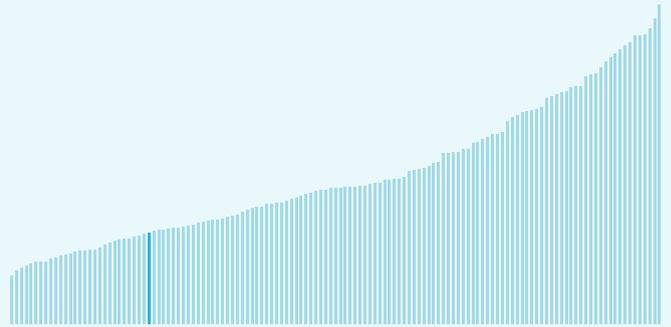


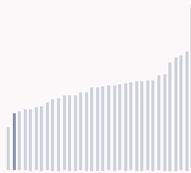
Ecuador ranking in the Global Innovation Index 2024

Ecuador ranks **105th** among the 133 economies featured in the GII 2024.

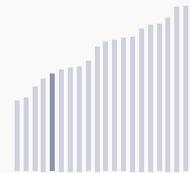
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Ecuador ranks **33rd** among the 34 upper-middle-income group economies.



Ecuador ranks **16th** among the 20 economies in Latin America and the Caribbean.



> Ecuador GII Ranking (2020-2024)

The table shows the rankings of Ecuador over the past four 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 Ecuador in the GII 2024 is between ranks 95 and 106.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	99th	96th	97th
2021	91st	92nd	94th
2022	98th	96th	98th
2023	104th	98th	99th
2024	105th	104th	100th

Ecuador performs better in innovation outputs than innovation inputs in 2024.

This year Ecuador ranks **104th in innovation inputs**. This position is lower than last year.

Ecuador ranks **100th in innovation outputs**. This position is lower than last year.

Ecuador has no clusters in the top 100 S&T clusters of the Global Innovation Index.

Global Innovation Index 2024



> Global Innovation Tracker

The Global Innovation Tracker 2024 shows what is the current state of innovation in Ecuador, how rapidly is technology being embraced and what are the resulting societal impacts.



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

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▲ 1.5% 2022 - 2023	n/a	n/a	n/a	▲ 83.3% 2022 - 2023
▲ 19.1% 2013 - 2023	▲ 21.8% 2006 - 2014	n/a	n/a	▼ -4.3% 2013 - 2023

Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▼ -0.5% 2021 - 2022	▲ 7.4% 2021 - 2022	n/a	n/a	n/a
▲ 0.1% 2012 - 2022	▲ 10.6% 2012 - 2022	n/a	n/a	n/a
41.6 per 100 inhabitants in 2022	15 per 100 inhabitants in 2022	n/a	n/a	n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 0.2% 2022 - 2023	▲ 5.7% 2021 - 2022	▲ 1.6°C 2023
▼ -1% 2013 - 2023	▲ 0.2% 2012 - 2022	n/a
29,446 USD in 2023	77.9 years in 2022	

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 country from 1951–1980. Figures are rounded.



Expected vs. observed innovation performance

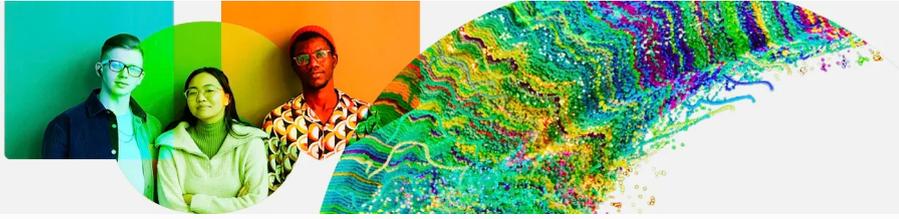
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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



Relative to GDP, Ecuador's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic 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.

