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SPECIAL TENTH ANNIVERSARY EDITION

The Global Talent Competitiveness Index 2023

*What a Difference Ten Years Make
What to Expect for the Next Decade*



Bruno Lanvin and Felipe Monteiro, Editors



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Preface

TEN YEARS AND COUNTING

This edition of GTCI marks the report's tenth anniversary.

It all started with a conversation between Bruno Lanvin, then Executive Director of eLab at INSEAD, and H.E. Tharman Shanmugaratnam, Minister of Manpower of Singapore, who had come to the local INSEAD campus for the launch of Global Innovation Index (GII) 2012. A year later, the first edition of GTCI came out. Ten years after that, Dr Shanmugaratnam was elected President of Singapore—and GTCI has established itself as a global reference on the Talent Competitiveness stage.

This has been an exciting and eventful decade for the global talent scene (and beyond). Following the initial impetus and support from the Human Capital Leadership Institute (HCLI) in Singapore, the business sector and global employers stepped up to the plate. The report has benefited from support and contributions from some of the key players on the field of job creation and talent strategies, such as Adecco, TCS, and Google. More recently, HCLI has returned as a GTCI sponsor and knowledge partner.

Thanks are also due to INSEAD, in particular Professor Paul Evans, the founding academic director, and Deans Ilian Mihov and Peter Zemsky, who lent their support to the project. INSEAD put together a vibrant team of researchers and staff—with special thanks to Christine Hirzel—who contributed to a model that has proved robust and pertinent, as confirmed by the annual audit by the European Commission's Joint Research Centre (JRC). They have also contributed to the global visibility of the GTCI.

This year's report opens with a Special Introduction, which takes a look back at the themes and key messages produced during these intense first ten years, and underscores their continuing relevance over time. The special introduction also includes six prospective messages on what the next decade of talent competitiveness might look like.

By and large, the GTCI has been at the leading edge of benchmarking and analytical thinking on labour markets, work organisation, and talent flows. The data accumulated during that process now constitute a significant and valuable resource that

will allow more innovative and action-oriented analyses and projections.

As co-editors of this ten-year edition of the GTCI Report, we know how much we owe to all those who invested their time, energy and resources to make the GTCI a stable and visible product of excellence, in particular our founding Advisory Board. As well as those already mentioned, we want to highlight the valuable support and encouragements received from (in alphabetical order) Thierry Breton, first as CEO of Atos, then as European Commissioner for Internal Market; Peter Capelli, George W. Taylor Professor of Management at The Wharton School and Director of Wharton's Center for Human Resources; Alain Dehaze, CEO of Adecco from 2015 to 2023; Vinod Kumar, CEO and Managing Director of Tata Communications from 2011 to 2019; Jacqueline Poh, currently Managing Director of Singapore's Economic Development Board; and Nicolas Schmit, first as Luxembourg's Minister of Labour, then as European Commissioner for Jobs and Social Rights.

This is therefore a time for celebration and thanks, when pride is mixed with anticipation and excitement for future editions of the GTCI.

Bruno Lanvin

*Founder and President, Descartes Institute for the Future;
INSEAD Distinguished Fellow*

Felipe Monteiro

*Academic Director of the Global Talent Competitiveness Index;
Senior Affiliate Professor of Strategy, INSEAD*

Human Capital Leadership Institute | Foreword

Over the past ten years, the Human Capital Leadership Institute (HCLI) has gained countless insights from collaborating on the Global Talent Competitiveness Index (GTCI). Our thanks to collaborators who have worked tirelessly on the GTCI over the past decade, especially INSEAD, who have committed to developing one of the very best indices of its kind—if not the very best!

Reflecting on this insightful body of work, three themes stand out.

First, the GTCI has kept pace with the implications of technology innovation for human capital. For instance, the 2015 GTCI report statement that “low-skilled workers continue to be replaced by robots, while knowledge workers are displaced by algorithms” is consistent with automation across factories and office tasks, as well as the advent of generative AI.

At first glance, it often seems that technology innovations will destroy jobs. When automated teller machines (ATMs) were introduced to the US in 1969, it was claimed that they would lead to unemployment. In fact, the number of bank tellers went from approximately 300,000 to around 500,000 by 1980. ATMs had contributed to job creation, as human tellers were freed up to provide more complex banking services. Similarly, e-mail was predicted to be a job-destroyer, and although it did disrupt traditional post and parcel services, some, if not most, postal companies found a way to pivot their business models to support the growth in ecommerce.

At HCLI, we see technology innovations as opportunities to rethink and redesign our approach to human capital to create new value.

Second, our work on the GTCI has almost always been forward thinking. For example, the GTCI anticipated the uneven war for talent from the very beginning. This resonates with our work on ‘future foresight,’ and our advocacy that future foresight is less about how accurately we predict the future, and more about how we think of multiple possible futures so we can be ready to adapt or respond to expected—and unexpected—challenges.

Thanks to its comprehensive data and its thoughtful analysis, the GTCI is an exemplary tool for those developing future forecasts from the ever-evolving trends in human capital. Consider *Welcome to the Post-Industrial Age*, a 2023 analysis of the global shortage of talent caused by declining birth rates in the post-industrial age from the Josh Bersin Academy. It makes clear that the GTCI was uniquely positioned to inform the report’s recommendation, that of shifting to a new model of work characterised by organisational dynamism, human-centred leadership, and HR as a consulting and product organisation. The report shows how designing work around jobs and functional areas to create and deliver value is fast becoming obsolete. Instead, systemic HR can

design and organise companies around people and skills, optimising output through projects, initiatives, and services to create new value.

Finally, and perhaps most importantly, the GTCI is designed with a call to action. The GTCI defines talent competitiveness as the set of policies and practices that enable a country to develop, attract, and empower the human capital that contributes to productivity and prosperity. Hence its assessment of what countries do to produce and acquire talent (input) and what they do to build the workforce’s skills and capabilities to achieve the desired socio-economic outcomes (output).

This special tenth-anniversary edition of the GTCI also presents several critical trends for the future that particularly resonate with HCLI’s work: talent inequalities between individual countries remain high; talent inequalities within countries are stubbornly persistent; and growing uncertainties hamper brain circulation. In particular, our work on ecosystem collaborations can inform or address the problem of talent inequalities around the world (see *2020’s Ecosystem Edge: Sustaining Competitiveness in the Face of Disruption* by Arnoud De Meyer and Peter Williamson).

For instance, the wide range of experiences and challenges regarding talent competitiveness across Southeastern Asia (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) suggest that a collaborative ecosystem approach could be designed to uplift talent competitiveness across the region. Founded on learning from each other to create inclusivity and accessibility it could raise productivity and prosperity for all countries. Similarly, our work on developing Asian-origin leaders for global leadership positions, such as our Singapore Leaders Network (SGLN) Fellowship, can inform or address the challenges associated with brain circulation, at least with respect to the Southeastern Asian ecosystem.

The tenth anniversary of the GTCI report is a timely reminder that the challenge of talent competitiveness is really a challenge for humanity. Talent competitiveness is defined as a set of policies and practices for enabling individual countries—but how might we re-imagine the challenges of talent competitiveness if we define it as the set of policies and practices that enable humanity? To this end, HCLI is proud and deeply grateful for our collaboration with INSEAD and the Descartes Institute for the Future—and looks forward to our collective call to action in disrupting the future of human capital.

Kevyn Yong

Chief Learning Officer

Human Capital Leadership Institute

INSEAD & Descartes Institute for the Future GTCI Team

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Chapters

CHAPTER 1: A Special Introduction

What a Difference Ten Years Make and What to Expect for the Next Decade

Bruno Lanvin, Felipe Monteiro, and Michael Bratt

For the past ten years, GTCI has continued to collect data and improve its model to track various aspects of talent competitiveness. Over the decade, it has been organised around

TEN YEARS OF FORWARD LOOKING THEMES

Since 2013, GTCI has addressed a variety of topics that include: *Growing Talent for Today and Tomorrow* (2014); *Talent Attraction and International Mobility* (2015); and *Talent and Technology* (2017). Switching gears in 2018, the report turned to *Diversity for Competitiveness*, followed by *Entrepreneurial Talent and Global Competitiveness* in 2019, and *Global Talent in the Age of Artificial Intelligence* in 2020. In 2021, the focus shifted once more, this time

annual themes with every edition generating its own set of key messages.

to *Talent Competitiveness in Times of COVID*, and last year's edition entitled *The Tectonics of Talent: Is the World Drifting Towards Increased Talent Inequalities?*

Looking back at those topics, themes, and messages, we can say with some confidence that the GTCI got it right more often than not and, in fact, was often ahead of the curve.

Bruno Lanvin is the Founder and President of Descartes Institute for the Future, and an INSEAD Distinguished Fellow. Felipe Monteiro is Senior Affiliate Professor of Strategy at INSEAD. Michael Bratt is Lead Researcher at Descartes Institute for the Future. For this tenth anniversary edition, GTCI offers a detailed introduction that looks back at the past ten years of GTCI reports and proposes some key predictions about how the global talent scene might continue to evolve over the coming decade.

TEN YEARS OF POWERFUL KEY MESSAGES

Some of the key messages that emerged during this decade of analysis appeared repeatedly, as they raised issues that were both urgent and unresolved. This was true particularly for the theme of inequalities. In the very first edition of the report, the first key message was: “The global war for talent is on, and it is an uneven one.” Since then, GTCI reports have emphasised that “Talent inequalities are broadening” (2019); “The gap between talent champions (almost all of them high-income countries) and the rest of the world is widening” (2020); and “Recent and current crises could have a negative and sometimes irreversible impact on the talent situation of poorer economies” (2022). Other key messages in 2022 included the statement that “Even in higher-income economies, labour markets may become more fragmented and hence generate new types of inequalities”; and “A more unequal global talent landscape would significantly diminish our collective ability to meet some key targets of the SDGs.”

Another recurring theme in the first ten years of the GTCI is that of **technological change** and how its acceleration is

critical to labour markets and even to the definition of work itself. In 2014, GTCI stressed that technological changes will affect new segments of the labour market, implying changes in the required profile of employable skills. In its next edition, the GTCI warned that low-skilled workers continue to be replaced by robots, while knowledge workers are displaced by algorithms. In 2017, a key message was that technology is changing the nature of work, and in 2020’s issue devoted to Global Talent in the Age of Artificial Intelligence, “the emergence of AI in the workplace requires a massive re-skilling of the workforce” was a key message.

The GTCI has also played a pioneering role in exploring the ways in which talent strategies matter at the local level, in particular **at the city level**. The establishment of a specific Global City Talent Competitiveness Index (GCTCI) has created its own invaluable data resource. This has led to useful insights into imaginative talent initiatives that could be developed and implemented at a sub-national level to create jobs and foster competitiveness.

TEN YEARS OF DATA YIELDING UNIQUE TIME SERIES

The data accumulated by GTCI over the past decade constitute a unique resource that provides opportunities for plenty of further analyses. Based on the approaches taken in the ten years since GTCI’s inception, it is possible to identify several important signals regarding changes to both the global and local scenes of talent competition.

GTCI data point to at least six major trends in line with the key messages highlighted above:

- Talent inequalities between individual countries remain high
- Talent inequalities within countries are stubbornly persistent
- COVID has profoundly altered the global talent landscape
- Cities and regions play increasingly important roles in talent initiatives
- Growing uncertainties hamper brain circulation
- New generations are reshaping the world of work

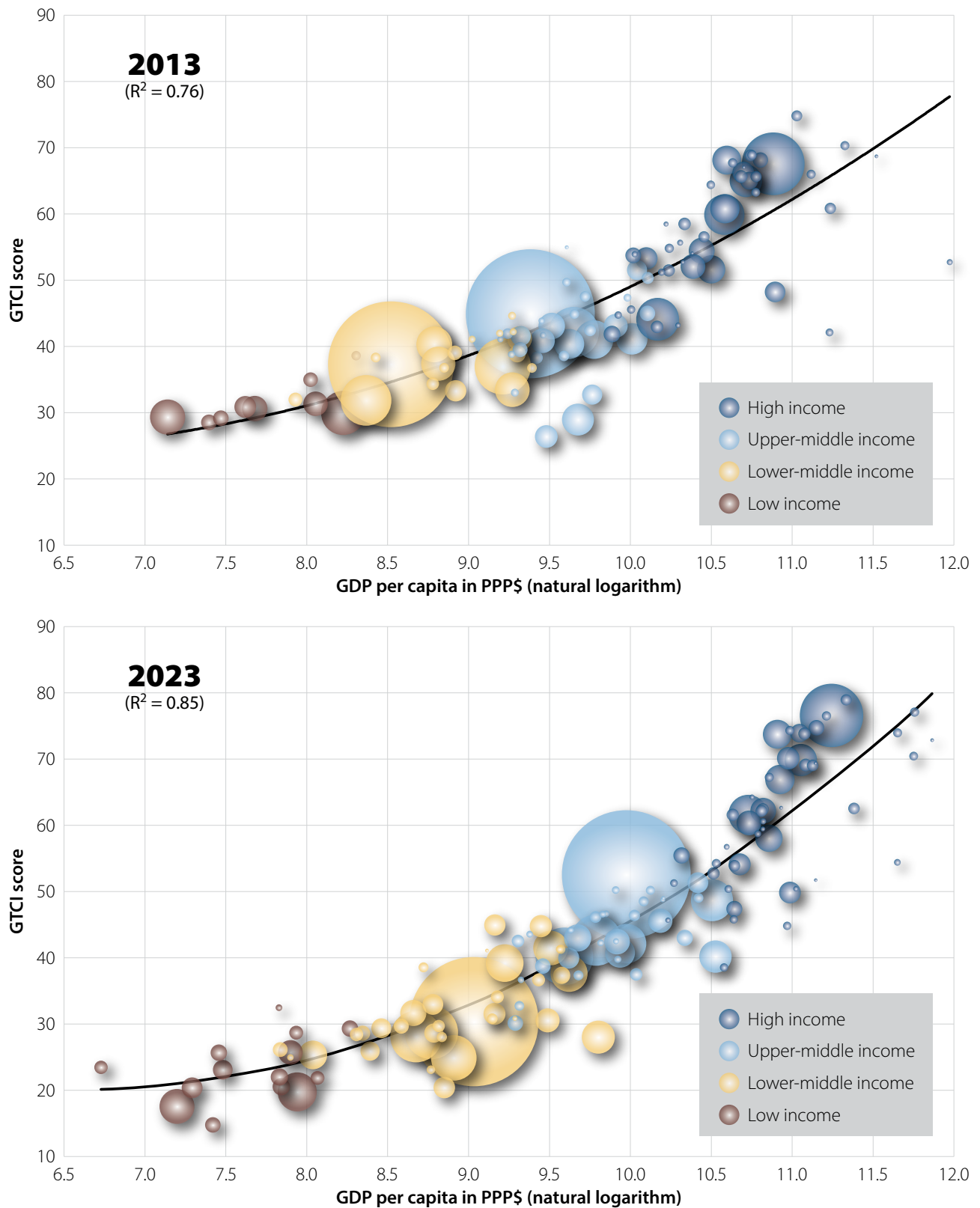
1. Talent inequalities between individual countries remain high

One of the most frequently highlighted findings from GTCI analyses is that the global landscape for talent competitiveness is—and remains—fraught with inequalities. In other words, poorer economies do not perform as well on the talent scene as other, richer economies. This has been illustrated annually by GTCI’s famous scatter plot, which shows the strength of the relationship between income per capita and GTCI scores. Comparing the 2023 and the 2013 versions, creates a striking visual image of how strong that correlation has remained (see Figure 1).

Despite the significant progress of the demographic powerhouses, India and China, up the talent ladder, and India’s

successful efforts to close the gap between its economy and that of China, the wealth/talent correlation remains strong. GTCI data from the past ten years show that it has even increased: the correlation coefficient between GDP per capita and GTCI score has grown from 0.76 in 2013 to 0.85 in 2023. In Figure 1, this can be seen in the clearer separation of income groups along the talent competitiveness ladder. Note that, although there were clear overlaps between such groups in 2013, there are almost none in 2023.

Figure 1

Talent performance remains closely linked to income level

2. Talent inequalities within countries are also stubbornly persistent

As new data became available at a global level, GTCI gave continuous and prominent attention to the gender component of talent inequalities. Altogether, GTCI data from the past ten years have shown significant progress in legal and regulatory environments as an increasing number of countries have committed to reduce gender gaps in labour markets. However, such efforts remain insufficient and need to be accelerated.

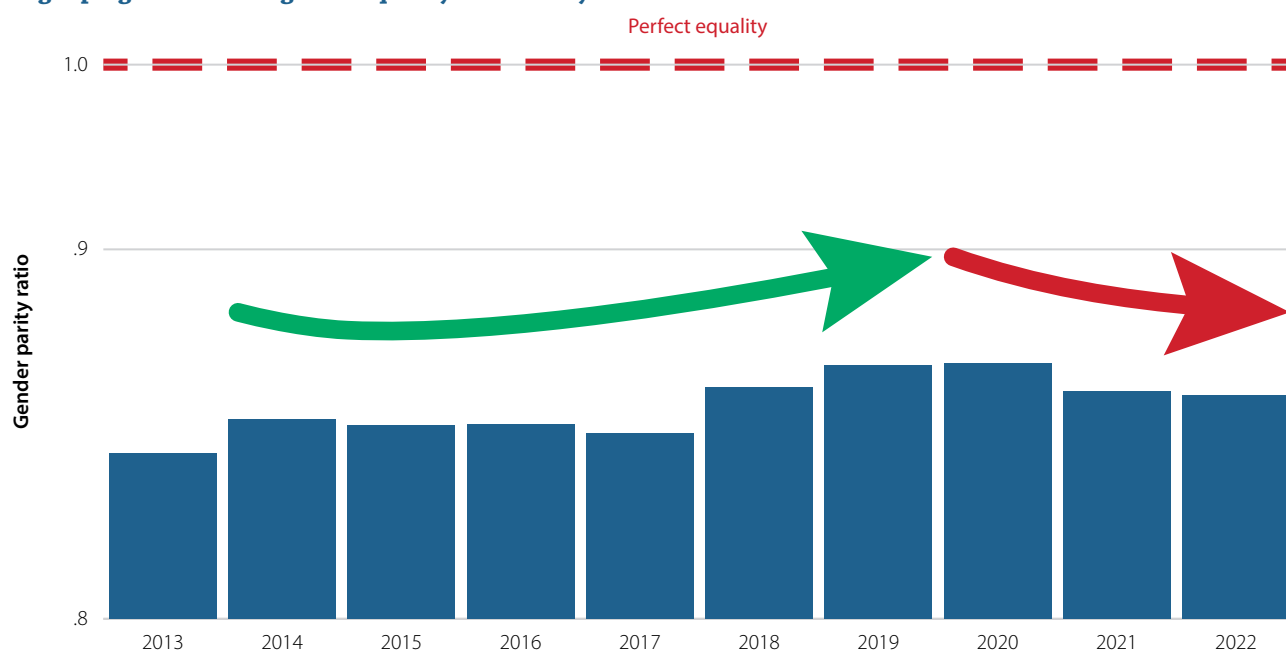
In large parts of the world, women are paid less than men at comparable levels of training and qualifications. They also have fewer career development opportunities and less access to higher levels of responsibility. In many emerging and poorer economies, the gender divide is stronger still, with girls having fewer opportunities to attend school, not to mention higher education. GTCI also described and highlighted how COVID

strengthened such inequalities, making them irreversible in some cases. These trends can be seen in GTCI's data on gender parity in high-skilled jobs (see Figure 2).

GTCI 2022, which introduced additional data about gender divides, also emphasised how possible options for a post-COVID recovery could, in fact, increase domestic inequalities among various categories of workers. The rapid expansion of new working practices, such as online collaboration, alongside the accelerating adoption of AI in various industries will undoubtedly have an impact on some of the fundamental parameters of the jobs/skills equation. Unqualified or low-qualified labour will bear much of the additional pressure, while new categories of workers, some with higher skills, will suffer from stronger competition from algorithms and specialised equipment.

Figure 2

Slight progress in talent gender equality thwarted by COVID



Source: ILO, but computation is our own.

Note: Gender parity in high-skilled jobs, 2013–2022 (y axis shows the ratio, where 1 signifies perfect equality).

3. COVID has profoundly altered the global talent landscape

The COVID years (2020–22) presented a challenge to both national and organisational talent strategies, which had to adapt to a dramatically changed environment in education, work, and social activity. Significant levels of public debt were accumulated in the process, as stop-gap and emergency measures were adopted to prevent a collapse in employment and output.

It is now clear that the new practices adopted during these years will not fade away rapidly. Instead, some of the trends identified by GTCI will contribute to a new normal, in which remote working and online collaboration will become close to common practice in all types of economies and societies.

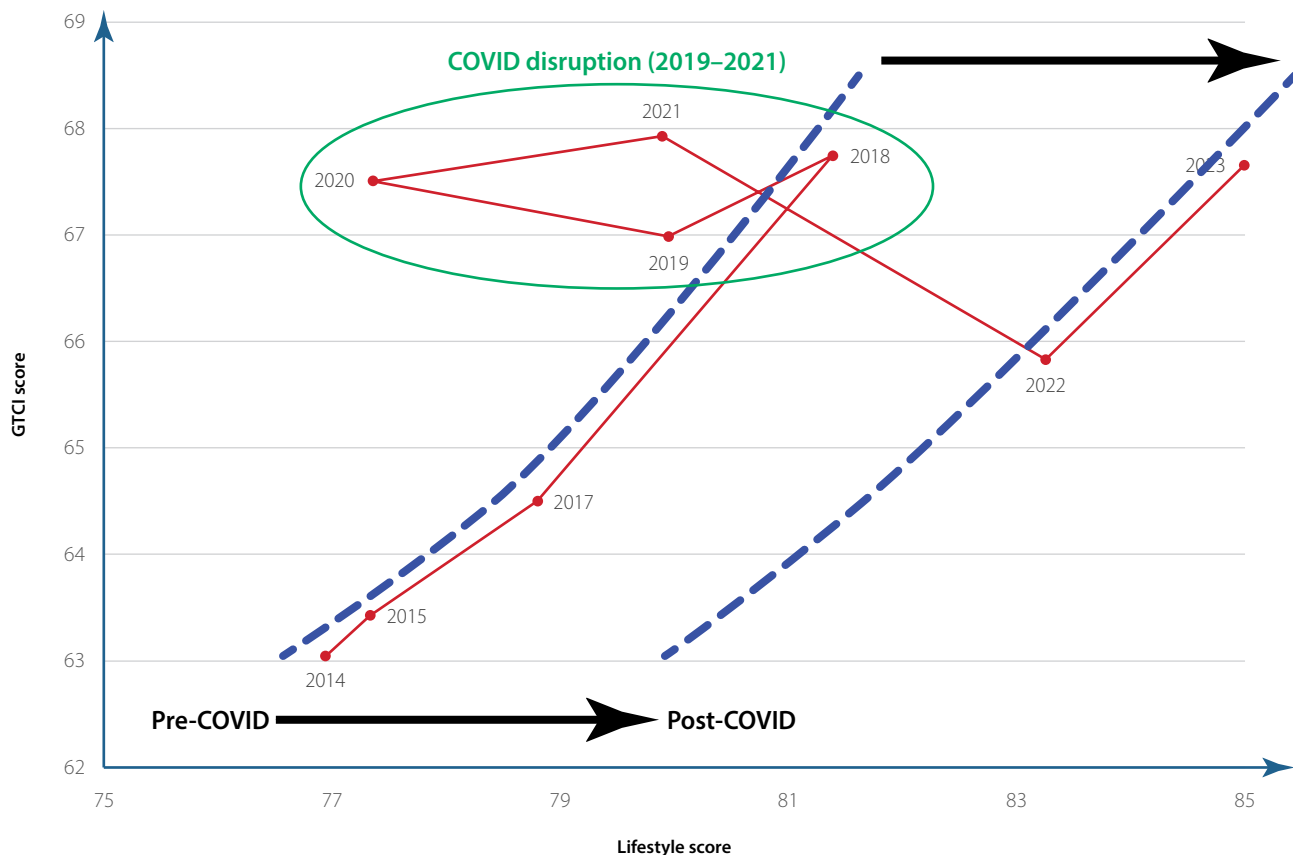
COVID also stimulated the emergence of new tools and techniques, and new ways to organise work and production. As a result, new needs and priorities have emerged in the area of skills and talent profiles.

A new world of work is emerging in which talent is less tightly attached to a particular physical location; and this is especially true for high-skilled workers. In such a renewed landscape, an increasing number of talent can make choices about where they want to live and where and how they wish to work. One of the resulting trends that GTCI identified is the growing value of quality of life in decisions made both by individuals and by recruiting organisations when considering physical location.

Figure 3 illustrates the strong positive correlation between quality of life in a country and its talent performance before and after COVID. The trend resumed in 2022 and can be expected to continue, and possibly accelerate, in the following years.

Figure 3

For talents, quality of life matters more and more



4. Cities and regions play increasingly important roles in talent initiatives

In 1990, 43% of the world population lived in a city. Today, that number is 56%, and is projected to be close to 70% by 2050. From sustainability to innovation and talent, core issues have now largely shifted from central governments to more regional and even municipal levels.

Again, COVID has contributed to the acceleration of this trend, as a number of national governments—including some in very large countries—proved unable or unwilling to take measures to fight the spread of the virus and its various mutations. In many parts of the world, cities stepped up to the plate and took the initiative to organise and implement sanitary measures.

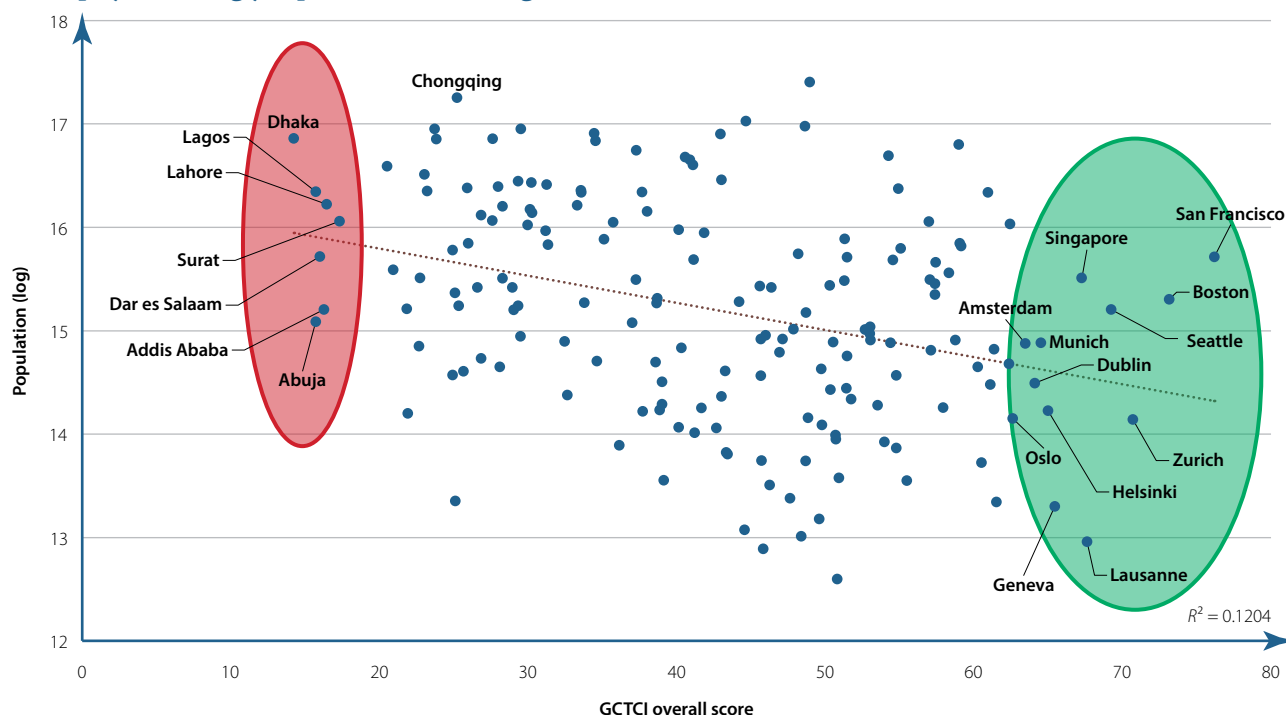
Through its dedicated Global City Talent Competitiveness Index (GCTCI), GTCI has repeatedly described and measured how cities have been able to deploy original and effective talent strategies, and how much global talent competition was influenced

by the emergence of new talent hubs among cities in all parts of the world. One of the findings of GCTCI (as shown in Figure 4) was that second-tier cities increasingly became the places where the most successful talent policies were deployed. Such cities, often medium or modest sized, frequently demonstrated an ability to be more dynamic and more attractive than larger metropolises.

Such a trend is only one facet of the complex set of phenomena by which cities have become prominent players on the global talent scene, and may be a harbinger of other possible changes. Cities could play a growing role by taking on some of the responsibilities that national governments have abandoned, or are unable to fulfil. This could occur in fields like international trade or investment, for example, through the adoption of exceptional fiscal or incentive regimes at the local level.

Figure 4

Cities play increasingly important roles on the global talent scene



Source: Authors' computations.

Note: The green oval highlights the variation of population size among the most talent-competitive cities. The red oval shows the least-talent-competitive cities and points to the potential talent disadvantages of large metropolitan areas.

5. Growing uncertainties hamper brain circulation

It is not an exaggeration to say that, over the past decade, talent competitiveness has become a key vector of geopolitics. Just as international tensions and rivalries have contributed to a decrease in multilateral cooperation and disciplines, the ability of enterprises and organisations, such as universities, to cooperate across national borders has been significantly reduced.

The effects of limiting international travel, as initially required by pandemic concerns, have been partially offset by the rapid adoption of online collaboration tools and new work habits. Yet, as the GTCI time series suggests, neither the recent period nor the one to come have created fertile ground for one of the most positive trends identified before COVID: that of 'brain circulation'.

In its 2015 edition, *Talent Attraction and International Mobility*, GTCI highlighted the notion of brain drain/brain gain vs brain circulation. The report underlined that, for national economies as well as for private enterprise, it was an advantage to consider

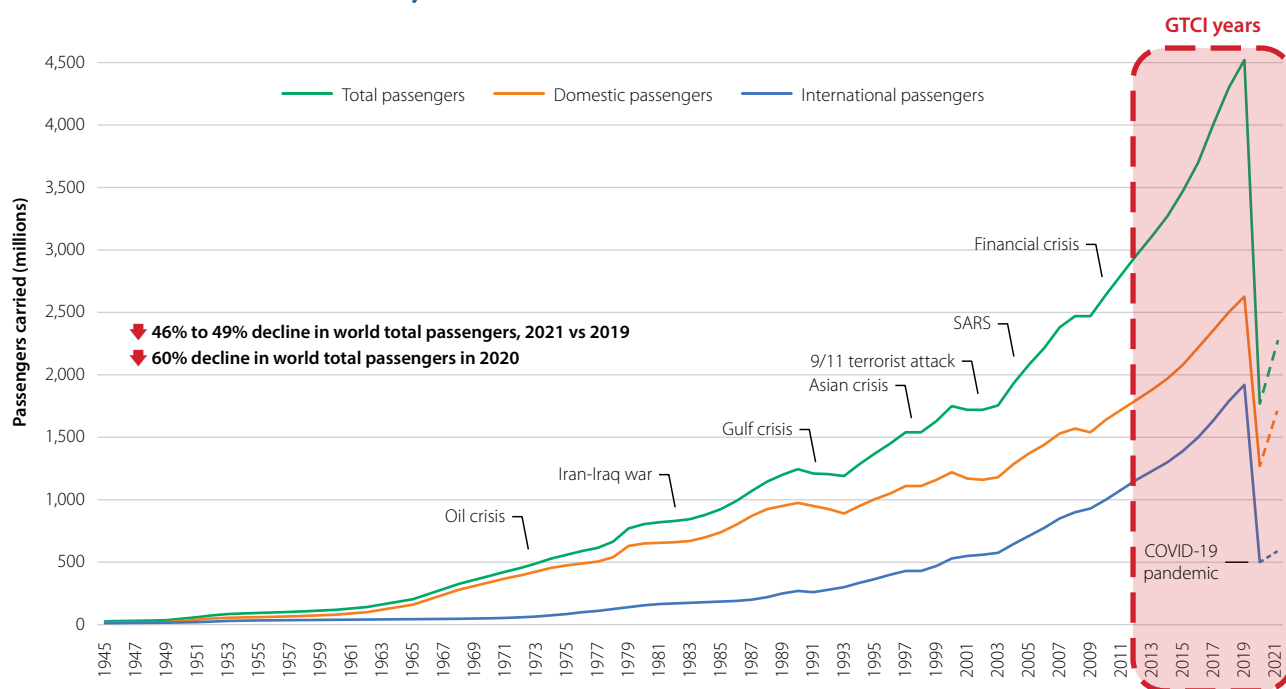
talent as a fluid resource, which would benefit from international exposure. A proven ability to operate in different geographical and cultural contexts has become a major plus for large segments of the global workforce.

By putting a sudden stop to international travel, COVID created a radically different environment for global brain circulation, as shown in Figure 5.

To a large extent, this negative trend was offset by the growing tendency among organisations of all sizes to rely on a more systemic use of online collaboration tools. Although international travel resumed swiftly once health-related limitations were relaxed, persistent levels of geopolitical uncertainty, renewed nationalistic and protectionist tendencies, and the resulting decrease in international cooperation continue to hamper direct, face-to-face cooperation and, hence, the cross-fertilisation of talent.

Figure 5

International talent flows are hurt by uncertainties



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

Note: Air traffic passengers—as measured by ICAO—being used as a proxy for international talent flows. ICAO = International Civil Aviation Organization.

6. New generations are reshaping the world of work

In its 2021 edition, *Talent Competitiveness in Times of COVID*, GTCI warned that a post-COVID recovery could take a ‘K-shape’, which would create and feed new types of inequalities among workers with different kinds of skills. As shown in Figure 6 (which uses the US economy as an example) the upper branch of the K would allow workers equipped with a future-ready sets of skills in key strategic sectors to benefit from the higher wages and career prospects produced by higher demand. In contrast, the lower branch of the K would indicate the path most likely to be imposed on other, less skilled or less adaptable workers.

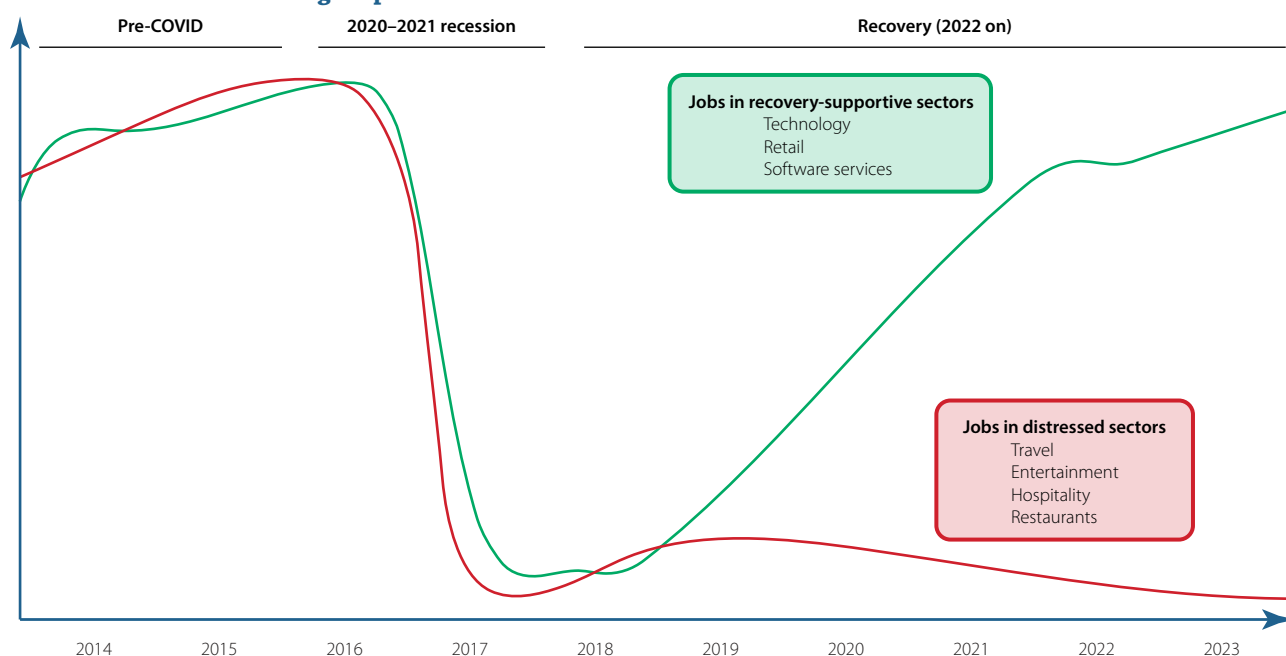
In such a scenario, younger generations preparing to find their first job could be expected to prioritise the acquisition of the most sought-after skills, and pick the most dynamic sectors of activity as their target. GTCI analyses showed this was not

necessarily the case. An increasing proportion of younger generations, especially among those with a higher level of education, were considering other priorities. This might include having a meaningful job by contributing positively to society or the environment, or enjoying a more healthy work-life balance. As mentioned above, when considering the role of cities as talent hubs, quality of life has become a key factor in the choices made by younger cohorts about their working and living environment.

The same phenomena have also led to the emergence of a new generation of workers for whom the traditional value of loyalty to their employer has quickly eroded. Gig-working and short-term contracts, often combined into parallel lines of work, have become the norm for a growing number of free agents on the global talent scene.

Figure 6

A new world of work is taking shape



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

GTCI PROVIDES A RICH GLOBAL PICTURE OF TALENT COMPETITION OVER THE PAST DECADE

As discussed above, one of the core and repeated messages of GTCI over the past ten years has been that the global talent scene remains uneven and unequal. However, the same analyses confirm that the overall landscape of global talent competitiveness shows signs of significant mutation.

For example, GTCI rankings continue to be dominated by rich countries, but for how long? How are the new dynamics of labour markets and talent competition being modified under the combined effect of post-COVID adjustments and longer-term demographic, economic, social and political trends?

Although there have been some notable changes to the GTCI top ten in its first decade, the most high-performing, talent-competitive economies are still found in a small group of countries.

Figure 7 and its accumulated data shows that:

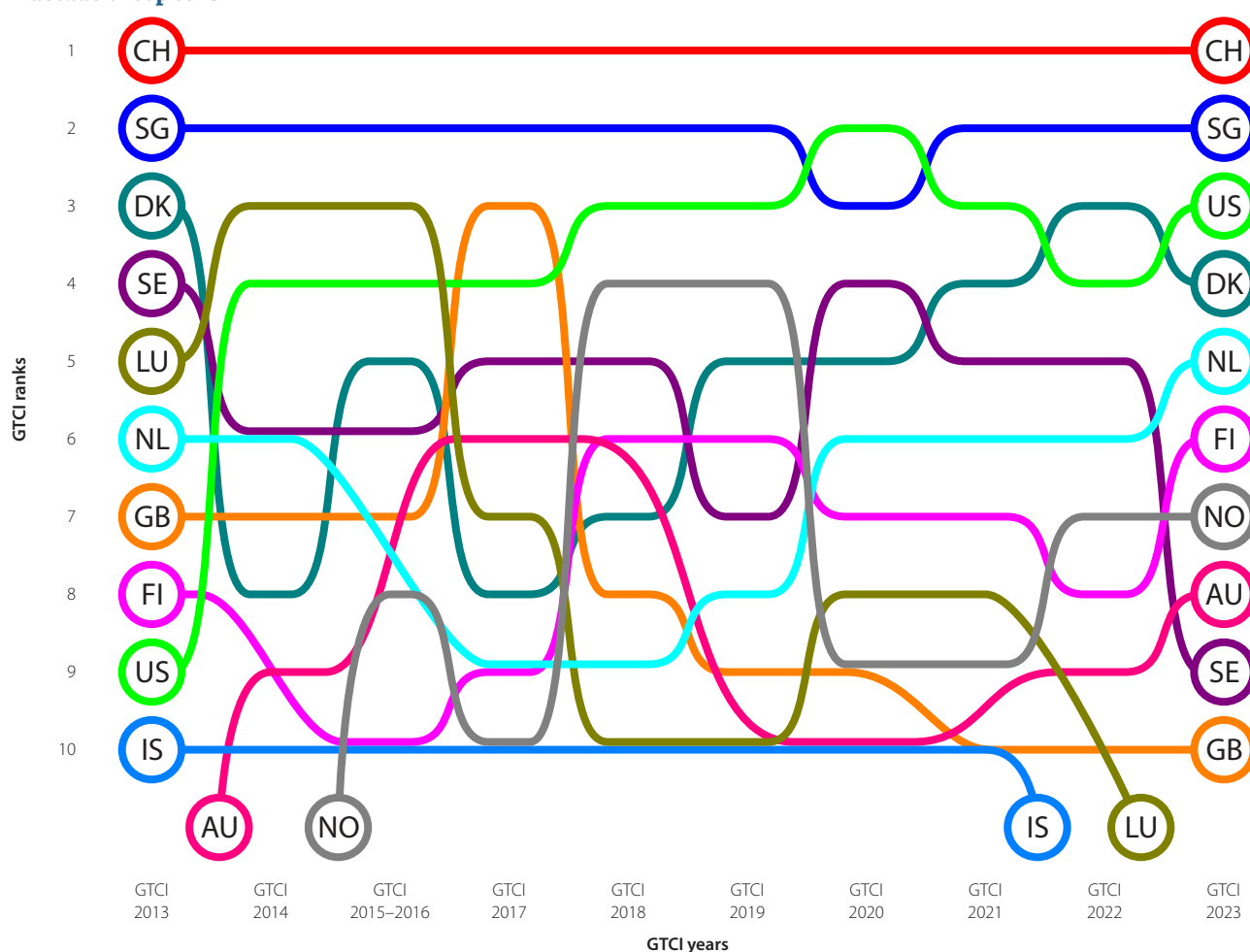
- The list of GTCI top-ten countries has been very steady over the past 10 years.
- Switzerland and Singapore are the clear leaders; the US is to a lesser extent.

- The top ten has otherwise been dominated by smaller European countries.
- Eight of the GTCI top ten in 2023 were also in the top ten in GTCI 2013. The only differences are that Luxembourg and Iceland, now in 11th and 15th position respectively, featured in 2013's top ten, while Australia and Norway have risen to the top ten from 15th and 12th position respectively.

However, GTCI time series also suggest that such stability at the top needs to be considered against the background of rapid changes among heavily populated countries, who face growing levels of uncertainty that will affect the world economy in the foreseeable future. Everything is in place for massive disruptions of the global talent landscape—as suggested in the reference to tectonics in GTCI 2022.

Although estimates vary, it is safe to assume that the total GDP of the E7 (the seven leading emerging economies of Brazil, China, India, Indonesia, Mexico, Russia, and Türkiye) is now roughly comparable to that of the G7 (Canada, France, Germany,

Figure 7
A decade of top tens



Italy, Japan, the United Kingdom, and the United States). China's rapid progression from 47th to 40th in GTCI rankings, and the level of excellence reached by Indian Institutes of Technology (IITs) suggests that emerging economies will play a significant

role in challenging current global hierarchies on the global talent scene—despite India's continuing struggle to bring its primary education system to the same standard as its higher education. This is further developed in subsequent sections of this report.

WHAT TO EXPECT FOR THE NEXT DECADE?

As Laurence J. Peter supposedly wrote: "An economist is an expert who will know tomorrow why the things he predicted yesterday didn't happen today." Trying to describe the future is always a perilous exercise. However, the accuracy of GTCI's predictions from its first ten years provides some level of reassurance

in offering the following view of what talent competitiveness might look like in the next ten years.

We therefore conclude with six key messages for the future—a time capsule to be reviewed and assessed against the reality of global talent competitiveness in 2033.

Key Messages for the Future of the GTCI 2023

- **Key Message #1: Over the coming decade, talent competitiveness will gain even more importance as a critical element of competitiveness, innovation and geopolitical soft power.** This will be true for nations, cities and organisations alike.
- **Key Message #2: Talent competition will grow fiercer.** As uncertainties and international tensions continue to accumulate in trade, in investment, in politics and in diplomacy, we can expect more rather than fewer talent wars. This will be reinforced by growing needs to address domestic tensions in labour markets and growing trend towards nationalist postures and policies around topics such as immigration or 'friend-shoring', for example.
- **Key Message #3: Significant aspects of the world of work will be uprooted under a combination of increasingly ubiquitous factors** including: new expectations and attitudes from younger generations; the emergence of new economic and organisational models; and new possibilities offered by technologies, including AI.
- **Key Message #4: Cities and regions will pave the way for new talent strategies and talent-based innovation.** Quality of life and sustainability will be a critical asset for those aiming at becoming talent hubs.
- **Key Message #5: Inequalities in global and local labour markets will take different forms and shapes.** Talent-focused regulatory policies will be required at the global level to prevent unnecessary tensions, and to allow the planet to fully leverage its human and technological capacities for a better, sustainable, and more equal world.
- **Key Message #6: In the rapidly moving and uncertain world of the coming decade, skills and education will remain vital tools** to offer workers opportunities to contribute to economies and societies in a meaningful fashion.

CHAPTER 2

Global Talent Competition Against the Background of Continuing Uncertainties

Bruno Lanvin, Felipe Monteiro, and Michael Bratt

This year's GTCI data and analyses largely confirm the trends identified over the past decade. However, they also point at a few changes in individual rankings as well as in performance by regions and income groups. While the index methodology and structure remain largely unchanged—see the audit provided by JRC below—such changes should not be ignored, as some of them might constitute the weak signals that precede broader shifts.

As shown and documented in the previous edition of the GTCI, the pandemic has generated long-term shocks across local and international labour markets. As uncertainties continue to grow throughout the world economy, countries, cities and organisations are adopting new talent strategies, which the GTCI attempts to detect and measure.

THE GTCI CONCEPTUAL FRAMEWORK

As made clear in previous editions of the GTCI, countries are competing globally for the talent they need, and who will contribute to competitiveness, innovation, and growth. This requires them to grow their own talent pools, attract talent from under-represented and under-privileged domestic sources as well as overseas and external sources, and to develop the means to retain these essential workers. In such a context, governments, businesses, and various other stakeholders need quantitative instruments that can inform their decisions—whether as investors, employers, employees, or jobseekers—and can help them design and implement better policies in areas such as education, employment, and immigration, among others. This is the purpose of the GTCI.

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Who Is Expected to Use the GTCI and Why?

Decision-making in the area of talent development, attraction, and empowerment is remarkably complex and multi-layered, covering many different issues in the fields of economics, education, human resource management and organisational behaviour, entrepreneurship, innovation, and strategy, and requiring multi-disciplinary effort. At the policy level, this complexity is compounded by emotional considerations and the international consequences of choices regarding immigration, social equity, and fiscal incentives, among others.

Faced with such intricate issues, decision-makers—both public and private—need quantitative tools that will enable them to benchmark their efforts and results obtained across the different socioeconomic environments into which talent management and talent competitiveness fall. The GTCI has been designed to help address this challenge by providing a composite view of talent competitiveness that is 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 will 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,

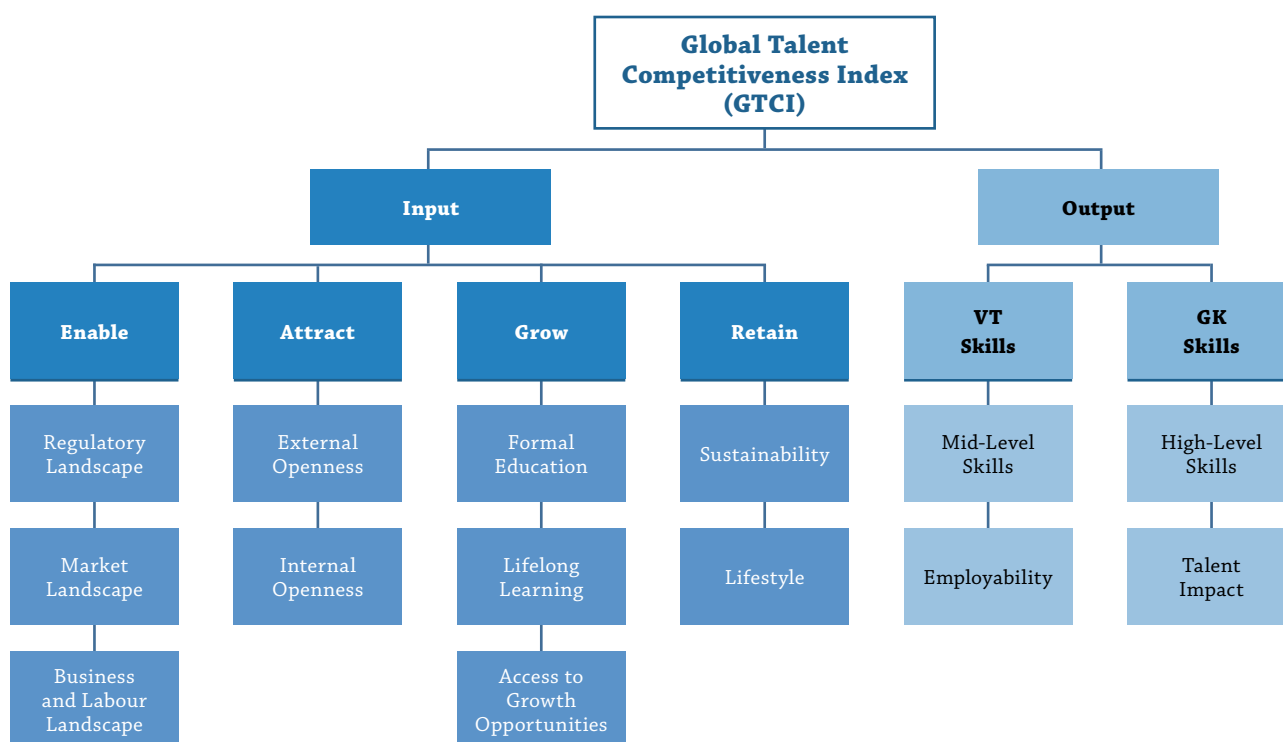
attract, and empower the human capital that contributes to productivity and prosperity. The GTCI is an Input-Output model (see Figure 1) that combines an assessment of what countries do to produce and acquire talent (Input) and the kind of skills that are available to them as a result (Output). Although the underlying structure of the report remains robust and unchanged, feedback on previous editions, additional research, and the availability of new data have allowed the model to be refined.

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.¹ The GTCI focuses on efforts by countries, which means the model is fed by macroeconomic and country-level indicators.

In the context of national competitiveness, **Attracting** talent is viewed from two perspectives. Firstly, as a draw towards valuable external (i.e., foreign) resources, which includes both productive businesses through foreign direct investment (FDI) and the like as well as creative people through high-skilled migration. Secondly, 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

Figure 1
The GTCI 2023 model



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

access to growth opportunities. However, 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 has. The 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 also 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, also known as *Vocational and Technical Skills* (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 around skills gaps and labour market mismatches and by the adequacy of education systems. High-level skills, also called Global Knowledge Skills (or GK Skills), describe the creativity and problem-solving skills required by knowledge workers in professional, managerial, or leadership roles. Their economic impact is evaluated by indicators around 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 provides an approach to talent competitiveness issues that is comprehensive, action-oriented, analytical, and practical. As noted above, the GTCI is a composite index, which relies on a simple but robust Input-Output model, composed of six pillars, as illustrated in Figure 1. As such, the GTCI generates three main indices that form the most visible focus for analysis, namely:

1. **The Talent Competitiveness Input sub-index**, which is composed of four pillars that describe the policies, resources, and efforts a particular country can harness to foster talent competitiveness. Pillar 1, Enable, reflects the extent to which the regulatory and business environments—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 resulting 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 in these two pillars.

3. **The Global Talent Competitiveness Index (GTCI)**, which is calculated as the simple arithmetic average of the scores of each of the four Input pillars and two Output pillars outlined above.

The GTCI model in the edition for 2023 is very similar to that of 2022. The only modifications of note are the removal of one indicator and the addition of another. The indicator that has been removed is 3.2.4 Formal and non-formal education and training, on grounds of data that are too fluctuating. The new indicator is 4.1.5 Vulnerable employment, which adds a more labour-focused dimension to the 4.1 Sustainability sub-pillar.

The total number of indicators in this year's model has stayed unchanged at 69. The GTCI's country coverage, meanwhile, has increased from 133 to 134. Together these countries represent more than 97 percent of the world's GDP and almost 94 percent of its population. The audit carried out by the JRC of the European Commission (see Chapter 3) has confirmed that the model remains solid and robust, these changes notwithstanding. Further details of the indicator definitions and the method of calculation can be found in the Sources and Definitions and Technical Notes appendices. The GTCI model will continue to be refined, based on further discussions with academics and business and government leaders, as well as feedback from GTCI users.

GLOBAL TALENT COMPETITIVENESS INDEX 2023: MAIN FINDINGS

The top positions in the ranking of the GTCI scores continue to be dominated by developed, high-income countries (see Table 1), and there is a high correlation between GDP per capita and GTCI scores (see Figure 2). The Statistical Annex to this chapter presents more detailed information on country performance for the different sub-pillars and indicators.

European countries continue to dominate the GTCI rankings, taking 17 of the top 25 positions. Switzerland retains its first-place position this year, followed by Singapore, and the United States. This has been the most common constellation in the top three over the past decade. The other non-European countries that make it into the top 25 are Australia, Canada, New Zealand, the United Arab Emirates, South Korea, and Israel. The most notable change in the top 25 this year is that, for the first time, it does not include Japan, which has given way to South Korea—also for the first time.

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

Table 1

Global Talent Competitiveness Index 2023 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Switzerland	78.96	1	High income	Europe	1
Singapore	77.11	2	High income	Eastern, Southeastern Asia and Oceania	1
United States of America	76.60	3	High income	Northern America	1
Denmark	76.54	4	High income	Europe	2
Netherlands	74.76	5	High income	Europe	3
Finland	74.35	6	High income	Europe	4
Norway	73.96	7	High income	Europe	5
Australia	73.93	8	High income	Eastern, Southeastern Asia and Oceania	2
Sweden	73.86	9	High income	Europe	6
United Kingdom	73.75	10	High income	Europe	7
Luxembourg	72.88	11	High income	Europe	8
Ireland	70.45	12	High income	Europe	9
Canada	70.13	13	High income	Northern America	2
Germany	69.88	14	High income	Europe	10
Iceland	69.38	15	High income	Europe	11
Belgium	69.12	16	High income	Europe	12
Austria	69.05	17	High income	Europe	13
New Zealand	67.26	18	High income	Eastern, Southeastern Asia and Oceania	3
France	66.91	19	High income	Europe	14
Estonia	64.29	20	High income	Europe	15
Malta	62.66	21	High income	Europe	16
United Arab Emirates	62.56	22	High income	Northern Africa and Western Asia	1
Czech Republic	62.43	23	High income	Europe	17
Korea, Rep.	62.21	24	High income	Eastern, Southeastern Asia and Oceania	4
Israel	62.20	25	High income	Northern Africa and Western Asia	2
Japan	61.65	26	High income	Eastern, Southeastern Asia and Oceania	5
Portugal	61.60	27	High income	Europe	18
Slovenia	60.62	28	High income	Europe	19
Spain	60.36	29	High income	Europe	20
Cyprus	59.46	30	High income	Northern Africa and Western Asia	3
Lithuania	58.73	31	High income	Europe	21
Italy	58.07	32	High income	Europe	22
Latvia	56.78	33	High income	Europe	23
Chile	55.48	34	High income	Latin America and the Caribbean	1
Qatar	54.42	35	High income	Northern Africa and Western Asia	4
Slovakia	54.24	36	High income	Europe	24
Poland	54.10	37	High income	Europe	25
Hungary	53.91	38	High income	Europe	26
Greece	52.75	39	High income	Europe	27
China	52.57	40	Upper-middle income	Eastern, Southeastern Asia and Oceania	6
Brunei Darussalam	51.74	41	High income	Eastern, Southeastern Asia and Oceania	7
Malaysia	51.35	42	Upper-middle income	Eastern, Southeastern Asia and Oceania	8
Uruguay	51.29	43	High income	Latin America and the Caribbean	2
Bahrain	50.44	44	High income	Northern Africa and Western Asia	5
Croatia	50.38	45	High income	Europe	28

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Table 1 (continued)

Global Talent Competitiveness Index 2023 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Georgia	50.25	46	Upper-middle income	Northern Africa and Western Asia	6
Costa Rica	50.20	47	Upper-middle income	Latin America and the Caribbean	3
Saudi Arabia	49.86	48	High income	Northern Africa and Western Asia	7
Bulgaria	49.05	49	Upper-middle income	Europe	29
Montenegro	49.05	50	Upper-middle income	Europe	30
Mauritius	48.77	51	Upper-middle income	Sub-Saharan Africa	1
Russian Federation	48.72	52	Upper-middle income	Europe	31
Serbia	48.56	53	Upper-middle income	Europe	32
Romania	47.39	54	High income	Europe	33
Armenia	46.67	55	Upper-middle income	Northern Africa and Western Asia	8
Albania	46.61	56	Upper-middle income	Europe	34
Belarus	46.41	57	Upper-middle income	Europe	35
Azerbaijan	46.19	58	Upper-middle income	Northern Africa and Western Asia	9
Oman	45.82	59	High income	Northern Africa and Western Asia	10
Trinidad and Tobago	45.68	60	High income	Latin America and the Caribbean	4
Argentina	45.60	61	Upper-middle income	Latin America and the Caribbean	5
Uzbekistan	44.97	62	Lower-middle income	Central and Southern Asia	1
Kuwait	44.83	63	High income	Northern Africa and Western Asia	11
Ukraine	44.80	64	Lower-middle income	Europe	36
Moldova, Rep.	44.22	65	Upper-middle income	Europe	37
Jamaica	43.59	66	Upper-middle income	Latin America and the Caribbean	6
Kazakhstan	43.01	67	Upper-middle income	Central and Southern Asia	2
South Africa	43.01	68	Upper-middle income	Sub-Saharan Africa	2
Brazil	42.67	69	Upper-middle income	Latin America and the Caribbean	7
Jordan	42.56	70	Lower-middle income	Northern Africa and Western Asia	12
North Macedonia	42.53	71	Upper-middle income	Europe	38
Colombia	42.44	72	Upper-middle income	Latin America and the Caribbean	8
Botswana	42.28	73	Upper-middle income	Sub-Saharan Africa	3
Mexico	42.17	74	Upper-middle income	Latin America and the Caribbean	9
Viet Nam	41.50	75	Lower-middle income	Eastern, Southeastern Asia and Oceania	9
Mongolia	41.31	76	Lower-middle income	Eastern, Southeastern Asia and Oceania	10
Lebanon	41.30	77	Lower-middle income	Northern Africa and Western Asia	13
Cabo Verde	41.11	78	Lower-middle income	Sub-Saharan Africa	4
Thailand	40.77	79	Upper-middle income	Eastern, Southeastern Asia and Oceania	11
Indonesia	40.25	80	Upper-middle income	Eastern, Southeastern Asia and Oceania	12
Türkiye	40.20	81	Upper-middle income	Northern Africa and Western Asia	14
Peru	39.96	82	Upper-middle income	Latin America and the Caribbean	10
Bosnia and Herzegovina	39.79	83	Upper-middle income	Europe	39
Philippines	39.23	84	Lower-middle income	Eastern, Southeastern Asia and Oceania	13
Ecuador	38.77	85	Upper-middle income	Latin America and the Caribbean	11
Kyrgyzstan	38.58	86	Lower-middle income	Central and Southern Asia	3
Panama	38.56	87	High income	Latin America and the Caribbean	12
Egypt	37.67	88	Lower-middle income	Northern Africa and Western Asia	15
Dominican Republic	37.51	89	Upper-middle income	Latin America and the Caribbean	13
Sri Lanka	37.36	90	Lower-middle income	Central and Southern Asia	4

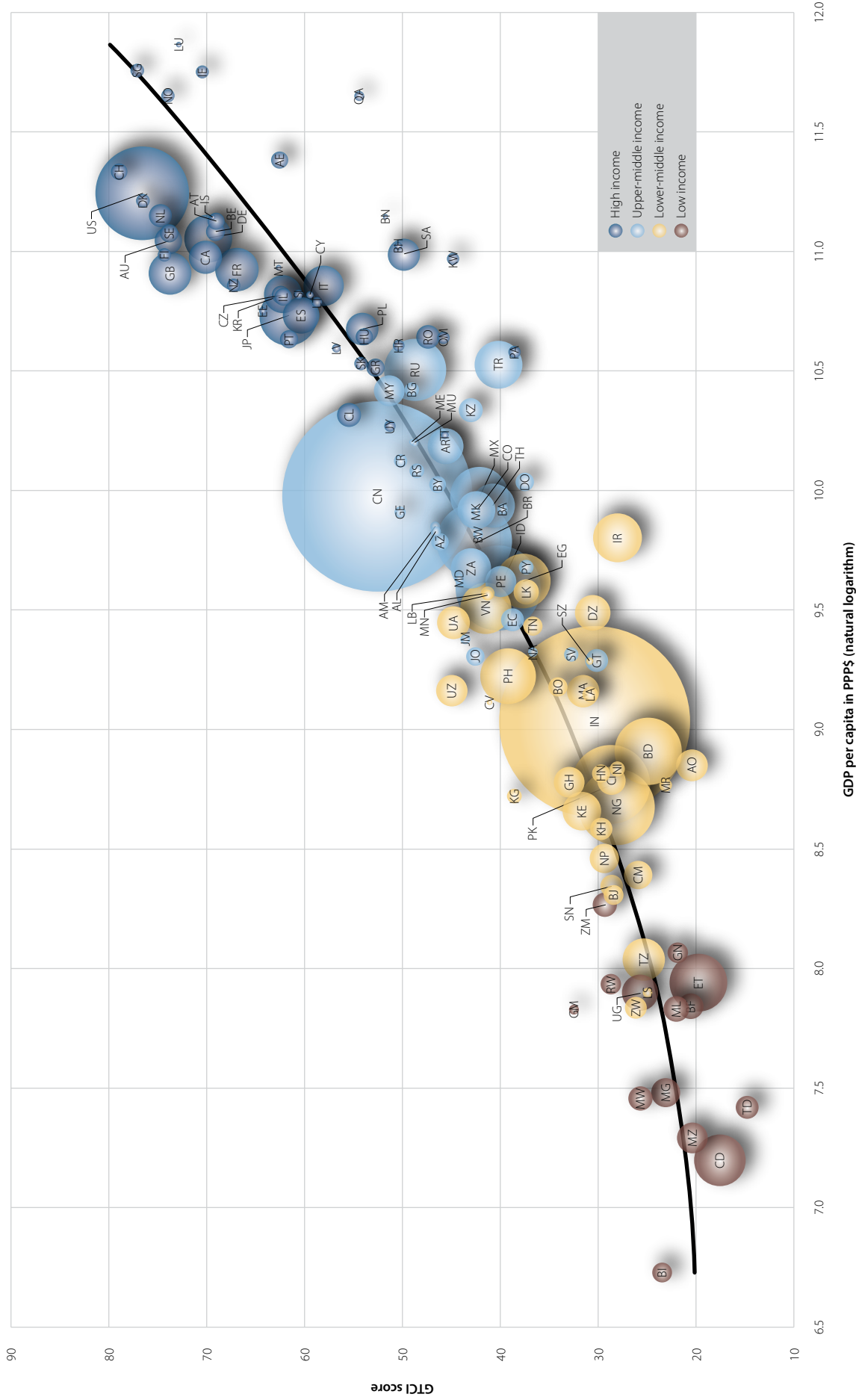
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Table 1 (continued)

Global Talent Competitiveness Index 2023 rankings

COUNTRY	SCORE	OVERALL RANK	INCOME GROUP	REGIONAL GROUP	REGIONAL GROUP RANK
Paraguay	37.36	91	Upper-middle income	Latin America and the Caribbean	14
Tunisia	36.67	92	Lower-middle income	Northern Africa and Western Asia	16
Namibia	36.67	93	Upper-middle income	Sub-Saharan Africa	5
Bolivia, Plurinational St.	34.11	94	Lower-middle income	Latin America and the Caribbean	15
Ghana	32.97	95	Lower-middle income	Sub-Saharan Africa	6
El Salvador	32.74	96	Upper-middle income	Latin America and the Caribbean	16
Gambia	32.48	97	Low income	Sub-Saharan Africa	7
Kenya	31.66	98	Lower-middle income	Sub-Saharan Africa	8
Morocco	31.53	99	Lower-middle income	Northern Africa and Western Asia	17
Eswatini	30.87	100	Lower-middle income	Sub-Saharan Africa	9
Lao PDR	30.83	101	Lower-middle income	Eastern, Southeastern Asia and Oceania	14
Algeria	30.56	102	Lower-middle income	Northern Africa and Western Asia	18
India	30.37	103	Lower-middle income	Central and Southern Asia	5
Guatemala	30.16	104	Upper-middle income	Latin America and the Caribbean	17
Honduras	29.71	105	Lower-middle income	Latin America and the Caribbean	18
Cambodia	29.69	106	Lower-middle income	Eastern, Southeastern Asia and Oceania	15
Nepal	29.37	107	Lower-middle income	Central and Southern Asia	6
Zambia	29.32	108	Lower-middle income	Sub-Saharan Africa	10
Pakistan	28.72	109	Lower-middle income	Central and Southern Asia	7
Rwanda	28.71	110	Low income	Sub-Saharan Africa	11
Côte d'Ivoire	28.67	111	Lower-middle income	Sub-Saharan Africa	12
Senegal	28.62	112	Lower-middle income	Sub-Saharan Africa	13
Benin	28.45	113	Lower-middle income	Sub-Saharan Africa	14
Nigeria	28.12	114	Lower-middle income	Sub-Saharan Africa	15
Nicaragua	28.05	115	Lower-middle income	Latin America and the Caribbean	19
Iran, Islamic Rep.	28.03	116	Lower-middle income	Central and Southern Asia	8
Zimbabwe	26.16	117	Lower-middle income	Sub-Saharan Africa	16
Cameroon	25.91	118	Lower-middle income	Sub-Saharan Africa	17
Uganda	25.71	119	Low income	Sub-Saharan Africa	18
Malawi	25.68	120	Low income	Sub-Saharan Africa	19
Tanzania, United Rep.	25.33	121	Lower-middle income	Sub-Saharan Africa	20
Lesotho	24.96	122	Lower-middle income	Sub-Saharan Africa	21
Bangladesh	24.91	123	Lower-middle income	Central and Southern Asia	9
Burundi	23.46	124	Low income	Sub-Saharan Africa	22
Madagascar	23.10	125	Low income	Sub-Saharan Africa	23
Mauritania	23.09	126	Lower-middle income	Sub-Saharan Africa	24
Mali	22.02	127	Low income	Sub-Saharan Africa	25
Guinea	21.87	128	Lower-middle income	Sub-Saharan Africa	26
Burkina Faso	20.55	129	Low income	Sub-Saharan Africa	27
Angola	20.43	130	Lower-middle income	Sub-Saharan Africa	28
Mozambique	20.40	131	Low income	Sub-Saharan Africa	29
Ethiopia	19.77	132	Low income	Sub-Saharan Africa	30
Congo, Dem. Rep.	17.57	133	Low income	Sub-Saharan Africa	31
Chad	14.78	134	Low income	Sub-Saharan Africa	32

Figure 2
GTCI scores versus GDP per capita



Note: GDP per capita in PPP\$ and population data (represented by the size of the bubbles) are drawn from the World Bank's World Development Indicators database. The trend line is a polynomial of degree two ($R^2 = 0.85$).

Figure 2 (continued)

GTCI scores versus GDP per capita: ISO-2 country codes

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

LONGER-TERM TRENDS IN TALENT COMPETITIVENESS

This fifth time-series analysis of the GTCI reaffirms the longer-term trends identified in previous reports. Above all, it underscores that the most talent-competitive countries are not only better at developing, attracting, and empowering human capital, but these trends also indicate that they are pulling away from less talent-competitive countries. In a word, talent inequalities are widening.

The approach used to analyse how talent competitiveness has changed over time follows the general approach of previous editions—that is, it compares performances in the GTCI over two periods. However, since this edition marks the tenth anniversary of the GTCI, the comparison is made with respect to the two halves over the past decade, rather than over two shorter periods as in the previous editions. The two periods being compared are GTCI 2013–GTCI 2018 and GTCI 2019–2023.² Focusing on the averages from these longer periods has several advantages. For example, 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 the GTCI.³

In terms of country coverage, countries that have been included in two of the five years that make up a period have been included in the time-series analysis. For this edition, this means that a total of 113 countries are included, and all four income groups are represented: 48 are classified as high-income countries, 32 are upper-middle-income countries, 26 are lower-middle-income countries, and seven are low-income countries. The regional breakdown, meanwhile, is as follows: six are in Central and Southern Asia; 13 in Eastern, Southeastern Asia and Oceania; 38 in Europe; 18 in Latin America and the Caribbean; 19 in Northern Africa and Western Asia; two in Northern America; and 17 in Sub-Saharan Africa.

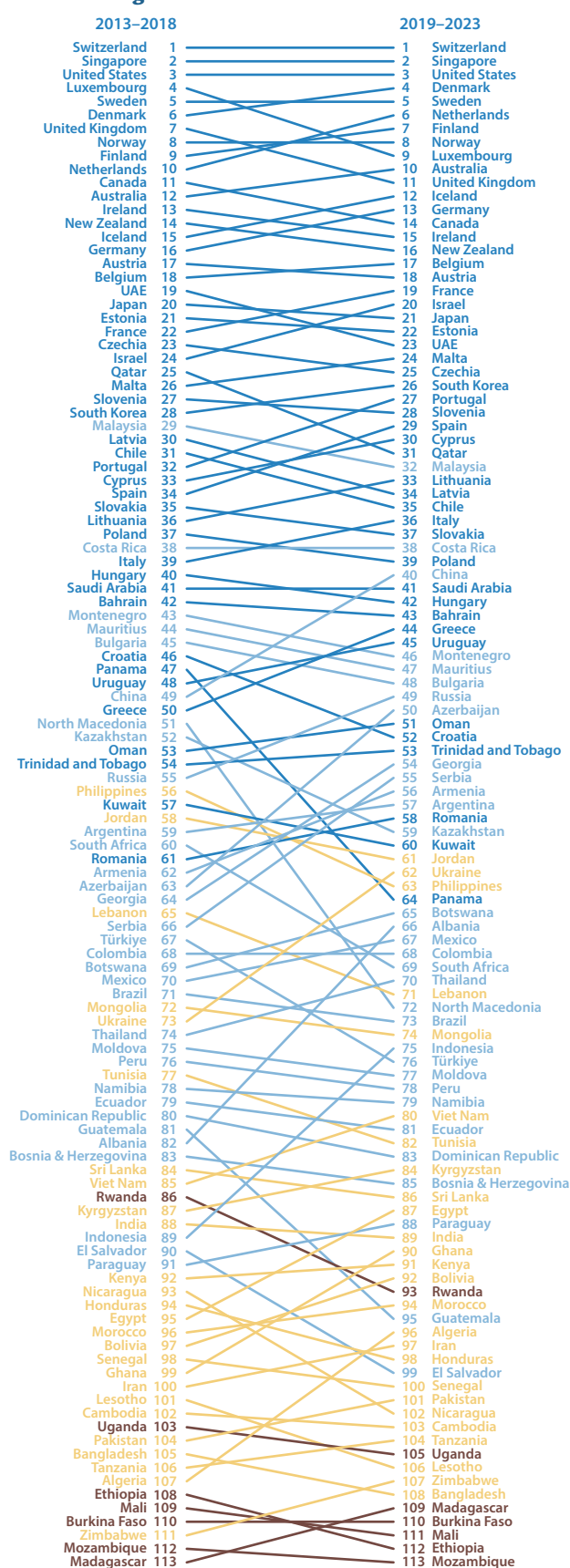
The calculation of the averages of the two five-year periods is based on the GTCI scores that the countries have achieved. More specifically, the calculation comprises two steps: (1) averaging overall scores for GTCI 2013–GTCI 2018 and GTCI 2019–GTCI 2023 periods, and (2) computing country rankings based 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, in which five-year average rankings are computed based on ranks (rather than scores) of countries in different GTCI editions, is used to corroborate the findings.⁴

Attracting and Growing Talent Are Key for Talent Movers

Figure 3 shows how the relative positions of countries in the GTCI have changed in the two periods, GTCI 2013–GTCI 2018 and GTCI 2019–GTCI 2023. The left-hand and right-hand columns rank the countries according to their GTCI scores in the earlier and

Figure 3

GTCI rankings in 2013–2018 and 2019–2023



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).

later period, 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.

An interesting feature of Figure 3 is that the criss-crosses become increasingly prevalent as one's eyes move from top to bottom. This implies that less talent-competitive countries tend to experience greater fluctuations in ranks over the long term than more talent-competitive countries. Indeed, the ranks of the top-three performers in the GTCI remained the same in both periods. They are, in descending order: Switzerland, Singapore, and the United States. In another example, 14 countries in the upper half of the rankings in the earlier period saw their rank remain the same or change by only one position in the later period. For countries in the lower half of the rankings, only seven experienced similarly small movements.

What might be the underlying reasons for this tendency? The strong association between talent competitiveness and income level could be one factor: just as better performers in the GTCI (typically high-income countries) are more stable in their talent competitiveness over time, high-income countries tend to experience less volatility than countries of lower income levels. Another plausible explanation is that the set of policies and practices that bring about greater talent competitiveness are more stable and less susceptible to political and socioeconomic fluctuations. Viewed in this light, it will be interesting to see in the years ahead whether the tendency of lower fluctuations higher up in the rankings will remain as strong against a backdrop of greater political and socioeconomic uncertainties in the world, including in high-income countries.

Given that large changes in the rankings are more common further down the rankings, it will not come as a surprise that the greatest improvers in the GTCI over the past decade are lower-middle-income and upper-middle-income countries. The three countries that climbed the most over the two periods are Albania, Indonesia, and Azerbaijan, which jumped by 16, 14, and 13 positions, respectively. All of them made particular strides with respect to Vocational and Technical Skills. Albania and Azerbaijan also considerably improved their ability to Attract talent, whereas Indonesia is also notable for strengthening its enabling environment and the ability to Retain talent.

Analysing pillar-level performances of all the top-10 talent improvers⁵ reveals that all of them improved their average ranks in the pillars Attract and Grow. Nine of the ten countries had their average ranks rise with respect to the enabling environment, while eight countries saw improvements in the ranks that relate to Vocational and Technical Skills. As for the remaining pillars—Retain and Global Knowledge Skills—six of the top-10 talent improvers enjoyed better ranks in the later period.

The Dynamics of Talent Competition Are Changing

As outlined in the special introduction, the global competition for talent has changed in both its nature and its modalities. Post-COVID, the competition for talent relies more on online cooperation, and focuses on specific, strategic areas in which demand

is expected to grow or where the availability of new skills still lags local or global needs. National economies have prioritised different aspects of talent strategies in accordance with their own mix of comparative advantages and disadvantages. Some place particular emphasis on education and training of their own workforce, while others are trying to attract and retain the talent that best fits the pursuit of key national goals, be that competitiveness, innovation, sustainability or some other ambition.

Regular readers of GTCI will recognise Figure 4 from previous editions. It shows the longer-term path followed by countries covered by the index over the past ten years, and describes how talent performance changes over longer periods of time—thus eliminating some of the noise created by year-on-year changes.

However, as described above, for this tenth-anniversary edition, two periods are being compared.

Many important insights can be gathered from this type of analysis, not least the following, which indicate that emerging countries are the core engine of changing talent dynamics.

- Several of the largest emerging economies are among the best improvers over the past decade: China and Russia have moved from being talent movers to talent champions; Indonesia remains a talent mover, but is one of the countries with the greatest strides in talent competitiveness over the past decade; Mexico has moved from being a talent laggard to a talent mover; Brazil is still among the talent laggards, but it has progressed within that quadrant and may well soon be categorised as a talent mover. All these five countries have in common an improvement in their ability to Retain talent.
- The share of countries from Latin America and Western Asia that are talent champions has increased since GTCI 2020. In GTCI 2020, Latin America represented 3% of the top-right quadrant. That rose to 6% in GTCI 2023. Similarly, Western Asia represented 9% of talent champions in GTCI 2020, but 13% in GTCI 2023. Conversely, the share of countries in Europe, Northern America, and Eastern, Southeastern Asia and Oceania has decreased over the same period.

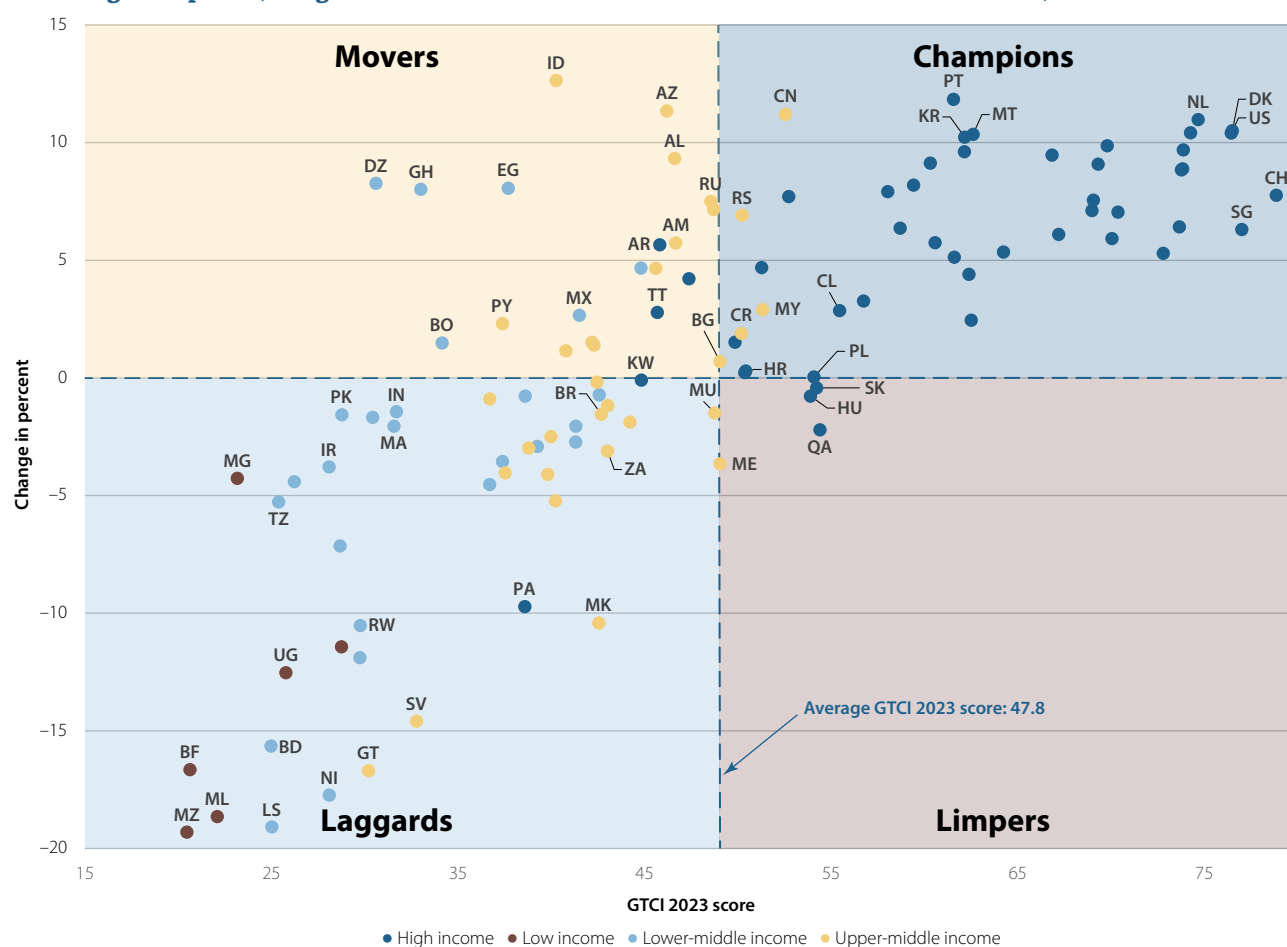
Talent Champions Continue to Pull Away from the Rest

The main finding in the long-term analyses of previous editions is that the gap between the most talent-competitive countries and the rest is widening. This finding remains just as valid in this year's GTCI, which extends the long-term analysis to ten years. Figure 5 makes this visually clear, showing how the distribution of scores has changed in the four income groups over the two five-year periods. It can be seen that there has been a notable upward shift for the high-income group, whereas the trend is the opposite for the lower-middle-income and low-income groups. Scores in the upper-middle-income group have been fairly steady over the two periods.

Taking the analysis one step further, looking at pillar-level performances by income group paints a broadly similar picture. That is, higher-income groups have generally outpaced

Figure 4

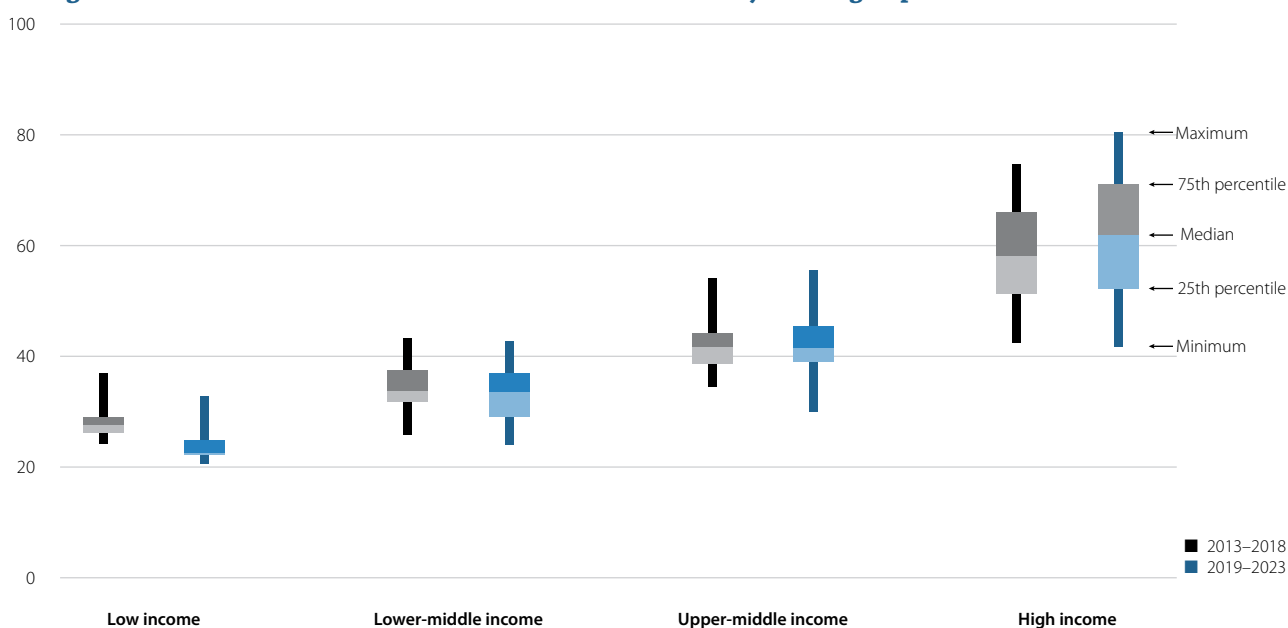
GTCI long-term paths (change in scores for GTCI 2013–2018 vs 2019–2023 and GTCI 2023 score)



Note: A complete ISO-2 country code key can be found as part of Figure 2, page 20.

Figure 5

Average scores in GTCI 2013–GTCI 2018 and GTCI 2019–GTCI 2023 by income group



Note: Black bars indicate GTCI 2013–GTCI 2018 values and blue bars indicate GTCI 2019–GTCI 2023 values.

lower-income groups in each pillar during the past decade. Looking at relative pillar-level performances within each income group, they have generally been similar across all pillars in the high-income group over the past ten GTCI editions, although high-income countries seem to have a slight advantage in both the ability to Retain talent and in Global Knowledge Skills. As for upper-middle-income countries, there has been a convergence of pillar performances, which is reflected in the more narrow range of median ranks seen in GTCI 2023 than in GTCI 2013. This suggests that talent competitiveness has become more balanced in upper-middle-income countries in the past decade. Lower-middle-income countries have frequently performed comparatively well in the two Output-related pillars—Vocational and Technical Skills and Global Knowledge Skills—whereas Enable and Grow have often been among the weakest pillars in this income group. As for low-income countries, Attract has been the strongest pillar in every GTCI edition without exception.

The trends are similar from a regional perspective (Figure 6). The higher-scoring regions—Eastern, Southeastern Asia and Oceania; Europe; Northern Africa and Western Asia; and Northern America—have improved their medians and means over the two periods, while Central and Southern Asia, Latin America and the Caribbean, and Sub-Saharan Africa have seen their corresponding values decline.

In terms of pillar-level performances within regions, Europe and Northern America have been the highest-ranked regions in all pillars in every GTCI edition. However, Europe has consistently enjoyed a particular advantage in its ability to Retain talent, while Northern America has been especially strong in growing talent

throughout the decade. The two pillars that stand out in Eastern, Southeastern Asia and Oceania are Grow and Global Knowledge Skills, which have been that region's best-performing pillars in almost every GTCI edition. The most consistently strong pillar in the Northern Africa and Western Asia region refers to the enabling environment, but the greatest improvement relates to the ability to Attract talent—the region's weakest pillar at the beginning of the decade and its strongest pillar at the end of it. Latin America and the Caribbean has done well in the Attract and Grow pillars throughout the decade and it has also improved the ability to Retain talent. Central and Southern Asia has consistently maintained an advantage with respect to retaining talent, but there has been a clear deterioration in the region's ability to Enable and Attract talent. As for Sub-Saharan Africa, Attract has been the best-performing pillar in the region by far, although this advantage has weakened over time, especially in the past few years. The weakest pillar in the region has frequently been the ability to Retain talent.

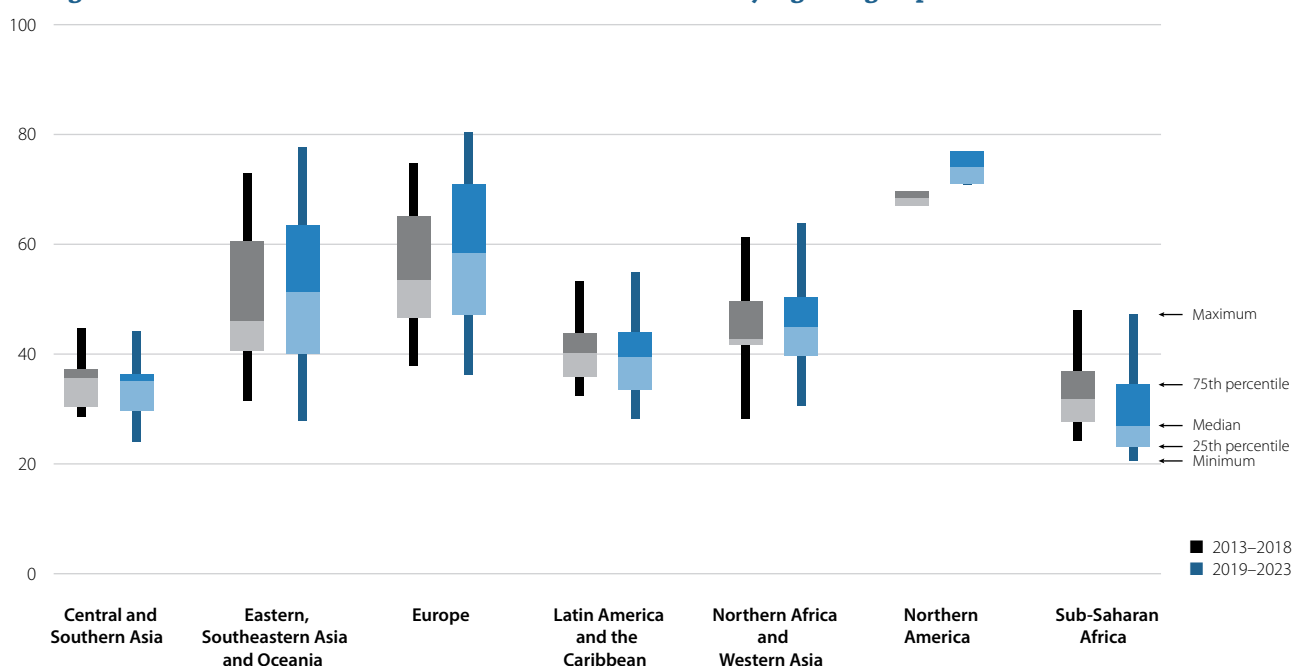
Main Findings from GTCI 2023

- **The talent champions are consistently strong in all, or almost all, dimensions of talent competitiveness.**

A constant theme throughout the GTCI is that the best performers do well in virtually all pillars. Switzerland, the global leader in all editions, is the talent champion *par excellence* in this regard. The same characteristic also applies to regions: Europe and Northern America outperform other regions in all pillars, on average.

Figure 6

Average scores in GTCI 2013–GTCI 2018 and GTCI 2019–GTCI 2023 by regional group



Note: Black bars indicate GTCI 2013–GTCI 2018 values and blue bars indicate GTCI 2019–GTCI 2023 values. The plots for Northern America are without wide bars because they only contain two countries: Canada and the United States.

- **The talent champions have a particular edge in their ability to Retain talent and in their Global Knowledge Skills.** Although the most talent-competitive countries outshine other countries in their consistent all-round performance, the gap between them is particularly wide with respect to the Retain and Global Knowledge Skills pillars. In other words, it is primarily the performances in these pillars that seem to set the talent champions apart from the rest.
- **The countries making the most headway in the past decade have strengthened the ability to Attract and Grow talent.** The ten countries that have made the greatest strides in strengthening their talent competitiveness over the past decade—the talent improvers—have frequently made progress in several pillars. However, there are two pillars where all of them have seen improvements: Attract and Grow. Countries looking to emulate the progress of the talent improvers should therefore ensure that supporting these pillars are part of their efforts to strengthen talent competitiveness.
- **The top performers among middle-income countries typically have a favourable enabling environment for nurturing talent.** Although the highest-ranked middle-income countries sometimes differ in their particular strengths, many of them have in common a conducive enabling environment for talent. Several of the top performers also have strong pools of Vocational and Technical Skills.

ENDNOTES

- 1 See Cappelli & Keller (2014); Stahl et al. (2012).
- 2 The question arises as to why GTCI 2013–GTCI 2018 covers five editions rather than six. The reason for the apparent discrepancy is that the print year of the report has not always matched the launch year. More specifically, the GTCI reports are always printed towards the end of the calendar year and the first two editions of the GTCI referred to this in their titles (*The Global Talent Competitiveness Index 2013* and *The Global Talent Competitiveness Index 2014*). However, because the launch of the report used to be held in January, a change was made in the third edition, whereby the title would refer to the launch year. Thus, the third edition became *The Global Talent Competitiveness Index 2015–16* and subsequent editions have had the launch year included in the title.
- 3 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 potential problem is addressed by averaging the scores across five years, as this 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.
- 4 More concretely, the country with the best average rank for a five-year period would be ranked 1st, the country with the next-best rank would be ranked 2nd, and so on.
- 5 In descending order of improvement in rank over the two periods: Albania (from 82nd to 66th), Indonesia (89th to 75th), Azerbaijan (63rd to 50th), Serbia (66th to 55th), Ukraine (73rd to 62nd), Algeria (107th to 96th), Georgia (64th to 54th), China (49th to 40th), Ghana (99th to 90th), and Egypt (95th to 87th).

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- Stahl, G. K., Björkman, I., Farndale, E., Morris, S., Paauwe, J., Stiles, P. & Wright, P.M. (2012). Six Principles of Effective Global Talent Management. *Sloan Management Review*, 53, 25–42 (January 2012).

<https://journals.aom.org/doi/abs/10.5465/amd.2022.0028>

Statistical Annex to Chapter 2

OVERVIEW

This annex analyses country performance in terms of overall score in the GTCI, as well as performance in individual pillars and sub-pillars. Performance data are broken down in different ways: by top performers (the top 15 GTCI score leaders), by region, and by income group (high, upper-middle, lower-middle, and low income).¹ Also included is a comparative analysis of the BRICS countries (Brazil, Russia, India, China and South Africa).

In total, there are 134 countries included in this year's GTCI, up from last year's 133. Of these, 49 are high-income countries, 34 are upper-middle-income countries, 39 are lower-middle-income countries, and 12 are low-income countries. The regional distribution, meanwhile, is as follows: nine countries are in Central and Southern Asia; 15 countries are in Eastern, Southeastern Asia, and Oceania; 39 are in Europe; 19 are in Latin America and the Caribbean; 18 in Northern Africa and Western Asia; two countries are in Northern America; and 32 are in Sub-Saharan Africa. All countries that were covered in the GTCI 2022 remain in this year's edition. Uzbekistan is the addition to the 2023 index, the first time it is included in the GTCI.

Figure A1 presents the dispersion of GTCI scores by income group and by region. In terms of income group, the left-hand

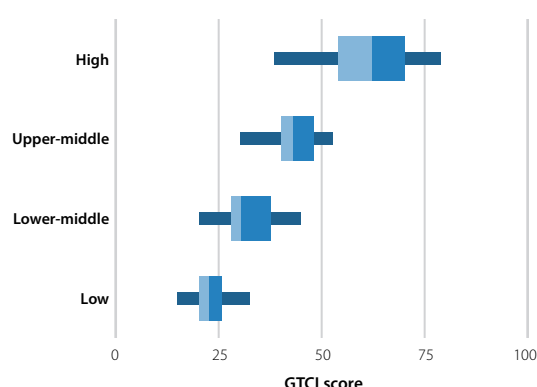
panel (1a) illustrates the positive relationship between GTCI score and GDP per capita. More specifically, high-income countries outperform upper-middle-income countries in all percentiles. The same is true of lower-middle-income countries and low-income-country groups. The dominance of high-income countries in the GTCI is particularly striking: indeed, the score at the 25th percentile of the high-income group exceeds the best-performing country in the upper-middle-income group.

As for performance by region, as the right-hand panel in Figure A1 (1b) shows, scores here also reflect income level. Thus, Northern America and Europe—which have the greatest shares of high-income countries—are the two best-performing regions, followed by Eastern, Southeastern Asia and Oceania. Conversely, the two regions with the greatest shares of low-income and lower-middle-income countries—Sub-Saharan Africa and Central and Southern Asia—are also the two worst-performing regions. In addition, performance by region is also a function of the number of countries within each region. For instance, the region with the highest number of countries, Europe, has a wide dispersion of scores, even though it only includes upper-middle-income and high-income countries.

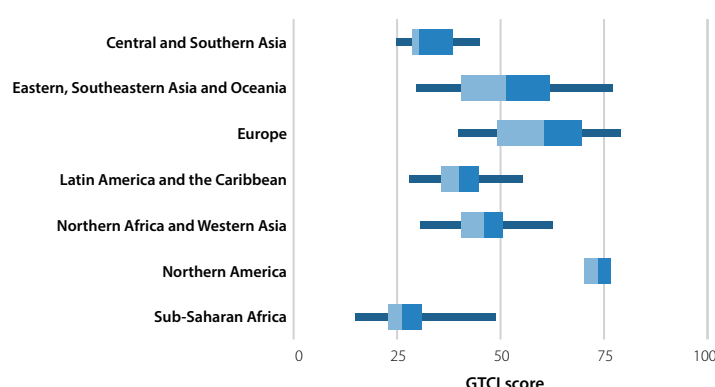
Figure A1

Country dispersion of GTCI scores

1a: By income group



1b: By region



Minimum 25th percentile Median 75th percentile Maximum

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

At the country level, year-on-year changes in rankings are to be expected given updates to data and refinements of the GTCI model. These changes tend to be small, with only a few countries experiencing dramatic climbs or falls in the rankings. However, the past few years have seen greater fluctuations than usual, due to the impact of the COVID pandemic on labour markets and the methodological changes to the GTCI (a response to the discontinuation of certain indicators). This year's GTCI rankings mark a return to greater stability, as would be expected now that COVID is no longer seen as an international public health concern,² and because most indicators populating the GTCI are unchanged since last year. A notable consequence is that only two countries in the GTCI 2023 saw their rankings move by 10 places or more, whereas GTCI 2022 saw 18 countries experience this kind of change in their rankings.

A constant in the GTCI over the past decade has been the dominance of European countries in the top 25, and GTCI 2023 is no exception. Switzerland, the world's most talent-competitive country in every edition, remains firmly in the top spot. All Nordic countries but one make it into the top 10 (Denmark in 4th place; Finland, 6th; Norway, 7th; and Sweden, 9th). Iceland is the exception, at 15th). Western European countries, such as the Netherlands in 5th place, the United Kingdom in 10th, and Luxembourg at 11th, are also among the top performers.

Four other regions are represented in the top 25: Northern America (United States of America ranks 3rd; Canada 13th); Eastern and Southeastern Asia (Singapore, in 2nd; South Korea in 24th); Oceania (Australia 8th; New Zealand 18th); and Western Asia (the United Arab Emirates at 22nd; Israel 25th).

Some of the differences in GTCI scores are driven by divergent performance in particular pillars (Figure A2). For example, dispersion in the Retain pillar is greater than in the Attract pillar, which suggests that the ability to retain talent varies much more than the ability to attract it. Similarly, ranking for Global

Knowledge Skills is more varied than for Vocational and Technical Skills—although less evident in the figure—an indication that higher-level skills and their impact are what primarily set countries apart, rather than more specialised, technical skills.

A detailed overview of country-level performances is shown in Figure A3, a heatmap that presents the rankings in the GTCI overall and in each pillar, and which is shaded by the quartile to which the rankings of each of the 134 countries belong. As the heatmap indicates, there is a certain degree of complementarity across pillars, with performances in various pillars seeming to be mutually reinforcing. That is, a strong performance in one pillar is associated with positive showings in the others—and vice versa for weak performances. To give a specific example, countries ranked in the top quartile overall are typically also ranked in the top quartile in each of the six pillars (they account for 88 percent of top-quartile performances at the pillar level). The same pattern is seen among countries ranked in the bottom quartile overall (where they account for 82 percent of bottom-quartile performances at the pillar level).

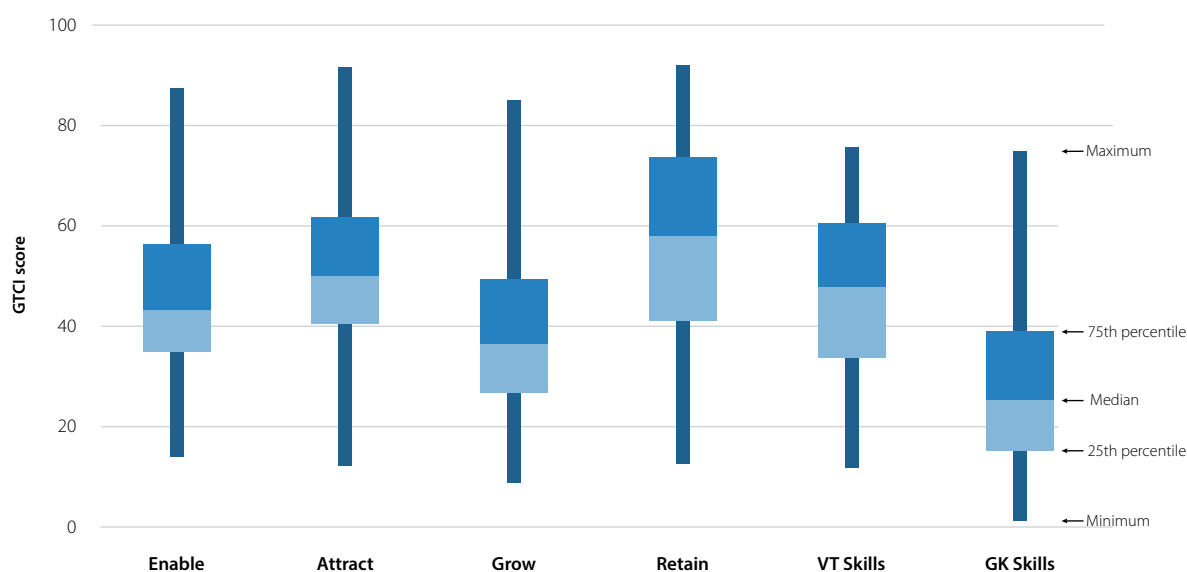
TOP 15 COUNTRIES IN THE GTCI 2023

The top 15 in the GTCI has remained relatively stable over the past decade. Eighteen countries have featured among the top 15 countries on at least one occasion; 12 of them have made this group of best performers in all ten GTCI editions.

Switzerland has ranked as the world's most talent-competitive country ever since the GTCI was launched in 2013, and this year is no different. Similarly, Singapore remains in 2nd place, a position it has held in every edition apart from GTCI 2020. The United States climbs one place and returns to the top three, which it has made five times in the past ten years. Denmark, 3rd last year, drops to 4th this year, although its score is only slightly lower than that of the United States. Last year marked the second time that Denmark had featured in the top three.

Figure A2

Dispersion of country scores for each pillar



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

Figure A3

Rankings in the 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	3	5	1	2	10
Singapore	2	7	2	3	38	3	1
United States	3	4	22	1	15	1	5
Denmark	4	2	7	8	2	8	9
Netherlands	5	5	8	4	10	12	16
Finland	6	3	9	13	4	4	17
Norway	7	8	14	12	3	7	7
Australia	8	15	6	6	14	19	3
Sweden	9	6	11	14	7	10	6
United Kingdom	10	12	13	2	11	29	2
Luxembourg	11	13	1	22	9	18	12
Ireland	12	20	5	10	13	23	15
Canada	13	16	10	9	28	16	18
Germany	14	10	15	16	6	6	23
Iceland	15	18	18	23	12	11	4
Belgium	16	17	19	11	24	14	20
Austria	17	14	17	19	5	5	25
New Zealand	18	11	12	20	22	57	11
France	19	19	25	7	19	25	21
Estonia	20	22	24	29	18	33	13
Malta	21	33	20	33	8	49	19
United Arab Emirates	22	23	4	17	59	28	32
Czech Republic	23	25	27	26	21	9	28
South Korea	24	21	59	28	29	27	8
Israel	25	24	44	43	25	13	14
Japan	26	9	42	21	23	39	33
Portugal	27	30	16	25	20	48	24
Slovenia	28	32	32	27	26	17	26
Spain	29	26	26	18	17	63	31
Cyprus	30	41	21	47	16	37	22
Lithuania	31	27	31	36	27	46	27
Italy	32	29	40	24	31	30	38
Latvia	33	36	35	40	33	34	29
Chile	34	37	34	35	34	44	42
Qatar	35	28	23	32	77	21	65
Slovakia	36	42	51	52	32	24	39
Poland	37	43	73	37	40	22	36
Hungary	38	44	47	51	37	32	35
Greece	39	54	43	39	30	66	40
China	40	31	91	15	74	47	43
Brunei Darussalam	41	51	54	46	49	26	45
Malaysia	42	35	71	44	66	38	34
Uruguay	43	34	36	34	36	69	76
Bahrain	44	46	29	30	69	56	63
Croatia	45	56	74	63	35	51	37
Georgia	46	47	38	71	45	36	60
Costa Rica	47	40	28	38	52	68	74
Saudi Arabia	48	48	39	53	80	20	57
Bulgaria	49	52	86	62	39	50	47
Montenegro	50	63	33	86	42	42	49
Mauritius	51	39	37	78	41	52	77
Russia	52	78	84	31	56	43	41
Serbia	53	62	48	58	58	41	51
Romania	54	69	66	67	43	45	56
Armenia	55	70	41	91	44	54	53
Albania	56	55	50	54	51	64	82
Belarus	57	106	81	65	47	40	44
Azerbaijan	58	67	45	79	62	15	95
Oman	59	49	61	56	64	59	85
Trinidad and Tobago	60	85	49	77	46	35	84
Argentina	61	91	63	42	48	67	75
Uzbekistan	62	76	65	100	53	31	64
Kuwait	63	60	30	84	60	75	70
Ukraine	64	75	57	68	50	77	50
Moldova	65	88	60	72	57	60	62
Jamaica	66	50	55	81	79	58	79
Kazakhstan	67	93	56	70	54	122	30

(continued on next page)

Figure A3 (continued)

Rankings in the 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							
South Africa	68	57	53	69	82	93	58
Brazil	69	61	88	60	68	74	69
Jordan	70	45	77	85	61	78	80
North Macedonia	71	80	83	88	55	61	67
Colombia	72	71	70	45	86	73	66
Botswana	73	38	82	93	72	96	55
Mexico	74	81	98	41	65	79	72
Viet Nam	75	59	72	55	98	71	71
Mongolia	76	72	69	73	73	100	48
Lebanon	77	97	79	66	89	70	46
Cabo Verde	78	53	75	106	70	76	73
Thailand	79	65	92	61	83	81	68
Indonesia	80	58	106	64	84	65	100
Türkiye	81	90	107	50	81	80	61
Peru	82	83	68	48	88	85	86
Bosnia and Herzegovina	83	98	94	80	71	62	87
Philippines	84	89	102	49	92	86	54
Ecuador	85	96	95	57	78	83	98
Kyrgyzstan	86	112	52	105	76	72	81
Panama	87	87	76	76	63	101	93
Egypt	88	82	110	75	93	55	91
Dominican Republic	89	64	67	97	91	92	88
Sri Lanka	90	73	122	87	85	53	96
Paraguay	91	104	58	101	67	98	99
Tunisia	92	77	121	94	75	107	59
Namibia	93	68	64	89	87	91	115
Bolivia	94	113	116	59	95	105	89
Ghana	95	66	90	95	111	88	112
El Salvador	96	109	118	82	97	82	104
Gambia	97	101	46	98	103	114	119
Kenya	98	95	105	92	114	90	94
Morocco	99	79	108	109	101	117	90
Eswatini	100	99	89	102	106	118	101
Lao PDR	101	86	100	115	116	99	92
Algeria	102	105	126	111	90	103	97
India	103	92	132	90	99	121	83
Guatemala	104	108	127	74	102	104	113
Honduras	105	121	115	83	100	112	110
Cambodia	106	103	85	104	110	115	117
Nepal	107	116	124	120	94	94	103
Zambia	108	107	62	123	126	95	111
Pakistan	109	111	125	99	105	109	107
Rwanda	110	84	87	113	113	126	114
Côte d'Ivoire	111	100	80	103	117	120	116
Senegal	112	94	93	122	107	116	122
Benin	113	74	78	126	130	89	128
Nigeria	114	119	112	118	118	123	52
Nicaragua	115	125	99	110	108	111	105
Iran	116	114	134	96	104	97	78
Zimbabwe	117	129	117	112	122	87	108
Cameroon	118	122	119	107	125	110	102
Uganda	119	118	97	114	131	102	120
Malawi	120	115	109	125	112	108	129
Tanzania	121	102	101	116	119	124	130
Lesotho	122	128	111	129	96	128	118
Bangladesh	123	117	131	124	109	113	109
Burundi	124	131	103	108	129	106	133
Madagascar	125	124	113	117	127	119	124
Mauritania	126	127	129	128	120	84	126
Mali	127	110	123	127	121	131	132
Guinea	128	120	120	119	132	125	127
Burkina Faso	129	123	96	133	124	133	125
Angola	130	130	104	131	123	134	106
Mozambique	131	126	114	132	115	132	131
Ethiopia	132	132	133	121	128	129	121
Congo, Dem. Rep.	133	133	128	130	133	130	123
Chad	134	134	130	134	134	127	134

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

All other countries in this year's top 15 also featured last year. Northern European countries continue to dominate, with the Netherlands, Finland, and Norway immediately following Denmark in the top ten, with Sweden in 9th and Iceland in 15th. All but Iceland, which has made the grade eight times in total, have consistently ranked in the top 15 since 2013. As for the remaining countries, Australia at 8th place, the United Kingdom at 10th, Luxembourg at 11th, and Canada at 13th, all count among the countries that have consistently ranked in the top 15. Ireland, in 12th place this year, and Germany in 14th have featured six and seven times, respectively. The three countries that have previously made the top 15, but fall outside it this year, are: Belgium (now in 16th place), Austria (17th), and New Zealand (18th).

The top 15 performers also dominate all six pillars of the GTCI, which is further evidence that there are feedback loops across different areas of talent competitiveness. As can be seen in Table A1, the top three countries in each pillar also feature among the top 15 countries in the overall index. Switzerland, for instance, is the global leader in terms of enabling and retaining talent and is also a top-three performer in both the Attract pillar and the Vocational and Technical Skills pillar. The second-most talent-competitive country, Singapore, likewise features in the top three in four pillars, including 1st position for Global Knowledge Skills. The United States is the best performer in two pillars, Grow and Vocational and Technical Skills, while Luxembourg tops the Attract pillar.

Analysing performances across pillars suggests that the top 15 countries are especially strong in the Input-related pillars. Thirteen of them count among the top 15 countries in the Attract and Retain pillars, and 12 of them do so in the Enable and Grow pillars. The equivalent count for the two Output-related pillars—Vocational and Technical Skills and Global Knowledge Skills—is 10 and 11 countries, respectively.

However, there are also several countries that, although ranked outside top 15, do make it as top performers in specific pillars. For example, Austria has the fifth-highest score in the Retain and in the Vocational and Technical Skills pillars. The United Arab Emirates is ranked 22nd overall, but has one of the best scores in the Attract pillar, while Japan (26th overall), France (19th), and Malta (21st) are among the top 10 performers in the Enable, Grow, and Retain pillars, respectively. Two other countries

that shine in specific pillars are the Czech Republic (ranked 23rd overall) in Vocational and Technical Skills and South Korea (24th overall) in Global Knowledge Skills.

Individual country analyses

Switzerland (1st) is at the top of the GTCI rankings this year, just as it has been every year since the index was launched ten years ago. The one aspect of Switzerland's talent competitiveness that makes it stand out is its impressive performances in multiple pillars and sub-pillars. It features in the top 10 in all six pillars, for example, and is the global leader in the Enable and Retain talent pillars. It ranks 2nd in Vocational and Technical Skills, thanks to the high relevance of its education system to its economy, and 3rd in the Attract pillar. As for the 14 sub-pillars, it is in the top 10 in all but two. Above all, Switzerland ranks 1st in Sustainability, which can be attributed to its high levels of social protection and the quality of its natural environment. The two lowest-ranked sub-pillars are Access to Growth Opportunities and High-Level Skills (it is ranked 15th in each case). In the former sub-pillar, there is scope to increase the use of virtual professional networks. In the latter sub-pillar, there is room to expand tertiary educated employees in the workforce.

Singapore (2nd) has earned its 2nd-place ranking in almost all GTCI editions and this year is no different (GTCI 2020 was the exception). Above all, it is a global leader in Global Knowledge Skills, where its highly-educated labour force and innovative economy contribute to its top rank in the High-Level Skills and Talent Impact sub-pillars. The city-state also makes it into the top three in the following pillars: Attract, Grow, and Vocational and Technical Skills (2nd, 3rd, and 3rd respectively). In these pillars, its top-ranked Formal Education, its ability to match workforce supply and labour market demand (it is 2nd in Employability), and its 4th-placed ranking for External Openness towards overseas business and talent are particularly impressive. The country's main weakness (36th position) remains its ability to Retain talent: greater personal rights and physician density would improve its ranking (currently 37th) in the Lifestyle sub-pillar.

The United States (3rd) returns to the GTCI top three, after being ranked 4th in 2022. This means that this year's top three reflects the most common grouping over the past decade: Switzerland, Singapore, and the United States have made up the top three in half of all GTCI editions. The United States is the global leader in two pillars: Grow and Vocational and Technical Skills. In terms of growing talent, its world-class universities and business schools contribute to its excellent 2nd place Formal Education and 1st-ranked Lifelong Learning. As for Vocational and Technical Skills, the country's high labour productivity and ease of finding skilled employees translate into 6th-place rankings for both Mid-Level Skills and Employability. The country's weakest pillar (22nd) is Attract, which would benefit both from greater External Openness towards overseas business and talent (where it ranks 24th) and from increased Internal Openness towards domestic human capital (17th), including greater gender equality.

Denmark (4th) drops out of the top three after a year, although its score is only just below that of the United States in 3rd place. This marks the seventh time that the country has

Table A1

Countries with highest scores, by pillar

PILLAR	TOP-RANKING COUNTRIES
Enable	Switzerland, Denmark, Finland
Attract	Luxembourg, Singapore, Switzerland
Grow	United States, United Kingdom, Singapore
Retain	Switzerland, Denmark, Norway
Vocational and Technical (VT) Skills	United States, Switzerland, Singapore
Global Knowledge (GK) Skills	Singapore, United Kingdom, Australia

ranked among the five most talent-competitive countries. As in previous years, strong performances across all pillars of the GTCI make Denmark an impressive force in talent competition. Its highest-ranked pillars are Enable and Retain (2nd in both), thanks to top-10 performances in all associated sub-pillars. In all remaining pillars, Denmark features in the top 10: it is 7th in Attract, 8th in both Grow and Vocational and Technical Skills, 9th for Global Knowledge Skills. Of particular note is Denmark's high degree of Internal Openness, for which it is ranked 3rd overall, which is primarily due to its merit-based opportunities for upward mobility and strong gender equality. It is also ranked 3rd for providing Access to Growth Opportunities, including through extensive delegation of authority to subordinates.

The Netherlands (5th) achieves its highest-ever rank in the GTCI this year and enters the top five for the first time. As in last year's edition, it ranks higher in the Input-related pillars than in the two Output-related pillars. Its highest rank (4th) is in the Grow pillar, where contributing factors include the high quality of the tertiary education and 4th-place ranking for Formal Education, the extensive training in firms which help place it 7th for Lifelong Learning, and widespread use of virtual networks (it is 4th in Access to Growth Opportunities). The Netherlands also boasts an impressive ability to Enable talent (ranked 5th), with excellent showings in all three related sub-pillars. Its two lowest rankings are for Vocational and Technical Skills and Global Knowledge Skills (12th and 16th respectively). In the case of Vocational and Technical Skills, its 13th place in Employability is offset by its 27th ranking in lower Mid-Level Skills. As for Global Knowledge Skills, its innovation capabilities help push it to 15th in the Talent Impact sub-pillar.

Finland (6th) climbs two positions to 6th, matching its highest ever rank in the GTCI, which it also achieved in 2018 and 2019. In particular, the country stands out for its global leadership position in two sub-pillars: Business and Labour Landscape, and Internal Openness. Combined with a 2nd-placed Regulatory Landscape, the strong Business and Labour Landscape has helped create an excellent ability to Enable talent, and a 3rd-place ranking in this pillar. Internal Openness contributes to Finland's 9th position in the Attract pillar, but is offset by its 28th position in the External Openness towards overseas talent sub-pillar. Finland is among the top-performing countries for ability to Retain talent and for its pool of Vocational and Technical Skills (4th in both pillars). Key assets include its world-class environmental performance and social welfare system, which contribute to its 3rd position in the Sustainability sub-pillar. In addition, Finland's much-lauded Formal Education system is ranked 7th overall (reflecting its high scores in PISA—the Programme for International Student Assessment). As it is highly relevant to the needs of the economy, it also contributes towards its 8th-place ranking for Employability. However, its 13th position in the Grow pillar could improve with more opportunities for Lifelong Learning (currently 25th).

Norway (7th) retains its position from last year, which is the sixth time that it features in the top 10 in the GTCI (it has been in the top 15 every year). Norway's performance in the Retain

pillar (3rd) is particularly impressive. It is partly driven by wide access to social protection and benefits, which help it achieve 5th position for Sustainability, and high levels of personal rights and safety that place it 3rd in the Lifestyle sub-pillar. Norway also shines in the two Output-related pillars: Vocational and Technical Skills and Global Knowledge Skills, ranking 7th in both. Among the Vocational and Technical Skills sub-pillars, it is placed 5th for Employability, thanks to its ability to match workforce supply and labour market demand. As for Global Knowledge Skills, Norway boasts a strong pool of High-Level Skills, including digital skills (ranked 6th). As in previous years, Norway's lowest pillar ranking (14th) is for Attract, despite its high level (ranked 6th) of Internal Openness. More could be done to encourage a greater inflow of overseas business and talent, which would raise the degree of External Openness, and improve on its current 27th ranking in this sub-pillar.

Australia (8th) has always featured in the top 15 in the GTCI, but this year it climbs one place to 8th, cementing its position in the top 10 for the fifth time since the launch of the index. The country has contrasting performances in the two Output-related pillars. On the one hand, its pool of Global Knowledge Skills is its highest-ranked pillar (3rd). This in turn is supported by its highest-ranked sub-pillars: High-Level Skills (2nd) and Talent Impact (4th). On the other hand, Australia's pool of Vocational and Technical Skills is its lowest-ranked pillar (19th). Here there is room to improve performance in the Mid-Level Skills sub-pillar (from 31st) and the Employability sub-pillar (from 18th). As for the Input-pillars, Australia's key assets are its ability to Attract and Grow talent (it is ranked 6th in both), which is driven by a high level of External Openness towards overseas talent (in 10th position), the strength of its higher education (5th for Formal Education), and the possibilities for Lifelong Learning (6th).

Sweden (9th) drops to its lowest position in the GTCI, although it remains a top-10 performer. One of the country's highest-ranked pillars (6th) is Enable, with a particularly strong showing (4th) in the Market Landscape sub-pillar, as a result of a strongly competitive environment and high R&D expenditure. Sweden also benefits from a strong pool of Global Knowledge Skills. Its 6th-place ranking in this pillar is due to its 7th place in the High-Level Skills sub-pillar and 10th place in the Talent Impact sub-pillar. These in turn are driven by its innovative economy and a highly-educated population with strong digital skills. The country also excels in the Retain pillar (7th) although a slide in personal rights and safety has had a negative impact on its ranking in the Lifestyle sub-pillar (now 12th). Sweden's lowest-ranked pillar (14th) is Grow, where strengthening business education would improve its position (17th) in the Lifelong Learning sub-pillar.

The United Kingdom (10th) retains its position from last year, meaning it has featured in the top 15 every year since the launch of the GTCI and in the top 10 eight times, including this year. It features in the top three (2nd) for its ability to Grow talent, primarily thanks to the impact of its world-class tertiary education and programmes for Formal Education and Lifelong Learning, for which it is ranked 3rd and 2nd, respectively. The United

Kingdom also achieves 2nd-place ranking in the Global Knowledge Skills pillar, where its highly innovative and entrepreneurial economy result in a large Talent Impact (also 2nd). However, the impressive level of Global Knowledge Skills stands in stark contrast to the country's comparatively weak position (29th) for Vocational and Technical Skills. There is considerable scope to raise its ranking in the Mid-Level Skills sub-pillar (from 44th), and to boost its 20th position for Employability by better matching workforce supply and labour market demand.

Luxembourg (11th) has been in the top 15 since the launch of the GTCI, but this year marks the second time that it falls (just) outside the top 10. As in the previous year, it stands out with its 1st place in the Attract pillar, as well as its superior performance in all five indicators that inform the sub-pillar relating to External Openness towards overseas business and people (also 1st). The country also achieves a top-10 position (9th) in the Retain pillar, where its world-class environmental performance and social welfare contribute to a high (2nd) Sustainability ranking. The main areas in need of improvement relate to the Grow pillar (currently 22nd) and the Vocational and Technical Skills pillar (18th). When it comes to growing talent, Luxembourg is ranked only 39th in the Formal Education sub-pillar because of low tertiary enrolment rates and the level of its universities. As for Vocational and Technical Skills, Luxembourg has room to improve the Employability of domestic talent in the private sector from its current 32nd position.

Ireland (12th) remains in the top 15 in GTCI 2023—climbing one position from last year—which is the sixth time that it has featured in this list of top performers. Ireland's key asset is its ability to Attract talent (ranked 5th), where its 4th-place position for Internal Openness towards minorities and a strong empowerment of women are particular advantages. Ireland also features in the top 10 (10th) in the Grow pillar, which is primarily due to its 7th place for Access to Growth Opportunities and considerable training in firms that encourage Lifelong Learning (10th). The country's weakest position (23rd) is in the Vocational and Technical Skills pillar. Here, boosting the secondary-educated workforce and expanding the number of technicians and associate professionals would go some way to improve the country's 46th position for Mid-Level Skills.

Canada (13th) has featured in the top 15 in every edition of the GTCI, although only twice as a top-10 performer. It features in the top 10 in two pillars: Grow and Attract (ranked 9th and 10th, respectively). In the Grow pillar, the high quality of Canada's business schools and the extensive possibilities for employee development are key factors in securing 8th position in the Lifelong Learning sub-pillar. In the Attract pillar, Canada has a high degree of both External and Internal Openness (ranked 15th and 10th, respectively), including towards talent from overseas. Although the country is a top performer when it comes to matching the skills of people with the needs of the economy, and is 9th in the Employability sub-pillar, its relatively weak ranking (41st) for Mid-Level Skills hampers its pool of Vocational and Technical Skills, such that it is only ranked 16th in this pillar. Canada's greatest challenge lies in strengthening its ability to Retain talent (from

28th), where addressing environmental concerns would boost Sustainability from 19th, while improving personal safety would boost its current 37th position in the Lifestyle sub-pillar.

Germany (14th) remains in the top 15 in the GTCI for the seventh time. The country's performance in the Output-related pillars is a study in contrasts. On the one hand, Germany boasts a strong pool of Vocational and Technical Skills (for which it is ranked 6th), and the high rate of technicians and associate professionals results in it being one of the leaders in Mid-Level Skills (ranked 4th). On the other hand, the country is comparatively weak (23rd) with respect to Global Knowledge Skills. Here there is a need to raise High-Level Skills (from 32nd place) with greater digital skills, among others. In addition to Vocational and Technical Skills, Germany also shines when it comes to retaining talent (in 6th place). This is due in large part to the positive impact that its generous social welfare system has on its ranking for Sustainability (9th position), coupled with the role played by the country's strong personal rights and personal safety in creating a favourable Lifestyle (for which Germany is ranked 8th).

Iceland (15th) has featured in the top 15 in the GTCI a total of eight times since the launch of the index. The country's talent competitiveness rests, above all, on its performance in the Output-related pillars. Its impressive and highly ranked (4th) pool of High-Level Skills contributes to an innovative, entrepreneurial economy with considerable Talent Impact (ranked 5th) that ultimately results in extensive Global Knowledge Skills—and another 4th-place ranking in this pillar. As for the Vocational and Technical Skills pillar, where Iceland ranks 11th, the country's ability to ensure that workforce supply matches labour market is reflected in its 7th place in the Employability sub-pillar. In the Input-related pillars, high levels of personal safety is a key factor in the country's desirable Lifestyle and strong Sustainability showing (13th and 14th, respectively), which contribute to Iceland's 12th-place showing in the Retain pillar. However, a comparatively weak (37th) Formal Education and relatively few possibilities for Lifelong Learning make Grow Iceland's weakest (23rd) pillar, despite being the country that offers the greatest Access to Growth Opportunities.

ANALYSIS BY INCOME AND REGIONAL GROUPS

The GTCI's top performers are all high-income countries. In fact, the top quartile of 34 countries features only high-income countries; while Panama at 87th is the only high-income country that is not in the upper half of the rankings. Outside the high-income countries, the highest-ranked country is China, at 40th, which has cemented its status as the GTCI's most talent-competitive country from the upper-middle-income group. Most upper-middle-income countries are ranked in the second and third quartiles (17 and 16 countries, respectively) with Malaysia (42nd) and Georgia (46th) being the top performers from this group after China. The only upper-middle-income country ranked in the bottom quartile is Guatemala, at 104th.

The group of lower-middle-income countries is led by Uzbekistan in 62nd place, Ukraine in 64th, and Jordan, which at 70th position falls into the third quartile (see Table A2). Of the

Table A2

Countries with the highest GTCI scores, by income and regional groups

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

remaining lower-middle-income countries, 15 are found in the third quartile alongside Jordan and 21 are in the bottom quartile. As for the low-income countries, all but one are ranked in the bottom quartile in GTCI 2023. The exception is Gambia, which at 97th position falls into the third quartile.

Northern America consists of only two countries—the United States and Canada—both of which feature in the top 15 in the GTCI 2023. Otherwise, the best-performing countries in the rankings are predominantly in Europe, home to 23 countries out of 34 in the top quartile. Europe is a heterogeneous region, however, and there are several economies further down the rankings: 14 are in the second quartile and two in the third quartile.

Countries in the Eastern, Southeastern Asia and Oceania region also show performances that range from the top to the bottom quartile. More specifically, five countries are in the top quartile, three are in the second quartile, six are in the third quartile, and one is placed in the bottom quartile.

The United Arab Emirates (22nd), Israel (25th), and Cyprus (30th) are the three countries from the Northern Africa and Western Asia region that make it into the top quartile. An additional eight countries, all from Western Asia, feature in the second quartile, while six countries are ranked in the third quartile and one country is in the bottom quartile.

Latin America and the Caribbean has one country in the top quartile—Chile, which is ranked 34th. Five countries from this region are in the second quartile, but most (ten) are in the third quartile. Three countries in Latin America and the Caribbean are in the bottom quartile.

As to Central and Southern Asia, two countries from this region feature in the upper half of the rankings: Uzbekistan in 62nd position globally, and Kazakhstan at 67th. A further two are ranked in the third quartile, while five are in the bottom quartile.

The worst-performing region, Sub-Saharan Africa, is also the one that is home to the highest proportion of countries in

the bottom quartile: 23 out of 32. However, eight Sub-Saharan African countries are ranked in the third quartile, while one country—Mauritius (49th)—makes it into the second quartile.

Income Groups

The dominance of high-income countries in the overall GTCI rankings can also be seen at the pillar level. A cursory glance at Figure A4, which depicts the average score of each income group in each pillar, makes this clear. As can be seen, the average scores of the high-income group in the six pillars are considerably higher than the corresponding scores of other income groups.

One interesting observation from the chart is that the ability to Retain talent is especially strong in both high-income and upper-middle-income countries. Not only are the average scores of these two income groups in the Retain pillar notably greater than their scores in the other pillars (which is, in part, due to methodological differences between the pillars), but the gap between the two higher income groups and the two lower income groups are particularly pronounced in the Retain pillar. This is not surprising, however: strong performances in the two sub-pillars related to the Retain pillar—Sustainability and Life-style—can reasonably be expected to be closely associated with higher-income countries in particular.

One aspect of talent competitiveness highlighted in the GTCI over the past decade is its complementarity, with the six pillars mutually reinforcing, or mutually undermining, one another, despite measuring distinct facets of talent competitiveness. This was seen above in the heatmap in Figure A3 and a quick glance at the best-performing countries in each income group (Tables A3a–A3d) adds weight to the hypothesis that a large degree of synergy exists across pillars.

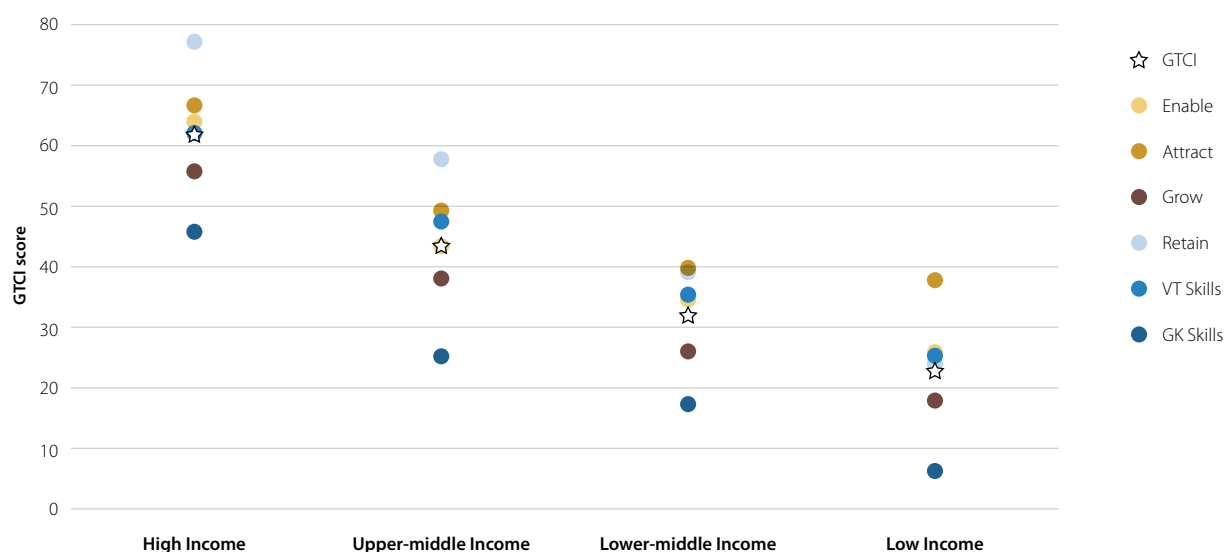
Switzerland, a top performer in all pillars, is the prime example as discussed above. But similar illustrations of complementarity across pillars can also be seen in other income groups. The highest-ranked upper-middle-income country, China, is also the leading country from its income group in two pillars and features in the top 10 in a further two. Uzbekistan, the top-ranking country in the lower-middle-income group, is also a top-10 performer among its income group in five of the six pillars. Gambia, the best-performing low-income country, heads its income group in three pillars and is placed second in another two.

Turning to specific income groups, 44 of the 49 high-income countries are in the GTCI 2023 top 50. The best-performing high-income countries are analysed in the section above discussing the top 15 countries. The high-income countries at the other end of the scale are **Romania** (ranked 54th globally), **Oman** (59th), **Trinidad and Tobago** (60th), **Kuwait** (63rd), and **Panama** (87th). At the pillar level, all five are positioned in the upper half of the Retain pillar, although most of them tend to lag behind in the Global Knowledge Skills pillar, where four of the five are placed in the lower half the rankings.

China, which is ranked 40th overall is, for the second year running, the top-performing upper-middle-income country in the GTCI. This signifies considerable progress since the first edition of the GTCI, in which China achieved a rank of 8th within its

Figure A4

Average scores in individual pillars, 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.

income group, and 47th of the 103 countries under consideration in 2013. One of the important factors behind China's progress in talent competitiveness over the past decade is its ability to Grow talent, which is reflected in its 15th position in this pillar, thanks to excellent performance (9th, globally) in the Formal Education sub-pillar, as reflected in its world-class universities, and extensive opportunities for Lifelong Learning (5th), including prevalent in-firm training. China is the global leader in matching the skills of people with the needs of the economy, leading to the top spot in the Employability sub-pillar. But its position (47th) in the associated Vocational and Technical Skills pillar is hampered by a low performance (95th) in the Mid-Level Skills sub-pillar, which includes a disappointing level of labour productivity. China's 91st position in the Attract pillar remains its Achilles' heel. The main challenge here is to increase the level of External Openness towards foreign businesses and people—for which it is currently ranked 100th.

China remains the leading member of the group of BRICS countries (Brazil, Russia, India, China, and South Africa). It is followed by the **Russian Federation**, which is currently ranked 52nd, and which has floated around 50th position in most GTCI editions. Some caution should be made when interpreting the latest results, however, since the index relies in part on data that stems from before the Russian invasion of Ukraine. Its greatest strength is the ability to Grow talent. Its 31st ranking in this pillar is primarily boosted by widespread Access to Growth Opportunities (22nd) and good Formal Education (28th), including at the tertiary level. This contributes, in turn, to a well-educated workforce (with a rank of 36th in the High-Level Skills sub-pillar), which, ultimately, results in a solid pool of Global Knowledge Skills (ranked 41st). The biggest challenge continues to be Russia's ability to Attract talent. It is ranked 84th in this pillar, hampered

by poor performance in both the External and Internal Openness sub-pillars (83rd and 76th, respectively). Russia's weakest sub-pillar, however, is its Regulatory Landscape (107th), which has a dampening effect on its performance (78th) in the Enable pillar.

Ranked 68th overall, **South Africa** is just outside the upper half of the GTCI 2023 rankings, which has frequently been the case in the past decade. The country makes it into the top quartile (29th) in the Business and Labour Landscape sub-pillar, which is due, in no small part, to the comparatively high level of technology adoption among its business sector. This boosts South Africa's ability to Enable talent, for which it is ranked 57th. Its highest-position (53rd), however, is in the Attract pillar, where a fairly liberal foreign direct investment (FDI) regime and progress in gender equality contribute to a robust performances in both External and Internal Openness (60th and 55th, respectively). The one area that drags down South Africa's overall ranking in the GTCI 2023 is its weak pool of Vocational and Technical Skills (ranked 93rd), where improving the Employability of domestic talent and rising from its current ranking (131st of 134) is a priority. This would include making the education system more relevant to the economy.

Just below South Africa, **Brazil** is ranked 69th, which represents ongoing progress over recent years towards the median position in the GTCI rankings. Brazil makes it into the upper half of the rankings in two pillars: Grow (60th) and Enable (61st). Its position in the Grow pillar is mainly due to the comparatively strong performance (47th) in the Access to Growth Opportunities sub-pillar, which are facilitated by collaboration through virtual networks, among others. In the Enable pillar, Brazil's position is primarily supported by its performance (31st) as a conducive Market Landscape, which is facilitated in turn by a solid ICT infrastructure. Brazil's weakest pillar, meanwhile, is

Table A3a

Best performers by income group: High-income countries (49 countries)

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

Note: Numbers in parentheses refer to global rankings.

Attract—where it ranks 88th. Although the country's degree of Internal Openness is one of its best-performing (49th) sub-pillars, partly because of strides made towards greater gender equality, External Openness is its worst performing (106th)—giving Brazil particular scope to become a much stronger magnet for foreign talent.

India remains the lowest-ranked BRICS member at 103rd. In the years to 2020, India saw its talent competitiveness increase, but it has regressed in each of the three years since. A major reason for this fall in GTCI rankings is a slump in business sentiment, which has had a detrimental effect on the ability to Attract talent (now ranked 132nd of 134)—whether that is talent from overseas (127th in External Openness sub-pillar) or from within the country (129th in Internal Openness). This has also led to an increased skills mismatch, and a greater difficulty in finding

skilled employees, pushing India to 121st in both the Employability sub-pillar and the Vocational and Technical Skills pillar. Meanwhile, Global Knowledge Skills, the second of the Output-related pillars, is India's best-performing area, where innovation and software development are driving its 69th position in the Talent Impact sub-pillar. The country also has a comparative strength in the Grow pillar (90th), which can primarily be attributed to the impact of the country's tertiary education and programmes for Formal Education and Lifelong Learning—ranked 64th and 66th respectively.

Returning to the best-performing countries in the upper-middle-income group, **Malaysia** (42nd globally) follows China as the most talent-competitive country in this income group. The country does well in the two Output-related pillars: it makes it into the top quartile (34th) for Global Knowledge Skills, which is

Table A3b

Best performers by income group: Upper-middle-income countries (34 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE
China (40)	China (31)	Costa Rica (28)	China (15)	Bulgaria (39)	Azerbaijan (15)	Kazakhstan (30)
Malaysia (42)	Malaysia (35)	Montenegro (33)	Russia (31)	Mauritius (41)	Georgia (36)	Malaysia (34)
Georgia (46)	Botswana (38)	Mauritius (37)	Costa Rica (38)	Montenegro (42)	Malaysia (38)	Russia (41)
Costa Rica (47)	Mauritius (39)	Georgia (38)	Mexico (41)	Armenia (44)	Belarus (40)	China (43)
Bulgaria (49)	Costa Rica (40)	Armenia (41)	Argentina (42)	Georgia (45)	Serbia (41)	Belarus (44)
Montenegro (50)	Georgia (47)	Azerbaijan (45)	Malaysia (44)	Belarus (47)	Montenegro (42)	Bulgaria (47)
Mauritius (51)	Jamaica (50)	Serbia (48)	Colombia (45)	Argentina (48)	Russia (43)	Montenegro (49)
Russia (52)	Bulgaria (52)	Albania (50)	Peru (48)	Albania (51)	China (47)	Serbia (51)
Serbia (53)	Albania (55)	South Africa (53)	Türkiye (50)	Costa Rica (52)	Bulgaria (50)	Armenia (53)
Armenia (55)	South Africa (57)	Jamaica (55)	Albania (54)	Kazakhstan (54)	Mauritius (52)	Botswana (55)

Note: Numbers in parentheses refer to global rankings.

Table A3c

Best performers by income group: Lower-middle-income countries (39 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE
Uzbekistan (62)	Jordan (45)	Kyrgyzstan (52)	Philippines (49)	Ukraine (50)	Uzbekistan (31)	Lebanon (46)
Ukraine (64)	Cabo Verde (53)	Ukraine (57)	Viet Nam (55)	Uzbekistan (53)	Sri Lanka (53)	Mongolia (48)
Jordan (70)	Viet Nam (59)	Zambia (62)	Bolivia (59)	Jordan (61)	Egypt (55)	Ukraine (50)
Viet Nam (75)	Ghana (66)	Uzbekistan (65)	Lebanon (66)	Cabo Verde (70)	Lebanon (70)	Nigeria (52)
Mongolia (76)	Mongolia (72)	Mongolia (69)	Ukraine (68)	Mongolia (73)	Viet Nam (71)	Philippines (54)
Lebanon (77)	Sri Lanka (73)	Viet Nam (72)	Mongolia (73)	Tunisia (75)	Kyrgyzstan (72)	Tunisia (59)
Cabo Verde (78)	Benin (74)	Cabo Verde (75)	Egypt (75)	Kyrgyzstan (76)	Cabo Verde (76)	Uzbekistan (64)
Philippines (84)	Ukraine (75)	Jordan (77)	Honduras (83)	Sri Lanka (85)	Ukraine (77)	Viet Nam (71)
Kyrgyzstan (86)	Uzbekistan (76)	Benin (78)	Jordan (85)	Lebanon (89)	Jordan (78)	Cabo Verde (73)
Egypt (88)	Tunisia (77)	Lebanon (79)	Sri Lanka (87)	Algeria (90)	Mauritania (84)	Iran (78)

Note: Numbers in parentheses refer to global rankings.

boosted by its 27th position for the Talent Impact of its export-driven economy; and it enjoys a robust 38th-ranked pool of Vocational and Technical Skills. Malaysia's lowest-ranked pillar (71st) is Attract, which could be improved by encouraging greater tolerance towards immigrants and fostering greater gender equality. This would go a long way to raise the level of Internal Openness from its current 98th place.

Georgia is the third-best upper-middle-income country and achieves its highest ranking in the GTCI 2023 after five years of steady improvement—and is now in 46th position. Its best pillar-level performance (36th) is in Vocational and Technical Skills, which can be attributed to a good performance (also 36th) in the Mid-Level Skills sub-pillar, and the comparatively strong (39th) Employability of its population—reflecting low levels of skills mismatch and an education system that is relevant to the needs

of the economy. Georgia's lowest showing at the pillar level is 71st for Grow, where there is particular scope to strengthen tertiary education and programmes in order to lift Formal Education from 91st position and Lifelong Learning from 71st.

Uzbekistan marks its first entry in the GTCI as the top-performing country in the lower-middle-income group. It has a strong performance (31st) in the Vocational and Technical Skills pillar, where the extensive pool of a secondary-educated workforce and the relevance of the education system to the needs of the economy render Mid-Level Skills and Employability the country's top-ranked sub-pillars (39th and 27th, respectively). The country's weakest performance in an individual pillar (100th) relates to growing talent. Here efforts should primarily be made to: encourage greater use of virtual social and professional networks, which would help boost Access to Growth Opportunities

Table A3d

Best performers by income group: Low-income countries (12 countries)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE
Gambia (97)	Rwanda (84)	Gambia (46)	Gambia (98)	Gambia (103)	Uganda (102)	Rwanda (114)
Rwanda (110)	Gambia (101)	Rwanda (87)	Burundi (108)	Malawi (112)	Burundi (106)	Gambia (119)
Uganda (119)	Mali (110)	Burkina Faso (96)	Rwanda (113)	Rwanda (113)	Malawi (108)	Uganda (120)
Malawi (120)	Malawi (115)	Uganda (97)	Uganda (114)	Mozambique (115)	Gambia (114)	Ethiopia (121)
Burundi (124)	Uganda (118)	Burundi (103)	Madagascar (117)	Mali (121)	Madagascar (119)	DR Congo (123)
Madagascar (125)	Burkina Faso (123)	Malawi (109)	Ethiopia (121)	Burkina Faso (124)	Rwanda (126)	Madagascar (124)
Mali (127)	Madagascar (124)	Madagascar (113)	Malawi (125)	Madagascar (127)	Chad (127)	Burkina Faso (125)
Burkina Faso (129)	Mozambique (126)	Mozambique (114)	Mali (127)	Ethiopia (128)	Ethiopia (129)	Malawi (129)
Mozambique (131)	Burundi (131)	Mali (123)	DR Congo (130)	Burundi (129)	DR Congo (130)	Mozambique (131)
Ethiopia (132)	Ethiopia (132)	DR Congo (128)	Mozambique (132)	Uganda (131)	Mali (131)	Mali (132)

Note: Numbers in parentheses refer to global rankings.

from Georgia's current 115th position; and expand in-firm trainings to stimulate Lifelong Learning (currently ranked at 94th).

The inclusion of Uzbekistan in this year's GTCI means that **Ukraine**, which topped the lower-middle-income group last year, is now ranked 64th globally and in 2nd place in its income group. It should, however, be noted that a large share of the data used for the computation of the index predates the Russian invasion of Ukraine. The country's talent competitiveness in the course of the GTCI is a story of steady progress, which has placed it in the upper half of the rankings in the past five years. A strong performance (now at 50th) in the Global Knowledge Skills pillar has been a constant throughout the first ten years of the GTCI, this has been aided by the impact that tertiary education has had on performance (45th) in the High-Level Skills sub-pillar. Although firms in Ukraine tend to be active in adopting technology such as software and cloud computing, which has helped it achieve 39th position in the Business and Labour Landscape sub-pillar, the country's ability in the Enable pillar (75th) is hampered by an underwhelming Regulatory Landscape (106th). Its position in this sub-pillar and related pillar would improve with strong rule of law and less corruption.

Jordan ranks 3rd among the lower-middle-income countries and is the top performer within this income group (45th globally) in the Enable pillar. Above all, it benefits from a business-friendly Market Landscape and a Business and Labour Landscape that is characterised by a solid labour market and good management practice—and ranks 28th and 40th in these sub-pillars respectively. The country's main challenge is to improve its ability to Grow talent (currently 85th) through greater investment in tertiary education, which would strengthen its position (currently 93rd) in the Formal Education sub-pillar. Facilitating more in-firm training would also boost its position (currently 64th) in the Lifelong Learning sub-pillar.

The group of low-income countries is headed by **Gambia**. Ranked 97th overall, Gambia has now made it into the third quartile in the five most recent editions of the GTCI. Of particular note is the country's ability to Attract talent, which has ranked it at 46th for this pillar. This is largely due to its high tolerance towards minorities and immigrants, which has resulted in a high degree of Internal Openness and, especially, External Openness, and it is ranked 72nd and 36th in these sub-pillars respectively. However, there is room to attract more foreign investment and improve gender equality. Gambia's greatest challenge is to improve its performance in the two Output-related pillars: Vocational and Technical Skills (114th) and Global Knowledge Skills (119th). In the Vocational and Technical Skills pillar, Gambia could address its skills gaps and improve its 120th position in the Employability sub-pillar. For Global Knowledge Skills, the focus should be on expanding tertiary education, to improve on its 118th ranking in the High-Level Skills sub-pillar.

Rwanda follows Gambia in the low-income group, and has found itself in the lowest quartile since GTCI 2021. It too has relative weaknesses in the Output-related pillars. A higher share of technicians and associate professionals would raise Vocational and Technical Skills from its current position (126th), while greater investment in tertiary education would boost its Global

Knowledge Skills position (currently 114th), and would have a positive impact on its ability to Grow talent (currently 113th). Rwanda performs comparatively well in both the Enable and Attract pillars (84th and 87th, respectively), which can be traced to its above-average Regulatory Landscape (ranked 53rd globally) and to its high level of Internal Openness (73rd), especially in terms of economic empowerment and leadership opportunities for women.

Uganda is the third-highest-ranking country in the low-income group, and has been firmly placed in the bottom quartile since the first GTCI edition in 2013. It makes it to the third quartile in only one pillar: its ability to Attract talent earns it the 97th spot in the rankings. This is primarily due to its approach to foreign talent, which earns it a comparatively high placement (82nd) in the External Openness sub-pillar. However, there is considerable scope to raise Internal Openness from 110th, by promoting greater social inclusion and improving gender equality. Uganda's lowest global ranking (131st) is in the Retain pillar, as it sits at the very bottom (134th) with respect to Lifestyle, where efforts are needed in all indicators: personal rights, personal safety, physician density, and sanitation.

Regional Groups

As shown in Figure A1, inter-regional performance in the GTCI can diverge significantly. No surprises there, since the proportion of countries from each of the four income groups can vary within regions, and there is a strong positive correlation between GTCI score and income level. For example, the two regions with the highest share of high-income countries—Northern America and Europe—generally have greater talent competitiveness than other regions. Conversely, Sub-Saharan Africa—the only region in the GTCI that includes low-income countries—lags behind all other regions.

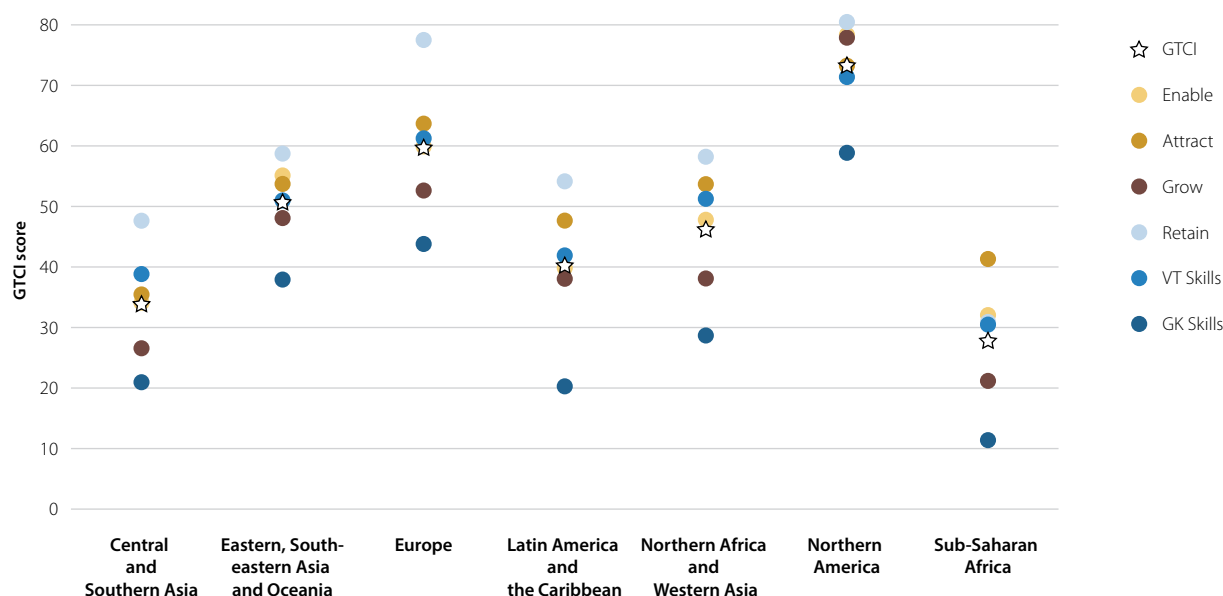
Figure A5 shows that this association also holds for individual pillars. Reflecting their performances overall, Northern America and Europe have higher average scores than the other regions in all six pillars. The relative positions of the remaining regions also mirror their overall GTCI rankings. As a result, Eastern, Southeastern Asia and Oceania is usually the third-best-performing region in the six pillars and is 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 a few notable exceptions, however. On average, Sub-Saharan Africa outscores Central and Southern Asia with respect to attracting talent, both in terms of External Openness and, especially, Internal Openness. The Northern Africa and Western Asia region has the edge over Eastern, Southeastern Asia and Oceania in the Vocational and Technical Skills pillar by virtue of superior Mid-Level Skills—although Eastern, Southeastern Asia and Oceania does have a higher degree of Employability. Finally, Central and Southern Asia is slightly ahead of Latin America and the Caribbean when it comes to Global Knowledge Skills as a result of more extensive High-Level Skills. The reverse is true when it comes to Talent Impact, however.

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

Figure A5

Average scores in individual pillars, 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.

Central and Southern Asia (nine countries): eight countries in this region are classified as belonging to the lower-middle-income group, with only one belonging to the upper-middle-income category. Contrary to expectations, it is a country from the lower-middle-income group that is the region's best performer. **Uzbekistan**, with an overall global ranking of 62nd. As discussed above, Uzbekistan performs particularly well in the Vocational and Technical Skills pillar (31st), whereas its key challenge is strengthening its ability to Grow talent (currently 100th). The region's sole country in the upper-middle-income group—**Kazakhstan** (67th overall)—is the next best performer. It finds itself just inside the upper half of the GTCI rankings for the ninth time in ten years. The country has contrasting performances in the two Output-related pillars. On the one hand, it is in the top quartile in the Global Knowledge Skills pillar in 30th position, which is mainly due to an extensive pool of High-Level Skills (14th) that can be traced to a large share of tertiary-educated employees and professionals in its labour force. On the other, Kazakhstan is not fully able to realise the potential of its domestic talent, which is reflected in a skills mismatch and wide skills gaps that lead to poor Employability (132nd) and, in turn, low Vocational and Technical Skills (122nd). **Kyrgyzstan** is positioned third in the region at 86th, having enjoyed steady progress in talent competitiveness over the past few years—although its GTCI 2023 rank is slightly lower than that achieved last year. It features in the upper half of the global rankings (52nd) with respect to its ability to Attract talent, which can be primarily attributed to the degree of External Openness (41st) towards foreign talent. The country's weakest pillars are Enable and Grow talent, ranked 112th and 105th respectively. Its ability to Enable talent is weighed down by an unfavourable Regulatory Landscape and Market Landscape (112th and 117th, respectively). Growing talent is primarily held back by discouraging levels of Formal Education

(111th) and Lifelong Learning (107th), which would improve with greater investment in tertiary education and more extensive employee development.

Eastern, Southeastern Asia and Oceania (15 countries): this is one of the more heterogeneous regions in the GTCI, with six high-income countries, four upper-middle-income countries, and five lower-middle-income countries. Two of the countries—Singapore (2nd) and Australia (8th)—feature in the top 15 and have been discussed above. Within the region, they are followed by **New Zealand**, which is ranked 18th globally, and which has been a top 15 performer in five GTCI editions over the past decade. New Zealand has clear strengths in three pillars: Enable (11th), Attract (12th), and Global Knowledge Skills (11th). In terms of enabling talent, it boasts an enviable Regulatory Landscape (4th overall) that is high on political stability and low on corruption. As for attracting talent, it enjoys a high level (7th) of Internal Openness, which is marked by considerable social inclusion and mobility and by strong economic empowerment of women. As for Global Knowledge Skills, it is in the top 10 in terms of Talent Impact (8th), which can be traced to high levels of entrepreneurship and R&D activity, among others. Vocational and Technical Skills (currently 57th globally) remain the main weakness in New Zealand's talent competitiveness, where ease of finding skilled employees is a particular concern in the Employability of talent (87th globally), although this is expected to improve following the end of COVID restrictions. Ranked 24th globally, the **Republic of Korea (South Korea)**, enters the top 25 of the GTCI for the first time. This rise in the rankings is mainly due to an improvement in what was already the country's strongest pillar: Global Knowledge Skills (now in 8th position overall). Above all, its innovative economy has resulted in a significant Talent Impact, for which it is ranked 3rd. South Korea also has an impressive and conducive Market Landscape (9th) and solid Regulatory

Table A4

Ten best performers, by regional group (overall GTCI rank)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE
Central and Southern Asia (9 countries)						
Uzbekistan (62)	Sri Lanka (73)	Kyrgyzstan (52)	Kazakhstan (70)	Uzbekistan (53)	Uzbekistan (31)	Kazakhstan (30)
Kazakhstan (67)	Uzbekistan (76)	Kazakhstan (56)	Sri Lanka (87)	Kazakhstan (54)	Sri Lanka (53)	Uzbekistan (64)
Kyrgyzstan (86)	India (92)	Uzbekistan (65)	India (90)	Kyrgyzstan (76)	Kyrgyzstan (72)	Iran (78)
Sri Lanka (90)	Kazakhstan (93)	Sri Lanka (122)	Iran (96)	Sri Lanka (85)	Nepal (94)	Kyrgyzstan (81)
India (103)	Pakistan (111)	Nepal (124)	Pakistan (99)	Nepal (94)	Iran (97)	India (83)
Nepal (107)	Kyrgyzstan (112)	Pakistan (125)	Uzbekistan (100)	India (99)	Pakistan (109)	Sri Lanka (96)
Pakistan (109)	Iran (114)	Bangladesh (131)	Kyrgyzstan (105)	Iran (104)	Bangladesh (113)	Nepal (103)
Iran (116)	Nepal (116)	India (132)	Nepal (120)	Pakistan (105)	India (121)	Pakistan (107)
Bangladesh (123)	Bangladesh (117)	Iran (134)	Bangladesh (124)	Bangladesh (109)	Kazakhstan (122)	Bangladesh (109)
Eastern, Southeastern Asia and Oceania (15 countries)						
Singapore (2)	Singapore (7)	Singapore (2)	Singapore (3)	Australia (14)	Singapore (3)	Singapore (1)
Australia (8)	Japan (9)	Australia (6)	Australia (6)	New Zealand (22)	Australia (19)	Australia (3)
New Zealand (18)	New Zealand (11)	New Zealand (12)	China (15)	Japan (23)	Brunei Darussalam (26)	South Korea (8)
South Korea (24)	Australia (15)	Japan (42)	New Zealand (20)	South Korea (29)	South Korea (27)	New Zealand (11)
Japan (26)	South Korea (21)	Brunei Darussalam (54)	Japan (21)	Singapore (38)	Malaysia (38)	Japan (33)
China (40)	China (31)	South Korea (59)	South Korea (28)	Brunei Darussalam (49)	Japan (39)	Malaysia (34)
Brunei Darussalam (41)	Malaysia (35)	Mongolia (69)	Malaysia (44)	Malaysia (66)	China (47)	China (43)
Malaysia (42)	Brunei Darussalam (51)	Malaysia (71)	Brunei Darussalam (46)	Mongolia (73)	New Zealand (57)	Brunei Darussalam (45)
Viet Nam (75)	Indonesia (58)	Viet Nam (72)	Philippines (49)	China (74)	Indonesia (65)	Mongolia (48)
Mongolia (76)	Viet Nam (59)	Cambodia (85)	Viet Nam (55)	Thailand (83)	Viet Nam (71)	Philippines (54)
Europe (39 countries)						
Switzerland (1)	Switzerland (1)	Luxembourg (1)	United Kingdom (2)	Switzerland (1)	Switzerland (2)	United Kingdom (2)
Denmark (4)	Denmark (2)	Switzerland (3)	Netherlands (4)	Denmark (2)	Finland (4)	Iceland (4)
Netherlands (5)	Finland (3)	Ireland (5)	Switzerland (5)	Norway (3)	Austria (5)	Sweden (6)
Finland (6)	Netherlands (5)	Denmark (7)	France (7)	Finland (4)	Germany (6)	Norway (7)
Norway (7)	Sweden (6)	Netherlands (8)	Denmark (8)	Austria (5)	Norway (7)	Denmark (9)
Sweden (9)	Norway (8)	Finland (9)	Ireland (10)	Germany (6)	Denmark (8)	Switzerland (10)
United Kingdom (10)	Germany (10)	Sweden (11)	Belgium (11)	Sweden (7)	Czech Republic (9)	Luxembourg (12)
Luxembourg (11)	United Kingdom (12)	United Kingdom (13)	Norway (12)	Malta (8)	Sweden (10)	Estonia (13)
Ireland (12)	Luxembourg (13)	Norway (14)	Finland (13)	Luxembourg (9)	Iceland (11)	Ireland (15)
Germany (14)	Austria (14)	Germany (15)	Sweden (14)	Netherlands (10)	Netherlands (12)	Netherlands (16)

(continued on next page)

Table A4 (continued)

Ten best performers, by regional group (overall GTCI rank)

GTCI	ENABLE	ATTRACT	GROW	RETAIN	VOCATIONAL AND TECHNICAL SKILLS	GLOBAL KNOWLEDGE
Latin America and the Caribbean (19 countries)						
Chile (34)	Uruguay (34)	Costa Rica (28)	Uruguay (34)	Chile (34)	Trinidad and Tobago (35)	Chile (42)
Uruguay (43)	Chile (37)	Chile (34)	Chile (35)	Uruguay (36)	Chile (44)	Colombia (66)
Costa Rica (47)	Costa Rica (40)	Uruguay (36)	Costa Rica (38)	Trinidad and Tobago (46)	Jamaica (58)	Brazil (69)
Trinidad and Tobago (60)	Jamaica (50)	Trinidad and Tobago (49)	Mexico (41)	Argentina (48)	Argentina (67)	Mexico (72)
Argentina (61)	Brazil (61)	Jamaica (55)	Argentina (42)	Costa Rica (52)	Costa Rica (68)	Costa Rica (74)
Jamaica (66)	Dominican Rep. (64)	Paraguay (58)	Colombia (45)	Panama (63)	Uruguay (69)	Argentina (75)
Brazil (69)	Colombia (71)	Argentina (63)	Peru (48)	Mexico (65)	Colombia (73)	Uruguay (76)
Colombia (72)	Mexico (81)	Dominican Rep. (67)	Ecuador (57)	Paraguay (67)	Brazil (74)	Jamaica (79)
Mexico (74)	Peru (83)	Peru (68)	Bolivia (59)	Brazil (68)	Mexico (79)	Trinidad and Tobago (84)
Peru (82)	Trinidad and Tobago (85)	Colombia (70)	Brazil (60)	Ecuador (78)	El Salvador (82)	Peru (86)
Northern Africa and Western Asia (18 countries)						
UAE (22)	UAE (23)	UAE (4)	UAE (17)	Cyprus (16)	Israel (13)	Israel (14)
Israel (25)	Israel (24)	Cyprus (21)	Bahrain (30)	Israel (25)	Azerbaijan (15)	Cyprus (22)
Cyprus (30)	Qatar (28)	Qatar (23)	Qatar (32)	Armenia (44)	Saudi Arabia (20)	UAE (32)
Qatar (35)	Cyprus (41)	Bahrain (29)	Israel (43)	Georgia (45)	Qatar (21)	Lebanon (46)
Bahrain (44)	Jordan (45)	Kuwait (30)	Cyprus (47)	UAE (59)	UAE (28)	Armenia (53)
Georgia (46)	Bahrain (46)	Georgia (38)	Türkiye (50)	Kuwait (60)	Georgia (36)	Saudi Arabia (57)
Saudi Arabia (48)	Georgia (47)	Saudi Arabia (39)	Saudi Arabia (53)	Jordan (61)	Cyprus (37)	Tunisia (59)
Armenia (55)	Saudi Arabia (48)	Armenia (41)	Oman (56)	Azerbaijan (62)	Armenia (54)	Georgia (60)
Azerbaijan (58)	Oman (49)	Israel (44)	Lebanon (66)	Oman (64)	Egypt (55)	Türkiye (61)
Oman (59)	Kuwait (60)	Azerbaijan (45)	Georgia (71)	Bahrain (69)	Bahrain (56)	Bahrain (63)
Northern America (2 countries)						
United States (3)	United States (4)	Canada (10)	United States (1)	United States (15)	United States (1)	United States (5)
Canada (13)	Canada (16)	United States (22)	Canada (9)	Canada (28)	Canada (16)	Canada (18)
Sub-Saharan Africa (32 countries)						
Mauritius (51)	Botswana (38)	Mauritius (37)	South Africa (69)	Mauritius (41)	Mauritius (52)	Nigeria (52)
South Africa (68)	Mauritius (39)	Gambia (46)	Mauritius (78)	Cabo Verde (70)	Cabo Verde (76)	Botswana (55)
Botswana (73)	Cabo Verde (53)	South Africa (53)	Namibia (89)	Botswana (72)	Mauritania (84)	South Africa (58)
Cabo Verde (78)	South Africa (57)	Zambia (62)	Kenya (92)	South Africa (82)	Zimbabwe (87)	Cabo Verde (73)
Namibia (93)	Ghana (66)	Namibia (64)	Botswana (93)	Namibia (87)	Ghana (88)	Mauritius (77)
Ghana (95)	Namibia (68)	Cabo Verde (75)	Ghana (95)	Lesotho (96)	Benin (89)	Kenya (94)
Gambia (97)	Benin (74)	Benin (78)	Gambia (98)	Gambia (103)	Kenya (90)	Eswatini (101)
Kenya (98)	Rwanda (84)	Côte d'Ivoire (80)	Eswatini (102)	Eswatini (106)	Namibia (91)	Cameroon (102)
Eswatini (100)	Senegal (94)	Botswana (82)	Côte d'Ivoire (103)	Senegal (107)	South Africa (93)	Angola (106)
Zambia (108)	Kenya (95)	Rwanda (87)	Cabo Verde (106)	Ghana (111)	Zambia (95)	Zimbabwe (108)

Note: Numbers in parentheses refer to global rankings.

Landscape (23rd), which have had a positive impact on its ability to Enable talent (21st), although there is scope to improve its 44th ranking for Business and Labour Landscape with improvements to the labour market. The country's lowest global rank (59th) is in the Attract pillar, where there is ample room to raise the level of External Openness towards foreign business and talent from 75th position. **Japan** drops out of the top 25 for the first time in the GTCI, and is now in 26th position overall. This despite a fall in global position in only one pillar—Retain (now 23rd)—which is, in turn, due to slightly lower ranking in the Sustainability and Lifestyle sub-pillars (now 22nd in both). The greatest challenge for Japan, however, is to address skills gaps and so improve the Employability of the population (93rd globally), which holds back Vocational and Technical Skills (39th), despite the country's excellent Mid-Level Skills (5th). Japan remains one of the leading countries in enabling talent (9th), where its 3rd-placed performance in the Market Landscape sub-pillar is particularly noteworthy.

Europe (39 countries): the region with the most countries in the GTCI, Europe includes 29 high-income countries, nine upper-middle-income countries, and one lower-middle-income country. Eleven of these countries feature in the top 15 and have been discussed above. **Belgium** ranked inside the top 15 in the first edition of the GTCI in 2013, but has since ranked just outside it and is currently at 16th position. The country is most impressive when it comes to growing talent (11th), where high enrolment rates in vocational and tertiary studies and the high quality of schools and universities result in an excellent Formal Education and an 8th-place ranking in this sub-pillar. This is accompanied by extensive opportunities in Lifelong Learning (11th), including training in firms. The Retain pillar has become Belgium's lowest-ranked at 24th, because of a slide in the Lifestyle (to 26th), especially with respect to personal rights and physician density. **Austria**, currently ranked 17th globally, has also been just outside the top 15 in most GTCI editions. The country is the global leader in the Lifestyle sub-pillar and takes 10th position in the Sustainability sub-pillar, which together make it a top-10 performer (5th) in the Retain talent pillar. Austria is equally impressive (ranked 5th) when it comes to Vocational and Technical Skills, which is due to its 2nd-place ranking in the Mid-Level Skills sub-pillar, which partly rests on its high share of technicians and associate professionals, and on good labour productivity. The greatest room for improvement relates to the country's pool of Global Knowledge Skills (currently 25th globally), where expanding the tertiary-educated workforce would raise High-Level Skills from 30th position, while promoting more entrepreneurship would boost Talent Impact from 28th. **France**, at 19th position globally, equals its highest position in the GTCI for the third year running. The country has a particularly strong showing in the Lifelong Learning sub-pillar (3rd) thanks to its world-class business schools and extensive training in firms. Combined with the high quality of its Formal Education (ranked 16th), this makes it a top-10 performer (7th) in the Grow talent pillar. France also has an advantage in the Enable talent pillar (19th), with solid showings in all three sub-pillars. Its main challenges, meanwhile, are in the Attract and Vocational and Technical Skills pillars (ranked 25th in both). Greater social inclusion would increase its performance

in the Internal Openness sub-pillar (from 29th) and so boost its performance in the Attract pillar, while addressing the skills gaps would improve Employability (from 40th) and consequently its showing in the Vocational and Technical Skills pillar.

Latin America and the Caribbean (19 countries): this region consists mainly of upper-middle-income countries: 12 in total. The seven remaining include four high-income countries and three lower-middle-income countries. At 34th position globally, **Chile** remains in the top quartile of the GTCI rankings for the third year in a row. It has a particular strength in the Input-related pillars, and it features in the top quartile (34th position) in both Attract and Retain. In the Attract pillar, Chile shows a high degree of Internal Openness (25th) that is derived from good social inclusion and progress in issues related to gender equality. The Retain pillar, meanwhile, is boosted primarily by Chile's widespread pension coverage, which has a positive impact on its ranking for Sustainability (30th). The country's lowest rankings are in the two Output-related pillars—Vocational and Technical Skills (44th) and Global Knowledge Skills (42nd). A larger share of technicians and associate professionals would boost its position in the Mid-Level Skills sub-pillar from 47th, while increasing the proportion of researchers, senior officials and managers would raise its ranking for High-Level Skills from 52nd. **Uruguay** achieves its highest-ever position (43rd) in this year's GTCI. Just like Chile, it has strong showings in the four Input-related pillars, including top-quartile performances (34th in each case) in the Enable and Grow pillars. Slightly lower, (36th) is Uruguay's performance in the Attract pillar; however, this is home to its strongest sub-pillar, where a high tolerance towards minorities and immigrants demonstrates a high level of Internal Openness, resulting in an 18th-place ranking, globally. Uruguay's main challenges are in the Output-related pillars: Vocational and Technical Skills (69th) and Global Knowledge Skills (76th). Efforts should be made to raise the share of both secondary and tertiary education in the population, which would boost its Mid-Level Skills ranking (from 81st) and High-Level Skills (from 85th) respectively. **Mexico** is one of two economic powers in the region (the other, Brazil, has already been discussed above in the context of BRICS) and is ranked 74th globally. It has seen its talent competitiveness strengthen over the past decade, despite a slight regression over the past three years. The country performs relatively well in the Grow pillar, where its 4th-place ranking is built on fairly solid performances in all three sub-pillars (which are also the country's top-ranked sub-pillars). Most notably, it is positioned in the top quartile (29th) with respect to Lifelong Learning, thanks to the good quality of its business masters programmes and the opportunities for employee development. The ability to Attract talent remains Mexico's lowest-ranked pillar (98th), where the greatest challenge is to improve greater External Openness towards foreign talent from its current 104th ranking.

Northern Africa and Western Asia (18 countries): one of the more heterogeneous regions in terms of income group representation, it includes eight high-income economies, four upper-middle-income economies, and six lower-middle-income economies. **The United Arab Emirates (UAE)** is ranked 22nd globally and is the best performer in the region for the sixth time

in the GTCI. It is one of the global leaders (4th) in the Attract talent pillar, and is particularly impressive as a magnet for foreign workers through a high level of External Openness (2nd globally). The country is also ranked 2nd globally for Access to Growth Opportunities afforded to its population, including the use of virtual networks. That said, its ability to Grow talent (currently 17th) would be even greater with higher enrolment rates in vocational and tertiary studies (it is ranked 52nd for Formal Education, for example). However, most scope for improvement concerns the ability to Retain talent. At 59th, this is the only pillar where UAE ranks outside the top quartile. The main challenge is to strengthen personal rights and safety, which would have a positive impact on Lifestyle (currently 80th). **Israel** is the second-most talent-competitive country in the region. It has ranked inside the 20th-25th range in each of the past GTCI editions and, at 25th position, this year is no different. As in previous years, Israel is particularly impressive in the two Output-related pillars: Vocational and Technical Skills and Global Knowledge Skills (13th and 14th respectively). It is particularly adept at matching labour market demands and job skills, which places it 12th in the Employability sub-pillar, which contributes towards its strong Vocation and Technical Skills. As for Global Knowledge Skills, Israel is a top-10 performer (9th) in the High-Level Skills pillar, thanks to its highly-educated and skilled workforce. Attract and Grow are the only two pillars where Israel is ranked outside the top quartile (44th and 43rd respectively), and would improve primarily through higher levels of Internal Openness (currently 61st) and more extensive training in firms to support Lifelong Learning (79th). **Cyprus** is the final country in the region to be ranked in the top quartile in GTCI 2023, and achieves its 30th-place ranking for the fourth time in a row. Its main strengths are in the Retain talent pillar (16th), which is mainly thanks to its high quality of life (it ranks 6th in the Lifestyle sub-pillar, for example). Cyprus is also a top-10 performer (8th) in the sub-pillar relating to External Openness towards foreign business and talent, although its rank in the Attract pillar (21st) would be even better with greater Internal Openness (40th), including more social inclusion. The country's most discouraging performance (47th) relates to the Grow talent pillar, where improvements to the quality of secondary and tertiary education could boost Formal Education (currently 55th) and Lifelong Learning (58th).

Northern America (two countries): both Northern American economies—the United States and Canada feature in the top-15 performers of this year's GTCI, at 3rd and 13th position respectively, and have been discussed in detail above. In terms of relative performance, the United States outperforms its northern neighbour in five of the six pillars, with Canada performing better only in the Attract pillar.

Sub-Saharan Africa (32 countries): the region with the weakest performance on average is also the only region with low-income countries in its grouping: 12 in total. Four of

the countries in the region are classified in the upper-middle-income group, while a further 16 are in the lower-middle-income group. The region is headed by **Mauritius**, which at 51st, is the only Sub-Saharan African country to make it into the upper half of the GTCI rankings this year. In fact, it has consistently ranked above the GTCI median since its first inclusion in 2017. The country's best performances are in the pillars that relate to enabling and attracting talent (39th and 37th respectively). In the Enable pillar, a positive Business and Labour Landscape (ranked 27th) and a solid Regulatory Landscape (32nd) are offset by a Market Landscape that is ranked 88th and which would benefit from more domestic competition and an improved ICT infrastructure. As for the Attract pillar, Mauritius benefits from a high degree (32nd) of Internal Openness. One of the greatest challenges facing the country, however, is the expansion of tertiary education. Increased investment and enrolment levels would boost Formal Education (currently 88th) and, by extension, the ability to Grow talent (78th). It would also raise High-Level Skills from 92nd, which would in turn strengthen Global Knowledge Skills (77th). **South Africa** is the next best performer in the region at 68th. As discussed in the section on BRICS members above, the country performs particularly well in the Attract and Enable pillars, but faces significant challenges around skills gaps and strengthening its performance in the Vocational and Technical Skills pillar. The talent competitiveness of **Botswana**, at 73rd, the region's third-best performer, has improved over the first decade of the GTCI, although the country's relative position has slipped slightly in the past three years. The strength of its institutions is reflected in its robust Regulatory Landscape (37th), which, combined with a positive Business and Labour Landscape (38th), helps Botswana achieve 38th position in the Enable pillar. The greatest scope for improvement is in the Grow talent pillar (currently 93rd) and in strengthening Vocational and Technical Skills from 96th position. Addressing low enrolment rates and improving Formal Education (127th) would go a long way to boosting its position in the Mid-Level Skills sub-pillar from 96th, while closing the skills gaps and skills mismatch would improve its Employability ranking from 86th.

