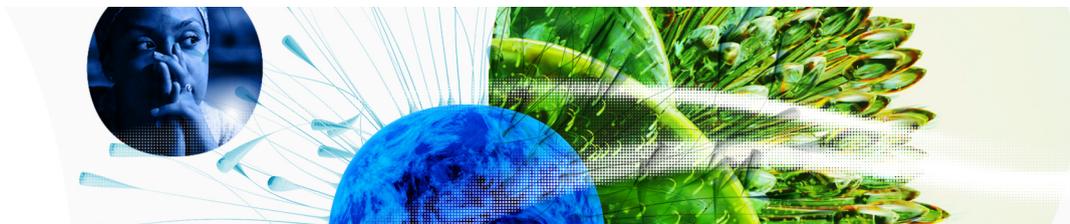


Global Innovation Index 2023

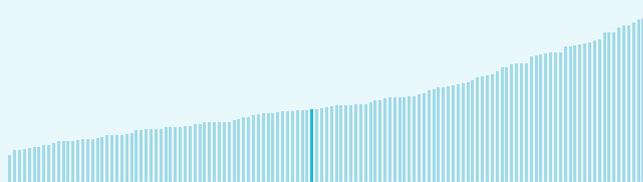


The Global Innovation Index (GII) **ranks world economies according to their innovation capabilities.**

Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation.**

Morocco ranking in the Global Innovation Index 2023

> Morocco ranks **70th** among the 132 economies featured in the GII 2023.



> Morocco ranks **8th** among the 37 lower-middle-income group economies.



> Morocco ranks **11th** among the 18 economies in Northern Africa and Western Asia.



> Morocco GII Ranking (2020-2023)

The table shows the rankings of Morocco 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 Morocco in the GII 2023 is between ranks 64 and 76.

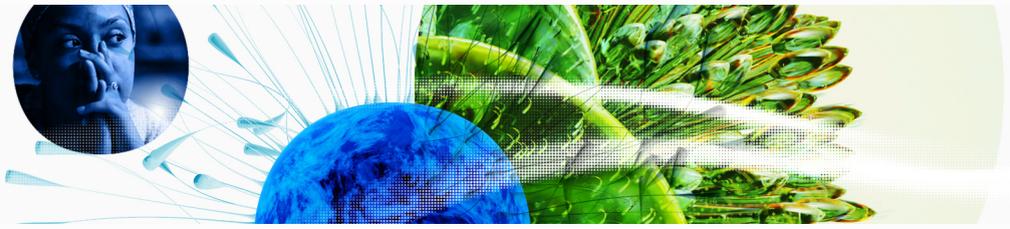
	GII Position	Innovation Inputs	Innovation Outputs
2020	75th	85th	69th
2021	77th	84th	67th
2022	67th	87th	56th
2023	70th	90th	55th

Morocco performs better in innovation outputs than innovation inputs in 2023.

This year Morocco ranks 90th in innovation inputs. This position is lower than last year.

Morocco ranks 55th in innovation outputs. This position is higher than last year.

Global Innovation Index 2023



→ Expected vs. observed innovation performance

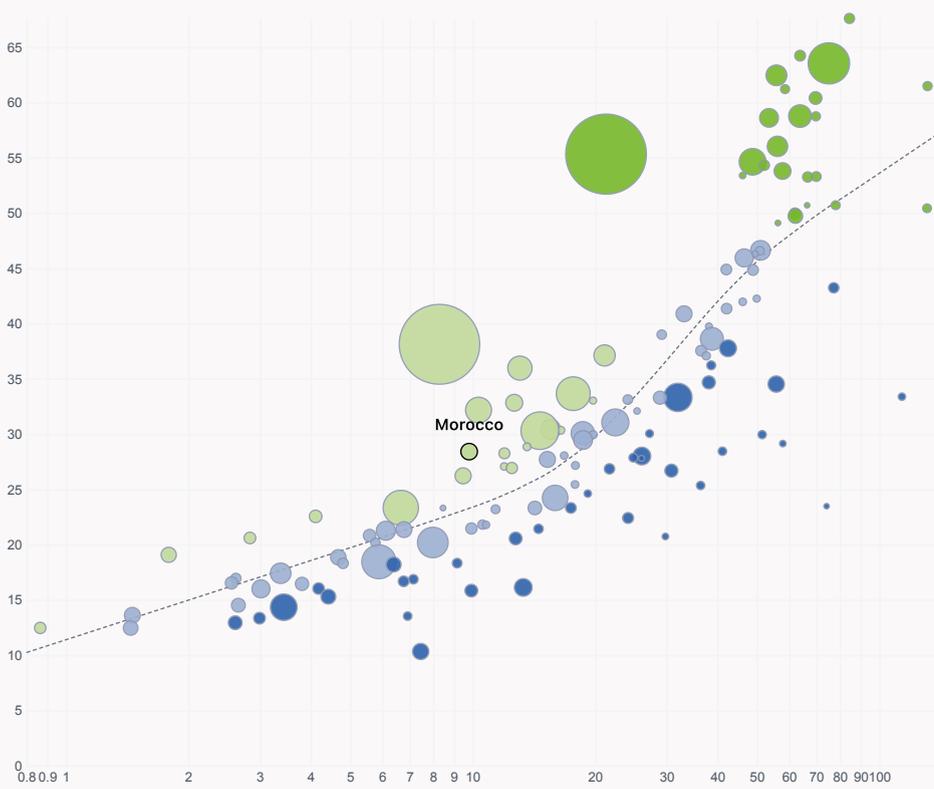
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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