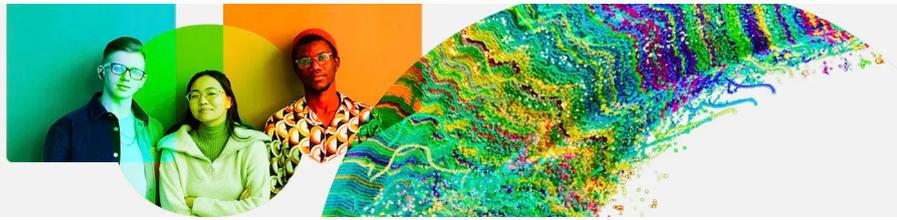


Ecuador produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

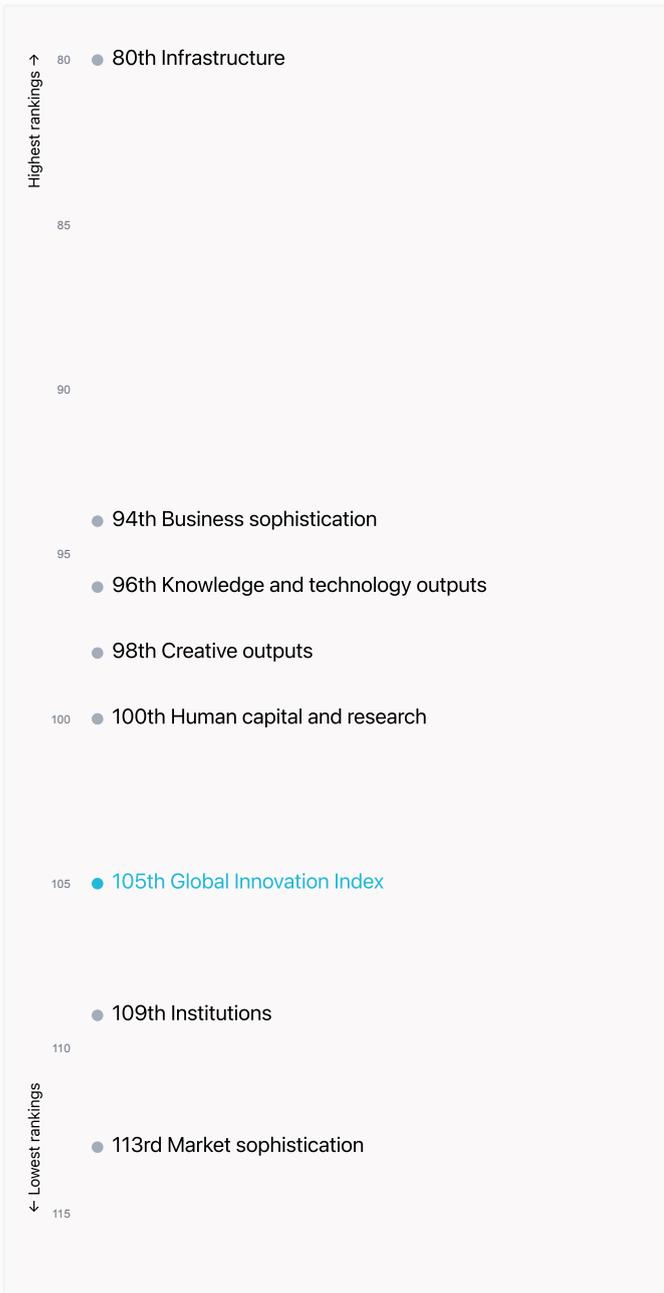


Global Innovation Index 2024



Overview of Ecuador's rankings in the seven areas of the GII in 2024

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



Highest rankings



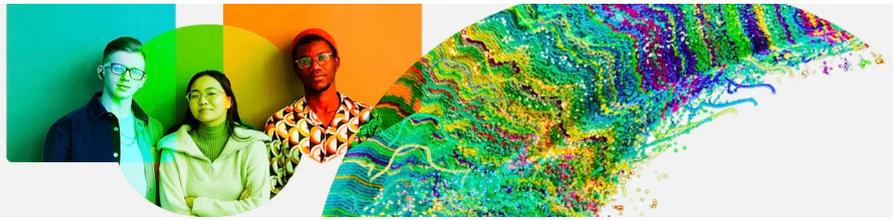
Ecuador ranks highest in Infrastructure (80th), Business sophistication (94th), Knowledge and technology outputs (96th) and Creative outputs (98th).