ENDNOTES

- 1 Countries are grouped according to the World Bank Income Classifications. Economies are divided based on their 2022 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 World Health Organization. (2023). *WHO chief declares end to COVID-19 as a global health emergency*. 5 May 2023, available at <https://www.who.int/news-room/speeches/item/who-director-general-s-opening-remarks-at-the-media-briefing---5-may-2023>

CHAPTER 3

JRC Statistical Audit of the Global Talent Competitiveness Index 2023

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More than capital, individual skills and talents are the engines of growth and the driving forces that guide human beings towards the future. In today's complex and dynamic global economic system of intense competition, an environment where talent can be adequately and effectively attracted, developed and retained is of utmost importance for business's investment decisions and, by extension, for countries' sustainable growth.

Each year since 2013, INSEAD Business School has released the Global Talent Competitiveness Index (GTCI) in collaboration with the Descartes Institute for the Future (since 2021) and the Human Capital Leadership Institute (2013–2017, and again from 2022). The index aims to summarise complex and diverse concepts related to the availability of human capital and the relative strengths of nations in enabling talent to be developed, attracted, and retained, creating a single quantitative measure of talent competitiveness at the national level. In doing so, it raises conceptual and practical challenges that are discussed in an annual GTCI report.

This chapter concerns the GTCI report for 2023, the tenth annual edition of the index. It focuses on the practical challenges

related to data quality and methodological choices made in the grouping of 69 indicators into 14 sub-pillars, six pillars, two sub-indices, and an overall index for 134 countries.

Overall, the GTCI 2023 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 robust to methodological choices regarding the treatment of missing values, weighting, and aggregation rule, with a shift of less than or equal to 3 positions with respect to the simulated median in 94 per cent of the countries included in this year's GTCI.

The added value of the GTCI lies in its ability to summarise different aspects of talent competitiveness in a more efficient manner than is possible when indicators and pillars are considered separately. In fact, between one-third and a half of the countries have a different rank position on the GTCI index compared to each of the six pillars.

The European Commission's Competence Centre on Composite Indicators and Scoreboards (COIN) at the Joint Research

Centre (JRC) has been invited to assess the statistical properties of the GTCI since its initial publication in 2013. This audit is the tenth such analysis of the GTCI performed by the JRC.

Overall, the JRC concludes that the GTCI 2023 framework is robust and reliable, with a statistically coherent and balanced multi-level structure. The analysis has been performed to ensure the transparency and reliability of the GTCI, and to enable policymakers to derive accurate and meaningful conclusions about human capital and national competitiveness, and potentially guide their choices on priority setting and policy formulation.

As with previous audits, this assessment of the GTCI 2023 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 to demonstrate the robustness of these ranks to the computation methodology (in particular, 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 talent attractiveness, competitiveness, and innovation. The 2023 version of the GTCI model is consistent with other international indicator frameworks measuring global attractiveness, competitiveness, and innovation at the national level. Furthermore, GTCI 2023 is shown to offer additional insights into nations' human capital and competitiveness compared to the other indices.

The practical aspects addressed in this chapter relate to the statistical soundness of the GTCI, which should be considered a necessary, although not necessarily sufficient, condition for a sound index. Given that the present statistical analysis of the GTCI will be mostly, but not exclusively, based on correlations, the correspondence of the GTCI to a real-world phenomenon needs to be critically addressed, since "correlations need not necessarily represent the real influence of the individual indicators on the phenomenon being measured".²

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 2023 data set in July 2023. No critical issues were identified in the 2023 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 2023 have remained largely the same as those in the 2022 edition, although there are some adjustments in this year's version. In particular, one indicator (3.2.4. Formal and non-formal education and training) has been excluded from the 3.2. Lifelong Learning

sub-pillar of the Grow pillar, as 58 percent of countries in the 2022 GTCI report had missing data.

A second indicator, 4.1.5. Vulnerable employment, has been included in the 4.1. Sustainability sub-pillar of the Retain pillar. The Vulnerable employment indicator adds a labour-focused aspect to the 4.1. Sustainability sub-pillar. Country rankings for 2023 are similar to those of 2022. In particular, all countries in the top-20 positions in the 2022 report also feature within the top 20 in the 2023 edition. This pattern also holds for 19 of the countries ranked in the bottom 20 positions.

Following the iterative process during which the index was fine-tuned, the assessment of the statistical coherence in the final version of the GTCI 2023 followed four steps:

Step 1: Relevance

Indicators 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, indicators were scaled either at the source or by the GTCI team.

Step 2: Data Checks

The data used are the most recently released. Forty-seven of 69 indicators have updated data since the 2022 GTCI report was compiled. Overall, data for 56 indicators refer to the years 2022 or 2021. Only three indicators (1.2.6 Urbanisation, 3.1.4 Reading, maths, and science, and 4.1.3 Brain retention) have data from 2018 or earlier. The cut-off year was set at 2012. Countries included in GTCI 2023 have data availability of at least 80% at the index level, and 60% at the sub-pillar level. Compared to the previous year's report, no additional country was excluded from the dataset, while Uzbekistan was added.

As a result, the GTCI 2023 dataset comprises 134 countries and 69 indicators and has 93.8% data coverage. This is a slight improvement over the 93% coverage in the 2022 report. Country data availability is at least 82% at the Input sub-index level and 63% at the Output sub-index level. Again, both are improvements over the 2022 report. Data availability at the indicator level is good: of the 69 indicators only two have data availability slightly below 60%. These are 2.1.1 FDI regulatory restrictiveness and 3.1.4. Reading, maths and science, both of which are available for approximately 59 percent of countries.

The GTCI development team identified potentially problematic indicators that could bias the overall results as those having absolute skewness greater than two and kurtosis greater than 3.5.³ These indicators were treated either by Winsorisation or, in the case of more than five outliers, by taking the natural logarithm.⁴ These criteria have been adopted since the first release of the GTCI, in line with the JRC-COIN's recommendations.

Step 3: Statistical Coherence

The JRC's analysis of the statistical coherence of the GTCI 2023, consists of a principal component analysis to study the structure of the data, a multi-level analysis of the correlations of indicators, 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 in comparison with its component pillars and to other relevant indices on talent attractiveness, competitiveness, and innovation.

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, that capture between 45% (2.2 Internal Openness) and 90% (1.1 Regulatory Landscape) of the total variance in the underlying indicators.

A more detailed analysis of the correlation structure within and across the six GTCI pillars confirms that the sub-pillars are more correlated with their own pillar than with any other. This suggests that the allocation of sub-pillars to pillars in the GTCI is consistent from both a conceptual and a statistical perspective. Furthermore, all correlations within a pillar are positive and well above 0.7, which suggests that 50% or more of the variance in the GTCI pillar scores can be explained by an underlying sub-pillar (see Table 1). The lowest correlation of a sub-pillar to its pillar is 0.84, (between sub-pillar 5.1. Employability and pillar 5. Vocational and Technical Skills). These results show that the GTCI conceptual grouping of sub-pillars into pillars is statistically valid and that the six pillars are statistically well balanced.

The six pillars also share a single statistical dimension that captures 87% of the total variance, and the six correlation coefficients are quite high and very similar to each other, ranging from 0.90 (Attract pillar) to 0.96 (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 when aggregated to the GTCI. The reliability of the GTCI, as measured by its Cronbach's alpha value, is very high, at 0.97—well above the 0.70 threshold for a reliable aggregate.⁵

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. The GTCI is built as the simple arithmetic average of the four Input sub-pillars and the two Output sub-pillars. This implies that the Input sub-index has a weight of 67% while the Output sub-index has a weight of 33%. However, this does not translate to the Input sub-index being twice as important as the Output sub-pillar 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 0.98, respectively, which suggests that the sub-indices are effectively placed on an equal footing as envisaged by the developers.

Overall, the above results demonstrate that the grouping of indicators into sub-pillars, pillars, and an overall index is statistically coherent, and that the GTCI has a balanced structure in which the six pillars are equally important in determining the variation in GTCI scores.

2. Importance of the Indicators in the GTCI Framework

The GTCI and its components are built as the simple arithmetic averages of the underlying indicators. Developers and users of composite indicators often consider that the weights assigned to the indicators coincide with the indicators' importance in

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	0.88	0.84	0.85	0.80	0.85
	1.2 Market Landscape	0.91	0.72	0.87	0.77	0.79	0.82
	1.3 Business and Labour Landscape	0.93	0.83	0.83	0.77	0.77	0.81
	2.1 External Openness	0.76	0.93	0.70	0.71	0.69	0.72
	2.2 Internal Openness	0.83	0.89	0.77	0.77	0.71	0.75
	3.1 Formal Education	0.82	0.68	0.92	0.82	0.78	0.85
	3.2 Lifelong Learning	0.78	0.68	0.90	0.64	0.64	0.72
	3.3 Access to Growth Opportunities	0.88	0.84	0.92	0.85	0.83	0.86
	4.1 Sustainability	0.88	0.82	0.85	0.96	0.85	0.87
	4.2 Lifestyle	0.78	0.74	0.77	0.96	0.80	0.81
OUTPUT	5.1 Mid-Level Skills	0.75	0.70	0.73	0.88	0.91	0.77
	5.2 Employability	0.73	0.66	0.72	0.59	0.84	0.64
	6.1 High-Level Skills	0.82	0.78	0.82	0.83	0.79	0.96
	6.2 Talent Impact	0.88	0.78	0.88	0.85	0.78	0.96

Source: European Commission, Joint Research Centre (2023).

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.

the index. However, the correlation structure of the indicators and their variances also impact an indicator's importance, thus weights are often not equivalent to an indicators importance within an index.

This section assesses the importance of all 69 indicators 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 indicators in an index. The importance of the selected indicators is taken to be equivalent to the contribution of those indicators to the variation of the aggregate scores, whether those are sub-pillars, pillars, sub-indices, or the overall GTCI. The overarching consideration made by the GTCI development team was that all indicators should matter at all levels of

aggregation. This is confirmed by an examination of the importance measures of the 69 indicators, which are given in Table 2.

For example, variations across countries in the scores of indicator 1.1.4 Regulatory quality can explain 94% of the variance in the respective sub-pillar score (1.1 Regulatory Landscape), 85% of the variance in the respective pillar (1. Enable), 86% of the variance in the Input sub-index, and 85% of the variance in the overall GTCI scores. Similarly, country variations in indicator 6.1.1. Tertiary educated workforce explains 77% of the variance in the sub-pillar, 6.1 High-Level Skills; 65% in its respective pillar, 6. Global Knowledge Skills; 67% in the Output sub-index; and 65% in GTCI scores. In addition, variations among countries in the newly added indicator, 4.1.5 Vulnerable employment, can explain at least 66% of the variation in its respective sub-pillar

Table 2

Importance measures for the indicators at each level of the GTCI structure

PILLAR	SUB-PILLAR	VARIABLE	SUB-PILLAR	PILLAR	INPUT/OUTPUT	GTCI
INPUT	1. Enable	1.1.1 Government effectiveness	93%	84%	85%	84%
		1.1.2 Rule of law	96%	82%	83%	82%
		1.1.3. Political stability	74%	55%	58%	55%
		1.1.4 Regulatory quality	94%	85%	86%	85%
		1.1.5 Corruption	93%	78%	80%	78%
		1.2.1 Extent of market dominance	61%	41%	42%	41%
		1.2.2 Domestic credit to private sector	54%	44%	44%	44%
		1.2.3 Cluster development	72%	48%	48%	48%
		1.2.4 R&D expenditure	60%	53%	50%	53%
		1.2.5 ICT infrastructure	73%	64%	62%	64%
		1.2.6 Urbanisation	53%	50%	50%	50%
		1.3.1 Labour rights	31%	23%	24%	23%
		1.3.2 Labour-employer cooperation	57%	43%	45%	43%
		1.3.3 Professional management	68%	52%	53%	52%
		1.3.4 Relationship of pay to productivity	45%	40%	40%	40%
	2. Attract	1.3.5 Enterprise software	47%	30%	30%	30%
		1.3.6 Cloud computing	68%	52%	52%	52%
		1.3.7 Firms with website	58%	69%	70%	69%
		2.1.1 FDI regulatory restrictiveness	23%	12%	13%	12%
		2.1.2 Financial globalisation	70%	56%	58%	56%
		2.1.3 Migrant stock	69%	37%	38%	37%
		2.1.4 International students	68%	37%	36%	37%
		2.1.5 Brain gain	35%	21%	22%	21%
		2.2.1 Tolerance of minorities	52%	29%	32%	29%
		2.2.2 Tolerance of immigrants	25%	11%	13%	11%
		2.2.3 Social Mobility	54%	56%	57%	56%
		2.2.4 Economic empowerment of women	46%	24%	26%	24%
		2.2.5 Gender parity in high-skilled jobs	41%	31%	31%	31%
		2.2.6 Leadership opportunities for women	43%	40%	40%	40%

(continued on next page)

Table 2 (continued)

Importance measures for the indicators at each level of the GTCI structure

	PILLAR	SUB-PILLAR	VARIABLE	SUB-PILLAR	PILLAR	INPUT/OUTPUT	GTCI
INPUT	3. Grow	3.1 Formal Education	3.1.1 Vocational enrolment	35%	18%	18%	18%
			3.1.2 Tertiary enrolment	64%	60%	58%	60%
			3.1.3 Tertiary education expenditure	59%	51%	51%	51%
			3.1.4 Reading, maths, and science	76%	61%	58%	61%
			3.1.5 University ranking	64%	50%	50%	50%
		3.2 Lifelong Learning	3.2.1 Business school ranking	69%	35%	36%	35%
			3.2.2 Prevalence of training in firms	39%	13%	14%	13%
			3.2.3 Employee development	57%	57%	58%	57%
		3.3 Access to Growth Opportunities	3.3.1 Delegation of authority	54%	51%	51%	51%
			3.3.2 Youth inclusion	61%	48%	47%	48%
			3.3.3 Use of virtual social networks	75%	65%	65%	65%
			3.3.4 Use of virtual professional networks	76%	67%	69%	67%
	4. Retain	4.1 Sustainability	4.1.1 Pension coverage	69%	47%	47%	47%
			4.1.2 Social protection	71%	67%	67%	67%
			4.1.3 Brain retention	31%	36%	38%	36%
			4.1.4 Environmental performance	69%	66%	67%	66%
			4.1.5 Vulnerable employment	73%	66%	64%	66%
		4.2 Lifestyle	4.2.1 Personal rights	51%	33%	35%	33%
			4.2.2 Personal safety	85%	70%	68%	70%
			4.2.3 Physician density	80%	63%	62%	63%
			4.2.4 Sanitation	68%	55%	54%	55%
OUTPUT	5. Vocational and Technical Skills	5.1 Mid-Level Skills	5.1.1 Workforce with secondary education	61%	26%	32%	26%
			5.1.2 Population with secondary education	75%	33%	40%	33%
			5.1.3 Technicians and associate professionals	78%	71%	73%	71%
			5.1.4 Labour productivity per employee	62%	78%	76%	78%
		5.2 Employability	5.2.1 Ease of finding skilled employees	50%	17%	18%	17%
			5.2.2 Relevance of education system to the economy	71%	43%	43%	43%
			5.2.3 Skills matching	34%	52%	56%	52%
			5.2.4 Highly educated unemployment	32%	8%	11%	8%
	6. Global Knowledge Skills	6.1 High-Level Skills	6.1.1 Workforce with tertiary education	77%	65%	67%	65%
			6.1.2 Population with tertiary education	75%	52%	56%	52%
			6.1.3 Professionals	78%	75%	77%	75%
			6.1.4 Researchers	69%	72%	73%	72%
			6.1.5 Senior officials and managers	53%	33%	39%	33%
			6.1.6 Digital skills	24%	14%	13%	14%
		6.2 Talent Impact	6.2.1 Innovation output	84%	73%	72%	73%
			6.2.2 High-value exports	43%	23%	25%	23%
			6.2.3 Software development	76%	82%	82%	82%
			6.2.4 New business density	47%	32%	31%	32%
			6.2.5 Scientific journal articles	79%	77%	76%	77%

Source: European Commission Joint Research Centre (2023).

Note: The values are the squared Pearson correlation coefficients, expressed as percentages ($n = 134$ countries). It is reassuring that almost all 69 variables in this 2023 edition are found to have a noteworthy impact of at least 10% on the GTCI variance and the variances of the respective sub-indices, pillars, and sub-pillars. The single indicator (5.2.4 Highly educated unemployment) for which the coefficients are less than 10% is shaded in white.

(4.1 Sustainability), pillar (4. Retain), the Input sub-index, and GTCI scores.

As shown in Table 2, variations in an indicator can explain between 23% and 96% of the variation in the respective sub-pillar, and between 11% and 86% of the variations in the respective Output or Input sub-Index. Almost all the 69 indicators in the 2023 GTCI edition are found to have a noteworthy impact on the GTCI: that is, variations in an indicator can explain at least 10% of the variance in the GTCI. The only exception is the 5.2.4. Highly educated unemployment indicator: while influential at the sub-pillar level (5.2 Employability), where it explains 32% of the variation of the scores, variations in this indicator can explain only 8% of the variation of the GTCI scores, which is slightly below the 10% threshold. These results are similar to the 2022 GTCI edition, where only one variable could not explain more than 10% of the GTCI. The fact that all but a few indicators are found to be influential at all levels of aggregation in the GTCI 2023 is in line with the careful revisions of the GTCI framework that its developers have undertaken in previous years.

3. Added Value of the GTCI

Very high levels of statistical reliability among the main components of an index can also be the result of redundancy of information. In this sense, the high correlation observed between the GTCI and its six sub-pillars suggests that each sub-pillar provides the same information, which would make aggregation unnecessary.

However, this is not the case in the GTCI. In fact, the overall GTCI 2023 country ranking differs significantly from any of the rankings within the individual six pillars: at least 36 percent of the 134 countries included in the 2023 edition have a position in the overall GTCI that differs from their rank in a particular pillar by 10 positions or more (see Table 3). This goes up to 55 percent of countries when the ranking of the GTCI is compared to that of the individual pillar 2. Attract (see Table 3). Again, this highlights the added value of aggregating the six pillars to obtain the overall GTCI and its informative summary of the six pillars. This result also shows the value of taking components into account on their own merit. In doing so, country-specific strengths and bottlenecks in

human capital and talent competitiveness can be identified and used as an input for evidence-based policymaking.

The GTCI 2023 has also been compared with the latest available edition of three relevant international indices, using the most recent rankings extracted from these projects' websites (see Table 4).⁶ These are: the 2022 Global Innovation Index from the World Intellectual Property Organization (WIPO); the 2023 Global Attractiveness Index from The European House - Ambrosetti; and the 2022 World Competitiveness Index from the International Institute for Management Development (IMD).

The correlation of rankings between the GTCI 2023 and all three indices is equal to or greater than 0.85, which suggests that the GTCI conceptual framework is consistent with the frameworks used to develop the other three indices. This is both an expected and a desirable outcome, since the concept of talent competitiveness relates to a country's potential for innovation and outcomes of innovation processes, and consequently its attractiveness and competitiveness as an investment destination.

Despite being highly correlated, however, the difference in rank between the GTCI and three alternative indices, is greater than 10 positions for 39 percent of countries in the Global Innovation Index, 67 percent in the Global Attractiveness Index, and 30 percent in the World Competitiveness Index. This indicates that the GTCI 2023 offers additional insights into nations' human capital and competitiveness compared to other indices.

Step 4: Qualitative Review

Finally, the GTCI results 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. This work covered overall country classifications as well as relative performances in the Input and Output sub-indices.

These statistical tests and the positive outcomes regarding the statistical soundness of the GTCI notwithstanding, 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 become available.

Table 3

Distribution of differences between pillar and GTCI rankings

Rank differences with respect to the GTCI 2023	GTCI INPUT SUB-INDEX				GTCI OUTPUT SUB-INDEX	
	Enable	Attract	Grow	Retain	Vocational and Technical Skills	Global Knowledge Skills
30 or more positions	3%	10%	7%	4%	7%	7%
20 to 29 positions	10%	16%	10%	4%	9%	9%
10 to 19 positions	25%	29%	27%	26%	30%	20%
10 or more positions*	38%	55%	43%	34%	46%	36%
5 to 9 positions	22%	17%	24%	29%	23%	28%
Less than 5 positions	34%	24%	29%	31%	28%	33%
0 positions	7%	4%	4%	6%	3%	4%
Total	100%	100%	100%	100%	100%	100%

Source: European Commission Joint Research Centre (2023).

* This row is the sum of the previous three rows.

Table 4

Difference in rankings between the GTCI 2023 and other international indices

Differences in ranking with respect to the GTCI 2023	Global Innovation Index 2022 (Cornell, INSEAD, WIPO)	Global Attractiveness Index 2023 (The European House Ambrosetti)	World Competitiveness Index 2022 (IMD)
30 or more positions	6%	12%	0%
20 to 29 positions	8%	19%	7%
10 to 19 positions	26%	36%	23%
10 or more positions*	39%	67%	30%
5 to 9 positions	33%	16%	27%
Less than 5 positions	26%	16%	32%
0 positions	2%	2%	12%
Total	100%	100%	100%
Pearson correlation coefficient with the GTCI	0.92	0.82	0.84
Spearman rank correlation coefficient with the GTCI	0.90	0.85	0.85
Common countries with the GTCI	125	129	60

Source: European Commission Joint Research Centre (2023).

Notes: The comparison between the GTCI and the other indices was based on the common set of countries.

*This row is the sum of the previous three rows.

One consideration for future versions of the GTCI would be to search for alternatives to the indicators which do not include recent data. In particular, the indicators 1.2.6 Urbanisation and 4.1.3 Brain retention are currently based on data from 2018, while the 5.1.4. Labour productivity per employee indicators refers to forecast data.

IMPACT OF MODELLING ASSUMPTIONS ON THE GTCI RESULTS

Every country's score in the overall GTCI and the Input and Output sub-indices depends on modelling choices: the six-pillar structure, the selected indicators, the choice to impute or not the missing data, the algorithm used for imputation, and the weights and aggregation method, among other elements. These choices are based on expert opinion, for example in the case of selection of indicators, or on common practice as is the case for min-max normalisation in the [0,100] range. They are driven by statistical analysis, for example in the treatment of outliers, or simplicity (for example, no imputation of missing data). Robustness analysis undertaken by the JRC aims at assessing the simultaneous and joint impact of these modelling choices on the rankings. The data are assumed to be error-free, as potential outliers and errors were corrected during the computation phase.

As suggested in the relevant literature on composite indicators,⁷ the robustness assessment of the GTCI was based on a combination of a Monte Carlo experiment and a multi-modelling approach that considered three modelling choices: pillar weights, missing data, and the aggregation formula. This 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. It 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 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, which 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 pillars in the Input sub-index; and 40% to 60% for the two in 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 6% to 26%. In all simulations, sampled weights are rescaled so that they always sum to 1.

For transparency and replicability, the GTCI development team opted not to estimate the missing data (only 6.2% of data were missing from the data set of 134 countries and all 69 indicators). The 'no imputation' choice, which is common in similar contexts (for example, in the Global Innovation Index and the European Skills Index), might encourage countries to not report low data values. The 'no imputation' choice in an arithmetic average means 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 indicators data 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.⁸

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 indicators can compensate for a comparative disadvantage for many indicators.⁹ As discussed in the previous section, the arithmetic averaging formula received statistical support for the development of the GTCI; however, the geometric average was considered as a possible alternative. This average is a partially compensatory approach that rewards

Table 5

Uncertainty analysis for the GTCI 2023: 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		Reference value for the weight (within the sub-index)	Distribution assigned for robustness analysis (within the sub-index)
GTCI sub-index	Pillar		
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]
		Reference value for the weight (when calculating the overall GTCI)	Distribution assigned for robustness analysis (when calculating the overall GTCI)
Overall GTCI	All six pillars	0.16	U[0.06, 0.26]

Source: European Commission Joint Research Centre (2023).

countries with similar performance in all pillars and 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 2023.

Uncertainty Analysis Results

The main results of the robustness analysis are shown in Figures 1a-1c, with median rankings and 90% confidence intervals computed across the 4,000 Monte Carlo simulations for the GTCI, the Input sub-index, and the Output sub-index respectively. In each of these figures, countries are ordered from best to worst according to their rank in the corresponding index, while a blue dot corresponds to each country's simulated median rank. Error bars represent the 90% interval across all simulations for each country. Table 6 shows 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 are 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.

GTCI ranks are shown to be within the limits of most scenarios considered and robust to changes in the imputation method, pillar weights, and the aggregation formula. Assuming the median rank across the simulated scenarios is representative of these scenarios, then the GTCI rank is close to the median rank for 94% of the countries—differing by three positions or less. This suggests that the GTCI is a suitable summary measure.

Furthermore, the confidence intervals of less than or equal to 10 positions for 96 percent of the countries implies that the GTCI ranks are also robust to changes in the pillar weights, the imputation method, and the aggregation formula for the vast majority of the countries. Robustness has improved compared to

the 2022 version of the GTCI, in which confidence intervals less than or equal to 10 positions were observed in the ranking for 71 percent of included countries.

Results for the Input and Output sub-indices are also robust and representative of the most scenarios considered. The rankings on the Input Sub-index are close to the median position (diverging by three positions or less) with intervals of less than or equal to 10 positions for 98 percent of the 134 countries considered. Similarly, rankings on the Output Sub-index are also close to the median rank for 85 percent of countries, with intervals of less than or equal to 10 positions for 82 percent of countries.

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

Sensitivity Analysis Results

To complement the uncertainty analysis, sensitivity analysis was used to identify which of the modelling assumptions have the highest impact on country ranks. Figure 2 plots the GTCI, the Input sub-index and the Output sub-index rankings against the rankings resulting from one-at-a-time changes either at the imputation methodology (no imputation of missing data versus imputation using the EM algorithm) or at the aggregation formula used at the last stage of aggregation (arithmetic versus geometric average).

Both the GTCI and its two sub-indices are robust to the changes in methodological assumptions, as illustrated by the relatively high correlations in ranking (the lowest correlation is 0.993) and the comparatively low calculated average change in ranking positions (the largest is 2.81 positions).

The most influential methodological assumption is the aggregation formula and this is particularly so for the Output sub-index, given that a lower correlation of ranks indicates

Figure 1a

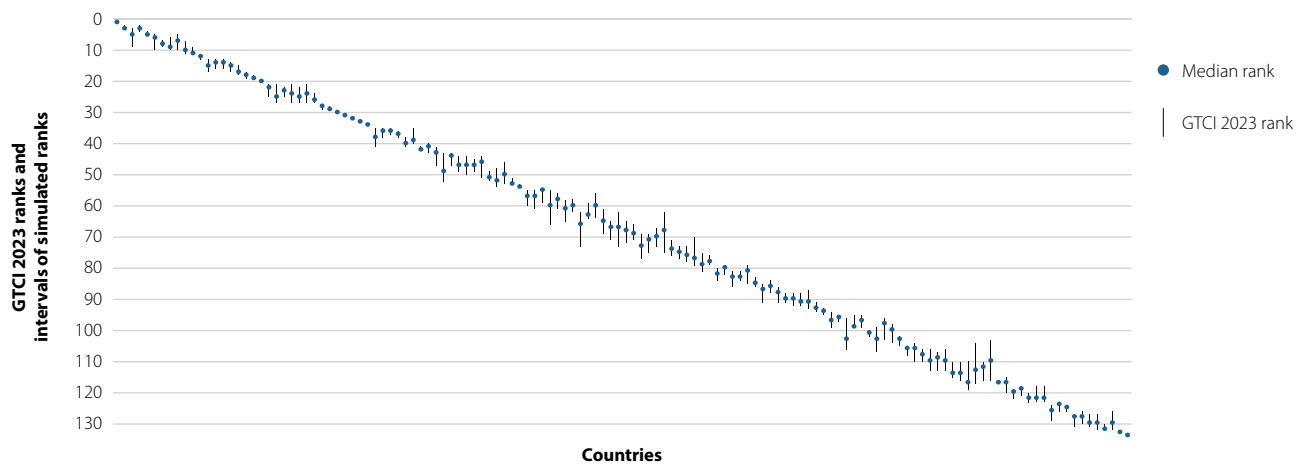
Robustness analysis (GTCI rank vs. median rank, 90% confidence intervals)

Figure 1b

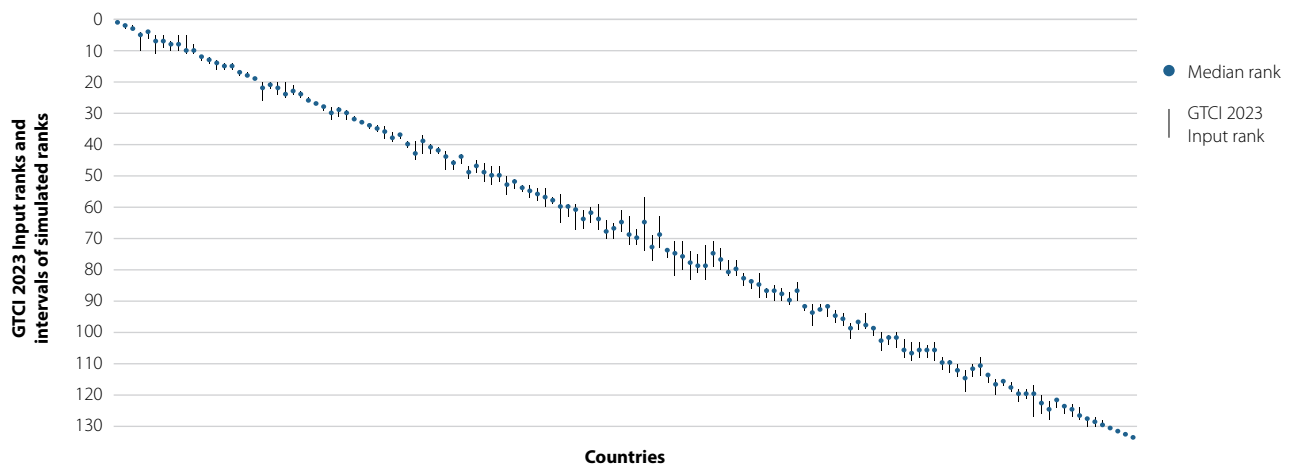
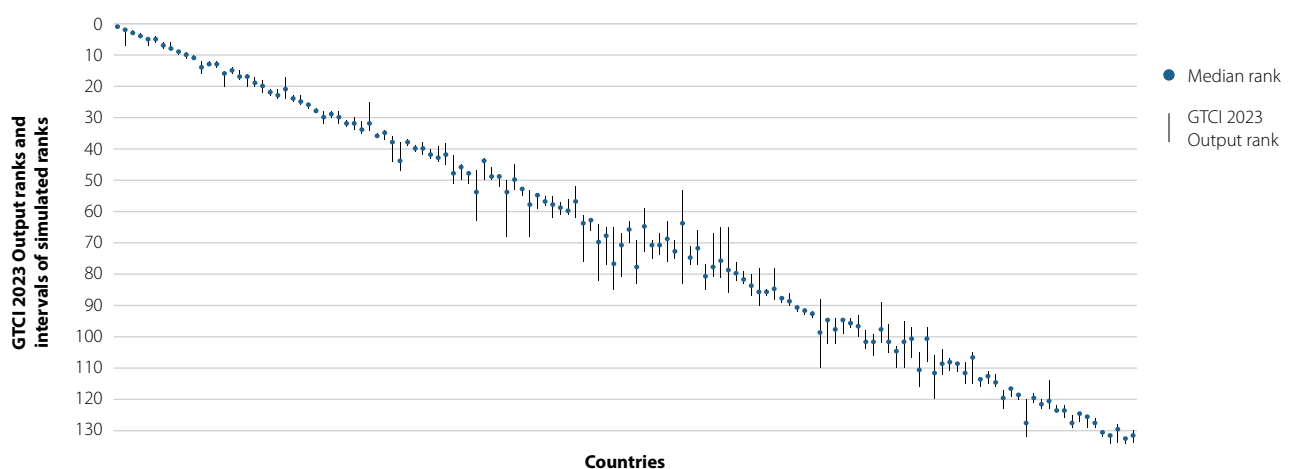
Robustness analysis (Input rank vs. median rank, 90% confidence intervals)

Figure 1c

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

Source: European Commission Joint Research Centre (2023).

Notes: The Spearman rank correlation between the median rank and the GTCI 2023 rank is 0.999 ($n = 134$); between the median rank and the GTCI 2023 Input rank it is 0.999; and between the median rank and the GTCI 2023 Output rank it is 0.997. 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.

Table 6

Country ranks and 90% confidence intervals for the GTCI 2023 and its Input/Output sub-indices

	GTCI 2023		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Switzerland	1	[1, 1]	1	[1, 1]	3	[2, 3]
Singapore	2	[2, 3]	6	[5, 11]	1	[1, 1]
United States	3	[3, 9]	4	[4, 10]	2	[2, 7]
Denmark	4	[2, 4]	2	[2, 3]	5	[5, 7]
Netherlands	5	[4, 5]	3	[2, 3]	14	[12, 14]
Finland	6	[5, 10]	5	[4, 6]	10	[9, 11]
Norway	7	[7, 9]	11	[8, 11]	4	[3, 4]
Australia	8	[6, 10]	8	[7, 10]	8	[6, 8]
Sweden	9	[5, 10]	9	[5, 10]	7	[6, 8]
United Kingdom	10	[7, 11]	7	[5, 9]	9	[9, 10]
Luxembourg	11	[9, 11]	10	[5, 11]	11	[10, 11]
Ireland	12	[12, 13]	12	[12, 13]	16	[14, 16]
Canada	13	[13, 17]	14	[13, 16]	15	[15, 20]
Germany	14	[13, 16]	13	[12, 14]	19	[17, 20]
Iceland	15	[13, 16]	19	[19, 19]	6	[4, 6]
Belgium	16	[14, 17]	16	[14, 16]	17	[15, 18]
Austria	17	[15, 18]	15	[14, 16]	20	[18, 22]
New Zealand	18	[17, 19]	17	[17, 18]	23	[17, 24]
France	19	[18, 19]	18	[17, 18]	21	[21, 23]
Estonia	20	[20, 20]	25	[23, 25]	18	[16, 20]
Malta	21	[21, 25]	23	[20, 25]	25	[23, 26]
United Arab Emirates	22	[21, 27]	20	[20, 26]	27	[27, 28]
Czech Republic	23	[22, 25]	26	[25, 26]	22	[21, 24]
South Korea	24	[21, 27]	31	[29, 32]	12	[12, 16]
Israel	25	[22, 27]	32	[31, 32]	13	[12, 13]
Japan	26	[21, 27]	22	[20, 24]	34	[25, 34]
Portugal	27	[24, 27]	24	[21, 24]	30	[28, 32]
Slovenia	28	[28, 29]	27	[27, 27]	24	[23, 25]
Spain	29	[28, 29]	21	[20, 22]	44	[38, 45]
Cyprus	30	[30, 30]	29	[28, 32]	26	[26, 27]
Lithuania	31	[31, 31]	28	[28, 29]	32	[30, 34]
Italy	32	[32, 32]	30	[28, 31]	35	[35, 36]
Latvia	33	[33, 33]	35	[34, 36]	29	[28, 30]
Chile	34	[34, 34]	33	[33, 33]	40	[39, 41]
Qatar	35	[35, 41]	36	[34, 38]	45	[42, 51]
Slovakia	36	[35, 38]	39	[39, 41]	33	[31, 35]
Poland	37	[35, 37]	43	[41, 43]	28	[28, 32]
Hungary	38	[36, 38]	42	[40, 43]	31	[31, 33]
Greece	39	[38, 41]	37	[36, 39]	53	[45, 53]
China	40	[35, 40]	41	[37, 43]	43	[39, 44]
Brunei Darussalam	41	[41, 42]	46	[43, 46]	37	[36, 44]
Malaysia	42	[40, 43]	48	[45, 49]	36	[34, 37]
Uruguay	43	[41, 47]	34	[34, 35]	71	[69, 75]
Bahrain	44	[43, 52]	40	[39, 45]	57	[55, 58]
Croatia	45	[43, 47]	47	[47, 51]	42	[40, 43]

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Table 6 (continued)

Country ranks and 90% confidence intervals for the GTCI 2023 and its Input/Output sub-indices

	GTCI 2023		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Georgia	46	[44, 49]	45	[45, 48]	50	[46, 50]
Costa Rica	47	[44, 50]	38	[37, 38]	68	[63, 70]
Saudi Arabia	48	[45, 49]	51	[47, 52]	38	[38, 47]
Bulgaria	49	[44, 51]	50	[47, 53]	49	[43, 50]
Montenegro	50	[49, 52]	52	[50, 56]	46	[45, 50]
Mauritius	51	[48, 54]	44	[42, 48]	59	[57, 61]
Russia	52	[46, 53]	57	[54, 60]	39	[37, 39]
Serbia	53	[51, 53]	54	[53, 55]	47	[47, 51]
Romania	54	[53, 54]	58	[57, 59]	51	[48, 52]
Armenia	55	[55, 60]	59	[56, 65]	54	[53, 55]
Albania	56	[55, 61]	49	[46, 52]	69	[69, 83]
Belarus	57	[55, 59]	71	[69, 77]	41	[38, 42]
Azerbaijan	58	[55, 66]	63	[60, 65]	52	[50, 68]
Oman	59	[56, 61]	53	[51, 54]	65	[65, 77]
Trinidad and Tobago	60	[58, 65]	61	[59, 67]	55	[53, 68]
Argentina	61	[58, 62]	55	[53, 57]	63	[62, 66]
Uzbekistan	62	[62, 73]	74	[71, 82]	48	[47, 63]
Kuwait	63	[59, 64]	56	[54, 58]	77	[66, 77]
Ukraine	64	[56, 64]	60	[59, 63]	61	[52, 62]
Moldova	65	[61, 69]	69	[67, 72]	58	[55, 62]
Jamaica	66	[65, 71]	66	[65, 70]	62	[61, 76]
Kazakhstan	67	[62, 73]	65	[64, 70]	75	[53, 83]
South Africa	68	[65, 72]	64	[59, 67]	79	[67, 81]
Brazil	69	[66, 71]	67	[61, 68]	76	[71, 77]
Jordan	70	[69, 77]	62	[61, 67]	86	[85, 87]
North Macedonia	71	[69, 75]	77	[75, 81]	60	[56, 61]
Colombia	72	[67, 73]	72	[63, 73]	72	[67, 74]
Botswana	73	[62, 75]	70	[57, 74]	80	[65, 81]
Mexico	74	[71, 76]	68	[63, 72]	83	[79, 83]
Viet Nam	75	[73, 77]	75	[71, 80]	74	[69, 75]
Mongolia	76	[73, 78]	73	[73, 76]	81	[65, 86]
Lebanon	77	[70, 79]	87	[85, 90]	56	[54, 59]
Cabo Verde	78	[75, 81]	76	[74, 83]	78	[77, 85]
Thailand	79	[76, 79]	80	[73, 80]	82	[76, 82]
Indonesia	80	[80, 84]	81	[77, 82]	85	[78, 90]
Türkiye	81	[79, 82]	83	[81, 85]	73	[63, 76]
Peru	82	[81, 86]	78	[72, 83]	88	[87, 89]
Bosnia and Herzegovina	83	[81, 84]	86	[86, 89]	67	[67, 81]
Philippines	84	[79, 85]	90	[84, 90]	70	[59, 73]
Ecuador	85	[83, 86]	82	[77, 82]	91	[91, 93]
Kyrgyzstan	86	[85, 91]	89	[87, 91]	84	[80, 87]
Panama	87	[84, 88]	79	[71, 79]	98	[93, 100]
Egypt	88	[86, 91]	93	[91, 93]	64	[64, 82]
Dominican Republic	89	[88, 91]	88	[86, 90]	90	[90, 92]
Sri Lanka	90	[88, 92]	94	[91, 95]	66	[65, 85]

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Table 6 (continued)

Country ranks and 90% confidence intervals for the GTCI 2023 and its Input/Output sub-indices

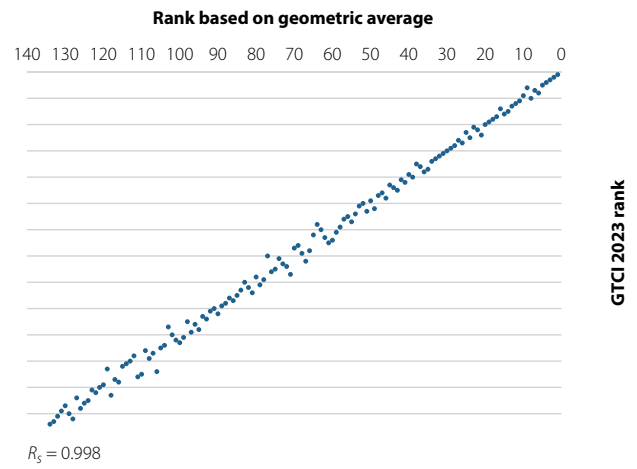
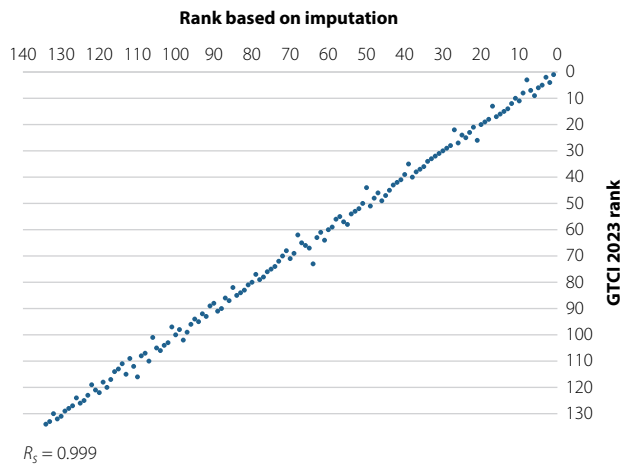
	GTCI 2023		INPUT SUB-INDEX		OUTPUT SUB-INDEX	
	RANK	INTERVAL	RANK	INTERVAL	RANK	INTERVAL
Paraguay	91	[88, 92]	85	[81, 89]	97	[94, 97]
Tunisia	92	[87, 93]	91	[91, 93]	87	[78, 88]
Namibia	93	[91, 94]	84	[83, 86]	104	[95, 110]
Bolivia	94	[93, 95]	95	[93, 97]	96	[94, 99]
Ghana	95	[94, 99]	96	[94, 98]	102	[96, 105]
El Salvador	96	[95, 97]	98	[96, 99]	95	[94, 102]
Gambia	97	[96, 106]	92	[91, 98]	119	[118, 120]
Kenya	98	[95, 99]	107	[104, 108]	92	[92, 94]
Morocco	99	[95, 99]	99	[94, 99]	107	[97, 108]
Eswatini	100	[100, 102]	97	[97, 102]	113	[105, 115]
Laos	101	[99, 107]	109	[108, 112]	94	[94, 102]
Algeria	102	[96, 103]	108	[103, 109]	101	[89, 102]
India	103	[98, 104]	106	[103, 108]	105	[97, 107]
Guatemala	104	[102, 105]	103	[100, 105]	110	[107, 111]
Honduras	105	[105, 108]	102	[101, 104]	116	[112, 116]
Cambodia	106	[104, 110]	100	[99, 101]	118	[117, 119]
Nepal	107	[106, 110]	113	[110, 114]	100	[99, 106]
Zambia	108	[106, 113]	111	[110, 114]	103	[103, 110]
Pakistan	109	[107, 113]	110	[109, 113]	111	[108, 111]
Rwanda	110	[106, 113]	101	[100, 106]	123	[114, 123]
Côte d'Ivoire	111	[110, 115]	104	[102, 108]	122	[120, 123]
Senegal	112	[110, 116]	105	[103, 109]	121	[118, 121]
Benin	113	[110, 119]	112	[112, 119]	108	[106, 120]
Nigeria	114	[104, 117]	118	[116, 119]	93	[88, 110]
Nicaragua	115	[110, 116]	114	[108, 114]	112	[108, 115]
Iran	116	[103, 116]	121	[117, 127]	89	[86, 90]
Zimbabwe	117	[116, 117]	124	[121, 124]	99	[98, 104]
Cameroon	118	[115, 120]	120	[118, 121]	109	[104, 112]
Uganda	119	[119, 122]	119	[118, 122]	114	[113, 116]
Malawi	120	[118, 121]	117	[115, 117]	117	[117, 123]
Tanzania	121	[120, 123]	115	[113, 116]	129	[126, 129]
Lesotho	122	[118, 123]	116	[115, 120]	125	[122, 126]
Bangladesh	123	[118, 123]	122	[120, 126]	115	[111, 115]
Burundi	124	[124, 129]	126	[123, 127]	120	[120, 132]
Madagascar	125	[124, 126]	125	[123, 126]	124	[122, 124]
Mauritania	126	[124, 126]	131	[131, 131]	106	[105, 116]
Mali	127	[127, 131]	123	[122, 128]	130	[130, 132]
Guinea	128	[126, 130]	129	[127, 130]	126	[125, 129]
Burkina Faso	129	[127, 131]	127	[124, 128]	134	[130, 134]
Angola	130	[127, 132]	130	[128, 130]	132	[128, 134]
Mozambique	131	[130, 132]	128	[127, 130]	133	[132, 134]
Ethiopia	132	[126, 132]	132	[132, 132]	127	[125, 127]
Democratic Republic of the Congo	133	[133, 133]	133	[133, 133]	128	[126, 129]
Chad	134	[134, 134]	134	[134, 134]	131	[131, 134]

Source: European Commission Joint Research Centre (2023).

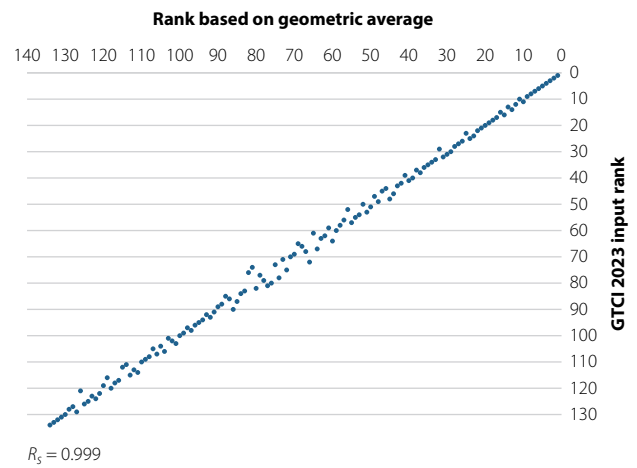
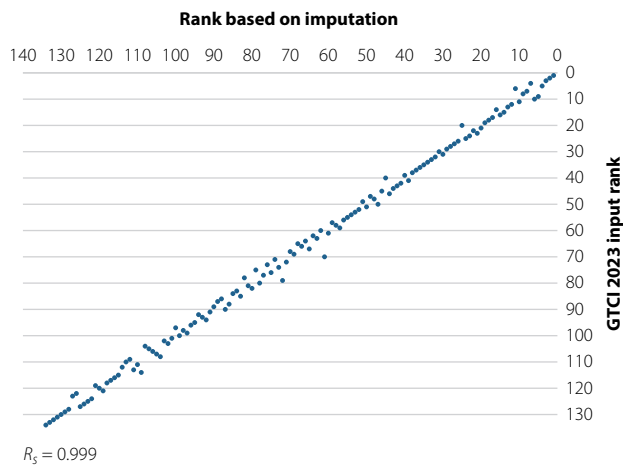
Figure 2

Sensitivity analysis: Impact of modelling choices

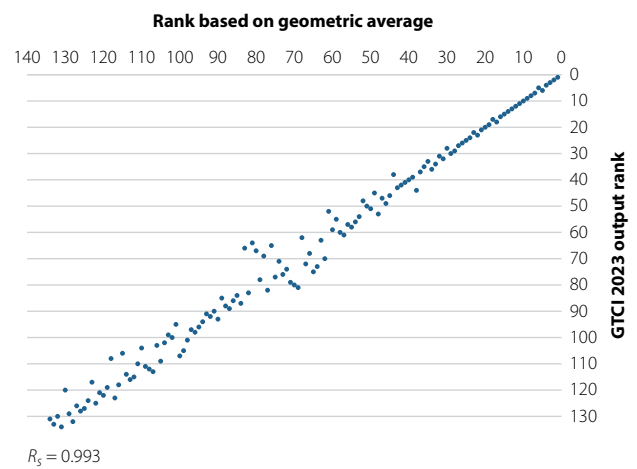
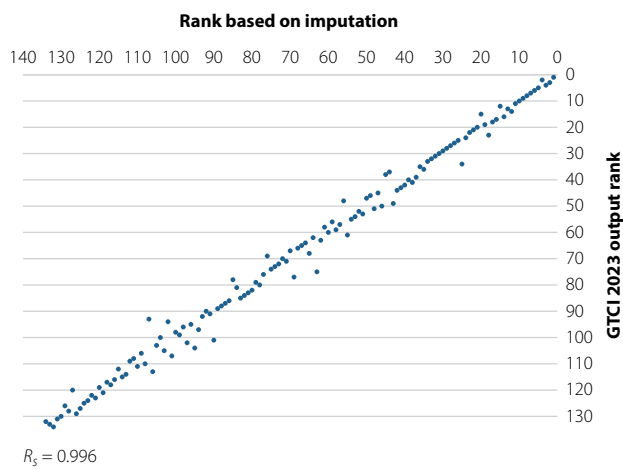
Global Talent Competitiveness 2023



GTCI 2023 Input sub-index



GTCI 2023 Output sub-index



Source: European Commission Joint Research Centre (2023).

Note: R_s represents the Spearman rank correlation coefficient ($n = 134$).

greater sensitivity. Change in country ranks when considering geometric instead of arithmetic aggregation in the Output sub-index is on average 2.81 positions, while just seven percent of countries exhibit shifts in rank greater than 10 positions. In the most extreme of these cases, aggregating the Output pillars using a geometric instead of an arithmetic average causes Egypt and Sri Lanka fall by 17 positions in the ranking (from 64 to 81, and from 66 to 83 respectively), while Mongolia improves by 12 positions (from 81 to 69). However, these assumptions on the weights, aggregation method, and missing data estimation—primarily concern methodological choices and may be less influential overall than choices related to the background assumptions in the conceptual framework.¹⁰

Overall, the ranges of uncertainty in the final rankings are fairly modest. This suggests that the rankings of the overwhelming majority of the 134 countries in the overall GTCI 2023 and the Input and Output sub-indices are the result of the countries' own performance (as reflected in the underlying data) and not of the considered modelling choices.¹¹ Consequently, the JRC recommendation is not to alter the GTCI methodology, but to consider country ranks in the GTCI 2023 and in the Input and Output sub-indices within the 90% confidence intervals in order to take into account to what degree a country's rank depends on the modelling choices.

CONCLUSIONS

This year's edition of the Global Talent Competitiveness Index (GTCI) marks its tenth anniversary. Throughout the decade of annual publications, the GTCI intention has been to bring attention to the growing challenges that countries around the world face when developing, attracting and maintaining talent, and to highlight best practices in talent management. The JRC statistical audit has investigated the current GTCI framework to assess the statistical properties of the data and the methodology used in constructing the 2023 edition of the index. The JRC analysis suggests that the conceptualised structure is statistically coherent and balanced on multiple levels of the GTCI 2023.

The GTCI is not dominated by any pillar or sub-pillar. All underlying indicators contribute to the variation of the respective Input and Output sub-indices, and to the overall GTCI. Furthermore, the analysis offers statistical justification for the use of equal weights and arithmetic averaging at the various levels of aggregation. It shows that the GTCI is statistically reliable in its current form as the simple average of the six pillars (as measured by a high Cronbach's alpha value of 0.97).

It is reassuring that the majority of the 69 indicators considered in this 2023 edition are found to have a noteworthy impact of at least 10% on the GTCI variance. The only exception, 5.2.4 Highly educated unemployment, is also very close to this threshold, and can explain 8% of the GTCI variance. That nearly all indicators are found to be influential at all levels of aggregation in the GTCI 2023 is the direct result of the careful revision of the GTCI framework undertaken in previous years by the developers. A suggestion for future versions of the GTCI would be to consider alternatives for the indicators which do not include recent data.

This refers mostly to indicators 1.2.6 Urbanisation and 4.1.3 Brain retention, which are currently based on data from 2018.

The country ranks in the GTCI and both its sub-indices 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 GTCI, the overall rank and those in the Input and Output sub-indices are the result of countries' own performance (as reflected in the underlying data) and not of the modelling choices. Consequently, inferences can be drawn for most countries in the GTCI.

Perfect robustness would not be desirable, as it would imply that the GTCI components are perfectly correlated and hence redundant, which is not the case for the GTCI 2023. In fact, one way in which the GTCI 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 GTCI and each of its six pillars.

In the analysis conducted by the JRC, the GTCI ranking differs from any of the six pillar rankings by 10 positions or more for at least 34 percent and up to 55 percent of all countries. This outcome demonstrates the added value of aggregating the six pillars to the GTCI, which helps to identify overall best practices in talent management across the world. It also highlights the importance of taking into account the individual pillars, sub-pillars, and indicators on their own merit. In doing so, country-specific strengths and bottlenecks in human capital and talent competitiveness can be identified and used as an input for evidence-based policymaking.

The auditing conducted herein has shown the potential of the GTCI 2023 for reliably identifying weaknesses and best practices and ultimately monitoring national performance in human capital development and the relative competitiveness of countries in talent management. Readers and policy analysts should go beyond the overall GTCI scores and ranks and consider the individual indicators and pillars on their own merit.

The GTCI cannot serve as the definitive yardstick for monitoring progress and performance on talent and competitiveness. Instead, it best represents an ongoing effort by INSEAD, the Descartes Institute for the Future and the Human Capital Leadership Institute to continuously adapt the GTCI framework to reflect improved and new data sources and the theoretical advances on how to leverage talent as a tool for competitiveness. In this way it can effectively contribute to policy discussions on the many challenges that national talent-management systems face in an increasingly competitive and talent-driven world.

ENDNOTES

- 1 The JRC analysis was based on the recommendations of the OECD and 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).

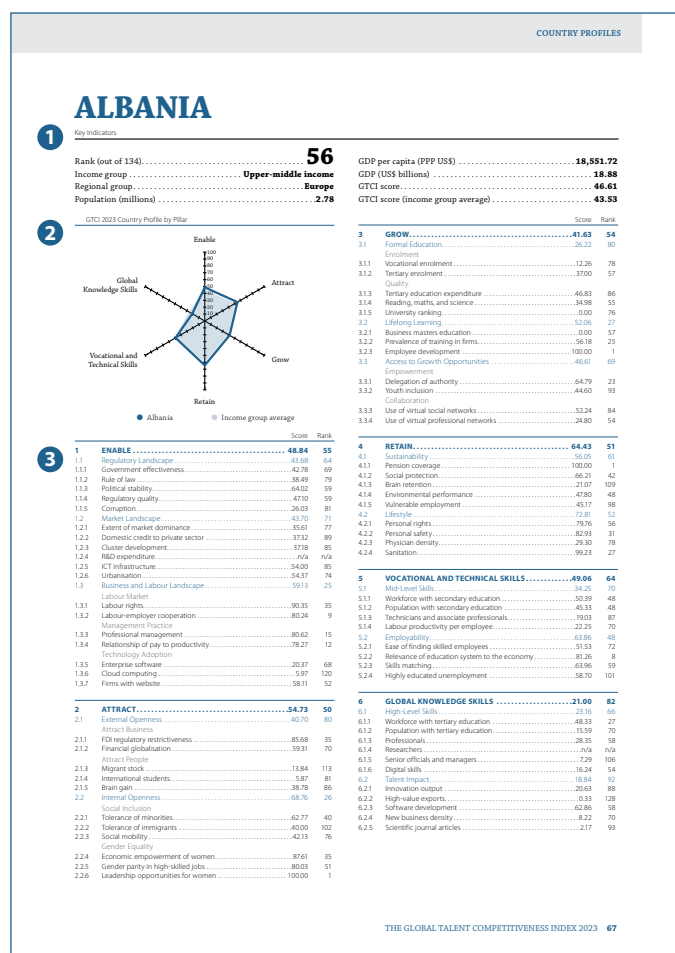
- 3 Groeneveld & Meeden (1984) set the criteria for absolute skewness above 1 and kurtosis above 3.5. The skewness criterion was relaxed to account for the small sample (134 countries).
- 4 These indicators are: 1.3.1 Labour rights; 2.1.4 International students; 6.1.5 Senior officials and managers; 6.2.2 High-value exports; and 6.2.4 New business density
- 5 See Nunnally (1978).
- 6 Comparison with these three indices has been adopted since the 2022 edition of the GTCI. At the time of writing, the 2023 version of the World Economic Forum's Global Competitiveness Index and of the Global Innovation Index are not available.
- 7 Becker et al. (2017); Paruolo et al. (2013); Montalto et al. (2020); Saisana et al. (2005), (2011); Saisana & Saltelli (2011); Saltelli et al. (2008); Vértesy (2016); Vértesy & Deiss (2016).
- 8 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.
- 9 Munda (2008).
- 10 Saltelli & Funtowicz (2014).
- 11 As already mentioned in the uncertainty analysis, about 94% of the simulated median ranks for the GTCI are fewer than three positions away from the reported 2023 rank—this percentage is at 98% in the Input sub-index and drops to 85% in the Output sub-index.

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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 2023; and its regional group, based on the United Nations' sub-regional groups. In addition, 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, this section presents each 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 of the GTCI, 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 indicators. 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 their role is to contextualise the theoretical framework. The 69 indicators are shown in a three-digit notation (e.g., 1.2.3 Cluster development).

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
- 3** Scores and ranks

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

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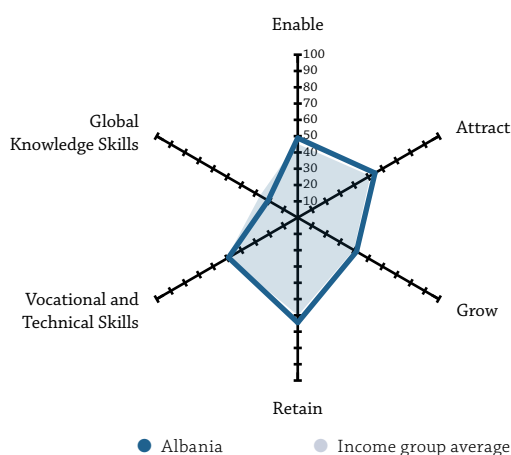
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ALBANIA

Key Indicators

Rank (out of 134)	56
Income group	Upper-middle income
Regional group	Europe
Population (millions)	2.78

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	48.84	55
1.1 Regulatory Landscape	43.68	64
1.1.1 Government effectiveness	42.78	69
1.1.2 Rule of law	38.49	79
1.1.3 Political stability	64.02	59
1.1.4 Regulatory quality	47.10	59
1.1.5 Corruption	26.03	81
1.2 Market Landscape	43.70	71
1.2.1 Extent of market dominance	35.61	77
1.2.2 Domestic credit to private sector	37.32	89
1.2.3 Cluster development	37.18	85
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	54.00	85
1.2.6 Urbanisation	54.37	74
1.3 Business and Labour Landscape	59.13	25
Labour Market		
1.3.1 Labour rights	90.35	35
1.3.2 Labour-employer cooperation	80.24	9
Management Practice		
1.3.3 Professional management	80.62	15
1.3.4 Relationship of pay to productivity	78.27	12
Technology Adoption		
1.3.5 Enterprise software	20.37	68
1.3.6 Cloud computing	5.97	120
1.3.7 Firms with website	58.11	52
2 ATTRACT	54.73	50
2.1 External Openness	40.70	80
Attract Business		
2.1.1 FDI regulatory restrictiveness	85.68	35
2.1.2 Financial globalisation	59.31	70
Attract People		
2.1.3 Migrant stock	13.84	113
2.1.4 International students	5.87	81
2.1.5 Brain gain	38.78	86
2.2 Internal Openness	68.76	26
Social Inclusion		
2.2.1 Tolerance of minorities	62.77	40
2.2.2 Tolerance of immigrants	40.00	102
2.2.3 Social mobility	42.13	76
Gender Equality		
2.2.4 Economic empowerment of women	87.61	35
2.2.5 Gender parity in high-skilled jobs	80.03	51
2.2.6 Leadership opportunities for women	100.00	1

GDP per capita (PPP US\$)	18,551.72
GDP (US\$ billions)	18.88
GTGI score	46.61
GTGI score (income group average)	43.53

	Score	Rank
3 GROW	41.63	54
3.1 Formal Education	26.22	80
Enrolment		
3.1.1 Vocational enrolment	12.26	78
3.1.2 Tertiary enrolment	37.00	57
Quality		
3.1.3 Tertiary education expenditure	46.83	86
3.1.4 Reading, maths, and science	34.98	55
3.1.5 University ranking	0.00	76
3.2 Lifelong Learning	52.06	27
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	56.18	25
3.2.3 Employee development	100.00	1
3.3 Access to Growth Opportunities	46.61	69
Empowerment		
3.3.1 Delegation of authority	64.79	23
3.3.2 Youth inclusion	44.60	93
Collaboration		
3.3.3 Use of virtual social networks	52.24	84
3.3.4 Use of virtual professional networks	24.80	54

4 RETAIN	64.43	51
4.1 Sustainability	56.05	61
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	66.21	42
4.1.3 Brain retention	21.07	109
4.1.4 Environmental performance	47.80	48
4.1.5 Vulnerable employment	45.17	98
4.2 Lifestyle	72.81	52
4.2.1 Personal rights	79.76	56
4.2.2 Personal safety	82.93	31
4.2.3 Physician density	29.30	78
4.2.4 Sanitation	99.23	27

5 VOCATIONAL AND TECHNICAL SKILLS	49.06	64
5.1 Mid-Level Skills	34.25	70
5.1.1 Workforce with secondary education	50.39	48
5.1.2 Population with secondary education	45.33	48
5.1.3 Technicians and associate professionals	19.03	87
5.1.4 Labour productivity per employee	22.25	70
5.2 Employability	63.86	48
5.2.1 Ease of finding skilled employees	51.53	72
5.2.2 Relevance of education system to the economy	81.26	8
5.2.3 Skills matching	63.96	59
5.2.4 Highly educated unemployment	58.70	101

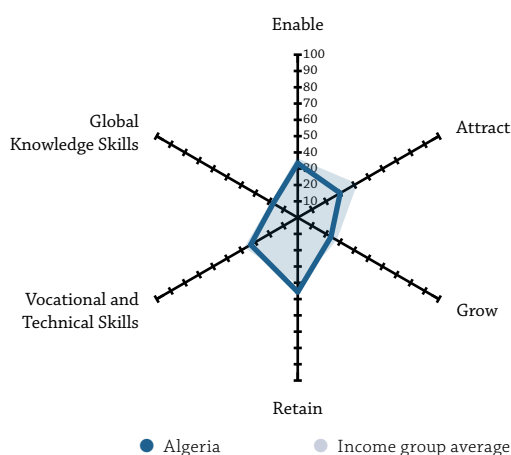
6 GLOBAL KNOWLEDGE SKILLS	21.00	82
6.1 High-Level Skills	23.16	66
6.1.1 Workforce with tertiary education	48.33	27
6.1.2 Population with tertiary education	15.59	70
6.1.3 Professionals	28.35	58
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	7.29	106
6.1.6 Digital skills	16.24	54
6.2 Talent Impact	18.84	92
6.2.1 Innovation output	20.63	88
6.2.2 High-value exports	0.33	128
6.2.3 Software development	62.86	58
6.2.4 New business density	8.22	70
6.2.5 Scientific journal articles	2.17	93

ALGERIA

Key Indicators

Rank (out of 134).....	102
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	44.90

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 33.34 105		
1.1 Regulatory Landscape.....	24.60	118
1.1.1 Government effectiveness	27.38	103
1.1.2 Rule of law	23.60	111
1.1.3 Political stability.....	38.38	111
1.1.4 Regulatory quality.....	11.71	131
1.1.5 Corruption	21.92	95
1.2 Market Landscape.....	39.24	83
1.2.1 Extent of market dominance.....	49.68	46
1.2.2 Domestic credit to private sector	25.85	110
1.2.3 Cluster development.....	44.28	64
1.2.4 R&D expenditure.....	9.81	57
1.2.5 ICT infrastructure.....	37.28	109
1.2.6 Urbanisation	68.53	49
1.3 Business and Labour Landscape.....	36.17	100
Labour Market		
1.3.1 Labour rights.....	66.76	80
1.3.2 Labour-employer cooperation	40.20	78
Management Practice		
1.3.3 Professional management	24.63	117
1.3.4 Relationship of pay to productivity.....	50.13	76
Technology Adoption		
1.3.5 Enterprise software	20.05	72
1.3.6 Cloud computing	15.28	69
1.3.7 Firms with website	n/a	n/a
2 ATTRACT..... 30.07 126		
2.1 External Openness	17.23	133
Attract Business		
2.1.1 FDI regulatory restrictiveness	28.65	76
2.1.2 Financial globalisation	15.92	128
Attract People		
2.1.3 Migrant stock	11.64	118
2.1.4 International students.....	1.93	98
2.1.5 Brain gain	28.02	107
2.2 Internal Openness.....	42.90	114
Social Inclusion		
2.2.1 Tolerance of minorities.....	29.79	90
2.2.2 Tolerance of immigrants	38.46	104
2.2.3 Social mobility	31.09	110
Gender Equality		
2.2.4 Economic empowerment of women.....	39.82	123
2.2.5 Gender parity in high-skilled jobs	60.68	93
2.2.6 Leadership opportunities for women	57.58	41

GDP per capita (PPP US\$)	13,209.60
GDP (US\$ billions)	191.91
GTGI score.....	30.56
GTGI score (income group average)	32.03

	Score	Rank
3 GROW..... 23.54 111		
3.1 Formal Education.....	15.45	108
Enrolment		
3.1.1 Vocational enrolment	15.50	68
3.1.2 Tertiary enrolment	35.01	63
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.....	0.00	76
3.2 Lifelong Learning.....	21.21	119
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	42.42	98
3.3 Access to Growth Opportunities	33.98	95
Empowerment		
3.3.1 Delegation of authority	19.25	120
3.3.2 Youth inclusion	56.50	76
Collaboration		
3.3.3 Use of virtual social networks	48.83	87
3.3.4 Use of virtual professional networks	11.33	90

4 RETAIN..... 45.65 90		
4.1 Sustainability	40.34	90
4.1.1 Pension coverage	n/a	n/a
4.1.2 Social protection.....	53.51	62
4.1.3 Brain retention	18.26	117
4.1.4 Environmental performance	18.14	115
4.1.5 Vulnerable employment	71.47	69
4.2 Lifestyle.....	50.96	90
4.2.1 Personal rights	40.91	107
4.2.2 Personal safety.....	51.45	86
4.2.3 Physician density.....	26.89	79
4.2.4 Sanitation	84.59	86

5 VOCATIONAL AND TECHNICAL SKILLS..... 33.32 103		
5.1 Mid-Level Skills	24.41	94
5.1.1 Workforce with secondary education	28.31	94
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	19.04	86
5.1.4 Labour productivity per employee.....	25.89	63
5.2 Employability.....	42.23	115
5.2.1 Ease of finding skilled employees	49.78	78
5.2.2 Relevance of education system to the economy	34.69	86
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	n/a	n/a

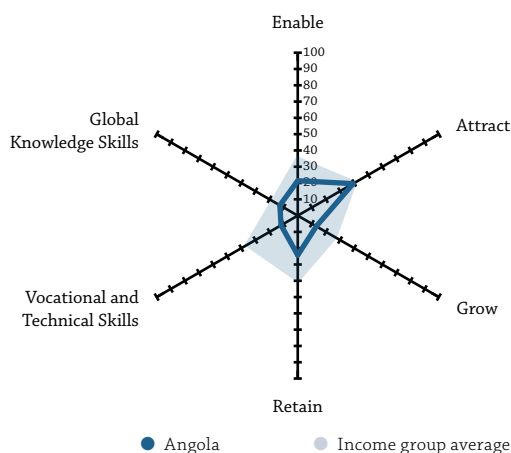
6 GLOBAL KNOWLEDGE SKILLS 17.41 97		
6.1 High-Level Skills	20.87	80
6.1.1 Workforce with tertiary education	22.66	79
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	22.89	71
6.1.4 Researchers	9.29	54
6.1.5 Senior officials and managers.....	18.65	72
6.1.6 Digital skills	30.85	28
6.2 Talent Impact.....	13.95	110
6.2.1 Innovation output	9.24	114
6.2.2 High-value exports.....	1.55	114
6.2.3 Software development	52.36	85
6.2.4 New business density	1.74	105
6.2.5 Scientific journal articles	4.87	77

ANGOLA

Key Indicators

Rank (out of 134).....	130
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	35.59

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....21.40 130		
1.1 Regulatory Landscape.....	25.19	115
1.1.1 Government effectiveness.....	16.45	128
1.1.2 Rule of law.....	19.98	120
1.1.3 Political stability.....	42.69	106
1.1.4 Regulatory quality.....	24.90	110
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	18.43	128
1.2.1 Extent of market dominance.....	0.53	133
1.2.2 Domestic credit to private sector.....	3.61	129
1.2.3 Cluster development.....	6.27	132
1.2.4 R&D expenditure.....	0.41	113
1.2.5 ICT infrastructure.....	39.39	106
1.2.6 Urbanisation.....	60.35	66
1.3 Business and Labour Landscape.....	20.60	131
Labour Market		
1.3.1 Labour rights.....	69.57	76
1.3.2 Labour-employer cooperation.....	10.19	129
Management Practice		
1.3.3 Professional management.....	5.84	132
1.3.4 Relationship of pay to productivity.....	20.09	133
Technology Adoption		
1.3.5 Enterprise software.....	12.62	108
1.3.6 Cloud computing.....	5.28	122
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....39.25 104		
2.1 External Openness.....	50.03	56
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	69.94	51
Attract People		
2.1.3 Migrant stock.....	35.61	77
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	44.54	73
2.2 Internal Openness.....	28.46	131
Social Inclusion		
2.2.1 Tolerance of minorities.....	13.83	117
2.2.2 Tolerance of immigrants.....	46.15	91
2.2.3 Social mobility.....	0.00	134
Gender Equality		
2.2.4 Economic empowerment of women.....	70.80	83
2.2.5 Gender parity in high-skilled jobs.....	21.53	120
2.2.6 Leadership opportunities for women.....	18.48	123

GDP per capita (PPP US\$).....	6,973.70
GDP (US\$ billions).....	106.71
GTGI score.....	20.43
GTGI score (income group average).....	32.03

	Score	Rank
3 GROW.....13.14 131		
3.1 Formal Education.....	9.29	125
Enrolment		
3.1.1 Vocational enrolment.....	21.71	58
3.1.2 Tertiary enrolment.....	6.16	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.....	0.00	76
3.2 Lifelong Learning.....	12.37	130
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	24.73	128
3.3 Access to Growth Opportunities.....	17.77	126
Empowerment		
3.3.1 Delegation of authority.....	5.71	133
3.3.2 Youth inclusion.....	54.69	80
Collaboration		
3.3.3 Use of virtual social networks.....	7.30	120
3.3.4 Use of virtual professional networks.....	3.40	117

4 RETAIN.....24.28 123		
4.1 Sustainability.....	18.58	129
4.1.1 Pension coverage.....	13.64	110
4.1.2 Social protection.....	7.66	131
4.1.3 Brain retention.....	19.13	116
4.1.4 Environmental performance.....	19.66	111
4.1.5 Vulnerable employment.....	32.82	109
4.2 Lifestyle.....	29.99	118
4.2.1 Personal rights.....	44.56	103
4.2.2 Personal safety.....	25.88	118
4.2.3 Physician density.....	2.58	114
4.2.4 Sanitation.....	46.93	110

5 VOCATIONAL AND TECHNICAL SKILLS.....11.84 134		
5.1 Mid-Level Skills.....	13.15	113
5.1.1 Workforce with secondary education.....	19.90	107
5.1.2 Population with secondary education.....	17.25	77
5.1.3 Technicians and associate professionals.....	7.50	119
5.1.4 Labour productivity per employee.....	7.93	96
5.2 Employability.....	10.54	134
5.2.1 Ease of finding skilled employees.....	8.94	132
5.2.2 Relevance of education system to the economy.....	1.69	133
5.2.3 Skills matching.....	31.52	99
5.2.4 Highly educated unemployment.....	0.00	124

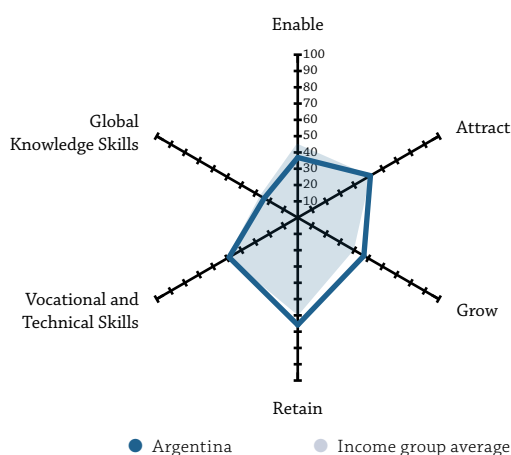
6 GLOBAL KNOWLEDGE SKILLS.....12.65 106		
6.1 High-Level Skills.....	4.27	126
6.1.1 Workforce with tertiary education.....	3.83	123
6.1.2 Population with tertiary education.....	1.38	90
6.1.3 Professionals.....	10.17	115
6.1.4 Researchers.....	0.09	107
6.1.5 Senior officials and managers.....	5.89	109
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	21.02	81
6.2.1 Innovation output.....	9.41	113
6.2.2 High-value exports.....	48.73	12
6.2.3 Software development.....	25.93	122
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	0.02	133

ARGENTINA

Key Indicators

Rank (out of 134).....	61
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	46.23

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 36.89 91		
1.1 Regulatory Landscape.....	36.04	85
1.1.1 Government effectiveness.....	33.97	91
1.1.2 Rule of law.....	33.00	92
1.1.3 Political stability.....	58.41	66
1.1.4 Regulatory quality.....	26.06	106
1.1.5 Corruption.....	28.77	74
1.2 Market Landscape.....	40.47	77
1.2.1 Extent of market dominance.....	33.76	84
1.2.2 Domestic credit to private sector.....	18.64	117
1.2.3 Cluster development.....	30.33	104
1.2.4 R&D expenditure.....	9.64	58
1.2.5 ICT infrastructure.....	59.78	74
1.2.6 Urbanisation.....	90.65	9
1.3 Business and Labour Landscape.....	34.16	109
Labour Market		
1.3.1 Labour rights.....	61.39	83
1.3.2 Labour-employer cooperation.....	25.38	115
Management Practice		
1.3.3 Professional management.....	45.56	75
1.3.4 Relationship of pay to productivity.....	25.79	129
Technology Adoption		
1.3.5 Enterprise software.....	7.30	121
1.3.6 Cloud computing.....	4.63	124
1.3.7 Firms with website.....	69.09	36
2 ATTRACT..... 51.53 63		
2.1 External Openness.....	40.54	81
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	65.68	58
2.1.2 Financial globalisation.....	55.70	83
Attract People		
2.1.3 Migrant stock.....	43.11	62
2.1.4 International students.....	12.61	60
2.1.5 Brain gain.....	25.59	114
2.2 Internal Openness.....	62.52	41
Social Inclusion		
2.2.1 Tolerance of minorities.....	65.96	34
2.2.2 Tolerance of immigrants.....	83.08	21
2.2.3 Social mobility.....	23.29	118
Gender Equality		
2.2.4 Economic empowerment of women.....	70.80	83
2.2.5 Gender parity in high-skilled jobs.....	89.59	26
2.2.6 Leadership opportunities for women.....	42.42	85

GDP per capita (PPP US\$).....	26,504.59
GDP (US\$ billions).....	632.77
GTCI score.....	45.60
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 46.87 42		
3.1 Formal Education.....	46.81	32
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	65.40	5
Quality		
3.1.3 Tertiary education expenditure.....	52.60	76
3.1.4 Reading, maths, and science.....	24.86	68
3.1.5 University ranking.....	44.38	28
3.2 Lifelong Learning.....	40.56	44
3.2.1 Business masters education.....	25.16	39
3.2.2 Prevalence of training in firms.....	48.21	34
3.2.3 Employee development.....	48.31	84
3.3 Access to Growth Opportunities.....	53.25	48
Empowerment		
3.3.1 Delegation of authority.....	33.10	99
3.3.2 Youth inclusion.....	68.30	55
Collaboration		
3.3.3 Use of virtual social networks.....	74.90	33
3.3.4 Use of virtual professional networks.....	36.69	34

4 RETAIN..... 65.87 48		
4.1 Sustainability.....	56.43	59
4.1.1 Pension coverage.....	84.34	64
4.1.2 Social protection.....	40.80	87
4.1.3 Brain retention.....	47.26	48
4.1.4 Environmental performance.....	37.63	69
4.1.5 Vulnerable employment.....	72.14	66
4.2 Lifestyle.....	75.30	43
4.2.1 Personal rights.....	89.17	36
4.2.2 Personal safety.....	55.60	78
4.2.3 Physician density.....	61.47	26
4.2.4 Sanitation.....	94.97	63

5 VOCATIONAL AND TECHNICAL SKILLS..... 48.66 67		
5.1 Mid-Level Skills.....	41.81	59
5.1.1 Workforce with secondary education.....	54.75	42
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	43.10	47
5.1.4 Labour productivity per employee.....	27.57	62
5.2 Employability.....	55.52	73
5.2.1 Ease of finding skilled employees.....	54.24	68
5.2.2 Relevance of education system to the economy.....	21.57	108
5.2.3 Skills matching.....	73.94	41
5.2.4 Highly educated unemployment.....	72.35	75

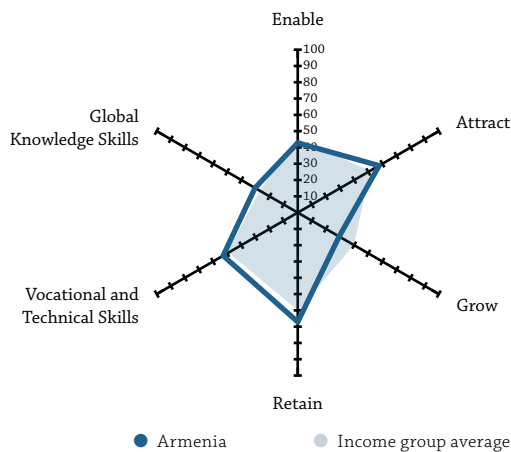
6 GLOBAL KNOWLEDGE SKILLS..... 23.78 75		
6.1 High-Level Skills.....	24.02	64
6.1.1 Workforce with tertiary education.....	30.17	58
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	22.98	70
6.1.4 Researchers.....	14.09	48
6.1.5 Senior officials and managers.....	28.83	53
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	23.55	75
6.2.1 Innovation output.....	33.83	61
6.2.2 High-value exports.....	7.83	82
6.2.3 Software development.....	67.20	50
6.2.4 New business density.....	0.88	113
6.2.5 Scientific journal articles.....	8.00	63

ARMENIA

Key Indicators

Rank (out of 134).....	55
Income group.....	Upper-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	2.78

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....42.79	70	
1.1 Regulatory Landscape.....	40.88	75
1.1.1 Government effectiveness.....	36.64	86
1.1.2 Rule of law.....	42.74	68
1.1.3 Political stability.....	39.44	108
1.1.4 Regulatory quality.....	45.87	63
1.1.5 Corruption.....	39.73	51
1.2 Market Landscape.....	40.28	79
1.2.1 Extent of market dominance.....	39.86	63
1.2.2 Domestic credit to private sector.....	48.25	63
1.2.3 Cluster development.....	25.00	114
1.2.4 R&D expenditure.....	3.66	89
1.2.5 ICT infrastructure.....	67.30	62
1.2.6 Urbanisation.....	57.63	70
1.3 Business and Labour Landscape.....	47.19	56
Labour Market		
1.3.1 Labour rights.....	81.23	55
1.3.2 Labour-employer cooperation.....	48.75	59
Management Practice		
1.3.3 Professional management.....	48.95	71
1.3.4 Relationship of pay to productivity.....	58.87	50
Technology Adoption		
1.3.5 Enterprise software.....	19.73	73
1.3.6 Cloud computing.....	17.35	61
1.3.7 Firms with website.....	55.45	56
2 ATTRACT.....57.66	41	
2.1 External Openness.....	53.63	48
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	95.95	9
2.1.2 Financial globalisation.....	61.99	65
Attract People		
2.1.3 Migrant stock.....	48.71	51
2.1.4 International students.....	21.45	44
2.1.5 Brain gain.....	40.03	82
2.2 Internal Openness.....	61.69	43
Social Inclusion		
2.2.1 Tolerance of minorities.....	43.62	63
2.2.2 Tolerance of immigrants.....	56.92	72
2.2.3 Social mobility.....	49.69	53
Gender Equality		
2.2.4 Economic empowerment of women.....	82.30	52
2.2.5 Gender parity in high-skilled jobs.....	79.03	54
2.2.6 Leadership opportunities for women.....	58.60	38

GDP per capita (PPP US\$).....	18,941.53
GDP (US\$ billions).....	19.50
GTCI score.....	46.67
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....29.32	91	
3.1 Formal Education.....	21.83	87
Enrolment		
3.1.1 Vocational enrolment.....	14.36	71
3.1.2 Tertiary enrolment.....	36.13	59
Quality		
3.1.3 Tertiary education expenditure.....	36.84	100
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	27.00	98
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	31.34	61
3.2.3 Employee development.....	49.65	73
3.3 Access to Growth Opportunities.....	39.13	82
Empowerment		
3.3.1 Delegation of authority.....	27.89	109
3.3.2 Youth inclusion.....	50.29	86
Collaboration		
3.3.3 Use of virtual social networks.....	62.16	67
3.3.4 Use of virtual professional networks.....	16.19	78

4 RETAIN.....67.07	44	
4.1 Sustainability.....	52.48	73
4.1.1 Pension coverage.....	64.85	76
4.1.2 Social protection.....	47.75	71
4.1.3 Brain retention.....	31.79	85
4.1.4 Environmental performance.....	49.83	45
4.1.5 Vulnerable employment.....	68.19	72
4.2 Lifestyle.....	81.67	32
4.2.1 Personal rights.....	80.03	54
4.2.2 Personal safety.....	81.44	36
4.2.3 Physician density.....	71.86	12
4.2.4 Sanitation.....	93.34	66

5 VOCATIONAL AND TECHNICAL SKILLS.....52.86	54	
5.1 Mid-Level Skills.....	47.84	51
5.1.1 Workforce with secondary education.....	83.28	5
5.1.2 Population with secondary education.....	66.13	19
5.1.3 Technicians and associate professionals.....	17.92	91
5.1.4 Labour productivity per employee.....	24.02	69
5.2 Employability.....	57.88	68
5.2.1 Ease of finding skilled employees.....	46.29	86
5.2.2 Relevance of education system to the economy.....	25.27	99
5.2.3 Skills matching.....	94.09	2
5.2.4 Highly educated unemployment.....	65.89	89

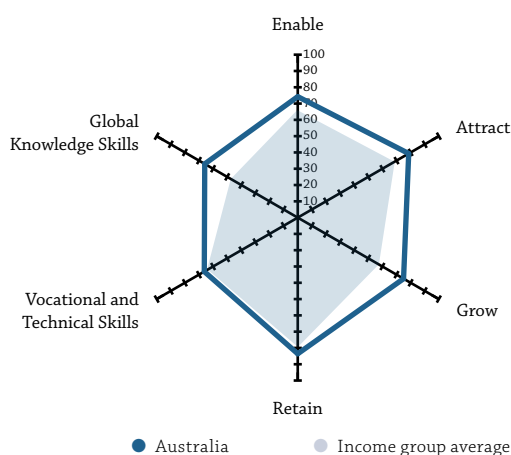
6 GLOBAL KNOWLEDGE SKILLS.....30.29	53	
6.1 High-Level Skills.....	34.05	43
6.1.1 Workforce with tertiary education.....	35.83	47
6.1.2 Population with tertiary education.....	57.68	11
6.1.3 Professionals.....	26.22	62
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	16.46	83
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	26.54	68
6.2.1 Innovation output.....	29.37	72
6.2.2 High-value exports.....	10.61	70
6.2.3 Software development.....	69.16	48
6.2.4 New business density.....	15.59	48
6.2.5 Scientific journal articles.....	7.97	64

AUSTRALIA

Key Indicators

Rank (out of 134).....	8
Income group	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions)	25.98

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....74.25	15	
1.1 Regulatory Landscape.....	84.59	11
1.1.1 Government effectiveness.....	80.59	12
1.1.2 Rule of law.....	89.80	12
1.1.3 Political stability.....	83.30	26
1.1.4 Regulatory quality.....	89.82	4
1.1.5 Corruption.....	79.45	12
1.2 Market Landscape.....	68.67	18
1.2.1 Extent of market dominance.....	63.80	30
1.2.2 Domestic credit to private sector.....	72.27	12
1.2.3 Cluster development.....	66.33	29
1.2.4 R&D expenditure.....	34.03	20
1.2.5 ICT infrastructure.....	91.67	7
1.2.6 Urbanisation.....	83.92	22
1.3 Business and Labour Landscape.....	69.49	15
Labour Market		
1.3.1 Labour rights.....	90.75	31
1.3.2 Labour-employer cooperation.....	63.93	32
Management Practice		
1.3.3 Professional management.....	86.25	9
1.3.4 Relationship of pay to productivity.....	68.55	33
Technology Adoption		
1.3.5 Enterprise software.....	47.99	21
1.3.6 Cloud computing.....	47.12	13
1.3.7 Firms with website.....	81.87	18
2 ATTRACT.....78.64	6	
2.1 External Openness.....	77.16	10
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	60.81	63
2.1.2 Financial globalisation.....	76.24	34
Attract People		
2.1.3 Migrant stock.....	79.56	10
2.1.4 International students.....	95.59	6
2.1.5 Brain gain.....	73.58	17
2.2 Internal Openness.....	80.13	12
Social Inclusion		
2.2.1 Tolerance of minorities.....	69.15	27
2.2.2 Tolerance of immigrants.....	93.85	6
2.2.3 Social mobility.....	77.15	15
Gender Equality		
2.2.4 Economic empowerment of women.....	95.58	20
2.2.5 Gender parity in high-skilled jobs.....	82.90	47
2.2.6 Leadership opportunities for women.....	62.14	31

GDP per capita (PPP US\$)	62,625.36
GDP (US\$ billions)	1,675.42
GTCI score.....	73.93
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....74.99	6	
3.1 Formal Education.....	68.14	5
Enrolment		
3.1.1 Vocational enrolment.....	45.07	19
3.1.2 Tertiary enrolment.....	75.45	3
Quality		
3.1.3 Tertiary education expenditure.....	70.68	38
3.1.4 Reading, maths, and science.....	67.32	19
3.1.5 University ranking.....	82.17	5
3.2 Lifelong Learning.....	77.84	6
3.2.1 Business masters education.....	79.37	7
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	76.30	23
3.3 Access to Growth Opportunities.....	79.00	9
Empowerment		
3.3.1 Delegation of authority.....	78.11	9
3.3.2 Youth inclusion.....	85.83	20
Collaboration		
3.3.3 Use of virtual social networks.....	76.17	27
3.3.4 Use of virtual professional networks.....	75.88	7

4 RETAIN.....83.56	14	
4.1 Sustainability.....	81.15	15
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	75.81	27
4.1.3 Brain retention.....	71.86	18
4.1.4 Environmental performance.....	69.83	17
4.1.5 Vulnerable employment.....	88.26	37
4.2 Lifestyle.....	85.97	20
4.2.1 Personal rights.....	92.67	27
4.2.2 Personal safety.....	86.44	24
4.2.3 Physician density.....	64.77	22
4.2.4 Sanitation.....	99.99	10

5 VOCATIONAL AND TECHNICAL SKILLS.....66.23	19	
5.1 Mid-Level Skills.....	56.77	31
5.1.1 Workforce with secondary education.....	50.25	50
5.1.2 Population with secondary education.....	47.13	45
5.1.3 Technicians and associate professionals.....	67.31	18
5.1.4 Labour productivity per employee.....	62.39	17
5.2 Employability.....	75.68	18
5.2.1 Ease of finding skilled employees.....	67.64	43
5.2.2 Relevance of education system to the economy.....	72.92	18
5.2.3 Skills matching.....	75.42	33
5.2.4 Highly educated unemployment.....	86.75	30

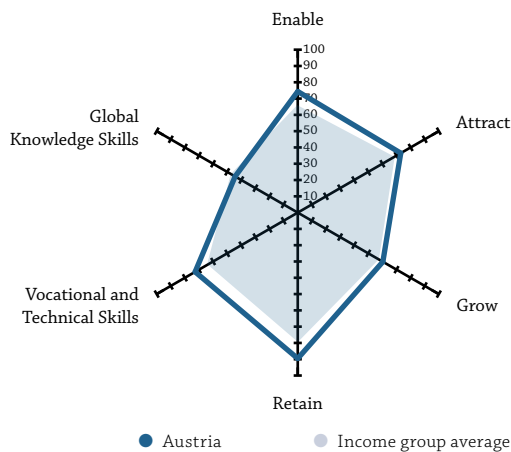
6 GLOBAL KNOWLEDGE SKILLS.....65.92	3	
6.1 High-Level Skills.....	62.01	2
6.1.1 Workforce with tertiary education.....	56.87	14
6.1.2 Population with tertiary education.....	62.01	10
6.1.3 Professionals.....	51.51	22
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	77.65	3
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	69.84	4
6.2.1 Innovation output.....	55.94	31
6.2.2 High-value exports.....	40.41	16
6.2.3 Software development.....	85.21	20
6.2.4 New business density.....	78.78	6
6.2.5 Scientific journal articles.....	88.85	4

AUSTRIA

Key Indicators

Rank (out of 134).....	17
Income group.....	High income
Regional group.....	Europe
Population (millions).....	9.04

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....74.35 14		
1.1 Regulatory Landscape.....82.17 15		
1.1.1 Government effectiveness.....82.01 11		
1.1.2 Rule of law.....92.83 7		
1.1.3 Political stability.....84.96 20		
1.1.4 Regulatory quality.....77.10 19		
1.1.5 Corruption.....73.97 21		
1.2 Market Landscape.....68.38 19		
1.2.1 Extent of market dominance.....82.75 6		
1.2.2 Domestic credit to private sector.....62.74 32		
1.2.3 Cluster development.....82.05 10		
1.2.4 R&D expenditure.....59.44 8		
1.2.5 ICT infrastructure.....71.28 54		
1.2.6 Urbanisation.....52.05 79		
1.3 Business and Labour Landscape.....72.49 8		
Labour Market		
1.3.1 Labour rights.....100.00 1		
1.3.2 Labour-employer cooperation.....82.47 8		
Management Practice		
1.3.3 Professional management.....70.99 26		
1.3.4 Relationship of pay to productivity.....75.70 17		
Technology Adoption		
1.3.5 Enterprise software.....43.66 26		
1.3.6 Cloud computing.....40.43 18		
1.3.7 Firms with website.....94.14 4		
2 ATTRACT.....73.01 17		
2.1 External Openness.....70.09 19		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....72.43 52		
2.1.2 Financial globalisation.....83.85 21		
Attract People		
2.1.3 Migrant stock.....68.83 21		
2.1.4 International students.....66.00 12		
2.1.5 Brain gain.....59.33 33		
2.2 Internal Openness.....75.93 15		
Social Inclusion		
2.2.1 Tolerance of minorities.....64.89 36		
2.2.2 Tolerance of immigrants.....66.15 51		
2.2.3 Social mobility.....80.63 12		
Gender Equality		
2.2.4 Economic empowerment of women.....95.58 20		
2.2.5 Gender parity in high-skilled jobs.....90.14 23		
2.2.6 Leadership opportunities for women.....58.18 39		

GDP per capita (PPP US\$).....	67,935.85
GDP (US\$ billions).....	471.40
GTCI score.....	69.05
GTCI score (income group average).....	61.91

	Score	Rank
3 GROW.....60.33 19		
3.1 Formal Education.....61.39 10		
Enrolment		
3.1.1 Vocational enrolment.....53.89 12		
3.1.2 Tertiary enrolment.....57.40 14		
Quality		
3.1.3 Tertiary education expenditure.....86.90 6		
3.1.4 Reading, maths, and science.....64.07 27		
3.1.5 University ranking.....44.68 26		
3.2 Lifelong Learning.....57.90 18		
3.2.1 Business masters education.....35.16 31		
3.2.2 Prevalence of training in firms.....51.39 30		
3.2.3 Employee development.....87.16 6		
3.3 Access to Growth Opportunities.....61.70 32		
Empowerment		
3.3.1 Delegation of authority.....62.15 35		
3.3.2 Youth inclusion.....77.97 39		
Collaboration		
3.3.3 Use of virtual social networks.....77.14 23		
3.3.4 Use of virtual professional networks.....29.56 48		

4 RETAIN.....89.55 5		
4.1 Sustainability.....86.03 10		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....97.28 4		
4.1.3 Brain retention.....60.32 34		
4.1.4 Environmental performance.....80.68 8		
4.1.5 Vulnerable employment.....91.85 19		
4.2 Lifestyle.....93.07 1		
4.2.1 Personal rights.....93.10 25		
4.2.2 Personal safety.....92.75 11		
4.2.3 Physician density.....86.46 4		
4.2.4 Sanitation.....99.97 11		

5 VOCATIONAL AND TECHNICAL SKILLS.....72.72 5		
5.1 Mid-Level Skills.....72.57 2		
5.1.1 Workforce with secondary education.....75.48 14		
5.1.2 Population with secondary education.....72.36 17		
5.1.3 Technicians and associate professionals.....75.06 7		
5.1.4 Labour productivity per employee.....67.39 12		
5.2 Employability.....72.87 22		
5.2.1 Ease of finding skilled employees.....61.75 55		
5.2.2 Relevance of education system to the economy.....63.59 27		
5.2.3 Skills matching.....79.75 20		
5.2.4 Highly educated unemployment.....86.38 33		

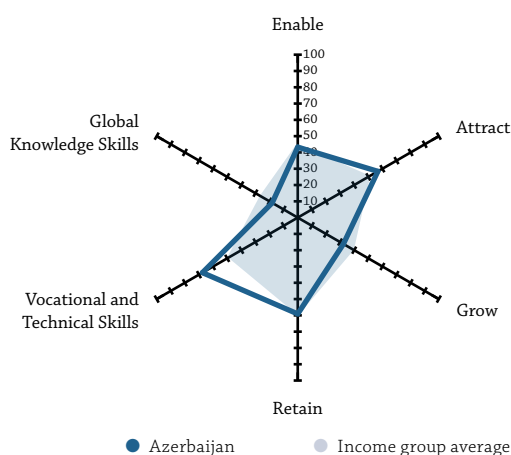
6 GLOBAL KNOWLEDGE SKILLS.....44.38 25		
6.1 High-Level Skills.....41.79 30		
6.1.1 Workforce with tertiary education.....28.04 64		
6.1.2 Population with tertiary education.....39.06 35		
6.1.3 Professionals.....48.45 28		
6.1.4 Researchers.....65.96 10		
6.1.5 Senior officials and managers.....30.68 46		
6.1.6 Digital skills.....38.56 19		
6.2 Talent Impact.....46.96 28		
6.2.1 Innovation output.....65.35 21		
6.2.2 High-value exports.....24.79 37		
6.2.3 Software development.....84.44 21		
6.2.4 New business density.....2.72 96		
6.2.5 Scientific journal articles.....57.50 16		

AZERBAIJAN

Key Indicators

Rank (out of 134).....	58
Income group	Upper-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	10.18

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	43.26	67
1.1 Regulatory Landscape.....	33.31	94
1.1.1 Government effectiveness.....	49.04	57
1.1.2 Rule of law.....	29.75	99
1.1.3 Political stability.....	38.98	109
1.1.4 Regulatory quality.....	40.55	73
1.1.5 Corruption.....	8.22	127
1.2 Market Landscape.....	45.84	64
1.2.1 Extent of market dominance.....	75.14	9
1.2.2 Domestic credit to private sector.....	21.99	115
1.2.3 Cluster development.....	68.51	27
1.2.4 R&D expenditure.....	3.72	88
1.2.5 ICT infrastructure.....	56.67	79
1.2.6 Urbanisation.....	49.04	87
1.3 Business and Labour Landscape.....	50.64	42
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	62.30	37
Management Practice		
1.3.3 Professional management.....	66.63	32
1.3.4 Relationship of pay to productivity.....	75.97	15
Technology Adoption		
1.3.5 Enterprise software.....	21.99	61
1.3.6 Cloud computing.....	11.46	86
1.3.7 Firms with website.....	65.50	42
2 ATTRACT.....	56.78	45
2.1 External Openness.....	54.19	45
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	80.27	45
2.1.2 Financial globalisation.....	74.98	40
Attract People		
2.1.3 Migrant stock.....	31.23	83
2.1.4 International students.....	8.05	75
2.1.5 Brain gain.....	76.40	14
2.2 Internal Openness.....	59.37	52
Social Inclusion		
2.2.1 Tolerance of minorities.....	41.49	71
2.2.2 Tolerance of immigrants.....	53.85	79
2.2.3 Social mobility.....	66.25	32
Gender Equality		
2.2.4 Economic empowerment of women.....	69.91	86
2.2.5 Gender parity in high-skilled jobs.....	69.76	73
2.2.6 Leadership opportunities for women.....	54.96	48

GDP per capita (PPP US\$)	17,764.45
GDP (US\$ billions)	78.72
GTCI score.....	46.19
GTCI score (income group average)	43.53

	Score	Rank
3 GROW.....	32.36	79
3.1 Formal Education.....	27.89	75
Enrolment		
3.1.1 Vocational enrolment.....	16.35	67
3.1.2 Tertiary enrolment.....	24.64	78
Quality		
3.1.3 Tertiary education expenditure.....	61.62	53
3.1.4 Reading, maths, and science.....	27.81	64
3.1.5 University ranking.....	9.02	71
3.2 Lifelong Learning.....	36.26	56
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	39.84	49
3.2.3 Employee development.....	68.95	33
3.3 Access to Growth Opportunities.....	32.95	98
Empowerment		
3.3.1 Delegation of authority.....	53.49	46
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	36.28	101
3.3.4 Use of virtual professional networks.....	9.06	97

4 RETAIN.....	59.11	62
4.1 Sustainability.....	58.14	58
4.1.1 Pension coverage.....	72.53	72
4.1.2 Social protection.....	77.44	22
4.1.3 Brain retention.....	67.01	26
4.1.4 Environmental performance.....	33.39	79
4.1.5 Vulnerable employment.....	40.34	106
4.2 Lifestyle.....	60.07	70
4.2.1 Personal rights.....	22.46	122
4.2.2 Personal safety.....	73.14	50
4.2.3 Physician density.....	48.93	46
4.2.4 Sanitation.....	95.75	61

5 VOCATIONAL AND TECHNICAL SKILLS.....	67.56	15
5.1 Mid-Level Skills.....	56.86	30
5.1.1 Workforce with secondary education.....	81.29	8
5.1.2 Population with secondary education.....	90.27	3
5.1.3 Technicians and associate professionals.....	38.53	52
5.1.4 Labour productivity per employee.....	17.38	79
5.2 Employability.....	78.25	14
5.2.1 Ease of finding skilled employees.....	75.56	27
5.2.2 Relevance of education system to the economy.....	69.73	20
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	89.44	21

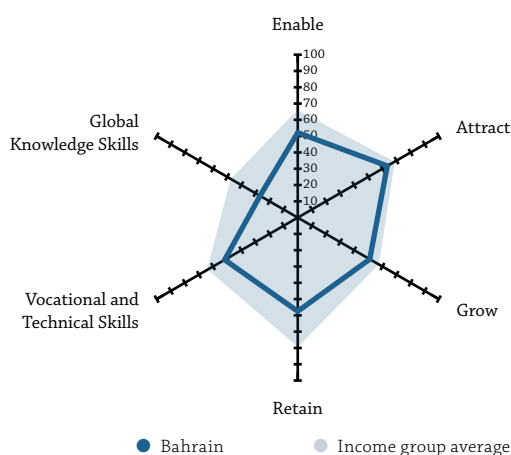
6 GLOBAL KNOWLEDGE SKILLS.....	18.10	95
6.1 High-Level Skills.....	20.95	79
6.1.1 Workforce with tertiary education.....	33.96	53
6.1.2 Population with tertiary education.....	32.88	42
6.1.3 Professionals.....	29.01	55
6.1.4 Researchers.....	19.88	41
6.1.5 Senior officials and managers.....	7.00	107
6.1.6 Digital skills.....	2.95	77
6.2 Talent Impact.....	15.25	103
6.2.1 Innovation output.....	10.73	106
6.2.2 High-value exports.....	3.62	97
6.2.3 Software development.....	51.26	88
6.2.4 New business density.....	6.98	77
6.2.5 Scientific journal articles.....	3.65	83

BAHRAIN

Key Indicators

Rank (out of 134).....	44
Income group	High income
Regional group.....	Northern Africa and Western Asia
Population (millions)	1.47

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....52.11	46	
1.1 Regulatory Landscape.....	53.54	49
1.1.1 Government effectiveness.....	60.74	39
1.1.2 Rule of law.....	57.81	42
1.1.3 Political stability.....	48.04	94
1.1.4 Regulatory quality.....	64.14	35
1.1.5 Corruption.....	36.99	55
1.2 Market Landscape.....	54.64	35
1.2.1 Extent of market dominance.....	47.36	49
1.2.2 Domestic credit to private sector.....	56.87	43
1.2.3 Cluster development.....	63.02	35
1.2.4 R&D expenditure.....	1.70	105
1.2.5 ICT infrastructure.....	71.20	55
1.2.6 Urbanisation.....	87.68	14
1.3 Business and Labour Landscape.....	48.16	53
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	67.74	23
Management Practice		
1.3.3 Professional management.....	66.44	33
1.3.4 Relationship of pay to productivity.....	76.57	14
Technology Adoption		
1.3.5 Enterprise software.....	17.33	87
1.3.6 Cloud computing.....	12.70	81
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....63.45	29	
2.1 External Openness.....	77.48	9
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	89.13	14
Attract People		
2.1.3 Migrant stock.....	94.66	4
2.1.4 International students.....	42.69	22
2.1.5 Brain gain.....	83.44	9
2.2 Internal Openness.....	49.42	92
Social Inclusion		
2.2.1 Tolerance of minorities.....	1.06	133
2.2.2 Tolerance of immigrants.....	76.92	29
2.2.3 Social mobility.....	68.23	28
Gender Equality		
2.2.4 Economic empowerment of women.....	54.87	113
2.2.5 Gender parity in high-skilled jobs.....	23.89	116
2.2.6 Leadership opportunities for women.....	71.56	15

GDP per capita (PPP US\$)	61,227.90
GDP (US\$ billions)	44.39
GTCI score.....	50.44
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....51.03	30	
3.1 Formal Education.....	36.26	56
Enrolment		
3.1.1 Vocational enrolment.....	10.12	83
3.1.2 Tertiary enrolment.....	42.23	48
Quality		
3.1.3 Tertiary education expenditure.....	74.65	29
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	18.03	59
3.2 Lifelong Learning.....	48.91	31
3.2.1 Business masters education.....	24.29	41
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	73.52	26
3.3 Access to Growth Opportunities.....	67.93	19
Empowerment		
3.3.1 Delegation of authority.....	62.39	32
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	93.39	2
3.3.4 Use of virtual professional networks.....	48.02	23

4 RETAIN.....57.50	69	
4.1 Sustainability.....	69.43	32
4.1.1 Pension coverage.....	72.93	70
4.1.2 Social protection.....	71.60	34
4.1.3 Brain retention.....	64.55	29
4.1.4 Environmental performance.....	39.15	67
4.1.5 Vulnerable employment.....	98.91	2
4.2 Lifestyle.....	45.58	99
4.2.1 Personal rights.....	16.42	126
4.2.2 Personal safety.....	53.23	83
4.2.3 Physician density.....	12.67	91
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....51.78	56	
5.1 Mid-Level Skills.....	33.61	73
5.1.1 Workforce with secondary education.....	11.57	116
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	25.10	76
5.1.4 Labour productivity per employee.....	64.15	15
5.2 Employability.....	69.95	29
5.2.1 Ease of finding skilled employees.....	80.53	18
5.2.2 Relevance of education system to the economy.....	59.36	35
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	n/a	n/a

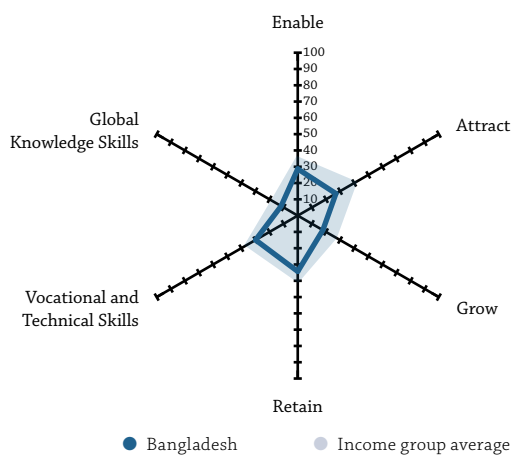
6 GLOBAL KNOWLEDGE SKILLS.....26.74	63	
6.1 High-Level Skills.....	29.86	50
6.1.1 Workforce with tertiary education.....	11.84	98
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	17.53	84
6.1.4 Researchers.....	4.12	75
6.1.5 Senior officials and managers.....	48.56	17
6.1.6 Digital skills.....	67.23	5
6.2 Talent Impact.....	23.62	74
6.2.1 Innovation output.....	21.78	84
6.2.2 High-value exports.....	7.88	81
6.2.3 Software development.....	58.99	67
6.2.4 New business density.....	17.00	43
6.2.5 Scientific journal articles.....	12.45	54

BANGLADESH

Key Indicators

Rank (out of 134).....	123
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	171.19

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....28.67 117		
1.1 Regulatory Landscape.....	24.66	116
1.1.1 Government effectiveness.....	27.22	105
1.1.2 Rule of law.....	29.04	103
1.1.3 Political stability.....	35.94	115
1.1.4 Regulatory quality.....	20.15	118
1.1.5 Corruption.....	10.96	120
1.2 Market Landscape.....	39.04	84
1.2.1 Extent of market dominance.....	20.52	110
1.2.2 Domestic credit to private sector.....	40.70	80
1.2.3 Cluster development.....	37.30	84
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	69.54	57
1.2.6 Urbanisation.....	27.14	113
1.3 Business and Labour Landscape.....	22.32	130
Labour Market		
1.3.1 Labour rights.....	0.00	101
1.3.2 Labour-employer cooperation.....	30.20	110
Management Practice		
1.3.3 Professional management.....	35.07	103
1.3.4 Relationship of pay to productivity.....	49.20	80
Technology Adoption		
1.3.5 Enterprise software.....	13.37	106
1.3.6 Cloud computing.....	9.56	102
1.3.7 Firms with website.....	18.83	98
2 ATTRACT.....27.05 131		
2.1 External Openness.....	25.04	119
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	3.00	133
Attract People		
2.1.3 Migrant stock.....	18.80	105
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	53.32	48
2.2 Internal Openness.....	29.06	130
Social Inclusion		
2.2.1 Tolerance of minorities.....	10.64	121
2.2.2 Tolerance of immigrants.....	56.92	72
2.2.3 Social mobility.....	32.03	107
Gender Equality		
2.2.4 Economic empowerment of women.....	28.32	127
2.2.5 Gender parity in high-skilled jobs.....	17.71	121
2.2.6 Leadership opportunities for women.....	28.75	114

GDP per capita (PPP US\$).....	7,395.10
GDP (US\$ billions).....	460.20
GTCI score.....	24.91
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....17.80 124		
3.1 Formal Education.....	16.57	106
Enrolment		
3.1.1 Vocational enrolment.....	7.81	90
3.1.2 Tertiary enrolment.....	15.85	90
Quality		
3.1.3 Tertiary education expenditure.....	29.35	105
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	13.27	65
3.2 Lifelong Learning.....	11.42	133
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	3.32	100
3.2.3 Employee development.....	30.93	122
3.3 Access to Growth Opportunities.....	25.43	114
Empowerment		
3.3.1 Delegation of authority.....	33.63	96
3.3.2 Youth inclusion.....	40.77	97
Collaboration		
3.3.3 Use of virtual social networks.....	22.67	107
3.3.4 Use of virtual professional networks.....	4.64	112

4 RETAIN.....34.27 109		
4.1 Sustainability.....	32.78	100
4.1.1 Pension coverage.....	56.46	78
4.1.2 Social protection.....	26.48	112
4.1.3 Brain retention.....	32.65	83
4.1.4 Environmental performance.....	7.12	132
4.1.5 Vulnerable employment.....	41.21	104
4.2 Lifestyle.....	35.76	109
4.2.1 Personal rights.....	38.54	108
4.2.2 Personal safety.....	44.91	98
4.2.3 Physician density.....	9.92	100
4.2.4 Sanitation.....	49.68	109

5 VOCATIONAL AND TECHNICAL SKILLS.....29.89 113		
5.1 Mid-Level Skills.....	17.34	106
5.1.1 Workforce with secondary education.....	25.53	98
5.1.2 Population with secondary education.....	28.93	62
5.1.3 Technicians and associate professionals.....	6.85	121
5.1.4 Labour productivity per employee.....	8.06	95
5.2 Employability.....	42.43	114
5.2.1 Ease of finding skilled employees.....	32.27	114
5.2.2 Relevance of education system to the economy.....	27.25	97
5.2.3 Skills matching.....	41.58	90
5.2.4 Highly educated unemployment.....	68.64	83

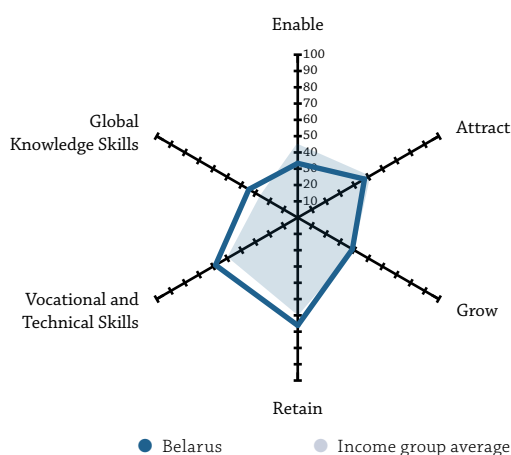
6 GLOBAL KNOWLEDGE SKILLS.....11.75 109		
6.1 High-Level Skills.....	9.98	107
6.1.1 Workforce with tertiary education.....	7.68	111
6.1.2 Population with tertiary education.....	11.76	72
6.1.3 Professionals.....	11.11	110
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	9.35	103
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	13.53	113
6.2.1 Innovation output.....	19.47	89
6.2.2 High-value exports.....	0.37	127
6.2.3 Software development.....	46.74	95
6.2.4 New business density.....	0.01	121
6.2.5 Scientific journal articles.....	1.07	102

BELARUS

Key Indicators

Rank (out of 134).....	57
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	9.21

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....33.33 106		
1.1 Regulatory Landscape.....	26.02	113
1.1.1 Government effectiveness.....	23.64	116
1.1.2 Rule of law.....	16.05	127
1.1.3 Political stability.....	42.02	107
1.1.4 Regulatory quality.....	18.25	122
1.1.5 Corruption.....	30.14	71
1.2 Market Landscape.....	35.21	95
1.2.1 Extent of market dominance.....	29.46	94
1.2.2 Domestic credit to private sector.....	33.47	97
1.2.3 Cluster development.....	29.13	107
1.2.4 R&D expenditure.....	8.60	60
1.2.5 ICT infrastructure.....	n/a	n/a
1.2.6 Urbanisation.....	75.39	38
1.3 Business and Labour Landscape.....	38.75	91
Labour Market		
1.3.1 Labour rights.....	0.00	101
1.3.2 Labour-employer cooperation.....	33.12	100
Management Practice		
1.3.3 Professional management.....	39.66	88
1.3.4 Relationship of pay to productivity.....	63.23	40
Technology Adoption		
1.3.5 Enterprise software.....	39.64	31
1.3.6 Cloud computing.....	21.69	39
1.3.7 Firms with website.....	73.94	28
2 ATTRACT.....47.30 81		
2.1 External Openness.....	49.14	58
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	77.84	50
2.1.2 Financial globalisation.....	50.61	90
Attract People		
2.1.3 Migrant stock.....	59.68	40
2.1.4 International students.....	23.51	39
2.1.5 Brain gain.....	34.05	99
2.2 Internal Openness.....	45.46	108
Social Inclusion		
2.2.1 Tolerance of minorities.....	43.62	63
2.2.2 Tolerance of immigrants.....	32.31	116
2.2.3 Social mobility.....	38.00	89
Gender Equality		
2.2.4 Economic empowerment of women.....	65.49	96
2.2.5 Gender parity in high-skilled jobs.....	41.70	106
2.2.6 Leadership opportunities for women.....	51.65	60

GDP per capita (PPP US\$).....	22,590.59
GDP (US\$ billions).....	72.79
GTCI score.....	46.41
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....38.74 65		
3.1 Formal Education.....	41.72	45
Enrolment		
3.1.1 Vocational enrolment.....	18.61	63
3.1.2 Tertiary enrolment.....	54.08	21
Quality		
3.1.3 Tertiary education expenditure.....	59.21	62
3.1.4 Reading, maths, and science.....	56.42	35
3.1.5 University ranking.....	20.26	55
3.2 Lifelong Learning.....	28.36	91
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	36.65	54
3.2.3 Employee development.....	48.44	81
3.3 Access to Growth Opportunities.....	46.15	70
Empowerment		
3.3.1 Delegation of authority.....	43.89	73
3.3.2 Youth inclusion.....	88.79	16
Collaboration		
3.3.3 Use of virtual social networks.....	41.05	93
3.3.4 Use of virtual professional networks.....	10.87	92

4 RETAIN.....66.19 47		
4.1 Sustainability.....	73.58	26
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	47.31	72
4.1.3 Brain retention.....	n/a	n/a
4.1.4 Environmental performance.....	50.17	44
4.1.5 Vulnerable employment.....	96.83	6
4.2 Lifestyle.....	58.79	75
4.2.1 Personal rights.....	10.19	129
4.2.2 Personal safety.....	57.21	76
4.2.3 Physician density.....	70.08	15
4.2.4 Sanitation.....	97.70	47

5 VOCATIONAL AND TECHNICAL SKILLS.....58.26 40		
5.1 Mid-Level Skills.....	48.69	50
5.1.1 Workforce with secondary education.....	80.80	9
5.1.2 Population with secondary education.....	47.78	44
5.1.3 Technicians and associate professionals.....	41.67	49
5.1.4 Labour productivity per employee.....	24.49	68
5.2 Employability.....	67.83	36
5.2.1 Ease of finding skilled employees.....	71.88	31
5.2.2 Relevance of education system to the economy.....	44.14	59
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	87.47	28

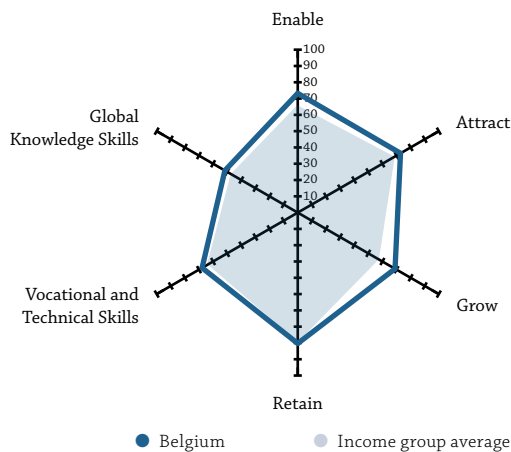
6 GLOBAL KNOWLEDGE SKILLS.....34.65 44		
6.1 High-Level Skills.....	42.33	28
6.1.1 Workforce with tertiary education.....	41.51	37
6.1.2 Population with tertiary education.....	81.71	3
6.1.3 Professionals.....	50.92	24
6.1.4 Researchers.....	16.17	47
6.1.5 Senior officials and managers.....	56.56	10
6.1.6 Digital skills.....	7.11	66
6.2 Talent Impact.....	26.97	67
6.2.1 Innovation output.....	33.50	62
6.2.2 High-value exports.....	9.95	72
6.2.3 Software development.....	79.95	32
6.2.4 New business density.....	6.10	80
6.2.5 Scientific journal articles.....	5.37	76

BELGIUM

Key Indicators

Rank (out of 134).....	16
Income group	High income
Regional group	Europe
Population (millions)	11.67

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 73.22 17		
1.1 Regulatory Landscape..... 76.44 20		
1.1.1 Government effectiveness..... 70.92 26		
1.1.2 Rule of law..... 80.54 20		
1.1.3 Political stability..... 77.10 37		
1.1.4 Regulatory quality..... 76.94 21		
1.1.5 Corruption..... 76.71 17		
1.2 Market Landscape..... 74.83 7		
1.2.1 Extent of market dominance..... 72.77 15		
1.2.2 Domestic credit to private sector..... 57.34 42		
1.2.3 Cluster development..... 75.27 18		
1.2.4 R&D expenditure..... 64.46 4		
1.2.5 ICT infrastructure..... 81.47 23		
1.2.6 Urbanisation..... 97.70 4		
1.3 Business and Labour Landscape..... 68.39 17		
Labour Market		
1.3.1 Labour rights..... 93.16 26		
1.3.2 Labour-employer cooperation..... 60.45 39		
Management Practice		
1.3.3 Professional management..... 67.18 30		
1.3.4 Relationship of pay to productivity..... 75.86 16		
Technology Adoption		
1.3.5 Enterprise software..... 49.53 20		
1.3.6 Cloud computing..... 43.47 16		
1.3.7 Firms with website..... 89.09 7		
2 ATTRACT..... 72.84 19		
2.1 External Openness..... 72.03 16		
Attract Business		
2.1.1 FDI regulatory restrictiveness..... 90.27 24		
2.1.2 Financial globalisation..... 93.08 9		
Attract People		
2.1.3 Migrant stock..... 67.05 24		
2.1.4 International students..... 37.94 25		
2.1.5 Brain gain..... 71.81 18		
2.2 Internal Openness..... 73.65 20		
Social Inclusion		
2.2.1 Tolerance of minorities..... 62.77 40		
2.2.2 Tolerance of immigrants..... 60.00 63		
2.2.3 Social mobility..... 64.82 35		
Gender Equality		
2.2.4 Economic empowerment of women..... 100.00 1		
2.2.5 Gender parity in high-skilled jobs..... 98.39 4		
2.2.6 Leadership opportunities for women..... 55.92 45		

GDP per capita (PPP US\$)	65,027.29
GDP (US\$ billions)	578.60
GTCI score.....	69.12
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 68.95 11		
3.1 Formal Education..... 64.97 8		
Enrolment		
3.1.1 Vocational enrolment..... 64.63 5		
3.1.2 Tertiary enrolment..... 53.17 22		
Quality		
3.1.3 Tertiary education expenditure..... 84.76 11		
3.1.4 Reading, maths, and science..... 67.69 18		
3.1.5 University ranking..... 54.61 16		
3.2 Lifelong Learning..... 70.55 11		
3.2.1 Business masters education..... 62.21 15		
3.2.2 Prevalence of training in firms..... 71.58 11		
3.2.3 Employee development..... 77.86 20		
3.3 Access to Growth Opportunities..... 71.31 17		
Empowerment		
3.3.1 Delegation of authority..... 63.70 25		
3.3.2 Youth inclusion..... 89.55 12		
Collaboration		
3.3.3 Use of virtual social networks..... 76.07 28		
3.3.4 Use of virtual professional networks..... 55.95 19		

4 RETAIN..... 80.31 24		
4.1 Sustainability..... 77.78 20		
4.1.1 Pension coverage..... 100.00 1		
4.1.2 Social protection..... 77.23 23		
4.1.3 Brain retention..... 56.74 36		
4.1.4 Environmental performance..... 66.61 21		
4.1.5 Vulnerable employment..... 88.32 36		
4.2 Lifestyle..... 82.83 26		
4.2.1 Personal rights..... 96.44 13		
4.2.2 Personal safety..... 84.97 28		
4.2.3 Physician density..... 50.48 44		
4.2.4 Sanitation..... 99.44 23		

5 VOCATIONAL AND TECHNICAL SKILLS..... 67.99 14		
5.1 Mid-Level Skills..... 58.31 24		
5.1.1 Workforce with secondary education..... 46.59 59		
5.1.2 Population with secondary education..... 50.13 37		
5.1.3 Technicians and associate professionals..... 61.35 23		
5.1.4 Labour productivity per employee..... 75.17 7		
5.2 Employability..... 77.28 16		
5.2.1 Ease of finding skilled employees..... 80.51 19		
5.2.2 Relevance of education system to the economy..... 70.17 19		
5.2.3 Skills matching..... 75.56 32		
5.2.4 Highly educated unemployment..... 82.87 47		

6 GLOBAL KNOWLEDGE SKILLS..... 51.63 20		
6.1 High-Level Skills..... 50.60 19		
6.1.1 Workforce with tertiary education..... 61.31 11		
6.1.2 Population with tertiary education..... 47.27 24		
6.1.3 Professionals..... 61.35 9		
6.1.4 Researchers..... 65.95 11		
6.1.5 Senior officials and managers..... 46.29 23		
6.1.6 Digital skills..... 21.40 46		
6.2 Talent Impact..... 52.66 21		
6.2.1 Innovation output..... 61.72 24		
6.2.2 High-value exports..... 33.06 25		
6.2.3 Software development..... 87.72 15		
6.2.4 New business density..... 25.62 30		
6.2.5 Scientific journal articles..... 55.19 19		

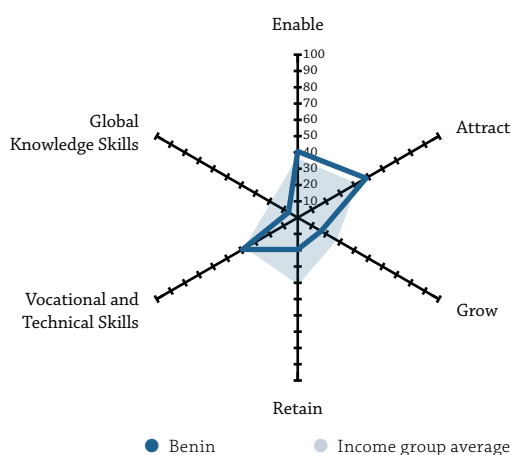
BENIN

Key Indicators

Rank (out of 134).....	113
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	13.35

GDP per capita (PPP US\$)	4,056.11
GDP (US\$ billions)	17.40
GTCI score.....	28.45
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 40.62 74		
1.1 Regulatory Landscape..... 37.42	83	
1.1.1 Government effectiveness..... 37.71	84	
1.1.2 Rule of law..... 29.52	101	
1.1.3 Political stability..... 53.34	81	
1.1.4 Regulatory quality..... 30.90	94	
1.1.5 Corruption..... 35.62	58	
1.2 Market Landscape..... 37.86	87	
1.2.1 Extent of market dominance..... 75.10	10	
1.2.2 Domestic credit to private sector..... 20.32	116	
1.2.3 Cluster development..... 20.64	121	
1.2.4 R&D expenditure..... n/a	n/a	
1.2.5 ICT infrastructure..... 33.82	113	
1.2.6 Urbanisation..... 39.42	102	
1.3 Business and Labour Landscape..... 46.57	61	
Labour Market		
1.3.1 Labour rights..... 88.34	41	
1.3.2 Labour-employer cooperation..... 61.02	38	
Management Practice		
1.3.3 Professional management..... 59.70	47	
1.3.4 Relationship of pay to productivity..... 48.62	85	
Technology Adoption		
1.3.5 Enterprise software..... 22.11	60	
1.3.6 Cloud computing..... 12.96	79	
1.3.7 Firms with website..... 33.27	89	
2 ATTRACT..... 48.37 78		
2.1 External Openness..... 35.23	94	
Attract Business		
2.1.1 FDI regulatory restrictiveness..... n/a	n/a	
2.1.2 Financial globalisation..... 39.70	107	
Attract People		
2.1.3 Migrant stock..... 39.73	69	
2.1.4 International students..... 10.59	66	
2.1.5 Brain gain..... 50.88	58	
2.2 Internal Openness..... 61.51	44	
Social Inclusion		
2.2.1 Tolerance of minorities..... 76.60	16	
2.2.2 Tolerance of immigrants..... 87.69	13	
2.2.3 Social mobility..... 75.60	18	
Gender Equality		
2.2.4 Economic empowerment of women..... 76.99	67	
2.2.5 Gender parity in high-skilled jobs..... 2.66	127	
2.2.6 Leadership opportunities for women..... 49.50	66	

	Score	Rank
3 GROW..... 16.57 126		
3.1 Formal Education..... 13.51	118	
Enrolment		
3.1.1 Vocational enrolment..... 6.46	96	
3.1.2 Tertiary enrolment..... 6.47	108	
Quality		
3.1.3 Tertiary education expenditure..... 41.09	91	
3.1.4 Reading, maths, and science..... n/a	n/a	
3.1.5 University ranking..... 0.00	76	
3.2 Lifelong Learning..... 11.87	132	
3.2.1 Business masters education..... 0.00	57	
3.2.2 Prevalence of training in firms..... 21.38	81	
3.2.3 Employee development..... 14.22	133	
3.3 Access to Growth Opportunities..... 24.34	120	
Empowerment		
3.3.1 Delegation of authority..... 63.16	28	
3.3.2 Youth inclusion..... 21.93	118	
Collaboration		
3.3.3 Use of virtual social networks..... 6.71	122	
3.3.4 Use of virtual professional networks..... 5.55	110	

4 RETAIN..... 19.56 130		
4.1 Sustainability..... 8.92	134	
4.1.1 Pension coverage..... 10.10	114	
4.1.2 Social protection..... 0.00	134	
4.1.3 Brain retention..... 13.25	126	
4.1.4 Environmental performance..... 18.14	115	
4.1.5 Vulnerable employment..... 3.13	132	
4.2 Lifestyle..... 30.19	116	
4.2.1 Personal rights..... 72.06	70	
4.2.2 Personal safety..... 39.65	105	
4.2.3 Physician density..... 0.20	131	
4.2.4 Sanitation..... 8.84	130	

5 VOCATIONAL AND TECHNICAL SKILLS..... 39.08 89		
5.1 Mid-Level Skills..... 14.32	110	
5.1.1 Workforce with secondary education..... 17.66	110	
5.1.2 Population with secondary education..... n/a	n/a	
5.1.3 Technicians and associate professionals..... 10.97	108	
5.1.4 Labour productivity per employee..... n/a	n/a	
5.2 Employability..... 63.85	49	
5.2.1 Ease of finding skilled employees..... 73.16	30	
5.2.2 Relevance of education system to the economy..... 68.02	22	
5.2.3 Skills matching..... 14.35	105	
5.2.4 Highly educated unemployment..... 99.87	2	

6 GLOBAL KNOWLEDGE SKILLS..... 6.49 128		
6.1 High-Level Skills..... 4.57	123	
6.1.1 Workforce with tertiary education..... 5.86	118	
6.1.2 Population with tertiary education..... n/a	n/a	
6.1.3 Professionals..... 6.79	121	
6.1.4 Researchers..... n/a	n/a	
6.1.5 Senior officials and managers..... 1.06	128	
6.1.6 Digital skills..... n/a	n/a	
6.2 Talent Impact..... 8.42	124	
6.2.1 Innovation output..... 0.99	124	
6.2.2 High-value exports..... 4.83	89	
6.2.3 Software development..... 32.29	114	
6.2.4 New business density..... 3.15	92	
6.2.5 Scientific journal articles..... 0.83	108	

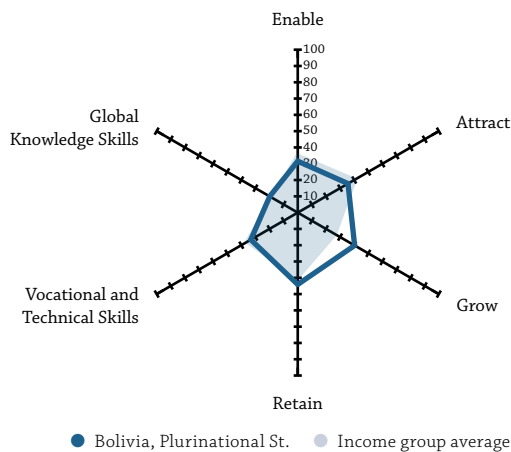
BOLIVIA, PLURINATIONAL ST.

Key Indicators

Rank (out of 134).....	94
Income group	Lower-middle income
Regional group	Latin America and the Caribbean
Population (millions)	12.22

GDP per capita (PPP US\$)	9,683.62
GDP (US\$ billions)	43.07
GTCI score	34.11
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	31.57	113
1.1 Regulatory Landscape	24.64	117
1.1.1 Government effectiveness	24.61	111
1.1.2 Rule of law	14.37	129
1.1.3 Political stability	52.89	83
1.1.4 Regulatory quality	12.15	129
1.1.5 Corruption	19.18	104
1.2 Market Landscape	41.13	74
1.2.1 Extent of market dominance	15.05	121
1.2.2 Domestic credit to private sector	55.92	45
1.2.3 Cluster development	21.82	119
1.2.4 R&D expenditure	n/a	n/a
1.2.5 ICT infrastructure	48.01	99
1.2.6 Urbanisation	64.84	54
1.3 Business and Labour Landscape	28.95	124
Labour Market		
1.3.1 Labour rights	60.59	86
1.3.2 Labour-employer cooperation	11.81	127
Management Practice		
1.3.3 Professional management	16.30	125
1.3.4 Relationship of pay to productivity	22.73	131
Technology Adoption		
1.3.5 Enterprise software	26.80	52
1.3.6 Cloud computing	18.33	57
1.3.7 Firms with website	46.10	66
2 ATTRACT	35.61	116
2.1 External Openness	22.05	126
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	31.33	118
Attract People		
2.1.3 Migrant stock	17.88	107
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	16.93	120
2.2 Internal Openness	49.17	93
Social Inclusion		
2.2.1 Tolerance of minorities	38.30	78
2.2.2 Tolerance of immigrants	58.46	66
2.2.3 Social mobility	25.23	116
Gender Equality		
2.2.4 Economic empowerment of women	84.07	43
2.2.5 Gender parity in high-skilled jobs	75.14	61
2.2.6 Leadership opportunities for women	13.80	128

	Score	Rank
3 GROW	40.31	59
3.1 Formal Education	50.00	30
Enrolment		
3.1.1 Vocational enrolment	100.00	1
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	76
3.2 Lifelong Learning	28.82	90
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	61.09	21
3.2.3 Employee development	25.36	125
3.3 Access to Growth Opportunities	42.11	77
Empowerment		
3.3.1 Delegation of authority	12.97	125
3.3.2 Youth inclusion	80.85	28
Collaboration		
3.3.3 Use of virtual social networks	56.71	77
3.3.4 Use of virtual professional networks	17.89	72

4 RETAIN	44.09	95
4.1 Sustainability	39.68	91
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	11.40	129
4.1.3 Brain retention	23.39	104
4.1.4 Environmental performance	35.93	75
4.1.5 Vulnerable employment	27.67	111
4.2 Lifestyle	48.51	92
4.2.1 Personal rights	68.16	73
4.2.2 Personal safety	48.14	90
4.2.3 Physician density	15.32	88
4.2.4 Sanitation	62.41	106
5 VOCATIONAL AND TECHNICAL SKILLS	33.24	105
5.1 Mid-Level Skills	21.87	98
5.1.1 Workforce with secondary education	31.12	84
5.1.2 Population with secondary education	25.71	67
5.1.3 Technicians and associate professionals	21.07	82
5.1.4 Labour productivity per employee	9.58	93
5.2 Employability	44.61	108
5.2.1 Ease of finding skilled employees	33.34	111
5.2.2 Relevance of education system to the economy	14.05	121
5.2.3 Skills matching	56.68	73
5.2.4 Highly educated unemployment	74.34	70

6 GLOBAL KNOWLEDGE SKILLS	19.86	89
6.1 High-Level Skills	23.89	65
6.1.1 Workforce with tertiary education	27.64	67
6.1.2 Population with tertiary education	41.29	33
6.1.3 Professionals	15.60	87
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers	11.05	99
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	15.83	99
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports	8.06	79
6.2.3 Software development	52.19	86
6.2.4 New business density	2.62	98
6.2.5 Scientific journal articles	0.45	116

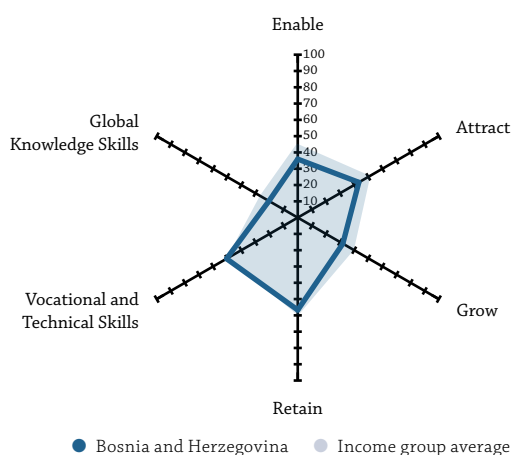
BOSNIA AND HERZEGOVINA

Key Indicators

Rank (out of 134).....	83
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	3.23

GDP per capita (PPP US\$)	20,376.89
GDP (US\$ billions)	24.53
GTCI score.....	39.79
GTCI score (income group average)	43.53

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....35.91 98		
1.1 Regulatory Landscape.....33.36 93		
1.1.1 Government effectiveness.....16.90 127		
1.1.2 Rule of law.....37.88 80		
1.1.3 Political stability.....51.28 84		
1.1.4 Regulatory quality.....37.46 80		
1.1.5 Corruption.....23.29 90		
1.2 Market Landscape.....32.65 106		
1.2.1 Extent of market dominance.....20.98 109		
1.2.2 Domestic credit to private sector.....46.01 71		
1.2.3 Cluster development.....34.54 90		
1.2.4 R&D expenditure.....3.42 90		
1.2.5 ICT infrastructure.....50.46 93		
1.2.6 Urbanisation.....40.49 101		
1.3 Business and Labour Landscape.....41.72 74		
Labour Market		
1.3.1 Labour rights.....88.07 43		
1.3.2 Labour-employer cooperation.....9.15 130		
Management Practice		
1.3.3 Professional management.....19.38 122		
1.3.4 Relationship of pay to productivity.....37.70 117		
Technology Adoption		
1.3.5 Enterprise software.....47.05 22		
1.3.6 Cloud computing.....22.99 35		
1.3.7 Firms with website.....67.70 39		
2 ATTRACT.....43.30 94		
2.1 External Openness.....36.03 91		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....91.08 23		
2.1.2 Financial globalisation.....48.87 92		
Attract People		
2.1.3 Migrant stock.....16.00 109		
2.1.4 International students.....24.18 38		
2.1.5 Brain gain.....0.00 130		
2.2 Internal Openness.....50.58 86		
Social Inclusion		
2.2.1 Tolerance of minorities.....36.17 81		
2.2.2 Tolerance of immigrants.....55.38 76		
2.2.3 Social mobility.....21.26 119		
Gender Equality		
2.2.4 Economic empowerment of women.....78.76 59		
2.2.5 Gender parity in high-skilled jobs.....92.52 19		
2.2.6 Leadership opportunities for women.....19.37 122		

	Score	Rank
3 GROW.....31.96 80		
3.1 Formal Education.....34.45 61		
Enrolment		
3.1.1 Vocational enrolment.....58.01 7		
3.1.2 Tertiary enrolment.....25.30 77		
Quality		
3.1.3 Tertiary education expenditure.....60.97 56		
3.1.4 Reading, maths, and science.....27.97 62		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....23.39 114		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....45.15 40		
3.2.3 Employee development.....25.02 126		
3.3 Access to Growth Opportunities.....38.05 88		
Empowerment		
3.3.1 Delegation of authority.....21.89 115		
3.3.2 Youth inclusion.....64.63 65		
Collaboration		
3.3.3 Use of virtual social networks.....51.75 85		
3.3.4 Use of virtual professional networks.....13.93 80		

4 RETAIN.....56.70 71		
4.1 Sustainability.....43.90 86		
4.1.1 Pension coverage.....69.19 74		
4.1.2 Social protection.....28.96 109		
4.1.3 Brain retention.....0.00 132		
4.1.4 Environmental performance.....34.75 77		
4.1.5 Vulnerable employment.....86.61 42		
4.2 Lifestyle.....69.50 54		
4.2.1 Personal rights.....67.67 75		
4.2.2 Personal safety.....82.55 32		
4.2.3 Physician density.....32.83 74		
4.2.4 Sanitation.....94.93 64		

5 VOCATIONAL AND TECHNICAL SKILLS.....50.45 62		
5.1 Mid-Level Skills.....59.28 23		
5.1.1 Workforce with secondary education.....84.68 4		
5.1.2 Population with secondary education.....79.92 9		
5.1.3 Technicians and associate professionals.....33.57 58		
5.1.4 Labour productivity per employee.....38.93 46		
5.2 Employability.....41.63 118		
5.2.1 Ease of finding skilled employees.....20.38 126		
5.2.2 Relevance of education system to the economy.....8.57 129		
5.2.3 Skills matching.....81.36 15		
5.2.4 Highly educated unemployment.....56.22 104		

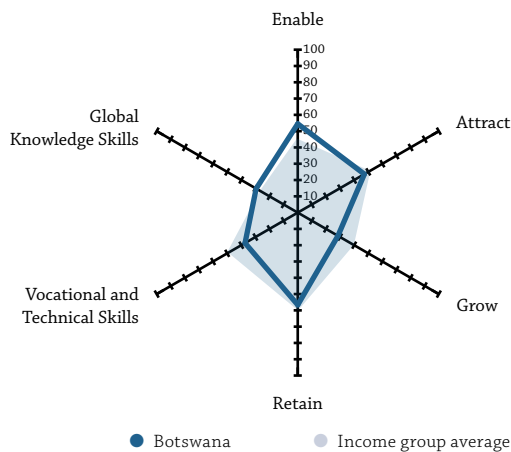
6 GLOBAL KNOWLEDGE SKILLS.....20.40 87		
6.1 High-Level Skills.....16.99 90		
6.1.1 Workforce with tertiary education.....23.51 75		
6.1.2 Population with tertiary education.....15.89 69		
6.1.3 Professionals.....33.39 51		
6.1.4 Researchers.....5.02 71		
6.1.5 Senior officials and managers.....14.73 86		
6.1.6 Digital skills.....9.42 65		
6.2 Talent Impact.....23.81 72		
6.2.1 Innovation output.....28.55 74		
6.2.2 High-value exports.....9.45 74		
6.2.3 Software development.....65.22 53		
6.2.4 New business density.....5.35 82		
6.2.5 Scientific journal articles.....10.49 58		

BOTSWANA

Key Indicators

Rank (out of 134).....	73
Income group	Upper-middle income
Regional group	Sub-Saharan Africa
Population (millions)	2.63

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE	54.50
1.1	Regulatory Landscape.....	62.67
1.1.1	Government effectiveness	51.69
1.1.2	Rule of law	58.10
1.1.3	Political stability.....	86.61
1.1.4	Regulatory quality.....	58.04
1.1.5	Corruption	58.90
1.2	Market Landscape.....	49.05
1.2.1	Extent of market dominance.....	59.91
1.2.2	Domestic credit to private sector	37.69
1.2.3	Cluster development.....	64.64
1.2.4	R&D expenditure.....	10.31
1.2.5	ICT infrastructure.....	56.89
1.2.6	Urbanisation	64.87
1.3	Business and Labour Landscape.....	51.78
	Labour Market	
1.3.1	Labour rights.....	60.99
1.3.2	Labour-employer cooperation	70.55
	Management Practice	
1.3.3	Professional management	82.80
1.3.4	Relationship of pay to productivity.....	66.38
	Technology Adoption	
1.3.5	Enterprise software	18.90
1.3.6	Cloud computing	11.08
1.3.7	Firms with website	n/a
2	ATTRACT.....	47.21
2.1	External Openness	36.81
	Attract Business	
2.1.1	FDI regulatory restrictiveness	n/a
2.1.2	Financial globalisation	34.77
	Attract People	
2.1.3	Migrant stock	46.09
2.1.4	International students.....	8.75
2.1.5	Brain gain	57.62
2.2	Internal Openness.....	57.61
	Social Inclusion	
2.2.1	Tolerance of minorities.....	60.64
2.2.2	Tolerance of immigrants	64.62
2.2.3	Social mobility	58.49
	Gender Equality	
2.2.4	Economic empowerment of women.....	48.67
2.2.5	Gender parity in high-skilled jobs	75.04
2.2.6	Leadership opportunities for women	38.21

GDP per capita (PPP US\$)	18,323.05
GDP (US\$ billions)	20.35
GTCI score.....	42.28
GTCI score (income group average)	43.53

	Score	Rank
3	GROW.....	28.50
3.1	Formal Education.....	7.80
	Enrolment	
3.1.1	Vocational enrolment	n/a
3.1.2	Tertiary enrolment	15.60
	Quality	
3.1.3	Tertiary education expenditure	n/a
3.1.4	Reading, maths, and science	n/a
3.1.5	University ranking.....	0.00
3.2	Lifelong Learning.....	36.36
3.2.1	Business masters education.....	0.00
3.2.2	Prevalence of training in firms.....	n/a
3.2.3	Employee development	72.72
3.3	Access to Growth Opportunities	41.34
	Empowerment	
3.3.1	Delegation of authority	88.08
3.3.2	Youth inclusion	17.29
	Collaboration	
3.3.3	Use of virtual social networks	37.55
3.3.4	Use of virtual professional networks	22.42

4	RETAIN.....	56.63
4.1	Sustainability	65.85
4.1.1	Pension coverage	100.00
4.1.2	Social protection.....	53.05
4.1.3	Brain retention	45.19
4.1.4	Environmental performance	59.49
4.1.5	Vulnerable employment	71.53
4.2	Lifestyle.....	47.41
4.2.1	Personal rights	82.08
4.2.2	Personal safety.....	24.72
4.2.3	Physician density.....	4.77
4.2.4	Sanitation	78.07

5	VOCATIONAL AND TECHNICAL SKILLS.....	37.35
5.1	Mid-Level Skills	23.61
5.1.1	Workforce with secondary education	24.41
5.1.2	Population with secondary education	n/a
5.1.3	Technicians and associate professionals.....	26.47
5.1.4	Labour productivity per employee.....	19.95
5.2	Employability.....	51.10
5.2.1	Ease of finding skilled employees	50.63
5.2.2	Relevance of education system to the economy	75.66
5.2.3	Skills matching	57.94
5.2.4	Highly educated unemployment	20.15

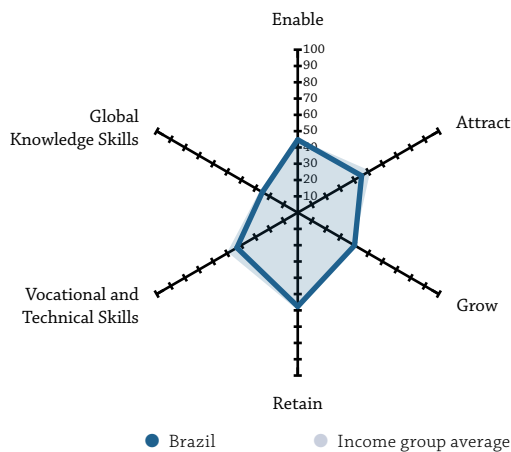
6	GLOBAL KNOWLEDGE SKILLS	29.47
6.1	High-Level Skills	26.51
6.1.1	Workforce with tertiary education	38.37
6.1.2	Population with tertiary education.....	n/a
6.1.3	Professionals	18.74
6.1.4	Researchers	2.01
6.1.5	Senior officials and managers.....	52.12
6.1.6	Digital skills	21.33
6.2	Talent Impact.....	32.43
6.2.1	Innovation output	16.67
6.2.2	High-value exports.....	0.41
6.2.3	Software development	40.91
6.2.4	New business density	99.32
6.2.5	Scientific journal articles	4.81

BRAZIL

Key Indicators

Rank (out of 134).....	69
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	215.31

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....44.74 61		
1.1 Regulatory Landscape.....37.16 84		
1.1.1 Government effectiveness.....31.38 97		
1.1.2 Rule of law.....37.84 81		
1.1.3 Political stability.....48.56 93		
1.1.4 Regulatory quality.....39.23 78		
1.1.5 Corruption.....28.77 74		
1.2 Market Landscape.....56.62 31		
1.2.1 Extent of market dominance.....46.73 52		
1.2.2 Domestic credit to private sector.....56.13 44		
1.2.3 Cluster development.....50.02 49		
1.2.4 R&D expenditure.....21.65 35		
1.2.5 ICT infrastructure.....80.62 26		
1.2.6 Urbanisation.....84.56 19		
1.3 Business and Labour Landscape.....40.44 83		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....30.35 109		
Management Practice		
1.3.3 Professional management.....59.88 46		
1.3.4 Relationship of pay to productivity.....49.71 77		
Technology Adoption		
1.3.5 Enterprise software.....28.15 44		
1.3.6 Cloud computing.....20.38 47		
1.3.7 Firms with website.....54.16 59		
2 ATTRACT.....45.25 88		
2.1 External Openness.....30.93 106		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....79.19 47		
2.1.2 Financial globalisation.....45.78 96		
Attract People		
2.1.3 Migrant stock.....8.42 124		
2.1.4 International students.....0.57 110		
2.1.5 Brain gain.....20.68 118		
2.2 Internal Openness.....59.57 49		
Social Inclusion		
2.2.1 Tolerance of minorities.....24.47 102		
2.2.2 Tolerance of immigrants.....81.54 24		
2.2.3 Social mobility.....39.82 83		
Gender Equality		
2.2.4 Economic empowerment of women.....78.76 59		
2.2.5 Gender parity in high-skilled jobs.....94.95 13		
2.2.6 Leadership opportunities for women.....37.86 100		

GDP per capita (PPP US\$).....	17,821.74
GDP (US\$ billions).....	1,920.10
GTGI score.....	42.67
GTGI score (income group average).....	43.53

	Score	Rank
3 GROW.....40.27 60		
3.1 Formal Education.....34.94 60		
Enrolment		
3.1.1 Vocational enrolment.....6.74 93		
3.1.2 Tertiary enrolment.....35.57 62		
Quality		
3.1.3 Tertiary education expenditure.....61.29 55		
3.1.4 Reading, maths, and science.....26.91 67		
3.1.5 University ranking.....44.17 29		
3.2 Lifelong Learning.....32.19 72		
3.2.1 Business masters education.....5.10 56		
3.2.2 Prevalence of training in firms.....n/a n/a		
3.2.3 Employee development.....59.29 54		
3.3 Access to Growth Opportunities.....53.69 47		
Empowerment		
3.3.1 Delegation of authority.....52.27 50		
3.3.2 Youth inclusion.....56.45 77		
Collaboration		
3.3.3 Use of virtual social networks.....66.05 63		
3.3.4 Use of virtual professional networks.....39.98 31		

4 RETAIN.....57.59 68		
4.1 Sustainability.....55.62 64		
4.1.1 Pension coverage.....79.09 68		
4.1.2 Social protection.....51.99 66		
4.1.3 Brain retention.....38.76 68		
4.1.4 Environmental performance.....41.86 61		
4.1.5 Vulnerable employment.....66.42 74		
4.2 Lifestyle.....59.56 72		
4.2.1 Personal rights.....72.71 68		
4.2.2 Personal safety.....42.99 102		
4.2.3 Physician density.....33.45 73		
4.2.4 Sanitation.....89.11 77		

5 VOCATIONAL AND TECHNICAL SKILLS.....43.12 74		
5.1 Mid-Level Skills.....39.10 63		
5.1.1 Workforce with secondary education.....57.93 38		
5.1.2 Population with secondary education.....45.74 47		
5.1.3 Technicians and associate professionals.....33.64 56		
5.1.4 Labour productivity per employee.....19.08 75		
5.2 Employability.....47.14 99		
5.2.1 Ease of finding skilled employees.....26.94 120		
5.2.2 Relevance of education system to the economy.....20.35 112		
5.2.3 Skills matching.....71.05 45		
5.2.4 Highly educated unemployment.....70.22 81		

6 GLOBAL KNOWLEDGE SKILLS.....25.06 69		
6.1 High-Level Skills.....19.93 83		
6.1.1 Workforce with tertiary education.....28.45 61		
6.1.2 Population with tertiary education.....20.63 63		
6.1.3 Professionals.....27.99 60		
6.1.4 Researchers.....10.08 52		
6.1.5 Senior officials and managers.....20.59 67		
6.1.6 Digital skills.....11.83 63		
6.2 Talent Impact.....30.19 55		
6.2.1 Innovation output.....38.94 52		
6.2.2 High-value exports.....16.13 54		
6.2.3 Software development.....68.66 49		
6.2.4 New business density.....14.92 49		
6.2.5 Scientific journal articles.....12.31 55		

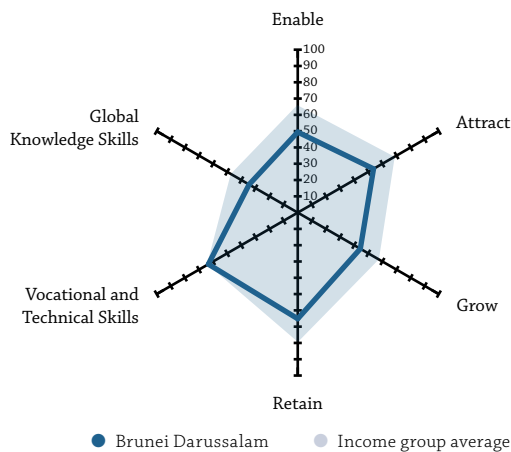
BRUNEI DARUSSALAM

Key Indicators

Rank (out of 134).....	41
Income group	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions)	0.45

GDP per capita (PPP US\$)	69,274.98
GDP (US\$ billions)	16.68
GTCI score.....	51.74
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....49.43	51	
1.1 Regulatory Landscape.....	76.88	19
1.1.1 Government effectiveness	79.14	14
1.1.2 Rule of law	68.96	31
1.1.3 Political stability.....	91.56	5
1.1.4 Regulatory quality.....	67.88	30
1.1.5 Corruption	n/a	n/a
1.2 Market Landscape.....	37.98	86
1.2.1 Extent of market dominance.....	30.71	92
1.2.2 Domestic credit to private sector	35.42	91
1.2.3 Cluster development.....	44.47	63
1.2.4 R&D expenditure.....	5.00	81
1.2.5 ICT infrastructure.....	n/a	n/a
1.2.6 Urbanisation	74.28	40
1.3 Business and Labour Landscape.....	33.42	112
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	51.20	53
Management Practice		
1.3.3 Professional management	42.44	81
1.3.4 Relationship of pay to productivity.....	55.17	63
Technology Adoption		
1.3.5 Enterprise software	11.53	111
1.3.6 Cloud computing	6.76	118
1.3.7 Firms with website	n/a	n/a
2 ATTRACT.....53.71	54	
2.1 External Openness	59.83	30
Attract Business		
2.1.1 FDI regulatory restrictiveness	61.62	61
2.1.2 Financial globalisation	85.47	19
Attract People		
2.1.3 Migrant stock	78.84	11
2.1.4 International students.....	13.39	59
2.1.5 Brain gain	n/a	n/a
2.2 Internal Openness.....	47.59	99
Social Inclusion		
2.2.1 Tolerance of minorities.....	30.85	84
2.2.2 Tolerance of immigrants	n/a	n/a
2.2.3 Social mobility	36.36	96
Gender Equality		
2.2.4 Economic empowerment of women.....	33.63	124
2.2.5 Gender parity in high-skilled jobs	83.85	44
2.2.6 Leadership opportunities for women	53.24	56

	Score	Rank
3 GROW.....44.35	46	
3.1 Formal Education.....	39.32	51
Enrolment		
3.1.1 Vocational enrolment	18.17	64
3.1.2 Tertiary enrolment	20.46	85
Quality		
3.1.3 Tertiary education expenditure	86.29	7
3.1.4 Reading, maths, and science	36.31	52
3.1.5 University ranking.....	35.36	37
3.2 Lifelong Learning.....	30.98	80
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	61.96	48
3.3 Access to Growth Opportunities	62.76	29
Empowerment		
3.3.1 Delegation of authority	63.34	26
3.3.2 Youth inclusion	62.04	70
Collaboration		
3.3.3 Use of virtual social networks	89.20	4
3.3.4 Use of virtual professional networks	36.47	35

4 RETAIN.....65.15	49	
4.1 Sustainability	67.40	35
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	55.97	58
4.1.3 Brain retention	42.74	57
4.1.4 Environmental performance	45.42	55
4.1.5 Vulnerable employment	92.87	15
4.2 Lifestyle	62.89	64
4.2.1 Personal rights	n/a	n/a
4.2.2 Personal safety.....	n/a	n/a
4.2.3 Physician density.....	29.78	77
4.2.4 Sanitation	95.99	60

5 VOCATIONAL AND TECHNICAL SKILLS.....63.32	26	
5.1 Mid-Level Skills	61.67	17
5.1.1 Workforce with secondary education	73.23	18
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	50.12	39
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	64.96	42
5.2.1 Ease of finding skilled employees	44.76	90
5.2.2 Relevance of education system to the economy	63.96	26
5.2.3 Skills matching	66.81	55
5.2.4 Highly educated unemployment	84.32	42

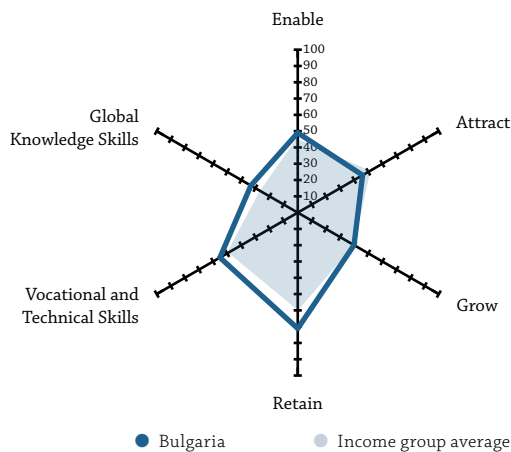
6 GLOBAL KNOWLEDGE SKILLS	34.47	45
6.1 High-Level Skills	50.08	20
6.1.1 Workforce with tertiary education	27.70	66
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	34.51	49
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers.....	38.10	35
6.1.6 Digital skills	100.00	1
6.2 Talent Impact.....	18.87	91
6.2.1 Innovation output	3.30	122
6.2.2 High-value exports.....	2.24	108
6.2.3 Software development	59.20	65
6.2.4 New business density	5.33	83
6.2.5 Scientific journal articles	24.29	42

BULGARIA

Key Indicators

Rank (out of 134).....	49
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	6.47

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 48.96 52		
1.1 Regulatory Landscape.....	49.19	55
1.1.1 Government effectiveness.....	39.39	79
1.1.2 Rule of law.....	44.13	62
1.1.3 Political stability.....	73.09	46
1.1.4 Regulatory quality.....	53.74	48
1.1.5 Corruption.....	35.62	58
1.2 Market Landscape.....	51.38	46
1.2.1 Extent of market dominance.....	49.20	48
1.2.2 Domestic credit to private sector.....	46.12	70
1.2.3 Cluster development.....	50.12	48
1.2.4 R&D expenditure.....	15.70	44
1.2.5 ICT infrastructure.....	75.89	42
1.2.6 Urbanisation.....	71.26	44
1.3 Business and Labour Landscape.....	46.32	62
Labour Market		
1.3.1 Labour rights.....	88.07	43
1.3.2 Labour-employer cooperation.....	46.08	64
Management Practice		
1.3.3 Professional management.....	35.84	99
1.3.4 Relationship of pay to productivity.....	68.43	34
Technology Adoption		
1.3.5 Enterprise software.....	21.60	64
1.3.6 Cloud computing.....	15.20	70
1.3.7 Firms with website.....	49.01	62
2 ATTRACT..... 45.94 86		
2.1 External Openness.....	35.48	93
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	67.93	55
Attract People		
2.1.3 Migrant stock.....	23.74	100
2.1.4 International students.....	28.27	35
2.1.5 Brain gain.....	21.98	117
2.2 Internal Openness.....	56.40	66
Social Inclusion		
2.2.1 Tolerance of minorities.....	57.45	44
2.2.2 Tolerance of immigrants.....	32.31	116
2.2.3 Social mobility.....	33.22	104
Gender Equality		
2.2.4 Economic empowerment of women.....	86.73	38
2.2.5 Gender parity in high-skilled jobs.....	74.62	64
2.2.6 Leadership opportunities for women.....	54.06	50

GDP per capita (PPP US\$).....	33,582.28
GDP (US\$ billions).....	89.04
GTGI score.....	49.05
GTGI score (income group average).....	43.53

	Score	Rank
3 GROW..... 39.89 62		
3.1 Formal Education.....	44.56	38
Enrolment		
3.1.1 Vocational enrolment.....	48.32	18
3.1.2 Tertiary enrolment.....	49.50	26
Quality		
3.1.3 Tertiary education expenditure.....	65.02	46
3.1.4 Reading, maths, and science.....	37.78	49
3.1.5 University ranking.....	22.19	50
3.2 Lifelong Learning.....	25.12	105
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	21.38	81
3.2.3 Employee development.....	53.97	63
3.3 Access to Growth Opportunities.....	49.99	57
Empowerment		
3.3.1 Delegation of authority.....	43.98	72
3.3.2 Youth inclusion.....	73.42	46
Collaboration		
3.3.3 Use of virtual social networks.....	61.28	69
3.3.4 Use of virtual professional networks.....	21.29	64

4 RETAIN..... 71.14 39		
4.1 Sustainability.....	64.43	44
4.1.1 Pension coverage.....	93.94	48
4.1.2 Social protection.....	60.08	52
4.1.3 Brain retention.....	19.84	114
4.1.4 Environmental performance.....	55.93	35
4.1.5 Vulnerable employment.....	92.36	16
4.2 Lifestyle.....	77.86	40
4.2.1 Personal rights.....	85.15	45
4.2.2 Personal safety.....	75.79	46
4.2.3 Physician density.....	65.83	19
4.2.4 Sanitation.....	84.67	85

5 VOCATIONAL AND TECHNICAL SKILLS..... 55.15 50		
5.1 Mid-Level Skills.....	45.85	54
5.1.1 Workforce with secondary education.....	70.25	21
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	37.77	53
5.1.4 Labour productivity per employee.....	29.52	60
5.2 Employability.....	64.46	43
5.2.1 Ease of finding skilled employees.....	37.26	105
5.2.2 Relevance of education system to the economy.....	46.33	56
5.2.3 Skills matching.....	87.06	9
5.2.4 Highly educated unemployment.....	87.20	29

6 GLOBAL KNOWLEDGE SKILLS..... 33.21 47		
6.1 High-Level Skills.....	29.10	53
6.1.1 Workforce with tertiary education.....	39.56	40
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	41.73	40
6.1.4 Researchers.....	27.48	34
6.1.5 Senior officials and managers.....	31.62	42
6.1.6 Digital skills.....	5.10	69
6.2 Talent Impact.....	37.33	43
6.2.1 Innovation output.....	59.08	28
6.2.2 High-value exports.....	20.29	43
6.2.3 Software development.....	77.51	34
6.2.4 New business density.....	7.57	74
6.2.5 Scientific journal articles.....	22.21	44

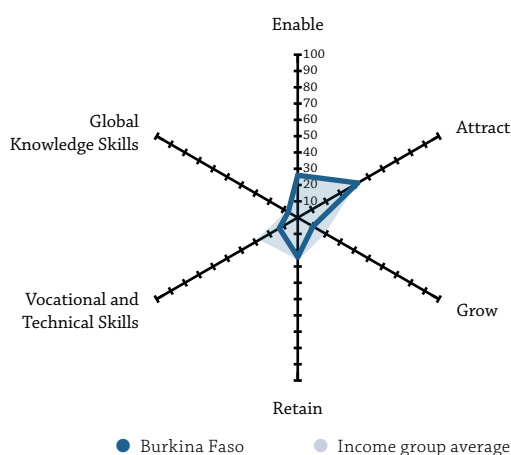
BURKINA FASO

Key Indicators

Rank (out of 134).....	129
Income group	Low income
Regional group.....	Sub-Saharan Africa
Population (millions)	22.67

GDP per capita (PPP US\$)	2,545.86
GDP (US\$ billions)	18.88
GTCI score.....	20.55
GTCI score (income group average)	22.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....26.01 123		
1.1 Regulatory Landscape.....	28.24	110
1.1.1 Government effectiveness	24.75	108
1.1.2 Rule of law	33.64	90
1.1.3 Political stability.....	18.56	130
1.1.4 Regulatory quality.....	29.98	96
1.1.5 Corruption	34.25	63
1.2 Market Landscape.....	19.20	126
1.2.1 Extent of market dominance.....	29.37	95
1.2.2 Domestic credit to private sector	35.15	92
1.2.3 Cluster development.....	4.79	133
1.2.4 R&D expenditure.....	4.49	85
1.2.5 ICT infrastructure.....	22.64	123
1.2.6 Urbanisation	18.77	122
1.3 Business and Labour Landscape.....	30.60	118
Labour Market		
1.3.1 Labour rights.....	90.75	31
1.3.2 Labour-employer cooperation	26.49	114
Management Practice		
1.3.3 Professional management	13.88	129
1.3.4 Relationship of pay to productivity.....	20.14	132
Technology Adoption		
1.3.5 Enterprise software	20.37	69
1.3.6 Cloud computing	11.94	83
1.3.7 Firms with website	n/a	n/a
2 ATTRACT.....42.51 96		
2.1 External Openness	33.18	99
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	55.88	81
Attract People		
2.1.3 Migrant stock	43.89	59
2.1.4 International students.....	6.68	78
2.1.5 Brain gain	26.26	113
2.2 Internal Openness.....	51.84	80
Social Inclusion		
2.2.1 Tolerance of minorities.....	44.68	62
2.2.2 Tolerance of immigrants	78.46	27
2.2.3 Social mobility	41.96	77
Gender Equality		
2.2.4 Economic empowerment of women.....	75.22	69
2.2.5 Gender parity in high-skilled jobs	62.51	86
2.2.6 Leadership opportunities for women	8.23	130

	Score	Rank
3 GROW.....10.77 133		
3.1 Formal Education.....	18.87	98
Enrolment		
3.1.1 Vocational enrolment	4.60	103
3.1.2 Tertiary enrolment	5.44	114
Quality		
3.1.3 Tertiary education expenditure	65.45	45
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	8.15	134
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	16.30	132
3.3 Access to Growth Opportunities	5.29	134
Empowerment		
3.3.1 Delegation of authority	5.79	132
3.3.2 Youth inclusion	7.52	124
Collaboration		
3.3.3 Use of virtual social networks	6.03	124
3.3.4 Use of virtual professional networks	1.81	125

4 RETAIN.....24.20 124		
4.1 Sustainability	21.21	125
4.1.1 Pension coverage	5.76	123
4.1.2 Social protection.....	38.37	89
4.1.3 Brain retention	28.52	96
4.1.4 Environmental performance	28.14	93
4.1.5 Vulnerable employment	5.26	130
4.2 Lifestyle	27.20	123
4.2.1 Personal rights	55.52	92
4.2.2 Personal safety.....	38.60	107
4.2.3 Physician density.....	0.67	126
4.2.4 Sanitation	14.00	128

5 VOCATIONAL AND TECHNICAL SKILLS.....13.07 133		
5.1 Mid-Level Skills	6.68	122
5.1.1 Workforce with secondary education	2.55	126
5.1.2 Population with secondary education	2.95	89
5.1.3 Technicians and associate professionals.....	19.01	88
5.1.4 Labour productivity per employee.....	2.21	110
5.2 Employability.....	19.46	133
5.2.1 Ease of finding skilled employees	39.71	99
5.2.2 Relevance of education system to the economy	16.78	118
5.2.3 Skills matching	1.88	110
5.2.4 Highly educated unemployment	n/a	n/a

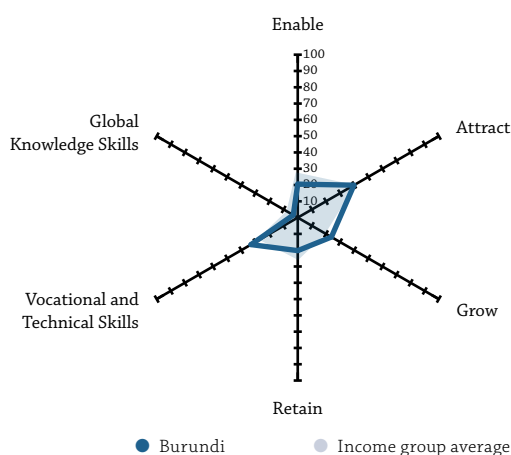
6 GLOBAL KNOWLEDGE SKILLS6.76 125		
6.1 High-Level Skills	8.75	112
6.1.1 Workforce with tertiary education	3.30	125
6.1.2 Population with tertiary education.....	1.44	89
6.1.3 Professionals	12.76	98
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers.....	17.52	77
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	4.77	131
6.2.1 Innovation output	7.10	120
6.2.2 High-value exports.....	3.90	93
6.2.3 Software development	10.86	131
6.2.4 New business density	1.60	107
6.2.5 Scientific journal articles	0.40	118

BURUNDI

Key Indicators

Rank (out of 134).....	124
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	12.89

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 20.56 131		
1.1 Regulatory Landscape..... 12.56 132		
1.1.1 Government effectiveness..... 9.67 132		
1.1.2 Rule of law..... 10.90 131		
1.1.3 Political stability..... 25.70 125		
1.1.4 Regulatory quality..... 16.56 127		
1.1.5 Corruption..... 0.00 133		
1.2 Market Landscape..... 18.33 129		
1.2.1 Extent of market dominance..... 32.24 87		
1.2.2 Domestic credit to private sector..... 44.38 76		
1.2.3 Cluster development..... 29.60 105		
1.2.4 R&D expenditure..... 3.80 87		
1.2.5 ICT infrastructure..... 0.00 129		
1.2.6 Urbanisation..... 0.00 134		
1.3 Business and Labour Landscape..... 30.77 117		
Labour Market		
1.3.1 Labour rights..... n/a n/a		
1.3.2 Labour-employer cooperation..... 45.62 66		
Management Practice		
1.3.3 Professional management..... 28.23 112		
1.3.4 Relationship of pay to productivity..... 29.58 127		
Technology Adoption		
1.3.5 Enterprise software..... 62.58 14		
1.3.6 Cloud computing..... 0.00 126		
1.3.7 Firms with website..... 18.60 99		
2 ATTRACT..... 39.81 103		
2.1 External Openness..... 30.85 107		
Attract Business		
2.1.1 FDI regulatory restrictiveness..... n/a n/a		
2.1.2 Financial globalisation..... 19.92 126		
Attract People		
2.1.3 Migrant stock..... 38.82 73		
2.1.4 International students..... 17.24 51		
2.1.5 Brain gain..... 47.43 66		
2.2 Internal Openness..... 48.76 94		
Social Inclusion		
2.2.1 Tolerance of minorities..... 28.72 92		
2.2.2 Tolerance of immigrants..... 53.85 79		
2.2.3 Social mobility..... 39.21 84		
Gender Equality		
2.2.4 Economic empowerment of women..... 66.37 95		
2.2.5 Gender parity in high-skilled jobs..... 56.76 97		
2.2.6 Leadership opportunities for women..... 47.66 69		

GDP per capita (PPP US\$)	836.19
GDP (US\$ billions)	3.07
GTGI score.....	23.46
GTGI score (income group average)	22.85

	Score	Rank
3 GROW..... 23.85 108		
3.1 Formal Education..... 17.95 102		
Enrolment		
3.1.1 Vocational enrolment..... 13.61 73		
3.1.2 Tertiary enrolment..... 3.03 122		
Quality		
3.1.3 Tertiary education expenditure..... 55.17 71		
3.1.4 Reading, maths, and science..... n/a n/a		
3.1.5 University ranking..... 0.00 76		
3.2 Lifelong Learning..... 24.55 109		
3.2.1 Business masters education..... 0.00 57		
3.2.2 Prevalence of training in firms..... 37.32 51		
3.2.3 Employee development..... 36.33 111		
3.3 Access to Growth Opportunities..... 29.05 107		
Empowerment		
3.3.1 Delegation of authority..... 32.88 100		
3.3.2 Youth inclusion..... 80.39 30		
Collaboration		
3.3.3 Use of virtual social networks..... 2.72 129		
3.3.4 Use of virtual professional networks..... 0.23 130		

4 RETAIN..... 20.26 129		
4.1 Sustainability..... 19.90 127		
4.1.1 Pension coverage..... 3.03 126		
4.1.2 Social protection..... 54.21 60		
4.1.3 Brain retention..... 17.84 119		
4.1.4 Environmental performance..... 19.66 111		
4.1.5 Vulnerable employment..... 4.76 131		
4.2 Lifestyle..... 20.63 129		
4.2.1 Personal rights..... 16.11 127		
4.2.2 Personal safety..... 25.73 119		
4.2.3 Physician density..... 0.24 130		
4.2.4 Sanitation..... 40.42 114		

5 VOCATIONAL AND TECHNICAL SKILLS..... 33.12 106		
5.1 Mid-Level Skills..... 3.83 130		
5.1.1 Workforce with secondary education..... 6.49 120		
5.1.2 Population with secondary education..... 3.66 87		
5.1.3 Technicians and associate professionals..... 1.34 131		
5.1.4 Labour productivity per employee..... n/a n/a		
5.2 Employability..... 62.40 54		
5.2.1 Ease of finding skilled employees..... 71.58 32		
5.2.2 Relevance of education system to the economy..... 41.89 65		
5.2.3 Skills matching..... n/a n/a		
5.2.4 Highly educated unemployment..... 73.74 72		

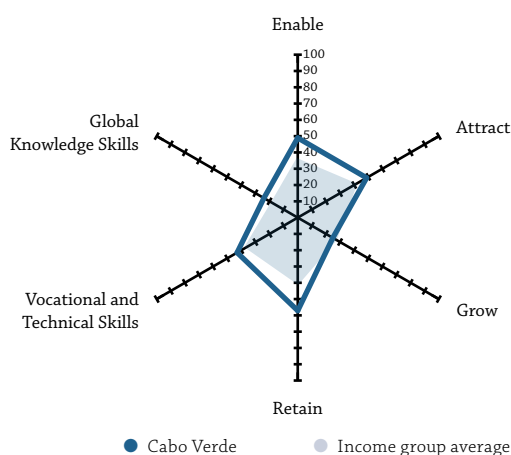
6 GLOBAL KNOWLEDGE SKILLS..... 3.18 133		
6.1 High-Level Skills..... 1.52 132		
6.1.1 Workforce with tertiary education..... 2.13 128		
6.1.2 Population with tertiary education..... 0.00 94		
6.1.3 Professionals..... 4.56 129		
6.1.4 Researchers..... 0.15 105		
6.1.5 Senior officials and managers..... 0.76 130		
6.1.6 Digital skills..... n/a n/a		
6.2 Talent Impact..... 4.84 130		
6.2.1 Innovation output..... 2.31 123		
6.2.2 High-value exports..... 0.12 130		
6.2.3 Software development..... 16.84 129		
6.2.4 New business density..... n/a n/a		
6.2.5 Scientific journal articles..... 0.07 130		

CABO VERDE

Key Indicators

Rank (out of 134).....	78
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	0.59

