaboration		
3.3.3 Use of virtual social networks.....	83.58	16
3.3.4 Use of virtual professional networks.....	55.63	14

4 RETAIN.....	89.17	2
4.1 Sustainability.....	92.31	4
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	97.97	2
4.1.3 Brain retention.....	79.74	11
4.1.4 Environmental performance.....	91.53	9
4.2 Lifestyle.....	86.04	5
4.2.1 Personal rights.....	96.73	17
4.2.2 Personal safety.....	88.74	9
4.2.3 Physician density.....	60.79	14
4.2.4 Sanitation.....	97.90	40

5 VOCATIONAL AND TECHNICAL SKILLS.....	75.30	6
5.1 Mid-Level Skills.....	66.78	28
5.1.1 Workforce with secondary education.....	51.85	53
5.1.2 Population with secondary education.....	54.25	37
5.1.3 Technicians and associate professionals.....	66.86	19
5.1.4 Labour productivity per employee.....	94.14	5
5.2 Employability.....	83.82	7
5.2.1 Ease of finding skilled employees.....	93.65	4
5.2.2 Relevance of education system to the economy.....	74.24	11
5.2.3 Skills matching.....	83.56	16

6 GLOBAL KNOWLEDGE SKILLS.....	65.90	15
6.1 High-Level Skills.....	68.23	6
6.1.1 Workforce with tertiary education.....	54.54	16
6.1.2 Population with tertiary education.....	50.73	15
6.1.3 Professionals.....	65.87	6
6.1.4 Researchers.....	96.63	6
6.1.5 Senior officials and managers.....	63.55	21
6.1.6 Availability of scientists and engineers.....	78.08	13
6.2 Talent Impact.....	63.56	23
6.2.1 Innovation output.....	51.62	27
6.2.2 High-value exports.....	76.25	17
6.2.3 New product entrepreneurial activity.....	23.20	17
6.2.4 New business density.....	70.33	18
6.2.5 Scientific journal articles.....	96.39	3

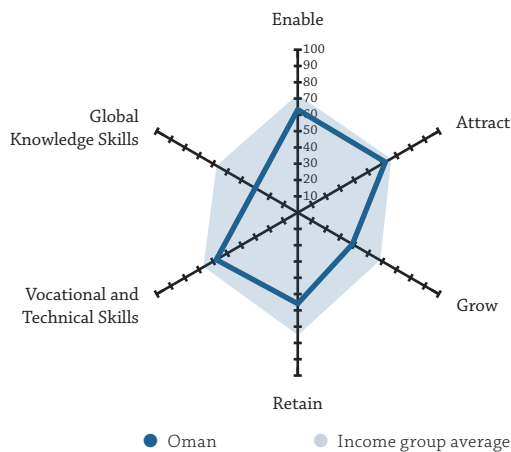
OMAN

Key Indicators

Rank (out of 134).....	48
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	5.11

GDP per capita (PPP US\$)	28,448.86
GDP (US\$ billions)	76.33
GTCI score	51.30
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	63.22	37
1.1 Regulatory Landscape	62.14	47
1.1.1 Government effectiveness	56.41	56
1.1.2 Rule of law	66.20	40
1.1.3 Political stability	75.99	33
1.1.4 Regulatory quality	58.66	56
1.1.5 Corruption	53.42	40
1.2 Market Landscape	62.24	31
1.2.1 Extent of market dominance	68.36	22
1.2.2 Ease of doing business	70.32	64
1.2.3 Cluster development	71.97	22
1.2.4 R&D expenditure	4.20	92
1.2.5 ICT infrastructure	76.34	54
1.2.6 Urbanisation	82.22	25
1.3 Business and Labour Landscape	65.29	34
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	72.08	14
Management Practice		
1.3.3 Professional management	69.21	29
1.3.4 Relationship of pay to productivity	74.06	26
Technology Adoption		
1.3.5 Technology utilisation	61.08	48
1.3.6 Investment in emerging technologies	50.01	42
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	62.06	27
2.1 External Openness	61.07	32
Attract Business		
2.1.1 FDI and technology transfer	58.99	61
2.1.2 Prevalence of foreign ownership	50.86	91
Attract People		
2.1.3 Migrant stock	89.22	6
2.1.4 International students	34.01	66
2.1.5 Brain gain	72.26	20
2.2 Internal Openness	63.06	32
Social Inclusion		
2.2.1 Tolerance of minorities	80.43	10
2.2.2 Tolerance of immigrants	n/a	n/a
2.2.3 Social mobility	68.25	31
Gender Equality		
2.2.4 Women in tertiary education	72.50	34
2.2.5 Women in high-skilled jobs	18.41	123
2.2.6 Leadership opportunities for women	75.71	17

	Score	Rank
3 GROW	38.75	58
3.1 Formal Education	34.37	66
Enrolment		
3.1.1 Vocational enrolment	1.42	97
3.1.2 Tertiary enrolment	27.90	73
Quality		
3.1.3 Tertiary education expenditure	78.67	21
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	29.49	63
3.2 Lifelong Learning	28.27	61
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	56.53	36
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	53.62	46
Empowerment		
3.3.1 Delegation of authority	63.84	31
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	80.46	24
3.3.4 Use of virtual professional networks	16.56	64

4 RETAIN	55.88	52
4.1 Sustainability	55.91	47
4.1.1 Pension coverage	46.36	84
4.1.2 Social protection	77.24	18
4.1.3 Brain retention	77.64	14
4.1.4 Environmental performance	22.40	92
4.2 Lifestyle	55.86	72
4.2.1 Personal rights	43.13	105
4.2.2 Personal safety	56.56	62
4.2.3 Physician density	23.75	72
4.2.4 Sanitation	100.00	1
5 VOCATIONAL AND TECHNICAL SKILLS	57.75	52
5.1 Mid-Level Skills	47.84	66
5.1.1 Workforce with secondary education	n/a	n/a
5.1.2 Population with secondary education	41.10	59
5.1.3 Technicians and associate professionals	31.26	66
5.1.4 Labour productivity per employee	71.15	52
5.2 Employability	67.65	31
5.2.1 Ease of finding skilled employees	71.16	38
5.2.2 Relevance of education system to the economy	64.15	26
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	30.15	82
6.1 High-Level Skills	38.95	64
6.1.1 Workforce with tertiary education	n/a	n/a
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	16.79	92
6.1.4 Researchers	48.79	76
6.1.5 Senior officials and managers	27.52	67
6.1.6 Availability of scientists and engineers	62.73	36
6.2 Talent Impact	21.34	103
6.2.1 Innovation output	8.26	108
6.2.2 High-value exports	19.64	105
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	26.40	71
6.2.5 Scientific journal articles	31.06	65

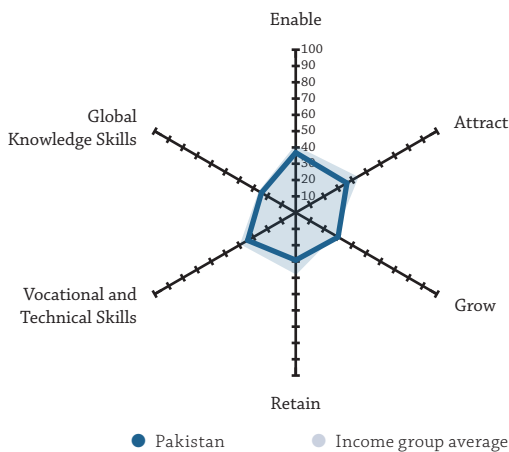
PAKISTAN

Key Indicators

Rank (out of 134).....	107
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	220.89

GDP per capita (PPP US\$)	4,876.63
GDP (US\$ billions)	263.69
GTCI score.....	31.76
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	36.80	109
1.1 Regulatory Landscape.....	29.06	124
1.1.1 Government effectiveness.....	35.61	108
1.1.2 Rule of law.....	38.06	106
1.1.3 Political stability.....	11.80	133
1.1.4 Regulatory quality.....	37.93	109
1.1.5 Corruption.....	21.92	102
1.2 Market Landscape.....	36.74	95
1.2.1 Extent of market dominance.....	43.39	72
1.2.2 Ease of doing business.....	54.34	94
1.2.3 Cluster development.....	47.00	53
1.2.4 R&D expenditure.....	4.54	89
1.2.5 ICT infrastructure.....	43.97	95
1.2.6 Urbanisation.....	27.18	110
1.3 Business and Labour Landscape.....	44.60	92
Labour Market		
1.3.1 Labour rights.....	51.80	91
1.3.2 Labour-employer cooperation.....	24.71	114
Management Practice		
1.3.3 Professional management.....	44.55	90
1.3.4 Relationship of pay to productivity.....	53.07	69
Technology Adoption		
1.3.5 Technology utilisation.....	46.59	73
1.3.6 Investment in emerging technologies.....	48.24	48
1.3.7 Firms with website.....	43.28	76
2 ATTRACT.....	36.24	120
2.1 External Openness.....	43.84	78
Attract Business		
2.1.1 FDI and technology transfer.....	54.17	74
2.1.2 Prevalence of foreign ownership.....	46.52	98
Attract People		
2.1.3 Migrant stock.....	29.36	85
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	45.31	72
2.2 Internal Openness.....	28.64	129
Social Inclusion		
2.2.1 Tolerance of minorities.....	9.78	115
2.2.2 Tolerance of immigrants.....	36.92	107
2.2.3 Social mobility.....	42.28	95
Gender Equality		
2.2.4 Women in tertiary education.....	46.72	106
2.2.5 Women in high-skilled jobs.....	12.17	128
2.2.6 Leadership opportunities for women.....	23.94	110

	Score	Rank
3 GROW.....	29.98	86
3.1 Formal Education.....	31.85	72
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	5.73	114
Quality		
3.1.3 Tertiary education expenditure.....	51.98	78
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	37.84	46
3.2 Lifelong Learning.....	32.50	51
3.2.1 Business and economics subject ranking.....	31.10	43
3.2.2 Prevalence of training in firms.....	33.99	51
3.2.3 Employee development.....	32.43	80
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	25.59	117
Empowerment		
3.3.1 Delegation of authority.....	37.24	102
3.3.2 Youth inclusion.....	41.66	103
Collaboration		
3.3.3 Use of virtual social networks.....	18.50	112
3.3.4 Use of virtual professional networks.....	4.97	109

4 RETAIN.....	29.17	111
4.1 Sustainability.....	28.45	105
4.1.1 Pension coverage.....	4.85	125
4.1.2 Social protection.....	41.87	63
4.1.3 Brain retention.....	54.22	42
4.1.4 Environmental performance.....	12.87	114
4.2 Lifestyle.....	29.88	117
4.2.1 Personal rights.....	30.17	115
4.2.2 Personal safety.....	19.09	120
4.2.3 Physician density.....	13.56	87
4.2.4 Sanitation.....	56.70	104
5 VOCATIONAL AND TECHNICAL SKILLS.....	34.07	108
5.1 Mid-Level Skills.....	20.38	115
5.1.1 Workforce with secondary education.....	26.27	104
5.1.2 Population with secondary education.....	26.29	83
5.1.3 Technicians and associate professionals.....	16.23	103
5.1.4 Labour productivity per employee.....	12.71	112
5.2 Employability.....	47.77	83
5.2.1 Ease of finding skilled employees.....	53.48	71
5.2.2 Relevance of education system to the economy.....	55.04	40
5.2.3 Skills matching.....	34.79	88

6 GLOBAL KNOWLEDGE SKILLS.....	24.30	95
6.1 High-Level Skills.....	25.59	97
6.1.1 Workforce with tertiary education.....	10.04	105
6.1.2 Population with tertiary education.....	10.38	89
6.1.3 Professionals.....	11.72	110
6.1.4 Researchers.....	51.48	73
6.1.5 Senior officials and managers.....	17.14	90
6.1.6 Availability of scientists and engineers.....	52.76	58
6.2 Talent Impact.....	23.02	97
6.2.1 Innovation output.....	14.08	87
6.2.2 High-value exports.....	28.81	98
6.2.3 New product entrepreneurial activity.....	56.03	32
6.2.4 New business density.....	1.87	114
6.2.5 Scientific journal articles.....	14.31	87

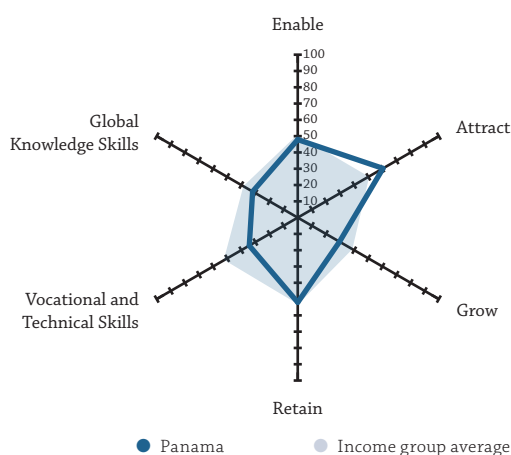
PANAMA

Key Indicators

Rank (out of 134).....	78
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	4.31

GDP per capita (PPP US\$).....	26,775.69
GDP (US\$ billions).....	52.94
GTCI score.....	42.71
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	47.88	76
1.1 Regulatory Landscape.....	51.98	61
1.1.1 Government effectiveness.....	52.10	67
1.1.2 Rule of law.....	50.69	66
1.1.3 Political stability.....	69.51	50
1.1.4 Regulatory quality.....	60.19	55
1.1.5 Corruption.....	27.40	91
1.2 Market Landscape.....	46.24	73
1.2.1 Extent of market dominance.....	46.46	61
1.2.2 Ease of doing business.....	64.26	81
1.2.3 Cluster development.....	43.64	63
1.2.4 R&D expenditure.....	2.73	100
1.2.5 ICT infrastructure.....	57.50	77
1.2.6 Urbanisation.....	62.87	61
1.3 Business and Labour Landscape.....	45.43	84
Labour Market		
1.3.1 Labour rights.....	55.00	90
1.3.2 Labour-employer cooperation.....	38.57	74
Management Practice		
1.3.3 Professional management.....	49.95	73
1.3.4 Relationship of pay to productivity.....	38.25	111
Technology Adoption		
1.3.5 Technology utilisation.....	59.96	49
1.3.6 Investment in emerging technologies.....	40.39	63
1.3.7 Firms with website.....	35.87	88
2 ATTRACT.....	60.43	33
2.1 External Openness.....	64.90	28
Attract Business		
2.1.1 FDI and technology transfer.....	77.33	22
2.1.2 Prevalence of foreign ownership.....	80.04	20
Attract People		
2.1.3 Migrant stock.....	43.22	60
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	59.02	32
2.2 Internal Openness.....	55.96	59
Social Inclusion		
2.2.1 Tolerance of minorities.....	44.57	60
2.2.2 Tolerance of immigrants.....	43.08	95
2.2.3 Social mobility.....	52.89	60
Gender Equality		
2.2.4 Women in tertiary education.....	79.10	12
2.2.5 Women in high-skilled jobs.....	75.61	30
2.2.6 Leadership opportunities for women.....	40.53	76

	Score	Rank
3 GROW.....	29.60	88
3.1 Formal Education.....	25.30	90
Enrolment		
3.1.1 Vocational enrolment.....	20.35	56
3.1.2 Tertiary enrolment.....	33.07	65
Quality		
3.1.3 Tertiary education expenditure.....	60.53	60
3.1.4 Reading, maths, and science.....	12.53	75
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	11.15	126
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	4.62	105
3.2.3 Employee development.....	34.96	71
3.2.4 Formal and non-formal studies.....	5.04	57
3.3 Access to Growth Opportunities.....	52.35	50
Empowerment		
3.3.1 Delegation of authority.....	49.89	61
3.3.2 Youth inclusion.....	65.79	63
Collaboration		
3.3.3 Use of virtual social networks.....	64.03	70
3.3.4 Use of virtual professional networks.....	29.69	33

4 RETAIN.....	52.04	68
4.1 Sustainability.....	43.32	77
4.1.1 Pension coverage.....	28.59	96
4.1.2 Social protection.....	45.19	54
4.1.3 Brain retention.....	61.58	33
4.1.4 Environmental performance.....	37.92	65
4.2 Lifestyle.....	60.77	58
4.2.1 Personal rights.....	87.22	45
4.2.2 Personal safety.....	53.85	66
4.2.3 Physician density.....	20.01	79
4.2.4 Sanitation.....	82.00	89

5 VOCATIONAL AND TECHNICAL SKILLS.....	34.34	106
5.1 Mid-Level Skills.....	39.70	80
5.1.1 Workforce with secondary education.....	60.46	36
5.1.2 Population with secondary education.....	30.42	76
5.1.3 Technicians and associate professionals.....	28.21	69
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	28.98	125
5.2.1 Ease of finding skilled employees.....	35.70	113
5.2.2 Relevance of education system to the economy.....	22.25	110
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	31.98	80
6.1 High-Level Skills.....	30.41	85
6.1.1 Workforce with tertiary education.....	20.90	80
6.1.2 Population with tertiary education.....	27.83	51
6.1.3 Professionals.....	28.96	59
6.1.4 Researchers.....	18.99	98
6.1.5 Senior officials and managers.....	39.11	48
6.1.6 Availability of scientists and engineers.....	46.66	69
6.2 Talent Impact.....	33.56	68
6.2.1 Innovation output.....	22.85	69
6.2.2 High-value exports.....	64.83	32
6.2.3 New product entrepreneurial activity.....	15.28	85
6.2.4 New business density.....	54.47	31
6.2.5 Scientific journal articles.....	10.35	93

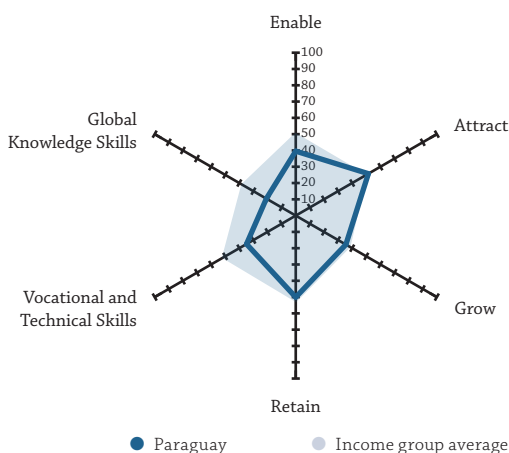
PARAGUAY

Key Indicators

Rank (out of 134) **92**
 Income group **Upper-middle income**
 Regional group **Latin America and the Caribbean**
 Population (millions) **7.13**

GDP per capita (PPP US\$) **13,012.88**
 GDP (US\$ billions) **35.30**
 GTCI score **38.72**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE 39.56		101
1.1 Regulatory Landscape 41.49		92
1.1.1 Government effectiveness 38.79		98
1.1.2 Rule of law 40.62		99
1.1.3 Political stability 62.53		66
1.1.4 Regulatory quality 47.69		84
1.1.5 Corruption 17.81		112
1.2 Market Landscape 34.02		106
1.2.1 Extent of market dominance 32.15		99
1.2.2 Ease of doing business 50.98		105
1.2.3 Cluster development 25.75		110
1.2.4 R&D expenditure 2.71		101
1.2.5 ICT infrastructure 36.71		105
1.2.6 Urbanisation 55.83		73
1.3 Business and Labour Landscape 43.16		102
Labour Market		
1.3.1 Labour rights 55.30		88
1.3.2 Labour-employer cooperation 41.60		66
Management Practice		
1.3.3 Professional management 34.81		111
1.3.4 Relationship of pay to productivity 40.58		103
Technology Adoption		
1.3.5 Technology utilisation 38.89		100
1.3.6 Investment in emerging technologies 19.09		120
1.3.7 Firms with website 71.86		34
2. ATTRACT 51.47		58
2.1 External Openness 44.13		77
Attract Business		
2.1.1 FDI and technology transfer 45.61		100
2.1.2 Prevalence of foreign ownership 55.11		74
Attract People		
2.1.3 Migrant stock 31.01		81
2.1.4 International students n/a		n/a
2.1.5 Brain gain 44.80		73
2.2 Internal Openness 58.81		45
Social Inclusion		
2.2.1 Tolerance of minorities 55.43		46
2.2.2 Tolerance of immigrants 87.69		13
2.2.3 Social mobility 47.54		76
Gender Equality		
2.2.4 Women in tertiary education 73.55		29
2.2.5 Women in high-skilled jobs 72.95		42
2.2.6 Leadership opportunities for women 15.71		119

	Score	Rank
3. GROW 35.52		70
3.1 Formal Education 19.53		104
Enrolment		
3.1.1 Vocational enrolment 14.16		69
3.1.2 Tertiary enrolment 23.80		80
Quality		
3.1.3 Tertiary education expenditure 40.17		95
3.1.4 Reading, maths, and science n/a		n/a
3.1.5 University ranking 0.00		87
3.2 Lifelong Learning 45.23		36
3.2.1 Business and economics subject ranking 0.00		70
3.2.2 Prevalence of training in firms 54.13		25
3.2.3 Employee development 26.81		96
3.2.4 Formal and non-formal studies 100.00		1
3.3 Access to Growth Opportunities 41.79		83
Empowerment		
3.3.1 Delegation of authority 29.20		116
3.3.2 Youth inclusion 67.13		61
Collaboration		
3.3.3 Use of virtual social networks 59.36		79
3.3.4 Use of virtual professional networks 11.48		78

4. RETAIN 50.09		76
4.1 Sustainability 42.68		80
4.1.1 Pension coverage 64.24		75
4.1.2 Social protection 28.29		97
4.1.3 Brain retention 41.84		60
4.1.4 Environmental performance 36.33		68
4.2 Lifestyle 57.51		69
4.2.1 Personal rights 75.08		62
4.2.2 Personal safety 49.46		74
4.2.3 Physician density 16.53		84
4.2.4 Sanitation 88.98		75

5. VOCATIONAL AND TECHNICAL SKILLS 34.88		104
5.1 Mid-Level Skills 39.53		81
5.1.1 Workforce with secondary education 39.08		78
5.1.2 Population with secondary education 34.13		69
5.1.3 Technicians and associate professionals 29.10		68
5.1.4 Labour productivity per employee 55.82		79
5.2 Employability 30.23		123
5.2.1 Ease of finding skilled employees 26.34		125
5.2.2 Relevance of education system to the economy 8.82		132
5.2.3 Skills matching 55.51		69

6. GLOBAL KNOWLEDGE SKILLS 20.83		104
6.1 High-Level Skills 23.49		102
6.1.1 Workforce with tertiary education 17.40		89
6.1.2 Population with tertiary education 19.40		70
6.1.3 Professionals 17.33		89
6.1.4 Researchers 38.17		84
6.1.5 Senior officials and managers 30.65		61
6.1.6 Availability of scientists and engineers 18.01		129
6.2 Talent Impact 18.17		106
6.2.1 Innovation output 12.96		91
6.2.2 High-value exports 50.69		62
6.2.3 New product entrepreneurial activity n/a		n/a
6.2.4 New business density 5.26		106
6.2.5 Scientific journal articles 3.75		109

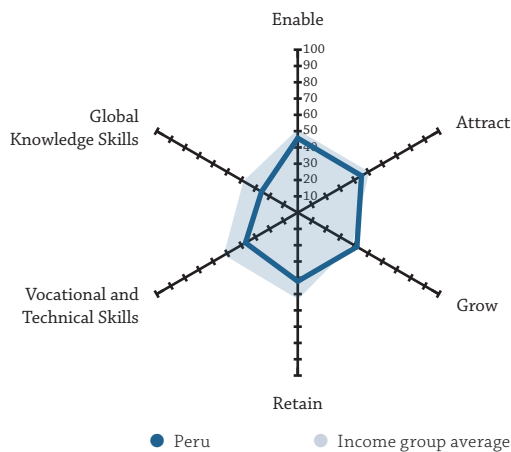
PERU

Key Indicators

Rank (out of 134).....	87
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	32.97

GDP per capita (PPP US\$).....	11,879.24
GDP (US\$ billions).....	202.01
GTCI score.....	39.61
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	45.69	84
1.1 Regulatory Landscape.....	49.38	71
1.1.1 Government effectiveness.....	49.15	77
1.1.2 Rule of law.....	42.21	96
1.1.3 Political stability.....	59.37	74
1.1.4 Regulatory quality.....	64.66	44
1.1.5 Corruption.....	31.51	76
1.2 Market Landscape.....	42.89	82
1.2.1 Extent of market dominance.....	31.99	100
1.2.2 Ease of doing business.....	68.04	71
1.2.3 Cluster development.....	29.05	99
1.2.4 R&D expenditure.....	2.32	104
1.2.5 ICT infrastructure.....	51.34	86
1.2.6 Urbanisation.....	74.60	40
1.3 Business and Labour Landscape.....	44.79	88
Labour Market		
1.3.1 Labour rights.....	59.90	85
1.3.2 Labour-employer cooperation.....	29.54	105
Management Practice		
1.3.3 Professional management.....	48.85	77
1.3.4 Relationship of pay to productivity.....	40.04	105
Technology Adoption		
1.3.5 Technology utilisation.....	40.97	96
1.3.6 Investment in emerging technologies.....	25.15	108
1.3.7 Firms with website.....	69.08	39
2. ATTRACT	45.19	85
2.1 External Openness.....	48.79	61
Attract Business		
2.1.1 FDI and technology transfer.....	58.52	63
2.1.2 Prevalence of foreign ownership.....	65.73	50
Attract People		
2.1.3 Migrant stock.....	29.71	83
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	41.18	84
2.2 Internal Openness.....	41.59	116
Social Inclusion		
2.2.1 Tolerance of minorities.....	11.96	110
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	46.62	78
Gender Equality		
2.2.4 Women in tertiary education.....	62.12	78
2.2.5 Women in high-skilled jobs.....	64.22	73
2.2.6 Leadership opportunities for women.....	13.83	121

	Score	Rank
3. GROW	41.95	50
3.1 Formal Education.....	29.98	79
Enrolment		
3.1.1 Vocational enrolment.....	2.01	94
3.1.2 Tertiary enrolment.....	49.23	30
Quality		
3.1.3 Tertiary education expenditure.....	38.49	98
3.1.4 Reading, maths, and science.....	27.52	65
3.1.5 University ranking.....	32.66	59
3.2 Lifelong Learning.....	40.66	41
3.2.1 Business and economics subject ranking.....	20.93	60
3.2.2 Prevalence of training in firms.....	81.40	6
3.2.3 Employee development.....	13.74	124
3.2.4 Formal and non-formal studies.....	46.58	33
3.3 Access to Growth Opportunities.....	55.22	43
Empowerment		
3.3.1 Delegation of authority.....	41.11	93
3.3.2 Youth inclusion.....	69.58	55
Collaboration		
3.3.3 Use of virtual social networks.....	81.70	21
3.3.4 Use of virtual professional networks.....	28.48	34

4. RETAIN	42.14	91
4.1 Sustainability.....	32.90	95
4.1.1 Pension coverage.....	35.05	91
4.1.2 Social protection.....	24.51	105
4.1.3 Brain retention.....	39.92	66
4.1.4 Environmental performance.....	32.10	79
4.2 Lifestyle.....	51.39	83
4.2.1 Personal rights.....	79.83	56
4.2.2 Personal safety.....	43.60	88
4.2.3 Physician density.....	9.83	93
4.2.4 Sanitation.....	72.32	97

5. VOCATIONAL AND TECHNICAL SKILLS	37.03	100
5.1 Mid-Level Skills.....	46.34	69
5.1.1 Workforce with secondary education.....	56.41	46
5.1.2 Population with secondary education.....	51.05	44
5.1.3 Technicians and associate professionals.....	23.96	81
5.1.4 Labour productivity per employee.....	53.95	83
5.2 Employability.....	27.72	127
5.2.1 Ease of finding skilled employees.....	37.22	108
5.2.2 Relevance of education system to the economy.....	18.22	120
5.2.3 Skills matching.....	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS	25.66	90
6.1 High-Level Skills.....	20.83	105
6.1.1 Workforce with tertiary education.....	24.93	72
6.1.2 Population with tertiary education.....	28.59	49
6.1.3 Professionals.....	14.57	99
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	0.67	128
6.1.6 Availability of scientists and engineers.....	35.41	105
6.2 Talent Impact.....	30.48	74
6.2.1 Innovation output.....	11.71	97
6.2.2 High-value exports.....	39.18	88
6.2.3 New product entrepreneurial activity.....	41.13	55
6.2.4 New business density.....	48.03	36
6.2.5 Scientific journal articles.....	12.36	89

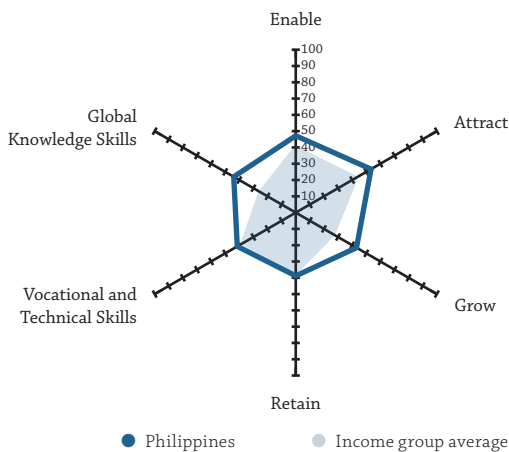
PHILIPPINES

Key Indicators

Rank (out of 134)	70
Income group	Lower-middle income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	109.58

GDP per capita (PPP US\$)	8,390.35
GDP (US\$ billions)	361.49
GTCI score	44.63
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	47.17	79
1.1 Regulatory Landscape	43.05	88
1.1.1 Government effectiveness	51.83	68
1.1.2 Rule of law	42.44	95
1.1.3 Political stability	42.57	111
1.1.4 Regulatory quality	52.39	70
1.1.5 Corruption	26.03	95
1.2 Market Landscape	35.65	100
1.2.1 Extent of market dominance	20.04	126
1.2.2 Ease of doing business	57.66	87
1.2.3 Cluster development	40.13	72
1.2.4 R&D expenditure	2.92	99
1.2.5 ICT infrastructure	54.22	82
1.2.6 Urbanisation	38.95	102
1.3 Business and Labour Landscape	62.81	39
Labour Market		
1.3.1 Labour rights	56.30	87
1.3.2 Labour-employer cooperation	63.04	25
Management Practice		
1.3.3 Professional management	67.00	34
1.3.4 Relationship of pay to productivity	76.71	21
Technology Adoption		
1.3.5 Technology utilisation	65.86	39
1.3.6 Investment in emerging technologies	61.10	30
1.3.7 Firms with website	49.64	66
2. ATTRACT	53.35	55
2.1 External Openness	43.37	79
Attract Business		
2.1.1 FDI and technology transfer	71.65	34
2.1.2 Prevalence of foreign ownership	51.72	87
Attract People		
2.1.3 Migrant stock	3.61	129
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	46.51	70
2.2 Internal Openness	63.33	31
Social Inclusion		
2.2.1 Tolerance of minorities	26.09	90
2.2.2 Tolerance of immigrants	63.08	57
2.2.3 Social mobility	55.13	53
Gender Equality		
2.2.4 Women in tertiary education	68.90	49
2.2.5 Women in high-skilled jobs	78.72	22
2.2.6 Leadership opportunities for women	88.07	5

	Score	Rank
3. GROW	43.06	48
3.1 Formal Education	21.45	99
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	24.40	79
Quality		
3.1.3 Tertiary education expenditure	23.25	110
3.1.4 Reading, maths, and science	6.37	77
3.1.5 University ranking	31.77	62
3.2 Lifelong Learning	51.85	26
3.2.1 Business and economics subject ranking	19.72	64
3.2.2 Prevalence of training in firms	72.87	8
3.2.3 Employee development	62.97	31
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	55.89	41
Empowerment		
3.3.1 Delegation of authority	62.59	33
3.3.2 Youth inclusion	65.75	64
Collaboration		
3.3.3 Use of virtual social networks	80.98	22
3.3.4 Use of virtual professional networks	14.24	72
4. RETAIN	38.84	97
4.1 Sustainability	32.43	96
4.1.1 Pension coverage	19.70	102
4.1.2 Social protection	31.73	86
4.1.3 Brain retention	56.06	39
4.1.4 Environmental performance	22.22	93
4.2 Lifestyle	45.25	93
4.2.1 Personal rights	72.83	64
4.2.2 Personal safety	26.42	112
4.2.3 Physician density	7.08	100
4.2.4 Sanitation	74.68	92
5. VOCATIONAL AND TECHNICAL SKILLS	41.44	90
5.1 Mid-Level Skills	19.82	117
5.1.1 Workforce with secondary education	6.32	122
5.1.2 Population with secondary education	5.72	107
5.1.3 Technicians and associate professionals	17.02	99
5.1.4 Labour productivity per employee	50.21	86
5.2 Employability	63.06	40
5.2.1 Ease of finding skilled employees	71.28	36
5.2.2 Relevance of education system to the economy	54.83	41
5.2.3 Skills matching	n/a	n/a
6. GLOBAL KNOWLEDGE SKILLS	43.95	51
6.1 High-Level Skills	44.64	45
6.1.1 Workforce with tertiary education	30.85	57
6.1.2 Population with tertiary education	35.01	36
6.1.3 Professionals	12.52	106
6.1.4 Researchers	33.93	87
6.1.5 Senior officials and managers	88.21	6
6.1.6 Availability of scientists and engineers	67.32	31
6.2 Talent Impact	43.25	48
6.2.1 Innovation output	40.28	40
6.2.2 High-value exports	100.00	1
6.2.3 New product entrepreneurial activity	63.60	19
6.2.4 New business density	6.82	105
6.2.5 Scientific journal articles	5.56	103

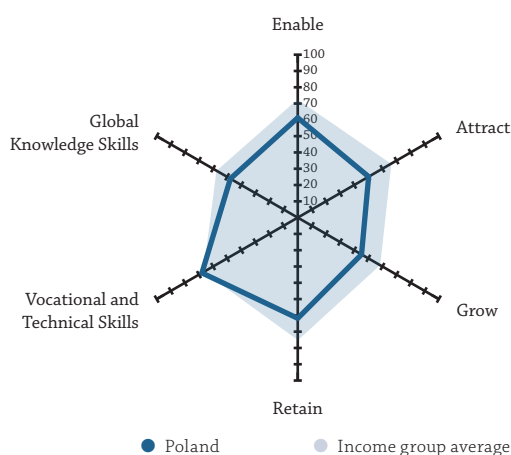
POLAND

Key Indicators

Rank (out of 134).....	40
Income group	High income
Regional group	Europe
Population (millions)	37.95

GDP per capita (PPP US\$)	34,264.76
GDP (US\$ billions)	594.16
GTCI score	55.69
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	61.25	41
1.1 Regulatory Landscape	66.60	39
1.1.1 Government effectiveness	64.02	41
1.1.2 Rule of law	63.84	46
1.1.3 Political stability	74.36	39
1.1.4 Regulatory quality	74.62	30
1.1.5 Corruption	56.16	38
1.2 Market Landscape	60.48	36
1.2.1 Extent of market dominance	73.61	17
1.2.2 Ease of doing business	81.63	38
1.2.3 Cluster development	42.69	64
1.2.4 R&D expenditure	24.29	31
1.2.5 ICT infrastructure	86.61	31
1.2.6 Urbanisation	54.07	76
1.3 Business and Labour Landscape	56.66	49
Labour Market		
1.3.1 Labour rights	89.00	49
1.3.2 Labour-employer cooperation	38.18	77
Management Practice		
1.3.3 Professional management	46.87	85
1.3.4 Relationship of pay to productivity	60.66	55
Technology Adoption		
1.3.5 Technology utilisation	53.14	61
1.3.6 Investment in emerging technologies	37.21	72
1.3.7 Firms with website	71.54	36
2 ATTRACT	50.24	68
2.1 External Openness	44.56	74
Attract Business		
2.1.1 FDI and technology transfer	66.28	45
2.1.2 Prevalence of foreign ownership	65.17	51
Attract People		
2.1.3 Migrant stock	22.62	103
2.1.4 International students	38.90	57
2.1.5 Brain gain	29.82	110
2.2 Internal Openness	55.92	60
Social Inclusion		
2.2.1 Tolerance of minorities	44.57	60
2.2.2 Tolerance of immigrants	50.77	82
2.2.3 Social mobility	51.39	66
Gender Equality		
2.2.4 Women in tertiary education	76.69	15
2.2.5 Women in high-skilled jobs	79.81	19
2.2.6 Leadership opportunities for women	32.28	90

	Score	Rank
3 GROW	45.21	44
3.1 Formal Education	55.59	28
Enrolment		
3.1.1 Vocational enrolment	55.43	20
3.1.2 Tertiary enrolment	47.73	35
Quality		
3.1.3 Tertiary education expenditure	69.53	38
3.1.4 Reading, maths, and science	72.98	8
3.1.5 University ranking	32.30	60
3.2 Lifelong Learning	28.12	65
3.2.1 Business and economics subject ranking	20.31	61
3.2.2 Prevalence of training in firms	19.58	82
3.2.3 Employee development	38.20	64
3.2.4 Formal and non-formal studies	34.41	37
3.3 Access to Growth Opportunities	51.91	51
Empowerment		
3.3.1 Delegation of authority	39.69	94
3.3.2 Youth inclusion	85.76	19
Collaboration		
3.3.3 Use of virtual social networks	68.30	61
3.3.4 Use of virtual professional networks	13.91	74

4 RETAIN	61.80	41
4.1 Sustainability	49.88	62
4.1.1 Pension coverage	83.43	64
4.1.2 Social protection	19.44	118
4.1.3 Brain retention	34.74	81
4.1.4 Environmental performance	61.90	37
4.2 Lifestyle	73.72	33
4.2.1 Personal rights	83.29	50
4.2.2 Personal safety	83.53	19
4.2.3 Physician density	29.37	62
4.2.4 Sanitation	98.70	33
5 VOCATIONAL AND TECHNICAL SKILLS	67.89	20
5.1 Mid-Level Skills	75.88	6
5.1.1 Workforce with secondary education	79.03	13
5.1.2 Population with secondary education	84.56	6
5.1.3 Technicians and associate professionals	57.44	27
5.1.4 Labour productivity per employee	82.50	33
5.2 Employability	59.90	49
5.2.1 Ease of finding skilled employees	54.14	69
5.2.2 Relevance of education system to the economy	36.30	88
5.2.3 Skills matching	89.26	6

6 GLOBAL KNOWLEDGE SKILLS	47.74	45
6.1 High-Level Skills	51.83	36
6.1.1 Workforce with tertiary education	44.53	33
6.1.2 Population with tertiary education	32.88	39
6.1.3 Professionals	48.98	25
6.1.4 Researchers	85.43	29
6.1.5 Senior officials and managers	47.63	38
6.1.6 Availability of scientists and engineers	51.55	62
6.2 Talent Impact	43.65	45
6.2.1 Innovation output	42.43	39
6.2.2 High-value exports	58.07	47
6.2.3 New product entrepreneurial activity	19.13	82
6.2.4 New business density	26.96	69
6.2.5 Scientific journal articles	71.67	32

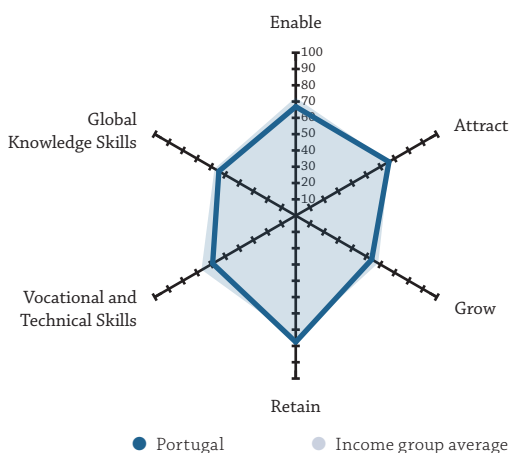
PORTUGAL

Key Indicators

Rank (out of 134).....	28
Income group.....	High income
Regional group.....	Europe
Population (millions).....	10.31

GDP per capita (PPP US\$).....	34,495.92
GDP (US\$ billions).....	231.26
GTCI score.....	62.95
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	66.86	32
1.1 Regulatory Landscape.....	76.12	23
1.1.1 Government effectiveness.....	76.29	25
1.1.2 Rule of law.....	79.58	23
1.1.3 Political stability.....	88.07	8
1.1.4 Regulatory quality.....	73.64	36
1.1.5 Corruption.....	63.01	27
1.2 Market Landscape.....	61.93	33
1.2.1 Extent of market dominance.....	55.24	43
1.2.2 Ease of doing business.....	81.78	37
1.2.3 Cluster development.....	57.44	36
1.2.4 R&D expenditure.....	27.09	26
1.2.5 ICT infrastructure.....	90.06	24
1.2.6 Urbanisation.....	60.00	68
1.3 Business and Labour Landscape.....	62.52	40
Labour Market		
1.3.1 Labour rights.....	94.90	27
1.3.2 Labour-employer cooperation.....	48.08	51
Management Practice		
1.3.3 Professional management.....	54.74	59
1.3.4 Relationship of pay to productivity.....	50.60	74
Technology Adoption		
1.3.5 Technology utilisation.....	76.21	24
1.3.6 Investment in emerging technologies.....	52.88	38
1.3.7 Firms with website.....	60.23	53
2 ATTRACT.....	66.05	23
2.1 External Openness.....	62.21	30
Attract Business		
2.1.1 FDI and technology transfer.....	81.00	16
2.1.2 Prevalence of foreign ownership.....	68.69	45
Attract People		
2.1.3 Migrant stock.....	52.23	47
2.1.4 International students.....	55.67	32
2.1.5 Brain gain.....	53.47	46
2.2 Internal Openness.....	69.89	16
Social Inclusion		
2.2.1 Tolerance of minorities.....	91.30	4
2.2.2 Tolerance of immigrants.....	92.31	8
2.2.3 Social mobility.....	58.53	42
Gender Equality		
2.2.4 Women in tertiary education.....	64.66	65
2.2.5 Women in high-skilled jobs.....	72.13	45
2.2.6 Leadership opportunities for women.....	40.44	77

	Score	Rank
3 GROW.....	53.84	31
3.1 Formal Education.....	54.16	31
Enrolment		
3.1.1 Vocational enrolment.....	46.17	30
3.1.2 Tertiary enrolment.....	45.65	39
Quality		
3.1.3 Tertiary education expenditure.....	68.85	40
3.1.4 Reading, maths, and science.....	64.46	25
3.1.5 University ranking.....	45.67	33
3.2 Lifelong Learning.....	44.52	39
3.2.1 Business and economics subject ranking.....	41.52	27
3.2.2 Prevalence of training in firms.....	29.79	61
3.2.3 Employee development.....	44.37	50
3.2.4 Formal and non-formal studies.....	62.38	23
3.3 Access to Growth Opportunities.....	62.84	26
Empowerment		
3.3.1 Delegation of authority.....	45.27	74
3.3.2 Youth inclusion.....	84.91	22
Collaboration		
3.3.3 Use of virtual social networks.....	76.72	38
3.3.4 Use of virtual professional networks.....	44.48	18

4 RETAIN.....	77.57	22
4.1 Sustainability.....	67.57	27
4.1.1 Pension coverage.....	90.30	57
4.1.2 Social protection.....	67.57	31
4.1.3 Brain retention.....	39.76	68
4.1.4 Environmental performance.....	72.66	27
4.2 Lifestyle.....	87.57	2
4.2.1 Personal rights.....	98.70	9
4.2.2 Personal safety.....	85.85	18
4.2.3 Physician density.....	66.14	8
4.2.4 Sanitation.....	99.58	18

5 VOCATIONAL AND TECHNICAL SKILLS.....	58.89	48
5.1 Mid-Level Skills.....	48.01	65
5.1.1 Workforce with secondary education.....	39.67	77
5.1.2 Population with secondary education.....	26.01	84
5.1.3 Technicians and associate professionals.....	46.72	45
5.1.4 Labour productivity per employee.....	79.65	40
5.2 Employability.....	69.77	25
5.2.1 Ease of finding skilled employees.....	72.73	35
5.2.2 Relevance of education system to the economy.....	63.56	30
5.2.3 Skills matching.....	73.04	40

6 GLOBAL KNOWLEDGE SKILLS.....	54.48	31
6.1 High-Level Skills.....	52.29	35
6.1.1 Workforce with tertiary education.....	36.15	45
6.1.2 Population with tertiary education.....	24.16	64
6.1.3 Professionals.....	52.00	22
6.1.4 Researchers.....	91.22	20
6.1.5 Senior officials and managers.....	44.31	40
6.1.6 Availability of scientists and engineers.....	65.91	32
6.2 Talent Impact.....	56.66	30
6.2.1 Innovation output.....	49.08	28
6.2.2 High-value exports.....	49.97	64
6.2.3 New product entrepreneurial activity.....	39.09	57
6.2.4 New business density.....	62.43	23
6.2.5 Scientific journal articles.....	82.75	18

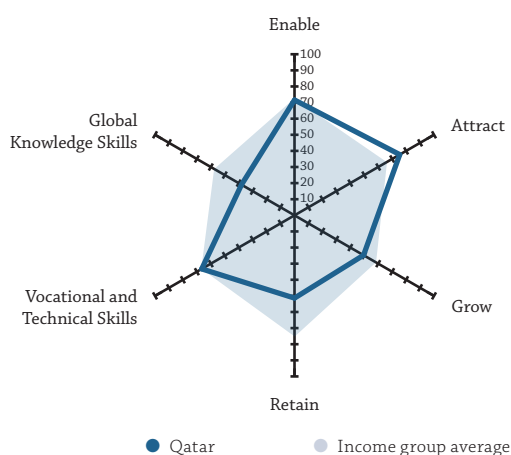
QATAR

Key Indicators

Rank (out of 134).....	36
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	2.88

GDP per capita (PPP US\$)	89,948.61
GDP (US\$ billions)	146.37
GTCI score	58.73
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	71.61	24
1.1 Regulatory Landscape	69.63	36
1.1.1 Government effectiveness	66.32	38
1.1.2 Rule of law	70.34	35
1.1.3 Political stability	78.50	29
1.1.4 Regulatory quality	67.21	39
1.1.5 Corruption	65.75	25
1.2 Market Landscape	70.21	22
1.2.1 Extent of market dominance	77.96	10
1.2.2 Ease of doing business	67.98	72
1.2.3 Cluster development	66.30	26
1.2.4 R&D expenditure	10.07	64
1.2.5 ICT infrastructure	99.92	2
1.2.6 Urbanisation	99.01	3
1.3 Business and Labour Landscape	74.99	22
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	68.53	19
Management Practice		
1.3.3 Professional management	75.12	25
1.3.4 Relationship of pay to productivity	90.41	5
Technology Adoption		
1.3.5 Technology utilisation	69.73	33
1.3.6 Investment in emerging technologies	71.18	16
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	75.42	10
2.1 External Openness	81.50	5
Attract Business		
2.1.1 FDI and technology transfer	73.66	27
2.1.2 Prevalence of foreign ownership	60.51	61
Attract People		
2.1.3 Migrant stock	97.79	2
2.1.4 International students	91.97	3
2.1.5 Brain gain	83.57	7
2.2 Internal Openness	69.34	17
Social Inclusion		
2.2.1 Tolerance of minorities	68.48	29
2.2.2 Tolerance of immigrants	83.08	20
2.2.3 Social mobility	77.62	20
Gender Equality		
2.2.4 Women in tertiary education	100.00	1
2.2.5 Women in high-skilled jobs	15.47	127
2.2.6 Leadership opportunities for women	71.39	21

	Score	Rank
3 GROW	49.49	36
3.1 Formal Education	23.82	92
Enrolment		
3.1.1 Vocational enrolment	0.49	100
3.1.2 Tertiary enrolment	12.76	98
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	32.41	59
3.1.5 University ranking	49.64	28
3.2 Lifelong Learning	54.18	23
3.2.1 Business and economics subject ranking	36.23	34
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	72.13	17
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	70.45	18
Empowerment		
3.3.1 Delegation of authority	71.16	21
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	99.79	3
3.3.4 Use of virtual professional networks	40.40	22

4 RETAIN	51.37	73
4.1 Sustainability	45.58	71
4.1.1 Pension coverage	18.59	104
4.1.2 Social protection	67.54	32
4.1.3 Brain retention	76.26	17
4.1.4 Environmental performance	19.93	100
4.2 Lifestyle	57.16	71
4.2.1 Personal rights	26.49	118
4.2.2 Personal safety	71.45	30
4.2.3 Physician density	30.71	58
4.2.4 Sanitation	100.00	1
5 VOCATIONAL AND TECHNICAL SKILLS	66.49	25
5.1 Mid-Level Skills	46.42	68
5.1.1 Workforce with secondary education	34.49	83
5.1.2 Population with secondary education	31.49	73
5.1.3 Technicians and associate professionals	27.31	72
5.1.4 Labour productivity per employee	92.39	9
5.2 Employability	86.55	4
5.2.1 Ease of finding skilled employees	90.07	7
5.2.2 Relevance of education system to the economy	83.04	6
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	38.00	62
6.1 High-Level Skills	37.38	67
6.1.1 Workforce with tertiary education	21.80	77
6.1.2 Population with tertiary education	24.63	62
6.1.3 Professionals	21.93	74
6.1.4 Researchers	59.75	62
6.1.5 Senior officials and managers	14.93	93
6.1.6 Availability of scientists and engineers	81.22	8
6.2 Talent Impact	38.62	62
6.2.1 Innovation output	22.26	71
6.2.2 High-value exports	0.06	128
6.2.3 New product entrepreneurial activity	52.54	42
6.2.4 New business density	61.44	25
6.2.5 Scientific journal articles	56.78	43

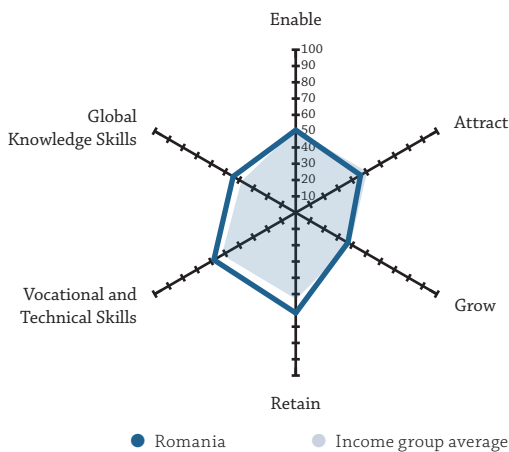
ROMANIA

Key Indicators

Rank (out of 134).....	55
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	19.29

GDP per capita (PPP US\$).....	31,945.75
GDP (US\$ billions).....	248.72
GTCI score.....	49.58
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	50.62	60
1.1 Regulatory Landscape.....	56.56	52
1.1.1 Government effectiveness.....	44.40	88
1.1.2 Rule of law.....	61.81	48
1.1.3 Political stability.....	74.45	37
1.1.4 Regulatory quality.....	62.41	51
1.1.5 Corruption.....	39.73	57
1.2 Market Landscape.....	50.55	64
1.2.1 Extent of market dominance.....	49.69	54
1.2.2 Ease of doing business.....	76.24	53
1.2.3 Cluster development.....	28.17	103
1.2.4 R&D expenditure.....	9.90	65
1.2.5 ICT infrastructure.....	92.18	17
1.2.6 Urbanisation.....	47.10	92
1.3 Business and Labour Landscape.....	44.76	90
Labour Market		
1.3.1 Labour rights.....	80.40	69
1.3.2 Labour-employer cooperation.....	31.21	97
Management Practice		
1.3.3 Professional management.....	40.93	96
1.3.4 Relationship of pay to productivity.....	42.59	97
Technology Adoption		
1.3.5 Technology utilisation.....	37.49	104
1.3.6 Investment in emerging technologies.....	31.16	94
1.3.7 Firms with website.....	49.53	67
2 ATTRACT.....	45.96	83
2.1 External Openness.....	38.85	94
Attract Business		
2.1.1 FDI and technology transfer.....	50.58	87
2.1.2 Prevalence of foreign ownership.....	60.91	59
Attract People		
2.1.3 Migrant stock.....	19.32	105
2.1.4 International students.....	47.20	42
2.1.5 Brain gain.....	16.25	130
2.2 Internal Openness.....	53.06	72
Social Inclusion		
2.2.1 Tolerance of minorities.....	40.22	68
2.2.2 Tolerance of immigrants.....	35.38	108
2.2.3 Social mobility.....	38.60	107
Gender Equality		
2.2.4 Women in tertiary education.....	66.07	57
2.2.5 Women in high-skilled jobs.....	77.60	25
2.2.6 Leadership opportunities for women.....	60.48	36

	Score	Rank
3 GROW.....	36.93	63
3.1 Formal Education.....	45.42	42
Enrolment		
3.1.1 Vocational enrolment.....	57.01	19
3.1.2 Tertiary enrolment.....	35.34	62
Quality		
3.1.3 Tertiary education expenditure.....	67.78	41
3.1.4 Reading, maths, and science.....	38.25	48
3.1.5 University ranking.....	28.74	64
3.2 Lifelong Learning.....	17.29	107
3.2.1 Business and economics subject ranking.....	17.38	67
3.2.2 Prevalence of training in firms.....	17.90	87
3.2.3 Employee development.....	24.61	106
3.2.4 Formal and non-formal studies.....	9.28	51
3.3 Access to Growth Opportunities.....	48.08	65
Empowerment		
3.3.1 Delegation of authority.....	35.97	107
3.3.2 Youth inclusion.....	73.67	48
Collaboration		
3.3.3 Use of virtual social networks.....	62.16	74
3.3.4 Use of virtual professional networks.....	20.53	54

4 RETAIN.....	61.59	42
4.1 Sustainability.....	53.56	51
4.1.1 Pension coverage.....	93.43	48
4.1.2 Social protection.....	47.91	52
4.1.3 Brain retention.....	4.31	131
4.1.4 Environmental performance.....	68.61	32
4.2 Lifestyle.....	69.62	45
4.2.1 Personal rights.....	88.05	43
4.2.2 Personal safety.....	70.46	33
4.2.3 Physician density.....	36.92	46
4.2.4 Sanitation.....	83.07	86

5 VOCATIONAL AND TECHNICAL SKILLS.....	58.02	49
5.1 Mid-Level Skills.....	66.32	30
5.1.1 Workforce with secondary education.....	83.26	9
5.1.2 Population with secondary education.....	74.58	16
5.1.3 Technicians and associate professionals.....	27.23	73
5.1.4 Labour productivity per employee.....	80.22	38
5.2 Employability.....	49.71	76
5.2.1 Ease of finding skilled employees.....	25.55	126
5.2.2 Relevance of education system to the economy.....	23.57	106
5.2.3 Skills matching.....	100.00	1

6 GLOBAL KNOWLEDGE SKILLS.....	44.35	50
6.1 High-Level Skills.....	33.11	80
6.1.1 Workforce with tertiary education.....	25.06	70
6.1.2 Population with tertiary education.....	18.66	72
6.1.3 Professionals.....	36.35	50
6.1.4 Researchers.....	66.22	52
6.1.5 Senior officials and managers.....	16.16	91
6.1.6 Availability of scientists and engineers.....	36.19	102
6.2 Talent Impact.....	55.60	31
6.2.1 Innovation output.....	36.41	45
6.2.2 High-value exports.....	60.06	43
6.2.3 New product entrepreneurial activity.....	59.44	25
6.2.4 New business density.....	65.73	20
6.2.5 Scientific journal articles.....	56.35	44

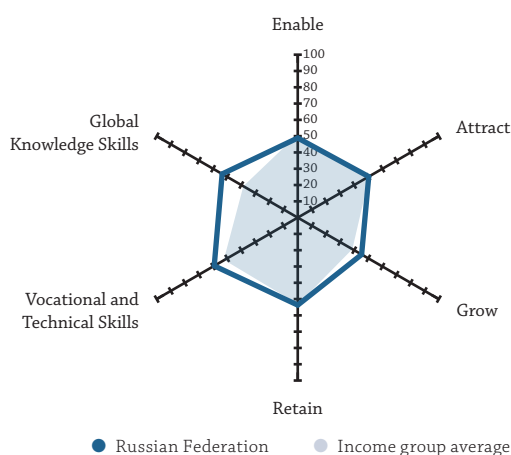
RUSSIAN FEDERATION

Key Indicators

Rank (out of 134).....	45
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	144.10

GDP per capita (PPP US\$).....	28,213.45
GDP (US\$ billions).....	1,483.50
GTCI score.....	51.82
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	48.86	66
1.1 Regulatory Landscape.....	40.85	95
1.1.1 Government effectiveness.....	53.99	61
1.1.2 Rule of law.....	36.76	108
1.1.3 Political stability.....	50.31	97
1.1.4 Regulatory quality.....	42.64	98
1.1.5 Corruption.....	20.55	107
1.2 Market Landscape.....	54.47	48
1.2.1 Extent of market dominance.....	40.12	80
1.2.2 Ease of doing business.....	84.78	26
1.2.3 Cluster development.....	37.24	81
1.2.4 R&D expenditure.....	19.68	37
1.2.5 ICT infrastructure.....	74.38	58
1.2.6 Urbanisation.....	70.60	47
1.3 Business and Labour Landscape.....	51.27	62
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	38.12	78
Management Practice		
1.3.3 Professional management.....	42.47	93
1.3.4 Relationship of pay to productivity.....	68.46	40
Technology Adoption		
1.3.5 Technology utilisation.....	52.97	62
1.3.6 Investment in emerging technologies.....	48.90	46
1.3.7 Firms with website.....	56.70	57
2 ATTRACT.....	50.32	66
2.1 External Openness.....	43.05	81
Attract Business		
2.1.1 FDI and technology transfer.....	44.38	102
2.1.2 Prevalence of foreign ownership.....	31.40	122
Attract People		
2.1.3 Migrant stock.....	51.76	49
2.1.4 International students.....	43.49	50
2.1.5 Brain gain.....	44.21	76
2.2 Internal Openness.....	57.59	50
Social Inclusion		
2.2.1 Tolerance of minorities.....	18.48	100
2.2.2 Tolerance of immigrants.....	72.31	38
2.2.3 Social mobility.....	45.35	86
Gender Equality		
2.2.4 Women in tertiary education.....	63.71	69
2.2.5 Women in high-skilled jobs.....	87.99	7
2.2.6 Leadership opportunities for women.....	57.73	40

	Score	Rank
3 GROW.....	45.27	43
3.1 Formal Education.....	57.62	24
Enrolment		
3.1.1 Vocational enrolment.....	51.49	23
3.1.2 Tertiary enrolment.....	58.97	15
Quality		
3.1.3 Tertiary education expenditure.....	62.83	51
3.1.4 Reading, maths, and science.....	60.11	30
3.1.5 University ranking.....	54.72	24
3.2 Lifelong Learning.....	28.17	64
3.2.1 Business and economics subject ranking.....	47.36	21
3.2.2 Prevalence of training in firms.....	5.73	104
3.2.3 Employee development.....	33.47	73
3.2.4 Formal and non-formal studies.....	26.09	42
3.3 Access to Growth Opportunities.....	50.02	58
Empowerment		
3.3.1 Delegation of authority.....	48.16	67
3.3.2 Youth inclusion.....	78.29	38
Collaboration		
3.3.3 Use of virtual social networks.....	67.57	65
3.3.4 Use of virtual professional networks.....	6.07	102

4 RETAIN.....	53.69	62
4.1 Sustainability.....	54.46	49
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	30.03	91
4.1.3 Brain retention.....	44.26	52
4.1.4 Environmental performance.....	43.56	56
4.2 Lifestyle.....	52.91	77
4.2.1 Personal rights.....	38.05	111
4.2.2 Personal safety.....	28.67	110
4.2.3 Physician density.....	55.20	18
4.2.4 Sanitation.....	89.73	73

5 VOCATIONAL AND TECHNICAL SKILLS.....	59.19	46
5.1 Mid-Level Skills.....	57.18	49
5.1.1 Workforce with secondary education.....	60.04	37
5.1.2 Population with secondary education.....	35.18	67
5.1.3 Technicians and associate professionals.....	58.64	25
5.1.4 Labour productivity per employee.....	74.85	46
5.2 Employability.....	61.21	44
5.2.1 Ease of finding skilled employees.....	66.25	45
5.2.2 Relevance of education system to the economy.....	42.23	72
5.2.3 Skills matching.....	75.15	34

6 GLOBAL KNOWLEDGE SKILLS.....	53.58	33
6.1 High-Level Skills.....	65.69	11
6.1.1 Workforce with tertiary education.....	62.71	7
6.1.2 Population with tertiary education.....	81.04	2
6.1.3 Professionals.....	62.30	10
6.1.4 Researchers.....	83.76	32
6.1.5 Senior officials and managers.....	44.22	41
6.1.6 Availability of scientists and engineers.....	60.14	46
6.2 Talent Impact.....	41.47	54
6.2.1 Innovation output.....	31.27	57
6.2.2 High-value exports.....	63.64	35
6.2.3 New product entrepreneurial activity.....	9.90	87
6.2.4 New business density.....	44.58	42
6.2.5 Scientific journal articles.....	57.93	42

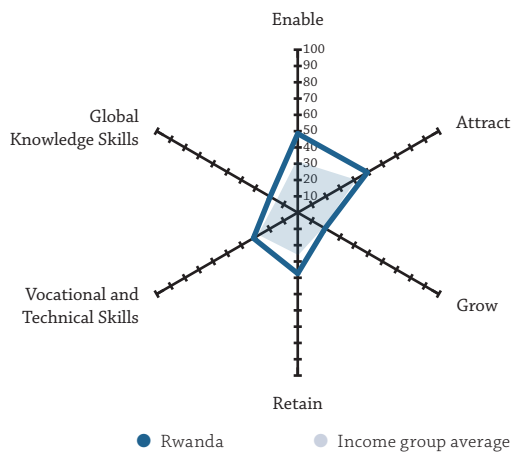
RWANDA

Key Indicators

Rank (out of 134).....	101
Income group	Low income
Regional group.....	Sub-Saharan Africa
Population (millions)	12.95

GDP per capita (PPP US\$)	2,213.96
GDP (US\$ billions)	10.33
GTCI score.....	34.26
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	48.49	68
1.1 Regulatory Landscape.....	56.49	53
1.1.1 Government effectiveness.....	54.76	57
1.1.2 Rule of law.....	55.18	58
1.1.3 Political stability.....	65.19	58
1.1.4 Regulatory quality.....	53.90	65
1.1.5 Corruption.....	53.42	40
1.2 Market Landscape.....	35.85	99
1.2.1 Extent of market dominance.....	33.81	96
1.2.2 Ease of doing business.....	81.81	36
1.2.3 Cluster development.....	41.97	66
1.2.4 R&D expenditure.....	12.86	52
1.2.5 ICT infrastructure.....	39.82	98
1.2.6 Urbanisation.....	4.81	132
1.3 Business and Labour Landscape.....	53.13	55
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	55.98	38
Management Practice		
1.3.3 Professional management.....	68.31	31
1.3.4 Relationship of pay to productivity.....	53.28	68
Technology Adoption		
1.3.5 Technology utilisation.....	52.91	63
1.3.6 Investment in emerging technologies.....	50.02	41
1.3.7 Firms with website.....	38.30	81
2. ATTRACT	49.35	75
2.1 External Openness.....	50.76	55
Attract Business		
2.1.1 FDI and technology transfer.....	54.15	75
2.1.2 Prevalence of foreign ownership.....	50.76	92
Attract People		
2.1.3 Migrant stock.....	40.24	68
2.1.4 International students.....	38.88	58
2.1.5 Brain gain.....	69.74	21
2.2 Internal Openness.....	47.94	90
Social Inclusion		
2.2.1 Tolerance of minorities.....	1.09	126
2.2.2 Tolerance of immigrants.....	41.54	98
2.2.3 Social mobility.....	66.59	35
Gender Equality		
2.2.4 Women in tertiary education.....	49.10	103
2.2.5 Women in high-skilled jobs.....	48.51	102
2.2.6 Leadership opportunities for women.....	80.80	11

	Score	Rank
3. GROW	19.34	119
3.1 Formal Education.....	14.74	119
Enrolment		
3.1.1 Vocational enrolment.....	11.01	75
3.1.2 Tertiary enrolment.....	3.81	120
Quality		
3.1.3 Tertiary education expenditure.....	44.15	91
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	18.88	102
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	39.44	44
3.2.3 Employee development.....	32.91	77
3.2.4 Formal and non-formal studies.....	3.18	67
3.3 Access to Growth Opportunities.....	24.39	120
Empowerment		
3.3.1 Delegation of authority.....	52.76	52
3.3.2 Youth inclusion.....	38.06	107
Collaboration		
3.3.3 Use of virtual social networks.....	3.85	129
3.3.4 Use of virtual professional networks.....	2.87	118

4. RETAIN	37.40	101
4.1 Sustainability.....	36.03	90
4.1.1 Pension coverage.....	2.12	130
4.1.2 Social protection.....	55.84	39
4.1.3 Brain retention.....	72.03	20
4.1.4 Environmental performance.....	14.11	109
4.2 Lifestyle.....	38.77	105
4.2.1 Personal rights.....	50.34	100
4.2.2 Personal safety.....	39.77	92
4.2.3 Physician density.....	1.03	118
4.2.4 Sanitation.....	63.94	100
5. VOCATIONAL AND TECHNICAL SKILLS	31.42	112
5.1 Mid-Level Skills.....	9.33	122
5.1.1 Workforce with secondary education.....	13.81	115
5.1.2 Population with secondary education.....	7.93	105
5.1.3 Technicians and associate professionals.....	5.60	121
5.1.4 Labour productivity per employee.....	9.96	114
5.2 Employability.....	53.50	67
5.2.1 Ease of finding skilled employees.....	48.95	81
5.2.2 Relevance of education system to the economy.....	45.01	62
5.2.3 Skills matching.....	66.55	51

6. GLOBAL KNOWLEDGE SKILLS	19.56	106
6.1 High-Level Skills.....	14.56	120
6.1.1 Workforce with tertiary education.....	10.02	106
6.1.2 Population with tertiary education.....	4.17	100
6.1.3 Professionals.....	13.52	104
6.1.4 Researchers.....	3.83	108
6.1.5 Senior officials and managers.....	9.37	105
6.1.6 Availability of scientists and engineers.....	46.43	70
6.2 Talent Impact.....	24.56	92
6.2.1 Innovation output.....	7.67	111
6.2.2 High-value exports.....	59.00	45
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	27.91	66
6.2.5 Scientific journal articles.....	3.67	110

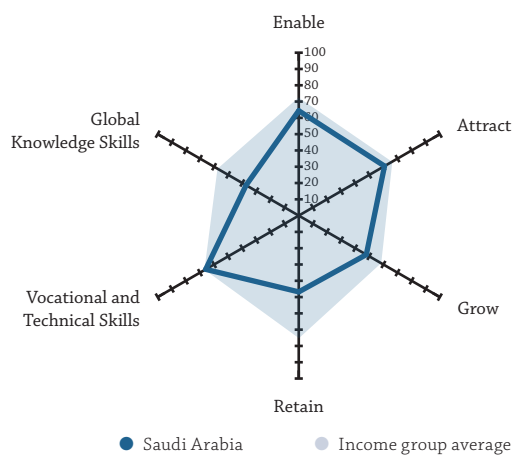
SAUDI ARABIA

Key Indicators

Rank (out of 134)	41
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	34.81

GDP per capita (PPP US\$)	46,762.47
GDP (US\$ billions)	700.12
GTCI score	53.85
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	64.36	34
1.1 Regulatory Landscape	54.08	56
1.1.1 Government effectiveness	57.46	53
1.1.2 Rule of law	57.31	54
1.1.3 Political stability	52.90	90
1.1.4 Regulatory quality	50.68	74
1.1.5 Corruption	52.05	43
1.2 Market Landscape	69.90	24
1.2.1 Extent of market dominance	76.76	13
1.2.2 Ease of doing business	73.10	59
1.2.3 Cluster development	80.36	12
1.2.4 R&D expenditure	16.28	45
1.2.5 ICT infrastructure	91.46	18
1.2.6 Urbanisation	81.42	26
1.3 Business and Labour Landscape	69.11	29
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	62.51	28
Management Practice		
1.3.3 Professional management	62.91	41
1.3.4 Relationship of pay to productivity	82.74	12
Technology Adoption		
1.3.5 Technology utilisation	75.86	26
1.3.6 Investment in emerging technologies	61.52	29
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	60.80	32
2.1 External Openness	65.28	27
Attract Business		
2.1.1 FDI and technology transfer	71.49	35
2.1.2 Prevalence of foreign ownership	45.56	100
Attract People		
2.1.3 Migrant stock	86.14	7
2.1.4 International students	42.95	52
2.1.5 Brain gain	80.25	10
2.2 Internal Openness	56.32	56
Social Inclusion		
2.2.1 Tolerance of minorities	7.61	117
2.2.2 Tolerance of immigrants	80.00	25
2.2.3 Social mobility	79.19	18
Gender Equality		
2.2.4 Women in tertiary education	57.13	90
2.2.5 Women in high-skilled jobs	n/a	n/a
2.2.6 Leadership opportunities for women	57.66	41

	Score	Rank
3 GROW	47.89	39
3.1 Formal Education	33.22	69
Enrolment		
3.1.1 Vocational enrolment	11.45	74
3.1.2 Tertiary enrolment	49.34	29
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	21.27	70
3.1.5 University ranking	50.81	27
3.2 Lifelong Learning	52.04	25
3.2.1 Business and economics subject ranking	43.58	25
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	60.50	33
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	58.41	38
Empowerment		
3.3.1 Delegation of authority	61.72	35
3.3.2 Youth inclusion	71.01	52
Collaboration		
3.3.3 Use of virtual social networks	79.52	28
3.3.4 Use of virtual professional networks	21.41	52

4 RETAIN	46.81	81
4.1 Sustainability	52.73	56
4.1.1 Pension coverage	32.53	93
4.1.2 Social protection	77.76	17
4.1.3 Brain retention	68.55	24
4.1.4 Environmental performance	32.10	79
4.2 Lifestyle	40.90	101
4.2.1 Personal rights	0.00	131
4.2.2 Personal safety	31.29	105
4.2.3 Physician density	32.29	53
4.2.4 Sanitation	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS	65.94	27
5.1 Mid-Level Skills	56.42	50
5.1.1 Workforce with secondary education	44.85	66
5.1.2 Population with secondary education	31.67	72
5.1.3 Technicians and associate professionals	n/a	n/a
5.1.4 Labour productivity per employee	92.75	8
5.2 Employability	75.45	18
5.2.1 Ease of finding skilled employees	83.66	13
5.2.2 Relevance of education system to the economy	67.24	20
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	37.32	66
6.1 High-Level Skills	48.60	40
6.1.1 Workforce with tertiary education	32.85	54
6.1.2 Population with tertiary education	41.73	31
6.1.3 Professionals	n/a	n/a
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	n/a	n/a
6.1.6 Availability of scientists and engineers	71.23	23
6.2 Talent Impact	26.04	86
6.2.1 Innovation output	18.26	76
6.2.2 High-value exports	12.05	117
6.2.3 New product entrepreneurial activity	44.20	50
6.2.4 New business density	11.62	96
6.2.5 Scientific journal articles	44.07	52

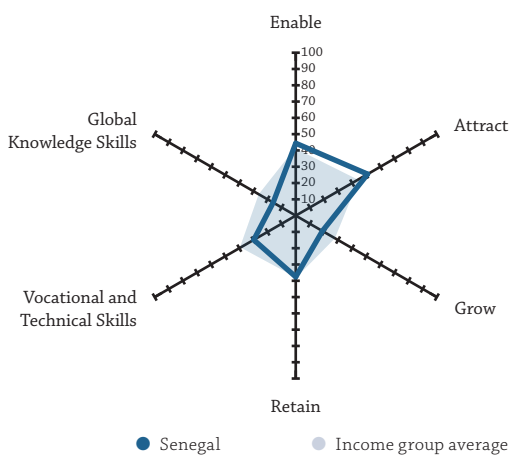
SENEGAL

Key Indicators

Rank (out of 134) **103**
 Income group **Lower-middle income**
 Regional group **Sub-Saharan Africa**
 Population (millions) **16.74**

GDP per capita (PPP US\$) **3,481.31**
 GDP (US\$ billions) **24.91**
 GTCI score **32.94**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	44.43	86
1.1 Regulatory Landscape	50.62	64
1.1.1 Government effectiveness	49.37	74
1.1.2 Rule of law	49.04	72
1.1.3 Political stability	63.87	62
1.1.4 Regulatory quality	49.70	78
1.1.5 Corruption	41.10	55
1.2 Market Landscape	35.12	103
1.2.1 Extent of market dominance	42.81	76
1.2.2 Ease of doing business	51.37	103
1.2.3 Cluster development	31.35	94
1.2.4 R&D expenditure	11.45	57
1.2.5 ICT infrastructure	34.46	110
1.2.6 Urbanisation	39.28	101
1.3 Business and Labour Landscape	47.55	75
Labour Market		
1.3.1 Labour rights	83.70	62
1.3.2 Labour-employer cooperation	39.85	70
Management Practice		
1.3.3 Professional management	36.54	108
1.3.4 Relationship of pay to productivity	37.50	112
Technology Adoption		
1.3.5 Technology utilisation	65.02	43
1.3.6 Investment in emerging technologies	41.21	59
1.3.7 Firms with website	29.04	98
2 ATTRACT	50.93	61
2.1 External Openness	51.52	52
Attract Business		
2.1.1 FDI and technology transfer	55.23	72
2.1.2 Prevalence of foreign ownership	66.63	47
Attract People		
2.1.3 Migrant stock	26.07	92
2.1.4 International students	54.80	33
2.1.5 Brain gain	54.85	42
2.2 Internal Openness	50.35	84
Social Inclusion		
2.2.1 Tolerance of minorities	48.91	54
2.2.2 Tolerance of immigrants	73.85	36
2.2.3 Social mobility	56.39	49
Gender Equality		
2.2.4 Women in tertiary education	42.72	111
2.2.5 Women in high-skilled jobs	35.53	114
2.2.6 Leadership opportunities for women	44.68	67

	Score	Rank
3 GROW	18.90	121
3.1 Formal Education	22.80	95
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	8.67	105
Quality		
3.1.3 Tertiary education expenditure	59.73	62
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	11.31	124
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	13.57	95
3.2.3 Employee development	24.31	108
3.2.4 Formal and non-formal studies	7.38	55
3.3 Access to Growth Opportunities	22.59	124
Empowerment		
3.3.1 Delegation of authority	23.92	122
3.3.2 Youth inclusion	37.37	109
Collaboration		
3.3.3 Use of virtual social networks	21.00	110
3.3.4 Use of virtual professional networks	8.06	94

4 RETAIN	37.59	100
4.1 Sustainability	24.15	112
4.1.1 Pension coverage	29.19	95
4.1.2 Social protection	25.06	104
4.1.3 Brain retention	33.73	83
4.1.4 Environmental performance	8.64	121
4.2 Lifestyle	51.03	85
4.2.1 Personal rights	78.93	59
4.2.2 Personal safety	76.89	24
4.2.3 Physician density	0.66	126
4.2.4 Sanitation	47.64	110
5 VOCATIONAL AND TECHNICAL SKILLS	29.75	115
5.1 Mid-Level Skills	14.46	119
5.1.1 Workforce with secondary education	7.01	121
5.1.2 Population with secondary education	9.65	102
5.1.3 Technicians and associate professionals	5.45	122
5.1.4 Labour productivity per employee	35.71	98
5.2 Employability	45.05	90
5.2.1 Ease of finding skilled employees	78.46	26
5.2.2 Relevance of education system to the economy	38.64	78
5.2.3 Skills matching	18.05	91

6 GLOBAL KNOWLEDGE SKILLS	16.01	118
6.1 High-Level Skills	20.37	107
6.1.1 Workforce with tertiary education	2.66	124
6.1.2 Population with tertiary education	4.04	101
6.1.3 Professionals	8.84	118
6.1.4 Researchers	59.40	64
6.1.5 Senior officials and managers	5.36	117
6.1.6 Availability of scientists and engineers	41.94	85
6.2 Talent Impact	11.64	123
6.2.1 Innovation output	14.78	83
6.2.2 High-value exports	15.92	113
6.2.3 New product entrepreneurial activity	10.17	86
6.2.4 New business density	10.92	97
6.2.5 Scientific journal articles	6.44	99

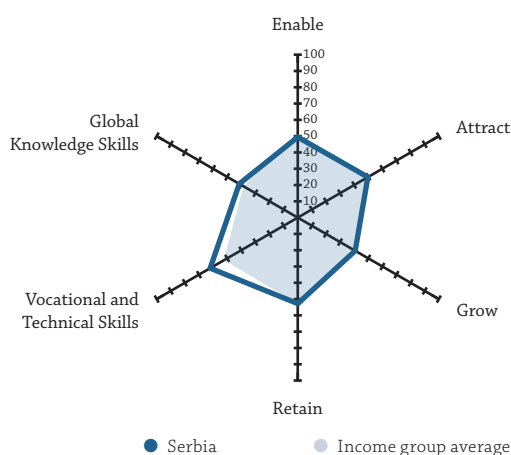
SERBIA

Key Indicators

Rank (out of 134).....	58
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	6.91

GDP per capita (PPP US\$).....	19,230.63
GDP (US\$ billions).....	52.96
GTCI score.....	49.35
GTCI score (income group average).....	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	49.43	64
1.1 Regulatory Landscape.....	49.69	69
1.1.1 Government effectiveness.....	51.07	71
1.1.2 Rule of law.....	50.69	67
1.1.3 Political stability.....	60.50	70
1.1.4 Regulatory quality.....	54.71	63
1.1.5 Corruption.....	31.51	76
1.2 Market Landscape.....	47.26	72
1.2.1 Extent of market dominance.....	25.62	112
1.2.2 Ease of doing business.....	80.34	42
1.2.3 Cluster development.....	30.35	96
1.2.4 R&D expenditure.....	18.40	41
1.2.5 ICT infrastructure.....	79.35	50
1.2.6 Urbanisation.....	49.51	86
1.3 Business and Labour Landscape.....	51.33	61
Labour Market		
1.3.1 Labour rights.....	91.40	39
1.3.2 Labour-employer cooperation.....	29.75	102
Management Practice		
1.3.3 Professional management.....	34.17	113
1.3.4 Relationship of pay to productivity.....	52.37	71
Technology Adoption		
1.3.5 Technology utilisation.....	39.74	98
1.3.6 Investment in emerging technologies.....	31.34	93
1.3.7 Firms with website.....	80.54	21
2 ATTRACT.....	49.70	72
2.1 External Openness.....	45.99	71
Attract Business		
2.1.1 FDI and technology transfer.....	50.95	86
2.1.2 Prevalence of foreign ownership.....	59.44	62
Attract People		
2.1.3 Migrant stock.....	56.57	43
2.1.4 International students.....	43.77	49
2.1.5 Brain gain.....	19.21	124
2.2 Internal Openness.....	53.42	71
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.26	84
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	37.13	111
Gender Equality		
2.2.4 Women in tertiary education.....	71.41	40
2.2.5 Women in high-skilled jobs.....	76.94	27
2.2.6 Leadership opportunities for women.....	40.61	75