> Relative to GDP, Morocco is performing above expectations for its level of development.

> Innovation overperformers relative to their economic development

↑ **GII Score**



- Innovation leader
- Performing above expectations for level of development
- Performing at expectations for level of development
- Performing below expectations for level of development

Size legend (Population)



→ **GDP per capita, PPP logarithmic scale (thousands of \$)**

Global Innovation Index 2023



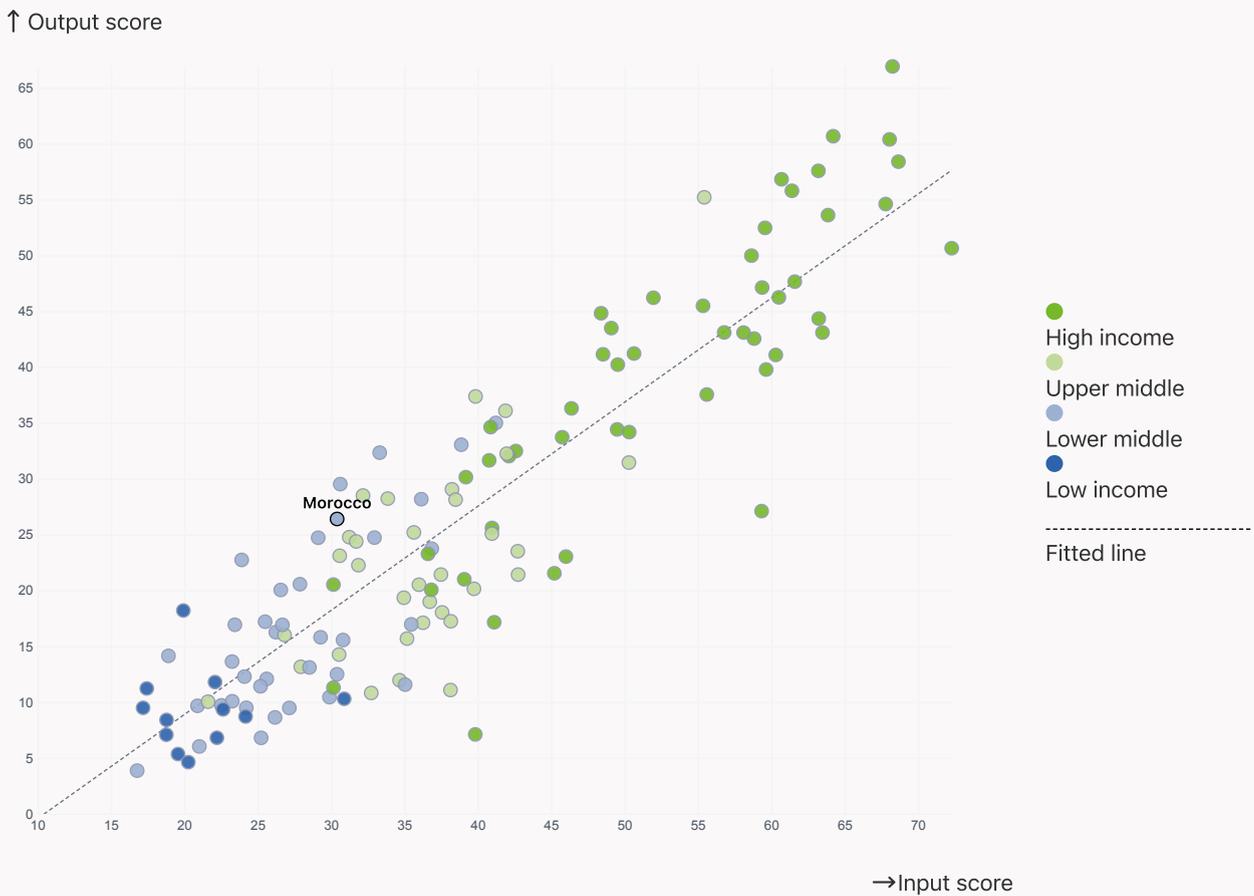
→ Effectively translating innovation investments into innovation outputs

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.