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 48.93 53		
1.1 Regulatory Landscape..... 58.25 43		
1.1.1 Government effectiveness..... 43.93 66		
1.1.2 Rule of law..... 54.58 49		
1.1.3 Political stability..... 84.64 21		
1.1.4 Regulatory quality..... 49.20 56		
1.1.5 Corruption..... 58.90 29		
1.2 Market Landscape..... 41.46 73		
1.2.1 Extent of market dominance..... 28.24 97		
1.2.2 Domestic credit to private sector..... 49.78 55		
1.2.3 Cluster development..... 37.00 86		
1.2.4 R&D expenditure..... n/a n/a		
1.2.5 ICT infrastructure..... 31.69 118		
1.2.6 Urbanisation..... 60.60 65		
1.3 Business and Labour Landscape..... 47.08 57		
Labour Market		
1.3.1 Labour rights..... 95.71 19		
1.3.2 Labour-employer cooperation..... 32.62 103		
Management Practice		
1.3.3 Professional management..... 17.96 123		
1.3.4 Relationship of pay to productivity..... 42.02 107		
Technology Adoption		
1.3.5 Enterprise software..... n/a n/a		
1.3.6 Cloud computing..... n/a n/a		
1.3.7 Firms with website..... n/a n/a		
2 ATTRACT..... 48.82 75		
2.1 External Openness..... 37.88 87		
Attract Business		
2.1.1 FDI regulatory restrictiveness..... n/a n/a		
2.1.2 Financial globalisation..... 70.17 50		
Attract People		
2.1.3 Migrant stock..... 36.20 76		
2.1.4 International students..... 4.97 83		
2.1.5 Brain gain..... 40.18 81		
2.2 Internal Openness..... 59.76 47		
Social Inclusion		
2.2.1 Tolerance of minorities..... 75.53 19		
2.2.2 Tolerance of immigrants..... n/a n/a		
2.2.3 Social mobility..... 20.59 120		
Gender Equality		
2.2.4 Economic empowerment of women..... 80.53 55		
2.2.5 Gender parity in high-skilled jobs..... 89.98 24		
2.2.6 Leadership opportunities for women..... 32.17 108		

GDP per capita (PPP US\$).....	9,082.84
GDP (US\$ billions).....	2.31
GTCI score.....	41.11
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 24.86 106		
3.1 Formal Education..... 17.09 103		
Enrolment		
3.1.1 Vocational enrolment..... 3.09 109		
3.1.2 Tertiary enrolment..... 14.85 94		
Quality		
3.1.3 Tertiary education expenditure..... 50.41 81		
3.1.4 Reading, maths, and science..... n/a n/a		
3.1.5 University ranking..... 0.00 76		
3.2 Lifelong Learning..... 22.09 117		
3.2.1 Business masters education..... 0.00 57		
3.2.2 Prevalence of training in firms..... n/a n/a		
3.2.3 Employee development..... 44.17 92		
3.3 Access to Growth Opportunities..... 35.41 91		
Empowerment		
3.3.1 Delegation of authority..... 39.62 82		
3.3.2 Youth inclusion..... 39.30 99		
Collaboration		
3.3.3 Use of virtual social networks..... 44.36 91		
3.3.4 Use of virtual professional networks..... 18.35 70		

4 RETAIN..... 57.12 70		
4.1 Sustainability..... 56.33 60		
4.1.1 Pension coverage..... 85.45 62		
4.1.2 Social protection..... 46.28 74		
4.1.3 Brain retention..... 40.56 62		
4.1.4 Environmental performance..... 38.98 68		
4.1.5 Vulnerable employment..... 70.39 71		
4.2 Lifestyle..... 57.90 77		
4.2.1 Personal rights..... 89.37 35		
4.2.2 Personal safety..... 53.31 82		
4.2.3 Physician density..... 11.86 94		
4.2.4 Sanitation..... 77.07 94		

5 VOCATIONAL AND TECHNICAL SKILLS..... 42.95 76		
5.1 Mid-Level Skills..... 30.82 78		
5.1.1 Workforce with secondary education..... 57.68 39		
5.1.2 Population with secondary education..... 12.90 80		
5.1.3 Technicians and associate professionals..... 21.87 80		
5.1.4 Labour productivity per employee..... n/a n/a		
5.2 Employability..... 55.07 76		
5.2.1 Ease of finding skilled employees..... 60.84 56		
5.2.2 Relevance of education system to the economy..... 50.22 50		
5.2.3 Skills matching..... 54.15 78		
5.2.4 Highly educated unemployment..... n/a n/a		

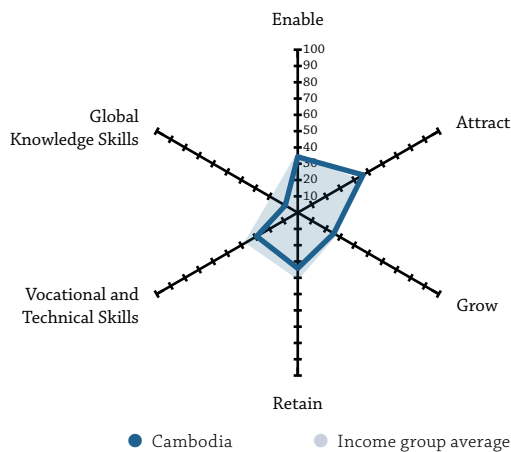
6 GLOBAL KNOWLEDGE SKILLS..... 23.98 73		
6.1 High-Level Skills..... 15.43 97		
6.1.1 Workforce with tertiary education..... 17.17 91		
6.1.2 Population with tertiary education..... 11.26 75		
6.1.3 Professionals..... 19.04 76		
6.1.4 Researchers..... 1.30 88		
6.1.5 Senior officials and managers..... 20.19 68		
6.1.6 Digital skills..... 23.60 39		
6.2 Talent Impact..... 32.54 50		
6.2.1 Innovation output..... n/a n/a		
6.2.2 High-value exports..... 1.19 118		
6.2.3 Software development..... 55.61 75		
6.2.4 New business density..... 71.99 8		
6.2.5 Scientific journal articles..... 1.35 98		

CAMBODIA

Key Indicators

Rank (out of 134).....	106
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	16.77

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 34.21 103		
1.1 Regulatory Landscape.....	29.28	108
1.1.1 Government effectiveness.....	32.32	95
1.1.2 Rule of law.....	21.36	117
1.1.3 Political stability.....	57.74	69
1.1.4 Regulatory quality.....	25.38	109
1.1.5 Corruption.....	9.59	123
1.2 Market Landscape.....	37.55	90
1.2.1 Extent of market dominance.....	36.91	74
1.2.2 Domestic credit to private sector.....	79.19	5
1.2.3 Cluster development.....	40.40	82
1.2.4 R&D expenditure.....	2.02	103
1.2.5 ICT infrastructure.....	54.87	83
1.2.6 Urbanisation.....	11.91	127
1.3 Business and Labour Landscape.....	35.80	104
Labour Market		
1.3.1 Labour rights.....	39.14	96
1.3.2 Labour-employer cooperation.....	51.55	52
Management Practice		
1.3.3 Professional management.....	50.71	67
1.3.4 Relationship of pay to productivity.....	61.63	42
Technology Adoption		
1.3.5 Enterprise software.....	19.26	75
1.3.6 Cloud computing.....	11.29	87
1.3.7 Firms with website.....	16.98	101
2 ATTRACT..... 46.25 85		
2.1 External Openness.....	45.19	69
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	86.49	33
2.1.2 Financial globalisation.....	72.99	43
Attract People		
2.1.3 Migrant stock.....	11.19	122
2.1.4 International students.....	0.60	109
2.1.5 Brain gain.....	54.69	46
2.2 Internal Openness.....	47.31	101
Social Inclusion		
2.2.1 Tolerance of minorities.....	41.49	71
2.2.2 Tolerance of immigrants.....	9.23	128
2.2.3 Social mobility.....	36.97	91
Gender Equality		
2.2.4 Economic empowerment of women.....	73.45	74
2.2.5 Gender parity in high-skilled jobs.....	63.19	83
2.2.6 Leadership opportunities for women.....	59.52	35

GDP per capita (PPP US\$).....	5,349.46
GDP (US\$ billions).....	29.96
GTCI score.....	29.69
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 25.54 104		
3.1 Formal Education.....	3.26	130
Enrolment		
3.1.1 Vocational enrolment.....	2.03	112
3.1.2 Tertiary enrolment.....	7.74	104
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	76
3.2 Lifelong Learning.....	23.30	115
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	24.30	72
3.2.3 Employee development.....	45.59	90
3.3 Access to Growth Opportunities.....	50.05	56
Empowerment		
3.3.1 Delegation of authority.....	42.64	76
3.3.2 Youth inclusion.....	92.55	6
Collaboration		
3.3.3 Use of virtual social networks.....	60.60	73
3.3.4 Use of virtual professional networks.....	4.42	113

4 RETAIN..... 34.21 110		
4.1 Sustainability.....	29.56	110
4.1.1 Pension coverage.....	5.66	124
4.1.2 Social protection.....	31.79	98
4.1.3 Brain retention.....	42.87	55
4.1.4 Environmental performance.....	18.98	114
4.1.5 Vulnerable employment.....	48.48	94
4.2 Lifestyle.....	38.87	105
4.2.1 Personal rights.....	28.28	118
4.2.2 Personal safety.....	58.83	71
4.2.3 Physician density.....	2.64	113
4.2.4 Sanitation.....	65.71	102

5 VOCATIONAL AND TECHNICAL SKILLS..... 29.11 115		
5.1 Mid-Level Skills.....	4.81	127
5.1.1 Workforce with secondary education.....	5.46	123
5.1.2 Population with secondary education.....	3.43	88
5.1.3 Technicians and associate professionals.....	7.54	118
5.1.4 Labour productivity per employee.....	2.83	106
5.2 Employability.....	53.42	82
5.2.1 Ease of finding skilled employees.....	33.18	112
5.2.2 Relevance of education system to the economy.....	39.95	73
5.2.3 Skills matching.....	44.82	85
5.2.4 Highly educated unemployment.....	95.71	6

6 GLOBAL KNOWLEDGE SKILLS..... 8.83 117		
6.1 High-Level Skills.....	4.28	125
6.1.1 Workforce with tertiary education.....	7.25	114
6.1.2 Population with tertiary education.....	5.34	81
6.1.3 Professionals.....	6.72	123
6.1.4 Researchers.....	0.23	101
6.1.5 Senior officials and managers.....	5.50	110
6.1.6 Digital skills.....	0.66	80
6.2 Talent Impact.....	13.38	115
6.2.1 Innovation output.....	14.03	100
6.2.2 High-value exports.....	3.95	92
6.2.3 Software development.....	45.77	98
6.2.4 New business density.....	2.79	95
6.2.5 Scientific journal articles.....	0.35	120

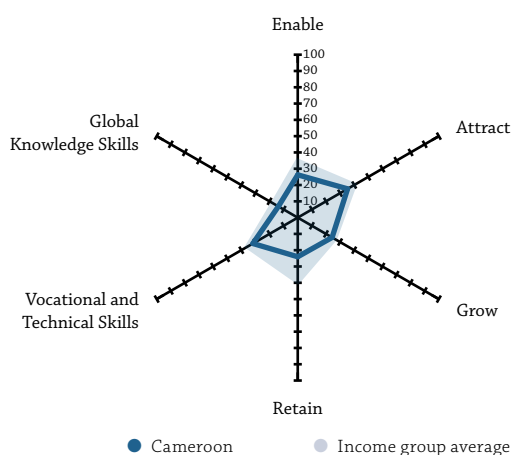
CAMEROON

Key Indicators

Rank (out of 134).....	118
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	27.91

GDP per capita (PPP US\$)	4,408.05
GDP (US\$ billions)	44.34
GTCI score	25.91
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	26.26	122
1.1 Regulatory Landscape.....	18.45	126
1.1.1 Government effectiveness	21.03	122
1.1.2 Rule of law	16.12	126
1.1.3 Political stability.....	24.60	126
1.1.4 Regulatory quality.....	18.15	123
1.1.5 Corruption	12.33	116
1.2 Market Landscape.....	31.72	110
1.2.1 Extent of market dominance.....	44.14	58
1.2.2 Domestic credit to private sector	16.62	120
1.2.3 Cluster development.....	34.47	91
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	13.56	127
1.2.6 Urbanisation	49.84	84
1.3 Business and Labour Landscape.....	28.62	125
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	34.99	97
Management Practice		
1.3.3 Professional management	34.23	104
1.3.4 Relationship of pay to productivity.....	52.96	70
Technology Adoption		
1.3.5 Enterprise software	21.69	62
1.3.6 Cloud computing	12.72	80
1.3.7 Firms with website	15.13	102
2 ATTRACT.....	35.32	119
2.1 External Openness	28.11	115
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	28.13	120
Attract People		
2.1.3 Migrant stock	29.93	86
2.1.4 International students.....	10.03	70
2.1.5 Brain gain	44.34	74
2.2 Internal Openness.....	42.54	116
Social Inclusion		
2.2.1 Tolerance of minorities.....	13.83	117
2.2.2 Tolerance of immigrants	61.54	60
2.2.3 Social mobility	48.10	58
Gender Equality		
2.2.4 Economic empowerment of women.....	43.36	120
2.2.5 Gender parity in high-skilled jobs	56.48	98
2.2.6 Leadership opportunities for women	31.93	109

	Score	Rank
3 GROW.....	24.35	107
3.1 Formal Education.....	14.72	113
Enrolment		
3.1.1 Vocational enrolment	29.98	40
3.1.2 Tertiary enrolment	8.60	103
Quality		
3.1.3 Tertiary education expenditure	20.28	109
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	31.72	73
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	44.75	41
3.2.3 Employee development	50.40	71
3.3 Access to Growth Opportunities	26.61	111
Empowerment		
3.3.1 Delegation of authority	23.05	112
3.3.2 Youth inclusion	66.12	58
Collaboration		
3.3.3 Use of virtual social networks	10.80	117
3.3.4 Use of virtual professional networks	6.46	106

4 RETAIN.....	24.03	125
4.1 Sustainability	21.75	124
4.1.1 Pension coverage	17.47	104
4.1.2 Social protection.....	27.86	111
4.1.3 Brain retention	23.49	103
4.1.4 Environmental performance	19.15	113
4.1.5 Vulnerable employment	20.76	116
4.2 Lifestyle	26.32	124
4.2.1 Personal rights	49.95	100
4.2.2 Personal safety.....	14.91	126
4.2.3 Physician density.....	1.20	122
4.2.4 Sanitation	39.22	116

5 VOCATIONAL AND TECHNICAL SKILLS.....	31.79	110
5.1 Mid-Level Skills	11.42	116
5.1.1 Workforce with secondary education	18.20	108
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	11.17	105
5.1.4 Labour productivity per employee.....	4.90	104
5.2 Employability.....	52.15	83
5.2.1 Ease of finding skilled employees	69.56	37
5.2.2 Relevance of education system to the economy	33.88	88
5.2.3 Skills matching	37.10	98
5.2.4 Highly educated unemployment	68.05	84

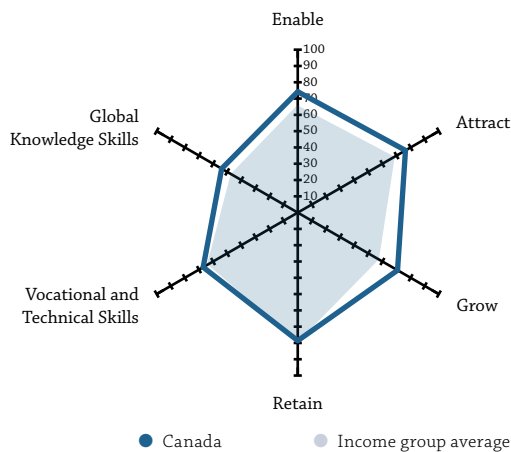
6 GLOBAL KNOWLEDGE SKILLS	13.73	102
6.1 High-Level Skills	12.11	103
6.1.1 Workforce with tertiary education	7.46	112
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	11.61	106
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers.....	17.28	79
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	15.35	102
6.2.1 Innovation output	10.07	110
6.2.2 High-value exports.....	12.55	63
6.2.3 Software development	37.20	111
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	1.57	95

CANADA

Key Indicators

Rank (out of 134).....	13
Income group	High income
Regional group	Northern America
Population (millions)	38.93

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....74.20	16	
1.1 Regulatory Landscape.....	83.82	12
1.1.1 Government effectiveness.....	82.85	10
1.1.2 Rule of law.....	88.55	13
1.1.3 Political stability.....	85.53	18
1.1.4 Regulatory quality.....	84.07	12
1.1.5 Corruption.....	78.08	13
1.2 Market Landscape.....	67.48	20
1.2.1 Extent of market dominance.....	66.40	24
1.2.2 Domestic credit to private sector.....	n/a	n/a
1.2.3 Cluster development.....	78.58	15
1.2.4 R&D expenditure.....	31.55	23
1.2.5 ICT infrastructure.....	82.23	21
1.2.6 Urbanisation.....	78.63	30
1.3 Business and Labour Landscape.....	71.30	13
Labour Market		
1.3.1 Labour rights.....	85.66	49
1.3.2 Labour-employer cooperation.....	63.83	33
Management Practice		
1.3.3 Professional management.....	73.53	24
1.3.4 Relationship of pay to productivity.....	78.36	11
Technology Adoption		
1.3.5 Enterprise software.....	63.73	13
1.3.6 Cloud computing.....	47.59	12
1.3.7 Firms with website.....	86.41	8
2 ATTRACT.....76.34	10	
2.1 External Openness.....	72.11	15
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	57.57	64
2.1.2 Financial globalisation.....	84.47	20
Attract People		
2.1.3 Migrant stock.....	72.27	18
2.1.4 International students.....	66.85	10
2.1.5 Brain gain.....	79.39	11
2.2 Internal Openness.....	80.57	10
Social Inclusion		
2.2.1 Tolerance of minorities.....	78.72	10
2.2.2 Tolerance of immigrants.....	98.46	2
2.2.3 Social mobility.....	67.48	30
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs.....	83.62	45
2.2.6 Leadership opportunities for women.....	55.12	47

GDP per capita (PPP US\$)	58,399.55
GDP (US\$ billions)	2,139.84
GTCI score.....	70.13
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....70.72	9	
3.1 Formal Education.....	58.76	17
Enrolment		
3.1.1 Vocational enrolment.....	6.65	94
3.1.2 Tertiary enrolment.....	52.25	25
Quality		
3.1.3 Tertiary education expenditure.....	79.17	22
3.1.4 Reading, maths, and science.....	74.55	6
3.1.5 University ranking.....	81.16	6
3.2 Lifelong Learning.....	76.73	8
3.2.1 Business masters education.....	73.86	8
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	79.60	17
3.3 Access to Growth Opportunities.....	76.67	11
Empowerment		
3.3.1 Delegation of authority.....	72.40	14
3.3.2 Youth inclusion.....	78.77	36
Collaboration		
3.3.3 Use of virtual social networks.....	80.74	10
3.3.4 Use of virtual professional networks.....	74.75	8

4 RETAIN.....78.60	28	
4.1 Sustainability.....	77.98	19
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	71.55	35
4.1.3 Brain retention.....	76.93	15
4.1.4 Environmental performance.....	52.71	42
4.1.5 Vulnerable employment.....	88.71	34
4.2 Lifestyle.....	79.21	37
4.2.1 Personal rights.....	96.18	15
4.2.2 Personal safety.....	83.15	30
4.2.3 Physician density.....	38.59	63
4.2.4 Sanitation.....	98.94	36

5 VOCATIONAL AND TECHNICAL SKILLS.....67.02	16	
5.1 Mid-Level Skills.....	51.79	41
5.1.1 Workforce with secondary education.....	28.82	90
5.1.2 Population with secondary education.....	48.89	39
5.1.3 Technicians and associate professionals.....	69.86	14
5.1.4 Labour productivity per employee.....	59.59	22
5.2 Employability.....	82.25	9
5.2.1 Ease of finding skilled employees.....	87.58	11
5.2.2 Relevance of education system to the economy.....	74.76	15
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	84.41	40

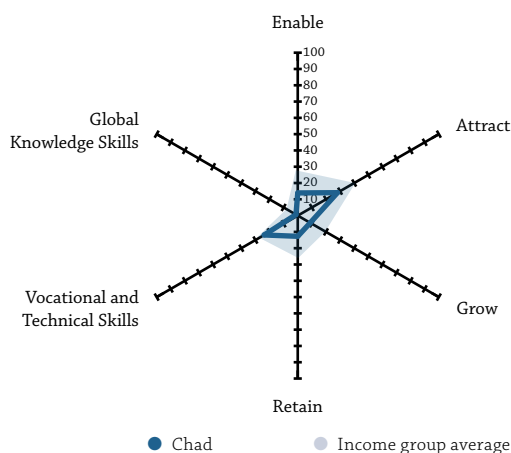
6 GLOBAL KNOWLEDGE SKILLS.....53.92	18	
6.1 High-Level Skills.....	58.95	5
6.1.1 Workforce with tertiary education.....	84.47	2
6.1.2 Population with tertiary education.....	66.46	5
6.1.3 Professionals.....	43.15	35
6.1.4 Researchers.....	51.77	22
6.1.5 Senior officials and managers.....	48.92	16
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	48.90	25
6.2.1 Innovation output.....	62.54	23
6.2.2 High-value exports.....	26.95	34
6.2.3 Software development.....	89.19	11
6.2.4 New business density.....	0.98	111
6.2.5 Scientific journal articles.....	64.82	12

CHAD

Key Indicators

Rank (out of 134).....	134
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	17.72

GTCI 2023 Country Profile by Pillar



GDP per capita (PPP US\$)	1,668.02
GDP (US\$ billions)	12.70
GTCI score.....	14.78
GTCI score (income group average)	22.85

	Score	Rank
3 GROW	8.85	134
3.1 Formal Education.....	1.01	132
Enrolment		
3.1.1 Vocational enrolment	1.79	114
3.1.2 Tertiary enrolment	1.23	128
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	76
3.2 Lifelong Learning.....	18.76	125
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	25.23	71
3.2.3 Employee development	31.06	121
3.3 Access to Growth Opportunities	6.78	132
Empowerment		
3.3.1 Delegation of authority	9.95	129
3.3.2 Youth inclusion	17.17	123
Collaboration		
3.3.3 Use of virtual social networks	0.00	134
3.3.4 Use of virtual professional networks	0.00	132

4 RETAIN	12.71	134
4.1 Sustainability	10.61	133
4.1.1 Pension coverage	0.00	131
4.1.2 Social protection.....	16.26	124
4.1.3 Brain retention	20.48	112
4.1.4 Environmental performance	15.59	125
4.1.5 Vulnerable employment	0.72	133
4.2 Lifestyle	14.81	132
4.2.1 Personal rights	32.53	113
4.2.2 Personal safety.....	23.12	124
4.2.3 Physician density.....	0.14	132
4.2.4 Sanitation.....	3.46	133

5 VOCATIONAL AND TECHNICAL SKILLS	23.78	127
5.1 Mid-Level Skills	2.71	133
5.1.1 Workforce with secondary education	5.53	122
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	1.55	130
5.1.4 Labour productivity per employee.....	1.06	114
5.2 Employability.....	44.85	107
5.2.1 Ease of finding skilled employees	42.77	94
5.2.2 Relevance of education system to the economy	24.65	102
5.2.3 Skills matching	12.00	107
5.2.4 Highly educated unemployment	100.00	1

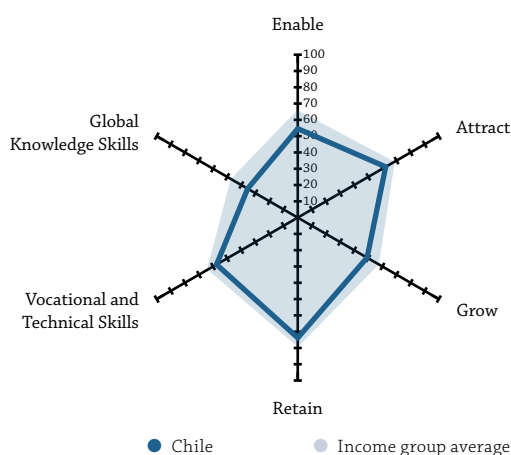
6 GLOBAL KNOWLEDGE SKILLS	1.26	134
6.1 High-Level Skills	2.38	130
6.1.1 Workforce with tertiary education	3.54	124
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	4.70	128
6.1.4 Researchers	0.54	96
6.1.5 Senior officials and managers.....	0.74	131
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	0.14	134
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports.....	n/a	n/a
6.2.3 Software development	0.00	133
6.2.4 New business density	0.41	119
6.2.5 Scientific journal articles	0.00	134

CHILE

Key Indicators

Rank (out of 134).....	34
Income group	High income
Regional group	Latin America and the Caribbean
Population (millions)	19.60

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....54.59	37	
1.1 Regulatory Landscape.....	65.24	35
1.1.1 Government effectiveness	58.47	42
1.1.2 Rule of law	69.60	30
1.1.3 Political stability.....	62.80	61
1.1.4 Regulatory quality.....	66.84	31
1.1.5 Corruption	68.49	23
1.2 Market Landscape.....	51.55	44
1.2.1 Extent of market dominance.....	27.78	98
1.2.2 Domestic credit to private sector	67.64	19
1.2.3 Cluster development.....	40.79	80
1.2.4 R&D expenditure.....	6.21	72
1.2.5 ICT infrastructure.....	81.16	24
1.2.6 Urbanisation	85.70	17
1.3 Business and Labour Landscape.....	46.99	59
Labour Market		
1.3.1 Labour rights.....	64.08	82
1.3.2 Labour-employer cooperation	52.04	50
Management Practice		
1.3.3 Professional management	56.02	51
1.3.4 Relationship of pay to productivity.....	58.17	53
Technology Adoption		
1.3.5 Enterprise software	35.14	35
1.3.6 Cloud computing	16.48	64
1.3.7 Firms with website	n/a	n/a
2 ATTRACT.....62.31	34	
2.1 External Openness	54.33	44
Attract Business		
2.1.1 FDI regulatory restrictiveness	85.68	35
2.1.2 Financial globalisation	75.20	38
Attract People		
2.1.3 Migrant stock	51.78	49
2.1.4 International students.....	3.55	87
2.1.5 Brain gain	55.43	45
2.2 Internal Openness.....	70.30	25
Social Inclusion		
2.2.1 Tolerance of minorities.....	65.96	34
2.2.2 Tolerance of immigrants	67.69	48
2.2.3 Social mobility	68.84	26
Gender Equality		
2.2.4 Economic empowerment of women.....	71.68	81
2.2.5 Gender parity in high-skilled jobs	96.88	7
2.2.6 Leadership opportunities for women	50.75	62

GDP per capita (PPP US\$)	30,208.81
GDP (US\$ billions)	301.03
GTCI score.....	55.48
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....49.13	35	
3.1 Formal Education.....	45.33	35
Enrolment		
3.1.1 Vocational enrolment	16.53	66
3.1.2 Tertiary enrolment	60.39	12
Quality		
3.1.3 Tertiary education expenditure	64.24	48
3.1.4 Reading, maths, and science	42.32	45
3.1.5 University ranking.....	43.16	30
3.2 Lifelong Learning.....	39.92	47
3.2.1 Business masters education.....	25.09	40
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	54.76	61
3.3 Access to Growth Opportunities	62.13	30
Empowerment		
3.3.1 Delegation of authority	47.51	63
3.3.2 Youth inclusion	71.59	50
Collaboration		
3.3.3 Use of virtual social networks	79.47	15
3.3.4 Use of virtual professional networks	49.94	22

4 RETAIN.....73.80	34	
4.1 Sustainability	70.70	30
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	55.97	57
4.1.3 Brain retention	75.91	16
4.1.4 Environmental performance	47.12	51
4.1.5 Vulnerable employment	74.50	63
4.2 Lifestyle	76.90	42
4.2.1 Personal rights	92.71	26
4.2.2 Personal safety.....	68.18	55
4.2.3 Physician density.....	46.73	50
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....57.53	44	
5.1 Mid-Level Skills	49.92	47
5.1.1 Workforce with secondary education	64.80	27
5.1.2 Population with secondary education	51.88	32
5.1.3 Technicians and associate professionals.....	49.84	40
5.1.4 Labour productivity per employee.....	33.16	52
5.2 Employability.....	65.14	41
5.2.1 Ease of finding skilled employees	80.47	20
5.2.2 Relevance of education system to the economy	33.68	89
5.2.3 Skills matching	74.34	40
5.2.4 Highly educated unemployment	72.06	76

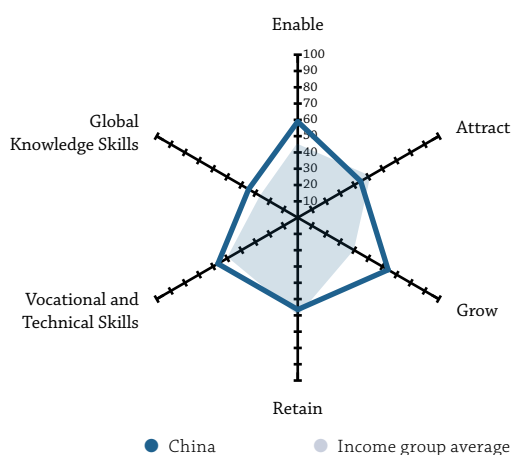
6 GLOBAL KNOWLEDGE SKILLS	35.51	42
6.1 High-Level Skills	29.38	52
6.1.1 Workforce with tertiary education	29.93	59
6.1.2 Population with tertiary education.....	28.23	51
6.1.3 Professionals	36.06	47
6.1.4 Researchers	5.74	69
6.1.5 Senior officials and managers.....	24.58	62
6.1.6 Digital skills	51.72	10
6.2 Talent Impact.....	41.65	36
6.2.1 Innovation output	38.28	56
6.2.2 High-value exports.....	22.37	40
6.2.3 Software development	63.41	56
6.2.4 New business density	66.80	10
6.2.5 Scientific journal articles	17.39	51

CHINA

Key Indicators

Rank (out of 134).....	40
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	1,412.17

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 58.95 31		
1.1 Regulatory Landscape.....	46.20	61
1.1.1 Government effectiveness.....	63.82	36
1.1.2 Rule of law.....	46.23	61
1.1.3 Political stability.....	48.64	92
1.1.4 Regulatory quality.....	33.97	88
1.1.5 Corruption.....	38.36	53
1.2 Market Landscape.....	75.72	5
1.2.1 Extent of market dominance.....	84.33	4
1.2.2 Domestic credit to private sector.....	80.33	4
1.2.3 Cluster development.....	91.78	2
1.2.4 R&D expenditure.....	44.84	13
1.2.5 ICT infrastructure.....	100.00	1
1.2.6 Urbanisation.....	53.03	76
1.3 Business and Labour Landscape.....	54.94	30
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	64.66	29
Management Practice		
1.3.3 Professional management.....	77.82	17
1.3.4 Relationship of pay to productivity.....	88.79	3
Technology Adoption		
1.3.5 Enterprise software.....	10.99	112
1.3.6 Cloud computing.....	21.97	37
1.3.7 Firms with website.....	65.39	43
2 ATTRACT..... 44.60 91		
2.1 External Openness.....	32.77	100
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	43.24	71
2.1.2 Financial globalisation.....	35.00	111
Attract People		
2.1.3 Migrant stock.....	0.00	134
2.1.4 International students.....	1.17	103
2.1.5 Brain gain.....	84.43	7
2.2 Internal Openness.....	56.43	65
Social Inclusion		
2.2.1 Tolerance of minorities.....	30.85	84
2.2.2 Tolerance of immigrants.....	58.46	66
2.2.3 Social mobility.....	65.20	33
Gender Equality		
2.2.4 Economic empowerment of women.....	69.03	90
2.2.5 Gender parity in high-skilled jobs.....	n/a	n/a
2.2.6 Leadership opportunities for women.....	58.61	37

GDP per capita (PPP US\$).....	21,475.61
GDP (US\$ billions).....	17,963.17
GTCI score.....	52.57
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 64.04 15		
3.1 Formal Education.....	64.63	9
Enrolment		
3.1.1 Vocational enrolment.....	28.17	45
3.1.2 Tertiary enrolment.....	41.61	49
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.....	88.75	3
3.2 Lifelong Learning.....	82.53	5
3.2.1 Business masters education.....	66.85	12
3.2.2 Prevalence of training in firms.....	100.00	1
3.2.3 Employee development.....	80.76	14
3.3 Access to Growth Opportunities.....	44.96	73
Empowerment		
3.3.1 Delegation of authority.....	62.47	31
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	67.41	60
3.3.4 Use of virtual professional networks.....	4.98	111

4 RETAIN..... 56.43 74		
4.1 Sustainability.....	62.13	49
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	76.82	25
4.1.3 Brain retention.....	62.12	32
4.1.4 Environmental performance.....	16.10	120
4.1.5 Vulnerable employment.....	55.60	88
4.2 Lifestyle.....	50.73	91
4.2.1 Personal rights.....	9.52	130
4.2.2 Personal safety.....	64.39	60
4.2.3 Physician density.....	37.37	66
4.2.4 Sanitation.....	91.63	73

5 VOCATIONAL AND TECHNICAL SKILLS..... 56.57 47		
5.1 Mid-Level Skills.....	24.04	95
5.1.1 Workforce with secondary education.....	n/a	n/a
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	29.75	64
5.1.4 Labour productivity per employee.....	18.34	77
5.2 Employability.....	89.09	1
5.2.1 Ease of finding skilled employees.....	93.96	4
5.2.2 Relevance of education system to the economy.....	79.23	10
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	94.08	7

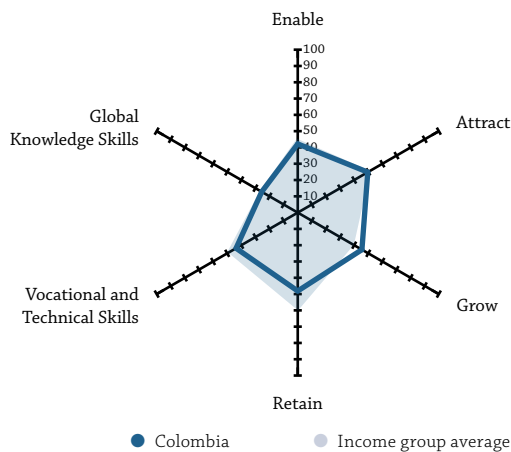
6 GLOBAL KNOWLEDGE SKILLS..... 34.83 43		
6.1 High-Level Skills.....	18.53	84
6.1.1 Workforce with tertiary education.....	n/a	n/a
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	7.73	118
6.1.4 Researchers.....	18.09	46
6.1.5 Senior officials and managers.....	29.76	49
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	51.12	24
6.2.1 Innovation output.....	85.81	8
6.2.2 High-value exports.....	54.13	9
6.2.3 Software development.....	50.65	91
6.2.4 New business density.....	47.29	17
6.2.5 Scientific journal articles.....	17.74	50

COLOMBIA

Key Indicators

Rank (out of 134).....	72
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	51.87

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....42.15	71	
1.1 Regulatory Landscape.....	38.23	81
1.1.1 Government effectiveness.....	42.50	70
1.1.2 Rule of law.....	33.28	91
1.1.3 Political stability.....	37.40	112
1.1.4 Regulatory quality.....	47.81	57
1.1.5 Corruption.....	30.14	71
1.2 Market Landscape.....	44.81	69
1.2.1 Extent of market dominance.....	34.05	83
1.2.2 Domestic credit to private sector.....	43.83	77
1.2.3 Cluster development.....	46.88	57
1.2.4 R&D expenditure.....	5.22	79
1.2.5 ICT infrastructure.....	60.97	71
1.2.6 Urbanisation.....	77.90	32
1.3 Business and Labour Landscape.....	43.40	69
Labour Market		
1.3.1 Labour rights.....	35.12	98
1.3.2 Labour-employer cooperation.....	55.21	45
Management Practice		
1.3.3 Professional management.....	52.84	61
1.3.4 Relationship of pay to productivity.....	42.75	105
Technology Adoption		
1.3.5 Enterprise software.....	27.96	46
1.3.6 Cloud computing.....	20.66	45
1.3.7 Firms with website.....	69.30	35
2 ATTRACT.....49.64	70	
2.1 External Openness.....	44.35	71
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	94.05	16
2.1.2 Financial globalisation.....	60.61	67
Attract People		
2.1.3 Migrant stock.....	29.12	88
2.1.4 International students.....	0.40	112
2.1.5 Brain gain.....	37.59	88
2.2 Internal Openness.....	54.93	71
Social Inclusion		
2.2.1 Tolerance of minorities.....	22.34	103
2.2.2 Tolerance of immigrants.....	60.00	63
2.2.3 Social mobility.....	36.54	95
Gender Equality		
2.2.4 Economic empowerment of women.....	77.88	66
2.2.5 Gender parity in high-skilled jobs.....	88.72	28
2.2.6 Leadership opportunities for women.....	44.09	80

GDP per capita (PPP US\$).....	20,287.40
GDP (US\$ billions).....	343.94
GTGI score.....	42.44
GTGI score (income group average).....	43.53

	Score	Rank
3 GROW.....45.48	45	
3.1 Formal Education.....	34.14	62
Enrolment		
3.1.1 Vocational enrolment.....	12.40	77
3.1.2 Tertiary enrolment.....	37.26	56
Quality		
3.1.3 Tertiary education expenditure.....	54.69	72
3.1.4 Reading, maths, and science.....	29.15	61
3.1.5 University ranking.....	37.18	35
3.2 Lifelong Learning.....	52.39	26
3.2.1 Business masters education.....	29.18	36
3.2.2 Prevalence of training in firms.....	78.49	7
3.2.3 Employee development.....	49.51	76
3.3 Access to Growth Opportunities.....	49.90	58
Empowerment		
3.3.1 Delegation of authority.....	48.03	62
3.3.2 Youth inclusion.....	48.02	88
Collaboration		
3.3.3 Use of virtual social networks.....	69.36	45
3.3.4 Use of virtual professional networks.....	34.20	38

4 RETAIN.....48.11	86	
4.1 Sustainability.....	41.60	89
4.1.1 Pension coverage.....	45.15	84
4.1.2 Social protection.....	35.21	94
4.1.3 Brain retention.....	39.92	64
4.1.4 Environmental performance.....	39.83	64
4.1.5 Vulnerable employment.....	47.90	95
4.2 Lifestyle.....	54.62	83
4.2.1 Personal rights.....	57.58	87
4.2.2 Personal safety.....	30.88	114
4.2.3 Physician density.....	36.95	68
4.2.4 Sanitation.....	93.06	68

5 VOCATIONAL AND TECHNICAL SKILLS.....43.71	73	
5.1 Mid-Level Skills.....	33.68	71
5.1.1 Workforce with secondary education.....	43.55	66
5.1.2 Population with secondary education.....	42.75	50
5.1.3 Technicians and associate professionals.....	26.75	73
5.1.4 Labour productivity per employee.....	21.65	71
5.2 Employability.....	53.74	80
5.2.1 Ease of finding skilled employees.....	63.43	51
5.2.2 Relevance of education system to the economy.....	34.48	87
5.2.3 Skills matching.....	57.13	72
5.2.4 Highly educated unemployment.....	59.94	96

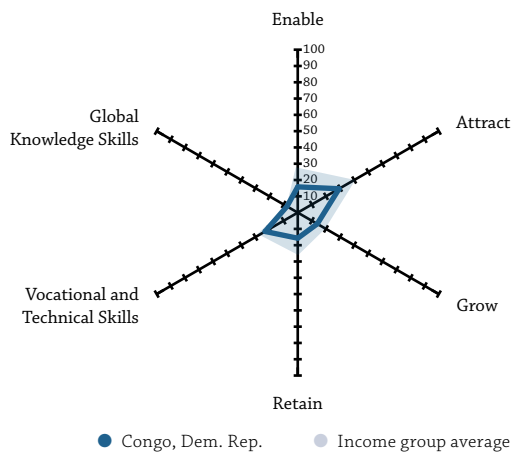
6 GLOBAL KNOWLEDGE SKILLS.....25.53	66	
6.1 High-Level Skills.....	26.26	59
6.1.1 Workforce with tertiary education.....	36.40	46
6.1.2 Population with tertiary education.....	28.92	49
6.1.3 Professionals.....	25.58	65
6.1.4 Researchers.....	0.89	93
6.1.5 Senior officials and managers.....	38.81	33
6.1.6 Digital skills.....	26.95	34
6.2 Talent Impact.....	24.81	71
6.2.1 Innovation output.....	29.87	69
6.2.2 High-value exports.....	14.70	57
6.2.3 Software development.....	62.01	60
6.2.4 New business density.....	10.66	63
6.2.5 Scientific journal articles.....	6.80	67

CONGO, DEM. REP.

Key Indicators

Rank (out of 134).....	133
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	99.01

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	15.80	133
1.1 Regulatory Landscape.....	5.69	134
1.1.1 Government effectiveness	0.00	134
1.1.2 Rule of law	0.00	134
1.1.3 Political stability.....	19.18	128
1.1.4 Regulatory quality.....	5.17	133
1.1.5 Corruption	4.11	130
1.2 Market Landscape.....	11.55	134
1.2.1 Extent of market dominance.....	6.69	130
1.2.2 Domestic credit to private sector	0.00	131
1.2.3 Cluster development.....	0.00	134
1.2.4 R&D expenditure.....	7.41	66
1.2.5 ICT infrastructure.....	19.04	126
1.2.6 Urbanisation	36.14	105
1.3 Business and Labour Landscape.....	30.15	120
Labour Market		
1.3.1 Labour rights.....	57.64	87
1.3.2 Labour-employer cooperation	30.19	111
Management Practice		
1.3.3 Professional management	23.03	118
1.3.4 Relationship of pay to productivity.....	31.25	125
Technology Adoption		
1.3.5 Enterprise software	n/a	n/a
1.3.6 Cloud computing	n/a	n/a
1.3.7 Firms with website.....	8.66	110
2 ATTRACT.....	29.30	128
2.1 External Openness	23.95	120
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	34.23	113
Attract People		
2.1.3 Migrant stock	23.43	101
2.1.4 International students.....	1.26	102
2.1.5 Brain gain	36.87	92
2.2 Internal Openness.....	34.66	126
Social Inclusion		
2.2.1 Tolerance of minorities.....	4.26	128
2.2.2 Tolerance of immigrants	46.15	91
2.2.3 Social mobility	36.54	94
Gender Equality		
2.2.4 Economic empowerment of women.....	69.91	86
2.2.5 Gender parity in high-skilled jobs	36.31	110
2.2.6 Leadership opportunities for women	14.79	127

GDP per capita (PPP US\$)	1,337.39
GDP (US\$ billions)	58.07
GTCI score.....	17.57
GTCI score (income group average)	22.85

	Score	Rank
3 GROW.....	13.83	130
3.1 Formal Education.....	14.09	116
Enrolment		
3.1.1 Vocational enrolment	29.04	43
3.1.2 Tertiary enrolment	3.74	119
Quality		
3.1.3 Tertiary education expenditure	23.57	107
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	15.98	127
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	17.40	88
3.2.3 Employee development	30.54	123
3.3 Access to Growth Opportunities	11.41	130
Empowerment		
3.3.1 Delegation of authority	12.35	127
3.3.2 Youth inclusion	31.05	108
Collaboration		
3.3.3 Use of virtual social networks	2.14	131
3.3.4 Use of virtual professional networks	0.11	131

4 RETAIN.....	15.71	133
4.1 Sustainability	17.50	130
4.1.1 Pension coverage	14.14	108
4.1.2 Social protection.....	6.61	132
4.1.3 Brain retention	21.88	107
4.1.4 Environmental performance	30.51	88
4.1.5 Vulnerable employment	14.36	123
4.2 Lifestyle	13.92	133
4.2.1 Personal rights	29.84	116
4.2.2 Personal safety.....	13.71	129
4.2.3 Physician density.....	5.00	107
4.2.4 Sanitation.....	7.11	131

5 VOCATIONAL AND TECHNICAL SKILLS.....	23.14	130
5.1 Mid-Level Skills	8.98	118
5.1.1 Workforce with secondary education	0.02	131
5.1.2 Population with secondary education	24.46	69
5.1.3 Technicians and associate professionals.....	11.14	106
5.1.4 Labour productivity per employee.....	0.28	116
5.2 Employability.....	37.29	125
5.2.1 Ease of finding skilled employees	25.54	122
5.2.2 Relevance of education system to the economy	10.63	125
5.2.3 Skills matching	38.40	97
5.2.4 Highly educated unemployment	74.60	68

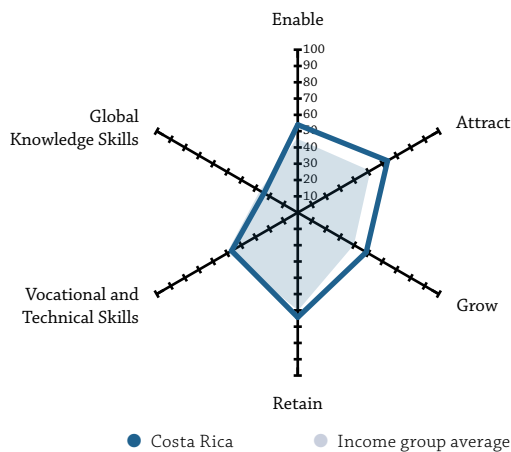
6 GLOBAL KNOWLEDGE SKILLS	7.64	123
6.1 High-Level Skills	8.50	115
6.1.1 Workforce with tertiary education	6.42	116
6.1.2 Population with tertiary education.....	10.35	77
6.1.3 Professionals	10.73	112
6.1.4 Researchers	0.00	109
6.1.5 Senior officials and managers.....	15.00	85
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	6.79	126
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports.....	0.74	121
6.2.3 Software development	26.38	121
6.2.4 New business density	0.00	122
6.2.5 Scientific journal articles	0.04	132

COSTA RICA

Key Indicators

Rank (out of 134).....	47
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	5.18

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....53.95	40	
1.1 Regulatory Landscape.....	59.02	41
1.1.1 Government effectiveness.....	49.28	55
1.1.2 Rule of law.....	57.31	43
1.1.3 Political stability.....	83.87	22
1.1.4 Regulatory quality.....	53.94	47
1.1.5 Corruption.....	50.68	39
1.2 Market Landscape.....	50.92	48
1.2.1 Extent of market dominance.....	45.89	54
1.2.2 Domestic credit to private sector.....	48.60	61
1.2.3 Cluster development.....	55.10	42
1.2.4 R&D expenditure.....	6.76	68
1.2.5 ICT infrastructure.....	72.91	49
1.2.6 Urbanisation.....	76.24	36
1.3 Business and Labour Landscape.....	51.92	37
Labour Market		
1.3.1 Labour rights.....	74.40	71
1.3.2 Labour-employer cooperation.....	70.69	19
Management Practice		
1.3.3 Professional management.....	60.74	42
1.3.4 Relationship of pay to productivity.....	56.15	60
Technology Adoption		
1.3.5 Enterprise software.....	28.13	45
1.3.6 Cloud computing.....	21.44	41
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....63.64	28	
2.1 External Openness.....	53.13	49
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	92.70	19
2.1.2 Financial globalisation.....	60.11	68
Attract People		
2.1.3 Migrant stock.....	56.38	44
2.1.4 International students.....	3.94	86
2.1.5 Brain gain.....	52.50	51
2.2 Internal Openness.....	74.15	19
Social Inclusion		
2.2.1 Tolerance of minorities.....	74.47	22
2.2.2 Tolerance of immigrants.....	78.46	27
2.2.3 Social mobility.....	65.19	34
Gender Equality		
2.2.4 Economic empowerment of women.....	88.50	34
2.2.5 Gender parity in high-skilled jobs.....	87.71	33
2.2.6 Leadership opportunities for women.....	50.57	63

GDP per capita (PPP US\$).....	24,922.66
GDP (US\$ billions).....	68.38
GTCI score.....	50.20
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....48.56	38	
3.1 Formal Education.....	41.06	46
Enrolment		
3.1.1 Vocational enrolment.....	39.36	29
3.1.2 Tertiary enrolment.....	37.64	55
Quality		
3.1.3 Tertiary education expenditure.....	79.83	19
3.1.4 Reading, maths, and science.....	32.95	58
3.1.5 University ranking.....	15.50	62
3.2 Lifelong Learning.....	47.06	32
3.2.1 Business masters education.....	31.57	34
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	62.55	47
3.3 Access to Growth Opportunities.....	57.55	39
Empowerment		
3.3.1 Delegation of authority.....	53.30	47
3.3.2 Youth inclusion.....	65.71	59
Collaboration		
3.3.3 Use of virtual social networks.....	69.07	47
3.3.4 Use of virtual professional networks.....	42.13	27

4 RETAIN.....64.28	52	
4.1 Sustainability.....	54.36	67
4.1.1 Pension coverage.....	55.76	79
4.1.2 Social protection.....	31.77	99
4.1.3 Brain retention.....	62.92	31
4.1.4 Environmental performance.....	46.44	53
4.1.5 Vulnerable employment.....	74.89	62
4.2 Lifestyle.....	74.20	48
4.2.1 Personal rights.....	96.36	14
4.2.2 Personal safety.....	59.24	68
4.2.3 Physician density.....	43.49	55
4.2.4 Sanitation.....	97.71	46

5 VOCATIONAL AND TECHNICAL SKILLS.....46.86	68	
5.1 Mid-Level Skills.....	31.57	77
5.1.1 Workforce with secondary education.....	33.50	80
5.1.2 Population with secondary education.....	21.87	72
5.1.3 Technicians and associate professionals.....	39.82	51
5.1.4 Labour productivity per employee.....	31.08	53
5.2 Employability.....	62.15	55
5.2.1 Ease of finding skilled employees.....	80.81	17
5.2.2 Relevance of education system to the economy.....	41.84	66
5.2.3 Skills matching.....	67.53	51
5.2.4 Highly educated unemployment.....	58.40	102

6 GLOBAL KNOWLEDGE SKILLS.....23.92	74	
6.1 High-Level Skills.....	17.33	88
6.1.1 Workforce with tertiary education.....	24.84	72
6.1.2 Population with tertiary education.....	28.58	50
6.1.3 Professionals.....	25.04	67
6.1.4 Researchers.....	3.84	77
6.1.5 Senior officials and managers.....	4.34	114
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	30.52	54
6.2.1 Innovation output.....	29.70	70
6.2.2 High-value exports.....	28.25	32
6.2.3 Software development.....	70.01	47
6.2.4 New business density.....	19.78	39
6.2.5 Scientific journal articles.....	4.84	78

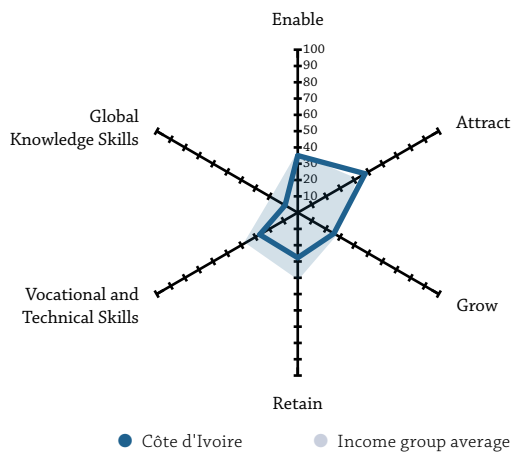
CÔTE D'IVOIRE

Key Indicators

Rank (out of 134).....	111
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	28.16

GDP per capita (PPP US\$)	6,538.30
GDP (US\$ billions)	70.02
GTCI score.....	28.67
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....35.02 100		
1.1 Regulatory Landscape.....	31.61	103
1.1.1 Government effectiveness.....	30.35	99
1.1.2 Rule of law.....	28.45	104
1.1.3 Political stability.....	36.39	114
1.1.4 Regulatory quality.....	35.45	85
1.1.5 Corruption.....	27.40	79
1.2 Market Landscape.....	35.54	93
1.2.1 Extent of market dominance.....	37.72	71
1.2.2 Domestic credit to private sector.....	25.48	111
1.2.3 Cluster development.....	42.76	71
1.2.4 R&D expenditure.....	1.13	107
1.2.5 ICT infrastructure.....	62.71	70
1.2.6 Urbanisation.....	43.40	96
1.3 Business and Labour Landscape.....	37.91	93
Labour Market		
1.3.1 Labour rights.....	90.35	35
1.3.2 Labour-employer cooperation.....	44.81	69
Management Practice		
1.3.3 Professional management.....	41.49	83
1.3.4 Relationship of pay to productivity.....	55.38	61
Technology Adoption		
1.3.5 Enterprise software.....	13.74	103
1.3.6 Cloud computing.....	9.66	100
1.3.7 Firms with website.....	9.94	109
2 ATTRACT.....47.75 80		
2.1 External Openness.....	46.02	67
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	46.29	95
Attract People		
2.1.3 Migrant stock.....	67.69	23
2.1.4 International students.....	8.65	73
2.1.5 Brain gain.....	61.46	30
2.2 Internal Openness.....	49.47	90
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.72	92
2.2.2 Tolerance of immigrants.....	76.92	29
2.2.3 Social mobility.....	50.02	52
Gender Equality		
2.2.4 Economic empowerment of women.....	92.92	25
2.2.5 Gender parity in high-skilled jobs.....	13.05	123
2.2.6 Leadership opportunities for women.....	35.17	105

	Score	Rank
3 GROW.....25.63 103		
3.1 Formal Education.....	18.26	100
Enrolment		
3.1.1 Vocational enrolment.....	7.47	91
3.1.2 Tertiary enrolment.....	5.68	113
Quality		
3.1.3 Tertiary education expenditure.....	59.89	60
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	31.39	78
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	41.97	47
3.2.3 Employee development.....	52.20	67
3.3 Access to Growth Opportunities.....	27.25	110
Empowerment		
3.3.1 Delegation of authority.....	32.74	101
3.3.2 Youth inclusion.....	54.13	81
Collaboration		
3.3.3 Use of virtual social networks.....	14.79	111
3.3.4 Use of virtual professional networks.....	7.36	100

4 RETAIN.....27.69 117		
4.1 Sustainability.....	23.07	121
4.1.1 Pension coverage.....	6.77	119
4.1.2 Social protection.....	31.70	100
4.1.3 Brain retention.....	31.11	88
4.1.4 Environmental performance.....	23.56	101
4.1.5 Vulnerable employment.....	22.19	115
4.2 Lifestyle.....	32.31	113
4.2.1 Personal rights.....	61.08	84
4.2.2 Personal safety.....	38.24	108
4.2.3 Physician density.....	1.76	119
4.2.4 Sanitation.....	28.17	121
5 VOCATIONAL AND TECHNICAL SKILLS.....26.94 120		
5.1 Mid-Level Skills.....	7.71	120
5.1.1 Workforce with secondary education.....	4.84	124
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	10.71	109
5.1.4 Labour productivity per employee.....	7.57	97
5.2 Employability.....	46.18	102
5.2.1 Ease of finding skilled employees.....	68.60	39
5.2.2 Relevance of education system to the economy.....	36.58	83
5.2.3 Skills matching.....	6.72	108
5.2.4 Highly educated unemployment.....	72.80	74

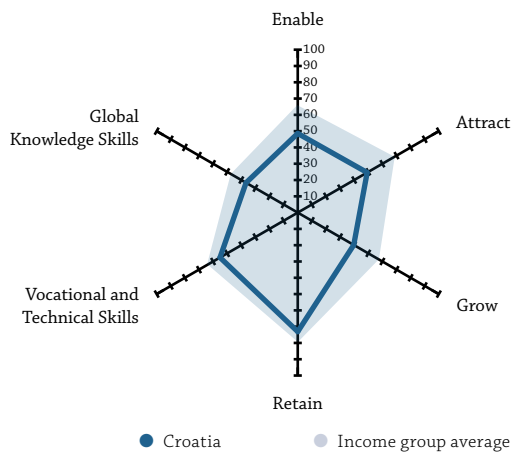
6 GLOBAL KNOWLEDGE SKILLS.....8.97 116		
6.1 High-Level Skills.....	4.99	122
6.1.1 Workforce with tertiary education.....	5.96	117
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	8.85	117
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	2.30	123
6.1.6 Digital skills.....	2.84	78
6.2 Talent Impact.....	12.94	116
6.2.1 Innovation output.....	12.21	103
6.2.2 High-value exports.....	20.18	44
6.2.3 Software development.....	27.92	120
6.2.4 New business density.....	4.10	88
6.2.5 Scientific journal articles.....	0.30	121

CROATIA

Key Indicators

Rank (out of 134).....	45
Income group	High income
Regional group	Europe
Population (millions)	3.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	48.59	56
1.1 Regulatory Landscape.....	58.17	45
1.1.1 Government effectiveness	57.60	43
1.1.2 Rule of law	53.34	50
1.1.3 Political stability.....	79.58	32
1.1.4 Regulatory quality.....	55.13	45
1.1.5 Corruption	45.21	46
1.2 Market Landscape.....	46.15	62
1.2.1 Extent of market dominance.....	24.46	103
1.2.2 Domestic credit to private sector	100.00	1
1.2.3 Cluster development.....	12.75	128
1.2.4 R&D expenditure.....	23.06	33
1.2.5 ICT infrastructure.....	66.14	63
1.2.6 Urbanisation	50.50	83
1.3 Business and Labour Landscape.....	41.46	75
Labour Market		
1.3.1 Labour rights.....	84.99	52
1.3.2 Labour-employer cooperation	13.79	125
Management Practice		
1.3.3 Professional management	32.18	109
1.3.4 Relationship of pay to productivity.....	38.77	113
Technology Adoption		
1.3.5 Enterprise software	32.53	39
1.3.6 Cloud computing	20.66	44
1.3.7 Firms with website	67.33	41
2 ATTRACT.....	49.19	74
2.1 External Openness	48.43	61
Attract Business		
2.1.1 FDI regulatory restrictiveness	91.89	22
2.1.2 Financial globalisation	67.30	56
Attract People		
2.1.3 Migrant stock	62.81	30
2.1.4 International students.....	10.54	67
2.1.5 Brain gain	9.60	127
2.2 Internal Openness.....	49.94	87
Social Inclusion		
2.2.1 Tolerance of minorities.....	54.26	50
2.2.2 Tolerance of immigrants	23.08	124
2.2.3 Social mobility	29.67	112
Gender Equality		
2.2.4 Economic empowerment of women.....	91.15	29
2.2.5 Gender parity in high-skilled jobs	88.22	30
2.2.6 Leadership opportunities for women	13.30	129

GDP per capita (PPP US\$)	40,379.57
GDP (US\$ billions)	70.96
GTCI score.....	50.38
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	39.69	63
3.1 Formal Education.....	39.78	48
Enrolment		
3.1.1 Vocational enrolment	57.82	8
3.1.2 Tertiary enrolment	44.61	43
Quality		
3.1.3 Tertiary education expenditure	30.08	104
3.1.4 Reading, maths, and science	56.24	36
3.1.5 University ranking.....	10.13	69
3.2 Lifelong Learning.....	29.18	89
3.2.1 Business masters education.....	23.40	44
3.2.2 Prevalence of training in firms.....	29.61	64
3.2.3 Employee development	34.53	114
3.3 Access to Growth Opportunities	50.13	55
Empowerment		
3.3.1 Delegation of authority	28.51	108
3.3.2 Youth inclusion	76.67	41
Collaboration		
3.3.3 Use of virtual social networks	68.48	52
3.3.4 Use of virtual professional networks	26.84	52

4 RETAIN.....	73.06	35
4.1 Sustainability	64.27	45
4.1.1 Pension coverage	89.70	59
4.1.2 Social protection.....	66.70	39
4.1.3 Brain retention	2.92	130
4.1.4 Environmental performance	70.00	16
4.1.5 Vulnerable employment	92.02	18
4.2 Lifestyle.....	81.86	30
4.2.1 Personal rights	88.76	38
4.2.2 Personal safety.....	87.85	20
4.2.3 Physician density.....	54.60	37
4.2.4 Sanitation	96.23	59

5 VOCATIONAL AND TECHNICAL SKILLS.....	55.09	51
5.1 Mid-Level Skills	60.58	19
5.1.1 Workforce with secondary education	80.72	10
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	55.19	32
5.1.4 Labour productivity per employee.....	45.84	38
5.2 Employability.....	49.59	91
5.2.1 Ease of finding skilled employees	15.49	130
5.2.2 Relevance of education system to the economy	19.42	114
5.2.3 Skills matching	88.54	6
5.2.4 Highly educated unemployment	74.91	66

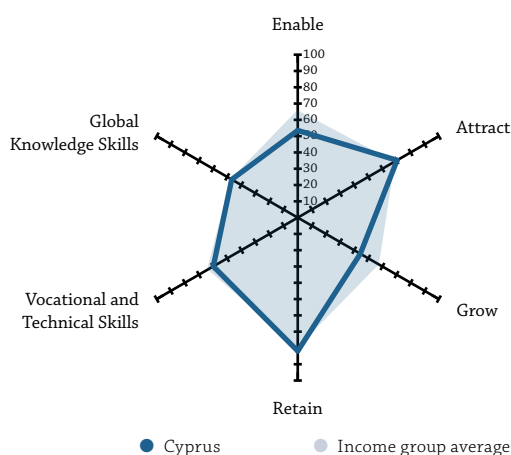
6 GLOBAL KNOWLEDGE SKILLS	36.64	37
6.1 High-Level Skills	30.29	49
6.1.1 Workforce with tertiary education	34.90	50
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	40.60	42
6.1.4 Researchers	25.39	37
6.1.5 Senior officials and managers.....	25.26	60
6.1.6 Digital skills	25.31	36
6.2 Talent Impact.....	42.99	34
6.2.1 Innovation output	45.21	39
6.2.2 High-value exports.....	17.15	49
6.2.3 Software development	83.84	23
6.2.4 New business density	24.36	33
6.2.5 Scientific journal articles	44.38	28

CYPRUS

Key Indicators

Rank (out of 134).....	30
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	1.25

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....53.51 41		
1.1 Regulatory Landscape.....	61.70	39
1.1.1 Government effectiveness	61.22	38
1.1.2 Rule of law	62.23	38
1.1.3 Political stability.....	72.69	47
1.1.4 Regulatory quality.....	64.39	34
1.1.5 Corruption	47.95	41
1.2 Market Landscape.....	49.78	53
1.2.1 Extent of market dominance.....	51.28	42
1.2.2 Domestic credit to private sector	62.83	30
1.2.3 Cluster development.....	49.84	50
1.2.4 R&D expenditure.....	14.95	45
1.2.5 ICT infrastructure.....	57.92	77
1.2.6 Urbanisation	61.84	63
1.3 Business and Labour Landscape.....	49.07	48
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation	54.01	47
Management Practice		
1.3.3 Professional management	34.07	105
1.3.4 Relationship of pay to productivity.....	58.37	51
Technology Adoption		
1.3.5 Enterprise software	13.53	105
1.3.6 Cloud computing	11.90	84
1.3.7 Firms with website.....	71.63	31
2 ATTRACT.....70.39 21		
2.1 External Openness	78.23	8
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	97.09	6
Attract People		
2.1.3 Migrant stock	64.20	29
2.1.4 International students.....	100.00	1
2.1.5 Brain gain	51.63	54
2.2 Internal Openness.....	62.55	40
Social Inclusion		
2.2.1 Tolerance of minorities.....	52.13	54
2.2.2 Tolerance of immigrants	50.77	82
2.2.3 Social mobility	45.53	63
Gender Equality		
2.2.4 Economic empowerment of women.....	92.04	27
2.2.5 Gender parity in high-skilled jobs	89.45	27
2.2.6 Leadership opportunities for women	45.40	77

GDP per capita (PPP US\$)	49,930.87
GDP (US\$ billions)	28.44
GTCI score.....	59.46
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....44.35 47		
3.1 Formal Education.....	36.51	55
Enrolment		
3.1.1 Vocational enrolment	12.67	76
3.1.2 Tertiary enrolment	61.23	10
Quality		
3.1.3 Tertiary education expenditure	66.22	43
3.1.4 Reading, maths, and science	42.42	44
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	35.08	58
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	47.54	36
3.2.3 Employee development	57.69	56
3.3 Access to Growth Opportunities	61.48	33
Empowerment		
3.3.1 Delegation of authority	44.66	69
3.3.2 Youth inclusion	74.04	44
Collaboration		
3.3.3 Use of virtual social networks	82.59	9
3.3.4 Use of virtual professional networks	44.62	26

4 RETAIN.....81.87 16		
4.1 Sustainability	72.98	27
4.1.1 Pension coverage	97.78	43
4.1.2 Social protection.....	61.10	50
4.1.3 Brain retention	50.99	43
4.1.4 Environmental performance	66.27	22
4.1.5 Vulnerable employment	88.78	32
4.2 Lifestyle.....	90.76	6
4.2.1 Personal rights	91.42	31
4.2.2 Personal safety.....	87.17	22
4.2.3 Physician density.....	85.12	6
4.2.4 Sanitation.....	99.34	25

5 VOCATIONAL AND TECHNICAL SKILLS.....59.84 37		
5.1 Mid-Level Skills	51.49	43
5.1.1 Workforce with secondary education	47.02	57
5.1.2 Population with secondary education	50.41	36
5.1.3 Technicians and associate professionals.....	55.69	31
5.1.4 Labour productivity per employee.....	52.84	29
5.2 Employability.....	68.18	35
5.2.1 Ease of finding skilled employees	77.99	23
5.2.2 Relevance of education system to the economy	50.38	49
5.2.3 Skills matching	69.86	46
5.2.4 Highly educated unemployment	74.49	69

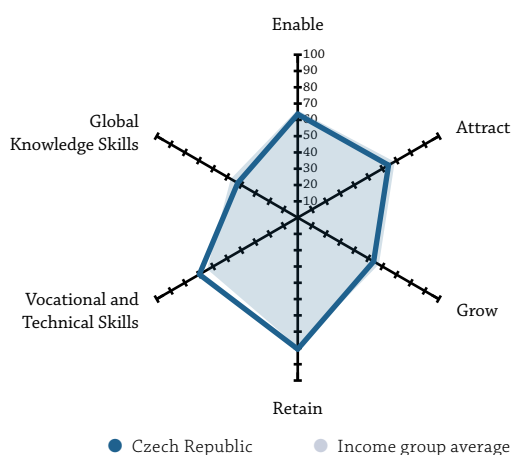
6 GLOBAL KNOWLEDGE SKILLS.....46.80 22		
6.1 High-Level Skills	36.60	40
6.1.1 Workforce with tertiary education	60.53	12
6.1.2 Population with tertiary education.....	51.19	17
6.1.3 Professionals	48.69	26
6.1.4 Researchers	19.31	42
6.1.5 Senior officials and managers.....	22.45	64
6.1.6 Digital skills	17.46	52
6.2 Talent Impact.....	56.99	19
6.2.1 Innovation output	66.01	20
6.2.2 High-value exports.....	28.75	30
6.2.3 Software development	72.09	41
6.2.4 New business density	73.21	7
6.2.5 Scientific journal articles	44.91	27

CZECH REPUBLIC

Key Indicators

Rank (out of 134).....	23
Income group	High income
Regional group.....	Europe
Population (millions)	10.53

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....63.47	25	
1.1 Regulatory Landscape.....	72.47	25
1.1.1 Government effectiveness.....	70.55	28
1.1.2 Rule of law.....	75.23	24
1.1.3 Political stability.....	86.07	15
1.1.4 Regulatory quality.....	77.10	20
1.1.5 Corruption.....	53.42	34
1.2 Market Landscape.....	55.46	33
1.2.1 Extent of market dominance.....	61.28	35
1.2.2 Domestic credit to private sector.....	48.79	59
1.2.3 Cluster development.....	44.17	66
1.2.4 R&D expenditure.....	36.97	18
1.2.5 ICT infrastructure.....	71.66	53
1.2.6 Urbanisation.....	69.86	48
1.3 Business and Labour Landscape.....	62.47	22
Labour Market		
1.3.1 Labour rights.....	97.59	14
1.3.2 Labour-employer cooperation.....	53.29	48
Management Practice		
1.3.3 Professional management.....	74.55	22
1.3.4 Relationship of pay to productivity.....	59.16	49
Technology Adoption		
1.3.5 Enterprise software.....	44.30	25
1.3.6 Cloud computing.....	23.65	33
1.3.7 Firms with website.....	84.73	13
2 ATTRACT.....64.35	27	
2.1 External Openness.....	61.45	29
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	98.38	4
2.1.2 Financial globalisation.....	75.05	39
Attract People		
2.1.3 Migrant stock.....	41.74	65
2.1.4 International students.....	54.97	14
2.1.5 Brain gain.....	37.10	89
2.2 Internal Openness.....	67.25	30
Social Inclusion		
2.2.1 Tolerance of minorities.....	57.45	44
2.2.2 Tolerance of immigrants.....	35.38	109
2.2.3 Social mobility.....	71.49	22
Gender Equality		
2.2.4 Economic empowerment of women.....	91.15	29
2.2.5 Gender parity in high-skilled jobs.....	78.76	55
2.2.6 Leadership opportunities for women.....	69.29	19

GDP per capita (PPP US\$)	49,945.50
GDP (US\$ billions)	290.92
GTCI score.....	62.43
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....53.80	26	
3.1 Formal Education.....	54.82	21
Enrolment		
3.1.1 Vocational enrolment.....	52.00	14
3.1.2 Tertiary enrolment.....	44.59	44
Quality		
3.1.3 Tertiary education expenditure.....	79.09	23
3.1.4 Reading, maths, and science.....	65.89	22
3.1.5 University ranking.....	32.52	40
3.2 Lifelong Learning.....	42.81	40
3.2.1 Business masters education.....	10.44	54
3.2.2 Prevalence of training in firms.....	52.72	28
3.2.3 Employee development.....	65.27	42
3.3 Access to Growth Opportunities.....	63.77	25
Empowerment		
3.3.1 Delegation of authority.....	63.07	29
3.3.2 Youth inclusion.....	91.52	10
Collaboration		
3.3.3 Use of virtual social networks.....	72.18	41
3.3.4 Use of virtual professional networks.....	28.31	49

4 RETAIN.....80.74	21	
4.1 Sustainability.....	75.46	24
4.1.1 Pension coverage.....	91.21	52
4.1.2 Social protection.....	82.60	12
4.1.3 Brain retention.....	48.32	47
4.1.4 Environmental performance.....	69.49	19
4.1.5 Vulnerable employment.....	85.66	45
4.2 Lifestyle.....	86.02	18
4.2.1 Personal rights.....	94.33	21
4.2.2 Personal safety.....	84.99	27
4.2.3 Physician density.....	65.70	20
4.2.4 Sanitation.....	99.05	34

5 VOCATIONAL AND TECHNICAL SKILLS.....69.71	9	
5.1 Mid-Level Skills.....	75.85	1
5.1.1 Workforce with secondary education.....	86.21	3
5.1.2 Population with secondary education.....	100.00	1
5.1.3 Technicians and associate professionals.....	68.01	17
5.1.4 Labour productivity per employee.....	49.16	34
5.2 Employability.....	63.58	50
5.2.1 Ease of finding skilled employees.....	18.69	127
5.2.2 Relevance of education system to the economy.....	56.87	41
5.2.3 Skills matching.....	86.33	12
5.2.4 Highly educated unemployment.....	92.42	11

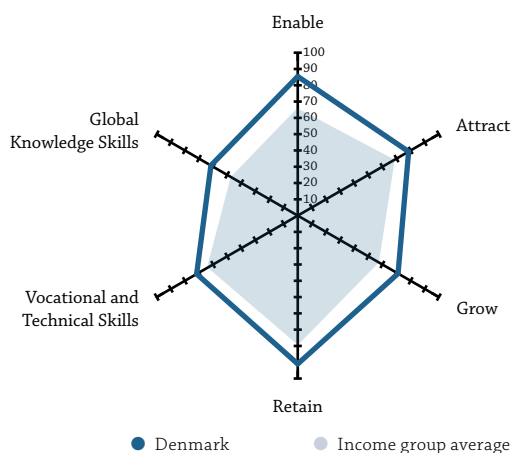
6 GLOBAL KNOWLEDGE SKILLS.....42.54	28	
6.1 High-Level Skills.....	33.55	44
6.1.1 Workforce with tertiary education.....	32.38	55
6.1.2 Population with tertiary education.....	26.81	56
6.1.3 Professionals.....	42.64	37
6.1.4 Researchers.....	47.31	24
6.1.5 Senior officials and managers.....	30.60	47
6.1.6 Digital skills.....	21.58	45
6.2 Talent Impact.....	51.52	23
6.2.1 Innovation output.....	59.74	26
6.2.2 High-value exports.....	36.61	22
6.2.3 Software development.....	88.03	14
6.2.4 New business density.....	20.79	38
6.2.5 Scientific journal articles.....	52.45	21

DENMARK

Key Indicators

Rank (out of 134).....	4
Income group	High income
Regional group	Europe
Population (millions)	5.90

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	85.41	2
1.1 Regulatory Landscape.....	92.90	3
1.1.1 Government effectiveness	92.83	3
1.1.2 Rule of law	96.77	3
1.1.3 Political stability.....	85.87	17
1.1.4 Regulatory quality.....	89.04	5
1.1.5 Corruption	100.00	1
1.2 Market Landscape.....	75.50	6
1.2.1 Extent of market dominance.....	85.85	3
1.2.2 Domestic credit to private sector	76.28	8
1.2.3 Cluster development.....	70.51	24
1.2.4 R&D expenditure.....	55.36	10
1.2.5 ICT infrastructure.....	78.92	34
1.2.6 Urbanisation	86.06	16
1.3 Business and Labour Landscape.....	87.82	3
Labour Market		
1.3.1 Labour rights.....	97.45	17
1.3.2 Labour-employer cooperation	99.54	2
Management Practice		
1.3.3 Professional management	91.67	3
1.3.4 Relationship of pay to productivity.....	78.66	10
Technology Adoption		
1.3.5 Enterprise software	77.35	9
1.3.6 Cloud computing	73.87	5
1.3.7 Firms with website	96.20	2
2 ATTRACT.....	78.57	7
2.1 External Openness	68.61	20
Attract Business		
2.1.1 FDI regulatory restrictiveness	92.16	21
2.1.2 Financial globalisation	88.48	16
Attract People		
2.1.3 Migrant stock	59.46	41
2.1.4 International students.....	37.41	27
2.1.5 Brain gain	65.52	23
2.2 Internal Openness.....	88.53	3
Social Inclusion		
2.2.1 Tolerance of minorities.....	67.02	32
2.2.2 Tolerance of immigrants	84.62	16
2.2.3 Social mobility	98.33	2
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	96.57	8
2.2.6 Leadership opportunities for women	84.64	5

GDP per capita (PPP US\$)	74,005.48
GDP (US\$ billions)	395.40
GTCI score.....	76.54
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	71.09	8
3.1 Formal Education.....	60.52	12
Enrolment		
3.1.1 Vocational enrolment	31.84	34
3.1.2 Tertiary enrolment	54.48	19
Quality		
3.1.3 Tertiary education expenditure	90.47	2
3.1.4 Reading, maths, and science	68.16	16
3.1.5 University ranking.....	57.65	15
3.2 Lifelong Learning.....	67.21	14
3.2.1 Business masters education.....	64.59	14
3.2.2 Prevalence of training in firms.....	48.74	33
3.2.3 Employee development	88.31	5
3.3 Access to Growth Opportunities	85.55	3
Empowerment		
3.3.1 Delegation of authority	100.00	1
3.3.2 Youth inclusion	90.38	11
Collaboration		
3.3.3 Use of virtual social networks	78.89	17
3.3.4 Use of virtual professional networks	72.93	11

4 RETAIN.....	91.02	2
4.1 Sustainability	91.90	4
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	93.79	6
4.1.3 Brain retention	71.40	21
4.1.4 Environmental performance	100.00	1
4.1.5 Vulnerable employment	94.29	12
4.2 Lifestyle	90.14	10
4.2.1 Personal rights	100.00	1
4.2.2 Personal safety.....	93.63	7
4.2.3 Physician density.....	67.37	18
4.2.4 Sanitation.....	99.56	21

5 VOCATIONAL AND TECHNICAL SKILLS.....	71.64	8
5.1 Mid-Level Skills	63.53	14
5.1.1 Workforce with secondary education	50.80	47
5.1.2 Population with secondary education	58.83	25
5.1.3 Technicians and associate professionals.....	75.79	6
5.1.4 Labour productivity per employee.....	68.71	11
5.2 Employability.....	79.75	11
5.2.1 Ease of finding skilled employees	77.45	24
5.2.2 Relevance of education system to the economy	78.79	11
5.2.3 Skills matching	76.89	29
5.2.4 Highly educated unemployment	85.88	34

6 GLOBAL KNOWLEDGE SKILLS	61.53	9
6.1 High-Level Skills	54.18	11
6.1.1 Workforce with tertiary education	48.27	28
6.1.2 Population with tertiary education.....	49.96	19
6.1.3 Professionals	64.28	6
6.1.4 Researchers	88.26	3
6.1.5 Senior officials and managers.....	16.05	84
6.1.6 Digital skills	58.28	7
6.2 Talent Impact.....	68.88	7
6.2.1 Innovation output	79.21	10
6.2.2 High-value exports.....	24.60	38
6.2.3 Software development	87.03	17
6.2.4 New business density	55.22	13
6.2.5 Scientific journal articles	98.34	2

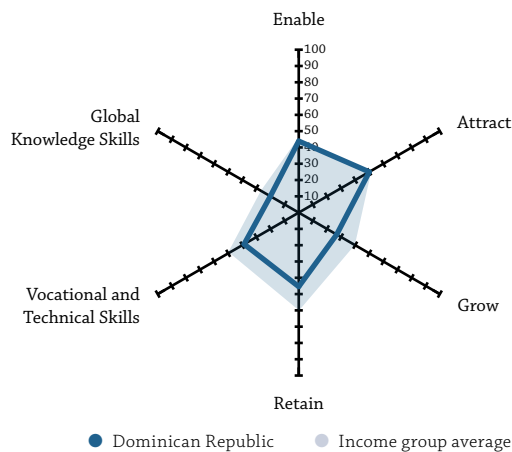
DOMINICAN REPUBLIC

Key Indicators

Rank (out of 134).....	89
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	11.23

GDP per capita (PPP US\$)	22,833.53
GDP (US\$ billions)	113.64
GTCI score.....	37.51
GTCI score (income group average)	43.53

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	43.89	64
1.1 Regulatory Landscape.....	43.22	66
1.1.1 Government effectiveness.....	43.63	67
1.1.2 Rule of law.....	42.74	69
1.1.3 Political stability.....	64.74	57
1.1.4 Regulatory quality.....	44.41	66
1.1.5 Corruption.....	20.55	102
1.2 Market Landscape.....	47.14	59
1.2.1 Extent of market dominance.....	22.10	105
1.2.2 Domestic credit to private sector.....	32.32	100
1.2.3 Cluster development.....	46.59	58
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	56.43	80
1.2.6 Urbanisation.....	78.24	31
1.3 Business and Labour Landscape.....	41.32	77
Labour Market		
1.3.1 Labour rights.....	80.56	58
1.3.2 Labour-employer cooperation.....	56.60	44
Management Practice		
1.3.3 Professional management.....	39.25	90
1.3.4 Relationship of pay to productivity.....	50.81	74
Technology Adoption		
1.3.5 Enterprise software.....	13.54	104
1.3.6 Cloud computing.....	10.92	91
1.3.7 Firms with website.....	37.55	81
2 ATTRACT.....	50.00	67
2.1 External Openness.....	39.32	84
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	48.33	93
Attract People		
2.1.3 Migrant stock.....	47.15	54
2.1.4 International students.....	6.02	80
2.1.5 Brain gain.....	55.78	43
2.2 Internal Openness.....	60.67	46
Social Inclusion		
2.2.1 Tolerance of minorities.....	54.26	50
2.2.2 Tolerance of immigrants.....	67.69	48
2.2.3 Social mobility.....	38.10	88
Gender Equality		
2.2.4 Economic empowerment of women.....	80.53	55
2.2.5 Gender parity in high-skilled jobs.....	69.58	74
2.2.6 Leadership opportunities for women.....	53.86	52

	Score	Rank
3 GROW.....	26.88	97
3.1 Formal Education.....	14.70	114
Enrolment		
3.1.1 Vocational enrolment.....	19.67	61
3.1.2 Tertiary enrolment.....	39.14	52
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	76
3.2 Lifelong Learning.....	26.82	99
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	25.90	70
3.2.3 Employee development.....	54.57	62
3.3 Access to Growth Opportunities.....	39.11	83
Empowerment		
3.3.1 Delegation of authority.....	33.27	98
3.3.2 Youth inclusion.....	40.91	96
Collaboration		
3.3.3 Use of virtual social networks.....	61.09	71
3.3.4 Use of virtual professional networks.....	21.18	65

4 RETAIN.....	45.42	91
4.1 Sustainability.....	31.52	104
4.1.1 Pension coverage.....	6.36	121
4.1.2 Social protection.....	21.39	117
4.1.3 Brain retention.....	32.95	81
4.1.4 Environmental performance.....	39.49	66
4.1.5 Vulnerable employment.....	57.43	85
4.2 Lifestyle.....	59.31	73
4.2.1 Personal rights.....	83.64	46
4.2.2 Personal safety.....	45.57	96
4.2.3 Physician density.....	22.11	83
4.2.4 Sanitation.....	85.92	81

5 VOCATIONAL AND TECHNICAL SKILLS.....	38.72	92
5.1 Mid-Level Skills.....	28.38	86
5.1.1 Workforce with secondary education.....	46.25	61
5.1.2 Population with secondary education.....	20.46	74
5.1.3 Technicians and associate professionals.....	21.39	81
5.1.4 Labour productivity per employee.....	25.42	66
5.2 Employability.....	49.05	92
5.2.1 Ease of finding skilled employees.....	48.35	82
5.2.2 Relevance of education system to the economy.....	12.98	123
5.2.3 Skills matching.....	68.68	50
5.2.4 Highly educated unemployment.....	66.20	87

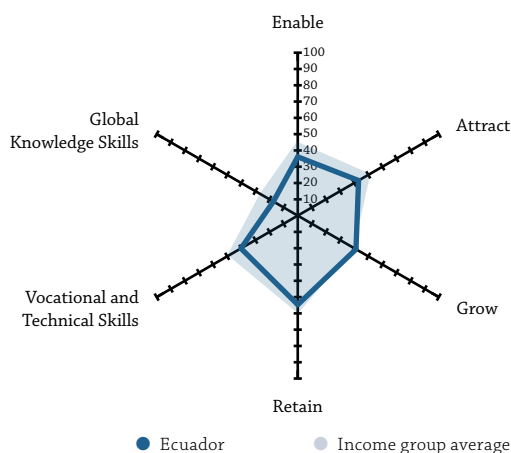
6 GLOBAL KNOWLEDGE SKILLS.....	20.13	88
6.1 High-Level Skills.....	20.96	78
6.1.1 Workforce with tertiary education.....	16.30	93
6.1.2 Population with tertiary education.....	28.14	52
6.1.3 Professionals.....	17.81	81
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	12.42	95
6.1.6 Digital skills.....	30.14	30
6.2 Talent Impact.....	19.30	90
6.2.1 Innovation output.....	19.14	91
6.2.2 High-value exports.....	15.20	56
6.2.3 Software development.....	53.96	79
6.2.4 New business density.....	7.97	72
6.2.5 Scientific journal articles.....	0.26	122

ECUADOR

Key Indicators

Rank (out of 134).....	85
Income group	Upper-middle income
Regional group	Latin America and the Caribbean
Population (millions)	18.00

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 36.08 96		
1.1 Regulatory Landscape.....	35.61	86
1.1.1 Government effectiveness.....	37.65	85
1.1.2 Rule of law.....	36.27	83
1.1.3 Political stability.....	54.25	79
1.1.4 Regulatory quality.....	23.86	111
1.1.5 Corruption.....	26.03	81
1.2 Market Landscape.....	34.80	96
1.2.1 Extent of market dominance.....	17.45	114
1.2.2 Domestic credit to private sector.....	48.39	62
1.2.3 Cluster development.....	24.98	115
1.2.4 R&D expenditure.....	8.09	64
1.2.5 ICT infrastructure.....	51.48	88
1.2.6 Urbanisation.....	58.40	68
1.3 Business and Labour Landscape.....	37.82	95
Labour Market		
1.3.1 Labour rights.....	41.02	93
1.3.2 Labour-employer cooperation.....	39.85	80
Management Practice		
1.3.3 Professional management.....	27.82	113
1.3.4 Relationship of pay to productivity.....	38.47	114
Technology Adoption		
1.3.5 Enterprise software.....	23.41	58
1.3.6 Cloud computing.....	14.70	73
1.3.7 Firms with website.....	79.48	22
2 ATTRACT..... 43.10 95		
2.1 External Openness.....	27.44	116
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	40.06	106
Attract People		
2.1.3 Migrant stock.....	35.12	78
2.1.4 International students.....	3.34	89
2.1.5 Brain gain.....	31.23	101
2.2 Internal Openness.....	58.77	53
Social Inclusion		
2.2.1 Tolerance of minorities.....	41.49	71
2.2.2 Tolerance of immigrants.....	58.46	66
2.2.3 Social mobility.....	31.67	109
Gender Equality		
2.2.4 Economic empowerment of women.....	84.96	41
2.2.5 Gender parity in high-skilled jobs.....	94.52	14
2.2.6 Leadership opportunities for women.....	41.49	87

GDP per capita (PPP US\$)	12,822.11
GDP (US\$ billions)	115.05
GTCI score.....	38.77
GTCI score (income group average)	43.53

	Score	Rank
3 GROW..... 41.28 57		
3.1 Formal Education.....	29.94	71
Enrolment		
3.1.1 Vocational enrolment.....	22.32	55
3.1.2 Tertiary enrolment.....	34.24	66
Quality		
3.1.3 Tertiary education expenditure.....	50.02	82
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	13.17	66
3.2 Lifelong Learning.....	44.83	34
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	92.70	2
3.2.3 Employee development.....	41.78	101
3.3 Access to Growth Opportunities.....	49.07	61
Empowerment		
3.3.1 Delegation of authority.....	31.21	103
3.3.2 Youth inclusion.....	63.80	66
Collaboration		
3.3.3 Use of virtual social networks.....	68.87	48
3.3.4 Use of virtual professional networks.....	32.39	39

4 RETAIN..... 54.66 78		
4.1 Sustainability.....	46.11	83
4.1.1 Pension coverage.....	72.63	71
4.1.2 Social protection.....	30.33	103
4.1.3 Brain retention.....	38.01	70
4.1.4 Environmental performance.....	46.78	52
4.1.5 Vulnerable employment.....	42.78	101
4.2 Lifestyle.....	63.22	63
4.2.1 Personal rights.....	83.19	47
4.2.2 Personal safety.....	44.10	100
4.2.3 Physician density.....	34.88	70
4.2.4 Sanitation.....	90.70	74

5 VOCATIONAL AND TECHNICAL SKILLS..... 40.25 83		
5.1 Mid-Level Skills.....	25.80	91
5.1.1 Workforce with secondary education.....	46.54	60
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	17.51	93
5.1.4 Labour productivity per employee.....	13.33	86
5.2 Employability.....	54.70	77
5.2.1 Ease of finding skilled employees.....	54.06	69
5.2.2 Relevance of education system to the economy.....	24.58	103
5.2.3 Skills matching.....	58.84	68
5.2.4 Highly educated unemployment.....	81.33	53

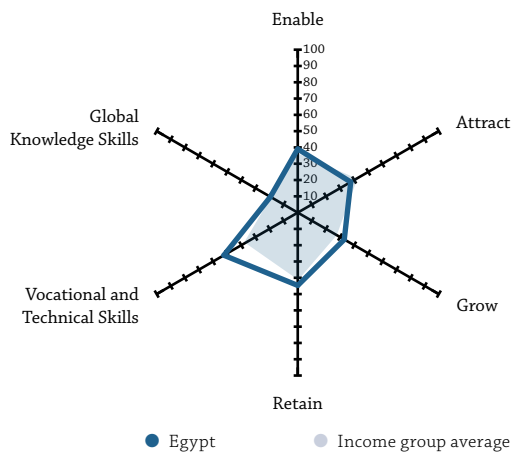
6 GLOBAL KNOWLEDGE SKILLS..... 17.27 98		
6.1 High-Level Skills.....	13.29	100
6.1.1 Workforce with tertiary education.....	17.99	87
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	16.63	85
6.1.4 Researchers.....	4.47	73
6.1.5 Senior officials and managers.....	4.66	113
6.1.6 Digital skills.....	22.73	40
6.2 Talent Impact.....	21.24	80
6.2.1 Innovation output.....	16.17	97
6.2.2 High-value exports.....	8.59	77
6.2.3 Software development.....	54.18	78
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	6.03	71

EGYPT

Key Indicators

Rank (out of 134).....	88
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	110.99

GTCI 2023 Country Profile by Pillar



	Score	Rank
1. ENABLE	39.07	82
1.1 Regulatory Landscape.....	30.43	105
1.1.1 Government effectiveness	32.09	96
1.1.2 Rule of law	38.79	76
1.1.3 Political stability.....	34.54	117
1.1.4 Regulatory quality.....	28.95	98
1.1.5 Corruption	17.81	108
1.2 Market Landscape.....	51.33	47
1.2.1 Extent of market dominance.....	62.54	32
1.2.2 Domestic credit to private sector	34.86	95
1.2.3 Cluster development.....	84.26	7
1.2.4 R&D expenditure.....	17.74	41
1.2.5 ICT infrastructure.....	74.44	45
1.2.6 Urbanisation	34.12	107
1.3 Business and Labour Landscape.....	35.46	106
Labour Market		
1.3.1 Labour rights.....	0.00	101
1.3.2 Labour-employer cooperation	69.50	21
Management Practice		
1.3.3 Professional management	55.54	53
1.3.4 Relationship of pay to productivity.....	69.11	29
Technology Adoption		
1.3.5 Enterprise software	6.86	123
1.3.6 Cloud computing	9.23	103
1.3.7 Firms with website	38.01	79
2. ATTRACT	37.56	110
2.1 External Openness	33.97	97
Attract Business		
2.1.1 FDI regulatory restrictiveness	69.46	54
2.1.2 Financial globalisation	33.02	116
Attract People		
2.1.3 Migrant stock	11.34	121
2.1.4 International students.....	3.13	90
2.1.5 Brain gain	52.90	49
2.2 Internal Openness.....	41.15	118
Social Inclusion		
2.2.1 Tolerance of minorities.....	18.09	106
2.2.2 Tolerance of immigrants	43.08	95
2.2.3 Social mobility	49.10	54
Gender Equality		
2.2.4 Economic empowerment of women.....	30.09	125
2.2.5 Gender parity in high-skilled jobs	31.16	113
2.2.6 Leadership opportunities for women	75.41	11

GDP per capita (PPP US\$)	15,090.99
GDP (US\$ billions)	476.75
GTCI score.....	37.67
GTCI score (income group average)	32.03

	Score	Rank
3. GROW	32.98	75
3.1 Formal Education.....	27.72	77
Enrolment		
3.1.1 Vocational enrolment	33.95	33
3.1.2 Tertiary enrolment	27.64	75
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.....	21.58	51
3.2 Lifelong Learning.....	36.60	53
3.2.1 Business masters education.....	38.79	28
3.2.2 Prevalence of training in firms.....	5.31	96
3.2.3 Employee development	65.69	41
3.3 Access to Growth Opportunities	34.62	93
Empowerment		
3.3.1 Delegation of authority	51.48	52
3.3.2 Youth inclusion	37.47	101
Collaboration		
3.3.3 Use of virtual social networks	37.65	97
3.3.4 Use of virtual professional networks	11.89	88

4. RETAIN	44.70	93
4.1 Sustainability	43.86	87
4.1.1 Pension coverage	37.37	88
4.1.2 Social protection.....	43.83	82
4.1.3 Brain retention	29.77	92
4.1.4 Environmental performance	28.14	93
4.1.5 Vulnerable employment	80.17	55
4.2 Lifestyle	45.54	100
4.2.1 Personal rights	28.00	119
4.2.2 Personal safety.....	46.54	93
4.2.3 Physician density.....	10.55	98
4.2.4 Sanitation	97.06	57

5. VOCATIONAL AND TECHNICAL SKILLS	52.35	55
5.1 Mid-Level Skills	50.05	45
5.1.1 Workforce with secondary education	50.32	49
5.1.2 Population with secondary education	87.29	4
5.1.3 Technicians and associate professionals.....	27.04	71
5.1.4 Labour productivity per employee.....	35.53	49
5.2 Employability.....	54.66	78
5.2.1 Ease of finding skilled employees	69.88	35
5.2.2 Relevance of education system to the economy	41.22	69
5.2.3 Skills matching	41.79	89
5.2.4 Highly educated unemployment	65.73	90

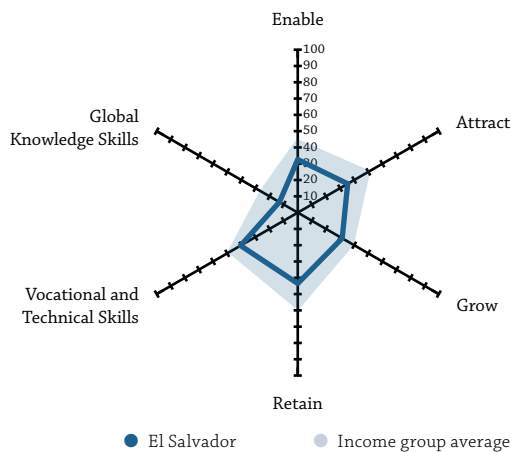
6. GLOBAL KNOWLEDGE SKILLS	19.38	91
6.1 High-Level Skills	22.11	69
6.1.1 Workforce with tertiary education	25.28	71
6.1.2 Population with tertiary education.....	6.27	80
6.1.3 Professionals	28.46	57
6.1.4 Researchers	9.69	53
6.1.5 Senior officials and managers.....	22.19	66
6.1.6 Digital skills	40.77	15
6.2 Talent Impact.....	16.64	96
6.2.1 Innovation output	24.92	81
6.2.2 High-value exports.....	4.96	88
6.2.3 Software development	45.82	97
6.2.4 New business density	1.10	109
6.2.5 Scientific journal articles	6.40	69

EL SALVADOR

Key Indicators

Rank (out of 134).....	96
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	6.34

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 32.59 109		
1.1 Regulatory Landscape.....	33.72	92
1.1.1 Government effectiveness.....	35.06	89
1.1.2 Rule of law.....	22.76	112
1.1.3 Political stability.....	55.68	74
1.1.4 Regulatory quality.....	33.17	90
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	33.58	100
1.2.1 Extent of market dominance.....	9.77	127
1.2.2 Domestic credit to private sector.....	52.18	50
1.2.3 Cluster development.....	17.94	125
1.2.4 R&D expenditure.....	2.90	95
1.2.5 ICT infrastructure.....	50.89	90
1.2.6 Urbanisation.....	67.83	50
1.3 Business and Labour Landscape.....	30.46	119
Labour Market		
1.3.1 Labour rights.....	40.75	94
1.3.2 Labour-employer cooperation.....	37.65	89
Management Practice		
1.3.3 Professional management.....	32.68	108
1.3.4 Relationship of pay to productivity.....	35.86	119
Technology Adoption		
1.3.5 Enterprise software.....	17.76	85
1.3.6 Cloud computing.....	10.41	96
1.3.7 Firms with website.....	38.12	78
2 ATTRACT..... 35.39 118		
2.1 External Openness.....	23.49	124
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	53.61	86
Attract People		
2.1.3 Migrant stock.....	13.02	114
2.1.4 International students.....	1.02	104
2.1.5 Brain gain.....	26.31	112
2.2 Internal Openness.....	47.29	102
Social Inclusion		
2.2.1 Tolerance of minorities.....	43.62	63
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	15.63	127
Gender Equality		
2.2.4 Economic empowerment of women.....	84.07	43
2.2.5 Gender parity in high-skilled jobs.....	49.41	101
2.2.6 Leadership opportunities for women.....	24.86	119

GDP per capita (PPP US\$).....	11,096.21
GDP (US\$ billions).....	32.49
GTCI score.....	32.74
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 31.49 82		
3.1 Formal Education.....	18.88	96
Enrolment		
3.1.1 Vocational enrolment.....	24.88	50
3.1.2 Tertiary enrolment.....	19.07	86
Quality		
3.1.3 Tertiary education expenditure.....	31.58	102
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	36.06	57
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	66.27	16
3.2.3 Employee development.....	41.91	100
3.3 Access to Growth Opportunities.....	39.53	80
Empowerment		
3.3.1 Delegation of authority.....	31.08	104
3.3.2 Youth inclusion.....	50.37	85
Collaboration		
3.3.3 Use of virtual social networks.....	58.66	75
3.3.4 Use of virtual professional networks.....	18.01	71

4 RETAIN..... 43.49 97		
4.1 Sustainability.....	30.07	107
4.1.1 Pension coverage.....	23.74	96
4.1.2 Social protection.....	12.39	127
4.1.3 Brain retention.....	14.31	125
4.1.4 Environmental performance.....	37.12	72
4.1.5 Vulnerable employment.....	62.80	79
4.2 Lifestyle.....	56.90	79
4.2.1 Personal rights.....	55.40	94
4.2.2 Personal safety.....	45.70	95
4.2.3 Physician density.....	45.77	51
4.2.4 Sanitation.....	80.73	90

5 VOCATIONAL AND TECHNICAL SKILLS..... 40.49 82		
5.1 Mid-Level Skills.....	36.07	66
5.1.1 Workforce with secondary education.....	45.15	63
5.1.2 Population with secondary education.....	33.78	56
5.1.3 Technicians and associate professionals.....	29.29	67
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	44.91	106
5.2.1 Ease of finding skilled employees.....	34.67	108
5.2.2 Relevance of education system to the economy.....	10.82	124
5.2.3 Skills matching.....	55.30	76
5.2.4 Highly educated unemployment.....	78.87	59

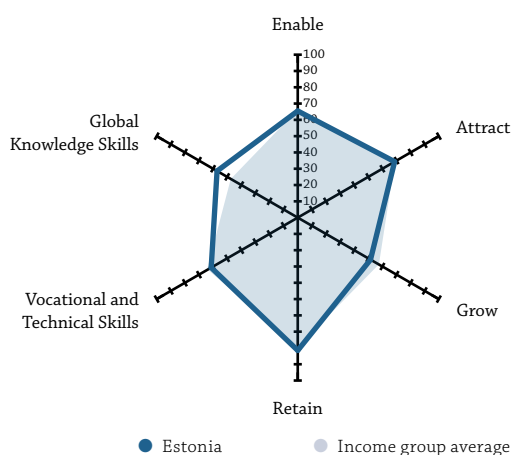
6 GLOBAL KNOWLEDGE SKILLS..... 12.97 104		
6.1 High-Level Skills.....	8.85	111
6.1.1 Workforce with tertiary education.....	9.99	103
6.1.2 Population with tertiary education.....	11.42	74
6.1.3 Professionals.....	14.33	93
6.1.4 Researchers.....	0.72	94
6.1.5 Senior officials and managers.....	7.78	105
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	17.10	94
6.2.1 Innovation output.....	16.50	94
6.2.2 High-value exports.....	13.17	60
6.2.3 Software development.....	53.65	80
6.2.4 New business density.....	2.12	103
6.2.5 Scientific journal articles.....	0.07	131

ESTONIA

Key Indicators

Rank (out of 134).....	20
Income group	High income
Regional group	Europe
Population (millions)	1.34

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 65.46 22		
1.1 Regulatory Landscape.....	80.41	17
1.1.1 Government effectiveness.....	77.34	18
1.1.2 Rule of law.....	83.25	17
1.1.3 Political stability.....	80.82	30
1.1.4 Regulatory quality.....	82.56	14
1.1.5 Corruption.....	78.08	13
1.2 Market Landscape.....	52.55	42
1.2.1 Extent of market dominance.....	47.05	50
1.2.2 Domestic credit to private sector.....	51.29	53
1.2.3 Cluster development.....	44.66	62
1.2.4 R&D expenditure.....	32.58	21
1.2.5 ICT infrastructure.....	75.51	43
1.2.6 Urbanisation.....	64.22	57
1.3 Business and Labour Landscape.....	63.41	21
Labour Market		
1.3.1 Labour rights.....	97.99	12
1.3.2 Labour-employer cooperation.....	75.76	14
Management Practice		
1.3.3 Professional management.....	81.99	13
1.3.4 Relationship of pay to productivity.....	68.96	30
Technology Adoption		
1.3.5 Enterprise software.....	20.19	71
1.3.6 Cloud computing.....	17.76	59
1.3.7 Firms with website.....	81.21	19
2 ATTRACT..... 68.67 24		
2.1 External Openness.....	70.29	18
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	96.22	7
2.1.2 Financial globalisation.....	82.28	26
Attract People		
2.1.3 Migrant stock.....	65.78	27
2.1.4 International students.....	45.05	21
2.1.5 Brain gain.....	62.15	29
2.2 Internal Openness.....	67.05	31
Social Inclusion		
2.2.1 Tolerance of minorities.....	27.66	98
2.2.2 Tolerance of immigrants.....	35.38	109
2.2.3 Social mobility.....	88.31	5
Gender Equality		
2.2.4 Economic empowerment of women.....	96.46	15
2.2.5 Gender parity in high-skilled jobs.....	71.69	71
2.2.6 Leadership opportunities for women.....	82.77	6

GDP per capita (PPP US\$)	46,697.36
GDP (US\$ billions)	38.10
GTCI score.....	64.29
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 51.57 29		
3.1 Formal Education.....	50.66	27
Enrolment		
3.1.1 Vocational enrolment.....	34.18	32
3.1.2 Tertiary enrolment.....	45.25	42
Quality		
3.1.3 Tertiary education expenditure.....	74.65	28
3.1.4 Reading, maths, and science.....	78.15	3
3.1.5 University ranking.....	21.07	52
3.2 Lifelong Learning.....	40.00	46
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	48.87	32
3.2.3 Employee development.....	71.13	30
3.3 Access to Growth Opportunities.....	64.04	24
Empowerment		
3.3.1 Delegation of authority.....	67.26	18
3.3.2 Youth inclusion.....	81.00	26
Collaboration		
3.3.3 Use of virtual social networks.....	75.97	29
3.3.4 Use of virtual professional networks.....	31.94	41

4 RETAIN..... 81.53 18		
4.1 Sustainability.....	77.32	21
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	80.41	16
4.1.3 Brain retention.....	40.83	60
4.1.4 Environmental performance.....	72.03	14
4.1.5 Vulnerable employment.....	93.33	13
4.2 Lifestyle.....	85.74	21
4.2.1 Personal rights.....	96.76	10
4.2.2 Personal safety.....	86.16	25
4.2.3 Physician density.....	60.96	28
4.2.4 Sanitation.....	99.06	33

5 VOCATIONAL AND TECHNICAL SKILLS..... 61.34 33		
5.1 Mid-Level Skills.....	58.23	26
5.1.1 Workforce with secondary education.....	59.96	32
5.1.2 Population with secondary education.....	65.69	21
5.1.3 Technicians and associate professionals.....	60.92	24
5.1.4 Labour productivity per employee.....	46.35	36
5.2 Employability.....	64.46	44
5.2.1 Ease of finding skilled employees.....	38.36	102
5.2.2 Relevance of education system to the economy.....	62.43	30
5.2.3 Skills matching.....	74.89	37
5.2.4 Highly educated unemployment.....	82.15	48

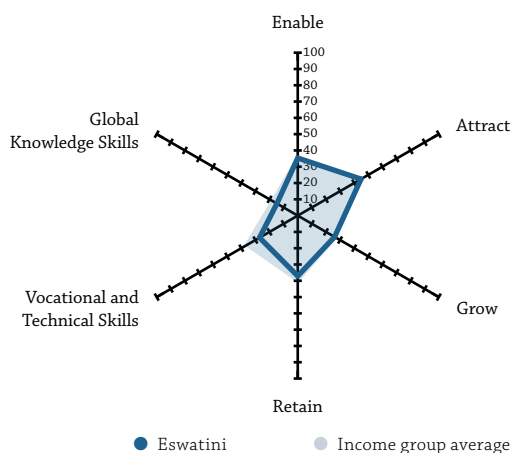
6 GLOBAL KNOWLEDGE SKILLS..... 57.18 13		
6.1 High-Level Skills.....	46.70	23
6.1.1 Workforce with tertiary education.....	51.26	22
6.1.2 Population with tertiary education.....	52.39	14
6.1.3 Professionals.....	56.32	16
6.1.4 Researchers.....	44.07	26
6.1.5 Senior officials and managers.....	45.95	25
6.1.6 Digital skills.....	30.20	29
6.2 Talent Impact.....	67.65	9
6.2.1 Innovation output.....	63.70	22
6.2.2 High-value exports.....	37.21	21
6.2.3 Software development.....	88.17	13
6.2.4 New business density.....	100.00	1
6.2.5 Scientific journal articles.....	49.19	26

ESWATINI

Key Indicators

Rank (out of 134).....	100
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	1.20

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 35.34 99		
1.1 Regulatory Landscape.....	32.05	100
1.1.1 Government effectiveness.....	24.69	110
1.1.2 Rule of law.....	30.38	98
1.1.3 Political stability.....	60.39	65
1.1.4 Regulatory quality.....	26.98	104
1.1.5 Corruption.....	17.81	108
1.2 Market Landscape.....	20.34	122
1.2.1 Extent of market dominance.....	12.70	123
1.2.2 Domestic credit to private sector.....	25.19	112
1.2.3 Cluster development.....	31.51	101
1.2.4 R&D expenditure.....	4.82	83
1.2.5 ICT infrastructure.....	35.46	110
1.2.6 Urbanisation.....	12.38	125
1.3 Business and Labour Landscape.....	53.63	34
Labour Market		
1.3.1 Labour rights.....	67.83	78
1.3.2 Labour-employer cooperation.....	33.04	101
Management Practice		
1.3.3 Professional management.....	59.93	45
1.3.4 Relationship of pay to productivity.....	46.12	96
Technology Adoption		
1.3.5 Enterprise software.....	n/a	n/a
1.3.6 Cloud computing.....	n/a	n/a
1.3.7 Firms with website.....	61.23	48
2 ATTRACT..... 44.83 89		
2.1 External Openness.....	36.31	90
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	68.31	54
Attract People		
2.1.3 Migrant stock.....	38.41	74
2.1.4 International students.....	1.53	100
2.1.5 Brain gain.....	36.98	91
2.2 Internal Openness.....	53.36	75
Social Inclusion		
2.2.1 Tolerance of minorities.....	82.98	6
2.2.2 Tolerance of immigrants.....	58.46	66
2.2.3 Social mobility.....	27.13	115
Gender Equality		
2.2.4 Economic empowerment of women.....	23.89	130
2.2.5 Gender parity in high-skilled jobs.....	100.00	1
2.2.6 Leadership opportunities for women.....	27.70	117

GDP per capita (PPP US\$).....	10,782.15
GDP (US\$ billions).....	4.85
GTGI score.....	30.87
GTGI score (income group average).....	32.03

	Score	Rank
3 GROW..... 26.12 102		
3.1 Formal Education.....	21.10	89
Enrolment		
3.1.1 Vocational enrolment.....	5.80	97
3.1.2 Tertiary enrolment.....	3.57	120
Quality		
3.1.3 Tertiary education expenditure.....	75.02	27
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	30.79	81
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	42.76	44
3.2.3 Employee development.....	49.59	75
3.3 Access to Growth Opportunities.....	26.49	112
Empowerment		
3.3.1 Delegation of authority.....	47.35	64
3.3.2 Youth inclusion.....	20.96	120
Collaboration		
3.3.3 Use of virtual social networks.....	24.51	106
3.3.4 Use of virtual professional networks.....	13.14	81

4 RETAIN..... 37.09 106		
4.1 Sustainability.....	55.21	66
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	36.31	91
4.1.3 Brain retention.....	30.75	90
4.1.4 Environmental performance.....	44.07	58
4.1.5 Vulnerable employment.....	64.91	77
4.2 Lifestyle.....	18.98	130
4.2.1 Personal rights.....	7.22	131
4.2.2 Personal safety.....	6.44	132
4.2.3 Physician density.....	1.44	121
4.2.4 Sanitation.....	60.80	107

5 VOCATIONAL AND TECHNICAL SKILLS..... 27.08 118		
5.1 Mid-Level Skills.....	8.37	119
5.1.1 Workforce with secondary education.....	0.61	130
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	16.12	96
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	45.80	104
5.2.1 Ease of finding skilled employees.....	43.98	92
5.2.2 Relevance of education system to the economy.....	30.10	91
5.2.3 Skills matching.....	60.91	61
5.2.4 Highly educated unemployment.....	48.20	113

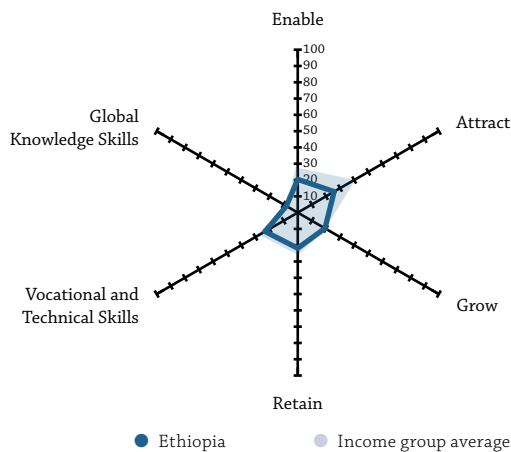
6 GLOBAL KNOWLEDGE SKILLS..... 14.77 101		
6.1 High-Level Skills.....	14.64	98
6.1.1 Workforce with tertiary education.....	18.05	86
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	27.51	61
6.1.4 Researchers.....	1.51	86
6.1.5 Senior officials and managers.....	11.48	98
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	14.90	106
6.2.1 Innovation output.....	n/a	n/a
6.2.2 High-value exports.....	0.43	124
6.2.3 Software development.....	34.24	113
6.2.4 New business density.....	23.91	34
6.2.5 Scientific journal articles.....	1.01	104

ETHIOPIA

Key Indicators

Rank (out of 134).....	132
Income group	Low income
Regional group.....	Sub-Saharan Africa
Population (millions)	123.38

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....20.40 132		
1.1 Regulatory Landscape.....22.18 122		
1.1.1 Government effectiveness.....27.57 101		
1.1.2 Rule of law.....29.18 102		
1.1.3 Political stability.....7.39 133		
1.1.4 Regulatory quality.....18.02 124		
1.1.5 Corruption.....28.77 74		
1.2 Market Landscape.....19.51 125		
1.2.1 Extent of market dominance.....18.99 112		
1.2.2 Domestic credit to private sector.....n/a n/a		
1.2.3 Cluster development.....22.93 117		
1.2.4 R&D expenditure.....4.94 82		
1.2.5 ICT infrastructure.....41.80 103		
1.2.6 Urbanisation.....8.89 129		
1.3 Business and Labour Landscape.....19.51 132		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....5.06 133		
Management Practice		
1.3.3 Professional management.....16.75 124		
1.3.4 Relationship of pay to productivity.....42.20 106		
Technology Adoption		
1.3.5 Enterprise software.....16.69 89		
1.3.6 Cloud computing.....7.12 117		
1.3.7 Firms with website.....29.23 91		
2 ATTRACT.....25.81 133		
2.1 External Openness.....19.74 131		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....n/a n/a		
2.1.2 Financial globalisation.....8.18 131		
Attract People		
2.1.3 Migrant stock.....15.31 110		
2.1.4 International students.....n/a n/a		
2.1.5 Brain gain.....35.74 96		
2.2 Internal Openness.....31.87 128		
Social Inclusion		
2.2.1 Tolerance of minorities.....5.32 125		
2.2.2 Tolerance of immigrants.....72.31 39		
2.2.3 Social mobility.....7.43 131		
Gender Equality		
2.2.4 Economic empowerment of women.....67.26 93		
2.2.5 Gender parity in high-skilled jobs.....36.31 109		
2.2.6 Leadership opportunities for women.....2.60 133		

GDP per capita (PPP US\$)	2,811.58
GDP (US\$ billions)	126.78
GTCI score.....	19.77
GTCI score (income group average)	22.85

	Score	Rank
3 GROW.....19.30 121		
3.1 Formal Education.....18.88 97		
Enrolment		
3.1.1 Vocational enrolment.....10.62 82		
3.1.2 Tertiary enrolment.....6.03 110		
Quality		
3.1.3 Tertiary education expenditure.....58.86 63		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....20.26 121		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....22.44 77		
3.2.3 Employee development.....38.32 109		
3.3 Access to Growth Opportunities.....18.76 125		
Empowerment		
3.3.1 Delegation of authority.....7.39 131		
3.3.2 Youth inclusion.....64.85 63		
Collaboration		
3.3.3 Use of virtual social networks.....2.33 130		
3.3.4 Use of virtual professional networks.....0.45 129		

4 RETAIN.....21.87 128		
4.1 Sustainability.....22.94 122		
4.1.1 Pension coverage.....2.93 127		
4.1.2 Social protection.....44.35 81		
4.1.3 Brain retention.....38.89 66		
4.1.4 Environmental performance.....21.86 105		
4.1.5 Vulnerable employment.....6.65 129		
4.2 Lifestyle.....20.80 128		
4.2.1 Personal rights.....51.01 99		
4.2.2 Personal safety.....31.31 113		
4.2.3 Physician density.....0.87 125		
4.2.4 Sanitation.....0.00 134		

5 VOCATIONAL AND TECHNICAL SKILLS.....23.15 129		
5.1 Mid-Level Skills.....4.33 129		
5.1.1 Workforce with secondary education.....7.16 118		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....4.41 125		
5.1.4 Labour productivity per employee.....1.41 112		
5.2 Employability.....41.98 116		
5.2.1 Ease of finding skilled employees.....31.25 116		
5.2.2 Relevance of education system to the economy.....40.61 71		
5.2.3 Skills matching.....22.09 104		
5.2.4 Highly educated unemployment.....73.96 71		

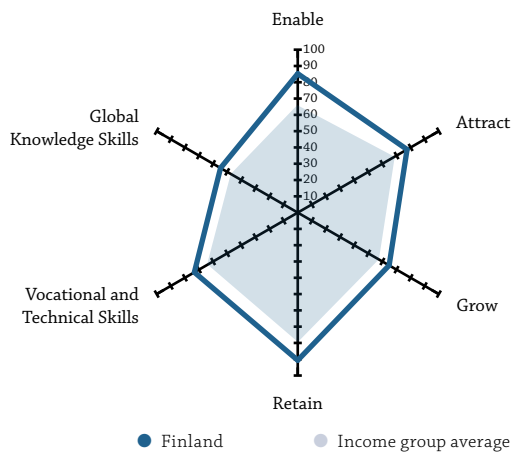
6 GLOBAL KNOWLEDGE SKILLS.....8.08 121		
6.1 High-Level Skills.....2.67 129		
6.1.1 Workforce with tertiary education.....1.19 130		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....5.97 124		
6.1.4 Researchers.....0.92 91		
6.1.5 Senior officials and managers.....2.60 122		
6.1.6 Digital skills.....n/a n/a		
6.2 Talent Impact.....13.48 114		
6.2.1 Innovation output.....14.69 99		
6.2.2 High-value exports.....23.56 39		
6.2.3 Software development.....25.32 123		
6.2.4 New business density.....2.62 97		
6.2.5 Scientific journal articles.....1.24 99		

FINLAND

Key Indicators

Rank (out of 134).....	6
Income group	High income
Regional group.....	Europe
Population (millions)	5.56

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 85.26	3	
1.1 Regulatory Landscape.....	93.14	2
1.1.1 Government effectiveness.....	91.75	4
1.1.2 Rule of law.....	100.00	1
1.1.3 Political stability.....	86.70	11
1.1.4 Regulatory quality.....	91.36	3
1.1.5 Corruption.....	95.89	2
1.2 Market Landscape.....	70.39	14
1.2.1 Extent of market dominance.....	66.91	23
1.2.2 Domestic credit to private sector.....	64.41	26
1.2.3 Cluster development.....	70.71	22
1.2.4 R&D expenditure.....	54.30	11
1.2.5 ICT infrastructure.....	82.83	18
1.2.6 Urbanisation.....	83.19	23
1.3 Business and Labour Landscape.....	92.25	1
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	76.34	13
Management Practice		
1.3.3 Professional management.....	100.00	1
1.3.4 Relationship of pay to productivity.....	69.42	28
Technology Adoption		
1.3.5 Enterprise software.....	100.00	1
1.3.6 Cloud computing.....	100.00	1
1.3.7 Firms with website.....	100.00	1
2 ATTRACT..... 77.47	9	
2.1 External Openness.....	61.80	28
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	95.95	9
2.1.2 Financial globalisation.....	89.21	13
Attract People		
2.1.3 Migrant stock.....	47.11	55
2.1.4 International students.....	29.07	33
2.1.5 Brain gain.....	47.65	65
2.2 Internal Openness.....	93.13	1
Social Inclusion		
2.2.1 Tolerance of minorities.....	100.00	1
2.2.2 Tolerance of immigrants.....	76.92	29
2.2.3 Social mobility.....	100.00	1
Gender Equality		
2.2.4 Economic empowerment of women.....	96.46	15
2.2.5 Gender parity in high-skilled jobs.....	93.63	18
2.2.6 Leadership opportunities for women.....	91.79	2

GDP per capita (PPP US\$)	59,026.71
GDP (US\$ billions)	280.83
GTCI score.....	74.35
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 64.77	13	
3.1 Formal Education.....	66.93	7
Enrolment		
3.1.1 Vocational enrolment.....	66.86	3
3.1.2 Tertiary enrolment.....	62.65	7
Quality		
3.1.3 Tertiary education expenditure.....	80.25	16
3.1.4 Reading, maths, and science.....	74.44	7
3.1.5 University ranking.....	50.46	17
3.2 Lifelong Learning.....	53.25	25
3.2.1 Business masters education.....	7.18	55
3.2.2 Prevalence of training in firms.....	61.49	20
3.2.3 Employee development.....	91.09	4
3.3 Access to Growth Opportunities.....	74.13	14
Empowerment		
3.3.1 Delegation of authority.....	87.57	5
3.3.2 Youth inclusion.....	88.98	15
Collaboration		
3.3.3 Use of virtual social networks.....	78.40	19
3.3.4 Use of virtual professional networks.....	41.56	28

4 RETAIN..... 90.63	4	
4.1 Sustainability.....	92.48	3
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	99.27	3
4.1.3 Brain retention.....	77.44	13
4.1.4 Environmental performance.....	97.63	3
4.1.5 Vulnerable employment.....	88.07	38
4.2 Lifestyle.....	88.77	11
4.2.1 Personal rights.....	98.51	3
4.2.2 Personal safety.....	88.84	17
4.2.3 Physician density.....	68.34	16
4.2.4 Sanitation.....	99.39	24

5 VOCATIONAL AND TECHNICAL SKILLS..... 73.25	4	
5.1 Mid-Level Skills.....	63.99	12
5.1.1 Workforce with secondary education.....	58.55	35
5.1.2 Population with secondary education.....	57.93	26
5.1.3 Technicians and associate professionals.....	78.28	5
5.1.4 Labour productivity per employee.....	61.18	20
5.2 Employability.....	82.51	8
5.2.1 Ease of finding skilled employees.....	83.51	13
5.2.2 Relevance of education system to the economy.....	90.55	2
5.2.3 Skills matching.....	77.81	25
5.2.4 Highly educated unemployment.....	78.16	60

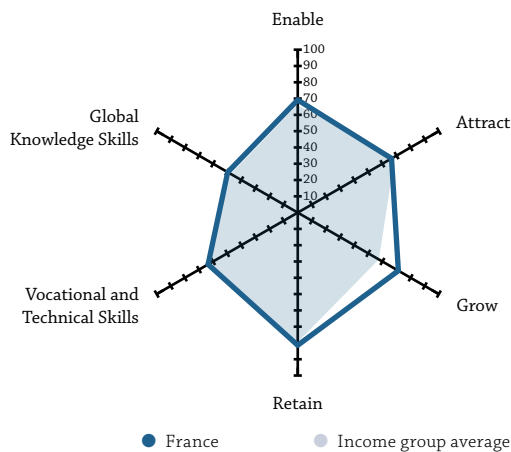
6 GLOBAL KNOWLEDGE SKILLS..... 54.72	17	
6.1 High-Level Skills.....	49.93	21
6.1.1 Workforce with tertiary education.....	50.31	24
6.1.2 Population with tertiary education.....	48.21	23
6.1.3 Professionals.....	60.62	11
6.1.4 Researchers.....	86.37	4
6.1.5 Senior officials and managers.....	13.16	92
6.1.6 Digital skills.....	40.93	14
6.2 Talent Impact.....	59.50	17
6.2.1 Innovation output.....	79.54	9
6.2.2 High-value exports.....	18.48	45
6.2.3 Software development.....	90.47	7
6.2.4 New business density.....	32.32	26
6.2.5 Scientific journal articles.....	76.69	7

FRANCE

Key Indicators

Rank (out of 134).....	19
Income group.....	High income
Regional group.....	Europe
Population (millions).....	67.94

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....69.14	19	
1.1 Regulatory Landscape.....	74.88	21
1.1.1 Government effectiveness.....	74.47	24
1.1.2 Rule of law.....	79.56	21
1.1.3 Political stability.....	70.84	48
1.1.4 Regulatory quality.....	74.17	23
1.1.5 Corruption.....	75.34	20
1.2 Market Landscape.....	69.08	17
1.2.1 Extent of market dominance.....	56.17	39
1.2.2 Domestic credit to private sector.....	69.44	17
1.2.3 Cluster development.....	70.65	23
1.2.4 R&D expenditure.....	43.73	14
1.2.5 ICT infrastructure.....	96.98	3
1.2.6 Urbanisation.....	77.51	33
1.3 Business and Labour Landscape.....	63.45	20
Labour Market		
1.3.1 Labour rights.....	93.16	26
1.3.2 Labour-employer cooperation.....	49.36	56
Management Practice		
1.3.3 Professional management.....	74.66	21
1.3.4 Relationship of pay to productivity.....	62.01	41
Technology Adoption		
1.3.5 Enterprise software.....	51.35	19
1.3.6 Cloud computing.....	43.12	17
1.3.7 Firms with website.....	70.47	33
2 ATTRACT.....66.46	25	
2.1 External Openness.....	65.24	23
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	88.92	27
2.1.2 Financial globalisation.....	85.83	18
Attract People		
2.1.3 Migrant stock.....	62.13	36
2.1.4 International students.....	33.55	29
2.1.5 Brain gain.....	55.77	44
2.2 Internal Openness.....	67.67	29
Social Inclusion		
2.2.1 Tolerance of minorities.....	31.91	83
2.2.2 Tolerance of immigrants.....	61.54	60
2.2.3 Social mobility.....	64.80	36
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs.....	94.49	15
2.2.6 Leadership opportunities for women.....	53.28	55

GDP per capita (PPP US\$).....	55,492.57
GDP (US\$ billions).....	2,782.91
GTCI score.....	66.91
GTCI score (income group average).....	61.91

	Score	Rank
3 GROW.....71.30	7	
3.1 Formal Education.....	59.14	16
Enrolment		
3.1.1 Vocational enrolment.....	26.61	47
3.1.2 Tertiary enrolment.....	45.45	40
Quality		
3.1.3 Tertiary education expenditure.....	80.59	15
3.1.4 Reading, maths, and science.....	65.14	24
3.1.5 University ranking.....	77.91	8
3.2 Lifelong Learning.....	87.31	3
3.2.1 Business masters education.....	100.00	1
3.2.2 Prevalence of training in firms.....	84.99	3
3.2.3 Employee development.....	76.94	21
3.3 Access to Growth Opportunities.....	67.45	20
Empowerment		
3.3.1 Delegation of authority.....	58.02	41
3.3.2 Youth inclusion.....	79.68	35
Collaboration		
3.3.3 Use of virtual social networks.....	75.68	30
3.3.4 Use of virtual professional networks.....	56.40	18

4 RETAIN.....81.41	19	
4.1 Sustainability.....	79.80	16
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	93.14	7
4.1.3 Brain retention.....	40.32	63
4.1.4 Environmental performance.....	73.90	12
4.1.5 Vulnerable employment.....	91.63	20
4.2 Lifestyle.....	83.02	24
4.2.1 Personal rights.....	93.94	22
4.2.2 Personal safety.....	87.30	21
4.2.3 Physician density.....	52.33	40
4.2.4 Sanitation.....	98.52	40

5 VOCATIONAL AND TECHNICAL SKILLS.....63.54	25	
5.1 Mid-Level Skills.....	61.83	16
5.1.1 Workforce with secondary education.....	52.41	45
5.1.2 Population with secondary education.....	56.53	28
5.1.3 Technicians and associate professionals.....	73.53	9
5.1.4 Labour productivity per employee.....	64.84	14
5.2 Employability.....	65.25	40
5.2.1 Ease of finding skilled employees.....	58.84	59
5.2.2 Relevance of education system to the economy.....	50.74	47
5.2.3 Skills matching.....	74.90	36
5.2.4 Highly educated unemployment.....	76.54	64

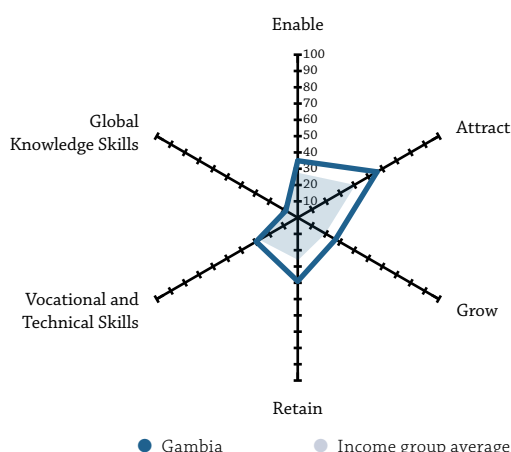
6 GLOBAL KNOWLEDGE SKILLS.....49.61	21	
6.1 High-Level Skills.....	45.64	25
6.1.1 Workforce with tertiary education.....	54.35	17
6.1.2 Population with tertiary education.....	42.25	32
6.1.3 Professionals.....	52.81	18
6.1.4 Researchers.....	56.48	17
6.1.5 Senior officials and managers.....	42.53	26
6.1.6 Digital skills.....	25.44	35
6.2 Talent Impact.....	53.57	20
6.2.1 Innovation output.....	79.04	11
6.2.2 High-value exports.....	39.56	19
6.2.3 Software development.....	83.56	24
6.2.4 New business density.....	28.86	28
6.2.5 Scientific journal articles.....	36.81	32

GAMBIA

Key Indicators

Rank (out of 134).....	97
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	2.71

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	34.91	101
1.1 Regulatory Landscape.....	34.09	91
1.1.1 Government effectiveness	26.94	107
1.1.2 Rule of law	35.05	86
1.1.3 Political stability.....	65.73	52
1.1.4 Regulatory quality.....	19.44	119
1.1.5 Corruption	23.29	90
1.2 Market Landscape.....	31.33	111
1.2.1 Extent of market dominance.....	45.70	55
1.2.2 Domestic credit to private sector	4.84	128
1.2.3 Cluster development.....	45.96	59
1.2.4 R&D expenditure.....	1.11	108
1.2.5 ICT infrastructure.....	34.90	111
1.2.6 Urbanisation	55.47	73
1.3 Business and Labour Landscape.....	39.33	86
Labour Market		
1.3.1 Labour rights.....	78.02	61
1.3.2 Labour-employer cooperation	56.65	43
Management Practice		
1.3.3 Professional management	53.24	60
1.3.4 Relationship of pay to productivity.....	72.49	23
Technology Adoption		
1.3.5 Enterprise software	0.00	127
1.3.6 Cloud computing	0.00	126
1.3.7 Firms with website	14.90	104
2 ATTRACT.....	56.20	46
2.1 External Openness	57.51	36
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	44.97	98
Attract People		
2.1.3 Migrant stock	62.48	31
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain	65.09	25
2.2 Internal Openness.....	54.89	72
Social Inclusion		
2.2.1 Tolerance of minorities.....	74.47	22
2.2.2 Tolerance of immigrants	89.23	12
2.2.3 Social mobility	43.20	72
Gender Equality		
2.2.4 Economic empowerment of women.....	56.64	111
2.2.5 Gender parity in high-skilled jobs	9.68	124
2.2.6 Leadership opportunities for women	56.12	44

GDP per capita (PPP US\$)	2,509.83
GDP (US\$ billions)	2.27
GTCI score.....	32.48
GTCI score (income group average)	22.85

	Score	Rank
3 GROW.....	26.77	98
3.1 Formal Education.....	27.90	74
Enrolment		
3.1.1 Vocational enrolment	72.79	2
3.1.2 Tertiary enrolment	0.87	130
Quality		
3.1.3 Tertiary education expenditure	37.94	97
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	24.01	112
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	28.29	66
3.2.3 Employee development	43.73	95
3.3 Access to Growth Opportunities	28.41	109
Empowerment		
3.3.1 Delegation of authority	60.31	37
3.3.2 Youth inclusion	35.76	103
Collaboration		
3.3.3 Use of virtual social networks	10.31	118
3.3.4 Use of virtual professional networks	7.25	101

4 RETAIN.....	39.05	103
4.1 Sustainability	35.29	97
4.1.1 Pension coverage	16.16	106
4.1.2 Social protection.....	52.10	65
4.1.3 Brain retention	58.08	35
4.1.4 Environmental performance	29.66	90
4.1.5 Vulnerable employment	20.46	117
4.2 Lifestyle	42.81	103
4.2.1 Personal rights	74.48	66
4.2.2 Personal safety.....	54.64	80
4.2.3 Physician density.....	0.45	129
4.2.4 Sanitation	41.67	113

5 VOCATIONAL AND TECHNICAL SKILLS.....	29.46	114
5.1 Mid-Level Skills	19.08	102
5.1.1 Workforce with secondary education	24.00	101
5.1.2 Population with secondary education	20.20	75
5.1.3 Technicians and associate professionals.....	13.04	102
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	39.84	120
5.2.1 Ease of finding skilled employees	68.50	40
5.2.2 Relevance of education system to the economy	59.97	33
5.2.3 Skills matching	27.03	101
5.2.4 Highly educated unemployment	3.86	122

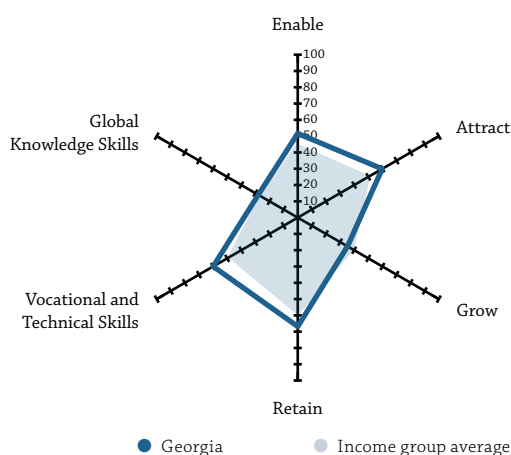
6 GLOBAL KNOWLEDGE SKILLS	8.48	119
6.1 High-Level Skills	6.90	118
6.1.1 Workforce with tertiary education	8.47	107
6.1.2 Population with tertiary education.....	8.11	79
6.1.3 Professionals	14.51	92
6.1.4 Researchers	0.49	97
6.1.5 Senior officials and managers.....	2.93	119
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	10.06	120
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports.....	1.42	116
6.2.3 Software development	27.94	119
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	0.81	109

GEORGIA

Key Indicators

Rank (out of 134).....	46
Income group.....	Upper-middle income
Regional group.....	Northern Africa and Western Asia
Population (millions).....	3.71

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....51.64 47		
1.1 Regulatory Landscape.....56.44 47		
1.1.1 Government effectiveness.....59.17 40		
1.1.2 Rule of law.....49.84 56		
1.1.3 Political stability.....50.16 88		
1.1.4 Regulatory quality.....69.62 28		
1.1.5 Corruption.....53.42 34		
1.2 Market Landscape.....48.53 58		
1.2.1 Extent of market dominance.....52.54 40		
1.2.2 Domestic credit to private sector.....53.23 49		
1.2.3 Cluster development.....55.13 40		
1.2.4 R&D expenditure.....4.52 84		
1.2.5 ICT infrastructure.....73.35 47		
1.2.6 Urbanisation.....52.43 77		
1.3 Business and Labour Landscape.....49.95 46		
Labour Market		
1.3.1 Labour rights.....88.47 40		
1.3.2 Labour-employer cooperation.....49.21 57		
Management Practice		
1.3.3 Professional management.....66.43 34		
1.3.4 Relationship of pay to productivity.....72.59 22		
Technology Adoption		
1.3.5 Enterprise software.....15.63 93		
1.3.6 Cloud computing.....9.17 104		
1.3.7 Firms with website.....48.18 64		
2 ATTRACT.....59.84 38		
2.1 External Openness.....56.08 40		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....96.22 7		
2.1.2 Financial globalisation.....82.50 25		
Attract People		
2.1.3 Migrant stock.....23.24 102		
2.1.4 International students.....33.09 30		
2.1.5 Brain gain.....45.32 69		
2.2 Internal Openness.....63.60 37		
Social Inclusion		
2.2.1 Tolerance of minorities.....28.72 92		
2.2.2 Tolerance of immigrants.....72.31 39		
2.2.3 Social mobility.....60.19 39		
Gender Equality		
2.2.4 Economic empowerment of women.....83.19 47		
2.2.5 Gender parity in high-skilled jobs.....70.55 72		
2.2.6 Leadership opportunities for women.....66.62 24		

GDP per capita (PPP US\$).....	20,113.38
GDP (US\$ billions).....	24.61
GTCI score.....	50.25
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....35.26 71		
3.1 Formal Education.....20.95 91		
Enrolment		
3.1.1 Vocational enrolment.....4.99 100		
3.1.2 Tertiary enrolment.....47.59 29		
Quality		
3.1.3 Tertiary education expenditure.....30.71 103		
3.1.4 Reading, maths, and science.....21.46 69		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....32.23 71		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....37.32 51		
3.2.3 Employee development.....59.37 53		
3.3 Access to Growth Opportunities.....52.60 50		
Empowerment		
3.3.1 Delegation of authority.....66.00 22		
3.3.2 Youth inclusion.....46.82 91		
Collaboration		
3.3.3 Use of virtual social networks.....76.85 25		
3.3.4 Use of virtual professional networks.....20.72 67		

4 RETAIN.....66.82 45		
4.1 Sustainability.....52.91 72		
4.1.1 Pension coverage.....90.81 54		
4.1.2 Social protection.....55.22 59		
4.1.3 Brain retention.....34.85 77		
4.1.4 Environmental performance.....34.24 78		
4.1.5 Vulnerable employment.....49.43 93		
4.2 Lifestyle.....80.72 33		
4.2.1 Personal rights.....73.76 67		
4.2.2 Personal safety.....79.17 41		
4.2.3 Physician density.....85.59 5		
4.2.4 Sanitation.....84.37 87		

5 VOCATIONAL AND TECHNICAL SKILLS.....59.94 36		
5.1 Mid-Level Skills.....54.40 36		
5.1.1 Workforce with secondary education.....75.14 15		
5.1.2 Population with secondary education.....83.60 7		
5.1.3 Technicians and associate professionals.....28.01 70		
5.1.4 Labour productivity per employee.....30.84 56		
5.2 Employability.....65.48 39		
5.2.1 Ease of finding skilled employees.....55.08 67		
5.2.2 Relevance of education system to the economy.....58.39 39		
5.2.3 Skills matching.....87.82 7		
5.2.4 Highly educated unemployment.....60.64 95		

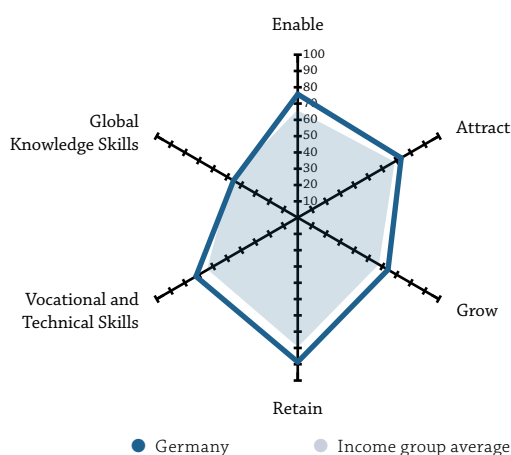
6 GLOBAL KNOWLEDGE SKILLS.....27.98 60		
6.1 High-Level Skills.....28.03 56		
6.1.1 Workforce with tertiary education.....41.53 36		
6.1.2 Population with tertiary education.....44.36 30		
6.1.3 Professionals.....29.69 54		
6.1.4 Researchers.....18.54 44		
6.1.5 Senior officials and managers.....29.36 51		
6.1.6 Digital skills.....4.71 70		
6.2 Talent Impact.....27.93 63		
6.2.1 Innovation output.....24.92 81		
6.2.2 High-value exports.....2.74 103		
6.2.3 Software development.....64.64 54		
6.2.4 New business density.....41.14 19		
6.2.5 Scientific journal articles.....6.21 70		

GERMANY

Key Indicators

Rank (out of 134).....	14
Income group	High income
Regional group	Europe
Population (millions)	84.08

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....75.75 10		
1.1 Regulatory Landscape.....82.86 14		
1.1.1 Government effectiveness.....76.05 21		
1.1.2 Rule of law.....88.05 14		
1.1.3 Political stability.....80.83 29		
1.1.4 Regulatory quality.....84.44 11		
1.1.5 Corruption.....84.93 9		
1.2 Market Landscape.....72.38 12		
1.2.1 Extent of market dominance.....74.40 11		
1.2.2 Domestic credit to private sector.....60.02 35		
1.2.3 Cluster development.....83.47 9		
1.2.4 R&D expenditure.....57.99 9		
1.2.5 ICT infrastructure.....84.50 16		
1.2.6 Urbanisation.....73.91 41		
1.3 Business and Labour Landscape.....72.00 10		
Labour Market		
1.3.1 Labour rights.....94.91 24		
1.3.2 Labour-employer cooperation.....64.25 31		
Management Practice		
1.3.3 Professional management.....70.95 27		
1.3.4 Relationship of pay to productivity.....68.59 32		
Technology Adoption		
1.3.5 Enterprise software.....62.54 15		
1.3.6 Cloud computing.....50.49 11		
1.3.7 Firms with website.....92.28 6		
2 ATTRACT.....73.30 15		
2.1 External Openness.....70.94 17		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....94.86 14		
2.1.2 Financial globalisation.....82.76 24		
Attract People		
2.1.3 Migrant stock.....68.83 20		
2.1.4 International students.....41.14 24		
2.1.5 Brain gain.....67.10 21		
2.2 Internal Openness.....75.67 16		
Social Inclusion		
2.2.1 Tolerance of minorities.....63.83 39		
2.2.2 Tolerance of immigrants.....75.38 34		
2.2.3 Social mobility.....67.64 29		
Gender Equality		
2.2.4 Economic empowerment of women.....100.00 1		
2.2.5 Gender parity in high-skilled jobs.....97.52 6		
2.2.6 Leadership opportunities for women.....49.64 65		

GDP per capita (PPP US\$)	63,149.60
GDP (US\$ billions)	4,072.19
GTCI score.....	69.88
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....63.96 16		
3.1 Formal Education.....60.58 11		
Enrolment		
3.1.1 Vocational enrolment.....29.98 41		
3.1.2 Tertiary enrolment.....47.89 28		
Quality		
3.1.3 Tertiary education expenditure.....84.29 12		
3.1.4 Reading, maths, and science.....67.91 17		
3.1.5 University ranking.....72.85 10		
3.2 Lifelong Learning.....67.59 13		
3.2.1 Business masters education.....67.84 11		
3.2.2 Prevalence of training in firms.....53.39 26		
3.2.3 Employee development.....81.55 13		
3.3 Access to Growth Opportunities.....63.72 26		
Empowerment		
3.3.1 Delegation of authority.....61.98 36		
3.3.2 Youth inclusion.....89.30 13		
Collaboration		
3.3.3 Use of virtual social networks.....80.16 12		
3.3.4 Use of virtual professional networks.....23.44 57		

4 RETAIN.....88.59 6		
4.1 Sustainability.....86.69 9		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....82.09 14		
4.1.3 Brain retention.....82.40 8		
4.1.4 Environmental performance.....73.73 13		
4.1.5 Vulnerable employment.....95.21 10		
4.2 Lifestyle.....90.50 8		
4.2.1 Personal rights.....99.54 2		
4.2.2 Personal safety.....91.87 13		
4.2.3 Physician density.....71.43 13		
4.2.4 Sanitation.....99.15 30		

5 VOCATIONAL AND TECHNICAL SKILLS.....72.11 6		
5.1 Mid-Level Skills.....71.26 4		
5.1.1 Workforce with secondary education.....63.77 29		
5.1.2 Population with secondary education.....78.20 11		
5.1.3 Technicians and associate professionals.....82.15 4		
5.1.4 Labour productivity per employee.....60.92 21		
5.2 Employability.....72.96 21		
5.2.1 Ease of finding skilled employees.....70.12 34		
5.2.2 Relevance of education system to the economy.....58.55 38		
5.2.3 Skills matching.....72.57 44		
5.2.4 Highly educated unemployment.....90.60 14		

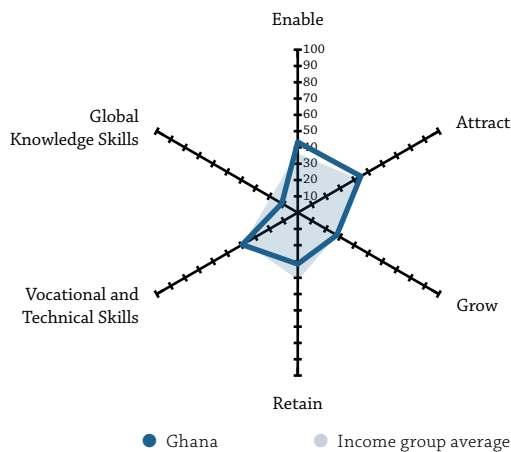
6 GLOBAL KNOWLEDGE SKILLS.....45.53 23		
6.1 High-Level Skills.....39.54 32		
6.1.1 Workforce with tertiary education.....39.45 41		
6.1.2 Population with tertiary education.....37.73 36		
6.1.3 Professionals.....51.23 23		
6.1.4 Researchers.....61.85 14		
6.1.5 Senior officials and managers.....24.48 63		
6.1.6 Digital skills.....22.48 43		
6.2 Talent Impact.....51.53 22		
6.2.1 Innovation output.....86.47 7		
6.2.2 High-value exports.....27.42 33		
6.2.3 Software development.....87.24 16		
6.2.4 New business density.....7.30 75		
6.2.5 Scientific journal articles.....49.22 25		

GHANA

Key Indicators

Rank (out of 134).....	95
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	33.48

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....43.31 66		
1.1 Regulatory Landscape.....43.54 65		
1.1.1 Government effectiveness.....39.13 80		
1.1.2 Rule of law.....43.14 66		
1.1.3 Political stability.....62.90 60		
1.1.4 Regulatory quality.....36.90 81		
1.1.5 Corruption.....35.62 58		
1.2 Market Landscape.....40.48 76		
1.2.1 Extent of market dominance.....50.12 44		
1.2.2 Domestic credit to private sector.....12.11 123		
1.2.3 Cluster development.....51.81 46		
1.2.4 R&D expenditure.....n/a n/a		
1.2.5 ICT infrastructure.....38.87 107		
1.2.6 Urbanisation.....49.48 86		
1.3 Business and Labour Landscape.....45.92 63		
Labour Market		
1.3.1 Labour rights.....78.28 60		
1.3.2 Labour-employer cooperation.....47.35 62		
Management Practice		
1.3.3 Professional management.....62.85 39		
1.3.4 Relationship of pay to productivity.....56.85 58		
Technology Adoption		
1.3.5 Enterprise software.....31.69 40		
1.3.6 Cloud computing.....17.03 62		
1.3.7 Firms with website.....27.38 93		
2 ATTRACT.....44.67 90		
2.1 External Openness.....32.03 102		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....n/a n/a		
2.1.2 Financial globalisation.....42.08 101		
Attract People		
2.1.3 Migrant stock.....26.25 93		
2.1.4 International students.....3.02 92		
2.1.5 Brain gain.....56.78 39		
2.2 Internal Openness.....57.31 62		
Social Inclusion		
2.2.1 Tolerance of minorities.....68.09 28		
2.2.2 Tolerance of immigrants.....72.31 39		
2.2.3 Social mobility.....43.25 71		
Gender Equality		
2.2.4 Economic empowerment of women.....64.60 99		
2.2.5 Gender parity in high-skilled jobs.....46.40 103		
2.2.6 Leadership opportunities for women.....49.19 67		

GDP per capita (PPP US\$).....	6,498.39
GDP (US\$ billions).....	72.84
GTCI score.....	32.97
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....27.66 95		
3.1 Formal Education.....16.75 105		
Enrolment		
3.1.1 Vocational enrolment.....4.20 105		
3.1.2 Tertiary enrolment.....12.13 98		
Quality		
3.1.3 Tertiary education expenditure.....50.68 80		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....34.41 60		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....48.07 35		
3.2.3 Employee development.....55.17 59		
3.3 Access to Growth Opportunities.....31.83 102		
Empowerment		
3.3.1 Delegation of authority.....48.15 61		
3.3.2 Youth inclusion.....51.49 84		
Collaboration		
3.3.3 Use of virtual social networks.....16.34 109		
3.3.4 Use of virtual professional networks.....11.33 90		

4 RETAIN.....31.57 111		
4.1 Sustainability.....28.13 112		
4.1.1 Pension coverage.....18.18 102		
4.1.2 Social protection.....29.78 107		
4.1.3 Brain retention.....54.29 41		
4.1.4 Environmental performance.....14.92 129		
4.1.5 Vulnerable employment.....23.49 114		
4.2 Lifestyle.....35.00 111		
4.2.1 Personal rights.....76.77 63		
4.2.2 Personal safety.....45.15 97		
4.2.3 Physician density.....1.83 118		
4.2.4 Sanitation.....16.24 127		

5 VOCATIONAL AND TECHNICAL SKILLS.....39.34 88		
5.1 Mid-Level Skills.....12.31 115		
5.1.1 Workforce with secondary education.....23.12 103		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....7.57 117		
5.1.4 Labour productivity per employee.....6.25 100		
5.2 Employability.....66.36 38		
5.2.1 Ease of finding skilled employees.....64.25 50		
5.2.2 Relevance of education system to the economy.....51.12 46		
5.2.3 Skills matching.....66.82 54		
5.2.4 Highly educated unemployment.....83.25 46		

6 GLOBAL KNOWLEDGE SKILLS.....11.28 112		
6.1 High-Level Skills.....8.03 117		
6.1.1 Workforce with tertiary education.....8.04 109		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....13.49 96		
6.1.4 Researchers.....0.90 92		
6.1.5 Senior officials and managers.....9.69 102		
6.1.6 Digital skills.....n/a n/a		
6.2 Talent Impact.....14.52 109		
6.2.1 Innovation output.....20.96 87		
6.2.2 High-value exports.....1.88 110		
6.2.3 Software development.....42.76 103		
6.2.4 New business density.....4.59 85		
6.2.5 Scientific journal articles.....2.42 90		

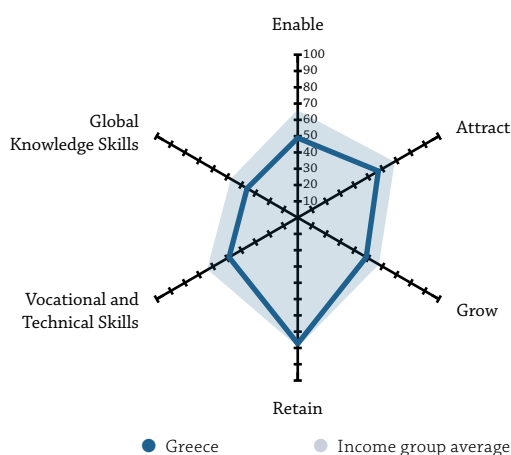
GREECE

Key Indicators

Rank (out of 134).....	39
Income group	High income
Regional group	Europe
Population (millions)	10.57

GDP per capita (PPP US\$)	36,834.87
GDP (US\$ billions)	219.07
GTCI score	52.75
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	48.87	54
1.1 Regulatory Landscape.....	55.04	48
1.1.1 Government effectiveness	53.92	46
1.1.2 Rule of law	54.59	48
1.1.3 Political stability.....	65.19	55
1.1.4 Regulatory quality.....	53.56	49
1.1.5 Corruption	47.95	41
1.2 Market Landscape.....	45.84	65
1.2.1 Extent of market dominance.....	42.37	61
1.2.2 Domestic credit to private sector	50.33	54
1.2.3 Cluster development.....	19.58	123
1.2.4 R&D expenditure.....	27.79	27
1.2.5 ICT infrastructure.....	59.07	76
1.2.6 Urbanisation	75.92	37
1.3 Business and Labour Landscape.....	45.72	64
Labour Market		
1.3.1 Labour rights.....	88.61	39
1.3.2 Labour-employer cooperation	42.70	70
Management Practice		
1.3.3 Professional management	44.19	76
1.3.4 Relationship of pay to productivity.....	53.67	67
Technology Adoption		
1.3.5 Enterprise software	14.93	100
1.3.6 Cloud computing	15.96	66
1.3.7 Firms with website	60.02	51
2 ATTRACT.....	57.13	43
2.1 External Openness	50.44	54
Attract Business		
2.1.1 FDI regulatory restrictiveness	92.43	20
2.1.2 Financial globalisation	73.22	41
Attract People		
2.1.3 Migrant stock	60.12	38
2.1.4 International students.....	9.96	71
2.1.5 Brain gain	16.48	121
2.2 Internal Openness.....	63.81	36
Social Inclusion		
2.2.1 Tolerance of minorities.....	57.45	44
2.2.2 Tolerance of immigrants	32.31	116
2.2.3 Social mobility	48.42	56
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	99.35	2
2.2.6 Leadership opportunities for women	45.36	78

	Score	Rank
3 GROW.....	48.55	39
3.1 Formal Education.....	50.12	29
Enrolment		
3.1.1 Vocational enrolment	26.08	48
3.1.2 Tertiary enrolment	100.00	1
Quality		
3.1.3 Tertiary education expenditure	52.59	77
3.1.4 Reading, maths, and science	48.73	42
3.1.5 University ranking.....	23.20	49
3.2 Lifelong Learning.....	41.62	41
3.2.1 Business masters education.....	51.87	19
3.2.2 Prevalence of training in firms.....	23.51	76
3.2.3 Employee development	49.48	77
3.3 Access to Growth Opportunities	53.92	46
Empowerment		
3.3.1 Delegation of authority	43.12	75
3.3.2 Youth inclusion	78.24	38
Collaboration		
3.3.3 Use of virtual social networks	67.70	58
3.3.4 Use of virtual professional networks	26.61	53

4 RETAIN.....	77.33	30
4.1 Sustainability	62.05	50
4.1.1 Pension coverage	95.76	46
4.1.2 Social protection.....	63.19	45
4.1.3 Brain retention	14.84	124
4.1.4 Environmental performance	63.22	28
4.1.5 Vulnerable employment	73.25	64
4.2 Lifestyle.....	92.62	5
4.2.1 Personal rights	91.28	33
4.2.2 Personal safety.....	80.28	37
4.2.3 Physician density.....	100.00	1
4.2.4 Sanitation	98.90	37

5 VOCATIONAL AND TECHNICAL SKILLS.....	48.69	66
5.1 Mid-Level Skills	45.34	56
5.1.1 Workforce with secondary education	57.38	40
5.1.2 Population with secondary education	54.25	31
5.1.3 Technicians and associate professionals.....	29.39	66
5.1.4 Labour productivity per employee.....	40.34	45
5.2 Employability.....	52.05	84
5.2.1 Ease of finding skilled employees	48.27	83
5.2.2 Relevance of education system to the economy	29.77	94
5.2.3 Skills matching	79.59	21
5.2.4 Highly educated unemployment	50.55	112

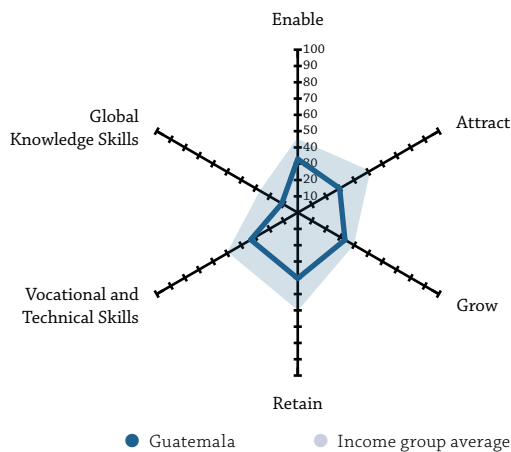
6 GLOBAL KNOWLEDGE SKILLS	35.90	40
6.1 High-Level Skills	35.65	41
6.1.1 Workforce with tertiary education	46.11	32
6.1.2 Population with tertiary education.....	34.83	40
6.1.3 Professionals	50.35	25
6.1.4 Researchers	45.96	25
6.1.5 Senior officials and managers.....	16.99	82
6.1.6 Digital skills	19.65	50
6.2 Talent Impact.....	36.15	45
6.2.1 Innovation output	41.25	48
6.2.2 High-value exports.....	10.89	68
6.2.3 Software development	75.26	38
6.2.4 New business density	9.50	65
6.2.5 Scientific journal articles	43.86	29

GUATEMALA

Key Indicators

Rank (out of 134).....	104
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	17.36

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 32.86 108		
1.1 Regulatory Landscape.....	26.97	111
1.1.1 Government effectiveness.....	24.12	113
1.1.2 Rule of law.....	16.24	125
1.1.3 Political stability.....	50.97	85
1.1.4 Regulatory quality.....	33.92	89
1.1.5 Corruption.....	9.59	123
1.2 Market Landscape.....	33.21	102
1.2.1 Extent of market dominance.....	34.51	82
1.2.2 Domestic credit to private sector.....	39.30	84
1.2.3 Cluster development.....	40.02	83
1.2.4 R&D expenditure.....	0.91	111
1.2.5 ICT infrastructure.....	40.83	104
1.2.6 Urbanisation.....	43.72	95
1.3 Business and Labour Landscape.....	38.38	92
Labour Market		
1.3.1 Labour rights.....	27.88	99
1.3.2 Labour-employer cooperation.....	62.77	35
Management Practice		
1.3.3 Professional management.....	42.83	79
1.3.4 Relationship of pay to productivity.....	52.30	71
Technology Adoption		
1.3.5 Enterprise software.....	16.20	91
1.3.6 Cloud computing.....	10.68	93
1.3.7 Firms with website.....	56.03	55
2 ATTRACT..... 29.71 127		
2.1 External Openness.....	19.34	132
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	27.27	121
Attract People		
2.1.3 Migrant stock.....	11.56	119
2.1.4 International students.....	0.49	111
2.1.5 Brain gain.....	38.05	87
2.2 Internal Openness.....	40.07	120
Social Inclusion		
2.2.1 Tolerance of minorities.....	4.26	128
2.2.2 Tolerance of immigrants.....	13.85	127
2.2.3 Social mobility.....	41.84	78
Gender Equality		
2.2.4 Economic empowerment of women.....	62.83	104
2.2.5 Gender parity in high-skilled jobs.....	72.21	69
2.2.6 Leadership opportunities for women.....	45.45	76

GDP per capita (PPP US\$).....	10,818.17
GDP (US\$ billions).....	95.00
GTCI score.....	30.16
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 33.45 74		
3.1 Formal Education.....	24.87	81
Enrolment		
3.1.1 Vocational enrolment.....	44.79	20
3.1.2 Tertiary enrolment.....	13.87	96
Quality		
3.1.3 Tertiary education expenditure.....	40.81	92
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	42.98	38
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	68.79	13
3.2.3 Employee development.....	60.14	51
3.3 Access to Growth Opportunities.....	32.50	99
Empowerment		
3.3.1 Delegation of authority.....	37.83	87
3.3.2 Youth inclusion.....	35.49	104
Collaboration		
3.3.3 Use of virtual social networks.....	44.46	90
3.3.4 Use of virtual professional networks.....	12.23	86

4 RETAIN..... 40.37 102		
4.1 Sustainability.....	32.67	101
4.1.1 Pension coverage.....	14.75	107
4.1.2 Social protection.....	20.29	119
4.1.3 Brain retention.....	49.51	44
4.1.4 Environmental performance.....	15.42	127
4.1.5 Vulnerable employment.....	63.36	78
4.2 Lifestyle.....	48.07	94
4.2.1 Personal rights.....	59.97	86
4.2.2 Personal safety.....	47.84	91
4.2.3 Physician density.....	19.67	84
4.2.4 Sanitation.....	64.79	104

5 VOCATIONAL AND TECHNICAL SKILLS..... 33.28 104		
5.1 Mid-Level Skills.....	20.99	100
5.1.1 Workforce with secondary education.....	28.35	93
5.1.2 Population with secondary education.....	26.46	66
5.1.3 Technicians and associate professionals.....	17.96	90
5.1.4 Labour productivity per employee.....	11.21	89
5.2 Employability.....	45.58	105
5.2.1 Ease of finding skilled employees.....	50.00	77
5.2.2 Relevance of education system to the economy.....	9.88	127
5.2.3 Skills matching.....	42.30	87
5.2.4 Highly educated unemployment.....	80.13	56

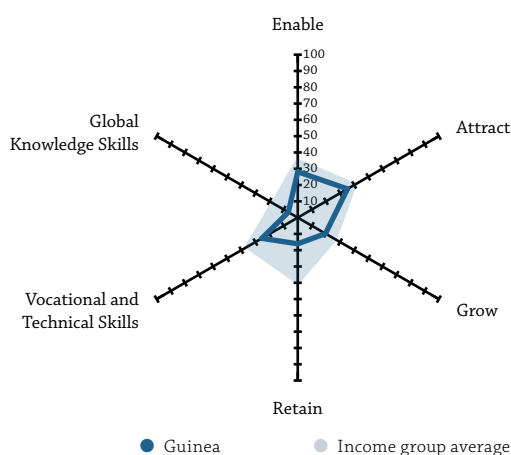
6 GLOBAL KNOWLEDGE SKILLS..... 11.27 113		
6.1 High-Level Skills.....	6.12	119
6.1.1 Workforce with tertiary education.....	8.95	105
6.1.2 Population with tertiary education.....	3.97	84
6.1.3 Professionals.....	12.67	99
6.1.4 Researchers.....	0.04	108
6.1.5 Senior officials and managers.....	4.99	111
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	16.41	97
6.2.1 Innovation output.....	16.50	94
6.2.2 High-value exports.....	9.18	75
6.2.3 Software development.....	53.01	84
6.2.4 New business density.....	3.10	93
6.2.5 Scientific journal articles.....	0.25	123

GUINEA

Key Indicators

Rank (out of 134).....	128
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	13.86

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....28.14 120		
1.1 Regulatory Landscape.....	19.85	125
1.1.1 Government effectiveness.....	20.03	124
1.1.2 Rule of law.....	15.24	128
1.1.3 Political stability.....	35.94	116
1.1.4 Regulatory quality.....	17.08	126
1.1.5 Corruption.....	10.96	120
1.2 Market Landscape.....	26.75	118
1.2.1 Extent of market dominance.....	49.59	47
1.2.2 Domestic credit to private sector.....	5.61	127
1.2.3 Cluster development.....	32.02	98
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	19.97	125
1.2.6 Urbanisation.....	26.57	115
1.3 Business and Labour Landscape.....	37.83	94
Labour Market		
1.3.1 Labour rights.....	91.02	30
1.3.2 Labour-employer cooperation.....	58.14	41
Management Practice		
1.3.3 Professional management.....	41.80	82
1.3.4 Relationship of pay to productivity.....	48.50	88
Technology Adoption		
1.3.5 Enterprise software.....	9.06	116
1.3.6 Cloud computing.....	5.31	121
1.3.7 Firms with website.....	10.98	108
2 ATTRACT.....35.23 120		
2.1 External Openness.....	30.78	110
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	35.52	110
Attract People		
2.1.3 Migrant stock.....	18.39	106
2.1.4 International students.....	3.04	91
2.1.5 Brain gain.....	66.16	22
2.2 Internal Openness.....	39.68	121
Social Inclusion		
2.2.1 Tolerance of minorities.....	0.00	134
2.2.2 Tolerance of immigrants.....	75.38	34
2.2.3 Social mobility.....	35.78	98
Gender Equality		
2.2.4 Economic empowerment of women.....	62.83	104
2.2.5 Gender parity in high-skilled jobs.....	24.24	115
2.2.6 Leadership opportunities for women.....	39.87	91

GDP per capita (PPP US\$).....	3,187.02
GDP (US\$ billions).....	21.23
GTGI score.....	21.87
GTGI score (income group average).....	32.03

	Score	Rank
3 GROW.....19.65 119		
3.1 Formal Education.....	14.44	115
Enrolment		
3.1.1 Vocational enrolment.....	9.87	84
3.1.2 Tertiary enrolment.....	3.55	121
Quality		
3.1.3 Tertiary education expenditure.....	44.34	90
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	25.02	106
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	16.07	91
3.2.3 Employee development.....	58.98	55
3.3 Access to Growth Opportunities.....	19.49	124
Empowerment		
3.3.1 Delegation of authority.....	40.92	80
3.3.2 Youth inclusion.....	23.89	115
Collaboration		
3.3.3 Use of virtual social networks.....	10.89	116
3.3.4 Use of virtual professional networks.....	2.27	121

4 RETAIN.....16.07 132		
4.1 Sustainability.....	15.37	132
4.1.1 Pension coverage.....	1.01	130
4.1.2 Social protection.....	33.38	97
4.1.3 Brain retention.....	20.93	111
4.1.4 Environmental performance.....	21.53	107
4.1.5 Vulnerable employment.....	0.00	134
4.2 Lifestyle.....	16.77	131
4.2.1 Personal rights.....	24.33	121
4.2.2 Personal safety.....	17.09	125
4.2.3 Physician density.....	2.76	112
4.2.4 Sanitation.....	22.91	125

5 VOCATIONAL AND TECHNICAL SKILLS.....25.46 125		
5.1 Mid-Level Skills.....	2.55	134
5.1.1 Workforce with secondary education.....	1.12	129
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	3.97	126
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	48.37	95
5.2.1 Ease of finding skilled employees.....	55.89	64
5.2.2 Relevance of education system to the economy.....	22.15	107
5.2.3 Skills matching.....	25.29	102
5.2.4 Highly educated unemployment.....	90.17	16

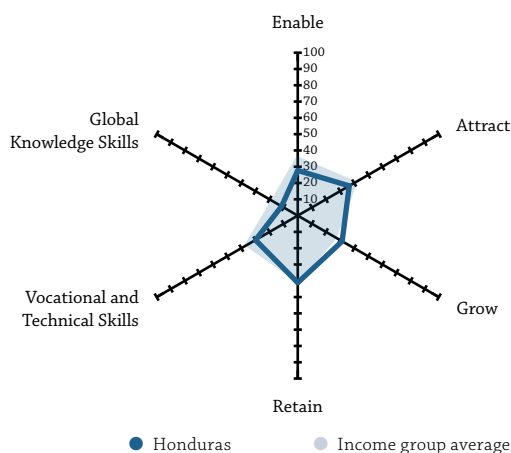
6 GLOBAL KNOWLEDGE SKILLS.....6.66 127		
6.1 High-Level Skills.....	9.64	110
6.1.1 Workforce with tertiary education.....	12.15	96
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	12.52	101
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	4.25	115
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	3.69	133
6.2.1 Innovation output.....	3.47	121
6.2.2 High-value exports.....	1.45	115
6.2.3 Software development.....	11.16	130
6.2.4 New business density.....	2.27	100
6.2.5 Scientific journal articles.....	0.08	129

HONDURAS

Key Indicators

Rank (out of 134).....	105
Income group.....	Lower-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	10.43

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....27.72 121		
1.1 Regulatory Landscape.....24.44	119	
1.1.1 Government effectiveness.....23.36	117	
1.1.2 Rule of law.....16.79	122	
1.1.3 Political stability.....45.26	98	
1.1.4 Regulatory quality.....28.55	99	
1.1.5 Corruption.....8.22	127	
1.2 Market Landscape.....28.59	115	
1.2.1 Extent of market dominance.....7.16	129	
1.2.2 Domestic credit to private sector.....55.31	47	
1.2.3 Cluster development.....30.51	103	
1.2.4 R&D expenditure.....0.92	110	
1.2.5 ICT infrastructure.....26.96	121	
1.2.6 Urbanisation.....50.67	82	
1.3 Business and Labour Landscape.....30.13	121	
Labour Market		
1.3.1 Labour rights.....41.82	92	
1.3.2 Labour-employer cooperation.....40.43	77	
Management Practice		
1.3.3 Professional management.....25.62	114	
1.3.4 Relationship of pay to productivity.....34.87	120	
Technology Adoption		
1.3.5 Enterprise software.....18.19	82	
1.3.6 Cloud computing.....10.67	94	
1.3.7 Firms with website.....39.28	76	
2 ATTRACT.....36.50 115		
2.1 External Openness.....23.53	123	
Attract Business		
2.1.1 FDI regulatory restrictiveness.....n/a	n/a	
2.1.2 Financial globalisation.....57.67	77	
Attract People		
2.1.3 Migrant stock.....7.33	127	
2.1.4 International students.....2.69	95	
2.1.5 Brain gain.....26.43	111	
2.2 Internal Openness.....49.46	91	
Social Inclusion		
2.2.1 Tolerance of minorities.....52.13	54	
2.2.2 Tolerance of immigrants.....38.46	104	
2.2.3 Social mobility.....18.69	124	
Gender Equality		
2.2.4 Economic empowerment of women.....64.60	99	
2.2.5 Gender parity in high-skilled jobs.....82.41	48	
2.2.6 Leadership opportunities for women.....40.49	88	

GDP per capita (PPP US\$).....	6,741.10
GDP (US\$ billions).....	31.72
GTGI score.....	29.71
GTGI score (income group average).....	32.03

	Score	Rank
3 GROW.....31.47 83		
3.1 Formal Education.....30.08	70	
Enrolment		
3.1.1 Vocational enrolment.....56.92	9	
3.1.2 Tertiary enrolment.....16.09	89	
Quality		
3.1.3 Tertiary education expenditure.....47.33	84	
3.1.4 Reading, maths, and science.....n/a	n/a	
3.1.5 University ranking.....0.00	76	
3.2 Lifelong Learning.....34.04	65	
3.2.1 Business masters education.....0.00	57	
3.2.2 Prevalence of training in firms.....58.17	23	
3.2.3 Employee development.....43.96	93	
3.3 Access to Growth Opportunities.....30.28	106	
Empowerment		
3.3.1 Delegation of authority.....30.55	107	
3.3.2 Youth inclusion.....42.21	95	
Collaboration		
3.3.3 Use of virtual social networks.....38.04	96	
3.3.4 Use of virtual professional networks.....10.31	94	

4 RETAIN.....41.17 100		
4.1 Sustainability.....29.72	108	
4.1.1 Pension coverage.....11.01	112	
4.1.2 Social protection.....11.14	130	
4.1.3 Brain retention.....40.57	61	
4.1.4 Environmental performance.....29.83	89	
4.1.5 Vulnerable employment.....56.03	87	
4.2 Lifestyle.....52.63	87	
4.2.1 Personal rights.....68.06	74	
4.2.2 Personal safety.....53.23	83	
4.2.3 Physician density.....7.03	104	
4.2.4 Sanitation.....82.19	89	

5 VOCATIONAL AND TECHNICAL SKILLS.....29.93 112		
5.1 Mid-Level Skills.....25.90	90	
5.1.1 Workforce with secondary education.....27.63	95	
5.1.2 Population with secondary education.....21.41	73	
5.1.3 Technicians and associate professionals.....28.67	68	
5.1.4 Labour productivity per employee.....n/a	n/a	
5.2 Employability.....33.96	128	
5.2.1 Ease of finding skilled employees.....23.16	124	
5.2.2 Relevance of education system to the economy.....6.48	131	
5.2.3 Skills matching.....39.91	95	
5.2.4 Highly educated unemployment.....66.31	86	

6 GLOBAL KNOWLEDGE SKILLS.....11.46 110		
6.1 High-Level Skills.....8.30	116	
6.1.1 Workforce with tertiary education.....7.94	110	
6.1.2 Population with tertiary education.....11.63	73	
6.1.3 Professionals.....6.83	120	
6.1.4 Researchers.....2.06	81	
6.1.5 Senior officials and managers.....13.04	93	
6.1.6 Digital skills.....n/a	n/a	
6.2 Talent Impact.....14.62	108	
6.2.1 Innovation output.....9.74	112	
6.2.2 High-value exports.....3.37	99	
6.2.3 Software development.....45.03	102	
6.2.4 New business density.....n/a	n/a	
6.2.5 Scientific journal articles.....0.36	119	

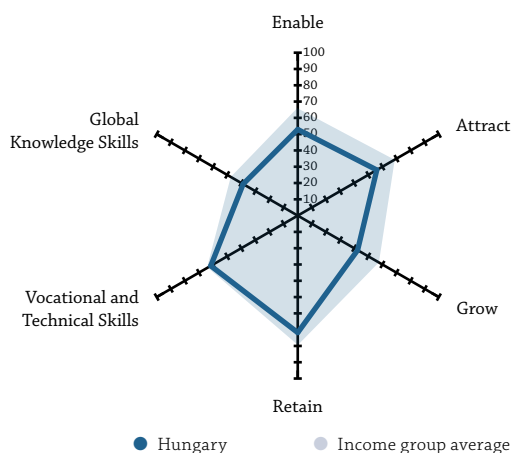
HUNGARY

Key Indicators

Rank (out of 134).....	38
Income group	High income
Regional group	Europe
Population (millions)	9.68

GDP per capita (PPP US\$)	41,906.66
GDP (US\$ billions)	178.79
GTCI score	53.91
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	52.88	44
1.1 Regulatory Landscape	58.18	44
1.1.1 Government effectiveness	58.68	41
1.1.2 Rule of law	59.41	40
1.1.3 Political stability	83.57	23
1.1.4 Regulatory quality	54.98	46
1.1.5 Corruption	34.25	63
1.2 Market Landscape	51.52	45
1.2.1 Extent of market dominance	34.90	80
1.2.2 Domestic credit to private sector	40.48	81
1.2.3 Cluster development	57.85	37
1.2.4 R&D expenditure	29.63	25
1.2.5 ICT infrastructure	79.22	33
1.2.6 Urbanisation	67.06	51
1.3 Business and Labour Landscape	48.95	50
Labour Market		
1.3.1 Labour rights	90.35	35
1.3.2 Labour-employer cooperation	37.63	90
Management Practice		
1.3.3 Professional management	53.86	57
1.3.4 Relationship of pay to productivity	41.12	109
Technology Adoption		
1.3.5 Enterprise software	36.58	34
1.3.6 Cloud computing	20.82	43
1.3.7 Firms with website	62.29	47
2 ATTRACT	56.02	47
2.1 External Openness	59.13	33
Attract Business		
2.1.1 FDI regulatory restrictiveness	93.24	18
2.1.2 Financial globalisation	81.18	29
Attract People		
2.1.3 Migrant stock	43.45	60
2.1.4 International students	49.38	16
2.1.5 Brain gain	28.40	104
2.2 Internal Openness	52.92	77
Social Inclusion		
2.2.1 Tolerance of minorities	64.89	36
2.2.2 Tolerance of immigrants	0.00	131
2.2.3 Social mobility	33.13	105
Gender Equality		
2.2.4 Economic empowerment of women	95.58	20
2.2.5 Gender parity in high-skilled jobs	78.19	57
2.2.6 Leadership opportunities for women	45.73	75

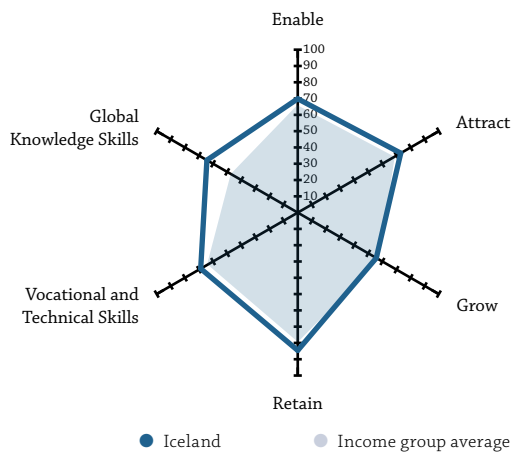
	Score	Rank
3 GROW	42.42	51
3.1 Formal Education	45.14	36
Enrolment		
3.1.1 Vocational enrolment	39.07	30
3.1.2 Tertiary enrolment	35.96	61
Quality		
3.1.3 Tertiary education expenditure	71.74	34
3.1.4 Reading, maths, and science	59.29	32
3.1.5 University ranking	19.66	58
3.2 Lifelong Learning	28.14	92
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	33.73	59
3.2.3 Employee development	50.69	70
3.3 Access to Growth Opportunities	53.97	45
Empowerment		
3.3.1 Delegation of authority	48.73	59
3.3.2 Youth inclusion	81.75	24
Collaboration		
3.3.3 Use of virtual social networks	67.61	59
3.3.4 Use of virtual professional networks	17.78	73
4 RETAIN	71.80	37
4.1 Sustainability	65.03	42
4.1.1 Pension coverage	90.40	57
4.1.2 Social protection	61.22	48
4.1.3 Brain retention	21.04	110
4.1.4 Environmental performance	61.36	31
4.1.5 Vulnerable employment	91.15	22
4.2 Lifestyle	78.58	39
4.2.1 Personal rights	79.62	58
4.2.2 Personal safety	85.09	26
4.2.3 Physician density	51.80	41
4.2.4 Sanitation	97.79	45
5 VOCATIONAL AND TECHNICAL SKILLS	61.62	32
5.1 Mid-Level Skills	64.95	9
5.1.1 Workforce with secondary education	73.35	16
5.1.2 Population with secondary education	78.53	10
5.1.3 Technicians and associate professionals	64.27	21
5.1.4 Labour productivity per employee	43.64	43
5.2 Employability	58.30	66
5.2.1 Ease of finding skilled employees	16.33	129
5.2.2 Relevance of education system to the economy	39.95	72
5.2.3 Skills matching	87.40	8
5.2.4 Highly educated unemployment	89.51	20
6 GLOBAL KNOWLEDGE SKILLS	38.71	35
6.1 High-Level Skills	34.43	42
6.1.1 Workforce with tertiary education	37.67	43
6.1.2 Population with tertiary education	32.33	44
6.1.3 Professionals	43.38	34
6.1.4 Researchers	49.95	23
6.1.5 Senior officials and managers	26.05	58
6.1.6 Digital skills	17.22	53
6.2 Talent Impact	42.99	33
6.2.1 Innovation output	52.31	33
6.2.2 High-value exports	29.29	28
6.2.3 Software development	82.66	26
6.2.4 New business density	22.00	36
6.2.5 Scientific journal articles	28.69	38

ICELAND

Key Indicators

Rank (out of 134).....	15
Income group	High income
Regional group	Europe
Population (millions)	0.38

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	69.87	18
1.1 Regulatory Landscape.....	86.51	10
1.1.1 Government effectiveness	83.72	9
1.1.2 Rule of law	91.94	9
1.1.3 Political stability.....	96.89	3
1.1.4 Regulatory quality.....	81.93	15
1.1.5 Corruption	78.08	13
1.2 Market Landscape.....	57.74	29
1.2.1 Extent of market dominance.....	31.23	90
1.2.2 Domestic credit to private sector	63.91	28
1.2.3 Cluster development.....	48.15	54
1.2.4 R&D expenditure.....	46.11	12
1.2.5 ICT infrastructure.....	64.18	65
1.2.6 Urbanisation	92.89	7
1.3 Business and Labour Landscape.....	65.35	19
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation	80.22	10
Management Practice		
1.3.3 Professional management	73.97	23
1.3.4 Relationship of pay to productivity.....	66.92	36
Technology Adoption		
1.3.5 Enterprise software	27.63	49
1.3.6 Cloud computing	24.30	32
1.3.7 Firms with website	84.42	15
2 ATTRACT.....	73.00	18
2.1 External Openness	54.05	46
Attract Business		
2.1.1 FDI regulatory restrictiveness	55.95	65
2.1.2 Financial globalisation	54.44	85
Attract People		
2.1.3 Migrant stock	68.47	22
2.1.4 International students.....	31.06	31
2.1.5 Brain gain	60.33	31
2.2 Internal Openness.....	91.95	2
Social Inclusion		
2.2.1 Tolerance of minorities.....	97.87	2
2.2.2 Tolerance of immigrants	83.08	21
2.2.3 Social mobility	94.79	4
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	86.93	36
2.2.6 Leadership opportunities for women	89.01	4

GDP per capita (PPP US\$)	69,081.26
GDP (US\$ billions)	27.84
GTCI score.....	69.38
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	55.67	23
3.1 Formal Education.....	44.58	37
Enrolment		
3.1.1 Vocational enrolment	27.75	46
3.1.2 Tertiary enrolment	55.44	18
Quality		
3.1.3 Tertiary education expenditure	79.60	20
3.1.4 Reading, maths, and science	60.14	29
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	34.47	59
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	68.94	34
3.3 Access to Growth Opportunities	87.94	1
Empowerment		
3.3.1 Delegation of authority	78.38	8
3.3.2 Youth inclusion	95.75	3
Collaboration		
3.3.3 Use of virtual social networks	77.63	21
3.3.4 Use of virtual professional networks	100.00	1

4 RETAIN.....	84.58	12
4.1 Sustainability	81.38	14
4.1.1 Pension coverage	71.11	73
4.1.2 Social protection.....	90.93	8
4.1.3 Brain retention	79.51	10
4.1.4 Environmental performance	74.41	10
4.1.5 Vulnerable employment	90.93	24
4.2 Lifestyle	87.78	13
4.2.1 Personal rights	96.03	16
4.2.2 Personal safety.....	95.04	5
4.2.3 Physician density.....	61.41	27
4.2.4 Sanitation	98.66	38

5 VOCATIONAL AND TECHNICAL SKILLS.....	68.78	11
5.1 Mid-Level Skills	54.73	34
5.1.1 Workforce with secondary education	48.49	55
5.1.2 Population with secondary education	49.79	38
5.1.3 Technicians and associate professionals.....	58.79	26
5.1.4 Labour productivity per employee.....	61.86	19
5.2 Employability.....	82.82	7
5.2.1 Ease of finding skilled employees	100.00	1
5.2.2 Relevance of education system to the economy	67.81	24
5.2.3 Skills matching	80.05	19
5.2.4 Highly educated unemployment	83.44	44

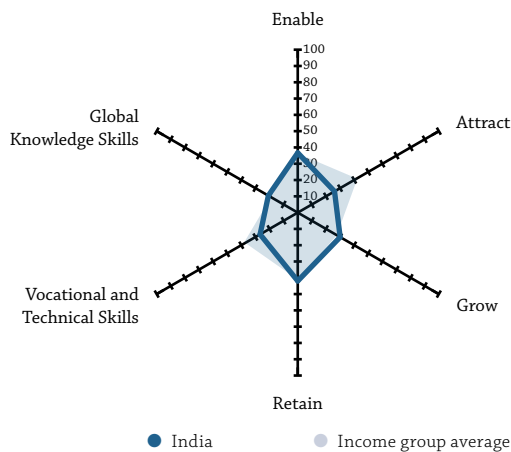
6 GLOBAL KNOWLEDGE SKILLS	64.38	4
6.1 High-Level Skills	59.25	4
6.1.1 Workforce with tertiary education	47.86	30
6.1.2 Population with tertiary education.....	51.32	16
6.1.3 Professionals	58.15	15
6.1.4 Researchers	69.83	7
6.1.5 Senior officials and managers.....	76.73	4
6.1.6 Digital skills	51.63	11
6.2 Talent Impact.....	69.50	5
6.2.1 Innovation output	69.14	17
6.2.2 High-value exports.....	60.53	6
6.2.3 Software development	90.43	8
6.2.4 New business density	57.55	11
6.2.5 Scientific journal articles	69.85	9

INDIA

Key Indicators

Rank (out of 134).....	103
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	1,417.17

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 36.68 92		
1.1 Regulatory Landscape..... 41.96 72		
1.1.1 Government effectiveness..... 49.90 52		
1.1.2 Rule of law..... 43.14 65		
1.1.3 Political stability..... 45.18 99		
1.1.4 Regulatory quality..... 40.06 75		
1.1.5 Corruption..... 31.51 68		
1.2 Market Landscape..... 37.19 91		
1.2.1 Extent of market dominance..... 38.53 66		
1.2.2 Domestic credit to private sector..... 47.18 67		
1.2.3 Cluster development..... 31.78 99		
1.2.4 R&D expenditure..... 12.07 53		
1.2.5 ICT infrastructure..... 69.46 58		
1.2.6 Urbanisation..... 24.14 119		
1.3 Business and Labour Landscape..... 30.90 116		
Labour Market		
1.3.1 Labour rights..... n/a n/a		
1.3.2 Labour-employer cooperation..... 18.62 120		
Management Practice		
1.3.3 Professional management..... 38.59 92		
1.3.4 Relationship of pay to productivity..... 54.71 66		
Technology Adoption		
1.3.5 Enterprise software..... 15.51 95		
1.3.6 Cloud computing..... 15.09 71		
1.3.7 Firms with website..... 42.86 73		
2 ATTRACT..... 26.06 132		
2.1 External Openness..... 21.40 127		
Attract Business		
2.1.1 FDI regulatory restrictiveness..... 45.14 69		
2.1.2 Financial globalisation..... 25.21 123		
Attract People		
2.1.3 Migrant stock..... 8.37 125		
2.1.4 International students..... 0.10 113		
2.1.5 Brain gain..... 28.19 106		
2.2 Internal Openness..... 30.71 129		
Social Inclusion		
2.2.1 Tolerance of minorities..... 17.02 110		
2.2.2 Tolerance of immigrants..... 50.77 82		
2.2.3 Social mobility..... 19.47 123		
Gender Equality		
2.2.4 Economic empowerment of women..... 63.72 102		
2.2.5 Gender parity in high-skilled jobs..... 16.21 122		
2.2.6 Leadership opportunities for women..... 17.07 125		

GDP per capita (PPP US\$).....	8,379.06
GDP (US\$ billions).....	3,385.09
GTCI score.....	30.37
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 30.06 90		
3.1 Formal Education..... 32.39 64		
Enrolment		
3.1.1 Vocational enrolment..... 5.11 99		
3.1.2 Tertiary enrolment..... 20.51 84		
Quality		
3.1.3 Tertiary education expenditure..... 55.72 68		
3.1.4 Reading, maths, and science..... n/a n/a		
3.1.5 University ranking..... 48.23 21		
3.2 Lifelong Learning..... 33.15 66		
3.2.1 Business masters education..... 60.71 16		
3.2.2 Prevalence of training in firms..... 5.05 98		
3.2.3 Employee development..... 33.70 118		
3.3 Access to Growth Opportunities..... 24.63 118		
Empowerment		
3.3.1 Delegation of authority..... 19.68 119		
3.3.2 Youth inclusion..... 39.25 100		
Collaboration		
3.3.3 Use of virtual social networks..... 29.28 103		
3.3.4 Use of virtual professional networks..... 10.31 94		

4 RETAIN..... 41.95 99		
4.1 Sustainability..... 35.49 96		
4.1.1 Pension coverage..... 41.92 85		
4.1.2 Social protection..... 45.29 76		
4.1.3 Brain retention..... 71.11 23		
4.1.4 Environmental performance..... 0.00 134		
4.1.5 Vulnerable employment..... 19.13 118		
4.2 Lifestyle..... 48.41 93		
4.2.1 Personal rights..... 61.68 82		
4.2.2 Personal safety..... 52.69 85		
4.2.3 Physician density..... 10.82 97		
4.2.4 Sanitation..... 68.46 100		

5 VOCATIONAL AND TECHNICAL SKILLS..... 26.68 121		
5.1 Mid-Level Skills..... 10.62 117		
5.1.1 Workforce with secondary education..... 13.54 112		
5.1.2 Population with secondary education..... n/a n/a		
5.1.3 Technicians and associate professionals..... 8.50 113		
5.1.4 Labour productivity per employee..... 9.81 92		
5.2 Employability..... 42.74 113		
5.2.1 Ease of finding skilled employees..... 27.18 118		
5.2.2 Relevance of education system to the economy..... 37.95 80		
5.2.3 Skills matching..... 46.15 84		
5.2.4 Highly educated unemployment..... 59.68 97		

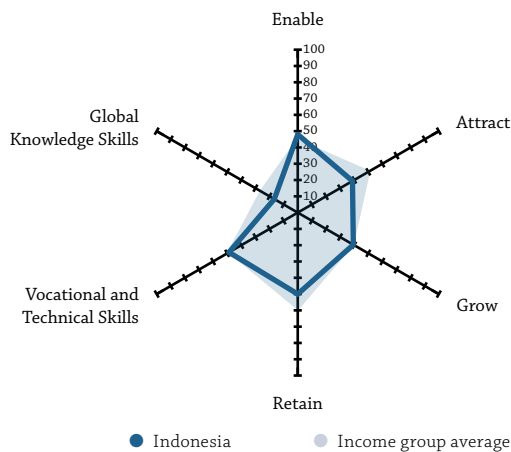
6 GLOBAL KNOWLEDGE SKILLS..... 20.82 83		
6.1 High-Level Skills..... 15.99 94		
6.1.1 Workforce with tertiary education..... 17.13 92		
6.1.2 Population with tertiary education..... n/a n/a		
6.1.3 Professionals..... 12.46 102		
6.1.4 Researchers..... 2.78 80		
6.1.5 Senior officials and managers..... 31.61 43		
6.1.6 Digital skills..... n/a n/a		
6.2 Talent Impact..... 25.64 69		
6.2.1 Innovation output..... 46.20 38		
6.2.2 High-value exports..... 18.33 46		
6.2.3 Software development..... 59.07 66		
6.2.4 New business density..... 0.63 115		
6.2.5 Scientific journal articles..... 3.97 81		

INDONESIA

Key Indicators

Rank (out of 134).....	80
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	275.50

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....47.99	58	
1.1 Regulatory Landscape.....	42.55	70
1.1.1 Government effectiveness.....	52.31	48
1.1.2 Rule of law.....	39.32	73
1.1.3 Political stability.....	48.00	95
1.1.4 Regulatory quality.....	49.84	55
1.1.5 Corruption.....	23.29	90
1.2 Market Landscape.....	54.39	36
1.2.1 Extent of market dominance.....	68.70	20
1.2.2 Domestic credit to private sector.....	38.22	87
1.2.3 Cluster development.....	87.14	5
1.2.4 R&D expenditure.....	5.06	80
1.2.5 ICT infrastructure.....	78.60	35
1.2.6 Urbanisation.....	48.63	89
1.3 Business and Labour Landscape.....	47.03	58
Labour Market		
1.3.1 Labour rights.....	77.21	65
1.3.2 Labour-employer cooperation.....	65.81	26
Management Practice		
1.3.3 Professional management.....	77.90	16
1.3.4 Relationship of pay to productivity.....	82.73	6
Technology Adoption		
1.3.5 Enterprise software.....	5.40	125
1.3.6 Cloud computing.....	7.44	114
1.3.7 Firms with website.....	12.71	106
2 ATTRACT.....38.78	106	
2.1 External Openness.....	22.53	125
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	7.30	78
2.1.2 Financial globalisation.....	38.44	109
Attract People		
2.1.3 Migrant stock.....	1.77	132
2.1.4 International students.....	0.00	114
2.1.5 Brain gain.....	65.13	24
2.2 Internal Openness.....	55.02	70
Social Inclusion		
2.2.1 Tolerance of minorities.....	30.85	84
2.2.2 Tolerance of immigrants.....	30.77	119
2.2.3 Social mobility.....	68.44	27
Gender Equality		
2.2.4 Economic empowerment of women.....	58.41	109
2.2.5 Gender parity in high-skilled jobs.....	85.24	38
2.2.6 Leadership opportunities for women.....	56.42	43

GDP per capita (PPP US\$).....	14,652.93
GDP (US\$ billions).....	1,319.10
GTCI score.....	40.25
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....39.41	64	
3.1 Formal Education.....	32.01	65
Enrolment		
3.1.1 Vocational enrolment.....	30.35	38
3.1.2 Tertiary enrolment.....	23.35	80
Quality		
3.1.3 Tertiary education expenditure.....	46.85	85
3.1.4 Reading, maths, and science.....	19.51	71
3.1.5 University ranking.....	40.02	32
3.2 Lifelong Learning.....	36.59	54
3.2.1 Business masters education.....	21.51	45
3.2.2 Prevalence of training in firms.....	5.05	98
3.2.3 Employee development.....	83.22	11
3.3 Access to Growth Opportunities.....	49.61	59
Empowerment		
3.3.1 Delegation of authority.....	76.75	11
3.3.2 Youth inclusion.....	53.10	82
Collaboration		
3.3.3 Use of virtual social networks.....	56.13	79
3.3.4 Use of virtual professional networks.....	12.46	83

4 RETAIN.....49.98	84	
4.1 Sustainability.....	42.43	88
4.1.1 Pension coverage.....	13.94	109
4.1.2 Social protection.....	71.22	36
4.1.3 Brain retention.....	65.27	27
4.1.4 Environmental performance.....	15.76	124
4.1.5 Vulnerable employment.....	45.95	96
4.2 Lifestyle.....	57.53	78
4.2.1 Personal rights.....	62.08	81
4.2.2 Personal safety.....	72.60	51
4.2.3 Physician density.....	10.32	99
4.2.4 Sanitation.....	85.14	84

5 VOCATIONAL AND TECHNICAL SKILLS.....48.74	65	
5.1 Mid-Level Skills.....	25.50	92
5.1.1 Workforce with secondary education.....	39.46	73
5.1.2 Population with secondary education.....	37.55	52
5.1.3 Technicians and associate professionals.....	11.12	107
5.1.4 Labour productivity per employee.....	13.87	84
5.2 Employability.....	71.99	25
5.2.1 Ease of finding skilled employees.....	70.61	33
5.2.2 Relevance of education system to the economy.....	78.64	12
5.2.3 Skills matching.....	58.13	69
5.2.4 Highly educated unemployment.....	80.57	55

6 GLOBAL KNOWLEDGE SKILLS.....16.62	100	
6.1 High-Level Skills.....	12.33	102
6.1.1 Workforce with tertiary education.....	15.18	94
6.1.2 Population with tertiary education.....	13.00	71
6.1.3 Professionals.....	13.62	95
6.1.4 Researchers.....	4.42	74
6.1.5 Senior officials and managers.....	12.04	96
6.1.6 Digital skills.....	15.73	55
6.2 Talent Impact.....	20.91	83
6.2.1 Innovation output.....	29.21	73
6.2.2 High-value exports.....	12.87	61
6.2.3 Software development.....	56.39	72
6.2.4 New business density.....	1.62	106
6.2.5 Scientific journal articles.....	4.45	80

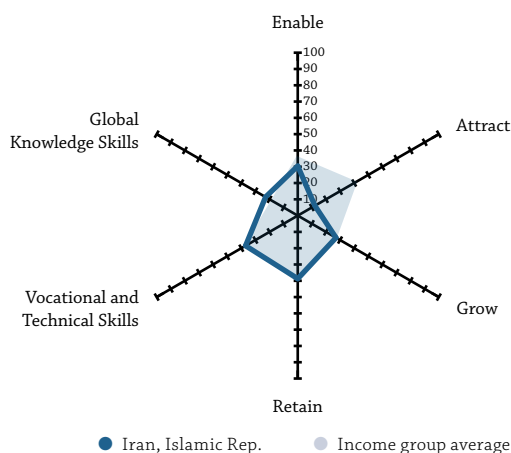
IRAN, ISLAMIC REP.