	Score	Rank
3 GROW.....	40.70	53
3.1 Formal Education.....	49.20	38
Enrolment		
3.1.1 Vocational enrolment.....	69.78	7
3.1.2 Tertiary enrolment.....	47.15	36
Quality		
3.1.3 Tertiary education expenditure.....	60.18	61
3.1.4 Reading, maths, and science.....	44.27	43
3.1.5 University ranking.....	24.63	71
3.2 Lifelong Learning.....	28.23	62
3.2.1 Business and economics subject ranking.....	20.20	62
3.2.2 Prevalence of training in firms.....	42.80	37
3.2.3 Employee development.....	23.25	111
3.2.4 Formal and non-formal studies.....	26.67	41
3.3 Access to Growth Opportunities.....	44.66	73
Empowerment		
3.3.1 Delegation of authority.....	41.67	88
3.3.2 Youth inclusion.....	70.85	53
Collaboration		
3.3.3 Use of virtual social networks.....	51.98	87
3.3.4 Use of virtual professional networks.....	14.13	73

4 RETAIN.....	52.80	63
4.1 Sustainability.....	39.25	84
4.1.1 Pension coverage.....	63.13	77
4.1.2 Social protection.....	28.47	95
4.1.3 Brain retention.....	13.57	126
4.1.4 Environmental performance.....	51.85	43
4.2 Lifestyle.....	66.36	49
4.2.1 Personal rights.....	70.64	68
4.2.2 Personal safety.....	58.83	58
4.2.3 Physician density.....	38.58	42
4.2.4 Sanitation.....	97.38	50

5 VOCATIONAL AND TECHNICAL SKILLS.....	62.06	38
5.1 Mid-Level Skills.....	66.17	31
5.1.1 Workforce with secondary education.....	78.02	14
5.1.2 Population with secondary education.....	71.89	21
5.1.3 Technicians and associate professionals.....	46.79	44
5.1.4 Labour productivity per employee.....	67.99	61
5.2 Employability.....	57.95	56
5.2.1 Ease of finding skilled employees.....	61.07	54
5.2.2 Relevance of education system to the economy.....	36.36	87
5.2.3 Skills matching.....	76.41	30

6 GLOBAL KNOWLEDGE SKILLS.....	41.43	55
6.1 High-Level Skills.....	40.80	58
6.1.1 Workforce with tertiary education.....	31.43	56
6.1.2 Population with tertiary education.....	27.03	57
6.1.3 Professionals.....	32.67	55
6.1.4 Researchers.....	79.36	37
6.1.5 Senior officials and managers.....	21.83	78
6.1.6 Availability of scientists and engineers.....	52.50	59
6.2 Talent Impact.....	42.06	51
6.2.1 Innovation output.....	32.40	55
6.2.2 High-value exports.....	n/a	n/a
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	32.23	58
6.2.5 Scientific journal articles.....	61.56	40

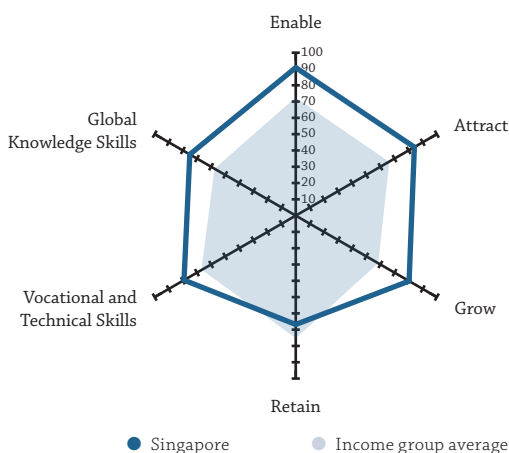
SINGAPORE

Key Indicators

Rank (out of 134) **2**
 Income group **High income**
 Regional group **Eastern, Southeastern Asia and Oceania**
 Population (millions) **5.69**

GDP per capita (PPP US\$) **98,525.95**
 GDP (US\$ billions) **340.00**
 GTCI score **79.38**
 GTCI score (income group average) **65.28**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 90.82	2	
1.1 Regulatory Landscape 97.95	1	
1.1.1 Government effectiveness 100.00	1	
1.1.2 Rule of law 96.69	8	
1.1.3 Political stability 97.19	2	
1.1.4 Regulatory quality 100.00	1	
1.1.5 Corruption 95.89	3	
1.2 Market Landscape 82.63	5	
1.2.1 Extent of market dominance 74.48	16	
1.2.2 Ease of doing business 99.00	2	
1.2.3 Cluster development 86.46	6	
1.2.4 R&D expenditure 38.80	19	
1.2.5 ICT infrastructure 97.02	5	
1.2.6 Urbanisation 100.00	1	
1.3 Business and Labour Landscape 91.87	2	
Labour Market		
1.3.1 Labour rights n/a	n/a	
1.3.2 Labour-employer cooperation 100.00	1	
Management Practice		
1.3.3 Professional management 95.71	3	
1.3.4 Relationship of pay to productivity 100.00	1	
Technology Adoption		
1.3.5 Technology utilisation 85.04	12	
1.3.6 Investment in emerging technologies 78.60	13	
1.3.7 Firms with website n/a	n/a	
2 ATTRACT 84.06	2	
2.1 External Openness 89.69	3	
Attract Business		
2.1.1 FDI and technology transfer 95.97	2	
2.1.2 Prevalence of foreign ownership 95.97	3	
Attract People		
2.1.3 Migrant stock 81.79	8	
2.1.4 International students 76.80	7	
2.1.5 Brain gain 97.93	2	
2.2 Internal Openness 78.43	8	
Social Inclusion		
2.2.1 Tolerance of minorities 81.52	7	
2.2.2 Tolerance of immigrants 84.62	15	
2.2.3 Social mobility 93.54	4	
Gender Equality		
2.2.4 Women in tertiary education 60.09	84	
2.2.5 Women in high-skilled jobs 61.35	80	
2.2.6 Leadership opportunities for women 89.44	3	

	Score	Rank
3 GROW 80.33	2	
3.1 Formal Education 78.22	1	
Enrolment		
3.1.1 Vocational enrolment 67.21	8	
3.1.2 Tertiary enrolment 62.00	10	
Quality		
3.1.3 Tertiary education expenditure 88.65	6	
3.1.4 Reading, maths, and science 90.79	2	
3.1.5 University ranking 82.44	5	
3.2 Lifelong Learning 81.67	4	
3.2.1 Business and economics subject ranking 79.05	4	
3.2.2 Prevalence of training in firms n/a	n/a	
3.2.3 Employee development 89.28	4	
3.2.4 Formal and non-formal studies 76.67	10	
3.3 Access to Growth Opportunities 81.10	5	
Empowerment		
3.3.1 Delegation of authority 79.38	15	
3.3.2 Youth inclusion 94.65	3	
Collaboration		
3.3.3 Use of virtual social networks 84.82	12	
3.3.4 Use of virtual professional networks 65.56	6	

	Score	Rank
4 RETAIN 66.81	35	
4.1 Sustainability 60.17	36	
4.1.1 Pension coverage 32.42	94	
4.1.2 Social protection 62.00	36	
4.1.3 Brain retention 89.29	4	
4.1.4 Environmental performance 56.97	38	
4.2 Lifestyle 73.46	35	
4.2.1 Personal rights 65.54	79	
4.2.2 Personal safety 99.98	2	
4.2.3 Physician density 28.30	65	
4.2.4 Sanitation 100.00	1	

	Score	Rank
5 VOCATIONAL AND TECHNICAL SKILLS 79.18	4	
5.1 Mid-Level Skills 67.05	25	
5.1.1 Workforce with secondary education 37.22	81	
5.1.2 Population with secondary education 37.91	62	
5.1.3 Technicians and associate professionals 94.16	2	
5.1.4 Labour productivity per employee 98.93	2	
5.2 Employability 91.31	1	
5.2.1 Ease of finding skilled employees 89.65	9	
5.2.2 Relevance of education system to the economy 92.96	2	
5.2.3 Skills matching n/a	n/a	

	Score	Rank
6 GLOBAL KNOWLEDGE SKILLS 75.08	3	
6.1 High-Level Skills 76.86	1	
6.1.1 Workforce with tertiary education 66.77	3	
6.1.2 Population with tertiary education 62.63	7	
6.1.3 Professionals 56.04	16	
6.1.4 Researchers 97.40	5	
6.1.5 Senior officials and managers 97.72	2	
6.1.6 Availability of scientists and engineers 80.63	10	
6.2 Talent Impact 73.30	11	
6.2.1 Innovation output 64.44	15	
6.2.2 High-value exports 95.80	2	
6.2.3 New product entrepreneurial activity 37.89	58	
6.2.4 New business density 74.60	14	
6.2.5 Scientific journal articles 93.77	5	

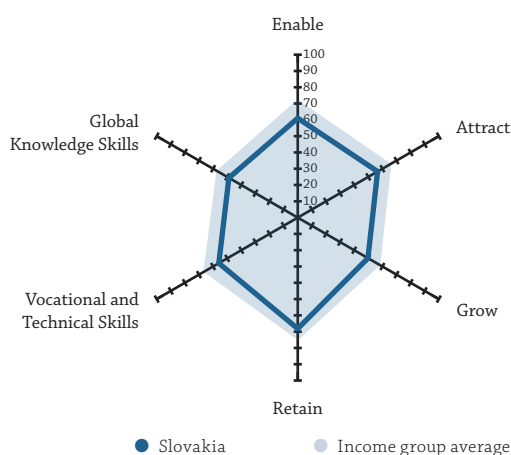
SLOVAKIA

Key Indicators

Rank (out of 134).....	38
Income group.....	High income
Regional group.....	Europe
Population (millions).....	5.46

GDP per capita (PPP US\$).....	31,832.39
GDP (US\$ billions).....	104.57
GTCI score.....	56.70
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	61.01	42
1.1 Regulatory Landscape.....	66.63	38
1.1.1 Government effectiveness.....	65.62	40
1.1.2 Rule of law.....	66.25	39
1.1.3 Political stability.....	80.27	26
1.1.4 Regulatory quality.....	74.46	33
1.1.5 Corruption.....	46.58	50
1.2 Market Landscape.....	52.09	59
1.2.1 Extent of market dominance.....	42.07	77
1.2.2 Ease of doing business.....	80.22	43
1.2.3 Cluster development.....	42.06	65
1.2.4 R&D expenditure.....	16.75	42
1.2.5 ICT infrastructure.....	84.65	37
1.2.6 Urbanisation.....	46.79	93
1.3 Business and Labour Landscape.....	64.32	37
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	38.41	75
Management Practice		
1.3.3 Professional management.....	55.72	57
1.3.4 Relationship of pay to productivity.....	63.98	47
Technology Adoption		
1.3.5 Technology utilisation.....	65.97	38
1.3.6 Investment in emerging technologies.....	49.41	43
1.3.7 Firms with website.....	76.74	27
2 ATTRACT.....	56.60	46
2.1 External Openness.....	57.18	38
Attract Business		
2.1.1 FDI and technology transfer.....	80.97	17
2.1.2 Prevalence of foreign ownership.....	96.33	2
Attract People		
2.1.3 Migrant stock.....	34.19	78
2.1.4 International students.....	56.07	30
2.1.5 Brain gain.....	18.32	125
2.2 Internal Openness.....	56.02	58
Social Inclusion		
2.2.1 Tolerance of minorities.....	n/a	n/a
2.2.2 Tolerance of immigrants.....	38.46	103
2.2.3 Social mobility.....	55.51	52
Gender Equality		
2.2.4 Women in tertiary education.....	76.11	20
2.2.5 Women in high-skilled jobs.....	72.41	43
2.2.6 Leadership opportunities for women.....	37.59	79

	Score	Rank
3 GROW.....	49.74	35
3.1 Formal Education.....	49.07	39
Enrolment		
3.1.1 Vocational enrolment.....	63.73	12
3.1.2 Tertiary enrolment.....	31.36	67
Quality		
3.1.3 Tertiary education expenditure.....	70.01	34
3.1.4 Reading, maths, and science.....	55.24	37
3.1.5 University ranking.....	24.99	70
3.2 Lifelong Learning.....	44.82	38
3.2.1 Business and economics subject ranking.....	23.15	58
3.2.2 Prevalence of training in firms.....	49.79	29
3.2.3 Employee development.....	43.95	52
3.2.4 Formal and non-formal studies.....	62.38	23
3.3 Access to Growth Opportunities.....	55.35	42
Empowerment		
3.3.1 Delegation of authority.....	51.13	59
3.3.2 Youth inclusion.....	81.77	29
Collaboration		
3.3.3 Use of virtual social networks.....	73.80	47
3.3.4 Use of virtual professional networks.....	14.68	70

4 RETAIN.....	68.16	33
4.1 Sustainability.....	58.13	41
4.1.1 Pension coverage.....	90.51	54
4.1.2 Social protection.....	50.09	48
4.1.3 Brain retention.....	16.98	121
4.1.4 Environmental performance.....	74.96	26
4.2 Lifestyle.....	78.18	29
4.2.1 Personal rights.....	89.70	37
4.2.2 Personal safety.....	81.62	22
4.2.3 Physician density.....	43.64	34
4.2.4 Sanitation.....	97.78	42
5 VOCATIONAL AND TECHNICAL SKILLS.....	55.93	59
5.1 Mid-Level Skills.....	83.68	2
5.1.1 Workforce with secondary education.....	91.32	4
5.1.2 Population with secondary education.....	93.54	3
5.1.3 Technicians and associate professionals.....	68.13	18
5.1.4 Labour productivity per employee.....	81.72	36
5.2 Employability.....	28.18	126
5.2.1 Ease of finding skilled employees.....	32.88	117
5.2.2 Relevance of education system to the economy.....	23.48	108
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	48.78	41
6.1 High-Level Skills.....	42.66	52
6.1.1 Workforce with tertiary education.....	33.46	52
6.1.2 Population with tertiary education.....	27.19	55
6.1.3 Professionals.....	34.00	53
6.1.4 Researchers.....	84.88	31
6.1.5 Senior officials and managers.....	41.11	43
6.1.6 Availability of scientists and engineers.....	35.29	106
6.2 Talent Impact.....	54.90	33
6.2.1 Innovation output.....	46.13	33
6.2.2 High-value exports.....	57.63	48
6.2.3 New product entrepreneurial activity.....	41.26	54
6.2.4 New business density.....	56.71	29
6.2.5 Scientific journal articles.....	72.78	31

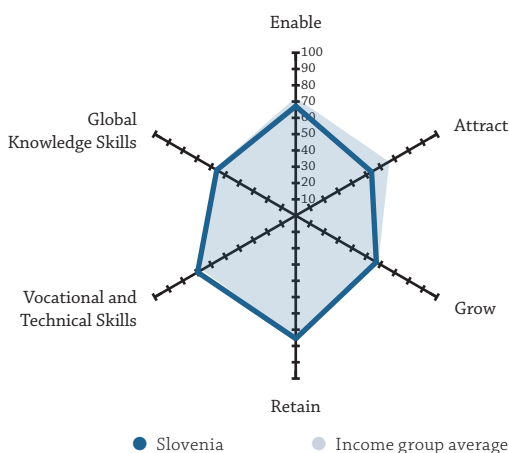
SLOVENIA

Key Indicators

Rank (out of 134).....	26
Income group.....	High income
Regional group.....	Europe
Population (millions).....	2.10

GDP per capita (PPP US\$).....	39,593.31
GDP (US\$ billions).....	52.88
GTCI score.....	63.16
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	67.15	30
1.1 Regulatory Landscape.....	74.21	26
1.1.1 Government effectiveness.....	74.68	27
1.1.2 Rule of law.....	79.19	24
1.1.3 Political stability.....	81.03	25
1.1.4 Regulatory quality.....	74.50	32
1.1.5 Corruption.....	61.64	29
1.2 Market Landscape.....	62.08	32
1.2.1 Extent of market dominance.....	71.61	19
1.2.2 Ease of doing business.....	81.87	35
1.2.3 Cluster development.....	41.76	67
1.2.4 R&D expenditure.....	39.32	17
1.2.5 ICT infrastructure.....	90.18	23
1.2.6 Urbanisation.....	47.73	91
1.3 Business and Labour Landscape.....	65.17	35
Labour Market		
1.3.1 Labour rights.....	96.40	20
1.3.2 Labour-employer cooperation.....	44.86	57
Management Practice		
1.3.3 Professional management.....	59.01	47
1.3.4 Relationship of pay to productivity.....	56.24	59
Technology Adoption		
1.3.5 Technology utilisation.....	65.55	40
1.3.6 Investment in emerging technologies.....	51.61	40
1.3.7 Firms with website.....	82.49	17
2 ATTRACT.....	53.74	54
2.1 External Openness.....	47.54	64
Attract Business		
2.1.1 FDI and technology transfer.....	58.80	62
2.1.2 Prevalence of foreign ownership.....	47.66	97
Attract People		
2.1.3 Migrant stock.....	60.10	36
2.1.4 International students.....	43.13	51
2.1.5 Brain gain.....	28.00	113
2.2 Internal Openness.....	59.93	42
Social Inclusion		
2.2.1 Tolerance of minorities.....	66.30	30
2.2.2 Tolerance of immigrants.....	15.38	124
2.2.3 Social mobility.....	67.71	33
Gender Equality		
2.2.4 Women in tertiary education.....	73.12	31
2.2.5 Women in high-skilled jobs.....	74.39	36
2.2.6 Leadership opportunities for women.....	62.68	33

	Score	Rank
3 GROW.....	57.11	25
3.1 Formal Education.....	64.56	13
Enrolment		
3.1.1 Vocational enrolment.....	100.00	1
3.1.2 Tertiary enrolment.....	53.71	24
Quality		
3.1.3 Tertiary education expenditure.....	71.48	29
3.1.4 Reading, maths, and science.....	69.26	10
3.1.5 University ranking.....	28.33	65
3.2 Lifelong Learning.....	47.77	33
3.2.1 Business and economics subject ranking.....	24.25	56
3.2.2 Prevalence of training in firms.....	50.77	27
3.2.3 Employee development.....	53.66	41
3.2.4 Formal and non-formal studies.....	62.38	23
3.3 Access to Growth Opportunities.....	59.00	35
Empowerment		
3.3.1 Delegation of authority.....	54.75	45
3.3.2 Youth inclusion.....	87.64	17
Collaboration		
3.3.3 Use of virtual social networks.....	69.65	57
3.3.4 Use of virtual professional networks.....	23.95	45

4 RETAIN.....	75.51	27
4.1 Sustainability.....	70.47	25
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	67.58	30
4.1.3 Brain retention.....	32.83	87
4.1.4 Environmental performance.....	81.48	18
4.2 Lifestyle.....	80.54	22
4.2.1 Personal rights.....	97.24	14
4.2.2 Personal safety.....	86.58	13
4.2.3 Physician density.....	39.32	41
4.2.4 Sanitation.....	99.04	31

5 VOCATIONAL AND TECHNICAL SKILLS.....	69.52	16
5.1 Mid-Level Skills.....	72.23	14
5.1.1 Workforce with secondary education.....	73.02	21
5.1.2 Population with secondary education.....	76.87	13
5.1.3 Technicians and associate professionals.....	56.66	31
5.1.4 Labour productivity per employee.....	82.38	35
5.2 Employability.....	66.81	33
5.2.1 Ease of finding skilled employees.....	58.39	59
5.2.2 Relevance of education system to the economy.....	54.29	44
5.2.3 Skills matching.....	87.75	11

6 GLOBAL KNOWLEDGE SKILLS.....	55.96	28
6.1 High-Level Skills.....	57.16	28
6.1.1 Workforce with tertiary education.....	47.43	28
6.1.2 Population with tertiary education.....	37.19	35
6.1.3 Professionals.....	58.36	14
6.1.4 Researchers.....	92.25	17
6.1.5 Senior officials and managers.....	58.87	30
6.1.6 Availability of scientists and engineers.....	48.83	67
6.2 Talent Impact.....	54.75	34
6.2.1 Innovation output.....	44.09	38
6.2.2 High-value exports.....	51.19	60
6.2.3 New product entrepreneurial activity.....	49.36	43
6.2.4 New business density.....	43.33	44
6.2.5 Scientific journal articles.....	85.82	12

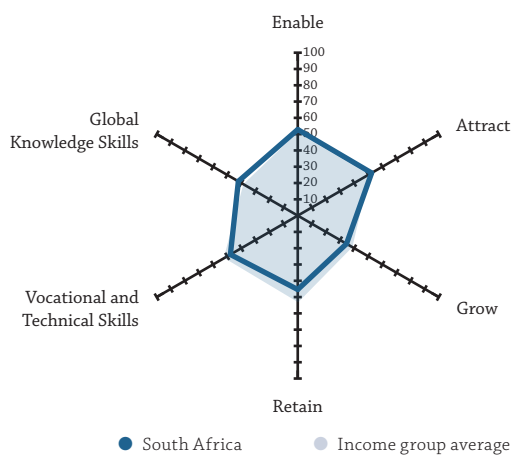
SOUTH AFRICA

Key Indicators

Rank (out of 134)	67
Income group	Upper-middle income
Regional group	Sub-Saharan Africa
Population (millions)	59.31

GDP per capita (PPP US\$)	12,095.86
GDP (US\$ billions)	301.92
GTCI score	45.82
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	52.83	58
1.1 Regulatory Landscape	52.70	60
1.1.1 Government effectiveness	58.81	50
1.1.2 Rule of law	51.67	65
1.1.3 Political stability	57.65	76
1.1.4 Regulatory quality	55.64	60
1.1.5 Corruption	39.73	57
1.2 Market Landscape	49.62	66
1.2.1 Extent of market dominance	36.07	90
1.2.2 Ease of doing business	65.07	79
1.2.3 Cluster development	53.18	40
1.2.4 R&D expenditure	16.63	43
1.2.5 ICT infrastructure	65.46	68
1.2.6 Urbanisation	61.31	65
1.3 Business and Labour Landscape	56.18	50
Labour Market		
1.3.1 Labour rights	90.20	44
1.3.2 Labour-employer cooperation	0.00	134
Management Practice		
1.3.3 Professional management	58.67	51
1.3.4 Relationship of pay to productivity	46.31	85
Technology Adoption		
1.3.5 Technology utilisation	65.15	42
1.3.6 Investment in emerging technologies	51.83	39
1.3.7 Firms with website	81.12	20
2. ATTRACT	52.35	56
2.1 External Openness	51.92	50
Attract Business		
2.1.1 FDI and technology transfer	60.16	59
2.1.2 Prevalence of foreign ownership	66.35	48
Attract People		
2.1.3 Migrant stock	52.19	48
2.1.4 International students	38.61	59
2.1.5 Brain gain	42.28	82
2.2 Internal Openness	52.77	74
Social Inclusion		
2.2.1 Tolerance of minorities	41.30	65
2.2.2 Tolerance of immigrants	70.77	42
2.2.3 Social mobility	39.08	106
Gender Equality		
2.2.4 Women in tertiary education	76.25	17
2.2.5 Women in high-skilled jobs	60.43	82
2.2.6 Leadership opportunities for women	28.80	96

	Score	Rank
3. GROW	34.56	72
3.1 Formal Education	38.40	57
Enrolment		
3.1.1 Vocational enrolment	14.17	68
3.1.2 Tertiary enrolment	16.18	94
Quality		
3.1.3 Tertiary education expenditure	67.11	44
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	56.14	22
3.2 Lifelong Learning	24.01	79
3.2.1 Business and economics subject ranking	36.94	32
3.2.2 Prevalence of training in firms	0.28	106
3.2.3 Employee development	55.65	38
3.2.4 Formal and non-formal studies	3.18	68
3.3 Access to Growth Opportunities	41.27	84
Empowerment		
3.3.1 Delegation of authority	63.09	32
3.3.2 Youth inclusion	38.81	106
Collaboration		
3.3.3 Use of virtual social networks	40.64	101
3.3.4 Use of virtual professional networks	22.52	47

4. RETAIN	45.37	87
4.1 Sustainability	45.13	73
4.1.1 Pension coverage	81.31	65
4.1.2 Social protection	31.79	85
4.1.3 Brain retention	36.92	76
4.1.4 Environmental performance	30.51	82
4.2 Lifestyle	45.62	92
4.2.1 Personal rights	80.57	53
4.2.2 Personal safety	18.58	121
4.2.3 Physician density	9.48	95
4.2.4 Sanitation	73.83	94
5. VOCATIONAL AND TECHNICAL SKILLS	47.73	72
5.1 Mid-Level Skills	55.10	55
5.1.1 Workforce with secondary education	44.33	67
5.1.2 Population with secondary education	69.84	23
5.1.3 Technicians and associate professionals	36.96	56
5.1.4 Labour productivity per employee	69.27	56
5.2 Employability	40.36	100
5.2.1 Ease of finding skilled employees	41.42	102
5.2.2 Relevance of education system to the economy	18.30	119
5.2.3 Skills matching	61.35	60

6. GLOBAL KNOWLEDGE SKILLS	42.09	54
6.1 High-Level Skills	36.90	71
6.1.1 Workforce with tertiary education	20.19	82
6.1.2 Population with tertiary education	14.75	78
6.1.3 Professionals	15.01	97
6.1.4 Researchers	58.09	65
6.1.5 Senior officials and managers	70.02	16
6.1.6 Availability of scientists and engineers	43.34	79
6.2 Talent Impact	47.27	43
6.2.1 Innovation output	23.81	67
6.2.2 High-value exports	42.78	83
6.2.3 New product entrepreneurial activity	58.67	27
6.2.4 New business density	75.16	12
6.2.5 Scientific journal articles	35.95	60

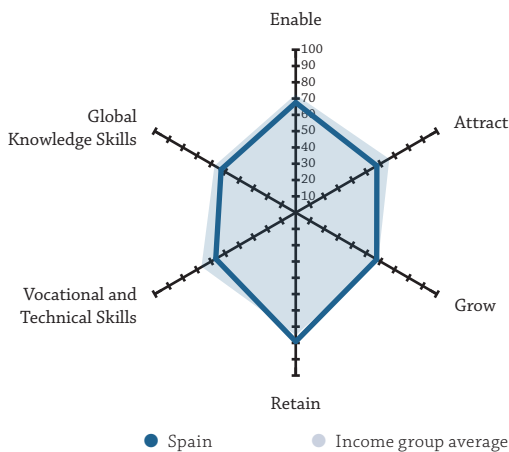
SPAIN

Key Indicators

Rank (out of 134).....	29
Income group.....	High income
Regional group.....	Europe
Population (millions).....	47.35

GDP per capita (PPP US\$).....	38,334.61
GDP (US\$ billions).....	1,281.20
GTCI score.....	61.85
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....67.54	29	
1.1 Regulatory Landscape.....	71.70	32
1.1.1 Government effectiveness.....	72.85	31
1.1.2 Rule of law.....	75.98	30
1.1.3 Political stability.....	69.87	48
1.1.4 Regulatory quality.....	75.42	29
1.1.5 Corruption.....	64.38	26
1.2 Market Landscape.....	69.49	25
1.2.1 Extent of market dominance.....	77.79	11
1.2.2 Ease of doing business.....	84.38	28
1.2.3 Cluster development.....	61.85	32
1.2.4 R&D expenditure.....	24.97	29
1.2.5 ICT infrastructure.....	90.55	22
1.2.6 Urbanisation.....	77.37	35
1.3 Business and Labour Landscape.....	61.43	41
Labour Market		
1.3.1 Labour rights.....	92.90	34
1.3.2 Labour-employer cooperation.....	44.43	58
Management Practice		
1.3.3 Professional management.....	63.18	39
1.3.4 Relationship of pay to productivity.....	48.09	79
Technology Adoption		
1.3.5 Technology utilisation.....	62.27	47
1.3.6 Investment in emerging technologies.....	43.01	55
1.3.7 Firms with website.....	76.12	28
2 ATTRACT.....57.49	43	
2.1 External Openness.....	57.62	37
Attract Business		
2.1.1 FDI and technology transfer.....	73.33	29
2.1.2 Prevalence of foreign ownership.....	73.84	34
Attract People		
2.1.3 Migrant stock.....	60.09	37
2.1.4 International students.....	37.85	60
2.1.5 Brain gain.....	43.01	79
2.2 Internal Openness.....	57.35	51
Social Inclusion		
2.2.1 Tolerance of minorities.....	32.61	80
2.2.2 Tolerance of immigrants.....	87.69	13
2.2.3 Social mobility.....	62.26	38
Gender Equality		
2.2.4 Women in tertiary education.....	64.86	63
2.2.5 Women in high-skilled jobs.....	67.67	63
2.2.6 Leadership opportunities for women.....	29.04	95

	Score	Rank
3 GROW.....57.37	23	
3.1 Formal Education.....	60.20	20
Enrolment		
3.1.1 Vocational enrolment.....	43.56	31
3.1.2 Tertiary enrolment.....	63.57	7
Quality		
3.1.3 Tertiary education expenditure.....	70.80	31
3.1.4 Reading, maths, and science.....	64.22	26
3.1.5 University ranking.....	58.87	17
3.2 Lifelong Learning.....	50.19	30
3.2.1 Business and economics subject ranking.....	56.14	14
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	35.71	69
3.2.4 Formal and non-formal studies.....	58.72	29
3.3 Access to Growth Opportunities.....	61.71	29
Empowerment		
3.3.1 Delegation of authority.....	51.88	57
3.3.2 Youth inclusion.....	75.41	43
Collaboration		
3.3.3 Use of virtual social networks.....	80.25	25
3.3.4 Use of virtual professional networks.....	39.29	23

4 RETAIN.....79.15	19	
4.1 Sustainability.....	77.10	21
4.1.1 Pension coverage.....	98.18	39
4.1.2 Social protection.....	86.53	10
4.1.3 Brain retention.....	38.14	73
4.1.4 Environmental performance.....	85.54	14
4.2 Lifestyle.....	81.21	20
4.2.1 Personal rights.....	96.96	15
4.2.2 Personal safety.....	77.90	23
4.2.3 Physician density.....	50.07	27
4.2.4 Sanitation.....	99.90	15

5 VOCATIONAL AND TECHNICAL SKILLS.....56.68	57	
5.1 Mid-Level Skills.....	49.31	62
5.1.1 Workforce with secondary education.....	32.28	89
5.1.2 Population with secondary education.....	27.30	79
5.1.3 Technicians and associate professionals.....	50.33	39
5.1.4 Labour productivity per employee.....	87.35	23
5.2 Employability.....	64.05	36
5.2.1 Ease of finding skilled employees.....	70.18	39
5.2.2 Relevance of education system to the economy.....	45.79	60
5.2.3 Skills matching.....	76.19	31

6 GLOBAL KNOWLEDGE SKILLS.....52.89	35	
6.1 High-Level Skills.....	52.76	34
6.1.1 Workforce with tertiary education.....	52.16	19
6.1.2 Population with tertiary education.....	41.22	32
6.1.3 Professionals.....	45.39	32
6.1.4 Researchers.....	84.90	30
6.1.5 Senior officials and managers.....	29.76	63
6.1.6 Availability of scientists and engineers.....	63.13	35
6.2 Talent Impact.....	53.02	38
6.2.1 Innovation output.....	52.41	26
6.2.2 High-value exports.....	49.72	67
6.2.3 New product entrepreneurial activity.....	42.10	53
6.2.4 New business density.....	43.15	45
6.2.5 Scientific journal articles.....	77.73	25

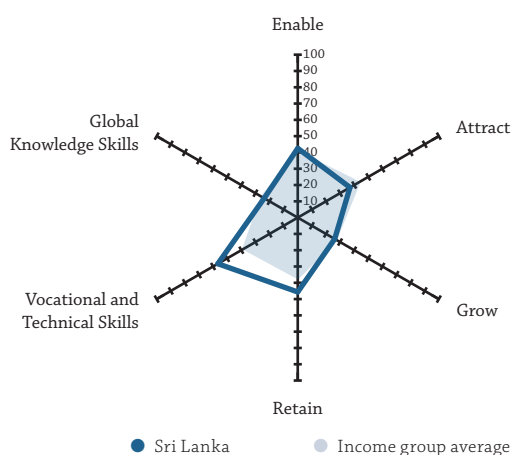
SRI LANKA

Key Indicators

Rank (out of 134).....	93
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	21.92

GDP per capita (PPP US\$).....	13,225.41
GDP (US\$ billions).....	80.71
GTCI score.....	38.63
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	42.53	93
1.1 Regulatory Landscape.....	47.66	75
1.1.1 Government effectiveness.....	48.13	80
1.1.2 Rule of law.....	53.15	62
1.1.3 Political stability.....	57.42	77
1.1.4 Regulatory quality.....	48.11	82
1.1.5 Corruption.....	31.51	76
1.2 Market Landscape.....	34.85	105
1.2.1 Extent of market dominance.....	47.95	56
1.2.2 Ease of doing business.....	55.85	89
1.2.3 Cluster development.....	47.40	51
1.2.4 R&D expenditure.....	2.33	103
1.2.5 ICT infrastructure.....	49.30	87
1.2.6 Urbanisation.....	6.26	131
1.3 Business and Labour Landscape.....	45.08	86
Labour Market		
1.3.1 Labour rights.....	75.90	76
1.3.2 Labour-employer cooperation.....	41.06	67
Management Practice		
1.3.3 Professional management.....	53.82	63
1.3.4 Relationship of pay to productivity.....	54.66	63
Technology Adoption		
1.3.5 Technology utilisation.....	41.21	94
1.3.6 Investment in emerging technologies.....	38.35	69
1.3.7 Firms with website.....	10.53	119
2 ATTRACT.....	37.03	116
2.1 External Openness.....	25.94	127
Attract Business		
2.1.1 FDI and technology transfer.....	42.54	106
2.1.2 Prevalence of foreign ownership.....	37.56	116
Attract People		
2.1.3 Migrant stock.....	1.73	131
2.1.4 International students.....	9.22	97
2.1.5 Brain gain.....	38.67	92
2.2 Internal Openness.....	48.12	89
Social Inclusion		
2.2.1 Tolerance of minorities.....	11.96	110
2.2.2 Tolerance of immigrants.....	47.69	88
2.2.3 Social mobility.....	48.24	75
Gender Equality		
2.2.4 Women in tertiary education.....	81.73	8
2.2.5 Women in high-skilled jobs.....	52.06	97
2.2.6 Leadership opportunities for women.....	47.05	62

	Score	Rank
3 GROW.....	26.19	102
3.1 Formal Education.....	28.88	81
Enrolment		
3.1.1 Vocational enrolment.....	10.80	76
3.1.2 Tertiary enrolment.....	14.30	97
Quality		
3.1.3 Tertiary education expenditure.....	55.95	67
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	34.49	53
3.2 Lifelong Learning.....	13.50	120
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	14.97	92
3.2.3 Employee development.....	38.14	66
3.2.4 Formal and non-formal studies.....	0.90	79
3.3 Access to Growth Opportunities.....	36.19	97
Empowerment		
3.3.1 Delegation of authority.....	45.76	72
3.3.2 Youth inclusion.....	55.05	82
Collaboration		
3.3.3 Use of virtual social networks.....	35.34	103
3.3.4 Use of virtual professional networks.....	8.61	89

4 RETAIN.....	45.64	85
4.1 Sustainability.....	32.03	98
4.1.1 Pension coverage.....	35.05	91
4.1.2 Social protection.....	41.47	64
4.1.3 Brain retention.....	28.31	101
4.1.4 Environmental performance.....	23.28	91
4.2 Lifestyle.....	59.26	63
4.2.1 Personal rights.....	66.04	78
4.2.2 Personal safety.....	61.52	48
4.2.3 Physician density.....	14.02	86
4.2.4 Sanitation.....	95.45	59
5 VOCATIONAL AND TECHNICAL SKILLS.....	56.60	58
5.1 Mid-Level Skills.....	55.99	52
5.1.1 Workforce with secondary education.....	46.71	63
5.1.2 Population with secondary education.....	80.06	11
5.1.3 Technicians and associate professionals.....	34.85	59
5.1.4 Labour productivity per employee.....	62.34	69
5.2 Employability.....	57.22	58
5.2.1 Ease of finding skilled employees.....	62.80	49
5.2.2 Relevance of education system to the economy.....	50.85	51
5.2.3 Skills matching.....	58.01	61

6 GLOBAL KNOWLEDGE SKILLS.....	23.78	96
6.1 High-Level Skills.....	31.52	83
6.1.1 Workforce with tertiary education.....	6.33	117
6.1.2 Population with tertiary education.....	17.87	74
6.1.3 Professionals.....	15.83	94
6.1.4 Researchers.....	34.04	86
6.1.5 Senior officials and managers.....	59.30	27
6.1.6 Availability of scientists and engineers.....	55.76	54
6.2 Talent Impact.....	16.04	113
6.2.1 Innovation output.....	16.31	82
6.2.2 High-value exports.....	16.95	111
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	16.32	87
6.2.5 Scientific journal articles.....	14.57	86

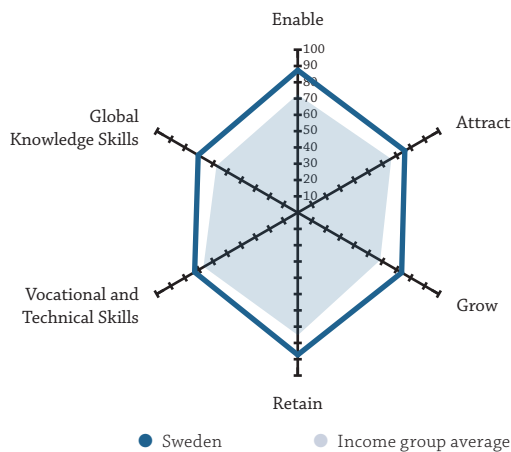
SWEDEN

Key Indicators

Rank (out of 134).....	5
Income group.....	High income
Regional group.....	Europe
Population (millions).....	10.35

GDP per capita (PPP US\$).....	54,563.12
GDP (US\$ billions).....	537.61
GTCI score.....	77.98
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....87.39	4	
1.1 Regulatory Landscape.....	92.58	7
1.1.1 Government effectiveness.....	91.31	6
1.1.2 Rule of law.....	97.34	4
1.1.3 Political stability.....	86.35	11
1.1.4 Regulatory quality.....	92.04	7
1.1.5 Corruption.....	95.89	3
1.2 Market Landscape.....	80.05	8
1.2.1 Extent of market dominance.....	67.81	23
1.2.2 Ease of doing business.....	91.56	9
1.2.3 Cluster development.....	74.93	19
1.2.4 R&D expenditure.....	66.96	4
1.2.5 ICT infrastructure.....	93.50	13
1.2.6 Urbanisation.....	85.55	19
1.3 Business and Labour Landscape.....	89.55	4
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	84.44	6
Management Practice		
1.3.3 Professional management.....	90.84	9
1.3.4 Relationship of pay to productivity.....	67.71	44
Technology Adoption		
1.3.5 Technology utilisation.....	98.63	2
1.3.6 Investment in emerging technologies.....	91.97	3
1.3.7 Firms with website.....	93.21	6
2 ATTRACT.....75.88	9	
2.1 External Openness.....	70.09	18
Attract Business		
2.1.1 FDI and technology transfer.....	84.12	10
2.1.2 Prevalence of foreign ownership.....	79.42	23
Attract People		
2.1.3 Migrant stock.....	69.89	18
2.1.4 International students.....	53.49	34
2.1.5 Brain gain.....	63.55	27
2.2 Internal Openness.....	81.67	4
Social Inclusion		
2.2.1 Tolerance of minorities.....	86.96	5
2.2.2 Tolerance of immigrants.....	92.31	8
2.2.3 Social mobility.....	79.46	17
Gender Equality		
2.2.4 Women in tertiary education.....	78.43	13
2.2.5 Women in high-skilled jobs.....	71.78	48
2.2.6 Leadership opportunities for women.....	81.08	10

	Score	Rank
3 GROW.....73.65	5	
3.1 Formal Education.....	62.49	17
Enrolment		
3.1.1 Vocational enrolment.....	35.78	38
3.1.2 Tertiary enrolment.....	50.44	27
Quality		
3.1.3 Tertiary education expenditure.....	87.59	7
3.1.4 Reading, maths, and science.....	68.77	13
3.1.5 University ranking.....	69.88	12
3.2 Lifelong Learning.....	77.84	6
3.2.1 Business and economics subject ranking.....	56.23	13
3.2.2 Prevalence of training in firms.....	87.55	3
3.2.3 Employee development.....	81.16	9
3.2.4 Formal and non-formal studies.....	86.42	5
3.3 Access to Growth Opportunities.....	80.61	6
Empowerment		
3.3.1 Delegation of authority.....	95.58	2
3.3.2 Youth inclusion.....	90.03	10
Collaboration		
3.3.3 Use of virtual social networks.....	82.43	18
3.3.4 Use of virtual professional networks.....	54.42	15

4 RETAIN.....87.30	5	
4.1 Sustainability.....	89.65	7
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	86.52	11
4.1.3 Brain retention.....	78.80	12
4.1.4 Environmental performance.....	93.30	8
4.2 Lifestyle.....	84.95	11
4.2.1 Personal rights.....	100.00	1
4.2.2 Personal safety.....	86.74	12
4.2.3 Physician density.....	53.84	21
4.2.4 Sanitation.....	99.24	23

5 VOCATIONAL AND TECHNICAL SKILLS.....73.07	12	
5.1 Mid-Level Skills.....	72.41	13
5.1.1 Workforce with secondary education.....	57.56	44
5.1.2 Population with secondary education.....	60.06	30
5.1.3 Technicians and associate professionals.....	81.17	7
5.1.4 Labour productivity per employee.....	90.86	12
5.2 Employability.....	73.73	20
5.2.1 Ease of finding skilled employees.....	75.62	30
5.2.2 Relevance of education system to the economy.....	67.29	19
5.2.3 Skills matching.....	78.26	25

6 GLOBAL KNOWLEDGE SKILLS.....70.55	6	
6.1 High-Level Skills.....	65.16	13
6.1.1 Workforce with tertiary education.....	51.99	21
6.1.2 Population with tertiary education.....	43.57	29
6.1.3 Professionals.....	72.81	2
6.1.4 Researchers.....	98.96	3
6.1.5 Senior officials and managers.....	48.26	37
6.1.6 Availability of scientists and engineers.....	75.38	16
6.2 Talent Impact.....	75.94	4
6.2.1 Innovation output.....	87.38	2
6.2.2 High-value exports.....	65.90	31
6.2.3 New product entrepreneurial activity.....	67.83	14
6.2.4 New business density.....	65.22	21
6.2.5 Scientific journal articles.....	93.41	6

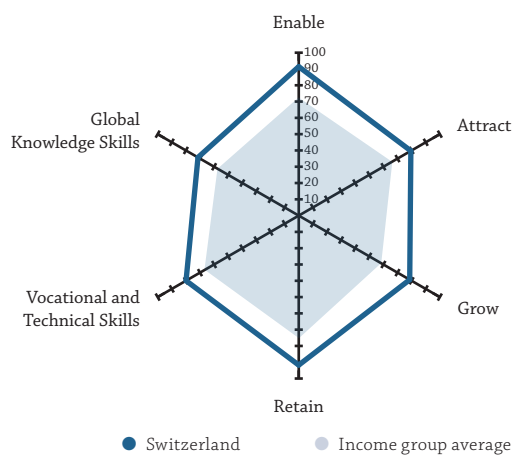
SWITZERLAND

Key Indicators

Rank (out of 134).....	1
Income group.....	High income
Regional group.....	Europe
Population (millions).....	8.64

GDP per capita (PPP US\$).....	71,352.35
GDP (US\$ billions).....	747.97
GTCI score.....	82.09
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....91.42		1
1.1 Regulatory Landscape.....	93.81	3
1.1.1 Government effectiveness.....	94.02	2
1.1.2 Rule of law.....	97.34	3
1.1.3 Political stability.....	92.79	5
1.1.4 Regulatory quality.....	89.01	11
1.1.5 Corruption.....	95.89	3
1.2 Market Landscape.....	85.08	1
1.2.1 Extent of market dominance.....	100.00	1
1.2.2 Ease of doing business.....	82.05	34
1.2.3 Cluster development.....	92.73	3
1.2.4 R&D expenditure.....	68.08	3
1.2.5 ICT infrastructure.....	97.74	4
1.2.6 Urbanisation.....	69.87	48
1.3 Business and Labour Landscape.....	95.38	1
Labour Market		
1.3.1 Labour rights.....	98.20	15
1.3.2 Labour-employer cooperation.....	97.76	2
Management Practice		
1.3.3 Professional management.....	92.66	6
1.3.4 Relationship of pay to productivity.....	98.30	3
Technology Adoption		
1.3.5 Technology utilisation.....	96.15	3
1.3.6 Investment in emerging technologies.....	89.43	4
1.3.7 Firms with website.....	95.17	3
2 ATTRACT.....79.45		4
2.1 External Openness.....	84.58	4
Attract Business		
2.1.1 FDI and technology transfer.....	83.21	12
2.1.2 Prevalence of foreign ownership.....	85.54	10
Attract People		
2.1.3 Migrant stock.....	79.29	11
2.1.4 International students.....	74.85	9
2.1.5 Brain gain.....	100.00	1
2.2 Internal Openness.....	74.32	12
Social Inclusion		
2.2.1 Tolerance of minorities.....	76.09	17
2.2.2 Tolerance of immigrants.....	76.92	28
2.2.3 Social mobility.....	98.51	2
Gender Equality		
2.2.4 Women in tertiary education.....	57.06	91
2.2.5 Women in high-skilled jobs.....	63.31	76
2.2.6 Leadership opportunities for women.....	74.01	18

	Score	Rank
3 GROW.....78.65		3
3.1 Formal Education.....	68.97	7
Enrolment		
3.1.1 Vocational enrolment.....	65.20	10
3.1.2 Tertiary enrolment.....	42.63	49
Quality		
3.1.3 Tertiary education expenditure.....	89.93	4
3.1.4 Reading, maths, and science.....	66.99	20
3.1.5 University ranking.....	80.08	6
3.2 Lifelong Learning.....	89.67	2
3.2.1 Business and economics subject ranking.....	75.39	5
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	100.00	1
3.2.4 Formal and non-formal studies.....	93.62	2
3.3 Access to Growth Opportunities.....	77.32	10
Empowerment		
3.3.1 Delegation of authority.....	88.02	7
3.3.2 Youth inclusion.....	90.24	9
Collaboration		
3.3.3 Use of virtual social networks.....	82.12	20
3.3.4 Use of virtual professional networks.....	48.90	16

4 RETAIN.....91.74		1
4.1 Sustainability.....	97.99	1
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	93.71	6
4.1.3 Brain retention.....	100.00	1
4.1.4 Environmental performance.....	98.24	3
4.2 Lifestyle.....	85.49	7
4.2.1 Personal rights.....	99.32	4
4.2.2 Personal safety.....	88.90	8
4.2.3 Physician density.....	53.87	20
4.2.4 Sanitation.....	99.88	17
5 VOCATIONAL AND TECHNICAL SKILLS.....79.87		1
5.1 Mid-Level Skills.....	73.11	11
5.1.1 Workforce with secondary education.....	59.64	39
5.1.2 Population with secondary education.....	65.37	26
5.1.3 Technicians and associate professionals.....	73.59	14
5.1.4 Labour productivity per employee.....	93.85	6
5.2 Employability.....	86.62	3
5.2.1 Ease of finding skilled employees.....	82.87	14
5.2.2 Relevance of education system to the economy.....	100.00	1
5.2.3 Skills matching.....	76.99	29

6 GLOBAL KNOWLEDGE SKILLS.....71.41		5
6.1 High-Level Skills.....	66.92	9
6.1.1 Workforce with tertiary education.....	52.05	20
6.1.2 Population with tertiary education.....	52.03	14
6.1.3 Professionals.....	62.80	7
6.1.4 Researchers.....	94.01	11
6.1.5 Senior officials and managers.....	59.17	28
6.1.6 Availability of scientists and engineers.....	81.44	7
6.2 Talent Impact.....	75.91	5
6.2.1 Innovation output.....	100.00	1
6.2.2 High-value exports.....	63.49	36
6.2.3 New product entrepreneurial activity.....	63.24	21
6.2.4 New business density.....	52.82	32
6.2.5 Scientific journal articles.....	100.00	1

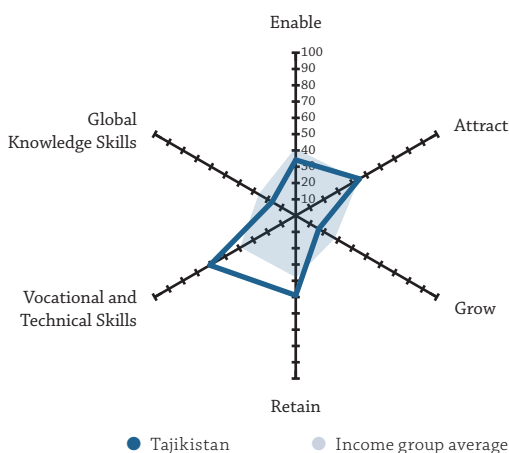
TAJIKISTAN

Key Indicators

Rank (out of 134) **97**
 Income group **Lower-middle income**
 Regional group **Central and Southern Asia**
 Population (millions) **9.54**

GDP per capita (PPP US\$) **3,858.43**
 GDP (US\$ billions) **8.19**
 GTCI score **37.02**
 GTCI score (income group average) **34.34**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	34.16	115
1.1 Regulatory Landscape	29.12	123
1.1.1 Government effectiveness	27.34	124
1.1.2 Rule of law	25.15	128
1.1.3 Political stability	49.57	100
1.1.4 Regulatory quality	29.82	127
1.1.5 Corruption	13.70	118
1.2 Market Landscape	30.38	116
1.2.1 Extent of market dominance	52.00	47
1.2.2 Ease of doing business	54.90	93
1.2.3 Cluster development	21.00	116
1.2.4 R&D expenditure	1.71	111
1.2.5 ICT infrastructure	36.47	106
1.2.6 Urbanisation	16.22	123
1.3 Business and Labour Landscape	43.00	104
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	43.66	59
Management Practice		
1.3.3 Professional management	34.35	112
1.3.4 Relationship of pay to productivity	74.86	23
Technology Adoption		
1.3.5 Technology utilisation	41.59	93
1.3.6 Investment in emerging technologies	41.88	57
1.3.7 Firms with website	21.64	105
2 ATTRACT	45.11	88
2.1 External Openness	37.85	101
Attract Business		
2.1.1 FDI and technology transfer	46.89	97
2.1.2 Prevalence of foreign ownership	38.01	114
Attract People		
2.1.3 Migrant stock	41.74	63
2.1.4 International students	15.07	91
2.1.5 Brain gain	47.55	65
2.2 Internal Openness	52.36	76
Social Inclusion		
2.2.1 Tolerance of minorities	32.61	80
2.2.2 Tolerance of immigrants	69.23	46
2.2.3 Social mobility	56.74	47
Gender Equality		
2.2.4 Women in tertiary education	40.85	114
2.2.5 Women in high-skilled jobs	44.86	105
2.2.6 Leadership opportunities for women	69.90	24

	Score	Rank
3 GROW	16.32	125
3.1 Formal Education	14.74	120
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	21.43	85
Quality		
3.1.3 Tertiary education expenditure	22.80	111
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	16.49	110
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	23.22	73
3.2.3 Employee development	26.26	100
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	17.74	129
Empowerment		
3.3.1 Delegation of authority	43.04	82
3.3.2 Youth inclusion	19.45	118
Collaboration		
3.3.3 Use of virtual social networks	7.90	121
3.3.4 Use of virtual professional networks	0.55	129

4 RETAIN	48.94	78
4.1 Sustainability	52.91	55
4.1.1 Pension coverage	93.64	47
4.1.2 Social protection	51.49	45
4.1.3 Brain retention	44.66	50
4.1.4 Environmental performance	21.87	96
4.2 Lifestyle	44.96	94
4.2.1 Personal rights	8.07	130
4.2.2 Personal safety	53.83	67
4.2.3 Physician density	21.15	75
4.2.4 Sanitation	96.79	53

5 VOCATIONAL AND TECHNICAL SKILLS	60.83	42
5.1 Mid-Level Skills	58.00	47
5.1.1 Workforce with secondary education	87.06	6
5.1.2 Population with secondary education	81.83	8
5.1.3 Technicians and associate professionals	24.05	80
5.1.4 Labour productivity per employee	39.06	94
5.2 Employability	63.66	38
5.2.1 Ease of finding skilled employees	51.87	76
5.2.2 Relevance of education system to the economy	51.96	47
5.2.3 Skills matching	87.14	13

6 GLOBAL KNOWLEDGE SKILLS	16.78	115
6.1 High-Level Skills	28.19	92
6.1.1 Workforce with tertiary education	18.90	85
6.1.2 Population with tertiary education	29.74	44
6.1.3 Professionals	17.29	90
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	19.94	83
6.1.6 Availability of scientists and engineers	55.09	55
6.2 Talent Impact	5.36	130
6.2.1 Innovation output	11.10	98
6.2.2 High-value exports	n/a	n/a
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	3.23	110
6.2.5 Scientific journal articles	1.74	121

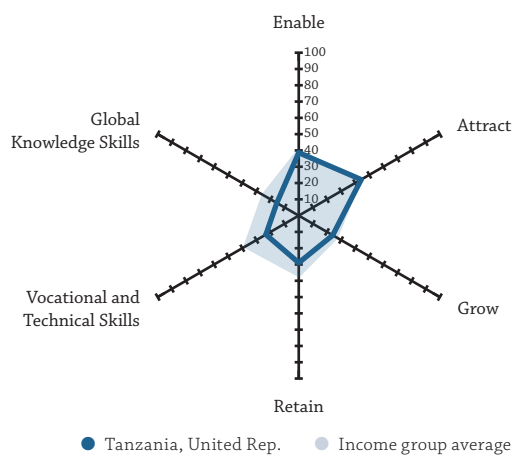
TANZANIA, UNITED REP.

Key Indicators

Rank (out of 134)	115
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	59.73

GDP per capita (PPP US\$)	2,780.06
GDP (US\$ billions)	62.41
GTCI score	29.12
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	38.62	104
1.1 Regulatory Landscape	39.03	99
1.1.1 Government effectiveness	31.12	122
1.1.2 Rule of law	40.12	103
1.1.3 Political stability	54.39	84
1.1.4 Regulatory quality	38.01	108
1.1.5 Corruption	31.51	76
1.2 Market Landscape	31.03	114
1.2.1 Extent of market dominance	35.87	93
1.2.2 Ease of doing business	42.86	114
1.2.3 Cluster development	48.96	46
1.2.4 R&D expenditure	10.18	63
1.2.5 ICT infrastructure	24.43	118
1.2.6 Urbanisation	23.85	119
1.3 Business and Labour Landscape	45.80	81
Labour Market		
1.3.1 Labour rights	82.30	66
1.3.2 Labour-employer cooperation	38.99	72
Management Practice		
1.3.3 Professional management	56.08	55
1.3.4 Relationship of pay to productivity	47.36	81
Technology Adoption		
1.3.5 Technology utilisation	39.07	99
1.3.6 Investment in emerging technologies	41.64	58
1.3.7 Firms with website	15.16	110
2 ATTRACT	44.24	91
2.1 External Openness	42.02	83
Attract Business		
2.1.1 FDI and technology transfer	48.61	91
2.1.2 Prevalence of foreign ownership	45.49	101
Attract People		
2.1.3 Migrant stock	20.51	104
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	53.46	47
2.2 Internal Openness	46.47	97
Social Inclusion		
2.2.1 Tolerance of minorities	52.17	50
2.2.2 Tolerance of immigrants	41.54	98
2.2.3 Social mobility	54.13	57
Gender Equality		
2.2.4 Women in tertiary education	35.67	118
2.2.5 Women in high-skilled jobs	51.91	98
2.2.6 Leadership opportunities for women	43.37	68

	Score	Rank
3 GROW	24.08	106
3.1 Formal Education	19.63	102
Enrolment		
3.1.1 Vocational enrolment	0.00	103
3.1.2 Tertiary enrolment	1.60	127
Quality		
3.1.3 Tertiary education expenditure	76.92	22
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	21.37	91
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	32.17	57
3.2.3 Employee development	31.94	81
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	31.25	109
Empowerment		
3.3.1 Delegation of authority	42.93	83
3.3.2 Youth inclusion	73.32	49
Collaboration		
3.3.3 Use of virtual social networks	6.34	126
3.3.4 Use of virtual professional networks	2.43	119

4 RETAIN	28.95	113
4.1 Sustainability	24.48	111
4.1.1 Pension coverage	4.55	126
4.1.2 Social protection	44.73	57
4.1.3 Brain retention	39.32	70
4.1.4 Environmental performance	9.35	119
4.2 Lifestyle	33.42	112
4.2.1 Personal rights	59.81	87
4.2.2 Personal safety	49.16	76
4.2.3 Physician density	0.31	132
4.2.4 Sanitation	24.38	122
5 VOCATIONAL AND TECHNICAL SKILLS	23.27	124
5.1 Mid-Level Skills	8.90	126
5.1.1 Workforce with secondary education	4.76	125
5.1.2 Population with secondary education	2.07	114
5.1.3 Technicians and associate professionals	8.01	118
5.1.4 Labour productivity per employee	20.75	106
5.2 Employability	37.63	106
5.2.1 Ease of finding skilled employees	61.76	51
5.2.2 Relevance of education system to the economy	45.27	61
5.2.3 Skills matching	5.87	98

6 GLOBAL KNOWLEDGE SKILLS	15.54	119
6.1 High-Level Skills	10.88	129
6.1.1 Workforce with tertiary education	0.72	129
6.1.2 Population with tertiary education	1.15	107
6.1.3 Professionals	1.14	128
6.1.4 Researchers	8.48	106
6.1.5 Senior officials and managers	2.14	124
6.1.6 Availability of scientists and engineers	51.63	61
6.2 Talent Impact	20.20	104
6.2.1 Innovation output	24.27	66
6.2.2 High-value exports	49.81	65
6.2.3 New product entrepreneurial activity	n/a	n/a
6.2.4 New business density	3.88	108
6.2.5 Scientific journal articles	2.83	115

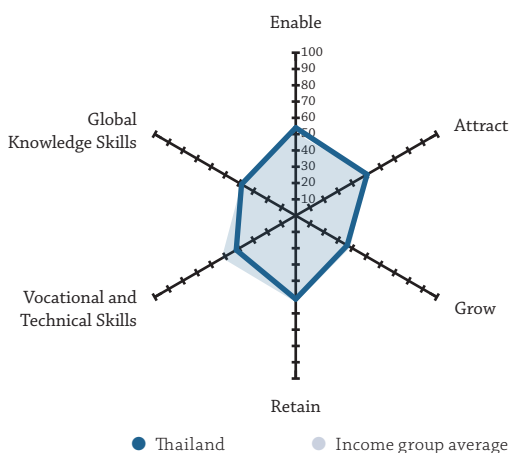
THAILAND

Key Indicators

Rank (out of 134) **68**
 Income group **Upper-middle income**
 Regional group **Eastern, Southeastern Asia and Oceania**
 Population (millions) **69.80**

GDP per capita (PPP US\$) **18,236.18**
 GDP (US\$ billions) **501.80**
 GTCI score **45.46**
 GTCI score (income group average) **45.84**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE 53.94	53	
1.1 Regulatory Landscape 49.67	70	
1.1.1 Government effectiveness 58.58	51	
1.1.2 Rule of law 55.80	56	
1.1.3 Political stability 50.42	96	
1.1.4 Regulatory quality 54.76	62	
1.1.5 Corruption 28.77	85	
1.2 Market Landscape 54.45	49	
1.2.1 Extent of market dominance 40.64	78	
1.2.2 Ease of doing business 88.20	19	
1.2.3 Cluster development 50.85	45	
1.2.4 R&D expenditure 20.07	36	
1.2.5 ICT infrastructure 84.51	38	
1.2.6 Urbanisation 42.45	99	
1.3 Business and Labour Landscape 57.72	48	
Labour Market		
1.3.1 Labour rights n/a	n/a	
1.3.2 Labour-employer cooperation 56.91	35	
Management Practice		
1.3.3 Professional management 58.65	52	
1.3.4 Relationship of pay to productivity 71.47	34	
Technology Adoption		
1.3.5 Technology utilisation 63.17	46	
1.3.6 Investment in emerging technologies 54.44	36	
1.3.7 Firms with website 41.66	78	
2 ATTRACT 50.56	65	
2.1 External Openness 50.07	57	
Attract Business		
2.1.1 FDI and technology transfer 67.84	41	
2.1.2 Prevalence of foreign ownership 62.93	56	
Attract People		
2.1.3 Migrant stock 41.09	66	
2.1.4 International students 20.89	84	
2.1.5 Brain gain 57.62	36	
2.2 Internal Openness 51.05	81	
Social Inclusion		
2.2.1 Tolerance of minorities 26.09	90	
2.2.2 Tolerance of immigrants 15.38	124	
2.2.3 Social mobility 47.47	77	
Gender Equality		
2.2.4 Women in tertiary education 73.54	30	
2.2.5 Women in high-skilled jobs 73.53	40	
2.2.6 Leadership opportunities for women 70.30	23	

	Score	Rank
3 GROW 36.44	66	
3.1 Formal Education 33.45	68	
Enrolment		
3.1.1 Vocational enrolment 15.62	66	
3.1.2 Tertiary enrolment 34.12	64	
Quality		
3.1.3 Tertiary education expenditure 51.76	79	
3.1.4 Reading, maths, and science 31.97	60	
3.1.5 University ranking 33.80	54	
3.2 Lifelong Learning 23.34	82	
3.2.1 Business and economics subject ranking 28.65	49	
3.2.2 Prevalence of training in firms 14.41	93	
3.2.3 Employee development 49.91	45	
3.2.4 Formal and non-formal studies 0.40	86	
3.3 Access to Growth Opportunities 52.53	47	
Empowerment		
3.3.1 Delegation of authority 52.66	53	
3.3.2 Youth inclusion 72.92	50	
Collaboration		
3.3.3 Use of virtual social networks 78.90	31	
3.3.4 Use of virtual professional networks 5.63	104	

4 RETAIN 51.23	74	
4.1 Sustainability 56.30	45	
4.1.1 Pension coverage 88.99	60	
4.1.2 Social protection 45.05	56	
4.1.3 Brain retention 56.61	37	
4.1.4 Environmental performance 34.57	71	
4.2 Lifestyle 46.15	90	
4.2.1 Personal rights 39.67	109	
4.2.2 Personal safety 35.20	100	
4.2.3 Physician density 11.07	91	
4.2.4 Sanitation 98.65	36	
5 VOCATIONAL AND TECHNICAL SKILLS 42.16	87	
5.1 Mid-Level Skills 32.75	95	
5.1.1 Workforce with secondary education 31.02	93	
5.1.2 Population with secondary education 19.63	94	
5.1.3 Technicians and associate professionals 19.55	92	
5.1.4 Labour productivity per employee 60.80	74	
5.2 Employability 51.56	73	
5.2.1 Ease of finding skilled employees 51.78	77	
5.2.2 Relevance of education system to the economy 47.19	57	
5.2.3 Skills matching 55.72	67	

6 GLOBAL KNOWLEDGE SKILLS 38.42	61	
6.1 High-Level Skills 36.79	73	
6.1.1 Workforce with tertiary education 20.94	79	
6.1.2 Population with tertiary education 25.03	60	
6.1.3 Professionals 13.59	103	
6.1.4 Researchers 72.71	45	
6.1.5 Senior officials and managers 32.46	56	
6.1.6 Availability of scientists and engineers 55.98	53	
6.2 Talent Impact 40.06	58	
6.2.1 Innovation output 37.20	43	
6.2.2 High-value exports 77.24	13	
6.2.3 New product entrepreneurial activity 31.86	64	
6.2.4 New business density 22.63	79	
6.2.5 Scientific journal articles 31.38	64	

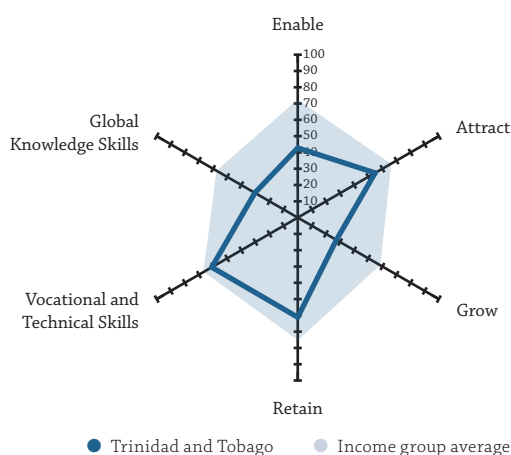
TRINIDAD AND TOBAGO

Key Indicators

Rank (out of 134).....	64
Income group.....	High income
Regional group.....	Latin America and the Caribbean
Population (millions).....	1.40

GDP per capita (PPP US\$).....	25,031.19
GDP (US\$ billions).....	21.53
GTCI score.....	46.25
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	42.78	92
1.1 Regulatory Landscape.....	50.09	66
1.1.1 Government effectiveness.....	52.87	63
1.1.2 Rule of law.....	50.66	68
1.1.3 Political stability.....	63.82	63
1.1.4 Regulatory quality.....	48.85	79
1.1.5 Corruption.....	34.25	69
1.2 Market Landscape.....	38.01	92
1.2.1 Extent of market dominance.....	21.60	117
1.2.2 Ease of doing business.....	54.94	92
1.2.3 Cluster development.....	35.75	88
1.2.4 R&D expenditure.....	1.45	112
1.2.5 ICT infrastructure.....	68.18	64
1.2.6 Urbanisation.....	46.17	94
1.3 Business and Labour Landscape.....	40.23	115
Labour Market		
1.3.1 Labour rights.....	83.50	63
1.3.2 Labour-employer cooperation.....	0.32	133
Management Practice		
1.3.3 Professional management.....	57.65	54
1.3.4 Relationship of pay to productivity.....	47.01	83
Technology Adoption		
1.3.5 Technology utilisation.....	46.17	78
1.3.6 Investment in emerging technologies.....	22.32	115
1.3.7 Firms with website.....	24.65	102
2. ATTRACT	54.85	50
2.1 External Openness.....	48.64	62
Attract Business		
2.1.1 FDI and technology transfer.....	56.14	71
2.1.2 Prevalence of foreign ownership.....	53.78	80
Attract People		
2.1.3 Migrant stock.....	37.48	74
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	47.19	66
2.2 Internal Openness.....	61.06	39
Social Inclusion		
2.2.1 Tolerance of minorities.....	72.83	21
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	57.30	44
Gender Equality		
2.2.4 Women in tertiary education.....	n/a	n/a
2.2.5 Women in high-skilled jobs.....	77.43	26
2.2.6 Leadership opportunities for women.....	46.98	63

	Score	Rank
3. GROW	27.38	96
3.1 Formal Education.....	18.15	111
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	36.31	53
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	23.59	80
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	28.39	62
3.2.3 Employee development.....	42.39	57
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	40.39	85
Empowerment		
3.3.1 Delegation of authority.....	52.98	51
3.3.2 Youth inclusion.....	0.00	123
Collaboration		
3.3.3 Use of virtual social networks.....	66.84	66
3.3.4 Use of virtual professional networks.....	41.72	20

4. RETAIN	61.15	44
4.1 Sustainability.....	53.51	52
4.1.1 Pension coverage.....	91.01	52
4.1.2 Social protection.....	41.01	66
4.1.3 Brain retention.....	43.75	57
4.1.4 Environmental performance.....	38.27	64
4.2 Lifestyle.....	68.79	47
4.2.1 Personal rights.....	92.52	32
4.2.2 Personal safety.....	34.11	102
4.2.3 Physician density.....	55.66	17
4.2.4 Sanitation.....	92.88	66
5. VOCATIONAL AND TECHNICAL SKILLS	60.92	41
5.1 Mid-Level Skills.....	66.13	32
5.1.1 Workforce with secondary education.....	67.36	28
5.1.2 Population with secondary education.....	65.34	27
5.1.3 Technicians and associate professionals.....	56.73	30
5.1.4 Labour productivity per employee.....	75.08	45
5.2 Employability.....	55.72	61
5.2.1 Ease of finding skilled employees.....	63.79	47
5.2.2 Relevance of education system to the economy.....	47.64	56
5.2.3 Skills matching.....	n/a	n/a

6. GLOBAL KNOWLEDGE SKILLS	30.39	81
6.1 High-Level Skills.....	44.10	47
6.1.1 Workforce with tertiary education.....	26.31	68
6.1.2 Population with tertiary education.....	27.69	52
6.1.3 Professionals.....	13.75	102
6.1.4 Researchers.....	59.47	63
6.1.5 Senior officials and managers.....	80.59	10
6.1.6 Availability of scientists and engineers.....	56.80	51
6.2 Talent Impact.....	16.68	111
6.2.1 Innovation output.....	7.82	110
6.2.2 High-value exports.....	3.11	125
6.2.3 New product entrepreneurial activity.....	27.70	69
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	28.11	67

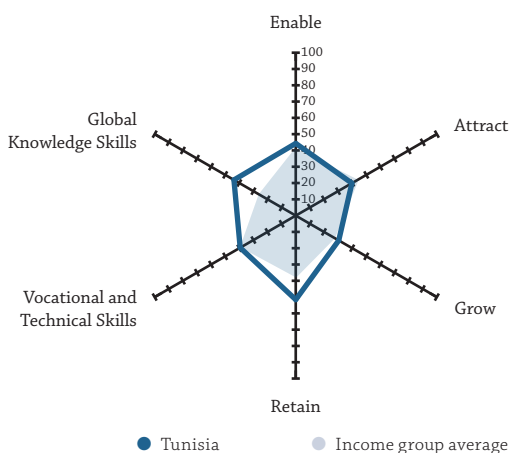
TUNISIA

Key Indicators

Rank (out of 134).....	81
Income group.....	Lower-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	11.82

GDP per capita (PPP US\$).....	10,261.69
GDP (US\$ billions).....	39.24
GTCI score.....	41.56
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	44.31	87
1.1 Regulatory Landscape.....	45.85	82
1.1.1 Government effectiveness.....	48.38	79
1.1.2 Rule of law.....	54.86	59
1.1.3 Political stability.....	43.75	110
1.1.4 Regulatory quality.....	42.52	99
1.1.5 Corruption.....	39.73	57
1.2 Market Landscape.....	43.87	79
1.2.1 Extent of market dominance.....	31.34	101
1.2.2 Ease of doing business.....	67.97	73
1.2.3 Cluster development.....	26.18	108
1.2.4 R&D expenditure.....	11.94	56
1.2.5 ICT infrastructure.....	61.49	76
1.2.6 Urbanisation.....	64.29	57
1.3 Business and Labour Landscape.....	43.21	101
Labour Market		
1.3.1 Labour rights.....	83.50	63
1.3.2 Labour-employer cooperation.....	19.46	120
Management Practice		
1.3.3 Professional management.....	40.79	97
1.3.4 Relationship of pay to productivity.....	32.52	122
Technology Adoption		
1.3.5 Technology utilisation.....	36.16	108
1.3.6 Investment in emerging technologies.....	35.63	79
1.3.7 Firms with website.....	54.39	61
2 ATTRACT.....	39.80	107
2.1 External Openness.....	32.12	117
Attract Business		
2.1.1 FDI and technology transfer.....	48.78	89
2.1.2 Prevalence of foreign ownership.....	51.00	90
Attract People		
2.1.3 Migrant stock.....	8.94	122
2.1.4 International students.....	29.44	74
2.1.5 Brain gain.....	22.43	121
2.2 Internal Openness.....	47.48	94
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.26	84
2.2.2 Tolerance of immigrants.....	46.15	91
2.2.3 Social mobility.....	50.20	73
Gender Equality		
2.2.4 Women in tertiary education.....	85.06	6
2.2.5 Women in high-skilled jobs.....	37.84	111
2.2.6 Leadership opportunities for women.....	37.35	81

	Score	Rank
3 GROW.....	30.47	84
3.1 Formal Education.....	30.43	76
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	21.84	82
Quality		
3.1.3 Tertiary education expenditure.....	64.01	47
3.1.4 Reading, maths, and science.....	15.23	73
3.1.5 University ranking.....	20.65	79
3.2 Lifelong Learning.....	17.90	104
3.2.1 Business and economics subject ranking.....	24.97	55
3.2.2 Prevalence of training in firms.....	15.94	89
3.2.3 Employee development.....	28.47	92
3.2.4 Formal and non-formal studies.....	2.23	71
3.3 Access to Growth Opportunities.....	43.06	80
Empowerment		
3.3.1 Delegation of authority.....	34.21	110
3.3.2 Youth inclusion.....	52.99	84
Collaboration		
3.3.3 Use of virtual social networks.....	68.81	59
3.3.4 Use of virtual professional networks.....	16.23	67

4 RETAIN.....	51.58	72
4.1 Sustainability.....	43.77	76
4.1.1 Pension coverage.....	85.25	61
4.1.2 Social protection.....	31.40	87
4.1.3 Brain retention.....	21.55	114
4.1.4 Environmental performance.....	36.86	66
4.2 Lifestyle.....	59.40	62
4.2.1 Personal rights.....	85.78	47
4.2.2 Personal safety.....	45.72	82
4.2.3 Physician density.....	15.88	85
4.2.4 Sanitation.....	90.20	72

5 VOCATIONAL AND TECHNICAL SKILLS.....	39.38	96
5.1 Mid-Level Skills.....	35.98	89
5.1.1 Workforce with secondary education.....	50.38	57
5.1.2 Population with secondary education.....	0.00	116
5.1.3 Technicians and associate professionals.....	31.87	63
5.1.4 Labour productivity per employee.....	61.68	70
5.2 Employability.....	42.79	97
5.2.1 Ease of finding skilled employees.....	53.26	72
5.2.2 Relevance of education system to the economy.....	32.31	93
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	43.79	52
6.1 High-Level Skills.....	42.18	54
6.1.1 Workforce with tertiary education.....	26.57	67
6.1.2 Population with tertiary education.....	19.32	71
6.1.3 Professionals.....	15.29	96
6.1.4 Researchers.....	76.86	41
6.1.5 Senior officials and managers.....	50.60	36
6.1.6 Availability of scientists and engineers.....	64.44	34
6.2 Talent Impact.....	45.41	44
6.2.1 Innovation output.....	29.14	58
6.2.2 High-value exports.....	49.80	66
6.2.3 New product entrepreneurial activity.....	64.35	17
6.2.4 New business density.....	29.95	60
6.2.5 Scientific journal articles.....	53.81	45

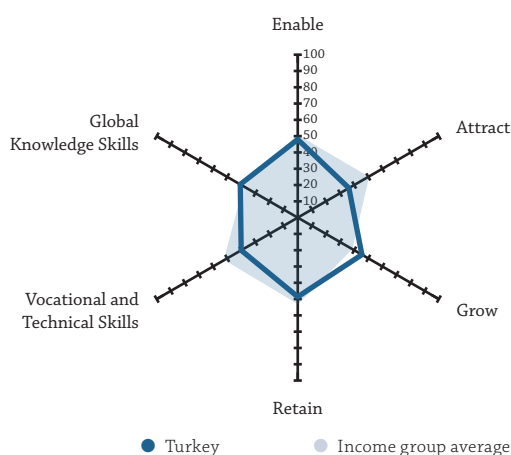
TURKEY

Key Indicators

Rank (out of 134)	76
Income group	Upper-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	84.34

GDP per capita (PPP US\$)	28,119.45
GDP (US\$ billions)	720.10
GTCI score	43.19
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	47.99	75
1.1 Regulatory Landscape	43.43	87
1.1.1 Government effectiveness	51.72	69
1.1.2 Rule of law	46.91	77
1.1.3 Political stability	32.22	123
1.1.4 Regulatory quality	52.03	71
1.1.5 Corruption	34.25	69
1.2 Market Landscape	56.96	43
1.2.1 Extent of market dominance	47.48	58
1.2.2 Ease of doing business	82.36	31
1.2.3 Cluster development	44.50	58
1.2.4 R&D expenditure	19.22	39
1.2.5 ICT infrastructure	76.79	53
1.2.6 Urbanisation	71.42	44
1.3 Business and Labour Landscape	43.59	98
Labour Market		
1.3.1 Labour rights	47.30	95
1.3.2 Labour-employer cooperation	27.68	108
Management Practice		
1.3.3 Professional management	52.16	71
1.3.4 Relationship of pay to productivity	47.41	80
Technology Adoption		
1.3.5 Technology utilisation	51.73	66
1.3.6 Investment in emerging technologies	27.62	103
1.3.7 Firms with website	51.20	64
2 ATTRACT	36.25	119
2.1 External Openness	38.83	95
Attract Business		
2.1.1 FDI and technology transfer	54.51	73
2.1.2 Prevalence of foreign ownership	41.11	111
Attract People		
2.1.3 Migrant stock	48.18	51
2.1.4 International students	24.49	79
2.1.5 Brain gain	25.86	116
2.2 Internal Openness	33.67	126
Social Inclusion		
2.2.1 Tolerance of minorities	0.00	128
2.2.2 Tolerance of immigrants	44.62	94
2.2.3 Social mobility	45.87	84
Gender Equality		
2.2.4 Women in tertiary education	50.09	102
2.2.5 Women in high-skilled jobs	42.68	107
2.2.6 Leadership opportunities for women	18.74	115

	Score	Rank
3 GROW	45.46	42
3.1 Formal Education	61.26	19
Enrolment		
3.1.1 Vocational enrolment	70.76	5
3.1.2 Tertiary enrolment	79.13	2
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	52.41	40
3.1.5 University ranking	42.75	37
3.2 Lifelong Learning	29.25	59
3.2.1 Business and economics subject ranking	30.68	44
3.2.2 Prevalence of training in firms	32.17	57
3.2.3 Employee development	25.98	101
3.2.4 Formal and non-formal studies	28.16	40
3.3 Access to Growth Opportunities	45.86	70
Empowerment		
3.3.1 Delegation of authority	48.66	65
3.3.2 Youth inclusion	46.87	96
Collaboration		
3.3.3 Use of virtual social networks	70.69	55
3.3.4 Use of virtual professional networks	17.22	62

4 RETAIN	48.60	79
4.1 Sustainability	53.01	54
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	54.74	41
4.1.3 Brain retention	27.67	102
4.1.4 Environmental performance	29.63	84
4.2 Lifestyle	44.18	96
4.2.1 Personal rights	19.10	125
4.2.2 Personal safety	38.34	96
4.2.3 Physician density	22.20	73
4.2.4 Sanitation	97.08	52

5 VOCATIONAL AND TECHNICAL SKILLS	40.09	95
5.1 Mid-Level Skills	42.39	77
5.1.1 Workforce with secondary education	29.37	96
5.1.2 Population with secondary education	27.93	78
5.1.3 Technicians and associate professionals	25.58	77
5.1.4 Labour productivity per employee	86.68	24
5.2 Employability	37.78	105
5.2.1 Ease of finding skilled employees	46.28	91
5.2.2 Relevance of education system to the economy	29.29	98
5.2.3 Skills matching	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	40.74	57
6.1 High-Level Skills	40.33	60
6.1.1 Workforce with tertiary education	33.28	53
6.1.2 Population with tertiary education	24.71	61
6.1.3 Professionals	28.65	61
6.1.4 Researchers	73.04	44
6.1.5 Senior officials and managers	42.62	42
6.1.6 Availability of scientists and engineers	39.66	90
6.2 Talent Impact	41.16	55
6.2.1 Innovation output	32.75	52
6.2.2 High-value exports	33.69	92
6.2.3 New product entrepreneurial activity	61.25	22
6.2.4 New business density	28.46	64
6.2.5 Scientific journal articles	49.63	47