Lowest rankings



Ecuador ranks lowest in Market sophistication (113rd), Institutions (109th) and Human capital and research (100th).

The full WIPO Intellectual Property  Statistics profile for Ecuador can be found on [this link](#).



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

The charts show the relative position of Ecuador (blue bar) against other economy groupings (grey bars), for each of the seven areas of the GII Index.



Upper-Middle-Income economies

Ecuador performs below the upper-middle-income group average in all pillars.



Latin America And The Caribbean

Ecuador performs above the regional average in Infrastructure.

Institutions

Top 10 | Score: 80.81

Upper middle income | Score: 43.0

LCN | Score: 38.36

Ecuador | Score: 30.09

Human capital and research

Top 10 | Score: 61.30

Upper middle income | Score: 29.5

LCN | Score: 26.04

Ecuador | Score: 21.91

Infrastructure

Top 10 | Score: 58.57

Upper middle income | Score: 39.8

Ecuador | Score: 35.96

LCN | Score: 35.16

Market sophistication

Top 10 | Score: 62.12

Upper middle income | Score: 32.9

LCN | Score: 27.03

Ecuador | Score: 18.34

Business sophistication

Top 10 | Score: 63.64

Upper middle income | Score: 27.6

LCN | Score: 24.99

Ecuador | Score: 21.10

Knowledge and technology outputs

Top 10 | Score: 57.29

Upper middle income | Score: 20.6

LCN | Score: 15.72

Ecuador | Score: 12.61

Creative outputs

Top 10 | Score: 56.54

Upper middle income | Score: 24.3

LCN | Score: 19.36

Ecuador | Score: 13.73



Innovation strengths and weaknesses in Ecuador

The table below gives an overview of the indicator strengths and weaknesses of Ecuador in the GII 2024.



Ecuador's main innovation strengths are **Trademarks by origin/bn PPP\$ GDP (rank 23)**, **Unicorn valuation, % GDP (rank 30)** and **Low-carbon energy use, % (rank 34)**.

Strengths

Weaknesses

Rank	Code	Indicator name	Rank	Code	Indicator name
23	7.1.2	Trademarks by origin/bn PPP\$ GDP	121	6.3.4	ICT services exports, % total trade
30	6.2.2	Unicorn valuation, % GDP	119	1.3.1	Policy stability for doing business [†]
34	3.3.2	Low-carbon energy use, %	117	5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP
41	3.1.4	E-participation*	113	6.3.2	Production and export complexity
45	6.3.5	ISO 9001 quality/bn PPP\$ GDP	107	4.2.3	VC recipients, deals/bn PPP\$ GDP
50	3.1.3	Government's online service*	94	2.1.2	Government funding/pupil, secondary, % GDP/cap
52	2.1.3	School life expectancy, years	81	4.1.1	Finance for startups and scaleups [†]
54	3.3.1	GDP/unit of energy use	75	7.1.3	Global brand value, top 5,000, % GDP
56	5.3.1	Intellectual property payments, % total trade	41	2.3.3	Global corporate R&D investors, top 3, mn USD



Ecuador's innovation system

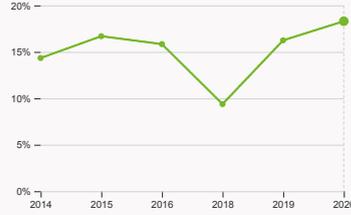
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Ecuador



2.1.1 Expenditure on education

was equal to 3.65 % GDP in 2022, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 86.



2.2.2 Graduates in science and engineering

was equal to 18.3 % of total graduates in 2020, up by 2.06 percentage points from the year prior – and equivalent to an indicator rank of 90.



2.3.1 Researchers

was equal to 402.3 FTE per million population in 2014, up by 13.98% from the year prior – and equivalent to an indicator rank of 77.



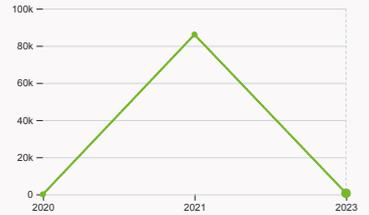
2.3.2 Gross expenditure on R&D

was equal to 0.44 % GDP in 2014, up by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 62.



