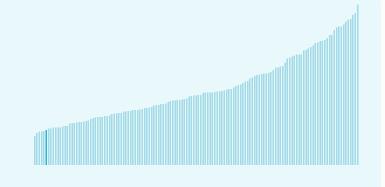


Ethiopia ranking in the Global Innovation Index 2025

Ethiopia ranks 134th among the 139 economies featured in the GII 2025.

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Ethiopia ranks 9th among the 11 Low-income group economies.



Ethiopia ranks 28th among the 32 economies in Sub-Saharan Africa.



> Ethiopia GII Ranking (2020-2025)

The table shows the rankings of Ethiopia over the past six years. Data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Ethiopia in the GII 2025 is between ranks 124 and 135.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	127th	130th	110th
2021	126th	129th	107th
2022	117th	126th	100th
2023	125th	130th	109th
2024	130th	133rd	112nd
2025	134th	138th	108th

Ethiopia performs better in innovation outputs than innovation inputs in 2025.

This year Ethiopia ranks 138th in innovation inputs. This position is lower than last year.

Ethiopia ranks 108th in innovation outputs. This position is higher than last year.

Ethiopia has no clusters in the world's top innovation clusters of the Global Innovation Index.



> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Ethiopia, how rapidly is technology being embraced and what are the resulting societal impacts.



For Ethiopia, 5 indicators have improved in the short-term and 2 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▲ 22.5 % 2023 - 2024	n/a	▼ -33.3 % 2023 - 2024	n/a
Long term (annual growth)	20.3 % 2014 - 2024	n/a	▲ 10.7 % 2020 - 2024	n/a

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	▲ 3.4% 2023 - 2024	▲ 16.1% 2021 - 2022	n/a	n/a	n/a
Long term (annual growth)	▲ 3.9% 2014 - 2024	▲ 52.1% 2012 - 2022	n/a	n/a	n/a
Penetration	8.1 per 100 inhabitants in 2024	0.5 per 100 inhabitants in 2022	n/a	n/a	n/a

Socioeconomic impact

_			
	Labor productivity	Life expectancy	Temperature change
Short term	▲ 5 % 2023 - 2024	▲ 0.6 % 2022 - 2023	+ 1.8 °C
Long term (annual growth)	5.1% 2014 - 2024	▲ 0.8 % 2013 - 2023	+ 1.1 °C 2014
Level	7,572.1 USD in 2024	67.3 years in 2023	n/a

Notes: Not all indicators of the Global Innovation Tracker are used to calculate the Global Innovation Index. Long-term annual growth refers to the compound annual growth rate (CAGR) over the indicated period. For each variable, a one-year growth rate is set for the short run, and ten-year CAGR is set for the long run; time windows might differ when gaps exist in data availability. The end period corresponds to the most recent available observation, which may differ among countries. Temperature change is an exception: it indicates the change in degrees Celsius with respect to the average temperature in the countries. from 1951–1980. Figures are rounded.

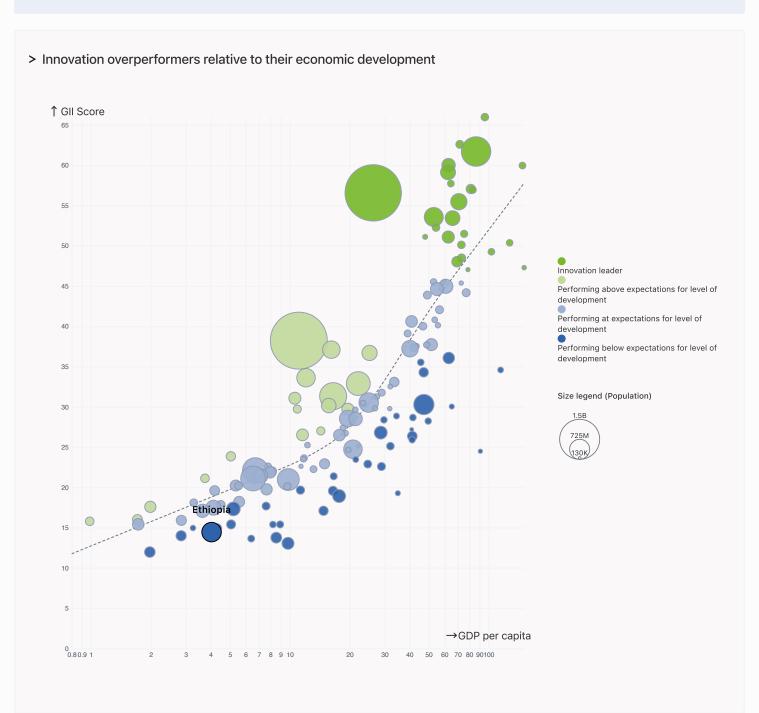


Expected vs. Observed Innovation Performance

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.



Relative to GDP Ethiopia performs below expectations for its level of development.