Key Indicators

Rank (out of 134).....	116
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	88.55

GDP per capita (PPP US\$)	18,075.05
GDP (US\$ billions)	388.54
GTCI score.....	28.03
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....30.42 114		
1.1 Regulatory Landscape.....14.31 131		
1.1.1 Government effectiveness.....21.46 120		
1.1.2 Rule of law.....20.11 119		
1.1.3 Political stability.....19.00 129		
1.1.4 Regulatory quality.....0.00 134		
1.1.5 Corruption.....10.96 120		
1.2 Market Landscape.....45.83 66		
1.2.1 Extent of market dominance.....50.38 43		
1.2.2 Domestic credit to private sector.....51.71 52		
1.2.3 Cluster development.....36.35 87		
1.2.4 R&D expenditure.....14.56 46		
1.2.5 ICT infrastructure.....50.81 91		
1.2.6 Urbanisation.....71.14 45		
1.3 Business and Labour Landscape.....31.12 115		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....11.03 128		
Management Practice		
1.3.3 Professional management.....16.20 126		
1.3.4 Relationship of pay to productivity.....29.95 126		
Technology Adoption		
1.3.5 Enterprise software.....60.40 16		
1.3.6 Cloud computing.....38.02 22		
1.3.7 Firms with website.....n/a n/a		
2 ATTRACT.....12.15 134		
2.1 External Openness.....9.39 134		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....n/a n/a		
2.1.2 Financial globalisation.....0.00 134		
Attract People		
2.1.3 Migrant stock.....25.77 96		
2.1.4 International students.....2.47 96		
2.1.5 Brain gain.....9.30 128		
2.2 Internal Openness.....14.91 134		
Social Inclusion		
2.2.1 Tolerance of minorities.....5.32 125		
2.2.2 Tolerance of immigrants.....41.54 98		
2.2.3 Social mobility.....8.10 130		
Gender Equality		
2.2.4 Economic empowerment of women.....2.65 133		
2.2.5 Gender parity in high-skilled jobs.....31.84 112		
2.2.6 Leadership opportunities for women.....0.00 134		

	Score	Rank
3 GROW.....27.12 96		
3.1 Formal Education.....35.91 57		
Enrolment		
3.1.1 Vocational enrolment.....24.03 53		
3.1.2 Tertiary enrolment.....38.01 54		
Quality		
3.1.3 Tertiary education expenditure.....54.55 74		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....27.05 46		
3.2 Lifelong Learning.....12.25 131		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....n/a n/a		
3.2.3 Employee development.....24.50 129		
3.3 Access to Growth Opportunities.....33.21 96		
Empowerment		
3.3.1 Delegation of authority.....9.15 130		
3.3.2 Youth inclusion.....40.57 98		
Collaboration		
3.3.3 Use of virtual social networks.....49.90 86		
3.3.4 Use of virtual professional networks.....n/a n/a		

4 RETAIN.....38.70 104		
4.1 Sustainability.....33.95 98		
4.1.1 Pension coverage.....20.51 99		
4.1.2 Social protection.....44.55 80		
4.1.3 Brain retention.....21.90 105		
4.1.4 Environmental performance.....26.44 97		
4.1.5 Vulnerable employment.....56.35 86		
4.2 Lifestyle.....43.46 102		
4.2.1 Personal rights.....21.79 123		
4.2.2 Personal safety.....39.33 106		
4.2.3 Physician density.....23.41 82		
4.2.4 Sanitation.....89.31 76		

5 VOCATIONAL AND TECHNICAL SKILLS.....36.98 97		
5.1 Mid-Level Skills.....29.48 82		
5.1.1 Workforce with secondary education.....30.07 87		
5.1.2 Population with secondary education.....34.99 55		
5.1.3 Technicians and associate professionals.....22.50 78		
5.1.4 Labour productivity per employee.....30.37 58		
5.2 Employability.....44.48 109		
5.2.1 Ease of finding skilled employees.....39.47 100		
5.2.2 Relevance of education system to the economy.....14.05 122		
5.2.3 Skills matching.....66.52 56		
5.2.4 Highly educated unemployment.....57.87 103		

6 GLOBAL KNOWLEDGE SKILLS.....22.81 78		
6.1 High-Level Skills.....21.99 70		
6.1.1 Workforce with tertiary education.....35.48 48		
6.1.2 Population with tertiary education.....29.65 45		
6.1.3 Professionals.....26.14 63		
6.1.4 Researchers.....18.95 43		
6.1.5 Senior officials and managers.....17.64 76		
6.1.6 Digital skills.....4.10 75		
6.2 Talent Impact.....23.63 73		
6.2.1 Innovation output.....46.37 37		
6.2.2 High-value exports.....1.13 119		
6.2.3 Software development.....42.67 104		
6.2.4 New business density.....3.25 91		
6.2.5 Scientific journal articles.....24.75 40		

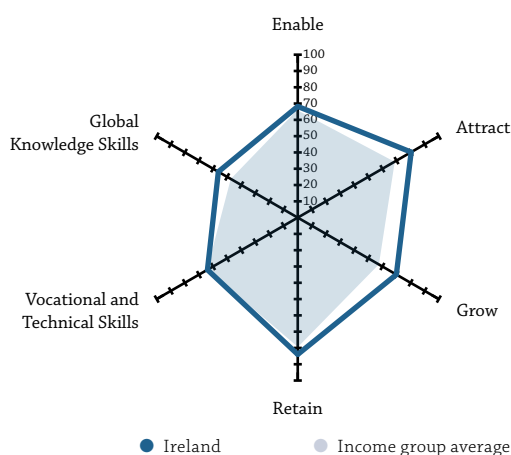
IRELAND

Key Indicators

Rank (out of 134).....	12
Income group.....	High income
Regional group.....	Europe
Population (millions).....	5.09

GDP per capita (PPP US\$)	126,905.20
GDP (US\$ billions)	529.24
GTCI score.....	70.45
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 68.24 20		
1.1 Regulatory Landscape..... 82.93 13		
1.1.1 Government effectiveness..... 80.37 13		
1.1.2 Rule of law..... 85.98 16		
1.1.3 Political stability..... 83.45 24		
1.1.4 Regulatory quality..... 82.64 13		
1.1.5 Corruption..... 82.19 10		
1.2 Market Landscape..... 53.12 40		
1.2.1 Extent of market dominance..... 60.83 37		
1.2.2 Domestic credit to private sector..... 32.32 99		
1.2.3 Cluster development..... 65.31 33		
1.2.4 R&D expenditure..... 22.87 34		
1.2.5 ICT infrastructure..... 79.76 30		
1.2.6 Urbanisation..... 57.65 69		
1.3 Business and Labour Landscape..... 68.66 16		
Labour Market		
1.3.1 Labour rights..... 100.00 1		
1.3.2 Labour-employer cooperation..... 80.01 11		
Management Practice		
1.3.3 Professional management..... 87.36 8		
1.3.4 Relationship of pay to productivity..... 73.41 20		
Technology Adoption		
1.3.5 Enterprise software..... 19.63 74		
1.3.6 Cloud computing..... 36.01 24		
1.3.7 Firms with website..... 84.18 16		
2 ATTRACT..... 80.38 5		
2.1 External Openness..... 73.09 13		
Attract Business		
2.1.1 FDI regulatory restrictiveness..... 89.46 26		
2.1.2 Financial globalisation..... 98.06 4		
Attract People		
2.1.3 Migrant stock..... 66.61 25		
2.1.4 International students..... 37.29 28		
2.1.5 Brain gain..... 74.03 16		
2.2 Internal Openness..... 87.67 4		
Social Inclusion		
2.2.1 Tolerance of minorities..... 96.81 3		
2.2.2 Tolerance of immigrants..... 93.85 6		
2.2.3 Social mobility..... 69.77 24		
Gender Equality		
2.2.4 Economic empowerment of women..... 100.00 1		
2.2.5 Gender parity in high-skilled jobs..... 96.06 9		
2.2.6 Leadership opportunities for women..... 69.52 18		

	Score	Rank
3 GROW..... 69.89 10		
3.1 Formal Education..... 54.37 24		
Enrolment		
3.1.1 Vocational enrolment..... 23.55 54		
3.1.2 Tertiary enrolment..... 49.02 27		
Quality		
3.1.3 Tertiary education expenditure..... 81.74 14		
3.1.4 Reading, maths, and science..... 69.61 9		
3.1.5 University ranking..... 47.92 22		
3.2 Lifelong Learning..... 75.05 10		
3.2.1 Business masters education..... 66.31 13		
3.2.2 Prevalence of training in firms..... 74.24 9		
3.2.3 Employee development..... 84.59 7		
3.3 Access to Growth Opportunities..... 80.24 7		
Empowerment		
3.3.1 Delegation of authority..... 78.93 7		
3.3.2 Youth inclusion..... 88.79 16		
Collaboration		
3.3.3 Use of virtual social networks..... 75.00 32		
3.3.4 Use of virtual professional networks..... 78.26 5		

4 RETAIN..... 83.96 13		
4.1 Sustainability..... 81.50 13		
4.1.1 Pension coverage..... 100.00 1		
4.1.2 Social protection..... 81.62 15		
4.1.3 Brain retention..... 71.83 19		
4.1.4 Environmental performance..... 65.25 24		
4.1.5 Vulnerable employment..... 88.77 33		
4.2 Lifestyle..... 86.42 17		
4.2.1 Personal rights..... 98.15 5		
4.2.2 Personal safety..... 92.92 9		
4.2.3 Physician density..... 64.14 23		
4.2.4 Sanitation..... 90.49 75		

5 VOCATIONAL AND TECHNICAL SKILLS..... 63.99 23		
5.1 Mid-Level Skills..... 49.94 46		
5.1.1 Workforce with secondary education..... 44.72 64		
5.1.2 Population with secondary education..... 47.89 43		
5.1.3 Technicians and associate professionals..... 50.14 38		
5.1.4 Labour productivity per employee..... 56.99 25		
5.2 Employability..... 78.04 15		
5.2.1 Ease of finding skilled employees..... 68.98 38		
5.2.2 Relevance of education system to the economy..... 87.41 4		
5.2.3 Skills matching..... 75.11 35		
5.2.4 Highly educated unemployment..... 80.68 54		

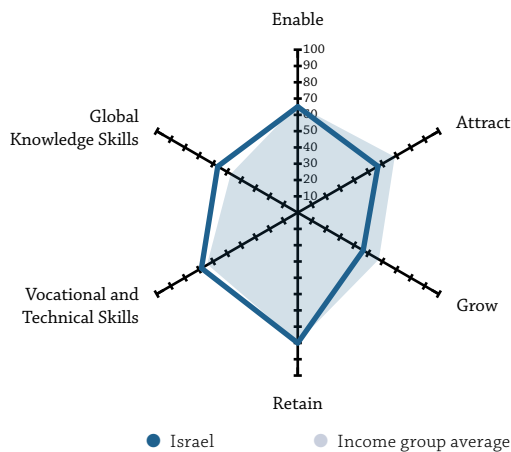
6 GLOBAL KNOWLEDGE SKILLS..... 56.27 15		
6.1 High-Level Skills..... 51.97 17		
6.1.1 Workforce with tertiary education..... 63.59 7		
6.1.2 Population with tertiary education..... 48.46 21		
6.1.3 Professionals..... 59.27 14		
6.1.4 Researchers..... 54.68 20		
6.1.5 Senior officials and managers..... 56.01 12		
6.1.6 Digital skills..... 29.84 31		
6.2 Talent Impact..... 60.57 16		
6.2.1 Innovation output..... 66.34 19		
6.2.2 High-value exports..... 46.09 13		
6.2.3 Software development..... 88.81 12		
6.2.4 New business density..... 37.31 22		
6.2.5 Scientific journal articles..... 64.29 13		

ISRAEL

Key Indicators

Rank (out of 134).....	25
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	9.55

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 65.04 24		
1.1 Regulatory Landscape.....	63.09	36
1.1.1 Government effectiveness	75.08	22
1.1.2 Rule of law	70.33	28
1.1.3 Political stability.....	33.57	119
1.1.4 Regulatory quality.....	73.48	25
1.1.5 Corruption	63.01	25
1.2 Market Landscape.....	70.13	15
1.2.1 Extent of market dominance.....	38.45	67
1.2.2 Domestic credit to private sector	55.70	46
1.2.3 Cluster development.....	58.30	36
1.2.4 R&D expenditure.....	100.00	1
1.2.5 ICT infrastructure.....	77.03	39
1.2.6 Urbanisation	91.28	8
1.3 Business and Labour Landscape.....	61.90	23
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation	64.53	30
Management Practice		
1.3.3 Professional management	75.64	20
1.3.4 Relationship of pay to productivity.....	63.93	39
Technology Adoption		
1.3.5 Enterprise software	40.16	30
1.3.6 Cloud computing	28.09	29
1.3.7 Firms with website	60.94	49
2 ATTRACT..... 56.84 44		
2.1 External Openness	56.23	39
Attract Business		
2.1.1 FDI regulatory restrictiveness	69.19	55
2.1.2 Financial globalisation	64.07	60
Attract People		
2.1.3 Migrant stock	79.60	9
2.1.4 International students.....	12.34	61
2.1.5 Brain gain	55.96	41
2.2 Internal Openness.....	57.44	61
Social Inclusion		
2.2.1 Tolerance of minorities.....	30.85	84
2.2.2 Tolerance of immigrants	27.69	122
2.2.3 Social mobility	62.25	37
Gender Equality		
2.2.4 Economic empowerment of women.....	72.57	78
2.2.5 Gender parity in high-skilled jobs	90.47	22
2.2.6 Leadership opportunities for women	60.79	34

GDP per capita (PPP US\$)	49,509.13
GDP (US\$ billions)	522.03
GTCI score.....	62.20
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 46.38 43		
3.1 Formal Education.....	45.88	34
Enrolment		
3.1.1 Vocational enrolment	30.99	36
3.1.2 Tertiary enrolment	39.91	51
Quality		
3.1.3 Tertiary education expenditure	68.67	41
3.1.4 Reading, maths, and science	53.53	38
3.1.5 University ranking.....	36.27	36
3.2 Lifelong Learning.....	31.19	79
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	19.52	84
3.2.3 Employee development	74.06	25
3.3 Access to Growth Opportunities	62.06	31
Empowerment		
3.3.1 Delegation of authority	67.18	19
3.3.2 Youth inclusion	66.73	57
Collaboration		
3.3.3 Use of virtual social networks	72.76	39
3.3.4 Use of virtual professional networks	41.56	28

4 RETAIN..... 80.02 25		
4.1 Sustainability	76.93	23
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	72.72	30
4.1.3 Brain retention	71.36	22
4.1.4 Environmental performance	49.66	46
4.1.5 Vulnerable employment	90.88	25
4.2 Lifestyle	83.12	23
4.2.1 Personal rights	92.55	28
4.2.2 Personal safety.....	82.38	34
4.2.3 Physician density.....	57.61	34
4.2.4 Sanitation.....	99.94	13

5 VOCATIONAL AND TECHNICAL SKILLS..... 68.22 13		
5.1 Mid-Level Skills	57.79	28
5.1.1 Workforce with secondary education	67.01	24
5.1.2 Population with secondary education	48.25	42
5.1.3 Technicians and associate professionals.....	58.33	27
5.1.4 Labour productivity per employee.....	57.55	24
5.2 Employability.....	78.66	12
5.2.1 Ease of finding skilled employees	95.08	3
5.2.2 Relevance of education system to the economy	56.29	42
5.2.3 Skills matching	78.63	23
5.2.4 Highly educated unemployment	84.62	39

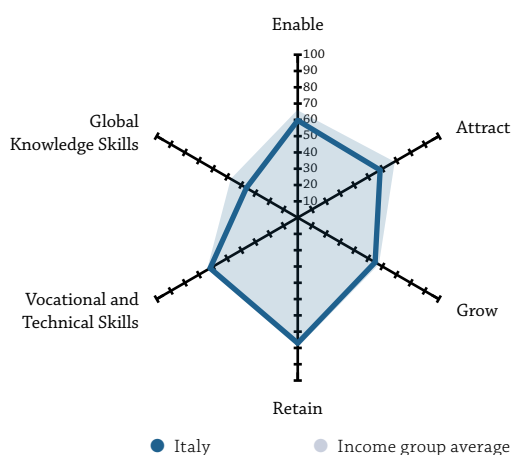
6 GLOBAL KNOWLEDGE SKILLS 56.69 14		
6.1 High-Level Skills	56.20	9
6.1.1 Workforce with tertiary education	46.55	31
6.1.2 Population with tertiary education.....	62.87	9
6.1.3 Professionals	69.38	4
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers.....	45.99	24
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	57.17	18
6.2.1 Innovation output	69.47	16
6.2.2 High-value exports.....	53.47	10
6.2.3 Software development	89.48	10
6.2.4 New business density	16.76	45
6.2.5 Scientific journal articles	56.68	17

ITALY

Key Indicators

Rank (out of 134).....	32
Income group.....	High income
Regional group.....	Europe
Population (millions).....	58.86

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....59.65	29	
1.1 Regulatory Landscape.....	58.04	46
1.1.1 Government effectiveness.....	51.87	49
1.1.2 Rule of law.....	52.46	51
1.1.3 Political stability.....	76.21	39
1.1.4 Regulatory quality.....	56.25	44
1.1.5 Corruption.....	53.42	34
1.2 Market Landscape.....	64.76	22
1.2.1 Extent of market dominance.....	72.91	13
1.2.2 Domestic credit to private sector.....	58.35	39
1.2.3 Cluster development.....	81.11	12
1.2.4 R&D expenditure.....	28.39	26
1.2.5 ICT infrastructure.....	81.77	22
1.2.6 Urbanisation.....	66.01	52
1.3 Business and Labour Landscape.....	56.15	28
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	40.47	76
Management Practice		
1.3.3 Professional management.....	48.48	72
1.3.4 Relationship of pay to productivity.....	60.64	45
Technology Adoption		
1.3.5 Enterprise software.....	32.62	38
1.3.6 Cloud computing.....	35.45	26
1.3.7 Firms with website.....	75.40	27
2 ATTRACT.....58.38	40	
2.1 External Openness.....	52.09	50
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	87.03	31
2.1.2 Financial globalisation.....	73.19	42
Attract People		
2.1.3 Migrant stock.....	55.68	46
2.1.4 International students.....	10.28	69
2.1.5 Brain gain.....	34.29	97
2.2 Internal Openness.....	64.67	34
Social Inclusion		
2.2.1 Tolerance of minorities.....	60.64	42
2.2.2 Tolerance of immigrants.....	73.85	37
2.2.3 Social mobility.....	45.35	65
Gender Equality		
2.2.4 Economic empowerment of women.....	96.46	15
2.2.5 Gender parity in high-skilled jobs.....	74.75	63
2.2.6 Leadership opportunities for women.....	36.96	102

GDP per capita (PPP US\$).....	51,864.98
GDP (US\$ billions).....	2,010.43
GTCI score.....	58.07
GTCI score (income group average).....	61.91

	Score	Rank
3 GROW.....54.84	24	
3.1 Formal Education.....	55.70	19
Enrolment		
3.1.1 Vocational enrolment.....	50.05	17
3.1.2 Tertiary enrolment.....	45.53	38
Quality		
3.1.3 Tertiary education expenditure.....	75.05	26
3.1.4 Reading, maths, and science.....	58.33	33
3.1.5 University ranking.....	49.54	18
3.2 Lifelong Learning.....	53.38	24
3.2.1 Business masters education.....	84.73	5
3.2.2 Prevalence of training in firms.....	11.55	93
3.2.3 Employee development.....	63.86	45
3.3 Access to Growth Opportunities.....	55.44	44
Empowerment		
3.3.1 Delegation of authority.....	55.04	44
3.3.2 Youth inclusion.....	59.40	74
Collaboration		
3.3.3 Use of virtual social networks.....	69.84	43
3.3.4 Use of virtual professional networks.....	37.49	33

4 RETAIN.....77.03	31	
4.1 Sustainability.....	66.70	37
4.1.1 Pension coverage.....	94.34	47
4.1.2 Social protection.....	63.18	46
4.1.3 Brain retention.....	27.75	97
4.1.4 Environmental performance.....	65.76	23
4.1.5 Vulnerable employment.....	82.48	53
4.2 Lifestyle.....	87.35	14
4.2.1 Personal rights.....	97.45	8
4.2.2 Personal safety.....	86.91	23
4.2.3 Physician density.....	65.16	21
4.2.4 Sanitation.....	99.87	18

5 VOCATIONAL AND TECHNICAL SKILLS.....62.10	30	
5.1 Mid-Level Skills.....	60.22	20
5.1.1 Workforce with secondary education.....	58.21	36
5.1.2 Population with secondary education.....	50.48	35
5.1.3 Technicians and associate professionals.....	70.01	13
5.1.4 Labour productivity per employee.....	62.19	18
5.2 Employability.....	63.98	46
5.2.1 Ease of finding skilled employees.....	50.34	76
5.2.2 Relevance of education system to the economy.....	57.79	40
5.2.3 Skills matching.....	74.73	38
5.2.4 Highly educated unemployment.....	73.05	73

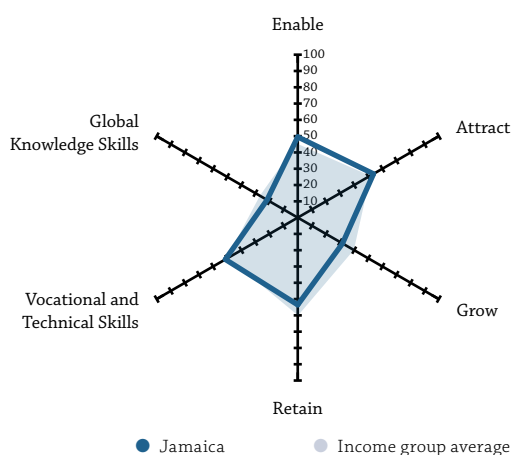
6 GLOBAL KNOWLEDGE SKILLS.....36.41	38	
6.1 High-Level Skills.....	27.25	57
6.1.1 Workforce with tertiary education.....	28.37	62
6.1.2 Population with tertiary education.....	20.66	62
6.1.3 Professionals.....	34.68	48
6.1.4 Researchers.....	30.58	32
6.1.5 Senior officials and managers.....	22.20	65
6.1.6 Digital skills.....	27.01	33
6.2 Talent Impact.....	45.58	29
6.2.1 Innovation output.....	69.64	15
6.2.2 High-value exports.....	14.68	58
6.2.3 Software development.....	73.61	39
6.2.4 New business density.....	16.17	47
6.2.5 Scientific journal articles.....	53.78	20

JAMAICA

Key Indicators

Rank (out of 134).....	66
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	2.83

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 49.54	50	
1.1 Regulatory Landscape.....	49.03	56
1.1.1 Government effectiveness.....	53.18	47
1.1.2 Rule of law.....	40.83	72
1.1.3 Political stability.....	66.98	51
1.1.4 Regulatory quality.....	47.18	58
1.1.5 Corruption.....	36.99	55
1.2 Market Landscape.....	45.91	63
1.2.1 Extent of market dominance.....	36.38	76
1.2.2 Domestic credit to private sector.....	47.41	65
1.2.3 Cluster development.....	40.62	81
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	56.12	81
1.2.6 Urbanisation.....	49.03	88
1.3 Business and Labour Landscape.....	53.67	33
Labour Market		
1.3.1 Labour rights.....	83.51	54
1.3.2 Labour-employer cooperation.....	40.12	79
Management Practice		
1.3.3 Professional management.....	62.49	40
1.3.4 Relationship of pay to productivity.....	48.61	86
Technology Adoption		
1.3.5 Enterprise software.....	67.50	11
1.3.6 Cloud computing.....	19.79	49
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT..... 53.69	55	
2.1 External Openness.....	46.17	66
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	75.72	35
Attract People		
2.1.3 Migrant stock.....	11.41	120
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	51.39	56
2.2 Internal Openness.....	61.20	45
Social Inclusion		
2.2.1 Tolerance of minorities.....	82.98	6
2.2.2 Tolerance of immigrants.....	84.62	16
2.2.3 Social mobility.....	40.02	82
Gender Equality		
2.2.4 Economic empowerment of women.....	63.72	102
2.2.5 Gender parity in high-skilled jobs.....	56.85	96
2.2.6 Leadership opportunities for women.....	39.02	93

GDP per capita (PPP US\$).....	11,821.58
GDP (US\$ billions).....	17.10
GTCI score.....	43.59
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 31.73	81	
3.1 Formal Education.....	24.21	83
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	17.20	88
Quality		
3.1.3 Tertiary education expenditure.....	55.44	70
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	24.23	111
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	48.46	80
3.3 Access to Growth Opportunities.....	46.76	68
Empowerment		
3.3.1 Delegation of authority.....	62.92	30
3.3.2 Youth inclusion.....	44.04	94
Collaboration		
3.3.3 Use of virtual social networks.....	45.53	88
3.3.4 Use of virtual professional networks.....	34.54	37

4 RETAIN..... 53.53	79	
4.1 Sustainability.....	44.67	85
4.1.1 Pension coverage.....	39.70	87
4.1.2 Social protection.....	42.27	85
4.1.3 Brain retention.....	36.00	73
4.1.4 Environmental performance.....	45.25	56
4.1.5 Vulnerable employment.....	60.12	82
4.2 Lifestyle.....	62.39	66
4.2.1 Personal rights.....	86.98	42
4.2.2 Personal safety.....	69.27	53
4.2.3 Physician density.....	8.00	103
4.2.4 Sanitation.....	85.30	83

5 VOCATIONAL AND TECHNICAL SKILLS..... 51.30	58	
5.1 Mid-Level Skills.....	33.63	72
5.1.1 Workforce with secondary education.....	66.19	25
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	24.48	77
5.1.4 Labour productivity per employee.....	10.22	91
5.2 Employability.....	68.98	33
5.2.1 Ease of finding skilled employees.....	56.76	62
5.2.2 Relevance of education system to the economy.....	53.06	43
5.2.3 Skills matching.....	86.42	11
5.2.4 Highly educated unemployment.....	79.68	58

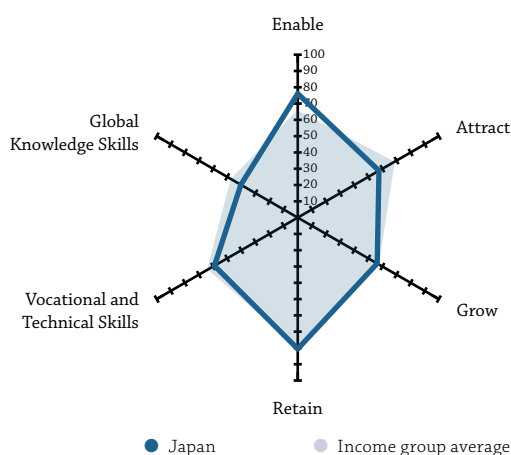
6 GLOBAL KNOWLEDGE SKILLS..... 21.75	79	
6.1 High-Level Skills.....	22.71	68
6.1.1 Workforce with tertiary education.....	18.81	84
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	20.23	75
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	47.11	22
6.1.6 Digital skills.....	4.70	71
6.2 Talent Impact.....	20.78	84
6.2.1 Innovation output.....	35.31	59
6.2.2 High-value exports.....	4.08	91
6.2.3 Software development.....	51.13	89
6.2.4 New business density.....	10.75	62
6.2.5 Scientific journal articles.....	2.64	89

JAPAN

Key Indicators

Rank (out of 134).....	26
Income group	High income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	125.12

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....76.09	9	
1.1 Regulatory Landscape.....	81.51	16
1.1.1 Government effectiveness.....	77.84	16
1.1.2 Rule of law.....	87.28	15
1.1.3 Political stability.....	87.89	10
1.1.4 Regulatory quality.....	77.81	18
1.1.5 Corruption.....	76.71	17
1.2 Market Landscape.....	79.83	3
1.2.1 Extent of market dominance.....	82.87	5
1.2.2 Domestic credit to private sector.....	81.71	3
1.2.3 Cluster development.....	73.60	19
1.2.4 R&D expenditure.....	61.08	6
1.2.5 ICT infrastructure.....	89.35	8
1.2.6 Urbanisation.....	90.36	10
1.3 Business and Labour Landscape.....	66.94	18
Labour Market		
1.3.1 Labour rights.....	85.12	51
1.3.2 Labour-employer cooperation.....	87.18	5
Management Practice		
1.3.3 Professional management.....	76.30	19
1.3.4 Relationship of pay to productivity.....	56.39	59
Technology Adoption		
1.3.5 Enterprise software.....	56.73	17
1.3.6 Cloud computing.....	39.90	20
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....57.56	42	
2.1 External Openness.....	51.19	53
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	87.03	31
2.1.2 Financial globalisation.....	72.17	47
Attract People		
2.1.3 Migrant stock.....	25.78	95
2.1.4 International students.....	20.80	45
2.1.5 Brain gain.....	50.15	61
2.2 Internal Openness.....	63.93	35
Social Inclusion		
2.2.1 Tolerance of minorities.....	79.79	9
2.2.2 Tolerance of immigrants.....	56.92	72
2.2.3 Social mobility.....	74.68	20
Gender Equality		
2.2.4 Economic empowerment of women.....	69.91	86
2.2.5 Gender parity in high-skilled jobs.....	72.97	67
2.2.6 Leadership opportunities for women.....	29.28	113

GDP per capita (PPP US\$)	45,572.72
GDP (US\$ billions)	4,231.14
GTCI score.....	61.65
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....56.32	21	
3.1 Formal Education.....	57.63	18
Enrolment		
3.1.1 Vocational enrolment.....	17.39	65
3.1.2 Tertiary enrolment.....	42.73	47
Quality		
3.1.3 Tertiary education expenditure.....	71.37	35
3.1.4 Reading, maths, and science.....	75.89	4
3.1.5 University ranking.....	80.75	7
3.2 Lifelong Learning.....	55.68	20
3.2.1 Business masters education.....	40.54	26
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	70.81	31
3.3 Access to Growth Opportunities.....	55.67	43
Empowerment		
3.3.1 Delegation of authority.....	50.32	57
3.3.2 Youth inclusion.....	100.00	1
Collaboration		
3.3.3 Use of virtual social networks.....	69.75	44
3.3.4 Use of virtual professional networks.....	2.60	120

4 RETAIN.....80.59	23	
4.1 Sustainability.....	77.20	22
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	74.90	29
4.1.3 Brain retention.....	55.01	40
4.1.4 Environmental performance.....	64.92	25
4.1.5 Vulnerable employment.....	91.16	21
4.2 Lifestyle.....	83.99	22
4.2.1 Personal rights.....	97.70	7
4.2.2 Personal safety.....	97.35	2
4.2.3 Physician density.....	40.99	59
4.2.4 Sanitation.....	99.91	15

5 VOCATIONAL AND TECHNICAL SKILLS.....59.04	39	
5.1 Mid-Level Skills.....	69.08	5
5.1.1 Workforce with secondary education.....	61.06	31
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	100.00	1
5.1.4 Labour productivity per employee.....	46.19	37
5.2 Employability.....	49.00	93
5.2.1 Ease of finding skilled employees.....	51.87	71
5.2.2 Relevance of education system to the economy.....	46.13	57
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	n/a	n/a

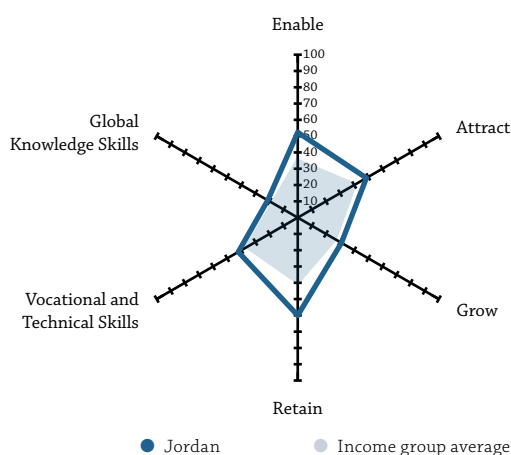
6 GLOBAL KNOWLEDGE SKILLS.....40.31	33	
6.1 High-Level Skills.....	37.84	38
6.1.1 Workforce with tertiary education.....	62.43	8
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	43.77	33
6.1.4 Researchers.....	62.55	13
6.1.5 Senior officials and managers.....	10.60	101
6.1.6 Digital skills.....	9.82	64
6.2 Talent Impact.....	42.79	35
6.2.1 Innovation output.....	73.76	12
6.2.2 High-value exports.....	32.41	26
6.2.3 Software development.....	75.57	36
6.2.4 New business density.....	2.27	101
6.2.5 Scientific journal articles.....	29.93	36

JORDAN

Key Indicators

Rank (out of 134).....	70
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	11.29

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 52.34 45		
1.1 Regulatory Landscape.....	48.12	58
1.1.1 Government effectiveness	48.53	58
1.1.2 Rule of law	50.95	54
1.1.3 Political stability.....	54.00	80
1.1.4 Regulatory quality.....	46.01	62
1.1.5 Corruption	41.10	49
1.2 Market Landscape.....	58.06	28
1.2.1 Extent of market dominance.....	67.43	22
1.2.2 Domestic credit to private sector	60.89	33
1.2.3 Cluster development.....	69.22	26
1.2.4 R&D expenditure.....	12.82	49
1.2.5 ICT infrastructure.....	48.35	98
1.2.6 Urbanisation	89.63	13
1.3 Business and Labour Landscape.....	50.86	40
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	54.29	46
Management Practice		
1.3.3 Professional management	59.37	48
1.3.4 Relationship of pay to productivity.....	68.38	35
Technology Adoption		
1.3.5 Enterprise software	28.37	42
1.3.6 Cloud computing	16.64	63
1.3.7 Firms with website	78.10	24
2 ATTRACT..... 48.64 77		
2.1 External Openness	54.47	43
Attract Business		
2.1.1 FDI regulatory restrictiveness	41.62	72
2.1.2 Financial globalisation	59.29	71
Attract People		
2.1.3 Migrant stock	76.80	13
2.1.4 International students.....	45.17	20
2.1.5 Brain gain	49.48	63
2.2 Internal Openness.....	42.81	115
Social Inclusion		
2.2.1 Tolerance of minorities.....	14.89	115
2.2.2 Tolerance of immigrants	56.92	72
2.2.3 Social mobility	46.89	60
Gender Equality		
2.2.4 Economic empowerment of women.....	24.78	129
2.2.5 Gender parity in high-skilled jobs	51.40	100
2.2.6 Leadership opportunities for women	61.94	32

GDP per capita (PPP US\$)	11,003.12
GDP (US\$ billions)	47.45
GTCI score.....	42.56
GTCI score (income group average)	32.03

	Score	Rank
3 GROW..... 30.98 85		
3.1 Formal Education.....	20.11	93
Enrolment		
3.1.1 Vocational enrolment	4.23	104
3.1.2 Tertiary enrolment	21.87	83
Quality		
3.1.3 Tertiary education expenditure	24.72	106
3.1.4 Reading, maths, and science	33.44	57
3.1.5 University ranking.....	16.31	61
3.2 Lifelong Learning.....	34.05	64
3.2.1 Business masters education.....	17.31	49
3.2.2 Prevalence of training in firms.....	17.26	89
3.2.3 Employee development	67.57	37
3.3 Access to Growth Opportunities	38.78	86
Empowerment		
3.3.1 Delegation of authority	52.00	51
3.3.2 Youth inclusion	27.43	112
Collaboration		
3.3.3 Use of virtual social networks	54.18	80
3.3.4 Use of virtual professional networks	21.52	63

4 RETAIN..... 60.02 61		
4.1 Sustainability	55.97	62
4.1.1 Pension coverage	45.56	83
4.1.2 Social protection.....	58.47	55
4.1.3 Brain retention	43.24	53
4.1.4 Environmental performance	41.86	61
4.1.5 Vulnerable employment	90.70	27
4.2 Lifestyle	64.07	62
4.2.1 Personal rights	53.35	95
4.2.2 Personal safety.....	66.75	58
4.2.3 Physician density.....	39.37	60
4.2.4 Sanitation	96.80	58

5 VOCATIONAL AND TECHNICAL SKILLS..... 42.13 78		
5.1 Mid-Level Skills	27.28	88
5.1.1 Workforce with secondary education	28.39	92
5.1.2 Population with secondary education	38.26	51
5.1.3 Technicians and associate professionals.....	17.62	92
5.1.4 Labour productivity per employee.....	24.85	67
5.2 Employability.....	56.98	71
5.2.1 Ease of finding skilled employees	87.27	12
5.2.2 Relevance of education system to the economy	63.28	29
5.2.3 Skills matching	47.94	83
5.2.4 Highly educated unemployment	29.42	116

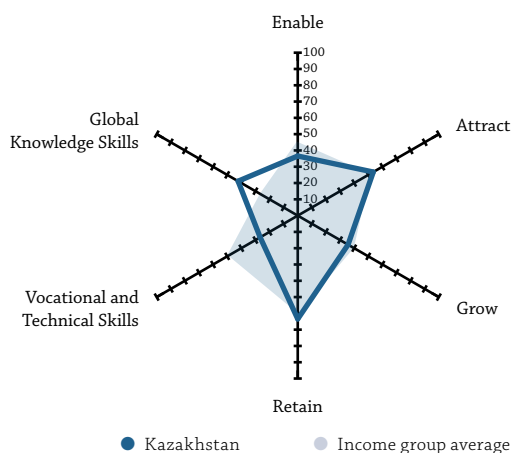
6 GLOBAL KNOWLEDGE SKILLS 21.25 80		
6.1 High-Level Skills	21.76	71
6.1.1 Workforce with tertiary education	29.84	60
6.1.2 Population with tertiary education.....	29.13	47
6.1.3 Professionals	42.14	38
6.1.4 Researchers	6.73	64
6.1.5 Senior officials and managers.....	0.97	129
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	20.74	85
6.2.1 Innovation output	27.06	77
6.2.2 High-value exports.....	2.61	104
6.2.3 Software development	59.78	64
6.2.4 New business density	2.17	102
6.2.5 Scientific journal articles	12.08	56

KAZAKHSTAN

Key Indicators

Rank (out of 134).....	67
Income group	Upper-middle income
Regional group	Central and Southern Asia
Population (millions)	19.62

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 36.58 93		
1.1 Regulatory Landscape.....	40.37	76
1.1.1 Government effectiveness	44.46	62
1.1.2 Rule of law	32.34	94
1.1.3 Political stability.....	54.56	78
1.1.4 Regulatory quality.....	44.43	65
1.1.5 Corruption	26.03	81
1.2 Market Landscape.....	33.34	101
1.2.1 Extent of market dominance.....	22.70	104
1.2.2 Domestic credit to private sector	30.20	103
1.2.3 Cluster development.....	20.59	122
1.2.4 R&D expenditure.....	2.25	101
1.2.5 ICT infrastructure.....	73.28	48
1.2.6 Urbanisation	51.05	81
1.3 Business and Labour Landscape.....	36.04	101
Labour Market		
1.3.1 Labour rights.....	69.57	76
1.3.2 Labour-employer cooperation	30.84	106
Management Practice		
1.3.3 Professional management	22.98	119
1.3.4 Relationship of pay to productivity.....	49.54	79
Technology Adoption		
1.3.5 Enterprise software	18.31	81
1.3.6 Cloud computing	13.80	76
1.3.7 Firms with website	47.25	65
2 ATTRACT..... 53.51 56		
2.1 External Openness	57.52	35
Attract Business		
2.1.1 FDI regulatory restrictiveness	70.54	53
2.1.2 Financial globalisation	72.63	44
Attract People		
2.1.3 Migrant stock	73.49	16
2.1.4 International students.....	19.98	46
2.1.5 Brain gain	50.97	57
2.2 Internal Openness.....	49.51	89
Social Inclusion		
2.2.1 Tolerance of minorities.....	21.28	104
2.2.2 Tolerance of immigrants	43.08	95
2.2.3 Social mobility	50.19	51
Gender Equality		
2.2.4 Economic empowerment of women.....	65.49	96
2.2.5 Gender parity in high-skilled jobs	63.00	85
2.2.6 Leadership opportunities for women	54.01	51

GDP per capita (PPP US\$)	30,809.88
GDP (US\$ billions)	220.62
GTCI score.....	43.01
GTCI score (income group average)	43.53

	Score	Rank
3 GROW..... 35.65 70		
3.1 Formal Education.....	35.23	58
Enrolment		
3.1.1 Vocational enrolment	15.05	69
3.1.2 Tertiary enrolment	46.34	34
Quality		
3.1.3 Tertiary education expenditure	47.76	83
3.1.4 Reading, maths, and science	27.87	63
3.1.5 University ranking.....	39.11	33
3.2 Lifelong Learning.....	25.69	103
3.2.1 Business masters education.....	21.26	46
3.2.2 Prevalence of training in firms.....	23.77	74
3.2.3 Employee development	32.04	120
3.3 Access to Growth Opportunities	46.02	71
Empowerment		
3.3.1 Delegation of authority	33.46	97
3.3.2 Youth inclusion	84.49	21
Collaboration		
3.3.3 Use of virtual social networks	56.52	78
3.3.4 Use of virtual professional networks	9.63	96

4 RETAIN..... 63.42 54		
4.1 Sustainability	59.95	55
4.1.1 Pension coverage	99.60	41
4.1.2 Social protection.....	50.42	68
4.1.3 Brain retention	35.05	76
4.1.4 Environmental performance	37.29	70
4.1.5 Vulnerable employment	77.40	59
4.2 Lifestyle.....	66.89	56
4.2.1 Personal rights	44.01	104
4.2.2 Personal safety.....	62.30	63
4.2.3 Physician density.....	63.59	25
4.2.4 Sanitation.....	97.66	50

5 VOCATIONAL AND TECHNICAL SKILLS..... 26.64 122		
5.1 Mid-Level Skills	30.64	79
5.1.1 Workforce with secondary education	22.74	104
5.1.2 Population with secondary education	32.30	58
5.1.3 Technicians and associate professionals.....	33.43	59
5.1.4 Labour productivity per employee.....	34.10	50
5.2 Employability.....	22.65	132
5.2.1 Ease of finding skilled employees	44.59	91
5.2.2 Relevance of education system to the economy	22.91	105
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	0.44	123

6 GLOBAL KNOWLEDGE SKILLS 42.27 30		
6.1 High-Level Skills	53.81	14
6.1.1 Workforce with tertiary education	100.00	1
6.1.2 Population with tertiary education.....	100.00	1
6.1.3 Professionals	52.23	21
6.1.4 Researchers	7.12	63
6.1.5 Senior officials and managers.....	36.26	37
6.1.6 Digital skills	27.25	32
6.2 Talent Impact.....	30.72	53
6.2.1 Innovation output	16.34	96
6.2.2 High-value exports.....	59.21	8
6.2.3 Software development	53.07	82
6.2.4 New business density	19.10	40
6.2.5 Scientific journal articles	5.90	73

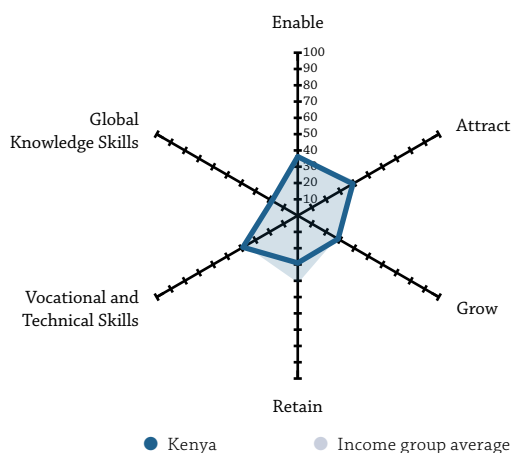
KENYA

Key Indicators

Rank (out of 134).....	98
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	54.03

GDP per capita (PPP US\$)	5,763.91
GDP (US\$ billions)	113.42
GTCI score.....	31.66
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....36.21 95		
1.1 Regulatory Landscape.....	30.70	104
1.1.1 Government effectiveness.....	34.63	90
1.1.2 Rule of law.....	34.92	87
1.1.3 Political stability.....	32.84	120
1.1.4 Regulatory quality.....	30.54	95
1.1.5 Corruption.....	20.55	102
1.2 Market Landscape.....	37.16	92
1.2.1 Extent of market dominance.....	27.60	99
1.2.2 Domestic credit to private sector.....	35.08	94
1.2.3 Cluster development.....	43.81	69
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	63.22	68
1.2.6 Urbanisation.....	16.10	124
1.3 Business and Labour Landscape.....	40.78	81
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	36.81	91
Management Practice		
1.3.3 Professional management.....	53.43	58
1.3.4 Relationship of pay to productivity.....	46.69	94
Technology Adoption		
1.3.5 Enterprise software.....	20.35	70
1.3.6 Cloud computing.....	43.75	15
1.3.7 Firms with website.....	43.67	72
2 ATTRACT.....39.03 105		
2.1 External Openness.....	26.85	117
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	14.91	129
Attract People		
2.1.3 Migrant stock.....	29.58	87
2.1.4 International students.....	4.42	85
2.1.5 Brain gain.....	58.49	35
2.2 Internal Openness.....	51.21	83
Social Inclusion		
2.2.1 Tolerance of minorities.....	18.09	106
2.2.2 Tolerance of immigrants.....	67.69	48
2.2.3 Social mobility.....	38.29	87
Gender Equality		
2.2.4 Economic empowerment of women.....	72.57	78
2.2.5 Gender parity in high-skilled jobs.....	72.12	70
2.2.6 Leadership opportunities for women.....	38.48	94

	Score	Rank
3 GROW.....28.60 92		
3.1 Formal Education.....	19.09	95
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	5.77	112
Quality		
3.1.3 Tertiary education expenditure.....	51.50	79
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	31.56	75
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	44.49	42
3.2.3 Employee development.....	50.19	72
3.3 Access to Growth Opportunities.....	35.15	92
Empowerment		
3.3.1 Delegation of authority.....	52.71	49
3.3.2 Youth inclusion.....	59.62	73
Collaboration		
3.3.3 Use of virtual social networks.....	16.15	110
3.3.4 Use of virtual professional networks.....	12.12	87

4 RETAIN.....29.06 114		
4.1 Sustainability.....	28.37	111
4.1.1 Pension coverage.....	12.32	111
4.1.2 Social protection.....	20.16	120
4.1.3 Brain retention.....	55.54	38
4.1.4 Environmental performance.....	20.17	108
4.1.5 Vulnerable employment.....	33.66	108
4.2 Lifestyle.....	29.75	119
4.2.1 Personal rights.....	66.59	77
4.2.2 Personal safety.....	23.48	123
4.2.3 Physician density.....	2.82	111
4.2.4 Sanitation.....	26.12	122

5 VOCATIONAL AND TECHNICAL SKILLS.....38.84 90		
5.1 Mid-Level Skills.....	14.43	109
5.1.1 Workforce with secondary education.....	29.04	89
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	8.01	115
5.1.4 Labour productivity per employee.....	6.25	101
5.2 Employability.....	63.25	52
5.2.1 Ease of finding skilled employees.....	82.32	15
5.2.2 Relevance of education system to the economy.....	51.49	45
5.2.3 Skills matching.....	49.77	82
5.2.4 Highly educated unemployment.....	69.42	82

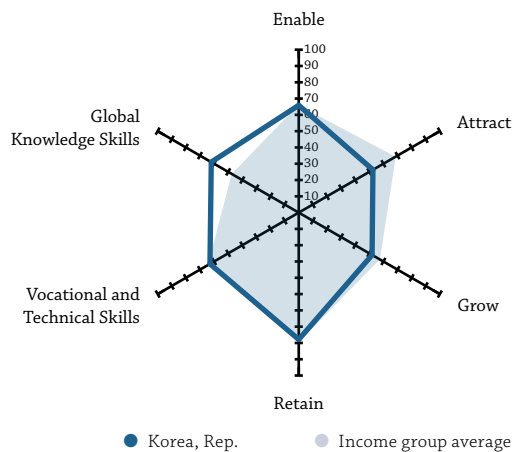
6 GLOBAL KNOWLEDGE SKILLS.....18.23 94		
6.1 High-Level Skills.....	16.91	91
6.1.1 Workforce with tertiary education.....	5.15	120
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	15.08	90
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	30.50	48
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	19.56	89
6.2.1 Innovation output.....	26.90	78
6.2.2 High-value exports.....	5.48	86
6.2.3 Software development.....	55.81	73
6.2.4 New business density.....	8.35	69
6.2.5 Scientific journal articles.....	1.23	100

KOREA, REP.

Key Indicators

Rank (out of 134).....	24
Income group	High income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	51.63

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	65.88	21
1.1 Regulatory Landscape.....	73.04	23
1.1.1 Government effectiveness	77.93	15
1.1.2 Rule of law	75.25	23
1.1.3 Political stability.....	78.40	34
1.1.4 Regulatory quality.....	70.64	27
1.1.5 Corruption	63.01	25
1.2 Market Landscape.....	74.16	9
1.2.1 Extent of market dominance.....	38.37	68
1.2.2 Domestic credit to private sector	78.98	6
1.2.3 Cluster development.....	71.78	21
1.2.4 R&D expenditure.....	89.54	2
1.2.5 ICT infrastructure.....	87.60	12
1.2.6 Urbanisation	78.68	29
1.3 Business and Labour Landscape.....	50.45	44
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	24.71	117
Management Practice		
1.3.3 Professional management	52.78	62
1.3.4 Relationship of pay to productivity.....	72.04	25
Technology Adoption		
1.3.5 Enterprise software	46.78	23
1.3.6 Cloud computing	36.57	23
1.3.7 Firms with website	69.79	34
2 ATTRACT.....	52.58	59
2.1 External Openness	41.80	75
Attract Business		
2.1.1 FDI regulatory restrictiveness	64.59	59
2.1.2 Financial globalisation	49.88	91
Attract People		
2.1.3 Migrant stock	30.32	84
2.1.4 International students.....	13.40	58
2.1.5 Brain gain	50.79	59
2.2 Internal Openness.....	63.36	38
Social Inclusion		
2.2.1 Tolerance of minorities.....	75.53	19
2.2.2 Tolerance of immigrants	58.46	66
2.2.3 Social mobility	29.81	111
Gender Equality		
2.2.4 Economic empowerment of women.....	78.76	59
2.2.5 Gender parity in high-skilled jobs	95.05	12
2.2.6 Leadership opportunities for women	42.54	84

GDP per capita (PPP US\$)	50,069.82
GDP (US\$ billions)	1,665.25
GTGI score.....	62.21
GTGI score (income group average)	61.91

	Score	Rank
3 GROW.....	51.98	28
3.1 Formal Education.....	60.02	15
Enrolment		
3.1.1 Vocational enrolment	13.16	74
3.1.2 Tertiary enrolment	67.61	4
Quality		
3.1.3 Tertiary education expenditure	66.14	44
3.1.4 Reading, maths, and science	75.76	5
3.1.5 University ranking.....	77.41	9
3.2 Lifelong Learning.....	44.71	35
3.2.1 Business masters education.....	28.05	38
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	61.37	49
3.3 Access to Growth Opportunities	51.20	52
Empowerment		
3.3.1 Delegation of authority	53.24	48
3.3.2 Youth inclusion	56.77	75
Collaboration		
3.3.3 Use of virtual social networks	86.87	5
3.3.4 Use of virtual professional networks	7.93	99

4 RETAIN.....	77.88	29
4.1 Sustainability	74.00	25
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	75.75	28
4.1.3 Brain retention	67.71	25
4.1.4 Environmental performance	47.46	49
4.1.5 Vulnerable employment	79.08	57
4.2 Lifestyle	81.77	31
4.2.1 Personal rights	94.55	20
4.2.2 Personal safety.....	93.31	8
4.2.3 Physician density.....	39.29	61
4.2.4 Sanitation.....	99.93	14

5 VOCATIONAL AND TECHNICAL SKILLS.....	62.93	27
5.1 Mid-Level Skills	53.43	38
5.1.1 Workforce with secondary education	40.55	72
5.1.2 Population with secondary education	50.86	34
5.1.3 Technicians and associate professionals.....	71.34	10
5.1.4 Labour productivity per employee.....	50.98	30
5.2 Employability.....	72.43	24
5.2.1 Ease of finding skilled employees	83.13	14
5.2.2 Relevance of education system to the economy	58.98	36
5.2.3 Skills matching	56.55	74
5.2.4 Highly educated unemployment	91.07	12

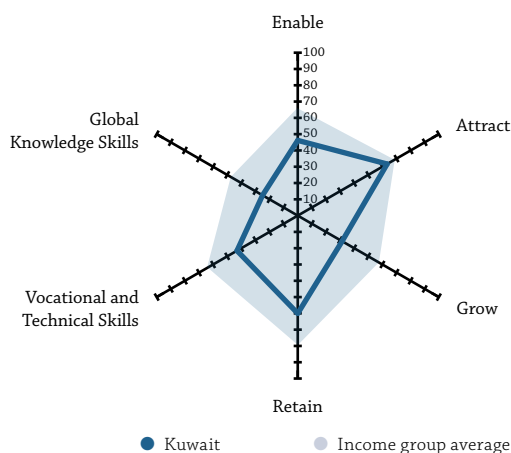
6 GLOBAL KNOWLEDGE SKILLS	61.99	8
6.1 High-Level Skills	51.98	16
6.1.1 Workforce with tertiary education	66.96	4
6.1.2 Population with tertiary education.....	53.50	12
6.1.3 Professionals	48.04	30
6.1.4 Researchers	100.00	1
6.1.5 Senior officials and managers.....	8.79	104
6.1.6 Digital skills	34.56	24
6.2 Talent Impact.....	72.01	3
6.2.1 Innovation output	88.78	4
6.2.2 High-value exports.....	64.56	5
6.2.3 Software development	82.38	27
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	52.34	22

KUWAIT

Key Indicators

Rank (out of 134).....	63
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	4.27

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	46.16	60
1.1 Regulatory Landscape.....	48.79	57
1.1.1 Government effectiveness	41.90	72
1.1.2 Rule of law	52.22	52
1.1.3 Political stability.....	68.95	49
1.1.4 Regulatory quality.....	46.64	61
1.1.5 Corruption	34.25	63
1.2 Market Landscape.....	54.11	38
1.2.1 Extent of market dominance.....	37.12	73
1.2.2 Domestic credit to private sector	59.82	36
1.2.3 Cluster development.....	55.35	39
1.2.4 R&D expenditure.....	3.30	91
1.2.5 ICT infrastructure.....	69.08	59
1.2.6 Urbanisation	100.00	1
1.3 Business and Labour Landscape.....	35.58	105
Labour Market		
1.3.1 Labour rights.....	66.35	81
1.3.2 Labour-employer cooperation	45.15	68
Management Practice		
1.3.3 Professional management	35.42	101
1.3.4 Relationship of pay to productivity.....	54.99	64
Technology Adoption		
1.3.5 Enterprise software	7.30	122
1.3.6 Cloud computing	4.28	125
1.3.7 Firms with website	n/a	n/a
2 ATTRACT.....	63.34	30
2.1 External Openness	80.80	6
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	92.91	10
Attract People		
2.1.3 Migrant stock	96.86	3
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain	52.61	50
2.2 Internal Openness.....	45.89	107
Social Inclusion		
2.2.1 Tolerance of minorities.....	56.38	48
2.2.2 Tolerance of immigrants	69.23	47
2.2.3 Social mobility	42.16	75
Gender Equality		
2.2.4 Economic empowerment of women.....	7.96	132
2.2.5 Gender parity in high-skilled jobs	61.60	90
2.2.6 Leadership opportunities for women	37.99	98

GDP per capita (PPP US\$)	58,056.23
GDP (US\$ billions)	184.56
GTCI score.....	44.83
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	31.45	84
3.1 Formal Education.....	18.48	99
Enrolment		
3.1.1 Vocational enrolment	3.48	107
3.1.2 Tertiary enrolment	38.40	53
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.....	13.58	63
3.2 Lifelong Learning.....	26.32	101
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	52.65	65
3.3 Access to Growth Opportunities	49.54	60
Empowerment		
3.3.1 Delegation of authority	38.44	85
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	78.79	18
3.3.4 Use of virtual professional networks	31.37	42

4 RETAIN.....	60.03	60
4.1 Sustainability	53.73	69
4.1.1 Pension coverage	25.66	95
4.1.2 Social protection.....	60.98	51
4.1.3 Brain retention	43.31	52
4.1.4 Environmental performance	39.83	64
4.1.5 Vulnerable employment	98.85	3
4.2 Lifestyle.....	66.33	58
4.2.1 Personal rights	55.66	91
4.2.2 Personal safety.....	73.78	48
4.2.3 Physician density.....	35.87	69
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....	43.04	75
5.1 Mid-Level Skills	34.78	69
5.1.1 Workforce with secondary education	12.39	115
5.1.2 Population with secondary education	16.46	78
5.1.3 Technicians and associate professionals.....	30.54	62
5.1.4 Labour productivity per employee.....	79.74	4
5.2 Employability.....	51.30	85
5.2.1 Ease of finding skilled employees	64.32	49
5.2.2 Relevance of education system to the economy	38.28	78
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	n/a	n/a

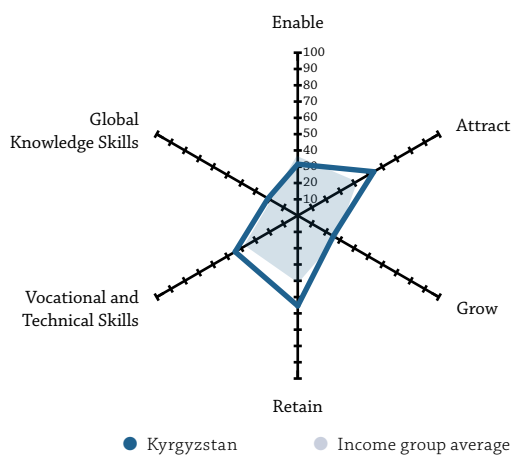
6 GLOBAL KNOWLEDGE SKILLS	24.94	70
6.1 High-Level Skills	28.45	55
6.1.1 Workforce with tertiary education	27.86	65
6.1.2 Population with tertiary education.....	23.34	61
6.1.3 Professionals	24.08	69
6.1.4 Researchers	1.87	84
6.1.5 Senior officials and managers.....	27.98	55
6.1.6 Digital skills	65.55	6
6.2 Talent Impact.....	21.42	79
6.2.1 Innovation output	31.52	65
6.2.2 High-value exports.....	2.26	107
6.2.3 Software development	45.50	99
6.2.4 New business density	17.98	42
6.2.5 Scientific journal articles	9.84	61

KYRGYZSTAN

Key Indicators

Rank (out of 134).....	86
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	6.80

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....31.58 112		
1.1 Regulatory Landscape.....	26.48	112
1.1.1 Government effectiveness.....	24.73	109
1.1.2 Rule of law.....	16.75	124
1.1.3 Political stability.....	50.10	89
1.1.4 Regulatory quality.....	27.11	102
1.1.5 Corruption.....	13.70	114
1.2 Market Landscape.....	26.82	117
1.2.1 Extent of market dominance.....	31.05	91
1.2.2 Domestic credit to private sector.....	27.67	106
1.2.3 Cluster development.....	25.10	113
1.2.4 R&D expenditure.....	1.47	106
1.2.5 ICT infrastructure.....	48.82	96
1.2.6 Urbanisation.....	26.81	114
1.3 Business and Labour Landscape.....	41.44	76
Labour Market		
1.3.1 Labour rights.....	95.31	20
1.3.2 Labour-employer cooperation.....	26.89	113
Management Practice		
1.3.3 Professional management.....	25.13	115
1.3.4 Relationship of pay to productivity.....	59.71	48
Technology Adoption		
1.3.5 Enterprise software.....	17.60	86
1.3.6 Cloud computing.....	10.32	98
1.3.7 Firms with website.....	55.11	57
2 ATTRACT.....53.91 52		
2.1 External Openness.....	55.59	41
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	64.05	60
2.1.2 Financial globalisation.....	52.48	87
Attract People		
2.1.3 Migrant stock.....	39.63	70
2.1.4 International students.....	84.70	7
2.1.5 Brain gain.....	37.07	90
2.2 Internal Openness.....	52.23	79
Social Inclusion		
2.2.1 Tolerance of minorities.....	15.96	113
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	46.36	61
Gender Equality		
2.2.4 Economic empowerment of women.....	67.26	93
2.2.5 Gender parity in high-skilled jobs.....	63.97	82
2.2.6 Leadership opportunities for women.....	53.66	53

GDP per capita (PPP US\$).....	6,132.51
GDP (US\$ billions).....	10.93
GTCI score.....	38.58
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....25.18 105		
3.1 Formal Education.....	15.00	111
Enrolment		
3.1.1 Vocational enrolment.....	12.19	79
3.1.2 Tertiary enrolment.....	34.82	64
Quality		
3.1.3 Tertiary education expenditure.....	12.98	110
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	24.90	107
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	49.80	31
3.2.3 Employee development.....	24.91	127
3.3 Access to Growth Opportunities.....	35.64	90
Empowerment		
3.3.1 Delegation of authority.....	32.04	102
3.3.2 Youth inclusion.....	68.86	53
Collaboration		
3.3.3 Use of virtual social networks.....	37.35	99
3.3.4 Use of virtual professional networks.....	4.30	114

4 RETAIN.....55.40 76		
4.1 Sustainability.....	50.33	78
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	38.45	88
4.1.3 Brain retention.....	19.32	115
4.1.4 Environmental performance.....	28.47	92
4.1.5 Vulnerable employment.....	65.42	75
4.2 Lifestyle.....	60.46	69
4.2.1 Personal rights.....	48.27	101
4.2.2 Personal safety.....	62.04	64
4.2.3 Physician density.....	33.86	72
4.2.4 Sanitation.....	97.68	49

5 VOCATIONAL AND TECHNICAL SKILLS.....44.36 72		
5.1 Mid-Level Skills.....	38.60	64
5.1.1 Workforce with secondary education.....	89.01	2
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	20.31	83
5.1.4 Labour productivity per employee.....	6.49	99
5.2 Employability.....	50.11	90
5.2.1 Ease of finding skilled employees.....	45.59	89
5.2.2 Relevance of education system to the economy.....	24.74	101
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	80.00	57

6 GLOBAL KNOWLEDGE SKILLS.....21.08 81		
6.1 High-Level Skills.....	21.20	77
6.1.1 Workforce with tertiary education.....	27.19	69
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	25.64	64
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	10.78	100
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	20.97	82
6.2.1 Innovation output.....	12.05	104
6.2.2 High-value exports.....	28.34	31
6.2.3 Software development.....	56.54	71
6.2.4 New business density.....	6.84	79
6.2.5 Scientific journal articles.....	1.07	103

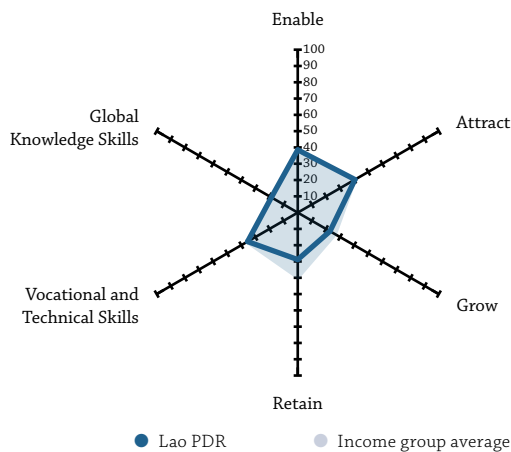
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Key Indicators

Rank (out of 134).....	101
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	7.53

GDP per capita (PPP US\$)	9,384.27
GDP (US\$ billions)	15.72
GTCI score.....	30.83
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....38.51 86		
1.1 Regulatory Landscape.....34.80 88		
1.1.1 Government effectiveness.....27.46 102		
1.1.2 Rule of law.....28.23 106		
1.1.3 Political stability.....80.06 31		
1.1.4 Regulatory quality.....19.07 121		
1.1.5 Corruption.....19.18 104		
1.2 Market Landscape.....46.69 60		
1.2.1 Extent of market dominance.....52.24 41		
1.2.2 Domestic credit to private sector.....n/a n/a		
1.2.3 Cluster development.....49.02 52		
1.2.4 R&D expenditure.....n/a n/a		
1.2.5 ICT infrastructure.....60.21 73		
1.2.6 Urbanisation.....25.26 118		
1.3 Business and Labour Landscape.....34.06 110		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....49.20 58		
Management Practice		
1.3.3 Professional management.....43.63 77		
1.3.4 Relationship of pay to productivity.....47.99 90		
Technology Adoption		
1.3.5 Enterprise software.....24.46 57		
1.3.6 Cloud computing.....14.34 75		
1.3.7 Firms with website.....24.72 94		
2 ATTRACT.....40.56 100		
2.1 External Openness.....33.85 98		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....49.19 68		
2.1.2 Financial globalisation.....55.81 82		
Attract People		
2.1.3 Migrant stock.....15.23 111		
2.1.4 International students.....1.78 99		
2.1.5 Brain gain.....47.24 67		
2.2 Internal Openness.....47.26 103		
Social Inclusion		
2.2.1 Tolerance of minorities.....26.60 99		
2.2.2 Tolerance of immigrants.....7.69 130		
2.2.3 Social mobility.....44.93 67		
Gender Equality		
2.2.4 Economic empowerment of women.....83.19 47		
2.2.5 Gender parity in high-skilled jobs.....77.93 58		
2.2.6 Leadership opportunities for women.....43.25 83		

	Score	Rank
3 GROW.....22.85 115		
3.1 Formal Education.....11.47 122		
Enrolment		
3.1.1 Vocational enrolment.....1.47 115		
3.1.2 Tertiary enrolment.....7.73 105		
Quality		
3.1.3 Tertiary education expenditure.....36.68 101		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....26.00 102		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....27.22 67		
3.2.3 Employee development.....50.79 69		
3.3 Access to Growth Opportunities.....31.08 104		
Empowerment		
3.3.1 Delegation of authority.....37.05 90		
3.3.2 Youth inclusion.....44.65 92		
Collaboration		
3.3.3 Use of virtual social networks.....40.37 94		
3.3.4 Use of virtual professional networks.....2.27 121		

4 RETAIN.....28.84 116		
4.1 Sustainability.....26.29 115		
4.1.1 Pension coverage.....5.35 125		
4.1.2 Social protection.....42.65 84		
4.1.3 Brain retention.....48.38 46		
4.1.4 Environmental performance.....20.00 109		
4.1.5 Vulnerable employment.....15.08 122		
4.2 Lifestyle.....31.38 114		
4.2.1 Personal rights.....2.37 132		
4.2.2 Personal safety.....41.25 104		
4.2.3 Physician density.....4.43 109		
4.2.4 Sanitation.....77.47 93		

5 VOCATIONAL AND TECHNICAL SKILLS.....35.53 99		
5.1 Mid-Level Skills.....13.44 111		
5.1.1 Workforce with secondary education.....20.80 106		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....6.08 123		
5.1.4 Labour productivity per employee.....n/a n/a		
5.2 Employability.....57.63 70		
5.2.1 Ease of finding skilled employees.....56.49 63		
5.2.2 Relevance of education system to the economy.....47.05 55		
5.2.3 Skills matching.....40.23 94		
5.2.4 Highly educated unemployment.....86.73 31		

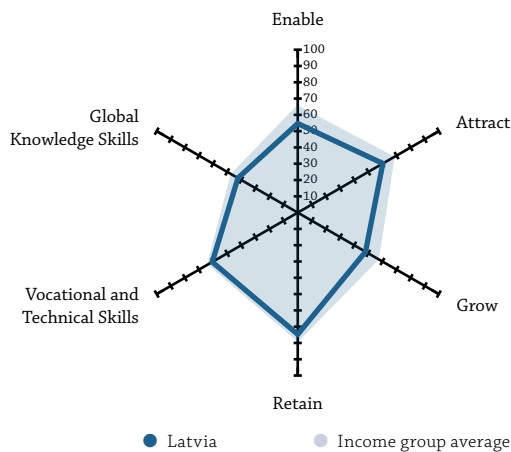
6 GLOBAL KNOWLEDGE SKILLS.....18.69 92		
6.1 High-Level Skills.....21.22 76		
6.1.1 Workforce with tertiary education.....10.89 102		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....11.59 107		
6.1.4 Researchers.....n/a n/a		
6.1.5 Senior officials and managers.....41.18 28		
6.1.6 Digital skills.....n/a n/a		
6.2 Talent Impact.....16.15 98		
6.2.1 Innovation output.....8.25 118		
6.2.2 High-value exports.....41.80 15		
6.2.3 Software development.....29.68 116		
6.2.4 New business density.....0.62 116		
6.2.5 Scientific journal articles.....0.43 117		

LATVIA

Key Indicators

Rank (out of 134).....	33
Income group	High income
Regional group	Europe
Population (millions)	1.88

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	54.68	36
1.1 Regulatory Landscape.....	69.29	30
1.1.1 Government effectiveness	64.62	34
1.1.2 Rule of law	71.38	27
1.1.3 Political stability.....	79.05	33
1.1.4 Regulatory quality.....	73.85	24
1.1.5 Corruption	57.53	32
1.2 Market Landscape.....	45.79	67
1.2.1 Extent of market dominance.....	46.94	51
1.2.2 Domestic credit to private sector	35.14	93
1.2.3 Cluster development.....	44.18	65
1.2.4 R&D expenditure.....	12.67	50
1.2.5 ICT infrastructure.....	72.43	51
1.2.6 Urbanisation	63.37	59
1.3 Business and Labour Landscape.....	48.98	49
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation	46.83	63
Management Practice		
1.3.3 Professional management	40.29	86
1.3.4 Relationship of pay to productivity.....	53.18	68
Technology Adoption		
1.3.5 Enterprise software	18.70	78
1.3.6 Cloud computing	16.44	65
1.3.7 Firms with website	67.40	40
2 ATTRACT.....	60.29	35
2.1 External Openness	64.57	26
Attract Business		
2.1.1 FDI regulatory restrictiveness	95.41	12
2.1.2 Financial globalisation	76.69	33
Attract People		
2.1.3 Migrant stock	62.37	32
2.1.4 International students.....	46.81	18
2.1.5 Brain gain	41.57	79
2.2 Internal Openness.....	56.01	67
Social Inclusion		
2.2.1 Tolerance of minorities.....	18.09	106
2.2.2 Tolerance of immigrants	30.77	119
2.2.3 Social mobility	57.50	46
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	62.35	87
2.2.6 Leadership opportunities for women	67.33	23

GDP per capita (PPP US\$)	39,956.19
GDP (US\$ billions)	41.15
GTCI score.....	56.78
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	48.03	40
3.1 Formal Education.....	46.18	33
Enrolment		
3.1.1 Vocational enrolment	30.82	37
3.1.2 Tertiary enrolment	62.29	8
Quality		
3.1.3 Tertiary education expenditure	62.07	52
3.1.4 Reading, maths, and science	62.57	28
3.1.5 University ranking.....	13.17	66
3.2 Lifelong Learning.....	40.03	45
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	65.07	18
3.2.3 Employee development	55.01	60
3.3 Access to Growth Opportunities	57.87	37
Empowerment		
3.3.1 Delegation of authority	37.02	91
3.3.2 Youth inclusion	86.59	18
Collaboration		
3.3.3 Use of virtual social networks	75.58	31
3.3.4 Use of virtual professional networks	32.28	40

4 RETAIN.....	74.71	33
4.1 Sustainability	70.26	31
4.1.1 Pension coverage	91.92	51
4.1.2 Social protection.....	69.54	37
4.1.3 Brain retention	27.32	99
4.1.4 Environmental performance	71.53	15
4.1.5 Vulnerable employment	90.98	23
4.2 Lifestyle	79.17	38
4.2.1 Personal rights	95.74	17
4.2.2 Personal safety.....	76.56	43
4.2.3 Physician density.....	52.68	39
4.2.4 Sanitation.....	91.68	71

5 VOCATIONAL AND TECHNICAL SKILLS.....	60.58	34
5.1 Mid-Level Skills	61.86	15
5.1.1 Workforce with secondary education	65.56	26
5.1.2 Population with secondary education	81.37	8
5.1.3 Technicians and associate professionals.....	58.01	28
5.1.4 Labour productivity per employee.....	42.51	44
5.2 Employability.....	59.29	64
5.2.1 Ease of finding skilled employees	40.89	96
5.2.2 Relevance of education system to the economy	43.02	63
5.2.3 Skills matching	77.25	27
5.2.4 Highly educated unemployment	75.99	65

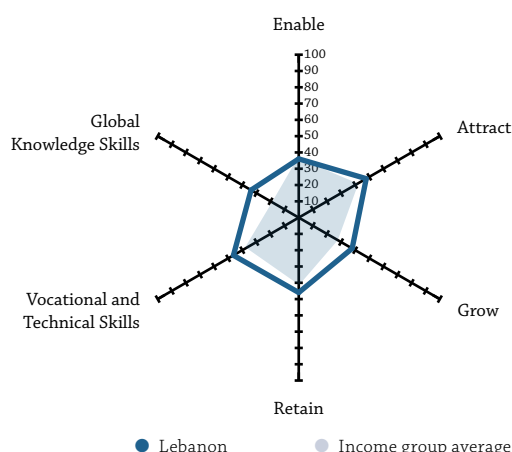
6 GLOBAL KNOWLEDGE SKILLS	42.37	29
6.1 High-Level Skills	40.16	31
6.1.1 Workforce with tertiary education	49.41	26
6.1.2 Population with tertiary education.....	44.75	29
6.1.3 Professionals	47.45	31
6.1.4 Researchers	24.68	38
6.1.5 Senior officials and managers.....	60.85	9
6.1.6 Digital skills	13.82	60
6.2 Talent Impact.....	44.58	31
6.2.1 Innovation output	44.88	41
6.2.2 High-value exports.....	30.56	27
6.2.3 Software development	80.65	29
6.2.4 New business density	37.90	21
6.2.5 Scientific journal articles	28.92	37

LEBANON

Key Indicators

Rank (out of 134).....	77
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	5.49

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	36.04	97
1.1 Regulatory Landscape.....	15.73	128
1.1.1 Government effectiveness.....	10.77	131
1.1.2 Rule of law.....	16.75	123
1.1.3 Political stability.....	22.34	127
1.1.4 Regulatory quality.....	19.19	120
1.1.5 Corruption.....	9.59	123
1.2 Market Landscape.....	55.69	32
1.2.1 Extent of market dominance.....	21.34	108
1.2.2 Domestic credit to private sector.....	66.18	20
1.2.3 Cluster development.....	31.51	100
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	72.53	50
1.2.6 Urbanisation.....	86.88	15
1.3 Business and Labour Landscape.....	36.69	98
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	35.48	93
Management Practice		
1.3.3 Professional management.....	33.99	106
1.3.4 Relationship of pay to productivity.....	45.30	99
Technology Adoption		
1.3.5 Enterprise software.....	33.26	37
1.3.6 Cloud computing.....	9.75	99
1.3.7 Firms with website.....	62.38	45
2 ATTRACT.....	47.83	79
2.1 External Openness.....	58.10	34
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	61.08	62
2.1.2 Financial globalisation.....	83.51	22
Attract People		
2.1.3 Migrant stock.....	73.25	17
2.1.4 International students.....	45.40	19
2.1.5 Brain gain.....	27.25	109
2.2 Internal Openness.....	37.56	123
Social Inclusion		
2.2.1 Tolerance of minorities.....	18.09	106
2.2.2 Tolerance of immigrants.....	47.69	88
2.2.3 Social mobility.....	7.03	132
Gender Equality		
2.2.4 Economic empowerment of women.....	41.59	121
2.2.5 Gender parity in high-skilled jobs.....	80.64	50
2.2.6 Leadership opportunities for women.....	30.31	110

GDP per capita (PPP US\$)	14,330.52
GDP (US\$ billions)	23.13
GTCI score.....	41.30
GTCI score (income group average)	32.03

	Score	Rank
3 GROW.....	37.85	66
3.1 Formal Education.....	31.48	67
Enrolment		
3.1.1 Vocational enrolment.....	24.34	52
3.1.2 Tertiary enrolment.....	n/a	n/a
Quality		
3.1.3 Tertiary education expenditure.....	55.66	69
3.1.4 Reading, maths, and science.....	17.44	72
3.1.5 University ranking.....	28.47	45
3.2 Lifelong Learning.....	34.20	61
3.2.1 Business masters education.....	44.95	25
3.2.2 Prevalence of training in firms.....	22.44	77
3.2.3 Employee development.....	35.20	112
3.3 Access to Growth Opportunities.....	47.88	65
Empowerment		
3.3.1 Delegation of authority.....	25.75	111
3.3.2 Youth inclusion.....	50.22	87
Collaboration		
3.3.3 Use of virtual social networks.....	85.41	6
3.3.4 Use of virtual professional networks.....	30.12	46

4 RETAIN.....	45.99	89
4.1 Sustainability.....	26.25	116
4.1.1 Pension coverage.....	8.89	116
4.1.2 Social protection.....	3.00	133
4.1.3 Brain retention.....	29.40	93
4.1.4 Environmental performance.....	22.54	104
4.1.5 Vulnerable employment.....	67.43	73
4.2 Lifestyle.....	65.72	60
4.2.1 Personal rights.....	64.10	79
4.2.2 Personal safety.....	58.62	72
4.2.3 Physician density.....	41.04	58
4.2.4 Sanitation.....	99.12	32

5 VOCATIONAL AND TECHNICAL SKILLS.....	46.28	70
5.1 Mid-Level Skills.....	22.06	97
5.1.1 Workforce with secondary education.....	20.98	105
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	19.67	84
5.1.4 Labour productivity per employee.....	25.52	65
5.2 Employability.....	70.50	28
5.2.1 Ease of finding skilled employees.....	99.84	2
5.2.2 Relevance of education system to the economy.....	67.96	23
5.2.3 Skills matching.....	61.93	60
5.2.4 Highly educated unemployment.....	52.26	110

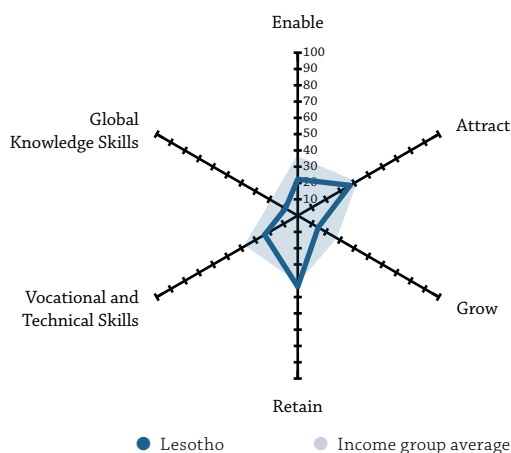
6 GLOBAL KNOWLEDGE SKILLS.....	33.79	46
6.1 High-Level Skills.....	39.33	33
6.1.1 Workforce with tertiary education.....	40.78	39
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	36.31	46
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	40.90	29
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	28.26	62
6.2.1 Innovation output.....	n/a	n/a
6.2.2 High-value exports.....	3.72	95
6.2.3 Software development.....	66.08	51
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	14.97	53

LESOTHO

Key Indicators

Rank (out of 134).....	122
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	2.31

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 22.30 128		
1.1 Regulatory Landscape.....	32.06	99
1.1.1 Government effectiveness.....	20.08	123
1.1.2 Rule of law.....	34.39	88
1.1.3 Political stability.....	55.46	75
1.1.4 Regulatory quality.....	22.97	113
1.1.5 Corruption.....	27.40	79
1.2 Market Landscape.....	17.42	131
1.2.1 Extent of market dominance.....	17.42	115
1.2.2 Domestic credit to private sector.....	24.15	113
1.2.3 Cluster development.....	11.67	129
1.2.4 R&D expenditure.....	0.76	112
1.2.5 ICT infrastructure.....	33.16	115
1.2.6 Urbanisation.....	17.39	123
1.3 Business and Labour Landscape.....	17.41	133
Labour Market		
1.3.1 Labour rights.....	80.70	57
1.3.2 Labour-employer cooperation.....	0.00	134
Management Practice		
1.3.3 Professional management.....	1.70	133
1.3.4 Relationship of pay to productivity.....	33.21	122
Technology Adoption		
1.3.5 Enterprise software.....	0.00	127
1.3.6 Cloud computing.....	0.00	126
1.3.7 Firms with website.....	6.24	111
2 ATTRACT..... 37.10 111		
2.1 External Openness.....	26.83	118
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	64.15	59
Attract People		
2.1.3 Migrant stock.....	12.23	116
2.1.4 International students.....	0.95	108
2.1.5 Brain gain.....	30.01	102
2.2 Internal Openness.....	47.36	100
Social Inclusion		
2.2.1 Tolerance of minorities.....	71.28	24
2.2.2 Tolerance of immigrants.....	55.38	76
2.2.3 Social mobility.....	10.46	128
Gender Equality		
2.2.4 Economic empowerment of women.....	69.03	90
2.2.5 Gender parity in high-skilled jobs.....	72.97	68
2.2.6 Leadership opportunities for women.....	5.03	131

GDP per capita (PPP US\$).....	2,694.55
GDP (US\$ billions).....	2.55
GTCI score.....	24.96
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 14.51 129		
3.1 Formal Education.....	12.08	120
Enrolment		
3.1.1 Vocational enrolment.....	4.83	101
3.1.2 Tertiary enrolment.....	5.87	111
Quality		
3.1.3 Tertiary education expenditure.....	37.62	98
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	19.95	122
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	36.25	55
3.2.3 Employee development.....	23.59	130
3.3 Access to Growth Opportunities.....	11.49	129
Empowerment		
3.3.1 Delegation of authority.....	0.00	134
3.3.2 Youth inclusion.....	21.81	119
Collaboration		
3.3.3 Use of virtual social networks.....	17.90	108
3.3.4 Use of virtual professional networks.....	6.23	107

4 RETAIN..... 43.63 96		
4.1 Sustainability.....	51.23	77
4.1.1 Pension coverage.....	93.94	48
4.1.2 Social protection.....	52.84	64
4.1.3 Brain retention.....	43.74	50
4.1.4 Environmental performance.....	22.71	103
4.1.5 Vulnerable employment.....	42.94	100
4.2 Lifestyle.....	36.03	108
4.2.1 Personal rights.....	77.34	59
4.2.2 Personal safety.....	14.84	127
4.2.3 Physician density.....	6.47	105
4.2.4 Sanitation.....	45.46	111

5 VOCATIONAL AND TECHNICAL SKILLS..... 23.47 128		
5.1 Mid-Level Skills.....	7.13	121
5.1.1 Workforce with secondary education.....	0.00	132
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	14.25	100
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	39.82	121
5.2.1 Ease of finding skilled employees.....	22.22	125
5.2.2 Relevance of education system to the economy.....	18.23	117
5.2.3 Skills matching.....	60.12	62
5.2.4 Highly educated unemployment.....	58.70	100

6 GLOBAL KNOWLEDGE SKILLS..... 8.75 118		
6.1 High-Level Skills.....	9.82	109
6.1.1 Workforce with tertiary education.....	7.03	115
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	14.73	91
6.1.4 Researchers.....	0.16	104
6.1.5 Senior officials and managers.....	12.43	94
6.1.6 Digital skills.....	14.77	57
6.2 Talent Impact.....	7.69	125
6.2.1 Innovation output.....	n/a	n/a
6.2.2 High-value exports.....	0.06	131
6.2.3 Software development.....	22.19	125
6.2.4 New business density.....	7.93	73
6.2.5 Scientific journal articles.....	0.57	112

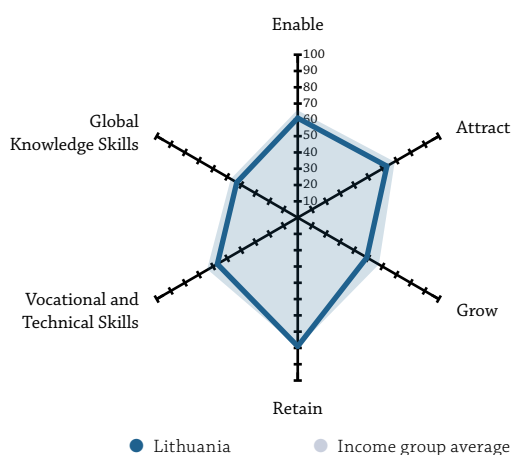
LITHUANIA

Key Indicators

Rank (out of 134).....	31
Income group	High income
Regional group	Europe
Population (millions)	2.83

GDP per capita (PPP US\$)	48,396.69
GDP (US\$ billions)	70.33
GTCI score	58.73
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	61.08	27
1.1 Regulatory Landscape	72.65	24
1.1.1 Government effectiveness	69.21	29
1.1.2 Rule of law	74.80	25
1.1.3 Political stability	82.38	27
1.1.4 Regulatory quality	75.24	22
1.1.5 Corruption	61.64	27
1.2 Market Landscape	50.68	49
1.2.1 Extent of market dominance	61.77	34
1.2.2 Domestic credit to private sector	39.77	83
1.2.3 Cluster development	43.92	68
1.2.4 R&D expenditure	21.31	36
1.2.5 ICT infrastructure	74.48	44
1.2.6 Urbanisation	62.84	61
1.3 Business and Labour Landscape	59.89	24
Labour Market		
1.3.1 Labour rights	97.59	14
1.3.2 Labour-employer cooperation	70.74	18
Management Practice		
1.3.3 Professional management	80.71	14
1.3.4 Relationship of pay to productivity	60.38	47
Technology Adoption		
1.3.5 Enterprise software	16.41	90
1.3.6 Cloud computing	14.43	74
1.3.7 Firms with website	78.99	23
2 ATTRACT	63.17	31
2.1 External Openness	54.90	42
Attract Business		
2.1.1 FDI regulatory restrictiveness	95.95	9
2.1.2 Financial globalisation	68.75	53
Attract People		
2.1.3 Migrant stock	42.81	63
2.1.4 International students	22.39	42
2.1.5 Brain gain	44.59	72
2.2 Internal Openness	71.45	22
Social Inclusion		
2.2.1 Tolerance of minorities	71.28	24
2.2.2 Tolerance of immigrants	33.85	114
2.2.3 Social mobility	81.07	11
Gender Equality		
2.2.4 Economic empowerment of women	91.15	29
2.2.5 Gender parity in high-skilled jobs	61.73	88
2.2.6 Leadership opportunities for women	89.62	3

	Score	Rank
3 GROW	48.97	36
3.1 Formal Education	40.92	47
Enrolment		
3.1.1 Vocational enrolment	11.65	80
3.1.2 Tertiary enrolment	46.41	32
Quality		
3.1.3 Tertiary education expenditure	66.83	42
3.1.4 Reading, maths, and science	59.45	31
3.1.5 University ranking	20.26	55
3.2 Lifelong Learning	42.92	39
3.2.1 Business masters education	14.82	51
3.2.2 Prevalence of training in firms	31.34	61
3.2.3 Employee development	82.61	12
3.3 Access to Growth Opportunities	63.08	27
Empowerment		
3.3.1 Delegation of authority	68.52	17
3.3.2 Youth inclusion	80.02	33
Collaboration		
3.3.3 Use of virtual social networks	72.86	38
3.3.4 Use of virtual professional networks	30.92	44

4 RETAIN	79.00	27
4.1 Sustainability	71.53	29
4.1.1 Pension coverage	97.07	44
4.1.2 Social protection	86.63	11
4.1.3 Brain retention	21.88	106
4.1.4 Environmental performance	62.71	30
4.1.5 Vulnerable employment	89.36	28
4.2 Lifestyle	86.48	16
4.2.1 Personal rights	91.84	29
4.2.2 Personal safety	82.40	33
4.2.3 Physician density	78.33	9
4.2.4 Sanitation	93.34	65

5 VOCATIONAL AND TECHNICAL SKILLS	56.97	46
5.1 Mid-Level Skills	55.28	32
5.1.1 Workforce with secondary education	59.12	34
5.1.2 Population with secondary education	74.73	15
5.1.3 Technicians and associate professionals	40.26	50
5.1.4 Labour productivity per employee	46.99	35
5.2 Employability	58.66	65
5.2.1 Ease of finding skilled employees	33.07	113
5.2.2 Relevance of education system to the economy	41.63	67
5.2.3 Skills matching	83.05	14
5.2.4 Highly educated unemployment	76.87	63

6 GLOBAL KNOWLEDGE SKILLS	43.21	27
6.1 High-Level Skills	47.03	22
6.1.1 Workforce with tertiary education	59.69	13
6.1.2 Population with tertiary education	39.08	34
6.1.3 Professionals	63.25	7
6.1.4 Researchers	42.72	27
6.1.5 Senior officials and managers	56.11	11
6.1.6 Digital skills	21.32	48
6.2 Talent Impact	39.39	38
6.2.1 Innovation output	42.08	46
6.2.2 High-value exports	20.68	41
6.2.3 Software development	81.32	28
6.2.4 New business density	16.22	46
6.2.5 Scientific journal articles	36.66	33

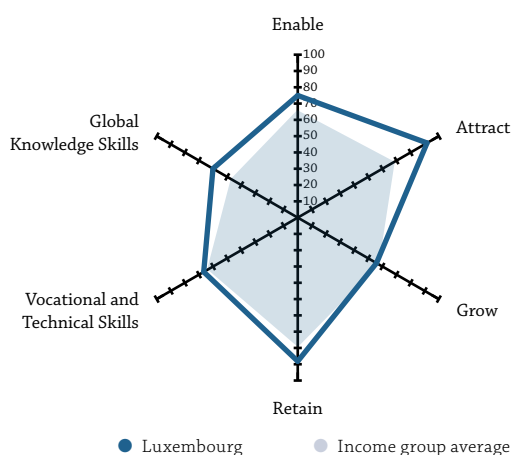
LUXEMBOURG

Key Indicators

Rank (out of 134).....	11
Income group	High income
Regional group	Europe
Population (millions)	0.65

GDP per capita (PPP US\$)	142,213.85
GDP (US\$ billions)	82.27
GTCI score	72.88
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	74.96	13
1.1 Regulatory Landscape.....	89.01	7
1.1.1 Government effectiveness	85.73	7
1.1.2 Rule of law	92.80	8
1.1.3 Political stability.....	92.54	4
1.1.4 Regulatory quality.....	91.80	2
1.1.5 Corruption	82.19	10
1.2 Market Landscape.....	64.33	23
1.2.1 Extent of market dominance.....	64.14	27
1.2.2 Domestic credit to private sector	65.70	21
1.2.3 Cluster development.....	65.64	32
1.2.4 R&D expenditure.....	20.74	37
1.2.5 ICT infrastructure.....	80.13	29
1.2.6 Urbanisation	89.63	12
1.3 Business and Labour Landscape.....	71.55	12
Labour Market		
1.3.1 Labour rights.....	97.45	17
1.3.2 Labour-employer cooperation	82.50	7
Management Practice		
1.3.3 Professional management	70.83	28
1.3.4 Relationship of pay to productivity.....	72.43	24
Technology Adoption		
1.3.5 Enterprise software	51.43	18
1.3.6 Cloud computing	43.87	14
1.3.7 Firms with website	82.33	17
2 ATTRACT.....	91.62	1
2.1 External Openness	96.49	1
Attract Business		
2.1.1 FDI regulatory restrictiveness	100.00	1
2.1.2 Financial globalisation	100.00	1
Attract People		
2.1.3 Migrant stock	89.43	5
2.1.4 International students.....	100.00	1
2.1.5 Brain gain	93.04	3
2.2 Internal Openness.....	86.74	5
Social Inclusion		
2.2.1 Tolerance of minorities.....	84.04	5
2.2.2 Tolerance of immigrants	95.38	3
2.2.3 Social mobility	83.11	10
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	89.74	25
2.2.6 Leadership opportunities for women	68.19	21

	Score	Rank
3 GROW.....	55.82	22
3.1 Formal Education.....	44.19	39
Enrolment		
3.1.1 Vocational enrolment	50.80	15
3.1.2 Tertiary enrolment	11.90	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.....	0.00	76
3.2 Lifelong Learning.....	54.22	23
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	82.60	5
3.2.3 Employee development	80.05	15
3.3 Access to Growth Opportunities	69.07	18
Empowerment		
3.3.1 Delegation of authority	58.06	40
3.3.2 Youth inclusion	86.49	19
Collaboration		
3.3.3 Use of virtual social networks	57.78	76
3.3.4 Use of virtual professional networks	73.95	9

4 RETAIN.....	88.16	9
4.1 Sustainability	93.33	2
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	95.01	5
4.1.3 Brain retention	88.13	5
4.1.4 Environmental performance	90.51	6
4.1.5 Vulnerable employment	93.02	14
4.2 Lifestyle	82.98	25
4.2.1 Personal rights	98.20	4
4.2.2 Personal safety.....	89.46	16
4.2.3 Physician density.....	46.92	48
4.2.4 Sanitation	97.36	54

5 VOCATIONAL AND TECHNICAL SKILLS.....	66.64	18
5.1 Mid-Level Skills	60.80	18
5.1.1 Workforce with secondary education	34.03	78
5.1.2 Population with secondary education	48.88	40
5.1.3 Technicians and associate professionals.....	67.23	19
5.1.4 Labour productivity per employee.....	93.08	2
5.2 Employability.....	72.48	23
5.2.1 Ease of finding skilled employees	50.46	75
5.2.2 Relevance of education system to the economy	65.79	25
5.2.3 Skills matching	88.91	5
5.2.4 Highly educated unemployment	84.76	38

6 GLOBAL KNOWLEDGE SKILLS	60.09	12
6.1 High-Level Skills	55.60	10
6.1.1 Workforce with tertiary education	66.49	6
6.1.2 Population with tertiary education.....	45.16	25
6.1.3 Professionals	100.00	1
6.1.4 Researchers	56.41	18
6.1.5 Senior officials and managers.....	26.84	57
6.1.6 Digital skills	38.72	18
6.2 Talent Impact.....	64.57	13
6.2.1 Innovation output	67.66	18
6.2.2 High-value exports.....	10.83	69
6.2.3 Software development	93.24	3
6.2.4 New business density	94.93	5
6.2.5 Scientific journal articles	56.22	18

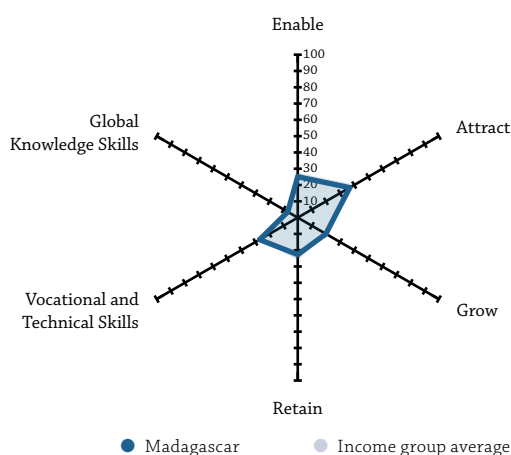
MADAGASCAR

Key Indicators

Rank (out of 134).....	125
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	29.61

GDP per capita (PPP US\$)	1,774.07
GDP (US\$ billions)	14.95
GTCI score	23.10
GTCI score (income group average)	22.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	25.08	124
1.1 Regulatory Landscape	23.59	120
1.1.1 Government effectiveness	17.92	126
1.1.2 Rule of law	22.25	114
1.1.3 Political stability	44.64	100
1.1.4 Regulatory quality	20.82	116
1.1.5 Corruption	12.33	116
1.2 Market Landscape	19.83	124
1.2.1 Extent of market dominance	20.07	111
1.2.2 Domestic credit to private sector	23.02	114
1.2.3 Cluster development	25.69	112
1.2.4 R&D expenditure	0.05	114
1.2.5 ICT infrastructure	22.34	124
1.2.6 Urbanisation	27.78	111
1.3 Business and Labour Landscape	31.82	114
Labour Market		
1.3.1 Labour rights	77.88	62
1.3.2 Labour-employer cooperation	34.82	98
Management Practice		
1.3.3 Professional management	22.80	120
1.3.4 Relationship of pay to productivity	28.20	128
Technology Adoption		
1.3.5 Enterprise software	25.72	55
1.3.6 Cloud computing	15.08	72
1.3.7 Firms with website	18.25	100
2 ATTRACT	36.79	113
2.1 External Openness	23.89	121
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	40.42	105
Attract People		
2.1.3 Migrant stock	3.24	130
2.1.4 International students	6.71	77
2.1.5 Brain gain	45.20	70
2.2 Internal Openness	49.68	88
Social Inclusion		
2.2.1 Tolerance of minorities	64.89	36
2.2.2 Tolerance of immigrants	35.38	109
2.2.3 Social mobility	29.32	113
Gender Equality		
2.2.4 Economic empowerment of women	56.64	111
2.2.5 Gender parity in high-skilled jobs	73.92	65
2.2.6 Leadership opportunities for women	37.96	99

	Score	Rank
3 GROW	19.94	117
3.1 Formal Education	11.19	123
Enrolment		
3.1.1 Vocational enrolment	3.84	106
3.1.2 Tertiary enrolment	2.75	124
Quality		
3.1.3 Tertiary education expenditure	38.19	95
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	76
3.2 Lifelong Learning	14.25	128
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	8.76	95
3.2.3 Employee development	34.00	117
3.3 Access to Growth Opportunities	34.38	94
Empowerment		
3.3.1 Delegation of authority	31.08	105
3.3.2 Youth inclusion	98.41	2
Collaboration		
3.3.3 Use of virtual social networks	6.91	121
3.3.4 Use of virtual professional networks	1.13	128

4 RETAIN	22.69	127
4.1 Sustainability	20.09	126
4.1.1 Pension coverage	n/a	n/a
4.1.2 Social protection	31.54	101
4.1.3 Brain retention	25.82	102
4.1.4 Environmental performance	15.42	127
4.1.5 Vulnerable employment	7.60	128
4.2 Lifestyle	25.29	125
4.2.1 Personal rights	60.86	85
4.2.2 Personal safety	34.26	111
4.2.3 Physician density	2.32	115
4.2.4 Sanitation	3.73	132

5 VOCATIONAL AND TECHNICAL SKILLS	27.04	119
5.1 Mid-Level Skills	6.40	124
5.1.1 Workforce with secondary education	17.77	109
5.1.2 Population with secondary education	5.19	86
5.1.3 Technicians and associate professionals	2.64	129
5.1.4 Labour productivity per employee	0.00	117
5.2 Employability	47.68	98
5.2.1 Ease of finding skilled employees	37.95	103
5.2.2 Relevance of education system to the economy	15.82	119
5.2.3 Skills matching	43.00	86
5.2.4 Highly educated unemployment	93.96	8

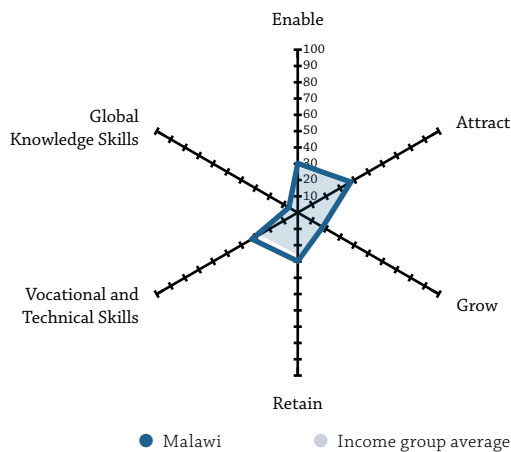
6 GLOBAL KNOWLEDGE SKILLS	7.08	124
6.1 High-Level Skills	3.78	127
6.1.1 Workforce with tertiary education	5.64	119
6.1.2 Population with tertiary education	4.25	83
6.1.3 Professionals	4.73	126
6.1.4 Researchers	0.27	100
6.1.5 Senior officials and managers	3.99	116
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	10.38	119
6.2.1 Innovation output	21.78	84
6.2.2 High-value exports	1.23	117
6.2.3 Software development	28.19	118
6.2.4 New business density	0.49	118
6.2.5 Scientific journal articles	0.18	124

MALAWI

Key Indicators

Rank (out of 134).....	120
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	20.41

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	30.23	115
1.1 Regulatory Landscape.....	33.18	95
1.1.1 Government effectiveness	23.69	115
1.1.2 Rule of law	38.96	75
1.1.3 Political stability.....	58.25	67
1.1.4 Regulatory quality.....	21.70	115
1.1.5 Corruption	23.29	90
1.2 Market Landscape.....	16.43	132
1.2.1 Extent of market dominance.....	15.77	119
1.2.2 Domestic credit to private sector	2.79	130
1.2.3 Cluster development.....	32.68	96
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	26.40	122
1.2.6 Urbanisation	4.49	133
1.3 Business and Labour Landscape.....	41.09	78
Labour Market		
1.3.1 Labour rights.....	95.04	23
1.3.2 Labour-employer cooperation	32.50	104
Management Practice		
1.3.3 Professional management	51.63	65
1.3.4 Relationship of pay to productivity.....	44.37	101
Technology Adoption		
1.3.5 Enterprise software	14.61	101
1.3.6 Cloud computing	8.57	108
1.3.7 Firms with website	40.90	75
2 ATTRACT.....	37.59	109
2.1 External Openness	31.47	103
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	22.64	125
Attract People		
2.1.3 Migrant stock	21.98	104
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain	49.80	62
2.2 Internal Openness.....	43.70	111
Social Inclusion		
2.2.1 Tolerance of minorities.....	56.38	48
2.2.2 Tolerance of immigrants	26.15	123
2.2.3 Social mobility	36.95	92
Gender Equality		
2.2.4 Economic empowerment of women.....	71.68	81
2.2.5 Gender parity in high-skilled jobs	34.01	111
2.2.6 Leadership opportunities for women	37.01	101

GDP per capita (PPP US\$)	1,732.03
GDP (US\$ billions)	13.16
GTGI score.....	25.68
GTGI score (income group average)	22.85

	Score	Rank
3 GROW.....	17.72	125
3.1 Formal Education.....	0.46	134
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	0.92	129
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	76
3.2 Lifelong Learning.....	27.10	96
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	38.51	50
3.2.3 Employee development	42.80	97
3.3 Access to Growth Opportunities	25.58	113
Empowerment		
3.3.1 Delegation of authority	39.52	83
3.3.2 Youth inclusion	60.26	72
Collaboration		
3.3.3 Use of virtual social networks	1.07	133
3.3.4 Use of virtual professional networks	1.47	126

4 RETAIN.....	29.82	112
4.1 Sustainability	25.51	117
4.1.1 Pension coverage	1.31	129
4.1.2 Social protection.....	19.18	121
4.1.3 Brain retention	35.95	74
4.1.4 Environmental performance	36.78	74
4.1.5 Vulnerable employment	34.32	107
4.2 Lifestyle	34.13	112
4.2.1 Personal rights	80.63	52
4.2.2 Personal safety.....	36.53	110
4.2.3 Physician density.....	0.00	134
4.2.4 Sanitation	19.37	126

5 VOCATIONAL AND TECHNICAL SKILLS.....	32.49	108
5.1 Mid-Level Skills	4.75	128
5.1.1 Workforce with secondary education	13.01	113
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	0.00	132
5.1.4 Labour productivity per employee.....	1.25	113
5.2 Employability.....	60.23	63
5.2.1 Ease of finding skilled employees	39.14	101
5.2.2 Relevance of education system to the economy	43.90	61
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	97.65	3

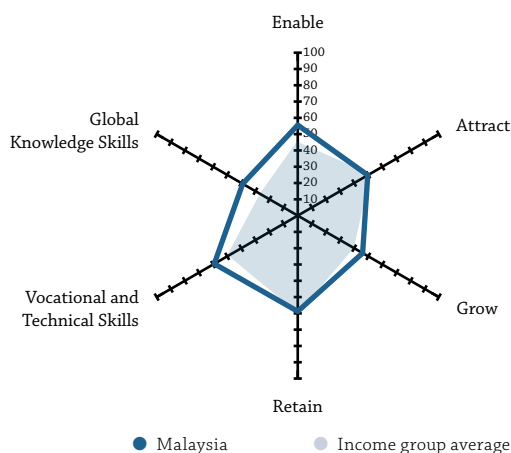
6 GLOBAL KNOWLEDGE SKILLS	6.25	129
6.1 High-Level Skills	3.75	128
6.1.1 Workforce with tertiary education	1.74	129
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	6.76	122
6.1.4 Researchers	n/a	n/a
6.1.5 Senior officials and managers.....	2.75	120
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	8.76	123
6.2.1 Innovation output	n/a	n/a
6.2.2 High-value exports.....	4.98	87
6.2.3 Software development	20.75	126
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	0.53	113

MALAYSIA

Key Indicators

Rank (out of 134).....	42
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	33.94

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	55.56	35
1.1 Regulatory Landscape.....	58.89	42
1.1.1 Government effectiveness.....	67.59	30
1.1.2 Rule of law.....	60.12	39
1.1.3 Political stability.....	64.78	56
1.1.4 Regulatory quality.....	60.85	42
1.1.5 Corruption.....	41.10	49
1.2 Market Landscape.....	59.07	27
1.2.1 Extent of market dominance.....	50.08	45
1.2.2 Domestic credit to private sector.....	70.77	15
1.2.3 Cluster development.....	66.00	30
1.2.4 R&D expenditure.....	17.60	42
1.2.5 ICT infrastructure.....	77.51	37
1.2.6 Urbanisation.....	72.44	42
1.3 Business and Labour Landscape.....	48.73	51
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	65.97	25
Management Practice		
1.3.3 Professional management.....	60.70	43
1.3.4 Relationship of pay to productivity.....	60.53	46
Technology Adoption		
1.3.5 Enterprise software.....	38.82	33
1.3.6 Cloud computing.....	21.65	40
1.3.7 Firms with website.....	44.71	70
2 ATTRACT.....	49.62	71
2.1 External Openness.....	51.45	52
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	31.62	74
2.1.2 Financial globalisation.....	71.96	48
Attract People		
2.1.3 Migrant stock.....	55.92	45
2.1.4 International students.....	29.42	32
2.1.5 Brain gain.....	68.33	20
2.2 Internal Openness.....	47.78	98
Social Inclusion		
2.2.1 Tolerance of minorities.....	48.94	56
2.2.2 Tolerance of immigrants.....	9.23	128
2.2.3 Social mobility.....	69.08	25
Gender Equality		
2.2.4 Economic empowerment of women.....	29.20	126
2.2.5 Gender parity in high-skilled jobs.....	64.83	80
2.2.6 Leadership opportunities for women.....	65.41	26

GDP per capita (PPP US\$).....	33,433.62
GDP (US\$ billions).....	406.31
GTCI score.....	51.35
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....	45.98	44
3.1 Formal Education.....	38.60	53
Enrolment		
3.1.1 Vocational enrolment.....	7.18	92
3.1.2 Tertiary enrolment.....	26.74	76
Quality		
3.1.3 Tertiary education expenditure.....	59.89	61
3.1.4 Reading, maths, and science.....	39.53	47
3.1.5 University ranking.....	59.68	13
3.2 Lifelong Learning.....	39.00	49
3.2.1 Business masters education.....	23.48	43
3.2.2 Prevalence of training in firms.....	26.69	69
3.2.3 Employee development.....	66.81	38
3.3 Access to Growth Opportunities.....	60.35	34
Empowerment		
3.3.1 Delegation of authority.....	62.36	33
3.3.2 Youth inclusion.....	74.38	43
Collaboration		
3.3.3 Use of virtual social networks.....	73.74	36
3.3.4 Use of virtual professional networks.....	30.92	44

4 RETAIN.....	58.77	66
4.1 Sustainability.....	53.31	71
4.1.1 Pension coverage.....	17.78	103
4.1.2 Social protection.....	63.83	44
4.1.3 Brain retention.....	80.55	9
4.1.4 Environmental performance.....	27.29	95
4.1.5 Vulnerable employment.....	77.12	60
4.2 Lifestyle.....	64.22	61
4.2.1 Personal rights.....	55.52	92
4.2.2 Personal safety.....	67.02	56
4.2.3 Physician density.....	34.82	71
4.2.4 Sanitation.....	99.54	22

5 VOCATIONAL AND TECHNICAL SKILLS.....	59.16	38
5.1 Mid-Level Skills.....	49.68	48
5.1.1 Workforce with secondary education.....	59.63	33
5.1.2 Population with secondary education.....	59.92	24
5.1.3 Technicians and associate professionals.....	42.53	48
5.1.4 Labour productivity per employee.....	36.65	48
5.2 Employability.....	68.64	34
5.2.1 Ease of finding skilled employees.....	78.33	22
5.2.2 Relevance of education system to the economy.....	58.96	37
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	n/a	n/a

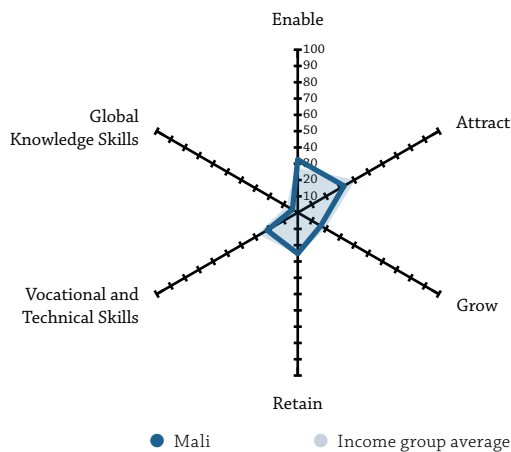
6 GLOBAL KNOWLEDGE SKILLS.....	39.02	34
6.1 High-Level Skills.....	30.51	48
6.1.1 Workforce with tertiary education.....	35.03	49
6.1.2 Population with tertiary education.....	25.81	59
6.1.3 Professionals.....	28.77	56
6.1.4 Researchers.....	8.39	60
6.1.5 Senior officials and managers.....	32.22	41
6.1.6 Digital skills.....	52.83	8
6.2 Talent Impact.....	47.53	27
6.2.1 Innovation output.....	46.70	36
6.2.2 High-value exports.....	93.51	3
6.2.3 Software development.....	61.22	63
6.2.4 New business density.....	11.58	59
6.2.5 Scientific journal articles.....	24.65	41

MALI

Key Indicators

Rank (out of 134).....	127
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	22.59

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE	32.52 110
1.1	Regulatory Landscape.....	14.94 129
1.1.1	Government effectiveness	12.36 129
1.1.2	Rule of law	21.31 118
1.1.3	Political stability.....	0.00 134
1.1.4	Regulatory quality.....	25.97 107
1.1.5	Corruption	15.07 111
1.2	Market Landscape.....	33.13 103
1.2.1	Extent of market dominance.....	63.98 29
1.2.2	Domestic credit to private sector	33.86 96
1.2.3	Cluster development.....	33.56 93
1.2.4	R&D expenditure.....	3.09 92
1.2.5	ICT infrastructure.....	30.57 120
1.2.6	Urbanisation	33.72 109
1.3	Business and Labour Landscape.....	49.48 47
	Labour Market	
1.3.1	Labour rights.....	88.20 42
1.3.2	Labour-employer cooperation	41.96 72
	Management Practice	
1.3.3	Professional management	24.63 116
1.3.4	Relationship of pay to productivity.....	54.80 65
	Technology Adoption	
1.3.5	Enterprise software	n/a n/a
1.3.6	Cloud computing	n/a n/a
1.3.7	Firms with website	37.78 80
2	ATTRACT.....	32.77 123
2.1	External Openness	30.83 108
	Attract Business	
2.1.1	FDI regulatory restrictiveness	n/a n/a
2.1.2	Financial globalisation	33.12 115
	Attract People	
2.1.3	Migrant stock	39.01 72
2.1.4	International students.....	2.81 94
2.1.5	Brain gain	48.39 64
2.2	Internal Openness.....	34.70 125
	Social Inclusion	
2.2.1	Tolerance of minorities.....	15.96 113
2.2.2	Tolerance of immigrants	66.15 51
2.2.3	Social mobility	41.19 79
	Gender Equality	
2.2.4	Economic empowerment of women.....	48.67 118
2.2.5	Gender parity in high-skilled jobs	6.02 126
2.2.6	Leadership opportunities for women	30.23 111

GDP per capita (PPP US\$)	2,517.15
GDP (US\$ billions)	18.83
GTCI score.....	22.02
GTCI score (income group average)	22.85

	Score	Rank
3	GROW.....	16.25 127
3.1	Formal Education.....	14.82 112
	Enrolment	
3.1.1	Vocational enrolment	0.62 117
3.1.2	Tertiary enrolment	2.33 126
	Quality	
3.1.3	Tertiary education expenditure	56.32 67
3.1.4	Reading, maths, and science	n/a n/a
3.1.5	University ranking.....	0.00 76
3.2	Lifelong Learning.....	19.81 123
3.2.1	Business masters education.....	0.00 57
3.2.2	Prevalence of training in firms.....	18.33 86
3.2.3	Employee development	41.09 103
3.3	Access to Growth Opportunities	14.11 128
	Empowerment	
3.3.1	Delegation of authority	17.44 122
3.3.2	Youth inclusion	32.29 106
	Collaboration	
3.3.3	Use of virtual social networks	4.57 126
3.3.4	Use of virtual professional networks	2.15 124

4	RETAIN.....	25.19 121
4.1	Sustainability	19.66 128
4.1.1	Pension coverage	6.36 121
4.1.2	Social protection.....	34.77 95
4.1.3	Brain retention	29.34 94
4.1.4	Environmental performance	16.27 119
4.1.5	Vulnerable employment	11.57 125
4.2	Lifestyle	30.71 115
4.2.1	Personal rights	56.59 89
4.2.2	Personal safety.....	25.02 120
4.2.3	Physician density.....	1.18 123
4.2.4	Sanitation	40.05 115

5	VOCATIONAL AND TECHNICAL SKILLS.....	21.67 131
5.1	Mid-Level Skills	3.71 131
5.1.1	Workforce with secondary education	3.32 125
5.1.2	Population with secondary education	2.30 90
5.1.3	Technicians and associate professionals.....	7.19 120
5.1.4	Labour productivity per employee.....	2.02 111
5.2	Employability.....	39.63 123
5.2.1	Ease of finding skilled employees	42.71 95
5.2.2	Relevance of education system to the economy	18.69 116
5.2.3	Skills matching	0.00 111
5.2.4	Highly educated unemployment	97.11 4

6	GLOBAL KNOWLEDGE SKILLS	3.75 132
6.1	High-Level Skills	1.45 133
6.1.1	Workforce with tertiary education	2.51 126
6.1.2	Population with tertiary education.....	1.02 91
6.1.3	Professionals	3.50 130
6.1.4	Researchers	0.23 102
6.1.5	Senior officials and managers.....	0.00 132
6.1.6	Digital skills	n/a n/a
6.2	Talent Impact.....	6.05 128
6.2.1	Innovation output	9.08 116
6.2.2	High-value exports.....	9.75 73
6.2.3	Software development	10.02 132
6.2.4	New business density	1.27 108
6.2.5	Scientific journal articles	0.14 127

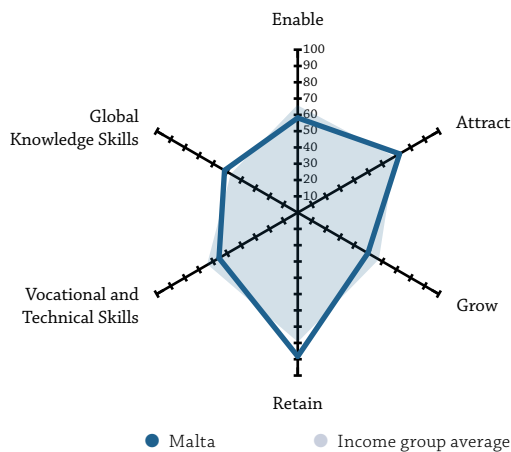
MALTA

Key Indicators

Rank (out of 134).....	21
Income group	High income
Regional group	Europe
Population (millions)	0.52

GDP per capita (PPP US\$)	55,927.86
GDP (US\$ billions)	17.77
GTCI score	62.66
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE58.14 33		
1.1 Regulatory Landscape.....	65.93	34
1.1.1 Government effectiveness	65.12	33
1.1.2 Rule of law	68.27	34
1.1.3 Political stability.....	86.46	13
1.1.4 Regulatory quality.....	63.22	38
1.1.5 Corruption	46.58	43
1.2 Market Landscape.....	50.43	50
1.2.1 Extent of market dominance.....	37.55	72
1.2.2 Domestic credit to private sector	57.62	41
1.2.3 Cluster development.....	45.24	61
1.2.4 R&D expenditure.....	12.29	52
1.2.5 ICT infrastructure.....	56.10	82
1.2.6 Urbanisation	93.80	6
1.3 Business and Labour Landscape.....	58.05	26
Labour Market		
1.3.1 Labour rights.....	75.47	67
1.3.2 Labour-employer cooperation	60.36	40
Management Practice		
1.3.3 Professional management	53.30	59
1.3.4 Relationship of pay to productivity.....	56.91	57
Technology Adoption		
1.3.5 Enterprise software	43.31	27
1.3.6 Cloud computing	31.74	27
1.3.7 Firms with website	85.26	11
2 ATTRACT.....72.14 20		
2.1 External Openness	75.89	12
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	97.96	5
Attract People		
2.1.3 Migrant stock	74.98	15
2.1.4 International students.....	51.89	15
2.1.5 Brain gain	78.74	12
2.2 Internal Openness.....	68.39	28
Social Inclusion		
2.2.1 Tolerance of minorities.....	77.66	13
2.2.2 Tolerance of immigrants	75.38	34
2.2.3 Social mobility	61.00	38
Gender Equality		
2.2.4 Economic empowerment of women.....	87.61	35
2.2.5 Gender parity in high-skilled jobs	61.62	89
2.2.6 Leadership opportunities for women	47.08	71

	Score	Rank
3 GROW.....49.73 33		
3.1 Formal Education.....	41.75	44
Enrolment		
3.1.1 Vocational enrolment	24.86	51
3.1.2 Tertiary enrolment	46.89	30
Quality		
3.1.3 Tertiary education expenditure	86.06	8
3.1.4 Reading, maths, and science	50.93	41
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	40.80	42
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	61.09	21
3.2.3 Employee development	61.32	50
3.3 Access to Growth Opportunities	66.63	21
Empowerment		
3.3.1 Delegation of authority	50.87	54
3.3.2 Youth inclusion	74.69	42
Collaboration		
3.3.3 Use of virtual social networks	74.12	35
3.3.4 Use of virtual professional networks	66.82	13

4 RETAIN.....88.25 8		
4.1 Sustainability	83.74	12
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	72.36	31
4.1.3 Brain retention	63.15	30
4.1.4 Environmental performance	95.42	4
4.1.5 Vulnerable employment	87.76	40
4.2 Lifestyle.....	92.77	4
4.2.1 Personal rights	91.36	32
4.2.2 Personal safety.....	92.88	10
4.2.3 Physician density.....	86.88	3
4.2.4 Sanitation.....	99.96	12

5 VOCATIONAL AND TECHNICAL SKILLS.....55.81 49		
5.1 Mid-Level Skills	47.32	52
5.1.1 Workforce with secondary education	48.52	54
5.1.2 Population with secondary education	31.49	59
5.1.3 Technicians and associate professionals.....	53.95	33
5.1.4 Labour productivity per employee.....	55.33	28
5.2 Employability.....	64.29	45
5.2.1 Ease of finding skilled employees	34.64	109
5.2.2 Relevance of education system to the economy	52.45	44
5.2.3 Skills matching	79.16	22
5.2.4 Highly educated unemployment	90.93	13

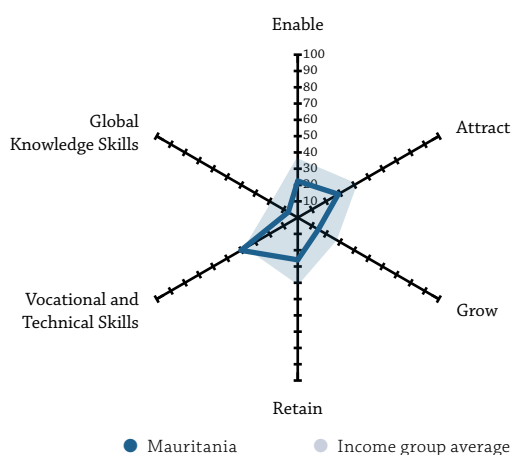
6 GLOBAL KNOWLEDGE SKILLS51.88 19		
6.1 High-Level Skills	41.86	29
6.1.1 Workforce with tertiary education	41.12	38
6.1.2 Population with tertiary education.....	32.79	43
6.1.3 Professionals	48.23	29
6.1.4 Researchers	26.27	35
6.1.5 Senior officials and managers.....	69.48	7
6.1.6 Digital skills	33.30	25
6.2 Talent Impact.....	61.89	14
6.2.1 Innovation output	73.10	13
6.2.2 High-value exports.....	59.92	7
6.2.3 Software development	82.75	25
6.2.4 New business density	55.43	12
6.2.5 Scientific journal articles	38.25	30

MAURITANIA

Key Indicators

Rank (out of 134).....	126
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	4.74

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE.....22.44	127
1.1	Regulatory Landscape.....25.66	114
1.1.1	Government effectiveness.....24.57	112
1.1.2	Rule of law.....27.47	109
1.1.3	Political stability.....43.74	103
1.1.4	Regulatory quality.....14.72	128
1.1.5	Corruption.....17.81	108
1.2	Market Landscape.....18.07	130
1.2.1	Extent of market dominance.....0.00	134
1.2.2	Domestic credit to private sector.....26.75	108
1.2.3	Cluster development.....16.89	127
1.2.4	R&D expenditure.....0.00	115
1.2.5	ICT infrastructure.....n/a	n/a
1.2.6	Urbanisation.....46.73	93
1.3	Business and Labour Landscape.....23.60	129
	Labour Market	
1.3.1	Labour rights.....75.47	67
1.3.2	Labour-employer cooperation.....6.58	131
	Management Practice	
1.3.3	Professional management.....0.00	134
1.3.4	Relationship of pay to productivity.....0.00	134
	Technology Adoption	
1.3.5	Enterprise software.....n/a	n/a
1.3.6	Cloud computing.....n/a	n/a
1.3.7	Firms with website.....35.93	84
2	ATTRACT.....28.70	129
2.1	External Openness.....30.78	109
	Attract Business	
2.1.1	FDI regulatory restrictiveness.....n/a	n/a
2.1.2	Financial globalisation.....46.98	94
	Attract People	
2.1.3	Migrant stock.....37.27	75
2.1.4	International students.....4.99	82
2.1.5	Brain gain.....33.89	100
2.2	Internal Openness.....26.62	133
	Social Inclusion	
2.2.1	Tolerance of minorities.....25.53	101
2.2.2	Tolerance of immigrants.....40.00	102
2.2.3	Social mobility.....38.33	86
	Gender Equality	
2.2.4	Economic empowerment of women.....26.55	128
2.2.5	Gender parity in high-skilled jobs.....n/a	n/a
2.2.6	Leadership opportunities for women.....2.70	132

GDP per capita (PPP US\$).....	6,424.12
GDP (US\$ billions).....	10.38
GTCI score.....	23.09
GTCI score (income group average).....	32.03

	Score	Rank
3	GROW.....14.58	128
3.1	Formal Education.....15.20	109
	Enrolment	
3.1.1	Vocational enrolment.....3.18	108
3.1.2	Tertiary enrolment.....2.98	123
	Quality	
3.1.3	Tertiary education expenditure.....54.65	73
3.1.4	Reading, maths, and science.....n/a	n/a
3.1.5	University ranking.....0.00	76
3.2	Lifelong Learning.....21.60	118
3.2.1	Business masters education.....0.00	57
3.2.2	Prevalence of training in firms.....64.81	19
3.2.3	Employee development.....0.00	134
3.3	Access to Growth Opportunities.....6.93	131
	Empowerment	
3.3.1	Delegation of authority.....10.19	128
3.3.2	Youth inclusion.....0.00	125
	Collaboration	
3.3.3	Use of virtual social networks.....14.01	113
3.3.4	Use of virtual professional networks.....3.51	116

4	RETAIN.....25.93	120
4.1	Sustainability.....21.77	123
4.1.1	Pension coverage.....8.38	117
4.1.2	Social protection.....27.99	110
4.1.3	Brain retention.....14.97	123
4.1.4	Environmental performance.....15.59	125
4.1.5	Vulnerable employment.....41.90	103
4.2	Lifestyle.....30.10	117
4.2.1	Personal rights.....35.04	110
4.2.2	Personal safety.....38.15	109
4.2.3	Physician density.....2.28	116
4.2.4	Sanitation.....44.93	112

5	VOCATIONAL AND TECHNICAL SKILLS.....40.20	84
5.1	Mid-Level Skills.....33.30	74
5.1.1	Workforce with secondary education.....2.52	127
5.1.2	Population with secondary education.....7.56	84
5.1.3	Technicians and associate professionals.....89.83	2
5.1.4	Labour productivity per employee.....n/a	n/a
5.2	Employability.....47.10	100
5.2.1	Ease of finding skilled employees.....79.96	21
5.2.2	Relevance of education system to the economy.....10.16	126
5.2.3	Skills matching.....n/a	n/a
5.2.4	Highly educated unemployment.....51.18	111

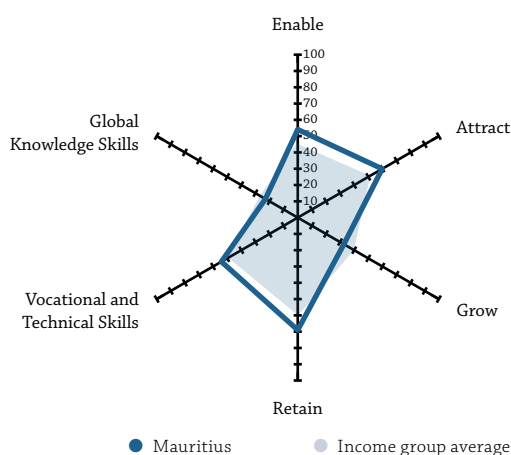
6	GLOBAL KNOWLEDGE SKILLS.....6.70	126
6.1	High-Level Skills.....8.51	114
6.1.1	Workforce with tertiary education.....4.27	122
6.1.2	Population with tertiary education.....1.68	88
6.1.3	Professionals.....0.00	132
6.1.4	Researchers.....n/a	n/a
6.1.5	Senior officials and managers.....28.08	54
6.1.6	Digital skills.....n/a	n/a
6.2	Talent Impact.....4.89	129
6.2.1	Innovation output.....0.00	125
6.2.2	High-value exports.....3.53	98
6.2.3	Software development.....18.86	128
6.2.4	New business density.....1.91	104
6.2.5	Scientific journal articles.....0.14	128

MAURITIUS

Key Indicators

Rank (out of 134).....	51
Income group	Upper-middle income
Regional group	Sub-Saharan Africa
Population (millions)	1.26

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	54.09	39
1.1 Regulatory Landscape.....	66.72	32
1.1.1 Government effectiveness.....	64.04	35
1.1.2 Rule of law.....	68.51	33
1.1.3 Political stability.....	83.43	25
1.1.4 Regulatory quality.....	72.39	26
1.1.5 Corruption.....	45.21	46
1.2 Market Landscape.....	37.83	88
1.2.1 Extent of market dominance.....	21.67	106
1.2.2 Domestic credit to private sector.....	58.71	38
1.2.3 Cluster development.....	48.57	53
1.2.4 R&D expenditure.....	6.67	69
1.2.5 ICT infrastructure.....	59.46	75
1.2.6 Urbanisation.....	31.92	110
1.3 Business and Labour Landscape.....	57.72	27
Labour Market		
1.3.1 Labour rights.....	71.45	74
1.3.2 Labour-employer cooperation.....	51.97	51
Management Practice		
1.3.3 Professional management.....	50.04	68
1.3.4 Relationship of pay to productivity.....	57.13	56
Technology Adoption		
1.3.5 Enterprise software.....	89.48	4
1.3.6 Cloud computing.....	26.23	30
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....	59.85	37
2.1 External Openness.....	53.77	47
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	99.20	2
Attract People		
2.1.3 Migrant stock.....	28.78	91
2.1.4 International students.....	24.42	37
2.1.5 Brain gain.....	62.68	28
2.2 Internal Openness.....	65.92	32
Social Inclusion		
2.2.1 Tolerance of minorities.....	53.19	52
2.2.2 Tolerance of immigrants.....	84.62	16
2.2.3 Social mobility.....	48.29	57
Gender Equality		
2.2.4 Economic empowerment of women.....	84.96	41
2.2.5 Gender parity in high-skilled jobs.....	84.09	41
2.2.6 Leadership opportunities for women.....	40.38	89

GDP per capita (PPP US\$)	26,905.92
GDP (US\$ billions)	12.90
GTCI score.....	48.77
GTCI score (income group average)	43.53

	Score	Rank
3 GROW.....	32.68	78
3.1 Formal Education.....	21.45	88
Enrolment		
3.1.1 Vocational enrolment.....	11.33	81
3.1.2 Tertiary enrolment.....	29.35	69
Quality		
3.1.3 Tertiary education expenditure.....	45.10	88
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	32.24	70
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	64.48	44
3.3 Access to Growth Opportunities.....	44.35	75
Empowerment		
3.3.1 Delegation of authority.....	44.53	70
3.3.2 Youth inclusion.....	28.48	111
Collaboration		
3.3.3 Use of virtual social networks.....	62.84	65
3.3.4 Use of virtual professional networks.....	41.56	28

4 RETAIN.....	68.99	41
4.1 Sustainability.....	64.77	43
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	54.10	61
4.1.3 Brain retention.....	43.14	54
4.1.4 Environmental performance.....	43.90	59
4.1.5 Vulnerable employment.....	82.69	51
4.2 Lifestyle.....	73.20	51
4.2.1 Personal rights.....	79.64	57
4.2.2 Personal safety.....	76.41	44
4.2.3 Physician density.....	41.70	57
4.2.4 Sanitation.....	95.07	62

5 VOCATIONAL AND TECHNICAL SKILLS.....	54.09	52
5.1 Mid-Level Skills.....	52.37	40
5.1.1 Workforce with secondary education.....	80.59	11
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	45.89	44
5.1.4 Labour productivity per employee.....	30.63	57
5.2 Employability.....	55.80	72
5.2.1 Ease of finding skilled employees.....	47.56	85
5.2.2 Relevance of education system to the economy.....	40.95	70
5.2.3 Skills matching.....	64.35	57
5.2.4 Highly educated unemployment.....	70.36	80

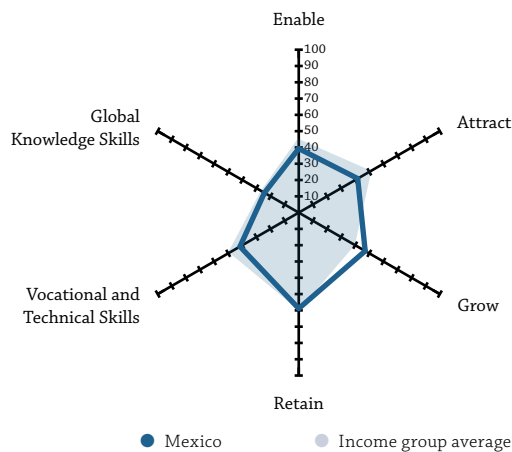
6 GLOBAL KNOWLEDGE SKILLS.....	22.92	77
6.1 High-Level Skills.....	16.54	92
6.1.1 Workforce with tertiary education.....	24.45	74
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	21.03	73
6.1.4 Researchers.....	6.40	66
6.1.5 Senior officials and managers.....	17.20	80
6.1.6 Digital skills.....	13.61	61
6.2 Talent Impact.....	29.31	60
6.2.1 Innovation output.....	38.61	53
6.2.2 High-value exports.....	0.51	123
6.2.3 Software development.....	62.75	59
6.2.4 New business density.....	38.83	20
6.2.5 Scientific journal articles.....	5.85	74

MEXICO

Key Indicators

Rank (out of 134).....	74
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	127.50

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....39.31 81		
1.1 Regulatory Landscape.....	31.80	101
1.1.1 Government effectiveness.....	35.08	88
1.1.2 Rule of law.....	24.03	110
1.1.3 Political stability.....	44.61	101
1.1.4 Regulatory quality.....	36.11	84
1.1.5 Corruption.....	19.18	104
1.2 Market Landscape.....	45.60	68
1.2.1 Extent of market dominance.....	29.29	96
1.2.2 Domestic credit to private sector.....	38.47	86
1.2.3 Cluster development.....	55.12	41
1.2.4 R&D expenditure.....	5.36	76
1.2.5 ICT infrastructure.....	68.20	61
1.2.6 Urbanisation.....	77.18	35
1.3 Business and Labour Landscape.....	40.54	82
Labour Market		
1.3.1 Labour rights.....	73.99	72
1.3.2 Labour-employer cooperation.....	50.34	54
Management Practice		
1.3.3 Professional management.....	39.47	89
1.3.4 Relationship of pay to productivity.....	43.01	103
Technology Adoption		
1.3.5 Enterprise software.....	18.09	84
1.3.6 Cloud computing.....	21.93	38
1.3.7 Firms with website.....	36.91	82
2 ATTRACT.....41.79 98		
2.1 External Openness.....	31.32	104
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	50.27	67
2.1.2 Financial globalisation.....	56.30	80
Attract People		
2.1.3 Migrant stock.....	8.19	126
2.1.4 International students.....	2.90	93
2.1.5 Brain gain.....	38.97	84
2.2 Internal Openness.....	52.26	78
Social Inclusion		
2.2.1 Tolerance of minorities.....	35.11	82
2.2.2 Tolerance of immigrants.....	58.46	66
2.2.3 Social mobility.....	28.13	114
Gender Equality		
2.2.4 Economic empowerment of women.....	84.07	43
2.2.5 Gender parity in high-skilled jobs.....	87.34	35
2.2.6 Leadership opportunities for women.....	20.46	120

GDP per capita (PPP US\$).....	21,512.27
GDP (US\$ billions).....	1,414.19
GTGI score.....	42.17
GTGI score (income group average).....	43.53

	Score	Rank
3 GROW.....47.09 41		
3.1 Formal Education.....	41.96	43
Enrolment		
3.1.1 Vocational enrolment.....	41.29	26
3.1.2 Tertiary enrolment.....	29.03	70
Quality		
3.1.3 Tertiary education expenditure.....	60.91	57
3.1.4 Reading, maths, and science.....	33.50	56
3.1.5 University ranking.....	45.09	24
3.2 Lifelong Learning.....	50.67	29
3.2.1 Business masters education.....	50.40	20
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	50.94	68
3.3 Access to Growth Opportunities.....	48.64	63
Empowerment		
3.3.1 Delegation of authority.....	37.67	88
3.3.2 Youth inclusion.....	65.36	61
Collaboration		
3.3.3 Use of virtual social networks.....	68.77	49
3.3.4 Use of virtual professional networks.....	22.76	58

4 RETAIN.....58.88 65		
4.1 Sustainability.....	55.87	63
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	20.87	118
4.1.3 Brain retention.....	42.63	58
4.1.4 Environmental performance.....	45.08	57
4.1.5 Vulnerable employment.....	70.78	70
4.2 Lifestyle.....	61.88	68
4.2.1 Personal rights.....	70.38	72
4.2.2 Personal safety.....	47.24	92
4.2.3 Physician density.....	38.22	64
4.2.4 Sanitation.....	91.68	72

5 VOCATIONAL AND TECHNICAL SKILLS.....41.64 79		
5.1 Mid-Level Skills.....	27.79	87
5.1.1 Workforce with secondary education.....	32.25	83
5.1.2 Population with secondary education.....	23.51	70
5.1.3 Technicians and associate professionals.....	29.70	65
5.1.4 Labour productivity per employee.....	25.72	64
5.2 Employability.....	55.48	75
5.2.1 Ease of finding skilled employees.....	46.24	87
5.2.2 Relevance of education system to the economy.....	20.42	111
5.2.3 Skills matching.....	68.83	49
5.2.4 Highly educated unemployment.....	86.43	32

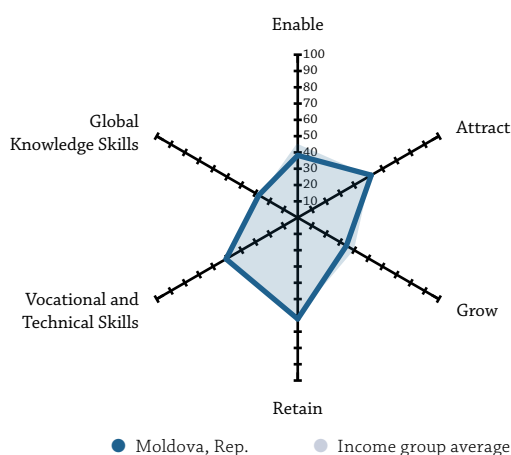
6 GLOBAL KNOWLEDGE SKILLS.....24.31 72		
6.1 High-Level Skills.....	20.79	81
6.1.1 Workforce with tertiary education.....	24.55	73
6.1.2 Population with tertiary education.....	23.71	60
6.1.3 Professionals.....	22.18	72
6.1.4 Researchers.....	3.89	76
6.1.5 Senior officials and managers.....	18.26	74
6.1.6 Digital skills.....	32.15	27
6.2 Talent Impact.....	27.83	65
6.2.1 Innovation output.....	38.61	53
6.2.2 High-value exports.....	35.72	24
6.2.3 Software development.....	54.68	77
6.2.4 New business density.....	4.18	87
6.2.5 Scientific journal articles.....	5.93	72

MOLDOVA, REP.