2.3.4 QS university ranking

was equal to an average score of 8.63 for the top three universities in 2023, down by 7.5% from the year prior – and equivalent to an indicator rank of 68.



4.2.4 VC received, value

was equal to 600 USD in 2023, down by 99.3% from the year prior – and equivalent to an indicator rank of 65.

Global Innovation Index 2024



4.3.2 Domestic industry diversification

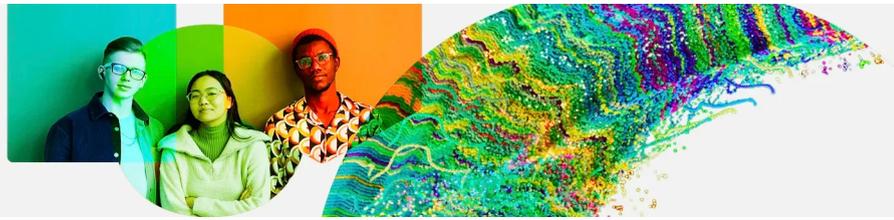
was equal to an index score of 0.24 in 2021, down by 7.35% from the year prior – and equivalent to an indicator rank of 91.



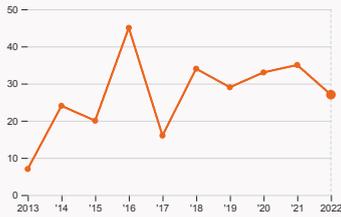
5.1.1 Knowledge-intensive employment

was equal to 12.94 % in 2023, up by 0.36 percentage points from the year prior – and equivalent to an indicator rank of 100.

Global Innovation Index 2024

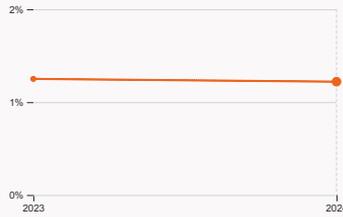


› Innovation outputs in Ecuador



6.1.1 Patents by origin

was equal to 27 patents in 2022, down by 22.86% from the year prior – and equivalent to an indicator rank of 108.



6.2.2 Unicorn valuation

was equal to 1.22 % GDP in 2024, down by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 30.



6.2.4 High-tech manufacturing

was equal to 9.9 % of total manufacturing output in 2021, up by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 87.



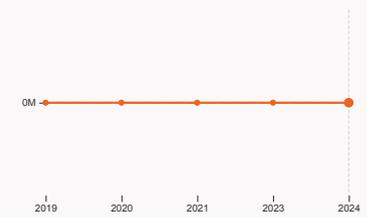
6.3.2 Production and export complexity

was equal to a score of -1.07 in 2021, up by 12.3% from the year prior – and equivalent to an indicator rank of 113.



6.3.3 High-tech exports

was equal to 129.21 million USD in 2022, up by 61.51% from the year prior – and equivalent to an indicator rank of 98.



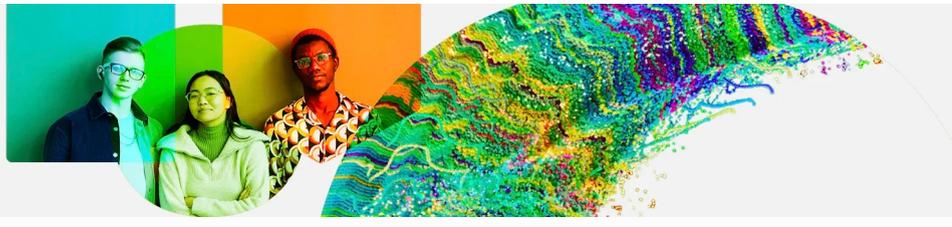
7.1.3 Global brand value

was equal to 0 million USD for the brands in the top 5,000 in 2024 with no change from the year prior – and equivalent to an indicator rank of 75.



7.3.3 Mobile app creation

was equal to 9.68 million global downloads of mobile apps in 2023, up by 14.69% from the year prior – and equivalent to an indicator rank of 91.