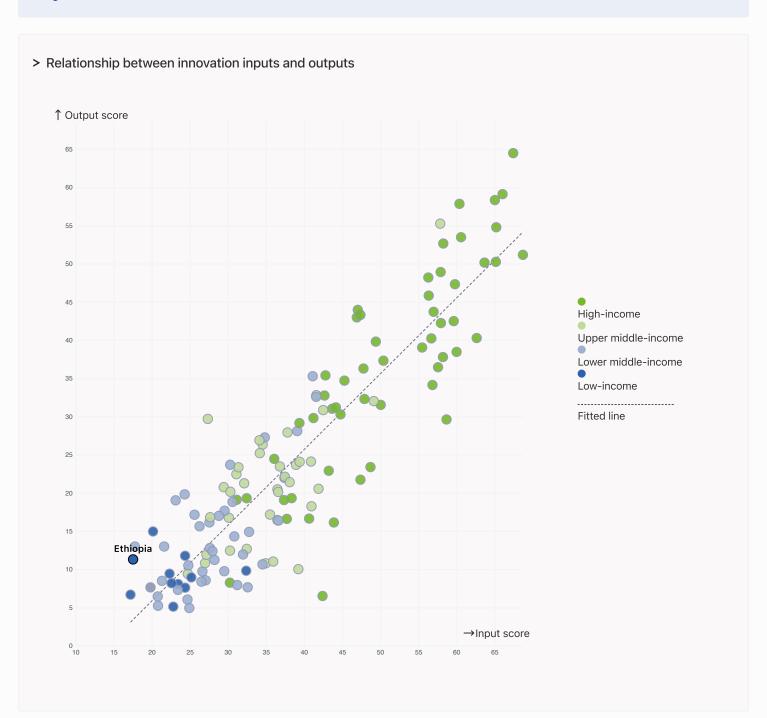


Effectively translating innovation investments into innovation outputs

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.



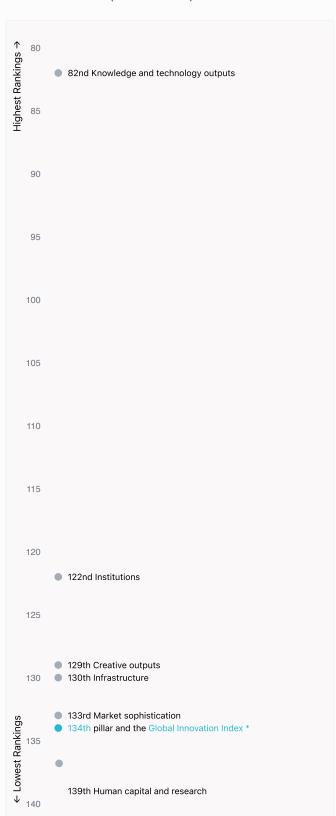
Ethiopia produces more innovation outputs relative to its level of innovation investments.





Overview of Ethiopia's rankings in the seven areas of the GII in 2025

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Ethiopia are those that rank above the GII (shown in blue) and the weakest are those that rank below.





Highest Rankings

Ethiopia ranks highest in Knowledge and technology outputs (82nd), Institutions (122nd), Creative outputs (129th) and Infrastructure (130th).



Lowest Rankings

Ethiopia ranks lowest in Human capital and research (139th), Business sophistication, GII Index (134th) and Market sophistication (133rd).

* Business sophistication



The full WIPO Intellectual Property Statistics profile for Ethiopia can be found on

https://www.wipo.int/edocs/statistics-country-profile/en/et.pdf



Benchmark of Ethiopia against other economy groupings for each of the seven areas of the GII Index

The charts shows the relative position of Ethiopia (blue bar) against other economy groupings (grey bars)



Low-income economies

Ethiopia performs above the Low-income group average in Infrastructure, Knowledge and technology outputs.



Sub-Saharan Africa

Ethiopia performs above the regional average in Knowledge and technology outputs.

Institutions

Top 10 | Score: 78.63

Sub-Saharan Africa | Score: 40.29

Low-income | Score: 34.81

Ethiopia | Score: 27.64

Human capital and research

Top 10 | Score: 59.30

Sub-Saharan Africa | Score: 18.06

Low-income | Score: 15.10

Ethiopia | Score: 5.52

Infrastructure

Top 10 | Score: 61.36

Sub-Saharan Africa | Score: 27.58

Ethiopia | Score: 22.32

Low-income | Score: 21.77

Market sophistication

Top 10 | Score: 61.82

Sub-Saharan Africa | Score: 22.67

Low-income | Score: 20.14

Ethiopia | Score: 14.57

Business sophistication

Top 10 | Score: 59.10

Sub-Saharan Africa | Score: 25.36

Low-income | Score: 23.04

Ethiopia | Score: 17.78

Knowledge and technology outputs

Top 10 | Score: 54.93

Ethiopia | Score: 17.05

Sub-Saharan Africa | Score: 11.53

Low-income | Score: 10.90

Creative outputs

Top 10 | Score: 55.98

Sub-Saharan Africa | Score: 10.61

Low-income | Score: 7.58

Ethiopia | Score: 5.51



Innovation strengths and weaknesses in Ethiopia

The table below gives an overview of the indicator strengths and weaknesses of Ethiopia in the GII 2025.



Ethiopia's best-ranked innovation strengths are **Labor productivity growth**, % (rank 5), **Low-carbon energy use**, % (rank 16) and **Youth demographic dividend**, % (rank 18).