Key Indicators

Rank (out of 134).....	65
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	2.59

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....38.18	88	
1.1 Regulatory Landscape.....	39.53	79
1.1.1 Government effectiveness.....	32.76	93
1.1.2 Rule of law.....	36.47	82
1.1.3 Political stability.....	55.83	73
1.1.4 Regulatory quality.....	42.46	71
1.1.5 Corruption.....	30.14	71
1.2 Market Landscape.....	32.90	104
1.2.1 Extent of market dominance.....	34.64	81
1.2.2 Domestic credit to private sector.....	32.18	101
1.2.3 Cluster development.....	18.51	124
1.2.4 R&D expenditure.....	4.15	86
1.2.5 ICT infrastructure.....	73.86	46
1.2.6 Urbanisation.....	34.03	108
1.3 Business and Labour Landscape.....	42.11	72
Labour Market		
1.3.1 Labour rights.....	88.07	43
1.3.2 Labour-employer cooperation.....	20.13	118
Management Practice		
1.3.3 Professional management.....	43.04	78
1.3.4 Relationship of pay to productivity.....	48.77	84
Technology Adoption		
1.3.5 Enterprise software.....	26.68	53
1.3.6 Cloud computing.....	23.46	34
1.3.7 Firms with website.....	44.59	71
2 ATTRACT.....52.09	60	
2.1 External Openness.....	48.99	59
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	84.86	40
2.1.2 Financial globalisation.....	58.99	73
Attract People		
2.1.3 Migrant stock.....	28.59	92
2.1.4 International students.....	23.51	40
2.1.5 Brain gain.....	n/a	n/a
2.2 Internal Openness.....	55.20	69
Social Inclusion		
2.2.1 Tolerance of minorities.....	38.30	78
2.2.2 Tolerance of immigrants.....	41.54	98
2.2.3 Social mobility.....	38.50	85
Gender Equality		
2.2.4 Economic empowerment of women.....	82.30	52
2.2.5 Gender parity in high-skilled jobs.....	54.09	99
2.2.6 Leadership opportunities for women.....	76.48	9

GDP per capita (PPP US\$).....	15,238.15
GDP (US\$ billions).....	14.42
GTCI score.....	44.22
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....34.48	72	
3.1 Formal Education.....	31.04	68
Enrolment		
3.1.1 Vocational enrolment.....	20.34	60
3.1.2 Tertiary enrolment.....	41.00	50
Quality		
3.1.3 Tertiary education expenditure.....	57.01	65
3.1.4 Reading, maths, and science.....	36.85	50
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	32.57	68
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	45.42	39
3.2.3 Employee development.....	52.30	66
3.3 Access to Growth Opportunities.....	39.83	79
Empowerment		
3.3.1 Delegation of authority.....	34.00	95
3.3.2 Youth inclusion.....	71.13	51
Collaboration		
3.3.3 Use of virtual social networks.....	41.83	92
3.3.4 Use of virtual professional networks.....	12.34	85

4 RETAIN.....62.19	57	
4.1 Sustainability.....	49.65	79
4.1.1 Pension coverage.....	74.95	69
4.1.2 Social protection.....	51.39	67
4.1.3 Brain retention.....	4.82	129
4.1.4 Environmental performance.....	40.34	63
4.1.5 Vulnerable employment.....	76.75	61
4.2 Lifestyle.....	74.73	45
4.2.1 Personal rights.....	87.31	41
4.2.2 Personal safety.....	70.89	52
4.2.3 Physician density.....	64.06	24
4.2.4 Sanitation.....	76.65	95

5 VOCATIONAL AND TECHNICAL SKILLS.....50.79	60	
5.1 Mid-Level Skills.....	39.18	62
5.1.1 Workforce with secondary education.....	67.17	23
5.1.2 Population with secondary education.....	57.05	27
5.1.3 Technicians and associate professionals.....	16.19	95
5.1.4 Labour productivity per employee.....	16.31	81
5.2 Employability.....	62.41	53
5.2.1 Ease of finding skilled employees.....	14.23	131
5.2.2 Relevance of education system to the economy.....	38.36	76
5.2.3 Skills matching.....	100.00	1
5.2.4 Highly educated unemployment.....	97.04	5

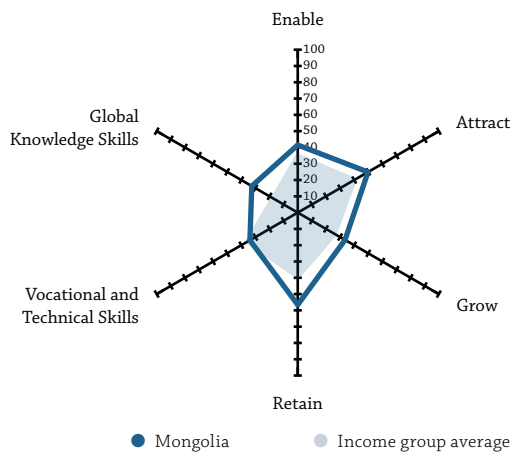
6 GLOBAL KNOWLEDGE SKILLS.....27.57	62	
6.1 High-Level Skills.....	25.02	63
6.1.1 Workforce with tertiary education.....	22.80	77
6.1.2 Population with tertiary education.....	45.02	26
6.1.3 Professionals.....	20.66	74
6.1.4 Researchers.....	8.93	56
6.1.5 Senior officials and managers.....	27.72	56
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	30.11	57
6.2.1 Innovation output.....	42.57	45
6.2.2 High-value exports.....	3.87	94
6.2.3 Software development.....	70.17	46
6.2.4 New business density.....	n/a	n/a
6.2.5 Scientific journal articles.....	3.83	82

MONGOLIA

Key Indicators

Rank (out of 134).....	76
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	3.40

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....41.50	72	
1.1 Regulatory Landscape.....	41.46	73
1.1.1 Government effectiveness.....	31.21	98
1.1.2 Rule of law.....	39.30	74
1.1.3 Political stability.....	78.19	35
1.1.4 Regulatory quality.....	36.69	83
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	32.59	107
1.2.1 Extent of market dominance.....	8.68	128
1.2.2 Domestic credit to private sector.....	45.68	73
1.2.3 Cluster development.....	21.46	120
1.2.4 R&D expenditure.....	2.30	99
1.2.5 ICT infrastructure.....	53.68	86
1.2.6 Urbanisation.....	63.72	58
1.3 Business and Labour Landscape.....	50.45	43
Labour Market		
1.3.1 Labour rights.....	97.99	12
1.3.2 Labour-employer cooperation.....	35.02	96
Management Practice		
1.3.3 Professional management.....	38.97	91
1.3.4 Relationship of pay to productivity.....	48.58	87
Technology Adoption		
1.3.5 Enterprise software.....	80.09	5
1.3.6 Cloud computing.....	20.13	48
1.3.7 Firms with website.....	32.35	90
2 ATTRACT.....49.80	69	
2.1 External Openness.....	41.21	79
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	81.62	43
2.1.2 Financial globalisation.....	80.43	30
Attract People		
2.1.3 Migrant stock.....	12.75	115
2.1.4 International students.....	3.48	88
2.1.5 Brain gain.....	27.74	108
2.2 Internal Openness.....	58.39	56
Social Inclusion		
2.2.1 Tolerance of minorities.....	77.66	13
2.2.2 Tolerance of immigrants.....	30.77	119
2.2.3 Social mobility.....	51.90	50
Gender Equality		
2.2.4 Economic empowerment of women.....	86.73	38
2.2.5 Gender parity in high-skilled jobs.....	57.14	95
2.2.6 Leadership opportunities for women.....	46.18	74

GDP per capita (PPP US\$).....	14,230.23
GDP (US\$ billions).....	16.81
GTCI score.....	41.31
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....33.50	73	
3.1 Formal Education.....	15.12	110
Enrolment		
3.1.1 Vocational enrolment.....	14.98	70
3.1.2 Tertiary enrolment.....	45.50	39
Quality		
3.1.3 Tertiary education expenditure.....	0.00	111
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	43.05	37
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	82.74	4
3.2.3 Employee development.....	46.42	88
3.3 Access to Growth Opportunities.....	42.34	76
Empowerment		
3.3.1 Delegation of authority.....	22.58	113
3.3.2 Youth inclusion.....	65.71	59
Collaboration		
3.3.3 Use of virtual social networks.....	68.39	54
3.3.4 Use of virtual professional networks.....	12.68	82

4 RETAIN.....56.57	73	
4.1 Sustainability.....	45.63	84
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	45.07	77
4.1.3 Brain retention.....	15.19	122
4.1.4 Environmental performance.....	18.14	115
4.1.5 Vulnerable employment.....	49.75	92
4.2 Lifestyle.....	67.51	55
4.2.1 Personal rights.....	85.58	44
4.2.2 Personal safety.....	58.98	69
4.2.3 Physician density.....	60.90	29
4.2.4 Sanitation.....	64.59	105

5 VOCATIONAL AND TECHNICAL SKILLS.....33.91	100	
5.1 Mid-Level Skills.....	24.80	93
5.1.1 Workforce with secondary education.....	48.74	53
5.1.2 Population with secondary education.....	13.69	79
5.1.3 Technicians and associate professionals.....	11.96	104
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	43.01	112
5.2.1 Ease of finding skilled employees.....	0.00	133
5.2.2 Relevance of education system to the economy.....	20.52	110
5.2.3 Skills matching.....	80.27	18
5.2.4 Highly educated unemployment.....	71.27	78

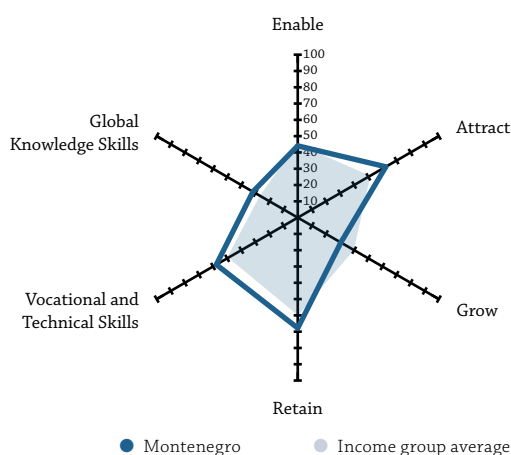
6 GLOBAL KNOWLEDGE SKILLS.....32.56	48	
6.1 High-Level Skills.....	32.05	46
6.1.1 Workforce with tertiary education.....	49.96	25
6.1.2 Population with tertiary education.....	44.98	27
6.1.3 Professionals.....	39.23	44
6.1.4 Researchers.....	3.68	78
6.1.5 Senior officials and managers.....	39.88	30
6.1.6 Digital skills.....	14.55	59
6.2 Talent Impact.....	33.08	49
6.2.1 Innovation output.....	33.33	63
6.2.2 High-value exports.....	39.74	17
6.2.3 Software development.....	57.43	70
6.2.4 New business density.....	32.54	25
6.2.5 Scientific journal articles.....	2.35	91

MONTENEGRO

Key Indicators

Rank (out of 134).....	50
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	0.62

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	44.07	63
1.1 Regulatory Landscape.....	47.13	59
1.1.1 Government effectiveness.....	43.01	68
1.1.2 Rule of law.....	43.72	63
1.1.3 Political stability.....	57.30	71
1.1.4 Regulatory quality.....	53.28	50
1.1.5 Corruption.....	38.36	53
1.2 Market Landscape.....	37.56	89
1.2.1 Extent of market dominance.....	35.53	78
1.2.2 Domestic credit to private sector.....	46.13	69
1.2.3 Cluster development.....	23.52	116
1.2.4 R&D expenditure.....	6.61	70
1.2.5 ICT infrastructure.....	51.73	87
1.2.6 Urbanisation.....	61.84	62
1.3 Business and Labour Landscape.....	47.52	54
Labour Market		
1.3.1 Labour rights.....	83.78	53
1.3.2 Labour-employer cooperation.....	17.62	122
Management Practice		
1.3.3 Professional management.....	33.41	107
1.3.4 Relationship of pay to productivity.....	48.28	89
Technology Adoption		
1.3.5 Enterprise software.....	94.66	2
1.3.6 Cloud computing.....	18.50	56
1.3.7 Firms with website.....	36.39	83
2 ATTRACT.....	62.41	33
2.1 External Openness.....	73.03	14
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	94.59	15
2.1.2 Financial globalisation.....	82.04	28
Attract People		
2.1.3 Migrant stock.....	59.97	39
2.1.4 International students.....	100.00	1
2.1.5 Brain gain.....	28.53	103
2.2 Internal Openness.....	51.78	81
Social Inclusion		
2.2.1 Tolerance of minorities.....	5.32	125
2.2.2 Tolerance of immigrants.....	70.77	43
2.2.3 Social mobility.....	31.84	108
Gender Equality		
2.2.4 Economic empowerment of women.....	78.76	59
2.2.5 Gender parity in high-skilled jobs.....	84.06	42
2.2.6 Leadership opportunities for women.....	39.95	90

GDP per capita (PPP US\$).....	26,984.07
GDP (US\$ billions).....	6.10
GTCI score.....	49.05
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....	30.56	86
3.1 Formal Education.....	30.64	69
Enrolment		
3.1.1 Vocational enrolment.....	50.43	16
3.1.2 Tertiary enrolment.....	36.28	58
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.....	0.00	76
3.2 Lifelong Learning.....	16.62	126
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	15.80	92
3.2.3 Employee development.....	34.05	116
3.3 Access to Growth Opportunities.....	44.42	74
Empowerment		
3.3.1 Delegation of authority.....	26.45	110
3.3.2 Youth inclusion.....	56.16	78
Collaboration		
3.3.3 Use of virtual social networks.....	70.72	42
3.3.4 Use of virtual professional networks.....	24.35	55

4 RETAIN.....	67.80	42
4.1 Sustainability.....	60.79	53
4.1.1 Pension coverage.....	90.51	55
4.1.2 Social protection.....	46.68	73
4.1.3 Brain retention.....	33.97	78
4.1.4 Environmental performance.....	47.46	49
4.1.5 Vulnerable employment.....	85.32	46
4.2 Lifestyle.....	74.81	44
4.2.1 Personal rights.....	80.50	53
4.2.2 Personal safety.....	77.72	42
4.2.3 Physician density.....	43.45	56
4.2.4 Sanitation.....	97.55	51

5 VOCATIONAL AND TECHNICAL SKILLS.....	57.68	42
5.1 Mid-Level Skills.....	64.86	10
5.1.1 Workforce with secondary education.....	76.69	13
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	53.03	34
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	50.49	89
5.2.1 Ease of finding skilled employees.....	40.22	98
5.2.2 Relevance of education system to the economy.....	29.83	93
5.2.3 Skills matching.....	89.59	4
5.2.4 Highly educated unemployment.....	42.33	115

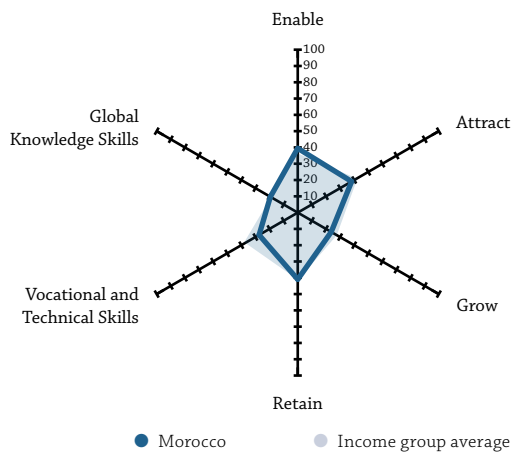
6 GLOBAL KNOWLEDGE SKILLS.....	31.78	49
6.1 High-Level Skills.....	28.92	54
6.1.1 Workforce with tertiary education.....	36.82	45
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	42.94	36
6.1.4 Researchers.....	8.46	59
6.1.5 Senior officials and managers.....	31.21	45
6.1.6 Digital skills.....	25.19	37
6.2 Talent Impact.....	34.63	47
6.2.1 Innovation output.....	29.70	70
6.2.2 High-value exports.....	16.94	50
6.2.3 Software development.....	64.15	55
6.2.4 New business density.....	43.77	18
6.2.5 Scientific journal articles.....	18.61	47

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Key Indicators

Rank (out of 134).....	99
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	37.46

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE	39.46 79
1.1	Regulatory Landscape.....	39.67 78
1.1.1	Government effectiveness	41.20 73
1.1.2	Rule of law	38.56 78
1.1.3	Political stability.....	50.87 86
1.1.4	Regulatory quality.....	38.94 79
1.1.5	Corruption	28.77 74
1.2	Market Landscape.....	49.37 54
1.2.1	Extent of market dominance.....	30.02 93
1.2.2	Domestic credit to private sector	60.69 34
1.2.3	Cluster development.....	35.89 88
1.2.4	R&D expenditure.....	n/a n/a
1.2.5	ICT infrastructure.....	63.44 67
1.2.6	Urbanisation	56.83 71
1.3	Business and Labour Landscape.....	29.33 122
	Labour Market	
1.3.1	Labour rights.....	n/a n/a
1.3.2	Labour-employer cooperation	17.26 123
	Management Practice	
1.3.3	Professional management	28.73 111
1.3.4	Relationship of pay to productivity.....	40.68 110
	Technology Adoption	
1.3.5	Enterprise software	18.64 79
1.3.6	Cloud computing	17.65 60
1.3.7	Firms with website	53.03 60
2	ATTRACT.....	38.18 108
2.1	External Openness	34.14 96
	Attract Business	
2.1.1	FDI regulatory restrictiveness	82.97 41
2.1.2	Financial globalisation	41.81 102
	Attract People	
2.1.3	Migrant stock	5.21 128
2.1.4	International students.....	6.55 79
2.1.5	Brain gain	n/a n/a
2.2	Internal Openness.....	42.22 117
	Social Inclusion	
2.2.1	Tolerance of minorities.....	11.70 120
2.2.2	Tolerance of immigrants	38.46 104
2.2.3	Social mobility	36.27 97
	Gender Equality	
2.2.4	Economic empowerment of women.....	65.49 96
2.2.5	Gender parity in high-skilled jobs	64.56 81
2.2.6	Leadership opportunities for women	36.87 103

GDP per capita (PPP US\$)	9,518.71
GDP (US\$ billions)	134.18
GTCI score.....	31.53
GTCI score (income group average)	32.03

	Score	Rank
3	GROW.....	23.73 109
3.1	Formal Education.....	12.71 119
	Enrolment	
3.1.1	Vocational enrolment	8.92 87
3.1.2	Tertiary enrolment	28.12 73
	Quality	
3.1.3	Tertiary education expenditure	n/a n/a
3.1.4	Reading, maths, and science	13.80 74
3.1.5	University ranking.....	0.00 76
3.2	Lifelong Learning.....	29.84 85
3.2.1	Business masters education.....	13.24 53
3.2.2	Prevalence of training in firms.....	42.23 46
3.2.3	Employee development	34.06 115
3.3	Access to Growth Opportunities	28.63 108
	Empowerment	
3.3.1	Delegation of authority	16.47 123
3.3.2	Youth inclusion	n/a n/a
	Collaboration	
3.3.3	Use of virtual social networks	52.43 83
3.3.4	Use of virtual professional networks	16.99 75

4	RETAIN.....	40.99 101
4.1	Sustainability	30.12 106
4.1.1	Pension coverage	n/a n/a
4.1.2	Social protection.....	22.26 115
4.1.3	Brain retention	32.10 84
4.1.4	Environmental performance	16.10 120
4.1.5	Vulnerable employment	50.02 91
4.2	Lifestyle.....	51.86 88
4.2.1	Personal rights	53.03 97
4.2.2	Personal safety.....	57.51 74
4.2.3	Physician density.....	10.91 96
4.2.4	Sanitation	86.00 80

5	VOCATIONAL AND TECHNICAL SKILLS.....	27.39 117
5.1	Mid-Level Skills	15.03 107
5.1.1	Workforce with secondary education	16.86 111
5.1.2	Population with secondary education	n/a n/a
5.1.3	Technicians and associate professionals.....	12.60 103
5.1.4	Labour productivity per employee.....	15.63 82
5.2	Employability.....	39.75 122
5.2.1	Ease of finding skilled employees	43.58 93
5.2.2	Relevance of education system to the economy	20.10 113
5.2.3	Skills matching	n/a n/a
5.2.4	Highly educated unemployment	55.59 106

6	GLOBAL KNOWLEDGE SKILLS	19.41 90
6.1	High-Level Skills	15.95 95
6.1.1	Workforce with tertiary education	11.07 100
6.1.2	Population with tertiary education.....	n/a n/a
6.1.3	Professionals	9.91 116
6.1.4	Researchers	12.21 49
6.1.5	Senior officials and managers.....	3.16 118
6.1.6	Digital skills	43.42 13
6.2	Talent Impact.....	22.86 77
6.2.1	Innovation output	38.45 55
6.2.2	High-value exports.....	7.77 83
6.2.3	Software development	49.33 93
6.2.4	New business density	12.18 57
6.2.5	Scientific journal articles	6.55 68

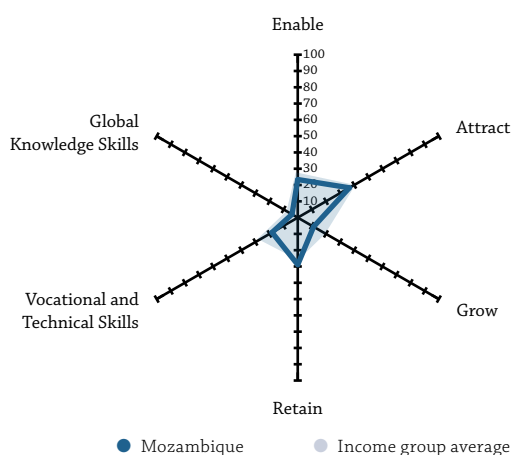
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Key Indicators

Rank (out of 134).....	131
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	32.97

GDP per capita (PPP US\$)	1,467.77
GDP (US\$ billions)	17.85
GTCI score	20.40
GTCI score (income group average)	22.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	23.38	126
1.1 Regulatory Landscape	21.00	123
1.1.1 Government effectiveness	23.78	114
1.1.2 Rule of law	17.78	121
1.1.3 Political stability	29.23	123
1.1.4 Regulatory quality	21.90	114
1.1.5 Corruption	12.33	116
1.2 Market Landscape	20.67	121
1.2.1 Extent of market dominance	13.24	122
1.2.2 Domestic credit to private sector	26.39	109
1.2.3 Cluster development	17.45	126
1.2.4 R&D expenditure	5.67	74
1.2.5 ICT infrastructure	34.88	112
1.2.6 Urbanisation	26.40	116
1.3 Business and Labour Landscape	28.48	127
Labour Market		
1.3.1 Labour rights	75.47	67
1.3.2 Labour-employer cooperation	12.49	126
Management Practice		
1.3.3 Professional management	12.31	130
1.3.4 Relationship of pay to productivity	23.00	130
Technology Adoption		
1.3.5 Enterprise software	21.55	65
1.3.6 Cloud computing	18.95	55
1.3.7 Firms with website	35.58	85
2 ATTRACT	36.59	114
2.1 External Openness	34.62	95
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	71.07	49
Attract People		
2.1.3 Migrant stock	23.13	103
2.1.4 International students	0.97	106
2.1.5 Brain gain	43.31	75
2.2 Internal Openness	38.55	122
Social Inclusion		
2.2.1 Tolerance of minorities	29.79	90
2.2.2 Tolerance of immigrants	63.08	58
2.2.3 Social mobility	4.34	133
Gender Equality		
2.2.4 Economic empowerment of women	75.22	69
2.2.5 Gender parity in high-skilled jobs	38.77	108
2.2.6 Leadership opportunities for women	20.12	121

	Score	Rank
3 GROW	11.22	132
3.1 Formal Education	13.59	117
Enrolment		
3.1.1 Vocational enrolment	9.64	86
3.1.2 Tertiary enrolment	3.94	117
Quality		
3.1.3 Tertiary education expenditure	40.78	93
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	76
3.2 Lifelong Learning	13.44	129
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	22.31	79
3.2.3 Employee development	18.00	131
3.3 Access to Growth Opportunities	6.63	133
Empowerment		
3.3.1 Delegation of authority	12.95	126
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	4.67	125
3.3.4 Use of virtual professional networks	2.27	121

4 RETAIN	28.90	115
4.1 Sustainability	29.70	109
4.1.1 Pension coverage	52.02	81
4.1.2 Social protection	36.51	90
4.1.3 Brain retention	28.76	95
4.1.4 Environmental performance	21.69	106
4.1.5 Vulnerable employment	9.50	127
4.2 Lifestyle	28.10	120
4.2.1 Personal rights	51.77	98
4.2.2 Personal safety	29.06	117
4.2.3 Physician density	0.51	128
4.2.4 Sanitation	31.06	118

5 VOCATIONAL AND TECHNICAL SKILLS	18.22	132
5.1 Mid-Level Skills	5.02	126
5.1.1 Workforce with secondary education	6.88	119
5.1.2 Population with secondary education	7.69	83
5.1.3 Technicians and associate professionals	5.20	124
5.1.4 Labour productivity per employee	0.30	115
5.2 Employability	31.43	130
5.2.1 Ease of finding skilled employees	17.60	128
5.2.2 Relevance of education system to the economy	6.59	130
5.2.3 Skills matching	13.77	106
5.2.4 Highly educated unemployment	87.74	27

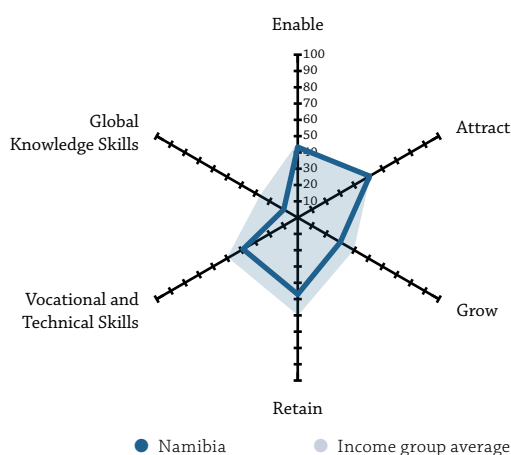
6 GLOBAL KNOWLEDGE SKILLS	4.06	131
6.1 High-Level Skills	1.87	131
6.1.1 Workforce with tertiary education	2.28	127
6.1.2 Population with tertiary education	0.47	92
6.1.3 Professionals	4.71	127
6.1.4 Researchers	0.37	98
6.1.5 Senior officials and managers	1.50	126
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	6.25	127
6.2.1 Innovation output	9.24	114
6.2.2 High-value exports	1.67	113
6.2.3 Software development	19.07	127
6.2.4 New business density	1.09	110
6.2.5 Scientific journal articles	0.18	126

NAMIBIA

Key Indicators

Rank (out of 134).....	93
Income group.....	Upper-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	2.57

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 43.22 68		
1.1 Regulatory Landscape..... 52.10	51	
1.1.1 Government effectiveness..... 44.34	63	
1.1.2 Rule of law..... 54.92	47	
1.1.3 Political stability..... 75.42	41	
1.1.4 Regulatory quality..... 41.98	72	
1.1.5 Corruption..... 43.84	48	
1.2 Market Landscape..... 35.28	94	
1.2.1 Extent of market dominance..... 31.72	89	
1.2.2 Domestic credit to private sector..... 51.94	51	
1.2.3 Cluster development..... 40.93	77	
1.2.4 R&D expenditure..... 6.36	71	
1.2.5 ICT infrastructure..... 38.20	108	
1.2.6 Urbanisation..... 42.55	99	
1.3 Business and Labour Landscape..... 42.27	71	
Labour Market		
1.3.1 Labour rights..... 90.21	38	
1.3.2 Labour-employer cooperation..... 38.76	86	
Management Practice		
1.3.3 Professional management..... 55.01	54	
1.3.4 Relationship of pay to productivity..... 53.14	69	
Technology Adoption		
1.3.5 Enterprise software..... 15.26	97	
1.3.6 Cloud computing..... 8.95	105	
1.3.7 Firms with website..... 34.54	87	
2 ATTRACT..... 50.92 64		
2.1 External Openness..... 42.36	72	
Attract Business		
2.1.1 FDI regulatory restrictiveness..... n/a	n/a	
2.1.2 Financial globalisation..... 60.08	69	
Attract People		
2.1.3 Migrant stock..... 47.38	53	
2.1.4 International students..... 11.62	62	
2.1.5 Brain gain..... 50.35	60	
2.2 Internal Openness..... 59.47	51	
Social Inclusion		
2.2.1 Tolerance of minorities..... 57.45	44	
2.2.2 Tolerance of immigrants..... 50.77	82	
2.2.3 Social mobility..... 36.85	93	
Gender Equality		
2.2.4 Economic empowerment of women..... 80.53	55	
2.2.5 Gender parity in high-skilled jobs..... 87.70	34	
2.2.6 Leadership opportunities for women..... 43.55	81	

GDP per capita (PPP US\$).....	11,205.71
GDP (US\$ billions).....	12.61
GTCI score.....	36.67
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 30.16 89		
3.1 Formal Education..... 29.44	73	
Enrolment		
3.1.1 Vocational enrolment..... n/a	n/a	
3.1.2 Tertiary enrolment..... 17.29	87	
Quality		
3.1.3 Tertiary education expenditure..... 71.02	36	
3.1.4 Reading, maths, and science..... n/a	n/a	
3.1.5 University ranking..... 0.00	76	
3.2 Lifelong Learning..... 28.01	93	
3.2.1 Business masters education..... 0.00	57	
3.2.2 Prevalence of training in firms..... 28.55	65	
3.2.3 Employee development..... 55.49	58	
3.3 Access to Growth Opportunities..... 33.02	97	
Empowerment		
3.3.1 Delegation of authority..... 55.04	43	
3.3.2 Youth inclusion..... 29.80	110	
Collaboration		
3.3.3 Use of virtual social networks..... 24.81	105	
3.3.4 Use of virtual professional networks..... 22.42	60	

4 RETAIN..... 47.09 87		
4.1 Sustainability..... 58.50	57	
4.1.1 Pension coverage..... 100.00	1	
4.1.2 Social protection..... 24.94	114	
4.1.3 Brain retention..... 48.39	45	
4.1.4 Environmental performance..... 54.24	37	
4.1.5 Vulnerable employment..... 64.93	76	
4.2 Lifestyle..... 35.67	110	
4.2.1 Personal rights..... 81.23	51	
4.2.2 Personal safety..... 23.72	122	
4.2.3 Physician density..... 8.81	102	
4.2.4 Sanitation..... 28.93	119	

5 VOCATIONAL AND TECHNICAL SKILLS..... 38.74 91		
5.1 Mid-Level Skills..... 37.13	65	
5.1.1 Workforce with secondary education..... 71.46	20	
5.1.2 Population with secondary education..... n/a	n/a	
5.1.3 Technicians and associate professionals..... 21.98	79	
5.1.4 Labour productivity per employee..... 17.97	78	
5.2 Employability..... 40.35	119	
5.2.1 Ease of finding skilled employees..... 48.80	81	
5.2.2 Relevance of education system to the economy..... 38.31	77	
5.2.3 Skills matching..... 51.51	80	
5.2.4 Highly educated unemployment..... 22.79	119	

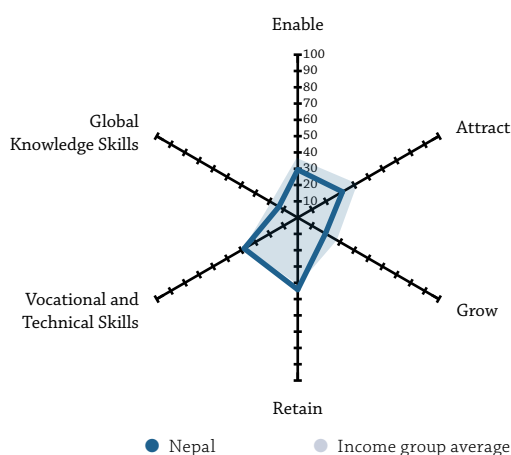
6 GLOBAL KNOWLEDGE SKILLS..... 9.92 115		
6.1 High-Level Skills..... 15.65	96	
6.1.1 Workforce with tertiary education..... 13.76	95	
6.1.2 Population with tertiary education..... n/a	n/a	
6.1.3 Professionals..... 17.60	83	
6.1.4 Researchers..... 1.60	85	
6.1.5 Senior officials and managers..... 29.66	50	
6.1.6 Digital skills..... n/a	n/a	
6.2 Talent Impact..... 4.19	132	
6.2.1 Innovation output..... 10.23	109	
6.2.2 High-value exports..... 0.68	122	
6.2.3 Software development..... n/a	n/a	
6.2.4 New business density..... 2.90	94	
6.2.5 Scientific journal articles..... 2.96	87	

NEPAL

Key Indicators

Rank (out of 134).....	107
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	30.55

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....29.38 116		
1.1 Regulatory Landscape.....	31.65	102
1.1.1 Government effectiveness.....	21.13	121
1.1.2 Rule of law.....	32.89	93
1.1.3 Political stability.....	54.85	77
1.1.4 Regulatory quality.....	26.10	105
1.1.5 Corruption.....	23.29	90
1.2 Market Landscape.....	29.96	113
1.2.1 Extent of market dominance.....	18.11	113
1.2.2 Domestic credit to private sector.....	63.33	29
1.2.3 Cluster development.....	29.27	106
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	31.39	119
1.2.6 Urbanisation.....	7.71	130
1.3 Business and Labour Landscape.....	26.54	128
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	30.56	108
Management Practice		
1.3.3 Professional management.....	30.02	110
1.3.4 Relationship of pay to productivity.....	49.57	78
Technology Adoption		
1.3.5 Enterprise software.....	18.84	77
1.3.6 Cloud computing.....	11.05	90
1.3.7 Firms with website.....	19.18	97
2 ATTRACT.....31.70 124		
2.1 External Openness.....	20.33	129
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	4.98	132
Attract People		
2.1.3 Migrant stock.....	29.00	89
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	27.01	110
2.2 Internal Openness.....	43.06	112
Social Inclusion		
2.2.1 Tolerance of minorities.....	6.38	124
2.2.2 Tolerance of immigrants.....	84.62	16
2.2.3 Social mobility.....	23.56	117
Gender Equality		
2.2.4 Economic empowerment of women.....	72.57	78
2.2.5 Gender parity in high-skilled jobs.....	42.68	105
2.2.6 Leadership opportunities for women.....	28.58	115

GDP per capita (PPP US\$).....	4,725.04
GDP (US\$ billions).....	40.83
GTCI score.....	29.37
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....19.62 120		
3.1 Formal Education.....	8.61	126
Enrolment		
3.1.1 Vocational enrolment.....	1.45	116
3.1.2 Tertiary enrolment.....	10.67	101
Quality		
3.1.3 Tertiary education expenditure.....	22.33	108
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	25.25	104
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	37.18	53
3.2.3 Employee development.....	38.55	108
3.3 Access to Growth Opportunities.....	25.00	116
Empowerment		
3.3.1 Delegation of authority.....	34.19	94
3.3.2 Youth inclusion.....	22.77	117
Collaboration		
3.3.3 Use of virtual social networks.....	37.26	100
3.3.4 Use of virtual professional networks.....	5.78	109

4 RETAIN.....44.20 94		
4.1 Sustainability.....	32.59	102
4.1.1 Pension coverage.....	80.00	67
4.1.2 Social protection.....	29.87	106
4.1.3 Brain retention.....	21.78	108
4.1.4 Environmental performance.....	15.93	122
4.1.5 Vulnerable employment.....	15.36	121
4.2 Lifestyle.....	55.81	81
4.2.1 Personal rights.....	67.28	76
4.2.2 Personal safety.....	68.58	54
4.2.3 Physician density.....	13.07	90
4.2.4 Sanitation.....	74.32	98

5 VOCATIONAL AND TECHNICAL SKILLS.....37.97 94		
5.1 Mid-Level Skills.....	28.98	85
5.1.1 Workforce with secondary education.....	41.04	71
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	16.92	94
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	46.96	101
5.2.1 Ease of finding skilled employees.....	46.17	88
5.2.2 Relevance of education system to the economy.....	36.55	84
5.2.3 Skills matching.....	51.06	81
5.2.4 Highly educated unemployment.....	54.06	108

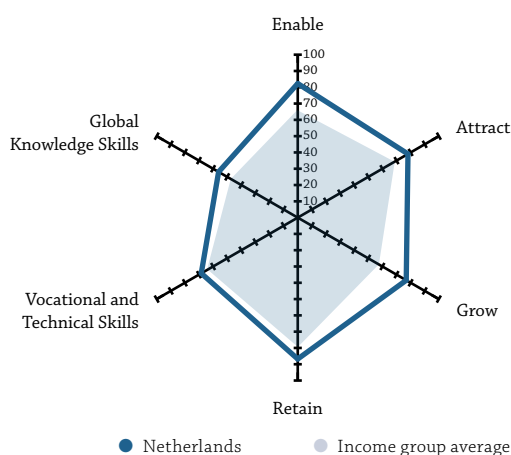
6 GLOBAL KNOWLEDGE SKILLS.....13.35 103		
6.1 High-Level Skills.....	11.77	104
6.1.1 Workforce with tertiary education.....	10.91	101
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	18.06	80
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	6.35	108
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	14.93	105
6.2.1 Innovation output.....	10.73	106
6.2.2 High-value exports.....	1.76	111
6.2.3 Software development.....	53.02	83
6.2.4 New business density.....	7.30	76
6.2.5 Scientific journal articles.....	1.84	94

NETHERLANDS

Key Indicators

Rank (out of 134).....	5
Income group	High income
Regional group	Europe
Population (millions)	17.70

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 82.28	5	
1.1 Regulatory Landscape.....	87.46	9
1.1.1 Government effectiveness.....	86.91	6
1.1.2 Rule of law.....	91.53	10
1.1.3 Political stability.....	84.97	19
1.1.4 Regulatory quality.....	87.58	7
1.1.5 Corruption.....	86.30	8
1.2 Market Landscape.....	73.19	10
1.2.1 Extent of market dominance.....	72.99	12
1.2.2 Domestic credit to private sector.....	64.01	27
1.2.3 Cluster development.....	84.72	6
1.2.4 R&D expenditure.....	42.93	15
1.2.5 ICT infrastructure.....	84.30	17
1.2.6 Urbanisation.....	90.21	11
1.3 Business and Labour Landscape.....	86.20	5
Labour Market		
1.3.1 Labour rights.....	94.91	24
1.3.2 Labour-employer cooperation.....	90.86	4
Management Practice		
1.3.3 Professional management.....	94.49	2
1.3.4 Relationship of pay to productivity.....	80.60	9
Technology Adoption		
1.3.5 Enterprise software.....	77.43	8
1.3.6 Cloud computing.....	69.41	7
1.3.7 Firms with website.....	95.67	3
2 ATTRACT..... 78.12	8	
2.1 External Openness.....	76.93	11
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	97.03	5
2.1.2 Financial globalisation.....	96.47	7
Attract People		
2.1.3 Migrant stock.....	62.21	35
2.1.4 International students.....	48.81	17
2.1.5 Brain gain.....	80.15	10
2.2 Internal Openness.....	79.31	14
Social Inclusion		
2.2.1 Tolerance of minorities.....	68.09	28
2.2.2 Tolerance of immigrants.....	76.92	29
2.2.3 Social mobility.....	79.25	13
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs.....	87.80	32
2.2.6 Leadership opportunities for women.....	63.80	29

GDP per capita (PPP US\$)	69,577.40
GDP (US\$ billions)	991.11
GTCI score.....	74.76
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 76.89	4	
3.1 Formal Education.....	68.16	4
Enrolment		
3.1.1 Vocational enrolment.....	59.89	6
3.1.2 Tertiary enrolment.....	60.62	11
Quality		
3.1.3 Tertiary education expenditure.....	84.89	10
3.1.4 Reading, maths, and science.....	68.74	14
3.1.5 University ranking.....	66.67	12
3.2 Lifelong Learning.....	77.33	7
3.2.1 Business masters education.....	80.76	6
3.2.2 Prevalence of training in firms.....	66.67	15
3.2.3 Employee development.....	84.55	8
3.3 Access to Growth Opportunities.....	85.18	4
Empowerment		
3.3.1 Delegation of authority.....	84.32	6
3.3.2 Youth inclusion.....	95.19	5
Collaboration		
3.3.3 Use of virtual social networks.....	83.07	8
3.3.4 Use of virtual professional networks.....	78.14	6

4 RETAIN..... 86.77	10	
4.1 Sustainability.....	86.75	8
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	88.35	10
4.1.3 Brain retention.....	84.75	6
4.1.4 Environmental performance.....	74.07	11
4.1.5 Vulnerable employment.....	86.58	43
4.2 Lifestyle.....	86.80	15
4.2.1 Personal rights.....	96.65	12
4.2.2 Personal safety.....	92.58	12
4.2.3 Physician density.....	60.51	30
4.2.4 Sanitation.....	97.46	53

5 VOCATIONAL AND TECHNICAL SKILLS..... 68.38	12	
5.1 Mid-Level Skills.....	58.18	27
5.1.1 Workforce with secondary education.....	47.76	56
5.1.2 Population with secondary education.....	51.00	33
5.1.3 Technicians and associate professionals.....	70.96	11
5.1.4 Labour productivity per employee.....	63.01	16
5.2 Employability.....	78.59	13
5.2.1 Ease of finding skilled employees.....	76.69	25
5.2.2 Relevance of education system to the economy.....	75.97	13
5.2.3 Skills matching.....	73.02	43
5.2.4 Highly educated unemployment.....	88.67	23

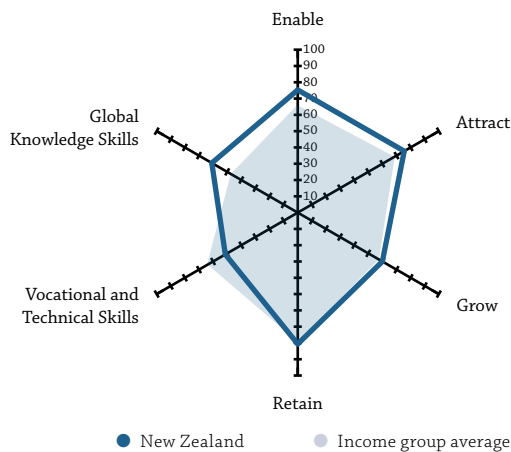
6 GLOBAL KNOWLEDGE SKILLS..... 56.09	16	
6.1 High-Level Skills.....	51.11	18
6.1.1 Workforce with tertiary education.....	50.60	23
6.1.2 Population with tertiary education.....	48.54	20
6.1.3 Professionals.....	72.05	3
6.1.4 Researchers.....	67.81	8
6.1.5 Senior officials and managers.....	31.40	44
6.1.6 Digital skills.....	36.28	20
6.2 Talent Impact.....	61.07	15
6.2.1 Innovation output.....	86.80	6
6.2.2 High-value exports.....	39.61	18
6.2.3 Software development.....	90.34	9
6.2.4 New business density.....	16.96	44
6.2.5 Scientific journal articles.....	71.63	8

NEW ZEALAND

Key Indicators

Rank (out of 134).....	18
Income group	High income
Regional group	Eastern, Southeastern Asia and Oceania
Population (millions)	5.12

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....75.29	11	
1.1 Regulatory Landscape.....	90.73	4
1.1.1 Government effectiveness	76.54	19
1.1.2 Rule of law	93.63	5
1.1.3 Political stability.....	98.58	2
1.1.4 Regulatory quality.....	89.03	6
1.1.5 Corruption	95.89	2
1.2 Market Landscape.....	62.89	26
1.2.1 Extent of market dominance.....	43.68	59
1.2.2 Domestic credit to private sector	74.47	10
1.2.3 Cluster development.....	52.52	44
1.2.4 R&D expenditure.....	26.08	30
1.2.5 ICT infrastructure.....	96.09	5
1.2.6 Urbanisation	84.52	20
1.3 Business and Labour Landscape.....	72.24	9
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	71.79	16
Management Practice		
1.3.3 Professional management	89.88	5
1.3.4 Relationship of pay to productivity.....	51.39	72
Technology Adoption		
1.3.5 Enterprise software	64.57	12
1.3.6 Cloud computing	71.16	6
1.3.7 Firms with website	84.64	14
2 ATTRACT.....75.46	12	
2.1 External Openness	65.01	25
Attract Business		
2.1.1 FDI regulatory restrictiveness	37.57	73
2.1.2 Financial globalisation	69.25	52
Attract People		
2.1.3 Migrant stock	76.51	14
2.1.4 International students.....	64.18	13
2.1.5 Brain gain	77.52	13
2.2 Internal Openness.....	85.91	7
Social Inclusion		
2.2.1 Tolerance of minorities.....	78.72	10
2.2.2 Tolerance of immigrants	95.38	3
2.2.3 Social mobility	83.93	9
Gender Equality		
2.2.4 Economic empowerment of women.....	96.46	15
2.2.5 Gender parity in high-skilled jobs	n/a	n/a
2.2.6 Leadership opportunities for women	75.05	13

GDP per capita (PPP US\$)	51,966.86
GDP (US\$ billions)	247.23
GTCI score.....	67.26
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....59.98	20	
3.1 Formal Education.....	54.49	23
Enrolment		
3.1.1 Vocational enrolment	25.94	49
3.1.2 Tertiary enrolment	52.52	24
Quality		
3.1.3 Tertiary education expenditure	77.26	24
3.1.4 Reading, maths, and science	68.92	12
3.1.5 University ranking.....	47.82	23
3.2 Lifelong Learning.....	51.12	28
3.2.1 Business masters education.....	28.96	37
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	73.29	27
3.3 Access to Growth Opportunities	74.32	13
Empowerment		
3.3.1 Delegation of authority	73.03	13
3.3.2 Youth inclusion	78.72	37
Collaboration		
3.3.3 Use of virtual social networks	76.56	26
3.3.4 Use of virtual professional networks	68.97	12

4 RETAIN.....80.65	22	
4.1 Sustainability	78.90	17
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	80.11	17
4.1.3 Brain retention	65.16	28
4.1.4 Environmental performance	64.07	26
4.1.5 Vulnerable employment	85.17	48
4.2 Lifestyle	82.40	28
4.2.1 Personal rights	97.82	6
4.2.2 Personal safety.....	76.37	45
4.2.3 Physician density.....	55.41	36
4.2.4 Sanitation	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....51.32	57	
5.1 Mid-Level Skills	51.75	42
5.1.1 Workforce with secondary education	51.76	46
5.1.2 Population with secondary education	54.27	30
5.1.3 Technicians and associate professionals.....	n/a	n/a
5.1.4 Labour productivity per employee.....	49.23	33
5.2 Employability.....	50.88	87
5.2.1 Ease of finding skilled employees	57.34	61
5.2.2 Relevance of education system to the economy	44.43	58
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS	60.89	11
6.1 High-Level Skills	53.82	13
6.1.1 Workforce with tertiary education	45.89	33
6.1.2 Population with tertiary education.....	48.44	22
6.1.3 Professionals	n/a	n/a
6.1.4 Researchers	67.14	9
6.1.5 Senior officials and managers.....	n/a	n/a
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	67.96	8
6.2.1 Innovation output	59.57	27
6.2.2 High-value exports.....	29.29	29
6.2.3 Software development	86.14	19
6.2.4 New business density	98.77	4
6.2.5 Scientific journal articles	66.06	11

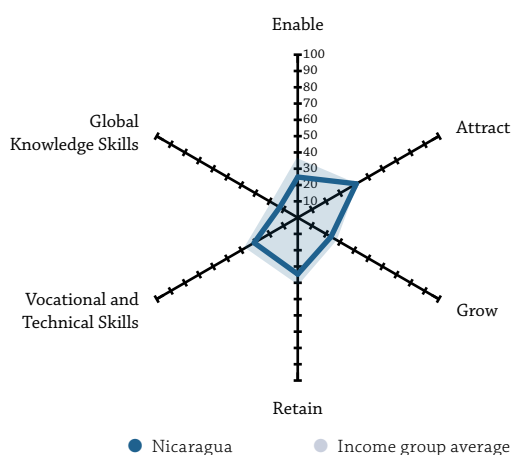
NICARAGUA

Key Indicators

Rank (out of 134).....	115
Income group.....	Lower-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	6.95

GDP per capita (PPP US\$)	6,874.81
GDP (US\$ billions)	15.67
GTCI score.....	28.05
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....24.90 125		
1.1 Regulatory Landscape.....20.61 124		
1.1.1 Government effectiveness.....21.61 119		
1.1.2 Rule of law.....9.25 133		
1.1.3 Political stability.....49.02 91		
1.1.4 Regulatory quality.....20.41 117		
1.1.5 Corruption.....2.74 131		
1.2 Market Landscape.....20.17 123		
1.2.1 Extent of market dominance.....4.70 131		
1.2.2 Domestic credit to private sector.....32.99 98		
1.2.3 Cluster development.....9.05 131		
1.2.4 R&D expenditure.....1.82 104		
1.2.5 ICT infrastructure.....n/a n/a		
1.2.6 Urbanisation.....52.31 78		
1.3 Business and Labour Landscape.....33.91 111		
Labour Market		
1.3.1 Labour rights.....95.17 21		
1.3.2 Labour-employer cooperation.....40.54 75		
Management Practice		
1.3.3 Professional management.....15.53 127		
1.3.4 Relationship of pay to productivity.....31.32 124		
Technology Adoption		
1.3.5 Enterprise software.....12.27 110		
1.3.6 Cloud computing.....7.20 116		
1.3.7 Firms with website.....35.35 86		
2 ATTRACT.....41.49 99		
2.1 External Openness.....28.84 114		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....n/a n/a		
2.1.2 Financial globalisation.....62.59 63		
Attract People		
2.1.3 Migrant stock.....11.76 117		
2.1.4 International students.....n/a n/a		
2.1.5 Brain gain.....12.19 126		
2.2 Internal Openness.....54.13 74		
Social Inclusion		
2.2.1 Tolerance of minorities.....42.55 67		
2.2.2 Tolerance of immigrants.....70.77 43		
2.2.3 Social mobility.....9.41 129		
Gender Equality		
2.2.4 Economic empowerment of women.....80.53 55		
2.2.5 Gender parity in high-skilled jobs.....91.44 21		
2.2.6 Leadership opportunities for women.....30.07 112		

	Score	Rank
3 GROW.....23.56 110		
3.1 Formal Education.....5.91 128		
Enrolment		
3.1.1 Vocational enrolment.....n/a n/a		
3.1.2 Tertiary enrolment.....11.81 100		
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 76		
3.2 Lifelong Learning.....32.83 67		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....70.92 12		
3.2.3 Employee development.....27.56 124		
3.3 Access to Growth Opportunities.....31.94 101		
Empowerment		
3.3.1 Delegation of authority.....22.13 114		
3.3.2 Youth inclusion.....47.85 89		
Collaboration		
3.3.3 Use of virtual social networks.....45.33 89		
3.3.4 Use of virtual professional networks.....12.46 83		

4 RETAIN.....34.71 108		
4.1 Sustainability.....32.43 103		
4.1.1 Pension coverage.....27.88 94		
4.1.2 Social protection.....12.12 128		
4.1.3 Brain retention.....31.59 87		
4.1.4 Environmental performance.....31.86 84		
4.1.5 Vulnerable employment.....58.70 83		
4.2 Lifestyle.....36.98 107		
4.2.1 Personal rights.....19.06 125		
4.2.2 Personal safety.....48.67 89		
4.2.3 Physician density.....9.82 101		
4.2.4 Sanitation.....70.38 99		

5 VOCATIONAL AND TECHNICAL SKILLS.....30.88 111		
5.1 Mid-Level Skills.....26.77 89		
5.1.1 Workforce with secondary education.....26.57 96		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....26.97 72		
5.1.4 Labour productivity per employee.....n/a n/a		
5.2 Employability.....35.00 127		
5.2.1 Ease of finding skilled employees.....26.89 121		
5.2.2 Relevance of education system to the economy.....0.00 134		
5.2.3 Skills matching.....41.46 91		
5.2.4 Highly educated unemployment.....71.65 77		

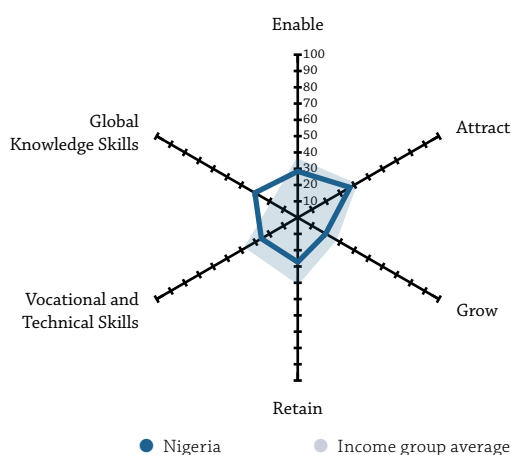
6 GLOBAL KNOWLEDGE SKILLS.....12.75 105		
6.1 High-Level Skills.....11.75 105		
6.1.1 Workforce with tertiary education.....11.85 97		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....11.89 103		
6.1.4 Researchers.....n/a n/a		
6.1.5 Senior officials and managers.....11.52 97		
6.1.6 Digital skills.....n/a n/a		
6.2 Talent Impact.....13.76 111		
6.2.1 Innovation output.....10.40 108		
6.2.2 High-value exports.....2.02 109		
6.2.3 Software development.....42.43 106		
6.2.4 New business density.....n/a n/a		
6.2.5 Scientific journal articles.....0.18 125		

NIGERIA

Key Indicators

Rank (out of 134).....	114
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	218.54

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 28.39 119		
1.1 Regulatory Landscape.....	16.59	127
1.1.1 Government effectiveness.....	18.03	125
1.1.2 Rule of law.....	22.55	113
1.1.3 Political stability.....	14.90	132
1.1.4 Regulatory quality.....	17.90	125
1.1.5 Corruption.....	9.59	123
1.2 Market Landscape.....	33.88	97
1.2.1 Extent of market dominance.....	24.61	101
1.2.2 Domestic credit to private sector.....	14.72	121
1.2.3 Cluster development.....	32.55	97
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	54.63	84
1.2.6 Urbanisation.....	42.90	98
1.3 Business and Labour Landscape.....	34.71	108
Labour Market		
1.3.1 Labour rights.....	61.13	84
1.3.2 Labour-employer cooperation.....	35.21	95
Management Practice		
1.3.3 Professional management.....	61.78	41
1.3.4 Relationship of pay to productivity.....	43.65	102
Technology Adoption		
1.3.5 Enterprise software.....	15.31	96
1.3.6 Cloud computing.....	11.10	88
1.3.7 Firms with website.....	14.79	105
2 ATTRACT..... 37.07 112		
2.1 External Openness.....	31.12	105
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	26.85	122
Attract People		
2.1.3 Migrant stock.....	14.65	112
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	51.88	53
2.2 Internal Openness.....	43.02	113
Social Inclusion		
2.2.1 Tolerance of minorities.....	8.51	122
2.2.2 Tolerance of immigrants.....	61.54	60
2.2.3 Social mobility.....	33.25	103
Gender Equality		
2.2.4 Economic empowerment of women.....	52.21	114
2.2.5 Gender parity in high-skilled jobs.....	66.58	79
2.2.6 Leadership opportunities for women.....	36.02	104

GDP per capita (PPP US\$).....	5,860.29
GDP (US\$ billions).....	477.39
GTCI score.....	28.12
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 19.80 118		
3.1 Formal Education.....	3.57	129
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	7.15	107
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	76
3.2 Lifelong Learning.....	34.16	62
3.2.1 Business masters education.....	18.49	48
3.2.2 Prevalence of training in firms.....	35.59	56
3.2.3 Employee development.....	48.39	82
3.3 Access to Growth Opportunities.....	21.67	123
Empowerment		
3.3.1 Delegation of authority.....	50.67	56
3.3.2 Youth inclusion.....	18.15	121
Collaboration		
3.3.3 Use of virtual social networks.....	11.28	115
3.3.4 Use of virtual professional networks.....	6.57	105

4 RETAIN..... 27.30 118		
4.1 Sustainability.....	16.77	131
4.1.1 Pension coverage.....	10.10	114
4.1.2 Social protection.....	13.08	126
4.1.3 Brain retention.....	30.90	89
4.1.4 Environmental performance.....	15.93	122
4.1.5 Vulnerable employment.....	13.84	124
4.2 Lifestyle.....	37.82	106
4.2.1 Personal rights.....	64.18	78
4.2.2 Personal safety.....	44.46	99
4.2.3 Physician density.....	5.52	106
4.2.4 Sanitation.....	37.12	117

5 VOCATIONAL AND TECHNICAL SKILLS..... 25.77 123		
5.1 Mid-Level Skills.....	18.20	105
5.1.1 Workforce with secondary education.....	39.05	75
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	8.84	111
5.1.4 Labour productivity per employee.....	6.72	98
5.2 Employability.....	33.34	129
5.2.1 Ease of finding skilled employees.....	36.43	106
5.2.2 Relevance of education system to the economy.....	18.72	115
5.2.3 Skills matching.....	31.08	100
5.2.4 Highly educated unemployment.....	47.13	114

6 GLOBAL KNOWLEDGE SKILLS..... 30.38 52		
6.1 High-Level Skills.....	45.78	24
6.1.1 Workforce with tertiary education.....	19.57	83
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	17.78	82
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	100.00	1
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	14.98	104
6.2.1 Innovation output.....	12.05	104
6.2.2 High-value exports.....	11.58	66
6.2.3 Software development.....	45.20	100
6.2.4 New business density.....	4.68	84
6.2.5 Scientific journal articles.....	1.39	97

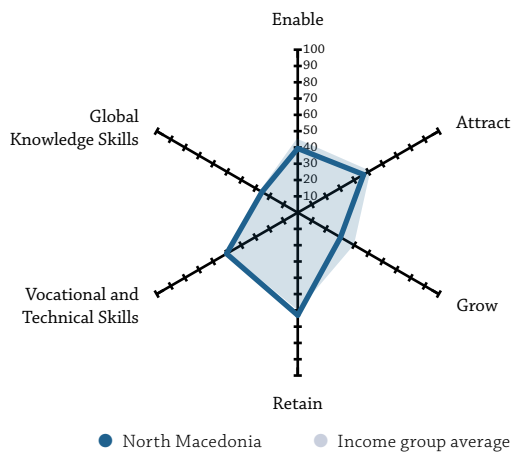
NORTH MACEDONIA

Key Indicators

Rank (out of 134).....	71
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	2.06

GDP per capita (PPP US\$)	20,161.75
GDP (US\$ billions)	13.56
GTCI score.....	42.53
GTCI score (income group average)	43.53

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....39.38	80	
1.1 Regulatory Landscape.....	46.58	60
1.1.1 Government effectiveness.....	40.76	75
1.1.2 Rule of law.....	43.28	64
1.1.3 Political stability.....	64.42	58
1.1.4 Regulatory quality.....	52.92	51
1.1.5 Corruption.....	31.51	68
1.2 Market Landscape.....	32.78	105
1.2.1 Extent of market dominance.....	12.22	125
1.2.2 Domestic credit to private sector.....	49.72	56
1.2.3 Cluster development.....	30.61	102
1.2.4 R&D expenditure.....	6.87	67
1.2.5 ICT infrastructure.....	45.59	100
1.2.6 Urbanisation.....	51.66	80
1.3 Business and Labour Landscape.....	38.78	89
Labour Market		
1.3.1 Labour rights.....	93.03	29
1.3.2 Labour-employer cooperation.....	24.80	116
Management Practice		
1.3.3 Professional management.....	14.42	128
1.3.4 Relationship of pay to productivity.....	40.18	112
Technology Adoption		
1.3.5 Enterprise software.....	28.36	43
1.3.6 Cloud computing.....	8.32	110
1.3.7 Firms with website.....	62.38	45
2 ATTRACT.....46.69	83	
2.1 External Openness.....	45.39	68
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	94.05	16
2.1.2 Financial globalisation.....	61.57	66
Attract People		
2.1.3 Migrant stock.....	45.55	57
2.1.4 International students.....	18.13	48
2.1.5 Brain gain.....	7.66	129
2.2 Internal Openness.....	47.98	96
Social Inclusion		
2.2.1 Tolerance of minorities.....	42.55	67
2.2.2 Tolerance of immigrants.....	35.38	109
2.2.3 Social mobility.....	17.96	125
Gender Equality		
2.2.4 Economic empowerment of women.....	78.76	59
2.2.5 Gender parity in high-skilled jobs.....	95.37	11
2.2.6 Leadership opportunities for women.....	17.84	124

	Score	Rank
3 GROW.....30.30	88	
3.1 Formal Education.....	24.75	82
Enrolment		
3.1.1 Vocational enrolment.....	44.24	23
3.1.2 Tertiary enrolment.....	27.83	74
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	76
3.2 Lifelong Learning.....	26.77	100
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	46.61	37
3.2.3 Employee development.....	33.69	119
3.3 Access to Growth Opportunities.....	39.39	81
Empowerment		
3.3.1 Delegation of authority.....	21.14	116
3.3.2 Youth inclusion.....	62.60	68
Collaboration		
3.3.3 Use of virtual social networks.....	53.31	82
3.3.4 Use of virtual professional networks.....	20.50	68

4 RETAIN.....63.01	55	
4.1 Sustainability.....	51.60	76
4.1.1 Pension coverage.....	68.28	75
4.1.2 Social protection.....	35.65	92
4.1.3 Brain retention.....	8.77	128
4.1.4 Environmental performance.....	60.00	32
4.1.5 Vulnerable employment.....	85.29	47
4.2 Lifestyle.....	74.43	46
4.2.1 Personal rights.....	74.83	65
4.2.2 Personal safety.....	80.20	38
4.2.3 Physician density.....	44.51	53
4.2.4 Sanitation.....	98.16	41

5 VOCATIONAL AND TECHNICAL SKILLS.....50.45	61	
5.1 Mid-Level Skills.....	54.90	33
5.1.1 Workforce with secondary education.....	70.01	22
5.1.2 Population with secondary education.....	65.82	20
5.1.3 Technicians and associate professionals.....	52.70	36
5.1.4 Labour productivity per employee.....	31.07	54
5.2 Employability.....	46.01	103
5.2.1 Ease of finding skilled employees.....	30.30	117
5.2.2 Relevance of education system to the economy.....	22.21	106
5.2.3 Skills matching.....	77.57	26
5.2.4 Highly educated unemployment.....	53.94	109

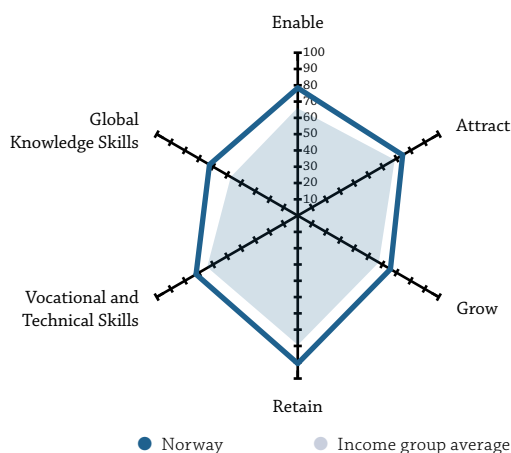
6 GLOBAL KNOWLEDGE SKILLS.....25.35	67	
6.1 High-Level Skills.....	25.32	62
6.1.1 Workforce with tertiary education.....	34.89	51
6.1.2 Population with tertiary education.....	28.12	53
6.1.3 Professionals.....	39.75	43
6.1.4 Researchers.....	8.53	58
6.1.5 Senior officials and managers.....	18.49	73
6.1.6 Digital skills.....	22.13	44
6.2 Talent Impact.....	25.39	70
6.2.1 Innovation output.....	27.39	76
6.2.2 High-value exports.....	7.39	84
6.2.3 Software development.....	65.54	52
6.2.4 New business density.....	18.92	41
6.2.5 Scientific journal articles.....	7.69	65

NORWAY

Key Indicators

Rank (out of 134).....	7
Income group	High income
Regional group	Europe
Population (millions)	5.46

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE	78.35
1.1	Regulatory Landscape.....	90.41
1.1.1	Government effectiveness	88.73
1.1.2	Rule of law	97.13
1.1.3	Political stability.....	89.87
1.1.4	Regulatory quality.....	84.54
1.1.5	Corruption	91.78
1.2	Market Landscape.....	72.69
1.2.1	Extent of market dominance.....	69.33
1.2.2	Domestic credit to private sector	67.81
1.2.3	Cluster development.....	77.01
1.2.4	R&D expenditure.....	42.43
1.2.5	ICT infrastructure.....	99.94
1.2.6	Urbanisation	79.59
1.3	Business and Labour Landscape.....	71.96
	Labour Market	
1.3.1	Labour rights.....	100.00
1.3.2	Labour-employer cooperation	86.63
	Management Practice	
1.3.3	Professional management	86.14
1.3.4	Relationship of pay to productivity.....	70.50
	Technology Adoption	
1.3.5	Enterprise software	39.18
1.3.6	Cloud computing	35.82
1.3.7	Firms with website	85.44
2	ATTRACT.....	74.34
2.1	External Openness	62.34
	Attract Business	
2.1.1	FDI regulatory restrictiveness	78.11
2.1.2	Financial globalisation	88.59
	Attract People	
2.1.3	Migrant stock	64.89
2.1.4	International students.....	15.82
2.1.5	Brain gain	64.29
2.2	Internal Openness.....	86.34
	Social Inclusion	
2.2.1	Tolerance of minorities.....	67.02
2.2.2	Tolerance of immigrants	95.38
2.2.3	Social mobility	84.25
	Gender Equality	
2.2.4	Economic empowerment of women.....	95.58
2.2.5	Gender parity in high-skilled jobs	98.58
2.2.6	Leadership opportunities for women	77.23

GDP per capita (PPP US\$)	114,898.76
GDP (US\$ billions)	579.27
GTCI score.....	73.96
GTCI score (income group average)	61.91

	Score	Rank
3	GROW.....	65.69
3.1	Formal Education.....	60.07
	Enrolment	
3.1.1	Vocational enrolment	44.36
3.1.2	Tertiary enrolment	55.55
	Quality	
3.1.3	Tertiary education expenditure	89.28
3.1.4	Reading, maths, and science	66.48
3.1.5	University ranking.....	44.68
3.2	Lifelong Learning.....	55.72
3.2.1	Business masters education.....	31.77
3.2.2	Prevalence of training in firms.....	n/a
3.2.3	Employee development	79.67
3.3	Access to Growth Opportunities	81.29
	Empowerment	
3.3.1	Delegation of authority	91.78
3.3.2	Youth inclusion	92.23
	Collaboration	
3.3.3	Use of virtual social networks	79.77
3.3.4	Use of virtual professional networks	61.38

4	RETAIN.....	90.77
4.1	Sustainability	88.74
4.1.1	Pension coverage	100.00
4.1.2	Social protection.....	99.73
4.1.3	Brain retention	79.42
4.1.4	Environmental performance	68.47
4.1.5	Vulnerable employment	96.06
4.2	Lifestyle	92.80
4.2.1	Personal rights	96.73
4.2.2	Personal safety.....	94.78
4.2.3	Physician density.....	81.82
4.2.4	Sanitation	97.86

5	VOCATIONAL AND TECHNICAL SKILLS.....	72.06
5.1	Mid-Level Skills	59.77
5.1.1	Workforce with secondary education	43.18
5.1.2	Population with secondary education	55.80
5.1.3	Technicians and associate professionals.....	64.17
5.1.4	Labour productivity per employee.....	75.94
5.2	Employability.....	84.35
5.2.1	Ease of finding skilled employees	92.76
5.2.2	Relevance of education system to the economy	73.20
5.2.3	Skills matching	81.27
5.2.4	Highly educated unemployment	90.19

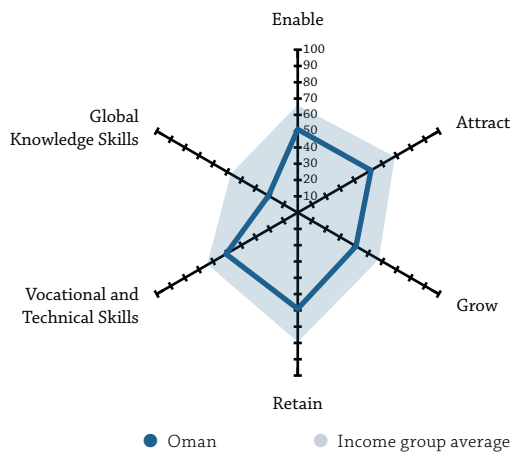
6	GLOBAL KNOWLEDGE SKILLS	62.55
6.1	High-Level Skills	58.61
6.1.1	Workforce with tertiary education	56.14
6.1.2	Population with tertiary education.....	52.02
6.1.3	Professionals	66.13
6.1.4	Researchers	76.85
6.1.5	Senior officials and managers.....	48.43
6.1.6	Digital skills	52.11
6.2	Talent Impact.....	66.49
6.2.1	Innovation output	59.08
6.2.2	High-value exports.....	37.24
6.2.3	Software development	91.79
6.2.4	New business density	52.05
6.2.5	Scientific journal articles	92.29

OMAN

Key Indicators

Rank (out of 134).....	59
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	4.58

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	51.11	49
1.1 Regulatory Landscape.....	51.60	52
1.1.1 Government effectiveness	39.92	77
1.1.2 Rule of law	56.08	46
1.1.3 Political stability.....	74.35	45
1.1.4 Regulatory quality.....	50.66	53
1.1.5 Corruption	36.99	55
1.2 Market Landscape.....	57.15	30
1.2.1 Extent of market dominance.....	62.31	33
1.2.2 Domestic credit to private sector	48.66	60
1.2.3 Cluster development.....	72.77	20
1.2.4 R&D expenditure.....	5.23	78
1.2.5 ICT infrastructure.....	71.70	52
1.2.6 Urbanisation	82.22	24
1.3 Business and Labour Landscape.....	44.60	66
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	71.39	17
Management Practice		
1.3.3 Professional management	64.43	36
1.3.4 Relationship of pay to productivity.....	75.53	18
Technology Adoption		
1.3.5 Enterprise software	6.71	124
1.3.6 Cloud computing	4.92	123
1.3.7 Firms with website	n/a	n/a
2 ATTRACT.....	51.90	61
2.1 External Openness	56.73	38
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	58.09	76
Attract People		
2.1.3 Migrant stock	88.55	6
2.1.4 International students.....	11.03	63
2.1.5 Brain gain	69.24	19
2.2 Internal Openness.....	47.06	104
Social Inclusion		
2.2.1 Tolerance of minorities.....	75.53	19
2.2.2 Tolerance of immigrants	n/a	n/a
2.2.3 Social mobility	59.56	40
Gender Equality		
2.2.4 Economic empowerment of women.....	13.27	131
2.2.5 Gender parity in high-skilled jobs	23.19	117
2.2.6 Leadership opportunities for women	63.76	30

GDP per capita (PPP US\$)	41,724.34
GDP (US\$ billions)	114.67
GTCI score.....	45.82
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	41.30	56
3.1 Formal Education.....	34.95	59
Enrolment		
3.1.1 Vocational enrolment	0.00	120
3.1.2 Tertiary enrolment	30.78	68
Quality		
3.1.3 Tertiary education expenditure	79.33	21
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	29.69	44
3.2 Lifelong Learning.....	31.52	76
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development	63.04	46
3.3 Access to Growth Opportunities	57.44	40
Empowerment		
3.3.1 Delegation of authority	59.97	38
3.3.2 Youth inclusion	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks	85.41	6
3.3.4 Use of virtual professional networks	26.95	51

4 RETAIN.....	59.05	64
4.1 Sustainability	64.21	46
4.1.1 Pension coverage	46.36	82
4.1.2 Social protection.....	80.01	18
4.1.3 Brain retention	77.28	14
4.1.4 Environmental performance	20.00	109
4.1.5 Vulnerable employment	97.37	5
4.2 Lifestyle	53.90	84
4.2.1 Personal rights	34.78	111
4.2.2 Personal safety.....	50.49	88
4.2.3 Physician density.....	31.08	76
4.2.4 Sanitation.....	99.25	26

5 VOCATIONAL AND TECHNICAL SKILLS.....	50.81	59
5.1 Mid-Level Skills	32.56	75
5.1.1 Workforce with secondary education	37.45	76
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals.....	15.46	98
5.1.4 Labour productivity per employee.....	44.76	40
5.2 Employability.....	69.06	32
5.2.1 Ease of finding skilled employees	76.02	26
5.2.2 Relevance of education system to the economy	62.10	31
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	n/a	n/a

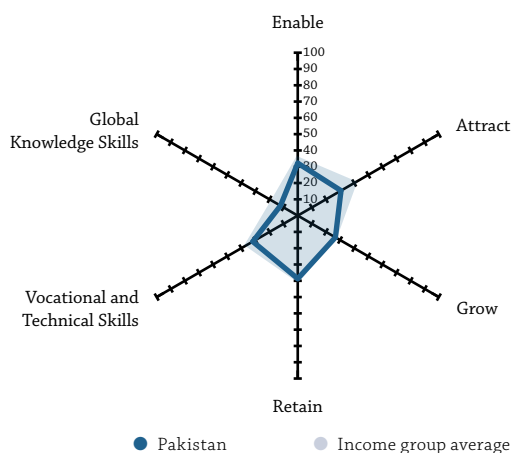
6 GLOBAL KNOWLEDGE SKILLS	20.74	85
6.1 High-Level Skills	23.00	67
6.1.1 Workforce with tertiary education	22.75	78
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals	11.66	105
6.1.4 Researchers	3.15	79
6.1.5 Senior officials and managers.....	41.49	27
6.1.6 Digital skills	35.95	22
6.2 Talent Impact.....	18.47	93
6.2.1 Innovation output	21.45	86
6.2.2 High-value exports.....	11.80	64
6.2.3 Software development	42.04	108
6.2.4 New business density	8.17	71
6.2.5 Scientific journal articles	8.90	62

PAKISTAN

Key Indicators

Rank (out of 134).....	109
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	235.82

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....32.21 111		
1.1 Regulatory Landscape.....	23.16	121
1.1.1 Government effectiveness.....	32.82	92
1.1.2 Rule of law.....	28.36	105
1.1.3 Political stability.....	17.83	131
1.1.4 Regulatory quality.....	23.11	112
1.1.5 Corruption.....	13.70	114
1.2 Market Landscape.....	38.61	85
1.2.1 Extent of market dominance.....	64.10	28
1.2.2 Domestic credit to private sector.....	16.77	119
1.2.3 Cluster development.....	57.31	38
1.2.4 R&D expenditure.....	2.89	96
1.2.5 ICT infrastructure.....	63.44	66
1.2.6 Urbanisation.....	27.18	112
1.3 Business and Labour Landscape.....	34.84	107
Labour Market		
1.3.1 Labour rights.....	37.80	97
1.3.2 Labour-employer cooperation.....	39.01	84
Management Practice		
1.3.3 Professional management.....	36.60	96
1.3.4 Relationship of pay to productivity.....	68.81	31
Technology Adoption		
1.3.5 Enterprise software.....	8.17	117
1.3.6 Cloud computing.....	8.09	112
1.3.7 Firms with website.....	45.40	68
2 ATTRACT.....30.66 125		
2.1 External Openness.....	29.03	113
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	18.08	127
Attract People		
2.1.3 Migrant stock.....	28.99	90
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	40.01	83
2.2 Internal Openness.....	32.29	127
Social Inclusion		
2.2.1 Tolerance of minorities.....	8.51	122
2.2.2 Tolerance of immigrants.....	36.92	108
2.2.3 Social mobility.....	58.35	45
Gender Equality		
2.2.4 Economic empowerment of women.....	41.59	121
2.2.5 Gender parity in high-skilled jobs.....	8.76	125
2.2.6 Leadership opportunities for women.....	39.63	92

GDP per capita (PPP US\$).....	6,437.16
GDP (US\$ billions).....	376.53
GTCI score.....	28.72
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....26.70 99		
3.1 Formal Education.....	23.92	84
Enrolment		
3.1.1 Vocational enrolment.....	4.62	102
3.1.2 Tertiary enrolment.....	7.23	106
Quality		
3.1.3 Tertiary education expenditure.....	53.02	75
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	30.80	43
3.2 Lifelong Learning.....	31.69	74
3.2.1 Business masters education.....	23.56	42
3.2.2 Prevalence of training in firms.....	2.66	101
3.2.3 Employee development.....	68.84	35
3.3 Access to Growth Opportunities.....	24.51	119
Empowerment		
3.3.1 Delegation of authority.....	41.44	78
3.3.2 Youth inclusion.....	23.25	116
Collaboration		
3.3.3 Use of virtual social networks.....	26.65	104
3.3.4 Use of virtual professional networks.....	6.68	104

4 RETAIN.....38.69 105		
4.1 Sustainability.....	35.67	95
4.1.1 Pension coverage.....	16.57	105
4.1.2 Social protection.....	58.07	56
4.1.3 Brain retention.....	53.50	42
4.1.4 Environmental performance.....	9.66	131
4.1.5 Vulnerable employment.....	40.56	105
4.2 Lifestyle.....	41.71	104
4.2.1 Personal rights.....	43.06	105
4.2.2 Personal safety.....	41.96	103
4.2.3 Physician density.....	16.54	87
4.2.4 Sanitation.....	65.31	103

5 VOCATIONAL AND TECHNICAL SKILLS.....31.85 109		
5.1 Mid-Level Skills.....	14.79	108
5.1.1 Workforce with secondary education.....	26.33	97
5.1.2 Population with secondary education.....	8.73	81
5.1.3 Technicians and associate professionals.....	15.20	99
5.1.4 Labour productivity per employee.....	8.89	94
5.2 Employability.....	48.92	94
5.2.1 Ease of finding skilled employees.....	47.68	84
5.2.2 Relevance of education system to the economy.....	49.40	51
5.2.3 Skills matching.....	39.19	96
5.2.4 Highly educated unemployment.....	59.39	99

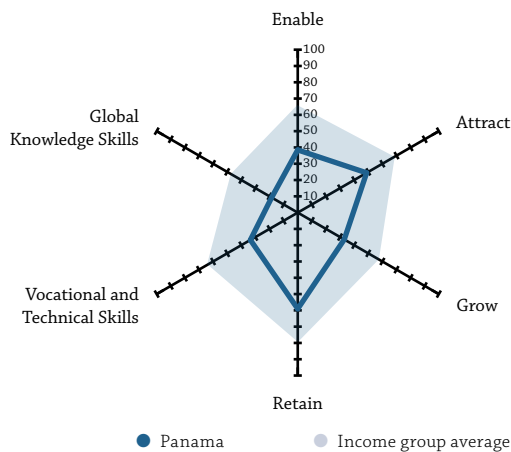
6 GLOBAL KNOWLEDGE SKILLS.....12.23 107		
6.1 High-Level Skills.....	8.73	113
6.1.1 Workforce with tertiary education.....	11.20	99
6.1.2 Population with tertiary education.....	3.47	85
6.1.3 Professionals.....	11.71	104
6.1.4 Researchers.....	4.74	72
6.1.5 Senior officials and managers.....	14.68	87
6.1.6 Digital skills.....	6.56	67
6.2 Talent Impact.....	15.72	100
6.2.1 Innovation output.....	30.36	68
6.2.2 High-value exports.....	2.51	105
6.2.3 Software development.....	42.37	107
6.2.4 New business density.....	0.60	117
6.2.5 Scientific journal articles.....	2.78	88

PANAMA

Key Indicators

Rank (out of 134).....	87
Income group	High income
Regional group	Latin America and the Caribbean
Population (millions)	4.41

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 38.48 87		
1.1 Regulatory Landscape.....	45.46	63
1.1.1 Government effectiveness.....	46.84	60
1.1.2 Rule of law.....	38.72	77
1.1.3 Political stability.....	68.60	50
1.1.4 Regulatory quality.....	47.10	60
1.1.5 Corruption.....	26.03	81
1.2 Market Landscape.....	40.90	75
1.2.1 Extent of market dominance.....	31.84	88
1.2.2 Domestic credit to private sector.....	64.59	24
1.2.3 Cluster development.....	32.92	95
1.2.4 R&D expenditure.....	2.90	94
1.2.5 ICT infrastructure.....	50.29	94
1.2.6 Urbanisation.....	62.87	60
1.3 Business and Labour Landscape.....	29.07	123
Labour Market		
1.3.1 Labour rights.....	39.68	95
1.3.2 Labour-employer cooperation.....	38.49	88
Management Practice		
1.3.3 Professional management.....	36.31	98
1.3.4 Relationship of pay to productivity.....	34.14	121
Technology Adoption		
1.3.5 Enterprise software.....	12.57	109
1.3.6 Cloud computing.....	13.26	78
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT..... 48.81 76		
2.1 External Openness.....	46.95	64
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	75.21	37
Attract People		
2.1.3 Migrant stock.....	49.09	50
2.1.4 International students.....	11.02	64
2.1.5 Brain gain.....	52.47	52
2.2 Internal Openness.....	50.67	85
Social Inclusion		
2.2.1 Tolerance of minorities.....	40.43	76
2.2.2 Tolerance of immigrants.....	43.08	95
2.2.3 Social mobility.....	44.65	68
Gender Equality		
2.2.4 Economic empowerment of women.....	70.80	83
2.2.5 Gender parity in high-skilled jobs.....	59.72	94
2.2.6 Leadership opportunities for women.....	45.36	79

GDP per capita (PPP US\$)	39,279.68
GDP (US\$ billions)	76.52
GTCI score.....	38.56
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 32.96 76		
3.1 Formal Education.....	27.83	76
Enrolment		
3.1.1 Vocational enrolment.....	28.35	44
3.1.2 Tertiary enrolment.....	28.75	71
Quality		
3.1.3 Tertiary education expenditure.....	61.52	54
3.1.4 Reading, maths, and science.....	12.53	75
3.1.5 University ranking.....	8.00	73
3.2 Lifelong Learning.....	20.67	120
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	41.34	102
3.3 Access to Growth Opportunities.....	50.39	54
Empowerment		
3.3.1 Delegation of authority.....	37.31	89
3.3.2 Youth inclusion.....	64.78	64
Collaboration		
3.3.3 Use of virtual social networks.....	59.82	74
3.3.4 Use of virtual professional networks.....	39.64	32

4 RETAIN..... 59.06 63		
4.1 Sustainability.....	52.31	75
4.1.1 Pension coverage.....	63.54	77
4.1.2 Social protection.....	29.27	108
4.1.3 Brain retention.....	60.97	33
4.1.4 Environmental performance.....	53.56	40
4.1.5 Vulnerable employment.....	54.24	90
4.2 Lifestyle.....	65.80	59
4.2.1 Personal rights.....	87.92	40
4.2.2 Personal safety.....	66.96	57
4.2.3 Physician density.....	25.25	81
4.2.4 Sanitation.....	83.06	88

5 VOCATIONAL AND TECHNICAL SKILLS..... 33.56 101		
5.1 Mid-Level Skills.....	29.15	84
5.1.1 Workforce with secondary education.....	43.20	67
5.1.2 Population with secondary education.....	30.56	60
5.1.3 Technicians and associate professionals.....	13.68	101
5.1.4 Labour productivity per employee.....	n/a	n/a
5.2 Employability.....	37.98	124
5.2.1 Ease of finding skilled employees.....	37.83	104
5.2.2 Relevance of education system to the economy.....	8.80	128
5.2.3 Skills matching.....	40.83	92
5.2.4 Highly educated unemployment.....	64.44	92

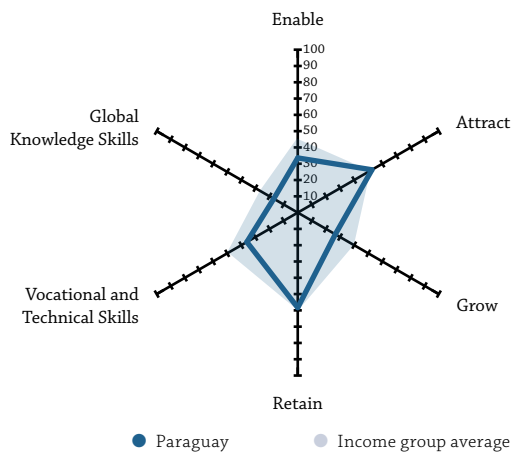
6 GLOBAL KNOWLEDGE SKILLS..... 18.50 93		
6.1 High-Level Skills.....	16.39	93
6.1.1 Workforce with tertiary education.....	21.31	80
6.1.2 Population with tertiary education.....	34.70	41
6.1.3 Professionals.....	11.53	108
6.1.4 Researchers.....	0.33	99
6.1.5 Senior officials and managers.....	14.07	91
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	20.61	86
6.2.1 Innovation output.....	26.73	79
6.2.2 High-value exports.....	0.29	129
6.2.3 Software development.....	50.67	90
6.2.4 New business density.....	23.15	35
6.2.5 Scientific journal articles.....	2.23	92

PARAGUAY

Key Indicators

Rank (out of 134).....	91
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	6.78

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 33.56 104		
1.1 Regulatory Landscape.....	34.14	90
1.1.1 Government effectiveness.....	27.33	104
1.1.2 Rule of law.....	30.47	97
1.1.3 Political stability.....	61.09	64
1.1.4 Regulatory quality.....	36.71	82
1.1.5 Corruption.....	15.07	111
1.2 Market Landscape.....	30.65	112
1.2.1 Extent of market dominance.....	11.51	126
1.2.2 Domestic credit to private sector.....	47.30	66
1.2.3 Cluster development.....	25.90	111
1.2.4 R&D expenditure.....	2.75	97
1.2.5 ICT infrastructure.....	40.62	105
1.2.6 Urbanisation.....	55.83	72
1.3 Business and Labour Landscape.....	35.90	103
Labour Market		
1.3.1 Labour rights.....	56.84	88
1.3.2 Labour-employer cooperation.....	36.50	92
Management Practice		
1.3.3 Professional management.....	21.24	121
1.3.4 Relationship of pay to productivity.....	33.00	123
Technology Adoption		
1.3.5 Enterprise software.....	18.44	80
1.3.6 Cloud computing.....	13.52	77
1.3.7 Firms with website.....	71.74	30
2 ATTRACT..... 52.59 58		
2.1 External Openness.....	39.31	85
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	41.27	103
Attract People		
2.1.3 Migrant stock.....	31.66	82
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	44.99	71
2.2 Internal Openness.....	65.88	33
Social Inclusion		
2.2.1 Tolerance of minorities.....	53.19	52
2.2.2 Tolerance of immigrants.....	87.69	13
2.2.3 Social mobility.....	35.68	99
Gender Equality		
2.2.4 Economic empowerment of women.....	92.04	27
2.2.5 Gender parity in high-skilled jobs.....	98.15	5
2.2.6 Leadership opportunities for women.....	28.53	116

GDP per capita (PPP US\$).....	15,977.31
GDP (US\$ billions).....	41.72
GTCI score.....	37.36
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 26.62 101		
3.1 Formal Education.....	10.43	124
Enrolment		
3.1.1 Vocational enrolment.....	21.96	57
3.1.2 Tertiary enrolment.....	0.00	131
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.....	9.32	70
3.2 Lifelong Learning.....	30.48	82
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	56.44	24
3.2.3 Employee development.....	35.00	113
3.3 Access to Growth Opportunities.....	38.96	85
Empowerment		
3.3.1 Delegation of authority.....	15.51	124
3.3.2 Youth inclusion.....	62.26	69
Collaboration		
3.3.3 Use of virtual social networks.....	61.19	70
3.3.4 Use of virtual professional networks.....	16.87	76

4 RETAIN..... 58.32 67		
4.1 Sustainability.....	47.01	81
4.1.1 Pension coverage.....	86.97	61
4.1.2 Social protection.....	14.76	125
4.1.3 Brain retention.....	40.92	59
4.1.4 Environmental performance.....	37.29	70
4.1.5 Vulnerable employment.....	55.13	89
4.2 Lifestyle.....	69.62	53
4.2.1 Personal rights.....	77.33	60
4.2.2 Personal safety.....	58.11	73
4.2.3 Physician density.....	51.03	43
4.2.4 Sanitation.....	92.01	70

5 VOCATIONAL AND TECHNICAL SKILLS..... 36.05 98		
5.1 Mid-Level Skills.....	30.16	80
5.1.1 Workforce with secondary education.....	36.27	77
5.1.2 Population with secondary education.....	36.56	53
5.1.3 Technicians and associate professionals.....	31.48	61
5.1.4 Labour productivity per employee.....	16.32	80
5.2 Employability.....	41.95	117
5.2.1 Ease of finding skilled employees.....	26.96	119
5.2.2 Relevance of education system to the economy.....	2.27	132
5.2.3 Skills matching.....	55.14	77
5.2.4 Highly educated unemployment.....	83.42	45

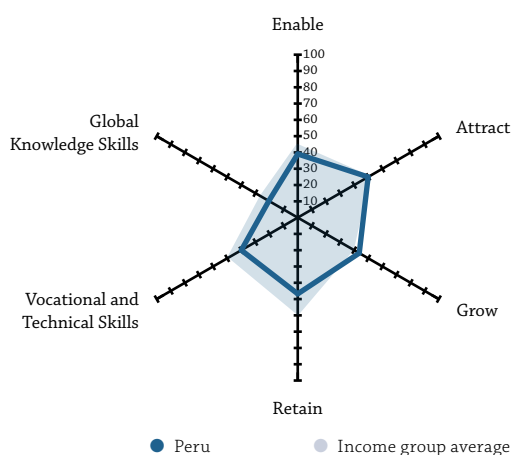
6 GLOBAL KNOWLEDGE SKILLS..... 17.00 99		
6.1 High-Level Skills.....	17.30	89
6.1.1 Workforce with tertiary education.....	17.71	88
6.1.2 Population with tertiary education.....	19.78	65
6.1.3 Professionals.....	18.32	79
6.1.4 Researchers.....	1.37	87
6.1.5 Senior officials and managers.....	29.30	52
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	16.70	95
6.2.1 Innovation output.....	22.11	83
6.2.2 High-value exports.....	13.27	59
6.2.3 Software development.....	47.20	94
6.2.4 New business density.....	0.06	120
6.2.5 Scientific journal articles.....	0.84	107

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Key Indicators

Rank (out of 134).....	82
Income group.....	Upper-middle income
Regional group.....	Latin America and the Caribbean
Population (millions).....	34.05

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....39.05 83		
1.1 Regulatory Landscape.....	37.77	82
1.1.1 Government effectiveness.....	36.36	87
1.1.2 Rule of law.....	31.59	95
1.1.3 Political stability.....	50.62	87
1.1.4 Regulatory quality.....	44.24	67
1.1.5 Corruption.....	26.03	81
1.2 Market Landscape.....	39.53	81
1.2.1 Extent of market dominance.....	24.48	102
1.2.2 Domestic credit to private sector.....	45.78	72
1.2.3 Cluster development.....	28.93	109
1.2.4 R&D expenditure.....	3.03	93
1.2.5 ICT infrastructure.....	60.38	72
1.2.6 Urbanisation.....	74.60	39
1.3 Business and Labour Landscape.....	39.85	84
Labour Market		
1.3.1 Labour rights.....	43.70	91
1.3.2 Labour-employer cooperation.....	32.27	105
Management Practice		
1.3.3 Professional management.....	42.73	80
1.3.4 Relationship of pay to productivity.....	44.45	100
Technology Adoption		
1.3.5 Enterprise software.....	27.75	48
1.3.6 Cloud computing.....	19.06	54
1.3.7 Firms with website.....	68.97	37
2 ATTRACT.....49.89 68		
2.1 External Openness.....	48.33	62
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	80.27	45
2.1.2 Financial globalisation.....	44.24	99
Attract People		
2.1.3 Migrant stock.....	32.50	81
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	36.30	94
2.2 Internal Openness.....	51.44	82
Social Inclusion		
2.2.1 Tolerance of minorities.....	14.89	115
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	44.09	70
Gender Equality		
2.2.4 Economic empowerment of women.....	92.92	25
2.2.5 Gender parity in high-skilled jobs.....	67.97	76
2.2.6 Leadership opportunities for women.....	38.03	97

GDP per capita (PPP US\$).....	15,047.52
GDP (US\$ billions).....	242.63
GTCI score.....	39.96
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....43.59 48		
3.1 Formal Education.....	27.20	78
Enrolment		
3.1.1 Vocational enrolment.....	2.96	110
3.1.2 Tertiary enrolment.....	46.38	33
Quality		
3.1.3 Tertiary education expenditure.....	38.09	96
3.1.4 Reading, maths, and science.....	27.52	65
3.1.5 University ranking.....	21.07	52
3.2 Lifelong Learning.....	55.26	21
3.2.1 Business masters education.....	46.99	22
3.2.2 Prevalence of training in firms.....	82.34	6
3.2.3 Employee development.....	36.46	110
3.3 Access to Growth Opportunities.....	48.30	64
Empowerment		
3.3.1 Delegation of authority.....	36.48	92
3.3.2 Youth inclusion.....	52.03	83
Collaboration		
3.3.3 Use of virtual social networks.....	68.68	50
3.3.4 Use of virtual professional networks.....	36.01	36

4 RETAIN.....46.79 88		
4.1 Sustainability.....	33.81	99
4.1.1 Pension coverage.....	35.05	89
4.1.2 Social protection.....	17.21	123
4.1.3 Brain retention.....	38.98	65
4.1.4 Environmental performance.....	35.42	76
4.1.5 Vulnerable employment.....	42.39	102
4.2 Lifestyle.....	59.77	71
4.2.1 Personal rights.....	79.84	55
4.2.2 Personal safety.....	57.25	75
4.2.3 Physician density.....	25.51	80
4.2.4 Sanitation.....	76.48	96

5 VOCATIONAL AND TECHNICAL SKILLS.....39.98 85		
5.1 Mid-Level Skills.....	35.58	67
5.1.1 Workforce with secondary education.....	53.07	44
5.1.2 Population with secondary education.....	45.20	49
5.1.3 Technicians and associate professionals.....	30.40	63
5.1.4 Labour productivity per employee.....	13.63	85
5.2 Employability.....	44.38	110
5.2.1 Ease of finding skilled employees.....	34.55	110
5.2.2 Relevance of education system to the economy.....	14.19	120
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	84.39	41

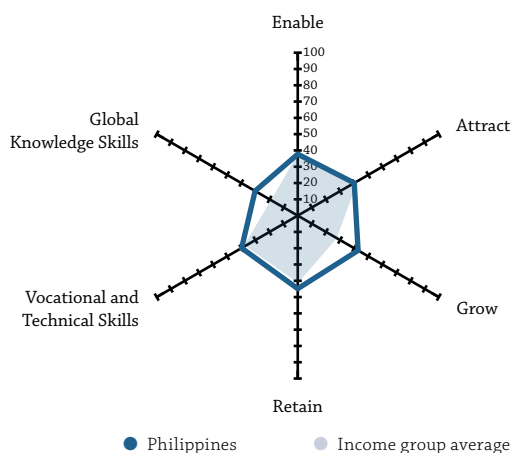
6 GLOBAL KNOWLEDGE SKILLS.....20.49 86		
6.1 High-Level Skills.....	17.61	87
6.1.1 Workforce with tertiary education.....	27.37	68
6.1.2 Population with tertiary education.....	28.05	54
6.1.3 Professionals.....	16.34	86
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	1.74	124
6.1.6 Digital skills.....	14.57	58
6.2 Talent Impact.....	23.36	76
6.2.1 Innovation output.....	25.58	80
6.2.2 High-value exports.....	8.51	78
6.2.3 Software development.....	58.91	68
6.2.4 New business density.....	20.80	37
6.2.5 Scientific journal articles.....	3.01	86

PHILIPPINES

Key Indicators

Rank (out of 134).....	84
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	115.56

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....37.72	89	
1.1 Regulatory Landscape.....	35.17	87
1.1.1 Government effectiveness.....	44.61	61
1.1.2 Rule of law.....	28.23	107
1.1.3 Political stability.....	37.02	113
1.1.4 Regulatory quality.....	44.08	68
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	33.75	98
1.2.1 Extent of market dominance.....	15.85	118
1.2.2 Domestic credit to private sector.....	46.39	68
1.2.3 Cluster development.....	44.06	67
1.2.4 R&D expenditure.....	5.84	73
1.2.5 ICT infrastructure.....	51.43	89
1.2.6 Urbanisation.....	38.95	104
1.3 Business and Labour Landscape.....	44.24	67
Labour Market		
1.3.1 Labour rights.....	46.78	90
1.3.2 Labour-employer cooperation.....	66.28	24
Management Practice		
1.3.3 Professional management.....	53.93	56
1.3.4 Relationship of pay to productivity.....	61.34	43
Technology Adoption		
1.3.5 Enterprise software.....	16.18	92
1.3.6 Cloud computing.....	15.62	68
1.3.7 Firms with website.....	49.56	61
2 ATTRACT.....40.04	102	
2.1 External Openness.....	21.37	128
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	0.00	79
2.1.2 Financial globalisation.....	45.04	97
Attract People		
2.1.3 Migrant stock.....	3.65	129
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	36.78	93
2.2 Internal Openness.....	58.70	54
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.72	92
2.2.2 Tolerance of immigrants.....	63.08	58
2.2.3 Social mobility.....	42.19	74
Gender Equality		
2.2.4 Economic empowerment of women.....	69.91	86
2.2.5 Gender parity in high-skilled jobs.....	73.74	66
2.2.6 Leadership opportunities for women.....	74.58	14

GDP per capita (PPP US\$).....	10,133.20
GDP (US\$ billions).....	404.28
GTCI score.....	39.23
GTCI score (income group average).....	32.03

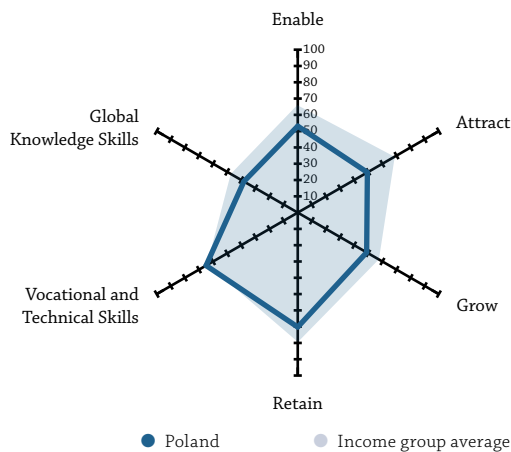
	Score	Rank
3 GROW.....42.77	49	
3.1 Formal Education.....	15.66	107
Enrolment		
3.1.1 Vocational enrolment.....	13.09	75
3.1.2 Tertiary enrolment.....	22.82	81
Quality		
3.1.3 Tertiary education expenditure.....	n/a	n/a
3.1.4 Reading, maths, and science.....	6.37	77
3.1.5 University ranking.....	20.36	54
3.2 Lifelong Learning.....	60.03	16
3.2.1 Business masters education.....	33.98	32
3.2.2 Prevalence of training in firms.....	74.24	9
3.2.3 Employee development.....	71.86	29
3.3 Access to Growth Opportunities.....	52.63	49
Empowerment		
3.3.1 Delegation of authority.....	58.94	39
3.3.2 Youth inclusion.....	65.00	62
Collaboration		
3.3.3 Use of virtual social networks.....	67.90	56
3.3.4 Use of virtual professional networks.....	18.69	69
4 RETAIN.....44.86	92	
4.1 Sustainability.....	36.92	93
4.1.1 Pension coverage.....	19.70	100
4.1.2 Social protection.....	29.99	104
4.1.3 Brain retention.....	55.37	39
4.1.4 Environmental performance.....	16.95	118
4.1.5 Vulnerable employment.....	62.59	81
4.2 Lifestyle.....	52.81	86
4.2.1 Personal rights.....	64.07	80
4.2.2 Personal safety.....	54.85	79
4.2.3 Physician density.....	11.78	95
4.2.4 Sanitation.....	80.52	91
5 VOCATIONAL AND TECHNICAL SKILLS.....39.78	86	
5.1 Mid-Level Skills.....	18.57	103
5.1.1 Workforce with secondary education.....	45.18	62
5.1.2 Population with secondary education.....	1.24	92
5.1.3 Technicians and associate professionals.....	16.07	97
5.1.4 Labour productivity per employee.....	11.80	87
5.2 Employability.....	60.98	58
5.2.1 Ease of finding skilled employees.....	62.30	54
5.2.2 Relevance of education system to the economy.....	38.23	79
5.2.3 Skills matching.....	53.74	79
5.2.4 Highly educated unemployment.....	89.66	18
6 GLOBAL KNOWLEDGE SKILLS.....30.22	54	
6.1 High-Level Skills.....	21.57	73
6.1.1 Workforce with tertiary education.....	30.29	57
6.1.2 Population with tertiary education.....	36.68	39
6.1.3 Professionals.....	12.58	100
6.1.4 Researchers.....	1.87	83
6.1.5 Senior officials and managers.....	48.00	20
6.1.6 Digital skills.....	0.00	81
6.2 Talent Impact.....	38.86	39
6.2.1 Innovation output.....	40.59	50
6.2.2 High-value exports.....	100.00	1
6.2.3 Software development.....	51.76	87
6.2.4 New business density.....	0.97	112
6.2.5 Scientific journal articles.....	0.99	105

POLAND

Key Indicators

Rank (out of 134).....	37
Income group	High income
Regional group.....	Europe
Population (millions)	37.56

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....53.07 43		
1.1 Regulatory Landscape.....	59.54	40
1.1.1 Government effectiveness.....	50.16	51
1.1.2 Rule of law.....	57.11	44
1.1.3 Political stability.....	74.50	44
1.1.4 Regulatory quality.....	63.90	36
1.1.5 Corruption.....	52.05	38
1.2 Market Landscape.....	52.88	41
1.2.1 Extent of market dominance.....	69.09	19
1.2.2 Domestic credit to private sector.....	45.08	75
1.2.3 Cluster development.....	40.91	78
1.2.4 R&D expenditure.....	25.73	31
1.2.5 ICT infrastructure.....	82.41	19
1.2.6 Urbanisation.....	54.07	75
1.3 Business and Labour Landscape.....	46.79	60
Labour Market		
1.3.1 Labour rights.....	85.25	50
1.3.2 Labour-employer cooperation.....	41.54	73
Management Practice		
1.3.3 Professional management.....	38.33	93
1.3.4 Relationship of pay to productivity.....	48.83	83
Technology Adoption		
1.3.5 Enterprise software.....	22.36	59
1.3.6 Cloud computing.....	19.67	50
1.3.7 Firms with website.....	71.52	32
2 ATTRACT.....49.35 73		
2.1 External Openness.....	41.46	77
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	81.62	43
2.1.2 Financial globalisation.....	56.90	79
Attract People		
2.1.3 Migrant stock.....	24.38	98
2.1.4 International students.....	16.13	53
2.1.5 Brain gain.....	28.29	105
2.2 Internal Openness.....	57.23	63
Social Inclusion		
2.2.1 Tolerance of minorities.....	46.81	59
2.2.2 Tolerance of immigrants.....	50.77	82
2.2.3 Social mobility.....	40.44	80
Gender Equality		
2.2.4 Economic empowerment of women.....	91.15	29
2.2.5 Gender parity in high-skilled jobs.....	75.87	60
2.2.6 Leadership opportunities for women.....	38.34	95

GDP per capita (PPP US\$)	43,268.54
GDP (US\$ billions)	688.18
GTCI score.....	54.10
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 48.84 37		
3.1 Formal Education.....	52.99	25
Enrolment		
3.1.1 Vocational enrolment.....	39.43	28
3.1.2 Tertiary enrolment.....	46.21	35
Quality		
3.1.3 Tertiary education expenditure.....	74.20	30
3.1.4 Reading, maths, and science.....	72.98	8
3.1.5 University ranking.....	32.12	41
3.2 Lifelong Learning.....	44.63	36
3.2.1 Business masters education.....	60.61	17
3.2.2 Prevalence of training in firms.....	23.64	75
3.2.3 Employee development.....	49.63	74
3.3 Access to Growth Opportunities.....	48.90	62
Empowerment		
3.3.1 Delegation of authority.....	36.10	93
3.3.2 Youth inclusion.....	80.31	31
Collaboration		
3.3.3 Use of virtual social networks.....	61.87	68
3.3.4 Use of virtual professional networks.....	17.33	74

4 RETAIN..... 70.24 40		
4.1 Sustainability.....	60.40	54
4.1.1 Pension coverage.....	83.43	65
4.1.2 Social protection.....	48.42	70
4.1.3 Brain retention.....	33.71	80
4.1.4 Environmental performance.....	53.73	39
4.1.5 Vulnerable employment.....	82.68	52
4.2 Lifestyle.....	80.08	35
4.2.1 Personal rights.....	76.88	62
4.2.2 Personal safety.....	84.88	29
4.2.3 Physician density.....	58.57	32
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS..... 64.96 22		
5.1 Mid-Level Skills.....	66.38	7
5.1.1 Workforce with secondary education.....	73.25	17
5.1.2 Population with secondary education.....	85.16	5
5.1.3 Technicians and associate professionals.....	57.10	29
5.1.4 Labour productivity per employee.....	50.02	32
5.2 Employability.....	63.54	51
5.2.1 Ease of finding skilled employees.....	51.31	73
5.2.2 Relevance of education system to the economy.....	26.40	98
5.2.3 Skills matching.....	86.86	10
5.2.4 Highly educated unemployment.....	89.59	19

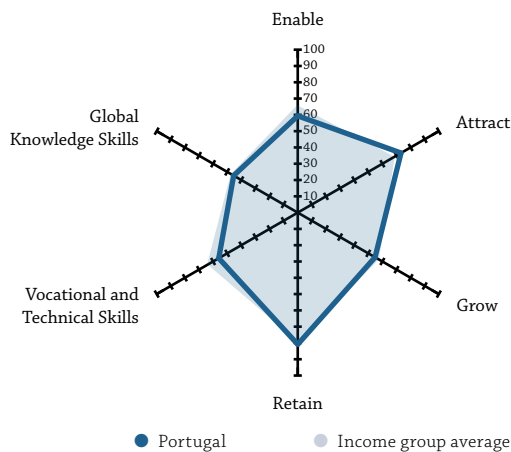
6 GLOBAL KNOWLEDGE SKILLS..... 38.17 36		
6.1 High-Level Skills.....	38.12	35
6.1.1 Workforce with tertiary education.....	45.06	34
6.1.2 Population with tertiary education.....	36.81	38
6.1.3 Professionals.....	48.57	27
6.1.4 Researchers.....	37.66	28
6.1.5 Senior officials and managers.....	39.65	31
6.1.6 Digital skills.....	20.96	49
6.2 Talent Impact.....	38.22	41
6.2.1 Innovation output.....	49.01	35
6.2.2 High-value exports.....	16.94	51
6.2.3 Software development.....	79.97	31
6.2.4 New business density.....	8.87	68
6.2.5 Scientific journal articles.....	36.30	34

PORTUGAL

Key Indicators

Rank (out of 134).....	27
Income group	High income
Regional group	Europe
Population (millions)	10.38

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....59.37 30		
1.1 Regulatory Landscape.....70.36	28	
1.1.1 Government effectiveness.....67.58	31	
1.1.2 Rule of law.....75.42	22	
1.1.3 Political stability.....85.95	16	
1.1.4 Regulatory quality.....61.20	40	
1.1.5 Corruption.....61.64	27	
1.2 Market Landscape.....54.80	34	
1.2.1 Extent of market dominance.....44.72	57	
1.2.2 Domestic credit to private sector.....64.47	25	
1.2.3 Cluster development.....49.24	51	
1.2.4 R&D expenditure.....30.01	24	
1.2.5 ICT infrastructure.....80.39	28	
1.2.6 Urbanisation.....60.00	67	
1.3 Business and Labour Landscape.....52.96	36	
Labour Market		
1.3.1 Labour rights.....93.16	26	
1.3.2 Labour-employer cooperation.....50.31	55	
Management Practice		
1.3.3 Professional management.....52.10	63	
1.3.4 Relationship of pay to productivity.....49.10	82	
Technology Adoption		
1.3.5 Enterprise software.....25.96	54	
1.3.6 Cloud computing.....39.39	21	
1.3.7 Firms with website.....60.69	50	
2 ATTRACT.....73.17 16		
2.1 External Openness.....66.36	21	
Attract Business		
2.1.1 FDI regulatory restrictiveness.....99.19	2	
2.1.2 Financial globalisation.....82.21	27	
Attract People		
2.1.3 Migrant stock.....54.49	47	
2.1.4 International students.....42.36	23	
2.1.5 Brain gain.....53.53	47	
2.2 Internal Openness.....79.99	13	
Social Inclusion		
2.2.1 Tolerance of minorities.....92.55	4	
2.2.2 Tolerance of immigrants.....92.31	8	
2.2.3 Social mobility.....45.88	62	
Gender Equality		
2.2.4 Economic empowerment of women.....100.00	1	
2.2.5 Gender parity in high-skilled jobs.....93.81	17	
2.2.6 Leadership opportunities for women.....55.42	46	

GDP per capita (PPP US\$)	41,451.61
GDP (US\$ billions)	251.95
GTCI score.....	61.60
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....54.80 25		
3.1 Formal Education.....49.75	31	
Enrolment		
3.1.1 Vocational enrolment.....35.04	31	
3.1.2 Tertiary enrolment.....46.14	36	
Quality		
3.1.3 Tertiary education expenditure.....69.67	39	
3.1.4 Reading, maths, and science.....64.46	25	
3.1.5 University ranking.....33.43	39	
3.2 Lifelong Learning.....50.22	30	
3.2.1 Business masters education.....57.56	18	
3.2.2 Prevalence of training in firms.....33.33	60	
3.2.3 Employee development.....59.78	52	
3.3 Access to Growth Opportunities.....64.43	23	
Empowerment		
3.3.1 Delegation of authority.....39.31	84	
3.3.2 Youth inclusion.....89.08	14	
Collaboration		
3.3.3 Use of virtual social networks.....73.74	36	
3.3.4 Use of virtual professional networks.....55.61	20	

4 RETAIN.....80.86 20		
4.1 Sustainability.....68.77	33	
4.1.1 Pension coverage.....90.30	58	
4.1.2 Social protection.....72.16	32	
4.1.3 Brain retention.....38.81	67	
4.1.4 Environmental performance.....53.39	41	
4.1.5 Vulnerable employment.....89.20	30	
4.2 Lifestyle.....92.94	2	
4.2.1 Personal rights.....95.32	19	
4.2.2 Personal safety.....87.92	19	
4.2.3 Physician density.....88.96	2	
4.2.4 Sanitation.....99.57	20	

5 VOCATIONAL AND TECHNICAL SKILLS.....55.98 48		
5.1 Mid-Level Skills.....40.19	61	
5.1.1 Workforce with secondary education.....39.12	74	
5.1.2 Population with secondary education.....28.50	64	
5.1.3 Technicians and associate professionals.....48.62	43	
5.1.4 Labour productivity per employee.....44.52	41	
5.2 Employability.....71.77	26	
5.2.1 Ease of finding skilled employees.....69.69	36	
5.2.2 Relevance of education system to the economy.....63.54	28	
5.2.3 Skills matching.....76.28	30	
5.2.4 Highly educated unemployment.....77.55	62	

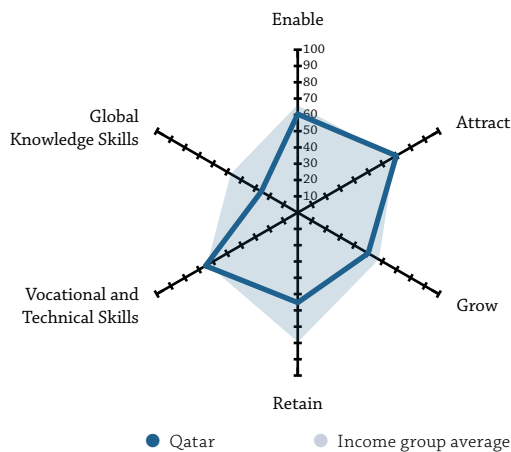
6 GLOBAL KNOWLEDGE SKILLS.....45.41 24		
6.1 High-Level Skills.....42.93	26	
6.1.1 Workforce with tertiary education.....41.61	35	
6.1.2 Population with tertiary education.....28.93	48	
6.1.3 Professionals.....55.03	17	
6.1.4 Researchers.....59.80	15	
6.1.5 Senior officials and managers.....37.34	36	
6.1.6 Digital skills.....34.87	23	
6.2 Talent Impact.....47.90	26	
6.2.1 Innovation output.....57.10	30	
6.2.2 High-value exports.....11.15	67	
6.2.3 Software development.....79.11	33	
6.2.4 New business density.....29.98	27	
6.2.5 Scientific journal articles.....62.15	14	

QATAR

Key Indicators

Rank (out of 134).....	35
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	2.70

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....60.45	28	
1.1 Regulatory Landscape.....	69.47	29
1.1.1 Government effectiveness.....	70.63	27
1.1.2 Rule of law.....	69.96	29
1.1.3 Political stability.....	86.08	14
1.1.4 Regulatory quality.....	64.51	33
1.1.5 Corruption.....	56.16	33
1.2 Market Landscape.....	66.94	21
1.2.1 Extent of market dominance.....	65.23	25
1.2.2 Domestic credit to private sector.....	64.67	23
1.2.3 Cluster development.....	77.87	16
1.2.4 R&D expenditure.....	12.55	51
1.2.5 ICT infrastructure.....	82.30	20
1.2.6 Urbanisation.....	99.01	3
1.3 Business and Labour Landscape.....	44.95	65
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	63.40	34
Management Practice		
1.3.3 Professional management.....	65.52	35
1.3.4 Relationship of pay to productivity.....	81.08	7
Technology Adoption		
1.3.5 Enterprise software.....	8.11	118
1.3.6 Cloud computing.....	6.65	119
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....69.82	23	
2.1 External Openness.....	91.79	3
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	85.90	17
Attract People		
2.1.3 Migrant stock.....	96.92	2
2.1.4 International students.....	100.00	1
2.1.5 Brain gain.....	84.36	8
2.2 Internal Openness.....	47.85	97
Social Inclusion		
2.2.1 Tolerance of minorities.....	70.21	26
2.2.2 Tolerance of immigrants.....	83.08	21
2.2.3 Social mobility.....	67.46	31
Gender Equality		
2.2.4 Economic empowerment of women.....	0.00	134
2.2.5 Gender parity in high-skilled jobs.....	2.42	128
2.2.6 Leadership opportunities for women.....	63.90	28

GDP per capita (PPP US\$)	114,648.03
GDP (US\$ billions)	237.30
GTCI score.....	54.42
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....49.91	32	
3.1 Formal Education.....	23.34	86
Enrolment		
3.1.1 Vocational enrolment.....	1.98	113
3.1.2 Tertiary enrolment.....	15.81	91
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.....	43.16	30
3.2 Lifelong Learning.....	54.74	22
3.2.1 Business masters education.....	30.59	35
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	78.90	18
3.3 Access to Growth Opportunities.....	71.66	16
Empowerment		
3.3.1 Delegation of authority.....	63.21	27
3.3.2 Youth inclusion.....	n/a	n/a
Collaboration		
3.3.3 Use of virtual social networks.....	91.54	3
3.3.4 Use of virtual professional networks.....	60.25	17

4 RETAIN.....55.21	77	
4.1 Sustainability.....	55.51	65
4.1.1 Pension coverage.....	18.59	101
4.1.2 Social protection.....	59.19	53
4.1.3 Brain retention.....	75.88	17
4.1.4 Environmental performance.....	23.90	100
4.1.5 Vulnerable employment.....	100.00	1
4.2 Lifestyle.....	54.91	82
4.2.1 Personal rights.....	15.52	128
4.2.2 Personal safety.....	64.97	59
4.2.3 Physician density.....	39.15	62
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....65.31	21	
5.1 Mid-Level Skills.....	44.86	57
5.1.1 Workforce with secondary education.....	24.32	100
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	34.01	55
5.1.4 Labour productivity per employee.....	76.26	5
5.2 Employability.....	85.76	3
5.2.1 Ease of finding skilled employees.....	91.11	8
5.2.2 Relevance of education system to the economy.....	80.41	9
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	n/a	n/a

6 GLOBAL KNOWLEDGE SKILLS.....25.84	65	
6.1 High-Level Skills.....	21.49	74
6.1.1 Workforce with tertiary education.....	33.71	54
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	25.42	66
6.1.4 Researchers.....	10.25	51
6.1.5 Senior officials and managers.....	14.47	89
6.1.6 Digital skills.....	23.62	38
6.2 Talent Impact.....	30.19	56
6.2.1 Innovation output.....	31.35	66
6.2.2 High-value exports.....	2.92	101
6.2.3 Software development.....	50.42	92
6.2.4 New business density.....	34.45	23
6.2.5 Scientific journal articles.....	31.80	35

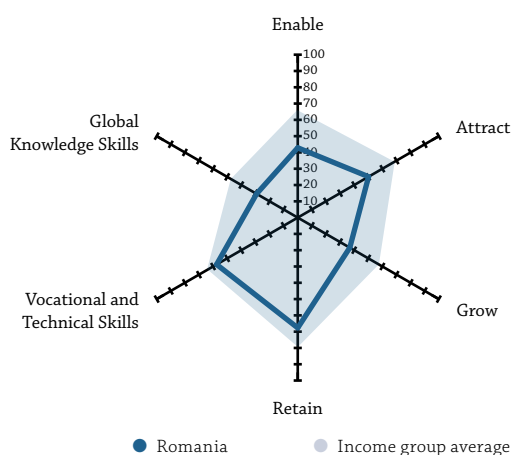
ROMANIA

Key Indicators

Rank (out of 134).....	54
Income group	High income
Regional group	Europe
Population (millions)	18.96

GDP per capita (PPP US\$)	41,887.92
GDP (US\$ billions)	301.26
GTCI score	47.39
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	42.87	69
1.1 Regulatory Landscape.....	52.13	50
1.1.1 Government effectiveness	39.63	78
1.1.2 Rule of law	56.13	45
1.1.3 Political stability.....	75.03	43
1.1.4 Regulatory quality.....	50.12	54
1.1.5 Corruption	39.73	51
1.2 Market Landscape.....	39.32	82
1.2.1 Extent of market dominance.....	39.16	64
1.2.2 Domestic credit to private sector	29.36	104
1.2.3 Cluster development.....	41.06	76
1.2.4 R&D expenditure.....	8.52	61
1.2.5 ICT infrastructure.....	70.72	56
1.2.6 Urbanisation	47.10	91
1.3 Business and Labour Landscape.....	37.15	97
Labour Market		
1.3.1 Labour rights.....	73.86	73
1.3.2 Labour-employer cooperation	34.41	99
Management Practice		
1.3.3 Professional management	37.48	95
1.3.4 Relationship of pay to productivity.....	46.02	97
Technology Adoption		
1.3.5 Enterprise software	9.58	114
1.3.6 Cloud computing	10.48	95
1.3.7 Firms with website	48.20	63
2 ATTRACT.....	50.20	66
2.1 External Openness	42.28	73
Attract Business		
2.1.1 FDI regulatory restrictiveness	97.03	5
2.1.2 Financial globalisation	51.27	89
Attract People		
2.1.3 Migrant stock	26.11	94
2.1.4 International students.....	21.77	43
2.1.5 Brain gain	15.22	122
2.2 Internal Openness.....	58.13	57
Social Inclusion		
2.2.1 Tolerance of minorities.....	42.55	67
2.2.2 Tolerance of immigrants	35.38	109
2.2.3 Social mobility	48.55	55
Gender Equality		
2.2.4 Economic empowerment of women.....	86.73	38
2.2.5 Gender parity in high-skilled jobs	78.71	56
2.2.6 Leadership opportunities for women	56.83	42

	Score	Rank
3 GROW.....	36.89	67
3.1 Formal Education.....	39.73	49
Enrolment		
3.1.1 Vocational enrolment	43.62	24
3.1.2 Tertiary enrolment	34.67	65
Quality		
3.1.3 Tertiary education expenditure	73.40	31
3.1.4 Reading, maths, and science	38.25	48
3.1.5 University ranking.....	8.71	72
3.2 Lifelong Learning.....	23.69	113
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	22.05	80
3.2.3 Employee development	49.03	79
3.3 Access to Growth Opportunities	47.25	67
Empowerment		
3.3.1 Delegation of authority	38.38	86
3.3.2 Youth inclusion	63.65	67
Collaboration		
3.3.3 Use of virtual social networks	62.84	65
3.3.4 Use of virtual professional networks	24.12	56

4 RETAIN.....	67.67	43
4.1 Sustainability	61.01	52
4.1.1 Pension coverage	93.43	50
4.1.2 Social protection.....	61.14	49
4.1.3 Brain retention	2.80	131
4.1.4 Environmental performance	62.88	29
4.1.5 Vulnerable employment	84.79	49
4.2 Lifestyle	74.34	47
4.2.1 Personal rights	82.96	48
4.2.2 Personal safety.....	81.84	35
4.2.3 Physician density.....	46.74	49
4.2.4 Sanitation	85.80	82

5 VOCATIONAL AND TECHNICAL SKILLS.....	57.50	45
5.1 Mid-Level Skills	57.12	29
5.1.1 Workforce with secondary education	79.37	12
5.1.2 Population with secondary education	76.85	13
5.1.3 Technicians and associate professionals.....	28.48	69
5.1.4 Labour productivity per employee.....	43.79	42
5.2 Employability.....	57.88	69
5.2.1 Ease of finding skilled employees	24.27	123
5.2.2 Relevance of education system to the economy	28.60	96
5.2.3 Skills matching	93.36	3
5.2.4 Highly educated unemployment	85.30	35

6 GLOBAL KNOWLEDGE SKILLS	29.18	56
6.1 High-Level Skills	20.55	82
6.1.1 Workforce with tertiary education	28.21	63
6.1.2 Population with tertiary education.....	18.92	66
6.1.3 Professionals	41.93	39
6.1.4 Researchers	10.83	50
6.1.5 Senior officials and managers.....	17.88	75
6.1.6 Digital skills	5.53	68
6.2 Talent Impact.....	37.80	42
6.2.1 Innovation output	43.89	42
6.2.2 High-value exports.....	20.64	42
6.2.3 Software development	71.35	42
6.2.4 New business density	34.28	24
6.2.5 Scientific journal articles	18.84	46

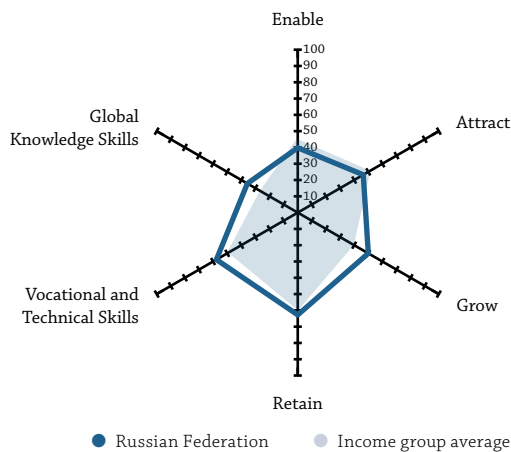
RUSSIAN FEDERATION

Key Indicators

Rank (out of 134)	52
Income group	Upper-middle income
Regional group	Europe
Population (millions)	143.56

GDP per capita (PPP US\$)	36,484.68
GDP (US\$ billions)	2,240.42
GTCI score	48.72
GTCI score (income group average)	43.53

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	39.78	78
1.1 Regulatory Landscape	29.69	107
1.1.1 Government effectiveness	38.47	82
1.1.2 Rule of law	22.17	115
1.1.3 Political stability	44.39	102
1.1.4 Regulatory quality	28.35	100
1.1.5 Corruption	15.07	111
1.2 Market Landscape	52.21	43
1.2.1 Extent of market dominance	38.17	69
1.2.2 Domestic credit to private sector	49.11	58
1.2.3 Cluster development	45.82	60
1.2.4 R&D expenditure	20.27	38
1.2.5 ICT infrastructure	89.27	10
1.2.6 Urbanisation	70.60	46
1.3 Business and Labour Landscape	37.44	96
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	39.80	81
Management Practice		
1.3.3 Professional management	40.88	84
1.3.4 Relationship of pay to productivity	65.73	38
Technology Adoption		
1.3.5 Enterprise software	10.13	113
1.3.6 Cloud computing	11.48	85
1.3.7 Firms with website	56.61	54
2 ATTRACT	46.43	84
2.1 External Openness	39.81	83
Attract Business		
2.1.1 FDI regulatory restrictiveness	30.27	75
2.1.2 Financial globalisation	56.94	78
Attract People		
2.1.3 Migrant stock	52.29	48
2.1.4 International students	17.97	49
2.1.5 Brain gain	41.58	78
2.2 Internal Openness	53.04	76
Social Inclusion		
2.2.1 Tolerance of minorities	17.02	110
2.2.2 Tolerance of immigrants	72.31	39
2.2.3 Social mobility	45.18	66
Gender Equality		
2.2.4 Economic empowerment of women	61.95	106
2.2.5 Gender parity in high-skilled jobs	60.99	92
2.2.6 Leadership opportunities for women	60.82	33

	Score	Rank
3 GROW	50.00	31
3.1 Formal Education	50.32	28
Enrolment		
3.1.1 Vocational enrolment	22.27	56
3.1.2 Tertiary enrolment	56.86	15
Quality		
3.1.3 Tertiary education expenditure	63.43	51
3.1.4 Reading, maths, and science	60.11	30
3.1.5 University ranking	48.94	20
3.2 Lifelong Learning	34.08	63
3.2.1 Business masters education	46.18	23
3.2.2 Prevalence of training in firms	10.49	94
3.2.3 Employee development	45.56	91
3.3 Access to Growth Opportunities	65.59	22
Empowerment		
3.3.1 Delegation of authority	50.74	55
3.3.2 Youth inclusion	77.36	40
Collaboration		
3.3.3 Use of virtual social networks	68.68	50
3.3.4 Use of virtual professional networks	n/a	n/a

4 RETAIN	62.75	56
4.1 Sustainability	66.43	38
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	62.94	47
4.1.3 Brain retention	43.38	51
4.1.4 Environmental performance	31.53	85
4.1.5 Vulnerable employment	94.30	11
4.2 Lifestyle	59.06	74
4.2.1 Personal rights	41.61	106
4.2.2 Personal safety	45.89	94
4.2.3 Physician density	60.38	31
4.2.4 Sanitation	88.35	78

5 VOCATIONAL AND TECHNICAL SKILLS	57.66	43
5.1 Mid-Level Skills	48.91	49
5.1.1 Workforce with secondary education	56.18	41
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	57.05	30
5.1.4 Labour productivity per employee	33.52	51
5.2 Employability	66.40	37
5.2.1 Ease of finding skilled employees	66.38	45
5.2.2 Relevance of education system to the economy	39.61	74
5.2.3 Skills matching	74.52	39
5.2.4 Highly educated unemployment	85.11	36

6 GLOBAL KNOWLEDGE SKILLS	35.71	41
6.1 High-Level Skills	38.11	36
6.1.1 Workforce with tertiary education	61.91	9
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	60.32	12
6.1.4 Researchers	31.15	31
6.1.5 Senior officials and managers	32.81	39
6.1.6 Digital skills	4.37	74
6.2 Talent Impact	33.31	48
6.2.1 Innovation output	41.09	49
6.2.2 High-value exports	17.38	48
6.2.3 Software development	72.44	40
6.2.4 New business density	12.27	56
6.2.5 Scientific journal articles	23.35	43

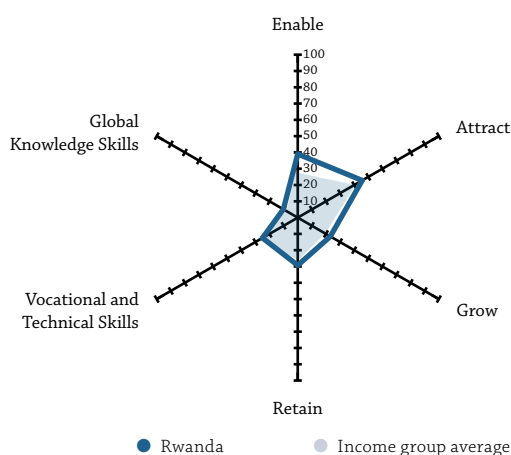
RWANDA

Key Indicators

Rank (out of 134).....	110
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	13.78

GDP per capita (PPP US\$)	2,792.42
GDP (US\$ billions)	13.31
GTCI score	28.71
GTCI score (income group average)	22.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	39.02	84
1.1 Regulatory Landscape	51.23	53
1.1.1 Government effectiveness	49.37	54
1.1.2 Rule of law	50.64	55
1.1.3 Political stability	65.60	53
1.1.4 Regulatory quality	43.94	69
1.1.5 Corruption	46.58	43
1.2 Market Landscape	26.35	119
1.2.1 Extent of market dominance	36.61	75
1.2.2 Domestic credit to private sector	27.42	107
1.2.3 Cluster development	42.42	72
1.2.4 R&D expenditure	13.99	47
1.2.5 ICT infrastructure	32.88	116
1.2.6 Urbanisation	4.81	132
1.3 Business and Labour Landscape	39.49	85
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	52.08	49
Management Practice		
1.3.3 Professional management	68.45	29
1.3.4 Relationship of pay to productivity	55.23	62
Technology Adoption		
1.3.5 Enterprise software	14.45	102
1.3.6 Cloud computing	8.47	109
1.3.7 Firms with website	38.24	77
2 ATTRACT	45.66	87
2.1 External Openness	37.13	88
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	29.58	119
Attract People		
2.1.3 Migrant stock	39.01	71
2.1.4 International students	15.16	55
2.1.5 Brain gain	64.79	26
2.2 Internal Openness	54.18	73
Social Inclusion		
2.2.1 Tolerance of minorities	4.26	128
2.2.2 Tolerance of immigrants	41.54	98
2.2.3 Social mobility	58.79	41
Gender Equality		
2.2.4 Economic empowerment of women	76.99	67
2.2.5 Gender parity in high-skilled jobs	67.66	77
2.2.6 Leadership opportunities for women	75.81	10

	Score	Rank
3 GROW	23.11	113
3.1 Formal Education	17.04	104
Enrolment		
3.1.1 Vocational enrolment	19.57	62
3.1.2 Tertiary enrolment	3.91	118
Quality		
3.1.3 Tertiary education expenditure	44.68	89
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	76
3.2 Lifelong Learning	29.76	87
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	42.50	45
3.2.3 Employee development	46.77	86
3.3 Access to Growth Opportunities	22.53	122
Empowerment		
3.3.1 Delegation of authority	47.22	65
3.3.2 Youth inclusion	36.71	102
Collaboration		
3.3.3 Use of virtual social networks	2.92	128
3.3.4 Use of virtual professional networks	3.28	118

4 RETAIN	29.28	113
4.1 Sustainability	31.20	105
4.1.1 Pension coverage	2.12	128
4.1.2 Social protection	31.40	102
4.1.3 Brain retention	71.59	20
4.1.4 Environmental performance	23.56	101
4.1.5 Vulnerable employment	27.32	112
4.2 Lifestyle	27.36	122
4.2.1 Personal rights	31.43	114
4.2.2 Personal safety	11.16	131
4.2.3 Physician density	1.07	124
4.2.4 Sanitation	65.78	101

5 VOCATIONAL AND TECHNICAL SKILLS	24.96	126
5.1 Mid-Level Skills	6.48	123
5.1.1 Workforce with secondary education	12.94	114
5.1.2 Population with secondary education	6.25	85
5.1.3 Technicians and associate professionals	3.56	128
5.1.4 Labour productivity per employee	3.16	105
5.2 Employability	43.45	111
5.2.1 Ease of finding skilled employees	40.77	97
5.2.2 Relevance of education system to the economy	42.92	64
5.2.3 Skills matching	64.23	58
5.2.4 Highly educated unemployment	25.88	118

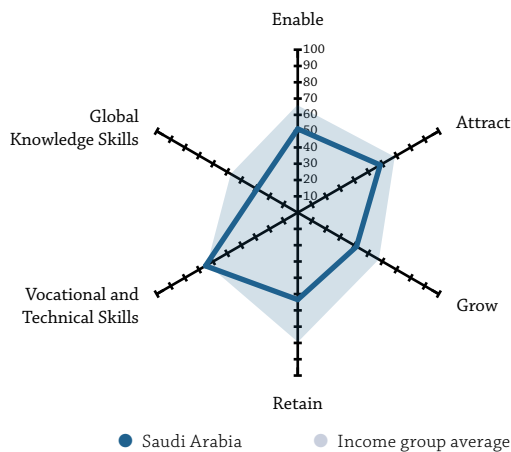
6 GLOBAL KNOWLEDGE SKILLS	10.20	114
6.1 High-Level Skills	5.52	120
6.1.1 Workforce with tertiary education	8.35	108
6.1.2 Population with tertiary education	3.46	86
6.1.3 Professionals	10.55	113
6.1.4 Researchers	0.55	95
6.1.5 Senior officials and managers	4.70	112
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	14.89	107
6.2.1 Innovation output	7.76	119
6.2.2 High-value exports	9.05	76
6.2.3 Software development	45.13	101
6.2.4 New business density	11.77	58
6.2.5 Scientific journal articles	0.72	111

SAUDI ARABIA

Key Indicators

Rank (out of 134).....	48
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	36.41

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	51.40	48
1.1 Regulatory Landscape.....	50.01	54
1.1.1 Government effectiveness	55.24	45
1.1.2 Rule of law	51.41	53
1.1.3 Political stability.....	45.99	97
1.1.4 Regulatory quality.....	50.81	52
1.1.5 Corruption	46.58	43
1.2 Market Landscape.....	63.31	25
1.2.1 Extent of market dominance.....	78.50	7
1.2.2 Domestic credit to private sector	47.96	64
1.2.3 Cluster development.....	83.74	8
1.2.4 R&D expenditure.....	8.50	62
1.2.5 ICT infrastructure.....	79.75	31
1.2.6 Urbanisation	81.42	25
1.3 Business and Labour Landscape.....	40.89	80
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation	57.20	42
Management Practice		
1.3.3 Professional management	63.86	37
1.3.4 Relationship of pay to productivity.....	83.44	5
Technology Adoption		
1.3.5 Enterprise software	7.81	120
1.3.6 Cloud computing	10.38	97
1.3.7 Firms with website	22.64	95
2 ATTRACT.....	58.42	39
2.1 External Openness	59.21	32
Attract Business		
2.1.1 FDI regulatory restrictiveness	44.05	70
2.1.2 Financial globalisation	64.34	58
Attract People		
2.1.3 Migrant stock	86.05	8
2.1.4 International students.....	14.52	56
2.1.5 Brain gain	87.11	6
2.2 Internal Openness.....	57.63	59
Social Inclusion		
2.2.1 Tolerance of minorities.....	4.26	128
2.2.2 Tolerance of immigrants	80.00	26
2.2.3 Social mobility	76.06	17
Gender Equality		
2.2.4 Economic empowerment of women.....	59.29	108
2.2.5 Gender parity in high-skilled jobs	n/a	n/a
2.2.6 Leadership opportunities for women	68.53	20

GDP per capita (PPP US\$)	59,065.00
GDP (US\$ billions)	1,108.15
GTCI score.....	49.86
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....	41.65	53
3.1 Formal Education.....	29.51	72
Enrolment		
3.1.1 Vocational enrolment	0.59	118
3.1.2 Tertiary enrolment	46.83	31
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.....	49.34	19
3.2 Lifelong Learning.....	37.86	51
3.2.1 Business masters education.....	37.61	29
3.2.2 Prevalence of training in firms.....	0.00	102
3.2.3 Employee development	75.99	24
3.3 Access to Growth Opportunities	57.59	38
Empowerment		
3.3.1 Delegation of authority	63.75	24
3.3.2 Youth inclusion	60.72	71
Collaboration		
3.3.3 Use of virtual social networks	74.51	34
3.3.4 Use of virtual professional networks	31.37	42

4 RETAIN.....	53.41	80
4.1 Sustainability	62.39	48
4.1.1 Pension coverage	32.53	91
4.1.2 Social protection.....	82.54	13
4.1.3 Brain retention	68.06	24
4.1.4 Environmental performance	32.20	83
4.1.5 Vulnerable employment	96.63	7
4.2 Lifestyle	44.43	101
4.2.1 Personal rights	0.00	133
4.2.2 Personal safety.....	33.94	112
4.2.3 Physician density.....	43.78	54
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS.....	65.36	20
5.1 Mid-Level Skills	53.51	37
5.1.1 Workforce with secondary education	n/a	n/a
5.1.2 Population with secondary education	33.58	57
5.1.3 Technicians and associate professionals.....	53.03	35
5.1.4 Labour productivity per employee.....	73.92	9
5.2 Employability.....	77.22	17
5.2.1 Ease of finding skilled employees	93.70	5
5.2.2 Relevance of education system to the economy	81.89	6
5.2.3 Skills matching	n/a	n/a
5.2.4 Highly educated unemployment	56.07	105

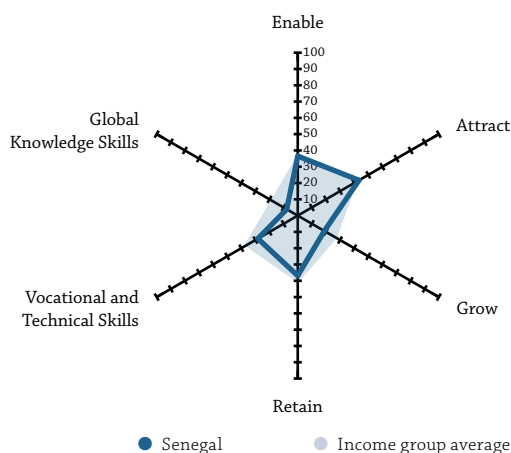
6 GLOBAL KNOWLEDGE SKILLS	28.93	57
6.1 High-Level Skills	37.89	37
6.1.1 Workforce with tertiary education	n/a	n/a
6.1.2 Population with tertiary education.....	50.21	18
6.1.3 Professionals	24.74	68
6.1.4 Researchers	7.93	61
6.1.5 Senior officials and managers.....	17.13	81
6.1.6 Digital skills	89.45	2
6.2 Talent Impact.....	19.98	87
6.2.1 Innovation output	31.68	64
6.2.2 High-value exports.....	0.92	120
6.2.3 Software development	45.99	96
6.2.4 New business density	3.31	90
6.2.5 Scientific journal articles	17.99	48

SENEGAL

Key Indicators

Rank (out of 134).....	112
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	17.32

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	36.55	94
1.1 Regulatory Landscape.....	41.27	74
1.1.1 Government effectiveness	44.34	64
1.1.2 Rule of law	35.61	85
1.1.3 Political stability.....	56.76	72
1.1.4 Regulatory quality.....	34.00	87
1.1.5 Corruption	35.62	58
1.2 Market Landscape.....	32.17	108
1.2.1 Extent of market dominance.....	33.39	85
1.2.2 Domestic credit to private sector	36.00	90
1.2.3 Cluster development.....	29.02	108
1.2.4 R&D expenditure.....	10.61	55
1.2.5 ICT infrastructure.....	44.73	101
1.2.6 Urbanisation	39.28	103
1.3 Business and Labour Landscape.....	36.20	99
Labour Market		
1.3.1 Labour rights.....	77.88	62
1.3.2 Labour-employer cooperation	35.45	94
Management Practice		
1.3.3 Professional management	35.18	102
1.3.4 Relationship of pay to productivity.....	42.85	104
Technology Adoption		
1.3.5 Enterprise software	20.84	67
1.3.6 Cloud computing	12.22	82
1.3.7 Firms with website	29.00	92
2 ATTRACT.....	43.39	93
2.1 External Openness	41.55	76
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	58.74	75
Attract People		
2.1.3 Migrant stock	25.70	97
2.1.4 International students.....	22.84	41
2.1.5 Brain gain	58.93	34
2.2 Internal Openness.....	45.22	109
Social Inclusion		
2.2.1 Tolerance of minorities.....	46.81	59
2.2.2 Tolerance of immigrants	73.85	37
2.2.3 Social mobility	32.27	106
Gender Equality		
2.2.4 Economic empowerment of women.....	61.06	107
2.2.5 Gender parity in high-skilled jobs	22.64	118
2.2.6 Leadership opportunities for women	34.70	106

GDP per capita (PPP US\$)	4,208.96
GDP (US\$ billions)	27.68
GTCI score.....	28.62
GTCI score (income group average)	32.03

	Score	Rank
3 GROW.....	18.84	122
3.1 Formal Education.....	19.73	94
Enrolment		
3.1.1 Vocational enrolment	8.62	88
3.1.2 Tertiary enrolment	9.51	102
Quality		
3.1.3 Tertiary education expenditure	60.78	58
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking.....	0.00	76
3.2 Lifelong Learning.....	19.28	124
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	17.93	87
3.2.3 Employee development	39.92	105
3.3 Access to Growth Opportunities	17.52	127
Empowerment		
3.3.1 Delegation of authority	20.37	118
3.3.2 Youth inclusion	24.87	114
Collaboration		
3.3.3 Use of virtual social networks	14.30	112
3.3.4 Use of virtual professional networks	10.53	93

4 RETAIN.....	36.87	107
4.1 Sustainability	27.67	113
4.1.1 Pension coverage	29.19	93
4.1.2 Social protection.....	21.81	116
4.1.3 Brain retention	32.68	82
4.1.4 Environmental performance	25.42	99
4.1.5 Vulnerable employment	29.22	110
4.2 Lifestyle	46.08	98
4.2.1 Personal rights	77.04	61
4.2.2 Personal safety.....	54.19	81
4.2.3 Physician density.....	0.56	127
4.2.4 Sanitation	52.55	108

5 VOCATIONAL AND TECHNICAL SKILLS.....	28.25	116
5.1 Mid-Level Skills	5.96	125
5.1.1 Workforce with secondary education	6.45	121
5.1.2 Population with secondary education	7.87	82
5.1.3 Technicians and associate professionals.....	3.63	127
5.1.4 Labour productivity per employee.....	5.90	102
5.2 Employability.....	50.55	88
5.2.1 Ease of finding skilled employees	82.03	16
5.2.2 Relevance of education system to the economy	33.38	90
5.2.3 Skills matching	23.57	103
5.2.4 Highly educated unemployment	63.21	94

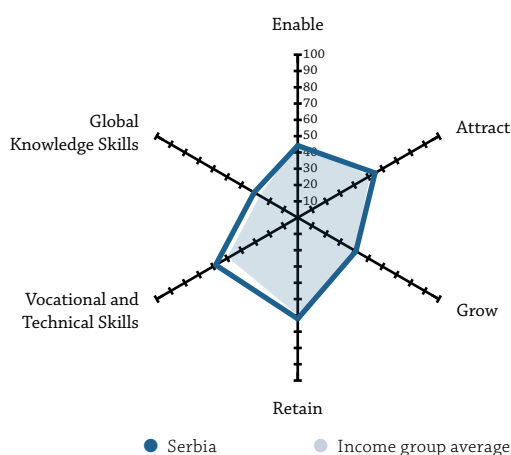
6 GLOBAL KNOWLEDGE SKILLS	7.82	122
6.1 High-Level Skills	4.57	124
6.1.1 Workforce with tertiary education	4.57	121
6.1.2 Population with tertiary education.....	3.32	87
6.1.3 Professionals	7.51	119
6.1.4 Researchers	6.36	67
6.1.5 Senior officials and managers.....	1.08	127
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	11.07	118
6.2.1 Innovation output	12.87	102
6.2.2 High-value exports.....	3.22	100
6.2.3 Software development	36.00	112
6.2.4 New business density	2.39	99
6.2.5 Scientific journal articles	0.87	106

SERBIA

Key Indicators

Rank (out of 134).....	53
Income group.....	Upper-middle income
Regional group.....	Europe
Population (millions).....	6.76

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....	44.21	62
1.1 Regulatory Landscape.....	42.81	69
1.1.1 Government effectiveness.....	44.04	65
1.1.2 Rule of law.....	42.86	67
1.1.3 Political stability.....	57.68	70
1.1.4 Regulatory quality.....	43.45	70
1.1.5 Corruption.....	26.03	81
1.2 Market Landscape.....	42.60	72
1.2.1 Extent of market dominance.....	38.83	65
1.2.2 Domestic credit to private sector.....	41.60	79
1.2.3 Cluster development.....	41.12	75
1.2.4 R&D expenditure.....	18.41	40
1.2.5 ICT infrastructure.....	66.09	64
1.2.6 Urbanisation.....	49.51	85
1.3 Business and Labour Landscape.....	47.22	55
Labour Market		
1.3.1 Labour rights.....	81.10	56
1.3.2 Labour-employer cooperation.....	32.69	102
Management Practice		
1.3.3 Professional management.....	40.55	85
1.3.4 Relationship of pay to productivity.....	49.17	81
Technology Adoption		
1.3.5 Enterprise software.....	18.17	83
1.3.6 Cloud computing.....	28.42	28
1.3.7 Firms with website.....	80.41	21
2 ATTRACT.....	54.78	48
2.1 External Openness.....	47.53	63
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	87.57	30
2.1.2 Financial globalisation.....	62.35	64
Attract People		
2.1.3 Migrant stock.....	57.04	43
2.1.4 International students.....	16.30	52
2.1.5 Brain gain.....	14.38	124
2.2 Internal Openness.....	62.02	42
Social Inclusion		
2.2.1 Tolerance of minorities.....	30.85	84
2.2.2 Tolerance of immigrants.....	66.15	51
2.2.3 Social mobility.....	42.75	73
Gender Equality		
2.2.4 Economic empowerment of women.....	91.15	29
2.2.5 Gender parity in high-skilled jobs.....	88.14	31
2.2.6 Leadership opportunities for women.....	53.09	57

GDP per capita (PPP US\$).....	23,911.20
GDP (US\$ billions).....	63.50
GTCI score.....	48.56
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....	41.25	58
3.1 Formal Education.....	43.25	41
Enrolment		
3.1.1 Vocational enrolment.....	55.57	11
3.1.2 Tertiary enrolment.....	45.34	41
Quality		
3.1.3 Tertiary education expenditure.....	63.45	50
3.1.4 Reading, maths, and science.....	44.27	43
3.1.5 University ranking.....	7.60	74
3.2 Lifelong Learning.....	29.81	86
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	45.68	38
3.2.3 Employee development.....	43.74	94
3.3 Access to Growth Opportunities.....	50.70	53
Empowerment		
3.3.1 Delegation of authority.....	47.19	66
3.3.2 Youth inclusion.....	68.47	54
Collaboration		
3.3.3 Use of virtual social networks.....	65.27	64
3.3.4 Use of virtual professional networks.....	21.86	62

4 RETAIN.....	62.09	58
4.1 Sustainability.....	46.37	82
4.1.1 Pension coverage.....	53.03	80
4.1.2 Social protection.....	45.61	75
4.1.3 Brain retention.....	12.21	127
4.1.4 Environmental performance.....	42.37	60
4.1.5 Vulnerable employment.....	78.64	58
4.2 Lifestyle.....	77.80	41
4.2.1 Personal rights.....	75.81	64
4.2.2 Personal safety.....	79.70	40
4.2.3 Physician density.....	58.00	33
4.2.4 Sanitation.....	97.69	48

5 VOCATIONAL AND TECHNICAL SKILLS.....	58.14	41
5.1 Mid-Level Skills.....	54.58	35
5.1.1 Workforce with secondary education.....	72.04	19
5.1.2 Population with secondary education.....	74.01	16
5.1.3 Technicians and associate professionals.....	43.45	46
5.1.4 Labour productivity per employee.....	28.82	61
5.2 Employability.....	61.69	57
5.2.1 Ease of finding skilled employees.....	64.53	48
5.2.2 Relevance of education system to the economy.....	41.34	68
5.2.3 Skills matching.....	75.69	31
5.2.4 Highly educated unemployment.....	65.20	91

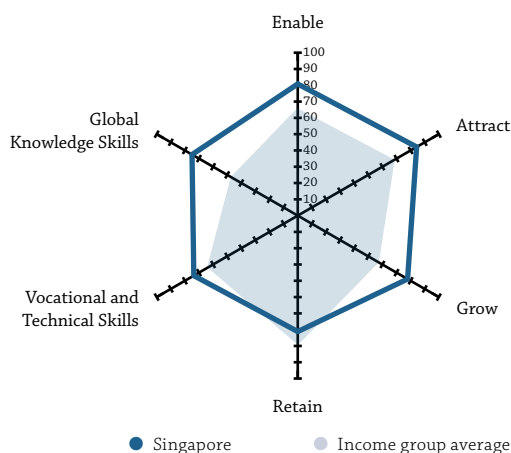
6 GLOBAL KNOWLEDGE SKILLS.....	30.88	51
6.1 High-Level Skills.....	25.51	61
6.1.1 Workforce with tertiary education.....	31.69	56
6.1.2 Population with tertiary education.....	27.76	55
6.1.3 Professionals.....	33.19	53
6.1.4 Researchers.....	25.51	36
6.1.5 Senior officials and managers.....	19.47	71
6.1.6 Digital skills.....	15.42	56
6.2 Talent Impact.....	36.25	44
6.2.1 Innovation output.....	37.29	57
6.2.2 High-value exports.....	n/a	n/a
6.2.3 Software development.....	71.20	44
6.2.4 New business density.....	10.82	61
6.2.5 Scientific journal articles.....	25.70	39

SINGAPORE

Key Indicators

Rank (out of 134).....	2
Income group	High income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions)	5.64

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 80.80	7	
1.1 Regulatory Landscape.....	97.02	1
1.1.1 Government effectiveness.....	100.00	1
1.1.2 Rule of law.....	94.68	4
1.1.3 Political stability.....	100.00	1
1.1.4 Regulatory quality.....	100.00	1
1.1.5 Corruption.....	90.41	5
1.2 Market Landscape.....	74.52	8
1.2.1 Extent of market dominance.....	63.35	31
1.2.2 Domestic credit to private sector.....	71.15	14
1.2.3 Cluster development.....	81.68	11
1.2.4 R&D expenditure.....	35.08	19
1.2.5 ICT infrastructure.....	95.87	6
1.2.6 Urbanisation.....	100.00	1
1.3 Business and Labour Landscape.....	70.87	14
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	92.73	3
Management Practice		
1.3.3 Professional management.....	89.18	6
1.3.4 Relationship of pay to productivity.....	77.65	13
Technology Adoption		
1.3.5 Enterprise software.....	27.61	50
1.3.6 Cloud computing.....	67.17	9
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT..... 84.26	2	
2.1 External Openness.....	88.14	4
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	85.14	37
2.1.2 Financial globalisation.....	98.69	3
Attract People		
2.1.3 Migrant stock.....	86.49	7
2.1.4 International students.....	70.38	9
2.1.5 Brain gain.....	100.00	1
2.2 Internal Openness.....	80.39	11
Social Inclusion		
2.2.1 Tolerance of minorities.....	76.60	16
2.2.2 Tolerance of immigrants.....	84.62	16
2.2.3 Social mobility.....	87.54	6
Gender Equality		
2.2.4 Economic empowerment of women.....	75.22	69
2.2.5 Gender parity in high-skilled jobs.....	79.66	52
2.2.6 Leadership opportunities for women.....	78.69	7

GDP per capita (PPP US\$)	127,564.56
GDP (US\$ billions)	466.79
GTCI score.....	77.11
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 77.84	3	
3.1 Formal Education.....	77.01	1
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	61.37	9
Quality		
3.1.3 Tertiary education expenditure.....	87.28	5
3.1.4 Reading, maths, and science.....	90.79	2
3.1.5 University ranking.....	68.59	11
3.2 Lifelong Learning.....	76.67	9
3.2.1 Business masters education.....	69.75	10
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	83.58	10
3.3 Access to Growth Opportunities.....	79.83	8
Empowerment		
3.3.1 Delegation of authority.....	66.51	20
3.3.2 Youth inclusion.....	92.53	7
Collaboration		
3.3.3 Use of virtual social networks.....	79.77	13
3.3.4 Use of virtual professional networks.....	80.52	4

4 RETAIN..... 71.17	38	
4.1 Sustainability.....	68.73	34
4.1.1 Pension coverage.....	32.42	92
4.1.2 Social protection.....	77.11	24
4.1.3 Brain retention.....	89.12	4
4.1.4 Environmental performance.....	54.24	37
4.1.5 Vulnerable employment.....	90.76	26
4.2 Lifestyle.....	73.61	49
4.2.1 Personal rights.....	56.31	90
4.2.2 Personal safety.....	100.00	1
4.2.3 Physician density.....	38.11	65
4.2.4 Sanitation.....	100.00	1

5 VOCATIONAL AND TECHNICAL SKILLS..... 73.66	3	
5.1 Mid-Level Skills.....	58.27	25
5.1.1 Workforce with secondary education.....	11.05	117
5.1.2 Population with secondary education.....	36.32	54
5.1.3 Technicians and associate professionals.....	85.72	3
5.1.4 Labour productivity per employee.....	100.00	1
5.2 Employability.....	89.05	2
5.2.1 Ease of finding skilled employees.....	89.29	10
5.2.2 Relevance of education system to the economy.....	89.24	3
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	88.61	24

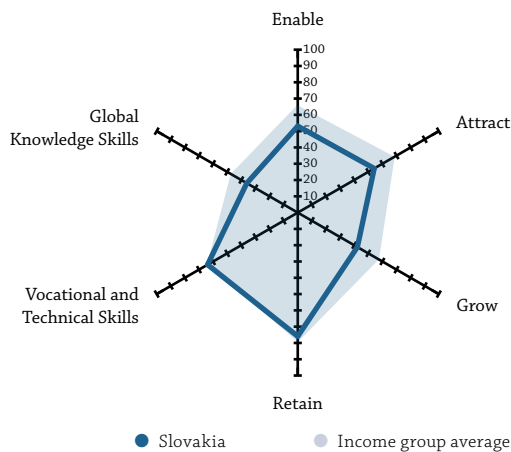
6 GLOBAL KNOWLEDGE SKILLS..... 74.92	1	
6.1 High-Level Skills.....	68.62	1
6.1.1 Workforce with tertiary education.....	75.25	3
6.1.2 Population with tertiary education.....	64.59	6
6.1.3 Professionals.....	52.27	19
6.1.4 Researchers.....	83.61	5
6.1.5 Senior officials and managers.....	100.00	1
6.1.6 Digital skills.....	36.00	21
6.2 Talent Impact.....	81.23	1
6.2.1 Innovation output.....	70.63	14
6.2.2 High-value exports.....	100.00	1
6.2.3 Software development.....	100.00	1
6.2.4 New business density.....	55.06	14
6.2.5 Scientific journal articles.....	80.46	5

SLOVAKIA

Key Indicators

Rank (out of 134).....	36
Income group	High income
Regional group	Europe
Population (millions)	5.43

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....53.07 42		
1.1 Regulatory Landscape.....	61.99	38
1.1.1 Government effectiveness.....	56.06	44
1.1.2 Rule of law.....	64.06	37
1.1.3 Political stability.....	75.72	40
1.1.4 Regulatory quality.....	64.79	32
1.1.5 Corruption.....	49.32	40
1.2 Market Landscape.....	46.38	61
1.2.1 Extent of market dominance.....	41.87	62
1.2.2 Domestic credit to private sector.....	54.05	48
1.2.3 Cluster development.....	41.57	74
1.2.4 R&D expenditure.....	16.61	43
1.2.5 ICT infrastructure.....	77.36	38
1.2.6 Urbanisation.....	46.79	92
1.3 Business and Labour Landscape.....	50.86	41
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation.....	38.79	85
Management Practice		
1.3.3 Professional management.....	37.68	94
1.3.4 Relationship of pay to productivity.....	50.15	75
Technology Adoption		
1.3.5 Enterprise software.....	33.32	36
1.3.6 Cloud computing.....	19.53	52
1.3.7 Firms with website.....	76.53	26
2 ATTRACT.....54.20 51		
2.1 External Openness.....	50.31	55
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	87.84	28
2.1.2 Financial globalisation.....	76.94	32
Attract People		
2.1.3 Migrant stock.....	34.67	79
2.1.4 International students.....	37.66	26
2.1.5 Brain gain.....	14.45	123
2.2 Internal Openness.....	58.10	58
Social Inclusion		
2.2.1 Tolerance of minorities.....	45.74	61
2.2.2 Tolerance of immigrants.....	38.46	104
2.2.3 Social mobility.....	55.79	48
Gender Equality		
2.2.4 Economic empowerment of women.....	78.76	59
2.2.5 Gender parity in high-skilled jobs.....	83.37	46
2.2.6 Leadership opportunities for women.....	46.47	73

GDP per capita (PPP US\$)	37,459.47
GDP (US\$ billions)	115.47
GTCI score.....	54.24
GTCI score (income group average)	61.91

	Score	Rank
3 GROW.....42.26 52		
3.1 Formal Education.....	44.13	40
Enrolment		
3.1.1 Vocational enrolment.....	44.42	21
3.1.2 Tertiary enrolment.....	30.92	67
Quality		
3.1.3 Tertiary education expenditure.....	73.25	32
3.1.4 Reading, maths, and science.....	55.24	37
3.1.5 University ranking.....	16.82	60
3.2 Lifelong Learning.....	31.43	77
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	52.32	29
3.2.3 Employee development.....	41.95	99
3.3 Access to Growth Opportunities.....	51.23	51
Empowerment		
3.3.1 Delegation of authority.....	41.36	79
3.3.2 Youth inclusion.....	80.61	29
Collaboration		
3.3.3 Use of virtual social networks.....	66.54	61
3.3.4 Use of virtual professional networks.....	16.42	77

4 RETAIN.....75.92 32		
4.1 Sustainability.....	65.85	40
4.1.1 Pension coverage.....	90.51	55
4.1.2 Social protection.....	66.35	41
4.1.3 Brain retention.....	15.67	120
4.1.4 Environmental performance.....	69.66	18
4.1.5 Vulnerable employment.....	87.04	41
4.2 Lifestyle.....	85.99	19
4.2.1 Personal rights.....	93.35	24
4.2.2 Personal safety.....	80.11	39
4.2.3 Physician density.....	73.20	10
4.2.4 Sanitation.....	97.29	55

5 VOCATIONAL AND TECHNICAL SKILLS.....63.90 24		
5.1 Mid-Level Skills.....	72.31	3
5.1.1 Workforce with secondary education.....	81.34	7
5.1.2 Population with secondary education.....	92.68	2
5.1.3 Technicians and associate professionals.....	69.78	15
5.1.4 Labour productivity per employee.....	45.44	39
5.2 Employability.....	55.48	74
5.2.1 Ease of finding skilled employees.....	36.37	107
5.2.2 Relevance of education system to the economy.....	22.95	104
5.2.3 Skills matching.....	81.17	17
5.2.4 Highly educated unemployment.....	81.45	51

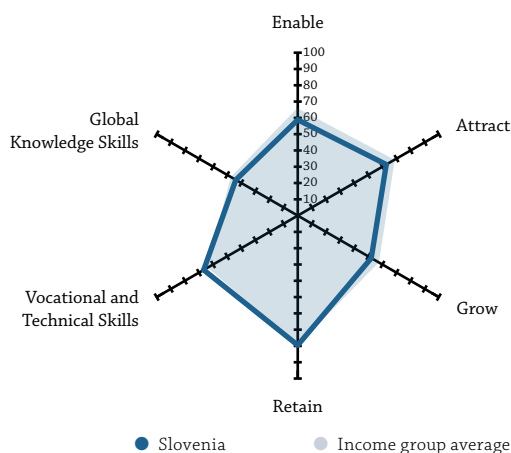
6 GLOBAL KNOWLEDGE SKILLS.....36.11 39		
6.1 High-Level Skills.....	31.97	47
6.1.1 Workforce with tertiary education.....	37.45	44
6.1.2 Population with tertiary education.....	29.61	46
6.1.3 Professionals.....	36.42	45
6.1.4 Researchers.....	36.24	29
6.1.5 Senior officials and managers.....	33.91	38
6.1.6 Digital skills.....	18.19	51
6.2 Talent Impact.....	40.26	37
6.2.1 Innovation output.....	43.56	44
6.2.2 High-value exports.....	16.14	53
6.2.3 Software development.....	76.25	35
6.2.4 New business density.....	28.17	29
6.2.5 Scientific journal articles.....	37.15	31

SLOVENIA

Key Indicators

Rank (out of 134).....	28
Income group	High income
Regional group	Europe
Population (millions)	2.11

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 58.80 32		
1.1 Regulatory Landscape.....	68.61	31
1.1.1 Government effectiveness	72.24	25
1.1.2 Rule of law	72.68	26
1.1.3 Political stability.....	80.94	28
1.1.4 Regulatory quality.....	63.75	37
1.1.5 Corruption	53.42	34
1.2 Market Landscape.....	53.41	39
1.2.1 Extent of market dominance.....	71.62	16
1.2.2 Domestic credit to private sector	41.96	78
1.2.3 Cluster development.....	43.20	70
1.2.4 R&D expenditure.....	39.90	17
1.2.5 ICT infrastructure.....	76.07	40
1.2.6 Urbanisation	47.73	90
1.3 Business and Labour Landscape.....	54.39	31
Labour Market		
1.3.1 Labour rights.....	95.17	21
1.3.2 Labour-employer cooperation	48.03	60
Management Practice		
1.3.3 Professional management	54.89	55
1.3.4 Relationship of pay to productivity.....	51.35	73
Technology Adoption		
1.3.5 Enterprise software	27.87	47
1.3.6 Cloud computing	18.16	58
1.3.7 Firms with website	85.26	12
2 ATTRACT..... 62.73 32		
2.1 External Openness	56.92	37
Attract Business		
2.1.1 FDI regulatory restrictiveness	99.19	2
2.1.2 Financial globalisation	72.52	45
Attract People		
2.1.3 Migrant stock	61.75	37
2.1.4 International students.....	28.38	34
2.1.5 Brain gain	22.73	116
2.2 Internal Openness.....	68.54	27
Social Inclusion		
2.2.1 Tolerance of minorities.....	68.09	28
2.2.2 Tolerance of immigrants	15.38	125
2.2.3 Social mobility	73.40	21
Gender Equality		
2.2.4 Economic empowerment of women.....	95.58	20
2.2.5 Gender parity in high-skilled jobs	88.51	29
2.2.6 Leadership opportunities for women	70.28	17

GDP per capita (PPP US\$)	50,031.66
GDP (US\$ billions)	62.12
GTCI score.....	60.62
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 52.12 27		
3.1 Formal Education.....	55.40	20
Enrolment		
3.1.1 Vocational enrolment	65.99	4
3.1.2 Tertiary enrolment	52.53	23
Quality		
3.1.3 Tertiary education expenditure	75.64	25
3.1.4 Reading, maths, and science	69.26	10
3.1.5 University ranking.....	13.58	63
3.2 Lifelong Learning.....	40.64	43
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	53.25	27
3.2.3 Employee development	68.66	36
3.3 Access to Growth Opportunities	60.33	35
Empowerment		
3.3.1 Delegation of authority	49.47	58
3.3.2 Youth inclusion	91.55	9
Collaboration		
3.3.3 Use of virtual social networks	72.67	40
3.3.4 Use of virtual professional networks	27.63	50

4 RETAIN..... 79.53 26		
4.1 Sustainability	78.36	18
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	89.10	9
4.1.3 Brain retention	31.77	86
4.1.4 Environmental performance	82.03	7
4.1.5 Vulnerable employment	88.89	31
4.2 Lifestyle	80.70	34
4.2.1 Personal rights	82.42	49
4.2.2 Personal safety.....	90.85	14
4.2.3 Physician density.....	51.62	42
4.2.4 Sanitation.....	97.91	42

5 VOCATIONAL AND TECHNICAL SKILLS..... 66.65 17		
5.1 Mid-Level Skills	64.08	11
5.1.1 Workforce with secondary education	63.91	28
5.1.2 Population with secondary education	77.67	12
5.1.3 Technicians and associate professionals.....	64.28	20
5.1.4 Labour productivity per employee.....	50.46	31
5.2 Employability.....	69.23	31
5.2.1 Ease of finding skilled employees	55.74	65
5.2.2 Relevance of education system to the economy	50.57	48
5.2.3 Skills matching	85.63	13
5.2.4 Highly educated unemployment	84.97	37

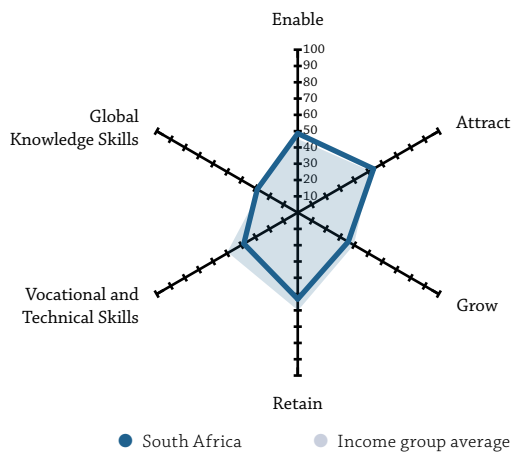
6 GLOBAL KNOWLEDGE SKILLS 43.88 26		
6.1 High-Level Skills	42.52	27
6.1.1 Workforce with tertiary education	51.79	20
6.1.2 Population with tertiary education.....	37.19	37
6.1.3 Professionals	62.02	8
6.1.4 Researchers	56.55	16
6.1.5 Senior officials and managers.....	25.08	61
6.1.6 Digital skills	22.51	42
6.2 Talent Impact.....	45.23	30
6.2.1 Innovation output	49.17	34
6.2.2 High-value exports.....	11.70	65
6.2.3 Software development	83.93	22
6.2.4 New business density	13.20	53
6.2.5 Scientific journal articles	68.14	10

SOUTH AFRICA

Key Indicators

Rank (out of 134).....	68
Income group.....	Upper-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	59.89

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 48.59 57		
1.1 Regulatory Landscape.....	41.96	71
1.1.1 Government effectiveness.....	42.43	71
1.1.2 Rule of law.....	48.77	57
1.1.3 Political stability.....	42.80	105
1.1.4 Regulatory quality.....	40.20	74
1.1.5 Corruption.....	35.62	58
1.2 Market Landscape.....	48.78	57
1.2.1 Extent of market dominance.....	37.85	70
1.2.2 Domestic credit to private sector.....	62.83	31
1.2.3 Cluster development.....	50.54	47
1.2.4 R&D expenditure.....	11.30	54
1.2.5 ICT infrastructure.....	68.86	60
1.2.6 Urbanisation.....	61.31	64
1.3 Business and Labour Landscape.....	55.03	29
Labour Market		
1.3.1 Labour rights.....	86.86	47
1.3.2 Labour-employer cooperation.....	16.88	124
Management Practice		
1.3.3 Professional management.....	56.76	49
1.3.4 Relationship of pay to productivity.....	46.91	92
Technology Adoption		
1.3.5 Enterprise software.....	41.23	29
1.3.6 Cloud computing.....	55.58	10
1.3.7 Firms with website.....	80.98	20
2 ATTRACT..... 53.73 53		
2.1 External Openness.....	48.88	60
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	86.22	34
2.1.2 Financial globalisation.....	63.08	62
Attract People		
2.1.3 Migrant stock.....	45.38	58
2.1.4 International students.....	10.88	65
2.1.5 Brain gain.....	38.82	85
2.2 Internal Openness.....	58.59	55
Social Inclusion		
2.2.1 Tolerance of minorities.....	40.43	76
2.2.2 Tolerance of immigrants.....	70.77	43
2.2.3 Social mobility.....	35.59	100
Gender Equality		
2.2.4 Economic empowerment of women.....	83.19	47
2.2.5 Gender parity in high-skilled jobs.....	79.50	53
2.2.6 Leadership opportunities for women.....	42.08	86

GDP per capita (PPP US\$).....	15,904.85
GDP (US\$ billions).....	405.87
GTCI score.....	43.01
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW..... 35.78 69		
3.1 Formal Education.....	31.60	66
Enrolment		
3.1.1 Vocational enrolment.....	8.47	89
3.1.2 Tertiary enrolment.....	15.27	93
Quality		
3.1.3 Tertiary education expenditure.....	70.83	37
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	31.81	42
3.2 Lifelong Learning.....	37.17	52
3.2.1 Business masters education.....	36.35	30
3.2.2 Prevalence of training in firms.....	5.31	96
3.2.3 Employee development.....	69.84	32
3.3 Access to Growth Opportunities.....	38.57	87
Empowerment		
3.3.1 Delegation of authority.....	57.79	42
3.3.2 Youth inclusion.....	27.26	113
Collaboration		
3.3.3 Use of virtual social networks.....	39.11	95
3.3.4 Use of virtual professional networks.....	30.12	46

4 RETAIN..... 53.07 82		
4.1 Sustainability.....	54.28	68
4.1.1 Pension coverage.....	81.31	66
4.1.2 Social protection.....	34.57	96
4.1.3 Brain retention.....	35.92	75
4.1.4 Environmental performance.....	31.02	87
4.1.5 Vulnerable employment.....	88.58	35
4.2 Lifestyle.....	51.85	89
4.2.1 Personal rights.....	89.13	37
4.2.2 Personal safety.....	29.79	115
4.2.3 Physician density.....	12.13	93
4.2.4 Sanitation.....	76.37	97

5 VOCATIONAL AND TECHNICAL SKILLS..... 38.20 93		
5.1 Mid-Level Skills.....	45.55	55
5.1.1 Workforce with secondary education.....	41.42	70
5.1.2 Population with secondary education.....	76.21	14
5.1.3 Technicians and associate professionals.....	33.64	57
5.1.4 Labour productivity per employee.....	30.92	55
5.2 Employability.....	30.86	131
5.2.1 Ease of finding skilled employees.....	32.06	115
5.2.2 Relevance of education system to the economy.....	24.88	100
5.2.3 Skills matching.....	59.95	65
5.2.4 Highly educated unemployment.....	6.55	121

6 GLOBAL KNOWLEDGE SKILLS..... 28.66 58		
6.1 High-Level Skills.....	21.45	75
6.1.1 Workforce with tertiary education.....	18.67	85
6.1.2 Population with tertiary education.....	20.24	64
6.1.3 Professionals.....	14.00	94
6.1.4 Researchers.....	5.44	70
6.1.5 Senior officials and managers.....	47.79	21
6.1.6 Digital skills.....	22.54	41
6.2 Talent Impact.....	35.88	46
6.2.1 Innovation output.....	34.65	60
6.2.2 High-value exports.....	10.00	71
6.2.3 Software development.....	55.69	74
6.2.4 New business density.....	68.96	9
6.2.5 Scientific journal articles.....	10.08	60

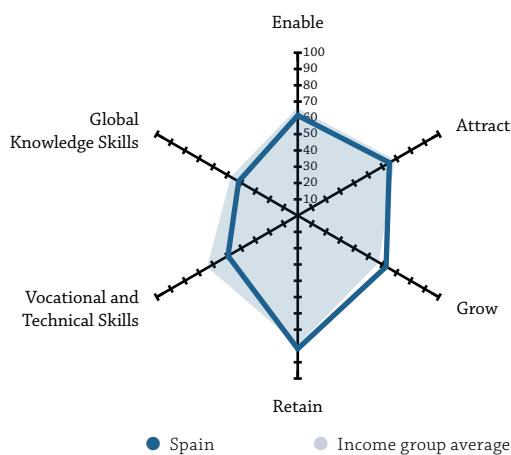
SPAIN

Key Indicators

Rank (out of 134).....	29
Income group	High income
Regional group.....	Europe
Population (millions)	47.62

GDP per capita (PPP US\$)	45,825.20
GDP (US\$ billions)	1,397.51
GTCI score.....	60.36
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....61.48	26	
1.1 Regulatory Landscape.....	66.67	33
1.1.1 Government effectiveness	66.48	32
1.1.2 Rule of law	68.58	32
1.1.3 Political stability.....	76.23	38
1.1.4 Regulatory quality.....	63.15	39
1.1.5 Corruption	58.90	29
1.2 Market Landscape.....	63.58	24
1.2.1 Extent of market dominance.....	61.11	36
1.2.2 Domestic credit to private sector	64.75	22
1.2.3 Cluster development.....	65.81	31
1.2.4 R&D expenditure.....	26.20	29
1.2.5 ICT infrastructure.....	86.22	14
1.2.6 Urbanisation	77.37	34
1.3 Business and Labour Landscape.....	54.21	32
Labour Market		
1.3.1 Labour rights.....	90.48	34
1.3.2 Labour-employer cooperation	45.45	67
Management Practice		
1.3.3 Professional management	60.25	44
1.3.4 Relationship of pay to productivity.....	38.07	116
Technology Adoption		
1.3.5 Enterprise software	27.53	51
1.3.6 Cloud computing	39.95	19
1.3.7 Firms with website	77.72	25
2 ATTRACT.....64.97	26	
2.1 External Openness	59.49	31
Attract Business		
2.1.1 FDI regulatory restrictiveness	95.41	12
2.1.2 Financial globalisation	83.27	23
Attract People		
2.1.3 Migrant stock	62.26	34
2.1.4 International students.....	13.80	57
2.1.5 Brain gain	42.73	77
2.2 Internal Openness.....	70.45	24
Social Inclusion		
2.2.1 Tolerance of minorities.....	28.72	92
2.2.2 Tolerance of immigrants	87.69	13
2.2.3 Social mobility	58.47	43
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	94.26	16
2.2.6 Leadership opportunities for women	53.55	54

	Score	Rank
3 GROW.....62.64	18	
3.1 Formal Education.....	54.81	22
Enrolment		
3.1.1 Vocational enrolment	29.50	42
3.1.2 Tertiary enrolment	63.26	6
Quality		
3.1.3 Tertiary education expenditure	72.00	33
3.1.4 Reading, maths, and science	64.22	26
3.1.5 University ranking.....	45.09	24
3.2 Lifelong Learning.....	70.30	12
3.2.1 Business masters education.....	94.85	4
3.2.2 Prevalence of training in firms.....	68.13	14
3.2.3 Employee development	47.92	85
3.3 Access to Growth Opportunities	62.80	28
Empowerment		
3.3.1 Delegation of authority	42.00	77
3.3.2 Youth inclusion	80.87	27
Collaboration		
3.3.3 Use of virtual social networks	80.64	11
3.3.4 Use of virtual professional networks	47.68	24

4 RETAIN.....81.74	17	
4.1 Sustainability	72.98	28
4.1.1 Pension coverage	98.18	42
4.1.2 Social protection.....	77.81	21
4.1.3 Brain retention	37.17	72
4.1.4 Environmental performance	63.90	27
4.1.5 Vulnerable employment	87.84	39
4.2 Lifestyle	90.51	7
4.2.1 Personal rights	93.57	23
4.2.2 Personal safety.....	96.21	3
4.2.3 Physician density.....	72.36	11
4.2.4 Sanitation	99.89	16

5 VOCATIONAL AND TECHNICAL SKILLS.....49.44	63	
5.1 Mid-Level Skills	40.84	60
5.1.1 Workforce with secondary education	30.13	86
5.1.2 Population with secondary education	26.91	65
5.1.3 Technicians and associate professionals.....	49.73	41
5.1.4 Labour productivity per employee.....	56.60	26
5.2 Employability.....	58.04	67
5.2.1 Ease of finding skilled employees	67.52	44
5.2.2 Relevance of education system to the economy	29.96	92
5.2.3 Skills matching	75.27	34
5.2.4 Highly educated unemployment	59.41	98

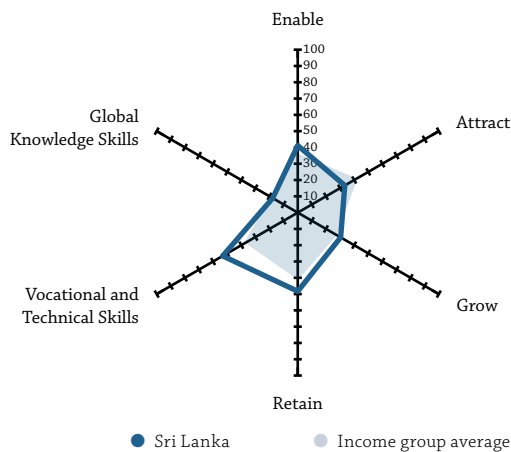
6 GLOBAL KNOWLEDGE SKILLS41.88	31	
6.1 High-Level Skills	39.27	34
6.1.1 Workforce with tertiary education	53.47	19
6.1.2 Population with tertiary education.....	44.01	31
6.1.3 Professionals	44.46	32
6.1.4 Researchers	35.60	30
6.1.5 Senior officials and managers.....	25.87	59
6.1.6 Digital skills	32.20	26
6.2 Talent Impact.....	44.48	32
6.2.1 Innovation output	59.90	25
6.2.2 High-value exports.....	16.84	52
6.2.3 Software development	80.21	30
6.2.4 New business density	13.60	51
6.2.5 Scientific journal articles	51.86	23

SRI LANKA

Key Indicators

Rank (out of 134).....	90
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	22.18

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....41.16 73		
1.1 Regulatory Landscape.....	39.71	77
1.1.1 Government effectiveness.....	40.79	74
1.1.2 Rule of law.....	46.32	60
1.1.3 Political stability.....	52.90	82
1.1.4 Regulatory quality.....	32.50	91
1.1.5 Corruption.....	26.03	81
1.2 Market Landscape.....	33.72	99
1.2.1 Extent of market dominance.....	45.98	53
1.2.2 Domestic credit to private sector.....	45.42	74
1.2.3 Cluster development.....	51.89	45
1.2.4 R&D expenditure.....	2.05	102
1.2.5 ICT infrastructure.....	50.74	92
1.2.6 Urbanisation.....	6.26	131
1.3 Business and Labour Landscape.....	50.04	45
Labour Market		
1.3.1 Labour rights.....	67.69	79
1.3.2 Labour-employer cooperation.....	45.86	65
Management Practice		
1.3.3 Professional management.....	63.31	38
1.3.4 Relationship of pay to productivity.....	60.78	44
Technology Adoption		
1.3.5 Enterprise software.....	41.36	28
1.3.6 Cloud computing.....	21.22	42
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....33.34 122		
2.1 External Openness.....	20.13	130
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	31.75	117
Attract People		
2.1.3 Migrant stock.....	1.87	131
2.1.4 International students.....	0.96	107
2.1.5 Brain gain.....	45.93	68
2.2 Internal Openness.....	46.56	106
Social Inclusion		
2.2.1 Tolerance of minorities.....	17.02	110
2.2.2 Tolerance of immigrants.....	47.69	88
2.2.3 Social mobility.....	53.19	49
Gender Equality		
2.2.4 Economic empowerment of women.....	51.33	116
2.2.5 Gender parity in high-skilled jobs.....	63.11	84
2.2.6 Leadership opportunities for women.....	47.00	72

GDP per capita (PPP US\$).....	14,405.42
GDP (US\$ billions).....	74.40
GTGI score.....	37.36
GTGI score (income group average).....	32.03

	Score	Rank
3 GROW.....30.40 87		
3.1 Formal Education.....	20.96	90
Enrolment		
3.1.1 Vocational enrolment.....	5.77	98
3.1.2 Tertiary enrolment.....	13.89	95
Quality		
3.1.3 Tertiary education expenditure.....	56.90	66
3.1.4 Reading, maths, and science.....	n/a	n/a
3.1.5 University ranking.....	7.29	75
3.2 Lifelong Learning.....	32.46	69
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	64.91	43
3.3 Access to Growth Opportunities.....	37.79	89
Empowerment		
3.3.1 Delegation of authority.....	54.76	45
3.3.2 Youth inclusion.....	55.13	79
Collaboration		
3.3.3 Use of virtual social networks.....	29.38	102
3.3.4 Use of virtual professional networks.....	11.89	88

4 RETAIN.....48.29 85		
4.1 Sustainability.....	38.15	92
4.1.1 Pension coverage.....	35.05	89
4.1.2 Social protection.....	43.20	83
4.1.3 Brain retention.....	27.18	100
4.1.4 Environmental performance.....	26.78	96
4.1.5 Vulnerable employment.....	58.56	84
4.2 Lifestyle.....	58.43	76
4.2.1 Personal rights.....	61.48	83
4.2.2 Personal safety.....	60.95	67
4.2.3 Physician density.....	18.27	86
4.2.4 Sanitation.....	93.03	69

5 VOCATIONAL AND TECHNICAL SKILLS.....53.18 53		
5.1 Mid-Level Skills.....	45.85	53
5.1.1 Workforce with secondary education.....	44.13	65
5.1.2 Population with secondary education.....	83.87	6
5.1.3 Technicians and associate professionals.....	35.58	54
5.1.4 Labour productivity per employee.....	19.80	74
5.2 Employability.....	60.52	59
5.2.1 Ease of finding skilled employees.....	62.87	53
5.2.2 Relevance of education system to the economy.....	48.27	53
5.2.3 Skills matching.....	59.73	67
5.2.4 Highly educated unemployment.....	71.21	79

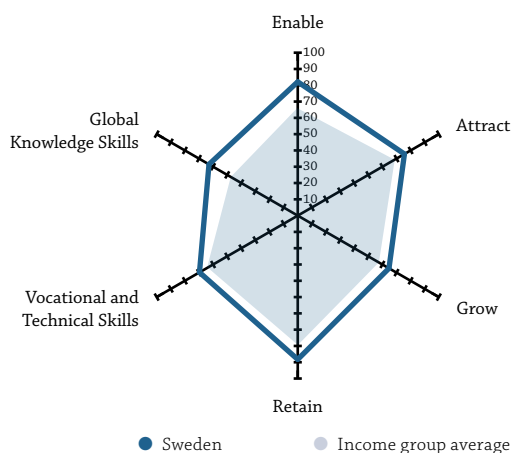
6 GLOBAL KNOWLEDGE SKILLS.....17.77 96		
6.1 High-Level Skills.....	13.36	99
6.1.1 Workforce with tertiary education.....	7.45	113
6.1.2 Population with tertiary education.....	4.69	82
6.1.3 Professionals.....	15.31	88
6.1.4 Researchers.....	1.09	89
6.1.5 Senior officials and managers.....	38.27	34
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	22.17	78
6.2.1 Innovation output.....	31.02	67
6.2.2 High-value exports.....	1.71	112
6.2.3 Software development.....	71.23	43
6.2.4 New business density.....	3.89	89
6.2.5 Scientific journal articles.....	3.01	85

SWEDEN

Key Indicators

Rank (out of 134).....	9
Income group	High income
Regional group	Europe
Population (millions)	10.49

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	82.10	6
1.1 Regulatory Landscape.....	88.30	8
1.1.1 Government effectiveness	84.06	8
1.1.2 Rule of law	91.39	11
1.1.3 Political stability.....	88.06	9
1.1.4 Regulatory quality.....	87.58	8
1.1.5 Corruption	90.41	5
1.2 Market Landscape.....	76.69	4
1.2.1 Extent of market dominance.....	77.24	8
1.2.2 Domestic credit to private sector	72.33	11
1.2.3 Cluster development.....	79.55	13
1.2.4 R&D expenditure.....	65.10	3
1.2.5 ICT infrastructure.....	80.39	27
1.2.6 Urbanisation	85.55	18
1.3 Business and Labour Landscape.....	81.32	6
Labour Market		
1.3.1 Labour rights.....	100.00	1
1.3.2 Labour-employer cooperation	68.20	22
Management Practice		
1.3.3 Professional management	77.24	18
1.3.4 Relationship of pay to productivity.....	75.38	19
Technology Adoption		
1.3.5 Enterprise software	76.16	10
1.3.6 Cloud computing	78.34	3
1.3.7 Firms with website	93.91	5
2 ATTRACT.....	75.61	11
2.1 External Openness	65.68	22
Attract Business		
2.1.1 FDI regulatory restrictiveness	85.14	37
2.1.2 Financial globalisation	90.25	12
Attract People		
2.1.3 Migrant stock	69.27	19
2.1.4 International students.....	25.64	36
2.1.5 Brain gain	58.12	36
2.2 Internal Openness.....	85.54	8
Social Inclusion		
2.2.1 Tolerance of minorities.....	81.91	8
2.2.2 Tolerance of immigrants	92.31	8
2.2.3 Social mobility	76.84	16
Gender Equality		
2.2.4 Economic empowerment of women.....	100.00	1
2.2.5 Gender parity in high-skilled jobs	95.85	10
2.2.6 Leadership opportunities for women	66.30	25

GDP per capita (PPP US\$)	64,578.40
GDP (US\$ billions)	585.94
GTGI score.....	73.86
GTGI score (income group average)	61.91

	Score	Rank
3 GROW.....	64.66	14
3.1 Formal Education.....	60.36	13
Enrolment		
3.1.1 Vocational enrolment	31.81	35
3.1.2 Tertiary enrolment	55.60	16
Quality		
3.1.3 Tertiary education expenditure	85.96	9
3.1.4 Reading, maths, and science	68.77	13
3.1.5 University ranking.....	59.68	13
3.2 Lifelong Learning.....	58.28	17
3.2.1 Business masters education.....	13.70	52
3.2.2 Prevalence of training in firms.....	77.03	8
3.2.3 Employee development	84.11	9
3.3 Access to Growth Opportunities	75.33	12
Empowerment		
3.3.1 Delegation of authority	66.06	21
3.3.2 Youth inclusion	95.29	4
Collaboration		
3.3.3 Use of virtual social networks	77.33	22
3.3.4 Use of virtual professional networks	62.63	14

4 RETAIN.....	88.26	7
4.1 Sustainability	88.37	7
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection.....	79.85	19
4.1.3 Brain retention	78.46	12
4.1.4 Environmental performance	91.19	5
4.1.5 Vulnerable employment	92.34	17
4.2 Lifestyle	88.15	12
4.2.1 Personal rights	96.83	9
4.2.2 Personal safety.....	88.79	18
4.2.3 Physician density.....	67.77	17
4.2.4 Sanitation	99.22	28

5 VOCATIONAL AND TECHNICAL SKILLS.....	69.64	10
5.1 Mid-Level Skills	63.64	13
5.1.1 Workforce with secondary education	50.11	51
5.1.2 Population with secondary education	61.25	22
5.1.3 Technicians and associate professionals.....	74.12	8
5.1.4 Labour productivity per employee.....	69.08	10
5.2 Employability.....	75.64	19
5.2.1 Ease of finding skilled employees	67.86	41
5.2.2 Relevance of education system to the economy	74.44	16
5.2.3 Skills matching	78.49	24
5.2.4 Highly educated unemployment	81.77	50

6 GLOBAL KNOWLEDGE SKILLS	62.89	6
6.1 High-Level Skills	58.53	7
6.1.1 Workforce with tertiary education	55.22	16
6.1.2 Population with tertiary education.....	44.81	28
6.1.3 Professionals	75.56	2
6.1.4 Researchers	91.00	2
6.1.5 Senior officials and managers.....	38.83	32
6.1.6 Digital skills	45.78	12
6.2 Talent Impact.....	67.25	10
6.2.1 Innovation output	91.91	2
6.2.2 High-value exports.....	25.07	36
6.2.3 Software development	90.66	6
6.2.4 New business density	49.48	16
6.2.5 Scientific journal articles	79.11	6

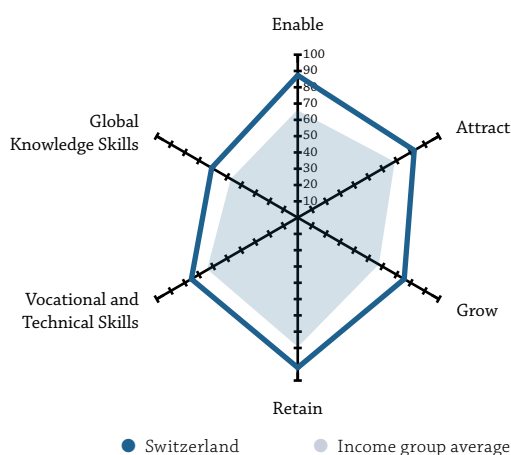
SWITZERLAND

Key Indicators

Rank (out of 134).....	1
Income group.....	High income
Regional group.....	Europe
Population (millions).....	8.77

GDP per capita (PPP US\$)	83,598.45
GDP (US\$ billions)	807.71
GTCI score.....	78.96
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....87.33		1
1.1 Regulatory Landscape.....	90.72	5
1.1.1 Government effectiveness.....	93.54	2
1.1.2 Rule of law.....	93.36	6
1.1.3 Political stability.....	90.59	6
1.1.4 Regulatory quality.....	87.07	9
1.1.5 Corruption.....	89.04	7
1.2 Market Landscape.....	80.87	2
1.2.1 Extent of market dominance.....	100.00	1
1.2.2 Domestic credit to private sector.....	78.17	7
1.2.3 Cluster development.....	91.74	3
1.2.4 R&D expenditure.....	59.54	7
1.2.5 ICT infrastructure.....	85.89	15
1.2.6 Urbanisation.....	69.87	47
1.3 Business and Labour Landscape.....	90.41	2
Labour Market		
1.3.1 Labour rights.....	97.59	14
1.3.2 Labour-employer cooperation.....	100.00	1
Management Practice		
1.3.3 Professional management.....	88.54	7
1.3.4 Relationship of pay to productivity.....	100.00	1
Technology Adoption		
1.3.5 Enterprise software.....	78.11	7
1.3.6 Cloud computing.....	78.19	4
1.3.7 Firms with website.....	n/a	n/a
2 ATTRACT.....82.55		3
2.1 External Openness.....	83.78	5
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	78.65	48
2.1.2 Financial globalisation.....	95.54	8
Attract People		
2.1.3 Migrant stock.....	78.47	12
2.1.4 International students.....	66.61	11
2.1.5 Brain gain.....	99.66	2
2.2 Internal Openness.....	81.31	9
Social Inclusion		
2.2.1 Tolerance of minorities.....	77.66	13
2.2.2 Tolerance of immigrants.....	76.92	29
2.2.3 Social mobility.....	97.51	3
Gender Equality		
2.2.4 Economic empowerment of women.....	83.19	47
2.2.5 Gender parity in high-skilled jobs.....	82.23	49
2.2.6 Leadership opportunities for women.....	70.36	16

	Score	Rank
3 GROW.....75.45		5
3.1 Formal Education.....	67.75	6
Enrolment		
3.1.1 Vocational enrolment.....	55.73	10
3.1.2 Tertiary enrolment.....	42.77	46
Quality		
3.1.3 Tertiary education expenditure.....	89.98	3
3.1.4 Reading, maths, and science.....	66.99	20
3.1.5 University ranking.....	83.28	4
3.2 Lifelong Learning.....	85.41	4
3.2.1 Business masters education.....	71.11	9
3.2.2 Prevalence of training in firms.....	n/a	n/a
3.2.3 Employee development.....	99.70	2
3.3 Access to Growth Opportunities.....	73.20	15
Empowerment		
3.3.1 Delegation of authority.....	70.27	15
3.3.2 Youth inclusion.....	83.95	22
Collaboration		
3.3.3 Use of virtual social networks.....	78.21	20
3.3.4 Use of virtual professional networks.....	60.36	16

4 RETAIN.....92.07		1
4.1 Sustainability.....	93.77	1
4.1.1 Pension coverage.....	100.00	1
4.1.2 Social protection.....	100.00	1
4.1.3 Brain retention.....	100.00	1
4.1.4 Environmental performance.....	79.66	9
4.1.5 Vulnerable employment.....	89.20	29
4.2 Lifestyle.....	90.38	9
4.2.1 Personal rights.....	95.44	18
4.2.2 Personal safety.....	95.96	4
4.2.3 Physician density.....	70.22	14
4.2.4 Sanitation.....	99.89	17

5 VOCATIONAL AND TECHNICAL SKILLS.....75.38		2
5.1 Mid-Level Skills.....	65.89	8
5.1.1 Workforce with secondary education.....	53.29	43
5.1.2 Population with secondary education.....	66.75	18
5.1.3 Technicians and associate professionals.....	69.04	16
5.1.4 Labour productivity per employee.....	74.48	8
5.2 Employability.....	84.86	4
5.2.1 Ease of finding skilled employees.....	74.52	28
5.2.2 Relevance of education system to the economy.....	100.00	1
5.2.3 Skills matching.....	76.90	28
5.2.4 Highly educated unemployment.....	88.02	26

6 GLOBAL KNOWLEDGE SKILLS.....61.00		10
6.1 High-Level Skills.....	52.86	15
6.1.1 Workforce with tertiary education.....	51.61	21
6.1.2 Population with tertiary education.....	52.61	13
6.1.3 Professionals.....	59.42	13
6.1.4 Researchers.....	63.67	12
6.1.5 Senior officials and managers.....	49.63	15
6.1.6 Digital skills.....	40.23	16
6.2 Talent Impact.....	69.14	6
6.2.1 Innovation output.....	100.00	1
6.2.2 High-value exports.....	25.63	35
6.2.3 Software development.....	94.61	2
6.2.4 New business density.....	25.46	31
6.2.5 Scientific journal articles.....	100.00	1

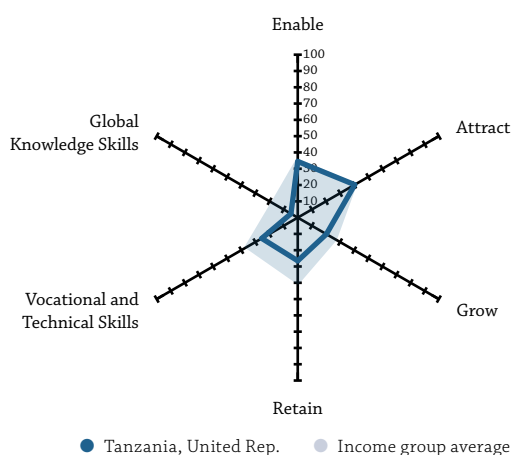
TANZANIA, UNITED REP.