Ecuador's innovation top performers

2.3.4 QS university ranking of Ecuador's top universities

Rank	University	Score
801-850	UNIVERSIDAD SAN FRANCISCO DE QUITO (USFQ)	13.70
901-950	PONTIFICIA UNIVERSIDAD CATOLICA DEL ECUADOR (PUCE)	12.20
1001-1200	ESCUELA POLITECNICA NACIONAL	7.60

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2023>).

Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].

Ranks can represent a single value "x", a tie "x=" or a range "x-y".

6.2.2 Top Unicorn Companies in Ecuador

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	KUSHKI	Financial Services	Quito	2

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: <https://www.cbinsights.com/research-unicorn-companies>

Global Innovation Index 2024

Ecuador

GII 2024 rank

105

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
100	104	Upper middle	LCN	18.0	242.6	13,285.2
			Score / Value Rank	Score / Value Rank		
Institutions			30.1 109	Business sophistication		
1.1 Institutional environment			41.6 94	5.1 Knowledge workers		
1.1.1 Operational stability for businesses*			47.3 98	30.1 72		
1.1.2 Government effectiveness*			35.9 88	5.1.1 Knowledge-intensive employment, %		
1.2 Regulatory environment			27.9 100	12.9 100 ◇		
1.2.1 Regulatory quality*			29.8 96	5.1.2 Firms offering formal training, %		
1.2.2 Rule of law*			26 103	73.7 1		
1.3 Business environment			20.8 117	5.1.3 GERD performed by business, % GDP		
1.3.1 Policy stability for doing business*			23 119 ○ ◇	0.2 55		
1.3.2 Entrepreneurship policies and culture*			18.5 68	5.1.4 GERD financed by business, %		
Human capital and research			21.9 100	0.2 96		
2.1 Education			38 106	5.1.5 Females employed w/advanced degrees, %		
2.1.1 Expenditure on education, % GDP			3.6 86	9 82		
2.1.2 Government funding/pupil, secondary, % GDP/cap			6.1 94 ○ ◇	5.2 Innovation linkages		
2.1.3 School life expectancy, years			14.9 52 ● ◆	12.2 117		
2.1.4 PISA scales in reading, maths and science			n/a n/a	5.2.1 Public Research-Industry co-publications, %		
2.1.5 Pupil-teacher ratio, secondary			20.4 98	0.5 117		
2.2 Tertiary education			22.7 89	5.2.2 University-industry R&D collaboration+		
2.2.1 Tertiary enrolment, % gross			57.9 60	30.8 96		
2.2.2 Graduates in science and engineering, %			18.3 90	5.2.3 State of cluster development†		
2.2.3 Tertiary inbound mobility, %			0.6 96 ◇	23.7 115 ◇		
2.3 Research and development (R&D)			5 76	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		
2.3.1 Researchers, FTE/mn pop.			402.3 77	0.004 117 ○		
2.3.2 Gross expenditure on R&D, % GDP			0.4 62	5.2.5 Patent families/bn PPP\$ GDP		
2.3.3 Global corporate R&D investors, top 3, mn USD			0 41 ○ ◇	0.02 84		
2.3.4 QS university ranking, top 3*			8.7 68	5.3 Knowledge absorption		
Infrastructure			36 80	21 88		
3.1 Information and communication technologies (ICTs)			68.6 76	5.3.1 Intellectual property payments, % total trade		
3.1.1 ICT access*			64 100 ◇	0.7 56 ● ◆		
3.1.2 ICT use*			66.7 90 ◇	5.3.2 High-tech imports, % total trade		
3.1.3 Government's online service*			74 50 ● ◆	8.3 64		
3.1.4 E-participation*			69.8 41 ● ◆	5.3.3 ICT services imports, % total trade		
3.2 General infrastructure			16.5 109	0.5 110 ◇		
3.2.1 Electricity output, GWh/mn pop.			1,805.3 85	5.3.4 FDI net inflows, % GDP		