Strengths

Weaknesses

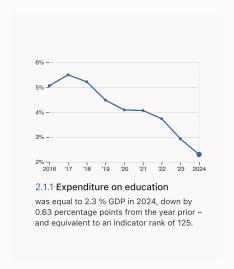
Rank	Code	Indicator name	Rank	Code	Indicator name
5	6.2.1	Labor productivity growth, %	139	7.3.1	Top-level domains (TLDs)/th pop. 15–69
16	3.3.2	Low-carbon energy use, %	138	6.2.3	Software spending, % GDP
18	5.1.3	Youth demographic dividend, %	136	3.1.1	ICT access*
26	6.1.3	Utility models by origin/bn PPP\$ GDP	121	7.2.1	Cultural and creative services exports, % total trade
31	5.3.2	High-tech imports, % total trade			
31	5.3.3	ICT services imports, % total trade	103	5.2.3	University industry & international engagement, top 5*
46	6.1.4	Scientific and technical articles/bn PPP\$ GDP	100	5.2.5	Patent families/bn PPP\$ GDP
54	4.3.3	Domestic market scale, bn PPP\$	80	2.3.4	QS university ranking, top 3*
60	5.3.4	FDI net inflows, % GDP	53	6.2.2	Unicorn valuation, % GDP
75	6.1.5	Citable documents H-index	44	2.3.3	Global corporate R&D investors, top 3, mn USD

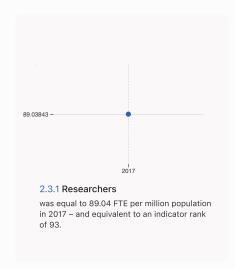


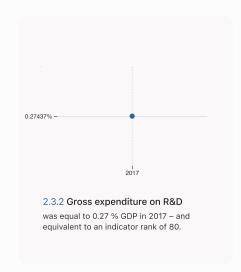
Ethiopia's innovation system

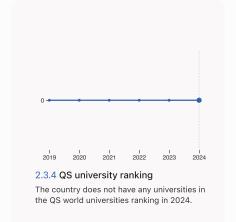
As far as practicable, the plots below present unscaled indicator data.

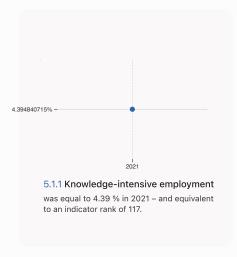
> Innovation inputs in Ethiopia





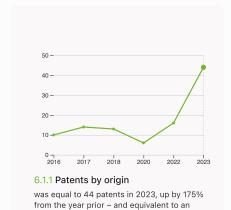




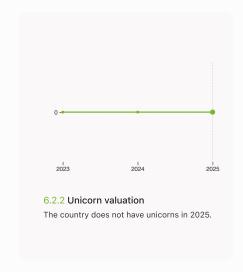


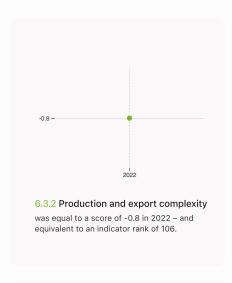


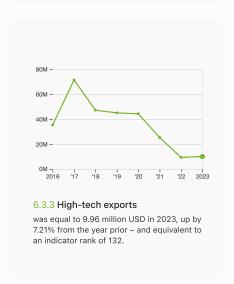
> Innovation outputs in Ethiopia

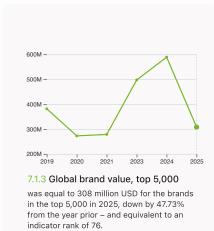


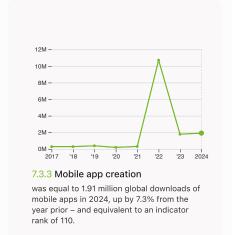
indicator rank of 112.













Ethiopia's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors, 2.3.4 QS university ranking of top universities, 6.2.2 Top Unicorn Companies and 7.1.1 Top 15 intangible-asset intensive companies.

Disclaimer: This section contains only the top performers per country. For the complete list, please visit the GII Innovation Ecosystems and Data Explorer website.

5.2.3 University industry and international engagement, top 5 universities

Rank	University	Score
1	JIMMA UNIVERSITY	27.60

Source: Times Higher Education (THE), World University Rankings 2025.

Note: Rank corresponds to within economy ranks. The score is calculated as the average of the International Outlook score (encompassing international staff, students, and co-authorship) and the industry score (reflecting industry income and patent citations). The 2025 ranking corresponds to data from the academic year that ended in 2022.

7.1.3 Top 5,000 companies in Ethiopia with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	ETHIOPIAN AIRLINES	Airlines	308

Source: Brand Finance (https://brandirectory.com). Note: Rank corresponds to within economy ranks.