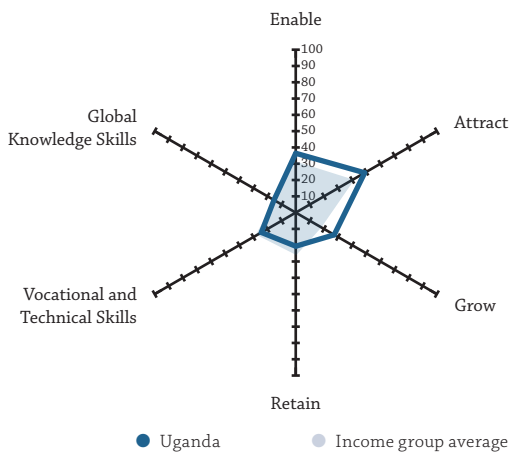
UGANDA

Key Indicators

Rank (out of 134).....	117
Income group.....	Low income
Regional group.....	Sub-Saharan Africa
Population (millions).....	45.74

GDP per capita (PPP US\$)	2,297.18
GDP (US\$ billions)	37.37
GTCI score.....	28.82
GTCI score (income group average)	23.75

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 36.42 110		
1.1 Regulatory Landscape.....	38.43	103
1.1.1 Government effectiveness.....	37.65	101
1.1.2 Rule of law.....	46.18	79
1.1.3 Political stability.....	47.97	102
1.1.4 Regulatory quality.....	43.91	95
1.1.5 Corruption.....	16.44	115
1.2 Market Landscape.....	27.92	118
1.2.1 Extent of market dominance.....	22.28	116
1.2.2 Ease of doing business.....	52.62	99
1.2.3 Cluster development.....	35.91	86
1.2.4 R&D expenditure.....	2.66	102
1.2.5 ICT infrastructure.....	41.69	96
1.2.6 Urbanisation.....	12.35	126
1.3 Business and Labour Landscape.....	42.90	106
Labour Market		
1.3.1 Labour rights.....	85.40	59
1.3.2 Labour-employer cooperation.....	40.60	69
Management Practice		
1.3.3 Professional management.....	49.01	74
1.3.4 Relationship of pay to productivity.....	42.73	96
Technology Adoption		
1.3.5 Technology utilisation.....	35.29	110
1.3.6 Investment in emerging technologies.....	36.03	76
1.3.7 Firms with website.....	11.22	116
2 ATTRACT..... 48.86 77		
2.1 External Openness.....	54.13	45
Attract Business		
2.1.1 FDI and technology transfer.....	51.76	83
2.1.2 Prevalence of foreign ownership.....	72.23	36
Attract People		
2.1.3 Migrant stock.....	35.18	77
2.1.4 International students.....	62.83	17
2.1.5 Brain gain.....	48.67	60
2.2 Internal Openness.....	43.60	108
Social Inclusion		
2.2.1 Tolerance of minorities.....	20.65	98
2.2.2 Tolerance of immigrants.....	33.85	113
2.2.3 Social mobility.....	55.59	51
Gender Equality		
2.2.4 Women in tertiary education.....	44.22	108
2.2.5 Women in high-skilled jobs.....	51.50	99
2.2.6 Leadership opportunities for women.....	55.77	45

	Score	Rank
3 GROW..... 27.26 98		
3.1 Formal Education.....	27.60	84
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	2.83	123
Quality		
3.1.3 Tertiary education expenditure.....	37.64	101
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	42.34	39
3.2 Lifelong Learning.....	29.58	58
3.2.1 Business and economics subject ranking.....	22.04	59
3.2.2 Prevalence of training in firms.....	37.76	48
3.2.3 Employee development.....	28.93	89
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	24.59	119
Empowerment		
3.3.1 Delegation of authority.....	46.96	69
3.3.2 Youth inclusion.....	43.53	100
Collaboration		
3.3.3 Use of virtual social networks.....	4.68	128
3.3.4 Use of virtual professional networks.....	3.20	114

4 RETAIN..... 20.62 125		
4.1 Sustainability.....	20.02	121
4.1.1 Pension coverage.....	10.30	115
4.1.2 Social protection.....	23.80	108
4.1.3 Brain retention.....	28.69	99
4.1.4 Environmental performance.....	17.28	103
4.2 Lifestyle.....	21.22	128
4.2.1 Personal rights.....	50.51	99
4.2.2 Personal safety.....	20.68	119
4.2.3 Physician density.....	1.66	114
4.2.4 Sanitation.....	12.04	130

5 VOCATIONAL AND TECHNICAL SKILLS..... 24.35 122		
5.1 Mid-Level Skills.....	9.20	124
5.1.1 Workforce with secondary education.....	2.96	126
5.1.2 Population with secondary education.....	2.40	113
5.1.3 Technicians and associate professionals.....	11.37	112
5.1.4 Labour productivity per employee.....	20.09	107
5.2 Employability.....	39.50	102
5.2.1 Ease of finding skilled employees.....	65.09	46
5.2.2 Relevance of education system to the economy.....	39.98	75
5.2.3 Skills matching.....	13.44	93

6 GLOBAL KNOWLEDGE SKILLS..... 15.42 120		
6.1 High-Level Skills.....	16.64	115
6.1.1 Workforce with tertiary education.....	0.00	131
6.1.2 Population with tertiary education.....	9.69	91
6.1.3 Professionals.....	14.05	100
6.1.4 Researchers.....	13.96	103
6.1.5 Senior officials and managers.....	8.56	108
6.1.6 Availability of scientists and engineers.....	53.56	56
6.2 Talent Impact.....	14.20	117
6.2.1 Innovation output.....	3.23	120
6.2.2 High-value exports.....	36.43	89
6.2.3 New product entrepreneurial activity.....	8.70	89
6.2.4 New business density.....	18.44	85
6.2.5 Scientific journal articles.....	4.20	107

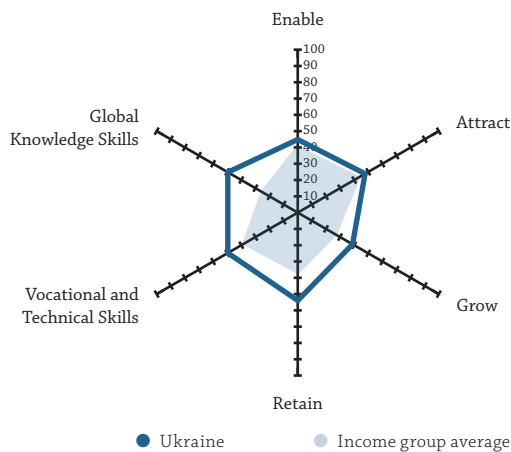
UKRAINE

Key Indicators

Rank (out of 134).....	61
Income group.....	Lower-middle income
Regional group.....	Europe
Population (millions).....	44.13

GDP per capita (PPP US\$).....	13,056.70
GDP (US\$ billions).....	155.58
GTCI score.....	47.42
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	44.89	85
1.1 Regulatory Landscape.....	36.13	109
1.1.1 Government effectiveness.....	44.06	89
1.1.2 Rule of law.....	37.35	107
1.1.3 Political stability.....	28.13	125
1.1.4 Regulatory quality.....	46.46	91
1.1.5 Corruption.....	24.66	97
1.2 Market Landscape.....	44.95	75
1.2.1 Extent of market dominance.....	40.25	79
1.2.2 Ease of doing business.....	70.72	61
1.2.3 Cluster development.....	27.90	104
1.2.4 R&D expenditure.....	9.30	67
1.2.5 ICT infrastructure.....	56.79	78
1.2.6 Urbanisation.....	64.76	56
1.3 Business and Labour Landscape.....	53.58	52
Labour Market		
1.3.1 Labour rights.....	94.30	31
1.3.2 Labour-employer cooperation.....	34.74	91
Management Practice		
1.3.3 Professional management.....	39.22	100
1.3.4 Relationship of pay to productivity.....	61.04	54
Technology Adoption		
1.3.5 Technology utilisation.....	42.28	92
1.3.6 Investment in emerging technologies.....	40.56	62
1.3.7 Firms with website.....	62.95	47
2 ATTRACT.....	47.71	80
2.1 External Openness.....	40.96	88
Attract Business		
2.1.1 FDI and technology transfer.....	36.29	119
2.1.2 Prevalence of foreign ownership.....	33.75	120
Attract People		
2.1.3 Migrant stock.....	58.57	42
2.1.4 International students.....	37.84	61
2.1.5 Brain gain.....	38.34	94
2.2 Internal Openness.....	54.45	66
Social Inclusion		
2.2.1 Tolerance of minorities.....	43.48	63
2.2.2 Tolerance of immigrants.....	55.38	76
2.2.3 Social mobility.....	34.35	117
Gender Equality		
2.2.4 Women in tertiary education.....	61.01	83
2.2.5 Women in high-skilled jobs.....	84.97	10
2.2.6 Leadership opportunities for women.....	47.54	60

	Score	Rank
3 GROW.....	38.84	57
3.1 Formal Education.....	43.21	46
Enrolment		
3.1.1 Vocational enrolment.....	12.38	72
3.1.2 Tertiary enrolment.....	57.63	18
Quality		
3.1.3 Tertiary education expenditure.....	58.01	64
3.1.4 Reading, maths, and science.....	52.50	39
3.1.5 University ranking.....	35.56	51
3.2 Lifelong Learning.....	28.45	60
3.2.1 Business and economics subject ranking.....	29.20	47
3.2.2 Prevalence of training in firms.....	23.22	73
3.2.3 Employee development.....	32.95	76
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	44.85	72
Empowerment		
3.3.1 Delegation of authority.....	41.53	90
3.3.2 Youth inclusion.....	70.27	54
Collaboration		
3.3.3 Use of virtual social networks.....	58.32	81
3.3.4 Use of virtual professional networks.....	9.27	85

4 RETAIN.....	53.97	59
4.1 Sustainability.....	48.32	65
4.1.1 Pension coverage.....	96.16	42
4.1.2 Social protection.....	36.19	75
4.1.3 Brain retention.....	19.14	119
4.1.4 Environmental performance.....	41.80	58
4.2 Lifestyle.....	59.61	61
4.2.1 Personal rights.....	66.10	77
4.2.2 Personal safety.....	39.35	94
4.2.3 Physician density.....	37.06	45
4.2.4 Sanitation.....	95.93	58
5 VOCATIONAL AND TECHNICAL SKILLS.....	49.56	69
5.1 Mid-Level Skills.....	48.45	64
5.1.1 Workforce with secondary education.....	35.38	82
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	49.19	41
5.1.4 Labour productivity per employee.....	60.78	75
5.2 Employability.....	50.67	74
5.2.1 Ease of finding skilled employees.....	56.35	63
5.2.2 Relevance of education system to the economy.....	44.98	63
5.2.3 Skills matching.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....	49.55	39
6.1 High-Level Skills.....	59.74	24
6.1.1 Workforce with tertiary education.....	65.50	5
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	42.20	38
6.1.4 Researchers.....	67.95	50
6.1.5 Senior officials and managers.....	61.51	25
6.1.6 Availability of scientists and engineers.....	61.54	42
6.2 Talent Impact.....	39.37	60
6.2.1 Innovation output.....	45.47	36
6.2.2 High-value exports.....	45.43	75
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	29.92	61
6.2.5 Scientific journal articles.....	36.65	59

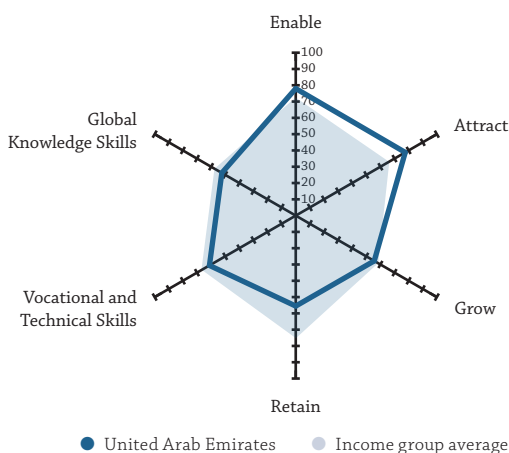
UNITED ARAB EMIRATES

Key Indicators

Rank (out of 134).....	25
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	9.89

GDP per capita (PPP US\$)	69,957.62
GDP (US\$ billions)	421.14
GTCI score	63.38
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	77.97	18
1.1 Regulatory Landscape	76.61	22
1.1.1 Government effectiveness	81.25	19
1.1.2 Rule of law	72.78	32
1.1.3 Political stability	78.47	30
1.1.4 Regulatory quality	73.85	35
1.1.5 Corruption	76.71	20
1.2 Market Landscape	77.20	12
1.2.1 Extent of market dominance	82.40	7
1.2.2 Ease of doing business	89.65	14
1.2.3 Cluster development	86.09	7
1.2.4 R&D expenditure	25.68	28
1.2.5 ICT infrastructure	94.85	9
1.2.6 Urbanisation	84.50	22
1.3 Business and Labour Landscape	80.09	17
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	71.50	16
Management Practice		
1.3.3 Professional management	77.29	23
1.3.4 Relationship of pay to productivity	93.19	4
Technology Adoption		
1.3.5 Technology utilisation	78.92	18
1.3.6 Investment in emerging technologies	79.57	11
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	77.60	7
2.1 External Openness	89.87	2
Attract Business		
2.1.1 FDI and technology transfer	81.39	15
2.1.2 Prevalence of foreign ownership	77.04	25
Attract People		
2.1.3 Migrant stock	100.00	1
2.1.4 International students	100.00	1
2.1.5 Brain gain	90.92	5
2.2 Internal Openness	65.33	22
Social Inclusion		
2.2.1 Tolerance of minorities	75.00	20
2.2.2 Tolerance of immigrants	100.00	1
2.2.3 Social mobility	81.82	15
Gender Equality		
2.2.4 Women in tertiary education	26.45	123
2.2.5 Women in high-skilled jobs	24.19	120
2.2.6 Leadership opportunities for women	84.52	7

	Score	Rank
3 GROW	55.62	28
3.1 Formal Education	30.61	74
Enrolment		
3.1.1 Vocational enrolment	1.36	99
3.1.2 Tertiary enrolment	36.46	60
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	40.56	46
3.1.5 University ranking	44.04	35
3.2 Lifelong Learning	56.87	22
3.2.1 Business and economics subject ranking	38.28	30
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	75.46	13
3.2.4 Formal and non-formal studies	n/a	n/a
3.3 Access to Growth Opportunities	79.39	8
Empowerment		
3.3.1 Delegation of authority	74.48	20
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	100.00	1
3.3.4 Use of virtual professional networks	63.69	10

4 RETAIN	55.52	55
4.1 Sustainability	58.36	39
4.1.1 Pension coverage	21.82	99
4.1.2 Social protection	67.99	28
4.1.3 Brain retention	91.08	3
4.1.4 Environmental performance	52.56	40
4.2 Lifestyle	52.68	78
4.2.1 Personal rights	29.28	116
4.2.2 Personal safety	51.73	71
4.2.3 Physician density	31.24	57
4.2.4 Sanitation	98.47	38
5 VOCATIONAL AND TECHNICAL SKILLS	61.16	40
5.1 Mid-Level Skills	45.21	73
5.1.1 Workforce with secondary education	21.46	108
5.1.2 Population with secondary education	24.53	89
5.1.3 Technicians and associate professionals	47.13	43
5.1.4 Labour productivity per employee	87.73	22
5.2 Employability	77.12	15
5.2.1 Ease of finding skilled employees	91.52	6
5.2.2 Relevance of education system to the economy	75.66	9
5.2.3 Skills matching	64.17	55

6 GLOBAL KNOWLEDGE SKILLS	52.38	36
6.1 High-Level Skills	64.17	16
6.1.1 Workforce with tertiary education	44.01	34
6.1.2 Population with tertiary education	69.61	3
6.1.3 Professionals	36.26	52
6.1.4 Researchers	81.36	33
6.1.5 Senior officials and managers	72.90	14
6.1.6 Availability of scientists and engineers	80.89	9
6.2 Talent Impact	40.58	56
6.2.1 Innovation output	32.46	54
6.2.2 High-value exports	27.77	99
6.2.3 New product entrepreneurial activity	55.46	35
6.2.4 New business density	42.93	47
6.2.5 Scientific journal articles	44.30	51

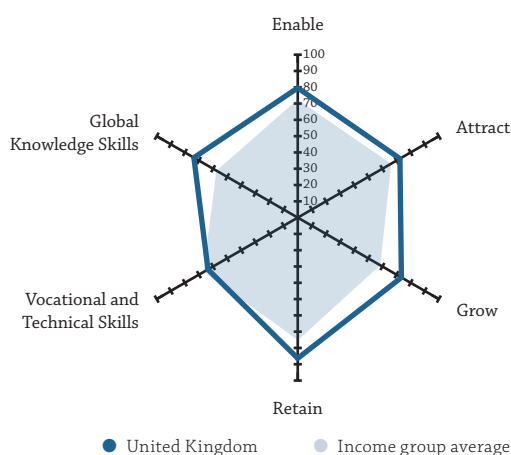
UNITED KINGDOM

Key Indicators

Rank (out of 134).....	12
Income group.....	High income
Regional group.....	Europe
Population (millions).....	67.22

GDP per capita (PPP US\$).....	44,916.23
GDP (US\$ billions).....	2,707.74
GTCI score.....	74.84
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	79.58	15
1.1 Regulatory Landscape.....	84.05	16
1.1.1 Government effectiveness.....	82.55	17
1.1.2 Rule of law.....	90.30	15
1.1.3 Political stability.....	74.31	40
1.1.4 Regulatory quality.....	88.15	12
1.1.5 Corruption.....	84.93	11
1.2 Market Landscape.....	74.31	16
1.2.1 Extent of market dominance.....	62.57	29
1.2.2 Ease of doing business.....	94.31	7
1.2.3 Cluster development.....	76.01	17
1.2.4 R&D expenditure.....	34.29	21
1.2.5 ICT infrastructure.....	97.77	3
1.2.6 Urbanisation.....	80.91	27
1.3 Business and Labour Landscape.....	80.37	15
Labour Market		
1.3.1 Labour rights.....	89.40	47
1.3.2 Labour-employer cooperation.....	62.93	27
Management Practice		
1.3.3 Professional management.....	83.68	13
1.3.4 Relationship of pay to productivity.....	73.94	27
Technology Adoption		
1.3.5 Technology utilisation.....	84.12	13
1.3.6 Investment in emerging technologies.....	82.43	8
1.3.7 Firms with website.....	86.07	11
2 ATTRACT.....	72.42	15
2.1 External Openness.....	80.95	6
Attract Business		
2.1.1 FDI and technology transfer.....	87.19	6
2.1.2 Prevalence of foreign ownership.....	95.35	4
Attract People		
2.1.3 Migrant stock.....	62.57	31
2.1.4 International students.....	75.70	8
2.1.5 Brain gain.....	83.92	6
2.2 Internal Openness.....	63.90	29
Social Inclusion		
2.2.1 Tolerance of minorities.....	39.13	69
2.2.2 Tolerance of immigrants.....	81.54	23
2.2.3 Social mobility.....	70.36	27
Gender Equality		
2.2.4 Women in tertiary education.....	71.65	38
2.2.5 Women in high-skilled jobs.....	64.12	74
2.2.6 Leadership opportunities for women.....	56.60	44

	Score	Rank
3 GROW.....	73.47	6
3.1 Formal Education.....	68.81	8
Enrolment		
3.1.1 Vocational enrolment.....	50.90	25
3.1.2 Tertiary enrolment.....	42.64	48
Quality		
3.1.3 Tertiary education expenditure.....	83.22	12
3.1.4 Reading, maths, and science.....	69.14	11
3.1.5 University ranking.....	98.17	2
3.2 Lifelong Learning.....	77.19	7
3.2.1 Business and economics subject ranking.....	97.61	2
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	63.43	30
3.2.4 Formal and non-formal studies.....	70.53	15
3.3 Access to Growth Opportunities.....	74.41	15
Empowerment		
3.3.1 Delegation of authority.....	76.61	18
3.3.2 Youth inclusion.....	82.03	28
Collaboration		
3.3.3 Use of virtual social networks.....	78.07	35
3.3.4 Use of virtual professional networks.....	60.93	13

4 RETAIN.....	86.37	9
4.1 Sustainability.....	87.53	10
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	67.30	34
4.1.3 Brain retention.....	84.95	7
4.1.4 Environmental performance.....	97.88	4
4.2 Lifestyle.....	85.22	9
4.2.1 Personal rights.....	95.63	22
4.2.2 Personal safety.....	73.65	26
4.2.3 Physician density.....	72.55	6
4.2.4 Sanitation.....	99.04	30
5 VOCATIONAL AND TECHNICAL SKILLS.....	63.62	33
5.1 Mid-Level Skills.....	57.22	48
5.1.1 Workforce with secondary education.....	53.13	51
5.1.2 Population with secondary education.....	36.53	64
5.1.3 Technicians and associate professionals.....	52.54	38
5.1.4 Labour productivity per employee.....	86.68	25
5.2 Employability.....	70.01	24
5.2.1 Ease of finding skilled employees.....	76.63	28
5.2.2 Relevance of education system to the economy.....	65.28	23
5.2.3 Skills matching.....	68.13	48

6 GLOBAL KNOWLEDGE SKILLS.....	73.59	4
6.1 High-Level Skills.....	72.55	4
6.1.1 Workforce with tertiary education.....	54.17	17
6.1.2 Population with tertiary education.....	59.05	9
6.1.3 Professionals.....	62.44	9
6.1.4 Researchers.....	91.44	19
6.1.5 Senior officials and managers.....	91.47	3
6.1.6 Availability of scientists and engineers.....	76.74	14
6.2 Talent Impact.....	74.63	9
6.2.1 Innovation output.....	83.50	3
6.2.2 High-value exports.....	77.10	14
6.2.3 New product entrepreneurial activity.....	40.52	56
6.2.4 New business density.....	87.66	7
6.2.5 Scientific journal articles.....	84.36	14

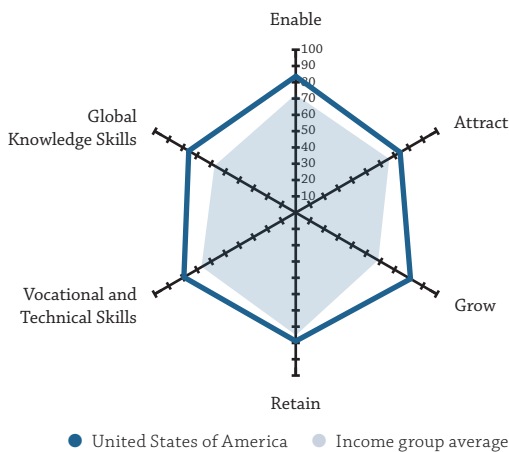
UNITED STATES OF AMERICA

Key Indicators

Rank (out of 134).....	3
Income group.....	High income
Regional group.....	Northern America
Population (millions).....	329.48

GDP per capita (PPP US\$).....	63,543.58
GDP (US\$ billions).....	20,936.60
GTCI score.....	78.81
GTCI score (income group average).....	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	83.64	10
1.1 Regulatory Landscape.....	78.66	21
1.1.1 Government effectiveness.....	83.74	16
1.1.2 Rule of law.....	87.08	17
1.1.3 Political stability.....	69.31	51
1.1.4 Regulatory quality.....	81.95	19
1.1.5 Corruption.....	71.23	23
1.2 Market Landscape.....	83.27	3
1.2.1 Extent of market dominance.....	79.87	9
1.2.2 Ease of doing business.....	95.10	5
1.2.3 Cluster development.....	100.00	1
1.2.4 R&D expenditure.....	57.23	9
1.2.5 ICT infrastructure.....	87.84	27
1.2.6 Urbanisation.....	79.60	28
1.3 Business and Labour Landscape.....	88.99	7
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	71.31	17
Management Practice		
1.3.3 Professional management.....	90.34	10
1.3.4 Relationship of pay to productivity.....	98.96	2
Technology Adoption		
1.3.5 Technology utilisation.....	100.00	1
1.3.6 Investment in emerging technologies.....	100.00	1
1.3.7 Firms with website.....	73.31	33
2 ATTRACT.....	73.99	12
2.1 External Openness.....	76.63	11
Attract Business		
2.1.1 FDI and technology transfer.....	95.43	3
2.1.2 Prevalence of foreign ownership.....	83.50	12
Attract People		
2.1.3 Migrant stock.....	66.26	23
2.1.4 International students.....	46.42	45
2.1.5 Brain gain.....	91.54	4
2.2 Internal Openness.....	71.34	15
Social Inclusion		
2.2.1 Tolerance of minorities.....	34.78	77
2.2.2 Tolerance of immigrants.....	90.77	11
2.2.3 Social mobility.....	84.36	13
Gender Equality		
2.2.4 Women in tertiary education.....	71.12	41
2.2.5 Women in high-skilled jobs.....	73.84	39
2.2.6 Leadership opportunities for women.....	73.17	19

	Score	Rank
3 GROW.....	81.32	1
3.1 Formal Education.....	76.65	2
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	61.59	11
Quality		
3.1.3 Tertiary education expenditure.....	79.20	20
3.1.4 Reading, maths, and science.....	65.82	23
3.1.5 University ranking.....	100.00	1
3.2 Lifelong Learning.....	90.11	1
3.2.1 Business and economics subject ranking.....	100.00	1
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	89.94	2
3.2.4 Formal and non-formal studies.....	80.39	8
3.3 Access to Growth Opportunities.....	77.20	11
Empowerment		
3.3.1 Delegation of authority.....	89.22	6
3.3.2 Youth inclusion.....	75.37	44
Collaboration		
3.3.3 Use of virtual social networks.....	72.25	52
3.3.4 Use of virtual professional networks.....	71.96	2

4 RETAIN.....	78.87	20
4.1 Sustainability.....	86.74	11
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	72.47	21
4.1.3 Brain retention.....	97.76	2
4.1.4 Environmental performance.....	76.72	24
4.2 Lifestyle.....	70.99	43
4.2.1 Personal rights.....	92.13	34
4.2.2 Personal safety.....	59.70	52
4.2.3 Physician density.....	32.19	54
4.2.4 Sanitation.....	99.97	13
5 VOCATIONAL AND TECHNICAL SKILLS.....	79.25	3
5.1 Mid-Level Skills.....	74.26	9
5.1.1 Workforce with secondary education.....	62.83	32
5.1.2 Population with secondary education.....	63.09	28
5.1.3 Technicians and associate professionals.....	74.41	12
5.1.4 Labour productivity per employee.....	96.70	4
5.2 Employability.....	84.24	6
5.2.1 Ease of finding skilled employees.....	100.00	1
5.2.2 Relevance of education system to the economy.....	83.78	4
5.2.3 Skills matching.....	68.93	46

6 GLOBAL KNOWLEDGE SKILLS.....	75.82	2
6.1 High-Level Skills.....	76.04	2
6.1.1 Workforce with tertiary education.....	61.28	8
6.1.2 Population with tertiary education.....	60.53	8
6.1.3 Professionals.....	54.51	17
6.1.4 Researchers.....	90.79	22
6.1.5 Senior officials and managers.....	89.11	4
6.1.6 Availability of scientists and engineers.....	100.00	1
6.2 Talent Impact.....	75.61	6
6.2.1 Innovation output.....	81.12	5
6.2.2 High-value exports.....	72.16	24
6.2.3 New product entrepreneurial activity.....	68.46	13
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	80.71	21

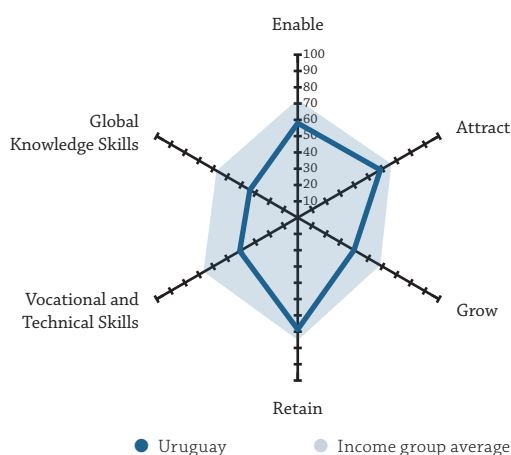
URUGUAY

Key Indicators

Rank (out of 134)	51
Income group	High income
Regional group	Latin America and the Caribbean
Population (millions)	3.47

GDP per capita (PPP US\$)	22,795.06
GDP (US\$ billions)	53.63
GTCI score	50.02
GTCI score (income group average)	65.28

GTCI 2021 Country Profile by Pillar



	Score	Rank
1. ENABLE	57.99	44
1.1 Regulatory Landscape	72.04	31
1.1.1 Government effectiveness	66.11	39
1.1.2 Rule of law	67.74	36
1.1.3 Political stability	86.20	12
1.1.4 Regulatory quality	63.46	47
1.1.5 Corruption	76.71	20
1.2 Market Landscape	53.37	54
1.2.1 Extent of market dominance	47.34	60
1.2.2 Ease of doing business	55.38	90
1.2.3 Cluster development	33.36	92
1.2.4 R&D expenditure	8.24	69
1.2.5 ICT infrastructure	81.25	45
1.2.6 Urbanisation	94.63	5
1.3 Business and Labour Landscape	48.57	70
1.3.1 Labour Market		
1.3.1.1 Labour rights	93.10	33
1.3.1.2 Labour-employer cooperation	10.90	130
1.3.2 Management Practice		
1.3.2.1 Professional management	53.43	66
1.3.2.2 Relationship of pay to productivity	38.51	110
1.3.3 Technology Adoption		
1.3.3.1 Technology utilisation	48.11	72
1.3.3.2 Investment in emerging technologies	26.97	104
1.3.3.3 Firms with website	68.97	40
2. ATTRACT	58.55	37
2.1 External Openness	49.55	60
2.1.1 Attract Business		
2.1.1.1 FDI and technology transfer	67.48	43
2.1.1.2 Prevalence of foreign ownership	68.71	44
2.1.2 Attract People		
2.1.2.1 Migrant stock	27.33	90
2.1.2.2 International students	n/a	n/a
2.1.2.3 Brain gain	34.69	101
2.1.2.4 Internal Openness	67.54	19
2.1.3 Social Inclusion		
2.1.3.1 Tolerance of minorities	79.35	12
2.1.3.2 Tolerance of immigrants	92.31	8
2.1.3.3 Social mobility	56.85	46
2.1.4 Gender Equality		
2.1.4.1 Women in tertiary education	n/a	n/a
2.1.4.2 Women in high-skilled jobs	74.70	35
2.1.4.3 Leadership opportunities for women	34.50	86

	Score	Rank
3. GROW	39.89	54
3.1 Formal Education	34.71	64
3.1.1 Enrolment		
3.1.1.1 Vocational enrolment	30.22	43
3.1.1.2 Tertiary enrolment	43.87	45
3.1.2 Quality		
3.1.2.1 Tertiary education expenditure	62.93	50
3.1.2.2 Reading, maths, and science	36.51	51
3.1.2.3 University ranking	0.00	87
3.2 Lifelong Learning	25.99	70
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	63.78	18
3.2.3 Employee development	32.49	79
3.2.4 Formal and non-formal studies	7.68	54
3.3 Access to Growth Opportunities	58.98	36
3.3.1 Empowerment		
3.3.1.1 Delegation of authority	45.22	75
3.3.1.2 Youth inclusion	67.83	59
3.3.2 Collaboration		
3.3.2.1 Use of virtual social networks	83.68	15
3.3.2.2 Use of virtual professional networks	39.18	24

4. RETAIN	68.62	32
4.1 Sustainability	62.58	32
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	78.20	16
4.1.3 Brain retention	31.04	92
4.1.4 Environmental performance	41.09	59
4.2 Lifestyle	74.65	32
4.2.1 Personal rights	98.04	10
4.2.2 Personal safety	42.75	89
4.2.3 Physician density	61.48	13
4.2.4 Sanitation	96.33	54
5. VOCATIONAL AND TECHNICAL SKILLS	41.12	93
5.1 Mid-Level Skills	35.29	90
5.1.1 Workforce with secondary education	13.66	116
5.1.2 Population with secondary education	24.20	90
5.1.3 Technicians and associate professionals	31.86	64
5.1.4 Labour productivity per employee	71.44	51
5.2 Employability	46.95	86
5.2.1 Ease of finding skilled employees	58.18	60
5.2.2 Relevance of education system to the economy	27.00	100
5.2.3 Skills matching	55.66	68

6. GLOBAL KNOWLEDGE SKILLS	33.94	71
6.1 High-Level Skills	29.98	86
6.1.1 Workforce with tertiary education	17.32	90
6.1.2 Population with tertiary education	16.79	75
6.1.3 Professionals	28.91	60
6.1.4 Researchers	62.61	57
6.1.5 Senior officials and managers	18.52	88
6.1.6 Availability of scientists and engineers	35.75	104
6.2 Talent Impact	37.90	64
6.2.1 Innovation output	24.60	64
6.2.2 High-value exports	53.70	55
6.2.3 New product entrepreneurial activity	48.77	44
6.2.4 New business density	24.47	77
6.2.5 Scientific journal articles	37.96	56

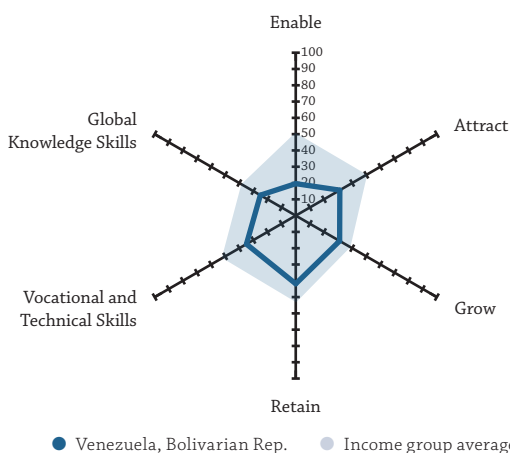
VENEZUELA, BOLIVARIAN REP.

Key Indicators

Rank (out of 134).....	110
Income group.....	Upper-middle income*
Regional group.....	Latin America and the Caribbean
Population (millions).....	28.44

GDP per capita (PPP US\$)	17,527.75
GDP (US\$ billions)	482.36
GTCI score.....	30.64
GTCI score (income group average)	45.84

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	19.61	131
1.1 Regulatory Landscape.....	8.74	133
1.1.1 Government effectiveness.....	13.80	133
1.1.2 Rule of law.....	0.00	134
1.1.3 Political stability.....	29.90	124
1.1.4 Regulatory quality.....	0.00	134
1.1.5 Corruption.....	0.00	133
1.2 Market Landscape.....	24.11	124
1.2.1 Extent of market dominance.....	18.08	128
1.2.2 Ease of doing business.....	0.00	134
1.2.3 Cluster development.....	3.48	132
1.2.4 R&D expenditure.....	6.58	78
1.2.5 ICT infrastructure.....	30.07	114
1.2.6 Urbanisation.....	86.44	16
1.3 Business and Labour Landscape.....	25.99	127
Labour Market		
1.3.1 Labour rights.....	26.10	98
1.3.2 Labour-employer cooperation.....	22.98	115
Management Practice		
1.3.3 Professional management.....	53.66	64
1.3.4 Relationship of pay to productivity.....	0.00	134
Technology Adoption		
1.3.5 Technology utilisation.....	19.85	124
1.3.6 Investment in emerging technologies.....	10.78	130
1.3.7 Firms with website.....	48.60	68
2 ATTRACT.....	31.24	128
2.1 External Openness.....	19.25	132
Attract Business		
2.1.1 FDI and technology transfer.....	9.64	132
2.1.2 Prevalence of foreign ownership.....	23.01	130
Attract People		
2.1.3 Migrant stock.....	44.35	57
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	0.00	134
2.2 Internal Openness.....	43.23	111
Social Inclusion		
2.2.1 Tolerance of minorities.....	29.35	83
2.2.2 Tolerance of immigrants.....	56.92	71
2.2.3 Social mobility.....	0.00	134
Gender Equality		
2.2.4 Women in tertiary education.....	n/a	n/a
2.2.5 Women in high-skilled jobs.....	88.29	6
2.2.6 Leadership opportunities for women.....	41.60	72

	Score	Rank
3 GROW.....	31.11	82
3.1 Formal Education.....	26.49	87
Enrolment		
3.1.1 Vocational enrolment.....	5.56	85
3.1.2 Tertiary enrolment.....	55.25	21
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	18.67	84
3.2 Lifelong Learning.....	24.17	78
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	67.55	13
3.2.3 Employee development.....	18.49	121
3.2.4 Formal and non-formal studies.....	10.64	49
3.3 Access to Growth Opportunities.....	42.65	81
Empowerment		
3.3.1 Delegation of authority.....	43.08	81
3.3.2 Youth inclusion.....	57.87	79
Collaboration		
3.3.3 Use of virtual social networks.....	48.02	93
3.3.4 Use of virtual professional networks.....	21.63	50

4 RETAIN.....	41.84	92
4.1 Sustainability.....	26.33	109
4.1.1 Pension coverage.....	58.99	79
4.1.2 Social protection.....	3.11	132
4.1.3 Brain retention.....	0.00	133
4.1.4 Environmental performance.....	43.21	57
4.2 Lifestyle.....	57.35	70
4.2.1 Personal rights.....	n/a	n/a
4.2.2 Personal safety.....	n/a	n/a
4.2.3 Physician density.....	21.24	74
4.2.4 Sanitation.....	93.46	64

5 VOCATIONAL AND TECHNICAL SKILLS.....	34.94	103
5.1 Mid-Level Skills.....	36.79	87
5.1.1 Workforce with secondary education.....	41.28	76
5.1.2 Population with secondary education.....	39.02	61
5.1.3 Technicians and associate professionals.....	n/a	n/a
5.1.4 Labour productivity per employee.....	30.08	104
5.2 Employability.....	33.08	116
5.2.1 Ease of finding skilled employees.....	26.40	124
5.2.2 Relevance of education system to the economy.....	17.46	122
5.2.3 Skills matching.....	55.38	70

6 GLOBAL KNOWLEDGE SKILLS.....	25.08	93
6.1 High-Level Skills.....	36.23	76
6.1.1 Workforce with tertiary education.....	39.83	40
6.1.2 Population with tertiary education.....	45.59	23
6.1.3 Professionals.....	36.67	49
6.1.4 Researchers.....	49.79	75
6.1.5 Senior officials and managers.....	30.72	60
6.1.6 Availability of scientists and engineers.....	14.79	131
6.2 Talent Impact.....	13.92	118
6.2.1 Innovation output.....	n/a	n/a
6.2.2 High-value exports.....	n/a	n/a
6.2.3 New product entrepreneurial activity.....	22.00	80
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	5.85	101

*Venezuela is unclassified in the most recent World Bank country classification because of lack of recent available data. However, to facilitate analysis in the GTCI, Venezuela is compared against upper-middle-income countries, which is the income group that it belonged to most recently.

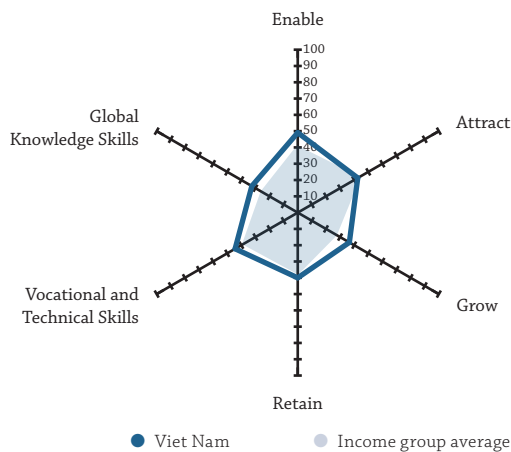
VIET NAM

Key Indicators

Rank (out of 134).....	82
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	97.34

GDP per capita (PPP US\$).....	8,650.65
GDP (US\$ billions).....	271.16
GTCI score.....	40.85
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	49.08	65
1.1 Regulatory Landscape.....	49.05	73
1.1.1 Government effectiveness.....	51.52	70
1.1.2 Rule of law.....	53.04	63
1.1.3 Political stability.....	65.55	56
1.1.4 Regulatory quality.....	46.38	92
1.1.5 Corruption.....	28.77	85
1.2 Market Landscape.....	51.57	61
1.2.1 Extent of market dominance.....	67.52	24
1.2.2 Ease of doing business.....	69.93	65
1.2.3 Cluster development.....	61.45	33
1.2.4 R&D expenditure.....	10.43	62
1.2.5 ICT infrastructure.....	73.77	59
1.2.6 Urbanisation.....	26.32	116
1.3 Business and Labour Landscape.....	46.63	79
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	47.26	53
Management Practice		
1.3.3 Professional management.....	42.03	94
1.3.4 Relationship of pay to productivity.....	68.67	38
Technology Adoption		
1.3.5 Technology utilisation.....	38.03	103
1.3.6 Investment in emerging technologies.....	38.57	67
1.3.7 Firms with website.....	45.24	73
2 ATTRACT.....	42.53	95
2.1 External Openness.....	30.68	119
Attract Business		
2.1.1 FDI and technology transfer.....	48.29	92
2.1.2 Prevalence of foreign ownership.....	43.77	103
Attract People		
2.1.3 Migrant stock.....	0.52	133
2.1.4 International students.....	7.39	103
2.1.5 Brain gain.....	53.42	48
2.2 Internal Openness.....	54.37	67
Social Inclusion		
2.2.1 Tolerance of minorities.....	48.91	54
2.2.2 Tolerance of immigrants.....	53.85	79
2.2.3 Social mobility.....	50.82	69
Gender Equality		
2.2.4 Women in tertiary education.....	n/a	n/a
2.2.5 Women in high-skilled jobs.....	75.11	33
2.2.6 Leadership opportunities for women.....	43.17	70

	Score	Rank
3 GROW.....	36.58	65
3.1 Formal Education.....	39.07	53
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	19.58	87
Quality		
3.1.3 Tertiary education expenditure.....	45.33	89
3.1.4 Reading, maths, and science.....	68.54	15
3.1.5 University ranking.....	22.82	76
3.2 Lifelong Learning.....	21.47	90
3.2.1 Business and economics subject ranking.....	19.64	65
3.2.2 Prevalence of training in firms.....	20.28	78
3.2.3 Employee development.....	45.98	49
3.2.4 Formal and non-formal studies.....	0.00	87
3.3 Access to Growth Opportunities.....	49.20	61
Empowerment		
3.3.1 Delegation of authority.....	45.79	71
3.3.2 Youth inclusion.....	72.25	51
Collaboration		
3.3.3 Use of virtual social networks.....	73.70	48
3.3.4 Use of virtual professional networks.....	5.08	106

4 RETAIN.....	40.03	94
4.1 Sustainability.....	34.17	93
4.1.1 Pension coverage.....	40.30	86
4.1.2 Social protection.....	44.59	58
4.1.3 Brain retention.....	38.38	72
4.1.4 Environmental performance.....	13.40	113
4.2 Lifestyle.....	45.89	91
4.2.1 Personal rights.....	31.98	112
4.2.2 Personal safety.....	59.43	53
4.2.3 Physician density.....	9.93	92
4.2.4 Sanitation.....	82.21	88

5 VOCATIONAL AND TECHNICAL SKILLS.....	44.38	80
5.1 Mid-Level Skills.....	30.43	98
5.1.1 Workforce with secondary education.....	33.32	84
5.1.2 Population with secondary education.....	26.83	81
5.1.3 Technicians and associate professionals.....	14.03	107
5.1.4 Labour productivity per employee.....	47.52	88
5.2 Employability.....	58.33	54
5.2.1 Ease of finding skilled employees.....	55.31	66
5.2.2 Relevance of education system to the economy.....	47.87	55
5.2.3 Skills matching.....	71.81	42

6 GLOBAL KNOWLEDGE SKILLS.....	32.53	77
6.1 High-Level Skills.....	26.81	96
6.1.1 Workforce with tertiary education.....	19.06	84
6.1.2 Population with tertiary education.....	7.69	94
6.1.3 Professionals.....	19.93	78
6.1.4 Researchers.....	62.86	56
6.1.5 Senior officials and managers.....	7.27	113
6.1.6 Availability of scientists and engineers.....	44.06	77
6.2 Talent Impact.....	38.24	63
6.2.1 Innovation output.....	44.87	37
6.2.2 High-value exports.....	89.80	4
6.2.3 New product entrepreneurial activity.....	22.95	78
6.2.4 New business density.....	22.49	80
6.2.5 Scientific journal articles.....	11.10	90

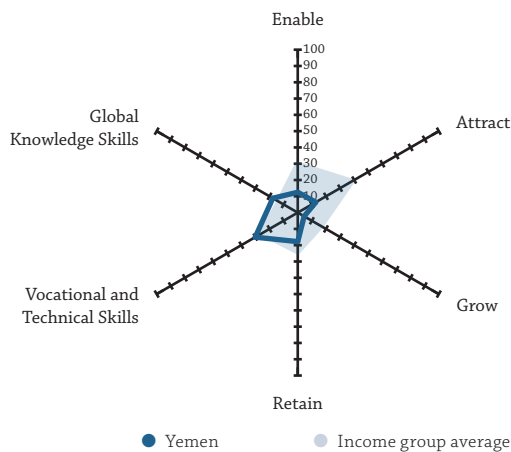
YEMEN

Key Indicators

Rank (out of 134)..... **133**
 Income group **Low income**
 Regional group **Northern Africa and Western Asia**
 Population (millions) **29.83**

GDP per capita (PPP US\$) **3,688.52**
 GDP (US\$ billions) **23.49**
 GTCI score **15.90**
 GTCI score (income group average) **23.75**

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	12.50	134
1.1 Regulatory Landscape.....	5.59	134
1.1.1 Government effectiveness.....	0.00	134
1.1.2 Rule of law.....	12.59	132
1.1.3 Political stability.....	0.00	134
1.1.4 Regulatory quality.....	15.38	133
1.1.5 Corruption.....	0.00	133
1.2 Market Landscape.....	15.45	132
1.2.1 Extent of market dominance.....	25.79	110
1.2.2 Ease of doing business.....	2.70	133
1.2.3 Cluster development.....	11.17	125
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	10.44	130
1.2.6 Urbanisation.....	27.15	111
1.3 Business and Labour Landscape.....	16.44	133
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	25.64	112
Management Practice		
1.3.3 Professional management.....	12.95	132
1.3.4 Relationship of pay to productivity.....	38.96	107
Technology Adoption		
1.3.5 Technology utilisation.....	0.00	133
1.3.6 Investment in emerging technologies.....	7.80	131
1.3.7 Firms with website.....	13.31	114
2 ATTRACT	12.75	134
2.1 External Openness.....	17.03	134
Attract Business		
2.1.1 FDI and technology transfer.....	0.00	133
2.1.2 Prevalence of foreign ownership.....	0.00	133
Attract People		
2.1.3 Migrant stock.....	23.43	98
2.1.4 International students.....	42.12	54
2.1.5 Brain gain.....	19.61	123
2.2 Internal Openness.....	8.47	134
Social Inclusion		
2.2.1 Tolerance of minorities.....	3.26	121
2.2.2 Tolerance of immigrants.....	12.31	127
2.2.3 Social mobility.....	19.55	132
Gender Equality		
2.2.4 Women in tertiary education.....	15.72	126
2.2.5 Women in high-skilled jobs.....	0.00	130
2.2.6 Leadership opportunities for women.....	0.00	134

	Score	Rank
3 GROW	4.54	134
3.1 Formal Education.....	2.33	131
Enrolment		
3.1.1 Vocational enrolment.....	0.42	101
3.1.2 Tertiary enrolment.....	6.57	110
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	3.27	134
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	9.23	101
3.2.3 Employee development.....	2.06	132
3.2.4 Formal and non-formal studies.....	1.80	77
3.3 Access to Growth Opportunities.....	8.03	133
Empowerment		
3.3.1 Delegation of authority.....	8.51	132
3.3.2 Youth inclusion.....	14.38	120
Collaboration		
3.3.3 Use of virtual social networks.....	8.11	120
3.3.4 Use of virtual professional networks.....	1.10	127
4 RETAIN	17.81	129
4.1 Sustainability.....	4.64	134
4.1.1 Pension coverage.....	6.06	122
4.1.2 Social protection.....	2.14	133
4.1.3 Brain retention.....	5.71	129
4.1.4 Environmental performance.....	n/a	n/a
4.2 Lifestyle.....	30.98	115
4.2.1 Personal rights.....	n/a	n/a
4.2.2 Personal safety.....	n/a	n/a
4.2.3 Physician density.....	6.13	102
4.2.4 Sanitation.....	55.82	107
5 VOCATIONAL AND TECHNICAL SKILLS	30.14	114
5.1 Mid-Level Skills.....	27.21	102
5.1.1 Workforce with secondary education.....	30.62	94
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	14.06	106
5.1.4 Labour productivity per employee.....	36.97	97
5.2 Employability.....	33.06	117
5.2.1 Ease of finding skilled employees.....	38.71	105
5.2.2 Relevance of education system to the economy.....	15.95	125
5.2.3 Skills matching.....	44.51	79
6 GLOBAL KNOWLEDGE SKILLS	17.68	113
6.1 High-Level Skills.....	17.29	111
6.1.1 Workforce with tertiary education.....	9.12	108
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	16.50	93
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	11.42	100
6.1.6 Availability of scientists and engineers.....	32.13	112
6.2 Talent Impact.....	18.06	107
6.2.1 Innovation output.....	0.00	125
6.2.2 High-value exports.....	53.03	57
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	1.15	125

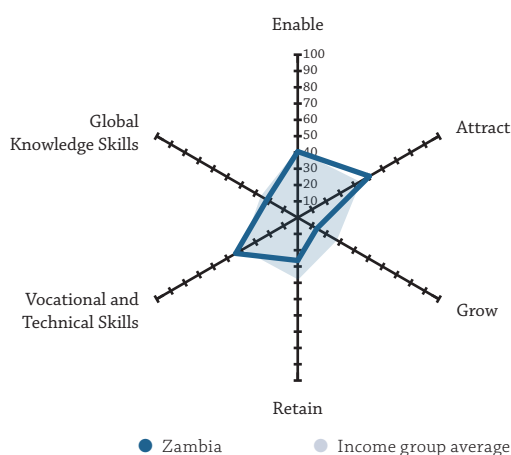
ZAMBIA

Key Indicators

Rank (out of 134)	104
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	18.38

GDP per capita (PPP US\$)	3,449.61
GDP (US\$ billions)	19.32
GTCI score	32.82
GTCI score (income group average)	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE	40.54	99
1.1 Regulatory Landscape	40.66	96
1.1.1 Government effectiveness	35.65	106
1.1.2 Rule of law	42.79	93
1.1.3 Political stability	60.26	71
1.1.4 Regulatory quality	39.93	104
1.1.5 Corruption	24.66	97
1.2 Market Landscape	36.32	96
1.2.1 Extent of market dominance	20.28	123
1.2.2 Ease of doing business	64.92	80
1.2.3 Cluster development	33.75	91
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	27.58	116
1.2.6 Urbanisation	35.06	104
1.3 Business and Labour Landscape	44.64	91
Labour Market		
1.3.1 Labour rights	77.90	73
1.3.2 Labour-employer cooperation	27.55	109
Management Practice		
1.3.3 Professional management	46.94	84
1.3.4 Relationship of pay to productivity	39.81	106
Technology Adoption		
1.3.5 Technology utilisation	31.59	114
1.3.6 Investment in emerging technologies	31.39	91
1.3.7 Firms with website	57.28	56
2 ATTRACT	50.80	62
2.1 External Openness	51.49	53
Attract Business		
2.1.1 FDI and technology transfer	50.02	88
2.1.2 Prevalence of foreign ownership	79.77	21
Attract People		
2.1.3 Migrant stock	22.84	102
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	53.32	49
2.2 Internal Openness	50.11	85
Social Inclusion		
2.2.1 Tolerance of minorities	47.83	56
2.2.2 Tolerance of immigrants	70.77	42
2.2.3 Social mobility	41.76	98
Gender Equality		
2.2.4 Women in tertiary education	43.33	109
2.2.5 Women in high-skilled jobs	47.75	104
2.2.6 Leadership opportunities for women	49.23	56

	Score	Rank
3 GROW	13.50	128
3.1 Formal Education	1.16	133
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	2.32	124
Quality		
3.1.3 Tertiary education expenditure	n/a	n/a
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	87
3.2 Lifelong Learning	16.69	109
3.2.1 Business and economics subject ranking	0.00	70
3.2.2 Prevalence of training in firms	40.42	42
3.2.3 Employee development	22.03	113
3.2.4 Formal and non-formal studies	4.29	60
3.3 Access to Growth Opportunities	22.66	123
Empowerment		
3.3.1 Delegation of authority	56.35	42
3.3.2 Youth inclusion	17.78	119
Collaboration		
3.3.3 Use of virtual social networks	11.54	118
3.3.4 Use of virtual professional networks	4.97	109

4 RETAIN	26.32	119
4.1 Sustainability	21.26	118
4.1.1 Pension coverage	6.87	119
4.1.2 Social protection	27.47	99
4.1.3 Brain retention	34.99	80
4.1.4 Environmental performance	15.70	105
4.2 Lifestyle	31.38	114
4.2.1 Personal rights	58.22	90
4.2.2 Personal safety	46.02	81
4.2.3 Physician density	0.71	124
4.2.4 Sanitation	20.56	125
5 VOCATIONAL AND TECHNICAL SKILLS	43.94	81
5.1 Mid-Level Skills	28.70	99
5.1.1 Workforce with secondary education	38.81	79
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	15.23	104
5.1.4 Labour productivity per employee	32.07	102
5.2 Employability	59.17	52
5.2.1 Ease of finding skilled employees	74.15	31
5.2.2 Relevance of education system to the economy	40.39	74
5.2.3 Skills matching	62.97	57

6 GLOBAL KNOWLEDGE SKILLS	21.86	100
6.1 High-Level Skills	30.64	84
6.1.1 Workforce with tertiary education	14.44	97
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	18.09	84
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	40.87	44
6.1.6 Availability of scientists and engineers	49.18	66
6.2 Talent Impact	13.07	120
6.2.1 Innovation output	1.39	124
6.2.2 High-value exports	28.89	97
6.2.3 New product entrepreneurial activity	9.38	88
6.2.4 New business density	22.43	81
6.2.5 Scientific journal articles	3.26	114

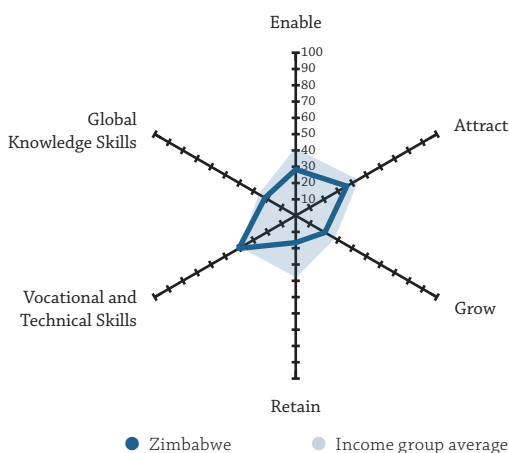
ZIMBABWE

Key Indicators

Rank (out of 134).....	120
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	14.86

GDP per capita (PPP US\$).....	2,895.42
GDP (US\$ billions).....	16.77
GTCI score.....	27.30
GTCI score (income group average).....	34.34

GTCI 2021 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	28.29	127
1.1 Regulatory Landscape.....	24.45	129
1.1.1 Government effectiveness.....	23.87	129
1.1.2 Rule of law.....	24.48	129
1.1.3 Political stability.....	41.77	114
1.1.4 Regulatory quality.....	19.82	131
1.1.5 Corruption.....	12.33	126
1.2 Market Landscape.....	24.18	123
1.2.1 Extent of market dominance.....	24.24	114
1.2.2 Ease of doing business.....	42.87	113
1.2.3 Cluster development.....	9.15	128
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	22.61	122
1.2.6 Urbanisation.....	22.05	120
1.3 Business and Labour Landscape.....	36.24	118
Labour Market		
1.3.1 Labour rights.....	40.80	97
1.3.2 Labour-employer cooperation.....	35.24	89
Management Practice		
1.3.3 Professional management.....	67.34	32
1.3.4 Relationship of pay to productivity.....	36.24	113
Technology Adoption		
1.3.5 Technology utilisation.....	28.02	116
1.3.6 Investment in emerging technologies.....	12.22	127
1.3.7 Firms with website.....	33.79	92
2 ATTRACT.....	36.17	122
2.1 External Openness.....	26.02	126
Attract Business		
2.1.1 FDI and technology transfer.....	19.79	130
2.1.2 Prevalence of foreign ownership.....	41.73	107
Attract People		
2.1.3 Migrant stock.....	41.54	64
2.1.4 International students.....	9.18	98
2.1.5 Brain gain.....	17.86	126
2.2 Internal Openness.....	46.31	98
Social Inclusion		
2.2.1 Tolerance of minorities.....	39.13	69
2.2.2 Tolerance of immigrants.....	47.69	88
2.2.3 Social mobility.....	31.51	120
Gender Equality		
2.2.4 Women in tertiary education.....	53.06	98
2.2.5 Women in high-skilled jobs.....	69.87	55
2.2.6 Leadership opportunities for women.....	36.60	84

	Score	Rank
3 GROW.....	20.68	116
3.1 Formal Education.....	22.36	98
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	6.47	111
Quality		
3.1.3 Tertiary education expenditure.....	60.60	59
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	87
3.2 Lifelong Learning.....	19.13	100
3.2.1 Business and economics subject ranking.....	0.00	70
3.2.2 Prevalence of training in firms.....	26.15	65
3.2.3 Employee development.....	31.24	82
3.2.4 Formal and non-formal studies.....	n/a	n/a
3.3 Access to Growth Opportunities.....	20.54	127
Empowerment		
3.3.1 Delegation of authority.....	53.59	49
3.3.2 Youth inclusion.....	14.38	120
Collaboration		
3.3.3 Use of virtual social networks.....	6.13	127
3.3.4 Use of virtual professional networks.....	8.06	94

4 RETAIN.....	16.57	130
4.1 Sustainability.....	16.13	127
4.1.1 Pension coverage.....	21.21	100
4.1.2 Social protection.....	6.84	131
4.1.3 Brain retention.....	16.71	122
4.1.4 Environmental performance.....	19.75	101
4.2 Lifestyle.....	17.02	131
4.2.1 Personal rights.....	31.60	113
4.2.2 Personal safety.....	3.12	129
4.2.3 Physician density.....	2.18	111
4.2.4 Sanitation.....	31.19	119

5 VOCATIONAL AND TECHNICAL SKILLS.....	40.30	94
5.1 Mid-Level Skills.....	25.21	108
5.1.1 Workforce with secondary education.....	64.25	30
5.1.2 Population with secondary education.....	4.02	111
5.1.3 Technicians and associate professionals.....	10.59	113
5.1.4 Labour productivity per employee.....	21.96	105
5.2 Employability.....	55.39	62
5.2.1 Ease of finding skilled employees.....	59.24	55
5.2.2 Relevance of education system to the economy.....	50.86	50
5.2.3 Skills matching.....	56.07	66

6 GLOBAL KNOWLEDGE SKILLS.....	21.82	101
6.1 High-Level Skills.....	20.44	106
6.1.1 Workforce with tertiary education.....	20.13	83
6.1.2 Population with tertiary education.....	11.43	86
6.1.3 Professionals.....	18.78	81
6.1.4 Researchers.....	33.03	88
6.1.5 Senior officials and managers.....	13.51	98
6.1.6 Availability of scientists and engineers.....	25.77	118
6.2 Talent Impact.....	23.20	96
6.2.1 Innovation output.....	8.41	107
6.2.2 High-value exports.....	43.02	80
6.2.3 New product entrepreneurial activity.....	n/a	n/a
6.2.4 New business density.....	34.83	54
6.2.5 Scientific journal articles.....	6.53	98

Data Tables

How to Read the Data Tables

DATA TABLES

1 1.2.3 Cluster development

2 Average answer to the question: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = nonexistent, 7 = widespread in many fields] | 2020

3

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America	5.56	100.00	68	Estonia	3.77	41.55
2	Italy	5.43	95.90	69	Hungary	3.76	41.54
3	Switzerland	5.34	92.73	70	Guatemala	3.75	40.51
4	Germany	5.33	92.37	71	Guinea	3.73	40.26
5	Netherlands	5.23	89.27	72	Philippines	3.72	40.13
6	Singapore	5.14	86.46	73	Nigeria	3.71	39.84
7	United Arab Emirates	5.13	86.09	74	Colombia	3.70	39.59
8	China	5.06	83.79	75	Mali	3.68	38.87
9	Malaysia	5.05	83.49	76	Armenia	3.67	38.55
10	Luxembourg	5.03	82.62	77	Chile	3.67	38.49
11	Japan	5.01	82.12	78	Bangladesh	3.66	37.91
12	Saudi Arabia	4.96	80.36	79	Morocco	3.65	37.66
13	Austria	4.94	79.84	80	Honduras	3.64	37.47
14	Norway	4.87	77.65	81	Russian Federation	3.63	37.24
15	Belgium	4.87	77.60	82	Nigeria	3.63	37.13
16	Finland	4.83	76.20	83	Namibia	3.62	36.84
17	United Kingdom	4.82	76.01	84	Georgia	3.60	36.56
18	Denmark	4.81	75.44	85	Iran, Islamic Rep.	3.60	36.13
19	Sweden	4.79	74.93	86	Uganda	3.59	35.91
20	Canada	4.74	73.14	87	Brunei Darussalam	3.59	35.77
21	Egypt	4.71	72.38	88	Trinidad and Tobago	3.59	35.75
22	Oman	4.70	71.97	89	Cabo Verde	3.58	35.68
23	Indonesia	4.67	70.92	90	Montenegro	3.55	34.60
24	Korea, Rep.	4.65	70.27	91	Zambia	3.53	33.75
25	France	4.61	69.12	92	Uruguay	3.51	33.36
26	Qatar	4.53	66.30	93	Lithuania	3.51	33.27
27	Lebanon	4.52	66.17	94	Senegal	3.45	31.35
28	Bahrain	4.48	64.68	95	Belarus	3.45	31.15
29	Jordan	4.46	64.13	96	Serbia	3.42	30.35
30	Israel	4.45	63.88	97	Argentina	3.42	30.17
31	Azerbaijan	4.43	63.31	98	Eswatini	3.40	29.80
32	Spain	4.39	61.85	99	Peru	3.38	29.05
33	Viet Nam	4.38	61.45	100	Ethiopia	3.38	29.02
34	Australia	4.28	58.42	101	Cameroon	3.36	28.38
35	Mexico	4.27	58.06	102	Cote d'Ivoire	3.36	28.24
36	Portugal	4.25	57.44	103	Romania	3.35	28.17
37	Malta	4.22	56.26	104	Ukraine	3.35	27.90
38	Kuwait	4.18	54.93	105	Burundi	3.32	27.01
39	Ghana	4.13	53.40	106	Lesotho	3.31	26.73
40	South Africa	4.12	53.18	107	Ecuador	3.31	26.61
41	Bulgaria	4.11	52.91	108	Tanzania	3.29	26.18
42	Kenya	4.10	52.30	109	Nepal	3.28	25.88
43	India	4.09	52.19	110	Paraguay	3.28	25.75
44	Iceland	4.07	51.58	111	North Macedonia	3.27	25.53
45	Thailand	4.05	50.85	112	Botswana	3.24	24.40
46	Tanzania, United Rep.	3.99	48.96	113	Madagascar	3.22	23.80
47	New Zealand	3.98	48.53	114	Bosnia and Herzegovina	3.17	22.27
48	Brazil	3.97	48.26	115	Mozambique	3.13	21.04
49	Costa Rica	3.96	47.95	116	Tajikistan	3.13	21.00
50	Laos PDR	3.95	47.57	117	Malawi	3.12	20.59
51	Sri Lanka	3.94	47.40	118	Mali	3.02	17.42
52	Mauritius	3.94	47.14	119	Kazakhstan	3.01	16.90
53	Pakistan	3.93	47.00	120	Kyrgyzstan	2.98	15.87
54	Dominican Republic	3.93	46.85	121	Ghana	2.95	15.37
55	Czech Republic	3.91	46.42	122	El Salvador	2.93	14.44
56	Cambodia	3.90	45.88	123	Bolivia, Plurinational St.	2.90	13.31
57	Cyprus	3.88	45.71	124	Nicaragua	2.89	13.18
58	Turkey	3.86	44.50	125	Yemen	2.83	11.17
59	Gambia	3.85	44.34	126	Burkina Faso	2.83	11.17
60	Lebanon	3.85	44.25	127	Croatia	2.82	10.73
61	Latvia	3.84	44.06	128	Zimbabwe	2.77	9.15
62	Jamaica	3.83	43.65	129	Guinea-Bissau	2.76	8.68
63	Panama	3.83	43.64	130	Chad	2.75	8.58
64	Poland	3.80	42.69	131	Moldova, Rep.	2.62	4.13
65	Slovakia	3.78	42.06	132	Mineraria Boliviana Rep.	2.60	3.48
66	Rwanda	3.78	41.97	133	Congo, Dem. Rep.	2.55	1.96
67	Slovenia	3.77	41.76	134	Angola	2.49	0.00

4

SOURCE: World Economic Forum, Executive Opinion Survey 2017-2020 (<https://www.weforum.org/hpeors/>). For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2020.

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1 The first section provides the variable number that represents its position in the overall structure of GTCI. The first digit refers to the pillar, the second digit refers to the sub-pillar within that pillar, and the third digit refers to the position of the variable in that sub-pillar. For instance, the variable 1.2.3 Cluster development refers to the third variable in the second sub-pillar of the first pillar.

2 The second section spells out the description or technical name of the variable, along with the latest year for which the data are available. For some countries, the year of the data differs from the most frequent year; in these cases, the most recent year available is used.

For variables derived from a published report where the publication date differs from the year the data were actually collected, the year of the data collection was used. This applies to variables taken from the Doing Business 2020 report, which was published in October 2019 and which uses data collected in 2019, for example.

For qualitative variables derived from survey responses, the question asked in the survey is shown as the exact technical name. This applies to all variables taken from the World Economic Forum's Executive Opinion Survey, for instance.

3 The ranking of the countries within the data table follows their normalised scores. There are three parts to the information in the ranking: the rank of the country, the raw value, and the normalised score. Because of the way outliers are treated, in some variables several countries have the same score despite having different raw values. For variables in which two or more countries happen to have the same normalised score (with a tie in the ranking as a result), the relevant countries have been sorted alphabetically. For more information about normalisation methods and variable names, please refer to the Technical Notes and the Sources and Definitions sections in the Appendices.

4 The final section presents all sources and a link to the data source as well as the cut-off year.

This section provides the rankings and scores for each of the 68 variables that make up the GTCI 2021.

Each data table consists of four parts:

- 1** the name of the variable,
- 2** the description or technical name and the latest year for which data are available,
- 3** the ranking, and
- 4** the source.

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Pillar 1

Enable

1.1.1 Government effectiveness

Government effectiveness indicator | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	2.22	100.00	68	Philippines.....	0.05	51.83
2	Switzerland.....	1.95	94.02	69	Turkey.....	0.05	51.72
3	Denmark.....	1.94	93.71	70	Viet Nam.....	0.04	51.52
4	Finland.....	1.93	93.52	71	Serbia.....	0.02	51.07
5	Norway.....	1.86	92.03	72	Kuwait.....	0.02	51.06
6	Sweden.....	1.83	91.31	73	North Macedonia.....	0.00	50.59
7	Netherlands.....	1.80	90.60	74	Senegal.....	-0.06	49.37
8	Luxembourg.....	1.73	89.17	75	Albania.....	-0.06	49.29
9	Canada.....	1.73	89.12	76	Armenia.....	-0.07	49.16
10	New Zealand.....	1.67	87.78	77	Peru.....	-0.07	49.15
11	Japan.....	1.59	85.90	78	Argentina.....	-0.09	48.73
12	Germany.....	1.59	85.87	79	Tunisia.....	-0.10	48.38
13	Australia.....	1.57	85.58	80	Sri Lanka.....	-0.11	48.13
14	Iceland.....	1.52	84.38	81	Morocco.....	-0.12	48.00
15	Austria.....	1.49	83.78	82	Azerbaijan.....	-0.14	47.56
16	United States of America.....	1.49	83.74	83	Mexico.....	-0.16	47.16
17	United Kingdom.....	1.44	82.55	84	Belarus.....	-0.18	46.57
18	France.....	1.38	81.41	85	Brazil.....	-0.19	46.50
19	United Arab Emirates.....	1.38	81.25	86	Mongolia.....	-0.19	46.32
20	Korea, Rep.....	1.38	81.23	87	Ghana.....	-0.21	45.98
21	Israel.....	1.33	80.10	88	Romania.....	-0.28	44.40
22	Brunei Darussalam.....	1.32	79.94	89	Ukraine.....	-0.30	44.06
23	Ireland.....	1.28	79.12	90	Dominican Republic.....	-0.36	42.71
24	Estonia.....	1.17	76.75	91	Kenya.....	-0.38	42.13
25	Portugal.....	1.15	76.29	92	Moldova, Rep.....	-0.38	42.13
26	Latvia.....	1.11	75.20	93	Ecuador.....	-0.40	41.79
27	Slovenia.....	1.08	74.68	94	Egypt.....	-0.42	41.24
28	Chile.....	1.06	74.21	95	El Salvador.....	-0.47	40.31
29	Lithuania.....	1.04	73.83	96	Côte d'Ivoire.....	-0.48	39.93
30	Belgium.....	1.03	73.58	97	Algeria.....	-0.52	39.18
31	Spain.....	1.00	72.85	98	Paraguay.....	-0.53	38.79
32	Malaysia.....	1.00	72.84	99	Iran, Islamic Rep.....	-0.55	38.35
33	Cyprus.....	0.99	72.70	100	Cambodia.....	-0.58	37.78
34	Czech Republic.....	0.89	70.33	101	Uganda.....	-0.59	37.65
35	Mauritius.....	0.87	70.00	102	Honduras.....	-0.61	37.05
36	Malta.....	0.86	69.72	103	Gambia.....	-0.63	36.63
37	Georgia.....	0.83	69.09	104	Bosnia and Herzegovina.....	-0.63	36.55
38	Qatar.....	0.71	66.32	105	Ethiopia.....	-0.63	36.55
39	Uruguay.....	0.70	66.11	106	Zambia.....	-0.68	35.65
40	Slovakia.....	0.67	65.62	107	Guatemala.....	-0.68	35.61
41	Poland.....	0.60	64.02	108	Pakistan.....	-0.68	35.61
42	China.....	0.52	62.16	109	Eswatini.....	-0.68	35.58
43	Jamaica.....	0.50	61.67	110	Kyrgyzstan.....	-0.68	35.50
44	Hungary.....	0.50	61.65	111	Bolivia, Plurinational St.....	-0.70	35.11
45	Italy.....	0.46	60.91	112	Bangladesh.....	-0.74	34.22
46	Botswana.....	0.43	60.18	113	Malawi.....	-0.75	34.00
47	Costa Rica.....	0.42	60.05	114	Burkina Faso.....	-0.76	33.79
48	Croatia.....	0.41	59.76	115	Nicaragua.....	-0.77	33.52
49	Greece.....	0.41	59.66	116	Guinea.....	-0.78	33.34
50	South Africa.....	0.37	58.81	117	Lao PDR.....	-0.78	33.22
51	Thailand.....	0.36	58.58	118	Cameroon.....	-0.81	32.60
52	Bulgaria.....	0.34	58.18	119	Mozambique.....	-0.82	32.35
53	Saudi Arabia.....	0.31	57.46	120	Lesotho.....	-0.83	32.16
54	Bahrain.....	0.30	57.29	121	Lebanon.....	-0.83	32.14
55	Cabo Verde.....	0.29	57.16	122	Tanzania, United Rep.....	-0.88	31.12
56	Oman.....	0.26	56.41	123	Nepal.....	-1.05	27.42
57	Rwanda.....	0.19	54.76	124	Tajikistan.....	-1.05	27.34
58	Indonesia.....	0.18	54.71	125	Mali.....	-1.06	27.17
59	India.....	0.17	54.46	126	Nigeria.....	-1.09	26.46
60	Montenegro.....	0.16	54.12	127	Angola.....	-1.12	25.83
61	Russian Federation.....	0.15	53.99	128	Madagascar.....	-1.14	25.26
62	Kazakhstan.....	0.12	53.42	129	Zimbabwe.....	-1.21	23.87
63	Trinidad and Tobago.....	0.10	52.87	130	Burundi.....	-1.33	21.18
64	Jordan.....	0.10	52.86	131	Chad.....	-1.57	15.80
65	Namibia.....	0.10	52.80	132	Congo, Dem. Rep.....	-1.63	14.49
66	Colombia.....	0.07	52.23	133	Venezuela, Bolivarian Rep.....	-1.66	13.80
67	Panama.....	0.07	52.10	134	Yemen.....	-2.28	0.00

SOURCE: World Bank, *Worldwide Governance Indicators*, 2020 Update (www.govindicators.org)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

1.1.2 Rule of law

Rule of law indicator | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland	2.02	100.00	68	Trinidad and Tobago	-0.12	50.66
2	Norway	1.98	99.14	69	Armenia	-0.13	50.41
3	Switzerland	1.91	97.34	70	Morocco	-0.14	50.31
4	Sweden	1.91	97.34	71	Brazil	-0.18	49.26
5	Denmark	1.90	97.15	72	Senegal	-0.19	49.04
6	New Zealand	1.88	96.84	73	Bosnia and Herzegovina	-0.23	48.05
7	Austria	1.88	96.80	74	North Macedonia	-0.24	47.82
8	Singapore	1.88	96.69	75	Mongolia	-0.27	47.30
9	Netherlands	1.81	95.08	76	China	-0.27	47.10
10	Luxembourg	1.79	94.73	77	Turkey	-0.28	46.91
11	Iceland	1.77	94.12	78	Jamaica	-0.31	46.23
12	Canada	1.76	93.96	79	Uganda	-0.31	46.18
13	Australia	1.73	93.37	80	Malawi	-0.33	45.80
14	Germany	1.62	90.71	81	Indonesia	-0.34	45.54
15	United Kingdom	1.60	90.30	82	Dominican Republic	-0.35	45.42
16	Japan	1.54	88.85	83	Gambia	-0.37	44.87
17	United States of America	1.46	87.08	84	Moldova, Rep.	-0.37	44.84
18	France	1.41	85.95	85	Lesotho	-0.38	44.67
19	Ireland	1.39	85.54	86	Albania	-0.41	43.96
20	Belgium	1.36	84.84	87	Colombia	-0.42	43.83
21	Estonia	1.28	82.94	88	Egypt	-0.42	43.74
22	Korea, Rep.	1.19	80.93	89	Burkina Faso	-0.43	43.61
23	Portugal	1.14	79.58	90	Argentina	-0.43	43.51
24	Slovenia	1.12	79.19	91	Kazakhstan	-0.43	43.47
25	Chile	1.07	78.16	92	Kenya	-0.45	42.97
26	Israel	1.05	77.56	93	Zambia	-0.46	42.79
27	Czech Republic	1.05	77.53	94	Ethiopia	-0.47	42.53
28	Lithuania	1.02	76.99	95	Philippines	-0.48	42.44
29	Latvia	1.01	76.78	96	Peru	-0.49	42.21
30	Spain	0.98	75.98	97	Eswatini	-0.50	41.87
31	Malta	0.95	75.36	98	Nepal	-0.54	41.10
32	United Arab Emirates	0.84	72.78	99	Paraguay	-0.56	40.62
33	Mauritius	0.76	71.02	100	Côte d'Ivoire	-0.57	40.37
34	Cyprus	0.76	70.93	101	Azerbaijan	-0.58	40.14
35	Qatar	0.73	70.34	102	Ecuador	-0.58	40.13
36	Uruguay	0.62	67.74	103	Tanzania, United Rep.	-0.58	40.12
37	Brunei Darussalam	0.61	67.58	104	Bangladesh	-0.64	38.78
38	Malaysia	0.59	67.04	105	Mexico	-0.66	38.27
39	Slovakia	0.56	66.25	106	Pakistan	-0.67	38.06
40	Oman	0.55	66.20	107	Ukraine	-0.70	37.35
41	Costa Rica	0.54	65.96	108	Russian Federation	-0.72	36.76
42	Cabo Verde	0.52	65.30	109	Iran, Islamic Rep.	-0.75	36.17
43	Botswana	0.50	64.91	110	El Salvador	-0.76	35.87
44	Bahrain	0.49	64.82	111	Belarus	-0.79	35.13
45	Hungary	0.49	64.79	112	Algeria	-0.82	34.65
46	Poland	0.45	63.84	113	Mali	-0.83	34.22
47	Croatia	0.37	61.86	114	Lebanon	-0.86	33.66
48	Romania	0.36	61.81	115	Kyrgyzstan	-0.89	33.02
49	Namibia	0.31	60.57	116	Nigeria	-0.90	32.75
50	Georgia	0.31	60.57	117	Cambodia	-0.94	31.88
51	Italy	0.28	59.88	118	Lao PDR	-0.94	31.76
52	Kuwait	0.22	58.40	119	Madagascar	-1.01	30.20
53	Greece	0.20	58.01	120	Honduras	-1.01	30.19
54	Saudi Arabia	0.17	57.31	121	Mozambique	-1.02	29.94
55	Jordan	0.14	56.75	122	Guatemala	-1.05	29.20
56	Thailand	0.10	55.80	123	Angola	-1.05	29.15
57	Montenegro	0.10	55.64	124	Cameroon	-1.12	27.66
58	Rwanda	0.08	55.18	125	Bolivia, Plurinational St.	-1.12	27.61
59	Tunisia	0.06	54.86	126	Nicaragua	-1.18	26.35
60	Ghana	0.05	54.51	127	Guinea	-1.21	25.59
61	Bulgaria	0.04	54.26	128	Tajikistan	-1.23	25.15
62	Sri Lanka	-0.01	53.15	129	Zimbabwe	-1.26	24.48
63	Viet Nam	-0.02	53.04	130	Chad	-1.28	23.87
64	India	-0.03	52.72	131	Burundi	-1.43	20.45
65	South Africa	-0.08	51.67	132	Yemen	-1.77	12.59
66	Panama	-0.12	50.69	133	Congo, Dem. Rep.	-1.79	12.30
67	Serbia	-0.12	50.69	134	Venezuela, Bolivarian Rep.	-2.32	0.00

SOURCE: World Bank, *Worldwide Governance Indicators*, 2020 Update (www.govindicators.org)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