Key Indicators

Rank (out of 134).....	121
Income group	Lower-middle income
Regional group	Sub-Saharan Africa
Population (millions)	65.50

GDP per capita (PPP US\$)	3,096.88
GDP (US\$ billions)	75.71
GTCI score	25.33
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	34.47	102
1.1 Regulatory Landscape.....	32.58	97
1.1.1 Government effectiveness	27.11	106
1.1.2 Rule of law	31.39	96
1.1.3 Political stability.....	49.81	90
1.1.4 Regulatory quality.....	25.83	108
1.1.5 Corruption	28.77	74
1.2 Market Landscape.....	32.04	109
1.2.1 Extent of market dominance.....	43.11	60
1.2.2 Domestic credit to private sector	12.64	122
1.2.3 Cluster development.....	54.66	43
1.2.4 R&D expenditure.....	9.44	59
1.2.5 ICT infrastructure.....	48.56	97
1.2.6 Urbanisation	23.85	120
1.3 Business and Labour Landscape.....	38.78	90
Labour Market		
1.3.1 Labour rights.....	76.27	66
1.3.2 Labour-employer cooperation	42.13	71
Management Practice		
1.3.3 Professional management	55.86	52
1.3.4 Relationship of pay to productivity.....	57.88	54
Technology Adoption		
1.3.5 Enterprise software	15.24	98
1.3.6 Cloud computing	8.94	106
1.3.7 Firms with website	15.13	102
2 ATTRACT.....	40.38	101
2.1 External Openness	32.52	101
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	24.10	124
Attract People		
2.1.3 Migrant stock	17.52	108
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain	55.95	42
2.2 Internal Openness.....	48.24	95
Social Inclusion		
2.2.1 Tolerance of minorities.....	48.94	56
2.2.2 Tolerance of immigrants	41.54	98
2.2.3 Social mobility	44.25	69
Gender Equality		
2.2.4 Economic empowerment of women.....	73.45	74
2.2.5 Gender parity in high-skilled jobs	30.11	114
2.2.6 Leadership opportunities for women	51.14	61

	Score	Rank
3 GROW.....	20.29	116
3.1 Formal Education.....	1.60	131
Enrolment		
3.1.1 Vocational enrolment	0.52	119
3.1.2 Tertiary enrolment	4.29	116
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	76
3.2 Lifelong Learning.....	27.16	95
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	35.59	56
3.2.3 Employee development	45.90	89
3.3 Access to Growth Opportunities	32.10	100
Empowerment		
3.3.1 Delegation of authority	48.50	60
3.3.2 Youth inclusion	72.62	48
Collaboration		
3.3.3 Use of virtual social networks	4.57	126
3.3.4 Use of virtual professional networks	2.72	119

4 RETAIN.....	26.51	119
4.1 Sustainability	25.13	119
4.1.1 Pension coverage	6.46	120
4.1.2 Social protection.....	44.64	78
4.1.3 Brain retention	38.36	69
4.1.4 Environmental performance	25.93	98
4.1.5 Vulnerable employment	10.24	126
4.2 Lifestyle	27.89	121
4.2.1 Personal rights	56.97	88
4.2.2 Personal safety.....	29.49	116
4.2.3 Physician density.....	0.00	133
4.2.4 Sanitation	25.09	124

5 VOCATIONAL AND TECHNICAL SKILLS.....	25.49	124
5.1 Mid-Level Skills	2.94	132
5.1.1 Workforce with secondary education	1.34	128
5.1.2 Population with secondary education	0.00	94
5.1.3 Technicians and associate professionals.....	7.63	116
5.1.4 Labour productivity per employee.....	2.79	107
5.2 Employability.....	48.05	96
5.2.1 Ease of finding skilled employees	67.84	42
5.2.2 Relevance of education system to the economy	43.90	62
5.2.3 Skills matching	5.69	109
5.2.4 Highly educated unemployment	74.76	67

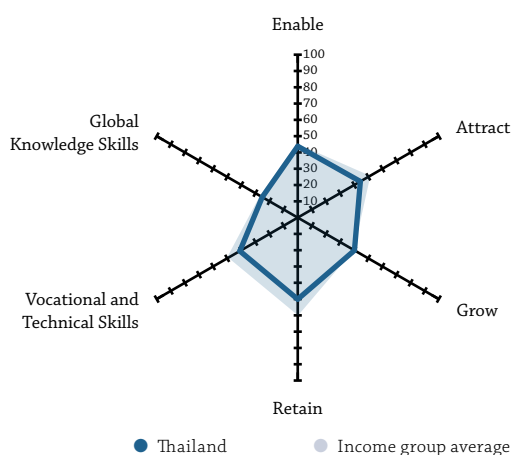
6 GLOBAL KNOWLEDGE SKILLS	4.82	130
6.1 High-Level Skills	0.82	134
6.1.1 Workforce with tertiary education	0.15	131
6.1.2 Population with tertiary education.....	0.41	93
6.1.3 Professionals	1.92	131
6.1.4 Researchers	0.10	106
6.1.5 Senior officials and managers.....	1.55	125
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact.....	8.82	122
6.2.1 Innovation output	14.85	98
6.2.2 High-value exports.....	2.86	102
6.2.3 Software development	25.12	124
6.2.4 New business density	0.76	114
6.2.5 Scientific journal articles	0.51	114

THAILAND

Key Indicators

Rank (out of 134).....	79
Income group.....	Upper-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	71.70

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....43.79 65		
1.1 Regulatory Landscape.....43.01 68		
1.1.1 Government effectiveness.....49.17 56		
1.1.2 Rule of law.....48.35 58		
1.1.3 Political stability.....46.98 96		
1.1.4 Regulatory quality.....44.54 64		
1.1.5 Corruption.....26.03 81		
1.2 Market Landscape.....49.36 55		
1.2.1 Extent of market dominance.....24.83 100		
1.2.2 Domestic credit to private sector.....75.95 9		
1.2.3 Cluster development.....47.36 55		
1.2.4 R&D expenditure.....24.70 32		
1.2.5 ICT infrastructure.....80.84 25		
1.2.6 Urbanisation.....42.45 100		
1.3 Business and Labour Landscape.....39.00 87		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....47.64 61		
Management Practice		
1.3.3 Professional management.....49.09 70		
1.3.4 Relationship of pay to productivity.....57.83 55		
Technology Adoption		
1.3.5 Enterprise software.....15.53 94		
1.3.6 Cloud computing.....22.31 36		
1.3.7 Firms with website.....41.59 74		
2 ATTRACT.....44.37 92		
2.1 External Openness.....38.00 86		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....28.65 76		
2.1.2 Financial globalisation.....58.82 74		
Attract People		
2.1.3 Migrant stock.....40.40 67		
2.1.4 International students.....4.48 84		
2.1.5 Brain gain.....57.63 37		
2.2 Internal Openness.....50.75 84		
Social Inclusion		
2.2.1 Tolerance of minorities.....28.72 92		
2.2.2 Tolerance of immigrants.....15.38 125		
2.2.3 Social mobility.....40.13 81		
Gender Equality		
2.2.4 Economic empowerment of women.....69.03 90		
2.2.5 Gender parity in high-skilled jobs.....83.87 43		
2.2.6 Leadership opportunities for women.....67.34 22		

GDP per capita (PPP US\$).....	20,671.68
GDP (US\$ billions).....	495.34
GTCI score.....	40.77
GTCI score (income group average).....	43.53

	Score	Rank
3 GROW.....40.19 61		
3.1 Formal Education.....33.50 63		
Enrolment		
3.1.1 Vocational enrolment.....20.94 59		
3.1.2 Tertiary enrolment.....28.48 72		
Quality		
3.1.3 Tertiary education expenditure.....52.56 78		
3.1.4 Reading, maths, and science.....31.97 60		
3.1.5 University ranking.....33.54 38		
3.2 Lifelong Learning.....39.26 48		
3.2.1 Business masters education.....45.51 24		
3.2.2 Prevalence of training in firms.....18.73 85		
3.2.3 Employee development.....53.56 64		
3.3 Access to Growth Opportunities.....47.80 66		
Empowerment		
3.3.1 Delegation of authority.....44.47 71		
3.3.2 Youth inclusion.....71.64 49		
Collaboration		
3.3.3 Use of virtual social networks.....68.19 55		
3.3.4 Use of virtual professional networks.....6.91 103		

4 RETAIN.....50.09 83		
4.1 Sustainability.....53.57 70		
4.1.1 Pension coverage.....88.99 60		
4.1.2 Social protection.....44.58 79		
4.1.3 Brain retention.....55.93 37		
4.1.4 Environmental performance.....32.54 82		
4.1.5 Vulnerable employment.....45.81 97		
4.2 Lifestyle.....46.62 97		
4.2.1 Personal rights.....29.96 115		
4.2.2 Personal safety.....43.88 101		
4.2.3 Physician density.....14.04 89		
4.2.4 Sanitation.....98.59 39		

5 VOCATIONAL AND TECHNICAL SKILLS.....41.03 81		
5.1 Mid-Level Skills.....21.54 99		
5.1.1 Workforce with secondary education.....29.73 88		
5.1.2 Population with secondary education.....19.69 76		
5.1.3 Technicians and associate professionals.....18.40 89		
5.1.4 Labour productivity per employee.....18.36 76		
5.2 Employability.....60.51 60		
5.2.1 Ease of finding skilled employees.....53.50 70		
5.2.2 Relevance of education system to the economy.....37.29 82		
5.2.3 Skills matching.....57.53 71		
5.2.4 Highly educated unemployment.....93.73 9		

6 GLOBAL KNOWLEDGE SKILLS.....25.16 68		
6.1 High-Level Skills.....18.05 86		
6.1.1 Workforce with tertiary education.....21.29 81		
6.1.2 Population with tertiary education.....25.92 58		
6.1.3 Professionals.....13.10 97		
6.1.4 Researchers.....23.66 39		
6.1.5 Senior officials and managers.....19.88 69		
6.1.6 Digital skills.....4.47 72		
6.2 Talent Impact.....32.26 52		
6.2.1 Innovation output.....43.73 43		
6.2.2 High-value exports.....49.98 11		
6.2.3 Software development.....53.39 81		
6.2.4 New business density.....6.91 78		
6.2.5 Scientific journal articles.....7.28 66		

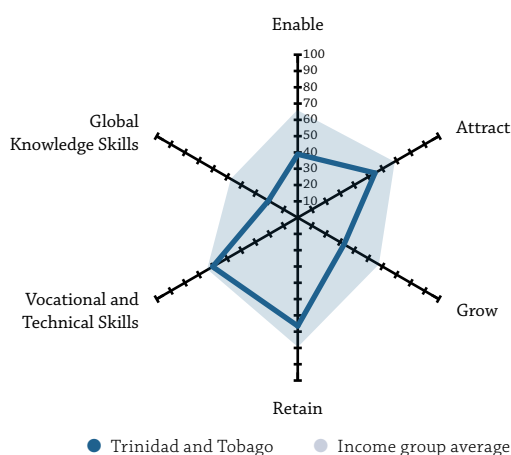
TRINIDAD AND TOBAGO

Key Indicators

Rank (out of 134).....	60
Income group	High income
Regional group	Latin America and the Caribbean
Population (millions)	1.53

GDP per capita (PPP US\$)	27,778.18
GDP (US\$ billions)	27.90
GTCI score	45.68
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	38.89	85
1.1 Regulatory Landscape	45.73	62
1.1.1 Government effectiveness	47.67	59
1.1.2 Rule of law	41.67	70
1.1.3 Political stability	65.20	54
1.1.4 Regulatory quality	39.88	77
1.1.5 Corruption	34.25	63
1.2 Market Landscape	29.18	114
1.2.1 Extent of market dominance	4.01	132
1.2.2 Domestic credit to private sector	39.88	82
1.2.3 Cluster development	34.91	89
1.2.4 R&D expenditure	1.01	109
1.2.5 ICT infrastructure	49.08	95
1.2.6 Urbanisation	46.17	94
1.3 Business and Labour Landscape	41.75	73
Labour Market		
1.3.1 Labour rights	75.34	70
1.3.2 Labour-employer cooperation	5.65	132
Management Practice		
1.3.3 Professional management	47.82	73
1.3.4 Relationship of pay to productivity	38.21	115
Technology Adoption		
1.3.5 Enterprise software	n/a	n/a
1.3.6 Cloud computing	n/a	n/a
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	54.74	49
2.1 External Openness	49.97	57
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	66.15	57
Attract People		
2.1.3 Migrant stock	40.78	66
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	42.97	76
2.2 Internal Openness	59.52	50
Social Inclusion		
2.2.1 Tolerance of minorities	68.09	28
2.2.2 Tolerance of immigrants	50.77	82
2.2.3 Social mobility	47.20	59
Gender Equality		
2.2.4 Economic empowerment of women	64.60	99
2.2.5 Gender parity in high-skilled jobs	77.59	59
2.2.6 Leadership opportunities for women	48.86	68

	Score	Rank
3 GROW	32.83	77
3.1 Formal Education	18.15	101
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	76
3.2 Lifelong Learning	24.65	108
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	49.29	78
3.3 Access to Growth Opportunities	55.68	42
Empowerment		
3.3.1 Delegation of authority	44.84	68
3.3.2 Youth inclusion	69.91	52
Collaboration		
3.3.3 Use of virtual social networks	61.09	71
3.3.4 Use of virtual professional networks	46.89	25

4 RETAIN	66.53	46
4.1 Sustainability	59.58	56
4.1.1 Pension coverage	91.01	53
4.1.2 Social protection	35.26	93
4.1.3 Brain retention	42.86	56
4.1.4 Environmental performance	48.98	47
4.1.5 Vulnerable employment	79.78	56
4.2 Lifestyle	73.49	50
4.2.1 Personal rights	87.96	39
4.2.2 Personal safety	58.94	70
4.2.3 Physician density	53.74	38
4.2.4 Sanitation	93.32	67

5 VOCATIONAL AND TECHNICAL SKILLS	60.29	35
5.1 Mid-Level Skills	60.14	21
5.1.1 Workforce with secondary education	82.16	6
5.1.2 Population with secondary education	n/a	n/a
5.1.3 Technicians and associate professionals	60.40	25
5.1.4 Labour productivity per employee	37.85	47
5.2 Employability	60.44	61
5.2.1 Ease of finding skilled employees	59.67	57
5.2.2 Relevance of education system to the economy	35.70	85
5.2.3 Skills matching	56.24	75
5.2.4 Highly educated unemployment	90.16	17

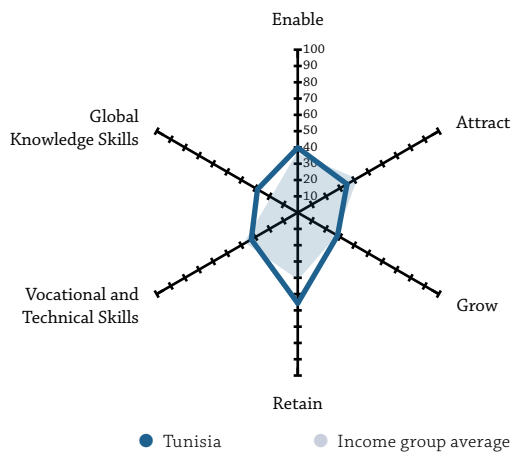
6 GLOBAL KNOWLEDGE SKILLS	20.79	84
6.1 High-Level Skills	21.71	72
6.1.1 Workforce with tertiary education	0.00	132
6.1.2 Population with tertiary education	n/a	n/a
6.1.3 Professionals	15.17	89
6.1.4 Researchers	7.22	62
6.1.5 Senior officials and managers	64.45	8
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	19.88	88
6.2.1 Innovation output	13.86	101
6.2.2 High-value exports	0.00	132
6.2.3 Software development	54.82	76
6.2.4 New business density	24.89	32
6.2.5 Scientific journal articles	5.82	75

TUNISIA

Key Indicators

Rank (out of 134).....	92
Income group	Lower-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	12.36

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....39.83 77		
1.1 Regulatory Landscape.....38.63 80		
1.1.1 Government effectiveness.....38.70 81		
1.1.2 Rule of law.....47.84 59		
1.1.3 Political stability.....43.08 104		
1.1.4 Regulatory quality.....32.02 92		
1.1.5 Corruption.....31.51 68		
1.2 Market Landscape.....39.88 80		
1.2.1 Extent of market dominance.....12.22 124		
1.2.2 Domestic credit to private sector.....59.42 37		
1.2.3 Cluster development.....26.62 110		
1.2.4 R&D expenditure.....13.78 48		
1.2.5 ICT infrastructure.....62.93 69		
1.2.6 Urbanisation.....64.29 56		
1.3 Business and Labour Landscape.....40.99 79		
Labour Market		
1.3.1 Labour rights.....77.88 62		
1.3.2 Labour-employer cooperation.....30.57 107		
Management Practice		
1.3.3 Professional management.....39.74 87		
1.3.4 Relationship of pay to productivity.....40.35 111		
Technology Adoption		
1.3.5 Enterprise software.....24.73 56		
1.3.6 Cloud computing.....19.33 53		
1.3.7 Firms with website.....54.30 58		
2 ATTRACT.....34.92 121		
2.1 External Openness.....29.42 111		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....54.05 66		
2.1.2 Financial globalisation.....54.94 84		
Attract People		
2.1.3 Migrant stock.....9.17 123		
2.1.4 International students.....10.32 68		
2.1.5 Brain gain.....18.61 119		
2.2 Internal Openness.....40.41 119		
Social Inclusion		
2.2.1 Tolerance of minorities.....26.60 99		
2.2.2 Tolerance of immigrants.....46.15 91		
2.2.3 Social mobility.....37.08 90		
Gender Equality		
2.2.4 Economic empowerment of women.....49.56 117		
2.2.5 Gender parity in high-skilled jobs.....39.64 107		
2.2.6 Leadership opportunities for women.....43.46 82		

GDP per capita (PPP US\$)	12,489.72
GDP (US\$ billions)	46.66
GTCI score.....	36.67
GTCI score (income group average)	32.03

	Score	Rank
3 GROW.....28.21 94		
3.1 Formal Education.....23.62 85		
Enrolment		
3.1.1 Vocational enrolment.....13.83 72		
3.1.2 Tertiary enrolment.....24.12 79		
Quality		
3.1.3 Tertiary education expenditure.....64.90 47		
3.1.4 Reading, maths, and science.....15.23 73		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....29.35 88		
3.2.1 Business masters education.....19.52 47		
3.2.2 Prevalence of training in firms.....20.19 83		
3.2.3 Employee development.....48.34 83		
3.3 Access to Growth Opportunities.....31.66 103		
Empowerment		
3.3.1 Delegation of authority.....20.87 117		
3.3.2 Youth inclusion.....30.73 109		
Collaboration		
3.3.3 Use of virtual social networks.....54.18 80		
3.3.4 Use of virtual professional networks.....20.84 66		

4 RETAIN.....55.62 75		
4.1 Sustainability.....48.53 80		
4.1.1 Pension coverage.....85.25 63		
4.1.2 Social protection.....17.80 122		
4.1.3 Brain retention.....20.32 113		
4.1.4 Environmental performance.....36.95 73		
4.1.5 Vulnerable employment.....82.31 54		
4.2 Lifestyle.....62.72 65		
4.2.1 Personal rights.....72.34 69		
4.2.2 Personal safety.....62.00 65		
4.2.3 Physician density.....19.36 85		
4.2.4 Sanitation.....97.18 56		

5 VOCATIONAL AND TECHNICAL SKILLS.....32.91 107		
5.1 Mid-Level Skills.....29.21 83		
5.1.1 Workforce with secondary education.....46.74 58		
5.1.2 Population with secondary education.....n/a n/a		
5.1.3 Technicians and associate professionals.....19.58 85		
5.1.4 Labour productivity per employee.....21.31 72		
5.2 Employability.....36.62 126		
5.2.1 Ease of finding skilled employees.....49.14 80		
5.2.2 Relevance of education system to the economy.....29.53 95		
5.2.3 Skills matching.....40.25 93		
5.2.4 Highly educated unemployment.....27.56 117		

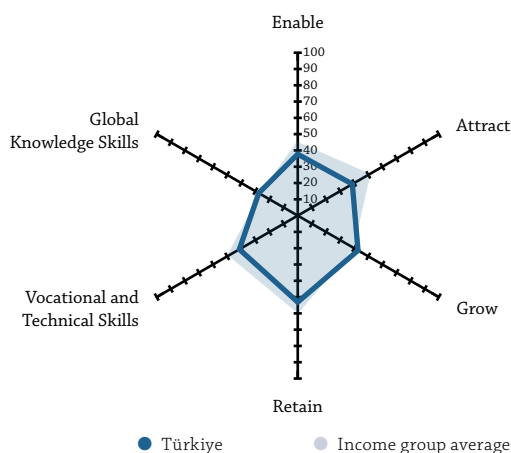
6 GLOBAL KNOWLEDGE SKILLS.....28.55 59		
6.1 High-Level Skills.....29.73 51		
6.1.1 Workforce with tertiary education.....26.84 70		
6.1.2 Population with tertiary education.....n/a n/a		
6.1.3 Professionals.....18.40 78		
6.1.4 Researchers.....18.51 45		
6.1.5 Senior officials and managers.....17.50 78		
6.1.6 Digital skills.....67.39 4		
6.2 Talent Impact.....27.37 66		
6.2.1 Innovation output.....35.81 58		
6.2.2 High-value exports.....12.81 62		
6.2.3 Software development.....61.49 61		
6.2.4 New business density.....10.85 60		
6.2.5 Scientific journal articles.....15.87 52		

TÜRKİYE

Key Indicators

Rank (out of 134).....	81
Income group	Upper-middle income
Regional group	Northern Africa and Western Asia
Population (millions)	85.34

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....37.72 90		
1.1 Regulatory Landscape.....34.71 89		
1.1.1 Government effectiveness.....40.70 76		
1.1.2 Rule of law.....34.22 89		
1.1.3 Political stability.....32.62 121		
1.1.4 Regulatory quality.....39.97 76		
1.1.5 Corruption.....26.03 81		
1.2 Market Landscape.....49.83 51		
1.2.1 Extent of market dominance.....35.16 79		
1.2.2 Domestic credit to private sector.....49.16 57		
1.2.3 Cluster development.....47.06 56		
1.2.4 R&D expenditure.....20.18 39		
1.2.5 ICT infrastructure.....76.01 41		
1.2.6 Urbanisation.....71.42 43		
1.3 Business and Labour Landscape.....28.61 126		
Labour Market		
1.3.1 Labour rights.....50.94 89		
1.3.2 Labour-employer cooperation.....18.04 121		
Management Practice		
1.3.3 Professional management.....35.73 100		
1.3.4 Relationship of pay to productivity.....37.04 118		
Technology Adoption		
1.3.5 Enterprise software.....4.25 126		
1.3.6 Cloud computing.....8.22 111		
1.3.7 Firms with website.....46.07 67		
2 ATTRACT.....38.70 107		
2.1 External Openness.....41.23 78		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....85.14 37		
2.1.2 Financial globalisation.....41.20 104		
Attract People		
2.1.3 Migrant stock.....48.20 52		
2.1.4 International students.....8.21 74		
2.1.5 Brain gain.....23.40 115		
2.2 Internal Openness.....36.18 124		
Social Inclusion		
2.2.1 Tolerance of minorities.....3.19 132		
2.2.2 Tolerance of immigrants.....44.62 94		
2.2.3 Social mobility.....20.19 121		
Gender Equality		
2.2.4 Economic empowerment of women.....75.22 69		
2.2.5 Gender parity in high-skilled jobs.....46.24 104		
2.2.6 Leadership opportunities for women.....27.60 118		

GDP per capita (PPP US\$)	37,273.70
GDP (US\$ billions)	905.99
GTCI score.....	40.20
GTCI score (income group average)	43.53

	Score	Rank
3 GROW.....42.71 50		
3.1 Formal Education.....50.77 26		
Enrolment		
3.1.1 Vocational enrolment.....30.15 39		
3.1.2 Tertiary enrolment.....77.41 2		
Quality		
3.1.3 Tertiary education expenditure.....69.49 40		
3.1.4 Reading, maths, and science.....52.41 40		
3.1.5 University ranking.....24.42 48		
3.2 Lifelong Learning.....38.36 50		
3.2.1 Business masters education.....40.26 27		
3.2.2 Prevalence of training in firms.....35.59 56		
3.2.3 Employee development.....39.25 107		
3.3 Access to Growth Opportunities.....38.99 84		
Empowerment		
3.3.1 Delegation of authority.....17.51 121		
3.3.2 Youth inclusion.....47.22 90		
Collaboration		
3.3.3 Use of virtual social networks.....68.48 52		
3.3.4 Use of virtual professional networks.....22.76 58		

4 RETAIN.....53.08 81		
4.1 Sustainability.....52.37 74		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....50.05 69		
4.1.3 Brain retention.....26.53 101		
4.1.4 Environmental performance.....12.54 130		
4.1.5 Vulnerable employment.....72.72 65		
4.2 Lifestyle.....53.79 85		
4.2.1 Personal rights.....20.74 124		
4.2.2 Personal safety.....63.54 61		
4.2.3 Physician density.....31.74 75		
4.2.4 Sanitation.....99.15 31		

5 VOCATIONAL AND TECHNICAL SKILLS.....41.37 80		
5.1 Mid-Level Skills.....34.99 68		
5.1.1 Workforce with secondary education.....28.64 91		
5.1.2 Population with secondary education.....29.24 61		
5.1.3 Technicians and associate professionals.....25.59 75		
5.1.4 Labour productivity per employee.....56.49 27		
5.2 Employability.....47.75 97		
5.2.1 Ease of finding skilled employees.....55.13 66		
5.2.2 Relevance of education system to the economy.....20.89 109		
5.2.3 Skills matching.....60.01 63		
5.2.4 Highly educated unemployment.....54.98 107		

6 GLOBAL KNOWLEDGE SKILLS.....27.64 61		
6.1 High-Level Skills.....25.67 60		
6.1.1 Workforce with tertiary education.....34.10 52		
6.1.2 Population with tertiary education.....26.47 57		
6.1.3 Professionals.....28.11 59		
6.1.4 Researchers.....20.28 40		
6.1.5 Senior officials and managers.....32.40 40		
6.1.6 Digital skills.....12.69 62		
6.2 Talent Impact.....29.60 59		
6.2.1 Innovation output.....55.12 32		
6.2.2 High-value exports.....5.77 85		
6.2.3 Software development.....58.56 69		
6.2.4 New business density.....9.61 64		
6.2.5 Scientific journal articles.....18.94 45		

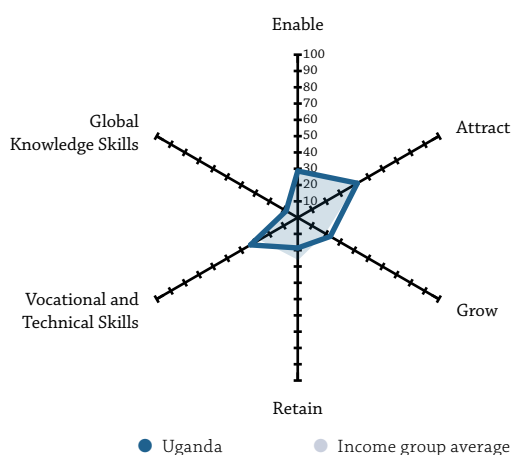
UGANDA

Key Indicators

Rank (out of 134).....	119
Income group	Low income
Regional group	Sub-Saharan Africa
Population (millions)	47.25

GDP per capita (PPP US\$)	2,693.82
GDP (US\$ billions)	45.56
GTCI score	25.71
GTCI score (income group average)	22.85

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	28.60	118
1.1 Regulatory Landscape	29.09	109
1.1.1 Government effectiveness	28.64	100
1.1.2 Rule of law	35.93	84
1.1.3 Political stability	38.82	110
1.1.4 Regulatory quality	29.72	97
1.1.5 Corruption	12.33	116
1.2 Market Landscape	20.78	120
1.2.1 Extent of market dominance	15.33	120
1.2.2 Domestic credit to private sector	16.80	118
1.2.3 Cluster development	34.19	92
1.2.4 R&D expenditure	2.48	98
1.2.5 ICT infrastructure	43.53	102
1.2.6 Urbanisation	12.35	126
1.3 Business and Labour Landscape	35.93	102
Labour Market		
1.3.1 Labour rights	80.43	59
1.3.2 Labour-employer cooperation	41.07	74
Management Practice		
1.3.3 Professional management	47.73	74
1.3.4 Relationship of pay to productivity	46.74	93
Technology Adoption		
1.3.5 Enterprise software	16.89	88
1.3.6 Cloud computing	7.43	115
1.3.7 Firms with website	11.21	107
2 ATTRACT	42.22	97
2.1 External Openness	40.05	82
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	34.21	114
Attract People		
2.1.3 Migrant stock	34.38	80
2.1.4 International students	n/a	n/a
2.1.5 Brain gain	51.55	55
2.2 Internal Openness	44.38	110
Social Inclusion		
2.2.1 Tolerance of minorities	19.15	105
2.2.2 Tolerance of immigrants	33.85	114
2.2.3 Social mobility	45.37	64
Gender Equality		
2.2.4 Economic empowerment of women	73.45	74
2.2.5 Gender parity in high-skilled jobs	47.31	102
2.2.6 Leadership opportunities for women	47.18	70

	Score	Rank
3 GROW	23.09	114
3.1 Formal Education	11.59	121
Enrolment		
3.1.1 Vocational enrolment	6.64	95
3.1.2 Tertiary enrolment	2.44	125
Quality		
3.1.3 Tertiary education expenditure	37.31	99
3.1.4 Reading, maths, and science	n/a	n/a
3.1.5 University ranking	0.00	76
3.2 Lifelong Learning	27.01	97
3.2.1 Business masters education	0.00	57
3.2.2 Prevalence of training in firms	40.90	48
3.2.3 Employee development	40.14	104
3.3 Access to Growth Opportunities	30.65	105
Empowerment		
3.3.1 Delegation of authority	43.23	74
3.3.2 Youth inclusion	73.96	45
Collaboration		
3.3.3 Use of virtual social networks	1.56	132
3.3.4 Use of virtual professional networks	3.85	115

4 RETAIN	18.63	131
4.1 Sustainability	25.42	118
4.1.1 Pension coverage	10.30	113
4.1.2 Social protection	41.72	86
4.1.3 Brain retention	27.56	98
4.1.4 Environmental performance	28.64	91
4.1.5 Vulnerable employment	18.85	119
4.2 Lifestyle	11.85	134
4.2.1 Personal rights	33.72	112
4.2.2 Personal safety	0.00	133
4.2.3 Physician density	1.74	120
4.2.4 Sanitation	11.94	129

5 VOCATIONAL AND TECHNICAL SKILLS	33.50	102
5.1 Mid-Level Skills	12.56	114
5.1.1 Workforce with secondary education	41.48	69
5.1.2 Population with secondary education	0.38	93
5.1.3 Technicians and associate professionals	6.16	122
5.1.4 Labour productivity per employee	2.24	109
5.2 Employability	54.43	79
5.2.1 Ease of finding skilled employees	58.81	60
5.2.2 Relevance of education system to the economy	38.78	75
5.2.3 Skills matching	42.02	88
5.2.4 Highly educated unemployment	78.10	61

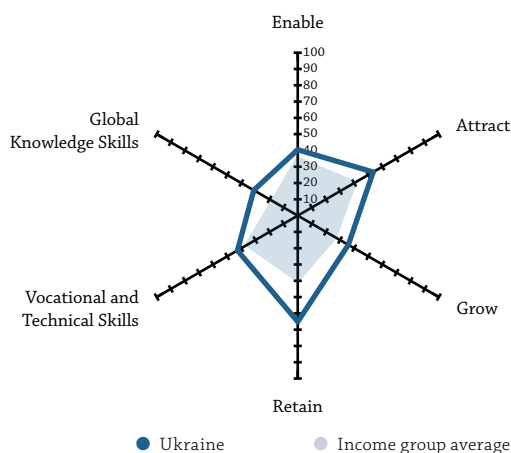
6 GLOBAL KNOWLEDGE SKILLS	8.24	120
6.1 High-Level Skills	5.18	121
6.1.1 Workforce with tertiary education	8.79	106
6.1.2 Population with tertiary education	9.01	78
6.1.3 Professionals	5.26	125
6.1.4 Researchers	0.20	103
6.1.5 Senior officials and managers	2.62	121
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	11.30	117
6.2.1 Innovation output	9.08	116
6.2.2 High-value exports	3.63	96
6.2.3 Software development	38.48	110
6.2.4 New business density	4.56	86
6.2.5 Scientific journal articles	0.76	110

UKRAINE

Key Indicators

Rank (out of 134).....	64
Income group.....	Lower-middle income
Regional group.....	Europe
Population (millions).....	38.00

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 40.44 75		
1.1 Regulatory Landscape.....	29.96	106
1.1.1 Government effectiveness.....	32.66	94
1.1.2 Rule of law.....	27.75	108
1.1.3 Political stability.....	32.60	122
1.1.4 Regulatory quality.....	34.88	86
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	40.47	78
1.2.1 Extent of market dominance.....	33.03	86
1.2.2 Domestic credit to private sector.....	28.17	105
1.2.3 Cluster development.....	33.38	94
1.2.4 R&D expenditure.....	5.32	77
1.2.5 ICT infrastructure.....	78.14	36
1.2.6 Urbanisation.....	64.76	55
1.3 Business and Labour Landscape.....	50.90	39
Labour Market		
1.3.1 Labour rights.....	87.40	46
1.3.2 Labour-employer cooperation.....	39.20	83
Management Practice		
1.3.3 Professional management.....	36.57	97
1.3.4 Relationship of pay to productivity.....	58.23	52
Technology Adoption		
1.3.5 Enterprise software.....	46.74	24
1.3.6 Cloud computing.....	25.30	31
1.3.7 Firms with website.....	62.85	44
2 ATTRACT..... 53.44 57		
2.1 External Openness.....	51.65	51
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	68.38	56
2.1.2 Financial globalisation.....	72.48	46
Attract People		
2.1.3 Migrant stock.....	58.64	42
2.1.4 International students.....	17.74	50
2.1.5 Brain gain.....	41.03	80
2.2 Internal Openness.....	55.22	68
Social Inclusion		
2.2.1 Tolerance of minorities.....	41.49	71
2.2.2 Tolerance of immigrants.....	55.38	76
2.2.3 Social mobility.....	34.04	102
Gender Equality		
2.2.4 Economic empowerment of women.....	78.76	59
2.2.5 Gender parity in high-skilled jobs.....	67.47	78
2.2.6 Leadership opportunities for women.....	54.19	49

GDP per capita (PPP US\$).....	12,671.24
GDP (US\$ billions).....	160.50
GTCI score.....	44.80
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 35.87 68		
3.1 Formal Education.....	39.45	50
Enrolment		
3.1.1 Vocational enrolment.....	9.79	85
3.1.2 Tertiary enrolment.....	54.37	20
Quality		
3.1.3 Tertiary education expenditure.....	60.45	59
3.1.4 Reading, maths, and science.....	52.50	39
3.1.5 University ranking.....	20.16	57
3.2 Lifelong Learning.....	22.33	116
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	27.09	68
3.2.3 Employee development.....	39.90	106
3.3 Access to Growth Opportunities.....	45.83	72
Empowerment		
3.3.1 Delegation of authority.....	31.01	106
3.3.2 Youth inclusion.....	67.44	56
Collaboration		
3.3.3 Use of virtual social networks.....	69.36	45
3.3.4 Use of virtual professional networks.....	15.52	79
4 RETAIN..... 65.12 50		
4.1 Sustainability.....	63.85	47
4.1.1 Pension coverage.....	96.16	45
4.1.2 Social protection.....	68.41	38
4.1.3 Brain retention.....	17.86	118
4.1.4 Environmental performance.....	52.03	43
4.1.5 Vulnerable employment.....	84.78	50
4.2 Lifestyle.....	66.40	57
4.2.1 Personal rights.....	70.44	71
4.2.2 Personal safety.....	50.64	87
4.2.3 Physician density.....	47.00	47
4.2.4 Sanitation.....	97.52	52
5 VOCATIONAL AND TECHNICAL SKILLS..... 42.73 77		
5.1 Mid-Level Skills.....	31.92	76
5.1.1 Workforce with secondary education.....	32.99	81
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	48.68	42
5.1.4 Labour productivity per employee.....	14.08	83
5.2 Employability.....	53.54	81
5.2.1 Ease of finding skilled employees.....	49.18	79
5.2.2 Relevance of education system to the economy.....	44.08	60
5.2.3 Skills matching.....	n/a	n/a
5.2.4 Highly educated unemployment.....	67.35	85
6 GLOBAL KNOWLEDGE SKILLS..... 31.18 50		
6.1 High-Level Skills.....	33.33	45
6.1.1 Workforce with tertiary education.....	66.81	5
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	41.50	41
6.1.4 Researchers.....	6.63	65
6.1.5 Senior officials and managers.....	48.38	19
6.1.6 Digital skills.....	3.35	76
6.2 Talent Impact.....	29.03	61
6.2.1 Innovation output.....	41.75	47
6.2.2 High-value exports.....	7.99	80
6.2.3 Software development.....	75.54	37
6.2.4 New business density.....	9.08	66
6.2.5 Scientific journal articles.....	10.81	57

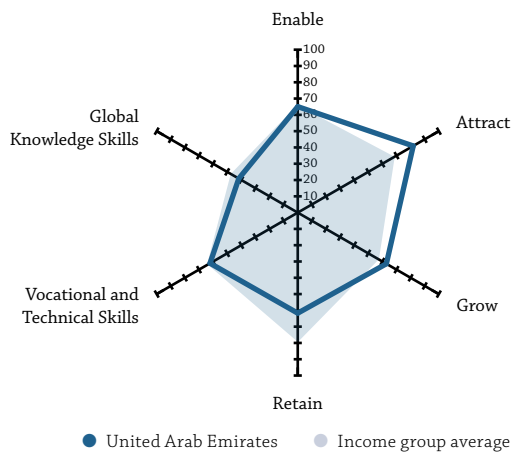
UNITED ARAB EMIRATES

Key Indicators

Rank (out of 134).....	22
Income group	High income
Regional group	Northern Africa and Western Asia
Population (millions)	9.44

GDP per capita (PPP US\$)	87,729.19
GDP (US\$ billions)	507.53
GTCI score	62.56
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	65.05	23
1.1 Regulatory Landscape	72.01	26
1.1.1 Government effectiveness	77.74	17
1.1.2 Rule of law	67.36	35
1.1.3 Political stability	78.06	36
1.1.4 Regulatory quality	68.41	29
1.1.5 Corruption	68.49	23
1.2 Market Landscape	69.97	16
1.2.1 Extent of market dominance	72.84	14
1.2.2 Domestic credit to private sector	58.09	40
1.2.3 Cluster development	87.30	4
1.2.4 R&D expenditure	27.79	28
1.2.5 ICT infrastructure	89.30	9
1.2.6 Urbanisation	84.50	21
1.3 Business and Labour Landscape	53.16	35
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	72.59	15
Management Practice		
1.3.3 Professional management	72.14	25
1.3.4 Relationship of pay to productivity	84.06	4
Technology Adoption		
1.3.5 Enterprise software	21.22	66
1.3.6 Cloud computing	15.78	67
1.3.7 Firms with website	n/a	n/a
2 ATTRACT	81.84	4
2.1 External Openness	92.56	2
Attract Business		
2.1.1 FDI regulatory restrictiveness	n/a	n/a
2.1.2 Financial globalisation	80.42	31
Attract People		
2.1.3 Migrant stock	100.00	1
2.1.4 International students	100.00	1
2.1.5 Brain gain	89.80	4
2.2 Internal Openness	71.12	23
Social Inclusion		
2.2.1 Tolerance of minorities	76.60	16
2.2.2 Tolerance of immigrants	100.00	1
2.2.3 Social mobility	77.72	14
Gender Equality		
2.2.4 Economic empowerment of women	75.22	69
2.2.5 Gender parity in high-skilled jobs	22.07	119
2.2.6 Leadership opportunities for women	75.11	12

	Score	Rank
3 GROW	62.81	17
3.1 Formal Education	39.25	52
Enrolment		
3.1.1 Vocational enrolment	2.22	111
3.1.2 Tertiary enrolment	36.05	60
Quality		
3.1.3 Tertiary education expenditure	79.92	17
3.1.4 Reading, maths, and science	40.56	46
3.1.5 University ranking	37.49	34
3.2 Lifelong Learning	62.69	15
3.2.1 Business masters education	48.93	21
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	76.44	22
3.3 Access to Growth Opportunities	86.49	2
Empowerment		
3.3.1 Delegation of authority	70.00	16
3.3.2 Youth inclusion	81.49	25
Collaboration		
3.3.3 Use of virtual social networks	100.00	1
3.3.4 Use of virtual professional networks	94.45	2

4 RETAIN	61.71	59
4.1 Sustainability	66.71	36
4.1.1 Pension coverage	21.82	97
4.1.2 Social protection	65.78	43
4.1.3 Brain retention	90.94	3
4.1.4 Environmental performance	56.78	34
4.1.5 Vulnerable employment	98.22	4
4.2 Lifestyle	56.70	80
4.2.1 Personal rights	25.25	120
4.2.2 Personal safety	57.19	77
4.2.3 Physician density	45.22	52
4.2.4 Sanitation	99.15	29

5 VOCATIONAL AND TECHNICAL SKILLS	62.16	28
5.1 Mid-Level Skills	43.13	58
5.1.1 Workforce with secondary education	30.76	85
5.1.2 Population with secondary education	28.66	63
5.1.3 Technicians and associate professionals	45.70	45
5.1.4 Labour productivity per employee	67.39	13
5.2 Employability	81.19	10
5.2.1 Ease of finding skilled employees	92.48	7
5.2.2 Relevance of education system to the economy	81.35	7
5.2.3 Skills matching	66.98	53
5.2.4 Highly educated unemployment	83.95	43

6 GLOBAL KNOWLEDGE SKILLS	41.79	32
6.1 High-Level Skills	53.83	12
6.1.1 Workforce with tertiary education	48.21	29
6.1.2 Population with tertiary education	70.34	4
6.1.3 Professionals	33.89	50
6.1.4 Researchers	28.48	33
6.1.5 Senior officials and managers	55.95	13
6.1.6 Digital skills	86.10	3
6.2 Talent Impact	29.76	58
6.2.1 Innovation output	39.11	51
6.2.2 High-value exports	16.06	55
6.2.3 Software development	63.26	57
6.2.4 New business density	12.49	54
6.2.5 Scientific journal articles	17.88	49

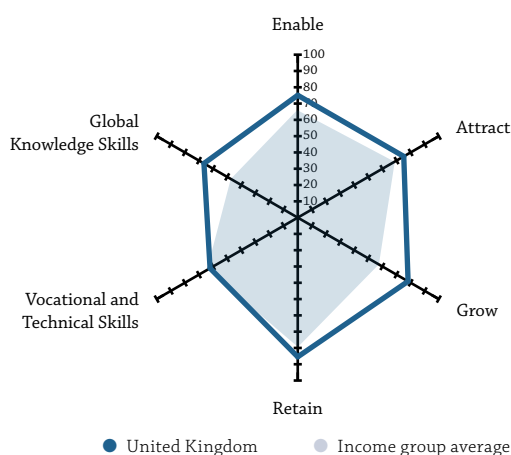
UNITED KINGDOM

Key Indicators

Rank (out of 134).....	10
Income group	High income
Regional group	Europe
Population (millions)	66.97

GDP per capita (PPP US\$)	54,602.54
GDP (US\$ billions)	3,070.67
GTCI score	73.75
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1	ENABLE	75.10
1.1	Regulatory Landscape	78.02
1.1.1	Government effectiveness	74.77
1.1.2	Rule of law	83.22
1.1.3	Political stability	75.27
1.1.4	Regulatory quality	80.14
1.1.5	Corruption	76.71
1.2	Market Landscape	70.45
1.2.1	Extent of market dominance	70.69
1.2.2	Domestic credit to private sector	71.39
1.2.3	Cluster development	78.72
1.2.4	R&D expenditure	32.01
1.2.5	ICT infrastructure	88.96
1.2.6	Urbanisation	80.91
1.3	Business and Labour Landscape	76.83
	Labour Market	
1.3.1	Labour rights	85.79
1.3.2	Labour-employer cooperation	64.78
	Management Practice	
1.3.3	Professional management	82.91
1.3.4	Relationship of pay to productivity	72.00
	Technology Adoption	
1.3.5	Enterprise software	79.74
1.3.6	Cloud computing	67.25
1.3.7	Firms with website	85.36
2	ATTRACT	75.14
2.1	External Openness	78.60
	Attract Business	
2.1.1	FDI regulatory restrictiveness	90.27
2.1.2	Financial globalisation	90.39
	Attract People	
2.1.3	Migrant stock	62.33
2.1.4	International students	74.01
2.1.5	Brain gain	76.01
2.2	Internal Openness	71.68
	Social Inclusion	
2.2.1	Tolerance of minorities	38.30
2.2.2	Tolerance of immigrants	81.54
2.2.3	Social mobility	69.98
	Gender Equality	
2.2.4	Economic empowerment of women	96.46
2.2.5	Gender parity in high-skilled jobs	84.65
2.2.6	Leadership opportunities for women	59.16

	Score	Rank
3	GROW	78.19
3.1	Formal Education	68.27
	Enrolment	
3.1.1	Vocational enrolment	43.62
3.1.2	Tertiary enrolment	45.54
	Quality	
3.1.3	Tertiary education expenditure	83.66
3.1.4	Reading, maths, and science	69.14
3.1.5	University ranking	99.39
3.2	Lifelong Learning	88.32
3.2.1	Business masters education	98.44
3.2.2	Prevalence of training in firms	n/a
3.2.3	Employee development	78.21
3.3	Access to Growth Opportunities	77.98
	Empowerment	
3.3.1	Delegation of authority	77.41
3.3.2	Youth inclusion	81.97
	Collaboration	
3.3.3	Use of virtual social networks	79.47
3.3.4	Use of virtual professional networks	73.05

4	RETAIN	85.45
4.1	Sustainability	88.53
4.1.1	Pension coverage	100.00
4.1.2	Social protection	71.75
4.1.3	Brain retention	84.71
4.1.4	Environmental performance	99.66
4.1.5	Vulnerable employment	86.53
4.2	Lifestyle	82.36
4.2.1	Personal rights	90.98
4.2.2	Personal safety	89.56
4.2.3	Physician density	49.89
4.2.4	Sanitation	99.02

5	VOCATIONAL AND TECHNICAL SKILLS	62.15
5.1	Mid-Level Skills	51.20
5.1.1	Workforce with secondary education	49.28
5.1.2	Population with secondary education	45.76
5.1.3	Technicians and associate professionals	50.92
5.1.4	Labour productivity per employee	58.86
5.2	Employability	73.09
5.2.1	Ease of finding skilled employees	64.99
5.2.2	Relevance of education system to the economy	68.59
5.2.3	Skills matching	69.41
5.2.4	Highly educated unemployment	89.38

6	GLOBAL KNOWLEDGE SKILLS	66.47
6.1	High-Level Skills	57.22
6.1.1	Workforce with tertiary education	54.35
6.1.2	Population with tertiary education	63.10
6.1.3	Professionals	60.83
6.1.4	Researchers	53.70
6.1.5	Senior officials and managers	71.17
6.1.6	Digital skills	40.17
6.2	Talent Impact	75.71
6.2.1	Innovation output	90.26
6.2.2	High-value exports	43.06
6.2.3	Software development	86.34
6.2.4	New business density	100.00
6.2.5	Scientific journal articles	58.90

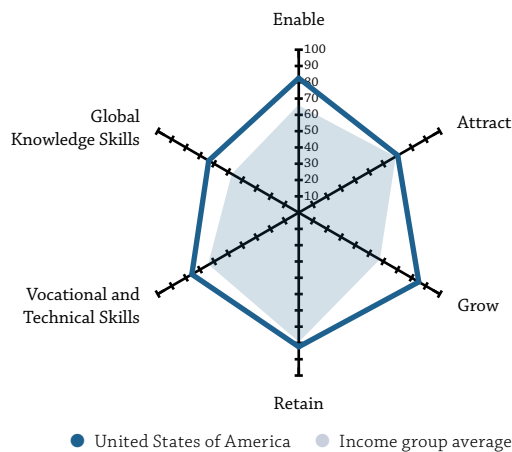
UNITED STATES OF AMERICA

Key Indicators

Rank (out of 134).....	3
Income group	High income
Regional group	Northern America
Population (millions)	333.29

GDP per capita (PPP US\$)	76,398.59
GDP (US\$ billions)	25,462.70
GTCI score	76.60
GTCI score (income group average)	61.91

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE	82.51	4
1.1 Regulatory Landscape	74.29	22
1.1.1 Government effectiveness	76.18	20
1.1.2 Rule of law	82.95	19
1.1.3 Political stability	61.30	63
1.1.4 Regulatory quality	79.78	17
1.1.5 Corruption	71.23	22
1.2 Market Landscape	85.67	1
1.2.1 Extent of market dominance	89.94	2
1.2.2 Domestic credit to private sector	84.28	2
1.2.3 Cluster development	100.00	1
1.2.4 R&D expenditure	63.86	5
1.2.5 ICT infrastructure	96.34	4
1.2.6 Urbanisation	79.60	27
1.3 Business and Labour Landscape	87.57	4
Labour Market		
1.3.1 Labour rights	n/a	n/a
1.3.2 Labour-employer cooperation	79.14	12
Management Practice		
1.3.3 Professional management	91.36	4
1.3.4 Relationship of pay to productivity	99.13	2
Technology Adoption		
1.3.5 Enterprise software	91.33	3
1.3.6 Cloud computing	91.29	2
1.3.7 Firms with website	73.19	29
2 ATTRACT	70.15	22
2.1 External Openness	65.14	24
Attract Business		
2.1.1 FDI regulatory restrictiveness	77.03	51
2.1.2 Financial globalisation	75.56	36
Attract People		
2.1.3 Migrant stock	66.22	26
2.1.4 International students	18.49	47
2.1.5 Brain gain	88.41	5
2.2 Internal Openness	75.16	17
Social Inclusion		
2.2.1 Tolerance of minorities	30.85	84
2.2.2 Tolerance of immigrants	90.77	11
2.2.3 Social mobility	84.98	7
Gender Equality		
2.2.4 Economic empowerment of women	87.61	35
2.2.5 Gender parity in high-skilled jobs	92.12	20
2.2.6 Leadership opportunities for women	64.64	27

	Score	Rank
3 GROW	85.05	1
3.1 Formal Education	75.84	2
Enrolment		
3.1.1 Vocational enrolment	n/a	n/a
3.1.2 Tertiary enrolment	57.64	13
Quality		
3.1.3 Tertiary education expenditure	79.90	18
3.1.4 Reading, maths, and science	65.82	23
3.1.5 University ranking	100.00	1
3.2 Lifelong Learning	98.84	1
3.2.1 Business masters education	99.70	2
3.2.2 Prevalence of training in firms	n/a	n/a
3.2.3 Employee development	97.99	3
3.3 Access to Growth Opportunities	80.47	6
Empowerment		
3.3.1 Delegation of authority	89.38	3
3.3.2 Youth inclusion	80.21	32
Collaboration		
3.3.3 Use of virtual social networks	67.90	56
3.3.4 Use of virtual professional networks	84.37	3

4 RETAIN	82.34	15
4.1 Sustainability	85.15	11
4.1.1 Pension coverage	100.00	1
4.1.2 Social protection	78.11	20
4.1.3 Brain retention	97.72	2
4.1.4 Environmental performance	54.58	36
4.1.5 Vulnerable employment	95.37	9
4.2 Lifestyle	79.53	36
4.2.1 Personal rights	86.72	43
4.2.2 Personal safety	75.73	47
4.2.3 Physician density	56.03	35
4.2.4 Sanitation	99.65	19

5 VOCATIONAL AND TECHNICAL SKILLS	75.74	1
5.1 Mid-Level Skills	68.02	6
5.1.1 Workforce with secondary education	57.96	37
5.1.2 Population with secondary education	60.69	23
5.1.3 Technicians and associate professionals	70.76	12
5.1.4 Labour productivity per employee	82.68	3
5.2 Employability	83.45	6
5.2.1 Ease of finding skilled employees	90.70	9
5.2.2 Relevance of education system to the economy	87.07	5
5.2.3 Skills matching	67.47	52
5.2.4 Highly educated unemployment	88.56	25

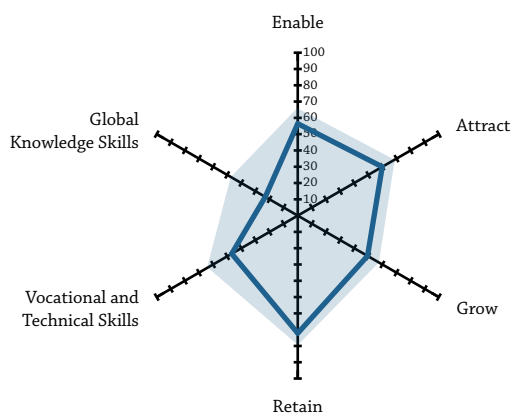
6 GLOBAL KNOWLEDGE SKILLS	63.80	5
6.1 High-Level Skills	60.80	3
6.1.1 Workforce with tertiary education	61.63	10
6.1.2 Population with tertiary education	64.27	7
6.1.3 Professionals	52.27	20
6.1.4 Researchers	55.28	19
6.1.5 Senior officials and managers	70.53	6
6.1.6 Digital skills	n/a	n/a
6.2 Talent Impact	66.80	11
6.2.1 Innovation output	88.28	5
6.2.2 High-value exports	35.88	23
6.2.3 Software development	91.59	5
6.2.4 New business density	n/a	n/a
6.2.5 Scientific journal articles	51.46	24

URUGUAY

Key Indicators

Rank (out of 134).....	43
Income group	High income
Regional group	Latin America and the Caribbean
Population (millions)	3.42

GTCI 2023 Country Profile by Pillar



● Uruguay

● Income group average

	Score	Rank
1 ENABLE..... 56.43 34		
1.1 Regulatory Landscape..... 71.17	27	
1.1.1 Government effectiveness..... 63.81	37	
1.1.2 Rule of law..... 64.75	36	
1.1.3 Political stability..... 88.38	8	
1.1.4 Regulatory quality..... 60.85	41	
1.1.5 Corruption..... 78.08	13	
1.2 Market Landscape..... 49.82	52	
1.2.1 Extent of market dominance..... 44.92	56	
1.2.2 Domestic credit to private sector..... 30.99	102	
1.2.3 Cluster development..... 40.79	79	
1.2.4 R&D expenditure..... 8.18	63	
1.2.5 ICT infrastructure..... 79.38	32	
1.2.6 Urbanisation..... 94.63	5	
1.3 Business and Labour Landscape..... 48.31	52	
Labour Market		
1.3.1 Labour rights..... 90.75	31	
1.3.2 Labour-employer cooperation..... 38.66	87	
Management Practice		
1.3.3 Professional management..... 51.76	64	
1.3.4 Relationship of pay to productivity..... 45.93	98	
Technology Adoption		
1.3.5 Enterprise software..... 21.62	63	
1.3.6 Cloud computing..... 20.60	46	
1.3.7 Firms with website..... 68.85	38	
2 ATTRACT..... 59.88 36		
2.1 External Openness..... 44.77	70	
Attract Business		
2.1.1 FDI regulatory restrictiveness..... 87.84	28	
2.1.2 Financial globalisation..... 64.01	61	
Attract People		
2.1.3 Migrant stock..... 30.19	85	
2.1.4 International students..... 7.56	76	
2.1.5 Brain gain..... 34.26	98	
2.2 Internal Openness..... 75.00	18	
Social Inclusion		
2.2.1 Tolerance of minorities..... 78.72	10	
2.2.2 Tolerance of immigrants..... 92.31	8	
2.2.3 Social mobility..... 58.42	44	
Gender Equality		
2.2.4 Economic empowerment of women..... 84.07	43	
2.2.5 Gender parity in high-skilled jobs..... 86.17	37	
2.2.6 Leadership opportunities for women..... 50.29	64	

GDP per capita (PPP US\$)	28,841.99
GDP (US\$ billions)	71.18
GTCI score.....	51.29
GTCI score (income group average)	61.91

	Score	Rank
3 GROW..... 49.46 34		
3.1 Formal Education..... 42.21	42	
Enrolment		
3.1.1 Vocational enrolment..... 40.87	27	
3.1.2 Tertiary enrolment..... 44.47	45	
Quality		
3.1.3 Tertiary education expenditure..... 63.55	49	
3.1.4 Reading, maths, and science..... 36.51	51	
3.1.5 University ranking..... 25.63	47	
3.2 Lifelong Learning..... 46.00	33	
3.2.1 Business masters education..... 15.71	50	
3.2.2 Prevalence of training in firms..... 65.60	17	
3.2.3 Employee development..... 56.67	57	
3.3 Access to Growth Opportunities..... 60.17	36	
Empowerment		
3.3.1 Delegation of authority..... 40.27	81	
3.3.2 Youth inclusion..... 72.84	47	
Collaboration		
3.3.3 Use of virtual social networks..... 76.95	24	
3.3.4 Use of virtual professional networks..... 50.62	21	

4 RETAIN..... 72.17 36		
4.1 Sustainability..... 61.93	51	
4.1.1 Pension coverage..... 100.00	1	
4.1.2 Social protection..... 76.25	26	
4.1.3 Brain retention..... 29.96	91	
4.1.4 Environmental performance..... 31.36	86	
4.1.5 Vulnerable employment..... 72.09	67	
4.2 Lifestyle..... 82.41	27	
4.2.1 Personal rights..... 91.61	30	
4.2.2 Personal safety..... 61.68	66	
4.2.3 Physician density..... 78.50	8	
4.2.4 Sanitation..... 97.86	43	
5 VOCATIONAL AND TECHNICAL SKILLS..... 46.78 69		
5.1 Mid-Level Skills..... 29.66	81	
5.1.1 Workforce with secondary education..... 33.86	79	
5.1.2 Population with secondary education..... 22.77	71	
5.1.3 Technicians and associate professionals..... 31.90	60	
5.1.4 Labour productivity per employee..... 30.11	59	
5.2 Employability..... 63.90	47	
5.2.1 Ease of finding skilled employees..... 62.92	52	
5.2.2 Relevance of education system to the economy..... 37.93	81	
5.2.3 Skills matching..... 73.37	42	
5.2.4 Highly educated unemployment..... 81.36	52	

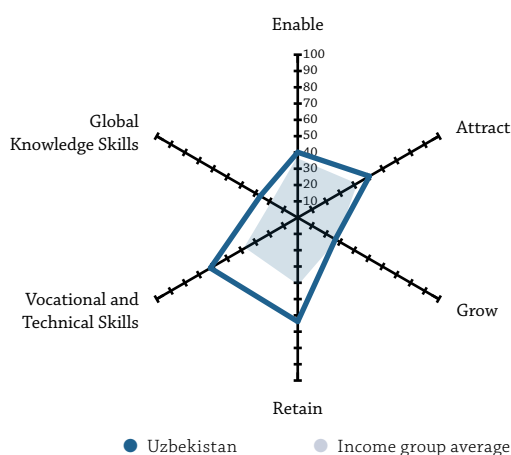
6 GLOBAL KNOWLEDGE SKILLS..... 23.01 76		
6.1 High-Level Skills..... 18.16	85	
6.1.1 Workforce with tertiary education..... 17.27	90	
6.1.2 Population with tertiary education..... 16.69	67	
6.1.3 Professionals..... 33.25	52	
6.1.4 Researchers..... 9.02	55	
6.1.5 Senior officials and managers..... 14.55	88	
6.1.6 Digital skills..... n/a	n/a	
6.2 Talent Impact..... 27.86	64	
6.2.1 Innovation output..... 27.72	75	
6.2.2 High-value exports..... 17.51	47	
6.2.3 Software development..... 71.15	45	
6.2.4 New business density..... 12.46	55	
6.2.5 Scientific journal articles..... 10.45	59	

UZBEKISTAN

Key Indicators

Rank (out of 134).....	62
Income group.....	Lower-middle income
Regional group.....	Central and Southern Asia
Population (millions).....	35.65

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....40.11 76		
1.1 Regulatory Landscape.....32.16 98		
1.1.1 Government effectiveness.....37.95 83		
1.1.2 Rule of law.....21.74 116		
1.1.3 Political stability.....54.94 76		
1.1.4 Regulatory quality.....27.02 103		
1.1.5 Corruption.....19.18 104		
1.2 Market Landscape.....44.13 70		
1.2.1 Extent of market dominance.....68.46 21		
1.2.2 Domestic credit to private sector.....39.17 85		
1.2.3 Cluster development.....67.68 28		
1.2.4 R&D expenditure.....2.28 100		
1.2.5 ICT infrastructure.....n/a n/a		
1.2.6 Urbanisation.....43.06 97		
1.3 Business and Labour Landscape.....44.03 68		
Labour Market		
1.3.1 Labour rights.....n/a n/a		
1.3.2 Labour-employer cooperation.....62.44 36		
Management Practice		
1.3.3 Professional management.....50.74 66		
1.3.4 Relationship of pay to productivity.....80.95 8		
Technology Adoption		
1.3.5 Enterprise software.....31.10 41		
1.3.6 Cloud computing.....19.64 51		
1.3.7 Firms with website.....19.29 96		
2 ATTRACT.....50.80 65		
2.1 External Openness.....41.88 74		
Attract Business		
2.1.1 FDI regulatory restrictiveness.....82.70 42		
2.1.2 Financial globalisation.....42.11 100		
Attract People		
2.1.3 Migrant stock.....40.33 68		
2.1.4 International students.....2.36 97		
2.1.5 Brain gain.....n/a n/a		
2.2 Internal Openness.....59.72 48		
Social Inclusion		
2.2.1 Tolerance of minorities.....42.55 67		
2.2.2 Tolerance of immigrants.....64.62 56		
2.2.3 Social mobility.....75.31 19		
Gender Equality		
2.2.4 Economic empowerment of women.....58.41 109		
2.2.5 Gender parity in high-skilled jobs.....n/a n/a		
2.2.6 Leadership opportunities for women.....57.73 40		

GDP per capita (PPP US\$).....	9,532.51
GDP (US\$ billions).....	80.39
GTCI score.....	44.97
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW.....26.64 100		
3.1 Formal Education.....26.70 79		
Enrolment		
3.1.1 Vocational enrolment.....52.90 13		
3.1.2 Tertiary enrolment.....13.27 97		
Quality		
3.1.3 Tertiary education expenditure.....40.62 94		
3.1.4 Reading, maths, and science.....n/a n/a		
3.1.5 University ranking.....0.00 76		
3.2 Lifelong Learning.....27.95 94		
3.2.1 Business masters education.....0.00 57		
3.2.2 Prevalence of training in firms.....17.26 89		
3.2.3 Employee development.....66.58 39		
3.3 Access to Growth Opportunities.....25.26 115		
Empowerment		
3.3.1 Delegation of authority.....62.27 34		
3.3.2 Youth inclusion.....n/a n/a		
Collaboration		
3.3.3 Use of virtual social networks.....12.26 114		
3.3.4 Use of virtual professional networks.....1.25 127		

4 RETAIN.....63.80 53		
4.1 Sustainability.....65.48 41		
4.1.1 Pension coverage.....100.00 1		
4.1.2 Social protection.....66.49 40		
4.1.3 Brain retention.....n/a n/a		
4.1.4 Environmental performance.....32.71 81		
4.1.5 Vulnerable employment.....62.71 80		
4.2 Lifestyle.....62.12 67		
4.2.1 Personal rights.....37.95 109		
4.2.2 Personal safety.....73.40 49		
4.2.3 Physician density.....37.13 67		
4.2.4 Sanitation.....100.00 1		

5 VOCATIONAL AND TECHNICAL SKILLS.....61.90 31		
5.1 Mid-Level Skills.....53.22 39		
5.1.1 Workforce with secondary education.....100.00 1		
5.1.2 Population with secondary education.....48.32 41		
5.1.3 Technicians and associate professionals.....n/a n/a		
5.1.4 Labour productivity per employee.....11.34 88		
5.2 Employability.....70.58 27		
5.2.1 Ease of finding skilled employees.....n/a n/a		
5.2.2 Relevance of education system to the economy.....59.37 34		
5.2.3 Skills matching.....n/a n/a		
5.2.4 Highly educated unemployment.....81.79 49		

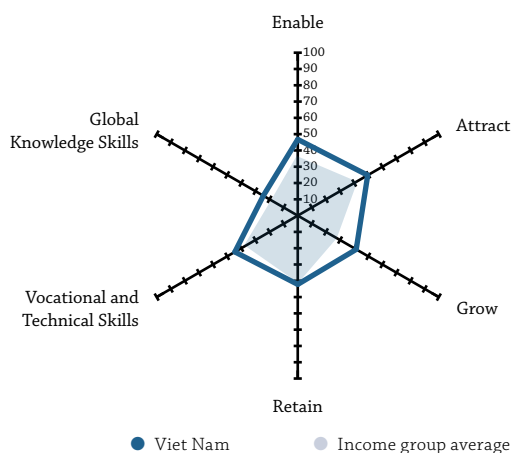
6 GLOBAL KNOWLEDGE SKILLS.....26.55 64		
6.1 High-Level Skills.....37.42 39		
6.1.1 Workforce with tertiary education.....23.36 76		
6.1.2 Population with tertiary education.....83.00 2		
6.1.3 Professionals.....n/a n/a		
6.1.4 Researchers.....5.89 68		
6.1.5 Senior officials and managers.....n/a n/a		
6.1.6 Digital skills.....n/a n/a		
6.2 Talent Impact.....15.69 101		
6.2.1 Innovation output.....19.31 90		
6.2.2 High-value exports.....0.37 126		
6.2.3 Software development.....42.48 105		
6.2.4 New business density.....14.80 50		
6.2.5 Scientific journal articles.....1.47 96		

VIET NAM

Key Indicators

Rank (out of 134).....	75
Income group.....	Lower-middle income
Regional group.....	Eastern, Southeastern Asia and Oceania
Population (millions).....	98.19

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 46.78 59		
1.1 Regulatory Landscape.....	43.08	67
1.1.1 Government effectiveness.....	49.79	53
1.1.2 Rule of law.....	41.40	71
1.1.3 Political stability.....	58.19	68
1.1.4 Regulatory quality.....	31.77	93
1.1.5 Corruption.....	34.25	63
1.2 Market Landscape.....	54.36	37
1.2.1 Extent of market dominance.....	64.61	26
1.2.2 Domestic credit to private sector.....	70.53	16
1.2.3 Cluster development.....	70.34	25
1.2.4 R&D expenditure.....	7.60	65
1.2.5 ICT infrastructure.....	86.77	13
1.2.6 Urbanisation.....	26.32	117
1.3 Business and Labour Landscape.....	42.89	70
Labour Market		
1.3.1 Labour rights.....	n/a	n/a
1.3.2 Labour-employer cooperation.....	64.83	27
Management Practice		
1.3.3 Professional management.....	56.51	50
1.3.4 Relationship of pay to productivity.....	73.16	21
Technology Adoption		
1.3.5 Enterprise software.....	8.00	119
1.3.6 Cloud computing.....	9.66	101
1.3.7 Firms with website.....	45.17	69
2 ATTRACT..... 49.58 72		
2.1 External Openness.....	35.98	92
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	65.95	57
2.1.2 Financial globalisation.....	52.12	88
Attract People		
2.1.3 Migrant stock.....	0.52	133
2.1.4 International students.....	0.99	105
2.1.5 Brain gain.....	60.32	32
2.2 Internal Openness.....	63.18	39
Social Inclusion		
2.2.1 Tolerance of minorities.....	48.94	56
2.2.2 Tolerance of immigrants.....	53.85	79
2.2.3 Social mobility.....	56.25	47
Gender Equality		
2.2.4 Economic empowerment of women.....	83.19	47
2.2.5 Gender parity in high-skilled jobs.....	84.63	40
2.2.6 Leadership opportunities for women.....	52.20	58

GDP per capita (PPP US\$).....	13,456.55
GDP (US\$ billions).....	408.80
GTCI score.....	41.50
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 41.45 55		
3.1 Formal Education.....	37.32	54
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	22.74	82
Quality		
3.1.3 Tertiary education expenditure.....	45.65	87
3.1.4 Reading, maths, and science.....	68.54	15
3.1.5 University ranking.....	12.36	68
3.2 Lifelong Learning.....	30.17	83
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	24.30	72
3.2.3 Employee development.....	66.19	40
3.3 Access to Growth Opportunities.....	56.87	41
Empowerment		
3.3.1 Delegation of authority.....	73.90	12
3.3.2 Youth inclusion.....	80.02	33
Collaboration		
3.3.3 Use of virtual social networks.....	66.44	62
3.3.4 Use of virtual professional networks.....	7.13	102

4 RETAIN..... 42.21 98		
4.1 Sustainability.....	36.40	94
4.1.1 Pension coverage.....	40.30	86
4.1.2 Social protection.....	58.86	54
4.1.3 Brain retention.....	37.41	71
4.1.4 Environmental performance.....	2.03	133
4.1.5 Vulnerable employment.....	43.40	99
4.2 Lifestyle.....	48.02	95
4.2.1 Personal rights.....	28.35	117
4.2.2 Personal safety.....	63.02	62
4.2.3 Physician density.....	12.52	92
4.2.4 Sanitation.....	88.19	79

5 VOCATIONAL AND TECHNICAL SKILLS..... 44.55 71		
5.1 Mid-Level Skills.....	19.31	101
5.1.1 Workforce with secondary education.....	32.63	82
5.1.2 Population with secondary education.....	24.85	68
5.1.3 Technicians and associate professionals.....	8.62	112
5.1.4 Labour productivity per employee.....	11.12	90
5.2 Employability.....	69.80	30
5.2.1 Ease of finding skilled employees.....	65.34	46
5.2.2 Relevance of education system to the economy.....	61.18	32
5.2.3 Skills matching.....	59.95	66
5.2.4 Highly educated unemployment.....	92.74	10

6 GLOBAL KNOWLEDGE SKILLS..... 24.40 71		
6.1 High-Level Skills.....	9.97	108
6.1.1 Workforce with tertiary education.....	17.49	89
6.1.2 Population with tertiary education.....	16.44	68
6.1.3 Professionals.....	11.17	109
6.1.4 Researchers.....	8.57	57
6.1.5 Senior officials and managers.....	3.47	117
6.1.6 Digital skills.....	2.69	79
6.2 Talent Impact.....	38.83	40
6.2.1 Innovation output.....	45.05	40
6.2.2 High-value exports.....	75.49	4
6.2.3 Software development.....	61.48	62
6.2.4 New business density.....	8.98	67
6.2.5 Scientific journal articles.....	3.15	84

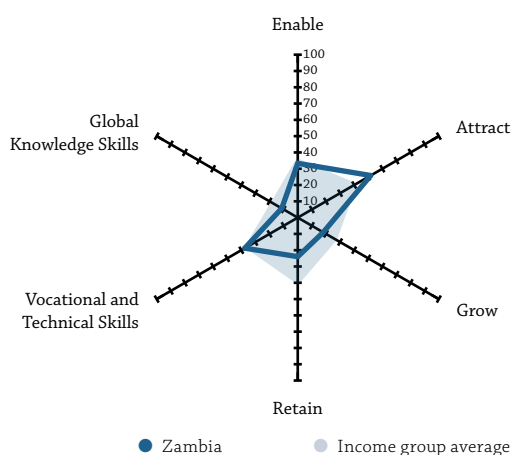
ZAMBIA

Key Indicators

Rank (out of 134).....	108
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	20.02

GDP per capita (PPP US\$)	3,894.31
GDP (US\$ billions)	29.78
GTCI score.....	29.32
GTCI score (income group average)	32.03

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE.....33.32 107		
1.1 Regulatory Landscape.....	32.89	96
1.1.1 Government effectiveness.....	22.49	118
1.1.2 Rule of law.....	29.53	100
1.1.3 Political stability.....	62.74	62
1.1.4 Regulatory quality.....	27.75	101
1.1.5 Corruption.....	21.92	95
1.2 Market Landscape.....	28.11	116
1.2.1 Extent of market dominance.....	21.42	107
1.2.2 Domestic credit to private sector.....	10.44	126
1.2.3 Cluster development.....	41.71	73
1.2.4 R&D expenditure.....	n/a	n/a
1.2.5 ICT infrastructure.....	31.94	117
1.2.6 Urbanisation.....	35.06	106
1.3 Business and Labour Landscape.....	38.97	88
Labour Market		
1.3.1 Labour rights.....	70.38	75
1.3.2 Labour-employer cooperation.....	28.65	112
Management Practice		
1.3.3 Professional management.....	49.47	69
1.3.4 Relationship of pay to productivity.....	46.64	95
Technology Adoption		
1.3.5 Enterprise software.....	12.92	107
1.3.6 Cloud computing.....	7.57	113
1.3.7 Firms with website.....	57.19	53
2 ATTRACT.....51.69 62		
2.1 External Openness.....	46.37	65
Attract Business		
2.1.1 FDI regulatory restrictiveness.....	n/a	n/a
2.1.2 Financial globalisation.....	59.15	72
Attract People		
2.1.3 Migrant stock.....	23.85	99
2.1.4 International students.....	n/a	n/a
2.1.5 Brain gain.....	56.12	40
2.2 Internal Openness.....	57.01	64
Social Inclusion		
2.2.1 Tolerance of minorities.....	43.62	63
2.2.2 Tolerance of immigrants.....	70.77	43
2.2.3 Social mobility.....	34.35	101
Gender Equality		
2.2.4 Economic empowerment of women.....	73.45	74
2.2.5 Gender parity in high-skilled jobs.....	68.02	75
2.2.6 Leadership opportunities for women.....	51.84	59

	Score	Rank
3 GROW.....18.07 123		
3.1 Formal Education.....	0.90	133
Enrolment		
3.1.1 Vocational enrolment.....	n/a	n/a
3.1.2 Tertiary enrolment.....	1.81	127
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	76
3.2 Lifelong Learning.....	29.96	84
3.2.1 Business masters education.....	0.00	57
3.2.2 Prevalence of training in firms.....	43.43	43
3.2.3 Employee development.....	46.46	87
3.3 Access to Growth Opportunities.....	23.35	121
Empowerment		
3.3.1 Delegation of authority.....	45.89	67
3.3.2 Youth inclusion.....	31.07	107
Collaboration		
3.3.3 Use of virtual social networks.....	10.31	118
3.3.4 Use of virtual professional networks.....	6.12	108

4 RETAIN.....23.97 126		
4.1 Sustainability.....	24.00	120
4.1.1 Pension coverage.....	6.87	118
4.1.2 Social protection.....	29.92	105
4.1.3 Brain retention.....	33.96	79
4.1.4 Environmental performance.....	33.05	80
4.1.5 Vulnerable employment.....	16.22	120
4.2 Lifestyle.....	23.94	126
4.2.1 Personal rights.....	53.06	96
4.2.2 Personal safety.....	13.52	130
4.2.3 Physician density.....	3.95	110
4.2.4 Sanitation.....	25.24	123

5 VOCATIONAL AND TECHNICAL SKILLS.....37.50 95		
5.1 Mid-Level Skills.....	13.20	112
5.1.1 Workforce with secondary education.....	24.00	102
5.1.2 Population with secondary education.....	n/a	n/a
5.1.3 Technicians and associate professionals.....	10.56	110
5.1.4 Labour productivity per employee.....	5.05	103
5.2 Employability.....	61.80	56
5.2.1 Ease of finding skilled employees.....	73.50	29
5.2.2 Relevance of education system to the economy.....	47.62	54
5.2.3 Skills matching.....	59.99	64
5.2.4 Highly educated unemployment.....	66.08	88

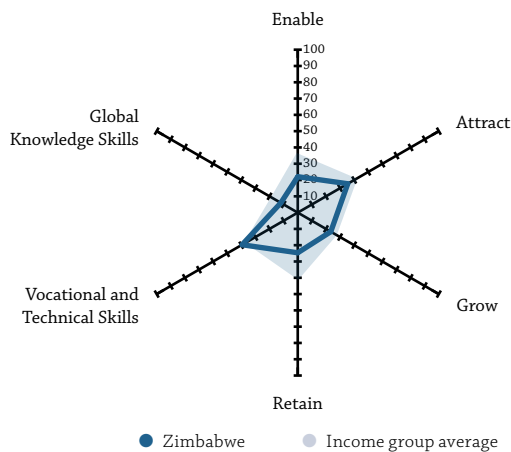
6 GLOBAL KNOWLEDGE SKILLS.....11.35 111		
6.1 High-Level Skills.....	13.26	101
6.1.1 Workforce with tertiary education.....	9.50	104
6.1.2 Population with tertiary education.....	n/a	n/a
6.1.3 Professionals.....	10.40	114
6.1.4 Researchers.....	n/a	n/a
6.1.5 Senior officials and managers.....	19.86	70
6.1.6 Digital skills.....	n/a	n/a
6.2 Talent Impact.....	9.45	121
6.2.1 Innovation output.....	9.90	111
6.2.2 High-value exports.....	2.28	106
6.2.3 Software development.....	28.83	117
6.2.4 New business density.....	5.73	81
6.2.5 Scientific journal articles.....	0.49	115

ZIMBABWE

Key Indicators

Rank (out of 134).....	117
Income group.....	Lower-middle income
Regional group.....	Sub-Saharan Africa
Population (millions).....	16.32

GTCI 2023 Country Profile by Pillar



	Score	Rank
1 ENABLE..... 22.06 129		
1.1 Regulatory Landscape..... 14.56	130	
1.1.1 Government effectiveness..... 11.87	130	
1.1.2 Rule of law..... 11.78	130	
1.1.3 Political stability..... 34.47	118	
1.1.4 Regulatory quality..... 6.48	132	
1.1.5 Corruption..... 8.22	127	
1.2 Market Landscape..... 18.88	127	
1.2.1 Extent of market dominance..... 17.33	116	
1.2.2 Domestic credit to private sector..... 11.05	125	
1.2.3 Cluster development..... 10.36	130	
1.2.4 R&D expenditure..... n/a	n/a	
1.2.5 ICT infrastructure..... 33.62	114	
1.2.6 Urbanisation..... 22.05	121	
1.3 Business and Labour Landscape..... 32.74	113	
Labour Market		
1.3.1 Labour rights..... 26.94	100	
1.3.2 Labour-employer cooperation..... 39.49	82	
Management Practice		
1.3.3 Professional management..... 67.17	31	
1.3.4 Relationship of pay to productivity..... 41.64	108	
Technology Adoption		
1.3.5 Enterprise software..... 9.30	115	
1.3.6 Cloud computing..... 10.91	92	
1.3.7 Firms with website..... 33.73	88	
2 ATTRACT..... 35.43 117		
2.1 External Openness..... 23.86	122	
Attract Business		
2.1.1 FDI regulatory restrictiveness..... n/a	n/a	
2.1.2 Financial globalisation..... 38.99	108	
Attract People		
2.1.3 Migrant stock..... 41.78	64	
2.1.4 International students..... 1.37	101	
2.1.5 Brain gain..... 13.32	125	
2.2 Internal Openness..... 46.99	105	
Social Inclusion		
2.2.1 Tolerance of minorities..... 41.49	71	
2.2.2 Tolerance of immigrants..... 47.69	88	
2.2.3 Social mobility..... 16.13	126	
Gender Equality		
2.2.4 Economic empowerment of women..... 81.42	54	
2.2.5 Gender parity in high-skilled jobs..... 61.49	91	
2.2.6 Leadership opportunities for women..... 33.75	107	

GDP per capita (PPP US\$).....	2,530.65
GDP (US\$ billions).....	20.68
GTCI score.....	26.16
GTCI score (income group average).....	32.03

	Score	Rank
3 GROW..... 23.42 112		
3.1 Formal Education..... 20.92	92	
Enrolment		
3.1.1 Vocational enrolment..... n/a	n/a	
3.1.2 Tertiary enrolment..... 4.99	115	
Quality		
3.1.3 Tertiary education expenditure..... 57.78	64	
3.1.4 Reading, maths, and science..... n/a	n/a	
3.1.5 University ranking..... 0.00	76	
3.2 Lifelong Learning..... 24.41	110	
3.2.1 Business masters education..... 0.00	57	
3.2.2 Prevalence of training in firms..... 29.88	63	
3.2.3 Employee development..... 43.34	96	
3.3 Access to Growth Opportunities..... 24.93	117	
Empowerment		
3.3.1 Delegation of authority..... 51.31	53	
3.3.2 Youth inclusion..... 33.34	105	
Collaboration		
3.3.3 Use of virtual social networks..... 6.23	123	
3.3.4 Use of virtual professional networks..... 8.83	98	

4 RETAIN..... 24.65 122		
4.1 Sustainability..... 26.89	114	
4.1.1 Pension coverage..... 21.21	98	
4.1.2 Social protection..... 25.76	113	
4.1.3 Brain retention..... 15.40	121	
4.1.4 Environmental performance..... 46.27	54	
4.1.5 Vulnerable employment..... 25.80	113	
4.2 Lifestyle..... 22.41	127	
4.2.1 Personal rights..... 44.58	102	
4.2.2 Personal safety..... 13.96	128	
4.2.3 Physician density..... 2.23	117	
4.2.4 Sanitation..... 28.85	120	

5 VOCATIONAL AND TECHNICAL SKILLS..... 39.45 87		
5.1 Mid-Level Skills..... 18.56	104	
5.1.1 Workforce with secondary education..... 61.22	30	
5.1.2 Population with secondary education..... 2.02	91	
5.1.3 Technicians and associate professionals..... 8.30	114	
5.1.4 Labour productivity per employee..... 2.68	108	
5.2 Employability..... 60.35	62	
5.2.1 Ease of finding skilled employees..... 59.56	58	
5.2.2 Relevance of education system to the economy..... 48.79	52	
5.2.3 Skills matching..... 69.28	48	
5.2.4 Highly educated unemployment..... 63.77	93	

6 GLOBAL KNOWLEDGE SKILLS..... 11.97 108		
6.1 High-Level Skills..... 10.22	106	
6.1.1 Workforce with tertiary education..... 19.72	82	
6.1.2 Population with tertiary education..... 10.77	76	
6.1.3 Professionals..... 10.93	111	
6.1.4 Researchers..... 1.02	90	
6.1.5 Senior officials and managers..... 14.43	90	
6.1.6 Digital skills..... 4.46	73	
6.2 Talent Impact..... 13.72	112	
6.2.1 Innovation output..... 18.48	92	
6.2.2 High-value exports..... 4.14	90	
6.2.3 Software development..... 31.39	115	
6.2.4 New business density..... 13.49	52	
6.2.5 Scientific journal articles..... 1.12	101	

Data Tables

How to Read the Data Tables

DATA TABLES

1 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 specialised institutions in a particular field)? [1 = non-existent; 7 = widespread in many fields] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America	5.56	100.00	68	Lithuania	3.89	43.92
2	China	5.31	91.78	69	Kenya	3.88	43.81
3	Switzerland	5.31	91.74	70	Slovenia	3.87	43.30
4	United Arab Emirates	5.18	87.39	71	Côte d'Ivoire	3.85	42.36
5	Indonesia	5.18	87.14	72	Bhswana	3.84	42.42
6	Netherlands	5.10	84.72	73	Zambia	3.82	41.71
7	Egypt	5.09	84.26	74	Sierra Leone	3.82	41.57
8	Saudi Arabia	5.07	83.74	75	Serbia	3.80	41.12
9	Germany	5.07	83.47	76	Romania	3.80	41.06
10	Austria	5.02	82.05	77	Namibia	3.80	40.93
11	Singapore	5.01	81.68	78	Poland	3.80	40.91
12	Italy	5.00	81.11	79	Uruguay	3.79	40.79
13	Sweden	4.95	79.55	80	Chile	3.79	40.79
14	United Kingdom	4.93	78.72	81	Jamaica	3.79	40.62
15	Canada	4.92	78.58	82	Cambodia	3.78	40.40
16	Qatar	4.90	77.87	83	Guatemala	3.77	40.02
17	Norway	4.87	77.01	84	Bangladesh	3.69	37.30
18	Belgium	4.82	75.27	85	Albania	3.69	37.18
19	Japan	4.77	73.60	86	Cabo Verde	3.68	37.00
20	Oman	4.75	72.77	87	Iran, Islamic Rep.	3.66	36.35
21	Korea, Rep.	4.72	71.78	88	Morocco	3.65	35.89
22	Finland	4.69	70.71	89	Trinidad and Tobago	3.62	34.91
23	France	4.68	70.65	90	Bosnia and Herzegovina	3.61	34.54
24	Denmark	4.68	70.51	91	Cameroon	3.60	34.47
25	Viet Nam	4.67	70.34	92	Uganda	3.60	34.19
26	Ireland	4.64	69.22	93	Malawi	3.58	33.56
27	Azerbaijan	4.62	68.51	94	Ukraine	3.57	33.88
28	Uzbekistan	4.60	67.68	95	Panama	3.56	32.92
29	Australia	4.56	66.31	96	Malawi	3.55	32.68
30	Malaysia	4.55	66.00	97	Nigeria	3.55	32.55
31	Spain	4.54	65.81	98	Guinea	3.53	32.02
32	Luxembourg	4.53	65.64	99	India	3.52	31.78
33	Ireland	4.52	65.31	100	Lebanon	3.52	31.51
34	Botswana	4.50	64.64	101	Eswatini	3.52	31.51
35	Bahrain	4.46	63.02	102	North Macedonia	3.49	30.61
36	Israel	4.32	58.30	103	Honduras	3.49	30.51
37	Hungary	4.30	57.95	104	Argentina	3.48	30.33
38	Pakistan	4.29	57.31	105	Burundi	3.46	29.60
39	Kuwait	4.23	55.35	106	Nepal	3.45	29.27
40	Georgia	4.22	55.13	107	Belarus	3.45	29.13
41	Mexico	4.22	55.12	108	Senegal	3.44	29.02
42	Costa Rica	4.22	55.10	109	Peru	3.44	28.93
43	Tanzania, United Rep.	4.21	54.66	110	Tunisia	3.37	26.62
44	New Zealand	4.14	52.52	111	Paraguay	3.35	25.90
45	Sri Lanka	4.12	51.89	112	Madagascar	3.34	25.69
46	Ghana	4.12	51.81	113	Kyrgyzstan	3.33	25.10
47	South Africa	4.08	50.54	114	Armenia	3.32	25.00
48	Bulgaria	4.07	50.12	115	Ecuador	3.32	24.98
49	Brazil	4.07	50.02	116	Montenegro	3.28	23.52
50	Cyprus	4.06	49.84	117	Ghana	3.26	22.92
51	Portugal	4.05	49.24	118	Chad	3.24	22.23
52	Laos PDR	4.04	49.02	119	Bolivia, Plurinational St.	3.23	21.82
53	Mauritius	4.03	48.57	120	Mongolia	3.22	21.46
54	Iceland	4.01	48.15	121	Benin	3.19	20.64
55	Thailand	3.99	47.36	122	Kazakhstan	3.19	20.59
56	Turkmenistan	3.98	47.06	123	Greece	3.16	19.58
57	Colombia	3.98	46.88	124	Moldova, Rep.	3.13	18.51
58	Dominican Republic	3.97	46.59	125	El Salvador	3.11	17.94
59	Gambia	3.95	45.96	126	Mozambique	3.10	17.45
60	Russian Federation	3.94	45.82	127	Mauritania	3.08	16.89
61	Malta	3.93	45.34	128	Croatia	2.96	12.75
62	Estonia	3.91	44.66	129	Lesotho	2.92	11.67
63	Brunei Darussalam	3.90	44.47	130	Zimbabwe	2.89	10.36
64	Nigeria	3.90	44.28	131	Nicaragua	2.85	9.05
65	Latvia	3.89	44.18	132	Angola	2.76	6.27
66	Czech Republic	3.89	44.17	133	Burkina Faso	2.72	4.79
67	Philippines	3.89	44.06	134	Congo, Dem. Rep.	2.58	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021-2022. <https://www.weforum.org/publications/executive-opinion-survey-2021-2022/>
 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 2012.

THE GLOBAL TALENT COMPETITIVENESS INDEX 2023 215

4 SOURCE: World Economic Forum, Executive Opinion Survey 2021-2022 (<https://www.weforum.org/eosurvey>)
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 2022.

THE GLOBAL TALENT COMPETITIVENESS INDEX 2023 215

1 The first section provides the indicator number that represents its position in the overall structure of the 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 indicator in that sub-pillar. For instance, the indicator *1.2.3 Cluster development* refers to the third indicator in the second sub-pillar of the first pillar.

2 The second section spells out the description or technical name of the indicator, 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 indicators derived from a published report where the publication date differs from the year the data were actually collected, the year of the data collection is used. For instance, the index score taken from the *Women, Business and the Law 2023* report published in March 2023 refers to data collected in 2022.

For qualitative indicators derived from survey responses, the question asked in the survey is shown as the exact technical name. This applies to all indicators 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, several countries have the same score in some indicators. For indicators in which two or more countries happen to have the same raw value (with a tie in the ranking as a result), the relevant countries have been sorted alphabetically. For more information about normalisation methods and indicator 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 appendix provides the rankings and scores for each of the 69 indicators that make up the GTCI 2023.

Each data table consists of four parts:

- 1** Name of the indicator
- 2** Description or technical name and the latest year for which data are available
- 3** Ranking
- 4** Source

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Pillar 1

Enable

1.1.1 Government effectiveness

Government effectiveness indicator | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	2.29	100.00	68	Montenegro.....	-0.01	43.01
2	Switzerland.....	2.03	93.54	69	Albania.....	-0.00	42.78
3	Denmark.....	2.00	92.83	70	Colombia.....	-0.01	42.50
4	Finland.....	1.96	91.75	71	South Africa.....	-0.02	42.43
5	Norway.....	1.84	88.73	72	Kuwait.....	-0.04	41.90
6	Netherlands.....	1.77	86.91	73	Morocco.....	-0.07	41.20
7	Luxembourg.....	1.72	85.73	74	Sri Lanka.....	-0.08	40.79
8	Sweden.....	1.65	84.06	75	North Macedonia.....	-0.08	40.76
9	Iceland.....	1.64	83.72	76	Türkiye.....	-0.09	40.70
10	Canada.....	1.60	82.85	77	Oman.....	-0.12	39.92
11	Austria.....	1.57	82.01	78	Romania.....	-0.13	39.63
12	Australia.....	1.51	80.59	79	Bulgaria.....	-0.14	39.39
13	Ireland.....	1.50	80.37	80	Ghana.....	-0.15	39.13
14	Brunei Darussalam.....	1.45	79.14	81	Tunisia.....	-0.17	38.70
15	Korea, Rep.....	1.41	77.93	82	Russian Federation.....	-0.18	38.47
16	Japan.....	1.40	77.84	83	Uzbekistan.....	-0.20	37.95
17	United Arab Emirates.....	1.40	77.74	84	Benin.....	-0.21	37.71
18	Estonia.....	1.38	77.34	85	Ecuador.....	-0.21	37.65
19	New Zealand.....	1.35	76.54	86	Armenia.....	-0.25	36.64
20	United States of America.....	1.34	76.18	87	Peru.....	-0.26	36.36
21	Germany.....	1.33	76.05	88	Mexico.....	-0.31	35.08
22	Israel.....	1.29	75.08	89	El Salvador.....	-0.31	35.06
23	United Kingdom.....	1.28	74.77	90	Kenya.....	-0.33	34.63
24	France.....	1.27	74.47	91	Argentina.....	-0.36	33.97
25	Slovenia.....	1.18	72.24	92	Pakistan.....	-0.40	32.82
26	Belgium.....	1.13	70.92	93	Moldova, Rep.....	-0.40	32.76
27	Qatar.....	1.11	70.63	94	Ukraine.....	-0.41	32.66
28	Czech Republic.....	1.11	70.55	95	Cambodia.....	-0.42	32.32
29	Lithuania.....	1.06	69.21	96	Egypt.....	-0.43	32.09
30	Malaysia.....	0.99	67.59	97	Brazil.....	-0.46	31.38
31	Portugal.....	0.99	67.58	98	Mongolia.....	-0.47	31.21
32	Spain.....	0.95	66.48	99	Côte d'Ivoire.....	-0.50	30.35
33	Malta.....	0.89	65.12	100	Uganda.....	-0.57	28.64
34	Latvia.....	0.87	64.62	101	Ethiopia.....	-0.61	27.57
35	Mauritius.....	0.85	64.04	102	Lao PDR.....	-0.62	27.46
36	China.....	0.84	63.82	103	Algeria.....	-0.62	27.38
37	Uruguay.....	0.84	63.81	104	Paraguay.....	-0.62	27.33
38	Cyprus.....	0.74	61.22	105	Bangladesh.....	-0.63	27.22
39	Bahrain.....	0.72	60.74	106	Tanzania, United Rep.....	-0.63	27.11
40	Georgia.....	0.65	59.17	107	Gambia.....	-0.64	26.94
41	Hungary.....	0.63	58.68	108	Burkina Faso.....	-0.73	24.75
42	Chile.....	0.63	58.47	109	Kyrgyzstan.....	-0.73	24.73
43	Croatia.....	0.59	57.60	110	Eswatini.....	-0.73	24.69
44	Slovakia.....	0.53	56.06	111	Bolivia, Plurinational St.....	-0.73	24.61
45	Saudi Arabia.....	0.50	55.24	112	Mauritania.....	-0.73	24.57
46	Greece.....	0.44	53.92	113	Guatemala.....	-0.75	24.12
47	Jamaica.....	0.41	53.18	114	Mozambique.....	-0.77	23.78
48	Indonesia.....	0.38	52.31	115	Malawi.....	-0.77	23.69
49	Italy.....	0.36	51.87	116	Belarus.....	-0.77	23.64
50	Botswana.....	0.35	51.69	117	Honduras.....	-0.78	23.36
51	Poland.....	0.29	50.16	118	Zambia.....	-0.82	22.49
52	India.....	0.28	49.90	119	Nicaragua.....	-0.85	21.61
53	Viet Nam.....	0.28	49.79	120	Iran, Islamic Rep.....	-0.86	21.46
54	Rwanda.....	0.26	49.37	121	Nepal.....	-0.87	21.13
55	Costa Rica.....	0.26	49.28	122	Cameroon.....	-0.88	21.03
56	Thailand.....	0.25	49.17	123	Lesotho.....	-0.91	20.08
57	Azerbaijan.....	0.25	49.04	124	Guinea.....	-0.92	20.03
58	Jordan.....	0.23	48.53	125	Nigeria.....	-1.00	18.03
59	Trinidad and Tobago.....	0.19	47.67	126	Madagascar.....	-1.00	17.92
60	Panama.....	0.16	46.84	127	Bosnia and Herzegovina.....	-1.04	16.90
61	Philippines.....	0.07	44.61	128	Angola.....	-1.06	16.45
62	Kazakhstan.....	0.06	44.46	129	Mali.....	-1.22	12.36
63	Namibia.....	0.06	44.34	130	Zimbabwe.....	-1.24	11.87
64	Senegal.....	0.06	44.34	131	Lebanon.....	-1.29	10.77
65	Serbia.....	0.05	44.04	132	Burundi.....	-1.33	9.67
66	Cabo Verde.....	0.04	43.93	133	Chad.....	-1.42	7.35
67	Dominican Republic.....	0.03	43.63	134	Congo, Dem. Rep.....	-1.72	0.00

SOURCE: World Bank, Worldwide Governance Indicators, 2022 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 2012.

1.1.2 Rule of law

Rule of law indicator | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	2.06	100.00	68	Armenia.....	-0.10	42.74
2	Norway.....	1.95	97.13	69	Dominican Republic.....	-0.10	42.74
3	Denmark.....	1.94	96.77	70	Trinidad and Tobago.....	-0.14	41.67
4	Singapore.....	1.86	94.68	71	Viet Nam.....	-0.15	41.40
5	New Zealand.....	1.82	93.63	72	Jamaica.....	-0.17	40.83
6	Switzerland.....	1.81	93.36	73	Indonesia.....	-0.22	39.32
7	Austria.....	1.79	92.83	74	Mongolia.....	-0.23	39.30
8	Luxembourg.....	1.79	92.80	75	Malawi.....	-0.24	38.96
9	Iceland.....	1.75	91.94	76	Egypt.....	-0.24	38.79
10	Netherlands.....	1.74	91.53	77	Panama.....	-0.25	38.72
11	Sweden.....	1.73	91.39	78	Morocco.....	-0.25	38.56
12	Australia.....	1.67	89.80	79	Albania.....	-0.26	38.49
13	Canada.....	1.63	88.55	80	Bosnia and Herzegovina.....	-0.28	37.88
14	Germany.....	1.61	88.05	81	Brazil.....	-0.28	37.84
15	Japan.....	1.58	87.28	82	Moldova, Rep.....	-0.33	36.47
16	Ireland.....	1.53	85.98	83	Ecuador.....	-0.34	36.27
17	Estonia.....	1.43	83.25	84	Uganda.....	-0.35	35.93
18	United Kingdom.....	1.43	83.22	85	Senegal.....	-0.36	35.61
19	United States of America.....	1.42	82.95	86	Gambia.....	-0.39	35.05
20	Belgium.....	1.33	80.54	87	Kenya.....	-0.39	34.92
21	France.....	1.29	79.56	88	Lesotho.....	-0.41	34.39
22	Portugal.....	1.13	75.42	89	Türkiye.....	-0.42	34.22
23	Korea, Rep.....	1.13	75.25	90	Burkina Faso.....	-0.44	33.64
24	Czech Republic.....	1.13	75.23	91	Colombia.....	-0.45	33.28
25	Lithuania.....	1.11	74.80	92	Argentina.....	-0.46	33.00
26	Slovenia.....	1.03	72.68	93	Nepal.....	-0.47	32.89
27	Latvia.....	0.98	71.38	94	Kazakhstan.....	-0.49	32.34
28	Israel.....	0.94	70.33	95	Peru.....	-0.52	31.59
29	Qatar.....	0.93	69.96	96	Tanzania, United Rep.....	-0.52	31.39
30	Chile.....	0.91	69.60	97	Paraguay.....	-0.56	30.47
31	Brunei Darussalam.....	0.89	68.96	98	Eswatini.....	-0.56	30.38
32	Spain.....	0.88	68.58	99	Azerbaijan.....	-0.58	29.75
33	Mauritius.....	0.87	68.51	100	Zambia.....	-0.59	29.53
34	Malta.....	0.86	68.27	101	Benin.....	-0.59	29.52
35	United Arab Emirates.....	0.83	67.36	102	Ethiopia.....	-0.61	29.18
36	Uruguay.....	0.73	64.75	103	Bangladesh.....	-0.61	29.04
37	Slovakia.....	0.71	64.06	104	Côte d'Ivoire.....	-0.63	28.45
38	Cyprus.....	0.64	62.23	105	Pakistan.....	-0.64	28.36
39	Malaysia.....	0.56	60.12	106	Lao PDR.....	-0.64	28.23
40	Hungary.....	0.53	59.41	107	Philippines.....	-0.64	28.23
41	Botswana.....	0.48	58.10	108	Ukraine.....	-0.66	27.75
42	Bahrain.....	0.47	57.81	109	Mauritania.....	-0.67	27.47
43	Costa Rica.....	0.45	57.31	110	Mexico.....	-0.80	24.03
44	Poland.....	0.44	57.11	111	Algeria.....	-0.82	23.60
45	Romania.....	0.41	56.13	112	El Salvador.....	-0.85	22.76
46	Oman.....	0.41	56.08	113	Nigeria.....	-0.86	22.55
47	Namibia.....	0.36	54.92	114	Madagascar.....	-0.87	22.25
48	Greece.....	0.35	54.59	115	Russian Federation.....	-0.87	22.17
49	Cabo Verde.....	0.35	54.58	116	Uzbekistan.....	-0.89	21.74
50	Croatia.....	0.30	53.34	117	Cambodia.....	-0.90	21.36
51	Italy.....	0.27	52.46	118	Mali.....	-0.90	21.31
52	Kuwait.....	0.26	52.22	119	Iran, Islamic Rep.....	-0.95	20.11
53	Saudi Arabia.....	0.23	51.41	120	Angola.....	-0.95	19.98
54	Jordan.....	0.21	50.95	121	Mozambique.....	-1.04	17.78
55	Rwanda.....	0.20	50.64	122	Honduras.....	-1.07	16.79
56	Georgia.....	0.17	49.84	123	Lebanon.....	-1.07	16.75
57	South Africa.....	0.13	48.77	124	Kyrgyzstan.....	-1.07	16.75
58	Thailand.....	0.11	48.35	125	Guatemala.....	-1.09	16.24
59	Tunisia.....	0.10	47.84	126	Cameroon.....	-1.10	16.12
60	Sri Lanka.....	0.04	46.32	127	Belarus.....	-1.10	16.05
61	China.....	0.04	46.23	128	Guinea.....	-1.13	15.24
62	Bulgaria.....	-0.04	44.13	129	Bolivia, Plurinational St.....	-1.16	14.37
63	Montenegro.....	-0.06	43.72	130	Zimbabwe.....	-1.26	11.78
64	North Macedonia.....	-0.08	43.28	131	Burundi.....	-1.29	10.90
65	India.....	-0.08	43.14	132	Chad.....	-1.33	10.07
66	Ghana.....	-0.08	43.14	133	Nicaragua.....	-1.36	9.25
67	Serbia.....	-0.09	42.86	134	Congo, Dem. Rep.....	-1.70	0.00

SOURCE: World Bank, Worldwide Governance Indicators, 2022 Update (www.govindicators.org)

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1.1.3 Political stability

Political stability and absence of violence indicator | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	1.49	100.00	68	Viet Nam.....	-0.11	58.19
2	New Zealand.....	1.44	98.58	69	Cambodia.....	-0.13	57.74
3	Iceland.....	1.37	96.89	70	Serbia.....	-0.13	57.68
4	Luxembourg.....	1.21	92.54	71	Montenegro.....	-0.15	57.30
5	Brunei Darussalam.....	1.17	91.56	72	Senegal.....	-0.17	56.76
6	Switzerland.....	1.13	90.59	73	Moldova, Rep.	-0.21	55.83
7	Norway.....	1.10	89.87	74	El Salvador.....	-0.21	55.68
8	Uruguay.....	1.05	88.38	75	Lesotho.....	-0.22	55.46
9	Sweden.....	1.03	88.06	76	Uzbekistan.....	-0.24	54.94
10	Japan.....	1.03	87.89	77	Nepal.....	-0.24	54.85
11	Finland.....	0.98	86.70	78	Kazakhstan.....	-0.25	54.56
12	Botswana.....	0.98	86.61	79	Ecuador.....	-0.27	54.25
13	Malta.....	0.97	86.46	80	Jordan.....	-0.28	54.00
14	Qatar.....	0.96	86.08	81	Benin.....	-0.30	53.34
15	Czech Republic.....	0.96	86.07	82	Sri Lanka.....	-0.32	52.90
16	Portugal.....	0.95	85.95	83	Bolivia, Plurinational St.....	-0.32	52.89
17	Denmark.....	0.95	85.87	84	Bosnia and Herzegovina.....	-0.38	51.28
18	Canada.....	0.94	85.53	85	Guatemala.....	-0.39	50.97
19	Netherlands.....	0.92	84.97	86	Morocco.....	-0.40	50.87
20	Austria.....	0.91	84.96	87	Peru.....	-0.41	50.62
21	Cabo Verde.....	0.90	84.64	88	Georgia.....	-0.42	50.16
22	Costa Rica.....	0.87	83.87	89	Kyrgyzstan.....	-0.43	50.10
23	Hungary.....	0.86	83.57	90	Tanzania, United Rep.	-0.44	49.81
24	Ireland.....	0.86	83.45	91	Nicaragua.....	-0.47	49.02
25	Mauritius.....	0.86	83.43	92	China.....	-0.48	48.64
26	Australia.....	0.85	83.30	93	Brazil.....	-0.49	48.56
27	Lithuania.....	0.82	82.38	94	Bahrain.....	-0.51	48.04
28	Slovenia.....	0.76	80.94	95	Indonesia.....	-0.51	48.00
29	Germany.....	0.76	80.83	96	Thailand.....	-0.55	46.98
30	Estonia.....	0.76	80.82	97	Saudi Arabia.....	-0.58	45.99
31	Lao PDR.....	0.73	80.06	98	Honduras.....	-0.61	45.26
32	Croatia.....	0.71	79.58	99	India.....	-0.62	45.18
33	Latvia.....	0.69	79.05	100	Madagascar.....	-0.64	44.64
34	Korea, Rep.....	0.66	78.40	101	Mexico.....	-0.64	44.61
35	Mongolia.....	0.65	78.19	102	Russian Federation.....	-0.65	44.39
36	United Arab Emirates.....	0.65	78.06	103	Mauritania.....	-0.67	43.74
37	Belgium.....	0.61	77.10	104	Tunisia.....	-0.70	43.08
38	Spain.....	0.58	76.23	105	South Africa.....	-0.71	42.80
39	Italy.....	0.58	76.21	106	Angola.....	-0.71	42.69
40	Slovakia.....	0.56	75.72	107	Belarus.....	-0.74	42.02
41	Namibia.....	0.55	75.42	108	Armenia.....	-0.84	39.44
42	United Kingdom.....	0.54	75.27	109	Azerbaijan.....	-0.85	38.98
43	Romania.....	0.53	75.03	110	Uganda.....	-0.86	38.82
44	Poland.....	0.51	74.50	111	Algeria.....	-0.88	38.38
45	Oman.....	0.51	74.35	112	Colombia.....	-0.91	37.40
46	Bulgaria.....	0.46	73.09	113	Philippines.....	-0.93	37.02
47	Cyprus.....	0.44	72.69	114	Côte d'Ivoire.....	-0.95	36.39
48	France.....	0.37	70.84	115	Bangladesh.....	-0.97	35.94
49	Kuwait.....	0.30	68.95	116	Guinea.....	-0.97	35.94
50	Panama.....	0.29	68.60	117	Egypt.....	-1.02	34.54
51	Jamaica.....	0.22	66.98	118	Zimbabwe.....	-1.03	34.47
52	Gambia.....	0.18	65.73	119	Israel.....	-1.06	33.57
53	Rwanda.....	0.17	65.60	120	Kenya.....	-1.09	32.84
54	Trinidad and Tobago.....	0.15	65.20	121	Türkiye.....	-1.10	32.62
55	Greece.....	0.15	65.19	122	Ukraine.....	-1.10	32.60
56	Malaysia.....	0.14	64.78	123	Mozambique.....	-1.23	29.23
57	Dominican Republic.....	0.14	64.74	124	Chad.....	-1.34	26.44
58	North Macedonia.....	0.12	64.42	125	Burundi.....	-1.36	25.70
59	Albania.....	0.11	64.02	126	Cameroon.....	-1.41	24.60
60	Ghana.....	0.07	62.90	127	Lebanon.....	-1.49	22.34
61	Chile.....	0.06	62.80	128	Congo, Dem. Rep.....	-1.61	19.18
62	Zambia.....	0.06	62.74	129	Iran, Islamic Rep.....	-1.62	19.00
63	United States of America.....	0.00	61.30	130	Burkina Faso.....	-1.64	18.56
64	Paraguay.....	0.00	61.09	131	Pakistan.....	-1.67	17.83
65	Eswatini.....	-0.03	60.39	132	Nigeria.....	-1.78	14.90
66	Argentina.....	-0.11	58.41	133	Ethiopia.....	-2.07	7.39
67	Malawi.....	-0.11	58.25	134	Mali.....	-2.35	0.00

SOURCE: World Bank, Worldwide Governance Indicators, 2022 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 2012.

1.1.4 Regulatory quality

Regulatory quality indicator | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	2.23	100.00	68	Philippines.....	0.08	44.08
2	Luxembourg.....	1.92	91.80	69	Rwanda.....	0.07	43.94
3	Finland.....	1.90	91.36	70	Serbia.....	0.05	43.45
4	Australia.....	1.84	89.82	71	Moldova, Rep.....	0.01	42.46
5	Denmark.....	1.81	89.04	72	Namibia.....	0.00	41.98
6	New Zealand.....	1.81	89.03	73	Azerbaijan.....	-0.06	40.55
7	Netherlands.....	1.75	87.58	74	South Africa.....	-0.07	40.20
8	Sweden.....	1.75	87.58	75	India.....	-0.08	40.06
9	Switzerland.....	1.73	87.07	76	Türkiye.....	-0.08	39.97
10	Norway.....	1.64	84.54	77	Trinidad and Tobago.....	-0.09	39.88
11	Germany.....	1.63	84.44	78	Brazil.....	-0.11	39.23
12	Canada.....	1.62	84.07	79	Morocco.....	-0.12	38.94
13	Ireland.....	1.56	82.64	80	Bosnia and Herzegovina.....	-0.18	37.46
14	Estonia.....	1.56	82.56	81	Ghana.....	-0.20	36.90
15	Iceland.....	1.53	81.93	82	Paraguay.....	-0.21	36.71
16	United Kingdom.....	1.47	80.14	83	Mongolia.....	-0.21	36.69
17	United States of America.....	1.45	79.78	84	Mexico.....	-0.23	36.11
18	Japan.....	1.38	77.81	85	Côte d'Ivoire.....	-0.26	35.45
19	Austria.....	1.35	77.10	86	Ukraine.....	-0.28	34.88
20	Czech Republic.....	1.35	77.10	87	Senegal.....	-0.31	34.00
21	Belgium.....	1.34	76.94	88	China.....	-0.31	33.97
22	Lithuania.....	1.28	75.24	89	Guatemala.....	-0.32	33.92
23	France.....	1.24	74.17	90	El Salvador.....	-0.34	33.17
24	Latvia.....	1.22	73.85	91	Sri Lanka.....	-0.37	32.50
25	Israel.....	1.21	73.48	92	Tunisia.....	-0.39	32.02
26	Mauritius.....	1.17	72.39	93	Viet Nam.....	-0.40	31.77
27	Korea, Rep.....	1.10	70.64	94	Benin.....	-0.43	30.90
28	Georgia.....	1.06	69.62	95	Kenya.....	-0.45	30.54
29	United Arab Emirates.....	1.01	68.41	96	Burkina Faso.....	-0.47	29.98
30	Brunei Darussalam.....	0.99	67.88	97	Uganda.....	-0.48	29.72
31	Chile.....	0.95	66.84	98	Egypt.....	-0.51	28.95
32	Slovakia.....	0.87	64.79	99	Honduras.....	-0.52	28.55
33	Qatar.....	0.86	64.51	100	Russian Federation.....	-0.53	28.35
34	Cyprus.....	0.86	64.39	101	Zambia.....	-0.55	27.75
35	Bahrain.....	0.85	64.14	102	Kyrgyzstan.....	-0.58	27.11
36	Poland.....	0.84	63.90	103	Uzbekistan.....	-0.58	27.02
37	Slovenia.....	0.83	63.75	104	Eswatini.....	-0.58	26.98
38	Malta.....	0.81	63.22	105	Nepal.....	-0.62	26.10
39	Spain.....	0.81	63.15	106	Argentina.....	-0.62	26.06
40	Portugal.....	0.74	61.20	107	Mali.....	-0.62	25.97
41	Uruguay.....	0.72	60.85	108	Tanzania, United Rep.....	-0.63	25.83
42	Malaysia.....	0.72	60.85	109	Cambodia.....	-0.64	25.38
43	Botswana.....	0.61	58.04	110	Angola.....	-0.66	24.90
44	Italy.....	0.55	56.25	111	Ecuador.....	-0.70	23.86
45	Croatia.....	0.50	55.13	112	Pakistan.....	-0.73	23.11
46	Hungary.....	0.50	54.98	113	Lesotho.....	-0.74	22.97
47	Costa Rica.....	0.46	53.94	114	Mozambique.....	-0.78	21.90
48	Bulgaria.....	0.45	53.74	115	Malawi.....	-0.79	21.70
49	Greece.....	0.44	53.56	116	Madagascar.....	-0.82	20.82
50	Montenegro.....	0.43	53.28	117	Nicaragua.....	-0.84	20.41
51	North Macedonia.....	0.42	52.92	118	Bangladesh.....	-0.85	20.15
52	Saudi Arabia.....	0.34	50.81	119	Gambia.....	-0.87	19.44
53	Oman.....	0.33	50.66	120	Lebanon.....	-0.88	19.19
54	Romania.....	0.31	50.12	121	Lao PDR.....	-0.89	19.07
55	Indonesia.....	0.30	49.84	122	Belarus.....	-0.92	18.25
56	Cabo Verde.....	0.27	49.20	123	Cameroon.....	-0.92	18.15
57	Colombia.....	0.22	47.81	124	Ethiopia.....	-0.93	18.02
58	Jamaica.....	0.20	47.18	125	Nigeria.....	-0.93	17.90
59	Albania.....	0.19	47.10	126	Guinea.....	-0.96	17.08
60	Panama.....	0.19	47.10	127	Burundi.....	-0.98	16.56
61	Kuwait.....	0.17	46.64	128	Mauritania.....	-1.06	14.72
62	Jordan.....	0.15	46.01	129	Bolivia, Plurinational St.....	-1.15	12.15
63	Armenia.....	0.15	45.87	130	Chad.....	-1.15	12.13
64	Thailand.....	0.09	44.54	131	Algeria.....	-1.17	11.71
65	Kazakhstan.....	0.09	44.43	132	Zimbabwe.....	-1.37	6.48
66	Dominican Republic.....	0.09	44.41	133	Congo, Dem. Rep.....	-1.42	5.17
67	Peru.....	0.08	44.24	134	Iran, Islamic Rep.....	-1.62	0.00

SOURCE: World Bank, Worldwide Governance Indicators, 2022 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 2012.

1.1.5 Corruption

Corruption Perceptions Index | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark	90.00	100.00	68	India	40.00	31.51
2	Finland	87.00	95.89	68	North Macedonia	40.00	31.51
2	New Zealand	87.00	95.89	68	Tunisia	40.00	31.51
4	Norway	84.00	91.78	71	Belarus	39.00	30.14
5	Singapore	83.00	90.41	71	Colombia	39.00	30.14
5	Sweden	83.00	90.41	71	Moldova, Rep.	39.00	30.14
7	Switzerland	82.00	89.04	74	Argentina	38.00	28.77
8	Netherlands	80.00	86.30	74	Brazil	38.00	28.77
9	Germany	79.00	84.93	74	Ethiopia	38.00	28.77
10	Ireland	77.00	82.19	74	Morocco	38.00	28.77
10	Luxembourg	77.00	82.19	74	Tanzania, United Rep.	38.00	28.77
12	Australia	75.00	79.45	79	Côte d'Ivoire	37.00	27.40
13	Canada	74.00	78.08	79	Lesotho	37.00	27.40
13	Estonia	74.00	78.08	81	Albania	36.00	26.03
13	Iceland	74.00	78.08	81	Ecuador	36.00	26.03
13	Uruguay	74.00	78.08	81	Kazakhstan	36.00	26.03
17	Belgium	73.00	76.71	81	Panama	36.00	26.03
17	Japan	73.00	76.71	81	Peru	36.00	26.03
17	United Kingdom	73.00	76.71	81	Serbia	36.00	26.03
20	France	72.00	75.34	81	Sri Lanka	36.00	26.03
21	Austria	71.00	73.97	81	Thailand	36.00	26.03
22	United States of America	69.00	71.23	81	Türkiye	36.00	26.03
23	Chile	67.00	68.49	90	Bosnia and Herzegovina	34.00	23.29
23	United Arab Emirates	67.00	68.49	90	Gambia	34.00	23.29
25	Israel	63.00	63.01	90	Indonesia	34.00	23.29
25	Korea, Rep.	63.00	63.01	90	Malawi	34.00	23.29
27	Lithuania	62.00	61.64	90	Nepal	34.00	23.29
27	Portugal	62.00	61.64	95	Algeria	33.00	21.92
29	Botswana	60.00	58.90	95	Angola	33.00	21.92
29	Cabo Verde	60.00	58.90	95	El Salvador	33.00	21.92
29	Spain	60.00	58.90	95	Mongolia	33.00	21.92
32	Latvia	59.00	57.53	95	Philippines	33.00	21.92
33	Qatar	58.00	56.16	95	Ukraine	33.00	21.92
34	Czech Republic	56.00	53.42	95	Zambia	33.00	21.92
34	Georgia	56.00	53.42	102	Dominican Republic	32.00	20.55
34	Italy	56.00	53.42	102	Kenya	32.00	20.55
34	Slovenia	56.00	53.42	104	Bolivia, Plurinational St.	31.00	19.18
38	Poland	55.00	52.05	104	Lao PDR	31.00	19.18
39	Costa Rica	54.00	50.68	104	Mexico	31.00	19.18
40	Slovakia	53.00	49.32	104	Uzbekistan	31.00	19.18
41	Cyprus	52.00	47.95	108	Egypt	30.00	17.81
41	Greece	52.00	47.95	108	Eswatini	30.00	17.81
43	Malta	51.00	46.58	108	Mauritania	30.00	17.81
43	Rwanda	51.00	46.58	111	Mali	28.00	15.07
43	Saudi Arabia	51.00	46.58	111	Paraguay	28.00	15.07
46	Croatia	50.00	45.21	111	Russian Federation	28.00	15.07
46	Mauritius	50.00	45.21	114	Kyrgyzstan	27.00	13.70
48	Namibia	49.00	43.84	114	Pakistan	27.00	13.70
49	Jordan	47.00	41.10	116	Cameroon	26.00	12.33
49	Malaysia	47.00	41.10	116	Madagascar	26.00	12.33
51	Armenia	46.00	39.73	116	Mozambique	26.00	12.33
51	Romania	46.00	39.73	116	Uganda	26.00	12.33
53	China	45.00	38.36	120	Bangladesh	25.00	10.96
53	Montenegro	45.00	38.36	120	Guinea	25.00	10.96
55	Bahrain	44.00	36.99	120	Iran, Islamic Rep.	25.00	10.96
55	Jamaica	44.00	36.99	123	Cambodia	24.00	9.59
55	Oman	44.00	36.99	123	Guatemala	24.00	9.59
58	Benin	43.00	35.62	123	Lebanon	24.00	9.59
58	Bulgaria	43.00	35.62	123	Nigeria	24.00	9.59
58	Ghana	43.00	35.62	127	Azerbaijan	23.00	8.22
58	Senegal	43.00	35.62	127	Honduras	23.00	8.22
58	South Africa	43.00	35.62	127	Zimbabwe	23.00	8.22
63	Burkina Faso	42.00	34.25	130	Congo, Dem. Rep.	20.00	4.11
63	Hungary	42.00	34.25	131	Chad	19.00	2.74
63	Kuwait	42.00	34.25	131	Nicaragua	19.00	2.74
63	Trinidad and Tobago	42.00	34.25	133	Burundi	17.00	0.00
63	Viet Nam	42.00	34.25		Brunei Darussalam	n/a	n/a

SOURCE: Transparency International, *The Corruption Perceptions Index 2022* (<https://www.transparency.org/en/cpi/2022>)

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 2012.

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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	5.83	100.00	68	Korea, Rep.....	3.77	38.37
2	United States of America.....	5.49	89.94	69	Russian Federation.....	3.76	38.17
3	Denmark.....	5.36	85.85	70	South Africa.....	3.75	37.85
4	China.....	5.31	84.33	71	Côte d'Ivoire.....	3.75	37.72
5	Japan.....	5.26	82.87	72	Malta.....	3.74	37.55
6	Austria.....	5.25	82.75	73	Kuwait.....	3.73	37.12
7	Saudi Arabia.....	5.11	78.50	74	Cambodia.....	3.72	36.91
8	Sweden.....	5.07	77.24	75	Rwanda.....	3.71	36.61
9	Azerbaijan.....	5.00	75.14	76	Jamaica.....	3.70	36.38
10	Benin.....	5.00	75.10	77	Albania.....	3.68	35.61
11	Germany.....	4.97	74.40	78	Montenegro.....	3.68	35.53
12	Netherlands.....	4.93	72.99	79	Türkiye.....	3.66	35.16
13	Italy.....	4.92	72.91	80	Hungary.....	3.65	34.90
14	United Arab Emirates.....	4.92	72.84	81	Moldova, Rep.....	3.65	34.64
15	Belgium.....	4.92	72.77	82	Guatemala.....	3.64	34.51
16	Slovenia.....	4.88	71.62	83	Colombia.....	3.63	34.05
17	United Kingdom.....	4.85	70.69	84	Argentina.....	3.62	33.76
18	Norway.....	4.81	69.33	85	Senegal.....	3.60	33.39
19	Poland.....	4.80	69.09	86	Ukraine.....	3.59	33.03
20	Indonesia.....	4.78	68.70	87	Burundi.....	3.57	32.24
21	Uzbekistan.....	4.78	68.46	88	Panama.....	3.55	31.84
22	Jordan.....	4.74	67.43	89	Namibia.....	3.55	31.72
23	Finland.....	4.72	66.91	90	Iceland.....	3.53	31.23
24	Canada.....	4.71	66.40	91	Kyrgyzstan.....	3.53	31.05
25	Qatar.....	4.67	65.23	92	Brunei Darussalam.....	3.52	30.71
26	Viet Nam.....	4.65	64.61	93	Morocco.....	3.49	30.02
27	Luxembourg.....	4.63	64.14	94	Belarus.....	3.47	29.46
28	Pakistan.....	4.63	64.10	95	Burkina Faso.....	3.47	29.37
29	Mali.....	4.63	63.98	96	Mexico.....	3.47	29.29
30	Australia.....	4.62	63.80	97	Cabo Verde.....	3.43	28.24
31	Singapore.....	4.61	63.35	98	Chile.....	3.42	27.78
32	Egypt.....	4.58	62.54	99	Kenya.....	3.41	27.60
33	Oman.....	4.57	62.31	100	Thailand.....	3.32	24.83
34	Lithuania.....	4.55	61.77	101	Nigeria.....	3.31	24.61
35	Czech Republic.....	4.54	61.28	102	Peru.....	3.31	24.48
36	Spain.....	4.53	61.11	103	Croatia.....	3.31	24.46
37	Ireland.....	4.52	60.83	104	Kazakhstan.....	3.25	22.70
38	Botswana.....	4.49	59.91	105	Dominican Republic.....	3.23	22.10
39	France.....	4.37	56.17	106	Mauritius.....	3.21	21.67
40	Georgia.....	4.24	52.54	107	Zambia.....	3.20	21.42
41	Lao PDR.....	4.23	52.24	108	Lebanon.....	3.20	21.34
42	Cyprus.....	4.20	51.28	109	Bosnia and Herzegovina.....	3.19	20.98
43	Iran, Islamic Rep.....	4.17	50.38	110	Bangladesh.....	3.17	20.52
44	Ghana.....	4.16	50.12	111	Madagascar.....	3.16	20.07
45	Malaysia.....	4.16	50.08	112	Ethiopia.....	3.12	18.99
46	Algeria.....	4.15	49.68	113	Nepal.....	3.09	18.11
47	Guinea.....	4.15	49.59	114	Ecuador.....	3.07	17.45
48	Bulgaria.....	4.13	49.20	115	Lesotho.....	3.07	17.42
49	Bahrain.....	4.07	47.36	116	Zimbabwe.....	3.07	17.33
50	Estonia.....	4.06	47.05	117	Chad.....	3.07	17.29
51	Latvia.....	4.06	46.94	118	Philippines.....	3.02	15.85
52	Brazil.....	4.05	46.73	119	Malawi.....	3.02	15.77
53	Sri Lanka.....	4.03	45.98	120	Uganda.....	3.00	15.33
54	Costa Rica.....	4.02	45.89	121	Bolivia, Plurinational St.....	2.99	15.05
55	Gambia.....	4.02	45.70	122	Mozambique.....	2.93	13.24
56	Uruguay.....	3.99	44.92	123	Eswatini.....	2.91	12.70
57	Portugal.....	3.98	44.72	124	Tunisia.....	2.90	12.22
58	Cameroon.....	3.96	44.14	125	North Macedonia.....	2.90	12.22
59	New Zealand.....	3.95	43.68	126	Paraguay.....	2.87	11.51
60	Tanzania, United Rep.....	3.93	43.11	127	El Salvador.....	2.82	9.77
61	Greece.....	3.90	42.37	128	Mongolia.....	2.78	8.68
62	Slovakia.....	3.89	41.87	129	Honduras.....	2.73	7.16
63	Armenia.....	3.82	39.86	130	Congo, Dem. Rep.....	2.71	6.69
64	Romania.....	3.80	39.16	131	Nicaragua.....	2.65	4.70
65	Serbia.....	3.79	38.83	132	Trinidad and Tobago.....	2.62	4.01
66	India.....	3.78	38.53	133	Angola.....	2.51	0.53
67	Israel.....	3.77	38.45	134	Mauritania.....	2.49	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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1.2.2 Domestic credit to private sector

Domestic credit to private sector (% GDP) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Croatia.....	5.99	100.00	68	Philippines.....	3.91	46.39
2	United States of America.....	5.38	84.28	69	Montenegro.....	3.90	46.13
3	Japan.....	5.28	81.71	70	Bulgaria.....	3.90	46.12
4	China.....	5.23	80.33	71	Bosnia and Herzegovina.....	3.89	46.01
5	Cambodia.....	5.18	79.19	72	Peru.....	3.88	45.78
6	Korea, Rep.....	5.17	78.98	73	Mongolia.....	3.88	45.68
7	Switzerland.....	5.14	78.17	74	Sri Lanka.....	3.87	45.42
8	Denmark.....	5.07	76.28	75	Poland.....	3.86	45.08
9	Thailand.....	5.06	75.95	76	Burundi.....	3.83	44.38
10	New Zealand.....	5.00	74.47	77	Colombia.....	3.81	43.83
11	Sweden.....	4.91	72.33	78	Slovenia.....	3.73	41.96
12	Australia.....	4.91	72.27	79	Serbia.....	3.72	41.60
13	United Kingdom.....	4.88	71.39	80	Bangladesh.....	3.69	40.70
14	Singapore.....	4.87	71.15	81	Hungary.....	3.68	40.48
15	Malaysia.....	4.85	70.77	82	Trinidad and Tobago.....	3.65	39.88
16	Viet Nam.....	4.84	70.53	83	Lithuania.....	3.65	39.77
17	France.....	4.80	69.44	84	Guatemala.....	3.63	39.30
18	Norway.....	4.74	67.81	85	Uzbekistan.....	3.63	39.17
19	Chile.....	4.73	67.64	86	Mexico.....	3.60	38.47
20	Lebanon.....	4.68	66.18	87	Indonesia.....	3.59	38.22
21	Luxembourg.....	4.66	65.70	88	Botswana.....	3.57	37.69
22	Spain.....	4.62	64.75	89	Albania.....	3.55	37.32
23	Qatar.....	4.62	64.67	90	Senegal.....	3.50	36.00
24	Panama.....	4.61	64.59	91	Brunei Darussalam.....	3.48	35.42
25	Portugal.....	4.61	64.47	92	Burkina Faso.....	3.47	35.15
26	Finland.....	4.61	64.41	93	Latvia.....	3.47	35.14
27	Netherlands.....	4.59	64.01	94	Kenya.....	3.47	35.08
28	Iceland.....	4.59	63.91	95	Egypt.....	3.46	34.86
29	Nepal.....	4.56	63.33	96	Mali.....	3.42	33.86
30	Cyprus.....	4.55	62.83	97	Belarus.....	3.40	33.47
31	South Africa.....	4.55	62.83	98	Nicaragua.....	3.39	32.99
32	Austria.....	4.54	62.74	99	Ireland.....	3.36	32.32
33	Jordan.....	4.47	60.89	100	Dominican Republic.....	3.36	32.32
34	Morocco.....	4.46	60.69	101	Moldova, Rep.....	3.35	32.18
35	Germany.....	4.44	60.02	102	Uruguay.....	3.31	30.99
36	Kuwait.....	4.43	59.82	103	Kazakhstan.....	3.28	30.20
37	Tunisia.....	4.41	59.42	104	Romania.....	3.24	29.36
38	Mauritius.....	4.39	58.71	105	Ukraine.....	3.20	28.17
39	Italy.....	4.37	58.35	106	Kyrgyzstan.....	3.18	27.67
40	United Arab Emirates.....	4.36	58.09	107	Rwanda.....	3.17	27.42
41	Malta.....	4.34	57.62	108	Mauritania.....	3.14	26.75
42	Belgium.....	4.33	57.34	109	Mozambique.....	3.13	26.39
43	Bahrain.....	4.31	56.87	110	Algeria.....	3.11	25.85
44	Brazil.....	4.28	56.13	111	Côte d'Ivoire.....	3.09	25.48
45	Bolivia, Plurinational St.....	4.28	55.92	112	Eswatini.....	3.08	25.19
46	Israel.....	4.27	55.70	113	Lesotho.....	3.04	24.15
47	Honduras.....	4.25	55.31	114	Madagascar.....	3.00	23.02
48	Slovakia.....	4.20	54.05	115	Azerbaijan.....	2.96	21.99
49	Georgia.....	4.17	53.23	116	Benin.....	2.89	20.32
50	El Salvador.....	4.13	52.18	117	Argentina.....	2.83	18.64
51	Namibia.....	4.12	51.94	118	Uganda.....	2.76	16.80
52	Iran, Islamic Rep.....	4.11	51.71	119	Pakistan.....	2.76	16.77
53	Estonia.....	4.10	51.29	120	Cameroon.....	2.75	16.62
54	Greece.....	4.06	50.33	121	Nigeria.....	2.68	14.72
55	Cabo Verde.....	4.04	49.78	122	Tanzania, United Rep.....	2.60	12.64
56	North Macedonia.....	4.04	49.72	123	Ghana.....	2.57	12.11
57	Türkiye.....	4.01	49.16	124	Chad.....	2.56	11.64
58	Russian Federation.....	4.01	49.11	125	Zimbabwe.....	2.53	11.05
59	Czech Republic.....	4.00	48.79	126	Zambia.....	2.51	10.44
60	Oman.....	3.99	48.66	127	Guinea.....	2.32	5.61
61	Costa Rica.....	3.99	48.60	128	Gambia.....	2.29	4.84
62	Ecuador.....	3.98	48.39	129	Angola.....	2.24	3.61
63	Armenia.....	3.98	48.25	130	Malawi.....	2.21	2.79
64	Saudi Arabia.....	3.97	47.96	131	Congo, Dem. Rep.....	2.10	0.00
65	Jamaica.....	3.95	47.41		Canada.....	n/a	n/a
66	Paraguay.....	3.94	47.30		Ethiopia.....	n/a	n/a
67	India.....	3.94	47.18		Lao PDR.....	n/a	n/a

SOURCE: International Monetary Fund (IMF) International Financial Statistics and data files, and World Bank and Organisation for Economic Co-operation and Development (OECD)

GDP estimates. Downloaded from World Bank, World Development Indicators (<https://data.worldbank.org/data-catalog/world-development-indicators>)

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 2012.

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 specialised institutions in a particular field)? [1 = non-existent; 7 = widespread in many fields] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	5.56	100.00	68	Lithuania.....	3.89	43.92
2	China.....	5.31	91.78	69	Kenya.....	3.88	43.81
3	Switzerland.....	5.31	91.74	70	Slovenia.....	3.87	43.20
4	United Arab Emirates.....	5.18	87.30	71	Côte d'Ivoire.....	3.85	42.76
5	Indonesia.....	5.18	87.14	72	Rwanda.....	3.84	42.42
6	Netherlands.....	5.10	84.72	73	Zambia.....	3.82	41.71
7	Egypt.....	5.09	84.26	74	Slovakia.....	3.82	41.57
8	Saudi Arabia.....	5.07	83.74	75	Serbia.....	3.80	41.12
9	Germany.....	5.07	83.47	76	Romania.....	3.80	41.06
10	Austria.....	5.02	82.05	77	Namibia.....	3.80	40.93
11	Singapore.....	5.01	81.68	78	Poland.....	3.80	40.91
12	Italy.....	5.00	81.11	79	Uruguay.....	3.79	40.79
13	Sweden.....	4.95	79.55	80	Chile.....	3.79	40.79
14	United Kingdom.....	4.93	78.72	81	Jamaica.....	3.79	40.62
15	Canada.....	4.92	78.58	82	Cambodia.....	3.78	40.40
16	Qatar.....	4.90	77.87	83	Guatemala.....	3.77	40.02
17	Norway.....	4.87	77.01	84	Bangladesh.....	3.69	37.30
18	Belgium.....	4.82	75.27	85	Albania.....	3.69	37.18
19	Japan.....	4.77	73.60	86	Cabo Verde.....	3.68	37.00
20	Oman.....	4.75	72.77	87	Iran, Islamic Rep.....	3.66	36.35
21	Korea, Rep.....	4.72	71.78	88	Morocco.....	3.65	35.89
22	Finland.....	4.69	70.71	89	Trinidad and Tobago.....	3.62	34.91
23	France.....	4.68	70.65	90	Bosnia and Herzegovina.....	3.61	34.54
24	Denmark.....	4.68	70.51	91	Cameroon.....	3.60	34.47
25	Viet Nam.....	4.67	70.34	92	Uganda.....	3.60	34.19
26	Jordan.....	4.64	69.22	93	Mali.....	3.58	33.56
27	Azerbaijan.....	4.62	68.51	94	Ukraine.....	3.57	33.38
28	Uzbekistan.....	4.60	67.68	95	Panama.....	3.56	32.92
29	Australia.....	4.56	66.33	96	Malawi.....	3.55	32.68
30	Malaysia.....	4.55	66.00	97	Nigeria.....	3.55	32.55
31	Spain.....	4.54	65.81	98	Guinea.....	3.53	32.02
32	Luxembourg.....	4.53	65.64	99	India.....	3.52	31.78
33	Ireland.....	4.52	65.31	100	Lebanon.....	3.52	31.51
34	Botswana.....	4.50	64.64	101	Eswatini.....	3.52	31.51
35	Bahrain.....	4.46	63.02	102	North Macedonia.....	3.49	30.61
36	Israel.....	4.32	58.30	103	Honduras.....	3.49	30.51
37	Hungary.....	4.30	57.85	104	Argentina.....	3.48	30.33
38	Pakistan.....	4.29	57.31	105	Burundi.....	3.46	29.60
39	Kuwait.....	4.23	55.35	106	Nepal.....	3.45	29.27
40	Georgia.....	4.22	55.13	107	Belarus.....	3.45	29.13
41	Mexico.....	4.22	55.12	108	Senegal.....	3.44	29.02
42	Costa Rica.....	4.22	55.10	109	Peru.....	3.44	28.93
43	Tanzania, United Rep.....	4.21	54.66	110	Tunisia.....	3.37	26.62
44	New Zealand.....	4.14	52.52	111	Paraguay.....	3.35	25.90
45	Sri Lanka.....	4.12	51.89	112	Madagascar.....	3.34	25.69
46	Ghana.....	4.12	51.81	113	Kyrgyzstan.....	3.33	25.10
47	South Africa.....	4.08	50.54	114	Armenia.....	3.32	25.00
48	Bulgaria.....	4.07	50.12	115	Ecuador.....	3.32	24.98
49	Brazil.....	4.07	50.02	116	Montenegro.....	3.28	23.52
50	Cyprus.....	4.06	49.84	117	Ethiopia.....	3.26	22.93
51	Portugal.....	4.05	49.24	118	Chad.....	3.24	22.23
52	Lao PDR.....	4.04	49.02	119	Bolivia, Plurinational St.....	3.23	21.82
53	Mauritius.....	4.03	48.57	120	Mongolia.....	3.22	21.46
54	Iceland.....	4.01	48.15	121	Benin.....	3.19	20.64
55	Thailand.....	3.99	47.36	122	Kazakhstan.....	3.19	20.59
56	Türkiye.....	3.98	47.06	123	Greece.....	3.16	19.58
57	Colombia.....	3.98	46.88	124	Moldova, Rep.....	3.13	18.51
58	Dominican Republic.....	3.97	46.59	125	El Salvador.....	3.11	17.94
59	Gambia.....	3.95	45.96	126	Mozambique.....	3.10	17.45
60	Russian Federation.....	3.94	45.82	127	Mauritania.....	3.08	16.89
61	Malta.....	3.93	45.24	128	Croatia.....	2.96	12.75
62	Estonia.....	3.91	44.66	129	Lesotho.....	2.92	11.67
63	Brunei Darussalam.....	3.90	44.47	130	Zimbabwe.....	2.89	10.36
64	Algeria.....	3.90	44.28	131	Nicaragua.....	2.85	9.05
65	Latvia.....	3.89	44.18	132	Angola.....	2.76	6.27
66	Czech Republic.....	3.89	44.17	133	Burkina Faso.....	2.72	4.79
67	Philippines.....	3.89	44.06	134	Congo, Dem. Rep.....	2.58	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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 2012.

1.2.4 R&D expenditure

Gross expenditure on R&D (%) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Israel	5.35	100.00	68	Costa Rica	0.37	6.76
2	Korea, Rep.	4.80	89.54	69	Mauritius	0.37	6.67
3	Sweden	3.49	65.10	70	Montenegro	0.36	6.61
4	Belgium	3.46	64.46	71	Namibia	0.35	6.36
5	United States of America	3.42	63.86	72	Chile	0.34	6.21
6	Japan	3.27	61.08	73	Philippines	0.32	5.84
7	Switzerland	3.19	59.54	74	Mozambique	0.31	5.67
8	Austria	3.19	59.44	75	Chad	0.30	5.43
9	Germany	3.11	57.99	76	Mexico	0.30	5.36
10	Denmark	2.97	55.36	77	Ukraine	0.29	5.32
11	Finland	2.91	54.30	78	Oman	0.29	5.23
12	Iceland	2.47	46.11	79	Colombia	0.29	5.22
13	China	2.41	44.84	80	Indonesia	0.28	5.06
14	France	2.35	43.73	81	Brunei Darussalam	0.28	5.00
15	Netherlands	2.30	42.93	82	Ethiopia	0.27	4.94
16	Norway	2.28	42.43	83	Eswatini	0.27	4.82
17	Slovenia	2.14	39.90	84	Georgia	0.25	4.52
18	Czech Republic	1.99	36.97	85	Burkina Faso	0.25	4.49
19	Singapore	1.89	35.08	86	Moldova, Rep.	0.23	4.15
20	Australia	1.83	34.03	87	Burundi	0.21	3.80
21	Estonia	1.75	32.58	88	Azerbaijan	0.21	3.72
22	United Kingdom	1.72	32.01	89	Armenia	0.21	3.66
23	Canada	1.70	31.55	90	Bosnia and Herzegovina	0.19	3.42
24	Portugal	1.61	30.01	91	Kuwait	0.19	3.30
25	Hungary	1.59	29.63	92	Mali	0.18	3.09
26	Italy	1.53	28.39	93	Peru	0.17	3.03
27	Greece	1.50	27.79	94	Panama	0.17	2.90
28	United Arab Emirates	1.50	27.79	95	El Salvador	0.17	2.90
29	Spain	1.41	26.20	96	Pakistan	0.16	2.89
30	New Zealand	1.40	26.08	97	Paraguay	0.16	2.75
31	Poland	1.39	25.73	98	Uganda	0.14	2.48
32	Thailand	1.33	24.70	99	Mongolia	0.13	2.30
33	Croatia	1.24	23.06	100	Uzbekistan	0.13	2.28
34	Ireland	1.23	22.87	101	Kazakhstan	0.13	2.25
35	Brazil	1.17	21.65	102	Sri Lanka	0.12	2.05
36	Lithuania	1.15	21.31	103	Cambodia	0.12	2.02
37	Luxembourg	1.12	20.74	104	Nicaragua	0.11	1.82
38	Russian Federation	1.09	20.27	105	Bahrain	0.10	1.70
39	Türkiye	1.09	20.18	106	Kyrgyzstan	0.09	1.47
40	Serbia	0.99	18.41	107	Côte d'Ivoire	0.07	1.13
41	Egypt	0.96	17.74	108	Gambia	0.07	1.11
42	Malaysia	0.95	17.60	109	Trinidad and Tobago	0.06	1.01
43	Slovakia	0.90	16.61	110	Honduras	0.06	0.92
44	Bulgaria	0.85	15.70	111	Guatemala	0.06	0.91
45	Cyprus	0.81	14.95	112	Lesotho	0.05	0.76
46	Iran, Islamic Rep.	0.79	14.56	113	Angola	0.03	0.41
47	Rwanda	0.76	13.99	114	Madagascar	0.01	0.05
48	Tunisia	0.75	13.78	115	Mauritania	0.01	0.00
49	Jordan	0.70	12.82		Albania	n/a	n/a
50	Latvia	0.69	12.67		Bangladesh	n/a	n/a
51	Qatar	0.68	12.55		Benin	n/a	n/a
52	Malta	0.67	12.29		Bolivia, Plurinational St.	n/a	n/a
53	India	0.66	12.07		Cabo Verde	n/a	n/a
54	South Africa	0.61	11.30		Cameroon	n/a	n/a
55	Senegal	0.58	10.61		Dominican Republic	n/a	n/a
56	Botswana	0.56	10.31		Ghana	n/a	n/a
57	Algeria	0.53	9.81		Guinea	n/a	n/a
58	Argentina	0.53	9.64		Jamaica	n/a	n/a
59	Tanzania, United Rep.	0.51	9.44		Kenya	n/a	n/a
60	Belarus	0.47	8.60		Lao PDR	n/a	n/a
61	Romania	0.47	8.52		Lebanon	n/a	n/a
62	Saudi Arabia	0.46	8.50		Malawi	n/a	n/a
63	Uruguay	0.45	8.18		Morocco	n/a	n/a
64	Ecuador	0.44	8.09		Nepal	n/a	n/a
65	Viet Nam	0.42	7.60		Nigeria	n/a	n/a
66	Congo, Dem. Rep.	0.41	7.41		Zambia	n/a	n/a
67	North Macedonia	0.38	6.87		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 2012.

1.2.5 ICT infrastructure

NRI Access sub-index | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	China	87.84	100.00	68	Kenya	63.27	63.22
2	Norway	87.80	99.94	69	Tunisia	63.08	62.93
3	France	85.83	96.98	70	Côte d'Ivoire	62.93	62.71
4	United States of America	85.39	96.34	71	Colombia	61.77	60.97
5	New Zealand	85.23	96.09	72	Peru	61.37	60.38
6	Singapore	85.08	95.87	73	Lao PDR	61.26	60.21
7	Australia	82.27	91.67	74	Argentina	60.98	59.78
8	Japan	80.72	89.35	75	Mauritius	60.76	59.46
9	United Arab Emirates	80.69	89.30	76	Greece	60.50	59.07
10	Russian Federation	80.68	89.27	77	Cyprus	59.73	57.92
11	United Kingdom	80.47	88.96	78	Botswana	59.04	56.89
12	Korea, Rep.	79.56	87.60	79	Azerbaijan	58.89	56.67
13	Viet Nam	79.01	86.77	80	Dominican Republic	58.74	56.43
14	Spain	78.63	86.22	81	Jamaica	58.53	56.12
15	Switzerland	78.41	85.89	82	Malta	58.51	56.10
16	Germany	77.49	84.50	83	Cambodia	57.69	54.87
17	Netherlands	77.35	84.30	84	Nigeria	57.53	54.63
18	Finland	76.37	82.83	85	Albania	57.11	54.00
19	Poland	76.09	82.41	86	Mongolia	56.90	53.68
20	Qatar	76.02	82.30	87	Montenegro	55.60	51.73
21	Canada	75.97	82.23	88	Ecuador	55.43	51.48
22	Italy	75.66	81.77	89	Philippines	55.40	51.43
23	Belgium	75.46	81.47	90	El Salvador	55.04	50.89
24	Chile	75.26	81.16	91	Iran, Islamic Rep.	54.99	50.81
25	Thailand	75.04	80.84	92	Sri Lanka	54.93	50.74
26	Brazil	74.90	80.62	93	Bosnia and Herzegovina	54.75	50.46
27	Sweden	74.74	80.39	94	Panama	54.64	50.29
28	Portugal	74.74	80.39	95	Trinidad and Tobago	53.83	49.08
29	Luxembourg	74.57	80.13	96	Kyrgyzstan	53.65	48.82
30	Ireland	74.32	79.76	97	Tanzania, United Rep.	53.48	48.56
31	Saudi Arabia	74.32	79.75	98	Jordan	53.34	48.35
32	Uruguay	74.07	79.38	99	Bolivia, Plurinational St.	53.11	48.01
33	Hungary	73.96	79.22	100	North Macedonia	51.50	45.59
34	Denmark	73.76	78.92	101	Senegal	50.92	44.73
35	Indonesia	73.55	78.60	102	Uganda	50.12	43.53
36	Ukraine	73.24	78.14	103	Ethiopia	48.97	41.80
37	Malaysia	72.82	77.51	104	Guatemala	48.31	40.83
38	Slovakia	72.72	77.36	105	Paraguay	48.17	40.62
39	Israel	72.50	77.03	106	Angola	47.35	39.39
40	Slovenia	71.85	76.07	107	Ghana	47.00	38.87
41	Türkiye	71.82	76.01	108	Namibia	46.56	38.20
42	Bulgaria	71.73	75.89	109	Algeria	45.95	37.28
43	Estonia	71.48	75.51	110	Eswatini	44.73	35.46
44	Lithuania	70.80	74.48	111	Gambia	44.36	34.90
45	Egypt	70.77	74.44	112	Mozambique	44.34	34.88
46	Moldova, Rep.	70.38	73.86	113	Benin	43.63	33.82
47	Georgia	70.04	73.35	114	Zimbabwe	43.50	33.62
48	Kazakhstan	69.99	73.28	115	Lesotho	43.19	33.16
49	Costa Rica	69.74	72.91	116	Rwanda	43.00	32.88
50	Lebanon	69.49	72.53	117	Zambia	42.38	31.94
51	Latvia	69.42	72.43	118	Cabo Verde	42.21	31.69
52	Oman	68.94	71.70	119	Nepal	42.01	31.39
53	Czech Republic	68.91	71.66	120	Mali	41.46	30.57
54	Austria	68.65	71.28	121	Honduras	39.05	26.96
55	Bahrain	68.61	71.20	122	Malawi	38.67	26.40
56	Romania	68.28	70.72	123	Burkina Faso	36.17	22.64
57	Bangladesh	67.49	69.54	124	Madagascar	35.97	22.34
58	India	67.44	69.46	125	Guinea	34.38	19.97
59	Kuwait	67.18	69.08	126	Congo, Dem. Rep.	33.76	19.04
60	South Africa	67.04	68.86	127	Cameroon	30.10	13.56
61	Mexico	66.60	68.20	128	Chad	29.12	12.09
62	Armenia	66.00	67.30	129	Burundi	21.04	0.00
63	Croatia	65.22	66.14		Belarus	n/a	n/a
64	Serbia	65.19	66.09		Brunei Darussalam	n/a	n/a
65	Iceland	63.91	64.18		Mauritania	n/a	n/a
66	Pakistan	63.42	63.44		Nicaragua	n/a	n/a
67	Morocco	63.42	63.44		Uzbekistan	n/a	n/a

SOURCE: Portulans Institute, *The Network Readiness Index 2022. Stepping into the new digital era: How and why digital natives will change the world* (<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 2012.

1.2.6 Urbanisation

Population of urban areas (%) | 2018

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kuwait	100.00	100.00	68	Ecuador	63.82	58.40
1	Singapore	100.00	100.00	69	Ireland	63.17	57.65
3	Qatar	99.14	99.01	70	Armenia	63.15	57.63
4	Belgium	98.00	97.70	71	Morocco	62.45	56.83
5	Uruguay	95.33	94.63	72	Paraguay	61.58	55.83
6	Malta	94.61	93.80	73	Gambia	61.27	55.47
7	Iceland	93.81	92.89	74	Albania	60.32	54.37
8	Israel	92.42	91.28	75	Poland	60.06	54.07
9	Argentina	91.87	90.65	76	China	59.15	53.03
10	Japan	91.62	90.36	77	Georgia	58.63	52.43
11	Netherlands	91.49	90.21	78	Nicaragua	58.52	52.31
12	Luxembourg	90.98	89.63	79	Austria	58.30	52.05
13	Jordan	90.98	89.63	80	North Macedonia	57.96	51.66
14	Bahrain	89.29	87.68	81	Kazakhstan	57.43	51.05
15	Lebanon	88.59	86.88	82	Honduras	57.10	50.67
16	Denmark	87.87	86.06	83	Croatia	56.95	50.50
17	Chile	87.56	85.70	84	Cameroon	56.37	49.84
18	Sweden	87.43	85.55	85	Serbia	56.09	49.51
19	Brazil	86.57	84.56	86	Ghana	56.06	49.48
20	New Zealand	86.54	84.52	87	Azerbaijan	55.68	49.04
21	United Arab Emirates	86.52	84.50	88	Jamaica	55.67	49.03
22	Australia	86.01	83.92	89	Indonesia	55.32	48.63
23	Finland	85.38	83.19	90	Slovenia	54.54	47.73
24	Oman	84.54	82.22	91	Romania	54.00	47.10
25	Saudi Arabia	83.84	81.42	92	Slovakia	53.73	46.79
26	United Kingdom	83.40	80.91	93	Mauritania	53.67	46.73
27	United States of America	82.26	79.60	94	Trinidad and Tobago	53.18	46.17
28	Norway	82.25	79.59	95	Guatemala	51.05	43.72
29	Korea, Rep.	81.46	78.68	96	Côte d'Ivoire	50.78	43.40
30	Canada	81.41	78.63	97	Uzbekistan	50.48	43.06
31	Dominican Republic	81.07	78.24	98	Nigeria	50.34	42.90
32	Colombia	80.78	77.90	99	Namibia	50.03	42.55
33	France	80.44	77.51	100	Thailand	49.95	42.45
34	Spain	80.32	77.37	101	Bosnia and Herzegovina	48.25	40.49
35	Mexico	80.16	77.18	102	Benin	47.31	39.42
36	Costa Rica	79.34	76.24	103	Senegal	47.19	39.28
37	Greece	79.06	75.92	104	Philippines	46.91	38.95
38	Belarus	78.59	75.39	105	Congo, Dem. Rep.	44.46	36.14
39	Peru	77.91	74.60	106	Zambia	43.52	35.06
40	Brunei Darussalam	77.63	74.28	107	Egypt	42.70	34.12
41	Germany	77.31	73.91	108	Moldova, Rep.	42.63	34.03
42	Malaysia	76.04	72.44	109	Mali	42.36	33.72
43	Türkiye	75.14	71.42	110	Mauritius	40.79	31.92
44	Bulgaria	75.01	71.26	111	Madagascar	37.19	27.78
45	Iran, Islamic Rep.	74.90	71.14	112	Pakistan	36.67	27.18
46	Russian Federation	74.43	70.60	113	Bangladesh	36.63	27.14
47	Switzerland	73.80	69.87	114	Kyrgyzstan	36.35	26.81
48	Czech Republic	73.79	69.86	115	Guinea	36.14	26.57
49	Algeria	72.63	68.53	116	Mozambique	35.99	26.40
50	El Salvador	72.02	67.83	117	Viet Nam	35.92	26.32
51	Hungary	71.35	67.06	118	Lao PDR	35.00	25.26
52	Italy	70.44	66.01	119	India	34.03	24.14
53	Botswana	69.45	64.87	120	Tanzania, United Rep.	33.78	23.85
54	Bolivia, Plurinational St.	69.43	64.84	121	Zimbabwe	32.21	22.05
55	Ukraine	69.35	64.76	122	Burkina Faso	29.36	18.77
56	Tunisia	68.95	64.29	123	Lesotho	28.15	17.39
57	Estonia	68.88	64.22	124	Kenya	27.03	16.10
58	Mongolia	68.45	63.72	125	Eswatini	23.80	12.38
59	Latvia	68.14	63.37	126	Uganda	23.77	12.35
60	Panama	67.71	62.87	127	Cambodia	23.39	11.91
61	Lithuania	67.68	62.84	128	Chad	23.06	11.53
62	Montenegro	66.81	61.84	129	Ethiopia	20.76	8.89
63	Cyprus	66.81	61.84	130	Nepal	19.74	7.71
64	South Africa	66.36	61.31	131	Sri Lanka	18.48	6.26
65	Cabo Verde	65.73	60.60	132	Rwanda	17.21	4.81
66	Angola	65.51	60.35	133	Malawi	16.94	4.49
67	Portugal	65.21	60.00	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 | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Austria	0.00	100.00	67	Mauritania	1.83	75.47
1	Cyprus	0.00	100.00	67	Mozambique	1.83	75.47
1	Finland	0.00	100.00	70	Trinidad and Tobago	1.84	75.34
1	Iceland	0.00	100.00	71	Costa Rica	1.91	74.40
1	Ireland	0.00	100.00	72	Mexico	1.94	73.99
1	Israel	0.00	100.00	73	Romania	1.95	73.86
1	Italy	0.00	100.00	74	Mauritius	2.13	71.45
1	Latvia	0.00	100.00	75	Zambia	2.21	70.38
1	Norway	0.00	100.00	76	Angola	2.27	69.57
1	Slovakia	0.00	100.00	76	Kazakhstan	2.27	69.57
1	Sweden	0.00	100.00	78	Eswatini	2.40	67.83
12	Estonia	0.15	97.99	79	Sri Lanka	2.41	67.69
12	Mongolia	0.15	97.99	80	Algeria	2.48	66.76
14	Czech Republic	0.18	97.59	81	Kuwait	2.51	66.35
14	Lithuania	0.18	97.59	82	Chile	2.68	64.08
14	Switzerland	0.18	97.59	83	Argentina	2.88	61.39
17	Denmark	0.19	97.45	84	Nigeria	2.90	61.13
17	Luxembourg	0.19	97.45	85	Botswana	2.91	60.99
19	Cabo Verde	0.32	95.71	86	Bolivia, Plurinational St.	2.94	60.59
20	Kyrgyzstan	0.35	95.31	87	Congo, Dem. Rep.	3.16	57.64
21	Nicaragua	0.36	95.17	88	Paraguay	3.22	56.84
21	Slovenia	0.36	95.17	89	Türkiye	3.66	50.94
23	Malawi	0.37	95.04	90	Philippines	3.97	46.78
24	Germany	0.38	94.91	91	Peru	4.20	43.70
24	Netherlands	0.38	94.91	92	Honduras	4.34	41.82
26	Belgium	0.51	93.16	93	Ecuador	4.40	41.02
26	France	0.51	93.16	94	El Salvador	4.42	40.75
26	Portugal	0.51	93.16	95	Panama	4.50	39.68
29	North Macedonia	0.52	93.03	96	Cambodia	4.54	39.14
30	Guinea	0.67	91.02	97	Pakistan	4.64	37.80
31	Australia	0.69	90.75	98	Colombia	4.84	35.12
31	Burkina Faso	0.69	90.75	99	Guatemala	5.38	27.88
31	Uruguay	0.69	90.75	100	Zimbabwe	5.45	26.94
34	Spain	0.71	90.48	101	Bangladesh	7.46	0.00
35	Albania	0.72	90.35	101	Belarus	10.00	0.00
35	Côte d'Ivoire	0.72	90.35	101	Egypt	10.00	0.00
35	Hungary	0.72	90.35		Azerbaijan	n/a	n/a
38	Namibia	0.73	90.21		Bahrain	n/a	n/a
39	Greece	0.85	88.61		Brazil	n/a	n/a
40	Georgia	0.86	88.47		Brunei Darussalam	n/a	n/a
41	Benin	0.87	88.34		Burundi	n/a	n/a
42	Mali	0.88	88.20		Cameroon	n/a	n/a
43	Bosnia and Herzegovina	0.89	88.07		Chad	n/a	n/a
43	Bulgaria	0.89	88.07		China	n/a	n/a
43	Moldova, Rep.	0.89	88.07		Ethiopia	n/a	n/a
46	Ukraine	0.94	87.40		India	n/a	n/a
47	South Africa	0.98	86.86		Iran, Islamic Rep.	n/a	n/a
48	United Kingdom	1.06	85.79		Jordan	n/a	n/a
49	Canada	1.07	85.66		Kenya	n/a	n/a
50	Poland	1.10	85.25		Korea, Rep.	n/a	n/a
51	Japan	1.11	85.12		Lao PDR	n/a	n/a
52	Croatia	1.12	84.99		Lebanon	n/a	n/a
53	Montenegro	1.21	83.78		Malaysia	n/a	n/a
54	Jamaica	1.23	83.51		Morocco	n/a	n/a
55	Armenia	1.40	81.23		Nepal	n/a	n/a
56	Serbia	1.41	81.10		New Zealand	n/a	n/a
57	Lesotho	1.44	80.70		Oman	n/a	n/a
58	Dominican Republic	1.45	80.56		Qatar	n/a	n/a
59	Uganda	1.46	80.43		Russian Federation	n/a	n/a
60	Ghana	1.62	78.28		Rwanda	n/a	n/a
61	Gambia	1.64	78.02		Saudi Arabia	n/a	n/a
62	Madagascar	1.65	77.88		Singapore	n/a	n/a
62	Senegal	1.65	77.88		Thailand	n/a	n/a
62	Tunisia	1.65	77.88		United Arab Emirates	n/a	n/a
65	Indonesia	1.70	77.21		United States of America	n/a	n/a
66	Tanzania, United Rep.	1.77	76.27		Uzbekistan	n/a	n/a
67	Malta	1.83	75.47		Viet Nam	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 characterise labour-employer relations?
[1 = generally confrontational; 7 = generally cooperative] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	6.03	100.00	68	Kuwait.....	4.49	45.15
2	Denmark.....	6.01	99.54	69	Côte d'Ivoire.....	4.48	44.81
3	Singapore.....	5.82	92.73	70	Greece.....	4.42	42.70
4	Netherlands.....	5.77	90.86	71	Tanzania, United Rep.	4.40	42.13
5	Japan.....	5.67	87.18	72	Mali.....	4.40	41.96
6	Norway.....	5.65	86.63	73	Poland.....	4.39	41.54
7	Luxembourg.....	5.53	82.50	74	Uganda.....	4.37	41.07
8	Austria.....	5.53	82.47	75	Nicaragua.....	4.36	40.54
9	Albania.....	5.47	80.24	76	Italy.....	4.36	40.47
10	Iceland.....	5.47	80.22	77	Honduras.....	4.35	40.43
11	Ireland.....	5.46	80.01	78	Algeria.....	4.35	40.20
12	United States of America.....	5.44	79.14	79	Jamaica.....	4.35	40.12
13	Finland.....	5.36	76.34	80	Ecuador.....	4.34	39.85
14	Estonia.....	5.35	75.76	81	Russian Federation.....	4.34	39.80
15	United Arab Emirates.....	5.26	72.59	82	Zimbabwe.....	4.33	39.49
16	New Zealand.....	5.23	71.79	83	Ukraine.....	4.32	39.20
17	Oman.....	5.22	71.39	84	Pakistan.....	4.31	39.01
18	Lithuania.....	5.20	70.74	85	Slovakia.....	4.31	38.79
19	Costa Rica.....	5.20	70.69	86	Namibia.....	4.31	38.76
20	Botswana.....	5.20	70.55	87	Uruguay.....	4.30	38.66
21	Egypt.....	5.17	69.50	88	Panama.....	4.30	38.49
22	Sweden.....	5.13	68.20	89	El Salvador.....	4.28	37.65
23	Bahrain.....	5.12	67.74	90	Hungary.....	4.28	37.63
24	Philippines.....	5.08	66.28	91	Kenya.....	4.25	36.81
25	Malaysia.....	5.07	65.97	92	Paraguay.....	4.24	36.50
26	Indonesia.....	5.07	65.81	93	Lebanon.....	4.22	35.48
27	Viet Nam.....	5.04	64.83	94	Senegal.....	4.21	35.45
28	United Kingdom.....	5.04	64.78	95	Nigeria.....	4.21	35.21
29	China.....	5.03	64.66	96	Mongolia.....	4.20	35.02
30	Israel.....	5.03	64.53	97	Cameroon.....	4.20	34.99
31	Germany.....	5.02	64.25	98	Madagascar.....	4.20	34.82
32	Australia.....	5.01	63.93	99	Romania.....	4.19	34.41
33	Canada.....	5.01	63.83	100	Belarus.....	4.15	33.12
34	Qatar.....	5.00	63.40	101	Eswatini.....	4.15	33.04
35	Guatemala.....	4.98	62.77	102	Serbia.....	4.14	32.69
36	Uzbekistan.....	4.97	62.44	103	Cabo Verde.....	4.13	32.62
37	Azerbaijan.....	4.97	62.30	104	Malawi.....	4.13	32.50
38	Benin.....	4.93	61.02	105	Peru.....	4.13	32.27
39	Belgium.....	4.92	60.45	106	Kazakhstan.....	4.08	30.84
40	Malta.....	4.91	60.36	107	Tunisia.....	4.08	30.57
41	Guinea.....	4.85	58.14	108	Nepal.....	4.08	30.56
42	Saudi Arabia.....	4.82	57.20	109	Brazil.....	4.07	30.35
43	Gambia.....	4.81	56.65	110	Bangladesh.....	4.07	30.20
44	Dominican Republic.....	4.81	56.60	111	Congo, Dem. Rep.....	4.07	30.19
45	Colombia.....	4.77	55.21	112	Zambia.....	4.02	28.65
46	Jordan.....	4.74	54.29	113	Kyrgyzstan.....	3.97	26.89
47	Cyprus.....	4.74	54.01	114	Burkina Faso.....	3.96	26.49
48	Czech Republic.....	4.71	53.29	115	Argentina.....	3.93	25.38
49	Rwanda.....	4.68	52.08	116	North Macedonia.....	3.92	24.80
50	Chile.....	4.68	52.04	117	Korea, Rep.....	3.91	24.71
51	Mauritius.....	4.68	51.97	118	Moldova, Rep.....	3.78	20.13
52	Cambodia.....	4.67	51.55	119	Chad.....	3.77	19.63
53	Brunei Darussalam.....	4.66	51.20	120	India.....	3.74	18.62
54	Mexico.....	4.63	50.34	121	Türkiye.....	3.73	18.04
55	Portugal.....	4.63	50.31	122	Montenegro.....	3.71	17.62
56	France.....	4.60	49.36	123	Morocco.....	3.70	17.26
57	Georgia.....	4.60	49.21	124	South Africa.....	3.69	16.88
58	Lao PDR.....	4.60	49.20	125	Croatia.....	3.61	13.79
59	Armenia.....	4.59	48.75	126	Mozambique.....	3.57	12.49
60	Slovenia.....	4.57	48.03	127	Bolivia, Plurinational St.....	3.55	11.81
61	Thailand.....	4.56	47.64	128	Iran, Islamic Rep.....	3.53	11.03
62	Ghana.....	4.55	47.35	129	Angola.....	3.51	10.19
63	Latvia.....	4.53	46.83	130	Bosnia and Herzegovina.....	3.48	9.15
64	Bulgaria.....	4.51	46.08	131	Mauritania.....	3.40	6.58
65	Sri Lanka.....	4.51	45.86	132	Trinidad and Tobago.....	3.38	5.65
66	Burundi.....	4.50	45.62	133	Ethiopia.....	3.36	5.06
67	Spain.....	4.49	45.45	134	Lesotho.....	3.22	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	6.12	100.00	68	Mauritius.....	4.38	50.04
2	Netherlands.....	5.92	94.49	69	Zambia.....	4.36	49.47
3	Denmark.....	5.83	91.67	70	Thailand.....	4.35	49.09
4	United States of America.....	5.82	91.36	71	Armenia.....	4.34	48.95
5	New Zealand.....	5.76	89.88	72	Italy.....	4.33	48.48
6	Singapore.....	5.74	89.18	73	Trinidad and Tobago.....	4.30	47.82
7	Switzerland.....	5.72	88.54	74	Uganda.....	4.30	47.73
8	Ireland.....	5.68	87.36	75	Argentina.....	4.23	45.56
9	Australia.....	5.64	86.25	76	Greece.....	4.18	44.19
10	Norway.....	5.63	86.14	77	Lao PDR.....	4.16	43.63
11	United Kingdom.....	5.52	82.91	78	Moldova, Rep.....	4.14	43.04
12	Botswana.....	5.52	82.80	79	Guatemala.....	4.13	42.83
13	Estonia.....	5.49	81.99	80	Peru.....	4.13	42.73
14	Lithuania.....	5.45	80.71	81	Brunei Darussalam.....	4.12	42.44
15	Albania.....	5.44	80.62	82	Guinea.....	4.10	41.80
16	Indonesia.....	5.35	77.90	83	Côte d'Ivoire.....	4.08	41.49
17	China.....	5.35	77.82	84	Russian Federation.....	4.06	40.88
18	Sweden.....	5.33	77.24	85	Serbia.....	4.05	40.55
19	Japan.....	5.29	76.30	86	Latvia.....	4.04	40.29
20	Israel.....	5.27	75.64	87	Tunisia.....	4.02	39.74
21	France.....	5.24	74.66	88	Belarus.....	4.02	39.66
22	Czech Republic.....	5.23	74.55	89	Mexico.....	4.01	39.47
23	Iceland.....	5.21	73.97	90	Dominican Republic.....	4.01	39.25
24	Canada.....	5.20	73.53	91	Mongolia.....	4.00	38.97
25	United Arab Emirates.....	5.15	72.14	92	India.....	3.98	38.59
26	Austria.....	5.11	70.99	93	Poland.....	3.97	38.33
27	Germany.....	5.11	70.95	94	Slovakia.....	3.95	37.68
28	Luxembourg.....	5.10	70.83	95	Romania.....	3.95	37.48
29	Rwanda.....	5.02	68.45	96	Pakistan.....	3.91	36.60
30	Belgium.....	4.98	67.18	97	Ukraine.....	3.91	36.57
31	Zimbabwe.....	4.98	67.17	98	Panama.....	3.90	36.31
32	Azerbaijan.....	4.96	66.63	99	Bulgaria.....	3.89	35.84
33	Bahrain.....	4.95	66.44	100	Türkiye.....	3.88	35.73
34	Georgia.....	4.95	66.43	101	Kuwait.....	3.87	35.42
35	Qatar.....	4.92	65.52	102	Senegal.....	3.87	35.18
36	Oman.....	4.88	64.43	103	Bangladesh.....	3.86	35.07
37	Saudi Arabia.....	4.86	63.86	104	Cameroon.....	3.83	34.23
38	Sri Lanka.....	4.84	63.31	105	Cyprus.....	3.83	34.07
39	Ghana.....	4.83	62.85	106	Lebanon.....	3.82	33.99
40	Jamaica.....	4.81	62.49	107	Montenegro.....	3.80	33.41
41	Nigeria.....	4.79	61.78	108	El Salvador.....	3.78	32.68
42	Costa Rica.....	4.75	60.74	109	Croatia.....	3.76	32.18
43	Malaysia.....	4.75	60.70	110	Nepal.....	3.69	30.02
44	Spain.....	4.74	60.25	111	Morocco.....	3.64	28.73
45	Eswatini.....	4.72	59.93	112	Burundi.....	3.62	28.23
46	Brazil.....	4.72	59.88	113	Ecuador.....	3.61	27.82
47	Benin.....	4.72	59.70	114	Honduras.....	3.53	25.62
48	Jordan.....	4.71	59.37	115	Kyrgyzstan.....	3.52	25.13
49	South Africa.....	4.61	56.76	116	Mali.....	3.50	24.63
50	Viet Nam.....	4.61	56.51	117	Algeria.....	3.50	24.63
51	Chile.....	4.59	56.02	118	Congo, Dem. Rep.....	3.44	23.03
52	Tanzania, United Rep.....	4.58	55.86	119	Kazakhstan.....	3.44	22.98
53	Egypt.....	4.57	55.54	120	Madagascar.....	3.44	22.80
54	Namibia.....	4.55	55.01	121	Paraguay.....	3.38	21.24
55	Slovenia.....	4.55	54.89	122	Bosnia and Herzegovina.....	3.32	19.38
56	Philippines.....	4.52	53.93	123	Cabo Verde.....	3.27	17.96
57	Hungary.....	4.51	53.86	124	Ethiopia.....	3.23	16.75
58	Kenya.....	4.50	53.43	125	Bolivia, Plurinational St.....	3.21	16.30
59	Malta.....	4.49	53.30	126	Iran, Islamic Rep.....	3.21	16.20
60	Gambia.....	4.49	53.24	127	Nicaragua.....	3.18	15.53
61	Colombia.....	4.48	52.84	128	North Macedonia.....	3.15	14.42
62	Korea, Rep.....	4.48	52.78	129	Burkina Faso.....	3.13	13.88
63	Portugal.....	4.45	52.10	130	Mozambique.....	3.07	12.31
64	Uruguay.....	4.44	51.76	131	Chad.....	2.96	9.22
65	Malawi.....	4.44	51.63	132	Angola.....	2.85	5.84
66	Uzbekistan.....	4.41	50.74	133	Lesotho.....	2.70	1.70
67	Cambodia.....	4.40	50.71	134	Mauritania.....	2.64	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	5.60	100.00	68	Latvia.....	3.90	53.18
2	United States of America.....	5.57	99.13	69	Namibia.....	3.90	53.14
3	China.....	5.19	88.79	70	Cameroon.....	3.89	52.96
4	United Arab Emirates.....	5.02	84.06	71	Guatemala.....	3.87	52.30
5	Saudi Arabia.....	5.00	83.44	72	New Zealand.....	3.83	51.39
6	Indonesia.....	4.97	82.73	73	Slovenia.....	3.83	51.35
7	Qatar.....	4.91	81.08	74	Dominican Republic.....	3.81	50.81
8	Uzbekistan.....	4.91	80.95	75	Slovakia.....	3.79	50.15
9	Netherlands.....	4.89	80.60	76	Algeria.....	3.79	50.13
10	Denmark.....	4.82	78.66	77	Brazil.....	3.77	49.71
11	Canada.....	4.81	78.36	78	Nepal.....	3.77	49.57
12	Albania.....	4.81	78.27	79	Kazakhstan.....	3.77	49.54
13	Singapore.....	4.79	77.65	80	Bangladesh.....	3.75	49.20
14	Bahrain.....	4.75	76.57	81	Serbia.....	3.75	49.17
15	Azerbaijan.....	4.73	75.97	82	Portugal.....	3.75	49.10
16	Belgium.....	4.72	75.86	83	Poland.....	3.74	48.83
17	Austria.....	4.72	75.70	84	Moldova, Rep.	3.74	48.77
18	Oman.....	4.71	75.53	85	Benin.....	3.73	48.62
19	Sweden.....	4.70	75.38	86	Jamaica.....	3.73	48.61
20	Ireland.....	4.63	73.41	87	Mongolia.....	3.73	48.58
21	Viet Nam.....	4.62	73.16	88	Guinea.....	3.73	48.50
22	Georgia.....	4.60	72.59	89	Montenegro.....	3.72	48.28
23	Gambia.....	4.60	72.49	90	Lao PDR.....	3.71	47.99
24	Luxembourg.....	4.60	72.43	91	Chad.....	3.68	47.03
25	Korea, Rep.	4.58	72.04	92	South Africa.....	3.67	46.91
26	United Kingdom.....	4.58	72.00	93	Uganda.....	3.66	46.74
27	Norway.....	4.53	70.50	94	Kenya.....	3.66	46.69
28	Finland.....	4.49	69.42	95	Zambia.....	3.66	46.64
29	Egypt.....	4.48	69.11	96	Eswatini.....	3.64	46.12
30	Estonia.....	4.47	68.96	97	Romania.....	3.64	46.02
31	Pakistan.....	4.47	68.81	98	Uruguay.....	3.64	45.93
32	Germany.....	4.46	68.59	99	Lebanon.....	3.61	45.30
33	Australia.....	4.46	68.55	100	Peru.....	3.58	44.45
34	Bulgaria.....	4.45	68.43	101	Malawi.....	3.58	44.37
35	Jordan.....	4.45	68.38	102	Nigeria.....	3.55	43.65
36	Iceland.....	4.40	66.92	103	Mexico.....	3.53	43.01
37	Botswana.....	4.38	66.38	104	Senegal.....	3.52	42.85
38	Russian Federation.....	4.35	65.73	105	Colombia.....	3.52	42.75
39	Israel.....	4.29	63.93	106	Ethiopia.....	3.50	42.20
40	Belarus.....	4.26	63.23	107	Cabo Verde.....	3.49	42.02
41	France.....	4.22	62.01	108	Zimbabwe.....	3.48	41.64
42	Cambodia.....	4.21	61.63	109	Hungary.....	3.46	41.12
43	Philippines.....	4.19	61.34	110	Morocco.....	3.44	40.68
44	Sri Lanka.....	4.17	60.78	111	Tunisia.....	3.43	40.35
45	Italy.....	4.17	60.64	112	North Macedonia.....	3.43	40.18
46	Malaysia.....	4.17	60.53	113	Croatia.....	3.38	38.77
47	Lithuania.....	4.16	60.38	114	Ecuador.....	3.36	38.47
48	Kyrgyzstan.....	4.14	59.71	115	Trinidad and Tobago.....	3.35	38.21
49	Czech Republic.....	4.12	59.16	116	Spain.....	3.35	38.07
50	Armenia.....	4.10	58.87	117	Bosnia and Herzegovina.....	3.34	37.70
51	Cyprus.....	4.09	58.37	118	Türkiye.....	3.31	37.04
52	Ukraine.....	4.08	58.23	119	El Salvador.....	3.27	35.86
53	Chile.....	4.08	58.17	120	Honduras.....	3.23	34.87
54	Tanzania, United Rep.	4.07	57.88	121	Panama.....	3.21	34.14
55	Thailand.....	4.07	57.83	122	Lesotho.....	3.17	33.21
56	Mauritius.....	4.04	57.13	123	Paraguay.....	3.17	33.00
57	Malta.....	4.03	56.91	124	Nicaragua.....	3.10	31.32
58	Ghana.....	4.03	56.85	125	Congo, Dem. Rep.	3.10	31.25
59	Japan.....	4.01	56.39	126	Iran, Islamic Rep.	3.06	29.95
60	Costa Rica.....	4.01	56.15	127	Burundi.....	3.04	29.58
61	Côte d'Ivoire.....	3.98	55.38	128	Madagascar.....	2.99	28.20
62	Rwanda.....	3.97	55.23	129	Argentina.....	2.90	25.79
63	Brunei Darussalam.....	3.97	55.17	130	Mozambique.....	2.80	23.00
64	Kuwait.....	3.96	54.99	131	Bolivia, Plurinational St.....	2.79	22.73
65	Mali.....	3.96	54.80	132	Burkina Faso.....	2.70	20.14
66	India.....	3.95	54.71	133	Angola.....	2.70	20.09
67	Greece.....	3.92	53.67	134	Mauritania.....	1.97	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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 2012.