Ethiopia

International	Output rank	Input rank 138	Income E Sub-Sa	Region I haran	-	Population (mn) 132.1	GDP, PPP\$ (bn) 434.4	GDP per c	apita <u>,</u> 45.1	PPP\$
1.11 Coveration of all life for interest contents 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5			Score / Value	Rank	<			Score / Value	Rank	
1.11 Concentration analytic for historical section (1.12 of particular decidences) 1.27 1.34 1.27 1.28 1.22 (Contration of efficiences) 2.22 1.35 1.28 (Contration of efficiences) 2.22 1.35 1.28 (Contration of efficiences) 2.24 1.35 1.28 (Contration of efficiences) 2.25 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35 1.35	⋒ Institutions		27.6	122		Business sophistication		17.8	134	
1.1.1 Convertioned effectiveness** 1.2 1.2 1.5 1.2 1.5 1.2 1.5 1.2 1.5 1.3 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1		vironment				5.1 Knowledge workers		19.7	134	
1.22 Engelatory material processors 2.24 10 12 Engelatory material 2.26 11 12 Engelatory material 2.26 11 12 12 12 12 12 12						5.1.1 Knowledge-intensive empl	oyment, %	6 4.4	117	
1.2.1 Regulators quality* 1.2.2 National part of lawer 1.2.3 National par	·	-				5.1.2 Females employed w/adva	nced degrees, %	9 2.4	104	
1.3 Extraction for the common to the common	1.2 Regulatory env	rironment	29.6	118		5.1.3 Youth demographic divide	nd, %	59.8	18	•
1.3 Bucklesse environment 1.31 Holey stability for doing business* 275 [106] 1.31 Holey stability for doing business* 276 [106] 1.31 Eding stability for doing business* 278 [106] 2.1 Education 2.1 Education 2.1 Education 2.1 Education 2.2 Education 2.3 Education environment 2.4 Education environment 2.5 Education 2.5 Education environment 2.5 Education 2.5 Educ	1.2.1 Regulatory qua	ality*	23.2	129	\Diamond	5.1.4 GERD performed by busine	ess, % GDP	• 0.006	83	
2.7 Policy subdiship for doing business 2.79 185 13.2 ethnyonnousely profess and culture* 2.74 186 13.2 ethnyonnousely profess and culture* 2.84 189 13.2 ethnyonnousely profess and culture* 2.85 189 13.2 ethnyonnousel* 2.85 2.85 189 13.2 ethnyonnousel* 2.85 189 189	1.2.2 Rule of law*		36	107		5.1.5 GERD financed by busines	s, %	9 1.5	87	
2.2 Enterprenouseship policios and cultural*	1.3 Business enviro	onment	27.9	[106	6]	5.2 Innovation linkages		10.8	129	
2.4 Human capture and activation (1992) 2.1 Expanditure on education, 16 GDP 2.1 Expanditure on education, 16 GDP 2.1.1 Expanditure on education, 16 GDP 2.1.2 Government funding/pupil, scenarizary, 16 GDP(xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	1.3.1 Policy stability	for doing business [†]	9 27.9	108		5.2.1 Public research-industry of	o-publications, %	0.6	115	
2.1 Iduated on the presentation of the properties of the properti	1.3.2 Entrepreneurs	hip policies and culture†	n/a	n/a		5.2.2 University-industry R&D c	ollaboration [†]	Q 24.4	100	
2.1.4 Expenditure on education, % GDP	2 Human capital	and research	5.5	[139	9]					0 ♦
2.1 Expenditure on education, N GDP 2.1 Expenditure on education, N GDP 2.1 Expenditure on education, N GDP 2.1 Section If members prepared the process of the process	2.1 Education		10.8	[138	31					
3.1 Researchers, Fider page assignment (and impliguigal, secondary, & GDP(rap) 1/4 n/1		n education, % GDP		-			DP			0 0
2.1.5 Pupil-teacher ratio, secondary			DP/cap n/a	n/a						
2.4.1 Page 1 scales in reading, marths and science				n/a			•			
2.1. Friuny elementer, % gross 2.2.1 Tertuny element, % gross 2.2.2 Graduates in science and engineering, % 10.1 12.1 2.2.2 Graduates in science and engineering, % 10.2.2.2 Graduates in science and engineering, % 10.3 10.1 2.2.3 Traitiny inhourd mobility, % 10.3 10.2 2.3.1 Research and development (R&D) 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3 10.0 1.3	2.1.4 PISA scales in	reading, maths and science	n/a	n/a						
2.21 Tertiary encolement, % gross 0 121 121 122 122 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 123 1	2.1.5 Pupil-teacher	ratio, secondary	4 4.7	130			ital trade			
2.2.1 Critary encolment, % gross of the standard sequence of the stand	2.2 Tertiary educa	tion	4.5	[128	3]		naccae			
2.2.2 Sartivary infound mobility % n/a	2.2.1 Tertiary enrolm	nent, % gross	• 10.1	121						
2.3.1 Research and development (R&O) 2.3.1 Research and development (R&O) 2.3.1 Research and development (R&O) 2.3.2 Gross expenditure on R&O, % GDP 2.3.2 Gross expenditure on R&O, % GDP 2.3.2 Gross expenditure on R&O, % GDP 2.3.3 Global corporate R&O investors, top 3, mn USD 2.3.4 QS university ranking, top 3* 2.3.3 Global corporate R&O investors, top 3, mn USD 2.3.4 QS university ranking, top 3* 2.3.1 Information and communication technologies (ICTs) 2.3.1 Information and communication technologies (ICTs) 2.3.1 Information and communication technologies (ICTs) 3.1.1 ICT cocess* 4.1.5 133 3.1.3 Qovernment's online service* 4.8.5 113 3.1.3 Qovernment's online service* 4.8.5 113 3.1.3 Qovernment's online service* 4.8.5 113 3.2 General infrastructure 4.1.7 120 3.2.1 Electricity output, GWhylmn pop. 4.1.4 Separation formation, GDP 4.2.5 84 3.3.3 ISOPlunit of energy use 5.9 114 4.3 Trankit connergy use 5.9 114 4.1 Finance for startups and scaleups* 4.1.1 Finance for startups and scaleups* 4.1.1 Finance for startups and scaleups* 4.1.2 Domestic credit to private sector, % GDP 