1.1.3 Political stability

Political stability and absence of violence indicator | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Iceland	1.66	100.00	68	Cambodia	-0.08	60.74
2	Singapore	1.53	97.19	69	Kazakhstan	-0.08	60.69
3	New Zealand	1.51	96.65	70	Serbia	-0.09	60.50
4	Luxembourg	1.36	93.36	71	Zambia	-0.10	60.26
5	Switzerland	1.34	92.79	72	Argentina	-0.12	59.86
6	Norway	1.19	89.38	73	El Salvador	-0.13	59.69
7	Brunei Darussalam	1.17	89.07	74	Peru	-0.14	59.37
8	Portugal	1.13	88.07	75	Ecuador	-0.19	58.30
9	Malta	1.09	87.21	76	South Africa	-0.22	57.65
10	Australia	1.09	87.13	77	Sri Lanka	-0.23	57.42
11	Sweden	1.05	86.35	78	China	-0.24	57.14
12	Uruguay	1.05	86.20	79	Madagascar	-0.25	56.86
13	Japan	1.04	86.11	80	Malawi	-0.27	56.53
14	Canada	1.03	85.85	81	Angola	-0.31	55.54
15	Botswana	1.01	85.43	82	Lesotho	-0.35	54.56
16	Denmark	1.01	85.37	83	Jordan	-0.36	54.48
17	Austria	0.98	84.73	84	Tanzania, United Rep.	-0.36	54.39
18	Ireland	0.97	84.57	85	Morocco	-0.37	54.22
19	Czech Republic	0.95	84.09	86	Eswatini	-0.38	54.01
20	Finland	0.91	83.12	87	Moldova, Rep.	-0.38	53.92
21	Cabo Verde	0.88	82.48	88	Bosnia and Herzegovina	-0.40	53.52
22	Netherlands	0.86	81.95	89	Kyrgyzstan	-0.41	53.31
23	Lithuania	0.84	81.61	90	Saudi Arabia	-0.43	52.90
24	Mauritius	0.82	81.15	91	Georgia	-0.45	52.49
25	Slovenia	0.82	81.03	92	Nepal	-0.47	52.05
26	Slovakia	0.78	80.27	93	Indonesia	-0.48	51.70
27	Croatia	0.76	79.65	94	Armenia	-0.51	51.13
28	Hungary	0.73	79.13	95	Honduras	-0.53	50.58
29	Qatar	0.70	78.50	96	Thailand	-0.54	50.42
30	United Arab Emirates	0.70	78.47	97	Russian Federation	-0.54	50.31
31	Mongolia	0.64	77.12	98	Guatemala	-0.55	50.23
32	Estonia	0.64	77.01	99	Brazil	-0.55	50.22
33	Oman	0.59	75.99	100	Tajikistan	-0.58	49.57
34	Germany	0.58	75.75	101	Bolivia, Plurinational St.	-0.62	48.66
35	Bulgaria	0.54	74.78	102	Uganda	-0.65	47.97
36	Namibia	0.53	74.64	103	Bahrain	-0.66	47.62
37	Romania	0.53	74.45	104	Azerbaijan	-0.68	47.18
38	Lao PDR	0.53	74.44	105	India	-0.70	46.69
39	Poland	0.52	74.36	106	Mexico	-0.71	46.42
40	United Kingdom	0.52	74.31	107	Mozambique	-0.75	45.72
41	Cyprus	0.52	74.25	108	Israel	-0.78	44.97
42	Belgium	0.48	73.45	109	Guinea	-0.83	43.80
43	Korea, Rep.	0.48	73.38	110	Tunisia	-0.83	43.75
44	Italy	0.46	73.03	111	Philippines	-0.88	42.57
45	Costa Rica	0.46	72.97	112	Colombia	-0.90	42.22
46	Latvia	0.45	72.72	113	Bangladesh	-0.92	41.82
47	Jamaica	0.41	71.94	114	Zimbabwe	-0.92	41.77
48	Spain	0.32	69.87	115	Côte d'Ivoire	-0.96	40.82
49	France	0.31	69.66	116	Algeria	-1.00	39.89
50	Panama	0.31	69.51	117	Nicaragua	-1.03	39.18
51	United States of America	0.30	69.31	118	Egypt	-1.07	38.47
52	Greece	0.29	69.15	119	Kenya	-1.12	37.17
53	Belarus	0.29	69.11	120	Burkina Faso	-1.19	35.71
54	Chile	0.21	67.24	121	Ethiopia	-1.28	33.65
55	Kuwait	0.20	67.10	122	Chad	-1.34	32.28
56	Viet Nam	0.13	65.55	123	Turkey	-1.34	32.22
57	Albania	0.12	65.25	124	Venezuela, Bolivarian Rep.	-1.45	29.90
58	Rwanda	0.12	65.19	125	Ukraine	-1.52	28.13
59	Gambia	0.11	65.09	126	Cameroon	-1.56	27.42
60	Malaysia	0.11	65.06	127	Lebanon	-1.64	25.53
61	Ghana	0.10	64.79	128	Burundi	-1.65	25.30
62	Senegal	0.06	63.87	129	Iran, Islamic Rep.	-1.70	24.19
63	Trinidad and Tobago	0.06	63.82	130	Congo, Dem. Rep.	-1.81	21.71
64	Dominican Republic	0.02	63.00	131	Nigeria	-1.93	18.84
65	Montenegro	0.01	62.81	132	Mali	-2.15	13.90
66	Paraguay	0.00	62.53	133	Pakistan	-2.25	11.80
67	North Macedonia	-0.05	61.46	134	Yemen	-2.77	0.00

SOURCE: World Bank, *Worldwide Governance Indicators*, 2020 Update (www.govindicators.org)

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1.1.4 Regulatory quality

Regulatory quality indicator | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	2.16	100.00	68	El Salvador.....	-0.02	52.67
2	New Zealand.....	1.88	93.80	69	Moldova, Rep.....	-0.01	52.40
3	Australia.....	1.87	93.63	70	Philippines.....	-0.01	52.39
4	Netherlands.....	1.86	93.36	71	Turkey.....	-0.01	52.03
5	Finland.....	1.85	93.13	72	Mongolia.....	-0.01	51.94
6	Norway.....	1.80	92.10	73	Dominican Republic.....	-0.05	51.00
7	Sweden.....	1.80	92.04	74	Saudi Arabia.....	-0.07	50.68
8	Germany.....	1.72	90.30	75	Indonesia.....	-0.09	50.12
9	Canada.....	1.72	90.15	76	Namibia.....	-0.11	49.78
10	Luxembourg.....	1.70	89.79	77	Ghana.....	-0.11	49.73
11	Switzerland.....	1.66	89.01	78	Senegal.....	-0.11	49.70
12	United Kingdom.....	1.63	88.15	79	Trinidad and Tobago.....	-0.15	48.85
13	Ireland.....	1.60	87.62	80	India.....	-0.16	48.64
14	Estonia.....	1.59	87.39	81	Brazil.....	-0.18	48.25
15	Denmark.....	1.57	86.81	82	Sri Lanka.....	-0.18	48.11
16	Austria.....	1.46	84.46	83	Bosnia and Herzegovina.....	-0.19	47.90
17	France.....	1.44	84.05	84	Paraguay.....	-0.20	47.69
18	Iceland.....	1.37	82.56	85	Morocco.....	-0.21	47.51
19	United States of America.....	1.35	81.95	86	Cabo Verde.....	-0.22	47.22
20	Japan.....	1.33	81.54	87	Guatemala.....	-0.22	47.21
21	Belgium.....	1.29	80.75	88	Azerbaijan.....	-0.23	47.17
22	Israel.....	1.28	80.52	89	Côte d'Ivoire.....	-0.24	46.81
23	Czech Republic.....	1.25	79.73	90	China.....	-0.24	46.78
24	Chile.....	1.22	79.27	91	Ukraine.....	-0.26	46.46
25	Latvia.....	1.19	78.57	92	Viet Nam.....	-0.26	46.38
26	Lithuania.....	1.16	77.79	93	Kenya.....	-0.28	46.06
27	Georgia.....	1.12	77.01	94	Kyrgyzstan.....	-0.35	44.50
28	Korea, Rep.....	1.07	75.85	95	Uganda.....	-0.37	43.91
29	Spain.....	1.05	75.42	96	Burkina Faso.....	-0.38	43.86
30	Poland.....	1.01	74.62	97	Lebanon.....	-0.43	42.77
31	Cyprus.....	1.01	74.58	98	Russian Federation.....	-0.43	42.64
32	Slovenia.....	1.01	74.50	99	Tunisia.....	-0.44	42.52
33	Slovakia.....	1.01	74.46	100	Honduras.....	-0.49	41.29
34	Mauritius.....	1.00	74.23	101	Argentina.....	-0.49	41.29
35	United Arab Emirates.....	0.98	73.85	102	Lesotho.....	-0.54	40.34
36	Portugal.....	0.97	73.64	103	Belarus.....	-0.54	40.16
37	Malta.....	0.96	73.33	104	Zambia.....	-0.55	39.93
38	Italy.....	0.95	73.31	105	Cambodia.....	-0.57	39.60
39	Qatar.....	0.68	67.21	106	Mali.....	-0.57	39.51
40	Malaysia.....	0.67	67.08	107	Eswatini.....	-0.61	38.64
41	Brunei Darussalam.....	0.63	66.22	108	Tanzania, United Rep.....	-0.64	38.01
42	Hungary.....	0.60	65.54	109	Pakistan.....	-0.64	37.93
43	Croatia.....	0.59	65.26	110	Gambia.....	-0.66	37.48
44	Peru.....	0.56	64.66	111	Nicaragua.....	-0.69	36.94
45	Bulgaria.....	0.53	63.95	112	Malawi.....	-0.70	36.68
46	Greece.....	0.53	63.91	113	Nepal.....	-0.70	36.67
47	Uruguay.....	0.51	63.46	114	Lao PDR.....	-0.71	36.41
48	North Macedonia.....	0.51	63.44	115	Mozambique.....	-0.72	36.15
49	Costa Rica.....	0.50	63.20	116	Madagascar.....	-0.73	36.04
50	Bahrain.....	0.49	62.92	117	Guinea.....	-0.77	35.16
51	Romania.....	0.46	62.41	118	Ecuador.....	-0.82	33.97
52	Colombia.....	0.40	60.96	119	Cameroon.....	-0.83	33.89
53	Botswana.....	0.37	60.37	120	Egypt.....	-0.83	33.88
54	Montenegro.....	0.37	60.27	121	Nigeria.....	-0.86	33.14
55	Panama.....	0.36	60.19	122	Ethiopia.....	-0.89	32.52
56	Oman.....	0.29	58.66	123	Angola.....	-0.89	32.41
57	Albania.....	0.27	58.26	124	Bangladesh.....	-0.93	31.64
58	Armenia.....	0.25	57.71	125	Burundi.....	-0.95	31.18
59	Jamaica.....	0.17	55.89	126	Bolivia, Plurinational St.....	-0.99	30.21
60	South Africa.....	0.16	55.64	127	Tajikistan.....	-1.01	29.82
61	Kazakhstan.....	0.14	55.22	128	Chad.....	-1.12	27.43
62	Thailand.....	0.12	54.76	129	Algeria.....	-1.30	23.35
63	Serbia.....	0.11	54.71	130	Iran, Islamic Rep.....	-1.42	20.71
64	Mexico.....	0.10	54.48	131	Zimbabwe.....	-1.46	19.82
65	Rwanda.....	0.08	53.90	132	Congo, Dem. Rep.....	-1.51	18.79
66	Kuwait.....	0.06	53.62	133	Yemen.....	-1.66	15.38
67	Jordan.....	0.03	52.95	134	Venezuela, Bolivarian Rep.....	-2.36	0.00

SOURCE: World Bank, *Worldwide Governance Indicators*, 2020 Update (www.govindicators.org)

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1.1.5 Corruption

Corruption Perceptions Index | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	88.00	100.00	68	Lesotho	41.00	35.62
1	New Zealand	88.00	100.00	69	Burkina Faso	40.00	34.25
3	Finland	85.00	95.89	69	India	40.00	34.25
3	Singapore	85.00	95.89	69	Morocco	40.00	34.25
3	Sweden	85.00	95.89	69	Trinidad and Tobago	40.00	34.25
3	Switzerland	85.00	95.89	69	Turkey	40.00	34.25
7	Norway	84.00	94.52	74	Colombia	39.00	32.88
8	Netherlands	82.00	91.78	74	Ecuador	39.00	32.88
9	Germany	80.00	89.04	76	Brazil	38.00	31.51
9	Luxembourg	80.00	89.04	76	Ethiopia	38.00	31.51
11	Australia	77.00	84.93	76	Kazakhstan	38.00	31.51
11	Canada	77.00	84.93	76	Peru	38.00	31.51
11	United Kingdom	77.00	84.93	76	Serbia	38.00	31.51
14	Austria	76.00	83.56	76	Sri Lanka	38.00	31.51
14	Belgium	76.00	83.56	76	Tanzania, United Rep.	38.00	31.51
16	Estonia	75.00	82.19	83	Gambia	37.00	30.14
16	Iceland	75.00	82.19	83	Indonesia	37.00	30.14
18	Japan	74.00	80.82	85	Albania	36.00	28.77
19	Ireland	72.00	78.08	85	Algeria	36.00	28.77
20	United Arab Emirates	71.00	76.71	85	Côte d'Ivoire	36.00	28.77
20	Uruguay	71.00	76.71	85	El Salvador	36.00	28.77
22	France	69.00	73.97	85	Thailand	36.00	28.77
23	Chile	67.00	71.23	85	Viet Nam	36.00	28.77
23	United States of America	67.00	71.23	91	Bosnia and Herzegovina	35.00	27.40
25	Qatar	63.00	65.75	91	Mongolia	35.00	27.40
26	Spain	62.00	64.38	91	North Macedonia	35.00	27.40
27	Korea, Rep.	61.00	63.01	91	Panama	35.00	27.40
27	Portugal	61.00	63.01	95	Moldova, Rep.	34.00	26.03
29	Botswana	60.00	61.64	95	Philippines	34.00	26.03
29	Brunei Darussalam	60.00	61.64	97	Egypt	33.00	24.66
29	Israel	60.00	61.64	97	Eswatini	33.00	24.66
29	Lithuania	60.00	61.64	97	Nepal	33.00	24.66
29	Slovenia	60.00	61.64	97	Ukraine	33.00	24.66
34	Cabo Verde	58.00	58.90	97	Zambia	33.00	24.66
35	Costa Rica	57.00	57.53	102	Bolivia, Plurinational St.	31.00	21.92
35	Cyprus	57.00	57.53	102	Kenya	31.00	21.92
35	Latvia	57.00	57.53	102	Kyrgyzstan	31.00	21.92
38	Georgia	56.00	56.16	102	Mexico	31.00	21.92
38	Poland	56.00	56.16	102	Pakistan	31.00	21.92
40	Czech Republic	54.00	53.42	107	Azerbaijan	30.00	20.55
40	Oman	54.00	53.42	107	Malawi	30.00	20.55
40	Rwanda	54.00	53.42	107	Mali	30.00	20.55
43	Italy	53.00	52.05	107	Russian Federation	30.00	20.55
43	Malta	53.00	52.05	111	Lao PDR	29.00	19.18
43	Mauritius	53.00	52.05	112	Dominican Republic	28.00	17.81
43	Saudi Arabia	53.00	52.05	112	Guinea	28.00	17.81
47	Malaysia	51.00	49.32	112	Paraguay	28.00	17.81
47	Namibia	51.00	49.32	115	Angola	27.00	16.44
49	Greece	50.00	47.95	115	Uganda	27.00	16.44
50	Armenia	49.00	46.58	117	Bangladesh	26.00	15.07
50	Jordan	49.00	46.58	118	Cameroon	25.00	13.70
50	Slovakia	49.00	46.58	118	Guatemala	25.00	13.70
53	Belarus	47.00	43.84	118	Iran, Islamic Rep.	25.00	13.70
53	Croatia	47.00	43.84	118	Lebanon	25.00	13.70
55	Montenegro	45.00	41.10	118	Madagascar	25.00	13.70
55	Senegal	45.00	41.10	118	Mozambique	25.00	13.70
57	Bulgaria	44.00	39.73	118	Nigeria	25.00	13.70
57	Hungary	44.00	39.73	118	Tajikistan	25.00	13.70
57	Jamaica	44.00	39.73	126	Honduras	24.00	12.33
57	Romania	44.00	39.73	126	Zimbabwe	24.00	12.33
57	South Africa	44.00	39.73	128	Nicaragua	22.00	9.59
57	Tunisia	44.00	39.73	129	Cambodia	21.00	8.22
63	Ghana	43.00	38.36	129	Chad	21.00	8.22
64	Argentina	42.00	36.99	131	Burundi	19.00	5.48
64	Bahrain	42.00	36.99	132	Congo, Dem. Rep.	18.00	4.11
64	China	42.00	36.99	133	Venezuela, Bolivarian Rep.	15.00	0.00
64	Kuwait	42.00	36.99	133	Yemen	15.00	0.00

SOURCE: Transparency International, *The Corruption Perceptions Index 2020* (<http://www.transparency.org/en/cpi>)
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1.2.1 Extent of market dominance

Average answer to the question: In your country, how do you characterise corporate activity? [1 = dominated by a few business groups; 7 = spread among many firms] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	5.65	100.00	68	Kuwait	3.74	44.09
2	Italy	5.45	94.20	69	Israel	3.73	43.79
3	Denmark	5.33	90.64	70	Korea, Rep.	3.73	43.73
4	Japan	5.30	89.85	71	Greece	3.73	43.58
5	Netherlands	5.16	85.53	72	Pakistan	3.72	43.39
6	Austria	5.10	84.04	73	Lebanon	3.72	43.32
7	United Arab Emirates	5.05	82.40	74	India	3.71	43.02
8	China	5.04	82.12	75	Jamaica	3.70	42.92
9	United States of America	4.96	79.87	76	Senegal	3.70	42.81
10	Qatar	4.90	77.96	77	Slovakia	3.68	42.07
11	Spain	4.89	77.79	78	Thailand	3.63	40.64
12	Germany	4.89	77.75	79	Ukraine	3.61	40.25
13	Saudi Arabia	4.86	76.76	80	Russian Federation	3.61	40.12
14	Belgium	4.82	75.57	81	Argentina	3.60	39.88
15	Norway	4.81	75.25	82	Mexico	3.60	39.84
16	Singapore	4.78	74.48	83	Côte d'Ivoire	3.60	39.79
17	Poland	4.75	73.61	84	Burundi	3.57	38.86
18	Azerbaijan	4.72	72.73	85	Kazakhstan	3.55	38.53
19	Slovenia	4.68	71.61	86	Cambodia	3.52	37.40
20	Luxembourg	4.67	71.38	87	Kyrgyzstan	3.50	36.85
21	Egypt	4.59	68.88	88	Namibia	3.49	36.50
22	Oman	4.57	68.36	89	Belarus	3.47	36.14
23	Sweden	4.55	67.81	90	South Africa	3.47	36.07
24	Viet Nam	4.54	67.52	91	Burkina Faso	3.47	36.06
25	Malaysia	4.48	65.76	92	Kenya	3.47	35.99
26	France	4.47	65.29	93	Tanzania, United Rep.	3.46	35.87
27	Indonesia	4.44	64.40	94	Dominican Republic	3.43	34.90
28	Canada	4.37	62.60	95	Colombia	3.42	34.54
29	United Kingdom	4.37	62.57	96	Rwanda	3.39	33.81
30	Finland	4.33	61.26	97	Bolivia, Plurinational St.	3.39	33.73
31	Costa Rica	4.32	61.10	98	Brunei Darussalam	3.34	32.34
32	Ireland	4.31	60.84	99	Paraguay	3.34	32.15
33	Iran, Islamic Rep.	4.29	60.06	100	Peru	3.33	31.99
34	Czech Republic	4.29	60.01	101	Tunisia	3.31	31.34
35	Armenia	4.26	59.18	102	Lesotho	3.26	30.01
36	Jordan	4.25	58.84	103	Moldova, Rep.	3.22	28.84
37	New Zealand	4.22	58.18	104	Bosnia and Herzegovina	3.17	27.13
38	Latvia	4.18	56.85	105	El Salvador	3.17	27.11
39	Australia	4.18	56.82	106	Madagascar	3.16	26.93
40	Lao PDR	4.18	56.80	107	Ecuador	3.14	26.35
41	Algeria	4.15	55.97	108	Ethiopia	3.12	25.87
42	Guinea	4.15	55.89	109	Chile	3.12	25.84
43	Portugal	4.12	55.24	110	Yemen	3.12	25.79
44	Estonia	4.07	53.52	111	Croatia	3.12	25.64
45	Cameroon	4.02	52.28	112	Serbia	3.12	25.62
46	Gambia	4.02	52.07	113	Hungary	3.10	25.31
47	Tajikistan	4.01	52.00	114	Zimbabwe	3.07	24.24
48	Bahrain	4.01	51.93	115	Bangladesh	3.01	22.63
49	Cyprus	4.00	51.51	116	Uganda	3.00	22.28
50	Ghana	3.98	51.04	117	Trinidad and Tobago	2.98	21.60
51	Bulgaria	3.98	51.02	118	Mauritius	2.97	21.43
52	Nigeria	3.94	49.85	119	Botswana	2.97	21.33
53	Malta	3.94	49.73	120	Albania	2.96	21.07
54	Romania	3.93	49.69	121	Nicaragua	2.94	20.58
55	Brazil	3.90	48.63	122	North Macedonia	2.94	20.51
56	Sri Lanka	3.88	47.95	123	Zambia	2.93	20.28
57	Mali	3.87	47.88	124	Mozambique	2.93	20.23
58	Turkey	3.86	47.48	125	Nepal	2.93	20.20
59	Cabo Verde	3.86	47.36	126	Philippines	2.92	20.04
60	Uruguay	3.85	47.34	127	Eswatini	2.91	19.70
61	Panama	3.82	46.46	128	Venezuela, Bolivarian Rep.	2.86	18.08
62	Morocco	3.81	45.94	129	Malawi	2.66	12.18
63	Montenegro	3.79	45.57	130	Congo, Dem. Rep.	2.59	10.18
64	Georgia	3.79	45.37	131	Mongolia	2.44	5.88
65	Iceland	3.77	44.93	132	Chad	2.41	4.97
66	Guatemala	3.76	44.70	133	Honduras	2.35	3.07
67	Lithuania	3.76	44.65	134	Angola	2.24	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2019–2020 (<https://www.weforum.org/reports/>)

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1.2.2 Ease of doing business

Ease of doing business score | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	New Zealand	86.76	100.00	68	Indonesia	69.58	69.60
2	Singapore	86.20	99.00	69	Costa Rica	69.24	69.00
3	Denmark	85.29	97.39	70	Jordan	68.97	68.53
4	Korea, Rep.	84.00	95.11	71	Peru	68.70	68.04
5	United States of America	84.00	95.10	72	Qatar	68.67	67.98
6	Georgia	83.73	94.64	73	Tunisia	68.66	67.97
7	United Kingdom	83.55	94.31	74	Greece	68.42	67.55
8	Norway	82.63	92.68	75	Kyrgyzstan	67.82	66.49
9	Sweden	81.99	91.56	76	Mongolia	67.77	66.40
10	Lithuania	81.62	90.90	77	Albania	67.75	66.36
11	Malaysia	81.47	90.64	78	Kuwait	67.40	65.75
12	Mauritius	81.47	90.63	79	South Africa	67.02	65.07
13	Australia	81.22	90.18	80	Zambia	66.94	64.92
14	United Arab Emirates	80.91	89.65	81	Panama	66.56	64.26
15	North Macedonia	80.75	89.36	82	Botswana	66.20	63.62
16	Estonia	80.62	89.12	83	Malta	66.14	63.51
17	Latvia	80.28	88.53	84	Bosnia and Herzegovina	65.44	62.28
18	Finland	80.18	88.35	85	El Salvador	65.25	61.94
19	Thailand	80.09	88.20	86	Nepal	63.19	58.29
20	Germany	79.71	87.52	87	Philippines	62.83	57.66
21	Canada	79.64	87.40	88	Guatemala	62.60	57.24
22	Ireland	79.58	87.28	89	Sri Lanka	61.81	55.85
23	Kazakhstan	79.56	87.25	90	Uruguay	61.54	55.38
24	Iceland	78.96	86.20	91	Namibia	61.35	55.04
25	Austria	78.75	85.81	92	Trinidad and Tobago	61.29	54.94
26	Russian Federation	78.16	84.78	93	Tajikistan	61.27	54.90
27	Japan	78.00	84.49	94	Pakistan	60.95	54.34
28	Spain	77.94	84.38	95	Malawi	60.94	54.31
29	China	77.93	84.37	96	Côte d'Ivoire	60.69	53.87
30	France	76.80	82.38	97	Egypt	60.05	52.75
31	Turkey	76.79	82.36	98	Dominican Republic	59.99	52.63
32	Azerbaijan	76.71	82.21	99	Uganda	59.98	52.62
33	Israel	76.68	82.15	100	Ghana	59.96	52.58
34	Switzerland	76.62	82.05	101	Eswatini	59.49	51.76
35	Slovenia	76.52	81.87	102	Lesotho	59.43	51.64
36	Rwanda	76.48	81.81	103	Senegal	59.27	51.37
37	Portugal	76.47	81.78	104	Brazil	59.08	51.03
38	Poland	76.38	81.63	105	Paraguay	59.05	50.98
39	Czech Republic	76.34	81.56	106	Argentina	58.96	50.82
40	Netherlands	76.10	81.14	107	Iran, Islamic Rep.	58.55	50.08
41	Bahrain	76.03	81.00	108	Ecuador	57.72	48.62
42	Serbia	75.65	80.34	109	Nigeria	56.88	47.13
43	Slovakia	75.59	80.22	110	Honduras	56.27	46.05
44	Belgium	74.99	79.17	111	Cabo Verde	55.04	43.88
45	Armenia	74.49	78.29	112	Mozambique	55.00	43.80
46	Moldova, Rep.	74.39	78.11	113	Zimbabwe	54.47	42.87
47	Belarus	74.29	77.93	114	Tanzania, United Rep.	54.46	42.86
48	Montenegro	73.82	77.10	115	Nicaragua	54.39	42.72
49	Croatia	73.62	76.75	116	Lebanon	54.33	42.63
50	Hungary	73.42	76.39	117	Cambodia	53.84	41.76
51	Morocco	73.38	76.32	118	Mali	52.94	40.17
52	Cyprus	73.35	76.27	119	Bolivia, Plurinational St.	51.66	37.89
53	Romania	73.33	76.24	120	Burkina Faso	51.40	37.44
54	Kenya	73.22	76.03	121	Lao PDR	50.82	36.42
55	Italy	72.85	75.39	122	Gambia	50.29	35.48
56	Chile	72.58	74.91	123	Guinea	49.43	33.95
57	Mexico	72.36	74.51	124	Algeria	48.60	32.48
58	Bulgaria	71.97	73.84	125	Ethiopia	47.98	31.38
59	Saudi Arabia	71.56	73.10	126	Madagascar	47.73	30.94
60	India	71.05	72.19	127	Burundi	46.77	29.26
61	Ukraine	70.21	70.72	128	Cameroon	46.10	28.06
62	Brunei Darussalam	70.06	70.46	129	Bangladesh	45.05	26.20
63	Colombia	70.06	70.45	130	Angola	41.29	19.55
64	Oman	69.98	70.32	131	Chad	36.94	11.85
65	Viet Nam	69.77	69.93	132	Congo, Dem. Rep.	36.21	10.57
66	Jamaica	69.68	69.78	133	Yemen	31.76	2.70
67	Luxembourg	69.60	69.64	134	Venezuela, Bolivarian Rep.	30.24	0.00

SOURCE: World Bank, *Doing Business 2020: Comparing Business Regulation in 190 Economies* (<http://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>)
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1.2.3 Cluster development

Average answer to the question: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = nonexistent; 7 = widespread in many fields] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	5.56	100.00	68	Estonia.....	3.77	41.55
2	Italy.....	5.43	95.90	69	Hungary.....	3.76	41.54
3	Switzerland.....	5.34	92.73	70	Guatemala.....	3.73	40.51
4	Germany.....	5.33	92.37	71	Guinea.....	3.73	40.26
5	Netherlands.....	5.23	89.27	72	Philippines.....	3.72	40.13
6	Singapore.....	5.14	86.46	73	Algeria.....	3.71	39.84
7	United Arab Emirates.....	5.13	86.09	74	Colombia.....	3.70	39.59
8	China.....	5.06	83.79	75	Mali.....	3.68	38.87
9	Malaysia.....	5.05	83.49	76	Armenia.....	3.67	38.55
10	Luxembourg.....	5.03	82.62	77	Chile.....	3.67	38.49
11	Japan.....	5.01	82.12	78	Bangladesh.....	3.65	37.81
12	Saudi Arabia.....	4.96	80.36	79	Morocco.....	3.65	37.66
13	Austria.....	4.94	79.84	80	Honduras.....	3.64	37.47
14	Norway.....	4.87	77.65	81	Russian Federation.....	3.63	37.24
15	Belgium.....	4.87	77.60	82	Nigeria.....	3.63	37.13
16	Finland.....	4.83	76.20	83	Namibia.....	3.62	36.84
17	United Kingdom.....	4.82	76.01	84	Georgia.....	3.61	36.56
18	Denmark.....	4.81	75.44	85	Iran, Islamic Rep.....	3.60	36.13
19	Sweden.....	4.79	74.93	86	Uganda.....	3.59	35.91
20	Canada.....	4.74	73.14	87	Brunei Darussalam.....	3.59	35.77
21	Egypt.....	4.71	72.38	88	Trinidad and Tobago.....	3.59	35.75
22	Oman.....	4.70	71.97	89	Cabo Verde.....	3.58	35.68
23	Indonesia.....	4.67	70.92	90	Montenegro.....	3.55	34.60
24	Korea, Rep.....	4.65	70.27	91	Zambia.....	3.53	33.75
25	France.....	4.61	69.12	92	Uruguay.....	3.51	33.36
26	Qatar.....	4.53	66.30	93	Lithuania.....	3.51	33.27
27	Ireland.....	4.52	66.17	94	Senegal.....	3.45	31.35
28	Bahrain.....	4.48	64.68	95	Belarus.....	3.45	31.15
29	Jordan.....	4.46	64.13	96	Serbia.....	3.42	30.35
30	Israel.....	4.45	63.88	97	Argentina.....	3.42	30.17
31	Azerbaijan.....	4.43	63.31	98	Eswatini.....	3.40	29.80
32	Spain.....	4.39	61.85	99	Peru.....	3.38	29.05
33	Viet Nam.....	4.38	61.45	100	Ethiopia.....	3.38	29.02
34	Australia.....	4.28	58.42	101	Cameroon.....	3.36	28.38
35	Mexico.....	4.27	58.06	102	Côte d'Ivoire.....	3.36	28.24
36	Portugal.....	4.25	57.44	103	Romania.....	3.35	28.17
37	Malta.....	4.22	56.26	104	Ukraine.....	3.35	27.90
38	Kuwait.....	4.18	54.93	105	Burundi.....	3.32	27.01
39	Ghana.....	4.13	53.40	106	Lesotho.....	3.31	26.73
40	South Africa.....	4.12	53.18	107	Ecuador.....	3.31	26.61
41	Bulgaria.....	4.11	52.91	108	Tunisia.....	3.29	26.18
42	Kenya.....	4.10	52.30	109	Nepal.....	3.28	25.88
43	India.....	4.09	52.19	110	Paraguay.....	3.28	25.75
44	Iceland.....	4.07	51.58	111	North Macedonia.....	3.27	25.53
45	Thailand.....	4.05	50.85	112	Botswana.....	3.24	24.40
46	Tanzania, United Rep.....	3.99	48.96	113	Madagascar.....	3.22	23.80
47	New Zealand.....	3.98	48.53	114	Bosnia and Herzegovina.....	3.17	22.27
48	Brazil.....	3.97	48.26	115	Mozambique.....	3.13	21.04
49	Costa Rica.....	3.96	47.95	116	Tajikistan.....	3.13	21.00
50	Lao PDR.....	3.95	47.57	117	Malawi.....	3.12	20.59
51	Sri Lanka.....	3.94	47.40	118	Mongolia.....	3.02	17.42
52	Mauritius.....	3.94	47.14	119	Kazakhstan.....	3.01	16.90
53	Pakistan.....	3.93	47.00	120	Kyrgyzstan.....	2.98	15.87
54	Dominican Republic.....	3.93	46.85	121	Greece.....	2.95	15.17
55	Czech Republic.....	3.91	46.42	122	El Salvador.....	2.93	14.44
56	Cambodia.....	3.90	45.88	123	Bolivia, Plurinational St.....	2.90	13.31
57	Cyprus.....	3.88	45.21	124	Nicaragua.....	2.89	13.18
58	Turkey.....	3.86	44.50	125	Yemen.....	2.83	11.17
59	Gambia.....	3.85	44.34	126	Burkina Faso.....	2.83	11.17
60	Lebanon.....	3.85	44.25	127	Croatia.....	2.82	10.73
61	Latvia.....	3.84	44.06	128	Zimbabwe.....	2.77	9.15
62	Jamaica.....	3.83	43.65	129	Albania.....	2.76	8.68
63	Panama.....	3.83	43.64	130	Chad.....	2.75	8.58
64	Poland.....	3.80	42.69	131	Moldova, Rep.....	2.62	4.13
65	Slovakia.....	3.78	42.06	132	Venezuela, Bolivarian Rep.....	2.60	3.48
66	Rwanda.....	3.78	41.97	133	Congo, Dem. Rep.....	2.55	1.96
67	Slovenia.....	3.77	41.76	134	Angola.....	2.49	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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1.2.4 R&D expenditure

Gross expenditure on R&D (%) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Israel	4.94	100.00	68	Ecuador	0.44	8.72
2	Korea, Rep.	4.53	91.61	69	Uruguay	0.42	8.24
3	Switzerland	3.37	68.08	70	Congo, Dem. Rep.	0.41	7.99
4	Sweden	3.31	66.96	71	Costa Rica	0.38	7.51
5	Japan	3.28	66.20	72	Ghana	0.38	7.38
6	Austria	3.21	64.89	73	North Macedonia	0.37	7.15
7	Germany	3.13	63.31	74	Montenegro	0.36	7.13
8	Denmark	3.03	61.29	75	Chile	0.36	6.97
9	United States of America	2.83	57.23	76	Namibia	0.35	6.89
10	Belgium	2.77	55.86	77	Mauritius	0.35	6.78
11	Finland	2.76	55.66	78	Venezuela, Bolivarian Rep.	0.34	6.58
12	France	2.19	44.24	79	Mozambique	0.31	6.10
13	Netherlands	2.16	43.65	80	Mexico	0.31	6.09
14	China	2.14	43.18	81	Nepal	0.30	5.87
15	Norway	2.07	41.80	82	Chad	0.30	5.84
16	Iceland	2.04	41.16	83	Mali	0.29	5.66
17	Slovenia	1.95	39.32	84	Georgia	0.28	5.43
18	Czech Republic	1.93	38.91	85	Brunei Darussalam	0.28	5.37
19	Singapore	1.92	38.80	86	Ethiopia	0.27	5.31
20	Australia	1.87	37.78	87	Eswatini	0.27	5.15
21	United Kingdom	1.70	34.29	88	Moldova, Rep.	0.25	4.85
22	Canada	1.54	31.04	89	Pakistan	0.24	4.54
23	Hungary	1.53	30.86	90	Colombia	0.23	4.50
24	Estonia	1.40	28.24	91	Indonesia	0.23	4.33
25	Italy	1.39	27.98	92	Oman	0.22	4.20
26	Portugal	1.35	27.09	93	Burundi	0.21	4.07
27	New Zealand	1.35	27.07	94	Bosnia and Herzegovina	0.19	3.70
28	United Arab Emirates	1.28	25.68	95	Armenia	0.19	3.57
29	Spain	1.24	24.97	96	Azerbaijan	0.18	3.48
30	Luxembourg	1.21	24.32	97	El Salvador	0.16	3.08
31	Poland	1.21	24.29	98	Bolivia, Plurinational St.	0.16	2.93
32	Greece	1.18	23.63	99	Philippines	0.16	2.92
33	Brazil	1.16	23.29	100	Panama	0.15	2.73
34	Ireland	1.15	23.01	101	Paraguay	0.15	2.71
35	Malaysia	1.04	20.86	102	Uganda	0.14	2.66
36	Thailand	1.00	20.07	103	Sri Lanka	0.13	2.33
37	Russian Federation	0.98	19.68	104	Peru	0.13	2.32
38	Croatia	0.97	19.46	105	Cambodia	0.12	2.14
39	Turkey	0.96	19.22	106	Kazakhstan	0.12	2.11
40	Lithuania	0.94	18.85	107	Nicaragua	0.11	1.92
41	Serbia	0.92	18.40	108	Mongolia	0.10	1.81
42	Slovakia	0.84	16.75	109	Bahrain	0.10	1.79
43	South Africa	0.83	16.63	110	Kyrgyzstan	0.10	1.79
44	Iran, Islamic Rep.	0.83	16.59	111	Tajikistan	0.10	1.71
45	Saudi Arabia	0.82	16.28	112	Trinidad and Tobago	0.08	1.45
46	Kenya	0.79	15.69	113	Cabo Verde	0.07	1.22
47	Bulgaria	0.76	15.07	114	Gambia	0.07	1.18
48	Egypt	0.72	14.43	115	Côte d'Ivoire	0.07	1.17
49	Morocco	0.71	14.24	116	Kuwait	0.06	1.01
50	Jordan	0.71	14.10	117	Lesotho	0.05	0.77
51	India	0.65	12.99	118	Honduras	0.04	0.55
52	Rwanda	0.65	12.86	119	Angola	0.03	0.40
53	Latvia	0.64	12.75	120	Guatemala	0.03	0.34
54	Burkina Faso	0.61	12.14	121	Madagascar	0.01	0.00
55	Belarus	0.60	12.01		Albania	n/a	n/a
56	Tunisia	0.60	11.94		Bangladesh	n/a	n/a
57	Senegal	0.58	11.45		Cameroon	n/a	n/a
58	Malta	0.57	11.36		Dominican Republic	n/a	n/a
59	Cyprus	0.55	10.86		Guinea	n/a	n/a
60	Algeria	0.54	10.76		Jamaica	n/a	n/a
61	Botswana	0.54	10.64		Lao PDR	n/a	n/a
62	Viet Nam	0.53	10.43		Lebanon	n/a	n/a
63	Tanzania, United Rep.	0.51	10.18		Malawi	n/a	n/a
64	Qatar	0.51	10.07		Nigeria	n/a	n/a
65	Romania	0.50	9.90		Yemen	n/a	n/a
66	Argentina	0.49	9.76		Zambia	n/a	n/a
67	Ukraine	0.47	9.30		Zimbabwe	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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1.2.5 ICT infrastructure

NRI Access sub-pillar | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	92.35	100.00	68	South Africa	61.79	65.46
2	Qatar	92.28	99.92	69	Mexico	61.70	65.36
3	United Kingdom	90.38	97.77	70	Morocco	61.67	65.33
4	Switzerland	90.35	97.74	71	Argentina	60.87	64.42
5	Singapore	89.71	97.02	72	Brazil	60.50	64.01
6	Norway	89.39	96.65	73	India	59.96	63.39
7	Iceland	88.85	96.04	74	Colombia	59.74	63.15
8	Australia	88.84	96.03	75	Cambodia	58.65	61.92
9	United Arab Emirates	87.79	94.85	76	Tunisia	58.27	61.49
10	Ireland	87.61	94.64	77	Panama	54.75	57.50
11	Netherlands	86.86	93.79	78	Ukraine	54.12	56.79
12	Denmark	86.73	93.65	79	Egypt	53.81	56.44
13	Sweden	86.59	93.50	80	Jordan	52.99	55.52
14	Finland	86.55	93.44	81	Iran, Islamic Rep.	52.36	54.81
15	New Zealand	86.25	93.10	82	Philippines	51.84	54.22
16	Belgium	85.91	92.72	83	Albania	50.17	52.33
17	Romania	85.43	92.18	84	Azerbaijan	49.61	51.70
18	Saudi Arabia	84.80	91.46	85	Dominican Republic	49.37	51.42
19	Korea, Rep.	84.49	91.11	86	Peru	49.29	51.34
20	Hungary	84.18	90.76	87	Sri Lanka	47.49	49.30
21	France	84.00	90.57	88	Cabo Verde	47.44	49.24
22	Spain	83.99	90.55	89	Botswana	46.37	48.03
23	Slovenia	83.66	90.18	90	Bosnia and Herzegovina	46.12	47.75
24	Portugal	83.55	90.06	91	Kyrgyzstan	45.01	46.49
25	Estonia	82.71	89.10	92	Algeria	43.71	45.03
26	Germany	82.00	88.31	93	Cameroon	43.30	44.57
27	United States of America	81.59	87.84	94	Ecuador	43.17	44.42
28	Canada	81.57	87.81	95	Pakistan	42.77	43.97
29	Lithuania	81.53	87.77	96	Uganda	40.76	41.69
30	Malta	80.67	86.80	97	Mongolia	40.41	41.30
31	Poland	80.50	86.61	98	Rwanda	39.10	39.82
32	Czech Republic	80.34	86.42	99	Bolivia, Plurinational St.	39.01	39.71
33	Kuwait	79.83	85.85	100	Kenya	38.61	39.26
34	Austria	79.66	85.66	101	Bangladesh	38.33	38.95
35	Japan	79.62	85.61	102	Namibia	38.14	38.74
36	Greece	78.91	84.81	103	El Salvador	38.13	38.73
37	Slovakia	78.76	84.65	104	Lesotho	37.87	38.43
38	Thailand	78.64	84.51	105	Paraguay	36.34	36.71
39	Latvia	78.29	84.11	106	Tajikistan	36.13	36.47
40	Bahrain	78.07	83.87	107	Côte d'Ivoire	35.24	35.46
41	China	77.74	83.49	108	Ghana	34.92	35.09
42	Chile	76.39	81.96	109	Guatemala	34.53	34.65
43	Georgia	76.35	81.92	110	Senegal	34.36	34.46
44	Italy	75.92	81.43	111	Lao PDR	34.34	34.44
45	Uruguay	75.76	81.25	112	Honduras	33.07	33.00
46	Cyprus	75.04	80.44	113	Nepal	32.63	32.51
47	Malaysia	74.75	80.11	114	Venezuela, Bolivarian Rep.	30.48	30.07
48	Croatia	74.74	80.09	115	Eswatini	29.17	28.60
49	Bulgaria	74.33	79.64	116	Zambia	28.27	27.58
50	Serbia	74.08	79.35	117	Nigeria	26.11	25.13
51	Kazakhstan	72.60	77.68	118	Tanzania, United Rep.	25.49	24.43
52	Israel	72.11	77.13	119	Mozambique	25.24	24.15
53	Turkey	71.81	76.79	120	Guinea	25.19	24.10
54	Oman	71.42	76.34	121	Angola	24.47	23.29
55	Moldova, Rep.	71.39	76.31	122	Zimbabwe	23.87	22.61
56	Lebanon	70.69	75.52	123	Mali	22.37	20.91
57	Belarus	70.07	74.83	124	Gambia	22.31	20.85
58	Russian Federation	69.68	74.38	125	Madagascar	20.85	19.20
59	Viet Nam	69.14	73.77	126	Malawi	17.47	15.37
60	North Macedonia	67.73	72.18	127	Ethiopia	16.24	13.99
61	Armenia	67.56	71.99	128	Burkina Faso	15.86	13.55
62	Montenegro	66.47	70.75	129	Burundi	15.43	13.06
63	Mauritius	65.61	69.78	130	Yemen	13.10	10.44
64	Trinidad and Tobago	64.19	68.18	131	Chad	11.69	8.84
65	Jamaica	64.01	67.97	132	Congo, Dem. Rep.	3.87	0.00
66	Costa Rica	63.69	67.61		Brunei Darussalam	n/a	n/a
67	Indonesia	63.24	67.10		Nicaragua	n/a	n/a

SOURCE: Portulans Institute, *The Network Readiness Index 2020: Accelerating Digital Transformation in a post-COVID Global Economy* (<https://networkreadinessindex.org/>)
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

1.2.6 Urbanisation

Population of urban areas (%) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kuwait	100.00	100.00	68	Portugal	65.21	60.00
1	Singapore	100.00	100.00	69	Ecuador	63.82	58.40
3	Qatar	99.14	99.01	70	Ireland	63.17	57.65
4	Belgium	98.00	97.70	71	Armenia	63.15	57.63
5	Uruguay	95.33	94.63	72	Morocco	62.45	56.83
6	Malta	94.61	93.80	73	Paraguay	61.58	55.83
7	Iceland	93.81	92.89	74	Gambia	61.27	55.47
8	Israel	92.42	91.28	75	Albania	60.32	54.37
9	Argentina	91.87	90.65	76	Poland	60.06	54.07
10	Japan	91.62	90.36	77	China	59.15	53.03
11	Netherlands	91.49	90.21	78	Georgia	58.63	52.43
12	Luxembourg	90.98	89.63	79	Nicaragua	58.52	52.31
13	Jordan	90.98	89.63	80	Austria	58.30	52.05
14	Bahrain	89.29	87.68	81	North Macedonia	57.96	51.66
15	Lebanon	88.59	86.88	82	Kazakhstan	57.43	51.05
16	Venezuela, Bolivarian Rep.	88.21	86.44	83	Honduras	57.10	50.67
17	Denmark	87.87	86.06	84	Croatia	56.95	50.50
18	Chile	87.56	85.70	85	Cameroon	56.37	49.84
19	Sweden	87.43	85.55	86	Serbia	56.09	49.51
20	Brazil	86.57	84.56	87	Ghana	56.06	49.48
21	New Zealand	86.54	84.52	88	Azerbaijan	55.68	49.04
22	United Arab Emirates	86.52	84.50	89	Jamaica	55.67	49.03
23	Australia	86.01	83.92	90	Indonesia	55.32	48.63
24	Finland	85.38	83.19	91	Slovenia	54.54	47.73
25	Oman	84.54	82.22	92	Romania	54.00	47.10
26	Saudi Arabia	83.84	81.42	93	Slovakia	53.73	46.79
27	United Kingdom	83.40	80.91	94	Trinidad and Tobago	53.18	46.17
28	United States of America	82.26	79.60	95	Guatemala	51.05	43.72
29	Norway	82.25	79.59	96	Côte d'Ivoire	50.78	43.40
30	Korea, Rep.	81.46	78.68	97	Nigeria	50.34	42.90
31	Canada	81.41	78.63	98	Namibia	50.03	42.55
32	Dominican Republic	81.07	78.24	99	Thailand	49.95	42.45
33	Colombia	80.78	77.90	100	Bosnia and Herzegovina	48.25	40.49
34	France	80.44	77.51	101	Senegal	47.19	39.28
35	Spain	80.32	77.37	102	Philippines	46.91	38.95
36	Mexico	80.16	77.18	103	Congo, Dem. Rep.	44.46	36.14
37	Costa Rica	79.34	76.24	104	Zambia	43.52	35.06
38	Greece	79.06	75.92	105	Egypt	42.70	34.12
39	Belarus	78.59	75.39	106	Moldova, Rep.	42.63	34.03
40	Peru	77.91	74.60	107	Mali	42.36	33.72
41	Brunei Darussalam	77.63	74.28	108	Mauritius	40.79	31.92
42	Germany	77.31	73.91	109	Madagascar	37.19	27.78
43	Malaysia	76.04	72.44	110	Pakistan	36.67	27.18
44	Turkey	75.14	71.42	111	Yemen	36.64	27.15
45	Bulgaria	75.01	71.26	112	Bangladesh	36.63	27.14
46	Iran, Islamic Rep.	74.90	71.14	113	Kyrgyzstan	36.35	26.81
47	Russian Federation	74.43	70.60	114	Guinea	36.14	26.57
48	Switzerland	73.80	69.87	115	Mozambique	35.99	26.40
49	Czech Republic	73.79	69.86	116	Viet Nam	35.92	26.32
50	Algeria	72.63	68.53	117	Lao PDR	35.00	25.26
51	El Salvador	72.02	67.83	118	India	34.03	24.14
52	Hungary	71.35	67.06	119	Tanzania, United Rep.	33.78	23.85
53	Italy	70.44	66.01	120	Zimbabwe	32.21	22.05
54	Botswana	69.45	64.87	121	Burkina Faso	29.36	18.77
55	Bolivia, Plurinational St.	69.43	64.84	122	Lesotho	28.15	17.39
56	Ukraine	69.35	64.76	123	Tajikistan	27.13	16.22
57	Tunisia	68.95	64.29	124	Kenya	27.03	16.10
58	Estonia	68.88	64.22	125	Eswatini	23.80	12.38
59	Mongolia	68.45	63.72	126	Uganda	23.77	12.35
60	Latvia	68.14	63.37	127	Cambodia	23.39	11.91
61	Panama	67.71	62.87	128	Chad	23.06	11.53
62	Lithuania	67.68	62.84	129	Ethiopia	20.76	8.89
63	Montenegro	66.81	61.84	130	Nepal	19.74	7.71
64	Cyprus	66.81	61.84	131	Sri Lanka	18.48	6.26
65	South Africa	66.36	61.31	132	Rwanda	17.21	4.81
66	Cabo Verde	65.73	60.60	133	Malawi	16.94	4.49
67	Angola	65.51	60.35	134	Burundi	13.03	0.00

SOURCE: United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2018 Revision* (<https://population.un.org/wup/>)
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1.3.1 Labour rights

Level of national compliance with labour rights | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Austria	0.00	100.00	68	Mexico	1.94	80.60
1	Belgium	0.00	100.00	69	Romania	1.96	80.40
1	Cyprus	0.00	100.00	70	Mozambique	2.00	80.00
1	Estonia	0.00	100.00	71	Angola	2.09	79.10
1	Finland	0.00	100.00	72	Mauritius	2.13	78.70
1	Iceland	0.00	100.00	73	Zambia	2.21	77.90
1	Ireland	0.00	100.00	74	Algeria	2.30	77.00
1	Israel	0.00	100.00	75	Eswatini	2.40	76.00
1	Italy	0.00	100.00	76	Sri Lanka	2.41	75.90
1	Latvia	0.00	100.00	77	Kuwait	2.51	74.90
1	Norway	0.00	100.00	78	Bolivia, Plurinational St.	2.59	74.10
1	Slovakia	0.00	100.00	79	Argentina	2.68	73.20
1	Sweden	0.00	100.00	79	Indonesia	2.68	73.20
14	Mongolia	0.15	98.50	81	Nigeria	2.90	71.00
15	Czech Republic	0.18	98.20	82	Kazakhstan	3.08	69.20
15	Lithuania	0.18	98.20	83	Botswana	3.11	68.90
15	Switzerland	0.18	98.20	84	Congo, Dem. Rep.	3.34	66.60
18	Luxembourg	0.19	98.10	85	Peru	4.01	59.90
19	North Macedonia	0.32	96.80	86	Ecuador	4.19	58.10
20	France	0.36	96.40	87	Philippines	4.37	56.30
20	Nicaragua	0.36	96.40	88	Paraguay	4.47	55.30
20	Slovenia	0.36	96.40	89	Colombia	4.48	55.20
23	Malawi	0.37	96.30	90	Panama	4.50	55.00
24	Germany	0.38	96.20	91	Pakistan	4.82	51.80
24	Netherlands	0.38	96.20	92	Honduras	4.87	51.30
26	Cabo Verde	0.47	95.30	93	El Salvador	4.95	50.50
27	Portugal	0.51	94.90	94	Guatemala	5.04	49.60
28	Denmark	0.53	94.70	95	Turkey	5.27	47.30
29	Kyrgyzstan	0.54	94.60	96	Cambodia	5.29	47.10
30	Côte d'Ivoire	0.55	94.50	97	Zimbabwe	5.92	40.80
31	Ukraine	0.57	94.30	98	Venezuela, Bolivarian Rep.	7.39	26.10
32	Guinea	0.67	93.30	99	Bangladesh	7.50	25.00
33	Uruguay	0.69	93.10	100	Belarus	10.00	0.00
34	Spain	0.71	92.90	100	Egypt	10.00	0.00
35	Albania	0.72	92.80		Azerbaijan	n/a	n/a
35	Hungary	0.72	92.80		Bahrain	n/a	n/a
37	Namibia	0.73	92.70		Brazil	n/a	n/a
38	Greece	0.85	91.50		Brunei Darussalam	n/a	n/a
39	Georgia	0.86	91.40		Burundi	n/a	n/a
39	Serbia	0.86	91.40		Cameroon	n/a	n/a
41	Burkina Faso	0.88	91.20		Chad	n/a	n/a
41	Mali	0.88	91.20		China	n/a	n/a
43	Moldova, Rep.	0.89	91.10		Ethiopia	n/a	n/a
44	South Africa	0.98	90.20		Gambia	n/a	n/a
45	Costa Rica	1.04	89.60		India	n/a	n/a
46	Bosnia and Herzegovina	1.05	89.50		Iran, Islamic Rep.	n/a	n/a
47	United Kingdom	1.06	89.40		Jordan	n/a	n/a
48	Bulgaria	1.08	89.20		Kenya	n/a	n/a
49	Poland	1.10	89.00		Korea, Rep.	n/a	n/a
50	Japan	1.11	88.90		Lao PDR	n/a	n/a
51	Croatia	1.12	88.80		Lebanon	n/a	n/a
52	Jamaica	1.23	87.70		Malaysia	n/a	n/a
53	Madagascar	1.27	87.30		Morocco	n/a	n/a
54	Canada	1.39	86.10		Nepal	n/a	n/a
55	Armenia	1.40	86.00		New Zealand	n/a	n/a
55	Montenegro	1.40	86.00		Oman	n/a	n/a
57	Lesotho	1.44	85.60		Qatar	n/a	n/a
58	Dominican Republic	1.45	85.50		Russian Federation	n/a	n/a
59	Uganda	1.46	85.40		Rwanda	n/a	n/a
60	Australia	1.62	83.80		Saudi Arabia	n/a	n/a
60	Ghana	1.62	83.80		Singapore	n/a	n/a
62	Senegal	1.63	83.70		Tajikistan	n/a	n/a
63	Malta	1.65	83.50		Thailand	n/a	n/a
63	Trinidad and Tobago	1.65	83.50		United Arab Emirates	n/a	n/a
63	Tunisia	1.65	83.50		United States of America	n/a	n/a
66	Tanzania, United Rep.	1.77	82.30		Viet Nam	n/a	n/a
67	Chile	1.82	81.80		Yemen	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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1.3.2 Labour-employer cooperation

Average answer to the question: In your country, how do you characterize labor-employer relations?
[1 = generally confrontational; 7 = generally cooperative] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	6.12	100.00	68	Jamaica.....	4.39	40.82
2	Switzerland.....	6.05	97.76	69	Uganda.....	4.38	40.60
3	Denmark.....	5.94	93.93	70	Senegal.....	4.36	39.85
4	Japan.....	5.79	88.81	71	Mongolia.....	4.33	39.03
5	Netherlands.....	5.79	88.76	72	Tanzania, United Rep.	4.33	38.99
6	Sweden.....	5.66	84.44	73	Burundi.....	4.32	38.75
7	Norway.....	5.65	84.00	74	Panama.....	4.32	38.57
8	Luxembourg.....	5.58	81.59	75	Slovakia.....	4.31	38.41
9	Austria.....	5.56	80.86	76	Honduras.....	4.31	38.37
10	Iceland.....	5.46	77.51	77	Poland.....	4.31	38.18
11	Bahrain.....	5.42	76.24	78	Russian Federation.....	4.31	38.12
12	Malaysia.....	5.36	73.93	79	Namibia.....	4.30	38.03
13	Estonia.....	5.34	73.42	80	Kazakhstan.....	4.29	37.69
14	Oman.....	5.30	72.08	81	Ecuador.....	4.29	37.60
15	New Zealand.....	5.28	71.53	82	Georgia.....	4.29	37.57
16	United Arab Emirates.....	5.28	71.50	83	Hungary.....	4.28	37.28
17	United States of America.....	5.28	71.31	84	France.....	4.27	36.90
18	Finland.....	5.21	69.14	85	Kenya.....	4.26	36.59
19	Qatar.....	5.20	68.53	86	India.....	4.25	36.22
20	Costa Rica.....	5.17	67.45	87	Cabo Verde.....	4.24	35.97
21	Azerbaijan.....	5.15	66.89	88	Algeria.....	4.23	35.44
22	Malta.....	5.15	66.76	89	Zimbabwe.....	4.22	35.24
23	Ireland.....	5.11	65.54	90	Montenegro.....	4.21	34.75
24	Israel.....	5.06	63.89	91	Ukraine.....	4.21	34.74
25	Philippines.....	5.04	63.04	92	Madagascar.....	4.16	33.22
26	Canada.....	5.03	62.94	93	Bangladesh.....	4.15	32.78
27	United Kingdom.....	5.03	62.93	94	Belarus.....	4.15	32.77
28	Saudi Arabia.....	5.02	62.51	95	Lebanon.....	4.15	32.74
29	Germany.....	5.01	62.27	96	Italy.....	4.10	31.24
30	Albania.....	4.99	61.46	97	Romania.....	4.10	31.21
31	Latvia.....	4.97	60.79	98	Kyrgyzstan.....	4.09	30.73
32	China.....	4.95	60.09	99	Bulgaria.....	4.08	30.52
33	Guatemala.....	4.94	59.74	100	El Salvador.....	4.07	29.94
34	Armenia.....	4.88	57.56	101	Greece.....	4.06	29.86
35	Thailand.....	4.86	56.91	102	Serbia.....	4.06	29.75
36	Brunei Darussalam.....	4.85	56.74	103	Malawi.....	4.05	29.55
37	Jordan.....	4.85	56.70	104	Eswatini.....	4.05	29.55
38	Rwanda.....	4.83	55.98	105	Peru.....	4.05	29.54
39	Gambia.....	4.79	54.61	106	Morocco.....	4.04	29.12
40	Cyprus.....	4.79	54.58	107	Nigeria.....	4.02	28.40
41	Lithuania.....	4.76	53.63	108	Turkey.....	4.00	27.68
42	Czech Republic.....	4.76	53.52	109	Zambia.....	4.00	27.55
43	Egypt.....	4.76	53.48	110	Burkina Faso.....	3.98	27.12
44	Mauritius.....	4.75	53.44	111	Cameroon.....	3.96	26.17
45	Kuwait.....	4.73	52.68	112	Yemen.....	3.94	25.64
46	Côte d'Ivoire.....	4.73	52.54	113	Mali.....	3.92	24.86
47	Belgium.....	4.72	52.14	114	Pakistan.....	3.91	24.71
48	Indonesia.....	4.68	51.06	115	Venezuela, Bolivarian Rep.....	3.86	22.98
49	Nicaragua.....	4.64	49.51	116	Nepal.....	3.85	22.55
50	Lao PDR.....	4.64	49.37	117	Argentina.....	3.81	21.09
51	Portugal.....	4.60	48.08	118	Brazil.....	3.78	20.15
52	Australia.....	4.59	47.71	119	North Macedonia.....	3.78	20.08
53	Viet Nam.....	4.57	47.26	120	Tunisia.....	3.76	19.46
54	Guinea.....	4.56	46.84	121	Congo, Dem. Rep.....	3.69	17.08
55	Chile.....	4.52	45.56	122	Korea, Rep.....	3.68	16.77
56	Dominican Republic.....	4.52	45.27	123	Angola.....	3.65	15.65
57	Slovenia.....	4.50	44.86	124	Chad.....	3.62	14.55
58	Spain.....	4.49	44.43	125	Iran, Islamic Rep.....	3.58	13.28
59	Tajikistan.....	4.47	43.66	126	Mozambique.....	3.56	12.69
60	Mexico.....	4.45	43.16	127	Bolivia, Plurinational St.....	3.56	12.57
61	Ghana.....	4.45	43.05	128	Bosnia and Herzegovina.....	3.53	11.69
62	Colombia.....	4.42	42.11	129	Ethiopia.....	3.52	11.20
63	Cambodia.....	4.41	41.80	130	Uruguay.....	3.51	10.90
64	Botswana.....	4.41	41.73	131	Croatia.....	3.34	5.21
65	Moldova, Rep.....	4.41	41.64	132	Lesotho.....	3.32	4.47
66	Paraguay.....	4.41	41.60	133	Trinidad and Tobago.....	3.20	0.32
67	Sri Lanka.....	4.39	41.06	134	South Africa.....	3.19	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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1.3.3 Professional management

Average answer to the question: In your country, who holds senior management positions in companies? [1 = usually relatives or friends without regard to merit; 7 = mostly professional managers chosen for merit and qualifications] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland	6.16	100.00	68	Namibia	4.31	52.75
2	Netherlands	6.08	97.92	69	Malawi	4.31	52.56
3	Singapore	5.99	95.71	70	Colombia	4.30	52.51
4	New Zealand	5.90	93.35	71	Turkey	4.29	52.16
5	Denmark	5.90	93.24	72	Jordan	4.28	51.99
6	Switzerland	5.87	92.66	73	Panama	4.20	49.95
7	Australia	5.84	91.88	74	Uganda	4.17	49.01
8	Ireland	5.83	91.52	75	Guatemala	4.17	49.01
9	Sweden	5.80	90.84	76	Brunei Darussalam	4.16	48.97
10	United States of America	5.78	90.34	77	Peru	4.16	48.85
11	Norway	5.63	86.55	78	Mongolia	4.14	48.31
12	Japan	5.63	86.36	79	Egypt	4.13	48.05
13	United Kingdom	5.52	83.68	80	Mexico	4.13	48.02
14	Malaysia	5.47	82.36	81	Montenegro	4.11	47.54
15	Canada	5.45	81.77	82	Hungary	4.10	47.35
16	Estonia	5.42	81.12	83	Dominican Republic	4.09	47.00
17	Belgium	5.42	80.99	84	Zambia	4.09	46.94
18	Luxembourg	5.41	80.68	85	Poland	4.08	46.87
19	Israel	5.38	80.03	86	Belarus	4.02	45.29
20	Austria	5.35	79.36	87	Lao PDR	4.01	45.01
21	Iceland	5.32	78.38	88	Cambodia	4.00	44.74
22	Germany	5.30	77.93	89	Greece	4.00	44.64
23	United Arab Emirates	5.27	77.29	90	Pakistan	3.99	44.55
24	France	5.27	77.12	91	Côte d'Ivoire	3.96	43.84
25	Qatar	5.19	75.12	92	Bangladesh	3.93	43.03
26	Czech Republic	5.18	74.92	93	Russian Federation	3.91	42.47
27	Lithuania	5.05	71.61	94	Viet Nam	3.89	42.03
28	China	5.04	71.25	95	Italy	3.89	42.02
29	Oman	4.96	69.21	96	Romania	3.85	40.93
30	Bahrain	4.93	68.65	97	Tunisia	3.84	40.79
31	Rwanda	4.92	68.31	98	Bulgaria	3.83	40.39
32	Zimbabwe	4.88	67.34	99	Lebanon	3.80	39.74
33	Indonesia	4.88	67.28	100	Ukraine	3.78	39.22
34	Philippines	4.87	67.00	101	Cyprus	3.76	38.59
35	Jamaica	4.86	66.63	102	Cabo Verde	3.73	37.79
36	Costa Rica	4.84	66.17	103	Moldova, Rep.	3.70	37.18
37	Chile	4.75	63.93	104	Kuwait	3.70	37.05
38	Azerbaijan	4.73	63.47	105	Honduras	3.69	36.93
39	Spain	4.72	63.18	106	Ecuador	3.69	36.89
40	Ghana	4.71	62.93	107	Cameroon	3.69	36.84
41	Saudi Arabia	4.71	62.91	108	Senegal	3.68	36.54
42	Albania	4.69	62.40	109	El Salvador	3.64	35.60
43	Gambia	4.65	61.43	110	Nepal	3.64	35.60
44	Eswatini	4.64	61.04	111	Paraguay	3.61	34.81
45	Latvia	4.63	60.94	112	Tajikistan	3.59	34.35
46	Nigeria	4.58	59.58	113	Serbia	3.59	34.17
47	Slovenia	4.56	59.01	114	Kazakhstan	3.57	33.73
48	India	4.56	58.95	115	Burundi	3.56	33.48
49	Brazil	4.54	58.68	116	Guinea	3.55	33.35
50	Botswana	4.54	58.67	117	Madagascar	3.50	32.02
51	South Africa	4.54	58.67	118	Croatia	3.49	31.65
52	Thailand	4.54	58.65	119	Bolivia, Plurinational St.	3.48	31.38
53	Korea, Rep.	4.51	57.89	120	Congo, Dem. Rep.	3.44	30.39
54	Trinidad and Tobago	4.50	57.65	121	Nicaragua	3.41	29.69
55	Tanzania, United Rep.	4.44	56.08	122	Mali	3.39	29.06
56	Malta	4.44	55.94	123	North Macedonia	3.37	28.67
57	Slovakia	4.43	55.72	124	Ethiopia	3.36	28.52
58	Kenya	4.42	55.52	125	Kyrgyzstan	3.36	28.31
59	Portugal	4.39	54.74	126	Iran, Islamic Rep.	3.30	26.91
60	Morocco	4.38	54.39	127	Lesotho	3.30	26.75
61	Mauritius	4.37	54.28	128	Algeria	3.28	26.34
62	Armenia	4.36	53.99	129	Bosnia and Herzegovina	3.13	22.54
63	Sri Lanka	4.35	53.82	130	Mozambique	3.09	21.50
64	Venezuela, Bolivarian Rep.	4.35	53.66	131	Burkina Faso	3.06	20.69
65	Georgia	4.34	53.45	132	Yemen	2.76	12.95
66	Uruguay	4.34	53.43	133	Angola	2.57	8.23
67	Argentina	4.33	53.12	134	Chad	2.25	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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1.3.4 Relationship of pay to productivity

Average answer to the question: In your country, to what extent is pay related to employee productivity? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	5.44	100.00	68	Rwanda.....	3.93	53.28
2	United States of America.....	5.40	98.96	69	Pakistan.....	3.92	53.07
3	Switzerland.....	5.38	98.30	70	Lebanon.....	3.92	53.01
4	United Arab Emirates.....	5.22	93.19	71	Serbia.....	3.90	52.37
5	Qatar.....	5.13	90.41	72	Montenegro.....	3.90	52.29
6	Germany.....	5.09	89.21	73	Kuwait.....	3.85	50.66
7	Malaysia.....	5.07	88.71	74	Portugal.....	3.84	50.60
8	China.....	5.04	87.74	75	Georgia.....	3.84	50.50
9	Azerbaijan.....	4.95	84.93	76	Guatemala.....	3.84	50.38
10	Korea, Rep.....	4.89	82.99	77	Bangladesh.....	3.80	49.16
11	Estonia.....	4.88	82.83	78	Mexico.....	3.77	48.23
12	Saudi Arabia.....	4.88	82.74	79	Spain.....	3.76	48.09
13	Canada.....	4.85	81.69	80	Turkey.....	3.74	47.41
14	Israel.....	4.78	79.57	81	Tanzania, United Rep.....	3.74	47.36
15	Bahrain.....	4.77	79.43	82	Nigeria.....	3.73	47.03
16	Denmark.....	4.76	78.90	83	Trinidad and Tobago.....	3.73	47.01
17	Ireland.....	4.75	78.86	84	Jamaica.....	3.72	46.64
18	Netherlands.....	4.72	77.79	85	South Africa.....	3.71	46.31
19	Indonesia.....	4.72	77.64	86	Colombia.....	3.70	46.05
20	Iceland.....	4.69	76.75	87	Morocco.....	3.70	45.96
21	Philippines.....	4.69	76.71	88	Mongolia.....	3.69	45.89
22	New Zealand.....	4.65	75.47	89	Eswatini.....	3.69	45.86
23	Tajikistan.....	4.63	74.86	90	North Macedonia.....	3.67	45.33
24	Lithuania.....	4.62	74.77	91	Algeria.....	3.65	44.53
25	Austria.....	4.62	74.69	92	Ethiopia.....	3.62	43.60
26	Oman.....	4.60	74.06	93	Ecuador.....	3.60	42.99
27	United Kingdom.....	4.60	73.94	94	Nepal.....	3.60	42.98
28	Belgium.....	4.58	73.39	95	Cabo Verde.....	3.59	42.84
29	Albania.....	4.58	73.35	96	Uganda.....	3.59	42.73
30	Finland.....	4.57	73.09	97	Romania.....	3.59	42.59
31	Australia.....	4.54	72.05	98	Dominican Republic.....	3.57	42.00
32	Gambia.....	4.53	71.96	99	Greece.....	3.56	41.91
33	Norway.....	4.53	71.79	100	Malawi.....	3.55	41.52
34	Thailand.....	4.52	71.47	101	Hungary.....	3.55	41.40
35	Luxembourg.....	4.52	71.42	102	Cameroon.....	3.53	40.91
36	Japan.....	4.48	70.44	103	Paraguay.....	3.52	40.58
37	Czech Republic.....	4.45	69.32	104	Honduras.....	3.51	40.07
38	Viet Nam.....	4.43	68.67	105	Peru.....	3.50	40.04
39	Chile.....	4.43	68.67	106	Zambia.....	3.50	39.81
40	Russian Federation.....	4.42	68.46	107	Yemen.....	3.47	38.96
41	Jordan.....	4.42	68.34	108	Brazil.....	3.46	38.81
42	Malta.....	4.41	68.22	109	Botswana.....	3.46	38.56
43	Latvia.....	4.40	67.85	110	Uruguay.....	3.46	38.51
44	Sweden.....	4.40	67.71	111	Panama.....	3.45	38.25
45	Costa Rica.....	4.38	67.23	112	Senegal.....	3.42	37.50
46	Lao PDR.....	4.29	64.29	113	Zimbabwe.....	3.38	36.24
47	Slovakia.....	4.28	63.98	114	Argentina.....	3.38	36.05
48	Belarus.....	4.26	63.60	115	Croatia.....	3.37	36.00
49	Kazakhstan.....	4.23	62.61	116	Nicaragua.....	3.36	35.57
50	Kyrgyzstan.....	4.23	62.44	117	Côte d'Ivoire.....	3.34	34.91
51	Armenia.....	4.22	62.35	118	Bosnia and Herzegovina.....	3.31	34.04
52	Cambodia.....	4.22	62.33	119	Italy.....	3.29	33.45
53	Kenya.....	4.19	61.41	120	Lesotho.....	3.28	33.21
54	Ukraine.....	4.18	61.04	121	Mali.....	3.26	32.52
55	Poland.....	4.17	60.66	122	Tunisia.....	3.26	32.52
56	Ghana.....	4.10	58.43	123	Iran, Islamic Rep.....	3.22	31.35
57	Moldova, Rep.....	4.05	57.06	124	Guinea.....	3.22	31.25
58	France.....	4.04	56.63	125	Madagascar.....	3.12	28.05
59	Slovenia.....	4.03	56.24	126	El Salvador.....	3.10	27.63
60	Egypt.....	4.02	56.01	127	Burundi.....	3.04	25.63
61	Mauritius.....	4.00	55.51	128	Bolivia, Plurinational St.....	2.86	19.99
62	India.....	3.98	54.88	129	Chad.....	2.81	18.35
63	Sri Lanka.....	3.98	54.66	130	Mozambique.....	2.79	17.72
64	Namibia.....	3.97	54.43	131	Burkina Faso.....	2.73	15.97
65	Bulgaria.....	3.97	54.35	132	Congo, Dem. Rep.....	2.71	15.37
66	Cyprus.....	3.95	53.88	133	Angola.....	2.52	9.46
67	Brunei Darussalam.....	3.94	53.48	134	Venezuela, Bolivarian Rep.....	2.22	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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1.3.5 Technology utilisation

Average answer to the question: In your country, to what extent do businesses adopt the latest technologies? [1 = not at all; 7 = to a great extent] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	6.01	100.00	68	Dominican Republic.....	4.43	50.03
2	Sweden.....	5.97	98.63	69	Hungary.....	4.40	48.83
3	Switzerland.....	5.89	96.15	70	Armenia.....	4.39	48.58
4	Iceland.....	5.89	96.05	71	Bulgaria.....	4.39	48.58
5	Israel.....	5.88	95.65	72	Uruguay.....	4.37	48.11
6	Finland.....	5.82	93.73	73	Pakistan.....	4.32	46.59
7	Netherlands.....	5.77	92.40	74	Namibia.....	4.32	46.50
8	Denmark.....	5.75	91.77	75	Ecuador.....	4.32	46.44
9	Luxembourg.....	5.66	88.90	76	Montenegro.....	4.32	46.36
10	Germany.....	5.58	86.41	77	Brunei Darussalam.....	4.31	46.25
11	Japan.....	5.58	86.16	78	Trinidad and Tobago.....	4.31	46.17
12	Singapore.....	5.54	85.04	79	Egypt.....	4.31	46.09
13	United Kingdom.....	5.51	84.12	80	Colombia.....	4.30	45.74
14	Malaysia.....	5.51	84.09	81	Bangladesh.....	4.29	45.43
15	Norway.....	5.46	82.39	82	Albania.....	4.27	44.87
16	New Zealand.....	5.37	79.62	83	Croatia.....	4.27	44.79
17	Ireland.....	5.35	79.12	84	Madagascar.....	4.25	44.29
18	United Arab Emirates.....	5.35	78.92	85	Greece.....	4.25	44.22
19	Lithuania.....	5.32	78.08	86	Ghana.....	4.24	44.06
20	Austria.....	5.29	77.21	87	Argentina.....	4.24	44.03
21	Korea, Rep.....	5.28	76.83	88	Kazakhstan.....	4.23	43.48
22	Canada.....	5.28	76.74	89	Mongolia.....	4.23	43.44
23	Estonia.....	5.28	76.64	90	Cabo Verde.....	4.22	43.37
24	Portugal.....	5.26	76.21	91	Nigeria.....	4.19	42.41
25	Australia.....	5.25	75.91	92	Ukraine.....	4.19	42.28
26	Saudi Arabia.....	5.25	75.86	93	Tajikistan.....	4.17	41.59
27	France.....	5.19	73.86	94	Sri Lanka.....	4.15	41.21
28	Belgium.....	5.18	73.73	95	Cambodia.....	4.15	41.07
29	Indonesia.....	5.18	73.64	96	Peru.....	4.15	40.97
30	Malta.....	5.15	72.70	97	Lao PDR.....	4.12	40.00
31	Bahrain.....	5.08	70.44	98	Serbia.....	4.11	39.74
32	Kenya.....	5.07	70.07	99	Tanzania, United Rep.....	4.09	39.07
33	Qatar.....	5.06	69.73	100	Paraguay.....	4.08	38.89
34	Czech Republic.....	4.99	67.76	101	Lebanon.....	4.08	38.70
35	Latvia.....	4.99	67.45	102	Moldova, Rep.....	4.07	38.40
36	Guatemala.....	4.97	66.96	103	Viet Nam.....	4.05	38.03
37	Chile.....	4.97	66.95	104	Romania.....	4.04	37.49
38	Slovakia.....	4.94	65.97	105	Botswana.....	4.02	36.97
39	Philippines.....	4.93	65.86	106	Bosnia and Herzegovina.....	4.02	36.85
40	Slovenia.....	4.92	65.55	107	Georgia.....	4.01	36.65
41	Costa Rica.....	4.92	65.53	108	Tunisia.....	3.99	36.16
42	South Africa.....	4.91	65.15	109	El Salvador.....	3.99	35.90
43	Senegal.....	4.91	65.02	110	Uganda.....	3.97	35.29
44	Azerbaijan.....	4.88	64.06	111	Mali.....	3.93	34.26
45	Jordan.....	4.88	64.02	112	North Macedonia.....	3.90	33.16
46	Thailand.....	4.85	63.17	113	Cameroon.....	3.86	31.79
47	Spain.....	4.82	62.27	114	Zambia.....	3.85	31.59
48	Oman.....	4.78	61.08	115	Nicaragua.....	3.84	31.29
49	Panama.....	4.75	59.96	116	Zimbabwe.....	3.74	28.02
50	India.....	4.74	59.61	117	Mozambique.....	3.72	27.61
51	Cyprus.....	4.70	58.34	118	Iran, Islamic Rep.....	3.72	27.54
52	Mexico.....	4.69	58.16	119	Algeria.....	3.68	26.37
53	Mauritius.....	4.68	57.67	120	Burkina Faso.....	3.67	25.79
54	Côte d'Ivoire.....	4.62	56.04	121	Nepal.....	3.66	25.63
55	Honduras.....	4.62	55.87	122	Bolivia, Plurinational St.....	3.62	24.40
56	China.....	4.56	54.03	123	Eswatini.....	3.59	23.43
57	Brazil.....	4.54	53.43	124	Venezuela, Bolivarian Rep.....	3.48	19.85
58	Jamaica.....	4.54	53.41	125	Malawi.....	3.39	17.15
59	Italy.....	4.54	53.33	126	Kyrgyzstan.....	3.37	16.39
60	Morocco.....	4.53	53.23	127	Ethiopia.....	3.29	13.80
61	Poland.....	4.53	53.14	128	Congo, Dem. Rep.....	3.27	13.38
62	Russian Federation.....	4.53	52.97	129	Chad.....	3.11	8.33
63	Rwanda.....	4.52	52.91	130	Angola.....	3.07	6.84
64	Kuwait.....	4.52	52.84	131	Lesotho.....	2.94	2.77
65	Guinea.....	4.49	51.88	132	Burundi.....	2.90	1.54
66	Turkey.....	4.49	51.73	133	Yemen.....	2.85	0.00
67	Gambia.....	4.48	51.64		Belarus.....	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

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1.3.6 Investment in emerging technologies