1.3.5 Enterprise software

Enterprise software market (weighted by GDP) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	0.52	100.00	68	Albania.....	0.11	20.37
2	Montenegro.....	0.49	94.66	69	Burkina Faso.....	0.11	20.37
3	United States of America.....	0.47	91.33	70	Kenya.....	0.11	20.35
4	Mauritius.....	0.47	89.48	71	Estonia.....	0.10	20.19
5	Mongolia.....	0.42	80.09	72	Algeria.....	0.10	20.05
6	United Kingdom.....	0.41	79.74	73	Armenia.....	0.10	19.73
7	Switzerland.....	0.41	78.11	74	Ireland.....	0.10	19.63
8	Netherlands.....	0.40	77.43	75	Cambodia.....	0.10	19.26
9	Denmark.....	0.40	77.35	76	Botswana.....	0.10	18.90
10	Sweden.....	0.40	76.16	77	Nepal.....	0.10	18.84
11	Jamaica.....	0.35	67.50	78	Latvia.....	0.10	18.70
12	New Zealand.....	0.34	64.57	79	Morocco.....	0.10	18.64
13	Canada.....	0.33	63.73	80	Paraguay.....	0.10	18.44
14	Burundi.....	0.33	62.58	81	Kazakhstan.....	0.10	18.31
15	Germany.....	0.33	62.54	82	Honduras.....	0.09	18.19
16	Iran, Islamic Rep.....	0.31	60.40	83	Serbia.....	0.09	18.17
17	Japan.....	0.29	56.73	84	Mexico.....	0.09	18.09
18	Luxembourg.....	0.27	51.43	85	El Salvador.....	0.09	17.76
19	France.....	0.27	51.35	86	Kyrgyzstan.....	0.09	17.60
20	Belgium.....	0.26	49.53	87	Bahrain.....	0.09	17.33
21	Australia.....	0.25	47.99	88	Uganda.....	0.09	16.89
22	Bosnia and Herzegovina.....	0.24	47.05	89	Ethiopia.....	0.09	16.69
23	Korea, Rep.....	0.24	46.78	90	Lithuania.....	0.09	16.41
24	Ukraine.....	0.24	46.74	91	Guatemala.....	0.08	16.20
25	Czech Republic.....	0.23	44.30	92	Philippines.....	0.08	16.18
26	Austria.....	0.23	43.66	93	Georgia.....	0.08	15.63
27	Malta.....	0.23	43.31	94	Thailand.....	0.08	15.53
28	Sri Lanka.....	0.22	41.36	95	India.....	0.08	15.51
29	South Africa.....	0.21	41.23	96	Nigeria.....	0.08	15.31
30	Israel.....	0.21	40.16	97	Namibia.....	0.08	15.26
31	Belarus.....	0.21	39.64	98	Tanzania, United Rep.....	0.08	15.24
32	Norway.....	0.20	39.18	99	Chad.....	0.08	15.14
33	Malaysia.....	0.20	38.82	100	Greece.....	0.08	14.93
34	Hungary.....	0.19	36.58	101	Malawi.....	0.08	14.61
35	Chile.....	0.18	35.14	102	Rwanda.....	0.08	14.45
36	Slovakia.....	0.17	33.32	103	Côte d'Ivoire.....	0.07	13.74
37	Lebanon.....	0.17	33.26	104	Dominican Republic.....	0.07	13.54
38	Italy.....	0.17	32.62	105	Cyprus.....	0.07	13.53
39	Croatia.....	0.17	32.53	106	Bangladesh.....	0.07	13.37
40	Ghana.....	0.16	31.69	107	Zambia.....	0.07	12.92
41	Uzbekistan.....	0.16	31.10	108	Angola.....	0.07	12.62
42	Jordan.....	0.15	28.37	109	Panama.....	0.07	12.57
43	North Macedonia.....	0.15	28.36	110	Nicaragua.....	0.06	12.27
44	Brazil.....	0.15	28.15	111	Brunei Darussalam.....	0.06	11.53
45	Costa Rica.....	0.15	28.13	112	China.....	0.06	10.99
46	Colombia.....	0.15	27.96	113	Russian Federation.....	0.05	10.13
47	Slovenia.....	0.14	27.87	114	Romania.....	0.05	9.58
48	Peru.....	0.14	27.75	115	Zimbabwe.....	0.05	9.30
49	Iceland.....	0.14	27.63	116	Guinea.....	0.05	9.06
50	Singapore.....	0.14	27.61	117	Pakistan.....	0.04	8.17
51	Spain.....	0.14	27.53	118	Qatar.....	0.04	8.11
52	Bolivia, Plurinational St.....	0.14	26.80	119	Viet Nam.....	0.04	8.00
53	Moldova, Rep.....	0.14	26.68	120	Saudi Arabia.....	0.04	7.81
54	Portugal.....	0.13	25.96	121	Argentina.....	0.04	7.30
55	Madagascar.....	0.13	25.72	122	Kuwait.....	0.04	7.30
56	Tunisia.....	0.13	24.73	123	Egypt.....	0.04	6.86
57	Lao PDR.....	0.13	24.46	124	Oman.....	0.03	6.71
58	Ecuador.....	0.12	23.41	125	Indonesia.....	0.03	5.40
59	Poland.....	0.12	22.36	126	Türkiye.....	0.02	4.25
60	Benin.....	0.11	22.11	127	Gambia.....	0.00	0.00
61	Azerbaijan.....	0.11	21.99	127	Lesotho.....	0.00	0.00
62	Cameroon.....	0.11	21.69		Cabo Verde.....	n/a	n/a
63	Uruguay.....	0.11	21.62		Congo, Dem. Rep.....	n/a	n/a
64	Bulgaria.....	0.11	21.60		Eswatini.....	n/a	n/a
65	Mozambique.....	0.11	21.55		Mali.....	n/a	n/a
66	United Arab Emirates.....	0.11	21.22		Mauritania.....	n/a	n/a
67	Senegal.....	0.11	20.84		Trinidad and Tobago.....	n/a	n/a

SOURCE: Statista, Technology Market Outlook: Enterprise Software (<https://www.statista.com/outlook/tmo/software/enterprise-software/worldwide?currency=usd>); GDP data come from World Development Indicators

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 2012.

1.3.6 Cloud computing

Cloud computing market (weighted by GDP) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	0.89	100.00	68	Philippines.....	0.14	15.62
2	United States of America.....	0.81	91.29	69	Algeria.....	0.14	15.28
3	Sweden.....	0.69	78.34	70	Bulgaria.....	0.13	15.20
4	Switzerland.....	0.69	78.19	71	India.....	0.13	15.09
5	Denmark.....	0.66	73.87	72	Madagascar.....	0.13	15.08
6	New Zealand.....	0.63	71.16	73	Ecuador.....	0.13	14.70
7	Netherlands.....	0.62	69.41	74	Lithuania.....	0.13	14.43
8	United Kingdom.....	0.60	67.25	75	Lao PDR.....	0.13	14.34
9	Singapore.....	0.60	67.17	76	Kazakhstan.....	0.12	13.80
10	South Africa.....	0.49	55.58	77	Paraguay.....	0.12	13.52
11	Germany.....	0.45	50.49	78	Panama.....	0.12	13.26
12	Canada.....	0.42	47.59	79	Benin.....	0.11	12.96
13	Australia.....	0.42	47.12	80	Cameroon.....	0.11	12.72
14	Luxembourg.....	0.39	43.87	81	Bahrain.....	0.11	12.70
15	Kenya.....	0.39	43.75	82	Senegal.....	0.11	12.22
16	Belgium.....	0.39	43.47	83	Burkina Faso.....	0.11	11.94
17	France.....	0.38	43.12	84	Cyprus.....	0.11	11.90
18	Austria.....	0.36	40.43	85	Russian Federation.....	0.10	11.48
19	Spain.....	0.35	39.95	86	Azerbaijan.....	0.10	11.46
20	Japan.....	0.35	39.90	87	Cambodia.....	0.10	11.29
21	Portugal.....	0.35	39.39	88	Nigeria.....	0.10	11.10
22	Iran, Islamic Rep.....	0.34	38.02	89	Botswana.....	0.10	11.08
23	Korea, Rep.....	0.32	36.57	90	Nepal.....	0.10	11.05
24	Ireland.....	0.32	36.01	91	Dominican Republic.....	0.10	10.92
25	Norway.....	0.32	35.82	92	Zimbabwe.....	0.10	10.91
26	Italy.....	0.31	35.45	93	Guatemala.....	0.09	10.68
27	Malta.....	0.28	31.74	94	Honduras.....	0.09	10.67
28	Serbia.....	0.25	28.42	95	Romania.....	0.09	10.48
29	Israel.....	0.25	28.09	96	El Salvador.....	0.09	10.41
30	Mauritius.....	0.23	26.23	97	Saudi Arabia.....	0.09	10.38
31	Ukraine.....	0.22	25.30	98	Kyrgyzstan.....	0.09	10.32
32	Iceland.....	0.22	24.30	99	Lebanon.....	0.09	9.75
33	Czech Republic.....	0.21	23.65	100	Côte d'Ivoire.....	0.09	9.66
34	Moldova, Rep.....	0.21	23.46	101	Viet Nam.....	0.09	9.66
35	Bosnia and Herzegovina.....	0.20	22.99	102	Bangladesh.....	0.08	9.56
36	Thailand.....	0.20	22.31	103	Egypt.....	0.08	9.23
37	China.....	0.19	21.97	104	Georgia.....	0.08	9.17
38	Mexico.....	0.19	21.93	105	Namibia.....	0.08	8.95
39	Belarus.....	0.19	21.69	106	Tanzania, United Rep.....	0.08	8.94
40	Malaysia.....	0.19	21.65	107	Chad.....	0.08	8.88
41	Costa Rica.....	0.19	21.44	108	Malawi.....	0.08	8.57
42	Sri Lanka.....	0.19	21.22	109	Rwanda.....	0.08	8.47
43	Hungary.....	0.18	20.82	110	North Macedonia.....	0.07	8.32
44	Croatia.....	0.18	20.66	111	Türkiye.....	0.07	8.22
45	Colombia.....	0.18	20.66	112	Pakistan.....	0.07	8.09
46	Uruguay.....	0.18	20.60	113	Zambia.....	0.07	7.57
47	Brazil.....	0.18	20.38	114	Indonesia.....	0.07	7.44
48	Mongolia.....	0.18	20.13	115	Uganda.....	0.07	7.43
49	Jamaica.....	0.18	19.79	116	Nicaragua.....	0.06	7.20
50	Poland.....	0.17	19.67	117	Ethiopia.....	0.06	7.12
51	Uzbekistan.....	0.17	19.64	118	Brunei Darussalam.....	0.06	6.76
52	Slovakia.....	0.17	19.53	119	Qatar.....	0.06	6.65
53	Tunisia.....	0.17	19.33	120	Albania.....	0.05	5.97
54	Peru.....	0.17	19.06	121	Guinea.....	0.05	5.31
55	Mozambique.....	0.17	18.95	122	Angola.....	0.05	5.28
56	Montenegro.....	0.16	18.50	123	Oman.....	0.04	4.92
57	Bolivia, Plurinational St.....	0.16	18.33	124	Argentina.....	0.04	4.63
58	Slovenia.....	0.16	18.16	125	Kuwait.....	0.04	4.28
59	Estonia.....	0.16	17.76	126	Burundi.....	0.00	0.00
60	Morocco.....	0.16	17.65	126	Gambia.....	0.00	0.00
61	Armenia.....	0.15	17.35	126	Lesotho.....	0.00	0.00
62	Ghana.....	0.15	17.03		Cabo Verde.....	n/a	n/a
63	Jordan.....	0.15	16.64		Congo, Dem. Rep.....	n/a	n/a
64	Chile.....	0.15	16.48		Eswatini.....	n/a	n/a
65	Latvia.....	0.15	16.44		Mali.....	n/a	n/a
66	Greece.....	0.14	15.96		Mauritania.....	n/a	n/a
67	United Arab Emirates.....	0.14	15.78		Trinidad and Tobago.....	n/a	n/a

SOURCE: Statista, Technology Market Outlook: Public Cloud (<https://www.statista.com/outlook/tmo/public-cloud/worldwide>); GDP data come from World Development Indicators. 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 2012.

1.3.7 Firms with website

Firms with website (% of total) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	96.06	100.00	68	Pakistan.....	48.80	45.40
2	Denmark.....	92.77	96.20	69	Viet Nam.....	48.60	45.17
3	Netherlands.....	92.31	95.67	70	Malaysia.....	48.20	44.71
4	Austria.....	90.99	94.14	71	Moldova, Rep.....	48.10	44.59
5	Sweden.....	90.79	93.91	72	Kenya.....	47.30	43.67
6	Germany.....	89.38	92.28	73	India.....	46.60	42.86
7	Belgium.....	86.62	89.09	74	Thailand.....	45.50	41.59
8	Canada.....	84.30	86.41	75	Malawi.....	44.90	40.90
9	Norway.....	83.45	85.44	76	Honduras.....	43.50	39.28
10	United Kingdom.....	83.39	85.36	77	Rwanda.....	42.60	38.24
11	Malta.....	83.30	85.26	78	El Salvador.....	42.50	38.12
12	Slovenia.....	83.30	85.26	79	Egypt.....	42.40	38.01
13	Czech Republic.....	82.84	84.73	80	Mali.....	42.20	37.78
14	New Zealand.....	82.76	84.64	81	Dominican Republic.....	42.00	37.55
15	Iceland.....	82.57	84.42	82	Mexico.....	41.45	36.91
16	Ireland.....	82.36	84.18	83	Montenegro.....	41.00	36.39
17	Luxembourg.....	80.76	82.33	84	Mauritania.....	40.60	35.93
18	Australia.....	80.37	81.87	85	Mozambique.....	40.30	35.58
19	Estonia.....	79.79	81.21	86	Nicaragua.....	40.10	35.35
20	South Africa.....	79.60	80.98	87	Namibia.....	39.40	34.54
21	Serbia.....	79.10	80.41	88	Zimbabwe.....	38.70	33.73
22	Ecuador.....	78.30	79.48	89	Benin.....	38.30	33.27
23	Lithuania.....	77.87	78.99	90	Mongolia.....	37.50	32.35
24	Jordan.....	77.10	78.10	91	Ethiopia.....	34.80	29.23
25	Spain.....	76.78	77.72	92	Senegal.....	34.60	29.00
26	Slovakia.....	75.74	76.53	93	Ghana.....	33.20	27.38
27	Italy.....	74.76	75.40	94	Lao PDR.....	30.90	24.72
28	Belarus.....	73.50	73.94	95	Saudi Arabia.....	29.10	22.64
29	United States of America.....	72.85	73.19	96	Uzbekistan.....	26.20	19.29
30	Paraguay.....	71.60	71.74	97	Nepal.....	26.10	19.18
31	Cyprus.....	71.50	71.63	98	Bangladesh.....	25.80	18.83
32	Poland.....	71.41	71.52	99	Burundi.....	25.60	18.60
33	France.....	70.50	70.47	100	Madagascar.....	25.30	18.25
34	Korea, Rep.....	69.91	69.79	101	Cambodia.....	24.20	16.98
35	Colombia.....	69.48	69.30	102	Cameroon.....	22.60	15.13
36	Argentina.....	69.30	69.09	102	Tanzania, United Rep.....	22.60	15.13
37	Peru.....	69.20	68.97	104	Gambia.....	22.40	14.90
38	Uruguay.....	69.10	68.85	105	Nigeria.....	22.30	14.79
39	Bosnia and Herzegovina.....	68.10	67.70	106	Indonesia.....	20.50	12.71
40	Latvia.....	67.84	67.40	107	Uganda.....	19.20	11.21
41	Croatia.....	67.78	67.33	108	Guinea.....	19.00	10.98
42	Azerbaijan.....	66.20	65.50	109	Côte d'Ivoire.....	18.10	9.94
43	China.....	66.10	65.39	110	Congo, Dem. Rep.....	17.00	8.66
44	Ukraine.....	63.90	62.85	111	Lesotho.....	14.90	6.24
45	Lebanon.....	63.50	62.38	112	Chad.....	9.50	0.00
46	North Macedonia.....	63.50	62.38		Algeria.....	n/a	n/a
47	Hungary.....	63.41	62.29		Angola.....	n/a	n/a
48	Eswatini.....	62.50	61.23		Bahrain.....	n/a	n/a
49	Israel.....	62.25	60.94		Botswana.....	n/a	n/a
50	Portugal.....	62.03	60.69		Brunei Darussalam.....	n/a	n/a
51	Greece.....	61.45	60.02		Burkina Faso.....	n/a	n/a
52	Albania.....	59.80	58.11		Cabo Verde.....	n/a	n/a
53	Zambia.....	59.00	57.19		Chile.....	n/a	n/a
54	Russian Federation.....	58.50	56.61		Costa Rica.....	n/a	n/a
55	Guatemala.....	58.00	56.03		Iran, Islamic Rep.....	n/a	n/a
56	Armenia.....	57.50	55.45		Jamaica.....	n/a	n/a
57	Kyrgyzstan.....	57.20	55.11		Japan.....	n/a	n/a
58	Tunisia.....	56.50	54.30		Kuwait.....	n/a	n/a
59	Brazil.....	56.38	54.16		Mauritius.....	n/a	n/a
60	Morocco.....	55.40	53.03		Oman.....	n/a	n/a
61	Philippines.....	52.40	49.56		Panama.....	n/a	n/a
62	Bulgaria.....	51.92	49.01		Qatar.....	n/a	n/a
63	Romania.....	51.22	48.20		Singapore.....	n/a	n/a
64	Georgia.....	51.20	48.18		Sri Lanka.....	n/a	n/a
65	Kazakhstan.....	50.40	47.25		Switzerland.....	n/a	n/a
66	Bolivia, Plurinational St.....	49.40	46.10		Trinidad and Tobago.....	n/a	n/a
67	Türkiye.....	49.38	46.07		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 (<https://www.enterprisesurveys.org/en/enterprisesurveys>)

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Pillar 2

Attract

2.1.1 FDI regulatory restrictiveness

FDI regulatory restrictiveness index score | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	0.00	100.00	68	Lao PDR	0.19	49.19
2	Portugal	0.01	99.19	69	India	0.21	45.14
2	Slovenia	0.01	99.19	70	Saudi Arabia	0.21	44.05
4	Czech Republic	0.01	98.38	71	China	0.21	43.24
5	Netherlands	0.01	97.03	72	Jordan	0.22	41.62
5	Romania	0.01	97.03	73	New Zealand	0.23	37.57
7	Estonia	0.02	96.22	74	Malaysia	0.26	31.62
7	Georgia	0.02	96.22	75	Russian Federation	0.26	30.27
9	Armenia	0.02	95.95	76	Algeria	0.27	28.65
9	Finland	0.02	95.95	76	Thailand	0.27	28.65
9	Lithuania	0.02	95.95	78	Indonesia	0.35	7.30
12	Latvia	0.02	95.41	79	Philippines	0.37	0.00
12	Spain	0.02	95.41		Angola	n/a	n/a
14	Germany	0.02	94.86		Bahrain	n/a	n/a
15	Montenegro	0.02	94.59		Bangladesh	n/a	n/a
16	Colombia	0.03	94.05		Benin	n/a	n/a
16	North Macedonia	0.03	94.05		Bolivia, Plurinational St.	n/a	n/a
18	Hungary	0.03	93.24		Botswana	n/a	n/a
19	Costa Rica	0.03	92.70		Bulgaria	n/a	n/a
20	Greece	0.03	92.43		Burkina Faso	n/a	n/a
21	Denmark	0.03	92.16		Burundi	n/a	n/a
22	Croatia	0.03	91.89		Cabo Verde	n/a	n/a
23	Bosnia and Herzegovina	0.04	91.08		Cameroon	n/a	n/a
24	Belgium	0.04	90.27		Chad	n/a	n/a
24	United Kingdom	0.04	90.27		Congo, Dem. Rep.	n/a	n/a
26	Ireland	0.04	89.46		Côte d'Ivoire	n/a	n/a
27	France	0.04	88.92		Cyprus	n/a	n/a
28	Slovakia	0.05	87.84		Dominican Republic	n/a	n/a
28	Uruguay	0.05	87.84		Ecuador	n/a	n/a
30	Serbia	0.05	87.57		El Salvador	n/a	n/a
31	Italy	0.05	87.03		Eswatini	n/a	n/a
31	Japan	0.05	87.03		Ethiopia	n/a	n/a
33	Cambodia	0.05	86.49		Gambia	n/a	n/a
34	South Africa	0.06	86.22		Ghana	n/a	n/a
35	Albania	0.06	85.68		Guatemala	n/a	n/a
35	Chile	0.06	85.68		Guinea	n/a	n/a
37	Singapore	0.06	85.14		Honduras	n/a	n/a
37	Sweden	0.06	85.14		Iran, Islamic Rep.	n/a	n/a
37	Türkiye	0.06	85.14		Jamaica	n/a	n/a
40	Moldova, Rep.	0.06	84.86		Kenya	n/a	n/a
41	Morocco	0.07	82.97		Kuwait	n/a	n/a
42	Uzbekistan	0.07	82.70		Lesotho	n/a	n/a
43	Mongolia	0.07	81.62		Madagascar	n/a	n/a
43	Poland	0.07	81.62		Malawi	n/a	n/a
45	Azerbaijan	0.08	80.27		Mali	n/a	n/a
45	Peru	0.08	80.27		Malta	n/a	n/a
47	Brazil	0.08	79.19		Mauritania	n/a	n/a
48	Switzerland	0.08	78.65		Mauritius	n/a	n/a
49	Norway	0.09	78.11		Mozambique	n/a	n/a
50	Belarus	0.09	77.84		Namibia	n/a	n/a
51	United States of America	0.09	77.03		Nepal	n/a	n/a
52	Austria	0.11	72.43		Nicaragua	n/a	n/a
53	Kazakhstan	0.11	70.54		Nigeria	n/a	n/a
54	Egypt	0.12	69.46		Oman	n/a	n/a
55	Israel	0.12	69.19		Pakistan	n/a	n/a
56	Ukraine	0.12	68.38		Panama	n/a	n/a
57	Viet Nam	0.13	65.95		Paraguay	n/a	n/a
58	Argentina	0.13	65.68		Qatar	n/a	n/a
59	Korea, Rep.	0.14	64.59		Rwanda	n/a	n/a
60	Kyrgyzstan	0.14	64.05		Senegal	n/a	n/a
61	Brunei Darussalam	0.15	61.62		Sri Lanka	n/a	n/a
62	Lebanon	0.15	61.08		Tanzania, United Rep.	n/a	n/a
63	Australia	0.15	60.81		Trinidad and Tobago	n/a	n/a
64	Canada	0.16	57.57		Uganda	n/a	n/a
65	Iceland	0.17	55.95		United Arab Emirates	n/a	n/a
66	Tunisia	0.17	54.05		Zambia	n/a	n/a
67	Mexico	0.19	50.27		Zimbabwe	n/a	n/a

SOURCE: OECD, FDI Regulatory Restrictiveness Index (FDI Index) (<https://www.oecd.org/investment/fdiindex.htm>)

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2.1.2 Financial globalisation

De facto financial globalisation sub-index | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	99.32	100.00	68	Costa Rica	67.31	60.11
2	Mauritius	98.68	99.20	69	Namibia	67.29	60.08
3	Singapore	98.27	98.69	70	Albania	66.68	59.31
4	Ireland	97.76	98.06	71	Jordan	66.66	59.29
5	Malta	97.68	97.96	72	Zambia	66.54	59.15
6	Cyprus	96.99	97.09	73	Moldova, Rep.	66.41	58.99
7	Netherlands	96.49	96.47	74	Thailand	66.28	58.82
8	Switzerland	95.74	95.54	75	Senegal	66.21	58.74
9	Belgium	93.77	93.08	76	Oman	65.69	58.09
10	Kuwait	93.63	92.91	77	Honduras	65.36	57.67
11	United Kingdom	91.61	90.39	78	Russian Federation	64.77	56.94
12	Sweden	91.50	90.25	79	Poland	64.74	56.90
13	Finland	90.66	89.21	80	Mexico	64.26	56.30
14	Bahrain	90.60	89.13	81	Burkina Faso	63.92	55.88
15	Norway	90.16	88.59	82	Lao PDR	63.86	55.81
16	Denmark	90.08	88.48	83	Argentina	63.78	55.70
17	Qatar	88.01	85.90	84	Tunisia	63.17	54.94
18	France	87.96	85.83	85	Iceland	62.76	54.44
19	Brunei Darussalam	87.66	85.47	86	El Salvador	62.10	53.61
20	Canada	86.86	84.47	87	Kyrgyzstan	61.19	52.48
21	Austria	86.36	83.85	88	Viet Nam	60.91	52.12
22	Lebanon	86.09	83.51	89	Romania	60.22	51.27
23	Spain	85.90	83.27	90	Belarus	59.69	50.61
24	Germany	85.49	82.76	91	Korea, Rep.	59.11	49.88
25	Georgia	85.28	82.50	92	Bosnia and Herzegovina	58.30	48.87
26	Estonia	85.10	82.28	93	Dominican Republic	57.87	48.33
27	Portugal	85.04	82.21	94	Mauritania	56.78	46.98
28	Montenegro	84.91	82.04	95	Côte d'Ivoire	56.23	46.29
29	Hungary	84.22	81.18	96	Brazil	55.82	45.78
30	Mongolia	83.62	80.43	97	Philippines	55.23	45.04
31	United Arab Emirates	83.61	80.42	98	Gambia	55.17	44.97
32	Slovakia	80.82	76.94	99	Peru	54.58	44.24
33	Latvia	80.62	76.69	100	Uzbekistan	52.87	42.11
34	Australia	80.26	76.24	101	Ghana	52.85	42.08
35	Jamaica	79.84	75.72	102	Morocco	52.63	41.81
36	United States of America	79.71	75.56	103	Paraguay	52.20	41.27
37	Panama	79.43	75.21	104	Türkiye	52.14	41.20
38	Chile	79.42	75.20	105	Madagascar	51.52	40.42
39	Czech Republic	79.30	75.05	106	Ecuador	51.23	40.06
40	Azerbaijan	79.25	74.98	107	Benin	50.94	39.70
41	Greece	77.84	73.22	108	Zimbabwe	50.37	38.99
42	Italy	77.81	73.19	109	Indonesia	49.93	38.44
43	Cambodia	77.65	72.99	110	Guinea	47.58	35.52
44	Kazakhstan	77.36	72.63	111	China	47.17	35.00
45	Slovenia	77.27	72.52	112	Botswana	46.99	34.77
46	Ukraine	77.24	72.48	113	Congo, Dem. Rep.	46.55	34.23
47	Japan	76.99	72.17	114	Uganda	46.54	34.21
48	Malaysia	76.82	71.96	115	Mali	45.66	33.12
49	Mozambique	76.11	71.07	116	Egypt	45.58	33.02
50	Cabo Verde	75.39	70.17	117	Sri Lanka	44.57	31.75
51	Angola	75.20	69.94	118	Bolivia, Plurinational St.	44.23	31.33
52	New Zealand	74.65	69.25	119	Rwanda	42.82	29.58
53	Lithuania	74.25	68.75	120	Cameroon	41.66	28.13
54	Eswatini	73.90	68.31	121	Guatemala	40.97	27.27
55	Bulgaria	73.59	67.93	122	Nigeria	40.63	26.85
56	Croatia	73.09	67.30	123	India	39.31	25.21
57	Trinidad and Tobago	72.16	66.15	124	Tanzania, United Rep.	38.42	24.10
58	Saudi Arabia	70.71	64.34	125	Malawi	37.25	22.64
59	Lesotho	70.56	64.15	126	Burundi	35.07	19.92
60	Israel	70.49	64.07	127	Pakistan	33.59	18.08
61	Uruguay	70.45	64.01	128	Algeria	31.86	15.92
62	South Africa	69.70	63.08	129	Kenya	31.05	14.91
63	Nicaragua	69.31	62.59	130	Chad	26.31	9.00
64	Serbia	69.11	62.35	131	Ethiopia	25.65	8.18
65	Armenia	68.83	61.99	132	Nepal	23.09	4.98
66	North Macedonia	68.48	61.57	133	Bangladesh	21.49	3.00
67	Colombia	67.71	60.61	134	Iran, Islamic Rep.	19.09	0.00

SOURCE: Gygli, Savina, Florian Haelg, Niklas Potrafke and Jan-Egbert Sturm (2019): The KOF Globalisation Index – Revisited, Review of International Organizations, 14(3), 543–574 (<https://doi.org/10.1007/s11558-019-09344-2>)

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2.1.3 Migrant stock

Adult migrant stock (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United Arab Emirates.....	4.50	100.00	68	Uzbekistan.....	1.84	40.33
2	Qatar.....	4.36	96.92	69	Benin.....	1.81	39.73
3	Kuwait.....	4.36	96.86	70	Kyrgyzstan.....	1.81	39.63
4	Bahrain.....	4.26	94.66	71	Rwanda.....	1.78	39.01
5	Luxembourg.....	4.02	89.43	72	Mali.....	1.78	39.01
6	Oman.....	3.99	88.55	73	Burundi.....	1.77	38.82
7	Singapore.....	3.89	86.49	74	Eswatini.....	1.75	38.41
8	Saudi Arabia.....	3.87	86.05	75	Mauritania.....	1.70	37.27
9	Israel.....	3.59	79.60	76	Cabo Verde.....	1.65	36.20
10	Australia.....	3.58	79.56	77	Angola.....	1.63	35.61
11	Brunei Darussalam.....	3.55	78.84	78	Ecuador.....	1.60	35.12
12	Switzerland.....	3.54	78.47	79	Slovakia.....	1.58	34.67
13	Jordan.....	3.46	76.80	80	Uganda.....	1.57	34.38
14	New Zealand.....	3.45	76.51	81	Peru.....	1.49	32.50
15	Malta.....	3.38	74.98	82	Paraguay.....	1.45	31.66
16	Kazakhstan.....	3.31	73.49	83	Azerbaijan.....	1.43	31.23
17	Lebanon.....	3.30	73.25	84	Korea, Rep.....	1.39	30.32
18	Canada.....	3.26	72.27	85	Uruguay.....	1.38	30.19
19	Sweden.....	3.13	69.27	86	Cameroon.....	1.37	29.93
20	Germany.....	3.11	68.83	87	Kenya.....	1.36	29.58
21	Austria.....	3.11	68.83	88	Colombia.....	1.34	29.12
22	Iceland.....	3.09	68.47	89	Nepal.....	1.33	29.00
23	Côte d'Ivoire.....	3.06	67.69	90	Pakistan.....	1.33	28.99
24	Belgium.....	3.03	67.05	91	Mauritius.....	1.32	28.78
25	Ireland.....	3.01	66.61	92	Moldova, Rep.....	1.31	28.59
26	United States of America.....	2.99	66.22	93	Ghana.....	1.21	26.25
27	Estonia.....	2.97	65.78	94	Romania.....	1.20	26.11
28	Norway.....	2.93	64.89	95	Japan.....	1.19	25.78
29	Cyprus.....	2.90	64.20	96	Iran, Islamic Rep.....	1.19	25.77
30	Croatia.....	2.84	62.81	97	Senegal.....	1.18	25.70
31	Gambia.....	2.82	62.48	98	Poland.....	1.13	24.38
32	Latvia.....	2.82	62.37	99	Zambia.....	1.10	23.85
33	United Kingdom.....	2.82	62.33	100	Bulgaria.....	1.10	23.74
34	Spain.....	2.81	62.26	101	Congo, Dem. Rep.....	1.08	23.43
35	Netherlands.....	2.81	62.21	102	Georgia.....	1.08	23.24
36	France.....	2.81	62.13	103	Mozambique.....	1.07	23.13
37	Slovenia.....	2.79	61.75	104	Malawi.....	1.02	21.98
38	Greece.....	2.72	60.12	105	Bangladesh.....	0.88	18.80
39	Montenegro.....	2.71	59.97	106	Guinea.....	0.86	18.39
40	Belarus.....	2.70	59.68	107	Bolivia, Plurinational St.....	0.84	17.88
41	Denmark.....	2.69	59.46	108	Tanzania, United Rep.....	0.82	17.52
42	Ukraine.....	2.65	58.64	109	Bosnia and Herzegovina.....	0.75	16.00
43	Serbia.....	2.58	57.04	110	Ethiopia.....	0.72	15.31
44	Costa Rica.....	2.55	56.38	111	Lao PDR.....	0.72	15.23
45	Malaysia.....	2.53	55.92	112	Nigeria.....	0.69	14.65
46	Italy.....	2.52	55.68	113	Albania.....	0.66	13.84
47	Portugal.....	2.47	54.49	114	El Salvador.....	0.62	13.02
48	Russian Federation.....	2.37	52.29	115	Mongolia.....	0.61	12.75
49	Chile.....	2.35	51.78	116	Lesotho.....	0.58	12.23
50	Panama.....	2.23	49.09	117	Nicaragua.....	0.56	11.76
51	Armenia.....	2.21	48.71	118	Algeria.....	0.56	11.64
52	Türkiye.....	2.19	48.20	119	Guatemala.....	0.55	11.56
53	Namibia.....	2.15	47.38	120	Jamaica.....	0.55	11.41
54	Dominican Republic.....	2.14	47.15	121	Egypt.....	0.54	11.34
55	Finland.....	2.14	47.11	122	Cambodia.....	0.54	11.19
56	Botswana.....	2.09	46.09	123	Tunisia.....	0.45	9.17
57	North Macedonia.....	2.07	45.55	124	Brazil.....	0.41	8.42
58	South Africa.....	2.06	45.38	125	India.....	0.41	8.37
59	Burkina Faso.....	2.00	43.89	126	Mexico.....	0.40	8.19
60	Hungary.....	1.98	43.45	127	Honduras.....	0.37	7.33
61	Chad.....	1.97	43.29	128	Morocco.....	0.27	5.21
62	Argentina.....	1.96	43.11	129	Philippines.....	0.20	3.65
63	Lithuania.....	1.95	42.81	130	Madagascar.....	0.18	3.24
64	Zimbabwe.....	1.90	41.78	131	Sri Lanka.....	0.12	1.87
65	Czech Republic.....	1.90	41.74	132	Indonesia.....	0.12	1.77
66	Trinidad and Tobago.....	1.86	40.78	133	Viet Nam.....	0.06	0.52
67	Thailand.....	1.84	40.40	134	China.....	0.04	0.00

SOURCE: United Nations Population Division, Trends in International Migrant Stock: Migrants by Age and Sex (<https://www.un.org/development/desa/pd/content/international-migrant-stock>)

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2.1.4 International students

Tertiary inbound mobility ratio (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Cyprus.....	27.19	100.00	68	Tunisia.....	2.89	10.32
1	Luxembourg.....	48.39	100.00	69	Italy.....	2.88	10.28
1	Montenegro.....	100.00	100.00	70	Cameroon.....	2.81	10.03
1	Qatar.....	37.57	100.00	71	Greece.....	2.80	9.96
1	United Arab Emirates.....	70.27	100.00	72	Botswana.....	2.47	8.75
6	Australia.....	25.99	95.59	73	Côte d'Ivoire.....	2.44	8.65
7	Kyrgyzstan.....	23.05	84.70	74	Türkiye.....	2.32	8.21
8	United Kingdom.....	20.15	74.01	75	Azerbaijan.....	2.28	8.05
9	Singapore.....	19.17	70.38	76	Uruguay.....	2.14	7.56
10	Canada.....	18.21	66.85	77	Madagascar.....	1.91	6.71
11	Switzerland.....	18.14	66.61	78	Burkina Faso.....	1.91	6.68
12	Austria.....	17.98	66.00	79	Morocco.....	1.87	6.55
13	New Zealand.....	17.49	64.18	80	Dominican Republic.....	1.73	6.02
14	Czech Republic.....	14.99	54.97	81	Albania.....	1.69	5.87
15	Malta.....	14.15	51.89	82	Mauritania.....	1.45	4.99
16	Hungary.....	13.48	49.38	83	Cabo Verde.....	1.44	4.97
17	Netherlands.....	13.32	48.81	84	Thailand.....	1.31	4.48
18	Latvia.....	12.78	46.81	85	Kenya.....	1.29	4.42
19	Lebanon.....	12.40	45.40	86	Costa Rica.....	1.16	3.94
20	Jordan.....	12.33	45.17	87	Chile.....	1.06	3.55
21	Estonia.....	12.30	45.05	88	Mongolia.....	1.04	3.48
22	Bahrain.....	11.66	42.69	89	Ecuador.....	1.00	3.34
23	Portugal.....	11.57	42.36	90	Egypt.....	0.94	3.13
24	Germany.....	11.24	41.14	91	Guinea.....	0.92	3.04
25	Belgium.....	10.38	37.94	92	Ghana.....	0.91	3.02
26	Slovakia.....	10.30	37.66	93	Mexico.....	0.88	2.90
27	Denmark.....	10.23	37.41	94	Mali.....	0.86	2.81
28	Ireland.....	10.20	37.29	95	Honduras.....	0.83	2.69
29	France.....	9.19	33.55	96	Iran, Islamic Rep.....	0.77	2.47
30	Georgia.....	9.06	33.09	97	Uzbekistan.....	0.73	2.36
31	Iceland.....	8.51	31.06	98	Algeria.....	0.62	1.93
32	Malaysia.....	8.07	29.42	99	Lao PDR.....	0.58	1.78
33	Finland.....	7.97	29.07	100	Eswatini.....	0.51	1.53
34	Slovenia.....	7.79	28.38	101	Zimbabwe.....	0.47	1.37
35	Bulgaria.....	7.76	28.27	102	Congo, Dem. Rep.....	0.44	1.26
36	Sweden.....	7.04	25.64	103	China.....	0.41	1.17
37	Mauritius.....	6.71	24.42	104	El Salvador.....	0.37	1.02
38	Bosnia and Herzegovina.....	6.65	24.18	105	Viet Nam.....	0.36	0.99
39	Belarus.....	6.47	23.51	106	Mozambique.....	0.36	0.97
40	Moldova, Rep.....	6.47	23.51	107	Sri Lanka.....	0.36	0.96
41	Senegal.....	6.28	22.84	108	Lesotho.....	0.35	0.95
42	Lithuania.....	6.16	22.39	109	Cambodia.....	0.26	0.60
43	Romania.....	5.99	21.77	110	Brazil.....	0.25	0.57
44	Armenia.....	5.91	21.45	111	Guatemala.....	0.23	0.49
45	Japan.....	5.73	20.80	112	Colombia.....	0.20	0.40
46	Kazakhstan.....	5.51	19.98	113	India.....	0.12	0.10
47	United States of America.....	5.10	18.49	114	Indonesia.....	0.10	0.00
48	North Macedonia.....	5.01	18.13		Angola.....	n/a	n/a
49	Russian Federation.....	4.97	17.97		Bangladesh.....	n/a	n/a
50	Ukraine.....	4.90	17.74		Bolivia, Plurinational St.....	n/a	n/a
51	Burundi.....	4.77	17.24		Chad.....	n/a	n/a
52	Serbia.....	4.51	16.30		Ethiopia.....	n/a	n/a
53	Poland.....	4.47	16.13		Gambia.....	n/a	n/a
54	Norway.....	4.38	15.82		Jamaica.....	n/a	n/a
55	Rwanda.....	4.20	15.16		Kuwait.....	n/a	n/a
56	Saudi Arabia.....	4.03	14.52		Malawi.....	n/a	n/a
57	Spain.....	3.83	13.80		Nepal.....	n/a	n/a
58	Korea, Rep.....	3.73	13.40		Nicaragua.....	n/a	n/a
59	Brunei Darussalam.....	3.72	13.39		Nigeria.....	n/a	n/a
60	Argentina.....	3.51	12.61		Pakistan.....	n/a	n/a
61	Israel.....	3.44	12.34		Paraguay.....	n/a	n/a
62	Namibia.....	3.24	11.62		Peru.....	n/a	n/a
63	Oman.....	3.08	11.03		Philippines.....	n/a	n/a
64	Panama.....	3.08	11.02		Tanzania, United Rep.....	n/a	n/a
65	South Africa.....	3.04	10.88		Trinidad and Tobago.....	n/a	n/a
66	Benin.....	2.97	10.59		Uganda.....	n/a	n/a
67	Croatia.....	2.95	10.54		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 2012.

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—attracts the best and brightest from around the world] | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	6.12	100.00	68	Sri Lanka.....	3.70	45.93
2	Switzerland.....	6.10	99.66	69	Georgia.....	3.67	45.32
3	Luxembourg.....	5.80	93.04	70	Madagascar.....	3.67	45.20
4	United Arab Emirates.....	5.66	89.80	71	Paraguay.....	3.66	44.99
5	United States of America.....	5.60	88.41	72	Lithuania.....	3.64	44.59
6	Saudi Arabia.....	5.54	87.11	73	Angola.....	3.64	44.54
7	China.....	5.42	84.43	74	Cameroon.....	3.63	44.34
8	Qatar.....	5.42	84.36	75	Mozambique.....	3.59	43.31
9	Bahrain.....	5.38	83.44	76	Trinidad and Tobago.....	3.57	42.97
10	Netherlands.....	5.23	80.15	77	Spain.....	3.56	42.73
11	Canada.....	5.20	79.39	78	Russian Federation.....	3.51	41.58
12	Malta.....	5.17	78.74	79	Latvia.....	3.51	41.57
13	New Zealand.....	5.11	77.52	80	Ukraine.....	3.48	41.03
14	Azerbaijan.....	5.06	76.40	81	Cabo Verde.....	3.45	40.18
15	United Kingdom.....	5.04	76.01	82	Armenia.....	3.44	40.03
16	Ireland.....	4.96	74.03	83	Pakistan.....	3.44	40.01
17	Australia.....	4.94	73.58	84	Mexico.....	3.39	38.97
18	Belgium.....	4.86	71.81	85	South Africa.....	3.38	38.82
19	Oman.....	4.74	69.24	86	Albania.....	3.38	38.78
20	Malaysia.....	4.70	68.33	87	Guatemala.....	3.35	38.05
21	Germany.....	4.65	67.10	88	Colombia.....	3.33	37.59
22	Guinea.....	4.61	66.16	89	Czech Republic.....	3.31	37.10
23	Denmark.....	4.58	65.52	90	Kyrgyzstan.....	3.31	37.07
24	Indonesia.....	4.56	65.13	91	Eswatini.....	3.30	36.98
25	Gambia.....	4.56	65.09	92	Congo, Dem. Rep.....	3.30	36.87
26	Rwanda.....	4.54	64.79	93	Philippines.....	3.29	36.78
27	Norway.....	4.52	64.29	94	Peru.....	3.27	36.30
28	Mauritius.....	4.45	62.68	95	Chad.....	3.25	35.75
29	Estonia.....	4.43	62.15	96	Ethiopia.....	3.25	35.74
30	Côte d'Ivoire.....	4.40	61.46	97	Italy.....	3.18	34.29
31	Iceland.....	4.34	60.33	98	Uruguay.....	3.18	34.26
32	Viet Nam.....	4.34	60.32	99	Belarus.....	3.17	34.05
33	Austria.....	4.30	59.33	100	Mauritania.....	3.16	33.89
34	Senegal.....	4.28	58.93	101	Ecuador.....	3.05	31.23
35	Kenya.....	4.26	58.49	102	Lesotho.....	2.99	30.01
36	Sweden.....	4.25	58.12	103	Montenegro.....	2.93	28.53
37	Thailand.....	4.22	57.63	104	Hungary.....	2.92	28.40
38	Botswana.....	4.22	57.62	105	Poland.....	2.91	28.29
39	Ghana.....	4.19	56.78	106	India.....	2.91	28.19
40	Zambia.....	4.16	56.12	107	Algeria.....	2.90	28.02
41	Israel.....	4.15	55.96	108	Mongolia.....	2.89	27.74
42	Tanzania, United Rep.....	4.15	55.95	109	Lebanon.....	2.87	27.25
43	Dominican Republic.....	4.14	55.78	110	Nepal.....	2.86	27.01
44	France.....	4.14	55.77	111	Honduras.....	2.83	26.43
45	Chile.....	4.13	55.43	112	El Salvador.....	2.83	26.31
46	Cambodia.....	4.09	54.69	113	Burkina Faso.....	2.82	26.26
47	Portugal.....	4.04	53.53	114	Argentina.....	2.79	25.59
48	Bangladesh.....	4.03	53.32	115	Türkiye.....	2.70	23.40
49	Egypt.....	4.01	52.90	116	Slovenia.....	2.67	22.73
50	Kuwait.....	4.00	52.61	117	Bulgaria.....	2.63	21.98
51	Costa Rica.....	4.00	52.50	118	Brazil.....	2.58	20.68
52	Panama.....	3.99	52.47	119	Tunisia.....	2.48	18.61
53	Nigeria.....	3.97	51.88	120	Bolivia, Plurinational St.....	2.41	16.93
54	Cyprus.....	3.96	51.63	121	Greece.....	2.39	16.48
55	Uganda.....	3.95	51.55	122	Romania.....	2.33	15.22
56	Jamaica.....	3.95	51.39	123	Slovakia.....	2.30	14.45
57	Kazakhstan.....	3.93	50.97	124	Serbia.....	2.29	14.38
58	Benin.....	3.92	50.88	125	Zimbabwe.....	2.25	13.32
59	Korea, Rep.....	3.92	50.79	126	Nicaragua.....	2.20	12.19
60	Namibia.....	3.90	50.35	127	Croatia.....	2.08	9.60
61	Japan.....	3.89	50.15	128	Iran, Islamic Rep.....	2.07	9.30
62	Malawi.....	3.88	49.80	129	North Macedonia.....	1.99	7.66
63	Jordan.....	3.86	49.48	130	Bosnia and Herzegovina.....	1.65	0.00
64	Mali.....	3.81	48.39		Brunei Darussalam.....	n/a	n/a
65	Finland.....	3.78	47.65		Moldova, Rep.....	n/a	n/a
66	Burundi.....	3.77	47.43		Morocco.....	n/a	n/a
67	Lao PDR.....	3.76	47.24		Uzbekistan.....	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2019–2020 (<https://www.weforum.org/publications>)

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 2012.

2.2.1 Tolerance of minorities

Discrimination and violence against minorities | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	0.30	100.00	67	North Macedonia.....	5.70	42.55
2	Iceland.....	0.50	97.87	67	Romania.....	5.70	42.55
3	Ireland.....	0.60	96.81	67	Uzbekistan.....	5.70	42.55
4	Portugal.....	1.00	92.55	71	Azerbaijan.....	5.80	41.49
5	Luxembourg.....	1.80	84.04	71	Cambodia.....	5.80	41.49
6	Eswatini.....	1.90	82.98	71	Ecuador.....	5.80	41.49
6	Jamaica.....	1.90	82.98	71	Ukraine.....	5.80	41.49
8	Sweden.....	2.00	81.91	71	Zimbabwe.....	5.80	41.49
9	Japan.....	2.20	79.79	76	Panama.....	5.90	40.43
10	Canada.....	2.30	78.72	76	South Africa.....	5.90	40.43
10	New Zealand.....	2.30	78.72	78	Bolivia, Plurinational St.....	6.10	38.30
10	Uruguay.....	2.30	78.72	78	Moldova, Rep.....	6.10	38.30
13	Malta.....	2.40	77.66	78	United Kingdom.....	6.10	38.30
13	Mongolia.....	2.40	77.66	81	Bosnia and Herzegovina.....	6.30	36.17
13	Switzerland.....	2.40	77.66	82	Mexico.....	6.40	35.11
16	Benin.....	2.50	76.60	83	France.....	6.70	31.91
16	Singapore.....	2.50	76.60	84	Brunei Darussalam.....	6.80	30.85
16	United Arab Emirates.....	2.50	76.60	84	China.....	6.80	30.85
19	Cabo Verde.....	2.60	75.53	84	Indonesia.....	6.80	30.85
19	Korea, Rep.....	2.60	75.53	84	Israel.....	6.80	30.85
19	Oman.....	2.60	75.53	84	Serbia.....	6.80	30.85
22	Costa Rica.....	2.70	74.47	84	United States of America.....	6.80	30.85
22	Gambia.....	2.70	74.47	90	Algeria.....	6.90	29.79
24	Lesotho.....	3.00	71.28	90	Mozambique.....	6.90	29.79
24	Lithuania.....	3.00	71.28	92	Burundi.....	7.00	28.72
26	Qatar.....	3.10	70.21	92	Côte d'Ivoire.....	7.00	28.72
27	Australia.....	3.20	69.15	92	Georgia.....	7.00	28.72
28	Ghana.....	3.30	68.09	92	Philippines.....	7.00	28.72
28	Netherlands.....	3.30	68.09	92	Spain.....	7.00	28.72
28	Slovenia.....	3.30	68.09	92	Thailand.....	7.00	28.72
28	Trinidad and Tobago.....	3.30	68.09	98	Estonia.....	7.10	27.66
32	Denmark.....	3.40	67.02	99	Lao PDR.....	7.20	26.60
32	Norway.....	3.40	67.02	99	Tunisia.....	7.20	26.60
34	Argentina.....	3.50	65.96	101	Mauritania.....	7.30	25.53
34	Chile.....	3.50	65.96	102	Brazil.....	7.40	24.47
36	Austria.....	3.60	64.89	103	Colombia.....	7.60	22.34
36	Hungary.....	3.60	64.89	104	Kazakhstan.....	7.70	21.28
36	Madagascar.....	3.60	64.89	105	Uganda.....	7.90	19.15
39	Germany.....	3.70	63.83	106	Egypt.....	8.00	18.09
40	Albania.....	3.80	62.77	106	Kenya.....	8.00	18.09
40	Belgium.....	3.80	62.77	106	Latvia.....	8.00	18.09
42	Botswana.....	4.00	60.64	106	Lebanon.....	8.00	18.09
42	Italy.....	4.00	60.64	110	India.....	8.10	17.02
44	Bulgaria.....	4.30	57.45	110	Russian Federation.....	8.10	17.02
44	Czech Republic.....	4.30	57.45	110	Sri Lanka.....	8.10	17.02
44	Greece.....	4.30	57.45	113	Kyrgyzstan.....	8.20	15.96
44	Namibia.....	4.30	57.45	113	Mali.....	8.20	15.96
48	Kuwait.....	4.40	56.38	115	Jordan.....	8.30	14.89
48	Malawi.....	4.40	56.38	115	Peru.....	8.30	14.89
50	Croatia.....	4.60	54.26	117	Angola.....	8.40	13.83
50	Dominican Republic.....	4.60	54.26	117	Cameroon.....	8.40	13.83
52	Mauritius.....	4.70	53.19	117	Chad.....	8.40	13.83
52	Paraguay.....	4.70	53.19	120	Morocco.....	8.60	11.70
54	Cyprus.....	4.80	52.13	121	Bangladesh.....	8.70	10.64
54	Honduras.....	4.80	52.13	122	Nigeria.....	8.90	8.51
56	Malaysia.....	5.10	48.94	122	Pakistan.....	8.90	8.51
56	Tanzania, United Rep.....	5.10	48.94	124	Nepal.....	9.10	6.38
56	Viet Nam.....	5.10	48.94	125	Ethiopia.....	9.20	5.32
59	Poland.....	5.30	46.81	125	Iran, Islamic Rep.....	9.20	5.32
59	Senegal.....	5.30	46.81	125	Montenegro.....	9.20	5.32
61	Slovakia.....	5.40	45.74	128	Congo, Dem. Rep.....	9.30	4.26
62	Burkina Faso.....	5.50	44.68	128	Guatemala.....	9.30	4.26
63	Armenia.....	5.60	43.62	128	Rwanda.....	9.30	4.26
63	Belarus.....	5.60	43.62	128	Saudi Arabia.....	9.30	4.26
63	El Salvador.....	5.60	43.62	132	Türkiye.....	9.40	3.19
63	Zambia.....	5.60	43.62	133	Bahrain.....	9.60	1.06
67	Nicaragua.....	5.70	42.55	134	Guinea.....	9.70	0.00

SOURCE: The Fund for Peace, *Fragile States Index 2022* (<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 2012.

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	66	Ecuador	-	58.46
2	Canada	-	98.46	66	Eswatini	-	58.46
3	Luxembourg	-	95.38	66	Korea, Rep.	-	58.46
3	New Zealand	-	95.38	66	Mexico	-	58.46
3	Norway	-	95.38	72	Armenia	-	56.92
6	Australia	-	93.85	72	Bangladesh	-	56.92
6	Ireland	-	93.85	72	Japan	-	56.92
8	Portugal	-	92.31	72	Jordan	-	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	Benin	-	87.69	79	Burundi	-	53.85
13	Paraguay	-	87.69	79	Viet Nam	-	53.85
13	Spain	-	87.69	82	Cyprus	-	50.77
16	Denmark	-	84.62	82	India	-	50.77
16	Jamaica	-	84.62	82	Namibia	-	50.77
16	Mauritius	-	84.62	82	Peru	-	50.77
16	Nepal	-	84.62	82	Poland	-	50.77
16	Singapore	-	84.62	82	Trinidad and Tobago	-	50.77
21	Argentina	-	83.08	88	Lebanon	-	47.69
21	Iceland	-	83.08	88	Sri Lanka	-	47.69
21	Qatar	-	83.08	88	Zimbabwe	-	47.69
24	Brazil	-	81.54	91	Angola	-	46.15
24	United Kingdom	-	81.54	91	Congo, Dem. Rep.	-	46.15
26	Saudi Arabia	-	80.00	91	Tunisia	-	46.15
27	Burkina Faso	-	78.46	94	Türkiye	-	44.62
27	Costa Rica	-	78.46	95	Egypt	-	43.08
29	Bahrain	-	76.92	95	Kazakhstan	-	43.08
29	Côte d'Ivoire	-	76.92	95	Panama	-	43.08
29	Finland	-	76.92	98	Iran, Islamic Rep.	-	41.54
29	Netherlands	-	76.92	98	Moldova, Rep.	-	41.54
29	Switzerland	-	76.92	98	Rwanda	-	41.54
34	Germany	-	75.38	98	Tanzania, United Rep.	-	41.54
34	Guinea	-	75.38	102	Albania	-	40.00
34	Malta	-	75.38	102	Mauritania	-	40.00
37	Italy	-	73.85	104	Algeria	-	38.46
37	Senegal	-	73.85	104	Honduras	-	38.46
39	Ethiopia	-	72.31	104	Morocco	-	38.46
39	Georgia	-	72.31	104	Slovakia	-	38.46
39	Ghana	-	72.31	108	Pakistan	-	36.92
39	Russian Federation	-	72.31	109	Czech Republic	-	35.38
43	Montenegro	-	70.77	109	Estonia	-	35.38
43	Nicaragua	-	70.77	109	Madagascar	-	35.38
43	South Africa	-	70.77	109	North Macedonia	-	35.38
43	Zambia	-	70.77	109	Romania	-	35.38
47	Kuwait	-	69.23	114	Lithuania	-	33.85
48	Chile	-	67.69	114	Uganda	-	33.85
48	Dominican Republic	-	67.69	116	Belarus	-	32.31
48	Kenya	-	67.69	116	Bulgaria	-	32.31
51	Austria	-	66.15	116	Greece	-	32.31
51	El Salvador	-	66.15	119	Indonesia	-	30.77
51	Kyrgyzstan	-	66.15	119	Latvia	-	30.77
51	Mali	-	66.15	119	Mongolia	-	30.77
51	Serbia	-	66.15	122	Israel	-	27.69
56	Botswana	-	64.62	123	Malawi	-	26.15
56	Uzbekistan	-	64.62	124	Croatia	-	23.08
58	Mozambique	-	63.08	125	Slovenia	-	15.38
58	Philippines	-	63.08	125	Thailand	-	15.38
60	Cameroon	-	61.54	127	Guatemala	-	13.85
60	France	-	61.54	128	Cambodia	-	9.23
60	Nigeria	-	61.54	128	Malaysia	-	9.23
63	Belgium	-	60.00	130	Lao PDR	-	7.69
63	Chad	-	60.00	131	Hungary	-	0.00
63	Colombia	-	60.00		Brunei Darussalam	n/a	n/a
66	Bolivia, Plurinational St.	-	58.46		Cabo Verde	n/a	n/a
66	China	-	58.46		Oman	n/a	n/a

SOURCE: The Gallup World Poll (2006–2020). Data kindly provided by Gallup, Inc.

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Finland.....	6.21	100.00	68	Panama.....	4.45	44.65
2	Denmark.....	6.16	98.33	69	Tanzania, United Rep.	4.43	44.25
3	Switzerland.....	6.13	97.51	70	Peru.....	4.43	44.09
4	Iceland.....	6.05	94.79	71	Ghana.....	4.40	43.25
5	Estonia.....	5.84	88.31	72	Gambia.....	4.40	43.20
6	Singapore.....	5.82	87.54	73	Serbia.....	4.39	42.75
7	United States of America.....	5.73	84.98	74	Philippines.....	4.37	42.19
8	Norway.....	5.71	84.25	75	Kuwait.....	4.37	42.16
9	New Zealand.....	5.70	83.93	76	Albania.....	4.37	42.13
10	Luxembourg.....	5.67	83.11	77	Burkina Faso.....	4.36	41.96
11	Lithuania.....	5.61	81.07	78	Guatemala.....	4.36	41.84
12	Austria.....	5.60	80.63	79	Mali.....	4.34	41.19
13	Netherlands.....	5.55	79.25	80	Poland.....	4.31	40.44
14	United Arab Emirates.....	5.50	77.72	81	Thailand.....	4.30	40.13
15	Australia.....	5.48	77.15	82	Jamaica.....	4.30	40.02
16	Sweden.....	5.47	76.84	83	Brazil.....	4.29	39.82
17	Saudi Arabia.....	5.45	76.06	84	Burundi.....	4.27	39.21
18	Benin.....	5.43	75.60	85	Moldova, Rep.....	4.25	38.50
19	Uzbekistan.....	5.43	75.31	86	Mauritania.....	4.24	38.33
20	Japan.....	5.41	74.68	87	Kenya.....	4.24	38.29
21	Slovenia.....	5.36	73.40	88	Dominican Republic.....	4.24	38.10
22	Czech Republic.....	5.30	71.49	89	Belarus.....	4.23	38.00
23	United Kingdom.....	5.26	69.98	90	Tunisia.....	4.20	37.08
24	Ireland.....	5.25	69.77	91	Cambodia.....	4.20	36.97
25	Malaysia.....	5.23	69.08	92	Malawi.....	4.20	36.95
26	Chile.....	5.22	68.84	93	Namibia.....	4.20	36.85
27	Indonesia.....	5.21	68.44	94	Congo, Dem. Rep.....	4.19	36.54
28	Bahrain.....	5.20	68.23	95	Colombia.....	4.19	36.54
29	Germany.....	5.18	67.64	96	Brunei Darussalam.....	4.18	36.36
30	Canada.....	5.18	67.48	97	Morocco.....	4.18	36.27
31	Qatar.....	5.17	67.46	98	Guinea.....	4.16	35.78
32	Azerbaijan.....	5.14	66.25	99	Paraguay.....	4.16	35.68
33	China.....	5.10	65.20	100	South Africa.....	4.16	35.59
34	Costa Rica.....	5.10	65.19	101	Zambia.....	4.12	34.35
35	Belgium.....	5.09	64.82	102	Ukraine.....	4.11	34.04
36	France.....	5.09	64.80	103	Nigeria.....	4.08	33.25
37	Israel.....	5.01	62.25	104	Bulgaria.....	4.08	33.22
38	Malta.....	4.97	61.00	105	Hungary.....	4.08	33.13
39	Georgia.....	4.94	60.19	106	Senegal.....	4.05	32.27
40	Oman.....	4.92	59.56	107	Bangladesh.....	4.04	32.03
41	Rwanda.....	4.90	58.79	108	Montenegro.....	4.04	31.84
42	Botswana.....	4.89	58.49	109	Ecuador.....	4.03	31.67
43	Spain.....	4.89	58.47	110	Algeria.....	4.01	31.09
44	Uruguay.....	4.89	58.42	111	Korea, Rep.....	3.97	29.81
45	Pakistan.....	4.88	58.35	112	Croatia.....	3.97	29.67
46	Latvia.....	4.86	57.50	113	Madagascar.....	3.96	29.32
47	Viet Nam.....	4.82	56.25	114	Mexico.....	3.92	28.13
48	Slovakia.....	4.80	55.79	115	Eswatini.....	3.89	27.13
49	Sri Lanka.....	4.72	53.19	116	Bolivia, Plurinational St.....	3.83	25.23
50	Mongolia.....	4.68	51.90	117	Nepal.....	3.77	23.56
51	Kazakhstan.....	4.62	50.19	118	Argentina.....	3.76	23.29
52	Côte d'Ivoire.....	4.62	50.02	119	Bosnia and Herzegovina.....	3.70	21.26
53	Armenia.....	4.61	49.69	120	Cabo Verde.....	3.68	20.59
54	Egypt.....	4.59	49.10	121	Türkiye.....	3.67	20.19
55	Romania.....	4.57	48.55	122	Chad.....	3.65	19.74
56	Greece.....	4.57	48.42	123	India.....	3.64	19.47
57	Mauritius.....	4.56	48.29	124	Honduras.....	3.62	18.69
58	Cameroon.....	4.56	48.10	125	North Macedonia.....	3.59	17.96
59	Trinidad and Tobago.....	4.53	47.20	126	Zimbabwe.....	3.54	16.13
60	Jordan.....	4.52	46.89	127	El Salvador.....	3.52	15.63
61	Kyrgyzstan.....	4.50	46.36	128	Lesotho.....	3.35	10.46
62	Portugal.....	4.49	45.88	129	Nicaragua.....	3.32	9.41
63	Cyprus.....	4.47	45.53	130	Iran, Islamic Rep.....	3.28	8.10
64	Uganda.....	4.47	45.37	131	Ethiopia.....	3.26	7.43
65	Italy.....	4.47	45.35	132	Lebanon.....	3.25	7.03
66	Russian Federation.....	4.46	45.18	133	Mozambique.....	3.16	4.34
67	Lao PDR.....	4.46	44.93	134	Angola.....	3.02	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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2.2.4 Economic empowerment of women

Women, Business, and the Law index score | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Belgium.....	100.00	100.00	67	Rwanda.....	83.75	76.99
1	Canada.....	100.00	100.00	69	Burkina Faso.....	82.50	75.22
1	Denmark.....	100.00	100.00	69	Mozambique.....	82.50	75.22
1	France.....	100.00	100.00	69	Singapore.....	82.50	75.22
1	Germany.....	100.00	100.00	69	Türkiye.....	82.50	75.22
1	Greece.....	100.00	100.00	69	United Arab Emirates.....	82.50	75.22
1	Iceland.....	100.00	100.00	74	Cambodia.....	81.25	73.45
1	Ireland.....	100.00	100.00	74	Tanzania, United Rep.	81.25	73.45
1	Latvia.....	100.00	100.00	74	Uganda.....	81.25	73.45
1	Luxembourg.....	100.00	100.00	74	Zambia.....	81.25	73.45
1	Netherlands.....	100.00	100.00	78	Israel.....	80.62	72.57
1	Portugal.....	100.00	100.00	78	Kenya.....	80.62	72.57
1	Spain.....	100.00	100.00	78	Nepal.....	80.62	72.57
1	Sweden.....	100.00	100.00	81	Chile.....	80.00	71.68
15	Estonia.....	97.50	96.46	81	Malawi.....	80.00	71.68
15	Finland.....	97.50	96.46	83	Angola.....	79.38	70.80
15	Italy.....	97.50	96.46	83	Argentina.....	79.38	70.80
15	New Zealand.....	97.50	96.46	83	Panama.....	79.38	70.80
15	United Kingdom.....	97.50	96.46	86	Azerbaijan.....	78.75	69.91
20	Australia.....	96.88	95.58	86	Congo, Dem. Rep.	78.75	69.91
20	Austria.....	96.88	95.58	86	Japan.....	78.75	69.91
20	Hungary.....	96.88	95.58	86	Philippines.....	78.75	69.91
20	Norway.....	96.88	95.58	90	China.....	78.12	69.03
20	Slovenia.....	96.88	95.58	90	Lesotho.....	78.12	69.03
25	Côte d'Ivoire.....	95.00	92.92	90	Thailand.....	78.12	69.03
25	Peru.....	95.00	92.92	93	Ethiopia.....	76.88	67.26
27	Cyprus.....	94.38	92.04	93	Kyrgyzstan.....	76.88	67.26
27	Paraguay.....	94.38	92.04	95	Burundi.....	76.25	66.37
29	Croatia.....	93.75	91.15	96	Belarus.....	75.62	65.49
29	Czech Republic.....	93.75	91.15	96	Kazakhstan.....	75.62	65.49
29	Lithuania.....	93.75	91.15	96	Morocco.....	75.62	65.49
29	Poland.....	93.75	91.15	99	Ghana.....	75.00	64.60
29	Serbia.....	93.75	91.15	99	Honduras.....	75.00	64.60
34	Costa Rica.....	91.88	88.50	99	Trinidad and Tobago.....	75.00	64.60
35	Albania.....	91.25	87.61	102	India.....	74.38	63.72
35	Malta.....	91.25	87.61	102	Jamaica.....	74.38	63.72
35	United States of America.....	91.25	87.61	104	Guatemala.....	73.75	62.83
38	Bulgaria.....	90.62	86.73	104	Guinea.....	73.75	62.83
38	Mongolia.....	90.62	86.73	106	Russian Federation.....	73.12	61.95
38	Romania.....	90.62	86.73	107	Senegal.....	72.50	61.06
41	Ecuador.....	89.38	84.96	108	Saudi Arabia.....	71.25	59.29
41	Mauritius.....	89.38	84.96	109	Indonesia.....	70.62	58.41
43	Bolivia, Plurinational St.....	88.75	84.07	109	Uzbekistan.....	70.62	58.41
43	El Salvador.....	88.75	84.07	111	Gambia.....	69.38	56.64
43	Mexico.....	88.75	84.07	111	Madagascar.....	69.38	56.64
43	Uruguay.....	88.75	84.07	113	Bahrain.....	68.12	54.87
47	Georgia.....	88.12	83.19	114	Chad.....	66.25	52.21
47	Lao PDR.....	88.12	83.19	114	Nigeria.....	66.25	52.21
47	South Africa.....	88.12	83.19	116	Sri Lanka.....	65.62	51.33
47	Switzerland.....	88.12	83.19	117	Tunisia.....	64.38	49.56
47	Viet Nam.....	88.12	83.19	118	Botswana.....	63.75	48.67
52	Armenia.....	87.50	82.30	118	Mali.....	63.75	48.67
52	Moldova, Rep.....	87.50	82.30	120	Cameroon.....	60.00	43.36
54	Zimbabwe.....	86.88	81.42	121	Lebanon.....	58.75	41.59
55	Cabo Verde.....	86.25	80.53	121	Pakistan.....	58.75	41.59
55	Dominican Republic.....	86.25	80.53	123	Algeria.....	57.50	39.82
55	Namibia.....	86.25	80.53	124	Brunei Darussalam.....	53.12	33.63
55	Nicaragua.....	86.25	80.53	125	Egypt.....	50.62	30.09
59	Bosnia and Herzegovina.....	85.00	78.76	126	Malaysia.....	50.00	29.20
59	Brazil.....	85.00	78.76	127	Bangladesh.....	49.38	28.32
59	Korea, Rep.....	85.00	78.76	128	Mauritania.....	48.12	26.55
59	Montenegro.....	85.00	78.76	129	Jordan.....	46.88	24.78
59	North Macedonia.....	85.00	78.76	130	Eswatini.....	46.25	23.89
59	Slovakia.....	85.00	78.76	131	Oman.....	38.75	13.27
59	Ukraine.....	85.00	78.76	132	Kuwait.....	35.00	7.96
66	Colombia.....	84.38	77.88	133	Iran, Islamic Rep.....	31.25	2.65
67	Benin.....	83.75	76.99	134	Qatar.....	29.38	0.00

SOURCE: World Bank (2023). Women, Business and the Law 2023. Washington, DC: World Bank. (<https://wbl.worldbank.org/en/wbl>)

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 2012.

2.2.5 Gender parity in high-skilled jobs

Adjusted gender parity in high-skilled jobs | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Eswatini.....	1.00	100.00	68	Lesotho.....	0.79	72.97
2	Greece.....	0.99	99.35	69	Guatemala.....	0.78	72.21
3	Norway.....	0.99	98.58	70	Kenya.....	0.78	72.12
4	Belgium.....	0.99	98.39	71	Estonia.....	0.78	71.69
5	Paraguay.....	0.98	98.15	72	Georgia.....	0.77	70.55
6	Germany.....	0.98	97.52	73	Azerbaijan.....	0.76	69.76
7	Chile.....	0.97	96.88	74	Dominican Republic.....	0.76	69.58
8	Denmark.....	0.97	96.57	75	Zambia.....	0.75	68.02
9	Ireland.....	0.97	96.06	76	Peru.....	0.75	67.97
10	Sweden.....	0.97	95.85	77	Rwanda.....	0.74	67.66
11	North Macedonia.....	0.96	95.37	78	Ukraine.....	0.74	67.47
12	Korea, Rep.....	0.96	95.05	79	Nigeria.....	0.74	66.58
13	Brazil.....	0.96	94.95	80	Malaysia.....	0.72	64.83
14	Ecuador.....	0.96	94.52	81	Morocco.....	0.72	64.56
15	France.....	0.96	94.49	82	Kyrgyzstan.....	0.72	63.97
16	Spain.....	0.95	94.26	83	Cambodia.....	0.71	63.19
17	Portugal.....	0.95	93.81	84	Sri Lanka.....	0.71	63.11
18	Finland.....	0.95	93.63	85	Kazakhstan.....	0.71	63.00
19	Bosnia and Herzegovina.....	0.94	92.52	86	Burkina Faso.....	0.70	62.51
20	United States of America.....	0.94	92.12	87	Latvia.....	0.70	62.35
21	Nicaragua.....	0.93	91.44	88	Lithuania.....	0.70	61.73
22	Israel.....	0.92	90.47	89	Malta.....	0.70	61.62
23	Austria.....	0.92	90.14	90	Kuwait.....	0.70	61.60
24	Cabo Verde.....	0.92	89.98	91	Zimbabwe.....	0.70	61.49
25	Luxembourg.....	0.92	89.74	92	Russian Federation.....	0.69	60.99
26	Argentina.....	0.92	89.59	93	Algeria.....	0.69	60.68
27	Cyprus.....	0.92	89.45	94	Panama.....	0.68	59.72
28	Colombia.....	0.91	88.72	95	Mongolia.....	0.66	57.14
29	Slovenia.....	0.91	88.51	96	Jamaica.....	0.66	56.85
30	Croatia.....	0.91	88.22	97	Burundi.....	0.66	56.76
31	Serbia.....	0.91	88.14	98	Cameroon.....	0.66	56.48
32	Netherlands.....	0.90	87.80	99	Moldova, Rep.....	0.64	54.09
33	Costa Rica.....	0.90	87.71	100	Jordan.....	0.62	51.40
34	Namibia.....	0.90	87.70	101	El Salvador.....	0.60	49.41
35	Mexico.....	0.90	87.34	102	Uganda.....	0.58	47.31
36	Iceland.....	0.90	86.93	103	Ghana.....	0.58	46.40
37	Uruguay.....	0.89	86.17	104	Türkiye.....	0.58	46.24
38	Indonesia.....	0.88	85.24	105	Nepal.....	0.55	42.68
39	United Kingdom.....	0.88	84.65	106	Belarus.....	0.54	41.70
40	Viet Nam.....	0.88	84.63	107	Tunisia.....	0.52	39.64
41	Mauritius.....	0.87	84.09	108	Mozambique.....	0.52	38.77
42	Montenegro.....	0.87	84.06	109	Ethiopia.....	0.50	36.31
43	Thailand.....	0.87	83.87	110	Congo, Dem. Rep.....	0.50	36.31
44	Brunei Darussalam.....	0.87	83.85	111	Malawi.....	0.48	34.01
45	Canada.....	0.87	83.62	112	Iran, Islamic Rep.....	0.46	31.84
46	Slovakia.....	0.87	83.37	113	Egypt.....	0.46	31.16
47	Australia.....	0.86	82.90	114	Tanzania, United Rep.....	0.45	30.11
48	Honduras.....	0.86	82.41	115	Guinea.....	0.40	24.24
49	Switzerland.....	0.86	82.23	116	Bahrain.....	0.40	23.89
50	Lebanon.....	0.85	80.64	117	Oman.....	0.39	23.19
51	Albania.....	0.84	80.03	118	Senegal.....	0.39	22.64
52	Singapore.....	0.84	79.66	119	United Arab Emirates.....	0.38	22.07
53	South Africa.....	0.84	79.50	120	Angola.....	0.38	21.53
54	Armenia.....	0.83	79.03	121	Bangladesh.....	0.35	17.71
55	Czech Republic.....	0.83	78.76	122	India.....	0.34	16.21
56	Romania.....	0.83	78.71	123	Côte d'Ivoire.....	0.31	13.05
57	Hungary.....	0.83	78.19	124	Gambia.....	0.29	9.68
58	Lao PDR.....	0.83	77.93	125	Pakistan.....	0.28	8.76
59	Trinidad and Tobago.....	0.82	77.59	126	Mali.....	0.26	6.02
60	Poland.....	0.81	75.87	127	Benin.....	0.23	2.66
61	Bolivia, Plurinational St.....	0.80	75.14	128	Qatar.....	0.23	2.42
62	Botswana.....	0.80	75.04	129	Chad.....	0.21	0.00
63	Italy.....	0.80	74.75		China.....	n/a	n/a
64	Bulgaria.....	0.80	74.62		Mauritania.....	n/a	n/a
65	Madagascar.....	0.79	73.92		New Zealand.....	n/a	n/a
66	Philippines.....	0.79	73.74		Saudi Arabia.....	n/a	n/a
67	Japan.....	0.79	72.97		Uzbekistan.....	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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Albania.....	6.43	100.00	68	Trinidad and Tobago.....	4.77	48.86
2	Finland.....	6.16	91.79	69	Burundi.....	4.73	47.66
3	Lithuania.....	6.09	89.62	70	Uganda.....	4.71	47.18
4	Iceland.....	6.07	89.01	71	Malta.....	4.71	47.08
5	Denmark.....	5.93	84.64	72	Sri Lanka.....	4.71	47.00
6	Estonia.....	5.87	82.77	73	Slovakia.....	4.69	46.47
7	Singapore.....	5.74	78.69	74	Mongolia.....	4.68	46.18
8	Norway.....	5.69	77.23	75	Hungary.....	4.67	45.73
9	Moldova, Rep.....	5.67	76.48	76	Guatemala.....	4.66	45.45
10	Rwanda.....	5.64	75.81	77	Cyprus.....	4.66	45.40
11	Egypt.....	5.63	75.41	78	Greece.....	4.66	45.36
12	United Arab Emirates.....	5.62	75.11	79	Panama.....	4.66	45.36
13	New Zealand.....	5.62	75.05	80	Colombia.....	4.61	44.09
14	Philippines.....	5.61	74.58	81	Namibia.....	4.60	43.55
15	Bahrain.....	5.51	71.56	82	Tunisia.....	4.59	43.46
16	Switzerland.....	5.47	70.36	83	Lao PDR.....	4.59	43.25
17	Slovenia.....	5.47	70.28	84	Korea, Rep.....	4.56	42.54
18	Ireland.....	5.44	69.52	85	Argentina.....	4.56	42.42
19	Czech Republic.....	5.43	69.29	86	South Africa.....	4.55	42.08
20	Saudi Arabia.....	5.41	68.53	87	Ecuador.....	4.53	41.49
21	Luxembourg.....	5.40	68.19	88	Honduras.....	4.50	40.49
22	Thailand.....	5.37	67.34	89	Mauritius.....	4.49	40.38
23	Latvia.....	5.37	67.33	90	Montenegro.....	4.48	39.95
24	Georgia.....	5.35	66.62	91	Guinea.....	4.48	39.87
25	Sweden.....	5.34	66.30	92	Pakistan.....	4.47	39.63
26	Malaysia.....	5.31	65.41	93	Jamaica.....	4.45	39.02
27	United States of America.....	5.28	64.64	94	Kenya.....	4.43	38.48
28	Qatar.....	5.26	63.90	95	Poland.....	4.43	38.34
29	Netherlands.....	5.25	63.80	96	Botswana.....	4.42	38.21
30	Oman.....	5.25	63.76	97	Peru.....	4.42	38.03
31	Australia.....	5.20	62.14	98	Kuwait.....	4.42	37.99
32	Jordan.....	5.19	61.94	99	Madagascar.....	4.42	37.96
33	Russian Federation.....	5.16	60.82	100	Brazil.....	4.41	37.86
34	Israel.....	5.16	60.79	101	Malawi.....	4.38	37.01
35	Cambodia.....	5.12	59.52	102	Italy.....	4.38	36.96
36	United Kingdom.....	5.10	59.16	103	Morocco.....	4.38	36.87
37	China.....	5.09	58.61	104	Nigeria.....	4.35	36.02
38	Armenia.....	5.09	58.60	105	Côte d'Ivoire.....	4.32	35.17
39	Austria.....	5.07	58.18	106	Senegal.....	4.31	34.70
40	Uzbekistan.....	5.06	57.73	107	Zimbabwe.....	4.28	33.75
41	Algeria.....	5.05	57.58	108	Cabo Verde.....	4.23	32.17
42	Romania.....	5.03	56.83	109	Cameroon.....	4.22	31.93
43	Indonesia.....	5.02	56.42	110	Lebanon.....	4.17	30.31
44	Gambia.....	5.01	56.12	111	Mali.....	4.16	30.23
45	Belgium.....	5.00	55.92	112	Nicaragua.....	4.16	30.07
46	Portugal.....	4.98	55.42	113	Japan.....	4.13	29.28
47	Canada.....	4.97	55.12	114	Bangladesh.....	4.12	28.75
48	Azerbaijan.....	4.97	54.96	115	Nepal.....	4.11	28.58
49	Ukraine.....	4.94	54.19	116	Paraguay.....	4.11	28.53
50	Bulgaria.....	4.94	54.06	117	Eswatini.....	4.08	27.70
51	Kazakhstan.....	4.94	54.01	118	Türkiye.....	4.08	27.60
52	Dominican Republic.....	4.93	53.86	119	El Salvador.....	3.99	24.86
53	Kyrgyzstan.....	4.93	53.66	120	Mexico.....	3.85	20.46
54	Spain.....	4.92	53.55	121	Mozambique.....	3.84	20.12
55	France.....	4.91	53.28	122	Bosnia and Herzegovina.....	3.81	19.37
56	Brunei Darussalam.....	4.91	53.24	123	Angola.....	3.78	18.48
57	Serbia.....	4.91	53.09	124	North Macedonia.....	3.76	17.84
58	Viet Nam.....	4.88	52.20	125	India.....	3.74	17.07
59	Zambia.....	4.87	51.84	126	Chad.....	3.71	16.11
60	Belarus.....	4.86	51.65	127	Congo, Dem. Rep.....	3.66	14.79
61	Tanzania, United Rep.....	4.84	51.14	128	Bolivia, Plurinational St.....	3.63	13.80
62	Chile.....	4.83	50.75	129	Croatia.....	3.61	13.30
63	Costa Rica.....	4.82	50.57	130	Burkina Faso.....	3.45	8.23
64	Uruguay.....	4.82	50.29	131	Lesotho.....	3.35	5.03
65	Germany.....	4.79	49.64	132	Mauritania.....	3.27	2.70
66	Benin.....	4.79	49.50	133	Ethiopia.....	3.27	2.60
67	Ghana.....	4.78	49.19	134	Iran, Islamic Rep.....	3.18	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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Pillar 3

Grow

3.1.1 Vocational enrolment

Vocational enrolment (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Bolivia, Plurinational St.....	64.52	100.00	68	Algeria.....	10.14	15.50
2	Gambia.....	47.01	72.79	69	Kazakhstan.....	9.86	15.05
3	Finland.....	43.20	66.86	70	Mongolia.....	9.81	14.98
4	Slovenia.....	42.64	65.99	71	Armenia.....	9.41	14.36
5	Belgium.....	41.77	64.63	72	Tunisia.....	9.07	13.83
6	Netherlands.....	38.71	59.89	73	Burundi.....	8.93	13.61
7	Bosnia and Herzegovina.....	37.50	58.01	74	Korea, Rep.....	8.64	13.16
8	Croatia.....	37.38	57.82	75	Philippines.....	8.59	13.09
9	Honduras.....	36.80	56.92	76	Cyprus.....	8.32	12.67
10	Switzerland.....	36.04	55.73	77	Colombia.....	8.15	12.40
11	Serbia.....	35.93	55.57	78	Albania.....	8.06	12.26
12	Austria.....	34.85	53.89	79	Kyrgyzstan.....	8.02	12.19
13	Uzbekistan.....	34.21	52.90	80	Lithuania.....	7.67	11.65
14	Czech Republic.....	33.64	52.00	81	Mauritius.....	7.46	11.33
15	Luxembourg.....	32.86	50.80	82	Ethiopia.....	7.00	10.62
16	Montenegro.....	32.63	50.43	83	Bahrain.....	6.68	10.12
17	Italy.....	32.38	50.05	84	Guinea.....	6.52	9.87
18	Bulgaria.....	31.27	48.32	85	Ukraine.....	6.47	9.79
19	Australia.....	29.17	45.07	86	Mozambique.....	6.37	9.64
20	Guatemala.....	29.00	44.79	87	Morocco.....	5.91	8.92
21	Slovakia.....	28.75	44.42	88	Senegal.....	5.72	8.62
22	Norway.....	28.72	44.36	89	South Africa.....	5.62	8.47
23	North Macedonia.....	28.64	44.24	90	Bangladesh.....	5.20	7.81
24	Romania.....	28.24	43.62	91	Côte d'Ivoire.....	4.97	7.47
25	United Kingdom.....	28.24	43.62	92	Malaysia.....	4.79	7.18
26	Mexico.....	26.74	41.29	93	Brazil.....	4.51	6.74
27	Uruguay.....	26.47	40.87	94	Canada.....	4.45	6.65
28	Poland.....	25.54	39.43	95	Uganda.....	4.44	6.64
29	Costa Rica.....	25.50	39.36	96	Benin.....	4.33	6.46
30	Hungary.....	25.31	39.07	97	Eswatini.....	3.91	5.80
31	Portugal.....	22.72	35.04	98	Sri Lanka.....	3.88	5.77
32	Estonia.....	22.17	34.18	99	India.....	3.46	5.11
33	Egypt.....	22.02	33.95	100	Georgia.....	3.38	4.99
34	Denmark.....	20.66	31.84	101	Lesotho.....	3.28	4.83
35	Sweden.....	20.64	31.81	102	Pakistan.....	3.15	4.62
36	Israel.....	20.12	30.99	103	Burkina Faso.....	3.13	4.60
37	Latvia.....	20.00	30.82	104	Jordan.....	2.89	4.23
38	Indonesia.....	19.70	30.35	105	Ghana.....	2.87	4.20
39	Türkiye.....	19.57	30.15	106	Madagascar.....	2.64	3.84
40	Cameroon.....	19.47	29.98	107	Kuwait.....	2.41	3.48
41	Germany.....	19.46	29.98	108	Mauritania.....	2.21	3.18
42	Spain.....	19.16	29.50	109	Cabo Verde.....	2.16	3.09
43	Congo, Dem. Rep.....	18.86	29.04	110	Peru.....	2.07	2.96
44	Panama.....	18.41	28.35	111	United Arab Emirates.....	1.60	2.22
45	China.....	18.30	28.17	112	Cambodia.....	1.48	2.03
46	Iceland.....	18.03	27.75	113	Qatar.....	1.44	1.98
47	France.....	17.29	26.61	114	Chad.....	1.32	1.79
48	Greece.....	16.96	26.08	115	Lao PDR.....	1.12	1.47
49	New Zealand.....	16.87	25.94	116	Nepal.....	1.10	1.45
50	El Salvador.....	16.18	24.88	117	Mali.....	0.57	0.62
51	Malta.....	16.17	24.86	118	Saudi Arabia.....	0.55	0.59
52	Lebanon.....	15.84	24.34	119	Tanzania, United Rep.....	0.51	0.52
53	Iran, Islamic Rep.....	15.63	24.03	120	Oman.....	0.17	0.00
54	Ireland.....	15.32	23.55		Argentina.....	n/a	n/a
55	Ecuador.....	14.54	22.32		Botswana.....	n/a	n/a
56	Russian Federation.....	14.50	22.27		Jamaica.....	n/a	n/a
57	Paraguay.....	14.30	21.96		Kenya.....	n/a	n/a
58	Angola.....	14.14	21.71		Malawi.....	n/a	n/a
59	Thailand.....	13.65	20.94		Namibia.....	n/a	n/a
60	Moldova, Rep.....	13.26	20.34		Nicaragua.....	n/a	n/a
61	Dominican Republic.....	12.83	19.67		Nigeria.....	n/a	n/a
62	Rwanda.....	12.77	19.57		Singapore.....	n/a	n/a
63	Belarus.....	12.15	18.61		Trinidad and Tobago.....	n/a	n/a
64	Brunei Darussalam.....	11.87	18.17		United States of America.....	n/a	n/a
65	Japan.....	11.36	17.39		Viet Nam.....	n/a	n/a
66	Chile.....	10.81	16.53		Zambia.....	n/a	n/a
67	Azerbaijan.....	10.69	16.35		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 2012.

3.1.2 Tertiary enrolment

Tertiary enrolment (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Greece.....	150.88	100.00	68	Oman.....	47.41	30.78
2	Türkiye.....	117.11	77.41	69	Mauritius.....	45.28	29.35
3	Australia.....	114.19	75.45	70	Mexico.....	44.81	29.03
4	Korea, Rep.....	102.47	67.61	71	Panama.....	44.38	28.75
5	Argentina.....	99.17	65.40	72	Thailand.....	43.98	28.48
6	Spain.....	95.96	63.26	73	Morocco.....	43.45	28.12
7	Finland.....	95.05	62.65	74	North Macedonia.....	43.02	27.83
8	Latvia.....	94.51	62.29	75	Egypt.....	42.72	27.64
9	Singapore.....	93.13	61.37	76	Malaysia.....	41.39	26.74
10	Cyprus.....	92.94	61.23	77	Bosnia and Herzegovina.....	39.23	25.30
11	Netherlands.....	92.01	60.62	78	Azerbaijan.....	38.24	24.64
12	Chile.....	91.67	60.39	79	Tunisia.....	37.46	24.12
13	United States of America.....	87.57	57.64	80	Indonesia.....	36.31	23.35
14	Austria.....	87.21	57.40	81	Philippines.....	35.52	22.82
15	Russian Federation.....	86.40	56.86	82	Viet Nam.....	35.40	22.74
16	Sweden.....	84.52	55.60	83	Jordan.....	34.10	21.87
17	Norway.....	84.44	55.55	84	India.....	32.07	20.51
18	Iceland.....	84.27	55.44	85	Brunei Darussalam.....	31.99	20.46
19	Denmark.....	82.84	54.48	86	El Salvador.....	29.92	19.07
20	Ukraine.....	82.67	54.37	87	Namibia.....	27.26	17.29
21	Belarus.....	82.24	54.08	88	Jamaica.....	27.13	17.20
22	Belgium.....	80.89	53.17	89	Honduras.....	25.46	16.09
23	Slovenia.....	79.92	52.53	90	Bangladesh.....	25.10	15.85
24	New Zealand.....	79.91	52.52	91	Qatar.....	25.04	15.81
25	Canada.....	79.52	52.25	92	Botswana.....	24.73	15.60
26	Bulgaria.....	75.41	49.50	93	South Africa.....	24.24	15.27
27	Ireland.....	74.68	49.02	94	Cabo Verde.....	23.62	14.85
28	Germany.....	72.99	47.89	95	Sri Lanka.....	22.17	13.89
29	Georgia.....	72.54	47.59	96	Guatemala.....	22.14	13.87
30	Malta.....	71.50	46.89	97	Uzbekistan.....	21.25	13.27
31	Saudi Arabia.....	71.41	46.83	98	Ghana.....	19.54	12.13
32	Lithuania.....	70.79	46.41	99	Luxembourg.....	19.20	11.90
33	Peru.....	70.74	46.38	100	Nicaragua.....	19.07	11.81
34	Kazakhstan.....	70.68	46.34	101	Nepal.....	17.37	10.67
35	Poland.....	70.48	46.21	102	Senegal.....	15.63	9.51
36	Portugal.....	70.38	46.14	103	Cameroon.....	14.27	8.60
37	United Kingdom.....	69.48	45.54	104	Cambodia.....	12.98	7.74
38	Italy.....	69.47	45.53	105	Lao PDR.....	12.98	7.73
39	Mongolia.....	69.41	45.50	106	Pakistan.....	12.22	7.23
40	France.....	69.35	45.45	107	Nigeria.....	12.10	7.15
41	Serbia.....	69.18	45.34	108	Benin.....	11.09	6.47
42	Estonia.....	69.05	45.25	109	Angola.....	10.63	6.16
43	Croatia.....	68.10	44.61	110	Ethiopia.....	10.43	6.03
44	Czech Republic.....	68.06	44.59	111	Lesotho.....	10.20	5.87
45	Uruguay.....	67.88	44.47	112	Kenya.....	10.04	5.77
46	Switzerland.....	65.33	42.77	113	Côte d'Ivoire.....	9.91	5.68
47	Japan.....	65.29	42.73	114	Burkina Faso.....	9.54	5.44
48	Bahrain.....	64.53	42.23	115	Zimbabwe.....	8.88	4.99
49	China.....	63.60	41.61	116	Tanzania, United Rep.....	7.83	4.29
50	Moldova, Rep.....	62.69	41.00	117	Mozambique.....	7.31	3.94
51	Israel.....	61.07	39.91	118	Rwanda.....	7.27	3.91
52	Dominican Republic.....	59.92	39.14	119	Congo, Dem. Rep.....	7.00	3.74
53	Kuwait.....	58.80	38.40	120	Eswatini.....	6.75	3.57
54	Iran, Islamic Rep.....	58.22	38.01	121	Guinea.....	6.72	3.55
55	Costa Rica.....	57.67	37.64	122	Burundi.....	5.95	3.03
56	Colombia.....	57.11	37.26	123	Mauritania.....	5.87	2.98
57	Albania.....	56.72	37.00	124	Madagascar.....	5.53	2.75
58	Montenegro.....	55.64	36.28	125	Uganda.....	5.06	2.44
59	Armenia.....	55.41	36.13	126	Mali.....	4.90	2.33
60	United Arab Emirates.....	55.30	36.05	127	Zambia.....	4.12	1.81
61	Hungary.....	55.16	35.96	128	Chad.....	3.25	1.23
62	Brazil.....	54.57	35.57	129	Malawi.....	2.79	0.92
63	Algeria.....	53.74	35.01	130	Gambia.....	2.72	0.87
64	Kyrgyzstan.....	53.46	34.82	131	Paraguay.....	1.42	0.00
65	Romania.....	53.23	34.67		Bolivia, Plurinational St.....	n/a	n/a
66	Ecuador.....	52.59	34.24		Lebanon.....	n/a	n/a
67	Slovakia.....	47.62	30.92		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 2012.

3.1.3 Tertiary education expenditure

Initial government funding per tertiary student (constant PPP\$) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	10.77	100.00	68	India	8.12	55.72
2	Denmark	10.20	90.47	69	Lebanon	8.11	55.66
3	Switzerland	10.17	89.98	70	Jamaica	8.10	55.44
4	Norway	10.12	89.28	71	Burundi	8.09	55.17
5	Singapore	10.01	87.28	72	Colombia	8.06	54.69
6	Austria	9.98	86.90	73	Mauritania	8.05	54.65
7	Brunei Darussalam	9.95	86.29	74	Iran, Islamic Rep.	8.05	54.55
8	Malta	9.93	86.06	75	Pakistan	7.96	53.02
9	Sweden	9.93	85.96	76	Argentina	7.93	52.60
10	Netherlands	9.86	84.89	77	Greece	7.93	52.59
11	Belgium	9.85	84.76	78	Thailand	7.93	52.56
12	Germany	9.83	84.29	79	Kenya	7.87	51.50
13	United Kingdom	9.79	83.66	80	Ghana	7.82	50.68
14	Ireland	9.67	81.74	81	Cabo Verde	7.80	50.41
15	France	9.61	80.59	82	Ecuador	7.78	50.02
16	Finland	9.58	80.25	83	Kazakhstan	7.64	47.76
17	United Arab Emirates	9.57	79.92	84	Honduras	7.62	47.33
18	United States of America	9.56	79.90	85	Indonesia	7.59	46.85
19	Costa Rica	9.56	79.83	86	Albania	7.59	46.83
20	Iceland	9.55	79.60	87	Viet Nam	7.52	45.65
21	Oman	9.53	79.33	88	Mauritius	7.48	45.10
22	Canada	9.52	79.17	89	Rwanda	7.46	44.68
23	Czech Republic	9.52	79.09	90	Guinea	7.44	44.34
24	New Zealand	9.41	77.26	91	Benin	7.24	41.09
25	Slovenia	9.31	75.64	92	Guatemala	7.23	40.81
26	Italy	9.27	75.05	93	Mozambique	7.23	40.78
27	Eswatini	9.27	75.02	94	Uzbekistan	7.22	40.62
28	Estonia	9.25	74.65	95	Madagascar	7.07	38.19
29	Bahrain	9.25	74.65	96	Peru	7.06	38.09
30	Poland	9.22	74.20	97	Gambia	7.06	37.94
31	Romania	9.18	73.40	98	Lesotho	7.04	37.62
32	Slovakia	9.17	73.25	99	Uganda	7.02	37.31
33	Spain	9.09	72.00	100	Armenia	6.99	36.84
34	Hungary	9.08	71.74	101	Lao PDR	6.98	36.68
35	Japan	9.05	71.37	102	El Salvador	6.68	31.58
36	Namibia	9.03	71.02	103	Georgia	6.62	30.71
37	South Africa	9.02	70.83	104	Croatia	6.59	30.08
38	Australia	9.01	70.68	105	Bangladesh	6.54	29.35
39	Portugal	8.95	69.67	106	Jordan	6.26	24.72
40	Türkiye	8.94	69.49	107	Congo, Dem. Rep.	6.20	23.57
41	Israel	8.89	68.67	108	Nepal	6.12	22.33
42	Lithuania	8.78	66.83	109	Cameroon	6.00	20.28
43	Cyprus	8.75	66.22	110	Kyrgyzstan	5.56	12.98
44	Korea, Rep.	8.74	66.14	111	Mongolia	4.79	0.00
45	Burkina Faso	8.70	65.45		Algeria	n/a	n/a
46	Bulgaria	8.67	65.02		Angola	n/a	n/a
47	Tunisia	8.67	64.90		Bolivia, Plurinational St.	n/a	n/a
48	Chile	8.63	64.24		Botswana	n/a	n/a
49	Uruguay	8.59	63.55		Cambodia	n/a	n/a
50	Serbia	8.58	63.45		Chad	n/a	n/a
51	Russian Federation	8.58	63.43		China	n/a	n/a
52	Latvia	8.50	62.07		Dominican Republic	n/a	n/a
53	Azerbaijan	8.47	61.62		Egypt	n/a	n/a
54	Panama	8.47	61.52		Kuwait	n/a	n/a
55	Brazil	8.45	61.29		Malawi	n/a	n/a
56	Bosnia and Herzegovina	8.43	60.97		Montenegro	n/a	n/a
57	Mexico	8.43	60.91		Morocco	n/a	n/a
58	Senegal	8.42	60.78		Nicaragua	n/a	n/a
59	Ukraine	8.40	60.45		Nigeria	n/a	n/a
60	Côte d'Ivoire	8.37	59.89		North Macedonia	n/a	n/a
61	Malaysia	8.37	59.89		Paraguay	n/a	n/a
62	Belarus	8.33	59.21		Philippines	n/a	n/a
63	Ethiopia	8.31	58.86		Qatar	n/a	n/a
64	Zimbabwe	8.24	57.78		Saudi Arabia	n/a	n/a
65	Moldova, Rep.	8.20	57.01		Tanzania, United Rep.	n/a	n/a
66	Sri Lanka	8.19	56.90		Trinidad and Tobago	n/a	n/a
67	Mali	8.15	56.32		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		Benin	n/a	n/a
17	Germany	500.44	67.91		Bolivia, Plurinational St.	n/a	n/a
18	Belgium	499.90	67.69		Botswana	n/a	n/a
19	Australia	498.99	67.32		Burkina Faso	n/a	n/a
20	Switzerland	498.17	66.99		Burundi	n/a	n/a
21	Norway	496.94	66.48		Cabo Verde	n/a	n/a
22	Czech Republic	495.49	65.89		Cambodia	n/a	n/a
23	United States of America	495.33	65.82		Cameroon	n/a	n/a
24	France	493.66	65.14		Chad	n/a	n/a
25	Portugal	491.99	64.46		Congo, Dem. Rep.	n/a	n/a
26	Spain	491.40	64.22		Côte d'Ivoire	n/a	n/a
27	Austria	491.04	64.07		Ecuador	n/a	n/a
28	Latvia	487.36	62.57		Egypt	n/a	n/a
29	Iceland	481.40	60.14		El Salvador	n/a	n/a
30	Russian Federation	481.34	60.11		Eswatini	n/a	n/a
31	Lithuania	479.71	59.45		Ethiopia	n/a	n/a
32	Hungary	479.33	59.29		Gambia	n/a	n/a
33	Italy	476.96	58.33		Ghana	n/a	n/a
34	Luxembourg	476.73	58.23		Guatemala	n/a	n/a
35	Belarus	472.31	56.42		Guinea	n/a	n/a
36	Croatia	471.85	56.24		Honduras	n/a	n/a
37	Slovakia	469.40	55.24		India	n/a	n/a
38	Israel	465.22	53.53		Iran, Islamic Rep.	n/a	n/a
39	Ukraine	462.69	52.50		Jamaica	n/a	n/a
40	Türkiye	462.48	52.41		Kenya	n/a	n/a
41	Malta	458.85	50.93		Kuwait	n/a	n/a
42	Greece	453.47	48.73		Kyrgyzstan	n/a	n/a
43	Serbia	442.54	44.27		Lao PDR	n/a	n/a
44	Cyprus	438.02	42.42		Lesotho	n/a	n/a
45	Chile	437.75	42.32		Madagascar	n/a	n/a
46	United Arab Emirates	433.46	40.56		Malawi	n/a	n/a
47	Malaysia	430.94	39.53		Mali	n/a	n/a
48	Romania	427.79	38.25		Mauritania	n/a	n/a
49	Bulgaria	426.65	37.78		Mauritius	n/a	n/a
50	Moldova, Rep.	424.36	36.85		Mongolia	n/a	n/a
51	Uruguay	423.53	36.51		Mozambique	n/a	n/a
52	Brunei Darussalam	423.06	36.31		Namibia	n/a	n/a
53	Trinidad and Tobago	423.04	36.31		Nepal	n/a	n/a
54	Montenegro	421.95	35.86		Nicaragua	n/a	n/a
55	Albania	419.79	34.98		Nigeria	n/a	n/a
56	Mexico	416.16	33.50		Oman	n/a	n/a
57	Jordan	416.03	33.44		Pakistan	n/a	n/a
58	Costa Rica	414.82	32.95		Paraguay	n/a	n/a
59	Qatar	413.48	32.41		Rwanda	n/a	n/a
60	Thailand	412.42	31.97		Senegal	n/a	n/a
61	Colombia	405.52	29.15		South Africa	n/a	n/a
62	Bosnia and Herzegovina	402.62	27.97		Sri Lanka	n/a	n/a
63	Kazakhstan	402.39	27.87		Tanzania, United Rep.	n/a	n/a
64	Azerbaijan	402.23	27.81		Uganda	n/a	n/a
65	Peru	401.52	27.52		Uzbekistan	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) (<https://www.oecd.org/pisa/>)

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3.1.5 University ranking

QS World University Ranking score | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United States of America.....	98.70	100.00	68	Viet Nam.....	12.20	12.36
2	United Kingdom.....	98.10	99.39	69	Croatia.....	10.00	10.13
3	China.....	87.60	88.75	70	Paraguay.....	9.20	9.32
4	Switzerland.....	82.20	83.28	71	Azerbaijan.....	8.90	9.02
5	Australia.....	81.10	82.17	72	Romania.....	8.60	8.71
6	Canada.....	80.10	81.16	73	Panama.....	7.90	8.00
7	Japan.....	79.70	80.75	74	Serbia.....	7.50	7.60
8	France.....	76.90	77.91	75	Sri Lanka.....	7.20	7.29
9	Korea, Rep.....	76.40	77.41	76	Albania.....	0.00	0.00
10	Germany.....	71.90	72.85	76	Algeria.....	0.00	0.00
11	Singapore.....	67.70	68.59	76	Angola.....	0.00	0.00
12	Netherlands.....	65.80	66.67	76	Armenia.....	0.00	0.00
13	Malaysia.....	58.90	59.68	76	Benin.....	0.00	0.00
13	Sweden.....	58.90	59.68	76	Bolivia, Plurinational St.....	0.00	0.00
15	Denmark.....	56.90	57.65	76	Bosnia and Herzegovina.....	0.00	0.00
16	Belgium.....	53.90	54.61	76	Botswana.....	0.00	0.00
17	Finland.....	49.80	50.46	76	Burkina Faso.....	0.00	0.00
18	Italy.....	48.90	49.54	76	Burundi.....	0.00	0.00
19	Saudi Arabia.....	48.70	49.34	76	Cabo Verde.....	0.00	0.00
20	Russian Federation.....	48.30	48.94	76	Cambodia.....	0.00	0.00
21	India.....	47.60	48.23	76	Cameroon.....	0.00	0.00
22	Ireland.....	47.30	47.92	76	Chad.....	0.00	0.00
23	New Zealand.....	47.20	47.82	76	Congo, Dem. Rep.....	0.00	0.00
24	Mexico.....	44.50	45.09	76	Côte d'Ivoire.....	0.00	0.00
24	Spain.....	44.50	45.09	76	Cyprus.....	0.00	0.00
26	Austria.....	44.10	44.68	76	Dominican Republic.....	0.00	0.00
26	Norway.....	44.10	44.68	76	El Salvador.....	0.00	0.00
28	Argentina.....	43.80	44.38	76	Eswatini.....	0.00	0.00
29	Brazil.....	43.60	44.17	76	Ethiopia.....	0.00	0.00
30	Chile.....	42.60	43.16	76	Gambia.....	0.00	0.00
30	Qatar.....	42.60	43.16	76	Georgia.....	0.00	0.00
32	Indonesia.....	39.50	40.02	76	Ghana.....	0.00	0.00
33	Kazakhstan.....	38.60	39.11	76	Guatemala.....	0.00	0.00
34	United Arab Emirates.....	37.00	37.49	76	Guinea.....	0.00	0.00
35	Colombia.....	36.70	37.18	76	Honduras.....	0.00	0.00
36	Israel.....	35.80	36.27	76	Iceland.....	0.00	0.00
37	Brunei Darussalam.....	34.90	35.36	76	Jamaica.....	0.00	0.00
38	Thailand.....	33.10	33.54	76	Kenya.....	0.00	0.00
39	Portugal.....	33.00	33.43	76	Kyrgyzstan.....	0.00	0.00
40	Czech Republic.....	32.10	32.52	76	Lao PDR.....	0.00	0.00
41	Poland.....	31.70	32.12	76	Lesotho.....	0.00	0.00
42	South Africa.....	31.40	31.81	76	Luxembourg.....	0.00	0.00
43	Pakistan.....	30.40	30.80	76	Madagascar.....	0.00	0.00
44	Oman.....	29.30	29.69	76	Malawi.....	0.00	0.00
45	Lebanon.....	28.10	28.47	76	Mali.....	0.00	0.00
46	Iran, Islamic Rep.....	26.70	27.05	76	Malta.....	0.00	0.00
47	Uruguay.....	25.30	25.63	76	Mauritania.....	0.00	0.00
48	Türkiye.....	24.10	24.42	76	Mauritius.....	0.00	0.00
49	Greece.....	22.90	23.20	76	Moldova, Rep.....	0.00	0.00
50	Bulgaria.....	21.90	22.19	76	Mongolia.....	0.00	0.00
51	Egypt.....	21.30	21.58	76	Montenegro.....	0.00	0.00
52	Estonia.....	20.80	21.07	76	Morocco.....	0.00	0.00
52	Peru.....	20.80	21.07	76	Mozambique.....	0.00	0.00
54	Philippines.....	20.10	20.36	76	Namibia.....	0.00	0.00
55	Belarus.....	20.00	20.26	76	Nepal.....	0.00	0.00
55	Lithuania.....	20.00	20.26	76	Nicaragua.....	0.00	0.00
57	Ukraine.....	19.90	20.16	76	Nigeria.....	0.00	0.00
58	Hungary.....	19.40	19.66	76	North Macedonia.....	0.00	0.00
59	Bahrain.....	17.80	18.03	76	Rwanda.....	0.00	0.00
60	Slovakia.....	16.60	16.82	76	Senegal.....	0.00	0.00
61	Jordan.....	16.10	16.31	76	Tanzania, United Rep.....	0.00	0.00
62	Costa Rica.....	15.30	15.50	76	Trinidad and Tobago.....	0.00	0.00
63	Kuwait.....	13.40	13.58	76	Tunisia.....	0.00	0.00
63	Slovenia.....	13.40	13.58	76	Uganda.....	0.00	0.00
65	Bangladesh.....	13.10	13.27	76	Uzbekistan.....	0.00	0.00
66	Ecuador.....	13.00	13.17	76	Zambia.....	0.00	0.00
66	Latvia.....	13.00	13.17	76	Zimbabwe.....	0.00	0.00

SOURCE: Quacquarelli Symonds Ltd (QS), QS World University Ranking 2023, Top Universities (<https://www.topuniversities.com/qs-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 2012.

3.2.1 Business masters education

QS Global MBA and Business Masters Rankings scores | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	France	91.86	100.00	57	Brunei Darussalam	0.00	0.00
2	United States of America	91.59	99.70	57	Bulgaria	0.00	0.00
3	United Kingdom	90.43	98.44	57	Burkina Faso	0.00	0.00
4	Spain	87.13	94.85	57	Burundi	0.00	0.00
5	Italy	77.84	84.73	57	Cabo Verde	0.00	0.00
6	Netherlands	74.19	80.76	57	Cambodia	0.00	0.00
7	Australia	72.92	79.37	57	Cameroon	0.00	0.00
8	Canada	67.85	73.86	57	Chad	0.00	0.00
9	Switzerland	65.33	71.11	57	Congo, Dem. Rep.	0.00	0.00
10	Singapore	64.08	69.75	57	Côte d'Ivoire	0.00	0.00
11	Germany	62.32	67.84	57	Cyprus	0.00	0.00
12	China	61.41	66.85	57	Dominican Republic	0.00	0.00
13	Ireland	60.91	66.31	57	Ecuador	0.00	0.00
14	Denmark	59.33	64.59	57	El Salvador	0.00	0.00
15	Belgium	57.15	62.21	57	Estonia	0.00	0.00
16	India	55.77	60.71	57	Eswatini	0.00	0.00
17	Poland	55.68	60.61	57	Ethiopia	0.00	0.00
18	Portugal	52.87	57.56	57	Gambia	0.00	0.00
19	Greece	47.65	51.87	57	Georgia	0.00	0.00
20	Mexico	46.30	50.40	57	Ghana	0.00	0.00
21	United Arab Emirates	44.95	48.93	57	Guatemala	0.00	0.00
22	Peru	43.17	46.99	57	Guinea	0.00	0.00
23	Russian Federation	42.42	46.18	57	Honduras	0.00	0.00
24	Thailand	41.80	45.51	57	Hungary	0.00	0.00
25	Lebanon	41.29	44.95	57	Iceland	0.00	0.00
26	Japan	37.24	40.54	57	Iran, Islamic Rep.	0.00	0.00
27	Türkiye	36.98	40.26	57	Israel	0.00	0.00
28	Egypt	35.63	38.79	57	Jamaica	0.00	0.00
29	Saudi Arabia	34.55	37.61	57	Kenya	0.00	0.00
30	South Africa	33.40	36.35	57	Kuwait	0.00	0.00
31	Austria	32.30	35.16	57	Kyrgyzstan	0.00	0.00
32	Philippines	31.22	33.98	57	Lao PDR	0.00	0.00
33	Norway	29.18	31.77	57	Latvia	0.00	0.00
34	Costa Rica	29.00	31.57	57	Lesotho	0.00	0.00
35	Qatar	28.10	30.59	57	Luxembourg	0.00	0.00
36	Colombia	26.81	29.18	57	Madagascar	0.00	0.00
37	New Zealand	26.61	28.96	57	Malawi	0.00	0.00
38	Korea, Rep.	25.77	28.05	57	Mali	0.00	0.00
39	Argentina	23.11	25.16	57	Malta	0.00	0.00
40	Chile	23.05	25.09	57	Mauritania	0.00	0.00
41	Bahrain	22.32	24.29	57	Mauritius	0.00	0.00
42	Pakistan	21.64	23.56	57	Moldova, Rep.	0.00	0.00
43	Malaysia	21.57	23.48	57	Mongolia	0.00	0.00
44	Croatia	21.50	23.40	57	Montenegro	0.00	0.00
45	Indonesia	19.76	21.51	57	Mozambique	0.00	0.00
46	Kazakhstan	19.53	21.26	57	Namibia	0.00	0.00
47	Tunisia	17.94	19.52	57	Nepal	0.00	0.00
48	Nigeria	16.98	18.49	57	Nicaragua	0.00	0.00
49	Jordan	15.90	17.31	57	North Macedonia	0.00	0.00
50	Uruguay	14.44	15.71	57	Oman	0.00	0.00
51	Lithuania	13.61	14.82	57	Panama	0.00	0.00
52	Sweden	12.59	13.70	57	Paraguay	0.00	0.00
53	Morocco	12.16	13.24	57	Romania	0.00	0.00
54	Czech Republic	9.59	10.44	57	Rwanda	0.00	0.00
55	Finland	6.59	7.18	57	Senegal	0.00	0.00
56	Brazil	4.68	5.10	57	Serbia	0.00	0.00
57	Albania	0.00	0.00	57	Slovakia	0.00	0.00
57	Algeria	0.00	0.00	57	Slovenia	0.00	0.00
57	Angola	0.00	0.00	57	Sri Lanka	0.00	0.00
57	Armenia	0.00	0.00	57	Tanzania, United Rep.	0.00	0.00
57	Azerbaijan	0.00	0.00	57	Trinidad and Tobago	0.00	0.00
57	Bangladesh	0.00	0.00	57	Uganda	0.00	0.00
57	Belarus	0.00	0.00	57	Ukraine	0.00	0.00
57	Benin	0.00	0.00	57	Uzbekistan	0.00	0.00
57	Bolivia, Plurinational St.	0.00	0.00	57	Viet Nam	0.00	0.00
57	Bosnia and Herzegovina	0.00	0.00	57	Zambia	0.00	0.00
57	Botswana	0.00	0.00	57	Zimbabwe	0.00	0.00

SOURCE: Own computation based on Quacquarelli Symonds Ltd (QS) (2022). *QS Higher Ed Report: Global MBA and Business Masters 2023* (<https://www.topmba.com/>)
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 2012.

3.2.2 Prevalence of training in firms

Proportion of firms offering formal training (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	China	79.20	100.00	68	Ukraine	24.30	27.09
2	Ecuador	73.70	92.70	69	Malaysia	24.00	26.69
3	France	67.90	84.99	70	Dominican Republic	23.40	25.90
4	Mongolia	66.20	82.74	71	Chad	22.90	25.23
5	Luxembourg	66.10	82.60	72	Cambodia	22.20	24.30
6	Peru	65.90	82.34	72	Viet Nam	22.20	24.30
7	Colombia	63.00	78.49	74	Kazakhstan	21.80	23.77
8	Sweden	61.90	77.03	75	Poland	21.70	23.64
9	Ireland	59.80	74.24	76	Greece	21.60	23.51
9	Philippines	59.80	74.24	77	Ethiopia	20.80	22.44
11	Belgium	57.80	71.58	77	Lebanon	20.80	22.44
12	Nicaragua	57.30	70.92	79	Mozambique	20.70	22.31
13	Guatemala	55.70	68.79	80	Romania	20.50	22.05
14	Spain	55.20	68.13	81	Benin	20.00	21.38
15	Netherlands	54.10	66.67	81	Bulgaria	20.00	21.38
16	El Salvador	53.80	66.27	83	Tunisia	19.10	20.19
17	Uruguay	53.30	65.60	84	Israel	18.60	19.52
18	Latvia	52.90	65.07	85	Thailand	18.00	18.73
19	Mauritania	52.70	64.81	86	Mali	17.70	18.33
20	Finland	50.20	61.49	87	Senegal	17.40	17.93
21	Bolivia, Plurinational St.	49.90	61.09	88	Congo, Dem. Rep.	17.00	17.40
21	Malta	49.90	61.09	89	Jordan	16.90	17.26
23	Honduras	47.70	58.17	89	Uzbekistan	16.90	17.26
24	Paraguay	46.40	56.44	91	Guinea	16.00	16.07
25	Albania	46.20	56.18	92	Montenegro	15.80	15.80
26	Germany	44.10	53.39	93	Italy	12.60	11.55
27	Slovenia	44.00	53.25	94	Russian Federation	11.80	10.49
28	Czech Republic	43.60	52.72	95	Madagascar	10.50	8.76
29	Slovakia	43.30	52.32	96	Egypt	7.90	5.31
30	Austria	42.60	51.39	96	South Africa	7.90	5.31
31	Kyrgyzstan	41.40	49.80	98	India	7.70	5.05
32	Estonia	40.70	48.87	98	Indonesia	7.70	5.05
33	Denmark	40.60	48.74	100	Bangladesh	6.40	3.32
34	Argentina	40.20	48.21	101	Pakistan	5.90	2.66
35	Ghana	40.10	48.07	102	Saudi Arabia	3.90	0.00
36	Cyprus	39.70	47.54		Algeria	n/a	n/a
37	North Macedonia	39.00	46.61		Angola	n/a	n/a
38	Serbia	38.30	45.68		Australia	n/a	n/a
39	Moldova, Rep.	38.10	45.42		Bahrain	n/a	n/a
40	Bosnia and Herzegovina	37.90	45.15		Botswana	n/a	n/a
41	Cameroon	37.60	44.75		Brazil	n/a	n/a
42	Kenya	37.40	44.49		Brunei Darussalam	n/a	n/a
43	Zambia	36.60	43.43		Burkina Faso	n/a	n/a
44	Eswatini	36.10	42.76		Cabo Verde	n/a	n/a
45	Rwanda	35.90	42.50		Canada	n/a	n/a
46	Morocco	35.70	42.23		Chile	n/a	n/a
47	Côte d'Ivoire	35.50	41.97		Costa Rica	n/a	n/a
48	Uganda	34.70	40.90		Iceland	n/a	n/a
49	Azerbaijan	33.90	39.84		Iran, Islamic Rep.	n/a	n/a
50	Malawi	32.90	38.51		Jamaica	n/a	n/a
51	Burundi	32.00	37.32		Japan	n/a	n/a
51	Georgia	32.00	37.32		Korea, Rep.	n/a	n/a
53	Nepal	31.90	37.18		Kuwait	n/a	n/a
54	Belarus	31.50	36.65		Mauritius	n/a	n/a
55	Lesotho	31.20	36.25		Mexico	n/a	n/a
56	Nigeria	30.70	35.59		New Zealand	n/a	n/a
56	Tanzania, United Rep.	30.70	35.59		Norway	n/a	n/a
56	Türkiye	30.70	35.59		Oman	n/a	n/a
59	Hungary	29.30	33.73		Panama	n/a	n/a
60	Portugal	29.00	33.33		Qatar	n/a	n/a
61	Armenia	27.50	31.34		Singapore	n/a	n/a
61	Lithuania	27.50	31.34		Sri Lanka	n/a	n/a
63	Zimbabwe	26.40	29.88		Switzerland	n/a	n/a
64	Croatia	26.20	29.61		Trinidad and Tobago	n/a	n/a
65	Namibia	25.40	28.55		United Arab Emirates	n/a	n/a
66	Gambia	25.20	28.29		United Kingdom	n/a	n/a
67	Lao PDR	24.40	27.22		United States of America	n/a	n/a

SOURCE: World Bank, Enterprise Surveys (<https://www.enterprisesurveys.org/en/enterprisesurveys>)

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Albania.....	5.79	100.00	68	Mexico.....	4.11	50.94
2	Switzerland.....	5.78	99.70	69	Lao PDR.....	4.10	50.79
3	United States of America.....	5.72	97.99	70	Hungary.....	4.10	50.69
4	Finland.....	5.49	91.09	71	Cameroon.....	4.09	50.40
5	Denmark.....	5.39	88.31	72	Kenya.....	4.08	50.19
6	Austria.....	5.35	87.16	73	Armenia.....	4.06	49.65
7	Ireland.....	5.26	84.59	74	Poland.....	4.06	49.63
8	Netherlands.....	5.26	84.55	75	Eswatini.....	4.06	49.59
9	Sweden.....	5.25	84.11	76	Colombia.....	4.06	49.51
10	Singapore.....	5.23	83.58	77	Greece.....	4.06	49.48
11	Indonesia.....	5.22	83.22	78	Trinidad and Tobago.....	4.05	49.29
12	Lithuania.....	5.19	82.61	79	Romania.....	4.04	49.03
13	Germany.....	5.16	81.55	80	Jamaica.....	4.02	48.46
14	China.....	5.13	80.76	81	Belarus.....	4.02	48.44
15	Luxembourg.....	5.11	80.05	82	Nigeria.....	4.02	48.39
16	Norway.....	5.09	79.67	83	Tunisia.....	4.02	48.34
17	Canada.....	5.09	79.60	84	Argentina.....	4.02	48.31
18	Qatar.....	5.07	78.90	85	Spain.....	4.00	47.92
19	United Kingdom.....	5.04	78.21	86	Rwanda.....	3.96	46.77
20	Belgium.....	5.03	77.86	87	Zambia.....	3.95	46.46
21	France.....	5.00	76.94	88	Mongolia.....	3.95	46.42
22	United Arab Emirates.....	4.98	76.44	89	Tanzania, United Rep.	3.93	45.90
23	Australia.....	4.98	76.30	90	Cambodia.....	3.92	45.59
24	Saudi Arabia.....	4.97	75.99	91	Russian Federation.....	3.92	45.56
25	Israel.....	4.90	74.06	92	Cabo Verde.....	3.87	44.17
26	Bahrain.....	4.88	73.52	93	Honduras.....	3.87	43.96
27	New Zealand.....	4.87	73.29	94	Serbia.....	3.86	43.74
28	Botswana.....	4.86	72.72	95	Gambia.....	3.86	43.73
29	Philippines.....	4.83	71.86	96	Zimbabwe.....	3.85	43.34
30	Estonia.....	4.80	71.13	97	Malawi.....	3.83	42.80
31	Japan.....	4.79	70.81	98	Algeria.....	3.81	42.42
32	South Africa.....	4.76	69.84	99	Slovakia.....	3.80	41.95
33	Azerbaijan.....	4.73	68.95	100	El Salvador.....	3.80	41.91
34	Iceland.....	4.73	68.94	101	Ecuador.....	3.79	41.78
35	Pakistan.....	4.72	68.84	102	Panama.....	3.78	41.34
36	Slovenia.....	4.72	68.66	103	Mali.....	3.77	41.09
37	Jordan.....	4.68	67.57	104	Uganda.....	3.74	40.14
38	Malaysia.....	4.65	66.81	105	Senegal.....	3.73	39.92
39	Uzbekistan.....	4.64	66.58	106	Ukraine.....	3.73	39.90
40	Viet Nam.....	4.63	66.19	107	Türkiye.....	3.71	39.25
41	Egypt.....	4.61	65.69	108	Nepal.....	3.68	38.55
42	Czech Republic.....	4.60	65.27	109	Ethiopia.....	3.67	38.32
43	Sri Lanka.....	4.59	64.91	110	Peru.....	3.61	36.46
44	Mauritius.....	4.57	64.48	111	Burundi.....	3.61	36.33
45	Italy.....	4.55	63.86	112	Lebanon.....	3.57	35.20
46	Oman.....	4.52	63.04	113	Paraguay.....	3.56	35.00
47	Costa Rica.....	4.51	62.55	114	Croatia.....	3.54	34.53
48	Brunei Darussalam.....	4.49	61.96	115	Morocco.....	3.53	34.06
49	Korea, Rep.	4.47	61.37	116	Montenegro.....	3.53	34.05
50	Malta.....	4.46	61.32	117	Madagascar.....	3.53	34.00
51	Guatemala.....	4.42	60.14	118	India.....	3.52	33.70
52	Portugal.....	4.41	59.78	119	North Macedonia.....	3.51	33.69
53	Georgia.....	4.40	59.37	120	Kazakhstan.....	3.46	32.04
54	Brazil.....	4.39	59.29	121	Chad.....	3.42	31.06
55	Guinea.....	4.38	58.98	122	Bangladesh.....	3.42	30.93
56	Cyprus.....	4.34	57.69	123	Congo, Dem. Rep.	3.41	30.54
57	Uruguay.....	4.30	56.67	124	Nicaragua.....	3.30	27.56
58	Namibia.....	4.26	55.49	125	Bolivia, Plurinational St.	3.23	25.36
59	Ghana.....	4.25	55.17	126	Bosnia and Herzegovina.....	3.22	25.02
60	Latvia.....	4.25	55.01	127	Kyrgyzstan.....	3.21	24.91
61	Chile.....	4.24	54.76	128	Angola.....	3.21	24.73
62	Dominican Republic.....	4.23	54.57	129	Iran, Islamic Rep.	3.20	24.50
63	Bulgaria.....	4.21	53.97	130	Lesotho.....	3.17	23.59
64	Thailand.....	4.20	53.56	131	Mozambique.....	2.98	18.00
65	Kuwait.....	4.17	52.65	132	Burkina Faso.....	2.92	16.30
66	Moldova, Rep.	4.15	52.30	133	Benin.....	2.85	14.22
67	Côte d'Ivoire.....	4.15	52.20	134	Mauritania.....	2.36	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark.....	6.04	100.00	68	Trinidad and Tobago.....	4.39	44.84
2	Norway.....	5.79	91.78	69	Cyprus.....	4.38	44.66
3	United States of America.....	5.72	89.38	70	Mauritius.....	4.38	44.53
4	Botswana.....	5.68	88.08	71	Thailand.....	4.38	44.47
5	Finland.....	5.67	87.57	72	Bulgaria.....	4.36	43.98
6	Netherlands.....	5.57	84.32	73	Belarus.....	4.36	43.89
7	Ireland.....	5.41	78.93	74	Uganda.....	4.34	43.23
8	Iceland.....	5.39	78.38	75	Greece.....	4.33	43.12
9	Australia.....	5.38	78.11	76	Cambodia.....	4.32	42.64
10	United Kingdom.....	5.36	77.41	77	Spain.....	4.30	42.00
11	Indonesia.....	5.34	76.75	78	Pakistan.....	4.28	41.44
12	Viet Nam.....	5.26	73.90	79	Slovakia.....	4.28	41.36
13	New Zealand.....	5.23	73.03	80	Guinea.....	4.27	40.92
14	Canada.....	5.21	72.40	81	Uruguay.....	4.25	40.27
15	Switzerland.....	5.15	70.27	82	Cabo Verde.....	4.23	39.62
16	United Arab Emirates.....	5.14	70.00	83	Malawi.....	4.23	39.52
17	Lithuania.....	5.10	68.52	84	Portugal.....	4.22	39.31
18	Estonia.....	5.06	67.26	85	Kuwait.....	4.19	38.44
19	Israel.....	5.06	67.18	86	Romania.....	4.19	38.38
20	Singapore.....	5.04	66.51	87	Guatemala.....	4.18	37.83
21	Sweden.....	5.02	66.06	88	Mexico.....	4.17	37.67
22	Georgia.....	5.02	66.00	89	Panama.....	4.16	37.31
23	Albania.....	4.98	64.79	90	Lao PDR.....	4.15	37.05
24	Saudi Arabia.....	4.95	63.75	91	Latvia.....	4.15	37.02
25	Belgium.....	4.95	63.70	92	Peru.....	4.14	36.48
26	Brunei Darussalam.....	4.94	63.34	93	Poland.....	4.12	36.10
27	Qatar.....	4.94	63.21	94	Nepal.....	4.07	34.19
28	Benin.....	4.94	63.16	95	Moldova, Rep.....	4.06	34.00
29	Czech Republic.....	4.93	63.07	96	Bangladesh.....	4.05	33.63
30	Jamaica.....	4.93	62.92	97	Kazakhstan.....	4.05	33.46
31	China.....	4.92	62.47	98	Dominican Republic.....	4.04	33.27
32	Bahrain.....	4.91	62.39	99	Argentina.....	4.03	33.10
33	Malaysia.....	4.91	62.36	100	Burundi.....	4.03	32.88
34	Uzbekistan.....	4.91	62.27	101	Côte d'Ivoire.....	4.02	32.74
35	Austria.....	4.91	62.15	102	Kyrgyzstan.....	4.00	32.04
36	Germany.....	4.90	61.98	103	Ecuador.....	3.98	31.21
37	Gambia.....	4.85	60.31	104	El Salvador.....	3.97	31.08
38	Oman.....	4.84	59.97	105	Madagascar.....	3.97	31.08
39	Philippines.....	4.81	58.94	106	Ukraine.....	3.97	31.01
40	Luxembourg.....	4.78	58.06	107	Honduras.....	3.96	30.55
41	France.....	4.78	58.02	108	Croatia.....	3.90	28.51
42	South Africa.....	4.77	57.79	109	Armenia.....	3.88	27.89
43	Namibia.....	4.69	55.04	110	Montenegro.....	3.84	26.45
44	Italy.....	4.69	55.04	111	Lebanon.....	3.81	25.75
45	Sri Lanka.....	4.68	54.76	112	Cameroon.....	3.73	23.05
46	Azerbaijan.....	4.65	53.49	113	Mongolia.....	3.72	22.58
47	Costa Rica.....	4.64	53.30	114	Nicaragua.....	3.71	22.13
48	Korea, Rep.....	4.64	53.24	115	Bosnia and Herzegovina.....	3.70	21.89
49	Kenya.....	4.62	52.71	116	North Macedonia.....	3.68	21.14
50	Brazil.....	4.61	52.27	117	Tunisia.....	3.67	20.87
51	Jordan.....	4.60	52.00	118	Senegal.....	3.65	20.37
52	Egypt.....	4.59	51.48	119	India.....	3.63	19.68
53	Zimbabwe.....	4.58	51.31	120	Algeria.....	3.62	19.25
54	Malta.....	4.57	50.87	121	Türkiye.....	3.57	17.51
55	Russian Federation.....	4.56	50.74	122	Mali.....	3.57	17.44
56	Nigeria.....	4.56	50.67	123	Morocco.....	3.54	16.47
57	Japan.....	4.55	50.32	124	Paraguay.....	3.51	15.51
58	Slovenia.....	4.53	49.47	125	Bolivia, Plurinational St.....	3.43	12.97
59	Hungary.....	4.50	48.73	126	Mozambique.....	3.43	12.95
60	Tanzania, United Rep.....	4.50	48.50	127	Congo, Dem. Rep.....	3.41	12.35
61	Ghana.....	4.49	48.15	128	Mauritania.....	3.35	10.19
62	Colombia.....	4.48	48.03	129	Chad.....	3.34	9.95
63	Chile.....	4.47	47.51	130	Iran, Islamic Rep.....	3.32	9.15
64	Eswatini.....	4.46	47.35	131	Ethiopia.....	3.26	7.39
65	Rwanda.....	4.46	47.22	132	Burkina Faso.....	3.22	5.79
66	Serbia.....	4.46	47.19	133	Angola.....	3.21	5.71
67	Zambia.....	4.42	45.89	134	Lesotho.....	3.04	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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 2012.

3.3.2 Youth inclusion

Proportion of youth (aged 15–24 years) not in education, employment, or training (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Japan.....	3.14	100.00	68	North Macedonia.....	18.45	62.60
2	Madagascar.....	3.79	98.41	69	Paraguay.....	18.59	62.26
3	Iceland.....	4.88	95.75	70	Brunei Darussalam.....	18.68	62.04
4	Sweden.....	5.07	95.29	71	Saudi Arabia.....	19.22	60.72
5	Netherlands.....	5.11	95.19	72	Malawi.....	19.41	60.26
6	Cambodia.....	6.19	92.55	73	Kenya.....	19.67	59.62
7	Singapore.....	6.20	92.53	74	Italy.....	19.76	59.40
8	Norway.....	6.32	92.23	75	Korea, Rep.....	20.84	56.77
9	Slovenia.....	6.60	91.55	76	Algeria.....	20.95	56.50
10	Czech Republic.....	6.61	91.52	77	Brazil.....	20.97	56.45
11	Denmark.....	7.08	90.38	78	Montenegro.....	21.09	56.16
12	Belgium.....	7.42	89.55	79	Sri Lanka.....	21.51	55.13
13	Germany.....	7.52	89.30	80	Angola.....	21.69	54.69
14	Portugal.....	7.61	89.08	81	Côte d'Ivoire.....	21.92	54.13
15	Finland.....	7.65	88.98	82	Indonesia.....	22.34	53.10
16	Belarus.....	7.73	88.79	83	Peru.....	22.78	52.03
16	Ireland.....	7.73	88.79	84	Ghana.....	23.00	51.49
18	Latvia.....	8.63	86.59	85	El Salvador.....	23.46	50.37
19	Luxembourg.....	8.67	86.49	86	Armenia.....	23.49	50.29
20	Australia.....	8.94	85.83	87	Lebanon.....	23.52	50.22
21	Kazakhstan.....	9.49	84.49	88	Colombia.....	24.42	48.02
22	Switzerland.....	9.71	83.95	89	Nicaragua.....	24.49	47.85
23	United Kingdom.....	10.52	81.97	90	Türkiye.....	24.75	47.22
24	Hungary.....	10.61	81.75	91	Georgia.....	24.91	46.82
25	United Arab Emirates.....	10.72	81.49	92	Lao PDR.....	25.80	44.65
26	Estonia.....	10.92	81.00	93	Albania.....	25.82	44.60
27	Spain.....	10.97	80.87	94	Jamaica.....	26.05	44.04
28	Bolivia, Plurinational St.....	10.98	80.85	95	Honduras.....	26.80	42.21
29	Slovakia.....	11.08	80.61	96	Dominican Republic.....	27.33	40.91
30	Burundi.....	11.17	80.39	97	Bangladesh.....	27.39	40.77
31	Poland.....	11.20	80.31	98	Iran, Islamic Rep.....	27.47	40.57
32	United States of America.....	11.24	80.21	99	Cabo Verde.....	27.99	39.30
33	Lithuania.....	11.32	80.02	100	India.....	28.01	39.25
33	Viet Nam.....	11.32	80.02	101	Egypt.....	28.74	37.47
35	France.....	11.46	79.68	102	Rwanda.....	29.05	36.71
36	Canada.....	11.83	78.77	103	Gambia.....	29.44	35.76
37	New Zealand.....	11.85	78.72	104	Guatemala.....	29.55	35.49
38	Greece.....	12.05	78.24	105	Zimbabwe.....	30.43	33.34
39	Austria.....	12.16	77.97	106	Mali.....	30.86	32.29
40	Russian Federation.....	12.41	77.36	107	Zambia.....	31.36	31.07
41	Croatia.....	12.69	76.67	108	Congo, Dem. Rep.....	31.37	31.05
42	Malta.....	13.50	74.69	109	Tunisia.....	31.50	30.73
43	Malaysia.....	13.63	74.38	110	Namibia.....	31.88	29.80
44	Cyprus.....	13.77	74.04	111	Mauritius.....	32.42	28.48
45	Uganda.....	13.80	73.96	112	Jordan.....	32.85	27.43
46	Bulgaria.....	14.02	73.42	113	South Africa.....	32.92	27.26
47	Uruguay.....	14.26	72.84	114	Senegal.....	33.90	24.87
48	Tanzania, United Rep.....	14.35	72.62	115	Guinea.....	34.30	23.89
49	Thailand.....	14.75	71.64	116	Pakistan.....	34.56	23.25
50	Chile.....	14.77	71.59	117	Nepal.....	34.76	22.77
51	Moldova, Rep.....	14.96	71.13	118	Benin.....	35.10	21.93
52	Trinidad and Tobago.....	15.46	69.91	119	Lesotho.....	35.15	21.81
53	Kyrgyzstan.....	15.89	68.86	120	Eswatini.....	35.50	20.96
54	Serbia.....	16.05	68.47	121	Nigeria.....	36.65	18.15
55	Argentina.....	16.12	68.30	122	Botswana.....	37.00	17.29
56	Ukraine.....	16.47	67.44	123	Chad.....	37.05	17.17
57	Israel.....	16.76	66.73	124	Burkina Faso.....	41.00	7.52
58	Cameroon.....	17.01	66.12	125	Mauritania.....	44.08	0.00
59	Costa Rica.....	17.18	65.71		Azerbaijan.....	n/a	n/a
59	Mongolia.....	17.18	65.71		Bahrain.....	n/a	n/a
61	Mexico.....	17.32	65.36		China.....	n/a	n/a
62	Philippines.....	17.47	65.00		Kuwait.....	n/a	n/a
63	Ethiopia.....	17.53	64.85		Morocco.....	n/a	n/a
64	Panama.....	17.56	64.78		Mozambique.....	n/a	n/a
65	Bosnia and Herzegovina.....	17.62	64.63		Oman.....	n/a	n/a
66	Ecuador.....	17.96	63.80		Qatar.....	n/a	n/a
67	Romania.....	18.02	63.65		Uzbekistan.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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3.3.3 Use of virtual social networks

Social media users (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	United Arab Emirates	105.50	100.00	68	Poland	66.30	61.87
2	Bahrain	98.70	93.39	69	Bulgaria	65.70	61.28
3	Qatar	96.80	91.54	70	Paraguay	65.60	61.19
4	Brunei Darussalam	94.40	89.20	71	Dominican Republic	65.50	61.09
5	Korea, Rep.	92.00	86.87	71	Trinidad and Tobago	65.50	61.09
6	Lebanon	90.50	85.41	73	Cambodia	65.00	60.60
6	Oman	90.50	85.41	74	Panama	64.20	59.82
8	Netherlands	88.10	83.07	75	El Salvador	63.00	58.66
9	Cyprus	87.60	82.59	76	Luxembourg	62.10	57.78
10	Canada	85.70	80.74	77	Bolivia, Plurinational St.	61.00	56.71
11	Spain	85.60	80.64	78	Kazakhstan	60.80	56.52
12	Germany	85.10	80.16	79	Indonesia	60.40	56.13
13	Norway	84.70	79.77	80	Jordan	58.40	54.18
13	Singapore	84.70	79.77	80	Tunisia	58.40	54.18
15	Chile	84.40	79.47	82	North Macedonia	57.50	53.31
15	United Kingdom	84.40	79.47	83	Morocco	56.60	52.43
17	Denmark	83.80	78.89	84	Albania	56.40	52.24
18	Kuwait	83.70	78.79	85	Bosnia and Herzegovina	55.90	51.75
19	Finland	83.30	78.40	86	Iran, Islamic Rep.	54.00	49.90
20	Switzerland	83.10	78.21	87	Algeria	52.90	48.83
21	Iceland	82.50	77.63	88	Jamaica	49.50	45.53
22	Sweden	82.20	77.33	89	Nicaragua	49.30	45.33
23	Austria	82.00	77.14	90	Guatemala	48.40	44.46
24	Uruguay	81.80	76.95	91	Cabo Verde	48.30	44.36
25	Georgia	81.70	76.85	92	Moldova, Rep.	45.70	41.83
26	New Zealand	81.40	76.56	93	Belarus	44.90	41.05
27	Australia	81.00	76.17	94	Lao PDR	44.20	40.37
28	Belgium	80.90	76.07	95	South Africa	42.90	39.11
29	Estonia	80.80	75.97	96	Honduras	41.80	38.04
30	France	80.50	75.68	97	Egypt	41.40	37.65
31	Latvia	80.40	75.58	98	Botswana	41.30	37.55
32	Ireland	79.80	75.00	99	Kyrgyzstan	41.10	37.35
33	Argentina	79.70	74.90	100	Nepal	41.00	37.26
34	Saudi Arabia	79.30	74.51	101	Azerbaijan	40.00	36.28
35	Malta	78.90	74.12	102	Sri Lanka	32.90	29.38
36	Malaysia	78.50	73.74	103	India	32.80	29.28
36	Portugal	78.50	73.74	104	Pakistan	30.10	26.65
38	Lithuania	77.60	72.86	105	Namibia	28.20	24.81
39	Israel	77.50	72.76	106	Eswatini	27.90	24.51
40	Slovenia	77.40	72.67	107	Bangladesh	26.00	22.67
41	Czech Republic	76.90	72.18	108	Lesotho	21.10	17.90
42	Montenegro	75.40	70.72	109	Ghana	19.50	16.34
43	Italy	74.50	69.84	110	Kenya	19.30	16.15
44	Japan	74.40	69.75	111	Côte d'Ivoire	17.90	14.79
45	Colombia	74.00	69.36	112	Senegal	17.40	14.30
45	Ukraine	74.00	69.36	113	Mauritania	17.10	14.01
47	Costa Rica	73.70	69.07	114	Uzbekistan	15.30	12.26
48	Ecuador	73.50	68.87	115	Nigeria	14.30	11.28
49	Mexico	73.40	68.77	116	Guinea	13.90	10.89
50	Peru	73.30	68.68	117	Cameroon	13.80	10.80
50	Russian Federation	73.30	68.68	118	Gambia	13.30	10.31
52	Croatia	73.10	68.48	118	Zambia	13.30	10.31
52	Türkiye	73.10	68.48	120	Angola	10.20	7.30
54	Mongolia	73.00	68.39	121	Madagascar	9.80	6.91
55	Thailand	72.80	68.19	122	Benin	9.60	6.71
56	Philippines	72.50	67.90	123	Zimbabwe	9.10	6.23
56	United States of America	72.50	67.90	124	Burkina Faso	8.90	6.03
58	Greece	72.30	67.70	125	Mozambique	7.50	4.67
59	Hungary	72.20	67.61	126	Mali	7.40	4.57
60	China	72.00	67.41	126	Tanzania, United Rep.	7.40	4.57
61	Slovakia	71.10	66.54	128	Rwanda	5.70	2.92
62	Viet Nam	71.00	66.44	129	Burundi	5.50	2.72
63	Brazil	70.60	66.05	130	Ethiopia	5.10	2.33
64	Serbia	69.80	65.27	131	Congo, Dem. Rep.	4.90	2.14
65	Mauritius	67.30	62.84	132	Uganda	4.30	1.56
65	Romania	67.30	62.84	133	Malawi	3.80	1.07
67	Armenia	66.60	62.16	134	Chad	2.70	0.00

SOURCE: We Are Social and Hootsuite (2023) Digital 2023 report series (<https://wearesocial.com/digital-2023>)

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3.3.4 Use of virtual professional networks

LinkedIn's potential advertising audience (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Iceland	89.20	100.00	68	North Macedonia	19.00	20.50
2	United Arab Emirates	84.30	94.45	69	Philippines	17.40	18.69
3	United States of America	75.40	84.37	70	Cabo Verde	17.10	18.35
4	Singapore	72.00	80.52	71	El Salvador	16.80	18.01
5	Ireland	70.00	78.26	72	Bolivia, Plurinational St.	16.70	17.89
6	Netherlands	69.90	78.14	73	Hungary	16.60	17.78
7	Australia	67.90	75.88	74	Poland	16.20	17.33
8	Canada	66.90	74.75	75	Morocco	15.90	16.99
9	Luxembourg	66.20	73.95	76	Paraguay	15.80	16.87
10	United Kingdom	65.40	73.05	77	Slovakia	15.40	16.42
11	Denmark	65.30	72.93	78	Armenia	15.20	16.19
12	New Zealand	61.80	68.97	79	Ukraine	14.60	15.52
13	Malta	59.90	66.82	80	Bosnia and Herzegovina	13.20	13.93
14	Sweden	56.20	62.63	81	Eswatini	12.50	13.14
15	Norway	55.10	61.38	82	Mongolia	12.10	12.68
16	Switzerland	54.20	60.36	83	Indonesia	11.90	12.46
17	Qatar	54.10	60.25	83	Nicaragua	11.90	12.46
18	France	50.70	56.40	85	Moldova, Rep.	11.80	12.34
19	Belgium	50.30	55.95	86	Guatemala	11.70	12.23
20	Portugal	50.00	55.61	87	Kenya	11.60	12.12
21	Uruguay	45.60	50.62	88	Egypt	11.40	11.89
22	Chile	45.00	49.94	88	Sri Lanka	11.40	11.89
23	Bahrain	43.30	48.02	90	Algeria	10.90	11.33
24	Spain	43.00	47.68	90	Ghana	10.90	11.33
25	Trinidad and Tobago	42.30	46.89	92	Belarus	10.50	10.87
26	Cyprus	40.30	44.62	93	Senegal	10.20	10.53
27	Costa Rica	38.10	42.13	94	Honduras	10.00	10.31
28	Finland	37.60	41.56	94	India	10.00	10.31
28	Israel	37.60	41.56	96	Kazakhstan	9.40	9.63
28	Mauritius	37.60	41.56	97	Azerbaijan	8.90	9.06
31	Brazil	36.20	39.98	98	Zimbabwe	8.70	8.83
32	Panama	35.90	39.64	99	Korea, Rep.	7.90	7.93
33	Italy	34.00	37.49	100	Côte d'Ivoire	7.40	7.36
34	Argentina	33.30	36.69	101	Gambia	7.30	7.25
35	Brunei Darussalam	33.10	36.47	102	Viet Nam	7.20	7.13
36	Peru	32.70	36.01	103	Thailand	7.00	6.91
37	Jamaica	31.40	34.54	104	Pakistan	6.80	6.68
38	Colombia	31.10	34.20	105	Nigeria	6.70	6.57
39	Ecuador	29.50	32.39	106	Cameroon	6.60	6.46
40	Latvia	29.40	32.28	107	Lesotho	6.40	6.23
41	Estonia	29.10	31.94	108	Zambia	6.30	6.12
42	Kuwait	28.60	31.37	109	Nepal	6.00	5.78
42	Saudi Arabia	28.60	31.37	110	Benin	5.80	5.55
44	Lithuania	28.20	30.92	111	China	5.30	4.98
44	Malaysia	28.20	30.92	112	Bangladesh	5.00	4.64
46	Lebanon	27.50	30.12	113	Cambodia	4.80	4.42
46	South Africa	27.50	30.12	114	Kyrgyzstan	4.70	4.30
48	Austria	27.00	29.56	115	Uganda	4.30	3.85
49	Czech Republic	25.90	28.31	116	Mauritania	4.00	3.51
50	Slovenia	25.30	27.63	117	Angola	3.90	3.40
51	Oman	24.70	26.95	118	Rwanda	3.80	3.28
52	Croatia	24.60	26.84	119	Tanzania, United Rep.	3.30	2.72
53	Greece	24.40	26.61	120	Japan	3.20	2.60
54	Albania	22.80	24.80	121	Guinea	2.90	2.27
55	Montenegro	22.40	24.35	121	Lao PDR	2.90	2.27
56	Romania	22.20	24.12	121	Mozambique	2.90	2.27
57	Germany	21.60	23.44	124	Mali	2.80	2.15
58	Mexico	21.00	22.76	125	Burkina Faso	2.50	1.81
58	Türkiye	21.00	22.76	126	Malawi	2.20	1.47
60	Botswana	20.70	22.42	127	Uzbekistan	2.00	1.25
60	Namibia	20.70	22.42	128	Madagascar	1.90	1.13
62	Serbia	20.20	21.86	129	Ethiopia	1.30	0.45
63	Jordan	19.90	21.52	130	Burundi	1.10	0.23
64	Bulgaria	19.70	21.29	131	Congo, Dem. Rep.	1.00	0.11
65	Dominican Republic	19.60	21.18	132	Chad	0.90	0.00
66	Tunisia	19.30	20.84		Iran, Islamic Rep.	n/a	n/a
67	Georgia	19.20	20.72		Russian Federation	n/a	n/a

SOURCE: We Are Social and Hootsuite (2023) Digital 2023 report series (<https://wearesocial.com/digital-2023>)

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Pillar 4

Retain

4.1.1 Pension coverage

Population above statutory pensionable age receiving a pension (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Albania.....	100.00	100.00	68	Brazil.....	79.30	79.09
1	Australia.....	100.00	100.00	69	Moldova, Rep.....	75.20	74.95
1	Austria.....	100.00	100.00	70	Bahrain.....	73.20	72.93
1	Belarus.....	100.00	100.00	71	Ecuador.....	72.90	72.63
1	Belgium.....	100.00	100.00	72	Azerbaijan.....	72.80	72.53
1	Bolivia, Plurinational St.....	100.00	100.00	73	Iceland.....	71.40	71.11
1	Botswana.....	100.00	100.00	74	Bosnia and Herzegovina.....	69.50	69.19
1	Brunei Darussalam.....	100.00	100.00	75	North Macedonia.....	68.60	68.28
1	Canada.....	100.00	100.00	76	Armenia.....	65.20	64.85
1	Chile.....	100.00	100.00	77	Panama.....	63.90	63.54
1	China.....	100.00	100.00	78	Bangladesh.....	56.90	56.46
1	Denmark.....	100.00	100.00	79	Costa Rica.....	56.20	55.76
1	Estonia.....	100.00	100.00	80	Serbia.....	53.50	53.03
1	Eswatini.....	100.00	100.00	81	Mozambique.....	52.50	52.02
1	Finland.....	100.00	100.00	82	Oman.....	46.90	46.36
1	France.....	100.00	100.00	83	Jordan.....	46.10	45.56
1	Germany.....	100.00	100.00	84	Colombia.....	45.70	45.15
1	Ireland.....	100.00	100.00	85	India.....	42.50	41.92
1	Israel.....	100.00	100.00	86	Viet Nam.....	40.90	40.30
1	Japan.....	100.00	100.00	87	Jamaica.....	40.30	39.70
1	Korea, Rep.....	100.00	100.00	88	Egypt.....	38.00	37.37
1	Kyrgyzstan.....	100.00	100.00	89	Peru.....	35.70	35.05
1	Luxembourg.....	100.00	100.00	89	Sri Lanka.....	35.70	35.05
1	Malta.....	100.00	100.00	91	Saudi Arabia.....	33.20	32.53
1	Mauritius.....	100.00	100.00	92	Singapore.....	33.10	32.42
1	Mexico.....	100.00	100.00	93	Senegal.....	29.90	29.19
1	Mongolia.....	100.00	100.00	94	Nicaragua.....	28.60	27.88
1	Namibia.....	100.00	100.00	95	Kuwait.....	26.40	25.66
1	Netherlands.....	100.00	100.00	96	El Salvador.....	24.50	23.74
1	New Zealand.....	100.00	100.00	97	United Arab Emirates.....	22.60	21.82
1	Norway.....	100.00	100.00	98	Zimbabwe.....	22.00	21.21
1	Russian Federation.....	100.00	100.00	99	Iran, Islamic Rep.....	21.30	20.51
1	Slovenia.....	100.00	100.00	100	Philippines.....	20.50	19.70
1	Sweden.....	100.00	100.00	101	Qatar.....	19.40	18.59
1	Switzerland.....	100.00	100.00	102	Ghana.....	19.00	18.18
1	Türkiye.....	100.00	100.00	103	Malaysia.....	18.60	17.78
1	United Kingdom.....	100.00	100.00	104	Cameroon.....	18.30	17.47
1	United States of America.....	100.00	100.00	105	Pakistan.....	17.40	16.57
1	Uruguay.....	100.00	100.00	106	Gambia.....	17.00	16.16
1	Uzbekistan.....	100.00	100.00	107	Guatemala.....	15.60	14.75
41	Kazakhstan.....	99.60	99.60	108	Congo, Dem. Rep.....	15.00	14.14
42	Spain.....	98.20	98.18	109	Indonesia.....	14.80	13.94
43	Cyprus.....	97.80	97.78	110	Angola.....	14.50	13.64
44	Lithuania.....	97.10	97.07	111	Kenya.....	13.20	12.32
45	Ukraine.....	96.20	96.16	112	Honduras.....	11.90	11.01
46	Greece.....	95.80	95.76	113	Uganda.....	11.20	10.30
47	Italy.....	94.40	94.34	114	Benin.....	11.00	10.10
48	Bulgaria.....	94.00	93.94	114	Nigeria.....	11.00	10.10
48	Lesotho.....	94.00	93.94	116	Lebanon.....	9.80	8.89
50	Romania.....	93.50	93.43	117	Mauritania.....	9.30	8.38
51	Latvia.....	92.00	91.92	118	Zambia.....	7.80	6.87
52	Czech Republic.....	91.30	91.21	119	Côte d'Ivoire.....	7.70	6.77
53	Trinidad and Tobago.....	91.10	91.01	120	Tanzania, United Rep.....	7.40	6.46
54	Georgia.....	90.90	90.81	121	Dominican Republic.....	7.30	6.36
55	Montenegro.....	90.60	90.51	121	Mali.....	7.30	6.36
55	Slovakia.....	90.60	90.51	123	Burkina Faso.....	6.70	5.76
57	Hungary.....	90.50	90.40	124	Cambodia.....	6.60	5.66
58	Portugal.....	90.40	90.30	125	Lao PDR.....	6.30	5.35
59	Croatia.....	89.80	89.70	126	Burundi.....	4.00	3.03
60	Thailand.....	89.10	88.99	127	Ethiopia.....	3.90	2.93
61	Paraguay.....	87.10	86.97	128	Rwanda.....	3.10	2.12
62	Cabo Verde.....	85.60	85.45	129	Malawi.....	2.30	1.31
63	Tunisia.....	85.40	85.25	130	Guinea.....	2.00	1.01
64	Argentina.....	84.50	84.34	131	Chad.....	1.00	0.00
65	Poland.....	83.60	83.43		Algeria.....	n/a	n/a
66	South Africa.....	81.50	81.31		Madagascar.....	n/a	n/a
67	Nepal.....	80.20	80.00		Morocco.....	n/a	n/a

SOURCE: International Labour Organization, Social Security Inquiry (SSI). Sourced from UN Global SDG Indicators Database (<https://unstats.un.org/sdgs/dataportal>)
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 2012.