4.2 Leventure capital (Cr) received, deal countryth PPP\$ GDP 4.2.1 Leventure capital (Cr) received, deal countryth PPP\$ GDP 4.2.2 Venture capital (Cr) received, deal countryth PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.2 VC investor, Gud countryth PPP\$ GDP 4.3.3 Hopping in PPP\$ GDP 4.3.4 Topic deal count, % global VC 4.4 VC investor, Gud countryth PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.4 VC investor, Gud countryth PPP\$ GDP 4.3.1 Applied tariff rate, weighted adeq, % 4.3.1 Connectic industry diversification and market scale 4.3.1 Connectic industry diversification and market scale 4.3.1 Applied tariff rate, weighted adeq, % 4.3.1 Applied tariff rate, weighted adeq, %	2.2.2 Graduates in s	science and engineering, %	n/a	n/a		Knowledge and technology	outputs	17	82	
2.3.1 Researchers, FE/mr pop. 2.3.2 Gross expenditure on R&D, % GDP 2.3.3 Global corporate R&D investors, top 3, mn USD 2.3.4 OS university ranking, top 3* o	2.2.3 Tertiary inbour	nd mobility, %	n/a	n/a		6.1 Knowledge creation		15.3	65	
2.3.2 Gross expenditure on R&D, % GDP 2.3.4 GS university ranking, top 3* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.3 Research and	development (R&D)	1.3	100		6.1.1 Patents by origin/bn PPP\$	GDP	0.1	112	
2.3.3 Global corporate R&D investors, top 3, m USD	2.3.1 Researchers, F	FTE/mn pop.	6 89	93		6.1.2 PCT patents by inventor or	igin/bn PPP\$ GDP	n/a	n/a	
2.3.4 GS university ranking, top 3* Column	2.3.2 Gross expendi	iture on R&D, % GDP	• 0.3	80		6.1.3 Utility models by origin/bn	PPP\$ GDP	0.6	26	•
Solution (a) (a) (b) (a) (a) (b) (a) (b) (a) (a) (b) (a) (b) (a) (a) (b) (a) (a) (a) (a) (a) (a) (a) (a) (a) (a	2.3.3 Global corpora	ate R&D investors, top 3, mn	USD 0	44	0 0	6.1.4 Scientific and technical art	cicles/bn PPP\$ GDP	14.9	46	•
Section 1	2.3.4 QS university	ranking, top 3*	0	80	0 0		X			•
3.1 Information and communication technologies (ICTs) 3.1.1 CT access* 4.5.5 13.1 CT access* 4.5.5 13.1 CT access* 4.5.5 13.2 Covernment's online service* 3.2.6 Someral infrastructure 3.2.1 Electricity output, GM/Imm pop. 4.1.2 Electricity output, GM/Imm pop. 3.2.2 Logistics performance* 7.0 No. 2.2.5 8.1 Sological sustrainability 3.2.3 Gross capital formation, % GDP 3.3.1 GDP/Imit of energy use 5.3.2 Ecological sustrainability 3.3.2 Love-carbon energy use, % 4.4.6 Is Sological sustrainability 4.1.1 Finance for startups and scaleups* 4.1.2 Domestic credit to private sector, % GDP 4.1.3 Loans from microfinance institutions, % GDP 4.2.1 Narket capitalization, % GDP 4.2.1 Narket capitalization, % GDP 4.2.2 Venture capital (VC) received, deal count/bn PPPS GDP 4.2.3 Late-stage VC deal count, % global VC 4.2.4 VC investors, deal count, % global VC 4.3.1 Applied tariff rate, weighted awa, % 10.5 Is 20 4.3.1 Applied tariff rate, weighted awa, % 10.5 Is 20 10.2 Software spending, % GDP 6.2.2 High-tech emanufacturing 6.3.4 Intellectual property receipts, % total trade 6.3.1 Intellectual property receipts, % total trade 6.3.3 High-tech exports, % total trade 6.3.4 ICT services exports, % total trade 6.3.5 ISO 9001 qualitrybn PPPS GDP 6.3.5 ISO 9001 qualitrybn PPPS GDP 7.1 Intrangible asset intensity, top 15, % 7.1 Intrangible asset intensity, top 15, % 7.1.1 Intrangible asset intensity, top 15, % 7.1.2 Trademarks by origin/bn PPPS GDP 7.2.2 Creative outputs 7.2.2 Creative outputs 7.3.3 Global brand value, top 5,000, % GDP 7.2.2 National feature (lims/mn pop. 16–69 7.2.3 Entertainment and media market/th pop. 15–69 7.2.4 Creative goods and services 7.3.3 Indicature (lims/mn pop. 16–69 7.3.3 Online creativity 7.3.3 Top-level domains (TLDs)/th pop. 18–69 7.3.3 Solithub commits/mn pop. 15–69 7.3.3 Solithub commits/mn pop. 15–69 7.3.3 Mobile app creation	⇔ Infrastructure		22.3	130						
1.1 ICT access*	3.1 Information and	d communication technolog	ies (ICTs) 29	130			%			
3.1.2 ICT use*							_			
3.1 Government's online service* 3.2 Goeral infrastructure 3.2 Clelectricity output, GWh/mn pop. 3.2.1 Electricity output, GWh/mn pop. 3.2.2 Logistics performance* 14 of 3 120 3.2.3 Gross capital formation, % GDP 3.3.3 Ecological sustainability 3.3.1 Eolopical sustainability 3.3.3 Secological sustainability 3.3.3 Secological sustainability 3.3.3 Secological sustainability 3.3.3 Secological sustainability 3.3.1 Ininabile assets 3.2 Secological sustainability 3.3.1 Inintalediculal property receityt	3.1.2 ICT use*						5			0 \$
3.21 General infrastructure 16.7 120 3.2.1 Electricity output, GWh/mn pop. 10.4 10.5 123 3.2.2 Logistics performance* 10.7 1/3 10.4 10.3 123 3.2.2 Logistics performance* 10.8 10.7 10.4 10.3 10.4 10.3 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.3 10.6 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5	3.1.3 Government's	online service*	20.8	128				•	-	
3.2.1 Electricity output, GWh/mn pop. 140.5 123 3.2.2 Logistics performance* 1/2	3.2 General infrast	tructure	16.7	120						
3.2.2 Logistics performance* 1,	3.2.1 Electricity outp	put, GWh/mn pop.	1 40.5	123			•			