Average answer to the question: In your country, to what extent do companies invest in emerging technologies (e.g Internet of Things, advanced analytics and artificial intelligence, augmented virtual reality and wearables, advanced robotics, 3D printing)? [1 = not at all; 7 = to a great extent] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	6.00	100.00	68	Chile.....	3.54	38.42
2	Israel	5.85	96.21	69	Sri Lanka.....	3.53	38.35
3	Sweden	5.68	91.97	70	Jamaica.....	3.52	38.07
4	Switzerland.....	5.57	89.43	71	Guatemala.....	3.50	37.54
5	Netherlands.....	5.51	87.95	72	Poland.....	3.49	37.21
6	Finland.....	5.51	87.87	73	Egypt.....	3.48	37.05
7	Germany.....	5.47	86.85	74	Kazakhstan.....	3.48	37.04
8	United Kingdom	5.29	82.43	75	Gambia.....	3.45	36.20
9	Japan.....	5.20	79.99	76	Uganda.....	3.44	36.03
10	Luxembourg.....	5.18	79.58	77	Honduras.....	3.43	35.90
11	United Arab Emirates.....	5.18	79.57	78	Lesotho.....	3.43	35.86
12	Malaysia.....	5.15	78.89	79	Tunisia.....	3.42	35.63
13	Singapore.....	5.14	78.60	80	Mauritius.....	3.40	34.96
14	Denmark.....	5.07	76.91	81	Morocco.....	3.40	34.94
15	Norway.....	4.94	73.55	82	Namibia.....	3.39	34.86
16	Qatar.....	4.84	71.18	83	Argentina.....	3.38	34.66
17	Ireland.....	4.82	70.53	84	Cabo Verde.....	3.36	34.06
18	New Zealand.....	4.74	68.51	85	Algeria.....	3.36	33.92
19	Canada.....	4.73	68.25	86	Madagascar.....	3.35	33.88
20	Belgium.....	4.70	67.50	87	Montenegro.....	3.34	33.65
21	France.....	4.69	67.30	88	Cameroon.....	3.33	33.24
22	Azerbaijan.....	4.68	67.18	89	Mali.....	3.33	33.17
23	Australia.....	4.63	65.76	90	Mongolia.....	3.32	32.94
24	Iceland.....	4.63	65.70	91	Zambia.....	3.25	31.39
25	Austria.....	4.57	64.42	92	Cyprus.....	3.25	31.37
26	India.....	4.57	64.29	93	Serbia.....	3.25	31.34
27	Indonesia.....	4.51	62.78	94	Romania.....	3.25	31.16
28	Lithuania.....	4.47	61.76	95	Botswana.....	3.23	30.84
29	Saudi Arabia.....	4.46	61.52	96	Georgia.....	3.20	29.90
30	Philippines.....	4.44	61.10	97	Dominican Republic.....	3.16	29.14
31	Kenya.....	4.40	60.12	98	Bangladesh.....	3.16	29.07
32	China.....	4.39	59.71	99	Côte d'Ivoire.....	3.14	28.47
33	Korea, Rep.....	4.38	59.48	100	Hungary.....	3.13	28.34
34	Estonia.....	4.35	58.91	101	Ethiopia.....	3.13	28.27
35	Czech Republic.....	4.20	55.17	102	Iran, Islamic Rep.....	3.11	27.77
36	Thailand.....	4.18	54.44	103	Turkey.....	3.10	27.62
37	Malta.....	4.14	53.67	104	Uruguay.....	3.08	26.97
38	Portugal.....	4.11	52.88	105	Nepal.....	3.05	26.30
39	South Africa.....	4.07	51.83	106	Mozambique.....	3.04	26.00
40	Slovenia.....	4.06	51.61	107	Croatia.....	3.01	25.34
41	Rwanda.....	4.00	50.02	108	Peru.....	3.01	25.15
42	Oman.....	4.00	50.01	109	Burkina Faso.....	2.96	23.92
43	Slovakia.....	3.97	49.41	110	Greece.....	2.94	23.53
44	Ghana.....	3.97	49.40	111	Burundi.....	2.94	23.48
45	Jordan.....	3.97	49.20	112	Ecuador.....	2.93	23.33
46	Russian Federation.....	3.95	48.90	113	Brunei Darussalam.....	2.93	23.20
47	Costa Rica.....	3.93	48.38	114	Nigeria.....	2.91	22.87
48	Pakistan.....	3.93	48.24	115	Trinidad and Tobago.....	2.89	22.32
49	Bulgaria.....	3.86	46.61	116	Albania.....	2.87	21.88
50	Lao PDR.....	3.85	46.40	117	Malawi.....	2.79	19.79
51	Armenia.....	3.85	46.26	118	Moldova, Rep.....	2.78	19.51
52	Guinea.....	3.83	45.81	119	Kyrgyzstan.....	2.77	19.32
53	Latvia.....	3.79	44.86	120	Paraguay.....	2.76	19.09
54	Cambodia.....	3.75	43.85	121	El Salvador.....	2.76	18.90
55	Spain.....	3.72	43.01	122	Congo, Dem. Rep.....	2.70	17.50
56	Kuwait.....	3.70	42.57	123	North Macedonia.....	2.70	17.45
57	Tajikistan.....	3.67	41.88	124	Bosnia and Herzegovina.....	2.68	16.99
58	Tanzania, United Rep.....	3.66	41.64	125	Nicaragua.....	2.53	13.37
59	Senegal.....	3.65	41.21	126	Chad.....	2.51	12.79
60	Italy.....	3.64	41.08	127	Zimbabwe.....	2.49	12.22
61	Lebanon.....	3.63	40.91	128	Bolivia, Plurinational St.....	2.48	12.03
62	Ukraine.....	3.62	40.56	129	Eswatini.....	2.47	11.76
63	Panama.....	3.61	40.39	130	Venezuela, Bolivarian Rep.....	2.43	10.78
64	Mexico.....	3.59	39.74	131	Yemen.....	2.31	7.80
65	Brazil.....	3.56	38.96	132	Angola.....	2.00	0.00
66	Colombia.....	3.55	38.85		Bahrain.....	n/a	n/a
67	Viet Nam.....	3.54	38.57		Belarus.....	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

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1.3.7 Firms with website

Firms with website (% of total) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland	95.92	100.00	68	Venezuela, Bolivarian Rep.	51.50	48.60
2	Denmark	92.77	96.35	69	Georgia	51.20	48.25
3	Switzerland	91.74	95.17	70	Kazakhstan	50.40	47.33
4	Japan	91.50	94.89	71	Bolivia, Plurinational St.	49.40	46.17
5	Austria	90.42	93.64	72	India	48.90	45.59
6	Sweden	90.05	93.21	73	Viet Nam	48.60	45.24
7	Germany	88.35	91.24	74	Moldova, Rep.	48.10	44.67
8	Belgium	86.62	89.24	75	Kenya	47.30	43.74
9	Netherlands	84.14	86.37	76	Pakistan	46.90	43.28
10	Luxembourg	83.98	86.19	77	Bulgaria	45.70	41.89
11	United Kingdom	83.88	86.07	78	Thailand	45.50	41.66
12	Czech Republic	83.32	85.42	79	Malawi	44.90	40.96
13	Malta	83.30	85.40	80	Honduras	43.50	39.34
14	New Zealand	82.76	84.77	81	Rwanda	42.60	38.30
15	Iceland	82.57	84.56	82	El Salvador	42.50	38.19
16	Canada	81.80	83.66	83	Egypt	42.40	38.07
17	Slovenia	80.79	82.49	84	Mali	42.20	37.84
18	Australia	80.37	82.01	85	Dominican Republic	42.00	37.61
19	Estonia	79.79	81.34	86	Mexico	41.45	36.97
20	South Africa	79.60	81.12	87	Montenegro	41.00	36.45
21	Serbia	79.10	80.54	88	Panama	40.50	35.87
22	Norway	78.76	80.14	89	Mozambique	40.30	35.64
23	Chile	78.70	80.07	90	Nicaragua	40.10	35.41
24	Ecuador	78.30	79.61	91	Namibia	39.40	34.60
25	Lithuania	78.13	79.41	92	Zimbabwe	38.70	33.79
26	Jordan	77.10	78.22	93	Mongolia	37.50	32.40
27	Slovakia	75.82	76.74	94	Botswana	36.60	31.36
28	Spain	75.28	76.12	95	Jamaica	36.40	31.13
29	Ireland	75.27	76.10	96	Mauritius	35.90	30.55
30	Croatia	74.90	75.68	97	Ethiopia	34.80	29.28
31	Belarus	73.50	74.06	98	Senegal	34.60	29.04
32	Italy	73.11	73.61	99	Ghana	33.20	27.42
33	United States of America	72.85	73.31	100	Malaysia	31.50	25.46
34	Paraguay	71.60	71.86	101	Lao PDR	30.90	24.76
35	Cyprus	71.50	71.74	102	Trinidad and Tobago	30.80	24.65
36	Poland	71.32	71.54	103	Madagascar	29.50	23.14
37	France	70.35	70.41	104	Angola	28.90	22.45
38	Argentina	69.30	69.20	105	Tajikistan	28.20	21.64
39	Peru	69.20	69.08	106	Bangladesh	26.30	19.44
40	Uruguay	69.10	68.97	107	Nepal	26.10	19.21
41	Bosnia and Herzegovina	68.10	67.81	108	Burundi	25.60	18.63
42	Colombia	67.81	67.47	109	Cambodia	24.20	17.01
43	Israel	67.20	66.77	110	Cameroon	22.60	15.16
44	Korea, Rep.	67.10	66.65	110	Tanzania, United Rep.	22.60	15.16
45	Azerbaijan	66.20	65.61	112	Gambia	22.40	14.93
46	China	66.10	65.49	113	Nigeria	22.30	14.81
47	Ukraine	63.90	62.95	114	Yemen	21.00	13.31
48	Lebanon	63.50	62.49	115	Indonesia	20.50	12.73
48	North Macedonia	63.50	62.49	116	Cabo Verde	19.20	11.22
50	Hungary	63.23	62.17	116	Uganda	19.20	11.22
51	Latvia	62.62	61.46	118	Guinea	19.00	10.99
52	Eswatini	62.50	61.33	119	Sri Lanka	18.60	10.53
53	Portugal	61.55	60.23	120	Côte d'Ivoire	18.10	9.95
54	Greece	60.10	58.55	121	Burkina Faso	17.20	8.91
55	Albania	59.80	58.20	122	Congo, Dem. Rep.	17.00	8.68
56	Zambia	59.00	57.28	123	Lesotho	14.90	6.25
57	Russian Federation	58.50	56.70	124	Chad	9.50	0.00
58	Guatemala	58.00	56.12		Algeria	n/a	n/a
59	Armenia	57.50	55.54		Bahrain	n/a	n/a
60	Kyrgyzstan	57.20	55.20		Brunei Darussalam	n/a	n/a
61	Tunisia	56.50	54.39		Iran, Islamic Rep.	n/a	n/a
62	Morocco	55.40	53.11		Kuwait	n/a	n/a
63	Costa Rica	54.00	51.49		Oman	n/a	n/a
64	Turkey	53.75	51.20		Qatar	n/a	n/a
65	Brazil	52.90	50.22		Saudi Arabia	n/a	n/a
66	Philippines	52.40	49.64		Singapore	n/a	n/a
67	Romania	52.30	49.53		United Arab Emirates	n/a	n/a

SOURCE: OECD, ICT Access and Use by Businesses, OECD Telecommunications and Internet Statistics (database) (<https://doi.org/10.1787/9d2cb97b-en>); World Bank, Enterprise Surveys (www.enterprisesurveys.org)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

Pillar 2

Attract

2.1.1 FDI and technology transfer

Average answer to the question: To what extent does foreign direct investment (FDI) bring new technology into your country? [1 = not at all; 7 = to a great extent] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Ireland	6.11	100.00	68	Colombia	4.34	56.46
2	Singapore	5.94	95.97	69	Guatemala	4.33	56.20
3	United States of America	5.92	95.43	70	Mauritius	4.32	56.16
4	Luxembourg	5.76	91.33	71	Trinidad and Tobago	4.32	56.14
5	Israel	5.65	88.72	72	Senegal	4.29	55.23
6	United Kingdom	5.59	87.19	73	Turkey	4.26	54.51
7	Malta	5.53	85.75	74	Pakistan	4.24	54.17
8	Netherlands	5.51	85.23	75	Rwanda	4.24	54.15
9	Malaysia	5.50	84.98	76	Namibia	4.24	54.09
10	Sweden	5.46	84.12	77	Ghana	4.24	54.06
11	Germany	5.44	83.51	78	Côte d'Ivoire	4.23	53.74
12	Switzerland	5.42	83.21	79	Cabo Verde	4.21	53.26
13	Denmark	5.41	82.89	80	Brunei Darussalam	4.18	52.68
14	Japan	5.40	82.67	81	Italy	4.17	52.30
15	United Arab Emirates	5.35	81.39	82	Nicaragua	4.16	52.07
16	Portugal	5.33	81.00	83	Uganda	4.14	51.76
17	Slovakia	5.33	80.97	84	Armenia	4.14	51.72
18	Chile	5.25	78.89	85	Lao PDR	4.12	51.24
19	New Zealand	5.23	78.48	86	Serbia	4.11	50.95
20	Australia	5.20	77.79	87	Romania	4.10	50.58
21	Costa Rica	5.20	77.71	88	Zambia	4.07	50.02
22	Panama	5.19	77.33	89	Tunisia	4.02	48.78
23	Belgium	5.15	76.58	90	Georgia	4.02	48.64
24	Lithuania	5.09	75.02	91	Tanzania, United Rep.	4.02	48.61
25	Mexico	5.08	74.80	92	Viet Nam	4.00	48.29
26	Canada	5.08	74.71	93	Nigeria	3.97	47.57
27	Qatar	5.04	73.66	94	Moldova, Rep.	3.97	47.39
28	Albania	5.03	73.48	95	Iran, Islamic Rep.	3.96	47.28
29	Spain	5.02	73.33	96	Madagascar	3.95	46.90
30	Azerbaijan	4.99	72.44	97	Tajikistan	3.95	46.89
31	Hungary	4.97	72.09	98	Mozambique	3.90	45.77
32	Finland	4.97	72.05	99	Kazakhstan	3.90	45.77
33	France	4.95	71.67	100	Paraguay	3.89	45.61
34	Philippines	4.95	71.65	101	Bangladesh	3.85	44.51
35	Saudi Arabia	4.95	71.49	102	Russian Federation	3.84	44.38
36	Norway	4.93	70.98	103	Kuwait	3.82	43.76
37	Jamaica	4.92	70.73	104	Mongolia	3.80	43.29
38	Czech Republic	4.90	70.25	105	Botswana	3.79	42.99
39	Bahrain	4.87	69.65	106	Sri Lanka	3.77	42.54
40	Dominican Republic	4.84	68.81	107	Argentina	3.74	41.79
41	Thailand	4.80	67.84	108	Burkina Faso	3.71	41.08
42	Estonia	4.79	67.67	109	Greece	3.66	39.85
43	Uruguay	4.78	67.48	110	Mali	3.65	39.53
44	Indonesia	4.75	66.69	111	Croatia	3.63	39.20
45	Poland	4.74	66.28	112	Ethiopia	3.63	39.09
46	Austria	4.74	66.28	113	Cameroon	3.59	38.05
47	Morocco	4.73	66.15	114	Algeria	3.58	37.96
48	Korea, Rep.	4.69	65.23	115	Bosnia and Herzegovina	3.58	37.96
49	Honduras	4.67	64.64	116	North Macedonia	3.56	37.49
50	Kenya	4.66	64.55	117	El Salvador	3.54	36.83
51	China	4.66	64.42	118	Ecuador	3.52	36.46
52	India	4.64	63.84	119	Ukraine	3.51	36.29
53	Cambodia	4.59	62.79	120	Lebanon	3.51	36.13
54	Gambia	4.58	62.34	121	Congo, Dem. Rep.	3.46	34.92
55	Latvia	4.56	62.09	122	Eswatini	3.39	33.23
56	Montenegro	4.53	61.32	123	Nepal	3.35	32.35
57	Brazil	4.53	61.16	124	Malawi	3.35	32.22
58	Guinea	4.49	60.31	125	Angola	3.33	31.76
59	South Africa	4.49	60.16	126	Burundi	3.30	30.91
60	Jordan	4.49	60.14	127	Bolivia, Plurinational St.	3.27	30.39
61	Oman	4.44	58.99	128	Chad	2.98	23.20
62	Slovenia	4.43	58.80	129	Kyrgyzstan	2.89	20.95
63	Peru	4.42	58.52	130	Zimbabwe	2.84	19.79
64	Bulgaria	4.42	58.46	131	Lesotho	2.81	18.96
65	Cyprus	4.36	57.07	132	Venezuela, Bolivarian Rep.	2.43	9.64
66	Egypt	4.36	57.05	133	Yemen	2.04	0.00
67	Iceland	4.34	56.48		Belarus	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

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2.1.2 Prevalence of foreign ownership

Average answer to the question: In your country, how prevalent is foreign ownership of companies?
[1 = extremely rare; 7 = extremely prevalent] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	6.22	100.00	68	Congo, Dem. Rep.	4.48	57.55
2	Slovakia	6.07	96.33	69	Cameroon	4.47	57.17
3	Singapore	6.06	95.97	70	Argentina	4.44	56.60
4	United Kingdom	6.03	95.35	71	Norway	4.43	56.34
5	Czech Republic	5.98	94.05	72	Bulgaria	4.40	55.49
6	Belgium	5.83	90.39	73	Madagascar	4.38	55.18
7	Ireland	5.71	87.52	74	Paraguay	4.38	55.11
8	Estonia	5.67	86.50	75	Georgia	4.36	54.69
9	Japan	5.65	85.97	76	Jordan	4.36	54.54
10	Switzerland	5.63	85.54	77	Lao PDR	4.35	54.24
11	Denmark	5.57	84.12	78	Cabo Verde	4.35	54.22
12	United States of America	5.55	83.50	79	Nicaragua	4.34	53.97
13	New Zealand	5.51	82.63	80	Trinidad and Tobago	4.33	53.78
14	Australia	5.50	82.47	81	Guatemala	4.32	53.67
15	Gambia	5.46	81.36	82	Korea, Rep.	4.32	53.63
16	Bahrain	5.46	81.33	83	Croatia	4.31	53.42
17	Chile	5.45	81.24	84	Mozambique	4.31	53.35
18	Canada	5.45	81.11	85	Cambodia	4.28	52.74
19	France	5.42	80.55	86	El Salvador	4.26	52.26
20	Panama	5.40	80.04	87	Philippines	4.24	51.72
21	Zambia	5.39	79.77	88	Italy	4.24	51.60
22	Mexico	5.38	79.50	89	Colombia	4.21	51.00
23	Sweden	5.38	79.42	90	Tunisia	4.21	51.00
24	Germany	5.32	77.98	91	Oman	4.21	50.86
25	United Arab Emirates	5.28	77.04	92	Rwanda	4.20	50.76
26	Netherlands	5.27	76.69	93	Albania	4.20	50.71
27	Morocco	5.24	75.95	94	Brunei Darussalam	4.12	48.68
28	Israel	5.21	75.26	95	Brazil	4.11	48.57
29	Côte d'Ivoire	5.20	74.98	96	Greece	4.11	48.54
30	Malaysia	5.20	74.96	97	Slovenia	4.08	47.66
31	Costa Rica	5.19	74.86	98	Pakistan	4.03	46.52
32	Guinea	5.18	74.69	99	Burkina Faso	4.03	46.50
33	Finland	5.18	74.58	100	Saudi Arabia	3.99	45.56
34	Spain	5.15	73.84	101	Tanzania, United Rep.	3.99	45.49
35	Malta	5.12	73.03	102	Kazakhstan	3.98	45.32
36	Uganda	5.08	72.23	103	Viet Nam	3.92	43.77
37	Ghana	5.08	72.14	104	Armenia	3.90	43.29
38	Botswana	5.08	72.12	105	Mongolia	3.87	42.63
39	Cyprus	5.05	71.33	106	North Macedonia	3.85	42.09
40	Eswatini	5.01	70.48	107	Zimbabwe	3.83	41.73
41	Latvia	4.97	69.50	108	Egypt	3.83	41.73
42	Dominican Republic	4.96	69.26	109	Bangladesh	3.83	41.69
43	Austria	4.95	68.97	110	Mali	3.83	41.67
44	Uruguay	4.94	68.71	111	Turkey	3.81	41.11
45	Portugal	4.94	68.69	112	Bosnia and Herzegovina	3.78	40.49
46	Namibia	4.90	67.74	113	Kyrgyzstan	3.78	40.38
47	Senegal	4.85	66.63	114	Tajikistan	3.68	38.01
48	South Africa	4.84	66.35	115	Ethiopia	3.66	37.60
49	Azerbaijan	4.83	66.12	116	Sri Lanka	3.66	37.56
50	Peru	4.82	65.73	117	Lebanon	3.66	37.42
51	Poland	4.79	65.17	118	Angola	3.63	36.87
52	Malawi	4.78	64.88	119	Moldova, Rep.	3.61	36.18
53	Jamaica	4.77	64.55	120	Ukraine	3.51	33.75
54	Kenya	4.74	63.84	121	Iceland	3.48	33.10
55	Hungary	4.71	63.17	122	Russian Federation	3.41	31.40
56	Thailand	4.70	62.93	123	Ecuador	3.36	30.09
57	Mauritius	4.65	61.74	124	Burundi	3.31	28.88
58	India	4.63	61.24	125	Algeria	3.28	28.23
59	Romania	4.62	60.91	126	Bolivia, Plurinational St.	3.19	25.92
60	Nigeria	4.62	60.91	127	Kuwait	3.18	25.70
61	Qatar	4.60	60.51	128	Lesotho	3.15	25.15
62	Serbia	4.56	59.44	129	Chad	3.07	23.08
63	Montenegro	4.54	58.90	130	Venezuela, Bolivarian Rep.	3.07	23.01
64	Indonesia	4.53	58.61	131	Nepal	2.98	20.84
65	Honduras	4.49	57.65	132	Iran, Islamic Rep.	2.72	14.70
66	Lithuania	4.48	57.62	133	Yemen	2.12	0.00
67	China	4.48	57.62		Belarus	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

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2.1.3 Migrant stock

Adult migrant stock (%) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United Arab Emirates	89.18	100.00	68	Rwanda	5.37	40.24
2	Qatar	80.76	97.79	69	Kyrgyzstan	5.26	39.86
3	Kuwait	78.14	97.05	70	Lithuania	5.01	38.93
4	Bahrain	58.08	90.46	71	Mali	4.89	38.49
5	Luxembourg	55.56	89.48	72	Burundi	4.89	38.47
6	Oman	54.91	89.22	73	Eswatini	4.86	38.36
7	Saudi Arabia	47.77	86.14	74	Trinidad and Tobago	4.64	37.48
8	Singapore	39.22	81.79	75	Cabo Verde	4.35	36.32
9	Israel	36.09	79.97	76	Angola	4.33	36.23
10	Australia	35.54	79.63	77	Uganda	4.09	35.18
11	Switzerland	34.99	79.29	78	Slovakia	3.87	34.19
12	Brunei Darussalam	34.67	79.09	79	Iran, Islamic Rep.	3.67	33.23
13	Jordan	31.37	76.90	80	Azerbaijan	3.31	31.43
14	Lebanon	27.42	73.96	81	Paraguay	3.23	31.01
15	New Zealand	27.01	73.63	82	Kenya	3.02	29.88
16	Kazakhstan	26.88	73.53	83	Peru	2.99	29.71
17	Canada	25.47	72.36	84	Nepal	2.94	29.39
18	Sweden	22.73	69.89	85	Pakistan	2.93	29.36
19	Austria	21.65	68.85	86	Mauritius	2.82	28.73
20	Côte d'Ivoire	20.90	68.09	87	Cameroon	2.81	28.65
21	Malta	20.58	67.76	88	Moldova, Rep.	2.72	28.09
22	Belgium	19.78	66.90	89	Malawi	2.67	27.79
23	United States of America	19.20	66.26	90	Uruguay	2.59	27.33
24	Cyprus	18.93	65.96	91	Korea, Rep.	2.49	26.66
25	Ireland	18.84	65.86	92	Senegal	2.40	26.07
26	Norway	18.59	65.58	93	Ghana	2.39	26.04
27	Estonia	18.15	65.06	94	Ecuador	2.29	25.34
28	Germany	17.94	64.82	95	Colombia	2.27	25.22
29	Iceland	16.71	63.30	96	Japan	2.08	23.89
30	Gambia	16.35	62.83	97	Congo, Dem. Rep.	2.04	23.53
31	United Kingdom	16.15	62.57	98	Yemen	2.02	23.43
32	Netherlands	15.87	62.21	99	Georgia	1.97	23.06
33	Latvia	15.62	61.87	100	Bulgaria	1.97	23.04
34	France	15.61	61.85	101	Mozambique	1.97	23.04
35	Croatia	15.57	61.80	102	Zambia	1.94	22.84
36	Slovenia	14.37	60.10	103	Poland	1.92	22.62
37	Spain	14.36	60.09	104	Tanzania, United Rep.	1.66	20.51
38	Montenegro	14.22	59.89	105	Romania	1.52	19.32
39	Belarus	14.05	59.63	106	Bangladesh	1.51	19.23
40	Denmark	13.99	59.54	107	Guinea	1.39	18.12
41	Greece	13.38	58.60	108	Bolivia, Plurinational St.	1.33	17.52
42	Ukraine	13.36	58.57	109	Ethiopia	1.27	16.99
43	Serbia	12.14	56.57	110	Bosnia and Herzegovina	1.14	15.65
44	Malaysia	11.69	55.79	111	Lao PDR	1.10	15.22
45	Italy	11.37	55.20	112	Nigeria	1.02	14.29
46	Costa Rica	10.70	53.95	113	Albania	0.98	13.91
47	Portugal	9.84	52.23	114	El Salvador	0.90	12.95
48	South Africa	9.82	52.19	115	Mongolia	0.88	12.76
49	Russian Federation	9.62	51.76	116	Nicaragua	0.80	11.71
50	Armenia	8.29	48.74	117	Algeria	0.79	11.63
51	Turkey	8.06	48.18	118	Jamaica	0.77	11.35
52	Namibia	7.76	47.42	119	Guatemala	0.77	11.32
53	Finland	7.52	46.80	120	Cambodia	0.76	11.19
54	Botswana	7.43	46.55	121	Egypt	0.74	11.04
55	Dominican Republic	7.23	46.02	122	Tunisia	0.59	8.94
56	North Macedonia	7.15	45.81	123	India	0.58	8.85
57	Venezuela, Bolivarian Rep.	6.64	44.35	124	Lesotho	0.51	7.83
58	Burkina Faso	6.47	43.84	125	Honduras	0.49	7.48
59	Argentina	6.30	43.32	126	Brazil	0.47	7.21
60	Panama	6.27	43.22	127	Mexico	0.47	7.10
61	Chad	6.18	42.94	128	Morocco	0.34	5.06
62	Chile	5.98	42.32	129	Philippines	0.25	3.61
63	Tajikistan	5.81	41.74	130	Madagascar	0.24	3.34
64	Zimbabwe	5.75	41.54	131	Sri Lanka	0.15	1.73
65	Hungary	5.67	41.29	132	Indonesia	0.15	1.73
66	Thailand	5.62	41.09	133	Viet Nam	0.09	0.52
67	Czech Republic	5.45	40.51	134	China	0.07	0.00

SOURCE: United Nations Population Division, Trends in International Migrant Stock: Migrants by Age and Sex (www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp)

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2.1.4 International students

Tertiary inbound mobility ratio (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United Arab Emirates	48.55	100.00	68	Cameroon	2.81	33.83
2	Luxembourg	47.74	99.57	69	Israel	2.78	33.59
3	Qatar	35.29	91.97	70	Korea, Rep.	2.75	33.39
4	Australia	26.50	84.81	71	Burkina Faso	2.28	29.93
5	Cyprus	23.90	82.24	72	Botswana	2.26	29.78
6	New Zealand	19.68	77.45	73	Azerbaijan	2.23	29.53
7	Singapore	19.17	76.80	74	Tunisia	2.22	29.44
8	United Kingdom	18.32	75.70	75	Côte d'Ivoire	2.17	29.09
9	Switzerland	17.70	74.85	76	Morocco	1.97	27.40
10	Austria	17.49	74.57	77	Egypt	1.83	26.17
11	Bahrain	14.15	69.43	78	Dominican Republic	1.73	25.17
12	Jordan	13.96	69.10	79	Turkey	1.66	24.49
13	Canada	13.84	68.89	80	Albania	1.61	24.09
14	Czech Republic	13.61	68.48	81	Cabo Verde	1.44	22.32
15	Netherlands	11.69	64.86	82	Madagascar	1.42	22.12
16	Hungary	11.41	64.28	83	Ghana	1.39	21.79
17	Uganda	10.73	62.83	84	Thailand	1.31	20.89
18	Denmark	10.71	62.77	85	Malawi	1.14	18.88
19	Belgium	10.45	62.21	86	Mongolia	1.05	17.86
20	Germany	9.97	61.09	87	Honduras	0.94	16.43
21	Malta	9.95	61.06	88	Kenya	0.93	16.31
22	Ireland	9.64	60.30	89	Guinea	0.92	16.11
23	Estonia	9.59	60.19	90	Mali	0.86	15.25
24	Lebanon	9.59	60.18	91	Tajikistan	0.84	15.07
25	Latvia	9.27	59.39	92	Ecuador	0.78	14.13
26	Kyrgyzstan	8.98	58.64	93	Iran, Islamic Rep.	0.57	10.92
27	France	8.77	58.10	94	Algeria	0.53	10.29
28	Georgia	8.11	56.31	95	El Salvador	0.51	10.00
29	Finland	8.05	56.14	96	Eswatini	0.51	9.91
30	Slovakia	8.03	56.07	97	Sri Lanka	0.47	9.22
31	Iceland	8.02	56.04	98	Zimbabwe	0.47	9.18
32	Portugal	7.89	55.67	99	Lao PDR	0.46	9.09
33	Senegal	7.60	54.80	100	Chile	0.45	8.93
34	Sweden	7.17	53.49	101	Congo, Dem. Rep.	0.44	8.67
35	Bosnia and Herzegovina	7.12	53.32	102	China	0.43	8.49
36	Malaysia	6.73	52.05	103	Viet Nam	0.37	7.39
37	Bulgaria	6.41	50.98	104	Mozambique	0.36	7.22
38	Namibia	6.11	49.89	105	Lesotho	0.35	7.08
39	Italy	5.62	48.07	106	Brazil	0.24	4.89
40	Moldova, Rep.	5.58	47.91	107	Colombia	0.20	3.95
41	Armenia	5.52	47.66	108	Mexico	0.16	3.09
42	Romania	5.40	47.20	109	India	0.13	2.56
43	Mauritius	5.37	47.08	110	Bangladesh	0.10	1.76
44	Lithuania	5.33	46.89	111	Indonesia	0.10	1.65
45	United States of America	5.21	46.42	112	Nepal	0.03	0.00
46	North Macedonia	5.15	46.16		Angola	n/a	n/a
47	Burundi	4.77	44.50		Bolivia, Plurinational St.	n/a	n/a
48	Japan	4.73	44.35		Cambodia	n/a	n/a
49	Serbia	4.61	43.77		Costa Rica	n/a	n/a
50	Russian Federation	4.54	43.49		Ethiopia	n/a	n/a
51	Slovenia	4.47	43.13		Gambia	n/a	n/a
52	Saudi Arabia	4.43	42.95		Guatemala	n/a	n/a
53	Belarus	4.34	42.51		Jamaica	n/a	n/a
54	Yemen	4.26	42.12		Kuwait	n/a	n/a
55	Norway	4.23	41.99		Montenegro	n/a	n/a
56	Chad	4.02	40.91		Nicaragua	n/a	n/a
57	Poland	3.64	38.90		Nigeria	n/a	n/a
58	Rwanda	3.64	38.88		Pakistan	n/a	n/a
59	South Africa	3.59	38.61		Panama	n/a	n/a
60	Spain	3.46	37.85		Paraguay	n/a	n/a
61	Ukraine	3.45	37.84		Peru	n/a	n/a
62	Greece	3.43	37.71		Philippines	n/a	n/a
63	Brunei Darussalam	3.41	37.57		Tanzania, United Rep.	n/a	n/a
64	Kazakhstan	3.32	37.04		Trinidad and Tobago	n/a	n/a
65	Croatia	3.04	35.33		Uruguay	n/a	n/a
66	Oman	2.84	34.01		Venezuela, Bolivarian Rep.	n/a	n/a
67	Argentina	2.83	33.94		Zambia	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

2.1.5 Brain gain

Average answer to the question: Does your country attract talented people from abroad? [1 = not at all; 7 = to a great extent—the country attracts the best and brightest from around the world] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	6.11	100.00	68	Mali	3.58	47.00
2	Singapore	6.01	97.93	69	India	3.58	46.89
3	Luxembourg	5.76	92.81	70	Philippines	3.56	46.51
4	United States of America	5.70	91.54	71	Bangladesh	3.50	45.37
5	United Arab Emirates	5.67	90.92	72	Pakistan	3.50	45.31
6	United Kingdom	5.34	83.92	73	Paraguay	3.48	44.80
7	Qatar	5.32	83.57	74	Madagascar	3.46	44.36
8	Canada	5.23	81.55	75	Mozambique	3.45	44.32
9	Netherlands	5.21	81.19	76	Russian Federation	3.45	44.21
10	Saudi Arabia	5.17	80.25	77	Mexico	3.44	44.02
11	Malta	5.11	79.18	78	Georgia	3.42	43.69
12	New Zealand	5.06	77.99	79	Spain	3.39	43.01
13	Bahrain	5.05	77.92	80	Cabo Verde	3.37	42.63
14	Ireland	4.95	75.64	81	Ethiopia	3.36	42.30
15	China	4.92	75.01	82	South Africa	3.36	42.28
16	Azerbaijan	4.91	74.97	83	Czech Republic	3.33	41.62
17	Australia	4.91	74.96	84	Peru	3.30	41.18
18	Malaysia	4.87	74.10	85	Armenia	3.27	40.37
19	Germany	4.82	73.01	86	Angola	3.26	40.32
20	Oman	4.78	72.26	87	Colombia	3.25	40.05
21	Rwanda	4.67	69.74	88	Cameroon	3.25	40.02
22	Belgium	4.57	67.71	89	Guatemala	3.23	39.64
23	Norway	4.52	66.73	90	Eswatini	3.22	39.50
24	Gambia	4.51	66.40	91	Lithuania	3.21	39.21
25	Indonesia	4.49	66.06	92	Sri Lanka	3.18	38.67
26	Denmark	4.43	64.88	93	Belarus	3.17	38.40
27	Sweden	4.37	63.55	94	Ukraine	3.17	38.34
28	Iceland	4.23	60.70	95	Burundi	3.17	38.29
29	Mauritius	4.23	60.64	96	Lesotho	3.10	36.98
30	Kenya	4.22	60.44	97	Latvia	3.09	36.77
31	Austria	4.20	59.96	98	Chad	3.09	36.75
32	Panama	4.15	59.02	99	Congo, Dem. Rep.	3.05	35.90
33	Chile	4.15	58.93	100	Ecuador	3.05	35.76
34	Israel	4.13	58.53	101	Uruguay	3.00	34.69
35	Ghana	4.12	58.39	102	Italy	2.96	34.00
36	Thailand	4.09	57.62	103	Honduras	2.96	33.95
37	Botswana	4.08	57.41	104	Kyrgyzstan	2.94	33.52
38	Estonia	4.06	57.01	105	Montenegro	2.90	32.59
39	Brunei Darussalam	4.02	56.23	106	Argentina	2.88	32.33
40	Côte d'Ivoire	4.02	56.11	107	Hungary	2.87	32.02
41	Costa Rica	4.00	55.80	108	Albania	2.87	31.96
42	Senegal	3.96	54.85	109	Burkina Faso	2.81	30.78
43	France	3.95	54.82	110	Poland	2.76	29.82
44	Cambodia	3.94	54.60	111	Lebanon	2.75	29.61
45	Korea, Rep.	3.94	54.46	112	Mongolia	2.74	29.24
46	Portugal	3.89	53.47	113	Slovenia	2.68	28.00
47	Tanzania, United Rep.	3.89	53.46	114	Nepal	2.62	26.87
48	Viet Nam	3.89	53.42	115	El Salvador	2.58	26.05
49	Zambia	3.88	53.32	116	Turkey	2.57	25.86
50	Guinea	3.87	53.04	117	Brazil	2.57	25.79
51	Namibia	3.84	52.38	118	Algeria	2.57	25.73
52	Jamaica	3.81	51.80	119	Bulgaria	2.56	25.46
53	Dominican Republic	3.80	51.66	120	Nicaragua	2.45	23.30
54	Japan	3.79	51.45	121	Tunisia	2.41	22.43
55	Kazakhstan	3.76	50.79	122	Bolivia, Plurinational St.	2.31	20.39
56	Cyprus	3.76	50.73	123	Yemen	2.28	19.61
57	Kuwait	3.76	50.68	124	Serbia	2.26	19.21
58	Finland	3.72	49.93	125	Slovakia	2.22	18.32
59	Nigeria	3.72	49.89	126	Zimbabwe	2.19	17.86
60	Uganda	3.66	48.67	127	Moldova, Rep.	2.18	17.58
61	Malawi	3.64	48.31	128	Greece	2.18	17.55
62	Lao PDR	3.64	48.22	129	Iran, Islamic Rep.	2.12	16.39
63	Jordan	3.63	47.95	130	Romania	2.12	16.25
64	Morocco	3.62	47.72	131	Croatia	1.94	12.50
65	Tajikistan	3.61	47.55	132	North Macedonia	1.89	11.48
66	Trinidad and Tobago	3.59	47.19	133	Bosnia and Herzegovina	1.57	4.79
67	Egypt	3.59	47.11	134	Venezuela, Bolivarian Rep.	1.34	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

2.2.1 Tolerance of minorities

Discrimination and violence against minorities | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Iceland	0.50	100.00	68	Romania	6.00	40.22
1	Ireland	0.50	100.00	69	Azerbaijan	6.10	39.13
3	Finland	0.60	98.91	69	Cambodia	6.10	39.13
4	Portugal	1.30	91.30	69	Ecuador	6.10	39.13
5	Sweden	1.70	86.96	69	United Kingdom	6.10	39.13
6	Luxembourg	2.10	82.61	69	Zimbabwe	6.10	39.13
7	Canada	2.20	81.52	74	Mexico	6.30	36.96
7	Jamaica	2.20	81.52	75	France	6.40	35.87
7	Singapore	2.20	81.52	75	Moldova, Rep.	6.40	35.87
10	Korea, Rep.	2.30	80.43	77	Brunei Darussalam	6.50	34.78
10	Oman	2.30	80.43	77	United States of America	6.50	34.78
12	Uruguay	2.40	79.35	79	Bosnia and Herzegovina	6.60	33.70
13	Japan	2.50	78.26	80	Israel	6.70	32.61
14	Gambia	2.60	77.17	80	Spain	6.70	32.61
14	Mongolia	2.60	77.17	80	Tajikistan	6.70	32.61
14	New Zealand	2.60	77.17	83	Venezuela, Bolivarian Rep.	7.00	29.35
17	Lesotho	2.70	76.09	84	China	7.10	28.26
17	Malta	2.70	76.09	84	Indonesia	7.10	28.26
17	Switzerland	2.70	76.09	84	Serbia	7.10	28.26
20	United Arab Emirates	2.80	75.00	84	Tunisia	7.10	28.26
21	Costa Rica	3.00	72.83	88	Algeria	7.20	27.17
21	Trinidad and Tobago	3.00	72.83	88	Lao PDR	7.20	27.17
23	Australia	3.10	71.74	90	Burundi	7.30	26.09
24	Chile	3.20	70.65	90	Côte d'Ivoire	7.30	26.09
24	Ghana	3.20	70.65	90	Georgia	7.30	26.09
26	Lithuania	3.30	69.57	90	Philippines	7.30	26.09
26	Madagascar	3.30	69.57	90	Thailand	7.30	26.09
26	Norway	3.30	69.57	95	Estonia	7.40	25.00
29	Qatar	3.40	68.48	96	Colombia	7.50	23.91
30	Hungary	3.60	66.30	97	Brazil	7.70	21.74
30	Netherlands	3.60	66.30	98	Uganda	7.80	20.65
30	Slovenia	3.60	66.30	99	Lebanon	7.90	19.57
33	Denmark	3.70	65.22	100	Chad	8.00	18.48
34	Argentina	3.80	64.13	100	Kazakhstan	8.00	18.48
35	Austria	3.90	63.04	100	Kenya	8.00	18.48
35	Botswana	3.90	63.04	100	Russian Federation	8.00	18.48
37	Germany	4.00	61.96	104	Angola	8.10	17.39
38	Albania	4.10	60.87	104	Mali	8.10	17.39
38	Belgium	4.10	60.87	106	India	8.20	16.30
38	Kuwait	4.10	60.87	107	Egypt	8.30	15.22
41	Bulgaria	4.20	59.78	107	Latvia	8.30	15.22
41	Greece	4.20	59.78	109	Morocco	8.50	13.04
43	Italy	4.30	58.70	110	Bangladesh	8.60	11.96
44	Mauritius	4.40	57.61	110	Jordan	8.60	11.96
45	Burkina Faso	4.50	56.52	110	Peru	8.60	11.96
46	Dominican Republic	4.60	55.43	110	Sri Lanka	8.60	11.96
46	Namibia	4.60	55.43	114	Cameroon	8.70	10.87
46	Paraguay	4.60	55.43	115	Nigeria	8.80	9.78
49	Malawi	4.70	54.35	115	Pakistan	8.80	9.78
50	Croatia	4.90	52.17	117	Saudi Arabia	9.00	7.61
50	Tanzania, United Rep.	4.90	52.17	118	Montenegro	9.10	6.52
52	Honduras	5.00	51.09	119	Guinea	9.30	4.35
53	Cyprus	5.10	50.00	119	Iran, Islamic Rep.	9.30	4.35
54	Senegal	5.20	48.91	121	Congo, Dem. Rep.	9.40	3.26
54	Viet Nam	5.20	48.91	121	Guatemala	9.40	3.26
56	Armenia	5.30	47.83	121	Nepal	9.40	3.26
56	Zambia	5.30	47.83	121	Yemen	9.40	3.26
58	Malaysia	5.40	46.74	125	Ethiopia	9.50	2.17
59	El Salvador	5.50	45.65	126	Bahrain	9.60	1.09
60	Bolivia, Plurinational St.	5.60	44.57	126	Rwanda	9.60	1.09
60	Panama	5.60	44.57	128	Turkey	9.70	0.00
60	Poland	5.60	44.57		Cabo Verde	n/a	n/a
63	Ukraine	5.70	43.48		Czech Republic	n/a	n/a
64	Mozambique	5.80	42.39		Eswatini	n/a	n/a
65	Belarus	5.90	41.30		Kyrgyzstan	n/a	n/a
65	Nicaragua	5.90	41.30		North Macedonia	n/a	n/a
65	South Africa	5.90	41.30		Slovakia	n/a	n/a

SOURCE: The Fund for Peace, *Fragile States Index 2021* (<https://fragilestatesindex.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

2.2.2 Tolerance of immigrants

The percentage of respondents answering “Good place” to the question: Is the city or area where you live a good place or not a good place to live for immigrants from other countries? | 2020

Rank	Country	Value*	Score	Rank	Country	Value*	Score
1	United Arab Emirates	—	100.00	65	Eswatini	—	58.46
2	Canada	—	98.46	65	Korea, Rep.	—	58.46
3	Luxembourg	—	95.38	65	Mexico	—	58.46
3	New Zealand	—	95.38	71	Armenia	—	56.92
3	Norway	—	95.38	71	Bangladesh	—	56.92
6	Australia	—	93.85	71	Japan	—	56.92
6	Ireland	—	93.85	71	Jordan	—	56.92
8	Portugal	—	92.31	71	Venezuela, Bolivarian Rep.	—	56.92
8	Sweden	—	92.31	76	Bosnia and Herzegovina	—	55.38
8	Uruguay	—	92.31	76	Lesotho	—	55.38
11	United States of America	—	90.77	76	Ukraine	—	55.38
12	Gambia	—	89.23	79	Azerbaijan	—	53.85
13	Paraguay	—	87.69	79	Burundi	—	53.85
13	Spain	—	87.69	79	Viet Nam	—	53.85
15	Denmark	—	84.62	82	Cyprus	—	50.77
15	Jamaica	—	84.62	82	India	—	50.77
15	Mauritius	—	84.62	82	Namibia	—	50.77
15	Nepal	—	84.62	82	Peru	—	50.77
15	Singapore	—	84.62	82	Poland	—	50.77
20	Argentina	—	83.08	82	Trinidad and Tobago	—	50.77
20	Iceland	—	83.08	88	Lebanon	—	47.69
20	Qatar	—	83.08	88	Sri Lanka	—	47.69
23	Brazil	—	81.54	88	Zimbabwe	—	47.69
23	United Kingdom	—	81.54	91	Angola	—	46.15
25	Saudi Arabia	—	80.00	91	Congo, Dem. Rep.	—	46.15
26	Burkina Faso	—	78.46	91	Tunisia	—	46.15
26	Costa Rica	—	78.46	94	Turkey	—	44.62
28	Bahrain	—	76.92	95	Egypt	—	43.08
28	Côte d'Ivoire	—	76.92	95	Kazakhstan	—	43.08
28	Finland	—	76.92	95	Panama	—	43.08
28	Netherlands	—	76.92	98	Iran, Islamic Rep.	—	41.54
28	Switzerland	—	76.92	98	Moldova, Rep.	—	41.54
33	Germany	—	75.38	98	Rwanda	—	41.54
33	Guinea	—	75.38	98	Tanzania, United Rep.	—	41.54
33	Malta	—	75.38	102	Albania	—	40.00
36	Italy	—	73.85	103	Algeria	—	38.46
36	Senegal	—	73.85	103	Honduras	—	38.46
38	Ethiopia	—	72.31	103	Morocco	—	38.46
38	Georgia	—	72.31	103	Slovakia	—	38.46
38	Ghana	—	72.31	107	Pakistan	—	36.92
38	Russian Federation	—	72.31	108	Czech Republic	—	35.38
42	Montenegro	—	70.77	108	Estonia	—	35.38
42	Nicaragua	—	70.77	108	Madagascar	—	35.38
42	South Africa	—	70.77	108	North Macedonia	—	35.38
42	Zambia	—	70.77	108	Romania	—	35.38
46	Kuwait	—	69.23	113	Lithuania	—	33.85
46	Tajikistan	—	69.23	113	Uganda	—	33.85
48	Chile	—	67.69	115	Belarus	—	32.31
48	Dominican Republic	—	67.69	115	Bulgaria	—	32.31
48	Kenya	—	67.69	115	Greece	—	32.31
51	Austria	—	66.15	118	Indonesia	—	30.77
51	El Salvador	—	66.15	118	Latvia	—	30.77
51	Kyrgyzstan	—	66.15	118	Mongolia	—	30.77
51	Mali	—	66.15	121	Israel	—	27.69
51	Serbia	—	66.15	122	Malawi	—	26.15
56	Botswana	—	64.62	123	Croatia	—	23.08
57	Mozambique	—	63.08	124	Slovenia	—	15.38
57	Philippines	—	63.08	124	Thailand	—	15.38
59	Cameroon	—	61.54	126	Guatemala	—	13.85
59	France	—	61.54	127	Yemen	—	12.31
59	Nigeria	—	61.54	128	Cambodia	—	9.23
62	Belgium	—	60.00	128	Malaysia	—	9.23
62	Chad	—	60.00	130	Lao PDR	—	7.69
62	Colombia	—	60.00	131	Hungary	—	0.00
65	Bolivia, Plurinational St.	—	58.46		Brunei Darussalam	n/a	n/a
65	China	—	58.46		Cabo Verde	n/a	n/a
65	Ecuador	—	58.46		Oman	n/a	n/a

SOURCE: The Gallup World Poll (2006–2020). Data kindly provided by Gallup, Inc. (<https://www.gallup.com/analytics/318875/global-research.aspx>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

*Confidential data.

2.2.3 Social mobility

Average answer to the question: In your country, to what extent do individuals have the opportunity to improve their economic situation through their personal efforts regardless of the socioeconomic status of their parents? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland	6.20	100.00	68	Namibia	4.25	50.95
2	Switzerland	6.14	98.51	69	Viet Nam	4.24	50.82
3	Iceland	6.00	94.86	70	Côte d'Ivoire	4.24	50.61
4	Singapore	5.94	93.54	71	Belarus	4.23	50.56
5	Denmark	5.87	91.82	72	Kazakhstan	4.23	50.37
6	Luxembourg	5.84	90.82	73	Tunisia	4.22	50.20
7	Australia	5.83	90.64	74	Botswana	4.21	49.97
8	New Zealand	5.82	90.44	75	Sri Lanka	4.14	48.24
9	Netherlands	5.79	89.57	76	Paraguay	4.11	47.54
10	Norway	5.71	87.70	77	Thailand	4.11	47.47
11	Estonia	5.68	86.93	78	Peru	4.08	46.62
12	Austria	5.63	85.66	79	Guinea	4.07	46.53
13	United States of America	5.58	84.36	80	Jordan	4.07	46.46
14	Canada	5.52	82.87	81	Kyrgyzstan	4.06	46.17
15	United Arab Emirates	5.48	81.82	82	Nigeria	4.06	46.16
16	Ireland	5.41	80.15	83	Cameroon	4.06	46.14
17	Sweden	5.38	79.46	84	Turkey	4.05	45.87
18	Saudi Arabia	5.37	79.19	85	Bangladesh	4.03	45.42
19	Japan	5.34	78.43	86	Russian Federation	4.03	45.35
20	Qatar	5.31	77.62	87	Italy	4.00	44.74
21	Bahrain	5.26	76.37	88	Ghana	4.00	44.71
22	Malaysia	5.25	76.04	89	Cabo Verde	4.00	44.67
23	Malta	5.19	74.66	90	Dominican Republic	3.97	43.97
24	Belgium	5.19	74.54	91	Cambodia	3.95	43.54
25	Germany	5.06	71.35	92	Malawi	3.94	43.19
26	Israel	5.02	70.43	93	Eswatini	3.91	42.43
27	United Kingdom	5.02	70.36	94	Burundi	3.91	42.41
28	Czech Republic	5.01	69.98	95	Pakistan	3.90	42.28
29	Lithuania	4.99	69.59	96	Egypt	3.89	42.02
30	China	4.97	69.11	97	Brazil	3.89	41.79
31	Oman	4.94	68.25	98	Zambia	3.88	41.76
32	Costa Rica	4.92	67.79	99	Greece	3.87	41.47
33	Slovenia	4.92	67.71	100	Madagascar	3.86	41.13
34	France	4.89	67.11	101	Algeria	3.85	40.93
35	Rwanda	4.87	66.59	102	Mali	3.84	40.66
36	Chile	4.83	65.60	103	Mexico	3.84	40.55
37	Mauritius	4.71	62.42	104	Nepal	3.83	40.41
38	Spain	4.70	62.26	105	Korea, Rep.	3.81	40.02
39	Latvia	4.70	62.24	106	South Africa	3.78	39.08
40	Indonesia	4.70	62.24	107	Romania	3.76	38.60
41	Azerbaijan	4.67	61.44	108	Colombia	3.75	38.42
42	Portugal	4.55	58.53	109	Ecuador	3.74	38.19
43	Mongolia	4.52	57.78	110	Hungary	3.71	37.40
44	Trinidad and Tobago	4.50	57.30	111	Serbia	3.70	37.13
45	Cyprus	4.49	57.11	112	Moldova, Rep.	3.68	36.75
46	Uruguay	4.48	56.85	113	Congo, Dem. Rep.	3.67	36.39
47	Tajikistan	4.48	56.74	114	Honduras	3.66	36.19
48	Brunei Darussalam	4.47	56.44	115	Argentina	3.64	35.71
49	Senegal	4.47	56.39	116	Croatia	3.62	35.11
50	Morocco	4.44	55.63	117	Ukraine	3.59	34.35
51	Uganda	4.43	55.59	118	Bulgaria	3.57	33.93
52	Slovakia	4.43	55.51	119	Ethiopia	3.54	33.02
53	Philippines	4.42	55.13	120	Zimbabwe	3.48	31.51
54	Kenya	4.42	55.11	121	Iran, Islamic Rep.	3.46	31.19
55	Jamaica	4.39	54.54	122	Lebanon	3.45	30.74
56	Burkina Faso	4.39	54.37	123	Lesotho	3.41	29.77
57	Tanzania, United Rep.	4.38	54.13	124	Nicaragua	3.39	29.46
58	Lao PDR	4.36	53.76	125	Bosnia and Herzegovina	3.37	28.88
59	Gambia	4.34	53.34	126	Chad	3.37	28.71
60	Panama	4.33	52.89	127	North Macedonia	3.21	24.86
61	India	4.32	52.73	128	Albania	3.21	24.74
62	Armenia	4.32	52.61	129	Mozambique	3.20	24.63
63	Montenegro	4.30	52.19	130	El Salvador	3.17	23.71
64	Georgia	4.27	51.52	131	Bolivia, Plurinational St.	3.16	23.53
65	Kuwait	4.27	51.45	132	Yemen	3.00	19.55
66	Poland	4.27	51.39	133	Angola	2.83	15.23
67	Guatemala	4.25	51.04	134	Venezuela, Bolivarian Rep.	2.22	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

2.2.4 Women in tertiary education

Women enrolled in tertiary education (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Qatar	70.48	100.00	68	Finland	53.08	63.82
2	Namibia	66.92	92.59	69	Russian Federation	53.02	63.71
3	Dominican Republic	63.96	86.44	70	Chile	52.99	63.66
4	Kuwait	63.73	85.97	71	Austria	52.94	63.55
5	Iceland	63.58	85.65	72	Belarus	52.89	63.43
6	Tunisia	63.30	85.06	73	Nepal	52.85	63.35
7	Jamaica	62.58	83.58	74	Colombia	52.69	63.02
8	Sri Lanka	61.69	81.73	75	Ecuador	52.56	62.75
9	Argentina	61.65	81.65	76	Indonesia	52.43	62.48
10	Algeria	61.48	81.29	77	Lao PDR	52.28	62.17
11	Lesotho	60.47	79.20	78	Peru	52.26	62.12
12	Panama	60.43	79.10	79	Netherlands	52.07	61.74
13	Sweden	60.10	78.43	80	Ireland	51.97	61.53
14	Albania	59.65	77.49	81	Luxembourg	51.94	61.46
15	Poland	59.26	76.69	82	China	51.88	61.34
16	Botswana	59.26	76.67	83	Ukraine	51.72	61.01
17	South Africa	59.05	76.25	84	Singapore	51.28	60.09
18	Bahrain	59.02	76.17	85	Azerbaijan	51.05	59.62
19	Cabo Verde	58.99	76.12	86	Eswatini	50.94	59.38
20	Slovakia	58.99	76.11	87	Mexico	50.60	58.69
21	Estonia	58.70	75.52	88	Georgia	50.29	58.04
22	Bosnia and Herzegovina	58.43	74.95	89	Egypt	49.97	57.36
23	Brunei Darussalam	58.33	74.75	90	Saudi Arabia	49.86	57.13
24	Latvia	58.09	74.24	91	Switzerland	49.82	57.06
25	Norway	58.06	74.18	92	India	49.77	56.95
26	Mongolia	58.03	74.13	93	Morocco	49.55	56.50
27	New Zealand	58.01	74.08	94	Germany	48.83	55.01
28	Mauritius	57.91	73.88	95	Madagascar	48.82	54.98
29	Paraguay	57.75	73.55	96	Greece	48.74	54.81
30	Thailand	57.75	73.54	97	Cambodia	47.99	53.25
31	Slovenia	57.55	73.12	98	Zimbabwe	47.89	53.06
32	Israel	57.43	72.87	99	Japan	47.86	52.98
33	Honduras	57.25	72.51	100	Cameroon	46.81	50.81
34	Oman	57.25	72.50	101	Iran, Islamic Rep.	46.60	50.37
35	Czech Republic	57.07	72.13	102	Turkey	46.47	50.09
36	Croatia	57.04	72.07	103	Rwanda	45.99	49.10
37	Brazil	56.90	71.77	104	Angola	45.75	48.60
38	United Kingdom	56.84	71.65	105	Mozambique	45.15	47.35
39	Malta	56.82	71.60	106	Pakistan	44.84	46.72
40	Serbia	56.72	71.41	107	Ghana	44.75	46.52
41	United States of America	56.59	71.12	108	Uganda	43.64	44.22
42	Australia	56.55	71.05	109	Zambia	43.21	43.33
43	Denmark	56.52	70.99	110	Côte d'Ivoire	42.93	42.73
44	Lithuania	56.43	70.79	111	Senegal	42.92	42.72
45	Moldova, Rep.	56.22	70.36	112	Kenya	42.46	41.76
46	Canada	56.01	69.92	113	Korea, Rep.	42.25	41.32
47	Lebanon	55.73	69.34	114	Tajikistan	42.02	40.85
48	Belgium	55.57	69.00	115	Gambia	41.41	39.58
49	Philippines	55.52	68.90	116	Bangladesh	40.89	38.50
50	North Macedonia	55.49	68.85	117	Nigeria	40.21	37.08
51	Italy	55.47	68.79	118	Tanzania, United Rep.	39.53	35.67
52	Montenegro	55.26	68.36	119	Malawi	39.16	34.91
53	Kyrgyzstan	54.99	67.80	120	Burundi	38.02	32.53
54	Malaysia	54.90	67.62	121	Congo, Dem. Rep.	35.73	27.77
55	France	54.48	66.75	122	Burkina Faso	35.25	26.78
56	Armenia	54.45	66.68	123	United Arab Emirates	35.09	26.45
57	Romania	54.16	66.07	124	Ethiopia	32.15	20.33
58	Costa Rica	53.99	65.72	125	Guinea	30.47	16.85
59	Hungary	53.87	65.47	126	Yemen	29.93	15.72
60	El Salvador	53.81	65.34	127	Mali	29.16	14.12
61	Bulgaria	53.68	65.09	128	Chad	22.37	0.00
62	Jordan	53.62	64.96		Bolivia, Plurinational St.	n/a	n/a
63	Spain	53.57	64.86		Nicaragua	n/a	n/a
64	Guatemala	53.57	64.85		Trinidad and Tobago	n/a	n/a
65	Portugal	53.48	64.66		Uruguay	n/a	n/a
66	Kazakhstan	53.42	64.54		Venezuela, Bolivarian Rep.	n/a	n/a
67	Cyprus	53.10	63.88		Viet Nam	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

2.2.5 Women in high-skilled jobs

Women employed in high-skilled occupations (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Belarus.....	65.53	100.00	68	Korea, Rep.....	47.93	66.35
2	Nigeria.....	63.22	95.57	69	Cabo Verde.....	47.93	66.35
3	Kyrgyzstan.....	62.85	94.88	70	Austria.....	47.87	66.25
4	Moldova, Rep.....	61.11	91.55	71	Bosnia and Herzegovina.....	47.37	65.29
5	Mongolia.....	60.93	91.21	72	Netherlands.....	47.36	65.25
6	Venezuela, Bolivarian Rep.....	59.41	88.29	73	Peru.....	46.81	64.22
7	Russian Federation.....	59.25	87.99	74	United Kingdom.....	46.76	64.12
8	Latvia.....	59.12	87.74	75	Costa Rica.....	46.68	63.96
9	Lithuania.....	58.26	86.09	76	Switzerland.....	46.34	63.31
10	Ukraine.....	57.67	84.97	77	Indonesia.....	46.13	62.92
11	Jamaica.....	57.49	84.63	78	Lebanon.....	45.81	62.31
12	Azerbaijan.....	57.13	83.94	79	Czech Republic.....	45.61	61.93
13	Kazakhstan.....	56.82	83.35	80	Singapore.....	45.31	61.35
14	Armenia.....	56.69	83.09	81	El Salvador.....	45.10	60.94
15	Georgia.....	56.59	82.91	82	South Africa.....	44.83	60.43
16	Lesotho.....	55.99	81.75	83	Mauritius.....	44.71	60.19
17	Dominican Republic.....	55.80	81.40	84	Italy.....	44.62	60.02
18	Bulgaria.....	55.67	81.14	85	Madagascar.....	44.25	59.31
19	Poland.....	54.97	79.81	86	Burundi.....	44.11	59.05
20	Lao PDR.....	54.77	79.42	87	Bolivia, Plurinational St.....	44.04	58.91
21	Estonia.....	54.69	79.28	88	Kenya.....	43.80	58.46
22	Philippines.....	54.40	78.72	89	Colombia.....	43.69	58.25
23	Albania.....	54.29	78.52	90	Cambodia.....	42.85	56.65
24	Montenegro.....	54.10	78.14	91	Brunei Darussalam.....	42.72	56.40
25	Romania.....	53.82	77.60	92	Burkina Faso.....	41.30	53.68
26	Trinidad and Tobago.....	53.73	77.43	93	Malta.....	41.09	53.29
27	Serbia.....	53.47	76.94	94	Kuwait.....	41.05	53.21
28	Canada.....	53.47	76.94	95	Malaysia.....	40.83	52.78
29	Botswana.....	53.13	76.30	96	Algeria.....	40.80	52.72
30	Panama.....	52.77	75.61	97	Sri Lanka.....	40.45	52.06
31	Hungary.....	52.61	75.30	98	Tanzania, United Rep.....	40.37	51.91
32	Namibia.....	52.57	75.21	99	Uganda.....	40.16	51.50
33	Viet Nam.....	52.51	75.11	100	Cameroon.....	39.61	50.46
34	Ecuador.....	52.39	74.87	101	Japan.....	39.16	49.59
35	Uruguay.....	52.29	74.70	102	Rwanda.....	38.59	48.51
36	Slovenia.....	52.14	74.39	103	Jordan.....	38.47	48.27
37	Brazil.....	51.92	73.99	104	Zambia.....	38.20	47.75
38	Israel.....	51.85	73.84	105	Tajikistan.....	36.68	44.86
39	United States of America.....	51.84	73.84	106	Ghana.....	36.40	44.31
40	Thailand.....	51.69	73.53	107	Turkey.....	35.55	42.68
41	Nicaragua.....	51.59	73.35	108	Nepal.....	35.36	42.33
42	Paraguay.....	51.38	72.95	109	Mozambique.....	34.05	39.82
43	Slovakia.....	51.10	72.41	110	Iran, Islamic Rep.....	33.59	38.95
44	Australia.....	50.96	72.14	111	Tunisia.....	33.02	37.84
45	Portugal.....	50.95	72.13	112	Malawi.....	32.37	36.61
46	Croatia.....	50.84	71.93	113	Angola.....	32.03	35.95
47	Finland.....	50.81	71.87	114	Senegal.....	31.81	35.53
48	Sweden.....	50.77	71.78	115	Ethiopia.....	31.73	35.38
49	North Macedonia.....	50.61	71.48	116	Guinea.....	28.65	29.50
50	Cyprus.....	50.29	70.86	117	Bahrain.....	28.51	29.23
51	Iceland.....	50.18	70.66	118	Côte d'Ivoire.....	26.30	25.01
52	Honduras.....	50.18	70.65	119	Bangladesh.....	25.93	24.29
53	Eswatini.....	50.01	70.33	120	United Arab Emirates.....	25.87	24.19
54	Mexico.....	49.78	69.89	121	Egypt.....	25.38	23.25
55	Zimbabwe.....	49.77	69.87	122	Congo, Dem. Rep.....	23.77	20.17
56	Greece.....	49.65	69.64	123	Oman.....	22.85	18.41
57	Chile.....	49.56	69.47	124	Gambia.....	22.17	17.10
58	Norway.....	49.51	69.38	125	Mali.....	22.05	16.89
59	Denmark.....	49.39	69.14	126	India.....	21.92	16.62
60	Belgium.....	49.17	68.73	127	Qatar.....	21.31	15.47
61	Argentina.....	48.97	68.35	128	Pakistan.....	19.59	12.17
62	France.....	48.93	68.26	129	Chad.....	17.37	7.94
63	Spain.....	48.62	67.67	130	Yemen.....	13.22	0.00
64	Ireland.....	48.36	67.17		China.....	n/a	n/a
65	Germany.....	48.03	66.54		Morocco.....	n/a	n/a
66	Guatemala.....	47.97	66.42		New Zealand.....	n/a	n/a
67	Luxembourg.....	47.93	66.36		Saudi Arabia.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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2.2.6 Leadership opportunities for women

Average answer to the question: In your country, to what extent do companies provide women with the same opportunities as men to rise to positions of leadership? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland	6.02	100.00	68	Tanzania, United Rep.	4.45	43.37
2	Iceland	5.98	98.65	69	Burundi	4.44	43.25
3	Singapore	5.73	89.44	70	Viet Nam	4.44	43.17
4	Norway	5.69	88.10	71	Costa Rica	4.44	43.03
5	Philippines	5.69	88.07	72	Venezuela, Bolivarian Rep.	4.40	41.60
6	Albania	5.62	85.56	73	Côte d'Ivoire	4.38	40.99
7	United Arab Emirates	5.59	84.52	74	Cabo Verde	4.38	40.88
8	Denmark	5.56	83.23	75	Serbia	4.37	40.61
9	Estonia	5.53	82.29	76	Panama	4.37	40.53
10	Sweden	5.50	81.08	77	Portugal	4.37	40.44
11	Rwanda	5.49	80.80	78	Ghana	4.33	39.21
12	Bahrain	5.44	79.14	79	Slovakia	4.29	37.59
13	Latvia	5.43	78.69	80	Madagascar	4.28	37.49
14	Malaysia	5.39	77.45	81	Tunisia	4.28	37.35
15	Luxembourg	5.37	76.48	82	Cyprus	4.28	37.26
16	New Zealand	5.35	75.78	83	Morocco	4.27	37.06
17	Oman	5.35	75.71	84	Zimbabwe	4.26	36.60
18	Switzerland	5.30	74.01	85	Kenya	4.20	34.64
19	United States of America	5.28	73.17	86	Uruguay	4.20	34.50
20	Lithuania	5.27	72.98	87	Guinea	4.16	32.96
21	Qatar	5.23	71.39	88	France	4.15	32.87
22	Azerbaijan	5.22	71.33	89	Nigeria	4.15	32.71
23	Thailand	5.20	70.30	90	Poland	4.14	32.28
24	Tajikistan	5.18	69.90	91	Japan	4.12	31.59
25	Netherlands	5.16	68.84	92	Cameroon	4.11	31.15
26	Egypt	5.13	67.90	93	Mauritius	4.10	31.06
27	Canada	5.12	67.51	94	Lebanon	4.07	29.67
28	Brunei Darussalam	5.10	66.72	95	Spain	4.05	29.04
29	Gambia	5.09	66.44	96	South Africa	4.04	28.80
30	China	5.06	65.50	97	Eswatini	4.04	28.58
31	Australia	5.06	65.34	98	Dominican Republic	4.03	28.55
32	Algeria	5.01	63.74	99	Greece	4.02	28.13
33	Slovenia	4.98	62.68	100	Korea, Rep.	4.02	28.08
34	Indonesia	4.95	61.64	101	Guatemala	4.02	28.00
35	Germany	4.95	61.38	102	Malawi	4.02	27.85
36	Romania	4.92	60.48	103	Nepal	4.01	27.53
37	Ireland	4.92	60.43	104	Colombia	3.96	25.96
38	Armenia	4.91	60.14	105	Bangladesh	3.94	25.09
39	Belarus	4.86	58.23	106	Argentina	3.93	24.90
40	Russian Federation	4.85	57.73	107	Ecuador	3.93	24.63
41	Saudi Arabia	4.84	57.66	108	Honduras	3.92	24.31
42	Mongolia	4.84	57.36	109	Nicaragua	3.91	24.03
43	Lao PDR	4.82	56.80	110	Pakistan	3.91	23.94
44	United Kingdom	4.81	56.60	111	Chile	3.90	23.67
45	Uganda	4.79	55.77	112	Mali	3.89	23.17
46	Czech Republic	4.79	55.68	113	India	3.83	21.31
47	Malta	4.78	55.40	114	Mozambique	3.80	20.06
48	Belgium	4.72	53.19	115	Turkey	3.76	18.74
49	Austria	4.69	52.06	116	North Macedonia	3.75	18.49
50	Montenegro	4.68	51.59	117	Bosnia and Herzegovina	3.74	18.02
51	Kazakhstan	4.67	51.50	118	Hungary	3.69	16.17
52	Jordan	4.65	50.71	119	Paraguay	3.68	15.71
53	Botswana	4.65	50.59	120	Angola	3.66	15.22
54	Israel	4.62	49.77	121	Peru	3.63	13.83
55	Bulgaria	4.62	49.52	122	Congo, Dem. Rep.	3.61	13.45
56	Zambia	4.61	49.23	123	Brazil	3.61	13.20
57	Cambodia	4.61	49.11	124	Chad	3.53	10.58
58	Moldova, Rep.	4.60	48.74	125	Mexico	3.53	10.23
59	Namibia	4.58	48.16	126	Croatia	3.49	8.98
60	Ukraine	4.56	47.54	127	Ethiopia	3.45	7.51
61	Kuwait	4.56	47.50	128	Italy	3.45	7.48
62	Sri Lanka	4.55	47.05	129	Burkina Faso	3.43	6.64
63	Trinidad and Tobago	4.55	46.98	130	El Salvador	3.42	6.28
64	Georgia	4.53	46.52	131	Iran, Islamic Rep.	3.36	4.12
65	Kyrgyzstan	4.52	46.03	132	Lesotho	3.26	0.85
66	Jamaica	4.50	45.24	133	Bolivia, Plurinational St.	3.25	0.46
67	Senegal	4.48	44.68	134	Yemen	3.24	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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Pillar 3

Grow

3.1.1 Vocational enrolment

Vocational enrolment (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Slovenia.....	35.38	100.00	68	South Africa.....	5.07	14.17
2	Austria.....	27.62	78.03	69	Paraguay.....	5.06	14.16
3	Bolivia, Plurinational St.....	27.22	76.91	70	Malaysia.....	4.73	13.22
4	Czech Republic.....	26.24	74.13	71	Dominican Republic.....	4.56	12.73
5	Turkey.....	25.05	70.76	72	Ukraine.....	4.43	12.38
6	Belgium.....	24.88	70.27	73	Lao PDR.....	4.41	12.30
7	Serbia.....	24.71	69.78	74	Saudi Arabia.....	4.10	11.45
8	Singapore.....	23.80	67.21	75	Rwanda.....	3.95	11.01
9	Montenegro.....	23.25	65.65	76	Sri Lanka.....	3.88	10.80
10	Switzerland.....	23.09	65.20	77	Brazil.....	3.87	10.78
11	Netherlands.....	22.99	64.93	78	Bahrain.....	3.58	9.97
12	Slovakia.....	22.57	63.73	79	Mali.....	3.55	9.87
13	Bosnia and Herzegovina.....	22.36	63.14	80	Georgia.....	3.36	9.33
14	Luxembourg.....	21.97	62.04	81	Bangladesh.....	3.03	8.40
15	Croatia.....	21.80	61.56	82	Burundi.....	2.58	7.14
16	Italy.....	21.31	60.17	83	Angola.....	2.40	6.64
17	Germany.....	20.51	57.91	84	Côte d'Ivoire.....	2.03	5.56
18	Finland.....	20.49	57.85	85	Venezuela, Bolivarian Rep.....	2.02	5.56
19	Romania.....	20.19	57.01	86	Ethiopia.....	1.69	4.60
20	Poland.....	19.64	55.43	87	Mauritius.....	1.50	4.08
21	France.....	19.34	54.58	88	Cabo Verde.....	1.36	3.67
22	Kazakhstan.....	18.61	52.53	89	Ghana.....	1.31	3.53
23	Russian Federation.....	18.24	51.49	90	Lesotho.....	1.29	3.48
24	Hungary.....	18.16	51.24	91	Jordan.....	1.22	3.29
25	United Kingdom.....	18.04	50.90	92	Guinea.....	0.81	2.11
26	Norway.....	17.44	49.20	93	Burkina Faso.....	0.80	2.09
27	Latvia.....	17.03	48.04	94	Peru.....	0.77	2.01
28	Bulgaria.....	16.58	46.77	95	Madagascar.....	0.73	1.89
29	Israel.....	16.56	46.72	96	Mozambique.....	0.68	1.76
30	Portugal.....	16.37	46.17	97	Oman.....	0.56	1.42
31	Spain.....	15.45	43.56	98	Nicaragua.....	0.56	1.42
32	Azerbaijan.....	15.10	42.59	99	United Arab Emirates.....	0.54	1.36
33	Korea, Rep.....	14.28	40.26	100	Qatar.....	0.23	0.49
34	Chile.....	13.95	39.32	101	Yemen.....	0.21	0.42
35	Australia.....	13.36	37.65	102	Eswatini.....	0.13	0.18
36	Greece.....	13.02	36.68	103	Tanzania, United Rep.....	0.06	0.00
37	Indonesia.....	12.80	36.08		Algeria.....	n/a	n/a
38	Sweden.....	12.70	35.78		Argentina.....	n/a	n/a
39	Mexico.....	12.63	35.58		Botswana.....	n/a	n/a
40	Denmark.....	11.95	33.67		Cambodia.....	n/a	n/a
41	Estonia.....	11.66	32.85		Canada.....	n/a	n/a
42	Egypt.....	11.62	32.73		Chad.....	n/a	n/a
43	Uruguay.....	10.73	30.22		Colombia.....	n/a	n/a
44	Ecuador.....	10.51	29.59		Congo, Dem. Rep.....	n/a	n/a
45	Moldova, Rep.....	10.20	28.71		Gambia.....	n/a	n/a
46	Malta.....	10.14	28.55		India.....	n/a	n/a
47	New Zealand.....	9.98	28.10		Jamaica.....	n/a	n/a
48	Belarus.....	9.96	28.02		Japan.....	n/a	n/a
49	Guatemala.....	9.45	26.59		Kenya.....	n/a	n/a
50	Costa Rica.....	9.31	26.19		Kuwait.....	n/a	n/a
51	Honduras.....	9.04	25.42		Lebanon.....	n/a	n/a
52	Iceland.....	9.02	25.37		Malawi.....	n/a	n/a
53	Lithuania.....	8.75	24.61		Namibia.....	n/a	n/a
54	Ireland.....	8.50	23.89		Nepal.....	n/a	n/a
55	Armenia.....	8.18	23.00		Nigeria.....	n/a	n/a
56	Panama.....	7.25	20.35		North Macedonia.....	n/a	n/a
57	Cameroon.....	7.17	20.12		Pakistan.....	n/a	n/a
58	El Salvador.....	7.13	20.03		Philippines.....	n/a	n/a
59	Brunei Darussalam.....	6.96	19.54		Senegal.....	n/a	n/a
60	Cyprus.....	6.84	19.21		Tajikistan.....	n/a	n/a
61	China.....	6.51	18.25		Trinidad and Tobago.....	n/a	n/a
62	Kyrgyzstan.....	6.05	16.96		Tunisia.....	n/a	n/a
63	Mongolia.....	5.91	16.57		Uganda.....	n/a	n/a
64	Iran, Islamic Rep.....	5.89	16.49		United States of America.....	n/a	n/a
65	Morocco.....	5.76	16.13		Viet Nam.....	n/a	n/a
66	Thailand.....	5.58	15.62		Zambia.....	n/a	n/a
67	Albania.....	5.33	14.93		Zimbabwe.....	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.1.2 Tertiary enrolment

Tertiary enrolment (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Greece	142.85	100.00	68	North Macedonia	43.12	29.78
2	Turkey	113.22	79.13	69	Malaysia	43.06	29.74
3	Australia	107.81	75.33	70	Kyrgyzstan	42.32	29.22
4	Korea, Rep.	95.86	66.92	71	Mexico	41.52	28.66
5	Latvia	93.02	64.92	72	Mauritius	40.60	28.00
6	Argentina	91.60	63.91	73	Oman	40.45	27.90
7	Spain	91.11	63.57	74	Bosnia and Herzegovina	40.19	27.72
8	Chile	90.90	63.42	75	Moldova, Rep.	39.21	27.03
9	Finland	90.26	62.97	76	Egypt	38.90	26.81
10	Singapore	88.89	62.00	77	Morocco	38.55	26.56
11	United States of America	88.30	61.59	78	Indonesia	36.31	24.99
12	Belarus	87.43	60.98	79	Philippines	35.48	24.40
13	Netherlands	87.10	60.74	80	Paraguay	34.63	23.80
14	Austria	86.69	60.46	81	Jordan	33.06	22.70
15	Russian Federation	84.58	58.97	82	Tunisia	31.85	21.84
16	Norway	83.02	57.87	83	Azerbaijan	31.54	21.63
17	New Zealand	82.98	57.85	84	Brunei Darussalam	31.47	21.58
18	Ukraine	82.67	57.63	85	Tajikistan	31.26	21.43
19	Cyprus	81.34	56.69	86	El Salvador	29.37	20.10
20	Denmark	81.18	56.58	87	Viet Nam	28.64	19.58
21	Venezuela, Bolivarian Rep.	79.30	55.25	88	India	28.57	19.54
22	Belgium	78.90	54.97	89	Jamaica	27.13	18.52
23	Ireland	77.28	53.83	90	Honduras	25.46	17.34
24	Slovenia	77.11	53.71	91	Botswana	25.08	17.08
25	Lithuania	73.73	51.33	92	Namibia	24.10	16.39
26	Iceland	73.10	50.89	93	Bangladesh	24.02	16.33
27	Sweden	72.46	50.44	94	South Africa	23.80	16.18
28	Bulgaria	71.52	49.78	95	Cabo Verde	23.62	16.05
29	Saudi Arabia	70.90	49.34	96	Guatemala	21.78	14.76
30	Peru	70.74	49.23	97	Sri Lanka	21.13	14.30
31	Kazakhstan	70.68	49.18	98	Qatar	18.95	12.76
32	Estonia	70.37	48.96	99	Luxembourg	18.59	12.51
33	Germany	70.34	48.95	100	Ghana	17.23	11.55
34	Canada	70.11	48.79	101	Cambodia	14.74	9.80
35	Poland	68.62	47.73	102	Lao PDR	14.45	9.60
36	Serbia	67.79	47.15	103	Cameroon	14.27	9.47
37	Croatia	67.65	47.05	104	Nepal	13.33	8.80
38	France	67.62	47.03	105	Senegal	13.14	8.67
39	Portugal	65.66	45.65	106	Guinea	11.56	7.56
40	Mongolia	65.60	45.60	107	Kenya	11.46	7.49
41	Malta	64.87	45.10	108	Lesotho	10.20	6.60
42	Italy	64.29	44.69	109	Nigeria	10.17	6.58
43	Georgia	63.92	44.42	110	Yemen	10.15	6.57
44	Czech Republic	63.77	44.32	111	Zimbabwe	10.01	6.47
45	Uruguay	63.13	43.87	112	Côte d'Ivoire	9.95	6.43
46	Iran, Islamic Rep.	62.79	43.63	113	Angola	9.34	5.99
47	Israel	61.48	42.70	114	Pakistan	8.96	5.73
48	United Kingdom	61.38	42.64	115	Ethiopia	8.11	5.13
49	Switzerland	61.38	42.63	116	Mozambique	7.31	4.57
50	Dominican Republic	59.92	41.61	117	Burkina Faso	7.10	4.42
51	Albania	59.78	41.51	118	Eswatini	6.75	4.17
52	Costa Rica	57.67	40.03	119	Congo, Dem. Rep.	6.60	4.07
53	Bahrain	55.63	38.59	120	Rwanda	6.24	3.81
54	Kuwait	55.31	38.36	121	Mali	5.50	3.29
55	Colombia	54.98	38.13	122	Madagascar	5.35	3.19
56	Montenegro	54.17	37.56	123	Uganda	4.84	2.83
57	China	53.76	37.28	124	Zambia	4.12	2.32
58	Brazil	53.26	36.92	125	Burundi	4.06	2.28
59	Algeria	52.62	36.47	126	Chad	3.25	1.71
60	United Arab Emirates	52.61	36.46	127	Tanzania, United Rep.	3.09	1.60
61	Armenia	51.49	35.67	128	Gambia	2.72	1.34
62	Romania	51.01	35.34	129	Malawi	0.82	0.00
63	Hungary	50.31	34.84		Bolivia, Plurinational St.	n/a	n/a
64	Thailand	49.29	34.12		Japan	n/a	n/a
65	Panama	47.80	33.07		Lebanon	n/a	n/a
66	Ecuador	47.60	32.93		Nicaragua	n/a	n/a
67	Slovakia	45.37	31.36		Trinidad and Tobago	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.1.3 Tertiary education expenditure