3.2.2 Logistics performance*			n/a n/a	0.8 102		
3.2.3 Gross capital formation, % GDP			22.4 82	5.3.5 Research talent, % in businesses		
3.3 Ecological sustainability			22.8 56 ● ◆	n/a n/a		
3.3.1 GDP/unit of energy use			11.9 54 ● ◆	Knowledge and technology outputs		
3.3.2 Low-carbon energy use, %			30.1 34 ● ◆	12.6 96		
3.3.3 ISO 14001 environment/bn PPP\$ GDP			1 72	6.1 Knowledge creation		
Market sophistication			18.3 113 ◇	7.2 100		
4.1 Credit			13.3 101	6.1.1 Patents by origin/bn PPP\$ GDP		
4.1.1 Finance for startups and scaleups†			14.6 81 ○ ◇	0.1 108		
4.1.2 Domestic credit to private sector, % GDP			52.9 60	6.1.2 PCT patents by origin/bn PPP\$ GDP		
4.1.3 Loans from microfinance institutions, % GDP			0.7 38	0.05 77		
4.2 Investment			2.1 107 ○	6.1.3 Utility models by origin/bn PPP\$ GDP		
4.2.1 Market capitalization, % GDP			n/a n/a	0.09 55		
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP			0.01 92	6.1.4 Scientific and technical articles/bn PPP\$ GDP		
4.2.3 VC recipients, deals/bn PPP\$ GDP			0.004 107 ○	10.2 71		
4.2.4 VC received, value, % GDP			0.0004 65	9.3 82		
4.3 Trade, diversification and market scale			39.6 101 ◇	6.1.5 Citable documents H-index		
4.3.1 Applied tariff rate, weighted avg., %			6.2 107 ◇	23.1 77		
4.3.2 Domestic industry diversification			63.1 91 ◇	6.2.1 Labor productivity growth, %		
4.3.3 Domestic market scale, bn PPP\$			242.6 66	-1 118 ◇		
				6.2.2 Unicorn valuation, % GDP		
				1.2 30 ● ◆		
				6.2.3 Software spending, % GDP		
				0.2 72		
				6.2.4 High-tech manufacturing, %		
				9.9 87		
				6.3 Knowledge diffusion		
				7.5 104 ◇		
				6.3.1 Intellectual property receipts, % total trade		
				0.04 79		
				6.3.2 Production and export complexity		
				16.1 113 ○ ◇		
				6.3.3 High-tech exports, % total trade		
				0.4 98		
				6.3.4 ICT services exports, % total trade		
				0.2 121 ○		
				6.3.5 ISO 9001 quality/bn PPP\$ GDP		
				6.3 45 ● ◆		
				Creative outputs		
				13.7 98 ◇		
				7.1 Intangible assets		
				16.5 86		
				7.1.1 Intangible asset intensity, top 15, %		
				n/a n/a		
				7.1.2 Trademarks by origin/bn PPP\$ GDP		
				62.2 23 ● ◆		
				7.1.3 Global brand value, top 5,000, % GDP		
				0 75 ○ ◇		
				7.1.4 Industrial designs by origin/bn PPP\$ GDP		
				0.4 84		
				7.2 Creative goods and services		
				0.7 [123]		
				7.2.1 Cultural and creative services exports, % total trade		
				0.03 99		
				7.2.2 National feature films/mn pop. 15-69		
				n/a n/a		
				7.2.3 Entertainment and media market/th pop. 15-69		
				n/a n/a		
				7.2.4 Creative goods exports, % total trade		
				0.03 115		
				7.3 Online creativity		
				21.2 94		
				7.3.1 Top-level domains (TLDs)/th pop. 15-69		
				1.3 88		
				7.3.2 GitHub commits/mn pop. 15-69		
				4.6 79		
				7.3.3 Mobile app creation/bn PPP\$ GDP		
				57.6 91		

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, ● that the economy's data is outdated. Square brackets [] indicate the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; n/a represents missing values; a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.



Data availability

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



Ecuador has missing data for seven indicators and outdated data for eleven indicators.