3.2.3 Gross capital formation, % GDP 3.3 Ecological sustainability 3.3.1 GDP/unit of energy use 3.3.2 Low-carbon energy use, % 3.3.3 ISO 14001 environment/bn PPP\$ GDP 3.3.3 ISO 14001 environment/bn PPP\$ GDP 4.1.6 Is3 4.1 Credit 4.1.1 Finance for startups and scaleups † 4.1.2 Domestic credit to private sector, % GDP 4.1.3 Loans from microfinance institutions, % GDP 4.2.1 Market capitalization, % GDP 4.2.1 Market capitalization, % GDP 4.2.1 Market capitalization, % GDP 4.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.3 Trade, diversification and market scale 3.7 Is 4 Creative sexports, % total trade 6.3.4 ICT services exports, % total trade 6.3.5 ISO 9001 quality/bn PPP\$ GDP 7.1 Intangible asset 7.1.1 Intangible asset intensity, top 15, % 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.3 Global brand value, top 5,000, % GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.2 Creative goods and services 7.2.1 Cultural and creative services exports, % total trade 7.2.2 National feature films/mn pop. 15-69 7.3 Online creativity 7.3 GibHub commits/mn pop. 15-69 1 18 7.3 Mobile app creation/bn PPP\$ GDP 4.5 VC investor co-participation/bn PPP\$ GDP 4.6 Treative outputs 7.1 Intangible asset 7.1 Intangible asset 7.1 Intangible asset intensity, top 15, % 7.1 Intangible asset intensity, top 15, % 7.1 Intangible asset 7.1.1 Intangible asset 7.1.1 Intangible asset 7.1.1 Intangible asset 7.1.1 Intangible asset intensity, top 15, % 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.2 Intangible asset intensity, top 15, %	3.2.2 Logistics perfo	ormance*	n/a	n/a						
3.3.1 GDP/unit of energy use 3.3.2 Low-carbon energy use, % 3.3.3 ISO 14001 environment/bn PPP\$ GDP 3.3.3 ISO 14001 environment/bn PPP\$ GDP 3.3.4 Low-carbon energy use, % 4.4.6 16	3.2.3 Gross capital t	formation, % GDP	22.5	84						~
3.3.1 GDP/unit of energy use	3.3 Ecological sust	tainability	21.3	65						. ^
3.3.2 Low-carbon energy use, % 3.3.2 Low-carbon energy use, % 3.3.2 ISO 14001 environment/bn PPP\$ GDP 3.3.3 ISO 14001 environment/bn PPP\$ GDP 3.4.1 Intangible asset intensity, top 15, % 7.1.1 Intangible asset intensity, top 15, % 7.1.2 Trademarks by origin/bn PPP\$ GDP 3.4.13 Global brand value, top 5,000, % GDP 3.5.2 Creative goods and services 3.6 Low-carbon energy use, % 3.7 Intangible asset intensity, top 15, % 3.8 ISO 14001 environment/bn PPP\$ GDP 3.9 Intangible asset intensity, top 15, % 3.9 Intangible asset intensity, top 15, % 3.0 Intangible asset intensity, top 15, % 3.1 Intangible asset intensity, top 15, % 3.2 ISO 14001 environment/bn PPP\$ GDP 3.4 Iso 130 3.5 ISO 14001 environment/bn PPP\$ GDP 3.6 Iso 140 3.7 Intangible asset intensity, top 15, % 3.8 ISO 14001 environment/bn PPP\$ GDP 3.9 Iso 140 3.9 Iso 150 3.9 I	3.3.1 GDP/unit of en	nergy use	5.9	114			<u> </u>			
Market sophistication 14.6 133	3.3.2 Low-carbon er	nergy use, %	44.6	16	•	Creative outputs		5.5	129	
## Market sophistication	3.3.3 ISO 14001 env	vironment/bn PPP\$ GDP	0.07	135	\Diamond	7.1 Intangible assets		3.2	129	
4.1 Credit 4.9 [128] 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.3 Global brand value, top 5,000, % GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.5 Trademarks by origin/bn PPP\$ GDP 7.1.6 Trademarks by origin/bn PPP\$ GDP 7.1.7 Trademarks by origin/bn PPP\$ GDP 7.1.8 Trademarks by origin/bn PPP\$ GDP 7.1.1 Trademarks by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.3 Global brand value, top 5,000, % GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.5 Trademarks by origin/bn PPP\$ GDP 7.1.6 Trademarks by origin/bn PPP\$ GDP 7.1.1 Trademarks by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.3 Global brand value, top 5,000, % GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.4 Industrial designs by origin/bn PPP\$ GDP 7.1.2 Trademarks by origin/bn PPP\$ GDP 7.1.2 Trade industrial designs by origin/bn PPP\$ GDP 7.2.2 Rational feature films/mn pop. 15–69 7.2.3 Entertainment and media market/th	<u></u> Market sophisti	ication	14.6	133	\Diamond	7.1.1 Intangible asset intensity, to	op 15, %	n/a	n/a	
4.1.1 Finance for startups and scaleups †			49	[128	31	,		3.4	130	
4.1.2 Domestic credit to private sector, % GDP 4.1.3 Loans from microfinance institutions, % GDP 4.2 Investment 4.2.1 Market capitalization, % GDP 4.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.2.4 VC investors, deal count/bn PPP\$ GDP 4.2.5 VC investor co-participation/bn PPP\$ GDP 4.3.1 Applied tariff rate, weighted avg., % 4.3.2 Domestic industry diversification n/a n/a n/a n/a n/a n/a n/a n		artups and scaleups†		-	-1		•			
4.1.3 Loans from microfinance institutions, % GDP 4.2 Investment 4.2.1 Market capitalization, % GDP 4.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.2.4 VC investors, deal count/bn PPP\$ GDP 4.2.5 VC investor co-participation/bn PPP\$ GDP 4.3.1 Applied tariff rate, weighted avg., % 4.3.2 Domestic industry diversification 4.1.3 Loans from microfinance institutions, % GDP 4.2.5 VC investors from microfinance institutions, % GDP 4.2.6 Univestment 5.2 Creative goods and services 7.2.1 Cultural and creative services exports, % total trade 7.2.2 National feature films/mn pop. 15–69 7.2.3 Entertainment and media market/th pop. 15–69 7.2.4 Creative goods exports, % total trade 7.2.4 Creative goods exports, % total trade 7.2.5 Entertainment and media market/th pop. 15–69 7.2.6 Creative goods and services 7.2.7 Cultural and creative services exports, % total trade 7.2.2 National feature films/mn pop. 15–69 7.2.3 Entertainment