Initial government funding per tertiary student (constant PPP\$) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	45,566.76	100.00	68	Argentina	3,652.86	55.60
2	Botswana	35,965.01	95.84	69	Iran, Islamic Rep.	3,622.23	55.45
3	Norway	26,183.78	90.25	70	Mali	3,610.01	55.39
4	Switzerland	25,713.48	89.93	71	Lebanon	3,492.77	54.81
5	Denmark	25,476.79	89.77	72	Jamaica	3,397.36	54.33
6	Singapore	23,903.03	88.65	73	Burundi	3,385.43	54.26
7	Sweden	22,510.36	87.59	74	Belarus	3,353.57	54.10
8	Brunei Darussalam	20,161.97	85.65	75	Bosnia and Herzegovina	3,284.09	53.73
9	Austria	19,477.80	85.05	76	Azerbaijan	3,241.36	53.50
10	Germany	17,932.99	83.59	77	Chad	3,203.61	53.29
11	Netherlands	17,896.63	83.56	78	Pakistan	2,973.11	51.98
12	United Kingdom	17,557.56	83.22	79	Thailand	2,936.02	51.76
13	Malta	17,037.83	82.69	80	Kenya	2,834.65	51.14
14	Belgium	16,479.68	82.11	81	Ghana	2,636.58	49.87
15	Ireland	16,415.15	82.04	82	Cabo Verde	2,609.88	49.69
16	Canada	15,508.51	81.04	83	Greece	2,575.88	49.46
17	Iceland	15,062.60	80.52	84	Colombia	2,360.37	47.92
18	Finland	15,028.66	80.48	85	Kazakhstan	2,283.17	47.34
19	France	14,196.08	79.48	86	India	2,254.10	47.11
20	United States of America	13,973.69	79.20	87	Honduras	2,213.88	46.79
21	Oman	13,555.70	78.67	88	Indonesia	2,157.79	46.34
22	Tanzania, United Rep.	12,272.61	76.92	89	Viet Nam	2,036.65	45.33
23	Estonia	11,837.96	76.29	90	Mauritius	1,977.21	44.81
24	Malawi	11,067.05	75.10	91	Rwanda	1,904.48	44.15
25	Eswatini	10,478.42	74.14	92	Guinea	1,894.00	44.05
26	New Zealand	10,472.02	74.13	93	Albania	1,828.72	43.43
27	Italy	10,384.16	73.98	94	Mozambique	1,577.69	40.84
28	Bahrain	10,297.74	73.83	95	Paraguay	1,518.88	40.17
29	Slovenia	9,010.27	71.48	96	Georgia	1,516.87	40.15
30	Australia	8,980.86	71.43	97	Guatemala	1,475.31	39.66
31	Spain	8,667.80	70.80	98	Peru	1,380.78	38.49
32	Czech Republic	8,526.00	70.51	99	Gambia	1,370.72	38.36
33	Cyprus	8,403.34	70.26	100	Lesotho	1,334.34	37.89
34	Slovakia	8,285.12	70.01	101	Uganda	1,315.09	37.64
35	Japan	8,274.14	69.98	102	Lao PDR	1,289.72	37.29
36	Hungary	8,269.24	69.97	103	Armenia	1,225.37	36.39
37	Namibia	8,232.73	69.90	104	El Salvador	977.92	32.43
38	Poland	8,061.84	69.53	105	Jordan	952.43	31.96
39	Israel	7,884.75	69.14	106	Bangladesh	885.24	30.68
40	Portugal	7,759.39	68.85	107	Congo, Dem. Rep.	725.94	27.19
41	Romania	7,300.53	67.78	108	Nepal	683.62	26.14
42	Malaysia	7,204.27	67.55	109	Cameroon	646.62	25.16
43	Costa Rica	7,178.18	67.48	110	Philippines	580.08	23.25
44	South Africa	7,027.31	67.11	111	Tajikistan	565.22	22.80
45	Ecuador	6,414.37	65.51	112	Mongolia	367.81	15.25
46	Burkina Faso	6,083.06	64.57	113	Kyrgyzstan	253.01	8.69
47	Tunisia	5,891.80	64.01	114	Cambodia	154.00	0.00
48	Korea, Rep.	5,773.05	63.65	114	Madagascar	0.51	0.00
49	Croatia	5,688.60	63.39		Algeria	n/a	n/a
50	Uruguay	5,541.85	62.93		Angola	n/a	n/a
51	Russian Federation	5,509.52	62.83		Bolivia, Plurinational St.	n/a	n/a
52	Côte d'Ivoire	5,490.96	62.77		China	n/a	n/a
53	Brazil	5,479.56	62.73		Dominican Republic	n/a	n/a
54	Lithuania	5,381.61	62.42		Egypt	n/a	n/a
55	Morocco	5,152.53	61.65		Kuwait	n/a	n/a
56	Mexico	5,123.28	61.55		Montenegro	n/a	n/a
57	Chile	4,928.46	60.87		Nicaragua	n/a	n/a
58	Bulgaria	4,894.48	60.75		Nigeria	n/a	n/a
59	Zimbabwe	4,853.90	60.60		North Macedonia	n/a	n/a
60	Panama	4,833.62	60.53		Qatar	n/a	n/a
61	Serbia	4,737.71	60.18		Saudi Arabia	n/a	n/a
62	Senegal	4,618.50	59.73		Trinidad and Tobago	n/a	n/a
63	Latvia	4,314.23	58.53		Turkey	n/a	n/a
64	Ukraine	4,187.97	58.01		United Arab Emirates	n/a	n/a
65	Moldova, Rep.	4,177.38	57.96		Venezuela, Bolivarian Rep.	n/a	n/a
66	Ethiopia	4,113.69	57.69		Yemen	n/a	n/a
67	Sri Lanka	3,726.03	55.95		Zambia	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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3.1.4 Reading, maths, and science

PISA average scores in reading, mathematics, and science | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	China	579.03	100.00	68	Argentina	395.01	24.86
2	Singapore	556.47	90.79	69	Georgia	386.67	21.46
3	Estonia	525.51	78.15	70	Saudi Arabia	386.21	21.27
4	Japan	519.99	75.89	71	Indonesia	381.90	19.51
5	Korea, Rep.	519.66	75.76	72	Lebanon	376.84	17.44
6	Canada	516.70	74.55	73	Tunisia	371.43	15.23
7	Finland	516.42	74.44	74	Morocco	367.90	13.80
8	Poland	512.85	72.98	75	Panama	364.81	12.53
9	Ireland	504.61	69.61	76	Algeria	361.74	11.28
10	Slovenia	503.75	69.26	77	Philippines	349.73	6.37
11	United Kingdom	503.46	69.14	78	Dominican Republic	334.12	0.00
12	New Zealand	502.90	68.92		Angola	n/a	n/a
13	Sweden	502.54	68.77		Armenia	n/a	n/a
14	Netherlands	502.47	68.74		Bahrain	n/a	n/a
15	Viet Nam	501.98	68.54		Bangladesh	n/a	n/a
16	Denmark	501.06	68.16		Bolivia, Plurinational St.	n/a	n/a
17	Germany	500.44	67.91		Botswana	n/a	n/a
18	Belgium	499.90	67.69		Burkina Faso	n/a	n/a
19	Australia	498.99	67.32		Burundi	n/a	n/a
20	Switzerland	498.17	66.99		Cabo Verde	n/a	n/a
21	Norway	496.94	66.48		Cambodia	n/a	n/a
22	Czech Republic	495.49	65.89		Cameroon	n/a	n/a
23	United States of America	495.33	65.82		Chad	n/a	n/a
24	France	493.66	65.14		Congo, Dem. Rep.	n/a	n/a
25	Portugal	491.99	64.46		Côte d'Ivoire	n/a	n/a
26	Spain	491.40	64.22		Ecuador	n/a	n/a
27	Austria	491.04	64.07		Egypt	n/a	n/a
28	Latvia	487.36	62.57		El Salvador	n/a	n/a
29	Iceland	481.40	60.14		Eswatini	n/a	n/a
30	Russian Federation	481.34	60.11		Ethiopia	n/a	n/a
31	Lithuania	479.71	59.45		Gambia	n/a	n/a
32	Hungary	479.33	59.29		Ghana	n/a	n/a
33	Italy	476.96	58.33		Guatemala	n/a	n/a
34	Luxembourg	476.73	58.23		Guinea	n/a	n/a
35	Belarus	472.31	56.42		Honduras	n/a	n/a
36	Croatia	471.85	56.24		India	n/a	n/a
37	Slovakia	469.40	55.24		Iran, Islamic Rep.	n/a	n/a
38	Israel	465.22	53.53		Jamaica	n/a	n/a
39	Ukraine	462.69	52.50		Kenya	n/a	n/a
40	Turkey	462.48	52.41		Kuwait	n/a	n/a
41	Malta	458.85	50.93		Kyrgyzstan	n/a	n/a
42	Greece	453.47	48.73		Lao PDR	n/a	n/a
43	Serbia	442.54	44.27		Lesotho	n/a	n/a
44	Cyprus	438.02	42.42		Madagascar	n/a	n/a
45	Chile	437.75	42.32		Malawi	n/a	n/a
46	United Arab Emirates	433.46	40.56		Mali	n/a	n/a
47	Malaysia	430.94	39.53		Mauritius	n/a	n/a
48	Romania	427.79	38.25		Mongolia	n/a	n/a
49	Bulgaria	426.65	37.78		Mozambique	n/a	n/a
50	Moldova, Rep.	424.36	36.85		Namibia	n/a	n/a
51	Uruguay	423.53	36.51		Nepal	n/a	n/a
52	Brunei Darussalam	423.06	36.31		Nicaragua	n/a	n/a
53	Trinidad and Tobago	423.04	36.31		Nigeria	n/a	n/a
54	Montenegro	421.95	35.86		Oman	n/a	n/a
55	Albania	419.79	34.98		Pakistan	n/a	n/a
56	Mexico	416.16	33.50		Paraguay	n/a	n/a
57	Jordan	416.03	33.44		Rwanda	n/a	n/a
58	Costa Rica	414.82	32.95		Senegal	n/a	n/a
59	Qatar	413.48	32.41		South Africa	n/a	n/a
60	Thailand	412.42	31.97		Sri Lanka	n/a	n/a
61	Colombia	405.52	29.15		Tajikistan	n/a	n/a
62	Bosnia and Herzegovina	402.62	27.97		Tanzania, United Rep.	n/a	n/a
63	Kazakhstan	402.39	27.87		Uganda	n/a	n/a
64	Azerbaijan	402.23	27.81		Venezuela, Bolivarian Rep.	n/a	n/a
65	Peru	401.52	27.52		Yemen	n/a	n/a
66	North Macedonia	400.05	26.92		Zambia	n/a	n/a
67	Brazil	400.02	26.91		Zimbabwe	n/a	n/a

SOURCE: OECD Programme for International Student Assessment (PISA) (www.oecd.org/pisa)

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3.1.5 University ranking

THE World University Rankings | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	94.73	100.00	68	Kuwait	24.57	25.93
2	United Kingdom	93.00	98.17	69	Ghana	23.80	25.13
3	Canada.....	79.17	83.57	70	Slovakia	23.67	24.99
4	China.....	78.47	82.83	71	Serbia	23.34	24.63
5	Singapore.....	78.10	82.44	72	Latvia	23.33	24.63
6	Switzerland.....	75.87	80.08	73	Morocco.....	23.20	24.49
7	Germany.....	75.77	79.98	74	Lithuania.....	22.99	24.27
8	Australia.....	73.20	77.27	75	Indonesia.....	22.89	24.17
9	Netherlands.....	68.30	72.10	76	Viet Nam.....	21.62	22.82
10	France.....	66.80	70.51	77	Kazakhstan.....	20.45	21.59
11	Japan.....	66.43	70.12	78	Bangladesh.....	20.01	21.12
12	Sweden.....	66.20	69.88	79	Tunisia.....	19.57	20.65
13	Korea, Rep.....	64.60	68.19	80	Argentina.....	19.25	20.32
14	Belgium.....	63.93	67.49	81	Belarus.....	18.70	19.74
15	Denmark.....	60.03	63.37	82	Botswana.....	17.94	18.94
16	Italy.....	55.97	59.08	83	Bulgaria.....	17.79	18.78
17	Spain.....	55.77	58.87	84	Venezuela, Bolivarian Rep.....	17.69	18.67
18	Austria.....	54.33	57.35	85	Montenegro.....	15.24	16.09
19	Finland.....	54.06	57.07	86	Georgia.....	13.20	13.93
20	Ireland.....	53.78	56.77	87	Albania.....	0.00	0.00
21	New Zealand.....	53.38	56.35	87	Angola.....	0.00	0.00
22	South Africa.....	53.19	56.14	87	Armenia.....	0.00	0.00
23	Norway.....	51.84	54.73	87	Azerbaijan.....	0.00	0.00
24	Russian Federation.....	51.84	54.72	87	Bahrain.....	0.00	0.00
25	Luxembourg.....	51.77	54.65	87	Bolivia, Plurinational St.....	0.00	0.00
26	Israel.....	49.65	52.41	87	Bosnia and Herzegovina.....	0.00	0.00
27	Saudi Arabia.....	48.13	50.81	87	Burkina Faso.....	0.00	0.00
28	Qatar.....	47.02	49.64	87	Burundi.....	0.00	0.00
29	Iceland.....	44.98	47.48	87	Cabo Verde.....	0.00	0.00
30	India.....	44.52	46.99	87	Cambodia.....	0.00	0.00
31	Brunei Darussalam.....	44.33	46.80	87	Cameroon.....	0.00	0.00
32	Iran, Islamic Rep.....	43.94	46.38	87	Chad.....	0.00	0.00
33	Portugal.....	43.27	45.67	87	Congo, Dem. Rep.....	0.00	0.00
34	Brazil.....	42.47	44.83	87	Côte d'Ivoire.....	0.00	0.00
35	United Arab Emirates.....	41.72	44.04	87	Dominican Republic.....	0.00	0.00
36	Chile.....	40.79	43.06	87	Ecuador.....	0.00	0.00
37	Turkey.....	40.50	42.75	87	El Salvador.....	0.00	0.00
38	Egypt.....	40.12	42.35	87	Eswatini.....	0.00	0.00
39	Uganda.....	40.11	42.34	87	Ethiopia.....	0.00	0.00
40	Greece.....	39.90	42.12	87	Gambia.....	0.00	0.00
41	Malaysia.....	39.40	41.59	87	Guatemala.....	0.00	0.00
42	Jamaica.....	37.78	39.88	87	Guinea.....	0.00	0.00
43	Cyprus.....	37.59	39.69	87	Honduras.....	0.00	0.00
44	Nigeria.....	37.49	39.58	87	Kyrgyzstan.....	0.00	0.00
45	Costa Rica.....	37.22	39.28	87	Lao PDR.....	0.00	0.00
46	Pakistan.....	35.85	37.84	87	Lesotho.....	0.00	0.00
47	Hungary.....	35.35	37.32	87	Madagascar.....	0.00	0.00
48	Jordan.....	34.65	36.58	87	Malawi.....	0.00	0.00
49	Czech Republic.....	34.56	36.48	87	Mali.....	0.00	0.00
50	Lebanon.....	34.51	36.43	87	Mauritius.....	0.00	0.00
51	Ukraine.....	33.69	35.56	87	Moldova, Rep.....	0.00	0.00
52	Estonia.....	32.89	34.72	87	Mongolia.....	0.00	0.00
53	Sri Lanka.....	32.67	34.49	87	Mozambique.....	0.00	0.00
54	Thailand.....	32.02	33.80	87	Namibia.....	0.00	0.00
55	Colombia.....	31.72	33.49	87	Nicaragua.....	0.00	0.00
56	Mexico.....	31.47	33.22	87	North Macedonia.....	0.00	0.00
57	Kenya.....	31.45	33.20	87	Panama.....	0.00	0.00
58	Malta.....	31.40	33.14	87	Paraguay.....	0.00	0.00
59	Peru.....	30.94	32.66	87	Rwanda.....	0.00	0.00
60	Poland.....	30.60	32.30	87	Senegal.....	0.00	0.00
61	Algeria.....	30.32	32.00	87	Tajikistan.....	0.00	0.00
62	Philippines.....	30.10	31.77	87	Tanzania, United Rep.....	0.00	0.00
63	Oman.....	27.94	29.49	87	Trinidad and Tobago.....	0.00	0.00
64	Romania.....	27.23	28.74	87	Uruguay.....	0.00	0.00
65	Slovenia.....	26.84	28.33	87	Yemen.....	0.00	0.00
66	Croatia.....	25.45	26.87	87	Zambia.....	0.00	0.00
67	Nepal.....	25.16	26.56	87	Zimbabwe.....	0.00	0.00

SOURCE: Times Higher Education World University Rankings 2021 (<https://www.timeshighereducation.com/world-university-rankings>)
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2019.

3.2.1 Business and economics subject ranking

THE World University Rankings in the subject Business and Economics | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	90.77	100.00	68	Morocco.....	14.98	16.51
2	United Kingdom.....	88.60	97.61	69	Kuwait.....	14.89	16.40
3	China.....	73.23	80.68	70	Albania.....	0.00	0.00
4	Singapore.....	71.75	79.05	70	Algeria.....	0.00	0.00
5	Switzerland.....	68.43	75.39	70	Angola.....	0.00	0.00
6	Canada.....	66.77	73.56	70	Argentina.....	0.00	0.00
7	Netherlands.....	66.63	73.41	70	Armenia.....	0.00	0.00
8	Australia.....	63.67	70.14	70	Azerbaijan.....	0.00	0.00
9	Germany.....	63.43	69.89	70	Bahrain.....	0.00	0.00
10	Japan.....	55.36	60.99	70	Bangladesh.....	0.00	0.00
11	Denmark.....	53.58	59.03	70	Belarus.....	0.00	0.00
12	France.....	51.63	56.88	70	Bolivia, Plurinational St.....	0.00	0.00
13	Sweden.....	51.04	56.23	70	Bosnia and Herzegovina.....	0.00	0.00
14	Spain.....	50.96	56.14	70	Botswana.....	0.00	0.00
15	Belgium.....	50.47	55.60	70	Brunei Darussalam.....	0.00	0.00
16	Korea, Rep.....	49.17	54.17	70	Bulgaria.....	0.00	0.00
17	Italy.....	48.77	53.73	70	Burkina Faso.....	0.00	0.00
18	Finland.....	46.98	51.76	70	Burundi.....	0.00	0.00
19	New Zealand.....	45.64	50.28	70	Cabo Verde.....	0.00	0.00
20	Austria.....	45.53	50.16	70	Cambodia.....	0.00	0.00
21	Russian Federation.....	42.99	47.36	70	Cameroon.....	0.00	0.00
22	Ireland.....	42.93	47.29	70	Chad.....	0.00	0.00
23	Malaysia.....	41.46	45.68	70	Congo, Dem. Rep.....	0.00	0.00
24	Luxembourg.....	39.93	43.99	70	Costa Rica.....	0.00	0.00
25	Saudi Arabia.....	39.56	43.58	70	Côte d'Ivoire.....	0.00	0.00
26	Israel.....	38.70	42.64	70	Dominican Republic.....	0.00	0.00
27	Portugal.....	37.68	41.52	70	Ecuador.....	0.00	0.00
28	Iran, Islamic Rep.....	37.09	40.86	70	El Salvador.....	0.00	0.00
29	Malta.....	35.52	39.13	70	Eswatini.....	0.00	0.00
30	United Arab Emirates.....	34.74	38.28	70	Ethiopia.....	0.00	0.00
31	Brazil.....	34.14	37.61	70	Gambia.....	0.00	0.00
32	South Africa.....	33.53	36.94	70	Georgia.....	0.00	0.00
33	Jordan.....	33.14	36.51	70	Guatemala.....	0.00	0.00
34	Qatar.....	32.88	36.23	70	Guinea.....	0.00	0.00
35	Czech Republic.....	32.55	35.86	70	Honduras.....	0.00	0.00
36	Lebanon.....	31.47	34.68	70	Jamaica.....	0.00	0.00
37	Cyprus.....	31.26	34.43	70	Kenya.....	0.00	0.00
38	Estonia.....	30.89	34.03	70	Kyrgyzstan.....	0.00	0.00
39	Chile.....	30.48	33.58	70	Lao PDR.....	0.00	0.00
40	Norway.....	30.18	33.25	70	Latvia.....	0.00	0.00
41	Iceland.....	28.81	31.74	70	Lesotho.....	0.00	0.00
42	Ghana.....	28.69	31.61	70	Madagascar.....	0.00	0.00
43	Pakistan.....	28.22	31.10	70	Malawi.....	0.00	0.00
44	Turkey.....	27.85	30.68	70	Mali.....	0.00	0.00
45	Mexico.....	27.24	30.01	70	Mauritius.....	0.00	0.00
46	Nigeria.....	26.62	29.33	70	Moldova, Rep.....	0.00	0.00
47	Ukraine.....	26.50	29.20	70	Mongolia.....	0.00	0.00
48	Kazakhstan.....	26.37	29.05	70	Montenegro.....	0.00	0.00
49	Thailand.....	26.00	28.65	70	Mozambique.....	0.00	0.00
50	Greece.....	25.82	28.44	70	Namibia.....	0.00	0.00
51	India.....	23.84	26.27	70	Nepal.....	0.00	0.00
52	Lithuania.....	23.50	25.89	70	Nicaragua.....	0.00	0.00
53	Indonesia.....	22.90	25.23	70	North Macedonia.....	0.00	0.00
54	Egypt.....	22.83	25.15	70	Oman.....	0.00	0.00
55	Tunisia.....	22.66	24.97	70	Panama.....	0.00	0.00
56	Slovenia.....	22.01	24.25	70	Paraguay.....	0.00	0.00
57	Colombia.....	21.88	24.10	70	Rwanda.....	0.00	0.00
58	Slovakia.....	21.02	23.15	70	Senegal.....	0.00	0.00
59	Uganda.....	20.01	22.04	70	Sri Lanka.....	0.00	0.00
60	Peru.....	19.00	20.93	70	Tajikistan.....	0.00	0.00
61	Poland.....	18.43	20.31	70	Tanzania, United Rep.....	0.00	0.00
62	Serbia.....	18.34	20.20	70	Trinidad and Tobago.....	0.00	0.00
63	Hungary.....	18.22	20.07	70	Uruguay.....	0.00	0.00
64	Philippines.....	17.90	19.72	70	Venezuela, Bolivarian Rep.....	0.00	0.00
65	Viet Nam.....	17.82	19.64	70	Yemen.....	0.00	0.00
66	Croatia.....	15.83	17.44	70	Zambia.....	0.00	0.00
67	Romania.....	15.77	17.38	70	Zimbabwe.....	0.00	0.00

SOURCE: Times Higher Education World University Rankings 2021 (<https://www.timeshighereducation.com/world-university-rankings>)
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3.2.2 Prevalence of training in firms

Proportion of firms offering formal training (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	China	79.20	100.00	68	Mauritius	25.60	25.03
2	Ecuador	73.70	92.31	69	Namibia	25.40	24.76
3	Sweden	70.30	87.55	70	Gambia	25.20	24.48
4	Mongolia	66.20	81.82	71	Burkina Faso	24.80	23.92
5	Luxembourg	66.10	81.68	72	Lao PDR	24.40	23.36
6	Peru	65.90	81.40	73	Tajikistan	24.30	23.22
7	Colombia	63.00	77.34	73	Ukraine	24.30	23.22
8	Ireland	59.80	72.87	75	Angola	23.50	22.10
8	Philippines	59.80	72.87	76	Dominican Republic	23.40	21.96
10	Belgium	57.80	70.07	77	Chad	22.90	21.26
11	Chile	57.50	69.65	78	Cambodia	22.20	20.28
12	Nicaragua	57.30	69.37	78	Viet Nam	22.20	20.28
13	Venezuela, Bolivarian Rep.	56.00	67.55	80	Bangladesh	21.90	19.86
14	Guatemala	55.70	67.13	81	Kazakhstan	21.80	19.72
15	Costa Rica	54.70	65.73	82	Poland	21.70	19.58
16	Netherlands	54.10	64.90	83	Greece	21.60	19.44
17	El Salvador	53.80	64.48	84	Ethiopia	20.80	18.32
18	Uruguay	53.30	63.78	84	Lebanon	20.80	18.32
19	Latvia	52.90	63.22	86	Mozambique	20.70	18.18
20	Botswana	51.90	61.82	87	Romania	20.50	17.90
21	Mexico	50.80	60.28	88	Bulgaria	20.00	17.20
22	Bolivia, Plurinational St.	49.90	59.02	89	Tunisia	19.10	15.94
22	Malta	49.90	59.02	90	Israel	18.60	15.24
24	Honduras	47.70	55.94	91	Malaysia	18.50	15.10
25	Paraguay	46.40	54.13	92	Sri Lanka	18.40	14.97
26	Albania	46.20	53.85	93	Thailand	18.00	14.41
27	Slovenia	44.00	50.77	94	Mali	17.70	13.99
28	Czech Republic	43.60	50.21	95	Senegal	17.40	13.57
29	Slovakia	43.30	49.79	96	Congo, Dem. Rep.	17.00	13.01
30	Brazil	42.20	48.25	97	Jordan	16.90	12.87
31	Kyrgyzstan	41.40	47.13	98	Cabo Verde	16.60	12.45
32	Estonia	40.70	46.15	99	Guinea	16.00	11.61
33	Argentina	40.20	45.45	100	Montenegro	15.80	11.33
34	Ghana	40.10	45.31	101	Yemen	14.30	9.23
35	Cyprus	39.70	44.76	102	Madagascar	12.70	6.99
36	North Macedonia	39.00	43.78	103	Italy	12.60	6.85
37	Serbia	38.30	42.80	104	Russian Federation	11.80	5.73
38	Moldova, Rep.	38.10	42.52	105	Panama	11.00	4.62
39	Bosnia and Herzegovina	37.90	42.24	106	Egypt	7.90	0.28
40	Cameroon	37.60	41.82	106	South Africa	7.90	0.28
41	Kenya	37.40	41.54	108	Indonesia	7.70	0.00
42	Zambia	36.60	40.42		Algeria	n/a	n/a
43	Eswatini	36.10	39.72		Australia	n/a	n/a
44	India	35.90	39.44		Austria	n/a	n/a
44	Rwanda	35.90	39.44		Bahrain	n/a	n/a
46	Morocco	35.70	39.16		Brunei Darussalam	n/a	n/a
47	Côte d'Ivoire	35.50	38.88		Canada	n/a	n/a
48	Uganda	34.70	37.76		Denmark	n/a	n/a
49	Azerbaijan	33.90	36.64		Finland	n/a	n/a
50	Malawi	32.90	35.24		France	n/a	n/a
51	Burundi	32.00	33.99		Germany	n/a	n/a
51	Georgia	32.00	33.99		Iceland	n/a	n/a
51	Pakistan	32.00	33.99		Iran, Islamic Rep.	n/a	n/a
54	Nepal	31.90	33.85		Japan	n/a	n/a
55	Belarus	31.50	33.29		Korea, Rep.	n/a	n/a
56	Lesotho	31.20	32.87		Kuwait	n/a	n/a
57	Nigeria	30.70	32.17		New Zealand	n/a	n/a
57	Tanzania, United Rep.	30.70	32.17		Norway	n/a	n/a
57	Turkey	30.70	32.17		Oman	n/a	n/a
60	Hungary	29.30	30.21		Qatar	n/a	n/a
61	Portugal	29.00	29.79		Saudi Arabia	n/a	n/a
62	Trinidad and Tobago	28.00	28.39		Singapore	n/a	n/a
63	Armenia	27.50	27.69		Spain	n/a	n/a
63	Lithuania	27.50	27.69		Switzerland	n/a	n/a
65	Zimbabwe	26.40	26.15		United Arab Emirates	n/a	n/a
66	Croatia	26.20	25.87		United Kingdom	n/a	n/a
67	Jamaica	25.90	25.45		United States of America	n/a	n/a

SOURCE: World Bank, Enterprise Surveys (www.enterprisesurveys.org)

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3.2.3 Employee development

Average answer to the question: In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	5.71	100.00	68	Botswana	3.95	37.25
2	United States of America	5.43	89.94	69	Spain	3.91	35.71
3	Luxembourg	5.42	89.67	70	Brazil	3.91	35.66
4	Singapore	5.41	89.28	71	Panama	3.89	34.96
5	Finland	5.40	89.04	72	Argentina	3.88	34.49
6	Netherlands	5.37	87.82	73	Russian Federation	3.85	33.47
7	Denmark	5.28	84.61	74	Lao PDR	3.84	33.34
8	Japan	5.20	81.84	75	Gambia	3.83	33.05
9	Sweden	5.18	81.16	76	Ukraine	3.83	32.95
10	Austria	5.12	78.94	77	Rwanda	3.83	32.91
11	Malaysia	5.12	78.87	78	Montenegro	3.82	32.55
12	Norway	5.09	77.97	79	Uruguay	3.82	32.49
13	United Arab Emirates	5.02	75.46	80	Pakistan	3.82	32.43
14	Ireland	5.02	75.27	81	Tanzania, United Rep.	3.80	31.94
15	Germany	5.00	74.79	82	Zimbabwe	3.78	31.24
16	Belgium	5.00	74.54	83	Mexico	3.78	31.17
17	Qatar	4.93	72.13	84	Armenia	3.78	30.95
18	Iceland	4.92	71.83	85	Colombia	3.76	30.29
19	Australia	4.90	71.23	86	Kazakhstan	3.75	29.93
20	China	4.86	69.50	87	Lebanon	3.74	29.50
21	Canada	4.85	69.33	88	Mongolia	3.73	29.20
22	New Zealand	4.84	68.87	89	Uganda	3.72	28.93
23	France	4.81	67.81	90	Cameroon	3.72	28.84
24	Israel	4.80	67.66	91	Italy	3.72	28.84
25	Lithuania	4.79	67.14	92	Tunisia	3.71	28.47
26	Bahrain	4.78	66.73	93	Nigeria	3.70	28.19
27	Guinea	4.76	65.89	94	Honduras	3.69	28.00
28	Estonia	4.75	65.65	95	Bulgaria	3.69	27.95
29	Indonesia	4.69	63.72	96	Paraguay	3.66	26.81
30	United Kingdom	4.69	63.43	97	Mali	3.65	26.62
31	Philippines	4.67	62.97	98	Greece	3.65	26.49
32	Albania	4.67	62.78	99	Algeria	3.65	26.49
33	Saudi Arabia	4.60	60.50	100	Tajikistan	3.64	26.26
34	Korea, Rep.	4.58	59.64	101	Turkey	3.64	25.98
35	Czech Republic	4.53	57.78	102	Ethiopia	3.63	25.80
36	Oman	4.49	56.53	103	Morocco	3.62	25.49
37	Mauritius	4.48	56.18	104	Malawi	3.61	25.09
38	South Africa	4.47	55.65	105	Georgia	3.61	25.01
39	Costa Rica	4.44	54.81	106	Romania	3.60	24.61
40	Azerbaijan	4.41	53.74	107	Hungary	3.60	24.59
41	Slovenia	4.41	53.66	108	Senegal	3.59	24.31
42	Latvia	4.40	53.04	109	Ecuador	3.57	23.64
43	Malta	4.35	51.31	110	Cabo Verde	3.57	23.59
44	Jordan	4.34	51.18	111	Serbia	3.56	23.25
45	Thailand	4.31	49.91	112	El Salvador	3.56	23.24
46	Guatemala	4.29	49.39	113	Zambia	3.53	22.03
47	Namibia	4.27	48.60	114	Madagascar	3.52	21.74
48	Cyprus	4.20	46.20	115	Moldova, Rep.	3.50	21.24
49	Viet Nam	4.20	45.98	116	Burundi	3.48	20.42
50	Portugal	4.15	44.37	117	Lesotho	3.48	20.25
51	Ghana	4.15	44.32	118	Kyrgyzstan	3.46	19.61
52	Slovakia	4.14	43.95	119	Nicaragua	3.44	18.80
53	Jamaica	4.14	43.88	120	Nepal	3.43	18.61
54	India	4.14	43.78	121	Venezuela, Bolivarian Rep.	3.43	18.49
55	Chile	4.12	43.07	122	North Macedonia	3.33	15.21
56	Kenya	4.11	42.82	123	Bangladesh	3.30	14.03
57	Trinidad and Tobago	4.10	42.39	124	Peru	3.29	13.74
58	Kuwait	4.03	40.01	125	Croatia	3.29	13.66
59	Brunei Darussalam	4.03	39.90	126	Congo, Dem. Rep.	3.21	10.65
60	Belarus	4.02	39.70	127	Iran, Islamic Rep.	3.20	10.29
61	Eswatini	4.02	39.68	128	Bolivia, Plurinational St.	3.10	6.79
62	Côte d'Ivoire	4.02	39.63	129	Bosnia and Herzegovina	3.07	5.61
63	Cambodia	3.98	38.30	130	Chad	3.05	4.94
64	Poland	3.98	38.20	131	Burkina Faso	3.01	3.53
65	Egypt	3.98	38.14	132	Yemen	2.97	2.06
66	Sri Lanka	3.98	38.14	133	Mozambique	2.95	1.29
67	Dominican Republic	3.95	37.27	134	Angola	2.91	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.2.4 Formal and non-formal studies

Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months (%) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Paraguay	73.80	100.00	68	South Africa	2.51	3.18
2	Switzerland	69.10	93.62	69	Eswatini	2.28	2.87
3	New Zealand	67.22	91.07	70	El Salvador	2.03	2.53
4	Netherlands	64.10	86.83	71	Tunisia	1.80	2.23
5	Sweden	63.80	86.42	72	Ghana	1.79	2.21
6	Norway	60.00	81.26	73	Mauritius	1.68	2.05
7	Austria	59.90	81.13	74	Georgia	1.62	1.97
8	United States of America	59.36	80.39	75	Brunei Darussalam	1.53	1.85
9	Canada	57.75	78.20	76	Burundi	1.53	1.85
10	Singapore	56.62	76.67	77	Yemen	1.49	1.80
11	Hungary	55.70	75.42	78	Cambodia	1.18	1.38
12	Australia	54.89	74.32	79	Sri Lanka	0.83	0.90
13	Finland	54.10	73.25	80	Malawi	0.82	0.88
14	Israel	52.54	71.14	81	Mali	0.81	0.87
15	United Kingdom	52.10	70.53	82	Indonesia	0.76	0.81
16	Germany	52.00	70.40	83	Lao PDR	0.70	0.72
17	France	51.30	69.45	84	Egypt	0.66	0.67
18	Denmark	50.40	68.22	85	Mongolia	0.63	0.63
19	Cyprus	48.10	65.10	86	Thailand	0.46	0.40
19	Luxembourg	48.10	65.10	87	Viet Nam	0.17	0.00
21	Latvia	47.50	64.29		Algeria	n/a	n/a
22	Chile	47.09	63.73		Armenia	n/a	n/a
23	Czech Republic	46.10	62.38		Azerbaijan	n/a	n/a
23	Portugal	46.10	62.38		Bahrain	n/a	n/a
23	Slovakia	46.10	62.38		Bangladesh	n/a	n/a
23	Slovenia	46.10	62.38		Belarus	n/a	n/a
27	Belgium	45.20	61.16		Brazil	n/a	n/a
28	Estonia	44.00	59.53		Burkina Faso	n/a	n/a
29	Spain	43.40	58.72		Cabo Verde	n/a	n/a
30	Japan	41.76	56.48		Cameroon	n/a	n/a
31	Italy	41.50	56.14		Chad	n/a	n/a
32	Malta	36.30	49.07		China	n/a	n/a
33	Peru	34.46	46.58		Colombia	n/a	n/a
34	Croatia	31.80	42.96		Costa Rica	n/a	n/a
35	Mexico	30.42	41.09		Gambia	n/a	n/a
36	Lithuania	27.90	37.67		Guinea	n/a	n/a
37	Poland	25.50	34.41		Iceland	n/a	n/a
38	Bulgaria	24.60	33.18		India	n/a	n/a
39	Ireland	24.40	32.91		Iran, Islamic Rep.	n/a	n/a
40	Turkey	20.90	28.16		Jamaica	n/a	n/a
41	Serbia	19.80	26.67		Jordan	n/a	n/a
42	Russian Federation	19.38	26.09		Kenya	n/a	n/a
43	Kazakhstan	16.95	22.79		Korea, Rep.	n/a	n/a
44	Greece	16.70	22.46		Kuwait	n/a	n/a
45	Angola	13.77	18.48		Kyrgyzstan	n/a	n/a
46	North Macedonia	12.70	17.02		Lebanon	n/a	n/a
47	Albania	9.20	12.27		Lesotho	n/a	n/a
48	Bosnia and Herzegovina	8.70	11.59		Madagascar	n/a	n/a
49	Venezuela, Bolivarian Rep.	8.00	10.64		Malaysia	n/a	n/a
50	Namibia	7.16	9.49		Moldova, Rep.	n/a	n/a
51	Romania	7.00	9.28		Montenegro	n/a	n/a
52	Argentina	6.49	8.59		Morocco	n/a	n/a
53	Dominican Republic	6.27	8.30		Mozambique	n/a	n/a
54	Uruguay	5.82	7.68		Nepal	n/a	n/a
55	Senegal	5.60	7.38		Nigeria	n/a	n/a
56	Bolivia, Plurinational St.	5.38	7.08		Oman	n/a	n/a
57	Panama	3.88	5.04		Pakistan	n/a	n/a
58	Nicaragua	3.58	4.63		Philippines	n/a	n/a
59	Ethiopia	3.57	4.63		Qatar	n/a	n/a
60	Zambia	3.33	4.29		Saudi Arabia	n/a	n/a
61	Botswana	3.33	4.29		Tajikistan	n/a	n/a
62	Ecuador	3.33	4.29		Tanzania, United Rep.	n/a	n/a
63	Honduras	3.31	4.27		Trinidad and Tobago	n/a	n/a
64	Côte d'Ivoire	2.95	3.78		Uganda	n/a	n/a
65	Congo, Dem. Rep.	2.83	3.62		Ukraine	n/a	n/a
66	Guatemala	2.61	3.31		United Arab Emirates	n/a	n/a
67	Rwanda	2.51	3.18		Zimbabwe	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.3.1 Delegation of authority

Average answer to the question: In your country, to what extent does senior management delegate authority to subordinates? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	6.02	100.00	68	Mexico	4.32	46.98
2	Sweden	5.88	95.58	69	Uganda	4.32	46.96
3	Norway	5.79	93.02	70	Argentina	4.28	45.87
4	Finland	5.78	92.55	71	Viet Nam	4.28	45.79
5	Netherlands	5.75	91.75	72	Sri Lanka	4.28	45.76
6	United States of America	5.67	89.22	73	Malawi	4.27	45.51
7	Switzerland	5.63	88.02	74	Portugal	4.26	45.27
8	New Zealand	5.61	87.16	75	Uruguay	4.26	45.22
9	Australia	5.58	86.37	76	India	4.24	44.47
10	Ireland	5.47	82.81	77	Egypt	4.23	44.10
11	Iceland	5.46	82.50	78	Georgia	4.22	44.04
12	Canada	5.42	81.30	79	Kazakhstan	4.22	43.86
13	Malaysia	5.37	79.93	80	Dominican Republic	4.21	43.43
14	Germany	5.37	79.79	81	Venezuela, Bolivarian Rep.	4.19	43.08
15	Singapore	5.36	79.38	82	Tajikistan	4.19	43.04
16	Luxembourg	5.33	78.44	83	Tanzania, United Rep.	4.19	42.93
17	Israel	5.29	77.20	84	Lao PDR	4.19	42.90
18	United Kingdom	5.27	76.61	85	Korea, Rep.	4.17	42.37
19	Austria	5.25	76.12	86	Honduras	4.17	42.26
20	United Arab Emirates	5.20	74.48	87	Cyprus	4.15	41.85
21	Qatar	5.09	71.16	88	Serbia	4.15	41.67
22	Estonia	5.04	69.62	89	Armenia	4.15	41.66
23	Gambia	5.01	68.60	90	Ukraine	4.14	41.53
24	Belgium	5.01	68.50	91	Morocco	4.14	41.52
25	Indonesia	4.98	67.69	92	Bulgaria	4.13	41.18
26	Czech Republic	4.96	66.88	93	Peru	4.13	41.11
27	Jamaica	4.94	66.23	94	Poland	4.09	39.69
28	Japan	4.90	65.19	95	Greece	4.08	39.61
29	Lithuania	4.90	65.18	96	Kuwait	4.07	39.36
30	Bahrain	4.89	64.80	97	Hungary	4.06	38.86
31	Oman	4.86	63.84	98	Moldova, Rep.	4.05	38.70
32	South Africa	4.84	63.09	99	Montenegro	4.03	37.93
33	Philippines	4.82	62.59	100	Lebanon	4.01	37.38
34	Costa Rica	4.81	62.18	101	Italy	4.01	37.28
35	Saudi Arabia	4.79	61.72	102	Pakistan	4.01	37.24
36	France	4.79	61.58	103	Cambodia	4.00	36.95
37	China	4.77	60.94	104	Ecuador	3.99	36.78
38	Latvia	4.73	59.95	105	Cabo Verde	3.99	36.75
39	Azerbaijan	4.70	59.00	106	Burundi	3.97	36.00
40	Malta	4.63	56.73	107	Romania	3.97	35.97
41	Nigeria	4.62	56.46	108	Côte d'Ivoire	3.97	35.94
42	Zambia	4.62	56.35	109	Madagascar	3.91	34.33
43	Chile	4.61	56.06	110	Tunisia	3.91	34.21
44	Mauritius	4.59	55.42	111	Nepal	3.87	32.93
45	Slovenia	4.57	54.75	112	El Salvador	3.86	32.69
46	Brunei Darussalam	4.56	54.42	113	North Macedonia	3.85	32.21
47	Kenya	4.55	54.32	114	Nicaragua	3.78	30.29
48	Namibia	4.54	53.85	115	Kyrgyzstan	3.76	29.51
49	Zimbabwe	4.53	53.59	116	Paraguay	3.75	29.20
50	Ghana	4.51	53.02	117	Croatia	3.69	27.26
51	Trinidad and Tobago	4.51	52.98	118	Cameroon	3.67	26.85
52	Rwanda	4.50	52.76	119	Bosnia and Herzegovina	3.65	26.24
53	Thailand	4.50	52.66	120	Bangladesh	3.64	25.67
54	Brazil	4.49	52.27	121	Bolivia, Plurinational St.	3.61	24.99
55	Guinea	4.48	52.09	122	Senegal	3.58	23.92
56	Eswatini	4.48	52.00	123	Mali	3.54	22.71
57	Spain	4.48	51.88	124	Mongolia	3.51	21.75
58	Botswana	4.45	51.17	125	Mozambique	3.42	19.06
59	Slovakia	4.45	51.13	126	Congo, Dem. Rep.	3.42	18.87
60	Guatemala	4.43	50.40	127	Algeria	3.40	18.34
61	Panama	4.41	49.89	128	Iran, Islamic Rep.	3.35	16.66
62	Albania	4.41	49.79	129	Ethiopia	3.32	15.66
63	Colombia	4.40	49.49	130	Lesotho	3.27	14.21
64	Jordan	4.38	48.99	131	Burkina Faso	3.24	13.37
65	Turkey	4.37	48.66	132	Yemen	3.09	8.51
66	Belarus	4.36	48.20	133	Angola	3.07	7.96
67	Russian Federation	4.36	48.16	134	Chad	2.81	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.3.2 Youth inclusion

Proportion of youth (aged 15–24 years) not in education, employment or training (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Nicaragua.....	1.42	100.00	68	Mongolia.....	19.72	63.86
2	Japan.....	3.11	96.66	69	Brunei Darussalam.....	20.09	63.12
3	Singapore.....	4.13	94.65	70	Costa Rica.....	20.16	62.99
4	Netherlands.....	4.52	93.88	71	Mexico.....	20.42	62.47
5	Norway.....	4.90	93.13	72	Kyrgyzstan.....	20.54	62.24
6	Iceland.....	6.03	90.89	73	North Macedonia.....	20.60	62.12
7	Cambodia.....	6.09	90.78	74	Chile.....	20.87	61.58
8	Burundi.....	6.19	90.58	75	Algeria.....	20.95	61.43
9	Switzerland.....	6.36	90.24	76	Bosnia and Herzegovina.....	21.17	60.99
10	Sweden.....	6.47	90.03	77	Congo, Dem. Rep.....	21.36	60.62
11	Luxembourg.....	6.55	89.87	78	Indonesia.....	21.76	59.83
12	Czech Republic.....	6.61	89.75	79	Venezuela, Bolivarian Rep.....	22.75	57.87
13	Madagascar.....	6.78	89.41	80	Lebanon.....	23.54	56.31
14	Latvia.....	7.06	88.86	81	Colombia.....	23.95	55.50
15	Germany.....	7.43	88.13	82	Sri Lanka.....	24.18	55.05
16	Denmark.....	7.44	88.11	83	Dominican Republic.....	24.72	53.98
17	Slovenia.....	7.68	87.64	84	Tunisia.....	25.22	52.99
18	Austria.....	7.95	87.10	85	Brazil.....	25.39	52.66
19	Poland.....	8.63	85.76	86	Albania.....	25.82	51.81
20	Estonia.....	8.86	85.31	87	Mali.....	26.72	50.03
21	Australia.....	8.94	85.15	88	Bangladesh.....	27.39	48.71
22	Portugal.....	9.06	84.91	89	Angola.....	27.90	47.70
23	Belgium.....	9.21	84.61	90	El Salvador.....	27.94	47.62
24	Malta.....	9.23	84.57	91	Egypt.....	27.95	47.60
25	Finland.....	9.25	84.53	92	Cabo Verde.....	27.99	47.52
26	Kazakhstan.....	9.49	84.06	93	Honduras.....	28.11	47.28
27	Ethiopia.....	10.48	82.11	94	Guatemala.....	28.19	47.13
28	United Kingdom.....	10.52	82.03	95	Moldova, Rep.....	28.25	47.01
29	Slovakia.....	10.65	81.77	96	Turkey.....	28.32	46.87
30	Guinea.....	10.76	81.55	97	Armenia.....	28.38	46.75
31	Lithuania.....	10.76	81.55	98	Georgia.....	28.53	46.45
32	Lesotho.....	10.99	81.10	99	India.....	29.53	44.48
33	France.....	11.38	80.33	100	Uganda.....	30.01	43.53
34	Hungary.....	11.71	79.68	101	Iran, Islamic Rep.....	30.40	42.76
35	Ireland.....	12.02	79.06	102	Ghana.....	30.46	42.64
36	Belarus.....	12.08	78.95	103	Pakistan.....	30.96	41.66
37	Croatia.....	12.24	78.63	104	Nigeria.....	31.39	40.81
38	Russian Federation.....	12.41	78.29	105	Namibia.....	31.76	40.08
39	Malaysia.....	12.47	78.17	106	South Africa.....	32.40	38.81
40	New Zealand.....	12.93	77.27	107	Rwanda.....	32.78	38.06
41	Greece.....	13.21	76.71	108	Malawi.....	32.90	37.82
42	Bolivia, Plurinational St.....	13.70	75.75	109	Senegal.....	33.13	37.37
43	Spain.....	13.87	75.41	110	Botswana.....	33.20	37.23
44	United States of America.....	13.89	75.37	111	Côte d'Ivoire.....	34.83	34.01
45	Cyprus.....	14.36	74.44	112	Nepal.....	35.35	32.98
46	Bulgaria.....	14.44	74.28	113	Eswatini.....	35.46	32.77
47	Israel.....	14.67	73.83	114	Jordan.....	36.00	31.70
48	Romania.....	14.75	73.67	115	Chad.....	37.05	29.63
49	Tanzania, United Rep.....	14.93	73.32	116	Burkina Faso.....	41.00	21.83
50	Thailand.....	15.13	72.92	117	Lao PDR.....	42.08	19.69
51	Viet Nam.....	15.47	72.25	118	Tajikistan.....	42.20	19.45
52	Saudi Arabia.....	16.10	71.01	119	Zambia.....	43.05	17.78
53	Serbia.....	16.18	70.85	120	Yemen.....	44.77	14.38
54	Ukraine.....	16.47	70.27	120	Zimbabwe.....	44.77	14.38
55	Peru.....	16.82	69.58	122	Gambia.....	49.55	4.94
56	Cameroon.....	17.01	69.21	123	Trinidad and Tobago.....	52.05	0.00
57	Montenegro.....	17.32	68.60		Azerbaijan.....	n/a	n/a
58	Ecuador.....	17.52	68.20		Bahrain.....	n/a	n/a
59	Uruguay.....	17.71	67.83		China.....	n/a	n/a
60	Canada.....	17.93	67.39		Jamaica.....	n/a	n/a
61	Paraguay.....	18.06	67.13		Korea, Rep.....	n/a	n/a
62	Mauritius.....	18.08	67.09		Kuwait.....	n/a	n/a
63	Panama.....	18.74	65.79		Morocco.....	n/a	n/a
64	Philippines.....	18.76	65.75		Mozambique.....	n/a	n/a
65	Italy.....	18.93	65.42		Oman.....	n/a	n/a
66	Argentina.....	19.23	64.82		Qatar.....	n/a	n/a
67	Kenya.....	19.67	63.95		United Arab Emirates.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.3.3 Use of virtual social networks

Social media users (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Brunei Darussalam.....	99.00	100.00	68	Luxembourg.....	65.00	64.66
1	United Arab Emirates.....	99.00	100.00	69	China.....	64.60	64.24
3	Kuwait.....	98.80	99.79	70	Panama.....	64.40	64.03
3	Qatar.....	98.80	99.79	71	Lebanon.....	64.30	63.93
5	Malta.....	95.00	95.84	72	Dominican Republic.....	64.20	63.83
6	Korea, Rep.....	89.30	89.92	73	Kazakhstan.....	63.50	63.10
7	Netherlands.....	88.00	88.57	74	Romania.....	62.60	62.16
8	Bahrain.....	87.00	87.53	75	Bulgaria.....	62.10	61.64
9	Malaysia.....	86.00	86.49	76	Indonesia.....	61.80	61.33
10	Canada.....	84.90	85.34	77	Jordan.....	61.50	61.02
11	Iceland.....	84.70	85.14	78	Armenia.....	60.70	60.19
12	Singapore.....	84.40	84.82	79	Paraguay.....	59.90	59.36
13	Denmark.....	83.60	83.99	80	Morocco.....	59.30	58.73
14	Chile.....	83.50	83.89	81	Ukraine.....	58.90	58.32
15	Uruguay.....	83.30	83.68	82	North Macedonia.....	57.60	56.96
16	Norway.....	83.20	83.58	83	Algeria.....	56.50	55.82
17	Cyprus.....	82.50	82.85	84	Albania.....	55.60	54.89
18	Sweden.....	82.10	82.43	85	Bosnia and Herzegovina.....	55.00	54.26
19	New Zealand.....	82.00	82.33	86	Cabo Verde.....	53.70	52.91
20	Switzerland.....	81.80	82.12	87	Serbia.....	52.80	51.98
21	Peru.....	81.40	81.70	88	Nicaragua.....	52.50	51.66
22	Philippines.....	80.70	80.98	89	Guatemala.....	51.40	50.52
23	Finland.....	80.40	80.67	90	Jamaica.....	50.60	49.69
24	Oman.....	80.20	80.46	91	Botswana.....	50.50	49.58
25	Spain.....	80.00	80.25	92	Lao PDR.....	49.10	48.13
26	Australia.....	79.90	80.15	93	Venezuela, Bolivarian Rep.....	49.00	48.02
26	Austria.....	79.90	80.15	94	Kyrgyzstan.....	48.70	47.71
28	Argentina.....	79.30	79.52	95	Honduras.....	48.10	47.09
28	Saudi Arabia.....	79.30	79.52	96	Egypt.....	47.40	46.36
30	Ecuador.....	78.80	79.00	97	Nepal.....	44.20	43.04
31	Germany.....	78.70	78.90	98	Iran, Islamic Rep.....	42.60	41.37
31	Mongolia.....	78.70	78.90	99	Azerbaijan.....	42.20	40.96
31	Thailand.....	78.70	78.90	99	Moldova, Rep.....	42.20	40.96
34	Israel.....	78.10	78.27	101	South Africa.....	41.90	40.64
35	United Kingdom.....	77.90	78.07	102	Belarus.....	41.30	40.02
36	Georgia.....	77.80	77.96	103	Sri Lanka.....	36.80	35.34
37	Mexico.....	77.20	77.34	104	India.....	32.30	30.67
38	Portugal.....	76.60	76.72	105	Namibia.....	31.20	29.52
39	Colombia.....	76.40	76.51	106	Eswatini.....	30.00	28.27
39	Ireland.....	76.40	76.51	107	Bangladesh.....	27.20	25.36
41	Costa Rica.....	76.20	76.30	108	Ghana.....	26.10	24.22
42	Belgium.....	76.00	76.09	109	Lesotho.....	24.60	22.66
43	France.....	75.90	75.99	110	Senegal.....	23.00	21.00
44	Lithuania.....	75.40	75.47	111	Côte d'Ivoire.....	22.10	20.06
45	Estonia.....	74.40	74.43	112	Pakistan.....	20.60	18.50
46	Japan.....	74.30	74.32	113	Kenya.....	20.20	18.09
47	Slovakia.....	73.80	73.80	114	Gambia.....	17.50	15.28
48	Viet Nam.....	73.70	73.70	115	Cameroon.....	16.00	13.72
49	Hungary.....	73.50	73.49	116	Nigeria.....	15.80	13.51
49	Latvia.....	73.50	73.49	117	Guinea.....	15.00	12.68
51	Mauritius.....	73.10	73.08	118	Zambia.....	13.90	11.54
52	United States of America.....	72.30	72.25	119	Madagascar.....	10.70	8.21
53	Cambodia.....	71.30	71.21	120	Yemen.....	10.60	8.11
54	Greece.....	71.20	71.10	121	Tajikistan.....	10.40	7.90
55	Turkey.....	70.80	70.69	122	Mali.....	10.20	7.69
56	Brazil.....	70.30	70.17	123	Mozambique.....	9.50	6.96
57	Bolivia, Plurinational St.....	69.80	69.65	124	Burkina Faso.....	9.40	6.86
57	Slovenia.....	69.80	69.65	125	Angola.....	9.00	6.44
59	Czech Republic.....	69.00	68.81	126	Tanzania, United Rep.....	8.90	6.34
59	Tunisia.....	69.00	68.81	127	Zimbabwe.....	8.70	6.13
61	Montenegro.....	68.50	68.30	128	Uganda.....	7.30	4.68
61	Poland.....	68.50	68.30	129	Rwanda.....	6.50	3.85
63	Croatia.....	68.40	68.19	130	Ethiopia.....	5.80	3.12
64	Italy.....	67.90	67.67	131	Burundi.....	5.70	3.01
65	Russian Federation.....	67.80	67.57	132	Congo, Dem. Rep.....	4.40	1.66
66	Trinidad and Tobago.....	67.10	66.84	133	Malawi.....	3.50	0.73
67	El Salvador.....	66.10	65.80	134	Chad.....	2.80	0.00

SOURCE: We Are Social and Hootsuite (2021) *Digital 2021* report series (<https://wearesocial.com/digital-2021>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

3.3.4 Use of virtual professional networks

LinkedIn's potential advertising audience (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Iceland	91.20	100.00	68	Dominican Republic	15.00	15.89
2	United States of America	65.80	71.96	69	Bolivia, Plurinational St.	14.60	15.45
3	Netherlands	65.60	71.74	70	Slovakia	13.90	14.68
4	Ireland	61.50	67.22	71	Hungary	13.80	14.57
5	Australia	60.70	66.34	72	Philippines	13.50	14.24
6	Malta	60.00	65.56	73	Serbia	13.40	14.13
6	Singapore	60.00	65.56	74	Poland	13.20	13.91
8	New Zealand	59.10	64.57	75	El Salvador	13.10	13.80
9	Canada	58.50	63.91	76	Georgia	12.80	13.47
10	United Arab Emirates	58.30	63.69	77	Morocco	11.80	12.36
11	Denmark	58.00	63.36	78	Paraguay	11.00	11.48
12	Luxembourg	56.60	61.81	79	Eswatini	10.60	11.04
13	United Kingdom	55.80	60.93	80	Armenia	10.30	10.71
14	Norway	51.00	55.63	80	Mongolia	10.30	10.71
15	Sweden	49.90	54.42	82	Bosnia and Herzegovina	10.00	10.38
16	Switzerland	44.90	48.90	83	Nicaragua	9.70	10.04
17	Belgium	44.30	48.23	84	Guatemala	9.20	9.49
18	Portugal	40.90	44.48	85	Ghana	9.00	9.27
19	France	40.80	44.37	85	Ukraine	9.00	9.27
20	Trinidad and Tobago	38.40	41.72	87	Indonesia	8.90	9.16
21	Chile	37.90	41.17	88	Algeria	8.70	8.94
22	Qatar	37.20	40.40	89	Belarus	8.40	8.61
23	Spain	36.20	39.29	89	Egypt	8.40	8.61
24	Uruguay	36.10	39.18	89	Kenya	8.40	8.61
25	Israel	32.30	34.99	89	Sri Lanka	8.40	8.61
26	Cyprus	32.00	34.66	93	Moldova, Rep.	8.00	8.17
27	Mauritius	31.80	34.44	94	Honduras	7.90	8.06
28	Finland	31.20	33.77	94	Kazakhstan	7.90	8.06
29	Italy	29.50	31.90	94	Senegal	7.90	8.06
30	Costa Rica	28.60	30.91	94	Zimbabwe	7.90	8.06
31	Brazil	28.10	30.35	98	India	7.50	7.62
32	Bahrain	28.00	30.24	99	Korea, Rep.	6.70	6.73
33	Panama	27.50	29.69	100	Azerbaijan	6.20	6.18
34	Brunei Darussalam	26.40	28.48	100	Gambia	6.20	6.18
34	Peru	26.40	28.48	102	Côte d'Ivoire	6.10	6.07
36	Argentina	26.10	28.15	102	Russian Federation	6.10	6.07
37	Malaysia	24.80	26.71	104	Thailand	5.70	5.63
38	Latvia	24.50	26.38	105	Nigeria	5.50	5.41
39	Jamaica	24.30	26.16	106	Cameroon	5.20	5.08
40	Ecuador	24.20	26.05	106	Lesotho	5.20	5.08
41	Colombia	24.10	25.94	106	Viet Nam	5.20	5.08
42	Kuwait	23.50	25.28	109	Pakistan	5.10	4.97
43	Estonia	23.40	25.17	109	Zambia	5.10	4.97
44	Lithuania	22.60	24.28	111	Nepal	4.50	4.30
45	Slovenia	22.30	23.95	112	China	4.40	4.19
46	Austria	21.50	23.07	113	Cambodia	3.80	3.53
47	South Africa	21.00	22.52	114	Uganda	3.50	3.20
48	Greece	20.80	22.30	115	Bangladesh	3.40	3.09
49	Czech Republic	20.70	22.19	115	Kyrgyzstan	3.40	3.09
50	Venezuela, Bolivarian Rep.	20.20	21.63	117	Angola	3.30	2.98
51	Croatia	20.10	21.52	118	Rwanda	3.20	2.87
52	Saudi Arabia	20.00	21.41	119	Tanzania, United Rep.	2.80	2.43
53	Albania	19.40	20.75	120	Japan	2.60	2.21
54	Romania	19.20	20.53	120	Lao PDR	2.60	2.21
55	Botswana	18.70	19.98	122	Mozambique	2.40	1.99
56	Mexico	17.90	19.09	123	Guinea	2.30	1.88
57	Lebanon	17.80	18.98	124	Mali	2.20	1.77
58	Montenegro	17.70	18.87	125	Burkina Faso	2.10	1.66
59	Jordan	17.50	18.65	126	Malawi	1.90	1.43
60	Germany	17.20	18.32	127	Yemen	1.60	1.10
61	Namibia	17.00	18.10	128	Madagascar	1.50	0.99
62	Turkey	16.20	17.22	129	Tajikistan	1.10	0.55
63	Cabo Verde	16.10	17.11	130	Burundi	1.00	0.44
64	Bulgaria	15.60	16.56	130	Ethiopia	1.00	0.44
64	Oman	15.60	16.56	132	Congo, Dem. Rep.	0.80	0.22
66	North Macedonia	15.50	16.45	133	Chad	0.60	0.00
67	Tunisia	15.30	16.23		Iran, Islamic Rep.	n/a	n/a

SOURCE: We Are Social and Hootsuite (2021) *Digital 2021* report series (<https://wearesocial.com/digital-2021>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

Pillar 4

Retain

4.1.1 Pension coverage

Population above statutory pensionable age receiving a pension (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Australia	100.00	100.00	68	Bahrain	73.20	72.93
1	Austria	100.00	100.00	69	Azerbaijan	72.80	72.53
1	Belarus	100.00	100.00	70	Chile	71.50	71.21
1	Belgium	100.00	100.00	71	Iceland	71.40	71.11
1	Bolivia, Plurinational St.	100.00	100.00	72	Bosnia and Herzegovina	69.50	69.19
1	Botswana	100.00	100.00	73	North Macedonia	68.60	68.28
1	Brunei Darussalam	100.00	100.00	74	Armenia	65.20	64.85
1	Canada	100.00	100.00	75	Paraguay	64.60	64.24
1	China	100.00	100.00	76	Algeria	63.60	63.23
1	Denmark	100.00	100.00	77	Serbia	63.50	63.13
1	Estonia	100.00	100.00	78	Ecuador	60.60	60.20
1	Eswatini	100.00	100.00	79	Venezuela, Bolivarian Rep.	59.40	58.99
1	Finland	100.00	100.00	80	Jordan	57.30	56.87
1	France	100.00	100.00	81	Costa Rica	56.20	55.76
1	Germany	100.00	100.00	82	Mozambique	52.50	52.02
1	Ireland	100.00	100.00	83	Colombia	50.60	50.10
1	Israel	100.00	100.00	84	Oman	46.90	46.36
1	Japan	100.00	100.00	85	India	42.50	41.92
1	Korea, Rep.	100.00	100.00	86	Viet Nam	40.90	40.30
1	Kyrgyzstan	100.00	100.00	87	Jamaica	40.30	39.70
1	Luxembourg	100.00	100.00	88	Morocco	39.80	39.19
1	Malta	100.00	100.00	89	Bangladesh	39.00	38.38
1	Mauritius	100.00	100.00	90	Egypt	38.00	37.37
1	Mexico	100.00	100.00	91	Peru	35.70	35.05
1	Mongolia	100.00	100.00	91	Sri Lanka	35.70	35.05
1	Namibia	100.00	100.00	93	Saudi Arabia	33.20	32.53
1	Netherlands	100.00	100.00	94	Singapore	33.10	32.42
1	New Zealand	100.00	100.00	95	Senegal	29.90	29.19
1	Norway	100.00	100.00	96	Panama	29.30	28.59
1	Russian Federation	100.00	100.00	97	Nicaragua	28.60	27.88
1	Slovenia	100.00	100.00	98	Kuwait	26.40	25.66
1	Sweden	100.00	100.00	99	United Arab Emirates	22.60	21.82
1	Switzerland	100.00	100.00	100	Zimbabwe	22.00	21.21
1	Turkey	100.00	100.00	101	Iran, Islamic Rep.	21.30	20.51
1	United Kingdom	100.00	100.00	102	Philippines	20.50	19.70
1	United States of America	100.00	100.00	103	El Salvador	20.10	19.29
1	Uruguay	100.00	100.00	104	Qatar	19.40	18.59
38	Kazakhstan	99.60	99.60	105	Ghana	19.00	18.18
39	Spain	98.20	98.18	106	Malaysia	18.60	17.78
40	Cyprus	97.80	97.78	107	Cameroon	18.30	17.47
41	Lithuania	97.10	97.07	108	Gambia	17.00	16.16
42	Ukraine	96.20	96.16	109	Guatemala	16.70	15.86
43	Greece	95.80	95.76	110	Congo, Dem. Rep.	15.00	14.14
44	Italy	94.40	94.34	111	Indonesia	14.80	13.94
45	Bulgaria	94.00	93.94	112	Angola	14.50	13.64
45	Lesotho	94.00	93.94	113	Kenya	13.20	12.32
47	Tajikistan	93.70	93.64	114	Dominican Republic	11.30	10.40
48	Romania	93.50	93.43	115	Uganda	11.20	10.30
49	Latvia	92.00	91.92	116	Nigeria	11.00	10.10
50	Brazil	91.50	91.41	117	Honduras	10.70	9.80
51	Czech Republic	91.30	91.21	118	Lebanon	9.80	8.89
52	Trinidad and Tobago	91.10	91.01	119	Zambia	7.80	6.87
53	Georgia	90.90	90.81	120	Côte d'Ivoire	7.70	6.77
54	Montenegro	90.60	90.51	121	Mali	7.30	6.36
54	Slovakia	90.60	90.51	122	Yemen	7.00	6.06
56	Hungary	90.50	90.40	123	Cambodia	6.60	5.66
57	Portugal	90.40	90.30	124	Lao PDR	6.30	5.35
58	Argentina	89.80	89.70	125	Pakistan	5.80	4.85
58	Croatia	89.80	89.70	126	Tanzania, United Rep.	5.50	4.55
60	Thailand	89.10	88.99	127	Madagascar	4.60	3.64
61	Tunisia	85.40	85.25	128	Burundi	4.00	3.03
62	Cabo Verde	84.80	84.65	129	Ethiopia	3.90	2.93
63	Nepal	84.20	84.04	130	Rwanda	3.10	2.12
64	Poland	83.60	83.43	131	Burkina Faso	2.70	1.72
65	South Africa	81.50	81.31	132	Malawi	2.30	1.31
66	Albania	77.00	76.77	133	Guinea	2.00	1.01
67	Moldova, Rep.	75.20	74.95	134	Chad	1.00	0.00

SOURCE: United Nations, Global SDG Indicators Database (<https://unstats.un.org/sdgs/indicators/database/>)

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4.1.2 Social protection

Average answer to the question: In your country, to what extent does a formal social safety net provide protection to the general population from economic insecurity in the event of job loss or disability? [1 = not at all; 7 = provides full protection] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	6.29	100.00	68	Algeria	3.81	40.16
2	Norway	6.20	97.97	69	Lithuania	3.75	38.73
3	Finland	6.19	97.57	70	Botswana	3.75	38.68
4	Austria	6.18	97.40	71	Brazil	3.70	37.37
5	Luxembourg	6.09	95.27	72	Mali	3.68	36.91
6	Switzerland	6.03	93.71	73	Iran, Islamic Rep.	3.67	36.70
7	France	5.92	91.17	74	Kazakhstan	3.65	36.34
8	Netherlands	5.90	90.56	75	Ukraine	3.65	36.19
9	Iceland	5.73	86.61	76	Lao PDR	3.62	35.62
10	Spain	5.73	86.53	77	Mexico	3.58	34.47
11	Sweden	5.73	86.52	78	Kenya	3.58	34.44
12	New Zealand	5.66	84.86	79	Montenegro	3.57	34.24
13	Belgium	5.64	84.46	80	Belarus	3.56	34.15
14	Australia	5.55	82.17	81	Armenia	3.54	33.60
15	Germany	5.40	78.62	82	Bulgaria	3.47	31.99
16	Uruguay	5.39	78.20	83	Dominican Republic	3.47	31.94
17	Saudi Arabia	5.37	77.76	84	Mongolia	3.47	31.92
18	Oman	5.35	77.24	85	South Africa	3.47	31.79
19	Japan	5.30	76.03	86	Philippines	3.46	31.73
20	Canada	5.28	75.63	87	Tunisia	3.45	31.40
21	United States of America	5.15	72.47	88	India	3.45	31.33
22	Costa Rica	5.14	72.21	89	Ethiopia	3.43	31.00
23	Ireland	5.13	71.99	90	Burundi	3.40	30.07
24	Bahrain	5.07	70.65	91	Russian Federation	3.39	30.03
25	Czech Republic	5.03	69.50	92	Guatemala	3.36	29.27
26	Malta	5.01	69.05	93	Lesotho	3.36	29.26
27	China	5.00	68.88	94	Bolivia, Plurinational St.	3.35	29.00
28	United Arab Emirates	4.96	67.99	95	Serbia	3.33	28.47
29	Malaysia	4.95	67.64	96	Greece	3.32	28.31
30	Slovenia	4.95	67.58	97	Paraguay	3.32	28.29
31	Portugal	4.95	67.57	98	Croatia	3.30	27.72
32	Qatar	4.94	67.54	99	Zambia	3.29	27.47
33	Kuwait	4.94	67.39	100	Kyrgyzstan	3.27	27.13
34	United Kingdom	4.93	67.30	101	Morocco	3.26	26.89
35	Israel	4.76	63.09	102	Jamaica	3.26	26.84
36	Singapore	4.72	62.00	103	Côte d'Ivoire	3.23	25.96
37	Korea, Rep.	4.63	60.02	104	Senegal	3.19	25.06
38	Azerbaijan	4.63	59.87	105	Peru	3.17	24.51
39	Rwanda	4.46	55.84	106	Georgia	3.15	24.06
40	Estonia	4.44	55.34	107	North Macedonia	3.14	23.92
41	Turkey	4.42	54.74	108	Uganda	3.14	23.80
42	Italy	4.41	54.58	109	Burkina Faso	3.11	23.28
43	Cyprus	4.34	52.94	110	Guinea	3.11	23.06
44	Indonesia	4.29	51.66	111	Eswatini	3.10	22.98
45	Tajikistan	4.28	51.49	112	Cambodia	3.10	22.93
46	Mauritius	4.27	51.31	113	Albania	3.10	22.92
47	Jordan	4.27	51.13	114	Cameroon	3.04	21.50
48	Slovakia	4.22	50.09	115	Mozambique	3.02	20.96
49	Egypt	4.22	49.93	116	Malawi	3.00	20.53
50	Latvia	4.21	49.76	117	Moldova, Rep.	2.98	20.01
51	Brunei Darussalam	4.17	48.83	118	Poland	2.96	19.44
52	Romania	4.13	47.91	119	Nepal	2.95	19.39
53	Chile	4.10	47.05	120	Honduras	2.94	19.01
54	Panama	4.02	45.19	121	El Salvador	2.92	18.53
55	Argentina	4.01	45.06	122	Hungary	2.89	17.80
56	Thailand	4.01	45.05	123	Nicaragua	2.88	17.69
57	Tanzania, United Rep.	4.00	44.73	124	Bangladesh	2.72	13.83
58	Viet Nam	4.00	44.59	125	Madagascar	2.68	12.88
59	Ecuador	3.97	44.09	126	Lebanon	2.64	11.79
60	Cabo Verde	3.97	44.06	127	Congo, Dem. Rep.	2.62	11.42
61	Namibia	3.95	43.39	128	Bosnia and Herzegovina	2.62	11.39
62	Colombia	3.91	42.61	129	Chad	2.54	9.45
63	Pakistan	3.88	41.87	130	Angola	2.49	8.26
64	Sri Lanka	3.87	41.47	131	Zimbabwe	2.43	6.84
65	Gambia	3.86	41.29	132	Venezuela, Bolivarian Rep.	2.28	3.11
66	Trinidad and Tobago	3.85	41.01	133	Yemen	2.24	2.14
67	Ghana	3.85	40.96	134	Nigeria	2.15	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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4.1.3 Brain retention

Average answer to the question: To what extent does your country retain talented people? [1 = not at all—the best and brightest leave to pursue opportunities abroad; 7 = to a great extent—the best and brightest stay and pursue opportunities in the country] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	5.90	100.00	68	Portugal	3.37	39.76
2	United States of America	5.81	97.76	69	Brazil	3.37	39.72
3	United Arab Emirates	5.52	91.08	70	Tanzania, United Rep.	3.35	39.32
4	Singapore	5.45	89.29	71	Ecuador	3.34	38.97
5	Luxembourg	5.41	88.32	72	Viet Nam	3.31	38.38
6	Netherlands	5.27	84.98	73	Spain	3.30	38.14
7	United Kingdom	5.27	84.95	74	Jamaica	3.25	36.99
8	Germany	5.17	82.68	75	Malawi	3.25	36.94
9	Malaysia	5.10	80.86	76	South Africa	3.25	36.92
10	Iceland	5.05	79.82	77	Kazakhstan	3.21	36.05
11	Norway	5.05	79.74	78	Georgia	3.20	35.86
12	Sweden	5.01	78.80	79	Montenegro	3.17	34.99
13	Finland	4.97	77.79	80	Zambia	3.17	34.99
14	Oman	4.96	77.64	81	Poland	3.16	34.74
15	Canada	4.95	77.29	82	Dominican Republic	3.13	33.99
16	Chile	4.90	76.28	83	Senegal	3.12	33.73
17	Qatar	4.90	76.26	84	Bangladesh	3.11	33.69
18	Australia	4.74	72.30	85	Morocco	3.09	33.16
19	Ireland	4.73	72.27	86	Armenia	3.08	32.85
20	Rwanda	4.72	72.03	87	Slovenia	3.08	32.83
21	Denmark	4.72	71.85	88	Nicaragua	3.07	32.65
22	Israel	4.71	71.80	89	Côte d'Ivoire	3.05	32.18
23	India	4.70	71.56	90	Nigeria	3.04	31.97
24	Saudi Arabia	4.58	68.55	91	Eswatini	3.04	31.82
25	Korea, Rep.	4.56	68.21	92	Uruguay	3.00	31.04
26	Azerbaijan	4.53	67.52	93	Egypt	2.99	30.86
27	Indonesia	4.46	65.81	94	Lebanon	2.98	30.49
28	New Zealand	4.46	65.70	95	Mali	2.98	30.44
29	Bahrain	4.43	65.10	96	Mozambique	2.95	29.86
30	Malta	4.38	63.72	97	Burkina Faso	2.94	29.63
31	Costa Rica	4.37	63.50	98	Italy	2.91	28.87
32	China	4.33	62.71	99	Uganda	2.90	28.69
33	Panama	4.29	61.58	100	Latvia	2.89	28.44
34	Austria	4.26	60.94	101	Sri Lanka	2.89	28.31
35	Gambia	4.17	58.73	102	Turkey	2.86	27.67
36	Belgium	4.11	57.41	103	Madagascar	2.83	26.97
37	Thailand	4.08	56.61	104	Cameroon	2.73	24.68
38	Kenya	4.06	56.23	105	Bolivia, Plurinational St.	2.73	24.58
39	Philippines	4.05	56.06	106	Iran, Islamic Rep.	2.67	23.12
40	Japan	4.04	55.70	107	Lithuania	2.67	23.10
41	Ghana	4.01	55.00	108	Congo, Dem. Rep.	2.67	23.10
42	Pakistan	3.98	54.22	109	Nepal	2.66	23.00
43	Cyprus	3.87	51.75	110	Albania	2.63	22.29
44	Guatemala	3.81	50.30	111	Hungary	2.63	22.26
45	Namibia	3.76	49.19	112	Guinea	2.63	22.16
46	Lao PDR	3.76	49.18	113	Chad	2.61	21.71
47	Czech Republic	3.76	49.12	114	Tunisia	2.60	21.55
48	Argentina	3.72	48.08	115	Bulgaria	2.58	21.08
49	Botswana	3.63	46.05	116	Kyrgyzstan	2.56	20.57
50	Tajikistan	3.57	44.66	117	Angola	2.55	20.39
51	Lesotho	3.57	44.62	118	Algeria	2.52	19.53
52	Russian Federation	3.56	44.26	119	Ukraine	2.50	19.14
53	Kuwait	3.55	44.19	120	Burundi	2.50	19.11
54	Jordan	3.55	44.12	121	Slovakia	2.41	16.98
55	Mauritius	3.55	44.02	122	Zimbabwe	2.40	16.71
56	Cambodia	3.54	43.76	123	Mongolia	2.39	16.50
57	Trinidad and Tobago	3.54	43.75	124	Greece	2.38	16.17
58	Brunei Darussalam	3.53	43.63	125	El Salvador	2.36	15.64
59	Mexico	3.53	43.52	126	Serbia	2.27	13.57
60	Paraguay	3.46	41.84	127	North Macedonia	2.13	10.18
61	Estonia	3.45	41.74	128	Moldova, Rep.	1.96	6.29
62	Honduras	3.44	41.50	129	Yemen	1.94	5.71
63	Cabo Verde	3.44	41.48	130	Croatia	1.88	4.43
64	France	3.43	41.24	131	Romania	1.88	4.31
65	Colombia	3.41	40.85	132	Bosnia and Herzegovina	1.76	1.55
66	Peru	3.38	39.92	133	Venezuela, Bolivarian Rep.	1.70	0.00
67	Ethiopia	3.37	39.84		Belarus	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

4.1.4 Environmental performance

Environmental Performance Index | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	82.50	100.00	68	Paraguay	46.40	36.33
2	Luxembourg	82.30	99.65	69	Dominican Republic	46.30	36.16
3	Switzerland	81.50	98.24	69	Montenegro	46.30	36.16
4	United Kingdom	81.30	97.88	71	Bosnia and Herzegovina	45.40	34.57
5	France	80.00	95.59	71	Lebanon	45.40	34.57
6	Austria	79.60	94.89	71	Thailand	45.40	34.57
7	Finland	78.90	93.65	74	Mauritius	45.10	34.04
8	Sweden	78.70	93.30	75	Algeria	44.80	33.51
9	Norway	77.70	91.53	76	Kazakhstan	44.70	33.33
10	Germany	77.20	90.65	77	Moldova, Rep.	44.40	32.80
11	Netherlands	75.30	87.30	78	Bolivia, Plurinational St.	44.30	32.63
12	Japan	75.10	86.95	79	Peru	44.00	32.10
13	Australia	74.90	86.60	79	Saudi Arabia	44.00	32.10
14	Spain	74.30	85.54	81	Egypt	43.30	30.86
15	Belgium	73.30	83.77	82	El Salvador	43.10	30.51
16	Ireland	72.80	82.89	82	South Africa	43.10	30.51
17	Iceland	72.30	82.01	84	Turkey	42.60	29.63
18	Slovenia	72.00	81.48	85	Morocco	42.30	29.10
19	New Zealand	71.30	80.25	86	Georgia	41.30	27.34
20	Canada	71.00	79.72	87	Botswana	40.40	25.75
20	Czech Republic	71.00	79.72	88	Namibia	40.20	25.40
20	Italy	71.00	79.72	89	Kyrgyzstan	39.80	24.69
23	Malta	70.70	79.19	90	Nicaragua	39.20	23.63
24	United States of America	69.30	76.72	91	Sri Lanka	39.00	23.28
25	Greece	69.10	76.37	92	Oman	38.50	22.40
26	Slovakia	68.30	74.96	93	Philippines	38.40	22.22
27	Portugal	67.00	72.66	94	Burkina Faso	38.30	22.05
28	Korea, Rep.	66.50	71.78	94	Malawi	38.30	22.05
29	Israel	65.80	70.55	96	Tajikistan	38.20	21.87
30	Estonia	65.30	69.66	97	Honduras	37.80	21.16
31	Cyprus	64.80	68.78	97	Indonesia	37.80	21.16
32	Romania	64.70	68.61	99	China	37.30	20.28
33	Hungary	63.70	66.84	100	Qatar	37.10	19.93
34	Croatia	63.10	65.78	101	Zimbabwe	37.00	19.75
35	Lithuania	62.90	65.43	102	Congo, Dem. Rep.	36.40	18.69
36	Latvia	61.60	63.14	103	Uganda	35.60	17.28
37	Poland	60.90	61.90	104	Lao PDR	34.80	15.87
38	Singapore	58.10	56.97	105	Kenya	34.70	15.70
39	Bulgaria	57.00	55.03	105	Zambia	34.70	15.70
40	United Arab Emirates	55.60	52.56	107	Ethiopia	34.40	15.17
41	North Macedonia	55.40	52.20	108	Mozambique	33.90	14.29
42	Chile	55.30	52.03	109	Eswatini	33.80	14.11
43	Serbia	55.20	51.85	109	Rwanda	33.80	14.11
44	Brunei Darussalam	54.80	51.15	111	Cambodia	33.60	13.76
45	Kuwait	53.60	49.03	111	Cameroon	33.60	13.76
46	Jordan	53.40	48.68	113	Viet Nam	33.40	13.40
47	Belarus	53.00	47.97	114	Pakistan	33.10	12.87
48	Colombia	52.90	47.80	115	Cabo Verde	32.80	12.35
49	Mexico	52.60	47.27	116	Nepal	32.70	12.17
50	Costa Rica	52.50	47.09	117	Mongolia	32.20	11.29
51	Armenia	52.30	46.74	118	Guatemala	31.80	10.58
52	Argentina	52.20	46.56	119	Tanzania, United Rep.	31.10	9.35
53	Brazil	51.20	44.80	120	Nigeria	31.00	9.17
54	Bahrain	51.00	44.44	121	Senegal	30.70	8.64
54	Ecuador	51.00	44.44	122	Angola	29.70	6.88
56	Russian Federation	50.50	43.56	123	Mali	29.40	6.35
57	Venezuela, Bolivarian Rep.	50.30	43.21	124	Bangladesh	29.00	5.64
58	Ukraine	49.50	41.80	125	Lesotho	28.00	3.88
59	Uruguay	49.10	41.09	126	Gambia	27.90	3.70
60	Albania	49.00	40.92	127	Ghana	27.60	3.17
61	Jamaica	48.20	39.51	127	India	27.60	3.17
62	Iran, Islamic Rep.	48.00	39.15	129	Burundi	27.00	2.12
63	Malaysia	47.90	38.98	130	Chad	26.70	1.59
64	Trinidad and Tobago	47.50	38.27	131	Madagascar	26.50	1.23
65	Panama	47.30	37.92	132	Guinea	26.40	1.06
66	Tunisia	46.70	36.86	133	Côte d'Ivoire	25.80	0.00
67	Azerbaijan	46.50	36.51		Yemen	n/a	n/a