Missing data for Ecuador

Code	Indicator name	Economy Year	Model Year	Source
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
3.2.2	Logistics performance*	n/a	2023	World Bank, Logistics Performance Index 2023 (https://lpi.worldbank.org/); and World Bank 2023, Connecting to Compete 2023: Trade Logistics in the Global Economy The Logistics Performance Index and its Indicators.
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank
5.3.5	Research talent, % in businesses	n/a	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance
7.2.2	National feature films/mn pop. 15–69	n/a	2022	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2023	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

Outdated data for Ecuador

Code	Indicator name	Economy Year	Model Year	Source
2.1.3	School life expectancy, years	2020	2022	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2020	2022	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD
2.2.3	Tertiary inbound mobility, %	2020	2022	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
4.1.3	Loans from microfinance institutions, %	2021	2022	International Monetary Fund, Financial Access Survey

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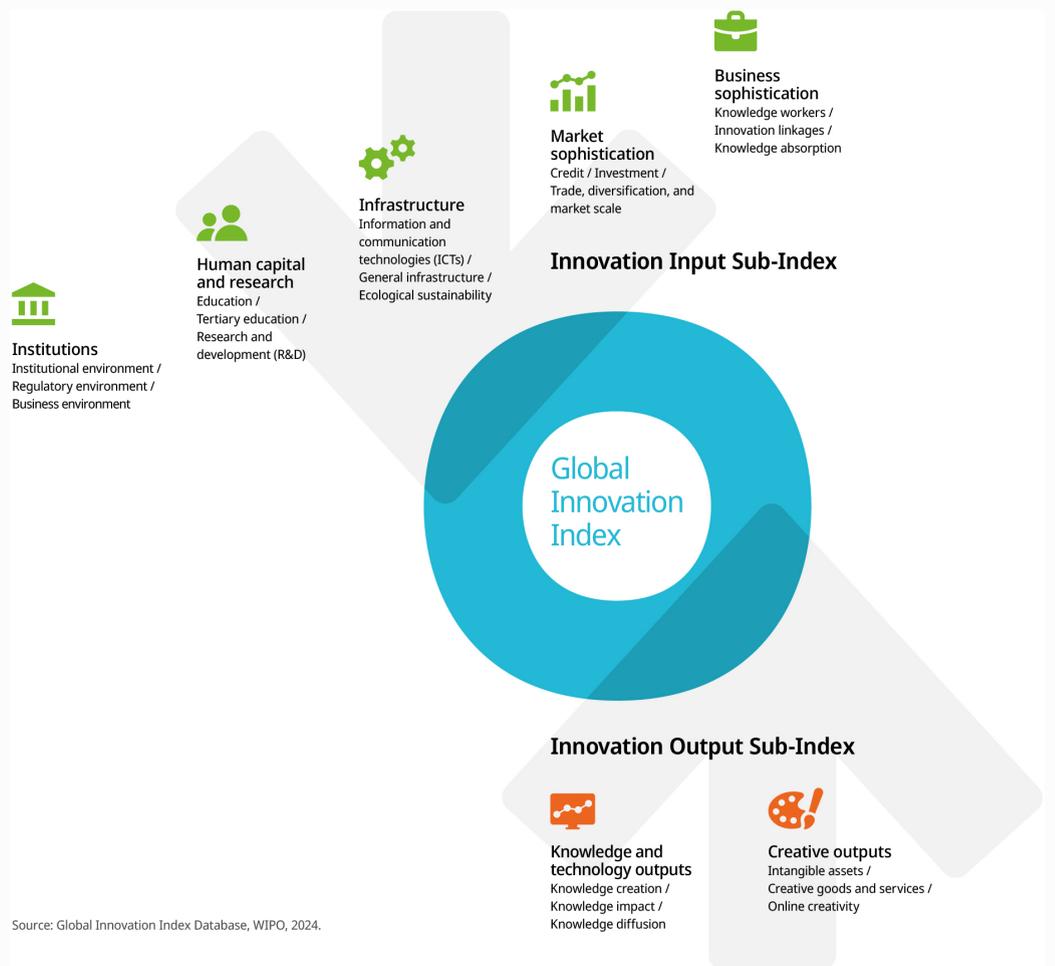
Code	Indicator name	Economy Year	Model Year	Source
	GDP			(FAS)
5.1.2	Firms offering formal training, %	2017	2023	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2014	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	2014	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

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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 130 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.