and media market/th pop. 15–69 7.2.4 Creative goods exports, % total trade 7.2.5 VC investor co-participation/bn PPP\$ GDP 7.2.6 Creative goods exports, % total trade 7.2.7 Cultural and creative services exports, % total trade 7.2.2 National feature films/mn pop. 15–69 7.2.3 Entertainment and media market/th pop. 15–69 7.2.4 Creative goods exports, % total trade 7.2.5 VC investor co-participation/bn PPP\$ GDP 7.2.6 Creative goods exports, % total trade 7.2.7 Cultural and creative services exports, % total trade 7.2.8 Entertainment and media market/th pop. 15–69 7.2.9 Creative goods exports, % total trade 7.2.1 Cultural and creative services exports, % total trade 7.2.2 National feature films/mn pop. 15–69 7.2.3 Entertainment and media market/th pop. 15–69 7.2.4 Creative goods exports, % total trade 7.2.5 VC investor co-participation/bn PPP\$ GDP 7.3.1 Top-level domains (TLDs)/th pop. 15–69 7.3.2 GitHub committs/mn pop. 15–69 7.3.3 Mobile app creation/bn PPP\$ GDP 4.3.1 Applied tariff rate, weighted avg., %		·								
4.2 Investment 0.9 116 1.2.1 Market capitalization, % GDP 1.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP 1.2.3 Late-stage VC deal count, % global VC 1.2.4 VC investors, deal count/bn PPP\$ GDP 1.2.5 VC investor co-participation/bn PPP\$ GDP 1.2.6 VC investor co-participation/bn PPP\$ GDP 1.2.7 Value capital (VC) received, deal count/bn PPP\$ GDP 1.2.3 Entertainment and media market/th pop. 15–69 1.2.4 Creative goods exports, % total trade 1.2.5 VC investors, deal count/bn PPP\$ GDP 1.2.6 VC investor co-participation/bn PPP\$ GDP 1.2.7 Value (Films/mn pop. 15–69) 1.2.8 Entertainment and media market/th pop. 15–69 1.2.9 Value (Films/mn pop. 15–69) 1.2.9 Value (Films/mn pop. 15–69) 1.2.0 Value (Films/mn pop. 15–69) 1.2.1 Cultural and creative services exports, % total trade 1.2.2 National feature films/mn pop. 15–69 1.2.3 Entertainment and media market/th pop. 15–69 1.2.4 Creative goods exports, % total trade 1.2.5 VC investors, deal count/bn PPP\$ GDP 1.2.5 VC investor co-participation/bn PPP\$ GDP 1.2.6 VC investor investor (Films/mn pop. 15–69) 1.2.7 Value (Films/mn pop. 15–69) 1.2.8 Entertainment and media market/th pop. 15–69 1.2.9 Value (Films/mn pop. 15–69) 1.2.9 Value (Films/mn pop. 15–69) 1.2.0 Value (Films/mn pop. 15–69) 1.2.1 Cultural and creative services exports, % total trade 1.2.2 National feature films/mn pop. 15–69 1.2.3 Entertainment and media market/th pop. 15–69 1.2.4 Creative goods exports, % total trade 1.2.5 VC investor (Films/mn pop. 15–69) 1.2.6 VC investor (Films/mn pop. 15–69) 1.2.7 Value (Films/mn pop. 15–69) 1.2.8 VC investor (Films/mn pop. 15–69) 1.2.9 Value (Film										
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4.2.2 Venture capital (VC) received, deal count/bn PPP\$ GDP 4.2.3 Late-stage VC deal count, % global VC 4.2.4 VC investors, deal count/bn PPP\$ GDP 4.2.5 VC investor co-participation/bn PPP\$ GDP 4.3 Trade, diversification and market scale 4.3.1 Applied tariff rate, weighted avg., % 4.3.2 Domestic industry diversification 7.2.4 Creative goods exports, % total trade 7.2.4		ization, % GDP	n/a	n/a			•			
4.2.3 Late-stage VC deal count, % global VC 4.2.4 VC investors, deal count/bn PPP\$ GDP 4.2.5 VC investor co-participation/bn PPP\$ GDP 4.3 Trade, diversification and market scale 4.3.1 Applied tariff rate, weighted avg., % 4.3.2 Domestic industry diversification 7.2.4 Creative goods exports, % total trade 7.3 Online creativity 7.3 Online creativity 7.3 Online creativity 7.3.1 Top-level domains (TLDs)/th pop. 15–69 7.3.2 GitHub commits/mn pop. 15–69 7.3.3 Mobile app creation/bn PPP\$ GDP 4.5.5 VC investor co-participation/sh PPP\$ GDP 4.6.6 110										
4.2.4 VC investors, deal count/bn PPP\$ GDP 4.2.5 VC investor co-participation/bn PPP\$ GDP 4.3 Trade, diversification and market scale 4.3.1 Applied tariff rate, weighted avg., % 4.3.2 Domestic industry diversification 98 7.3.1 Top-level domains (TLDs)/th pop. 15−69 7.3.2 GitHub commits/mn pop. 15−69 1 118 7.3.3 Mobile app creation/bn PPP\$ GDP 45.6 110 17.8 Top-level domains (TLDs)/th pop. 15−69 1 118 1 118 1 118 1 118 1 118 1 118 1 118 1 1 118 1 1 1 1				91			total trade			
4.2.5 VC investor co-participation/bn PPP\$ GDP 0.02 92 7.3.2 GitHub commits/mn pop. 15–69 1 118 4.3 Trade, diversification and market scale 37.9 124 7.3.3 Mobile app creation/bn PPP\$ GDP 45.6 110 4.3.1 Applied tariff rate, weighted avg., % 10.5 129 45.6 110 4.3.2 Domestic industry diversification n/a n/	4.2.4 VC investors,	deal count/bn PPP\$ GDP	0.03	98			th non 15–60			
4.3 Trade, diversification and market scale 4.3.1 Applied tariff rate, weighted avg., % 10.5 129 4.3.2 Domestic industry diversification 10.5 129 4.3.3 Mobile app creation/bn PPP\$ GDP 4.5.6 110	4.2.5 VC investor co	o-participation/bn PPP\$ GDP	0.02	92						
4.3.1 Applied tariff rate, weighted avg., % 10.5 129 \Diamond 4.3.2 Domestic industry diversification n/a n/a	4.3 Trade, diversif	ication and market scale	37.9	124						
	4.3.1 Applied tariff r	rate, weighted avg., %	10.5	129	\Diamond	Mobile app creation/bit FF	. 4 001	45.0	110	
4.3.3 Domestic market scale, bn PPP\$ 434.4 54 •	4.3.2 Domestic indu	ustry diversification	n/a	n/a						
	4.3.3 Domestic mar	ket scale, bn PPP\$	434.4	54	•					