SOURCE: Wendling, Z.A., Emerson, J.W., de Sherbinin, A., Esty, D.C., et al. (2020). 2020 Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law & Policy. (<https://epi.yale.edu>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

4.2.1 Personal rights

Personal rights indicator | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Sweden	96.78	100.00	68	Serbia	74.63	70.64
2	Germany	96.44	99.55	69	Dominican Republic	74.30	70.21
3	New Zealand	96.41	99.51	70	Brazil	73.53	69.18
4	Australia	96.27	99.32	71	Lesotho	73.36	68.96
4	Switzerland	96.27	99.32	72	Bosnia and Herzegovina	72.72	68.11
6	Denmark	96.22	99.26	73	Indonesia	72.31	67.57
7	Belgium	96.17	99.19	74	Montenegro	71.90	67.02
8	Netherlands	95.89	98.82	75	Malawi	71.80	66.89
9	Portugal	95.80	98.70	76	Madagascar	71.74	66.81
10	Uruguay	95.30	98.04	77	Ukraine	71.20	66.10
11	Ireland	95.27	98.00	78	Sri Lanka	71.16	66.04
12	Luxembourg	94.89	97.50	79	Singapore	70.78	65.54
13	Canada	94.75	97.31	80	Bolivia, Plurinational St.	70.68	65.41
14	Slovenia	94.70	97.24	81	Malaysia	69.46	63.79
15	Spain	94.49	96.96	82	North Macedonia	69.43	63.75
16	Latvia	94.32	96.74	83	India	68.30	62.25
17	Norway	94.31	96.73	84	Kuwait	67.51	61.21
18	Finland	94.21	96.59	85	Colombia	67.02	60.56
19	Italy	93.93	96.22	86	Burkina Faso	66.95	60.46
19	Japan	93.93	96.22	87	Tanzania, United Rep.	66.46	59.81
21	Estonia	93.57	95.75	88	Lebanon	66.26	59.55
22	United Kingdom	93.48	95.63	89	Côte d'Ivoire	65.86	59.02
23	Costa Rica	93.44	95.57	90	Zambia	65.26	58.22
24	Korea, Rep.	93.30	95.39	91	Mozambique	65.20	58.14
25	Lithuania	93.14	95.18	92	Kyrgyzstan	63.18	55.47
26	Cyprus	93.05	95.06	93	Guatemala	63.01	55.24
26	Iceland	93.05	95.06	94	Jordan	62.84	55.02
28	France	92.81	94.74	95	Honduras	62.16	54.12
29	Czech Republic	92.34	94.12	96	Mali	62.12	54.06
30	Chile	92.16	93.88	97	Kenya	60.89	52.43
31	Mauritius	91.27	92.70	98	Morocco	59.65	50.79
32	Trinidad and Tobago	91.14	92.52	99	Uganda	59.44	50.51
33	Jamaica	91.02	92.37	100	Rwanda	59.31	50.34
34	United States of America	90.84	92.13	101	Cameroon	58.56	49.34
35	Cabo Verde	90.59	91.80	102	Angola	58.24	48.92
36	Austria	89.49	90.34	103	Belarus	55.20	44.89
37	Slovakia	89.01	89.70	104	Kazakhstan	54.94	44.55
38	Greece	88.57	89.12	105	Oman	53.87	43.13
39	Malta	88.54	89.08	106	Ethiopia	52.92	41.87
40	Argentina	88.36	88.84	107	Guinea	51.95	40.58
41	Ghana	88.15	88.56	108	Bangladesh	51.31	39.73
42	Mongolia	88.09	88.48	109	Thailand	51.26	39.67
43	Romania	87.76	88.05	110	Algeria	50.32	38.42
44	Israel	87.54	87.75	111	Russian Federation	50.04	38.05
45	Panama	87.14	87.22	112	Viet Nam	45.46	31.98
46	Croatia	86.52	86.40	113	Zimbabwe	45.17	31.60
47	Tunisia	86.05	85.78	114	Nicaragua	44.10	30.18
48	Namibia	85.55	85.12	115	Pakistan	44.09	30.17
49	Bulgaria	84.23	83.37	116	United Arab Emirates	43.42	29.28
50	Poland	84.17	83.29	117	Cambodia	41.83	27.17
51	Botswana	82.69	81.33	118	Qatar	41.32	26.49
52	Hungary	82.49	81.06	119	Iran, Islamic Rep.	40.50	25.41
53	South Africa	82.12	80.57	120	Egypt	40.39	25.26
54	Albania	82.06	80.49	121	Azerbaijan	40.06	24.82
55	Moldova, Rep.	81.89	80.27	122	Chad	39.89	24.60
56	Peru	81.56	79.83	123	Congo, Dem. Rep.	39.49	24.07
57	Gambia	81.35	79.55	124	Bahrain	37.64	21.62
58	Ecuador	81.09	79.20	125	Turkey	35.74	19.10
59	Senegal	80.88	78.93	126	Burundi	32.29	14.53
60	Georgia	80.66	78.63	127	Lao PDR	30.96	12.76
61	Armenia	80.48	78.40	128	China	29.21	10.44
62	Paraguay	77.98	75.08	129	Eswatini	27.45	8.11
63	Nepal	76.47	73.08	130	Tajikistan	27.42	8.07
64	Philippines	76.28	72.83	131	Saudi Arabia	21.33	0.00
65	El Salvador	75.38	71.64		Brunei Darussalam	n/a	n/a
65	Mexico	75.38	71.64		Venezuela, Bolivarian Rep.	n/a	n/a
67	Nigeria	75.25	71.46		Yemen	n/a	n/a

SOURCE: Social Progress Imperative, *The Social Progress Index 2020* (<https://www.socialprogress.org/>)

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4.2.2 Personal safety

Personal safety indicator | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Japan	96.58	100.00	68	Costa Rica	69.67	52.35
2	Singapore	96.57	99.98	69	Georgia	69.54	52.12
3	Iceland	94.84	96.92	70	Bolivia, Plurinational St.	69.35	51.78
4	New Zealand	93.60	94.72	71	Montenegro	69.32	51.73
5	Korea, Rep.	93.55	94.63	71	United Arab Emirates	69.32	51.73
6	Australia	93.24	94.09	73	Moldova, Rep.	68.44	50.17
7	Canada	91.77	91.48	74	Paraguay	68.04	49.46
8	Switzerland	90.31	88.90	75	Kazakhstan	67.92	49.25
9	Norway	90.22	88.74	76	Tanzania, United Rep.	67.87	49.16
10	Netherlands	90.06	88.45	77	Gambia	67.76	48.96
11	Ireland	89.18	86.90	78	Azerbaijan	66.93	47.49
12	Sweden	89.09	86.74	79	Namibia	66.69	47.07
13	Slovenia	89.00	86.58	80	Bangladesh	66.43	46.61
14	Czech Republic	88.80	86.22	81	Zambia	66.10	46.02
15	Denmark	88.63	85.92	82	Tunisia	65.93	45.72
15	Germany	88.63	85.92	83	Mali	65.74	45.39
17	Austria	88.60	85.87	84	China	65.46	44.89
18	Portugal	88.59	85.85	85	Argentina	65.33	44.66
19	Poland	87.28	83.53	86	Bahrain	65.11	44.27
20	Finland	87.24	83.46	87	Madagascar	64.93	43.95
21	Luxembourg	86.44	82.04	88	Peru	64.73	43.60
22	Slovakia	86.20	81.62	89	Uruguay	64.25	42.75
23	Spain	84.10	77.90	90	Burkina Faso	64.06	42.41
24	Senegal	83.53	76.89	91	India	63.05	40.62
25	Mauritius	82.36	74.82	92	Rwanda	62.57	39.77
26	United Kingdom	81.70	73.65	93	Ecuador	62.55	39.74
27	France	81.52	73.33	94	Lebanon	62.33	39.35
28	Greece	80.96	72.34	94	Ukraine	62.33	39.35
29	Belgium	80.48	71.49	96	Turkey	61.76	38.34
30	Qatar	80.46	71.45	97	Lao PDR	60.94	36.89
31	Cyprus	80.43	71.40	98	Iran, Islamic Rep.	60.63	36.34
32	Estonia	80.24	71.06	99	Cameroon	60.31	35.77
33	Romania	79.90	70.46	100	Thailand	59.99	35.20
34	Bulgaria	79.70	70.11	101	Ethiopia	59.51	34.35
35	Hungary	79.28	69.36	102	Trinidad and Tobago	59.37	34.11
36	Israel	79.07	68.99	103	Dominican Republic	58.68	32.88
37	Malta	78.95	68.78	104	Jamaica	58.48	32.53
38	Indonesia	77.73	66.62	105	Saudi Arabia	57.78	31.29
39	Italy	76.91	65.17	106	Kenya	57.49	30.78
40	Malaysia	76.86	65.08	107	Cambodia	57.38	30.58
41	Croatia	76.83	65.03	108	Côte d'Ivoire	57.16	30.19
42	Mongolia	76.49	64.42	109	Mozambique	56.40	28.85
43	Lithuania	76.20	63.91	110	Russian Federation	56.30	28.67
44	Latvia	76.17	63.86	111	Egypt	55.93	28.01
45	Cabo Verde	76.15	63.82	112	Philippines	55.03	26.42
46	Jordan	74.95	61.70	113	Eswatini	54.88	26.16
47	Belarus	74.93	61.66	114	Nicaragua	54.46	25.41
48	Sri Lanka	74.85	61.52	115	Mexico	53.07	22.95
49	North Macedonia	74.49	60.88	116	Colombia	52.28	21.55
50	Nepal	74.23	60.42	117	Guinea	52.00	21.06
51	Armenia	73.83	59.71	118	Brazil	51.94	20.95
52	United States of America	73.82	59.70	119	Uganda	51.79	20.68
53	Viet Nam	73.67	59.43	120	Pakistan	50.89	19.09
54	Kuwait	73.63	59.36	121	South Africa	50.60	18.58
55	Albania	73.55	59.22	122	Angola	50.46	18.33
55	Botswana	73.55	59.22	123	Guatemala	49.12	15.96
57	Bosnia and Herzegovina	73.40	58.95	124	Honduras	48.29	14.49
58	Serbia	73.33	58.83	125	El Salvador	46.87	11.97
59	Chile	73.12	58.46	126	Burundi	46.40	11.14
60	Morocco	73.08	58.38	127	Lesotho	45.60	9.72
61	Ghana	72.60	57.53	128	Nigeria	42.01	3.36
62	Oman	72.05	56.56	129	Zimbabwe	41.87	3.12
63	Malawi	71.78	56.08	130	Congo, Dem. Rep.	41.41	2.30
64	Algeria	71.21	55.07	131	Chad	40.11	0.00
65	Kyrgyzstan	70.58	53.96		Brunei Darussalam	n/a	n/a
66	Panama	70.52	53.85		Venezuela, Bolivarian Rep.	n/a	n/a
67	Tajikistan	70.51	53.83		Yemen	n/a	n/a

SOURCE: Social Progress Imperative, *The Social Progress Index 2020* (<https://www.socialprogress.org/>)

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4.2.3 Physician density

Medical doctors (per 10,000 people) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Italy	80.13	100.00	68	Bosnia and Herzegovina	21.62	26.65
2	Georgia	70.78	88.28	69	Lebanon	21.04	25.92
3	France	65.34	81.46	70	China	19.80	24.37
4	Greece	62.26	77.60	71	Cyprus	19.51	24.01
5	Belgium	59.56	74.21	72	Oman	19.30	23.75
6	United Kingdom	58.23	72.55	73	Turkey	18.07	22.20
7	Israel	54.67	68.08	74	Venezuela, Bolivarian Rep.	17.30	21.24
8	Portugal	53.12	66.14	75	Tajikistan	17.23	21.15
9	Austria	52.11	64.88	76	Algeria	17.19	21.10
10	Belarus	51.91	64.62	77	Nicaragua	16.64	20.42
11	Chile	51.82	64.52	78	Albania	16.47	20.20
12	Lithuania	50.40	62.73	79	Panama	16.32	20.01
13	Uruguay	49.40	61.48	80	Brunei Darussalam	16.09	19.72
14	Norway	48.85	60.79	81	Iran, Islamic Rep.	15.84	19.41
15	Mexico	48.50	60.34	82	Malaysia	15.36	18.80
16	Finland	46.40	57.72	83	Dominican Republic	14.52	17.75
17	Trinidad and Tobago	44.76	55.66	84	Paraguay	13.54	16.53
18	Russian Federation	44.40	55.20	85	Tunisia	13.03	15.88
19	Armenia	44.02	54.74	86	Sri Lanka	11.54	14.02
20	Switzerland	43.33	53.87	87	Pakistan	11.18	13.56
21	Sweden	43.31	53.84	88	Bolivia, Plurinational St.	10.30	12.46
22	Germany	43.00	53.45	89	India	9.28	11.19
23	Denmark	42.25	52.51	90	Bahrain	9.26	11.16
24	Bulgaria	42.07	52.29	91	Thailand	9.19	11.07
25	Iceland	41.42	51.47	92	Viet Nam	8.28	9.93
26	Czech Republic	41.16	51.14	93	Peru	8.20	9.83
27	Spain	40.30	50.07	94	Nepal	8.09	9.69
28	Argentina	39.90	49.57	95	South Africa	7.92	9.48
29	Kazakhstan	39.80	49.44	96	Cabo Verde	7.81	9.35
30	Mongolia	38.52	47.84	97	Egypt	7.46	8.91
31	Colombia	38.44	47.74	98	Morocco	7.31	8.71
32	Australia	37.59	46.68	99	Bangladesh	6.37	7.53
33	Netherlands	37.07	46.02	100	Philippines	6.00	7.08
34	Slovakia	35.17	43.64	101	Namibia	5.91	6.96
35	Estonia	34.63	42.96	102	Yemen	5.25	6.13
36	Azerbaijan	34.46	42.75	103	Indonesia	4.65	5.38
37	New Zealand	34.20	42.43	104	Jamaica	4.55	5.25
38	Hungary	34.08	42.27	105	Nigeria	3.81	4.32
39	Ireland	33.52	41.57	106	Lao PDR	3.73	4.22
40	Latvia	33.02	40.94	107	Guatemala	3.55	4.00
41	Slovenia	31.72	39.32	108	Honduras	3.09	3.42
42	Serbia	31.13	38.58	109	Botswana	2.89	3.18
43	Luxembourg	30.07	37.25	110	Angola	2.15	2.24
44	Croatia	30.00	37.15	111	Zimbabwe	2.10	2.18
45	Ukraine	29.92	37.06	112	Cambodia	1.93	1.97
46	Romania	29.81	36.92	113	Madagascar	1.81	1.82
47	Costa Rica	28.94	35.83	114	Uganda	1.68	1.66
48	North Macedonia	28.74	35.57	115	Côte d'Ivoire	1.62	1.59
49	El Salvador	28.70	35.53	116	Kenya	1.56	1.51
50	Malta	28.60	35.40	117	Mali	1.29	1.16
51	Montenegro	27.56	34.10	118	Rwanda	1.18	1.03
52	Kuwait	26.46	32.72	119	Gambia	1.07	0.90
53	Saudi Arabia	26.12	32.29	120	Ghana	1.06	0.89
54	United States of America	26.04	32.19	121	Burundi	1.00	0.81
55	Moldova, Rep.	25.59	31.63	122	Eswatini	0.96	0.76
56	Mauritius	25.33	31.31	123	Burkina Faso	0.94	0.73
57	United Arab Emirates	25.28	31.24	124	Zambia	0.92	0.71
58	Qatar	24.85	30.71	125	Congo, Dem. Rep.	0.90	0.68
59	Japan	24.80	30.63	126	Cameroon	0.88	0.66
60	Canada	24.42	30.17	126	Senegal	0.88	0.66
61	Korea, Rep.	24.08	29.74	128	Mozambique	0.85	0.61
62	Poland	23.79	29.37	129	Guinea	0.83	0.59
63	Jordan	23.24	28.68	130	Ethiopia	0.77	0.52
64	Brazil	23.11	28.52	131	Lesotho	0.69	0.42
65	Singapore	22.94	28.30	132	Tanzania, United Rep.	0.60	0.31
66	Ecuador	22.20	27.38	133	Chad	0.54	0.23
67	Kyrgyzstan	22.13	27.29	134	Malawi	0.36	0.00

SOURCE: World Health Organization, Global Health Observatory (<https://www.who.int/data/gho>)

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4.2.4 Sanitation

Population using at least basic sanitation services (%) | 2017

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Bahrain.....	100.00	100.00	68	Azerbaijan.....	92.51	91.92
1	Chile.....	100.00	100.00	69	Latvia.....	92.15	91.53
1	Israel.....	100.00	100.00	70	Ireland.....	91.25	90.55
1	Korea, Rep.....	100.00	100.00	71	Mexico.....	91.18	90.49
1	Kuwait.....	100.00	100.00	72	Tunisia.....	90.92	90.20
1	New Zealand.....	100.00	100.00	73	Russian Federation.....	90.48	89.73
1	Oman.....	100.00	100.00	74	Georgia.....	90.02	89.24
1	Qatar.....	100.00	100.00	75	Paraguay.....	89.78	88.98
1	Saudi Arabia.....	100.00	100.00	76	Colombia.....	89.63	88.81
1	Singapore.....	100.00	100.00	77	Morocco.....	88.50	87.60
11	Australia.....	99.99	99.99	78	Iran, Islamic Rep.....	88.42	87.51
12	Austria.....	99.97	99.97	79	Brazil.....	88.29	87.37
13	United States of America.....	99.97	99.97	80	Ecuador.....	87.99	87.04
14	Malta.....	99.96	99.95	81	Algeria.....	87.59	86.61
15	Spain.....	99.90	99.90	82	El Salvador.....	87.43	86.44
16	Japan.....	99.89	99.89	83	Jamaica.....	87.31	86.31
17	Switzerland.....	99.89	99.88	84	Bulgaria.....	86.00	84.90
18	Portugal.....	99.61	99.58	85	China.....	84.76	83.56
19	Denmark.....	99.60	99.57	86	Romania.....	84.31	83.07
20	Malaysia.....	99.57	99.54	87	Dominican Republic.....	83.89	82.62
21	Belgium.....	99.49	99.45	88	Viet Nam.....	83.52	82.21
22	Finland.....	99.45	99.40	89	Panama.....	83.32	82.00
23	Sweden.....	99.30	99.24	90	Honduras.....	81.25	79.77
24	Canada.....	99.29	99.23	91	Botswana.....	77.27	75.47
25	Germany.....	99.23	99.16	92	Philippines.....	76.53	74.68
26	Cyprus.....	99.15	99.09	93	Moldova, Rep.....	76.31	74.44
27	Estonia.....	99.15	99.08	94	South Africa.....	75.75	73.83
28	Czech Republic.....	99.13	99.07	95	Lao PDR.....	74.46	72.44
29	North Macedonia.....	99.12	99.06	96	Nicaragua.....	74.43	72.42
30	United Kingdom.....	99.11	99.04	97	Peru.....	74.34	72.32
31	Slovenia.....	99.11	99.04	98	Cabo Verde.....	73.85	71.79
32	Greece.....	98.98	98.90	99	Indonesia.....	73.13	71.01
33	Poland.....	98.80	98.70	100	Rwanda.....	66.57	63.94
34	Iceland.....	98.78	98.69	101	Guatemala.....	65.06	62.31
35	Italy.....	98.77	98.68	102	Nepal.....	62.05	59.06
36	Thailand.....	98.75	98.65	103	Bolivia, Plurinational St.....	60.72	57.62
37	France.....	98.65	98.54	104	Pakistan.....	59.87	56.70
38	United Arab Emirates.....	98.59	98.47	105	India.....	59.54	56.35
39	Lebanon.....	98.48	98.36	106	Cambodia.....	59.23	56.01
40	Norway.....	98.05	97.90	107	Yemen.....	59.05	55.82
41	Hungary.....	97.99	97.83	108	Mongolia.....	58.48	55.20
42	Slovakia.....	97.94	97.78	109	Eswatini.....	58.35	55.06
43	Kazakhstan.....	97.87	97.71	110	Senegal.....	51.47	47.64
44	Costa Rica.....	97.82	97.65	111	Angola.....	49.88	45.92
45	Belarus.....	97.79	97.62	112	Bangladesh.....	48.23	44.15
46	Montenegro.....	97.77	97.60	113	Burundi.....	45.82	41.54
47	Albania.....	97.72	97.54	114	Lesotho.....	42.75	38.24
48	Netherlands.....	97.71	97.53	115	Mali.....	39.34	34.55
49	Luxembourg.....	97.60	97.41	116	Gambia.....	39.23	34.43
50	Serbia.....	97.57	97.38	117	Nigeria.....	39.17	34.37
51	Jordan.....	97.34	97.13	118	Cameroon.....	39.08	34.27
52	Turkey.....	97.30	97.08	119	Zimbabwe.....	36.22	31.19
53	Tajikistan.....	97.02	96.79	120	Namibia.....	34.50	29.33
54	Uruguay.....	96.60	96.33	121	Côte d'Ivoire.....	32.13	26.78
55	Croatia.....	96.54	96.27	122	Tanzania, United Rep.....	29.91	24.38
56	Kyrgyzstan.....	96.51	96.23	123	Mozambique.....	29.36	23.78
57	Brunei Darussalam.....	96.35	96.06	124	Kenya.....	29.05	23.45
58	Ukraine.....	96.22	95.93	125	Zambia.....	26.37	20.56
59	Sri Lanka.....	95.78	95.45	126	Malawi.....	26.23	20.40
60	Mauritius.....	95.50	95.15	127	Guinea.....	22.72	16.62
61	Bosnia and Herzegovina.....	95.36	94.99	128	Congo, Dem. Rep.....	20.46	14.18
62	Argentina.....	94.26	93.81	129	Burkina Faso.....	19.40	13.04
63	Egypt.....	94.19	93.73	130	Uganda.....	18.47	12.04
64	Venezuela, Bolivarian Rep.....	93.94	93.46	131	Ghana.....	18.47	12.04
65	Armenia.....	93.64	93.14	132	Madagascar.....	10.51	3.44
66	Trinidad and Tobago.....	93.40	92.88	133	Chad.....	8.34	1.11
67	Lithuania.....	93.35	92.83	134	Ethiopia.....	7.32	0.00

SOURCE: World Health Organization, Global Health Observatory (<https://www.who.int/data/gho>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

Pillar 5

Vocational and Technical Skills

5.1.1 Workforce with secondary education

Labour force with secondary education (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kyrgyzstan	73.91	100.00	68	Korea, Rep.	32.81	44.04
2	Bosnia and Herzegovina	70.52	95.38	69	Bolivia, Plurinational St.	32.69	43.87
3	Czech Republic	70.11	94.82	70	Ecuador	32.53	43.66
4	Slovakia	67.53	91.32	71	Colombia	31.98	42.91
5	Azerbaijan	66.22	89.53	72	Malta	31.90	42.79
6	Tajikistan	64.40	87.06	73	Indonesia	31.30	41.99
7	Armenia	63.78	86.21	74	Mauritius	31.06	41.66
8	Croatia	63.31	85.57	75	Luxembourg	30.97	41.53
9	Romania	61.61	83.26	76	Venezuela, Bolivarian Rep.	30.78	41.28
10	Montenegro	61.33	82.87	77	Portugal	29.60	39.67
11	Hungary	60.34	81.53	78	Paraguay	29.17	39.08
12	Egypt	58.89	79.55	79	Zambia	28.97	38.81
13	Poland	58.51	79.03	80	Nigeria	28.07	37.58
14	Serbia	57.77	78.02	81	Singapore	27.80	37.22
15	Namibia	57.07	77.07	82	Ukraine	26.45	35.38
16	Georgia	55.71	75.22	83	Qatar	25.80	34.49
17	Bulgaria	55.63	75.11	84	Viet Nam	24.94	33.32
18	Israel	54.94	74.17	85	Gambia	24.67	32.95
19	North Macedonia	54.87	74.08	86	Mexico	24.59	32.84
20	Brunei Darussalam	54.33	73.35	87	Canada	24.30	32.45
21	Slovenia	54.09	73.02	88	Jordan	24.18	32.29
22	Latvia	53.04	71.58	89	Spain	24.17	32.28
23	Chile	52.05	70.24	90	Iran, Islamic Rep.	23.84	31.83
24	New Zealand	51.01	68.82	91	Kenya	23.44	31.28
25	Austria	50.74	68.46	92	Costa Rica	23.41	31.24
26	Lithuania	50.25	67.79	93	Thailand	23.25	31.02
27	Japan	50.20	67.72	94	Yemen	22.96	30.62
28	Trinidad and Tobago	49.93	67.36	95	Honduras	22.66	30.22
29	Estonia	49.39	66.61	96	Turkey	22.04	29.37
30	Zimbabwe	47.65	64.25	97	Nicaragua	21.48	28.61
31	Greece	46.65	62.88	98	Ghana	21.02	27.99
32	United States of America	46.61	62.83	99	Morocco	20.75	27.61
33	Italy	46.40	62.54	100	Kuwait	20.72	27.58
34	Germany	46.31	62.42	101	Bangladesh	20.66	27.49
35	Cabo Verde	46.15	62.20	102	Lao PDR	20.36	27.09
36	Panama	44.87	60.46	103	Côte d'Ivoire	20.27	26.96
37	Russian Federation	44.56	60.04	104	Pakistan	19.76	26.27
38	Finland	44.54	60.00	105	Botswana	18.57	24.65
39	Switzerland	44.27	59.64	106	Kazakhstan	18.44	24.47
40	Belarus	44.23	59.59	107	Lebanon	17.04	22.57
41	Brazil	44.10	59.41	108	United Arab Emirates	16.23	21.46
42	Malaysia	43.75	58.93	109	Malawi	16.12	21.31
43	Argentina	43.03	57.96	110	Guatemala	15.21	20.07
44	Sweden	42.74	57.56	111	Cameroon	14.84	19.58
45	France	42.21	56.84	112	Madagascar	14.50	19.11
46	Peru	41.89	56.41	113	Angola	11.76	15.37
47	Denmark	41.85	56.34	114	India	10.80	14.06
48	Mongolia	40.48	54.48	115	Rwanda	10.61	13.81
49	Albania	40.36	54.32	116	Uruguay	10.50	13.66
50	Australia	40.06	53.91	117	Bahrain	9.59	12.42
51	United Kingdom	39.48	53.13	118	Cambodia	8.49	10.93
52	Netherlands	39.19	52.73	119	Ethiopia	6.09	7.65
53	Norway	38.55	51.85	120	Mozambique	5.87	7.35
54	Cyprus	38.08	51.21	121	Senegal	5.61	7.01
55	Congo, Dem. Rep.	38.03	51.14	122	Philippines	5.11	6.32
56	Belgium	37.95	51.04	123	Chad	4.80	5.90
57	Tunisia	37.47	50.38	124	Mali	3.99	4.80
58	Moldova, Rep.	36.94	49.67	125	Tanzania, United Rep.	3.97	4.76
59	Algeria	36.51	49.08	126	Uganda	2.64	2.96
60	Ireland	36.21	48.66	127	Burkina Faso	2.43	2.68
61	Iceland	36.11	48.53	128	Burundi	2.39	2.62
62	Dominican Republic	35.29	47.41	129	Guinea	1.30	1.14
63	Sri Lanka	34.77	46.71	130	Eswatini	0.90	0.58
64	El Salvador	34.38	46.17	131	Lesotho	0.47	0.00
65	Nepal	33.62	45.14		China	n/a	n/a
66	Saudi Arabia	33.41	44.85		Jamaica	n/a	n/a
67	South Africa	33.03	44.33		Oman	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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5.1.2 Population with secondary education

Population with secondary education (%) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kyrgyzstan	70.75	100.00	68	Indonesia	24.61	34.78
2	Czech Republic	69.71	98.53	69	Paraguay	24.14	34.13
3	Slovakia	66.18	93.54	70	Kazakhstan	23.49	33.20
4	Azerbaijan	63.07	89.15	71	Malta	23.10	32.65
5	Egypt	60.99	86.21	72	Saudi Arabia	22.40	31.67
6	Poland	59.83	84.56	73	Qatar	22.27	31.49
7	Georgia	58.43	82.59	74	El Salvador	21.67	30.62
8	Tajikistan	57.89	81.83	75	Kenya	21.64	30.59
9	Germany	57.57	81.38	76	Panama	21.52	30.42
10	Latvia	57.23	80.89	77	Bangladesh	21.18	29.94
11	Sri Lanka	56.64	80.06	78	Turkey	19.76	27.93
12	Hungary	54.66	77.27	79	Spain	19.31	27.30
13	Slovenia	54.38	76.87	80	Mexico	19.18	27.12
14	Montenegro	52.86	74.72	81	Viet Nam	18.98	26.83
15	Lithuania	52.77	74.59	82	Bolivia, Plurinational St.	18.62	26.31
16	Romania	52.76	74.58	83	Pakistan	18.60	26.29
17	Bosnia and Herzegovina	52.67	74.45	84	Portugal	18.40	26.01
18	Croatia	52.32	73.95	85	Congo, Dem. Rep.	18.15	25.65
19	Bulgaria	51.74	73.13	86	Guatemala	18.07	25.54
20	Austria	51.23	72.41	87	Ghana	17.43	24.64
21	Serbia	50.86	71.89	88	Costa Rica	17.39	24.58
22	Brunei Darussalam	49.83	70.43	89	United Arab Emirates	17.36	24.53
23	South Africa	49.41	69.84	90	Uruguay	17.12	24.20
24	Estonia	47.34	66.91	91	India	16.95	23.96
25	Armenia	46.58	65.84	92	Cameroon	16.72	23.64
26	Switzerland	46.25	65.37	93	Gambia	15.24	21.54
27	Trinidad and Tobago	46.23	65.34	94	Thailand	13.89	19.63
28	United States of America	44.64	63.09	95	China	13.50	19.09
29	Mongolia	43.86	61.99	96	Honduras	13.25	18.73
30	Sweden	42.49	60.06	97	Angola	13.23	18.70
31	Moldova, Rep.	41.72	58.98	98	Nepal	12.12	17.13
32	Denmark	40.91	57.82	99	Kuwait	11.69	16.52
33	Finland	40.28	56.93	100	Cabo Verde	10.26	14.51
34	Japan	39.91	56.41	101	Ethiopia	7.74	10.94
35	France	39.85	56.33	102	Senegal	6.83	9.65
36	Malaysia	39.49	55.82	103	Mozambique	6.71	9.49
37	Norway	38.38	54.25	104	Côte d'Ivoire	5.87	8.30
38	Mauritius	37.83	53.47	105	Rwanda	5.61	7.93
39	Netherlands	37.46	52.94	106	Mali	4.31	6.09
40	Argentina	37.17	52.53	107	Philippines	4.05	5.72
41	Chile	37.05	52.37	108	Burundi	3.96	5.60
42	New Zealand	36.55	51.66	109	Cambodia	3.80	5.38
43	Korea, Rep.	36.15	51.09	110	Chad	3.42	4.83
44	Peru	36.12	51.05	111	Zimbabwe	2.85	4.02
45	Cyprus	35.19	49.74	112	Burkina Faso	2.81	3.97
46	Canada	34.80	49.19	113	Uganda	1.70	2.40
47	Italy	34.80	49.19	114	Tanzania, United Rep.	1.47	2.07
48	Luxembourg	34.79	49.18	115	Guinea	1.18	1.67
49	Israel	34.34	48.54	116	Jamaica	0.00	0.00
50	Australia	34.13	48.25	116	Tunisia	0.00	0.00
51	Belgium	34.03	48.10		Algeria	n/a	n/a
52	Greece	33.44	47.26		Botswana	n/a	n/a
53	Bahrain	32.56	46.03		Eswatini	n/a	n/a
54	Albania	32.38	45.77		Iceland	n/a	n/a
55	Belarus	32.10	45.37		Lao PDR	n/a	n/a
56	Ireland	32.00	45.24		Lebanon	n/a	n/a
57	Brazil	30.89	43.66		Lesotho	n/a	n/a
58	Ecuador	29.58	41.81		Madagascar	n/a	n/a
59	Oman	29.08	41.10		Malawi	n/a	n/a
60	Colombia	28.52	40.31		Morocco	n/a	n/a
61	Venezuela, Bolivarian Rep.	27.60	39.02		Namibia	n/a	n/a
62	Singapore	26.82	37.91		Nicaragua	n/a	n/a
63	Dominican Republic	26.63	37.64		Nigeria	n/a	n/a
64	United Kingdom	25.85	36.53		North Macedonia	n/a	n/a
65	Iran, Islamic Rep.	25.32	35.79		Ukraine	n/a	n/a
66	Jordan	25.17	35.58		Yemen	n/a	n/a
67	Russian Federation	24.89	35.18		Zambia	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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5.1.3 Technicians and associate professionals

Technicians and associate professionals (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Japan	23.27	100.00	68	Paraguay	6.94	29.10
2	Singapore	21.93	94.16	69	Panama	6.73	28.21
3	Nigeria	21.09	90.50	70	Botswana	6.67	27.93
4	France	19.85	85.15	71	Nicaragua	6.64	27.83
5	Germany	19.82	85.00	72	Qatar	6.53	27.31
6	Finland	19.50	83.62	73	Romania	6.51	27.23
7	Sweden	18.94	81.17	74	Moldova, Rep.	6.44	26.95
8	Denmark	18.11	77.57	75	Bahrain	6.20	25.90
9	Austria	18.02	77.20	76	Honduras	6.14	25.64
10	Italy	17.66	75.61	77	Turkey	6.13	25.58
11	Czech Republic	17.50	74.96	78	Dominican Republic	5.96	24.85
12	United States of America	17.38	74.41	79	Gambia	5.81	24.22
13	Korea, Rep.	17.36	74.32	80	Tajikistan	5.77	24.05
14	Switzerland	17.19	73.59	81	Peru	5.75	23.96
15	Canada	16.84	72.09	82	Jamaica	5.61	23.35
16	Netherlands	16.64	71.19	83	Congo, Dem. Rep.	5.56	23.14
17	Luxembourg	16.63	71.15	84	Namibia	5.46	22.67
18	Slovakia	15.93	68.13	85	Iran, Islamic Rep.	5.43	22.57
19	Norway	15.64	66.86	86	Cabo Verde	5.43	22.56
20	Estonia	15.36	65.63	87	Bolivia, Plurinational St.	5.11	21.16
21	Hungary	14.50	61.94	88	Lebanon	4.98	20.59
22	Croatia	14.41	61.55	89	Algeria	4.76	19.64
23	Belgium	14.31	61.08	90	Albania	4.76	19.64
24	Latvia	14.23	60.77	91	Burkina Faso	4.75	19.61
25	Russian Federation	13.74	58.64	92	Thailand	4.74	19.55
26	Malta	13.74	58.60	93	Ecuador	4.52	18.62
27	Poland	13.47	57.44	94	Lesotho	4.48	18.43
28	Brunei Darussalam	13.43	57.28	95	Nepal	4.44	18.26
29	Iceland	13.40	57.15	96	Morocco	4.40	18.09
30	Trinidad and Tobago	13.30	56.73	97	Côte d'Ivoire	4.33	17.79
31	Slovenia	13.29	56.66	98	India	4.23	17.35
32	Australia	12.98	55.33	99	Philippines	4.15	17.02
33	Israel	12.88	54.88	100	El Salvador	4.13	16.90
34	Montenegro	12.85	54.77	101	Eswatini	4.06	16.63
35	Costa Rica	12.80	54.56	102	Jordan	4.00	16.37
36	Chile	12.70	54.09	103	Pakistan	3.97	16.23
37	Cyprus	12.48	53.17	104	Zambia	3.74	15.23
38	United Kingdom	12.34	52.54	105	Angola	3.66	14.88
39	Spain	11.83	50.33	106	Yemen	3.47	14.06
40	Ireland	11.66	49.58	107	Viet Nam	3.47	14.03
41	Ukraine	11.57	49.19	108	Guatemala	3.34	13.50
42	North Macedonia	11.31	48.09	109	Indonesia	2.89	11.55
43	United Arab Emirates	11.09	47.13	110	Cameroon	2.89	11.52
44	Serbia	11.01	46.79	111	Mongolia	2.88	11.49
45	Portugal	11.00	46.72	112	Uganda	2.85	11.37
46	Belarus	10.52	44.63	113	Zimbabwe	2.67	10.59
47	Malaysia	10.44	44.31	114	Lao PDR	2.63	10.39
48	Mauritius	10.09	42.80	115	Ghana	2.55	10.04
49	Lithuania	9.97	42.27	116	Mali	2.14	8.27
50	Argentina	9.47	40.10	117	Kenya	2.13	8.26
51	Bulgaria	9.37	39.67	118	Tanzania, United Rep.	2.08	8.01
52	Georgia	9.37	39.67	119	Bangladesh	1.86	7.06
53	Azerbaijan	9.34	39.51	120	Burundi	1.62	6.03
54	Armenia	9.15	38.71	121	Rwanda	1.52	5.60
55	Bosnia and Herzegovina	8.91	37.68	122	Senegal	1.49	5.45
56	South Africa	8.75	36.96	123	Mozambique	1.47	5.36
57	Greece	8.53	36.02	124	Cambodia	1.39	5.03
58	Brazil	8.47	35.77	125	Ethiopia	1.30	4.62
59	Sri Lanka	8.26	34.85	126	Guinea	1.17	4.09
60	Kazakhstan	8.18	34.49	127	Madagascar	0.86	2.72
61	Kyrgyzstan	7.84	33.02	128	Chad	0.60	1.59
62	Egypt	7.74	32.60	129	Malawi	0.23	0.00
63	Tunisia	7.57	31.87		China	n/a	n/a
64	Uruguay	7.57	31.86		Colombia	n/a	n/a
65	Kuwait	7.49	31.51		New Zealand	n/a	n/a
66	Oman	7.43	31.26		Saudi Arabia	n/a	n/a
67	Mexico	7.24	30.40		Venezuela, Bolivarian Rep.	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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5.1.4 Labour productivity per employee

Labour productivity per person employed (2020 US\$ PPP) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	162,934.54	100.00	68	Colombia	37,466.75	62.42
2	Singapore	156,238.71	98.93	69	Sri Lanka	37,343.94	62.34
3	Ireland	145,704.90	97.14	70	Tunisia	36,401.03	61.68
4	United States of America	143,179.79	96.70	71	Brazil	36,313.58	61.62
5	Norway	129,583.72	94.14	72	Lebanon	35,744.33	61.22
6	Switzerland	128,114.01	93.85	73	Botswana	35,248.83	60.86
7	Belgium	125,740.63	93.38	74	Thailand	35,159.43	60.80
8	Saudi Arabia	122,691.56	92.75	75	Ukraine	35,138.02	60.78
9	Qatar	120,987.06	92.39	76	Georgia	34,575.45	60.37
10	Denmark	118,635.64	91.89	77	Namibia	31,909.75	58.32
11	Austria	114,207.60	90.92	78	Azerbaijan	30,769.51	57.39
12	Sweden	113,978.49	90.86	79	Paraguay	28,939.58	55.82
13	France	112,429.35	90.51	80	Malaysia	28,739.03	55.64
14	Iceland	111,273.05	90.25	81	Moldova, Rep.	27,361.26	54.39
15	Netherlands	107,844.52	89.45	82	Morocco	26,948.52	54.00
16	Finland	107,230.11	89.30	83	Peru	26,900.19	53.95
17	Italy	104,113.19	88.55	84	Ecuador	26,706.23	53.77
18	Canada	103,755.00	88.46	85	China	26,023.07	53.10
19	Germany	103,570.04	88.42	86	Philippines	23,240.32	50.21
20	Australia	103,552.04	88.41	87	Guatemala	23,048.79	50.00
21	Bahrain	101,711.71	87.95	88	Viet Nam	20,917.89	47.52
22	United Arab Emirates	100,819.36	87.73	89	Jamaica	20,352.17	46.82
23	Spain	99,326.38	87.35	90	India	20,072.70	46.47
24	Turkey	96,783.79	86.68	91	Bolivia, Plurinational St.	19,461.59	45.68
25	United Kingdom	96,767.35	86.68	92	Côte d'Ivoire	18,969.97	45.02
26	Israel	93,562.90	85.82	93	Angola	17,415.60	42.84
27	Malta	89,898.40	84.80	94	Tajikistan	15,021.42	39.06
28	Korea, Rep.	88,885.54	84.51	95	Kyrgyzstan	14,973.10	38.97
29	Cyprus	85,225.86	83.43	96	Nigeria	14,898.85	38.85
30	Czech Republic	84,578.70	83.24	97	Yemen	13,841.96	36.97
31	New Zealand	83,593.66	82.94	98	Senegal	13,180.26	35.71
32	Lithuania	82,328.06	82.55	99	Ghana	12,992.63	35.35
33	Poland	82,163.30	82.50	100	Indonesia	12,712.86	34.79
34	Estonia	82,111.79	82.48	101	Kenya	12,440.12	34.24
35	Slovenia	81,787.48	82.38	102	Zambia	11,431.13	32.07
36	Slovakia	79,707.36	81.72	103	Cameroon	10,777.91	30.57
37	Japan	79,604.94	81.69	104	Venezuela, Bolivarian Rep.	10,574.85	30.08
38	Romania	75,169.28	80.22	105	Zimbabwe	7,695.61	21.96
39	Hungary	73,758.04	79.74	106	Tanzania, United Rep.	7,340.17	20.75
40	Portugal	73,504.03	79.65	107	Uganda	7,154.01	20.09
41	Latvia	73,040.72	79.49	108	Mali	6,948.03	19.35
42	Croatia	71,608.42	78.98	109	Burkina Faso	6,775.36	18.70
43	Greece	69,750.39	78.31	110	Bangladesh	5,951.73	15.39
44	Bosnia and Herzegovina	62,108.56	75.34	111	Ethiopia	5,414.41	12.97
45	Trinidad and Tobago	61,475.71	75.08	112	Pakistan	5,358.37	12.71
46	Russian Federation	60,916.30	74.85	113	Cambodia	4,847.01	10.14
47	Chile	59,026.44	74.04	114	Rwanda	4,812.95	9.96
48	Egypt	57,523.95	73.38	115	Chad	4,642.87	9.04
49	Kazakhstan	56,881.66	73.10	116	Malawi	3,657.29	2.94
50	Kuwait	55,386.61	72.41	117	Mozambique	3,653.59	2.92
51	Uruguay	53,319.74	71.44	118	Congo, Dem. Rep.	3,554.16	2.21
52	Oman	52,711.10	71.15	119	Madagascar	3,259.34	0.00
53	Costa Rica	52,422.28	71.01		Brunei Darussalam	n/a	n/a
54	Argentina	50,554.37	70.08		Burundi	n/a	n/a
55	Jordan	50,208.12	69.91		Cabo Verde	n/a	n/a
56	South Africa	48,976.27	69.27		El Salvador	n/a	n/a
57	Bulgaria	48,944.50	69.25		Eswatini	n/a	n/a
58	Mexico	48,436.35	68.99		Gambia	n/a	n/a
59	Algeria	46,752.55	68.08		Guinea	n/a	n/a
60	Mauritius	46,585.85	67.99		Honduras	n/a	n/a
61	Serbia	46,582.68	67.99		Lao PDR	n/a	n/a
62	Belarus	45,088.77	67.16		Lesotho	n/a	n/a
63	Iran, Islamic Rep.	43,904.20	66.48		Mongolia	n/a	n/a
64	Dominican Republic	42,265.60	65.50		Montenegro	n/a	n/a
65	North Macedonia	41,469.24	65.02		Nepal	n/a	n/a
66	Armenia	39,261.21	63.62		Nicaragua	n/a	n/a
67	Albania	37,597.32	62.51		Panama	n/a	n/a

SOURCE: The Conference Board, Total Economy Database™ (www.conference-board.org/data/economydatabase)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

5.2.1 Ease of finding skilled employees

Average answer to the question: In your country, to what extent can companies find people with the skills required to fill their vacancies? [1 = not at all; 7 = to a great extent] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	5.41	100.00	68	Luxembourg.....	4.18	55.24
2	Israel.....	5.37	98.40	69	Poland.....	4.15	54.14
3	Iceland.....	5.24	93.94	70	Ecuador.....	4.15	53.99
4	Norway.....	5.24	93.65	71	Pakistan.....	4.14	53.48
5	Lebanon.....	5.19	92.01	72	Tunisia.....	4.13	53.26
6	United Arab Emirates.....	5.18	91.52	73	Mexico.....	4.13	53.12
7	Qatar.....	5.14	90.07	74	Albania.....	4.11	52.62
8	Finland.....	5.13	89.92	75	Lao PDR.....	4.11	52.43
9	Singapore.....	5.13	89.65	76	Tajikistan.....	4.09	51.87
10	Canada.....	5.06	87.06	77	Thailand.....	4.09	51.78
11	Malaysia.....	5.03	86.16	78	Dominican Republic.....	4.05	50.49
12	China.....	4.99	84.78	79	Mauritius.....	4.03	49.54
13	Saudi Arabia.....	4.96	83.66	80	Botswana.....	4.03	49.50
14	Switzerland.....	4.94	82.87	81	Rwanda.....	4.01	48.95
15	Kenya.....	4.93	82.58	82	Algeria.....	4.01	48.89
16	Costa Rica.....	4.93	82.52	83	India.....	4.00	48.34
17	Korea, Rep.....	4.91	81.79	84	Georgia.....	3.98	47.83
18	Netherlands.....	4.89	81.01	85	Mali.....	3.98	47.65
19	Chile.....	4.88	80.75	86	Burkina Faso.....	3.97	47.49
20	Germany.....	4.87	80.33	87	Eswatini.....	3.97	47.33
21	Jordan.....	4.86	79.90	88	Armenia.....	3.97	47.29
22	Denmark.....	4.85	79.39	89	Nepal.....	3.95	46.79
23	Belgium.....	4.84	79.23	90	Kazakhstan.....	3.95	46.74
24	Bahrain.....	4.83	78.79	91	Turkey.....	3.94	46.28
25	Cyprus.....	4.82	78.58	92	Chad.....	3.92	45.64
26	Senegal.....	4.82	78.46	93	Iran, Islamic Rep.....	3.92	45.54
27	Ireland.....	4.79	77.30	94	Montenegro.....	3.91	45.12
28	United Kingdom.....	4.77	76.63	95	Madagascar.....	3.90	44.87
29	Azerbaijan.....	4.76	76.33	96	Morocco.....	3.88	44.29
30	Sweden.....	4.74	75.62	97	Namibia.....	3.86	43.53
31	Zambia.....	4.70	74.15	98	Latvia.....	3.86	43.47
32	Belarus.....	4.69	73.88	99	Malawi.....	3.85	43.16
33	Australia.....	4.68	73.18	100	Brunei Darussalam.....	3.84	42.84
34	Indonesia.....	4.66	72.77	101	Kyrgyzstan.....	3.82	42.01
35	Portugal.....	4.66	72.73	102	South Africa.....	3.81	41.42
36	Philippines.....	4.62	71.28	103	Nigeria.....	3.79	40.75
37	Côte d'Ivoire.....	4.62	71.20	104	Guinea.....	3.77	40.05
38	Oman.....	4.62	71.16	105	Yemen.....	3.73	38.71
39	Spain.....	4.59	70.18	106	Malta.....	3.73	38.48
40	Gambia.....	4.58	69.64	107	Estonia.....	3.72	38.16
41	Ghana.....	4.54	68.35	108	Peru.....	3.69	37.22
42	France.....	4.53	67.96	109	El Salvador.....	3.68	36.92
43	Cameroon.....	4.53	67.80	110	Honduras.....	3.67	36.52
44	Austria.....	4.52	67.51	111	Bangladesh.....	3.67	36.33
45	Russian Federation.....	4.49	66.25	112	Ethiopia.....	3.66	36.13
46	Uganda.....	4.45	65.09	113	Panama.....	3.65	35.70
47	Trinidad and Tobago.....	4.42	63.79	114	Congo, Dem. Rep.....	3.64	35.21
48	Colombia.....	4.39	62.89	115	Bolivia, Plurinational St.....	3.62	34.69
49	Sri Lanka.....	4.39	62.80	116	Bulgaria.....	3.62	34.49
50	Jamaica.....	4.37	62.08	117	Slovakia.....	3.57	32.88
51	Tanzania, United Rep.....	4.36	61.76	118	Cambodia.....	3.56	32.59
52	New Zealand.....	4.35	61.23	119	Lithuania.....	3.54	31.83
53	Japan.....	4.35	61.13	120	North Macedonia.....	3.48	29.70
54	Serbia.....	4.34	61.07	121	Nicaragua.....	3.44	28.22
55	Zimbabwe.....	4.29	59.24	122	Brazil.....	3.44	28.21
56	Kuwait.....	4.28	58.90	123	Lesotho.....	3.41	27.13
57	Cabo Verde.....	4.28	58.76	124	Venezuela, Bolivarian Rep.....	3.39	26.40
58	Italy.....	4.27	58.50	125	Paraguay.....	3.39	26.34
59	Slovenia.....	4.27	58.39	126	Romania.....	3.37	25.55
60	Uruguay.....	4.26	58.18	127	Bosnia and Herzegovina.....	3.33	24.04
61	Burundi.....	4.26	58.13	128	Czech Republic.....	3.32	23.57
62	Egypt.....	4.23	57.07	129	Mozambique.....	3.30	22.79
63	Ukraine.....	4.21	56.35	130	Croatia.....	3.27	21.82
64	Greece.....	4.21	56.08	131	Moldova, Rep.....	3.18	18.61
65	Guatemala.....	4.19	55.43	132	Hungary.....	3.13	16.82
66	Viet Nam.....	4.19	55.31	133	Mongolia.....	2.75	3.06
67	Argentina.....	4.18	55.25	134	Angola.....	2.67	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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5.2.2 Relevance of education system to the economy

Average answer to the question: In your country, how well does the education system meet the needs of a competitive economy? [1 = not well at all; 7 = extremely well] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	6.08	100.00	68	Armenia	3.74	43.53
2	Singapore	5.78	92.96	69	Chile	3.72	43.22
3	Finland	5.69	90.77	70	Cambodia	3.72	43.11
4	United States of America	5.40	83.78	71	Bulgaria	3.69	42.49
5	Netherlands	5.38	83.13	72	Russian Federation	3.68	42.23
6	Qatar	5.37	83.04	73	Ethiopia	3.64	41.12
7	Ireland	5.28	80.80	74	Zambia	3.61	40.39
8	Canada	5.10	76.37	75	Uganda	3.59	39.98
9	United Arab Emirates	5.07	75.66	76	Nepal	3.58	39.79
10	Denmark	5.06	75.57	77	Lithuania	3.58	39.77
11	Norway	5.01	74.24	78	Senegal	3.53	38.64
12	China	5.01	74.23	79	Cameroon	3.53	38.49
13	Germany	4.98	73.63	80	Colombia	3.50	37.82
14	Iceland	4.97	73.40	81	Lesotho	3.50	37.81
15	Malaysia	4.95	72.93	82	Burundi	3.49	37.67
16	Lebanon	4.90	71.61	83	Georgia	3.47	37.15
17	Belgium	4.88	71.19	84	Kazakhstan	3.47	37.01
18	Australia	4.82	69.66	85	Botswana	3.46	36.89
19	Sweden	4.72	67.29	86	Namibia	3.46	36.89
20	Saudi Arabia	4.72	67.24	87	Serbia	3.44	36.36
21	Luxembourg	4.70	66.77	88	Poland	3.44	36.30
22	Austria	4.65	65.56	89	Bangladesh	3.37	34.68
23	United Kingdom	4.64	65.28	90	Eswatini	3.37	34.61
24	Malta	4.63	65.13	91	Algeria	3.37	34.56
25	Israel	4.61	64.66	92	Argentina	3.34	34.04
26	Oman	4.59	64.15	93	Tunisia	3.27	32.31
27	Estonia	4.57	63.72	94	Malawi	3.26	32.04
28	New Zealand	4.57	63.70	95	Ecuador	3.26	32.00
29	Albania	4.57	63.56	96	Moldova, Rep.	3.24	31.49
30	Portugal	4.57	63.56	97	Côte d'Ivoire	3.18	30.10
31	Bahrain	4.55	63.07	98	Turkey	3.15	29.29
32	Indonesia	4.51	62.22	99	Hungary	3.11	28.35
33	Brunei Darussalam	4.50	61.87	100	Uruguay	3.05	27.00
34	Azerbaijan	4.50	61.84	101	Mexico	3.05	26.85
35	Gambia	4.43	60.37	102	Egypt	3.03	26.53
36	Costa Rica	4.34	58.20	103	Morocco	3.02	26.23
37	France	4.31	57.47	104	Mali	2.99	25.49
38	Jordan	4.27	56.38	105	Kyrgyzstan	2.92	23.77
39	Jamaica	4.24	55.76	106	Romania	2.91	23.57
40	Pakistan	4.21	55.04	107	Greece	2.91	23.54
41	Philippines	4.20	54.83	108	Slovakia	2.91	23.48
42	Japan	4.19	54.46	109	Burkina Faso	2.86	22.46
43	Kenya	4.19	54.44	110	Panama	2.86	22.25
44	Slovenia	4.18	54.29	111	Guinea	2.85	22.20
45	Ghana	4.10	52.35	112	Madagascar	2.84	21.94
46	India	4.09	52.14	113	North Macedonia	2.84	21.92
47	Tajikistan	4.09	51.96	114	Dominican Republic	2.77	20.14
48	Montenegro	4.07	51.57	115	Honduras	2.75	19.80
49	Cyprus	4.05	51.16	116	Bolivia, Plurinational St.	2.75	19.68
50	Zimbabwe	4.04	50.86	117	Mongolia	2.73	19.26
51	Sri Lanka	4.04	50.85	118	Iran, Islamic Rep.	2.71	18.78
52	Lao PDR	4.02	50.36	119	South Africa	2.69	18.30
53	Mauritius	3.95	48.61	120	Peru	2.69	18.22
54	Korea, Rep.	3.93	48.22	121	Croatia	2.67	17.75
55	Viet Nam	3.92	47.87	122	Venezuela, Bolivarian Rep.	2.66	17.46
56	Trinidad and Tobago	3.91	47.64	123	Chad	2.64	17.00
57	Thailand	3.89	47.19	124	Congo, Dem. Rep.	2.60	16.07
58	Belarus	3.87	46.80	125	Yemen	2.59	15.95
59	Cabo Verde	3.87	46.69	126	Brazil	2.55	14.78
60	Spain	3.83	45.79	127	Nigeria	2.54	14.59
61	Tanzania, United Rep.	3.81	45.27	128	Guatemala	2.50	13.56
62	Rwanda	3.80	45.01	129	Mozambique	2.47	12.97
63	Ukraine	3.80	44.98	130	Bosnia and Herzegovina	2.45	12.38
64	Kuwait	3.79	44.86	131	El Salvador	2.36	10.26
65	Italy	3.79	44.83	132	Paraguay	2.30	8.82
66	Czech Republic	3.78	44.51	133	Nicaragua	2.22	6.79
67	Latvia	3.75	43.91	134	Angola	1.93	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

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5.2.3 Skills matching

Workers whose education matches their occupation (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Romania	77.38	100.00	68	Uruguay	45.75	55.66
2	Montenegro	72.49	93.15	69	Paraguay	45.64	55.51
3	Armenia	71.90	92.31	70	Venezuela, Bolivarian Rep.	45.55	55.38
4	Croatia	69.89	89.49	71	Cabo Verde	44.91	54.48
5	Hungary	69.81	89.39	72	Egypt	44.45	53.83
6	Poland	69.72	89.26	73	El Salvador	44.39	53.76
7	Georgia	69.45	88.88	74	Nepal	43.07	51.91
8	Bulgaria	69.38	88.79	75	Namibia	42.94	51.73
9	Luxembourg	68.92	88.14	76	Jordan	40.78	48.69
10	Iceland	68.67	87.79	77	India	39.59	47.02
11	Slovenia	68.64	87.75	78	Cambodia	38.09	44.93
12	Czech Republic	68.40	87.41	79	Yemen	37.80	44.51
13	Tajikistan	68.20	87.14	80	Lao PDR	37.48	44.06
14	Ghana	67.83	86.60	81	Madagascar	36.61	42.84
15	Lithuania	67.32	85.90	82	Bangladesh	35.55	41.35
16	Norway	65.66	83.56	83	Nicaragua	35.48	41.26
17	Moldova, Rep.	65.37	83.17	84	Honduras	34.78	40.29
18	Mongolia	63.94	81.15	85	Congo, Dem. Rep.	33.18	38.03
19	Greece	63.82	80.99	86	Guatemala	33.15	38.00
20	Israel	63.53	80.59	87	Cameroon	32.21	36.68
21	Denmark	63.40	80.40	88	Pakistan	30.86	34.79
22	Finland	62.82	79.59	89	Gambia	25.50	27.27
23	Bosnia and Herzegovina	62.50	79.13	90	Ethiopia	21.03	21.01
24	Malta	62.41	79.01	91	Senegal	18.92	18.05
25	Sweden	61.87	78.26	92	Angola	16.04	14.02
26	Belgium	61.77	78.11	93	Uganda	15.63	13.44
27	North Macedonia	61.67	77.97	94	Mozambique	14.84	12.33
28	Estonia	61.08	77.15	95	Chad	13.52	10.48
29	Switzerland	60.97	76.99	96	Mali	12.94	9.67
30	Serbia	60.55	76.41	97	Côte d'Ivoire	10.95	6.87
31	Spain	60.39	76.19	98	Tanzania, United Rep.	10.23	5.87
32	Latvia	59.78	75.32	99	Burkina Faso	6.04	0.00
33	Italy	59.73	75.26		Algeria	n/a	n/a
34	Russian Federation	59.65	75.15		Australia	n/a	n/a
35	Austria	59.59	75.05		Azerbaijan	n/a	n/a
36	Netherlands	59.45	74.87		Bahrain	n/a	n/a
37	Ireland	59.42	74.82		Belarus	n/a	n/a
38	Argentina	58.65	73.74		Burundi	n/a	n/a
39	France	58.62	73.70		Canada	n/a	n/a
40	Portugal	58.15	73.04		China	n/a	n/a
41	Chile	58.04	72.88		Colombia	n/a	n/a
42	Viet Nam	57.27	71.81		Germany	n/a	n/a
43	Cyprus	56.77	71.11		Guinea	n/a	n/a
44	Mauritius	56.59	70.86		Jamaica	n/a	n/a
45	Brazil	55.55	69.40		Japan	n/a	n/a
46	United States of America	55.22	68.93		Kazakhstan	n/a	n/a
47	Dominican Republic	55.01	68.64		Kenya	n/a	n/a
48	United Kingdom	54.65	68.13		Kuwait	n/a	n/a
49	Mexico	54.59	68.05		Kyrgyzstan	n/a	n/a
50	Brunei Darussalam	53.71	66.82		Lesotho	n/a	n/a
51	Rwanda	53.52	66.55		Malawi	n/a	n/a
52	Iran, Islamic Rep.	53.12	65.98		Malaysia	n/a	n/a
53	Costa Rica	52.25	64.77		Morocco	n/a	n/a
54	Albania	52.21	64.72		New Zealand	n/a	n/a
55	United Arab Emirates	51.82	64.17		Nigeria	n/a	n/a
56	Bolivia, Plurinational St.	51.16	63.25		Oman	n/a	n/a
57	Zambia	50.96	62.97		Panama	n/a	n/a
58	Lebanon	50.67	62.56		Peru	n/a	n/a
59	Eswatini	49.94	61.54		Philippines	n/a	n/a
60	South Africa	49.81	61.35		Qatar	n/a	n/a
61	Sri Lanka	47.43	58.01		Saudi Arabia	n/a	n/a
62	Ecuador	47.42	58.00		Singapore	n/a	n/a
63	Korea, Rep.	47.39	57.96		Slovakia	n/a	n/a
64	Indonesia	46.79	57.12		Trinidad and Tobago	n/a	n/a
65	Botswana	46.39	56.55		Tunisia	n/a	n/a
66	Zimbabwe	46.04	56.07		Turkey	n/a	n/a
67	Thailand	45.79	55.72		Ukraine	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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Pillar 6

Global Knowledge Skills

6.1.1 Workforce with tertiary education

Labour force with tertiary education (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kazakhstan	81.55	100.00	68	Trinidad and Tobago	21.84	26.31
2	Canada	67.83	83.08	69	Costa Rica	21.05	25.34
3	Singapore	54.62	66.77	70	Romania	20.82	25.06
4	Belarus	54.28	66.35	71	Egypt	20.79	25.02
5	Ukraine	53.59	65.50	72	Peru	20.72	24.93
6	Korea, Rep.	53.31	65.15	73	Mauritius	19.92	23.94
7	Russian Federation	51.33	62.71	74	Kuwait	19.11	22.95
8	United States of America	50.17	61.28	75	Mexico	19.05	22.87
9	Ireland	49.85	60.89	76	Kyrgyzstan	18.20	21.82
10	Japan	49.74	60.75	77	Qatar	18.18	21.80
11	Luxembourg	48.53	59.26	78	Bolivia, Plurinational St.	17.64	21.13
12	Belgium	47.45	57.92	79	Thailand	17.48	20.94
13	Cyprus	46.84	57.17	80	Panama	17.45	20.90
14	Finland	45.83	55.92	81	Bosnia and Herzegovina	16.97	20.30
15	Lithuania	45.75	55.82	82	South Africa	16.88	20.19
16	Norway	44.71	54.54	83	Zimbabwe	16.83	20.13
17	United Kingdom	44.41	54.17	84	Viet Nam	15.96	19.06
18	France	43.12	52.57	85	Tajikistan	15.84	18.90
19	Spain	42.78	52.16	86	Ecuador	15.48	18.46
20	Switzerland	42.69	52.05	87	Nigeria	15.00	17.87
21	Sweden	42.64	51.99	88	Eswatini	14.89	17.74
22	Estonia	42.04	51.24	89	Paraguay	14.62	17.40
23	Netherlands	40.33	49.13	90	Uruguay	14.55	17.32
24	Iceland	39.86	48.55	91	Armenia	14.49	17.25
25	Mongolia	39.83	48.51	92	Cabo Verde	14.18	16.86
26	Georgia	39.82	48.50	93	India	13.86	16.46
27	Albania	39.52	48.13	94	Dominican Republic	13.69	16.26
28	Slovenia	38.95	47.43	95	Lao PDR	12.83	15.19
29	Latvia	38.92	47.39	96	Indonesia	12.72	15.06
30	Denmark	38.46	46.83	97	Zambia	12.22	14.44
31	Australia	38.15	46.44	98	Gambia	11.77	13.89
32	Germany	37.96	46.21	99	Namibia	11.40	13.43
33	Poland	36.60	44.53	100	Guinea	10.09	11.81
34	United Arab Emirates	36.18	44.01	101	Nicaragua	9.85	11.51
35	Austria	35.88	43.64	102	Bahrain	9.84	11.50
36	Greece	35.71	43.43	103	Nepal	9.37	10.92
37	Israel	35.15	42.74	104	Morocco	9.10	10.59
38	Malta	33.46	40.65	105	Pakistan	8.65	10.04
39	Lebanon	33.44	40.63	106	Rwanda	8.63	10.02
40	Venezuela, Bolivarian Rep.	32.79	39.83	107	Ghana	8.29	9.59
41	Botswana	32.57	39.55	108	Yemen	7.91	9.12
42	Bulgaria	32.01	38.87	109	El Salvador	7.61	8.75
43	New Zealand	31.79	38.60	110	Honduras	6.76	7.71
44	Montenegro	30.20	36.63	111	Lesotho	6.75	7.69
45	Portugal	29.81	36.15	112	Bangladesh	6.46	7.33
46	Croatia	29.00	35.16	113	Côte d'Ivoire	6.46	7.33
47	Colombia	28.97	35.12	114	Congo, Dem. Rep.	6.36	7.20
48	Iran, Islamic Rep.	28.66	34.74	115	Cameroon	6.27	7.10
49	Hungary	28.25	34.23	116	Cambodia	5.84	6.56
50	Moldova, Rep.	27.86	33.75	117	Sri Lanka	5.65	6.33
51	North Macedonia	27.64	33.47	118	Guatemala	4.93	5.45
52	Slovakia	27.63	33.46	119	Madagascar	4.80	5.28
53	Turkey	27.48	33.28	120	Kenya	4.40	4.79
54	Saudi Arabia	27.13	32.85	121	Angola	3.56	3.75
55	Azerbaijan	26.75	32.38	122	Chad	3.09	3.17
56	Serbia	25.99	31.43	123	Burkina Faso	2.89	2.93
57	Philippines	25.52	30.85	124	Senegal	2.67	2.66
58	Czech Republic	24.88	30.07	125	Mali	2.62	2.59
59	Brunei Darussalam	24.21	29.24	126	Mozambique	2.07	1.91
60	Brazil	24.20	29.22	127	Malawi	1.69	1.44
61	Chile	23.63	28.52	128	Ethiopia	1.18	0.81
62	Malaysia	23.50	28.36	129	Tanzania, United Rep.	1.11	0.72
63	Italy	23.17	27.95	130	Burundi	0.83	0.39
64	Argentina	23.03	27.78	131	Uganda	0.52	0.00
65	Algeria	22.73	27.41		China	n/a	n/a
66	Jordan	22.72	27.40		Jamaica	n/a	n/a
67	Tunisia	22.05	26.57		Oman	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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6.1.2 Population with tertiary education

Population with tertiary education (%) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kazakhstan	73.91	100.00	68	Mexico	16.45	21.09
2	Russian Federation	60.10	81.04	69	Jordan	16.18	20.72
3	United Arab Emirates	51.78	69.61	70	Paraguay	15.22	19.40
4	Belarus	51.66	69.44	71	Tunisia	15.16	19.32
5	Canada	49.67	66.71	72	Romania	14.68	18.66
6	Israel	47.07	63.15	73	Italy	14.35	18.21
7	Singapore	46.70	62.63	74	Sri Lanka	14.11	17.87
8	United States of America	45.17	60.53	75	Uruguay	13.32	16.79
9	United Kingdom	44.09	59.05	76	Brunei Darussalam	13.17	16.59
10	Armenia	43.52	58.26	77	Albania	12.90	16.21
11	Australia	43.27	57.92	78	South Africa	11.83	14.75
12	Korea, Rep.	40.30	53.85	79	Bosnia and Herzegovina	10.84	13.38
13	Estonia	40.29	53.83	80	Bangladesh	10.14	12.42
14	Switzerland	38.98	52.03	81	Indonesia	9.99	12.22
15	Norway	38.03	50.73	82	India	9.89	12.09
16	Cyprus	37.79	50.40	83	Cabo Verde	9.77	11.92
17	Denmark	37.12	49.47	84	Honduras	9.75	11.89
18	Ireland	36.66	48.84	85	Kuwait	9.52	11.57
19	Finland	35.25	46.90	86	Zimbabwe	9.42	11.43
20	Belgium	35.12	46.73	87	Congo, Dem. Rep.	9.12	11.02
21	Lithuania	34.54	45.93	88	China	8.81	10.60
22	Japan	34.40	45.73	89	Pakistan	8.65	10.38
23	Venezuela, Bolivarian Rep.	34.29	45.59	90	Guatemala	8.53	10.21
24	Luxembourg	34.28	45.57	91	Uganda	8.15	9.69
25	Georgia	34.06	45.28	92	El Salvador	7.95	9.42
26	Moldova, Rep.	33.51	44.52	93	Gambia	7.50	8.80
27	Latvia	33.07	43.92	94	Viet Nam	6.70	7.69
28	Netherlands	33.04	43.87	95	Egypt	6.17	6.97
29	Sweden	32.82	43.57	96	Cambodia	5.49	6.04
30	New Zealand	32.31	42.87	97	Côte d'Ivoire	5.31	5.79
31	Saudi Arabia	31.48	41.73	98	Mauritius	5.28	5.74
32	Spain	31.11	41.22	99	Nepal	4.62	4.85
33	France	30.13	39.88	100	Rwanda	4.13	4.17
34	Austria	28.43	37.55	101	Senegal	4.03	4.04
35	Slovenia	28.18	37.19	102	Ghana	3.13	2.80
36	Philippines	26.59	35.01	103	Mali	2.81	2.36
37	Germany	25.74	33.85	104	Angola	2.63	2.12
38	Azerbaijan	25.43	33.42	105	Kenya	2.18	1.50
39	Poland	25.03	32.88	106	Mozambique	1.97	1.21
40	Bulgaria	24.71	32.44	107	Tanzania, United Rep.	1.93	1.15
41	Bolivia, Plurinational St.	24.01	31.47	108	Chad	1.69	0.81
42	Bahrain	23.93	31.36	109	Burundi	1.64	0.75
43	Iran, Islamic Rep.	23.06	30.17	110	Cameroon	1.44	0.48
44	Tajikistan	22.75	29.74	111	Ethiopia	1.09	0.00
45	Costa Rica	22.23	29.03		Algeria	n/a	n/a
46	Malta	22.12	28.87		Botswana	n/a	n/a
47	Chile	22.04	28.76		Burkina Faso	n/a	n/a
48	Dominican Republic	21.97	28.67		Ecuador	n/a	n/a
49	Peru	21.91	28.59		Eswatini	n/a	n/a
50	Hungary	21.40	27.88		Guinea	n/a	n/a
51	Panama	21.36	27.83		Iceland	n/a	n/a
52	Trinidad and Tobago	21.26	27.69		Jamaica	n/a	n/a
53	Colombia	21.25	27.68		Lao PDR	n/a	n/a
54	Greece	21.20	27.61		Lebanon	n/a	n/a
55	Slovakia	20.89	27.19		Lesotho	n/a	n/a
56	Czech Republic	20.80	27.06		Madagascar	n/a	n/a
57	Serbia	20.78	27.03		Malawi	n/a	n/a
58	Argentina	19.99	25.95		Mongolia	n/a	n/a
59	Montenegro	19.57	25.38		Morocco	n/a	n/a
60	Thailand	19.32	25.03		Namibia	n/a	n/a
61	Turkey	19.09	24.71		Nicaragua	n/a	n/a
62	Qatar	19.03	24.63		Nigeria	n/a	n/a
63	Malaysia	18.84	24.37		North Macedonia	n/a	n/a
64	Portugal	18.69	24.16		Oman	n/a	n/a
65	Croatia	18.29	23.62		Ukraine	n/a	n/a
66	Kyrgyzstan	17.62	22.70		Yemen	n/a	n/a
67	Brazil	16.54	21.22		Zambia	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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6.1.3 Professionals

Professionals (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	42.06	100.00	68	Mauritius	10.48	24.25
2	Sweden	30.72	72.81	69	Kuwait	10.45	24.18
3	Finland	29.03	68.75	70	Argentina	10.07	23.27
4	Denmark	28.53	67.56	71	Algeria	9.93	22.94
5	Netherlands	28.41	67.26	72	Mexico	9.83	22.68
6	Norway	27.83	65.87	73	Botswana	9.54	21.99
7	Switzerland	26.55	62.80	74	Qatar	9.51	21.93
8	Belgium	26.53	62.76	75	Kyrgyzstan	9.38	21.61
9	United Kingdom	26.40	62.44	76	Bolivia, Plurinational St.	9.15	21.05
10	Russian Federation	26.34	62.30	77	Jamaica	8.91	20.49
11	Iceland	25.74	60.86	78	Viet Nam	8.68	19.93
12	Ireland	25.74	60.86	79	Ecuador	8.33	19.09
13	Israel	25.60	60.52	80	Cabo Verde	8.26	18.93
14	Slovenia	24.70	58.36	81	Zimbabwe	8.20	18.78
15	Lithuania	24.64	58.22	82	Dominican Republic	8.19	18.76
16	Singapore	23.73	56.04	83	Nepal	8.18	18.74
17	United States of America	23.09	54.51	84	Zambia	7.91	18.09
18	Kazakhstan	22.66	53.48	85	Lesotho	7.91	18.09
19	Germany	22.36	52.76	86	Lao PDR	7.87	17.99
20	Estonia	22.20	52.37	87	Namibia	7.64	17.43
21	Australia	22.12	52.18	88	Bahrain	7.61	17.36
22	Portugal	22.05	52.00	89	Paraguay	7.60	17.33
23	Belarus	21.36	50.34	90	Tajikistan	7.58	17.29
24	Malta	20.95	49.36	91	Ghana	7.46	17.00
25	Poland	20.79	48.98	92	Oman	7.37	16.79
26	Austria	20.54	48.39	93	Yemen	7.25	16.50
27	Korea, Rep.	20.28	47.76	94	Sri Lanka	6.97	15.83
28	France	20.19	47.54	95	El Salvador	6.77	15.35
29	Greece	20.16	47.47	96	Tunisia	6.75	15.29
30	Cyprus	19.47	45.81	97	South Africa	6.63	15.01
31	Latvia	19.35	45.53	98	Kenya	6.54	14.81
32	Spain	19.29	45.39	99	Peru	6.44	14.57
33	Hungary	18.89	44.42	100	Uganda	6.23	14.05
34	Canada	18.73	44.03	101	Nigeria	6.14	13.84
35	Montenegro	18.64	43.83	102	Trinidad and Tobago	6.10	13.75
36	Croatia	18.51	43.51	103	Thailand	6.04	13.59
37	Bulgaria	18.03	42.36	104	Rwanda	6.01	13.52
38	Ukraine	17.96	42.20	105	Indonesia	5.98	13.46
39	Mongolia	17.65	41.46	106	Philippines	5.59	12.52
40	Georgia	17.53	41.16	107	Burkina Faso	5.54	12.39
41	Brunei Darussalam	17.49	41.06	108	Angola	5.50	12.29
42	Moldova, Rep.	17.46	40.99	109	Guinea	5.43	12.14
43	Jordan	17.07	40.06	110	Pakistan	5.26	11.72
44	Czech Republic	16.94	39.75	111	Nicaragua	5.21	11.60
45	Armenia	16.86	39.55	112	Honduras	5.08	11.31
46	Lebanon	15.80	37.02	113	Cameroon	5.04	11.19
47	North Macedonia	15.79	36.99	114	Guatemala	5.01	11.14
48	Italy	15.74	36.86	115	Bangladesh	4.82	10.68
49	Venezuela, Bolivarian Rep.	15.66	36.67	116	Côte d'Ivoire	4.74	10.48
50	Romania	15.52	36.35	117	India	4.28	9.39
51	Chile	15.52	36.35	118	Senegal	4.06	8.84
52	United Arab Emirates	15.49	36.26	119	Cambodia	3.38	7.22
53	Slovakia	14.55	34.00	120	Malawi	2.96	6.21
54	Bosnia and Herzegovina	14.34	33.51	121	Ethiopia	2.56	5.25
55	Serbia	13.99	32.67	122	Congo, Dem. Rep.	2.40	4.87
56	Brazil	12.64	29.43	123	Madagascar	2.05	4.03
57	Azerbaijan	12.55	29.21	124	Mozambique	2.04	4.01
58	Malaysia	12.50	29.09	125	Chad	2.04	4.00
59	Panama	12.44	28.96	126	Mali	1.99	3.88
60	Uruguay	12.42	28.91	127	Morocco	1.80	3.43
61	Turkey	12.31	28.65	128	Tanzania, United Rep.	0.85	1.14
62	Albania	12.30	28.63	129	Burundi	0.37	0.00
63	Eswatini	11.94	27.75		China	n/a	n/a
64	Egypt	11.78	27.37		Colombia	n/a	n/a
65	Iran, Islamic Rep.	11.22	26.02		Japan	n/a	n/a
66	Gambia	10.99	25.47		New Zealand	n/a	n/a
67	Costa Rica	10.72	24.82		Saudi Arabia	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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6.1.4 Researchers

Full-time equivalent researchers (per million population) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	8,065.89	100.00	68	Mauritius	473.85	56.74
2	Korea, Rep.	7,980.40	99.84	69	Bosnia and Herzegovina	471.25	56.66
3	Sweden	7,536.47	98.96	70	Ecuador	399.49	54.14
4	Finland	6,861.11	97.53	71	Bahrain	368.99	52.93
5	Singapore	6,802.54	97.40	72	Costa Rica	345.04	51.91
6	Norway	6,466.70	96.63	73	Pakistan	335.58	51.48
7	Iceland	6,130.51	95.81	74	Mexico	315.26	50.53
8	Austria	5,733.08	94.79	75	Venezuela, Bolivarian Rep.	300.26	49.79
9	Netherlands	5,604.54	94.44	76	Oman	281.16	48.79
10	New Zealand	5,529.52	94.23	77	India	252.70	47.17
11	Switzerland	5,450.43	94.01	78	Kenya	221.39	45.15
12	Japan	5,331.15	93.68	79	Indonesia	215.99	44.78
13	Ireland	5,243.13	93.42	80	Botswana	185.21	42.44
14	Germany	5,211.87	93.33	81	Bolivia, Plurinational St.	163.80	40.58
15	Belgium	5,023.26	92.77	82	Namibia	149.47	39.19
16	Luxembourg	4,941.70	92.52	83	Eswatini	142.34	38.45
17	Slovenia	4,854.57	92.25	84	Paraguay	139.73	38.17
18	France	4,715.32	91.80	85	Cabo Verde	123.49	36.29
19	United Kingdom	4,603.31	91.44	86	Sri Lanka	106.40	34.04
20	Portugal	4,537.53	91.22	87	Philippines	105.68	33.93
21	Australia	4,532.40	91.20	88	Zimbabwe	99.52	33.03
22	United States of America	4,412.44	90.79	89	Ethiopia	90.53	31.59
23	Canada	4,325.64	90.49	90	Ghana	89.11	31.36
24	Czech Republic	3,862.67	88.76	91	Colombia	88.02	31.17
25	Estonia	3,755.33	88.33	92	El Salvador	71.18	27.97
26	Greece	3,482.72	87.18	93	Chad	57.89	24.86
27	Hungary	3,237.70	86.06	94	Gambia	52.89	23.51
28	Lithuania	3,190.70	85.84	95	Malawi	50.35	22.77
29	Poland	3,106.12	85.43	96	Burkina Faso	47.58	21.92
30	Spain	3,000.89	84.90	97	Mozambique	42.97	20.40
31	Slovakia	2,995.96	84.88	98	Panama	39.11	18.99
32	Russian Federation	2,784.33	83.76	99	Honduras	34.68	17.21
33	United Arab Emirates	2,378.89	81.36	100	Madagascar	34.04	16.93
34	Bulgaria	2,342.87	81.12	101	Mali	32.86	16.41
35	Italy	2,306.77	80.89	102	Cambodia	30.37	15.24
36	Malaysia	2,184.72	80.06	103	Uganda	27.84	13.96
37	Serbia	2,087.22	79.36	104	Lesotho	24.11	11.84
38	Malta	1,946.51	78.29	105	Burundi	23.44	11.43
39	Croatia	1,921.13	78.09	106	Tanzania, United Rep.	19.15	8.48
40	Latvia	1,792.10	77.03	107	Angola	18.82	8.22
41	Tunisia	1,771.61	76.86	108	Rwanda	13.86	3.83
42	Iran, Islamic Rep.	1,474.91	74.06	109	Guatemala	12.87	2.78
43	Georgia	1,463.77	73.94	110	Congo, Dem. Rep.	10.56	0.00
44	Turkey	1,379.41	73.04		Albania	n/a	n/a
45	Thailand	1,350.34	72.71		Armenia	n/a	n/a
46	China	1,307.12	72.22		Azerbaijan	n/a	n/a
47	Cyprus	1,255.85	71.61		Bangladesh	n/a	n/a
48	Argentina	1,211.42	71.06		Belarus	n/a	n/a
49	Morocco	1,073.54	69.21		Brunei Darussalam	n/a	n/a
50	Ukraine	988.08	67.95		Cameroon	n/a	n/a
51	Brazil	887.68	66.31		Côte d'Ivoire	n/a	n/a
52	Romania	882.44	66.22		Dominican Republic	n/a	n/a
53	Algeria	819.34	65.09		Guinea	n/a	n/a
54	North Macedonia	799.27	64.71		Israel	n/a	n/a
55	Montenegro	734.30	63.42		Jamaica	n/a	n/a
56	Viet Nam	707.74	62.86		Kyrgyzstan	n/a	n/a
57	Uruguay	696.38	62.61		Lao PDR	n/a	n/a
58	Moldova, Rep.	696.08	62.60		Lebanon	n/a	n/a
59	Egypt	686.72	62.40		Mongolia	n/a	n/a
60	Kazakhstan	666.94	61.95		Nepal	n/a	n/a
61	Jordan	595.96	60.23		Nicaragua	n/a	n/a
62	Qatar	577.35	59.75		Nigeria	n/a	n/a
63	Trinidad and Tobago	566.97	59.47		Peru	n/a	n/a
64	Senegal	564.34	59.40		Saudi Arabia	n/a	n/a
65	South Africa	517.72	58.09		Tajikistan	n/a	n/a
66	Kuwait	513.86	57.97		Yemen	n/a	n/a
67	Chile	493.30	57.35		Zambia	n/a	n/a