4.1.2 Social protection

Average answer to the question: In your country, to what extent do all members of the population have sufficient access to safety nets and social services in terms of unemployment income, re-training and re-employment support [1 = not at all—service is difficult or expensive to access for all; 7 = to a great extent—service is easy and affordable to access for all] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland	6.22	100.00	68	Kazakhstan	3.72	50.42
2	Norway	6.20	99.73	69	Türkiye	3.70	50.05
3	Finland	6.18	99.27	70	Poland	3.62	48.42
4	Austria	6.08	97.28	71	Armenia	3.59	47.75
5	Luxembourg	5.97	95.01	72	Belarus	3.56	47.31
6	Denmark	5.90	93.79	73	Montenegro	3.53	46.68
7	France	5.87	93.14	74	Cabo Verde	3.51	46.28
8	Iceland	5.76	90.93	75	Serbia	3.48	45.61
9	Slovenia	5.67	89.10	76	India	3.46	45.29
10	Netherlands	5.63	88.35	77	Mongolia	3.45	45.07
11	Lithuania	5.54	86.63	78	Tanzania, United Rep.	3.43	44.64
12	Czech Republic	5.34	82.60	79	Thailand	3.43	44.58
13	Saudi Arabia	5.34	82.54	80	Iran, Islamic Rep.	3.42	44.55
14	Germany	5.31	82.09	81	Ethiopia	3.41	44.35
15	Ireland	5.29	81.62	82	Egypt	3.39	43.83
16	Estonia	5.23	80.41	83	Sri Lanka	3.36	43.20
17	New Zealand	5.21	80.11	84	Lao PDR	3.33	42.65
18	Oman	5.21	80.01	85	Jamaica	3.31	42.27
19	Sweden	5.20	79.85	86	Uganda	3.28	41.72
20	United States of America	5.11	78.11	87	Argentina	3.24	40.80
21	Spain	5.10	77.81	88	Kyrgyzstan	3.12	38.45
22	Azerbaijan	5.08	77.44	89	Burkina Faso	3.11	38.37
23	Belgium	5.07	77.23	90	Mozambique	3.02	36.51
24	Singapore	5.06	77.11	91	Eswatini	3.01	36.31
25	China	5.05	76.82	92	North Macedonia	2.98	35.65
26	Uruguay	5.02	76.25	93	Trinidad and Tobago	2.96	35.26
27	Australia	5.00	75.81	94	Colombia	2.95	35.21
28	Korea, Rep.	5.00	75.75	95	Mali	2.93	34.77
29	Japan	4.95	74.90	96	South Africa	2.92	34.57
30	Israel	4.84	72.72	97	Guinea	2.86	33.38
31	Malta	4.83	72.36	98	Cambodia	2.78	31.79
32	Portugal	4.82	72.16	99	Costa Rica	2.78	31.77
33	United Kingdom	4.79	71.75	100	Côte d'Ivoire	2.78	31.70
34	Bahrain	4.79	71.60	101	Madagascar	2.77	31.54
35	Canada	4.78	71.55	102	Rwanda	2.76	31.40
36	Indonesia	4.77	71.22	103	Ecuador	2.71	30.33
37	Latvia	4.68	69.54	104	Philippines	2.69	29.99
38	Ukraine	4.63	68.41	105	Zambia	2.69	29.92
39	Croatia	4.54	66.70	106	Nepal	2.69	29.87
40	Uzbekistan	4.53	66.49	107	Ghana	2.68	29.78
41	Slovakia	4.52	66.35	108	Panama	2.66	29.27
42	Albania	4.52	66.21	109	Bosnia and Herzegovina	2.64	28.96
43	United Arab Emirates	4.49	65.78	110	Mauritania	2.59	27.99
44	Malaysia	4.40	63.83	111	Cameroon	2.58	27.86
45	Greece	4.36	63.19	112	Bangladesh	2.52	26.48
46	Italy	4.36	63.18	113	Zimbabwe	2.48	25.76
47	Russian Federation	4.35	62.94	114	Namibia	2.44	24.94
48	Hungary	4.26	61.22	115	Morocco	2.30	22.26
49	Romania	4.26	61.14	116	Senegal	2.28	21.81
50	Cyprus	4.26	61.10	117	Dominican Republic	2.26	21.39
51	Kuwait	4.25	60.98	118	Mexico	2.23	20.87
52	Bulgaria	4.21	60.08	119	Guatemala	2.20	20.29
53	Qatar	4.16	59.19	120	Kenya	2.20	20.16
54	Viet Nam	4.15	58.86	121	Malawi	2.15	19.18
55	Jordan	4.13	58.47	122	Tunisia	2.08	17.80
56	Pakistan	4.11	58.07	123	Peru	2.05	17.21
57	Chile	4.00	55.97	124	Chad	2.00	16.26
58	Brunei Darussalam	4.00	55.97	125	Paraguay	1.93	14.76
59	Georgia	3.96	55.22	126	Nigeria	1.84	13.08
60	Burundi	3.91	54.21	127	El Salvador	1.81	12.39
61	Mauritius	3.91	54.10	128	Nicaragua	1.79	12.12
62	Algeria	3.88	53.51	129	Bolivia, Plurinational St.	1.76	11.40
63	Botswana	3.85	53.05	130	Honduras	1.74	11.14
64	Lesotho	3.84	52.84	131	Angola	1.57	7.66
65	Gambia	3.80	52.10	132	Congo, Dem. Rep.	1.51	6.61
66	Brazil	3.80	51.99	133	Lebanon	1.33	3.00
67	Moldova, Rep.	3.77	51.39	134	Benin	1.18	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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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	Brazil.....	3.37	38.76
2	United States of America.....	5.81	97.72	69	Tanzania, United Rep.	3.35	38.36
3	United Arab Emirates.....	5.52	90.94	70	Ecuador.....	3.34	38.01
4	Singapore.....	5.45	89.12	71	Viet Nam.....	3.31	37.41
5	Luxembourg.....	5.41	88.13	72	Spain.....	3.30	37.17
6	Netherlands.....	5.27	84.75	73	Jamaica.....	3.25	36.00
7	United Kingdom.....	5.27	84.71	74	Malawi.....	3.25	35.95
8	Germany.....	5.17	82.40	75	South Africa.....	3.25	35.92
9	Malaysia.....	5.10	80.55	76	Kazakhstan.....	3.21	35.05
10	Iceland.....	5.05	79.51	77	Georgia.....	3.20	34.85
11	Norway.....	5.05	79.42	78	Montenegro.....	3.17	33.97
12	Sweden.....	5.01	78.46	79	Zambia.....	3.17	33.96
13	Finland.....	4.97	77.44	80	Poland.....	3.16	33.71
14	Oman.....	4.96	77.28	81	Dominican Republic.....	3.13	32.95
15	Canada.....	4.95	76.93	82	Senegal.....	3.12	32.68
16	Chile.....	4.90	75.91	83	Bangladesh.....	3.11	32.65
17	Qatar.....	4.90	75.88	84	Morocco.....	3.09	32.10
18	Australia.....	4.74	71.86	85	Armenia.....	3.08	31.79
19	Ireland.....	4.73	71.83	86	Slovenia.....	3.08	31.77
20	Rwanda.....	4.72	71.59	87	Nicaragua.....	3.07	31.59
21	Denmark.....	4.72	71.40	88	Côte d'Ivoire.....	3.05	31.11
22	Israel.....	4.71	71.36	89	Nigeria.....	3.04	30.90
23	India.....	4.70	71.11	90	Eswatini.....	3.04	30.75
24	Saudi Arabia.....	4.58	68.06	91	Uruguay.....	3.00	29.96
25	Korea, Rep.....	4.56	67.71	92	Egypt.....	2.99	29.77
26	Azerbaijan.....	4.53	67.01	93	Lebanon.....	2.98	29.40
27	Indonesia.....	4.46	65.27	94	Mali.....	2.98	29.34
28	New Zealand.....	4.46	65.16	95	Mozambique.....	2.95	28.76
29	Bahrain.....	4.43	64.55	96	Burkina Faso.....	2.94	28.52
30	Malta.....	4.38	63.15	97	Italy.....	2.91	27.75
31	Costa Rica.....	4.37	62.92	98	Uganda.....	2.90	27.56
32	China.....	4.33	62.12	99	Latvia.....	2.89	27.32
33	Panama.....	4.29	60.97	100	Sri Lanka.....	2.89	27.18
34	Austria.....	4.26	60.32	101	Türkiye.....	2.86	26.53
35	Gambia.....	4.17	58.08	102	Madagascar.....	2.83	25.82
36	Belgium.....	4.11	56.74	103	Cameroon.....	2.73	23.49
37	Thailand.....	4.08	55.93	104	Bolivia, Plurinational St.....	2.73	23.39
38	Kenya.....	4.06	55.54	105	Iran, Islamic Rep.....	2.67	21.90
39	Philippines.....	4.05	55.37	106	Lithuania.....	2.67	21.88
40	Japan.....	4.04	55.01	107	Congo, Dem. Rep.....	2.67	21.88
41	Ghana.....	4.01	54.29	108	Nepal.....	2.66	21.78
42	Pakistan.....	3.98	53.50	109	Albania.....	2.63	21.07
43	Cyprus.....	3.87	50.99	110	Hungary.....	2.63	21.04
44	Guatemala.....	3.81	49.51	111	Guinea.....	2.63	20.93
45	Namibia.....	3.76	48.39	112	Chad.....	2.61	20.48
46	Lao PDR.....	3.76	48.38	113	Tunisia.....	2.60	20.32
47	Czech Republic.....	3.76	48.32	114	Bulgaria.....	2.58	19.84
48	Argentina.....	3.72	47.26	115	Kyrgyzstan.....	2.56	19.32
49	Botswana.....	3.63	45.19	116	Angola.....	2.55	19.13
50	Lesotho.....	3.57	43.74	117	Algeria.....	2.52	18.26
51	Russian Federation.....	3.56	43.38	118	Ukraine.....	2.50	17.86
52	Kuwait.....	3.55	43.31	119	Burundi.....	2.50	17.84
53	Jordan.....	3.55	43.24	120	Slovakia.....	2.41	15.67
54	Mauritius.....	3.55	43.14	121	Zimbabwe.....	2.40	15.40
55	Cambodia.....	3.54	42.87	122	Mongolia.....	2.39	15.19
56	Trinidad and Tobago.....	3.54	42.86	123	Mauritania.....	2.38	14.97
57	Brunei Darussalam.....	3.53	42.74	124	Greece.....	2.38	14.84
58	Mexico.....	3.53	42.63	125	El Salvador.....	2.36	14.31
59	Paraguay.....	3.46	40.92	126	Benin.....	2.31	13.25
60	Estonia.....	3.45	40.83	127	Serbia.....	2.27	12.21
61	Honduras.....	3.44	40.57	128	North Macedonia.....	2.13	8.77
62	Cabo Verde.....	3.44	40.56	129	Moldova, Rep.....	1.96	4.82
63	France.....	3.43	40.32	130	Croatia.....	1.88	2.92
64	Colombia.....	3.41	39.92	131	Romania.....	1.88	2.80
65	Peru.....	3.38	38.98	132	Bosnia and Herzegovina.....	1.76	0.00
66	Ethiopia.....	3.37	38.89		Belarus.....	n/a	n/a
67	Portugal.....	3.37	38.81		Uzbekistan.....	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2017–2018 (<https://www.weforum.org/publications>)

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4.1.4 Environmental performance

Environmental Performance Index score | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark.....	77.90	100.00	68	Cabo Verde.....	41.90	38.98
2	United Kingdom.....	77.70	99.66	69	Argentina.....	41.10	37.63
3	Finland.....	76.50	97.63	70	Kazakhstan.....	40.90	37.29
4	Malta.....	75.20	95.42	70	Paraguay.....	40.90	37.29
5	Sweden.....	72.70	91.19	72	El Salvador.....	40.80	37.12
6	Luxembourg.....	72.30	90.51	73	Tunisia.....	40.70	36.95
7	Slovenia.....	67.30	82.03	74	Malawi.....	40.60	36.78
8	Austria.....	66.50	80.68	75	Bolivia, Plurinational St.....	40.10	35.93
9	Switzerland.....	65.90	79.66	76	Peru.....	39.80	35.42
10	Iceland.....	62.80	74.41	77	Bosnia and Herzegovina.....	39.40	34.75
11	Netherlands.....	62.60	74.07	78	Georgia.....	39.10	34.24
12	France.....	62.50	73.90	79	Azerbaijan.....	38.60	33.39
13	Germany.....	62.40	73.73	80	Zambia.....	38.40	33.05
14	Estonia.....	61.40	72.03	81	Uzbekistan.....	38.20	32.71
15	Latvia.....	61.10	71.53	82	Thailand.....	38.10	32.54
16	Croatia.....	60.20	70.00	83	Saudi Arabia.....	37.90	32.20
17	Australia.....	60.10	69.83	84	Nicaragua.....	37.70	31.86
18	Slovakia.....	60.00	69.66	85	Russian Federation.....	37.50	31.53
19	Czech Republic.....	59.90	69.49	86	Uruguay.....	37.40	31.36
20	Norway.....	59.30	68.47	87	South Africa.....	37.20	31.02
21	Belgium.....	58.20	66.61	88	Congo, Dem. Rep.....	36.90	30.51
22	Cyprus.....	58.00	66.27	89	Honduras.....	36.50	29.83
23	Italy.....	57.70	65.76	90	Gambia.....	36.40	29.66
24	Ireland.....	57.40	65.25	91	Uganda.....	35.80	28.64
25	Japan.....	57.20	64.92	92	Kyrgyzstan.....	35.70	28.47
26	New Zealand.....	56.70	64.07	93	Burkina Faso.....	35.50	28.14
27	Spain.....	56.60	63.90	93	Egypt.....	35.50	28.14
28	Greece.....	56.20	63.22	95	Malaysia.....	35.00	27.29
29	Romania.....	56.00	62.88	96	Sri Lanka.....	34.70	26.78
30	Lithuania.....	55.90	62.71	97	Iran, Islamic Rep.....	34.50	26.44
31	Hungary.....	55.10	61.36	98	Tanzania, United Rep.....	34.20	25.93
32	North Macedonia.....	54.30	60.00	99	Senegal.....	33.90	25.42
33	Botswana.....	54.00	59.49	100	Qatar.....	33.00	23.90
34	United Arab Emirates.....	52.40	56.78	101	Côte d'Ivoire.....	32.80	23.56
35	Bulgaria.....	51.90	55.93	101	Rwanda.....	32.80	23.56
36	United States of America.....	51.10	54.58	103	Lesotho.....	32.30	22.71
37	Namibia.....	50.90	54.24	104	Lebanon.....	32.20	22.54
37	Singapore.....	50.90	54.24	105	Ethiopia.....	31.80	21.86
39	Poland.....	50.60	53.73	106	Mozambique.....	31.70	21.69
40	Panama.....	50.50	53.56	107	Guinea.....	31.60	21.53
41	Portugal.....	50.40	53.39	108	Kenya.....	30.80	20.17
42	Canada.....	50.00	52.71	109	Lao PDR.....	30.70	20.00
43	Ukraine.....	49.60	52.03	109	Oman.....	30.70	20.00
44	Belarus.....	48.50	50.17	111	Angola.....	30.50	19.66
45	Armenia.....	48.30	49.83	111	Burundi.....	30.50	19.66
46	Israel.....	48.20	49.66	113	Cameroon.....	30.20	19.15
47	Trinidad and Tobago.....	47.80	48.98	114	Cambodia.....	30.10	18.98
48	Albania.....	47.10	47.80	115	Algeria.....	29.60	18.14
49	Korea, Rep.....	46.90	47.46	115	Benin.....	29.60	18.14
49	Montenegro.....	46.90	47.46	115	Mongolia.....	29.60	18.14
51	Chile.....	46.70	47.12	118	Philippines.....	28.90	16.95
52	Ecuador.....	46.50	46.78	119	Mali.....	28.50	16.27
53	Costa Rica.....	46.30	46.44	120	China.....	28.40	16.10
54	Zimbabwe.....	46.20	46.27	120	Morocco.....	28.40	16.10
55	Brunei Darussalam.....	45.70	45.42	122	Nepal.....	28.30	15.93
56	Jamaica.....	45.60	45.25	122	Nigeria.....	28.30	15.93
57	Mexico.....	45.50	45.08	124	Indonesia.....	28.20	15.76
58	Eswatini.....	44.90	44.07	125	Chad.....	28.10	15.59
59	Mauritius.....	44.80	43.90	125	Mauritania.....	28.10	15.59
60	Serbia.....	43.90	42.37	127	Guatemala.....	28.00	15.42
61	Brazil.....	43.60	41.86	127	Madagascar.....	28.00	15.42
61	Jordan.....	43.60	41.86	129	Ghana.....	27.70	14.92
63	Moldova, Rep.....	42.70	40.34	130	Türkiye.....	26.30	12.54
64	Colombia.....	42.40	39.83	131	Pakistan.....	24.60	9.66
64	Kuwait.....	42.40	39.83	132	Bangladesh.....	23.10	7.12
66	Dominican Republic.....	42.20	39.49	133	Viet Nam.....	20.10	2.03
67	Bahrain.....	42.00	39.15	134	India.....	18.90	0.00

SOURCE: Wolf, M. J., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. (2022). *2022 Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law & Policy. (<https://epi.yale.edu>)

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4.1.5 Vulnerable employment

Vulnerable employment (% of total employment) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Qatar.....	0.05	100.00	68	Botswana.....	26.01	71.53
2	Bahrain.....	1.05	98.91	69	Algeria.....	26.07	71.47
3	Kuwait.....	1.10	98.85	70	Mexico.....	26.70	70.78
4	United Arab Emirates.....	1.67	98.22	71	Cabo Verde.....	27.06	70.39
5	Oman.....	2.45	97.37	72	Armenia.....	29.07	68.19
6	Belarus.....	2.95	96.83	73	Lebanon.....	29.76	67.43
7	Saudi Arabia.....	3.12	96.63	74	Brazil.....	30.68	66.42
8	Norway.....	3.64	96.06	75	Kyrgyzstan.....	31.59	65.42
9	United States of America.....	4.28	95.37	76	Namibia.....	32.04	64.93
10	Germany.....	4.42	95.21	77	Eswatini.....	32.06	64.91
11	Russian Federation.....	5.25	94.30	78	Guatemala.....	33.47	63.36
12	Denmark.....	5.26	94.29	79	El Salvador.....	33.98	62.80
13	Estonia.....	6.14	93.33	80	Uzbekistan.....	34.06	62.71
14	Luxembourg.....	6.42	93.02	81	Philippines.....	34.18	62.59
15	Brunei Darussalam.....	6.55	92.87	82	Jamaica.....	36.43	60.12
16	Bulgaria.....	7.02	92.36	83	Nicaragua.....	37.72	58.70
17	Sweden.....	7.04	92.34	84	Sri Lanka.....	37.85	58.56
18	Croatia.....	7.33	92.02	85	Dominican Republic.....	38.88	57.43
19	Austria.....	7.48	91.85	86	Iran, Islamic Rep.....	39.86	56.35
20	France.....	7.69	91.63	87	Honduras.....	40.16	56.03
21	Japan.....	8.12	91.16	88	China.....	40.54	55.60
22	Hungary.....	8.12	91.15	89	Paraguay.....	40.98	55.13
23	Latvia.....	8.28	90.98	90	Panama.....	41.79	54.24
24	Iceland.....	8.32	90.93	91	Morocco.....	45.63	50.02
25	Israel.....	8.37	90.88	92	Mongolia.....	45.88	49.75
26	Singapore.....	8.47	90.76	93	Georgia.....	46.18	49.43
27	Jordan.....	8.53	90.70	94	Cambodia.....	47.05	48.48
28	Lithuania.....	9.75	89.36	95	Colombia.....	47.57	47.90
29	Switzerland.....	9.90	89.20	96	Indonesia.....	49.35	45.95
30	Portugal.....	9.90	89.20	97	Thailand.....	49.48	45.81
31	Slovenia.....	10.18	88.89	98	Albania.....	50.06	45.17
32	Cyprus.....	10.28	88.78	99	Viet Nam.....	51.68	43.40
33	Ireland.....	10.29	88.77	100	Lesotho.....	52.10	42.94
34	Canada.....	10.34	88.71	101	Ecuador.....	52.24	42.78
35	South Africa.....	10.47	88.58	102	Peru.....	52.60	42.39
36	Belgium.....	10.70	88.32	103	Mauritania.....	53.05	41.90
37	Australia.....	10.76	88.26	104	Bangladesh.....	53.67	41.21
38	Finland.....	10.93	88.07	105	Pakistan.....	54.26	40.56
39	Spain.....	11.14	87.84	106	Azerbaijan.....	54.46	40.34
40	Malta.....	11.21	87.76	107	Malawi.....	59.95	34.32
41	Slovakia.....	11.87	87.04	108	Kenya.....	60.56	33.66
42	Bosnia and Herzegovina.....	12.26	86.61	109	Angola.....	61.33	32.82
43	Netherlands.....	12.29	86.58	110	Senegal.....	64.61	29.22
44	United Kingdom.....	12.34	86.53	111	Bolivia, Plurinational St.....	66.02	27.67
45	Czech Republic.....	13.13	85.66	112	Rwanda.....	66.34	27.32
46	Montenegro.....	13.44	85.32	113	Zimbabwe.....	67.73	25.80
47	North Macedonia.....	13.47	85.29	114	Ghana.....	69.83	23.49
48	New Zealand.....	13.57	85.17	115	Côte d'Ivoire.....	71.02	22.19
49	Romania.....	13.93	84.79	116	Cameroon.....	72.33	20.76
50	Ukraine.....	13.93	84.78	117	Gambia.....	72.60	20.46
51	Mauritius.....	15.83	82.69	118	India.....	73.81	19.13
52	Poland.....	15.84	82.68	119	Uganda.....	74.07	18.85
53	Italy.....	16.03	82.48	120	Zambia.....	76.46	16.22
54	Tunisia.....	16.18	82.31	121	Nepal.....	77.25	15.36
55	Egypt.....	18.13	80.17	122	Lao PDR.....	77.50	15.08
56	Trinidad and Tobago.....	18.50	79.78	123	Congo, Dem. Rep.....	78.17	14.36
57	Korea, Rep.....	19.13	79.08	124	Nigeria.....	78.64	13.84
58	Serbia.....	19.53	78.64	125	Mali.....	80.71	11.57
59	Kazakhstan.....	20.66	77.40	126	Tanzania, United Rep.....	81.92	10.24
60	Malaysia.....	20.92	77.12	127	Mozambique.....	82.60	9.50
61	Moldova, Rep.....	21.25	76.75	128	Madagascar.....	84.33	7.60
62	Costa Rica.....	22.95	74.89	129	Ethiopia.....	85.19	6.65
63	Chile.....	23.31	74.50	130	Burkina Faso.....	86.46	5.26
64	Greece.....	24.45	73.25	131	Burundi.....	86.92	4.76
65	Türkiye.....	24.93	72.72	132	Benin.....	88.41	3.13
66	Argentina.....	25.46	72.14	133	Chad.....	90.61	0.72
67	Uruguay.....	25.51	72.09	134	Guinea.....	91.26	0.00

SOURCE: World Development Indicators (<https://datacatalog.worldbank.org/search/dataset/0037712>) based on data obtained from International Labour Organization, ILOSTAT (<https://ilostat ilo.org/>)

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4.2.1 Personal rights

Personal rights indicator | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Denmark.....	98.10	100.00	68	Brazil.....	77.47	72.71
2	Germany.....	97.75	99.54	69	Tunisia.....	77.19	72.34
3	Finland.....	96.97	98.51	70	Benin.....	76.98	72.06
4	Luxembourg.....	96.74	98.20	71	Ukraine.....	75.75	70.44
5	Ireland.....	96.70	98.15	72	Mexico.....	75.71	70.38
6	New Zealand.....	96.45	97.82	73	Bolivia, Plurinational St.....	74.03	68.16
7	Japan.....	96.36	97.70	74	Honduras.....	73.95	68.06
8	Italy.....	96.17	97.45	75	Bosnia and Herzegovina.....	73.66	67.67
9	Sweden.....	95.70	96.83	76	Nepal.....	73.36	67.28
10	Estonia.....	95.65	96.76	77	Kenya.....	72.84	66.59
11	Norway.....	95.63	96.73	78	Nigeria.....	71.02	64.18
12	Netherlands.....	95.57	96.65	79	Lebanon.....	70.96	64.10
13	Belgium.....	95.41	96.44	80	Philippines.....	70.94	64.07
14	Costa Rica.....	95.35	96.36	81	Indonesia.....	69.43	62.08
15	Canada.....	95.21	96.18	82	India.....	69.13	61.68
16	Iceland.....	95.10	96.03	83	Sri Lanka.....	68.98	61.48
17	Latvia.....	94.88	95.74	84	Côte d'Ivoire.....	68.68	61.08
18	Switzerland.....	94.65	95.44	85	Madagascar.....	68.51	60.86
19	Portugal.....	94.56	95.32	86	Guatemala.....	67.84	59.97
20	Korea, Rep.....	93.98	94.55	87	Colombia.....	66.03	57.58
21	Czech Republic.....	93.81	94.33	88	Tanzania, United Rep.....	65.57	56.97
22	France.....	93.52	93.94	89	Mali.....	65.28	56.59
23	Spain.....	93.24	93.57	90	Singapore.....	65.07	56.31
24	Slovakia.....	93.07	93.35	91	Kuwait.....	64.58	55.66
25	Austria.....	92.88	93.10	92	Burkina Faso.....	64.47	55.52
26	Chile.....	92.59	92.71	92	Malaysia.....	64.47	55.52
27	Australia.....	92.56	92.67	94	El Salvador.....	64.38	55.40
28	Israel.....	92.47	92.55	95	Jordan.....	62.83	53.35
29	Lithuania.....	91.93	91.84	96	Zambia.....	62.61	53.06
30	Uruguay.....	91.76	91.61	97	Morocco.....	62.59	53.03
31	Cyprus.....	91.61	91.42	98	Mozambique.....	61.64	51.77
32	Malta.....	91.57	91.36	99	Ethiopia.....	61.06	51.01
33	Greece.....	91.51	91.28	100	Cameroon.....	60.26	49.95
34	United Kingdom.....	91.28	90.98	101	Kyrgyzstan.....	58.99	48.27
35	Cabo Verde.....	90.06	89.37	102	Zimbabwe.....	56.20	44.58
36	Argentina.....	89.91	89.17	103	Angola.....	56.19	44.56
37	South Africa.....	89.88	89.13	104	Kazakhstan.....	55.77	44.01
38	Croatia.....	89.60	88.76	105	Pakistan.....	55.05	43.06
39	Trinidad and Tobago.....	89.00	87.96	106	Russian Federation.....	53.96	41.61
40	Panama.....	88.97	87.92	107	Algeria.....	53.43	40.91
41	Moldova, Rep.....	88.51	87.31	108	Bangladesh.....	51.64	38.54
42	Jamaica.....	88.26	86.98	109	Uzbekistan.....	51.19	37.95
43	United States of America.....	88.06	86.72	110	Mauritania.....	48.99	35.04
44	Mongolia.....	87.20	85.58	111	Oman.....	48.79	34.78
45	Bulgaria.....	86.87	85.15	112	Uganda.....	47.99	33.72
46	Dominican Republic.....	85.73	83.64	113	Chad.....	47.09	32.53
47	Ecuador.....	85.39	83.19	114	Rwanda.....	46.26	31.43
48	Romania.....	85.22	82.96	115	Thailand.....	45.15	29.96
49	Slovenia.....	84.81	82.42	116	Congo, Dem. Rep.....	45.06	29.84
50	Botswana.....	84.55	82.08	117	Viet Nam.....	43.93	28.35
51	Namibia.....	83.91	81.23	118	Cambodia.....	43.88	28.28
52	Malawi.....	83.46	80.63	119	Egypt.....	43.67	28.00
53	Montenegro.....	83.36	80.50	120	United Arab Emirates.....	41.59	25.25
54	Armenia.....	83.00	80.03	121	Guinea.....	40.89	24.33
55	Peru.....	82.86	79.84	122	Azerbaijan.....	39.48	22.46
56	Albania.....	82.80	79.76	123	Iran, Islamic Rep.....	38.97	21.79
57	Mauritius.....	82.71	79.64	124	Türkiye.....	38.18	20.74
58	Hungary.....	82.69	79.62	125	Nicaragua.....	36.91	19.06
59	Lesotho.....	80.97	77.34	126	Bahrain.....	34.91	16.42
60	Paraguay.....	80.96	77.33	127	Burundi.....	34.68	16.11
61	Senegal.....	80.74	77.04	128	Qatar.....	34.23	15.52
62	Poland.....	80.62	76.88	129	Belarus.....	30.20	10.19
63	Ghana.....	80.54	76.77	130	China.....	29.70	9.52
64	Serbia.....	79.81	75.81	131	Eswatini.....	27.96	7.22
65	North Macedonia.....	79.07	74.83	132	Lao PDR.....	24.29	2.37
66	Gambia.....	78.81	74.48	133	Saudi Arabia.....	22.50	0.00
67	Georgia.....	78.26	73.76		Brunei Darussalam.....	n/a	n/a

SOURCE: Social Progress Imperative, The Social Progress Index 2022 (<https://www.socialprogress.org/>)

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4.2.2 Personal safety

Personal safety indicator | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	83.20	100.00	68	Costa Rica	64.14	59.24
2	Japan.....	81.96	97.35	69	Mongolia.....	64.02	58.98
3	Spain	81.43	96.21	70	Trinidad and Tobago	64.00	58.94
4	Switzerland.....	81.31	95.96	71	Cambodia.....	63.95	58.83
5	Iceland	80.88	95.04	72	Lebanon.....	63.85	58.62
6	Norway.....	80.76	94.78	73	Paraguay.....	63.61	58.11
7	Denmark.....	80.22	93.63	74	Morocco.....	63.33	57.51
8	Korea, Rep.....	80.07	93.31	75	Peru.....	63.21	57.25
9	Ireland	79.89	92.92	76	Belarus.....	63.19	57.21
10	Malta.....	79.87	92.88	77	United Arab Emirates.....	63.18	57.19
11	Austria.....	79.81	92.75	78	Argentina	62.44	55.60
12	Netherlands.....	79.73	92.58	79	Philippines.....	62.09	54.85
13	Germany.....	79.40	91.87	80	Gambia.....	61.99	54.64
14	Slovenia.....	78.92	90.85	81	Senegal.....	61.78	54.19
15	United Kingdom	78.32	89.56	82	Cabo Verde.....	61.37	53.31
16	Luxembourg.....	78.27	89.46	83	Bahrain.....	61.33	53.23
17	Finland.....	77.98	88.84	83	Honduras	61.33	53.23
18	Sweden	77.96	88.79	85	India.....	61.08	52.69
19	Portugal.....	77.55	87.92	86	Algeria.....	60.50	51.45
20	Croatia.....	77.52	87.85	87	Ukraine	60.12	50.64
21	France.....	77.26	87.30	88	Oman.....	60.05	50.49
22	Cyprus.....	77.20	87.17	89	Nicaragua.....	59.20	48.67
23	Italy.....	77.08	86.91	90	Bolivia, Plurinational St.....	58.95	48.14
24	Australia.....	76.86	86.44	91	Guatemala.....	58.81	47.84
25	Estonia.....	76.73	86.16	92	Mexico.....	58.53	47.24
26	Hungary.....	76.23	85.09	93	Egypt.....	58.20	46.54
27	Czech Republic.....	76.18	84.99	94	Russian Federation	57.90	45.89
28	Belgium.....	76.17	84.97	95	El Salvador.....	57.81	45.70
29	Poland.....	76.13	84.88	96	Dominican Republic.....	57.75	45.57
30	Canada.....	75.32	83.15	97	Ghana.....	57.55	45.15
31	Albania.....	75.22	82.93	98	Bangladesh.....	57.44	44.91
32	Bosnia and Herzegovina.....	75.04	82.55	99	Nigeria.....	57.23	44.46
33	Lithuania.....	74.97	82.40	100	Ecuador.....	57.06	44.10
34	Israel.....	74.96	82.38	101	Thailand.....	56.96	43.88
35	Romania.....	74.71	81.84	102	Brazil.....	56.54	42.99
36	Armenia.....	74.52	81.44	103	Pakistan.....	56.06	41.96
37	Greece.....	73.98	80.28	104	Lao PDR.....	55.73	41.25
38	North Macedonia	73.94	80.20	105	Benin.....	54.98	39.65
39	Slovakia.....	73.90	80.11	106	Iran, Islamic Rep.....	54.83	39.33
40	Serbia.....	73.71	79.70	107	Burkina Faso.....	54.49	38.60
41	Georgia.....	73.46	79.17	108	Côte d'Ivoire.....	54.32	38.24
42	Montenegro.....	72.78	77.72	109	Mauritania.....	54.28	38.15
43	Latvia.....	72.24	76.56	110	Malawi.....	53.52	36.53
44	Mauritius.....	72.17	76.41	111	Madagascar.....	52.46	34.26
45	New Zealand	72.15	76.37	112	Saudi Arabia.....	52.31	33.94
46	Bulgaria.....	71.88	75.79	113	Ethiopia.....	51.08	31.31
47	United States of America.....	71.85	75.73	114	Colombia.....	50.88	30.88
48	Kuwait.....	70.94	73.78	115	South Africa.....	50.37	29.79
49	Uzbekistan.....	70.76	73.40	116	Tanzania, United Rep.....	50.23	29.49
50	Azerbaijan.....	70.64	73.14	117	Mozambique.....	50.03	29.06
51	Indonesia.....	70.39	72.60	118	Angola.....	48.54	25.88
52	Moldova, Rep.....	69.59	70.89	119	Burundi.....	48.47	25.73
53	Jamaica.....	68.83	69.27	120	Mali.....	48.14	25.02
54	Nepal.....	68.51	68.58	121	Botswana.....	48.00	24.72
55	Chile.....	68.32	68.18	122	Namibia.....	47.53	23.72
56	Malaysia.....	67.78	67.02	123	Kenya.....	47.42	23.48
57	Panama.....	67.75	66.96	124	Chad.....	47.25	23.12
58	Jordan.....	67.65	66.75	125	Guinea.....	44.43	17.09
59	Qatar.....	66.82	64.97	126	Cameroon.....	43.41	14.91
60	China.....	66.55	64.39	127	Lesotho.....	43.38	14.84
61	Türkiye.....	66.15	63.54	128	Zimbabwe.....	42.97	13.96
62	Viet Nam.....	65.91	63.02	129	Congo, Dem. Rep.....	42.85	13.71
63	Kazakhstan.....	65.57	62.30	130	Zambia.....	42.76	13.52
64	Kyrgyzstan.....	65.45	62.04	131	Rwanda.....	41.66	11.16
65	Tunisia.....	65.43	62.00	132	Eswatini.....	39.45	6.44
66	Uruguay.....	65.28	61.68	133	Uganda.....	36.44	0.00
67	Sri Lanka.....	64.94	60.95		Brunei Darussalam.....	n/a	n/a

SOURCE: Social Progress Imperative, The Social Progress Index 2022 (<https://www.socialprogress.org/>)

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4.2.3 Physician density

Medical doctors (per 10,000 people) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Greece.....	63.06	100.00	68	Colombia.....	23.61	36.95
2	Portugal.....	56.15	88.96	69	Kuwait.....	22.93	35.87
3	Malta.....	54.85	86.88	70	Ecuador.....	22.32	34.88
4	Austria.....	54.59	86.46	71	Malaysia.....	22.28	34.82
5	Georgia.....	54.05	85.59	72	Kyrgyzstan.....	21.68	33.86
6	Cyprus.....	53.75	85.12	73	Brazil.....	21.42	33.45
7	Norway.....	51.68	81.82	74	Bosnia and Herzegovina.....	21.03	32.83
8	Uruguay.....	49.61	78.50	75	Türkiye.....	20.36	31.74
9	Lithuania.....	49.50	78.33	76	Oman.....	19.94	31.08
10	Slovakia.....	46.29	73.20	77	Brunei Darussalam.....	19.13	29.78
11	Spain.....	45.77	72.36	78	Albania.....	18.83	29.30
12	Armenia.....	45.46	71.86	79	Algeria.....	17.32	26.89
13	Germany.....	45.18	71.43	80	Peru.....	16.45	25.51
14	Switzerland.....	44.43	70.22	81	Panama.....	16.29	25.25
15	Belarus.....	44.34	70.08	82	Iran, Islamic Rep.....	15.14	23.41
16	Finland.....	43.25	68.34	83	Dominican Republic.....	14.33	22.11
17	Sweden.....	42.90	67.77	84	Guatemala.....	12.80	19.67
18	Denmark.....	42.64	67.37	85	Tunisia.....	12.61	19.36
19	Bulgaria.....	41.68	65.83	86	Sri Lanka.....	11.92	18.27
20	Czech Republic.....	41.60	65.70	87	Pakistan.....	10.84	16.54
21	Italy.....	41.26	65.16	88	Bolivia, Plurinational St.....	10.08	15.32
22	Australia.....	41.02	64.77	89	Thailand.....	9.28	14.04
23	Ireland.....	40.62	64.14	90	Nepal.....	8.67	13.07
24	Moldova, Rep.....	40.57	64.06	91	Bahrain.....	8.42	12.67
25	Kazakhstan.....	40.28	63.59	92	Viet Nam.....	8.33	12.52
26	Argentina.....	38.95	61.47	93	South Africa.....	8.09	12.13
27	Iceland.....	38.91	61.41	94	Cabo Verde.....	7.91	11.86
28	Estonia.....	38.63	60.96	95	Philippines.....	7.86	11.78
29	Mongolia.....	38.59	60.90	96	Morocco.....	7.32	10.91
30	Netherlands.....	38.35	60.51	97	India.....	7.26	10.82
31	Russian Federation.....	38.27	60.38	98	Egypt.....	7.09	10.55
32	Poland.....	37.14	58.57	99	Indonesia.....	6.95	10.32
33	Serbia.....	36.78	58.00	100	Bangladesh.....	6.70	9.92
34	Israel.....	36.54	57.61	101	Nicaragua.....	6.64	9.82
35	United States of America.....	35.55	56.03	102	Namibia.....	6.01	8.81
36	New Zealand.....	35.16	55.41	103	Jamaica.....	5.50	8.00
37	Croatia.....	34.66	54.60	104	Honduras.....	4.89	7.03
38	Trinidad and Tobago.....	34.12	53.74	105	Lesotho.....	4.54	6.47
39	Latvia.....	33.45	52.68	106	Nigeria.....	3.95	5.52
40	France.....	33.24	52.33	107	Congo, Dem. Rep.....	3.62	5.00
41	Hungary.....	32.91	51.80	108	Botswana.....	3.48	4.77
42	Slovenia.....	32.79	51.62	109	Lao PDR.....	3.27	4.43
43	Paraguay.....	32.42	51.03	110	Zambia.....	2.96	3.95
44	Belgium.....	32.08	50.48	111	Kenya.....	2.26	2.82
45	United Kingdom.....	31.71	49.89	112	Guinea.....	2.22	2.76
46	Azerbaijan.....	31.10	48.93	113	Cambodia.....	2.14	2.64
47	Ukraine.....	29.90	47.00	114	Angola.....	2.11	2.58
48	Luxembourg.....	29.85	46.92	115	Madagascar.....	1.95	2.32
49	Romania.....	29.74	46.74	116	Mauritania.....	1.92	2.28
50	Chile.....	29.73	46.73	117	Zimbabwe.....	1.89	2.23
51	El Salvador.....	29.13	45.77	118	Ghana.....	1.64	1.83
52	United Arab Emirates.....	28.79	45.22	119	Côte d'Ivoire.....	1.60	1.76
53	North Macedonia.....	28.34	44.51	120	Uganda.....	1.58	1.74
54	Saudi Arabia.....	27.89	43.78	121	Eswatini.....	1.40	1.44
55	Costa Rica.....	27.70	43.49	122	Cameroon.....	1.24	1.20
56	Montenegro.....	27.68	43.45	123	Mali.....	1.23	1.18
57	Mauritius.....	26.58	41.70	124	Rwanda.....	1.16	1.07
58	Lebanon.....	26.17	41.04	125	Ethiopia.....	1.04	0.87
59	Japan.....	26.14	40.99	126	Burkina Faso.....	0.91	0.67
60	Jordan.....	25.13	39.37	127	Senegal.....	0.84	0.56
61	Korea, Rep.....	25.08	39.29	128	Mozambique.....	0.81	0.51
62	Qatar.....	24.99	39.15	129	Gambia.....	0.77	0.45
63	Canada.....	24.64	38.59	130	Burundi.....	0.65	0.24
64	Mexico.....	24.41	38.22	131	Benin.....	0.62	0.20
65	Singapore.....	24.34	38.11	132	Chad.....	0.58	0.14
66	China.....	23.87	37.37	133	Tanzania, United Rep.....	0.50	0.00
67	Uzbekistan.....	23.73	37.13	134	Malawi.....	0.49	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 2012.

4.2.4 Sanitation

Population using at least basic sanitation services (%) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Bahrain.....	100.00	100.00	68	Colombia.....	93.68	93.06
1	Chile.....	100.00	100.00	69	Sri Lanka.....	93.65	93.03
1	Kuwait.....	100.00	100.00	70	Paraguay.....	92.72	92.01
1	New Zealand.....	100.00	100.00	71	Latvia.....	92.42	91.68
1	Poland.....	100.00	100.00	72	Mexico.....	92.42	91.68
1	Qatar.....	100.00	100.00	73	China.....	92.38	91.63
1	Saudi Arabia.....	100.00	100.00	74	Ecuador.....	91.52	90.70
1	Singapore.....	100.00	100.00	75	Ireland.....	91.34	90.49
1	Uzbekistan.....	100.00	100.00	76	Iran, Islamic Rep.....	90.27	89.31
10	Australia.....	99.99	99.99	77	Brazil.....	90.08	89.11
11	Austria.....	99.97	99.97	78	Russian Federation.....	89.39	88.35
12	Malta.....	99.96	99.96	79	Viet Nam.....	89.25	88.19
13	Israel.....	99.95	99.94	80	Morocco.....	87.25	86.00
14	Korea, Rep.....	99.94	99.93	81	Dominican Republic.....	87.18	85.92
15	Japan.....	99.92	99.91	82	Romania.....	87.07	85.80
16	Spain.....	99.90	99.89	83	Jamaica.....	86.61	85.30
17	Switzerland.....	99.90	99.89	84	Indonesia.....	86.46	85.14
18	Italy.....	99.89	99.87	85	Bulgaria.....	86.03	84.67
19	United States of America.....	99.68	99.65	86	Algeria.....	85.97	84.59
20	Portugal.....	99.60	99.57	87	Georgia.....	85.77	84.37
21	Denmark.....	99.60	99.56	88	Panama.....	84.57	83.06
22	Malaysia.....	99.58	99.54	89	Honduras.....	83.78	82.19
23	Belgium.....	99.49	99.44	90	El Salvador.....	82.45	80.73
24	Finland.....	99.45	99.39	91	Philippines.....	82.26	80.52
25	Cyprus.....	99.40	99.34	92	Botswana.....	80.03	78.07
26	Oman.....	99.32	99.25	93	Lao PDR.....	79.48	77.47
27	Albania.....	99.30	99.23	94	Cabo Verde.....	79.12	77.07
28	Sweden.....	99.29	99.22	95	Moldova, Rep.....	78.73	76.65
29	United Arab Emirates.....	99.23	99.15	96	Peru.....	78.58	76.48
30	Germany.....	99.23	99.15	97	South Africa.....	78.47	76.37
31	Türkiye.....	99.22	99.15	98	Nepal.....	76.61	74.32
32	Lebanon.....	99.20	99.12	99	Nicaragua.....	73.02	70.38
33	Estonia.....	99.14	99.06	100	India.....	71.27	68.46
34	Czech Republic.....	99.13	99.05	101	Rwanda.....	68.83	65.78
35	United Kingdom.....	99.11	99.02	102	Cambodia.....	68.77	65.71
36	Canada.....	99.03	98.94	103	Pakistan.....	68.40	65.31
37	Greece.....	98.99	98.90	104	Guatemala.....	67.93	64.79
38	Iceland.....	98.78	98.66	105	Mongolia.....	67.74	64.59
39	Thailand.....	98.71	98.59	106	Bolivia, Plurinational St.....	65.76	62.41
40	France.....	98.65	98.52	107	Eswatini.....	64.29	60.80
41	North Macedonia.....	98.33	98.16	108	Senegal.....	56.78	52.55
42	Slovenia.....	98.10	97.91	109	Bangladesh.....	54.16	49.68
43	Uruguay.....	98.05	97.86	110	Angola.....	51.66	46.93
44	Norway.....	98.05	97.86	111	Lesotho.....	50.32	45.46
45	Hungary.....	97.98	97.79	112	Mauritania.....	49.83	44.93
46	Costa Rica.....	97.91	97.71	113	Gambia.....	46.87	41.67
47	Belarus.....	97.90	97.70	114	Burundi.....	45.73	40.42
48	Serbia.....	97.90	97.69	115	Mali.....	45.39	40.05
49	Kyrgyzstan.....	97.89	97.68	116	Cameroon.....	44.63	39.22
50	Kazakhstan.....	97.87	97.66	117	Nigeria.....	42.72	37.12
51	Montenegro.....	97.77	97.55	118	Mozambique.....	37.20	31.06
52	Ukraine.....	97.74	97.52	119	Namibia.....	35.26	28.93
53	Netherlands.....	97.69	97.46	120	Zimbabwe.....	35.19	28.85
54	Luxembourg.....	97.59	97.36	121	Côte d'Ivoire.....	34.57	28.17
55	Slovakia.....	97.53	97.29	122	Kenya.....	32.70	26.12
56	Tunisia.....	97.43	97.18	123	Zambia.....	31.90	25.24
57	Egypt.....	97.33	97.06	124	Tanzania, United Rep.....	31.76	25.09
58	Jordan.....	97.08	96.80	125	Guinea.....	29.78	22.91
59	Croatia.....	96.57	96.23	126	Malawi.....	26.55	19.37
60	Brunei Darussalam.....	96.35	95.99	127	Ghana.....	23.70	16.24
61	Azerbaijan.....	96.13	95.75	128	Burkina Faso.....	21.66	14.00
62	Mauritius.....	95.50	95.07	129	Uganda.....	19.79	11.94
63	Argentina.....	95.42	94.97	130	Benin.....	16.96	8.84
64	Bosnia and Herzegovina.....	95.39	94.93	131	Congo, Dem. Rep.....	15.39	7.11
65	Lithuania.....	93.94	93.34	132	Madagascar.....	12.31	3.73
66	Armenia.....	93.94	93.34	133	Chad.....	12.06	3.46
67	Trinidad and Tobago.....	93.92	93.32	134	Ethiopia.....	8.91	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 2012.

Pillar 5

Vocational and Technical Skills

5.1.1 Workforce with secondary education

Labour force with secondary education (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Uzbekistan.....	79.70	100.00	68	Norway.....	34.65	43.18
2	Kyrgyzstan.....	70.98	89.01	69	Uganda.....	33.30	41.48
3	Czech Republic.....	68.77	86.21	70	South Africa.....	33.26	41.42
4	Bosnia and Herzegovina.....	67.55	84.68	71	Nepal.....	32.95	41.04
5	Armenia.....	66.44	83.28	72	Korea, Rep.....	32.57	40.55
6	Trinidad and Tobago.....	65.55	82.16	73	Indonesia.....	31.70	39.46
7	Slovakia.....	64.91	81.34	74	Portugal.....	31.43	39.12
8	Azerbaijan.....	64.86	81.29	75	Nigeria.....	31.37	39.05
9	Belarus.....	64.47	80.80	76	Oman.....	30.11	37.45
10	Croatia.....	64.41	80.72	77	Paraguay.....	29.17	36.27
11	Mauritius.....	64.31	80.59	78	Luxembourg.....	27.39	34.03
12	Romania.....	63.34	79.37	79	Uruguay.....	27.26	33.86
13	Montenegro.....	61.21	76.69	80	Costa Rica.....	26.98	33.50
14	Austria.....	60.26	75.48	81	Ukraine.....	26.57	32.99
15	Georgia.....	59.99	75.14	82	Viet Nam.....	26.28	32.63
16	Hungary.....	58.57	73.35	83	Mexico.....	25.98	32.25
17	Poland.....	58.49	73.25	84	Bolivia, Plurinational St.....	25.08	31.12
18	Brunei Darussalam.....	58.47	73.23	85	United Arab Emirates.....	24.80	30.76
19	Serbia.....	57.53	72.04	86	Spain.....	24.30	30.13
20	Namibia.....	57.07	71.46	87	Iran, Islamic Rep.....	24.26	30.07
21	Bulgaria.....	56.11	70.25	88	Thailand.....	23.98	29.73
22	North Macedonia.....	55.92	70.01	89	Kenya.....	23.44	29.04
23	Moldova, Rep.....	53.67	67.17	90	Canada.....	23.26	28.82
24	Israel.....	53.54	67.01	91	Türkiye.....	23.12	28.64
25	Jamaica.....	52.89	66.19	92	Jordan.....	22.92	28.39
26	Latvia.....	52.39	65.56	93	Guatemala.....	22.89	28.35
27	Chile.....	51.79	64.80	94	Algeria.....	22.86	28.31
28	Slovenia.....	51.09	63.91	95	Honduras.....	22.32	27.63
29	Germany.....	50.97	63.77	96	Nicaragua.....	21.48	26.57
30	Zimbabwe.....	48.95	61.22	97	Pakistan.....	21.29	26.33
31	Japan.....	48.83	61.06	98	Bangladesh.....	20.66	25.53
32	Estonia.....	47.95	59.96	99	Botswana.....	19.77	24.41
33	Malaysia.....	47.69	59.63	100	Qatar.....	19.70	24.32
34	Lithuania.....	47.29	59.12	101	Gambia.....	19.44	24.00
35	Finland.....	46.84	58.55	102	Zambia.....	19.44	24.00
36	Italy.....	46.56	58.21	103	Ghana.....	18.74	23.12
37	United States of America.....	46.36	57.96	104	Kazakhstan.....	18.44	22.74
38	Brazil.....	46.35	57.93	105	Lebanon.....	17.04	20.98
39	Cabo Verde.....	46.15	57.68	106	Lao PDR.....	16.90	20.80
40	Greece.....	45.90	57.38	107	Angola.....	16.19	19.90
41	Russian Federation.....	44.95	56.18	108	Cameroon.....	14.84	18.20
42	Argentina.....	43.82	54.75	109	Madagascar.....	14.50	17.77
43	Switzerland.....	42.66	53.29	110	Benin.....	14.42	17.66
44	Peru.....	42.49	53.07	111	Morocco.....	13.78	16.86
45	France.....	41.96	52.41	112	India.....	11.14	13.54
46	New Zealand.....	41.45	51.76	113	Malawi.....	10.73	13.01
47	Denmark.....	40.69	50.80	114	Rwanda.....	10.67	12.94
48	Albania.....	40.36	50.39	115	Kuwait.....	10.24	12.39
49	Egypt.....	40.31	50.32	116	Bahrain.....	9.59	11.57
50	Australia.....	40.25	50.25	117	Singapore.....	9.18	11.05
51	Sweden.....	40.15	50.11	118	Ethiopia.....	6.09	7.16
52	United Kingdom.....	39.49	49.28	119	Mozambique.....	5.87	6.88
53	Mongolia.....	39.06	48.74	120	Burundi.....	5.56	6.49
54	Malta.....	38.88	48.52	121	Senegal.....	5.52	6.45
55	Iceland.....	38.86	48.49	122	Chad.....	4.80	5.53
56	Netherlands.....	38.28	47.76	123	Cambodia.....	4.74	5.46
57	Cyprus.....	37.69	47.02	124	Côte d'Ivoire.....	4.25	4.84
58	Tunisia.....	37.47	46.74	125	Mali.....	3.05	3.32
59	Belgium.....	37.35	46.59	126	Burkina Faso.....	2.43	2.55
60	Ecuador.....	37.32	46.54	127	Mauritania.....	2.41	2.52
61	Dominican Republic.....	37.08	46.25	128	Tanzania, United Rep.....	1.48	1.34
62	Philippines.....	36.24	45.18	129	Guinea.....	1.30	1.12
63	El Salvador.....	36.21	45.15	130	Eswatini.....	0.90	0.61
64	Ireland.....	35.87	44.72	131	Congo, Dem. Rep.....	0.43	0.02
65	Sri Lanka.....	35.40	44.13	132	Lesotho.....	0.41	0.00
66	Colombia.....	34.94	43.55		China.....	n/a	n/a
67	Panama.....	34.67	43.20		Saudi Arabia.....	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 (%) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Czech Republic	69.65	100.00	68	Viet Nam	18.41	24.85
2	Slovakia	64.67	92.68	69	Congo, Dem. Rep.	18.15	24.46
3	Azerbaijan	63.02	90.27	70	Mexico	17.50	23.51
4	Egypt	60.99	87.29	71	Uruguay	16.99	22.77
5	Poland	59.54	85.16	72	Costa Rica	16.38	21.87
6	Sri Lanka	58.66	83.87	73	Honduras	16.07	21.41
7	Georgia	58.47	83.60	74	Dominican Republic	15.42	20.46
8	Latvia	56.95	81.37	75	Gambia	15.24	20.20
9	Bosnia and Herzegovina	55.96	79.92	76	Thailand	14.89	19.69
10	Hungary	55.01	78.53	77	Angola	13.23	17.25
11	Germany	54.79	78.20	78	Kuwait	12.69	16.46
12	Slovenia	54.43	77.67	79	Mongolia	10.80	13.69
13	Romania	53.87	76.85	80	Cabo Verde	10.26	12.90
14	South Africa	53.43	76.21	81	Pakistan	7.42	8.73
15	Lithuania	52.43	74.73	82	Senegal	6.83	7.87
16	Serbia	51.93	74.01	83	Mozambique	6.71	7.69
17	Austria	50.80	72.36	84	Mauritania	6.62	7.56
18	Switzerland	46.98	66.75	85	Rwanda	5.73	6.25
19	Armenia	46.56	66.13	86	Madagascar	5.01	5.19
20	North Macedonia	46.35	65.82	87	Burundi	3.96	3.66
21	Estonia	46.26	65.69	88	Cambodia	3.80	3.43
22	Sweden	43.23	61.25	89	Burkina Faso	3.48	2.95
23	United States of America	42.85	60.69	90	Mali	3.04	2.30
24	Malaysia	42.33	59.92	91	Zimbabwe	2.85	2.02
25	Denmark	41.58	58.83	92	Philippines	2.31	1.24
26	Finland	40.97	57.93	93	Uganda	1.72	0.38
27	Moldova, Rep.	40.37	57.05	94	Tanzania, United Rep.	1.47	0.00
28	France	40.01	56.53		Algeria	n/a	n/a
29	Norway	39.52	55.80		Argentina	n/a	n/a
30	New Zealand	38.47	54.27		Bahrain	n/a	n/a
31	Greece	38.46	54.25		Benin	n/a	n/a
32	Chile	36.84	51.88		Botswana	n/a	n/a
33	Netherlands	36.24	51.00		Brunei Darussalam	n/a	n/a
34	Korea, Rep.	36.15	50.86		Bulgaria	n/a	n/a
35	Italy	35.89	50.48		Cameroon	n/a	n/a
36	Cyprus	35.84	50.41		Chad	n/a	n/a
37	Belgium	35.65	50.13		China	n/a	n/a
38	Iceland	35.42	49.79		Côte d'Ivoire	n/a	n/a
39	Canada	34.80	48.89		Croatia	n/a	n/a
40	Luxembourg	34.79	48.88		Ecuador	n/a	n/a
41	Uzbekistan	34.41	48.32		Eswatini	n/a	n/a
42	Israel	34.37	48.25		Ethiopia	n/a	n/a
43	Ireland	34.12	47.89		Ghana	n/a	n/a
44	Belarus	34.05	47.78		Guinea	n/a	n/a
45	Australia	33.60	47.13		India	n/a	n/a
46	United Kingdom	32.67	45.76		Jamaica	n/a	n/a
47	Brazil	32.66	45.74		Japan	n/a	n/a
48	Albania	32.38	45.33		Kenya	n/a	n/a
49	Peru	32.29	45.20		Kyrgyzstan	n/a	n/a
50	Colombia	30.62	42.75		Lao PDR	n/a	n/a
51	Jordan	27.56	38.26		Lebanon	n/a	n/a
52	Indonesia	27.07	37.55		Lesotho	n/a	n/a
53	Paraguay	26.40	36.56		Malawi	n/a	n/a
54	Singapore	26.23	36.32		Mauritius	n/a	n/a
55	Iran, Islamic Rep.	25.32	34.99		Montenegro	n/a	n/a
56	El Salvador	24.50	33.78		Morocco	n/a	n/a
57	Saudi Arabia	24.37	33.58		Namibia	n/a	n/a
58	Kazakhstan	23.49	32.30		Nepal	n/a	n/a
59	Malta	22.94	31.49		Nicaragua	n/a	n/a
60	Panama	22.30	30.56		Nigeria	n/a	n/a
61	Türkiye	21.41	29.24		Oman	n/a	n/a
62	Bangladesh	21.19	28.93		Qatar	n/a	n/a
63	United Arab Emirates	21.01	28.66		Russian Federation	n/a	n/a
64	Portugal	20.90	28.50		Trinidad and Tobago	n/a	n/a
65	Spain	19.81	26.91		Tunisia	n/a	n/a
66	Guatemala	19.51	26.46		Ukraine	n/a	n/a
67	Bolivia, Plurinational St.	19.00	25.71		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 (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Japan.....	24.01	100.00	68	Honduras.....	7.05	28.67
2	Mauritania.....	21.59	89.83	69	Romania.....	7.00	28.48
3	Singapore.....	20.62	85.72	70	Georgia.....	6.89	28.01
4	Germany.....	19.77	82.15	71	Egypt.....	6.66	27.04
5	Finland.....	18.85	78.28	72	Nicaragua.....	6.64	26.97
6	Denmark.....	18.25	75.79	73	Colombia.....	6.59	26.75
7	Austria.....	18.08	75.06	74	Botswana.....	6.52	26.47
8	Sweden.....	17.86	74.12	75	Türkiye.....	6.32	25.59
9	France.....	17.72	73.53	76	Bahrain.....	6.20	25.10
10	Korea, Rep.....	17.19	71.34	77	Jamaica.....	6.05	24.48
11	Netherlands.....	17.11	70.96	78	Iran, Islamic Rep.....	5.58	22.50
12	United States of America.....	17.06	70.76	79	Namibia.....	5.46	21.98
13	Italy.....	16.88	70.01	80	Cabo Verde.....	5.43	21.87
14	Canada.....	16.84	69.86	81	Dominican Republic.....	5.32	21.39
15	Slovakia.....	16.82	69.78	82	Bolivia, Plurinational St.....	5.24	21.07
16	Switzerland.....	16.65	69.04	83	Kyrgyzstan.....	5.06	20.31
17	Czech Republic.....	16.40	68.01	84	Lebanon.....	4.91	19.67
18	Australia.....	16.24	67.31	85	Tunisia.....	4.89	19.58
19	Luxembourg.....	16.22	67.23	86	Algeria.....	4.76	19.04
20	Slovenia.....	15.52	64.28	87	Albania.....	4.76	19.03
21	Hungary.....	15.51	64.27	88	Burkina Faso.....	4.75	19.01
22	Norway.....	15.49	64.17	89	Thailand.....	4.61	18.40
23	Belgium.....	14.82	61.35	90	Guatemala.....	4.50	17.96
24	Estonia.....	14.72	60.92	91	Armenia.....	4.49	17.92
25	Trinidad and Tobago.....	14.59	60.40	92	Jordan.....	4.42	17.62
26	Iceland.....	14.21	58.79	93	Ecuador.....	4.39	17.51
27	Israel.....	14.10	58.33	94	Nepal.....	4.25	16.92
28	Latvia.....	14.03	58.01	95	Moldova, Rep.....	4.08	16.19
29	Poland.....	13.81	57.10	96	Eswatini.....	4.06	16.12
30	Russian Federation.....	13.80	57.05	97	Philippines.....	4.05	16.07
31	Cyprus.....	13.47	55.69	98	Oman.....	3.91	15.46
32	Croatia.....	13.36	55.19	99	Pakistan.....	3.84	15.20
33	Malta.....	13.06	53.95	100	Lesotho.....	3.62	14.25
34	Montenegro.....	12.84	53.03	101	Panama.....	3.48	13.68
35	Saudi Arabia.....	12.84	53.03	102	Gambia.....	3.33	13.04
36	North Macedonia.....	12.76	52.70	103	Morocco.....	3.23	12.60
37	United Kingdom.....	12.34	50.92	104	Mongolia.....	3.08	11.96
38	Ireland.....	12.15	50.14	105	Cameroon.....	2.89	11.17
39	Brunei Darussalam.....	12.15	50.12	106	Congo, Dem. Rep.....	2.88	11.14
40	Chile.....	12.08	49.84	107	Indonesia.....	2.87	11.12
41	Spain.....	12.06	49.73	108	Benin.....	2.84	10.97
42	Ukraine.....	11.81	48.68	109	Côte d'Ivoire.....	2.78	10.71
43	Portugal.....	11.79	48.62	110	Zambia.....	2.74	10.56
44	Mauritius.....	11.14	45.89	111	Nigeria.....	2.33	8.84
45	United Arab Emirates.....	11.10	45.70	112	Viet Nam.....	2.28	8.62
46	Serbia.....	10.56	43.45	113	India.....	2.25	8.50
47	Argentina.....	10.48	43.10	114	Zimbabwe.....	2.20	8.30
48	Malaysia.....	10.34	42.53	115	Kenya.....	2.13	8.01
49	Belarus.....	10.14	41.67	116	Tanzania, United Rep.....	2.04	7.63
50	Lithuania.....	9.80	40.26	117	Ghana.....	2.03	7.57
51	Costa Rica.....	9.70	39.82	118	Cambodia.....	2.02	7.54
52	Azerbaijan.....	9.39	38.53	119	Angola.....	2.01	7.50
53	Bulgaria.....	9.21	37.77	120	Mali.....	1.94	7.19
54	Sri Lanka.....	8.69	35.58	121	Bangladesh.....	1.86	6.85
55	Qatar.....	8.32	34.01	122	Uganda.....	1.69	6.16
56	Brazil.....	8.23	33.64	123	Lao PDR.....	1.68	6.08
57	South Africa.....	8.23	33.64	124	Mozambique.....	1.47	5.20
58	Bosnia and Herzegovina.....	8.21	33.57	125	Ethiopia.....	1.28	4.41
59	Kazakhstan.....	8.18	33.43	126	Guinea.....	1.17	3.97
60	Uruguay.....	7.82	31.90	127	Senegal.....	1.09	3.63
61	Paraguay.....	7.72	31.48	128	Rwanda.....	1.08	3.56
62	Kuwait.....	7.49	30.54	129	Madagascar.....	0.86	2.64
63	Peru.....	7.46	30.40	130	Chad.....	0.60	1.55
64	China.....	7.30	29.75	131	Burundi.....	0.55	1.34
65	Mexico.....	7.29	29.70	132	Malawi.....	0.23	0.00
66	Greece.....	7.22	29.39		New Zealand.....	n/a	n/a
67	El Salvador.....	7.20	29.29		Uzbekistan.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

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 2012.

5.1.4 Labour productivity per employee

Labour productivity per person employed (2022 US\$ PPP) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	190412.83	100.00	68	Belarus.....	49265.24	24.49
2	Luxembourg.....	177475.37	93.08	69	Armenia.....	48371.83	24.02
3	United States of America.....	158039.43	82.68	70	Albania.....	45061.73	22.25
4	Kuwait.....	152544.64	79.74	71	Colombia.....	43950.51	21.65
5	Qatar.....	146027.20	76.26	72	Tunisia.....	43319.06	21.31
6	Norway.....	145440.85	75.94	73	Botswana.....	40771.02	19.95
7	Belgium.....	143992.21	75.17	74	Sri Lanka.....	40493.47	19.80
8	Switzerland.....	142709.88	74.48	75	Brazil.....	39137.08	19.08
9	Saudi Arabia.....	141653.83	73.92	76	Thailand.....	37794.69	18.36
10	Sweden.....	132605.24	69.08	77	China.....	37759.82	18.34
11	Denmark.....	131925.56	68.71	78	Namibia.....	37065.24	17.97
12	Austria.....	129456.91	67.39	79	Azerbaijan.....	35964.70	17.38
13	United Arab Emirates.....	129455.33	67.39	80	Paraguay.....	33981.07	16.32
14	France.....	124693.24	64.84	81	Moldova, Rep.....	33962.57	16.31
15	Bahrain.....	123392.07	64.15	82	Morocco.....	32690.28	15.63
16	Netherlands.....	121263.51	63.01	83	Ukraine.....	29792.52	14.08
17	Australia.....	120100.77	62.39	84	Indonesia.....	29398.71	13.87
18	Italy.....	119724.39	62.19	85	Peru.....	28957.00	13.63
19	Iceland.....	119110.33	61.86	86	Ecuador.....	28399.17	13.33
20	Finland.....	117846.29	61.18	87	Philippines.....	25544.07	11.80
21	Germany.....	117353.72	60.92	88	Uzbekistan.....	24680.78	11.34
22	Canada.....	114866.90	59.59	89	Guatemala.....	24423.75	11.21
23	United Kingdom.....	113505.60	58.86	90	Viet Nam.....	24259.18	11.12
24	Israel.....	111060.13	57.55	91	Jamaica.....	22573.99	10.22
25	Ireland.....	110019.69	56.99	92	India.....	21824.03	9.81
26	Spain.....	109286.19	56.60	93	Bolivia, Plurinational St.....	21387.94	9.58
27	Türkiye.....	109083.60	56.49	94	Pakistan.....	20102.35	8.89
28	Malta.....	106906.48	55.33	95	Bangladesh.....	18548.72	8.06
29	Cyprus.....	102251.55	52.84	96	Angola.....	18303.52	7.93
30	Korea, Rep.....	98780.21	50.98	97	Côte d'Ivoire.....	17626.32	7.57
31	Slovenia.....	97796.87	50.46	98	Nigeria.....	16041.16	6.72
32	Poland.....	96975.04	50.02	99	Kyrgyzstan.....	15616.31	6.49
33	New Zealand.....	95499.64	49.23	100	Ghana.....	15158.86	6.25
34	Czech Republic.....	95377.16	49.16	101	Kenya.....	15158.21	6.25
35	Lithuania.....	91313.87	46.99	102	Senegal.....	14509.69	5.90
36	Estonia.....	90113.12	46.35	103	Zambia.....	12911.49	5.05
37	Japan.....	89823.89	46.19	104	Cameroon.....	12630.31	4.90
38	Croatia.....	89171.23	45.84	105	Rwanda.....	9383.81	3.16
39	Slovakia.....	88417.94	45.44	106	Cambodia.....	8763.09	2.83
40	Oman.....	87141.70	44.76	107	Tanzania, United Rep.....	8688.26	2.79
41	Portugal.....	86693.64	44.52	108	Zimbabwe.....	8489.09	2.68
42	Romania.....	85333.95	43.79	109	Uganda.....	7673.99	2.24
43	Hungary.....	85060.35	43.64	110	Burkina Faso.....	7603.77	2.21
44	Latvia.....	82949.68	42.51	111	Mali.....	7262.54	2.02
45	Greece.....	78892.94	40.34	112	Ethiopia.....	6119.32	1.41
46	Bosnia and Herzegovina.....	76244.56	38.93	113	Malawi.....	5806.62	1.25
47	Trinidad and Tobago.....	74225.61	37.85	114	Chad.....	5453.13	1.06
48	Malaysia.....	71987.99	36.65	115	Mozambique.....	4043.43	0.30
49	Egypt.....	69895.69	35.53	116	Congo, Dem. Rep.....	4007.23	0.28
50	Kazakhstan.....	67230.44	34.10	117	Madagascar.....	3477.43	0.00
51	Russian Federation.....	66129.27	33.52		Benin.....	n/a	n/a
52	Chile.....	65460.28	33.16		Brunei Darussalam.....	n/a	n/a
53	Costa Rica.....	61586.15	31.08		Burundi.....	n/a	n/a
54	North Macedonia.....	61564.96	31.07		Cabo Verde.....	n/a	n/a
55	South Africa.....	61283.86	30.92		El Salvador.....	n/a	n/a
56	Georgia.....	61134.25	30.84		Eswatini.....	n/a	n/a
57	Mauritius.....	60741.58	30.63		Gambia.....	n/a	n/a
58	Iran, Islamic Rep.....	60248.33	30.37		Guinea.....	n/a	n/a
59	Uruguay.....	59768.08	30.11		Honduras.....	n/a	n/a
60	Bulgaria.....	58652.04	29.52		Lao PDR.....	n/a	n/a
61	Serbia.....	57352.42	28.82		Lesotho.....	n/a	n/a
62	Argentina.....	55008.52	27.57		Mauritania.....	n/a	n/a
63	Algeria.....	51879.53	25.89		Mongolia.....	n/a	n/a
64	Mexico.....	51548.63	25.72		Montenegro.....	n/a	n/a
65	Lebanon.....	51174.00	25.52		Nepal.....	n/a	n/a
66	Dominican Republic.....	50991.85	25.42		Nicaragua.....	n/a	n/a
67	Jordan.....	49926.31	24.85		Panama.....	n/a	n/a

SOURCE: The Conference Board, Total Economy Database™ (<https://www.conference-board.org/data/economydatabase>)

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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	Iceland	5.42	100.00	68	Argentina	4.24	54.24
2	Lebanon	5.42	99.84	69	Ecuador	4.23	54.06
3	Israel	5.30	95.08	70	Thailand	4.22	53.50
4	China	5.27	93.96	71	Japan	4.18	51.87
5	Saudi Arabia	5.26	93.70	72	Albania	4.17	51.53
6	Norway	5.24	92.76	73	Poland	4.16	51.31
7	United Arab Emirates	5.23	92.48	74	Botswana	4.14	50.63
8	Qatar	5.19	91.11	75	Luxembourg	4.14	50.46
9	United States of America	5.18	90.70	76	Italy	4.14	50.34
10	Singapore	5.15	89.29	77	Guatemala	4.13	50.00
11	Canada	5.10	87.58	78	Algeria	4.12	49.78
12	Jordan	5.09	87.27	79	Ukraine	4.11	49.18
13	Finland	5.00	83.51	80	Tunisia	4.11	49.14
14	Korea, Rep.	4.99	83.13	81	Namibia	4.10	48.80
15	Kenya	4.97	82.32	82	Dominican Republic	4.08	48.35
16	Senegal	4.96	82.03	83	Greece	4.08	48.27
17	Costa Rica	4.93	80.81	84	Pakistan	4.07	47.68
18	Bahrain	4.92	80.53	85	Mauritius	4.06	47.56
19	Belgium	4.92	80.51	86	Armenia	4.03	46.29
20	Chile	4.92	80.47	87	Mexico	4.03	46.24
21	Mauritania	4.90	79.96	88	Nepal	4.03	46.17
22	Malaysia	4.86	78.33	89	Kyrgyzstan	4.01	45.59
23	Cyprus	4.85	77.99	90	Brunei Darussalam	3.99	44.76
24	Denmark	4.84	77.45	91	Kazakhstan	3.99	44.59
25	Netherlands	4.82	76.69	92	Eswatini	3.97	43.98
26	Oman	4.80	76.02	93	Morocco	3.96	43.58
27	Azerbaijan	4.79	75.56	94	Chad	3.94	42.77
28	Switzerland	4.76	74.52	95	Mali	3.94	42.71
29	Zambia	4.74	73.50	96	Latvia	3.89	40.89
30	Benin	4.73	73.16	97	Rwanda	3.89	40.77
31	Belarus	4.69	71.88	98	Montenegro	3.87	40.22
32	Burundi	4.69	71.58	99	Burkina Faso	3.86	39.71
33	Indonesia	4.66	70.61	100	Iran, Islamic Rep.	3.85	39.47
34	Germany	4.65	70.12	101	Malawi	3.85	39.14
35	Egypt	4.64	69.88	102	Estonia	3.83	38.36
36	Portugal	4.64	69.69	103	Madagascar	3.82	37.95
37	Cameroon	4.63	69.56	104	Panama	3.81	37.83
38	Ireland	4.62	68.98	105	Bulgaria	3.80	37.26
39	Côte d'Ivoire	4.61	68.60	106	Nigeria	3.78	36.43
40	Gambia	4.61	68.50	107	Slovakia	3.77	36.37
41	Sweden	4.59	67.86	108	El Salvador	3.73	34.67
42	Tanzania, United Rep.	4.59	67.84	109	Malta	3.73	34.64
43	Australia	4.58	67.64	110	Peru	3.73	34.55
44	Spain	4.58	67.52	111	Bolivia, Plurinational St.	3.70	33.34
45	Russian Federation	4.55	66.38	112	Cambodia	3.69	33.18
46	Viet Nam	4.53	65.34	113	Lithuania	3.69	33.07
47	United Kingdom	4.52	64.99	114	Bangladesh	3.67	32.27
48	Serbia	4.50	64.53	115	South Africa	3.66	32.06
49	Kuwait	4.50	64.32	116	Ethiopia	3.64	31.25
50	Ghana	4.50	64.25	117	North Macedonia	3.62	30.30
51	Colombia	4.48	63.43	118	India	3.54	27.18
52	Uruguay	4.46	62.92	119	Paraguay	3.53	26.96
53	Sri Lanka	4.46	62.87	120	Brazil	3.53	26.94
54	Philippines	4.45	62.30	121	Nicaragua	3.53	26.89
55	Austria	4.43	61.75	122	Congo, Dem. Rep.	3.49	25.54
56	Cabo Verde	4.41	60.84	123	Romania	3.46	24.27
57	Trinidad and Tobago	4.38	59.67	124	Honduras	3.43	23.16
58	Zimbabwe	4.38	59.56	125	Lesotho	3.41	22.22
59	France	4.36	58.84	126	Bosnia and Herzegovina	3.36	20.38
60	Uganda	4.36	58.81	127	Czech Republic	3.32	18.69
61	New Zealand	4.32	57.34	128	Mozambique	3.29	17.60
62	Jamaica	4.30	56.76	129	Hungary	3.25	16.33
63	Lao PDR	4.30	56.49	130	Croatia	3.23	15.49
64	Guinea	4.28	55.89	131	Moldova, Rep.	3.20	14.23
65	Slovenia	4.28	55.74	132	Angola	3.06	8.94
66	Türkiye	4.26	55.13	133	Mongolia	2.83	0.00
67	Georgia	4.26	55.08		Uzbekistan	n/a	n/a

SOURCE: World Economic Forum, Executive Opinion Survey 2019–2020 (<https://www.weforum.org/publications>)

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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] | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	6.06	100.00	68	Serbia.....	3.76	41.34
2	Finland.....	5.69	90.55	69	Egypt.....	3.76	41.22
3	Singapore.....	5.64	89.24	70	Mauritius.....	3.75	40.95
4	Ireland.....	5.56	87.41	71	Ethiopia.....	3.73	40.61
5	United States of America.....	5.55	87.07	72	Hungary.....	3.71	39.95
6	Saudi Arabia.....	5.35	81.89	73	Cambodia.....	3.71	39.95
7	United Arab Emirates.....	5.33	81.35	74	Russian Federation.....	3.69	39.61
8	Albania.....	5.32	81.26	75	Uganda.....	3.66	38.78
9	Qatar.....	5.29	80.41	76	Moldova, Rep.....	3.65	38.36
10	China.....	5.24	79.23	77	Namibia.....	3.64	38.31
11	Denmark.....	5.23	78.79	78	Kuwait.....	3.64	38.28
12	Indonesia.....	5.22	78.64	79	Philippines.....	3.64	38.23
13	Netherlands.....	5.12	75.97	80	India.....	3.63	37.95
14	Botswana.....	5.10	75.66	81	Uruguay.....	3.63	37.93
15	Canada.....	5.07	74.76	82	Thailand.....	3.60	37.29
16	Sweden.....	5.06	74.44	83	Côte d'Ivoire.....	3.58	36.58
17	Norway.....	5.01	73.20	84	Nepal.....	3.58	36.55
18	Australia.....	5.00	72.92	85	Trinidad and Tobago.....	3.54	35.70
19	Belgium.....	4.89	70.17	86	Algeria.....	3.50	34.69
20	Azerbaijan.....	4.87	69.73	87	Colombia.....	3.49	34.48
21	United Kingdom.....	4.83	68.59	88	Cameroon.....	3.47	33.88
22	Benin.....	4.81	68.02	89	Chile.....	3.46	33.68
23	Lebanon.....	4.80	67.96	90	Senegal.....	3.45	33.38
24	Iceland.....	4.80	67.81	91	Eswatini.....	3.32	30.10
25	Luxembourg.....	4.72	65.79	92	Spain.....	3.32	29.96
26	Brunei Darussalam.....	4.65	63.96	93	Montenegro.....	3.31	29.83
27	Austria.....	4.63	63.59	94	Greece.....	3.31	29.77
28	Portugal.....	4.63	63.54	95	Tunisia.....	3.30	29.53
29	Jordan.....	4.62	63.28	96	Romania.....	3.26	28.60
30	Estonia.....	4.59	62.43	97	Bangladesh.....	3.21	27.25
31	Oman.....	4.57	62.10	98	Poland.....	3.18	26.40
32	Viet Nam.....	4.54	61.18	99	Armenia.....	3.13	25.27
33	Gambia.....	4.49	59.97	100	South Africa.....	3.12	24.88
34	Uzbekistan.....	4.47	59.37	101	Kyrgyzstan.....	3.11	24.74
35	Bahrain.....	4.47	59.36	102	Chad.....	3.11	24.65
36	Korea, Rep.....	4.45	58.98	103	Ecuador.....	3.11	24.58
37	Malaysia.....	4.45	58.96	104	Slovakia.....	3.04	22.95
38	Germany.....	4.44	58.55	105	Kazakhstan.....	3.04	22.91
39	Georgia.....	4.43	58.39	106	North Macedonia.....	3.01	22.21
40	Italy.....	4.41	57.79	107	Guinea.....	3.01	22.15
41	Czech Republic.....	4.37	56.87	108	Argentina.....	2.99	21.57
42	Israel.....	4.35	56.29	109	Türkiye.....	2.96	20.89
43	Jamaica.....	4.22	53.06	110	Mongolia.....	2.95	20.52
44	Malta.....	4.20	52.45	111	Mexico.....	2.94	20.42
45	Kenya.....	4.16	51.49	112	Brazil.....	2.94	20.35
46	Ghana.....	4.15	51.12	113	Morocco.....	2.93	20.10
47	France.....	4.13	50.74	114	Croatia.....	2.91	19.42
48	Slovenia.....	4.12	50.57	115	Nigeria.....	2.88	18.72
49	Cyprus.....	4.12	50.38	116	Mali.....	2.88	18.69
50	Cabo Verde.....	4.11	50.22	117	Lesotho.....	2.86	18.23
51	Pakistan.....	4.08	49.40	118	Burkina Faso.....	2.80	16.78
52	Zimbabwe.....	4.05	48.79	119	Madagascar.....	2.76	15.82
53	Sri Lanka.....	4.03	48.27	120	Peru.....	2.70	14.19
54	Zambia.....	4.01	47.62	121	Bolivia, Plurinational St.....	2.70	14.05
55	Lao PDR.....	3.99	47.05	122	Iran, Islamic Rep.....	2.70	14.05
56	Bulgaria.....	3.96	46.33	123	Dominican Republic.....	2.65	12.98
57	Japan.....	3.95	46.13	124	El Salvador.....	2.57	10.82
58	New Zealand.....	3.88	44.43	125	Congo, Dem. Rep.....	2.56	10.63
59	Belarus.....	3.87	44.14	126	Mauritania.....	2.54	10.16
60	Ukraine.....	3.87	44.08	127	Guatemala.....	2.53	9.88
61	Malawi.....	3.86	43.90	128	Panama.....	2.49	8.80
62	Tanzania, United Rep.....	3.86	43.90	129	Bosnia and Herzegovina.....	2.48	8.57
63	Latvia.....	3.83	43.02	130	Mozambique.....	2.40	6.59
64	Rwanda.....	3.82	42.92	131	Honduras.....	2.40	6.48
65	Burundi.....	3.78	41.89	132	Paraguay.....	2.23	2.27
66	Costa Rica.....	3.78	41.84	133	Angola.....	2.21	1.69
67	Lithuania.....	3.77	41.63	134	Nicaragua.....	2.15	0.00

SOURCE: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/publications>)

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5.2.3 Skills matching

Workers whose education matches their occupation (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Moldova, Rep.	79.06	100.00	68	Ecuador	48.40	58.84
2	Armenia	74.65	94.09	69	Indonesia	47.88	58.13
3	Romania	74.11	93.36	70	Botswana	47.73	57.94
4	Montenegro	71.30	89.59	71	Thailand	47.42	57.53
5	Luxembourg	70.80	88.91	72	Colombia	47.13	57.13
6	Croatia	70.52	88.54	73	Bolivia, Plurinational St.	46.79	56.68
7	Georgia	69.99	87.82	74	Korea, Rep.	46.69	56.55
8	Hungary	69.67	87.40	75	Trinidad and Tobago	46.47	56.24
9	Bulgaria	69.42	87.06	76	El Salvador	45.77	55.30
10	Poland	69.27	86.86	77	Paraguay	45.64	55.14
11	Jamaica	68.94	86.42	78	Cabo Verde	44.91	54.15
12	Czech Republic	68.87	86.33	79	Philippines	44.60	53.74
13	Slovenia	68.35	85.63	80	Namibia	42.94	51.51
14	Lithuania	66.44	83.05	81	Nepal	42.60	51.06
15	Bosnia and Herzegovina	65.18	81.36	82	Kenya	41.65	49.77
16	Norway	65.10	81.27	83	Jordan	40.28	47.94
17	Slovakia	65.03	81.17	84	India	38.95	46.15
18	Mongolia	64.36	80.27	85	Cambodia	37.96	44.82
19	Iceland	64.20	80.05	86	Madagascar	36.61	43.00
20	Austria	63.98	79.75	87	Guatemala	36.08	42.30
21	Greece	63.86	79.59	88	Uganda	35.87	42.02
22	Malta	63.53	79.16	89	Egypt	35.70	41.79
23	Israel	63.14	78.63	90	Bangladesh	35.55	41.58
24	Sweden	63.04	78.49	91	Nicaragua	35.46	41.46
25	Finland	62.53	77.81	92	Panama	34.99	40.83
26	North Macedonia	62.35	77.57	93	Tunisia	34.56	40.25
27	Latvia	62.11	77.25	94	Lao PDR	34.54	40.23
28	Switzerland	61.85	76.90	95	Honduras	34.31	39.91
29	Denmark	61.84	76.89	96	Pakistan	33.77	39.19
30	Portugal	61.39	76.28	97	Congo, Dem. Rep.	33.18	38.40
31	Serbia	60.95	75.69	98	Cameroon	32.21	37.10
32	Belgium	60.86	75.56	99	Angola	28.05	31.52
33	Australia	60.75	75.42	100	Nigeria	27.73	31.08
34	Spain	60.64	75.27	101	Gambia	24.71	27.03
35	Ireland	60.52	75.11	102	Guinea	23.41	25.29
36	France	60.36	74.90	103	Senegal	22.14	23.57
37	Estonia	60.36	74.89	104	Ethiopia	21.03	22.09
38	Italy	60.24	74.73	105	Benin	15.27	14.35
39	Russian Federation	60.08	74.52	106	Mozambique	14.84	13.77
40	Chile	59.94	74.34	107	Chad	13.52	12.00
41	Argentina	59.65	73.94	108	Côte d'Ivoire	9.59	6.72
42	Uruguay	59.23	73.37	109	Tanzania, United Rep.	8.81	5.69
43	Netherlands	58.96	73.02	110	Burkina Faso	5.98	1.88
44	Germany	58.63	72.57	111	Mali	4.58	0.00
45	Brazil	57.50	71.05		Algeria	n/a	n/a
46	Cyprus	56.61	69.86		Azerbaijan	n/a	n/a
47	United Kingdom	56.27	69.41		Bahrain	n/a	n/a
48	Zimbabwe	56.18	69.28		Belarus	n/a	n/a
49	Mexico	55.84	68.83		Burundi	n/a	n/a
50	Dominican Republic	55.73	68.68		Canada	n/a	n/a
51	Costa Rica	54.88	67.53		China	n/a	n/a
52	United States of America	54.83	67.47		Japan	n/a	n/a
53	United Arab Emirates	54.46	66.98		Kazakhstan	n/a	n/a
54	Ghana	54.35	66.82		Kuwait	n/a	n/a
55	Brunei Darussalam	54.34	66.81		Kyrgyzstan	n/a	n/a
56	Iran, Islamic Rep.	54.12	66.52		Malawi	n/a	n/a
57	Mauritius	52.51	64.35		Malaysia	n/a	n/a
58	Rwanda	52.42	64.23		Mauritania	n/a	n/a
59	Albania	52.21	63.96		Morocco	n/a	n/a
60	Lebanon	50.70	61.93		New Zealand	n/a	n/a
61	Eswatini	49.94	60.91		Oman	n/a	n/a
62	Lesotho	49.35	60.12		Peru	n/a	n/a
63	Türkiye	49.27	60.01		Qatar	n/a	n/a
64	Zambia	49.26	59.99		Saudi Arabia	n/a	n/a
65	South Africa	49.23	59.95		Singapore	n/a	n/a
66	Viet Nam	49.23	59.95		Ukraine	n/a	n/a
67	Sri Lanka	49.06	59.73		Uzbekistan	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 2012.

5.2.4 Highly educated unemployment

Unemployment rate with intermediate or advanced education (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Chad.....	0.16	100.00	68	Congo, Dem. Rep.....	7.34	74.60
2	Benin.....	0.20	99.87	69	Cyprus.....	7.37	74.49
3	Malawi.....	0.83	97.65	70	Bolivia, Plurinational St.....	7.41	74.34
4	Mali.....	0.98	97.11	71	Ethiopia.....	7.52	73.96
5	Moldova, Rep.....	1.00	97.04	72	Burundi.....	7.58	73.74
6	Cambodia.....	1.38	95.71	73	Italy.....	7.77	73.05
7	China.....	1.84	94.08	74	Côte d'Ivoire.....	7.84	72.80
8	Madagascar.....	1.87	93.96	75	Argentina.....	7.97	72.35
9	Thailand.....	1.94	93.73	76	Chile.....	8.05	72.06
10	Viet Nam.....	2.22	92.74	77	Nicaragua.....	8.17	71.65
11	Czech Republic.....	2.31	92.42	78	Mongolia.....	8.28	71.27
12	Korea, Rep.....	2.69	91.07	79	Sri Lanka.....	8.29	71.21
13	Malta.....	2.73	90.93	80	Mauritius.....	8.54	70.36
14	Germany.....	2.82	90.60	81	Brazil.....	8.57	70.22
15	Norway.....	2.93	90.19	82	Kenya.....	8.80	69.42
16	Guinea.....	2.94	90.17	83	Bangladesh.....	9.02	68.64
17	Trinidad and Tobago.....	2.94	90.16	84	Cameroon.....	9.19	68.05
18	Philippines.....	3.08	89.66	85	Ukraine.....	9.38	67.35
19	Poland.....	3.10	89.59	86	Honduras.....	9.68	66.31
20	Hungary.....	3.13	89.51	87	Dominican Republic.....	9.71	66.20
21	Azerbaijan.....	3.15	89.44	88	Zambia.....	9.74	66.08
22	United Kingdom.....	3.16	89.38	89	Armenia.....	9.80	65.89
23	Netherlands.....	3.36	88.67	90	Egypt.....	9.84	65.73
24	Singapore.....	3.38	88.61	91	Serbia.....	9.99	65.20
25	United States of America.....	3.39	88.56	92	Panama.....	10.21	64.44
26	Switzerland.....	3.55	88.02	93	Zimbabwe.....	10.40	63.77
27	Mozambique.....	3.63	87.74	94	Senegal.....	10.55	63.21
28	Belarus.....	3.70	87.47	95	Georgia.....	11.28	60.64
29	Bulgaria.....	3.78	87.20	96	Colombia.....	11.48	59.94
30	Australia.....	3.91	86.75	97	India.....	11.55	59.68
31	Lao PDR.....	3.91	86.73	98	Spain.....	11.63	59.41
32	Mexico.....	4.00	86.43	99	Pakistan.....	11.63	59.39
33	Austria.....	4.01	86.38	100	Lesotho.....	11.83	58.70
34	Denmark.....	4.15	85.88	101	Albania.....	11.83	58.70
35	Romania.....	4.32	85.30	102	Costa Rica.....	11.91	58.40
36	Russian Federation.....	4.37	85.11	103	Iran, Islamic Rep.....	12.06	57.87
37	Slovenia.....	4.41	84.97	104	Bosnia and Herzegovina.....	12.53	56.22
38	Luxembourg.....	4.47	84.76	105	Saudi Arabia.....	12.57	56.07
39	Israel.....	4.51	84.62	106	Morocco.....	12.71	55.59
40	Canada.....	4.57	84.41	107	Türkiye.....	12.88	54.98
41	Peru.....	4.57	84.39	108	Nepal.....	13.14	54.06
42	Brunei Darussalam.....	4.59	84.32	109	North Macedonia.....	13.17	53.94
43	United Arab Emirates.....	4.70	83.95	110	Lebanon.....	13.64	52.26
44	Iceland.....	4.84	83.44	111	Mauritania.....	13.95	51.18
45	Paraguay.....	4.85	83.42	112	Greece.....	14.13	50.55
46	Ghana.....	4.90	83.25	113	Eswatini.....	14.79	48.20
47	Belgium.....	5.00	82.87	114	Nigeria.....	15.10	47.13
48	Estonia.....	5.21	82.15	115	Montenegro.....	16.45	42.33
49	Uzbekistan.....	5.31	81.79	116	Jordan.....	20.10	29.42
50	Sweden.....	5.31	81.77	117	Tunisia.....	20.62	27.56
51	Slovakia.....	5.40	81.45	118	Rwanda.....	21.10	25.88
52	Uruguay.....	5.43	81.36	119	Namibia.....	21.97	22.79
53	Ecuador.....	5.44	81.33	120	Botswana.....	22.71	20.15
54	Ireland.....	5.62	80.68	121	South Africa.....	26.55	6.55
55	Indonesia.....	5.65	80.57	122	Gambia.....	27.31	3.86
56	Guatemala.....	5.78	80.13	123	Kazakhstan.....	28.28	0.44
57	Kyrgyzstan.....	5.81	80.00	124	Angola.....	28.40	0.00
58	Jamaica.....	5.90	79.68		Algeria.....	n/a	n/a
59	El Salvador.....	6.13	78.87		Bahrain.....	n/a	n/a
60	Finland.....	6.33	78.16		Burkina Faso.....	n/a	n/a
61	Uganda.....	6.35	78.10		Cabo Verde.....	n/a	n/a
62	Portugal.....	6.51	77.55		Japan.....	n/a	n/a
63	Lithuania.....	6.69	76.87		Kuwait.....	n/a	n/a
64	France.....	6.79	76.54		Malaysia.....	n/a	n/a
65	Latvia.....	6.94	75.99		New Zealand.....	n/a	n/a
66	Croatia.....	7.25	74.91		Oman.....	n/a	n/a
67	Tanzania, United Rep.....	7.29	74.76		Qatar.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

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Pillar 6

Global Knowledge Skills

6.1.1 Workforce with tertiary education

Labour force with tertiary education (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kazakhstan.....	81.55	100.00	68	Peru.....	22.47	27.37
2	Canada.....	68.92	84.47	69	Kyrgyzstan.....	22.33	27.19
3	Singapore.....	61.42	75.25	70	Tunisia.....	22.05	26.84
4	Korea, Rep.....	54.67	66.96	71	Egypt.....	20.77	25.28
5	Ukraine.....	54.55	66.81	72	Costa Rica.....	20.41	24.84
6	Luxembourg.....	54.29	66.49	73	Mexico.....	20.18	24.55
7	Ireland.....	51.93	63.59	74	Mauritius.....	20.10	24.45
8	Japan.....	50.99	62.43	75	Bosnia and Herzegovina.....	19.34	23.51
9	Russian Federation.....	50.57	61.91	76	Uzbekistan.....	19.21	23.36
10	United States of America.....	50.34	61.63	77	Moldova, Rep.....	18.75	22.80
11	Belgium.....	50.08	61.31	78	Oman.....	18.72	22.75
12	Cyprus.....	49.44	60.53	79	Algeria.....	18.65	22.66
13	Lithuania.....	48.76	59.69	80	Panama.....	17.54	21.31
14	Australia.....	46.46	56.87	81	Thailand.....	17.53	21.29
15	Norway.....	45.87	56.14	82	Zimbabwe.....	16.25	19.72
16	Sweden.....	45.13	55.22	83	Nigeria.....	16.13	19.57
17	France.....	44.41	54.35	84	Jamaica.....	15.51	18.81
18	United Kingdom.....	44.41	54.35	85	South Africa.....	15.39	18.67
19	Spain.....	43.70	53.47	86	Eswatini.....	14.89	18.05
20	Slovenia.....	42.33	51.79	87	Ecuador.....	14.84	17.99
21	Switzerland.....	42.18	51.61	88	Paraguay.....	14.62	17.71
22	Estonia.....	41.90	51.26	89	Viet Nam.....	14.44	17.49
23	Netherlands.....	41.37	50.60	90	Uruguay.....	14.26	17.27
24	Finland.....	41.13	50.31	91	Cabo Verde.....	14.18	17.17
25	Mongolia.....	40.84	49.96	92	India.....	14.15	17.13
26	Latvia.....	40.40	49.41	93	Dominican Republic.....	13.47	16.30
27	Albania.....	39.52	48.33	94	Indonesia.....	12.55	15.18
28	Denmark.....	39.47	48.27	95	Namibia.....	11.40	13.76
29	United Arab Emirates.....	39.43	48.21	96	Guinea.....	10.09	12.15
30	Iceland.....	39.14	47.86	97	Nicaragua.....	9.85	11.85
31	Israel.....	38.08	46.55	98	Bahrain.....	9.84	11.84
32	Greece.....	37.72	46.11	99	Pakistan.....	9.32	11.20
33	New Zealand.....	37.53	45.89	100	Morocco.....	9.22	11.07
34	Poland.....	36.86	45.06	101	Nepal.....	9.08	10.91
35	Portugal.....	34.06	41.61	102	Lao PDR.....	9.07	10.89
36	Georgia.....	33.99	41.53	103	El Salvador.....	8.34	9.99
37	Belarus.....	33.98	41.51	104	Zambia.....	7.94	9.50
38	Malta.....	33.65	41.12	105	Guatemala.....	7.49	8.95
39	Lebanon.....	33.38	40.78	106	Uganda.....	7.36	8.79
40	Bulgaria.....	32.39	39.56	107	Gambia.....	7.10	8.47
41	Germany.....	32.30	39.45	108	Rwanda.....	7.00	8.35
42	Botswana.....	31.42	38.37	109	Ghana.....	6.75	8.04
43	Hungary.....	30.85	37.67	110	Honduras.....	6.67	7.94
44	Slovakia.....	30.67	37.45	111	Bangladesh.....	6.46	7.68
45	Montenegro.....	30.16	36.82	112	Cameroon.....	6.27	7.46
46	Colombia.....	29.82	36.40	113	Sri Lanka.....	6.27	7.45
47	Armenia.....	29.35	35.83	114	Cambodia.....	6.11	7.25
48	Iran, Islamic Rep.....	29.06	35.48	115	Lesotho.....	5.93	7.03
49	Malaysia.....	28.70	35.03	116	Congo, Dem. Rep.....	5.44	6.42
50	Croatia.....	28.60	34.90	117	Côte d'Ivoire.....	5.05	5.96
51	North Macedonia.....	28.59	34.89	118	Benin.....	4.98	5.86
52	Türkiye.....	27.95	34.10	119	Madagascar.....	4.80	5.64
53	Azerbaijan.....	27.83	33.96	120	Kenya.....	4.40	5.15
54	Qatar.....	27.63	33.71	121	Senegal.....	3.93	4.57
55	Czech Republic.....	26.55	32.38	122	Mauritania.....	3.68	4.27
56	Serbia.....	25.99	31.69	123	Angola.....	3.32	3.83
57	Philippines.....	24.85	30.29	124	Chad.....	3.09	3.54
58	Argentina.....	24.75	30.17	125	Burkina Faso.....	2.89	3.30
59	Chile.....	24.56	29.93	126	Mali.....	2.26	2.51
60	Jordan.....	24.48	29.84	127	Mozambique.....	2.07	2.28
61	Brazil.....	23.35	28.45	128	Burundi.....	1.94	2.13
62	Italy.....	23.29	28.37	129	Malawi.....	1.63	1.74
63	Romania.....	23.16	28.21	130	Ethiopia.....	1.18	1.19
64	Austria.....	23.01	28.04	131	Tanzania, United Rep.....	0.33	0.15
65	Kuwait.....	22.87	27.86	132	Trinidad and Tobago.....	0.21	0.00
66	Brunei Darussalam.....	22.74	27.70		China.....	n/a	n/a
67	Bolivia, Plurinational St.....	22.69	27.64		Saudi Arabia.....	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 (%) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Kazakhstan	73.91	100.00	68	Viet Nam	13.52	16.44
2	Uzbekistan	61.62	83.00	69	Bosnia and Herzegovina	13.12	15.89
3	Belarus	60.69	81.71	70	Albania	12.90	15.59
4	United Arab Emirates	52.47	70.34	71	Indonesia	11.03	13.00
5	Canada	49.67	66.46	72	Bangladesh	10.14	11.76
6	Singapore	48.32	64.59	73	Honduras	10.04	11.63
7	United States of America	48.09	64.27	74	El Salvador	9.89	11.42
8	United Kingdom	47.24	63.10	75	Cabo Verde	9.77	11.26
9	Israel	47.07	62.87	76	Zimbabwe	9.42	10.77
10	Australia	46.45	62.01	77	Congo, Dem. Rep.	9.12	10.35
11	Armenia	43.32	57.68	78	Uganda	8.15	9.01
12	Korea, Rep.	40.30	53.50	79	Gambia	7.50	8.11
13	Switzerland	39.66	52.61	80	Egypt	6.17	6.27
14	Estonia	39.50	52.39	81	Cambodia	5.49	5.34
15	Norway	39.23	52.02	82	Sri Lanka	5.03	4.69
16	Iceland	38.73	51.32	83	Madagascar	4.71	4.25
17	Cyprus	38.63	51.19	84	Guatemala	4.51	3.97
18	Saudi Arabia	37.92	50.21	85	Pakistan	4.15	3.47
19	Denmark	37.74	49.96	86	Rwanda	4.13	3.46
20	Netherlands	36.72	48.54	87	Senegal	4.03	3.32
21	Ireland	36.66	48.46	88	Mauritania	2.85	1.68
22	New Zealand	36.64	48.44	89	Burkina Faso	2.68	1.44
23	Finland	36.48	48.21	90	Angola	2.63	1.38
24	Belgium	35.80	47.27	91	Mali	2.37	1.02
25	Luxembourg	34.28	45.16	92	Mozambique	1.97	0.47
26	Moldova, Rep.	34.17	45.02	93	Tanzania, United Rep.	1.93	0.41
27	Mongolia	34.15	44.98	94	Burundi	1.64	0.00
28	Sweden	34.03	44.81		Algeria	n/a	n/a
29	Latvia	33.98	44.75		Argentina	n/a	n/a
30	Georgia	33.70	44.36		Bahrain	n/a	n/a
31	Spain	33.44	44.01		Benin	n/a	n/a
32	France	32.17	42.25		Botswana	n/a	n/a
33	Bolivia, Plurinational St.	31.48	41.29		Brunei Darussalam	n/a	n/a
34	Lithuania	29.88	39.08		Bulgaria	n/a	n/a
35	Austria	29.87	39.06		Cameroon	n/a	n/a
36	Germany	28.90	37.73		Chad	n/a	n/a
37	Slovenia	28.52	37.19		China	n/a	n/a
38	Poland	28.24	36.81		Côte d'Ivoire	n/a	n/a
39	Philippines	28.15	36.68		Croatia	n/a	n/a
40	Greece	26.81	34.83		Ecuador	n/a	n/a
41	Panama	26.72	34.70		Eswatini	n/a	n/a
42	Azerbaijan	25.40	32.88		Ethiopia	n/a	n/a
43	Malta	25.34	32.79		Ghana	n/a	n/a
44	Hungary	25.00	32.33		Guinea	n/a	n/a
45	Iran, Islamic Rep.	23.06	29.65		India	n/a	n/a
46	Slovakia	23.03	29.61		Jamaica	n/a	n/a
47	Jordan	22.69	29.13		Japan	n/a	n/a
48	Portugal	22.55	28.93		Kenya	n/a	n/a
49	Colombia	22.54	28.92		Kyrgyzstan	n/a	n/a
50	Costa Rica	22.29	28.58		Lao PDR	n/a	n/a
51	Chile	22.04	28.23		Lebanon	n/a	n/a
52	Dominican Republic	21.97	28.14		Lesotho	n/a	n/a
53	North Macedonia	21.96	28.12		Malawi	n/a	n/a
54	Peru	21.91	28.05		Mauritius	n/a	n/a
55	Serbia	21.70	27.76		Montenegro	n/a	n/a
56	Czech Republic	21.01	26.81		Morocco	n/a	n/a
57	Türkiye	20.76	26.47		Namibia	n/a	n/a
58	Thailand	20.37	25.92		Nepal	n/a	n/a
59	Malaysia	20.29	25.81		Nicaragua	n/a	n/a
60	Mexico	18.77	23.71		Nigeria	n/a	n/a
61	Kuwait	18.51	23.34		Oman	n/a	n/a
62	Italy	16.57	20.66		Qatar	n/a	n/a
63	Brazil	16.54	20.63		Russian Federation	n/a	n/a
64	South Africa	16.26	20.24		Trinidad and Tobago	n/a	n/a
65	Paraguay	15.93	19.78		Tunisia	n/a	n/a
66	Romania	15.31	18.92		Ukraine	n/a	n/a
67	Uruguay	13.70	16.69		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 (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Luxembourg	43.40	100.00	68	Saudi Arabia	10.74	24.74
2	Sweden	32.79	75.56	69	Kuwait	10.45	24.08
3	Netherlands	31.27	72.05	70	Argentina	9.97	22.98
4	Israel	30.11	69.38	71	Algeria	9.93	22.89
5	Norway	28.70	66.13	72	Mexico	9.62	22.18
6	Denmark	27.90	64.28	73	Mauritius	9.13	21.03
7	Lithuania	27.45	63.25	74	Moldova, Rep.	8.97	20.66
8	Slovenia	26.91	62.02	75	Jamaica	8.78	20.23
9	Belgium	26.63	61.35	76	Cabo Verde	8.26	19.04
10	United Kingdom	26.40	60.83	77	Botswana	8.13	18.74
11	Finland	26.31	60.62	78	Tunisia	7.98	18.40
12	Russian Federation	26.18	60.32	79	Paraguay	7.95	18.32
13	Switzerland	25.79	59.42	80	Nepal	7.84	18.06
14	Ireland	25.72	59.27	81	Dominican Republic	7.73	17.81
15	Iceland	25.24	58.15	82	Nigeria	7.71	17.78
16	Estonia	24.44	56.32	83	Namibia	7.64	17.60
17	Portugal	23.88	55.03	84	Bahrain	7.61	17.53
18	France	22.92	52.81	85	Ecuador	7.22	16.63
19	Singapore	22.69	52.27	86	Peru	7.09	16.34
20	United States of America	22.68	52.27	87	Bolivia, Plurinational St.	6.77	15.60
21	Kazakhstan	22.67	52.23	88	Sri Lanka	6.64	15.31
22	Australia	22.35	51.51	89	Trinidad and Tobago	6.58	15.17
23	Germany	22.23	51.23	90	Kenya	6.54	15.08
24	Belarus	22.10	50.92	91	Lesotho	6.39	14.73
25	Greece	21.85	50.35	92	Gambia	6.30	14.51
26	Cyprus	21.13	48.69	93	El Salvador	6.22	14.33
27	Poland	21.08	48.57	94	South Africa	6.08	14.00
28	Austria	21.03	48.45	95	Indonesia	5.91	13.62
29	Malta	20.93	48.23	96	Ghana	5.85	13.49
30	Korea, Rep.	20.85	48.04	97	Thailand	5.69	13.10
31	Latvia	20.59	47.45	98	Burkina Faso	5.54	12.76
32	Spain	19.29	44.46	99	Guatemala	5.50	12.67
33	Japan	18.99	43.77	100	Philippines	5.46	12.58
34	Hungary	18.83	43.38	101	Guinea	5.43	12.52
35	Canada	18.73	43.15	102	India	5.41	12.46
36	Montenegro	18.63	42.94	103	Nicaragua	5.16	11.89
37	Czech Republic	18.51	42.64	104	Pakistan	5.08	11.71
38	Jordan	18.29	42.14	105	Oman	5.06	11.66
39	Romania	18.20	41.93	106	Cameroon	5.04	11.61
40	Bulgaria	18.11	41.73	107	Lao PDR	5.03	11.59
41	Ukraine	18.01	41.50	108	Panama	5.00	11.53
42	Croatia	17.62	40.60	109	Viet Nam	4.85	11.17
43	North Macedonia	17.25	39.75	110	Bangladesh	4.82	11.11
44	Mongolia	17.02	39.23	111	Zimbabwe	4.74	10.93
45	Slovakia	15.80	36.42	112	Congo, Dem. Rep.	4.66	10.73
46	Lebanon	15.76	36.31	113	Rwanda	4.58	10.55
47	Chile	15.65	36.06	114	Zambia	4.51	10.40
48	Italy	15.05	34.68	115	Angola	4.41	10.17
49	Brunei Darussalam	14.97	34.51	116	Morocco	4.30	9.91
50	United Arab Emirates	14.71	33.89	117	Côte d'Ivoire	3.84	8.85
51	Bosnia and Herzegovina	14.49	33.39	118	China	3.35	7.73
52	Uruguay	14.43	33.25	119	Senegal	3.26	7.51
53	Serbia	14.40	33.19	120	Honduras	2.96	6.83
54	Georgia	12.89	29.69	121	Benin	2.95	6.79
55	Azerbaijan	12.59	29.01	122	Malawi	2.93	6.76
56	Malaysia	12.49	28.77	123	Cambodia	2.92	6.72
57	Egypt	12.35	28.46	124	Ethiopia	2.59	5.97
58	Albania	12.30	28.35	125	Uganda	2.28	5.26
59	Türkiye	12.20	28.11	126	Madagascar	2.05	4.73
60	Brazil	12.15	27.99	127	Mozambique	2.04	4.71
61	Eswatini	11.94	27.51	128	Chad	2.04	4.70
62	Armenia	11.38	26.22	129	Burundi	1.98	4.56
63	Iran, Islamic Rep.	11.34	26.14	130	Mali	1.52	3.50
64	Kyrgyzstan	11.13	25.64	131	Tanzania, United Rep.	0.83	1.92
65	Colombia	11.10	25.58	132	Mauritania	0.00	0.00
66	Qatar	11.03	25.42		New Zealand	n/a	n/a
67	Costa Rica	10.87	25.04		Uzbekistan	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

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6.1.4 Researchers

Full-time equivalent researchers (per million population) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Korea, Rep.	8713.59	100.00	68	Uzbekistan	523.38	5.89
2	Sweden	7930.18	91.00	69	Chile	510.31	5.74
3	Denmark	7691.89	88.26	70	South Africa	484.28	5.44
4	Finland	7527.36	86.37	71	Bosnia and Herzegovina	447.22	5.02
5	Singapore	7286.87	83.61	72	Pakistan	422.83	4.74
6	Norway	6698.84	76.85	73	Ecuador	399.49	4.47
7	Iceland	6088.27	69.83	74	Indonesia	395.67	4.42
8	Netherlands	5911.69	67.81	75	Bahrain	368.99	4.12
9	New Zealand	5853.99	67.14	76	Mexico	348.75	3.89
10	Austria	5751.32	65.96	77	Costa Rica	345.04	3.84
11	Belgium	5750.14	65.95	78	Mongolia	330.99	3.68
12	Switzerland	5551.97	63.67	79	Oman	284.45	3.15
13	Japan	5454.68	62.55	80	India	252.70	2.78
14	Germany	5393.15	61.85	81	Honduras	189.92	2.06
15	Portugal	5214.85	59.80	82	Botswana	185.21	2.01
16	Slovenia	4932.33	56.55	83	Philippines	173.64	1.87
17	France	4926.19	56.48	84	Kuwait	173.51	1.87
18	Luxembourg	4920.30	56.41	85	Namibia	149.47	1.60
19	United States of America	4821.23	55.28	86	Eswatini	142.34	1.51
20	Ireland	4769.14	54.68	87	Paraguay	129.83	1.37
21	United Kingdom	4683.77	53.70	88	Cabo Verde	123.49	1.30
22	Canada	4516.30	51.77	89	Sri Lanka	105.61	1.09
23	Hungary	4357.92	49.95	90	Zimbabwe	99.52	1.02
24	Czech Republic	4127.93	47.31	91	Ethiopia	90.53	0.92
25	Greece	4010.34	45.96	92	Ghana	89.11	0.90
26	Estonia	3846.11	44.07	93	Colombia	88.02	0.89
27	Lithuania	3728.48	42.72	94	El Salvador	72.98	0.72
28	Poland	3288.17	37.66	95	Rwanda	58.76	0.55
29	Slovakia	3164.31	36.24	96	Chad	57.89	0.54
30	Spain	3109.24	35.60	97	Gambia	52.89	0.49
31	Russian Federation	2721.68	31.15	98	Mozambique	42.97	0.37
32	Italy	2671.83	30.58	99	Panama	39.11	0.33
33	United Arab Emirates	2488.82	28.48	100	Madagascar	34.04	0.27
34	Bulgaria	2402.12	27.48	101	Cambodia	30.37	0.23
35	Malta	2296.49	26.27	102	Mali	30.31	0.23
36	Serbia	2230.88	25.51	103	Uganda	27.84	0.20
37	Croatia	2219.83	25.39	104	Lesotho	24.11	0.16
38	Latvia	2158.84	24.68	105	Burundi	23.44	0.15
39	Thailand	2069.91	23.66	106	Tanzania, United Rep.	19.15	0.10
40	Türkiye	1775.35	20.28	107	Angola	18.82	0.09
41	Azerbaijan	1741.11	19.88	108	Guatemala	13.92	0.04
42	Cyprus	1690.84	19.31	109	Congo, Dem. Rep.	10.56	0.00
43	Iran, Islamic Rep.	1659.46	18.95		Albania	n/a	n/a
44	Georgia	1623.68	18.54		Armenia	n/a	n/a
45	Tunisia	1621.60	18.51		Australia	n/a	n/a
46	China	1584.87	18.09		Bangladesh	n/a	n/a
47	Belarus	1417.68	16.17		Benin	n/a	n/a
48	Argentina	1236.89	14.09		Bolivia, Plurinational St.	n/a	n/a
49	Morocco	1073.54	12.21		Brunei Darussalam	n/a	n/a
50	Romania	952.87	10.83		Burkina Faso	n/a	n/a
51	Qatar	902.58	10.25		Cameroon	n/a	n/a
52	Brazil	887.68	10.08		Côte d'Ivoire	n/a	n/a
53	Egypt	854.28	9.69		Dominican Republic	n/a	n/a
54	Algeria	819.34	9.29		Guinea	n/a	n/a
55	Uruguay	795.37	9.02		Israel	n/a	n/a
56	Moldova, Rep.	788.08	8.93		Jamaica	n/a	n/a
57	Viet Nam	756.69	8.57		Kenya	n/a	n/a
58	North Macedonia	752.78	8.53		Kyrgyzstan	n/a	n/a
59	Montenegro	746.83	8.46		Lao PDR	n/a	n/a
60	Malaysia	740.77	8.39		Lebanon	n/a	n/a
61	Saudi Arabia	700.64	7.93		Malawi	n/a	n/a
62	Trinidad and Tobago	638.81	7.22		Mauritania	n/a	n/a
63	Kazakhstan	629.85	7.12		Nepal	n/a	n/a
64	Jordan	595.96	6.73		Nicaragua	n/a	n/a
65	Ukraine	587.50	6.63		Nigeria	n/a	n/a
66	Mauritius	567.98	6.40		Peru	n/a	n/a
67	Senegal	564.34	6.36		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 (%) | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Nigeria.....	28.09	100.00	68	Cabo Verde.....	3.42	20.19
1	Singapore.....	16.57	100.00	69	Thailand.....	3.37	19.88
3	Australia.....	12.89	77.65	70	Zambia.....	3.37	19.86
4	Iceland.....	12.74	76.73	71	Serbia.....	3.30	19.47
5	United Kingdom.....	11.82	71.17	72	Algeria.....	3.17	18.65
6	United States of America.....	11.72	70.53	73	North Macedonia.....	3.14	18.49
7	Malta.....	11.54	69.48	74	Mexico.....	3.11	18.26
8	Trinidad and Tobago.....	10.71	64.45	75	Romania.....	3.04	17.88
9	Latvia.....	10.12	60.85	76	Iran, Islamic Rep.....	3.00	17.64
10	Belarus.....	9.42	56.56	77	Burkina Faso.....	2.98	17.52
11	Lithuania.....	9.34	56.11	78	Tunisia.....	2.98	17.50
12	Ireland.....	9.32	56.01	79	Cameroon.....	2.94	17.28
13	United Arab Emirates.....	9.31	55.95	80	Mauritius.....	2.93	17.20
14	Botswana.....	8.68	52.12	81	Saudi Arabia.....	2.92	17.13
15	Switzerland.....	8.27	49.63	82	Greece.....	2.90	16.99
16	Canada.....	8.16	48.92	83	Armenia.....	2.81	16.46
17	Bahrain.....	8.10	48.56	84	Denmark.....	2.74	16.05
18	Norway.....	8.08	48.43	85	Congo, Dem. Rep.....	2.57	15.00
19	Ukraine.....	8.07	48.38	86	Bosnia and Herzegovina.....	2.52	14.73
20	Philippines.....	8.00	48.00	87	Pakistan.....	2.52	14.68
21	South Africa.....	7.97	47.79	88	Uruguay.....	2.49	14.55
22	Jamaica.....	7.86	47.11	89	Qatar.....	2.48	14.47
23	Belgium.....	7.72	46.29	90	Zimbabwe.....	2.47	14.43
24	Israel.....	7.67	45.99	91	Panama.....	2.42	14.07
25	Estonia.....	7.67	45.95	92	Finland.....	2.26	13.16
26	France.....	7.10	42.53	93	Honduras.....	2.25	13.04
27	Oman.....	6.93	41.49	94	Lesotho.....	2.15	12.43
28	Lao PDR.....	6.88	41.18	95	Dominican Republic.....	2.14	12.42
29	Lebanon.....	6.83	40.90	96	Indonesia.....	2.08	12.04
30	Mongolia.....	6.67	39.88	97	Nicaragua.....	1.99	11.52
31	Poland.....	6.63	39.65	98	Eswatini.....	1.99	11.48
32	Sweden.....	6.49	38.83	99	Bolivia, Plurinational St.....	1.92	11.05
33	Colombia.....	6.49	38.81	100	Kyrgyzstan.....	1.87	10.78
34	Sri Lanka.....	6.40	38.27	101	Japan.....	1.84	10.60
35	Brunei Darussalam.....	6.37	38.10	102	Ghana.....	1.69	9.69
36	Portugal.....	6.25	37.34	103	Bangladesh.....	1.64	9.35
37	Kazakhstan.....	6.07	36.26	104	Korea, Rep.....	1.55	8.79
38	Slovakia.....	5.68	33.91	105	El Salvador.....	1.38	7.78
39	Russian Federation.....	5.50	32.81	106	Albania.....	1.30	7.29
40	Türkiye.....	5.44	32.40	107	Azerbaijan.....	1.25	7.00
41	Malaysia.....	5.40	32.22	108	Nepal.....	1.14	6.35
42	Bulgaria.....	5.31	31.62	109	Angola.....	1.07	5.89
43	India.....	5.30	31.61	110	Cambodia.....	1.00	5.50
44	Netherlands.....	5.27	31.40	111	Guatemala.....	0.92	4.99
45	Montenegro.....	5.24	31.21	112	Rwanda.....	0.87	4.70
46	Austria.....	5.15	30.68	113	Ecuador.....	0.86	4.66
47	Czech Republic.....	5.14	30.60	114	Costa Rica.....	0.81	4.34
48	Kenya.....	5.12	30.50	115	Guinea.....	0.80	4.25
49	China.....	5.00	29.76	116	Madagascar.....	0.75	3.99
50	Namibia.....	4.98	29.66	117	Viet Nam.....	0.67	3.47
51	Georgia.....	4.93	29.36	118	Morocco.....	0.62	3.16
52	Paraguay.....	4.92	29.30	119	Gambia.....	0.58	2.93
53	Argentina.....	4.85	28.83	120	Malawi.....	0.55	2.75
54	Mauritania.....	4.72	28.08	121	Uganda.....	0.53	2.62
55	Kuwait.....	4.71	27.98	122	Ethiopia.....	0.53	2.60
56	Moldova, Rep.....	4.66	27.72	123	Côte d'Ivoire.....	0.48	2.30
57	Luxembourg.....	4.52	26.84	124	Peru.....	0.38	1.74
58	Hungary.....	4.39	26.05	125	Tanzania, United Rep.....	0.35	1.55
59	Spain.....	4.36	25.87	126	Mozambique.....	0.34	1.50
60	Croatia.....	4.26	25.26	127	Senegal.....	0.28	1.08
61	Slovenia.....	4.23	25.08	128	Benin.....	0.27	1.06
62	Chile.....	4.15	24.58	129	Jordan.....	0.26	0.97
63	Germany.....	4.13	24.48	130	Burundi.....	0.22	0.76
64	Cyprus.....	3.80	22.45	131	Chad.....	0.22	0.74
65	Italy.....	3.75	22.20	132	Mali.....	0.10	0.00
66	Egypt.....	3.75	22.19		New Zealand.....	n/a	n/a
67	Brazil.....	3.49	20.59		Uzbekistan.....	n/a	n/a

SOURCE: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

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6.1.6 Digital skills

Individuals with advanced ICT skills (%) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Brunei Darussalam.....	22.34	100.00	68	Romania.....	1.24	5.53
2	Saudi Arabia.....	19.99	89.45	69	Bulgaria.....	1.14	5.10
3	United Arab Emirates.....	19.24	86.10	70	Georgia.....	1.05	4.71
4	Tunisia.....	15.06	67.39	71	Jamaica.....	1.05	4.70
5	Bahrain.....	15.02	67.23	72	Thailand.....	1.00	4.47
6	Kuwait.....	14.65	65.55	73	Zimbabwe.....	1.00	4.46
7	Denmark.....	13.02	58.28	74	Russian Federation.....	0.98	4.37
8	Malaysia.....	11.80	52.83	75	Iran, Islamic Rep.....	0.92	4.10
9	Norway.....	11.64	52.11	76	Ukraine.....	0.75	3.35
10	Chile.....	11.56	51.72	77	Azerbaijan.....	0.66	2.95
11	Iceland.....	11.54	51.63	78	Côte d'Ivoire.....	0.63	2.84
12	Sweden.....	10.23	45.78	79	Viet Nam.....	0.60	2.69
13	Morocco.....	9.70	43.42	80	Cambodia.....	0.15	0.66
14	Finland.....	9.14	40.93	81	Philippines.....	0.00	0.00
15	Egypt.....	9.11	40.77		Angola.....	n/a	n/a
16	Switzerland.....	8.99	40.23		Argentina.....	n/a	n/a
17	United Kingdom.....	8.97	40.17		Armenia.....	n/a	n/a
18	Luxembourg.....	8.65	38.72		Australia.....	n/a	n/a
19	Austria.....	8.61	38.56		Bangladesh.....	n/a	n/a
20	Netherlands.....	8.11	36.28		Benin.....	n/a	n/a
21	Singapore.....	8.04	36.00		Bolivia, Plurinational St.....	n/a	n/a
22	Oman.....	8.03	35.95		Burkina Faso.....	n/a	n/a
23	Portugal.....	7.79	34.87		Burundi.....	n/a	n/a
24	Korea, Rep.....	7.72	34.56		Cameroon.....	n/a	n/a
25	Malta.....	7.44	33.30		Canada.....	n/a	n/a
26	Spain.....	7.20	32.20		Chad.....	n/a	n/a
27	Mexico.....	7.18	32.15		China.....	n/a	n/a
28	Algeria.....	6.89	30.85		Congo, Dem. Rep.....	n/a	n/a
29	Estonia.....	6.75	30.20		Costa Rica.....	n/a	n/a
30	Dominican Republic.....	6.73	30.14		El Salvador.....	n/a	n/a
31	Ireland.....	6.67	29.84		Eswatini.....	n/a	n/a
32	Kazakhstan.....	6.09	27.25		Ethiopia.....	n/a	n/a
33	Italy.....	6.03	27.01		Gambia.....	n/a	n/a
34	Colombia.....	6.02	26.95		Ghana.....	n/a	n/a
35	France.....	5.68	25.44		Guatemala.....	n/a	n/a
36	Croatia.....	5.66	25.31		Guinea.....	n/a	n/a
37	Montenegro.....	5.63	25.19		Honduras.....	n/a	n/a
38	Qatar.....	5.28	23.62		India.....	n/a	n/a
39	Cabo Verde.....	5.27	23.60		Israel.....	n/a	n/a
40	Ecuador.....	5.08	22.73		Jordan.....	n/a	n/a
41	South Africa.....	5.04	22.54		Kenya.....	n/a	n/a
42	Slovenia.....	5.03	22.51		Kyrgyzstan.....	n/a	n/a
43	Germany.....	5.02	22.48		Lao PDR.....	n/a	n/a
44	North Macedonia.....	4.94	22.13		Lebanon.....	n/a	n/a
45	Czech Republic.....	4.82	21.58		Madagascar.....	n/a	n/a
46	Belgium.....	4.78	21.40		Malawi.....	n/a	n/a
47	Botswana.....	4.77	21.33		Mali.....	n/a	n/a
48	Lithuania.....	4.76	21.32		Mauritania.....	n/a	n/a
49	Poland.....	4.68	20.96		Moldova, Rep.....	n/a	n/a
50	Greece.....	4.39	19.65		Mozambique.....	n/a	n/a
51	Slovakia.....	4.07	18.19		Namibia.....	n/a	n/a
52	Cyprus.....	3.90	17.46		Nepal.....	n/a	n/a
53	Hungary.....	3.85	17.22		New Zealand.....	n/a	n/a
54	Albania.....	3.63	16.24		Nicaragua.....	n/a	n/a
55	Indonesia.....	3.52	15.73		Nigeria.....	n/a	n/a
56	Serbia.....	3.45	15.42		Panama.....	n/a	n/a
57	Lesotho.....	3.30	14.77		Paraguay.....	n/a	n/a
58	Peru.....	3.25	14.57		Rwanda.....	n/a	n/a
59	Mongolia.....	3.25	14.55		Senegal.....	n/a	n/a
60	Latvia.....	3.09	13.82		Sri Lanka.....	n/a	n/a
61	Mauritius.....	3.04	13.61		Tanzania, United Rep.....	n/a	n/a
62	Türkiye.....	2.84	12.69		Trinidad and Tobago.....	n/a	n/a
63	Brazil.....	2.64	11.83		Uganda.....	n/a	n/a
64	Japan.....	2.19	9.82		United States of America.....	n/a	n/a
65	Bosnia and Herzegovina.....	2.10	9.42		Uruguay.....	n/a	n/a
66	Belarus.....	1.59	7.11		Uzbekistan.....	n/a	n/a
67	Pakistan.....	1.47	6.56		Zambia.....	n/a	n/a

SOURCE: International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database, August 2022 (<https://www.itu.int/itu-d/sites/statistics/>)

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6.2.1 Innovation output

Innovation Output Sub-Index | 2022

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	61.70	100.00	68	Pakistan.....	19.50	30.36
2	Sweden.....	56.80	91.91	69	Colombia.....	19.20	29.87
3	United Kingdom.....	55.80	90.26	70	Costa Rica.....	19.10	29.70
4	Korea, Rep.....	54.90	88.78	70	Montenegro.....	19.10	29.70
5	United States of America.....	54.60	88.28	72	Armenia.....	18.90	29.37
6	Netherlands.....	53.70	86.80	73	Indonesia.....	18.80	29.21
7	Germany.....	53.50	86.47	74	Bosnia and Herzegovina.....	18.40	28.55
8	China.....	53.10	85.81	75	Uruguay.....	17.90	27.72
9	Finland.....	49.30	79.54	76	North Macedonia.....	17.70	27.39
10	Denmark.....	49.10	79.21	77	Jordan.....	17.50	27.06
11	France.....	49.00	79.04	78	Kenya.....	17.40	26.90
12	Japan.....	45.80	73.76	79	Panama.....	17.30	26.73
13	Malta.....	45.40	73.10	80	Peru.....	16.60	25.58
14	Singapore.....	43.90	70.63	81	Egypt.....	16.20	24.92
15	Italy.....	43.30	69.64	81	Georgia.....	16.20	24.92
16	Israel.....	43.20	69.47	83	Paraguay.....	14.50	22.11
17	Iceland.....	43.00	69.14	84	Bahrain.....	14.30	21.78
18	Luxembourg.....	42.10	67.66	84	Madagascar.....	14.30	21.78
19	Ireland.....	41.30	66.34	86	Oman.....	14.10	21.45
20	Cyprus.....	41.10	66.01	87	Ghana.....	13.80	20.96
21	Austria.....	40.70	65.35	88	Albania.....	13.60	20.63
22	Estonia.....	39.70	63.70	89	Bangladesh.....	12.90	19.47
23	Canada.....	39.00	62.54	90	Uzbekistan.....	12.80	19.31
24	Belgium.....	38.50	61.72	91	Dominican Republic.....	12.70	19.14
25	Spain.....	37.40	59.90	92	Zimbabwe.....	12.30	18.48
26	Czech Republic.....	37.30	59.74	93	Botswana.....	11.20	16.67
27	New Zealand.....	37.20	59.57	94	El Salvador.....	11.10	16.50
28	Bulgaria.....	36.90	59.08	94	Guatemala.....	11.10	16.50
28	Norway.....	36.90	59.08	96	Kazakhstan.....	11.00	16.34
30	Portugal.....	35.70	57.10	97	Ecuador.....	10.90	16.17
31	Australia.....	35.00	55.94	98	Tanzania, United Rep.....	10.10	14.85
32	Türkiye.....	34.50	55.12	99	Ethiopia.....	10.00	14.69
33	Hungary.....	32.80	52.31	100	Cambodia.....	9.60	14.03
34	Slovenia.....	30.90	49.17	101	Trinidad and Tobago.....	9.50	13.86
35	Poland.....	30.80	49.01	102	Senegal.....	8.90	12.87
36	Malaysia.....	29.40	46.70	103	Côte d'Ivoire.....	8.50	12.21
37	Iran, Islamic Rep.....	29.20	46.37	104	Kyrgyzstan.....	8.40	12.05
38	India.....	29.10	46.20	104	Nigeria.....	8.40	12.05
39	Croatia.....	28.50	45.21	106	Azerbaijan.....	7.60	10.73
40	Viet Nam.....	28.40	45.05	106	Nepal.....	7.60	10.73
41	Latvia.....	28.30	44.88	108	Nicaragua.....	7.40	10.40
42	Romania.....	27.70	43.89	109	Namibia.....	7.30	10.23
43	Thailand.....	27.60	43.73	110	Cameroon.....	7.20	10.07
44	Slovakia.....	27.50	43.56	111	Zambia.....	7.10	9.90
45	Moldova, Rep.....	26.90	42.57	112	Honduras.....	7.00	9.74
46	Lithuania.....	26.60	42.08	113	Angola.....	6.80	9.41
47	Ukraine.....	26.40	41.75	114	Algeria.....	6.70	9.24
48	Greece.....	26.10	41.25	114	Mozambique.....	6.70	9.24
49	Russian Federation.....	26.00	41.09	116	Mali.....	6.60	9.08
50	Philippines.....	25.70	40.59	116	Uganda.....	6.60	9.08
51	United Arab Emirates.....	24.80	39.11	118	Lao PDR.....	6.10	8.25
52	Brazil.....	24.70	38.94	119	Rwanda.....	5.80	7.76
53	Mauritius.....	24.50	38.61	120	Burkina Faso.....	5.40	7.10
53	Mexico.....	24.50	38.61	121	Guinea.....	3.20	3.47
55	Morocco.....	24.40	38.45	122	Brunei Darussalam.....	3.10	3.30
56	Chile.....	24.30	38.28	123	Burundi.....	2.50	2.31
57	Serbia.....	23.70	37.29	124	Benin.....	1.70	0.99
58	Tunisia.....	22.80	35.81	125	Mauritania.....	1.10	0.00
59	Jamaica.....	22.50	35.31		Bolivia, Plurinational St.....	n/a	n/a
60	South Africa.....	22.10	34.65		Cabo Verde.....	n/a	n/a
61	Argentina.....	21.60	33.83		Chad.....	n/a	n/a
62	Belarus.....	21.40	33.50		Congo, Dem. Rep.....	n/a	n/a
63	Mongolia.....	21.30	33.33		Eswatini.....	n/a	n/a
64	Saudi Arabia.....	20.30	31.68		Gambia.....	n/a	n/a
65	Kuwait.....	20.20	31.52		Lebanon.....	n/a	n/a
66	Qatar.....	20.10	31.35		Lesotho.....	n/a	n/a
67	Sri Lanka.....	19.90	31.02		Malawi.....	n/a	n/a

SOURCE: INSEAD, Cornell University, and World Intellectual Property Organization, *The Global Innovation Index 2022: What is the future of innovation-driven growth?* (<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 2012.

6.2.2 High-value exports

High-technology exports (% of manufactured exports) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Philippines.....	64.23	100.00	68	Greece.....	6.11	10.89
1	Singapore.....	55.26	100.00	69	Luxembourg.....	6.07	10.83
3	Malaysia.....	51.68	93.51	70	Armenia.....	5.96	10.61
4	Viet Nam.....	41.74	75.49	71	South Africa.....	5.62	10.00
5	Korea, Rep.....	35.71	64.56	72	Belarus.....	5.59	9.95
6	Iceland.....	33.49	60.53	73	Mali.....	5.48	9.75
7	Malta.....	33.15	59.92	74	Bosnia and Herzegovina.....	5.32	9.45
8	Kazakhstan.....	32.76	59.21	75	Guatemala.....	5.17	9.18
9	China.....	29.96	54.13	76	Rwanda.....	5.09	9.05
10	Israel.....	29.59	53.47	77	Ecuador.....	4.84	8.59
11	Thailand.....	27.67	49.98	78	Peru.....	4.79	8.51
12	Angola.....	26.98	48.73	79	Bolivia, Plurinational St.....	4.55	8.06
13	Ireland.....	25.52	46.09	80	Ukraine.....	4.51	7.99
14	United Kingdom.....	23.85	43.06	81	Bahrain.....	4.45	7.88
15	Lao PDR.....	23.16	41.80	82	Argentina.....	4.42	7.83
16	Australia.....	22.39	40.41	83	Morocco.....	4.39	7.77
17	Mongolia.....	22.02	39.74	84	North Macedonia.....	4.18	7.39
18	Netherlands.....	21.95	39.61	85	Türkiye.....	3.28	5.77
19	France.....	21.92	39.56	86	Kenya.....	3.13	5.48
20	Norway.....	20.64	37.24	87	Malawi.....	2.85	4.98
21	Estonia.....	20.63	37.21	88	Egypt.....	2.84	4.96
22	Czech Republic.....	20.29	36.61	89	Benin.....	2.76	4.83
23	United States of America.....	19.89	35.88	90	Zimbabwe.....	2.38	4.14
24	Mexico.....	19.80	35.72	91	Jamaica.....	2.36	4.08
25	Belgium.....	18.34	33.06	92	Cambodia.....	2.28	3.95
26	Japan.....	17.98	32.41	93	Burkina Faso.....	2.26	3.90
27	Latvia.....	16.96	30.56	94	Moldova, Rep.....	2.24	3.87
28	Hungary.....	16.26	29.29	95	Lebanon.....	2.15	3.72
29	New Zealand.....	16.26	29.29	96	Uganda.....	2.10	3.63
30	Cyprus.....	15.96	28.75	97	Azerbaijan.....	2.10	3.62
31	Kyrgyzstan.....	15.73	28.34	98	Mauritania.....	2.05	3.53
32	Costa Rica.....	15.68	28.25	99	Honduras.....	1.96	3.37
33	Germany.....	15.23	27.42	100	Senegal.....	1.88	3.22
34	Canada.....	14.97	26.95	101	Qatar.....	1.71	2.92
35	Switzerland.....	14.24	25.63	102	Tanzania, United Rep.....	1.68	2.86
36	Sweden.....	13.93	25.07	103	Georgia.....	1.61	2.74
37	Austria.....	13.78	24.79	104	Jordan.....	1.54	2.61
38	Denmark.....	13.67	24.60	105	Pakistan.....	1.49	2.51
39	Ethiopia.....	13.10	23.56	106	Zambia.....	1.36	2.28
40	Chile.....	12.44	22.37	107	Kuwait.....	1.35	2.26
41	Lithuania.....	11.51	20.68	108	Brunei Darussalam.....	1.34	2.24
42	Romania.....	11.49	20.64	109	Nicaragua.....	1.22	2.02
43	Bulgaria.....	11.30	20.29	110	Ghana.....	1.14	1.88
44	Côte d'Ivoire.....	11.23	20.18	111	Nepal.....	1.07	1.76
45	Finland.....	10.29	18.48	112	Sri Lanka.....	1.05	1.71
46	India.....	10.21	18.33	113	Mozambique.....	1.02	1.67
47	Uruguay.....	9.76	17.51	114	Algeria.....	0.96	1.55
48	Russian Federation.....	9.69	17.38	115	Guinea.....	0.90	1.45
49	Croatia.....	9.56	17.15	116	Gambia.....	0.89	1.42
50	Montenegro.....	9.44	16.94	117	Madagascar.....	0.78	1.23
51	Poland.....	9.44	16.94	118	Cabo Verde.....	0.76	1.19
52	Spain.....	9.39	16.84	119	Iran, Islamic Rep.....	0.72	1.13
53	Slovakia.....	9.00	16.14	120	Saudi Arabia.....	0.61	0.92
54	Brazil.....	9.00	16.13	121	Congo, Dem. Rep.....	0.51	0.74
55	United Arab Emirates.....	8.96	16.06	122	Namibia.....	0.48	0.68
56	Dominican Republic.....	8.48	15.20	123	Mauritius.....	0.39	0.51
57	Colombia.....	8.21	14.70	124	Eswatini.....	0.34	0.43
58	Italy.....	8.20	14.68	125	Botswana.....	0.33	0.41
59	Paraguay.....	7.42	13.27	126	Uzbekistan.....	0.31	0.37
60	El Salvador.....	7.37	13.17	127	Bangladesh.....	0.31	0.37
61	Indonesia.....	7.20	12.87	128	Albania.....	0.29	0.33
62	Tunisia.....	7.17	12.81	129	Panama.....	0.26	0.29
63	Cameroon.....	7.03	12.55	130	Burundi.....	0.17	0.12
64	Oman.....	6.61	11.80	131	Lesotho.....	0.14	0.06
65	Slovenia.....	6.56	11.70	132	Trinidad and Tobago.....	0.10	0.00
66	Nigeria.....	6.49	11.58		Chad.....	n/a	n/a
67	Portugal.....	6.25	11.15		Serbia.....	n/a	n/a

SOURCE: World Bank, World Development Indicators (<https://datacatalog.worldbank.org/search/dataset/0037712>). Sourced from United Nations, Comtrade database through the World Integrated Trade Solution (WITS) platform (<https://wits.worldbank.org/>).

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6.2.3 Software development

GitHub commits (per 1,000 population) | 2021

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Singapore.....	8.47	100.00	68	Peru.....	5.07	58.91
2	Switzerland.....	8.03	94.61	69	Türkiye.....	5.04	58.56
3	Luxembourg.....	7.91	93.24	70	Mongolia.....	4.95	57.43
4	Norway.....	7.79	91.79	71	Kyrgyzstan.....	4.88	56.54
5	United States of America.....	7.78	91.59	72	Indonesia.....	4.86	56.39
6	Sweden.....	7.70	90.66	73	Kenya.....	4.82	55.81
7	Finland.....	7.68	90.47	74	South Africa.....	4.81	55.69
8	Iceland.....	7.68	90.43	75	Cabo Verde.....	4.80	55.61
9	Netherlands.....	7.67	90.34	76	Trinidad and Tobago.....	4.73	54.82
10	Israel.....	7.60	89.48	77	Mexico.....	4.72	54.68
11	Canada.....	7.58	89.19	78	Ecuador.....	4.68	54.18
12	Ireland.....	7.55	88.81	79	Dominican Republic.....	4.66	53.96
13	Estonia.....	7.49	88.17	80	El Salvador.....	4.64	53.65
14	Czech Republic.....	7.48	88.03	81	Thailand.....	4.62	53.39
15	Belgium.....	7.46	87.72	82	Kazakhstan.....	4.59	53.07
16	Germany.....	7.42	87.24	83	Nepal.....	4.59	53.02
17	Denmark.....	7.40	87.03	84	Guatemala.....	4.58	53.01
18	United Kingdom.....	7.34	86.34	85	Algeria.....	4.53	52.36
19	New Zealand.....	7.32	86.14	86	Bolivia, Plurinational St.....	4.52	52.19
20	Australia.....	7.25	85.21	87	Philippines.....	4.48	51.76
21	Austria.....	7.18	84.44	88	Azerbaijan.....	4.44	51.26
22	Slovenia.....	7.14	83.93	89	Jamaica.....	4.43	51.13
23	Croatia.....	7.14	83.84	90	Panama.....	4.39	50.67
24	France.....	7.11	83.56	91	China.....	4.39	50.65
25	Malta.....	7.04	82.75	92	Qatar.....	4.37	50.42
26	Hungary.....	7.04	82.66	93	Morocco.....	4.28	49.33
27	Korea, Rep.....	7.01	82.38	94	Paraguay.....	4.10	47.20
28	Lithuania.....	6.93	81.32	95	Bangladesh.....	4.07	46.74
29	Latvia.....	6.87	80.65	96	Saudi Arabia.....	4.00	45.99
30	Spain.....	6.83	80.21	97	Egypt.....	3.99	45.82
31	Poland.....	6.81	79.97	98	Cambodia.....	3.99	45.77
32	Belarus.....	6.81	79.95	99	Kuwait.....	3.96	45.50
33	Portugal.....	6.74	79.11	100	Nigeria.....	3.94	45.20
34	Bulgaria.....	6.61	77.51	101	Rwanda.....	3.93	45.13
35	Slovakia.....	6.51	76.25	102	Honduras.....	3.93	45.03
36	Japan.....	6.45	75.57	103	Ghana.....	3.74	42.76
37	Ukraine.....	6.45	75.54	104	Iran, Islamic Rep.....	3.73	42.67
38	Greece.....	6.43	75.26	105	Uzbekistan.....	3.71	42.48
39	Italy.....	6.29	73.61	106	Nicaragua.....	3.71	42.43
40	Russian Federation.....	6.19	72.44	107	Pakistan.....	3.70	42.37
41	Cyprus.....	6.16	72.09	108	Oman.....	3.68	42.04
42	Romania.....	6.10	71.35	109	Botswana.....	3.58	40.91
43	Sri Lanka.....	6.09	71.23	110	Uganda.....	3.38	38.48
44	Serbia.....	6.09	71.20	111	Cameroon.....	3.28	37.20
45	Uruguay.....	6.09	71.15	112	Senegal.....	3.18	36.00
46	Moldova, Rep.....	6.00	70.17	113	Eswatini.....	3.03	34.24
47	Costa Rica.....	5.99	70.01	114	Benin.....	2.87	32.29
48	Armenia.....	5.92	69.16	115	Zimbabwe.....	2.80	31.39
49	Brazil.....	5.88	68.66	116	Lao PDR.....	2.66	29.68
50	Argentina.....	5.76	67.20	117	Zambia.....	2.59	28.83
51	Lebanon.....	5.67	66.08	118	Madagascar.....	2.53	28.19
52	North Macedonia.....	5.62	65.54	119	Gambia.....	2.51	27.94
53	Bosnia and Herzegovina.....	5.60	65.22	120	Côte d'Ivoire.....	2.51	27.92
54	Georgia.....	5.55	64.64	121	Congo, Dem. Rep.....	2.38	26.38
55	Montenegro.....	5.51	64.15	122	Angola.....	2.35	25.93
56	Chile.....	5.44	63.41	123	Ethiopia.....	2.29	25.32
57	United Arab Emirates.....	5.43	63.26	124	Tanzania, United Rep.....	2.28	25.12
58	Albania.....	5.40	62.86	125	Lesotho.....	2.04	22.19
59	Mauritius.....	5.39	62.75	126	Malawi.....	1.92	20.75
60	Colombia.....	5.33	62.01	127	Mozambique.....	1.78	19.07
61	Tunisia.....	5.29	61.49	128	Mauritania.....	1.76	18.86
62	Viet Nam.....	5.29	61.48	129	Burundi.....	1.59	16.84
63	Malaysia.....	5.26	61.22	130	Guinea.....	1.12	11.16
64	Jordan.....	5.15	59.78	131	Burkina Faso.....	1.10	10.86
65	Brunei Darussalam.....	5.10	59.20	132	Mali.....	1.03	10.02
66	India.....	5.09	59.07	133	Chad.....	0.20	0.00
67	Bahrain.....	5.08	58.99		Namibia.....	n/a	n/a

SOURCE: GitHub (<https://github.com/>). Data on population are sourced from World Bank, World Development Indicators (<https://datacatalog.worldbank.org/search/dataset/0037712>)

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6.2.4 New business density

New corporate registrations (per 1,000 working-age population) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Estonia	24.19	100.00	68	Poland	1.64	8.87
1	United Kingdom	18.11	100.00	69	Kenya	1.55	8.35
3	Botswana	17.98	99.32	70	Albania	1.52	8.22
4	New Zealand	17.88	98.77	71	Oman	1.52	8.17
5	Luxembourg	17.19	94.93	72	Dominican Republic	1.48	7.97
6	Australia	14.27	78.78	73	Lesotho	1.47	7.93
7	Cyprus	13.26	73.21	74	Bulgaria	1.41	7.57
8	Cabo Verde	13.04	71.99	75	Germany	1.36	7.30
9	South Africa	12.50	68.96	76	Nepal	1.36	7.30
10	Chile	12.11	66.80	77	Azerbaijan	1.30	6.98
11	Iceland	10.44	57.55	78	Thailand	1.29	6.91
12	Malta	10.05	55.43	79	Kyrgyzstan	1.27	6.84
13	Denmark	10.02	55.22	80	Belarus	1.14	6.10
14	Singapore	9.99	55.06	81	Zambia	1.07	5.73
15	Norway	9.44	52.05	82	Bosnia and Herzegovina	1.01	5.35
16	Sweden	8.98	49.48	83	Brunei Darussalam	1.00	5.33
17	China	8.58	47.29	84	Nigeria	0.88	4.68
18	Montenegro	7.95	43.77	85	Ghana	0.87	4.59
19	Georgia	7.47	41.14	86	Uganda	0.86	4.56
20	Mauritius	7.05	38.83	87	Mexico	0.79	4.18
21	Latvia	6.89	37.90	88	Côte d'Ivoire	0.78	4.10
22	Ireland	6.78	37.31	89	Sri Lanka	0.74	3.89
23	Qatar	6.26	34.45	90	Saudi Arabia	0.64	3.31
24	Romania	6.23	34.28	91	Iran, Islamic Rep.	0.63	3.25
25	Mongolia	5.92	32.54	92	Benin	0.61	3.15
26	Finland	5.88	32.32	93	Guatemala	0.60	3.10
27	Portugal	5.45	29.98	94	Namibia	0.56	2.90
28	France	5.25	28.86	95	Cambodia	0.54	2.79
29	Slovakia	5.13	28.17	96	Austria	0.53	2.72
30	Belgium	4.67	25.62	97	Ethiopia	0.51	2.62
31	Switzerland	4.64	25.46	98	Bolivia, Plurinational St.	0.51	2.62
32	Trinidad and Tobago	4.54	24.89	99	Senegal	0.47	2.39
33	Croatia	4.44	24.36	100	Guinea	0.45	2.27
34	Eswatini	4.36	23.91	101	Japan	0.45	2.27
35	Panama	4.22	23.15	102	Jordan	0.43	2.17
36	Hungary	4.01	22.00	103	El Salvador	0.42	2.12
37	Peru	3.80	20.80	104	Mauritania	0.38	1.91
38	Czech Republic	3.79	20.79	105	Algeria	0.35	1.74
39	Costa Rica	3.61	19.78	106	Indonesia	0.33	1.62
40	Kazakhstan	3.49	19.10	107	Burkina Faso	0.33	1.60
41	North Macedonia	3.46	18.92	108	Mali	0.27	1.27
42	Kuwait	3.29	17.98	109	Egypt	0.24	1.10
43	Bahrain	3.11	17.00	110	Mozambique	0.24	1.09
44	Netherlands	3.10	16.96	111	Canada	0.22	0.98
45	Israel	3.07	16.76	112	Philippines	0.21	0.97
46	Lithuania	2.97	16.22	113	Argentina	0.20	0.88
47	Italy	2.96	16.17	114	Tanzania, United Rep.	0.18	0.76
48	Armenia	2.86	15.59	115	India	0.15	0.63
49	Brazil	2.73	14.92	116	Lao PDR	0.15	0.62
50	Uzbekistan	2.71	14.80	117	Pakistan	0.15	0.60
51	Spain	2.50	13.60	118	Madagascar	0.13	0.49
52	Zimbabwe	2.48	13.49	119	Chad	0.11	0.41
53	Slovenia	2.42	13.20	120	Paraguay	0.05	0.06
54	United Arab Emirates	2.30	12.49	121	Bangladesh	0.04	0.01
55	Uruguay	2.29	12.46	122	Congo, Dem. Rep.	0.04	0.00
56	Russian Federation	2.26	12.27		Angola	n/a	n/a
57	Morocco	2.24	12.18		Burundi	n/a	n/a
58	Rwanda	2.17	11.77		Cameroon	n/a	n/a
59	Malaysia	2.13	11.58		Ecuador	n/a	n/a
60	Tunisia	2.00	10.85		Gambia	n/a	n/a
61	Serbia	1.99	10.82		Honduras	n/a	n/a
62	Jamaica	1.98	10.75		Korea, Rep.	n/a	n/a
63	Colombia	1.97	10.66		Lebanon	n/a	n/a
64	Türkiye	1.77	9.61		Malawi	n/a	n/a
65	Greece	1.76	9.50		Moldova, Rep.	n/a	n/a
66	Ukraine	1.68	9.08		Nicaragua	n/a	n/a
67	Viet Nam	1.66	8.98		United States of America	n/a	n/a

SOURCE: World Bank, Entrepreneurship Database (<https://www.worldbank.org/en/programs/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 2012.

6.2.5 Scientific journal articles

Number of scientific and technical journal articles (per 10,000 inhabitants) | 2020

Rank	Country	Value	Score	Rank	Country	Value	Score
1	Switzerland.....	26.71	100.00	68	Morocco.....	1.76	6.55
2	Denmark.....	26.27	98.34	69	Egypt.....	1.72	6.40
3	Norway.....	24.65	92.29	70	Georgia.....	1.67	6.21
4	Australia.....	23.73	88.85	71	Ecuador.....	1.62	6.03
5	Singapore.....	21.49	80.46	72	Mexico.....	1.59	5.93
6	Sweden.....	21.13	79.11	73	Kazakhstan.....	1.58	5.90
7	Finland.....	20.49	76.69	74	Mauritius.....	1.57	5.85
8	Netherlands.....	19.14	71.63	75	Trinidad and Tobago.....	1.56	5.82
9	Iceland.....	18.66	69.85	76	Belarus.....	1.44	5.37
10	Slovenia.....	18.21	68.14	77	Algeria.....	1.31	4.87
11	New Zealand.....	17.65	66.06	78	Costa Rica.....	1.30	4.84
12	Canada.....	17.32	64.82	79	Botswana.....	1.29	4.81
13	Ireland.....	17.18	64.29	80	Indonesia.....	1.20	4.45
14	Portugal.....	16.61	62.15	81	India.....	1.07	3.97
15	United Kingdom.....	15.74	58.90	82	Moldova, Rep.....	1.03	3.83
16	Austria.....	15.36	57.50	83	Azerbaijan.....	0.98	3.65
17	Israel.....	15.14	56.68	84	Viet Nam.....	0.85	3.15
18	Luxembourg.....	15.02	56.22	85	Sri Lanka.....	0.81	3.01
19	Belgium.....	14.75	55.19	86	Peru.....	0.81	3.01
20	Italy.....	14.37	53.78	87	Namibia.....	0.80	2.96
21	Czech Republic.....	14.02	52.45	88	Pakistan.....	0.75	2.78
22	Korea, Rep.....	13.98	52.34	89	Jamaica.....	0.71	2.64
23	Spain.....	13.86	51.86	90	Ghana.....	0.65	2.42
24	United States of America.....	13.75	51.46	91	Mongolia.....	0.64	2.35
25	Germany.....	13.15	49.22	92	Panama.....	0.60	2.23
26	Estonia.....	13.14	49.19	93	Albania.....	0.59	2.17
27	Cyprus.....	12.00	44.91	94	Nepal.....	0.50	1.84
28	Croatia.....	11.86	44.38	95	Cameroon.....	0.43	1.57
29	Greece.....	11.72	43.86	96	Uzbekistan.....	0.40	1.47
30	Malta.....	10.22	38.25	97	Nigeria.....	0.38	1.39
31	Slovakia.....	9.93	37.15	98	Cabo Verde.....	0.37	1.35
32	France.....	9.84	36.81	99	Ethiopia.....	0.34	1.24
33	Lithuania.....	9.80	36.66	100	Kenya.....	0.34	1.23
34	Poland.....	9.70	36.30	101	Zimbabwe.....	0.31	1.12
35	Qatar.....	8.50	31.80	102	Bangladesh.....	0.29	1.07
36	Japan.....	8.00	29.93	103	Kyrgyzstan.....	0.29	1.07
37	Latvia.....	7.73	28.92	104	Eswatini.....	0.28	1.01
38	Hungary.....	7.67	28.69	105	Philippines.....	0.27	0.99
39	Serbia.....	6.87	25.70	106	Senegal.....	0.24	0.87
40	Iran, Islamic Rep.....	6.62	24.75	107	Paraguay.....	0.23	0.84
41	Malaysia.....	6.59	24.65	108	Benin.....	0.23	0.83
42	Brunei Darussalam.....	6.49	24.29	109	Gambia.....	0.23	0.81
43	Russian Federation.....	6.24	23.35	110	Uganda.....	0.21	0.76
44	Bulgaria.....	5.94	22.21	111	Rwanda.....	0.20	0.72
45	Türkiye.....	5.07	18.94	112	Lesotho.....	0.16	0.57
46	Romania.....	5.04	18.84	113	Malawi.....	0.15	0.53
47	Montenegro.....	4.98	18.61	114	Tanzania, United Rep.....	0.15	0.51
48	Saudi Arabia.....	4.81	17.99	115	Zambia.....	0.14	0.49
49	United Arab Emirates.....	4.78	17.88	116	Bolivia, Plurinational St.....	0.13	0.45
50	China.....	4.75	17.74	117	Lao PDR.....	0.12	0.43
51	Chile.....	4.65	17.39	118	Burkina Faso.....	0.11	0.40
52	Tunisia.....	4.25	15.87	119	Honduras.....	0.10	0.36
53	Lebanon.....	4.01	14.97	120	Cambodia.....	0.10	0.35
54	Bahrain.....	3.33	12.45	121	Côte d'Ivoire.....	0.09	0.30
55	Brazil.....	3.30	12.31	122	Dominican Republic.....	0.08	0.26
56	Jordan.....	3.23	12.08	123	Guatemala.....	0.07	0.25
57	Ukraine.....	2.90	10.81	124	Madagascar.....	0.06	0.18
58	Bosnia and Herzegovina.....	2.81	10.49	125	Nicaragua.....	0.06	0.18
59	Uruguay.....	2.80	10.45	126	Mozambique.....	0.06	0.18
60	South Africa.....	2.70	10.08	127	Mali.....	0.05	0.14
61	Kuwait.....	2.64	9.84	128	Mauritania.....	0.05	0.14
62	Oman.....	2.38	8.90	129	Guinea.....	0.03	0.08
63	Argentina.....	2.14	8.00	130	Burundi.....	0.03	0.07
64	Armenia.....	2.14	7.97	131	El Salvador.....	0.03	0.07
65	North Macedonia.....	2.06	7.69	132	Congo, Dem. Rep.....	0.02	0.04
66	Thailand.....	1.95	7.28	133	Angola.....	0.01	0.02
67	Colombia.....	1.83	6.80	134	Chad.....	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 (<https://datacatalog.worldbank.org/search/dataset/0037712>)

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 2012.

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 tenth 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 July 2023, following which a final audit was completed in August–September 2023. 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 seven indicators. Each sub-pillar score is derived from the simple arithmetic average of its individual indicators. 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 Indicators

The GTCI 2023 model includes 69 indicators, which fall into the following categories:²

1. Hard/quantitative data (34 indicators)
2. Index/composite indicator data (17 indicators)
3. Survey/qualitative data (18 indicators)

Hard Data

The 34 indicators based on hard data were drawn from a variety of public sources, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), the World Bank, the OECD, and The

Conference Board. Most indicators were already scaled at their source and therefore did not need to be re-scaled.

Indices

The 17 indicators measured as indices come from sources such as the World Bank (the World Governance Indicators and the *Women, Business and the Law* 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 indicators. 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. In addition, only indices with a narrow focus were selected, to avoid double-counting.

Survey Data

The 18 indicators 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 2023 were selected based on an aggregate data availability threshold of at least 80% (55 out of 69 indicators) 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 2012 as the cut-off year. Meanwhile, each indicator 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 and, by extension, the index 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 were nine indicators with outliers.⁴ As a general rule, for indicators with one to four outliers,

the Winsorisation method should be applied. The values distorting the indicator distribution were assigned the next highest value until the reported skewness and/or kurtosis fell within the ranges specified above. For indicators with five outliers and above, transformation by natural logarithms, with the following formula, was used:⁵

$$\ln \left[(\max \times \text{factor} - 1) \times \frac{(\text{value} - \min)}{(\max - \min)} + 1 \right]$$

Normalisation

To adjust for differences in units of measurement and ranges of variation, all 69 indicators were normalised into the [0, 100] range, with higher scores representing better outcomes. A min-max normalisation method was adopted, based on the minimum and maximum values of each indicator respectively.

For indicators where higher values indicate better outcomes, the following normalisation formula was applied:

$$100 \times \frac{(\text{value} - \min)}{(\max - \min)}$$

For indicators where higher values indicate worse outcomes, the following reverse normalisation formula was applied:⁶

$$100 \times \frac{(\max - \text{value})}{(\max - \min)}$$

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 2022 had 69 indicators in total, 33 of which were hard/quantitative data, 17 were index/composite indicators, and 19 were survey/qualitative data.
- 3 Adopted from Groeneveld & Meeden (1984).
- 4 The indicators are 1.2.2 Domestic credit to private sector, 1.3.1 Labour rights, 2.1.3 Migrant stock, 2.1.4 International students, 3.1.3 Tertiary education expenditure, 6.1.5 Senior officials and managers, 6.2.2 High-value exports, 6.2.3 Software development, and 6.2.4 New business density.
- 5 The formula ensures that natural logarithms are positive and start at zero. Four of the indicators with outliers were transformed through this formula: 1.2.2 Domestic credit to private sector, 2.1.3 Migrant stock, 3.1.3 Tertiary education expenditure, and 6.2.3 Software development. Log transformation on indicator 2.1.3 Migrant stock is performed for every GTCI edition because the indicator often includes four to five outliers, which means it might be treated differently from year to year. Consistently log transforming the indicator thus ensures that it is treated similarly over time.
- 6 Reverse normalisation was needed for six indicators: 1.3.1 Labour rights, 2.1.1 FDI regulatory restrictiveness, 2.2.1 Tolerance of minorities, 3.3.2 Youth inclusion, 4.1.5 Vulnerable employment, and 5.2.4 Highly educated unemployment.

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Appendix II: Sources and Definitions

1 ENABLE

1.1 Regulatory Landscape

1.1.1 Government effectiveness

Government effectiveness indicator | 2021

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 (–2.5 = low; 2.5 = high).

Source: World Bank, Worldwide Governance Indicators 2022
Update (www.govindicators.org)

1.1.2 Rule of law

Rule of law indicator | 2021

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 (–2.5 = low; 2.5 = high).

Source: World Bank, Worldwide Governance Indicators 2022
Update (www.govindicators.org)

1.1.3 Political stability

Political stability and absence of violence indicator | 2021

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 (–2.5 = low; 2.5 = high).

Source: World Bank, Worldwide Governance Indicators 2022
Update (www.govindicators.org)

1.1.4 Regulatory quality

Regulatory quality indicator | 2021

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 (–2.5 = low; 2.5 = high).

Source: World Bank, Worldwide Governance Indicators 2022
Update (www.govindicators.org)

1.1.5 Corruption

Corruption Perceptions Index | 2022

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 2022* (<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 characterise corporate activity? [1 = dominated by a few business groups; 7 = spread among many firms] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

1.2.2 Domestic credit to private sector

Domestic credit to private sector (% GDP) | 2021

This indicator refers to loans, purchases of nonequity securities, trade credits, and other financial resources that need to be repaid and that are provided to the private sector by financial corporations. Financial corporations include monetary authorities, deposit money banks, finance and leasing companies, and money lenders, among others.

Source: International Monetary Fund (IMF) International Financial Statistics and data files, and World Bank and Organisation for Economic Co-operation and Development (OECD) GDP estimates. Downloaded from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

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 specialised institutions in a particular field)? [1 = non-existent; 7 = widespread in many fields] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

1.2.4 R&D expenditure

Gross expenditure on R&D (%) | 2021

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 | 2022

The Access sub-pillar is part of the Network Readiness Index (NRI) and comprises six ICT indicators that are given equal weights: (1) mobile tariffs, (2) handset prices, (3) FTTH/building internet subscriptions, (4) population covered by at least a 3G mobile network, (5) international internet bandwidth, and (6) 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 2022: Stepping into the new digital era: How and why digital natives will change the world* (<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 | 2020

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 (ILO), ILOSTAT (<https://ilostat.ilo.org/>)

1.3.2 Labour-employer cooperation

Average answer to the question: In your country, how do you characterise labour-employer relations? [1 = generally confrontational; 7 = generally cooperative] | 2022

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 non-existent. 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 2021–2022 (<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] | 2022

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 non-existent. 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 2021–2022 (<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] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

Technology Adoption

1.3.5 Enterprise software

Enterprise software market (weighted GDP) | 2022

The *Enterprise software market* indicator refers to the size of the market for software that is used for essential large-scale business activities in professional business-to-business (B2B) environments, including Enterprise Resource Planning, Customer Relationship Management, Business Intelligence, and Supply Chain Management. The indicator is weighted by national GDP.

Source: Statista, Technology Market Outlook: Enterprise Software (<https://www.statista.com/outlook/tmo/software/enterprise-software/worldwide>); GDP data from World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

1.3.6 Cloud computing

Cloud computing market (weighted by GDP) | 2022

The *Cloud computing* indicator refers to the size of the market for the three standard cloud-computing service models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). The indicator is weighted by national GDP.

Source: Statista, Technology Market Outlook: Public Cloud (<https://www.statista.com/outlook/tmo/public-cloud/worldwide>); GDP data come from World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

1.3.7 Firms with website

Firms with website (% of total) | 2022

Firms with website refers to the share of businesses that have their own website, expressed as a percentage of all firms. The data are based on enterprise surveys conducted by the OECD and the World Bank. The former survey is used for OECD countries and accession countries or key partners, while the latter is used for all other countries.

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 regulatory restrictiveness

FDI Regulatory Restrictiveness Index score | 2020

The Foreign Direct Investment (FDI) Regulatory Restrictiveness Index measure is a composite indicator developed by the OECD that provides a measure of the openness of FDI rules and regulations towards overseas investors. Four types of statutory restrictions are considered in the computation of the index: (1) foreign equity restrictions, (2) screening and prior approval requirements, (3) rules for key personnel, and (4) other restrictions on the operation of foreign enterprises. The index is measured on a scale of 0 (no restrictions) to 1 (completely restricted).

Source: OECD, FDI Regulatory Restrictiveness Index (FDI Index) (<https://www.oecd.org/investment/fdiindex.htm>)

2.1.2 Financial globalisation

Financial Globalisation (de facto) sub-index | 2020

The Financial Globalisation (de facto) sub-index is one of the dimensions of the KOF Globalisation Index. It provides a measure of the degree of a country's integration in global financial flows. It is made up of five variables: (1) foreign direct investment, (2) portfolio investment, (3) international debt, (4) international reserves, and (5) international income payments. The sub-index is calculated by aggregating the five (normalised) variables, where each variable has been given a specific weight based on principal components analysis (PCA).

Source: Savina Gygli, Florian Haelg, Niklas Potrafke, & Jan-Egbert Sturm (2019). The KOF Globalisation Index – Revisited. *Review of International Organizations*, 14(3), 543–574 (<https://doi.org/10.1007/s11558-019-09344-2>)

Attract People

2.1.3 Migrant stock

Adult migrant stock (%) | 2020

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 (<https://www.un.org/development/desa/pd/content/international-migration-1>)

2.1.4 International students

Tertiary inbound mobility ratio (%) | 2022

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

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 non-existent. 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 (<https://www.weforum.org/reports/>)

2.2 Internal Openness

Social Inclusion

2.2.1 Tolerance of minorities

Discrimination and violence against minorities | 2022

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* 2022 (<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 socioeconomic status of their parents? [1 = not at all; 7 = to a great extent] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

Gender Equality

2.2.4 Economic empowerment of women

Women, Business, and the Law index score | 2022

The Women, Business and the Law index is a composite indicator that provides a measure of the degree of gender equality with respect to legal rights in economic participation. The index is composed of eight pillars, where each pillar represents a different aspect of a woman's life: (1) mobility, (2) workplace, (3) pay, (4) marriage, (5) parenthood, (6) entrepreneurship, (7) assets, and (8) pension. The index is measured on a scale of 0 (women have no legal economic rights equal to those of men) to 100 (women and men have equal economic opportunities).

Source: World Bank (2023). *Women, Business and the Law* 2023. Washington, DC: World Bank. (<https://wbl.worldbank.org/en/wbl>)

2.2.5 Gender parity in high-skilled jobs

Adjusted gender parity in high-skilled jobs | 2022

Gender parity in high-skilled jobs refers to the ratio of managers, professionals, or technicians and associate professionals who are female to those who are male. Possible values range from 0 (total inequality) to 1 (perfect equality). The parity index is adjusted following the methodology of the United Nations Education, Scientific and Cultural Organization (UNESCO). The occupations correspond to skill levels 3 and 4 (high) in the International Standard Classification of Occupations 2008 (ISCO-08).

Source: International Labour Organization (ILO), 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] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

3 GROW

3.1 Formal Education

Enrolment

3.1.1 Vocational enrolment

Vocational enrolment (%) | 2022

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 2011 (ISCED 2011) levels 2-4.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

3.1.2 Tertiary enrolment

Tertiary enrolment (%) | 2022

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 it leads 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 2011 (ISCED 2011) 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\$) | 2021

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 2011 (ISCED 2011) 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

QS World University Ranking | 2022

The QS World University Ranking is based on six indicators (with their weights in parentheses): (1) Academic reputation from the QS global survey (40%), (2) Employer reputation from the QS global survey (10%), (3) Citations per faculty from SciVerse Scopus database (20%), (4) Faculty-student ratio (20%), (5) Proportion of international students (5%), and (6) Proportion of international faculty (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: Quacquarelli Symonds Ltd (QS), QS World University Ranking 2023, Top Universities (<https://www.topuniversities.com/qs-world-university-rankings>)

3.2 Lifelong Learning

3.2.1 Business masters education

QS Global MBA and Business Masters Rankings scores | 2022

Business masters education is a composite indicator computed by the GTCI team based on the scores of six business masters programmes, where the Global MBA is given a weight of 50% because of its status as a business master's programme. The six pillars (weights in parentheses) refer to the following business masters: (1) Global MBA (50%); (2) Business Analytics (11.25%); (3) Finance (11.25%); (4) Management (11.25%); (5) Marketing (11.25%), and (6) Supply Chain Management (5%). The value is derived from the top university per country and per business master's programme. Countries without an institution in a business master's programme are given a value of 0 for the programme in question.

Source: Own computation based on Quacquarelli Symonds Ltd (QS) (2022). *QS Higher Ed Report: Global MBA and Business Masters 2023* (<https://www.topmba.com/>)

3.2.2 Prevalence of training in firms

Proportion of firms offering formal training (%) | 2022

This indicator refers to the percentage of firms that offered formal training programmes in the most recent 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 195,000 interviews with top managers and business owners in 155 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] | 2022

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 non-existent. It is part of the effort to supplement the *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2021–2022 (<https://www.weforum.org/reports/>)

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] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

3.3.2 Youth inclusion

Proportion of youth (aged 15–24 years) not in education, employment, or training (%) | 2022

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 (ILO), ILOSTAT (<https://ilostat.ilo.org/>)

Collaboration

3.3.3 Use of virtual social networks

Social media users (% of population) | 2023

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, as well as platforms' self-service advertising tools.

Source: We Are Social and Hootsuite (2023) *Digital 2023 report series* (<https://wearesocial.com/uk/blog/2023/01/digital-2023/>)

3.3.4 Use of virtual professional networks

LinkedIn's potential advertising audience (%) | 2023

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 (2023) *Digital 2023 report series* (<https://wearesocial.com/uk/blog/2023/01/digital-2023/>)

4 RETAIN

4.1 Sustainability

4.1.1 Pension coverage

Population above statutory pensionable age receiving a pension (%) | 2022

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/dataportal>)

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] | 2022

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 non-existent. 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 2021–2022 (<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 non-existent. 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 | 2022

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: Wolf, M. J., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. (2022). *2022 Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law & Policy. (<https://epi.yale.edu>)

4.1.5 Vulnerable employment

Vulnerable employment (% of total employment) | 2021

This indicator refers to the number of contributing family workers and own-account workers, expressed as a percentage of total employment. Own-account workers are defined as self-employed workers without employees, whereas contributing family workers are unpaid family workers.

Source: World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>) based on data obtained from International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

4.2 Lifestyle**4.2.1 Personal rights**

Personal rights indicator | 2022

Personal Rights are a component in the Opportunity dimension of the Social Progress Index. This component is based on six variables: Access to justice (0 = non-existent; 1 = observed), Freedom of religion (0 = no freedom; 4 = full freedom), Political rights (0 = no rights; 40 = full rights), Property rights for women (0 = no rights; 5 = full rights), Freedom of peaceful assembly (0 = no freedom; 4 = full freedom), and Freedom of discussion (0 = low; 1 = high).

Source: Social Progress Imperative, The Social Progress Index 2022 (<https://www.socialprogress.org/>)

4.2.2 Personal safety

Personal safety indicator | 2022

Personal safety is a component in the Basic Human Needs dimension of the Social Progress Index. This component is based on five variables: Interpersonal violence (Age-standardised Disability-Adjusted Life Years (DALYs)/100,000), Transportation-related fatalities (Age-standardised Disability-Adjusted Life Years (DALYs)/100,000), Political killings and torture (0 = low freedom; 1 = high freedom), Intimate partner violence (% of women aged 15+), and Money stolen (proportion of population).

Source: Social Progress Imperative, The Social Progress Index 2022 (<https://www.socialprogress.org/>)

4.2.3 Physician density

Medical doctors (per 10,000 people) | 2021

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 (%) | 2020

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 (%) | 2022

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 2011 (ISCED 2011) levels 3-4.

Source: International Labour Organization (ILO), ILOSTAT (<https://ilostat.ilo.org/>)

5.1.2 Population with secondary education

Population with secondary education (%) | 2021

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 2011 (ISCED 2011) 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 (%) | 2022

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). For those countries where ILOSTAT data are unavailable, data from the JOIN database have been used instead.

Source: International Labour Organization (ILO), ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

5.1.4 Labour productivity per employee

Labour productivity per person employed (2022 US\$ PPP) | 2022

Labour productivity estimates are obtained by dividing the total output (GDP in 2022 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 Base 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

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 non-existent. 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 (<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] | 2022

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 non-existent. 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 2021–2022 (<https://www.weforum.org/reports/>)

5.2.3 Skills matching

Workers whose education matches their occupation (%) | 2022

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 2011 (ISCED 2011) 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 (ILO), ILOSTAT (<https://ilostat.ilo.org/>)

5.2.4 Highly educated unemployment

Workers whose education matches their occupation (%) | 2022

This indicator refers to the percentage of the labour force with high education who are unemployed. *High education* refers to intermediate and advanced education; it comprises upper secondary and post-secondary non-tertiary education, short-cycle tertiary education, a bachelor's degree or equivalent education level, a master's degree or equivalent education level, and a doctoral degree or equivalent education level according to the International Standard Classification of Education 2011 (ISCED 2011). For those countries where ILOSTAT data are unavailable, data from the JOIN database have been used instead.

Source: International Labour Organization (ILO), ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

6 GLOBAL KNOWLEDGE SKILLS

6.1 High-Level Skills

6.1.1 Workforce with tertiary education

Labour force with tertiary education (%) | 2022

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 2011 (ISCED 2011) levels 5–8.

Source: International Labour Organization (ILO), ILOSTAT (<https://ilostat.ilo.org/>)

6.1.2 Population with tertiary education

Population with tertiary education (%) | 2021

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 2011 (ISCED 2011) levels 5-8.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

6.1.3 Professionals

Professionals (%) | 2022

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). For those countries where ILOSTAT data are unavailable, data from the JOIN database have been used instead.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

6.1.4 Researchers

Full-time equivalent researchers (per million population) | 2021

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 equivalent (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 (%) | 2022

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). For those countries where ILOSTAT data are unavailable, data from the JOIN database have been used instead.

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>); World Bank, Global Jobs Indicators Database (JOIN) (<https://datacatalog.worldbank.org/dataset/global-jobs-indicators-database>)

6.1.6 Digital skills

Individuals with advanced ICT skills (%) | 2021

This indicator measures the prevalence of advanced *digital skills* in the population. More specifically, it refers to the share of youth and adults who have written a computer program using a specialised programming language in the last three months, expressed as a percentage of individuals that have undertaken computer-related activities during that period.

Source: International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database, August 2022 (<https://www.itu.int/itu-d/sites/statistics/>)

6.2 Talent Impact

6.2.1 Innovation output

Innovation Output Sub-Index | 2022

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 2022: What is the future of innovation-driven growth?* (<https://www.globalinnovationindex.org>)

6.2.2 High-value exports

High-technology exports (% of manufactured exports) | 2021

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>). Sourced from United Nations, Comtrade database through the World Integrated Trade Solution (WITS) platform (<https://wits.worldbank.org/>)

6.2.3 Software development

GitHub commits (per 1,000 population) | 2021

GitHub is the world's largest host of source code, and a *commit* is the term used for a saved change on this platform. *GitHub commits* therefore refers to the number of saved changes on the GitHub website that are publicly available.

Source: GitHub (<https://github.com/>). Data on population are sourced from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

6.2.4 New business density

New corporate registrations (per 1,000 working-age population) | 2020

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 Entrepreneurship Database contains annual data on entrepreneurial activity in more than 170 economies over the period 2006–2020.

Source: World Bank, Entrepreneurship Database (<https://www.worldbank.org/en/programs/entrepreneurship>)

6.2.5 Scientific journal articles

Number of scientific and technical journal articles (per 10,000 inhabitants) | 2020

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>)

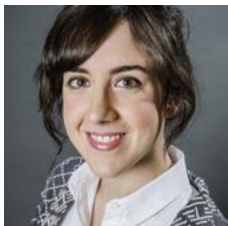
Appendix III: About the Contributors



Michael Bratt

Michael Bratt is Lead Researcher for the Descartes Institute for the Future. 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).



Begoña Cabeza Martínez

Begoña Cabeza Martínez is a policy analyst at the European Commission's Joint Research Centre (JRC). At the Competence Centre on Composite Indicators and Scoreboards (COIN), she has worked on the EU Regional Competitiveness Index, the EU

Social Progress Index, monitoring the Gender Equality Strategy, and auditing composite indicators. She received a PhD in Social and Economic Sciences from the University of Antwerp, and her research focuses on inequality aversion, meritocratic beliefs, and redistributive preferences. She has experience with survey micro-data and experimental methods. She took part in a project at the University of Alcalá (Spain) analysing inequality trends in Spain. She was also a teaching assistant at the University Carlos III de Madrid, where she obtained a Research Master in Human Rights, with a focus on International Law and Political Philosophy, and a Bachelor's in Business. In the private sector, she worked at the engineering consultancy TPF as junior financial controller.



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 (GTCL), 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.



Jaime Lagüera González

Jaime Lagüera González is a research statistician at the European Commission's Joint Research Centre (JRC). Before joining the Competence Centre on Composite Indicators and Scoreboards (COIN), he worked at the European Central Bank (ECB) and in other areas of the JRC, where he collaborated on

topics like data quality, data visualisation, and text-mining analysis.

Jaime holds a Bachelor's degree in Economics as well as two Master degrees, one in Econometrics and Operations Research and the other in Big Data and Business Analytics. His main research interest is the use of non-conventional data related to different topics like economics and composite indicators.



Bruno Lanvin

Bruno Lanvin is Founder and President of the Descartes Institute for the Future, and INSEAD Distinguished Fellow. For 30 years, he was an economist in the United Nations and then at the World Bank, where he was, inter alia, Manager of the InfoDev Programme, 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. He is also the President of IMD's Smart City Observatory.

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). His most recent book is *The Future is Young* (2022).

Dr Lanvin holds a BA in Mathematics and Physics from the University of Valenciennes (France), an MBA from École des Hautes Études 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) and an MIT Media Lab alumnus (Beyond Smart Cities-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).



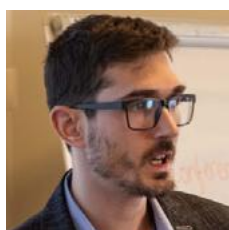
Felipe Monteiro

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).

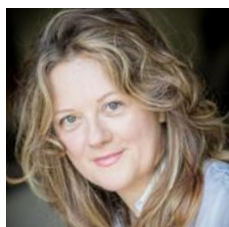
His research explaining the patterns of inter- and intra-firm knowledge-sourcing processes in multinational organisations has been published in top academic journals such as the *Strategic Management Journal*, *Organization Science*, *Research Policy*, and the *Journal of International Business Studies*, 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. His new book on Global Strategic Management (<https://www.bloomsbury.com/uk/global-strategic-management-9781350932968/>) is published by Bloomsbury.

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.



Panagiotis Ravanos

Panagiotis Ravanos is a policy analyst at the Competence Centre on Composite Indicators and Scoreboards (COIN) of the European Commission's Joint Research Centre (JRC). His research is related to performance evaluation, efficiency measurement, Data Envelopment Analysis (DEA), and the methodology and empirical applications of DEA to the development of composite indicators. He holds a PhD in Economics from the Department of Economics at the University of Macedonia, Thessaloniki, Greece. Prior to joining COIN, Panagiotis had worked in the Centre for the Development of Vocational Education and Training (CEDEFOP), as a teaching and research assistant in the University of Macedonia, and as a research analyst in the private sector.



Michaela Saisana

Michaela Saisana is Head of the Monitoring, Indicators and Impact Evaluation at the European Commission's Joint Research Centre, whereby she oversees the activities of the Competence Centre on Composite Indicators and Scoreboards (COIN) and the Competence Centre on Microeconomic Evaluation (C-ME). 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 won 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 almost 19,000 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).



Oscar Smallembroek

Oscar Smallembroek is a policy analyst in the Competence Centre on Composite Indicators and Scoreboards (COIN) of the European Commission's Joint Research Centre (JRC). He is currently working in the COIN team auditing composite indicators and doing research on the state of innovation in the INNOVA project. Having attained a PhD in Sociology from the European University Institute in 2020, he focused on measuring social stratification and personal value change over the life-course. His work has been published in the *Journal of Positive Psychology*, *European Journal of Population*, *Sociological Methods & Research*, and *Research in Social Stratification and Mobility*.



Doris Sohmen-Pao

Doris Sohmen-Pao is Chief Executive Officer of the Human Capital Leadership Institute (HCLI). She joined HCLI from the Singapore Public Service Division, where she was the Director for External Outreach, with a focus on developing relationships and synergies between the public and private sector.

Before her work with the Singapore Public Service, she was one of the founding leaders of Yale-NUS College. Her first role at the College was the EVP of administration where she set up and oversaw the admissions, finance, human resources, public affairs, and grounds and building departments. Her last posting at Yale-NUS was as the EVP for Institutional Projects—a role that covered public affairs, institutional research, alumni affairs, and external outreach. Her experience spans industries and geographies. She was the Director of Human Capital at Bain & Company (SEA), and before that, the Director of the MBA Programme at INSEAD and then at Singapore Management University, where she created and launched the MBA Programme. She was also briefly at Ngee Ann Polytechnic as a Visiting Lecturer. Her experience extends to working in multiple media ventures, including an internet start-up, Time Inc. International, Hearst New Media and Price Waterhouse LLP in its telecom and media division. Over the years, she has worked in Hong Kong, London, New York, France, and Singapore. Doris graduated with a BA in Politics and Environmental Studies from Princeton University and an MBA from Harvard University. She has worked on several boards of educational institutions including Princeton University, United World College (SEA), and the Yong Siew Toh Conservatory. Currently, she serves on the Nanyang Technological University College of Science, Singapore National Gallery, and Singapore's Institute for HR Practitioners (IHRP) boards. She is also an executive committee member of the International Women's Forum Singapore.



Kevyn Yong

Kevyn is the Chief Learning Officer at the Human Capital Leadership Institute (HCLI). Prior to HCLI, Kevyn held senior leadership positions at the Wealth Management Institute, the Singapore Institute of Management, ESSEC Business School, and HEC Paris.

His areas of interests and expertise include creativity, innovation, entrepreneurship, and leadership, with a focus on design thinking, agility, systems thinking, human capital, and strategy.

He has designed, developed, and delivered customised leadership and innovation programmes for many corporate, government, and non-profit enterprises, including Amazon and ATOS in France, eBay and Nike in China, the French Chamber of Commerce and Keio University in Japan, Danone, the Inland Revenue Authority of Singapore, Singtel, Takeda Pharmaceuticals, and the United Overseas Bank in Singapore.

Kevyn received his Ph.D. in Management and Organisations from the S.C. Johnson Graduate School of Management at Cornell University. He also holds undergraduate degrees in Psychology and Philosophy from the National University of Singapore and a Masters degree in Mind, Brain, and Education from Harvard University.

Appendix III: About the Partners



About the Human Capital Leadership Institute

The Human Capital Leadership Institute (HCLI) is a renowned centre of excellence in Asia, dedicated to accelerating leadership and strategic human capital management capabilities.

Through Asia-specific research and insights, industry-relevant executive development programmes, and fostering networks between thought leaders in business, government, and academia, HCLI aims to cultivate global leaders with a deep understanding of leading in Asia and develop Asian leaders with the ability to lead on a global stage.

For further information, please visit www.hcli.org



About INSEAD, The Business School for the World

As one of the world's leading and largest graduate business schools, INSEAD brings together people, cultures, and ideas to develop responsible leaders who transform business and society. Our research, teaching, and partnerships reflect this global perspective and cultural diversity.

With locations in [Europe](#) (France), [Asia](#) (Singapore), the [Middle East](#) (Abu Dhabi), and [North America](#) (San Francisco), INSEAD's business education and research spans four regions. Our 195 renowned [faculty](#) members from 41 countries inspire more than 1,300 degree participants annually in our [Master in Management](#), [MBA](#), [Global Executive MBA](#), Specialised Master's degrees ([Executive Master in Finance](#), and [Executive Master in Change](#)) and [PhD](#) programmes. In addition, more than 10,000 executives participate in INSEAD [Executive Education](#) programmes each year.

INSEAD continues to conduct cutting-edge research and innovate across all our programmes. We provide business leaders with the knowledge and awareness to operate anywhere. Our core values drive academic excellence and serve the global community as The Business School for the World. More information about INSEAD can be found at www.insead.edu.



About Descartes Institute for the Future

Because the current times are complex, because the future has become more difficult to anticipate, and because our decoding grids and navigation instruments require constant upgrading, the mindset of René Descartes stands out as one of the most powerful tools we can use to be future ready. To do this, we need to combine two core qualities, namely: (1) offer innovative ways to look at tomorrow while building on proven facts and measurable realities; and (2) doing so by constantly challenging established ways of describing the world, and offering new bridges between various areas of thoughts, culture and ways to see the world.

Our thirty years of experience in dealing with the highest levels of government and business management, and our reputation in building global indices and innovative benchmarks in future-critical areas such as technology, innovation and talent is our strongest asset to help private and public organizations to be more future-ready. Visit [our website](#) for more information.

The full report can be downloaded at
<https://www.insead.edu/global-talent-competitiveness-index>