Data Availability

The following tables list indicators that are either missing or outdated for Ethiopia.



Ethiopia has missing data for sixteen indicators and outdated data for sixteen indicators.

Missing data for Ethiopia

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture [†]	n/a	2024	Global Entrepreneurship Monitor
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2021	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2023	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
2.2.2	Graduates in science and engineering, %	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	n/a	2023	UNESCO Institute for Statistics
3.2.2	Logistics performance*	n/a	2023	World Bank, Logistics Performance Index 2023
4.1.1	Finance for startups and scaleups†	n/a	2024	Global Entrepreneurship Monitor
4.1.2	Domestic credit to private sector, % GDP	n/a	2023	International Monetary Fund; World Bank and OECD GDP estimates
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
4.3.2	Domestic industry diversification	n/a	2022	United Nations Industrial Development Organization (UNIDO)
6.1.2	PCT patents by inventor origin/bn PPP\$ GDP	n/a	2024	World Intellectual Property Organization; International Monetary Fund
6.2.4	High-tech manufacturing	n/a	2022	United Nations Industrial Development Organization (UNIDO)
7.1.1	Intangible asset intensity, top 15, %	n/a	2024	Brand Finance
7.2.2	National feature films/mn pop. 15–69	n/a	2023	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2024	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund



Outdated data for Ethiopia

Code	Indicator name	Economy year	Model year	Source
1.3.1	Policy stability for doing business [†]	2019	2024	World Economic Forum, Executive Opinion Survey (EOS)
2.1.5	Pupil–teacher ratio, secondary	2017	2023	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2018	2023	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2017	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2017	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.1.1	ICT access*	2021	2023	World Intellectual Property Organization; based on International Telecommunication Union (ITU)
3.2.1	Electricity output, GWh/mn pop.	2022	2023	International Energy Agency
4.1.3	Loans from microfinance institutions, % GDP	2022	2023	International Monetary Fund, Financial Access Survey (FAS)
5.1.1	Knowledge-intensive employment, %	2021	2024	International Labour Organization
5.1.2	Females employed w/advanced degrees, %	2021	2024	International Labour Organization
5.1.4	GERD performed by business, % GDP	2017	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	GERD financed by business, %	2017	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.2.2	University-industry R&D collaboration [†]	2019	2024	World Economic Forum, Executive Opinion Survey (EOS)
5.2.4	State of cluster development [†]	2019	2024	World Economic Forum, Executive Opinion Survey (EOS)
5.3.5	Research talent, % in businesses	2017	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.2.1	Cultural and creative services exports, % total trade	2022	2023	World Trade Organization, Organisation for Economic Co-operation and Development; United Nations Conference on Trade and Development



About the Global Innovation Index

- The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.
- Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 140 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a "tool for action" for economies that incorporate the GII into their innovation agendas.



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research infrastructure, credit, investment, linkages, the creation, absorption and diffusion of knowledge and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.