SOURCE: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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6.1.5 Senior officials and managers

Legislators, senior officials, and managers (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Iceland	12.91	100.00	68	Italy	3.61	26.98
2	Singapore	12.62	97.72	69	Mauritius	3.55	26.49
3	United Kingdom	11.82	91.47	70	Armenia	3.47	25.86
4	United States of America	11.52	89.11	71	Luxembourg	3.47	25.83
5	Malta	11.50	88.93	72	Cabo Verde	3.42	25.49
6	Philippines	11.41	88.21	73	Algeria	3.17	23.50
7	Australia	10.96	84.72	74	Iran, Islamic Rep.	3.17	23.48
8	Lao PDR	10.78	83.27	75	Mexico	3.09	22.88
9	Estonia	10.50	81.07	76	Greece	3.09	22.87
10	Trinidad and Tobago	10.44	80.59	77	Burkina Faso	2.98	22.04
11	Latvia	10.24	79.03	78	Serbia	2.96	21.83
12	Egypt	10.09	77.88	79	Cameroon	2.94	21.72
13	Israel	9.89	76.33	80	North Macedonia	2.80	20.62
14	United Arab Emirates	9.46	72.90	81	Denmark	2.75	20.20
15	Lithuania	9.26	71.37	82	Finland	2.74	20.14
16	South Africa	9.09	70.02	83	Tajikistan	2.72	19.94
17	Belarus	8.70	66.93	84	Bosnia and Herzegovina	2.71	19.87
18	Ireland	8.47	65.16	85	Lesotho	2.66	19.46
19	Belgium	8.47	65.14	86	Honduras	2.63	19.25
20	India	8.44	64.90	87	Dominican Republic	2.58	18.85
21	Norway	8.27	63.55	88	Uruguay	2.54	18.52
22	Canada	8.16	62.67	89	Indonesia	2.41	17.53
23	Bahrain	8.10	62.20	90	Pakistan	2.36	17.14
24	Botswana	8.03	61.71	91	Romania	2.24	16.16
25	Ukraine	8.01	61.51	92	Ghana	2.15	15.49
26	France	7.81	59.92	93	Qatar	2.08	14.93
27	Sri Lanka	7.73	59.30	94	Nicaragua	1.99	14.26
28	Switzerland	7.71	59.17	95	Eswatini	1.99	14.22
29	Brunei Darussalam	7.70	59.08	96	Angola	1.92	13.64
30	Slovenia	7.67	58.87	97	Japan	1.90	13.55
31	Moldova, Rep.	7.20	55.13	98	Zimbabwe	1.90	13.51
32	Jamaica	7.12	54.55	99	Bangladesh	1.64	11.46
33	Mongolia	7.08	54.21	100	Yemen	1.63	11.42
34	Lebanon	6.85	52.44	101	Kyrgyzstan	1.61	11.24
35	Georgia	6.71	51.32	102	Bolivia, Plurinational St.	1.48	10.22
36	Tunisia	6.62	50.60	103	Korea, Rep.	1.46	10.09
37	Sweden	6.32	48.26	104	El Salvador	1.42	9.76
38	Poland	6.24	47.63	105	Rwanda	1.37	9.37
39	Kazakhstan	6.07	46.29	106	Congo, Dem. Rep.	1.34	9.12
40	Portugal	5.82	44.31	107	Albania	1.30	8.79
41	Russian Federation	5.81	44.22	108	Uganda	1.27	8.56
42	Turkey	5.60	42.62	109	Azerbaijan	1.26	8.48
43	Slovakia	5.41	41.11	110	Côte d'Ivoire	1.21	8.09
44	Zambia	5.38	40.87	111	Nepal	1.19	7.97
45	Netherlands	5.25	39.81	112	Nigeria	1.16	7.74
46	Montenegro	5.24	39.77	113	Viet Nam	1.10	7.27
47	Bulgaria	5.22	39.57	114	Ecuador	1.06	6.93
48	Panama	5.16	39.11	115	Gambia	0.98	6.28
49	Kenya	5.12	38.83	116	Guatemala	0.97	6.18
50	Argentina	5.10	38.66	117	Senegal	0.86	5.36
51	Croatia	5.06	38.32	118	Guinea	0.80	4.86
52	Austria	5.05	38.30	119	Cambodia	0.77	4.66
53	Namibia	4.98	37.75	120	Madagascar	0.75	4.52
54	Kuwait	4.71	35.57	121	Morocco	0.70	4.09
55	Malaysia	4.61	34.79	122	Ethiopia	0.65	3.71
56	Thailand	4.31	32.46	123	Malawi	0.55	2.95
57	Czech Republic	4.29	32.27	124	Tanzania, United Rep.	0.45	2.14
58	Germany	4.13	31.07	125	Mozambique	0.34	1.30
59	Cyprus	4.11	30.86	126	Burundi	0.32	1.11
60	Venezuela, Bolivarian Rep.	4.09	30.72	127	Jordan	0.28	0.79
61	Paraguay	4.08	30.65	128	Peru	0.26	0.67
62	Brazil	4.07	30.58	129	Chad	0.22	0.32
63	Spain	3.97	29.76	130	Mali	0.18	0.00
64	Costa Rica	3.86	28.92		China	n/a	n/a
65	Hungary	3.80	28.45		Colombia	n/a	n/a
66	Chile	3.71	27.75		New Zealand	n/a	n/a
67	Oman	3.68	27.52		Saudi Arabia	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

6.1.6 Availability of scientists and engineers

Average answer to the question: In your country, to what extent are scientists and engineers available?
[1 = not at all; 7 = widely available] | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	5.85	100.00	68	Czech Republic.....	3.94	48.81
2	Finland.....	5.80	98.64	69	Panama.....	3.86	46.66
3	Malaysia.....	5.44	88.90	70	Rwanda.....	3.85	46.43
4	Japan.....	5.32	85.93	71	Guatemala.....	3.84	46.07
5	Canada.....	5.32	85.84	72	Kuwait.....	3.84	45.95
6	Israel.....	5.22	83.20	73	Malta.....	3.83	45.66
7	Switzerland.....	5.16	81.44	74	Algeria.....	3.81	45.29
8	Qatar.....	5.15	81.22	75	Mongolia.....	3.78	44.32
9	United Arab Emirates.....	5.14	80.89	76	Jamaica.....	3.77	44.26
10	Singapore.....	5.13	80.63	77	Viet Nam.....	3.77	44.06
11	Germany.....	5.12	80.50	78	Albania.....	3.75	43.55
12	Greece.....	5.08	79.42	79	South Africa.....	3.74	43.34
13	Norway.....	5.03	78.08	80	Colombia.....	3.73	43.21
14	United Kingdom.....	4.98	76.74	81	Argentina.....	3.73	43.14
15	Lebanon.....	4.95	75.98	82	Hungary.....	3.72	42.80
16	Sweden.....	4.93	75.38	83	Bangladesh.....	3.69	42.06
17	Jordan.....	4.93	75.37	84	Kazakhstan.....	3.69	41.94
18	Cyprus.....	4.85	73.29	85	Senegal.....	3.69	41.94
19	Australia.....	4.85	73.19	86	Mauritius.....	3.67	41.56
20	India.....	4.84	72.98	87	Madagascar.....	3.66	41.07
21	Iceland.....	4.79	71.60	88	Nigeria.....	3.65	40.95
22	Chile.....	4.78	71.42	89	Honduras.....	3.62	40.01
23	Saudi Arabia.....	4.78	71.23	90	Turkey.....	3.60	39.66
24	Netherlands.....	4.78	71.22	91	Ethiopia.....	3.60	39.57
25	Azerbaijan.....	4.75	70.43	92	Cameroon.....	3.59	39.37
26	France.....	4.71	69.32	93	Namibia.....	3.59	39.32
27	Ireland.....	4.69	69.00	94	Mali.....	3.59	39.21
28	China.....	4.68	68.58	95	Bulgaria.....	3.57	38.85
29	Indonesia.....	4.67	68.42	96	Dominican Republic.....	3.54	38.09
30	Korea, Rep.....	4.66	68.09	97	Brunei Darussalam.....	3.53	37.75
31	Philippines.....	4.63	67.32	98	Latvia.....	3.50	36.84
32	Portugal.....	4.58	65.91	99	Congo, Dem. Rep.....	3.48	36.43
33	Iran, Islamic Rep.....	4.56	65.45	100	Botswana.....	3.48	36.40
34	Tunisia.....	4.53	64.44	101	Ecuador.....	3.48	36.29
35	Spain.....	4.48	63.13	102	Romania.....	3.47	36.19
36	Oman.....	4.46	62.73	103	Gambia.....	3.46	35.79
37	New Zealand.....	4.46	62.66	104	Uruguay.....	3.46	35.75
38	Kenya.....	4.45	62.51	105	Peru.....	3.44	35.41
39	Costa Rica.....	4.45	62.45	106	Slovakia.....	3.44	35.29
40	Denmark.....	4.45	62.43	107	Nepal.....	3.42	34.82
41	Italy.....	4.42	61.64	108	Malawi.....	3.42	34.73
42	Ukraine.....	4.42	61.54	109	Cabo Verde.....	3.39	34.08
43	Bahrain.....	4.38	60.55	110	Brazil.....	3.39	33.96
44	Estonia.....	4.38	60.51	111	Lao PDR.....	3.33	32.41
45	Egypt.....	4.37	60.21	112	Yemen.....	3.32	32.13
46	Russian Federation.....	4.36	60.14	113	Croatia.....	3.28	31.03
47	Austria.....	4.31	58.63	114	Bosnia and Herzegovina.....	3.27	30.85
48	Armenia.....	4.29	58.18	115	Kyrgyzstan.....	3.26	30.41
49	Belgium.....	4.27	57.53	116	Lesotho.....	3.20	28.97
50	Mexico.....	4.24	56.87	117	Cambodia.....	3.18	28.26
51	Trinidad and Tobago.....	4.24	56.80	118	Zimbabwe.....	3.09	25.77
52	Lithuania.....	4.22	56.38	119	North Macedonia.....	3.07	25.42
53	Thailand.....	4.21	55.98	120	Burkina Faso.....	3.07	25.39
54	Sri Lanka.....	4.20	55.76	121	Chad.....	3.06	25.08
55	Tajikistan.....	4.18	55.09	122	Burundi.....	3.05	24.87
56	Uganda.....	4.12	53.56	123	Bolivia, Plurinational St.....	3.02	24.00
57	Luxembourg.....	4.09	52.76	124	Moldova, Rep.....	3.00	23.41
58	Pakistan.....	4.09	52.76	125	Mozambique.....	2.98	22.87
59	Serbia.....	4.08	52.50	126	Georgia.....	2.97	22.69
60	Morocco.....	4.06	51.99	127	Nicaragua.....	2.95	22.23
61	Tanzania, United Rep.....	4.05	51.63	128	Eswatini.....	2.92	21.35
62	Poland.....	4.05	51.55	129	Paraguay.....	2.80	18.01
63	Côte d'Ivoire.....	4.03	51.25	130	Guinea.....	2.70	15.50
64	Montenegro.....	4.01	50.61	131	Venezuela, Bolivarian Rep.....	2.68	14.79
65	Ghana.....	3.98	49.72	132	El Salvador.....	2.67	14.50
66	Zambia.....	3.96	49.18	133	Angola.....	2.13	0.00
67	Slovenia.....	3.94	48.83		Belarus.....	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

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6.2.1 Innovation output

Innovation Output Sub-Index | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	62.75	100.00	68	Morocco	20.42	23.71
2	Sweden	55.75	87.38	69	Panama	19.95	22.85
3	United Kingdom	53.59	83.50	70	Georgia	19.66	22.34
4	Netherlands	53.08	82.56	71	Qatar	19.62	22.26
5	United States of America	52.28	81.12	72	Argentina	18.40	20.06
6	China	51.04	78.90	73	Colombia	18.02	19.37
7	Germany	50.39	77.73	74	Bosnia and Herzegovina	18.00	19.34
8	Finland	48.47	74.26	75	Indonesia	17.85	19.07
9	Denmark	48.30	73.95	76	Saudi Arabia	17.40	18.26
10	Korea, Rep.	47.40	72.34	77	Kenya	17.22	17.94
11	Ireland	46.38	70.49	78	Kuwait	17.17	17.84
12	France	45.89	69.60	79	Lebanon	17.07	17.66
13	Israel	45.73	69.32	80	Jordan	16.57	16.77
14	Luxembourg	44.45	67.01	81	Egypt	16.55	16.73
15	Singapore	43.02	64.44	82	Sri Lanka	16.32	16.31
16	Czech Republic	41.95	62.50	83	Senegal	15.46	14.78
17	Japan	41.80	62.25	84	Dominican Republic	15.44	14.74
18	Iceland	41.18	61.12	85	Azerbaijan	15.29	14.46
19	Estonia	40.45	59.81	86	El Salvador	15.25	14.39
20	Malta	40.14	59.25	87	Pakistan	15.08	14.08
21	Canada	39.68	58.42	88	Bahrain	14.69	13.38
22	Austria	39.10	57.38	89	Cabo Verde	14.64	13.29
23	Italy	39.06	57.31	90	Albania	14.61	13.24
24	Belgium	38.64	56.54	91	Paraguay	14.46	12.96
25	Cyprus	38.17	55.70	92	Ghana	14.35	12.77
26	Spain	36.35	52.41	93	Kazakhstan	14.34	12.75
27	Norway	35.91	51.62	94	Lao PDR	14.18	12.45
28	Portugal	34.50	49.08	95	Guatemala	14.14	12.39
29	Bulgaria	33.98	48.14	96	Ecuador	13.94	12.03
30	Australia	33.85	47.91	97	Peru	13.76	11.71
31	Hungary	33.80	47.83	98	Tajikistan	13.43	11.10
32	New Zealand	33.06	46.48	99	Madagascar	13.39	11.04
33	Slovakia	32.86	46.13	100	Cambodia	13.29	10.85
34	Latvia	32.63	45.71	101	Honduras	12.98	10.30
35	Malaysia	32.61	45.68	102	Malawi	12.86	10.08
36	Ukraine	32.49	45.47	103	Namibia	12.82	10.01
37	Viet Nam	32.17	44.87	104	Botswana	12.77	9.91
38	Slovenia	31.73	44.09	105	Nepal	12.54	9.51
39	Poland	30.81	42.43	106	Kyrgyzstan	12.40	9.25
40	Philippines	29.62	40.28	107	Zimbabwe	11.93	8.41
41	Lithuania	28.98	39.14	108	Oman	11.85	8.26
42	Croatia	28.24	37.79	109	Ethiopia	11.75	8.08
43	Thailand	27.91	37.20	110	Trinidad and Tobago	11.60	7.82
44	India	27.66	36.76	111	Rwanda	11.52	7.67
45	Romania	27.47	36.41	112	Brunei Darussalam	11.48	7.59
46	Armenia	27.15	35.83	113	Bangladesh	11.29	7.25
47	Moldova, Rep.	26.79	35.18	114	Côte d'Ivoire	11.17	7.04
48	Montenegro	26.62	34.88	115	Mali	10.97	6.67
49	Iran, Islamic Rep.	25.86	33.52	116	Bolivia, Plurinational St.	10.95	6.64
50	Costa Rica	25.63	33.10	117	Cameroon	10.78	6.34
51	Greece	25.54	32.93	118	Nigeria	10.44	5.72
52	Turkey	25.44	32.75	119	Guinea	9.53	4.08
53	Mongolia	25.35	32.60	120	Uganda	9.06	3.23
54	United Arab Emirates	25.28	32.46	121	Burkina Faso	8.73	2.64
55	Serbia	25.24	32.40	122	Mozambique	8.56	2.33
56	Mexico	24.80	31.59	123	Algeria	8.51	2.24
57	Russian Federation	24.62	31.27	124	Zambia	8.04	1.39
58	Tunisia	23.44	29.14	125	Yemen	7.27	0.00
59	Mauritius	22.94	28.24		Angola	n/a	n/a
60	Belarus	21.23	25.16		Burundi	n/a	n/a
61	Jamaica	21.00	24.76		Chad	n/a	n/a
62	North Macedonia	20.96	24.69		Congo, Dem. Rep.	n/a	n/a
63	Brazil	20.94	24.64		Eswatini	n/a	n/a
64	Uruguay	20.92	24.60		Gambia	n/a	n/a
65	Chile	20.74	24.29		Lesotho	n/a	n/a
66	Tanzania, United Rep.	20.73	24.27		Nicaragua	n/a	n/a
67	South Africa	20.48	23.81		Venezuela, Bolivarian Rep.	n/a	n/a

SOURCE: INSEAD, Cornell University, and World Intellectual Property Organization, *The Global Innovation Index 2020* (<https://www.globalinnovationindex.org>)
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

6.2.2 High-value exports

High-technology exports (% of manufactured exports) | 2019

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Philippines	62.25	100.00	68	Kyrgyzstan	6.77	49.43
2	Singapore	52.13	95.80	69	Luxembourg	6.56	48.78
3	Malaysia	51.85	95.67	70	Bolivia, Plurinational St.	6.40	48.27
4	Viet Nam	40.44	89.80	71	Estonia	6.33	48.03
5	Iceland	38.08	88.39	72	Cameroon	6.02	46.98
6	Korea, Rep.	32.41	84.61	73	Angola	5.78	46.15
7	China	30.79	83.41	74	Mozambique	5.65	45.68
8	Malta	29.78	82.63	75	Ukraine	5.58	45.43
9	Kazakhstan	29.78	82.63	76	Ecuador	5.53	45.24
10	France	26.99	80.34	77	Bosnia and Herzegovina	5.27	44.27
11	Ireland	25.97	79.45	78	Argentina	5.21	44.04
12	Burkina Faso	25.80	79.30	79	El Salvador	5.13	43.71
13	Thailand	23.61	77.24	80	Zimbabwe	4.95	43.02
14	United Kingdom	23.47	77.10	81	Guatemala	4.92	42.88
15	Israel	23.09	76.73	82	Morocco	4.90	42.80
16	Netherlands	23.06	76.70	83	South Africa	4.89	42.78
17	Norway	22.62	76.25	84	Kenya	4.59	41.51
18	Australia	21.52	75.10	85	Azerbaijan	4.35	40.42
19	Czech Republic	20.80	74.32	86	Belarus	4.25	39.99
20	Lao PDR	20.61	74.10	87	North Macedonia	4.22	39.86
21	Mexico	20.42	73.89	88	Peru	4.08	39.18
22	Cyprus	19.87	73.27	89	Uganda	3.53	36.43
23	Mongolia	18.94	72.17	90	Montenegro	3.15	34.34
24	United States of America	18.93	72.16	91	Jamaica	3.06	33.81
25	Costa Rica	17.56	70.44	92	Turkey	3.04	33.69
26	Hungary	17.46	70.30	93	Moldova, Rep.	2.96	33.21
27	Latvia	17.24	70.02	94	Georgia	2.57	30.67
28	Japan	17.02	69.73	95	Lebanon	2.35	29.18
29	Canada	16.51	69.04	96	Egypt	2.34	29.08
30	Germany	16.43	68.92	97	Zambia	2.31	28.89
31	Sweden	14.38	65.90	98	Pakistan	2.30	28.81
32	Panama	13.71	64.83	99	United Arab Emirates	2.16	27.77
33	Ethiopia	13.65	64.72	100	Mauritius	2.14	27.62
34	Brazil	13.28	64.11	101	Honduras	1.97	26.22
35	Russian Federation	13.00	63.64	102	Burundi	1.53	22.39
36	Switzerland	12.91	63.49	103	Nigeria	1.48	21.92
37	Greece	12.51	62.79	104	Jordan	1.37	20.79
38	Denmark	12.04	61.93	105	Oman	1.26	19.64
39	Lithuania	12.03	61.91	106	Mali	1.24	19.49
40	Belgium	12.02	61.89	107	Cambodia	1.19	18.95
41	Austria	11.50	60.90	108	Nepal	1.18	18.84
42	Côte d'Ivoire	11.23	60.38	109	Ghana	1.14	18.32
43	Romania	11.07	60.06	110	Nicaragua	1.06	17.46
44	Bulgaria	10.85	59.62	111	Sri Lanka	1.02	16.95
45	Rwanda	10.55	59.00	112	Algeria	0.96	16.23
46	India	10.30	58.47	113	Senegal	0.94	15.92
47	Poland	10.11	58.07	114	Kuwait	0.90	15.51
48	Slovakia	9.91	57.63	115	Guinea	0.90	15.48
49	New Zealand	9.87	57.52	116	Iran, Islamic Rep.	0.83	14.57
50	Armenia	9.79	57.37	117	Saudi Arabia	0.65	12.05
51	Finland	9.21	56.03	118	Bahrain	0.45	8.94
52	Colombia	9.12	55.82	119	Botswana	0.39	7.85
53	Brunei Darussalam	8.50	54.30	120	Madagascar	0.37	7.52
54	Croatia	8.30	53.78	121	Bangladesh	0.31	6.47
55	Uruguay	8.27	53.70	122	Eswatini	0.27	5.85
56	Indonesia	8.10	53.24	123	Namibia	0.24	5.12
57	Yemen	8.02	53.03	124	Lesotho	0.21	4.57
58	Italy	7.83	52.53	125	Trinidad and Tobago	0.14	3.11
59	Chile	7.53	51.68	126	Albania	0.04	1.05
60	Slovenia	7.35	51.19	127	Gambia	0.04	0.97
61	Malawi	7.26	50.90	128	Qatar	0.00	0.06
62	Paraguay	7.18	50.69	129	Cabo Verde	0.00	0.00
63	Dominican Republic	7.00	50.13		Chad	n/a	n/a
64	Portugal	6.94	49.97		Congo, Dem. Rep.	n/a	n/a
65	Tanzania, United Rep.	6.89	49.81		Serbia	n/a	n/a
66	Tunisia	6.89	49.80		Tajikistan	n/a	n/a
67	Spain	6.86	49.72		Venezuela, Bolivarian Rep.	n/a	n/a

SOURCE: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>). Sourced from United Nations, Comtrade database through the World Integrated Trade Solution (WITS) platform.

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

6.2.3 New product entrepreneurial activity

New product entrepreneurial activity (%) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	47.94	100.00	68	Colombia	16.07	27.94
2	Chile	47.58	99.19	69	Trinidad and Tobago	15.96	27.70
3	India	46.88	97.60	70	Cameroon	15.90	27.56
4	Denmark	46.34	96.38	71	North Macedonia	15.50	26.66
5	Lebanon	41.89	86.32	72	Indonesia	15.36	26.34
6	Canada	41.30	84.99	73	El Salvador	14.90	25.30
7	Namibia	40.08	82.23	74	Bulgaria	14.89	25.28
8	Belgium	39.72	81.42	75	Morocco	14.88	25.25
9	Guatemala	39.16	80.15	76	Ghana	14.73	24.92
10	Cyprus	38.63	78.95	77	Norway	13.97	23.20
11	Austria	37.02	75.31	78	Viet Nam	13.86	22.95
12	Ireland	35.75	72.44	79	Ethiopia	13.72	22.63
13	United States of America	33.99	68.46	80	Venezuela, Bolivarian Rep.	13.44	22.00
14	Sweden	33.71	67.83	81	Madagascar	13.38	21.86
15	China	33.06	66.36	82	Poland	12.17	19.13
16	Israel	32.90	66.00	83	Algeria	11.48	17.57
17	Argentina	32.17	64.35	84	Bosnia and Herzegovina	10.93	16.32
17	Tunisia	32.17	64.35	85	Panama	10.47	15.28
19	Philippines	31.84	63.60	86	Senegal	8.21	10.17
20	Mexico	31.71	63.31	87	Russian Federation	8.09	9.90
21	Switzerland	31.68	63.24	88	Zambia	7.86	9.38
22	Turkey	30.80	61.25	89	Uganda	7.56	8.70
23	Germany	30.53	60.64	90	Bangladesh	6.78	6.94
24	Estonia	30.20	59.89	91	Brazil	3.71	0.00
25	Romania	30.00	59.44		Albania	n/a	n/a
26	Korea, Rep.	29.94	59.30		Armenia	n/a	n/a
27	South Africa	29.66	58.67		Azerbaijan	n/a	n/a
28	Lithuania	29.55	58.42		Bahrain	n/a	n/a
29	Finland	29.40	58.08		Belarus	n/a	n/a
30	Malaysia	29.33	57.92		Brunei Darussalam	n/a	n/a
31	Australia	28.51	56.07		Burundi	n/a	n/a
32	Pakistan	28.49	56.03		Cabo Verde	n/a	n/a
33	Greece	28.44	55.91		Cambodia	n/a	n/a
34	Latvia	28.41	55.84		Chad	n/a	n/a
35	United Arab Emirates	28.24	55.46		Congo, Dem. Rep.	n/a	n/a
36	Malawi	28.21	55.39		Côte d'Ivoire	n/a	n/a
37	France	28.07	55.08		Dominican Republic	n/a	n/a
38	Bolivia, Plurinational St.	27.88	54.65		Eswatini	n/a	n/a
39	Japan	27.74	54.33		Gambia	n/a	n/a
40	Egypt	27.52	53.83		Guinea	n/a	n/a
41	Czech Republic	27.51	53.81		Honduras	n/a	n/a
42	Qatar	26.95	52.54		Iceland	n/a	n/a
43	Slovenia	25.54	49.36		Kenya	n/a	n/a
44	Uruguay	25.28	48.77		Kuwait	n/a	n/a
45	Croatia	24.59	47.21		Kyrgyzstan	n/a	n/a
46	Italy	24.27	46.48		Lao PDR	n/a	n/a
47	Jordan	23.90	45.65		Lesotho	n/a	n/a
48	Netherlands	23.83	45.49		Mali	n/a	n/a
49	Kazakhstan	23.54	44.83		Malta	n/a	n/a
50	Saudi Arabia	23.26	44.20		Mauritius	n/a	n/a
51	Costa Rica	23.18	44.02		Moldova, Rep.	n/a	n/a
52	Burkina Faso	22.50	42.48		Mongolia	n/a	n/a
53	Spain	22.33	42.10		Montenegro	n/a	n/a
54	Slovakia	21.96	41.26		Mozambique	n/a	n/a
55	Peru	21.90	41.13		Nepal	n/a	n/a
56	United Kingdom	21.63	40.52		New Zealand	n/a	n/a
57	Portugal	21.00	39.09		Nicaragua	n/a	n/a
58	Singapore	20.47	37.89		Oman	n/a	n/a
59	Hungary	20.40	37.73		Paraguay	n/a	n/a
60	Botswana	20.27	37.44		Rwanda	n/a	n/a
61	Georgia	20.10	37.06		Serbia	n/a	n/a
61	Jamaica	20.10	37.06		Sri Lanka	n/a	n/a
63	Nigeria	18.30	32.99		Tajikistan	n/a	n/a
64	Angola	17.80	31.86		Tanzania, United Rep.	n/a	n/a
64	Thailand	17.80	31.86		Ukraine	n/a	n/a
66	Iran, Islamic Rep.	17.23	30.57		Yemen	n/a	n/a
67	Ecuador	16.54	29.01		Zimbabwe	n/a	n/a

SOURCE: Global Entrepreneurship Research Association, Global Entrepreneurship Monitor database (www.gemconsortium.org/data)
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

6.2.4 New business density

New corporate registrations (per 1,000 working-age population) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Estonia	23.59	100.00	68	Dominican Republic	1.48	27.46
2	Botswana	20.09	95.14	69	Poland	1.44	26.96
3	New Zealand	17.84	91.57	70	Greece	1.42	26.71
4	Cyprus	17.58	91.13	71	Oman	1.40	26.40
5	Malta	17.48	90.97	72	Germany	1.35	25.82
6	Luxembourg	17.20	90.48	73	Belarus	1.34	25.68
7	United Kingdom	15.65	87.66	74	Nepal	1.34	25.68
8	Australia	14.47	85.35	75	Brazil	1.29	25.02
9	Montenegro	11.29	78.07	76	Kyrgyzstan	1.27	24.74
10	Georgia	10.35	75.57	77	Uruguay	1.26	24.47
11	Chile	10.31	75.46	78	Namibia	1.15	22.98
12	South Africa	10.21	75.16	79	Thailand	1.13	22.63
13	Bulgaria	10.10	74.86	80	Viet Nam	1.12	22.49
14	Singapore	10.01	74.60	81	Zambia	1.11	22.43
15	Denmark	10.01	74.59	82	Bosnia and Herzegovina	1.09	22.08
16	Iceland	9.88	74.21	83	Mexico	1.00	20.74
17	Mauritius	9.26	72.36	84	Ghana	0.87	18.54
18	Norway	8.62	70.33	85	Uganda	0.86	18.44
19	Latvia	8.01	68.24	86	Nigeria	0.83	17.79
20	Romania	7.32	65.73	87	Sri Lanka	0.74	16.32
21	Sweden	7.18	65.22	88	Côte d'Ivoire	0.74	16.26
22	Ireland	7.13	65.01	89	Cambodia	0.67	15.00
23	Portugal	6.49	62.43	90	Austria	0.65	14.58
24	Netherlands	6.42	62.11	91	El Salvador	0.57	12.94
25	Qatar	6.26	61.44	92	Jordan	0.53	12.28
26	Kuwait	5.90	59.83	93	Guatemala	0.53	12.16
27	Croatia	5.86	59.64	94	Ethiopia	0.51	11.85
28	Mongolia	5.54	58.13	95	Bolivia, Plurinational St.	0.51	11.85
29	Slovakia	5.25	56.71	96	Saudi Arabia	0.50	11.62
30	France	4.84	54.56	97	Senegal	0.47	10.92
31	Panama	4.83	54.47	98	Iran, Islamic Rep.	0.42	9.80
32	Switzerland	4.53	52.82	99	Guinea	0.40	9.36
33	Czech Republic	4.39	52.03	100	Japan	0.39	9.11
34	Finland	4.29	51.41	101	Algeria	0.35	8.33
35	Cabo Verde	3.99	49.56	102	Indonesia	0.33	7.83
36	Peru	3.75	48.03	103	Burkina Faso	0.33	7.75
37	Hungary	3.74	47.94	104	Mali	0.33	7.74
38	North Macedonia	3.63	47.23	105	Philippines	0.29	6.82
39	Belgium	3.37	45.37	106	Paraguay	0.23	5.26
40	Lithuania	3.33	45.08	107	Argentina	0.20	4.49
41	Israel	3.27	44.65	108	Tanzania, United Rep.	0.18	3.88
42	Russian Federation	3.26	44.58	109	Canada	0.16	3.57
43	Bahrain	3.11	43.45	110	Tajikistan	0.15	3.23
44	Slovenia	3.09	43.33	111	India	0.14	2.83
45	Spain	3.07	43.15	112	Madagascar	0.13	2.55
46	Armenia	3.05	43.00	113	Chad	0.11	2.14
47	United Arab Emirates	3.04	42.93	114	Pakistan	0.10	1.87
48	Italy	2.96	42.28	115	Malawi	0.09	1.38
49	Lesotho	2.83	41.24	116	Congo, Dem. Rep.	0.05	0.28
50	Costa Rica	2.60	39.25	117	Bangladesh	0.04	0.05
51	Korea, Rep.	2.56	38.95	118	Lao PDR	0.04	0.00
52	Malaysia	2.37	37.13		Angola	n/a	n/a
53	Brunei Darussalam	2.36	37.11		Burundi	n/a	n/a
54	Zimbabwe	2.13	34.83		Cameroon	n/a	n/a
55	Colombia	2.02	33.69		China	n/a	n/a
56	Kazakhstan	2.00	33.51		Ecuador	n/a	n/a
57	Morocco	1.90	32.47		Egypt	n/a	n/a
58	Serbia	1.88	32.23		Eswatini	n/a	n/a
59	Moldova, Rep.	1.86	32.02		Gambia	n/a	n/a
60	Tunisia	1.68	29.95		Honduras	n/a	n/a
61	Ukraine	1.68	29.92		Lebanon	n/a	n/a
62	Azerbaijan	1.66	29.67		Mozambique	n/a	n/a
63	Jamaica	1.60	28.92		Nicaragua	n/a	n/a
64	Turkey	1.56	28.46		Trinidad and Tobago	n/a	n/a
65	Albania	1.52	28.00		United States of America	n/a	n/a
66	Rwanda	1.51	27.91		Venezuela, Bolivarian Rep.	n/a	n/a
67	Kenya	1.49	27.58		Yemen	n/a	n/a

SOURCE: World Bank, Doing Business, Entrepreneurship Project (<http://www.doingbusiness.org/en/data/exploretopics/entrepreneurship>)
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2009.

6.2.5 Scientific journal articles

Number of scientific and technical journal articles (per 10,000 inhabitants) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	25.11	100.00	68	Georgia	1.48	27.59
2	Denmark	24.13	98.82	69	Colombia	1.45	27.24
3	Norway	22.22	96.39	70	Morocco	1.40	26.66
4	Australia	21.46	95.37	71	Egypt	1.35	26.02
5	Singapore	20.32	93.77	72	Kazakhstan	1.30	25.25
6	Sweden	20.07	93.41	73	Mexico	1.30	25.25
7	Iceland	19.30	92.27	74	Ecuador	1.25	24.69
8	Finland	19.22	92.14	75	Botswana	1.24	24.56
9	Netherlands	17.68	89.70	76	Belarus	1.24	24.55
10	Canada	16.18	87.13	77	Algeria	1.24	24.48
11	New Zealand	16.10	86.98	78	Costa Rica	1.01	21.24
12	Slovenia	15.46	85.82	79	Indonesia	1.01	21.12
13	Ireland	14.74	84.44	80	India	1.00	21.07
14	United Kingdom	14.70	84.36	81	Mauritius	1.00	21.06
15	Czech Republic	14.65	84.27	82	Moldova, Rep.	0.78	17.37
16	Luxembourg	14.30	83.56	83	Azerbaijan	0.77	17.19
17	Austria	13.98	82.93	84	Namibia	0.64	14.88
18	Portugal	13.90	82.75	85	Albania	0.63	14.71
19	Israel	13.77	82.49	86	Sri Lanka	0.62	14.57
20	Belgium	13.73	82.40	87	Pakistan	0.61	14.31
21	United States of America	12.94	80.71	88	Jamaica	0.56	13.34
22	Korea, Rep.	12.86	80.53	89	Peru	0.51	12.36
23	Germany	12.59	79.93	90	Viet Nam	0.45	11.10
24	Italy	11.79	78.06	91	Mongolia	0.44	11.00
25	Spain	11.65	77.73	92	Ghana	0.43	10.67
26	Estonia	10.70	75.33	93	Panama	0.41	10.35
27	Cyprus	10.47	74.72	94	Cameroon	0.35	8.86
28	Croatia	10.46	74.69	95	Eswatini	0.30	7.76
29	Greece	10.16	73.87	96	Nigeria	0.29	7.43
30	France	9.91	73.17	97	Nepal	0.28	7.34
31	Slovakia	9.77	72.78	98	Zimbabwe	0.25	6.53
32	Poland	9.39	71.67	99	Senegal	0.24	6.44
33	Malta	8.71	69.58	100	Kenya	0.24	6.38
34	Lithuania	8.09	67.57	101	Venezuela, Bolivarian Rep.	0.22	5.85
35	Japan	7.81	66.59	102	Kyrgyzstan	0.22	5.73
36	Malaysia	7.50	65.51	103	Philippines	0.21	5.56
37	Latvia	7.36	64.97	104	Bangladesh	0.19	5.16
38	Hungary	6.85	63.07	105	Ethiopia	0.18	4.86
39	Brunei Darussalam	6.85	63.06	106	Cabo Verde	0.16	4.26
40	Serbia	6.48	61.56	107	Uganda	0.16	4.20
41	Iran, Islamic Rep.	5.91	59.11	108	Gambia	0.15	3.95
42	Russian Federation	5.65	57.93	109	Paraguay	0.14	3.75
43	Qatar	5.40	56.78	110	Rwanda	0.14	3.67
44	Romania	5.31	56.35	111	Burkina Faso	0.13	3.39
45	Tunisia	4.81	53.81	112	Malawi	0.13	3.39
46	Bulgaria	4.71	53.28	113	Lao PDR	0.12	3.27
47	Turkey	4.07	49.63	114	Zambia	0.12	3.26
48	Montenegro	4.01	49.24	115	Tanzania, United Rep.	0.11	2.83
49	Chile	3.80	47.94	116	Côte d'Ivoire	0.10	2.60
50	China	3.79	47.88	117	Bolivia, Plurinational St.	0.09	2.37
51	United Arab Emirates	3.27	44.30	118	Cambodia	0.09	2.34
52	Saudi Arabia	3.23	44.07	119	Lesotho	0.09	2.29
53	Brazil	2.87	41.32	120	El Salvador	0.07	1.80
54	Jordan	2.64	39.41	121	Tajikistan	0.07	1.74
55	Lebanon	2.59	39.03	122	Nicaragua	0.07	1.71
56	Uruguay	2.47	37.96	123	Guatemala	0.06	1.52
57	Kuwait	2.43	37.56	124	Madagascar	0.05	1.16
58	North Macedonia	2.37	37.03	125	Yemen	0.05	1.15
59	Ukraine	2.33	36.65	126	Mali	0.05	1.12
60	South Africa	2.25	35.95	127	Mozambique	0.05	1.12
61	Bosnia and Herzegovina	2.12	34.66	128	Honduras	0.05	1.11
62	Bahrain	2.05	33.97	129	Dominican Republic	0.05	1.09
63	Argentina	1.98	33.28	130	Guinea	0.02	0.38
64	Thailand	1.80	31.38	131	Burundi	0.02	0.28
65	Oman	1.77	31.06	132	Congo, Dem. Rep.	0.02	0.24
66	Armenia	1.77	30.98	133	Chad	0.01	0.01
67	Trinidad and Tobago	1.52	28.11	134	Angola	0.01	0.00

SOURCE: World Bank, World Development Indicators based on National Science Foundation, Science and Engineering Indicators; population data come from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

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Appendices

Appendix I: Technical Notes

Audit by the Joint Research Centre of the European Commission

The Joint Research Centre (JRC) of the European Commission has conducted extensive research on the development of composite indicators, most notably publishing the *Handbook on Constructing Composite Indicators: Methodology and User Guide* in collaboration with the Organisation for Economic Co-operation and Development (OECD). For the eighth consecutive edition of the Global Talent Competitiveness Index (GTCI), the GTCI development team engaged the JRC to conduct an audit.¹ This exercise has provided external validation and further improved the statistical analyses to ensure the consistency and rigour of the GTCI model.

A preliminary audit was carried out by the JRC in May–July 2021, following which a final audit was completed in August–September 2021. The results and report of the final audit can be found in Chapter 2.

Composite Indicators

The GTCI framework builds on six pillars: (1) Enable, (2) Attract, (3) Grow, (4) Retain, (5) Vocational and Technical Skills, and (6) Global Knowledge Skills. Each pillar consists of two to three sub-pillars. Each sub-pillar is composed of three to six variables. Each sub-pillar score is derived from the simple arithmetic average of its individual variables. The successive arithmetic aggregation continues at the pillar level.

Overall, the GTCI includes three indices:

- The Talent Competitiveness Input sub-index is the simple average of the first four pillars.
- The Talent Competitiveness Output sub-index is the simple average of the last two pillars.
- The Global Talent Competitiveness Index is the simple average of the six pillars.

Individual Variables

The GTCI 2021 model includes 68 variables, which fall within the following categories:²

1. Hard/quantitative data (29 variables)
2. Index/composite indicator data (15 variables)
3. Survey/qualitative data (24 variables)

Hard Data

The 29 variables based on hard data were drawn from a variety of public sources, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Conference on Trade and Development (UNCTAD), the International

Labour Organization (ILO), the World Bank, the OECD, and The Conference Board. Most variables were already scaled at their source and therefore did not need to be re-scaled.

Indices

The 15 variables measured as indices come from sources such as the World Bank (the World Governance Indicators and the *Doing Business* report series) and Transparency International. They also come from other composite indicators such as the Social Progress Index, the Global Innovation Index (Cornell, INSEAD, and the World Intellectual Property Organization), and the Environmental Performance Index (Yale University and Columbia University). There are two main concerns about using ‘indices within an index’: (1) doubts over its methodology to derive a single score, and (2) the risk of duplicating variables. Despite these concerns, the GTCI team determined that the gains outweighed the downsides, as there are certain phenomena that are best captured by a multi-dimensional index. To address these concerns, only indices that transparently indicate their methodology and are widely well received were included in the GTCI. Additionally, to avoid double-counting, only indices with a narrow focus were selected.

Survey Data

The 24 variables based on survey data were mainly extracted from the World Economic Forum’s Executive Opinion Survey. Qualitative information tends to provide the most current assessment of certain areas related to talent competitiveness for which hard data either do not exist or have low country coverage.

Country Coverage and Missing Data

The 134 countries covered in the GTCI 2021 were selected based on an aggregate data availability threshold of at least 80% (54 out of 68 variables) and a sub-pillar level data availability threshold of at least 40%. The most recent data points for each country were considered in the calculation, with 2009 as the cut-off year. Meanwhile, each variable had to pass a country-based availability threshold of 50% (67 out of 134 countries). In order to provide transparency and replicability, there was no imputation effort to fill in missing values in the data set. Missing values were noted with ‘n/a’ and were not considered in the calculation of sub-pillar scores.

Treatment of Series with Outliers

Inclusion of series with outliers can be problematic and potentially bias the rankings. Outliers were detected based on an absolute value of skewness greater than 2 and kurtosis greater than 3.5.³ In our data set, there was one variable with outliers.⁴ As a

general rule, for variables with one to five outliers, the Winsorisation method should be applied. The values distorting the variable distribution were assigned the next highest value until the reported skewness and/or kurtosis fell within the ranges specified above. For variables with five outliers and above, transformation by natural logarithms, with the following formula, was used:⁵

$$\ln \left[(\max \times \text{factor} - 1) \times \frac{(\text{value} - \min)}{(\max - \min)} + 1 \right]$$

In addition, the choice was made to perform log transformation on eight variables because of (1) the number of outliers, (2) the distribution of the data, and/or (3) putting a greater weight on the importance of improvements at lower levels.⁶

Normalisation

To adjust for differences in units of measurement and ranges of variation, all 68 variables were normalised into the [0, 100] range, with higher scores representing better outcomes. A min-max normalisation method was adopted, given the minimum and maximum values of each variable respectively.

For variables where higher values indicate higher outcomes, the following normalisation formula was applied:

$$100 \times \frac{(\text{value} - \min)}{(\max - \min)}$$

For variables where higher values indicate worse outcomes, the following reverse normalisation formula was applied:⁷

$$100 \times \frac{(\max - \text{value})}{(\max - \min)}$$

ENDNOTES

- 1 The JRC has audited various index projects, including the Global Innovation Index (Cornell, INSEAD, and WIPO), the Environment Performance Index (Yale and Columbia), and the Corruption Perceptions Index (Transparency international).
- 2 The GTCI 2020 had 70 variables in total, 27 of which were hard/quantitative data, 14 were index/composite indicators, and 29 were survey/qualitative data.
- 3 Adopted from Groeneveld & Meeden (1984).
- 4 The indicator is 3.1.3 Tertiary education expenditure.
- 5 The formula ensures that natural logarithms are positive and start at zero.
- 6 The eight variables are: 2.1.3 Migrant Stock; 2.1.4 International students; 3.1.3 Tertiary Expenditure; 5.1.4 Labour Productivity; 6.1.4 Researchers; 6.2.2 High-value exports; 6.2.4 New Business Density; and 6.2.5 Scientific Journal Articles.
- 7 Reverse normalisation was needed for three indicators: 1.3.1 Labour rights, 2.2.1 Tolerance of minorities, and 3.3.2 Youth inclusion.

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Appendix II: Sources and Definitions

1 ENABLE

1.1 Regulatory Landscape

1.1.1 Government effectiveness

Government effectiveness indicator | 2019

The government effectiveness indicator captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Scores are standardised.

Source: World Bank, *Worldwide Governance Indicators 2020* Update (www.govindicators.org)

1.1.2 Rule of law

Rule of law indicator | 2019

The rule of law indicator 'reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence'. Scores are standardised.

Source: World Bank, *Worldwide Governance Indicators 2020* Update (www.govindicators.org)

1.1.3 Political stability

Political stability and absence of violence indicator | 2019

The political stability and absence of violence indicator measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Scores are standardised.

Source: World Bank, *Worldwide Governance Indicators 2020* Update (www.govindicators.org)

1.1.4 Regulatory quality

Regulatory quality indicator | 2019

The regulatory quality indicator captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Scores are standardised.

Source: World Bank, *Worldwide Governance Indicators 2020* Update (www.govindicators.org)

1.1.5 Corruption

Corruption Perceptions Index | 2020

The Corruption Perceptions Index aggregates data from a number of different sources that provide perceptions of business people and country experts of the level of corruption in the public sector.

Source: Transparency International, *The Corruption Perceptions Index 2020* (<http://www.transparency.org/en/cpi>)

1.2 Market Landscape

1.2.1 Extent of market dominance

Average answer to the question: In your country, how do you characterize corporate activity? [1 = dominated by a few business groups; 7 = spread among many firms] | 2020

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2019–2020 (<http://reports.weforum.org/reports>)

1.2.2 Ease of doing business

Ease of doing business score | 2019

The ease of doing business score aggregates a country's score on 10 topics covered in the World Bank's *Doing Business* report series. The topics are starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. A high score indicates that the regulatory environment is more conducive to setting up business. Scores are standardised from 0 (worst) to 100 (best).

Source: World Bank, *Doing Business 2020: Comparing Business Regulation in 190 Economies* (<http://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>)

1.2.3 Cluster development

Average answer to the question: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? [1 = nonexistent; 7 = widespread in many fields] | 2020

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

1.2.4 R&D expenditure

Gross expenditure on R&D (%) | 2019

R&D expenditure refers to the total domestic intramural expenditure on research and development (R&D) during a given period as a percentage of GDP. Intramural R&D expenditure is all expenditure for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

1.2.5 ICT infrastructure

NRI Access sub-pillar | 2020

The Access sub-pillar is part of the Network Readiness Index (NRI) and comprises seven ICT indicators that are given equal weights: (1) mobile tariffs, (2) handset prices, (3) Internet access, (4) 4G-mobile network coverage, (5) fixed-broadband subscriptions, (6) international Internet bandwidth, and (7) Internet access in schools. The Access sub-pillar is one of three dimensions included in the NRI's Technology pillar.

Source: Portulans Institute, *The Network Readiness Index 2020: Accelerating Digital Transformation in a post-COVID Global Economy* (<https://networkreadinessindex.org/>)

1.2.6 Urbanisation

Population of urban areas (%) | 2018

Urbanisation refers to people living in urban areas as defined by national statistical offices. The data are collected and smoothed by the United Nations Population Division.

Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2018 Revision* (<https://population.un.org/wup/>)

1.3 Business and Labour Landscape

Labour Market

1.3.1 Labour rights

Level of national compliance with labour rights | 2018

This indicator measures the level of national compliance with fundamental labour rights (freedom of association and collective bargaining or FACB). It has a range from 0 to 10, with 0 being the best possible score (indicating higher levels of compliance with FACB rights) and 10 the worst (indicating lower levels of compliance with FACB rights). It is based on six ILO supervisory body textual sources and on national legislation.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

1.3.2 Labour-employer cooperation

Average answer to the question: In your country, how do you characterize labor-employer relations? [1 = generally confrontational; 7 = generally cooperative] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

Management Practice

1.3.3 Professional management

Average answer to the question: In your country, who holds senior management positions in companies? [1 = usually relatives or friends without regard to merit; 7 = mostly professional managers chosen for merit and qualifications] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

1.3.4 Relationship of pay to productivity

Average answer to the question: In your country, to what extent is pay related to employee productivity? [1 = not at all; 7 = to a great extent] | 2020

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

*Technology Adoption***1.3.5 Technology utilisation**

Average answer to the question: In your country, to what extent do businesses adopt the latest technologies? [1 = not at all; 7 = to a great extent] | 2018

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

1.3.6 Investment in emerging technologies

Average answer to the question: In your country, to what extent do companies invest in emerging technologies (e.g. Internet of Things, advanced analytics and artificial intelligence, augmented virtual reality and wearables, advanced robotics, 3D printing)? [1 = not at all; 7 = to a great extent] | 2018

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

1.3.7 Firms with website

Firms with website (% of total) | 2020

Firms with website refers to the estimated number of multipurpose industrial robots per 10,000 persons employed in the manufacturing industry (ISIC rev.4: C). The International Federation of Robotics (IFR) collects country-level data on operational stock of industrial robots and, for some countries, computes robot densities. The computed robot densities are published in the annual *World Robotics* report.

Source: OECD, ICT Access and Use by Businesses, OECD Telecommunications and Internet Statistics (<https://doi.org/10.1787/9d2cb97b-en>); World Bank, Enterprise Surveys (www.enterprisesurveys.org)

2 ATTRACT

2.1 External Openness

Attract Business

2.1.1 FDI and technology transfer

Average answer to the question: To what extent does foreign direct investment (FDI) bring new technology into your country? [1 = not at all; 7 = to a great extent] | 2018

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

2.1.2 Prevalence of foreign ownership

Average answer to the question: In your country, how prevalent is foreign ownership of companies? [1 = extremely rare; 7 = extremely prevalent] | 2018

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Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

Attract People

2.1.3 Migrant stock

Adult migrant stock (%) | 2019

Adult migrant stock refers to the number of the migrant stock population above 25 years old as a percentage of the total population of the same age group.

Source: United Nations Population Division, Trends in International Migrant Stock: Migrants by Age and Sex (www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp)

2.1.4 International students

Tertiary inbound mobility ratio (%) | 2020

Tertiary inbound mobility ratio refers to the number of students from abroad studying in a given country as a percentage of the total tertiary enrolment in that country.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

2.1.5 Brain gain

Average answer to the question: To what extent does your country attract talented people from abroad? [1 = not at all; 7 = to a great extent—the country attracts the best and brightest from around the world] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

2.2 Internal Openness

Social Inclusion

2.2.1 Tolerance of minorities

Discrimination and violence against minorities | 2021

Tolerance of minorities is based on the Group Grievance indicator included in the *Fragile States Index* published by The Fund for Peace. Group Grievance 'focuses on divisions and schisms between different groups in society—particularly divisions based on social or political characteristics—and their role in access to services or resources, and inclusion in the political process'. Its dimensions include post-conflict response, equality, divisions, and communal violence. It is measured on a scale of 0 (low pressures) to 10 (very high pressures).

Source: The Fund for Peace, *Fragile States Index 2021* (<https://fragilestatesindex.org/>)

2.2.2 Tolerance of immigrants

The percentage of respondents answering 'Good place' to the question: Is the city or area where you live a good place or not a good place to live for immigrants from other countries? | 2020

The Gallup World Poll is an annual survey carried out in more than 140 countries. One of the topics included in the poll concerns social issues, where the question related to the Tolerance of immigrants indicator is one of four questions asked.

Source: The Gallup World Poll (2006–2020). Data kindly provided by Gallup, Inc. (<https://www.gallup.com/analytics/318875/global-research.aspx>)

2.2.3 Social mobility

Average answer to the question: In your country, to what extent do individuals have the opportunity to improve their economic situation through their personal efforts regardless of the socio-economic status of their parents? [1 = not at all; 7 = to a great extent] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

Gender Equality

2.2.4 Women in tertiary education

Women enrolled in tertiary education (%) | 2020

Women in tertiary education refers to the percentage of female students officially registered in an educational programme at the tertiary level, regardless of age. The tertiary level is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

2.2.5 Women in high-skilled jobs

Women employed in high-skilled occupations (%) | 2020

Women in high-skilled jobs refers to the percentage of managers, professionals, or technicians and associate professionals who are female. These occupations correspond to skill levels 3 and 4 (high) in the International Standard Classification of Occupations 2008 (ISCO-08).

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

2.2.6 Leadership opportunities for women

Average answer to the question: In your country, to what extent do companies provide women with the same opportunities as men to rise to positions of leadership? [1 = not at all; 7 = to a great extent] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

3 GROW

3.1 Formal Education

Enrolment

3.1.1 Vocational enrolment

Vocational enrolment (%) | 2020

Vocational enrolment refers to the total number of students enrolled in vocational programmes in secondary education, expressed as a percentage of the total number of students enrolled in all programmes (vocational and general) at that level. The secondary level is based on International Standard Classification of Education (ISCED) levels 2–4.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

3.1.2 Tertiary enrolment

Tertiary enrolment (%) | 2020

Tertiary enrolment refers to the ratio of total tertiary enrolment, regardless of age, to the population of the age group that officially corresponds to the tertiary level of education. Tertiary education, whether or not to an advanced research qualification, normally requires as a minimum condition of admission the successful completion of education at the secondary level. The tertiary level is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

Quality

3.1.3 Tertiary education expenditure

Initial government funding per tertiary student (constant PPP\$) | 2019

This indicator refers to the amount of resources invested by central, regional, and local governments per student enrolled at the tertiary level. The amount is divided by the constant PPP\$ conversion factor. Tertiary education is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

3.1.4 Reading, maths, and science

PISA average scores in reading, mathematics, and science | 2018

The OECD Programme for International Student Assessment (PISA) develops triennial surveys that examine 15-year-old students' performance in reading, mathematics, and science. The scores are calculated so that the mean is 500 and the standard deviation is 100. The scores for China come from Beijing-Shanghai-Jiangsu-Guangdong.

Source: OECD Programme for International Student Assessment (PISA) (www.oecd.org/pisa)

3.1.5 University ranking

THE World University Rankings | 2019

The Times Higher Education (THE) World University Rankings is a composite indicator based on five pillars (weight in parenthesis): (1) Teaching (30%); (2) Research (30%); (3) Citations (30%); (4) International outlook (7.5%); and (5) Industry income (2.5%). The value is derived from the average score of the top three universities per country. A country without any university in the ranking is given a score of 0.

Source: Times Higher Education World University Rankings 2021 (<https://www.timeshighereducation.com/world-university-rankings>)

3.2 Lifelong Learning

3.2.1 Business and economics subject ranking

THE World University Rankings in the subject Business and Economics | 2020

The Times Higher Education (THE) World University Rankings in the subject Business and Economics is a composite indicator based on five pillars (weight in parenthesis): (1) Teaching (30.9%); (2) Research (32.6%); (3) Citations (25%); (4) International outlook (9%); and (5) Industry income (2.5%). The value is derived from the average score of the top three universities per country. A country without any university in the ranking is given a score of 0.

Source: Times Higher Education World University Rankings 2021 (<https://www.timeshighereducation.com/world-university-rankings>)

3.2.2 Prevalence of training in firms

Proportion of firms offering formal training (%) | 2020

This indicator refers to the percentage of firms that offered formal training programmes in the last complete fiscal year for its permanent, full-time employees. The Enterprise Survey is a firm-level survey of a representative sample of an economy's private sector. The survey covers a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition, and performance measures. Since 2005–06, under its developed Global Methodology, the World Bank's Enterprise Analysis Unit has collected these data based on over 171,000 interviews with top managers and business owners in 149 economies.

Source: World Bank, Enterprise Surveys (www.enterprisesurveys.org)

3.2.3 Employee development

Average answer to the question: In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

3.2.4 Formal and non-formal studies

Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months (%) | 2018

This indicator refers to the share adults aged 16–65 who participated in formal and non-formal education and training in the 12 months prior to the interview. It is expressed as a percentage of the population of the same age.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

3.3 Access to Growth Opportunities

Empowerment

3.3.1 Delegation of authority

Average answer to the question: In your country, to what extent does senior management delegate authority to subordinates? [1 = not at all; 7 = to a great extent] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

3.3.2 Youth inclusion

Proportion of youth (aged 15–24 years) not in education, employment or training (%) | 2020

This indicator refers to the share of young people aged 15–24 who are not in education, employment or training. It is known as the 'NEET rate' and is expressed as a percentage of the population of the same age.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

Collaboration

3.3.3 Use of virtual social networks

Social media users (% of population) | 2020

Use of virtual social networks refers to the penetration of active social media users, expressed as a percentage of total population. The original data are sourced from Kepios and ultimately come from a variety of sources, including company earnings announcements and media statements, and platforms' self-service advertising tools.

Source: We Are Social and Hootsuite (2021) *Digital 2021* report series (<https://wearesocial.com/digital-2021>)

3.3.4 Use of virtual professional networks

LinkedIn's potential advertising audience (%) | 2020

Use of virtual professional networks refers to the potential advertising audience that marketers can reach using advertisements on LinkedIn. The potential audience is expressed as a percentage of the population who are 18 years old or above. The data are based on LinkedIn's self-service advertising tools.

Source: We Are Social and Hootsuite (2021) *Digital 2021* report series (<https://wearesocial.com/digital-2021>)

4 RETAIN

4.1 Sustainability

4.1.1 Pension coverage

Population above statutory pensionable age receiving a pension (%) | 2020

Pension coverage refers to the share of people above statutory retirement age who receive an old-age pension, expressed as a percentage of the population above statutory retirement age. Data are originally sourced from International Labour Organization (ILO) estimates, which are based on country data compiled through the ILO Social Security Inquiry (SSI).

Source: United Nations, Global SDG Indicators Database (<https://unstats.un.org/sdgs/indicators/database/>)

4.1.2 Social protection

Average answer to the question: In your country, to what extent does a formal social safety net provide protection to the general population from economic insecurity in the event of job loss or disability? [1 = not at all; 7 = provides full protection] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

4.1.3 Brain retention

Average answer to the question: To what extent does your country retain talented people? [1 = not at all—the best and brightest leave to pursue opportunities abroad; 7 = to a great extent—the best and brightest stay and pursue opportunities in the country] | 2018

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

4.1.4 Environmental performance

Environmental Performance Index | 2020

The Environmental Performance Index (EPI) ranks how well countries perform in two fundamental dimensions of sustainable development: environmental health and ecosystem vitality. Within these two policy objectives, the EPI scores country performance in eleven issue areas comprising a total of 32 indicators. Indicators in the EPI measure how close countries are to meeting internationally established targets or, in the absence of agreed-upon targets, how they compare relative to the best-performing countries.

Source: Wendling, Z.A., Emerson, J.W., de Sherbinin, A., Esty, D.C., et al. (2020). *2020 Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law & Policy. (<https://epi.yale.edu>)

4.2 Lifestyle**4.2.1 Personal rights**

Personal rights indicator | 2020

Personal Rights are a component in the Opportunity dimension of the Social Progress Index. This component is based on five variables: Political rights (0 = no rights; 40 = full rights), Freedom of expression (0 = no freedom; 1 = full freedom), Freedom of religion (0 = no freedom; 4 = full freedom), Access to justice (0 = non-existent; 1 = observed), and Property rights for women (0 = no right; 5 = full rights).

Source: Social Progress Imperative, *The Social Progress Index 2020* (<https://www.socialprogress.org/>)

4.2.2 Personal safety

Personal safety indicator | 2020

Personal safety is a component in the Basic Human Needs dimension of the Social Progress Index. This component is based on four variables: Homicide rate (deaths/100,000), Perceived criminality (1 = low; 5 = high), Political killings and torture (0 = low freedom; 1 = high freedom), and Traffic deaths (deaths/100,000).

Source: Social Progress Imperative, *The Social Progress Index 2020* (<https://www.socialprogress.org/>)

4.2.3 Physician density

Medical doctors (per 10,000 people) | 2019

Physician density refers to the number of medical doctors (physicians), including generalist and specialist medical practitioners, per 10,000 people.

Source: World Health Organization, Global Health Observatory; (<https://www.who.int/data/gho>)

4.2.4 Sanitation

Population using at least basic sanitation services (%) | 2017

This indicator refers to the percentage of the population using at least basic sanitation services—that is, improved sanitation facilities that are not shared with other households. This indicator encompasses both people using basic sanitation services as well as those using safely managed sanitation services. Improved sanitation facilities include flush/pour-flush to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets.

Source: World Health Organization, Global Health Observatory (<https://www.who.int/data/gho>)

5 VOCATIONAL AND TECHNICAL SKILLS**5.1 Mid-Level Skills****5.1.1 Workforce with secondary education**

Labour force with secondary education (%) | 2020

Workforce with secondary education refers to the percentage of the labour force (above 15 years old) whose highest educational attainment is at the secondary level. Secondary level includes both upper secondary and post-secondary non-tertiary education based on International Standard Classification of Education (ISCED) levels 3–4.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

5.1.2 Population with secondary education

Population with secondary education (%) | 2019

Population with secondary education refers to the percentage of the population (above 25 years old) whose highest educational attainment is at the secondary level. This is based on International Standard Classification of Education (ISCED) levels 3–4.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

5.1.3 Technicians and associate professionals

Technicians and associate professionals (%) | 2020

Technicians and associate professionals refers to the number of technicians and associate professionals as a share of the total workforce. The employment by occupation is based on the International Standard Classification of Occupation (ISCO) Revision 2008 (data based on ISCO Rev. 1988 are used for those countries where ISCO Rev. 2008 is not available). It includes physical and engineering science associate professionals, life science and health associate professionals, teaching associate professionals, and other associate professionals (finance and sales, social work, artistic, entertainment and sports, religious associate professionals, police inspectors and detectives, administrative, customs, and tax and related government associate professionals).

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

5.1.4 Labour productivity per employee

Labour productivity per person employed (2020 US\$ PPP) | 2021

Labour productivity estimates are obtained by dividing the total output (GDP in 2020 US\$ PPP) by the total labour input used (labour force) to produce that output. For China and the United States, the adjusted values (which take into account drops in prices of ICT goods) have been used.

Source: The Conference Board, Total Economy Database™ (www.conference-board.org/data/economydatabase)

5.2 Employability

5.2.1 Ease of finding skilled employees

Average answer to the question: In your country, to what extent can companies find people with the skills required to fill their vacancies? [1 = not at all; 7 = to a great extent] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

5.2.2 Relevance of education system to the economy

Average answer to the question: In your country, how well does the education system meet the needs of a competitive economy? [1 = not well at all; 7 = extremely well] | 2020

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Source: World Economic Forum, Executive Opinion Survey 2017–2020 (<https://www.weforum.org/reports/>)

5.2.3 Skills matching

Workers whose education matches their occupation (%) | 2020

Skills matching refers to the percentage of the workforce whose education matches their occupation. The data relate to the so-called normative approach to measure 'educational mismatch', whereby a worker's educational match/mismatch is defined based on the correspondence of a worker's education with that person's occupation. The correspondence table used to determine the standard level of education required in each occupation has been derived from the International Standard Classification of Education (ISCED) and the International Standard Classification of Occupations (ISCO). Workers who do not have the identified standard level of education are regarded as mismatched.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

6 GLOBAL KNOWLEDGE SKILLS

6.1 High-Level Skills

6.1.1 Workforce with tertiary education

Labour force with tertiary education (%) | 2020

Workforce with tertiary education refers to the percentage of the labour force (above 15 years old) whose highest educational attainment is at the tertiary level. The tertiary level is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

6.1.2 Population with tertiary education

Population with tertiary education (%) | 2019

Population with tertiary education refers to the percentage of the population (above 25 years old) whose highest educational attainment is at the tertiary level. The tertiary level is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

6.1.3 Professionals

Professionals (%) | 2020

Professionals refers to the number of professionals as a share of the total workforce. The employment by occupation is based on the International Standard Classification of Occupation (ISCO) Revision 2008 (data based on ISCO Rev. 1988 are used for those countries where ISCO Rev. 2008 is not available). It includes physical, mathematical, and engineering science professionals; life science and health professionals; teaching professionals; and other professionals (business, legal, archivists, librarians, social science, religious professionals and writers and creative or performing artists).

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

6.1.4 Researchers

Full-time equivalent researchers (per million population) | 2018

Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods, or systems, as well as the management of these projects. Full-time equivalence (FTE) R&D data are a measure of the actual volume of human resources devoted to R&D and are especially useful for international comparisons. 'One FTE may be thought of as one person-year. Thus, a person who normally spends 30% of time on R&D and the rest on other activities (such as teaching, university administration, and student counselling) should be considered as 0.3 FTE. Similarly, if a full-time R&D worker is employed at an R&D unit for only six months, this results in an FTE of 0.5.' The data are reported per million population.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

6.1.5 Senior officials and managers

Legislators, senior officials, and managers (%) | 2020

This variable measures the percentage of legislators, senior officials, and managers within total employment. The employment by occupation is based on the International Standard Classification of Occupation (ISCO) Revision 2008 (data based on ISCO Rev. 1988 are used for those countries where ISCO Rev. 2008 is not available).

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

6.1.6 Availability of scientists and engineers

Average answer to the question: In your country, to what extent are scientists and engineers available? [1 = not at all; 7 = widely available] | 2018

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Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/reports/>)

6.2 Talent Impact

6.2.1 Innovation output

Innovation Output Sub-Index | 2020

The Global Innovation Index (GII), developed jointly by INSEAD and the World Intellectual Property Organization, aims to capture the richness of innovation in society. Innovation Output is one of the two sub-indices in the GI, which is derived by aggregating two output pillars: Knowledge and Technology Outputs and Creative Outputs. The first pillar covers elements of knowledge creation, impact, and diffusion, while the second pillar includes creative intangibles, creative goods and services, and online creativity.

Source: INSEAD, Cornell University, and World Intellectual Property Organization, *The Global Innovation Index 2020* (<https://www.globalinnovationindex.org>)

6.2.2 High-value exports

High-technology exports (% of manufactured exports) | 2019

High-value exports here refers to manufactures with high R&D intensity (e.g., computers, pharmaceuticals, scientific instruments, and electrical machinery), expressed as a percentage of exports of all manufactured goods. The definition of *high-technology* is based on the importance of expenditures on research and development relative to the gross output and value added of different types of industries that produce goods for export.

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

6.2.3 New product entrepreneurial activity

New product entrepreneurial activity (%) | 2018

New product entrepreneurial activity refers to the percentage of total early-stage entrepreneurs 'who indicate that their product or service is new to at least some customers AND that few/no other businesses offer the same product'. The Global Entrepreneurship Monitor project is an annual assessment of the entrepreneurial activity, aspirations, and attitudes of individuals across a wide range of countries.

Source: Global Entrepreneurship Research Association, Global Entrepreneurship Monitor database (www.gemconsortium.org/data)

6.2.4 New business density

New corporate registrations (per 1,000 working-age population) | 2018

New business density is defined as the number of newly registered firms with limited liability per 1,000 working-age people (between 15 and 64 years old) per calendar year. The Enterprise Survey is a firm-level survey of a representative sample of an economy's private sector. The survey covers a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition, and performance measures. Since 2005–06, under its developed Global Methodology, the World Bank's Enterprise Analysis Unit has collected these data based on over 171,000 interviews with top managers and business owners in 149 economies.

Source: World Bank, Doing Business, Entrepreneurship Project (<http://www.doingbusiness.org/en/data/exploretopics/entrepreneurship>)

6.2.5 Scientific journal articles

Number of scientific and technical journal articles (per 10,000 inhabitants) | 2018

Scientific and technical journal articles refers to the number of scientific and engineering articles published in the following fields: physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering and technology, and earth and space sciences. The data are reported per 10,000 inhabitants.

Source: World Bank, World Development Indicators based on National Science Foundation, Science and Engineering Indicators; population data come from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

Appendix III: About the Contributors



Michael Bratt

Michael Bratt is Lead Researcher for Portulans Institute. Previously he was a Consultant for INSEAD, leading the analytical work of the Global Talent Competitiveness Index by being responsible for the calculation and analysis of the country and city rankings.

Prior to his current role he was Consultant and Associate Economic Affairs Officer at United Nations Conference on Trade and Development (UNCTAD), working primarily on issues of trade and development related to least-developed countries and landlocked developing countries. Other past work experience includes consulting for the World Trade Organization and working as an analyst at the Swedish National Board of Trade, CUTS International, and Mintel International. He holds a PhD in Economics from the University of Geneva and a Master of International Law and Economics from the World Trade Institute (University of Bern).



Giulio Caperna

Giulio Caperna is a Researcher and Statistician at the European Commission's Joint Research Centre in Ispra, Italy. Before joining the Competence Centre on Composite Indicators and Scoreboards (COIN), Dr Caperna worked at the University of Padua as a Post-Doc Researcher where he taught

statistics and the construction of composite indicators. Before earning his PhD in Statistical Science at the University of Padua, he worked as Data-Manager and Data-Analyst in a medical department in Rome. He studied Statistical Science and Demography at the 'Sapienza' University of Rome. His main research interests include the methodology of composite indicators, as well as their use for the description of complex concepts such as civic participation and well-being.



Anna Henry

Anna Henry is a Senior Project Manager and independent consultant. Currently, she leads various projects on future-readiness, inclusion and prosperity, and on the Global Talent Competitiveness Index (GTCI), with responsibilities such as building the report, event management, media relations, and dissemination.

Prior to this role, she was a Team Coordinator at Procter & Gamble (P&G) and a Project Coordinator at the World Economic Forum (WEF), working primarily on multilateral projects on internet and connectivity (dealing with academia, governments, and public and private sectors as well as organising world-class conferences in Davos). She holds an MBA from the University of Geneva and co-founded in 2019 an L.L.C. called PminD, collaborating on various projects related to the digital architecture of smart cities and innovation. She has lived in nine countries and is fluent in four languages. Her volunteer experience includes

the New Zealand winter games and educational projects in Ecuador. In her free time, she reads extensively and enjoys traveling across the globe with her son and husband.



Bruno Lanvin

Bruno Lanvin is Co-Founder of Portulans Institute and INSEAD Distinguished Fellow. He worked for the World Bank, where he was inter alia Senior Advisor for E-strategies, Regional Coordinator (Europe and Central Asia) for ICT and e-government issues, and Chairman of the Bank's e-Thematic Group.

Since 2002 he has been co-authoring the *Global Information Technology Report* (INSEAD-World Economic Forum), now the *Network Readiness Index Report* (Portulans Institute), and he is currently (and has been since 2007) the co-editor of the *Global Innovation Index Report* (WIPO-Portulans Institute).

From June 2001 to December 2003, he was the Manager of the Information for Development Program (infoDev) at the World Bank. In 2000, Dr Lanvin was appointed Executive Secretary of the G8-DOT Force. Until then, he occupied several high-level positions at the United Nations in Geneva and New York, including that of Chief of Cabinet of the Director General.

Dr Lanvin holds a BA in Mathematics and Physics from the University of Valenciennes (France), an MBA from Ecole des Hautes Etudes Commerciales (HEC) in Paris, and a PhD in Economics from the University of Paris I (La Sorbonne) in France. He is also an INSEAD alumnus (IDP-C). A frequent speaker at high-level meetings, he advises a number of global companies and governments and has been a member of numerous boards, including those of IDA Infocomm (Singapore), ICANN, GovTech (Singapore), the Mohammed Bin Rashid Center for Government Innovation (United Arab Emirates), IPWatch, and the Association for Accountability and Internet Democracy (AAID).



Felipe Monteiro

Felipe Monteiro is the Academic Director of the GTCI, Senior Affiliate Professor of Strategy at INSEAD, France, and a Senior Fellow of the Wharton School Mack Institute for Innovation Management. Before joining INSEAD, he was a standing faculty member at the Wharton School. He has also worked

as a Senior Researcher at the Harvard Business School's Latin American Research Center in Brazil and taught at the London School of Economics (LSE).

His research explaining the patterns of inter- and intra-firm knowledge-sourcing processes in multinational organisations has been published in top academic journals such as the *Strategic Management Journal*, *Organization Science*, *Research Policy*, and the *Journal of International Business Studies*, among others. His research has also received prestigious awards from the Strategic Management Society, the Academy

of Management, and the Academy of International Business. He has received multiple teaching awards and published several case studies at Harvard Business School, London Business School, and INSEAD.

Professor Monteiro obtained his PhD in Strategic and International Management at the London Business School. He also has an LLB (JD equivalent) degree, cum laude, from the Federal University of Rio de Janeiro, an MSc in Business Administration from COPPEAD/UFRJ, Brazil, and an MRes in Business Studies from London Business School.



Carlos Moura

Carlos Moura currently works at the European Commission's Joint Research Centre – Competence Centre on Composite Indicators and Scoreboards (COIN), where he has been part of the team developing several visualisation platforms as the Cultural and Creative Cities Monitor, the Social

Scoreboard, and the ASEM Sustainable Connectivity Portal. Prior to joining the European Commission, he worked in the Portuguese fisheries administration.

At the fisheries administration he was responsible for managing the Portuguese statistical system relating to fisheries. He developed several visual tools for controlling the fisheries and the Portuguese quotas and automated the data collection procedures.



Ana Rita Neves

Ana Rita Neves currently works at the European Commission's Joint Research Centre – Competence Centre on Composite Indicators and Scoreboards (COIN), where she has been part of the team developing the Asia-Europe Meeting sustainable connectivity index. Prior to joining the European

Commission, she worked for six years at Climate Alliance, an international network of cities dedicated to climate action. At Climate Alliance, she coordinated the development of the energy and climate reporting framework for over 7,000 cities engaged in the Covenant of Mayors initiative and was involved in policy and advocacy activities linked to the international climate process. She was also an external expert evaluator of Horizon 2020, the biggest European Union's research and innovation programme. She has worked in research and international organisations for over 12 years at the intersection between science and policy. She holds a PhD in Sustainable Energy Systems from the MIT-Portugal Programme, a Master's in Urban and Environmental Planning, and a degree in Environmental Engineering.



Gianmario Pisanu

Gianmario Pisanu is an Accenture leader with over 20 years of experience in consulting, working at the intersection between business and technology across Europe and the Middle East. He managed international consulting portfolios, built new teams, and helped clients shape and execute complex

change programs. Today he leads the Accenture global consulting team in Growth Markets, a region that spans from Asia through Africa to Latin America, with special attention to enterprise functions optimisation and innovation through intelligent technologies. His focus areas include

the future role of governments, digital social innovation, sustainability services, and hybrid delivery models in professional services. He lives in Dubai with his family.



Michaela Saisana

Michaela Saisana is Head of the Monitoring, Indicators and Impact Evaluation Unit and she also leads the European Commission's Competence Centre on Composite Indicators and Scoreboards (COIN) at the Joint Research Centre in Italy. She has been working at the JRC since 1998, where

she obtained a prize as 'best young scientist of the year' in 2004 and together with her team the 'JRC policy impact award' for the Social Scoreboard of the European Pillar of Social Rights in 2018. She collaborates, by auditing performance indices, with over 150 international organisations and world-class universities, including the United Nations, Transparency International, Oxfam, the World Economic Forum, INSEAD, the World Intellectual Property Organization, Yale University, Columbia University, and Harvard University. She is a highly cited scientist with over 15,000 citations in Google Scholar and is a co-author of three books: 2021 *Data Science for Economics and Finance: Methodologies and Applications*, 2008 *OECD/JRC Handbook on Constructing Composite Indicators*, and 2008 *Global Sensitivity Analysis: The Primer* (Wiley).



Peter Zemsky

Peter Zemsky has been a faculty member at INSEAD since 1994 and a member of the school's leadership team since 2010. As Deputy Dean, he is responsible for external relations including fundraising, alumni relations, and communications. As Dean of Innovation, he is responsible for the school's digital strategy, including the development of its award-winning online courses.

Professor Zemsky is a leading scholar in the economics of strategy, where he develops rigorous analysis of topics such as disruptive technologies, the trade-offs between value creation and value capture, and the choice of generalist versus specialist strategies. His doctoral students have been recognised three times for having the best dissertation in strategy by the Academy of Management.

Professor Zemsky is a passionate educator. He teaches about strategy in the face of technology change and industry dynamics. He currently offers the popular online executive education course *Strategy in an Age of Digital Disruption*. He led the development of large-scale customised online courses for leading companies including Accenture, Microsoft, and Schneider Electric. These courses have been recognised with gold medals by the Chief Learning Officer's Learning in Practice Awards for 'Excellence in Blended Technology' and 'Excellence in Academic Partnerships', by Brandon Hall for 'Best Results of a Learning Program' and 'Best Unique or Innovative L&D Program', and by EFMD for 'Excellence in Professional Development'.

Appendix III: About the Partners



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About Portulans Institute (<https://portulansinstitute.org/>)

Founded in 2019, the Portulans Institute (PI) is an independent nonprofit, nonpartisan research and educational institute based in Washington DC. Portulans (or portolans) are ancient nautical maps, first made in the 13th century in the Mediterranean basin and later expanded to include other regions. The word portolan comes from the Italian portulano, meaning "related to ports or harbors", and which since at least the 17th century designates "a collection of sailing directions". In these maps, only a few harbors were visible, and much of the coastlines were hypothetical. This is how we see our mission: in an uncertain world, much is yet to be explored, and many opportunities have yet to be identified. Like the navigators of the 16th century, modern leaders have to make decisions on the basis of imperfect information and incomplete maps. The Portulans Institute aims at providing them with the best available data and analyses, and the directions that they need. This is why our logo combines a compass, and pi, which is not only a powerful number found in geometry, algebra, physics and arts, but also an infinite series of digits, with no pre-written rule telling us what the next one might be. More information about PI can be found at <https://portulansinstitute.org/>



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