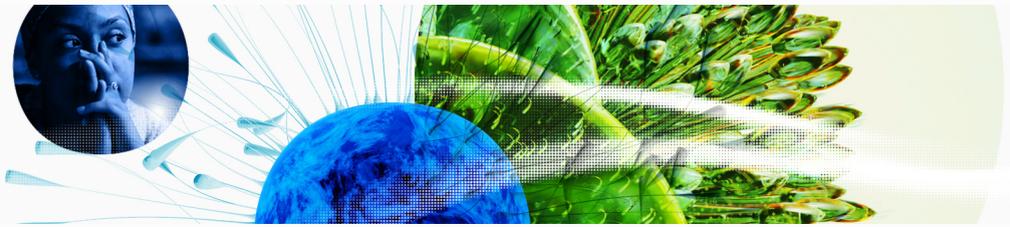


> Morocco produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

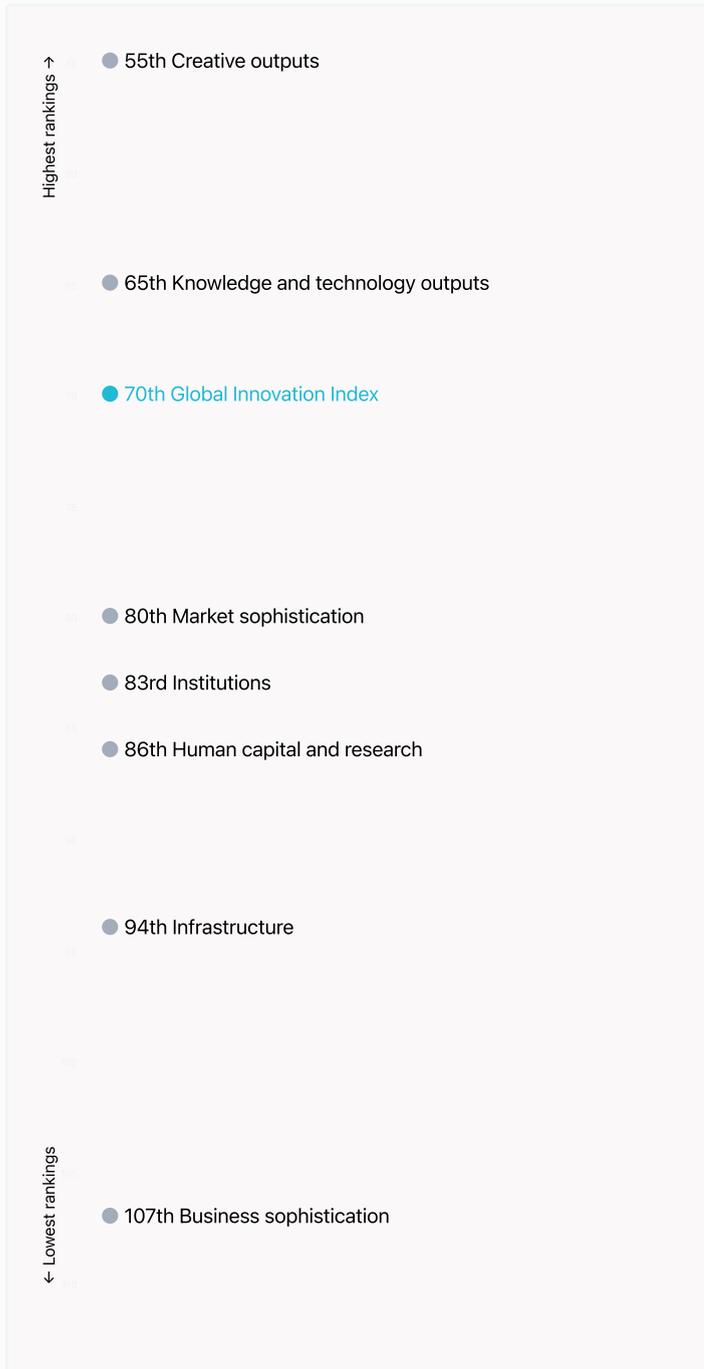


Global Innovation Index 2023



→ Overview of Morocco's rankings in the seven areas of the GII in 2023

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



> Highest rankings



Morocco ranks highest in Creative outputs (55th) and Knowledge and technology outputs (65th).

> Lowest rankings



Morocco ranks lowest in Business sophistication (107th), Infrastructure (94th) and Human capital and research (86th).

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

Global Innovation Index 2023



→ Benchmark of Morocco against other country groupings for each of the seven areas of the GII Index

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

> Lower-Middle-Income economies

Morocco performs above the lower-middle-income group average in Knowledge and technology outputs, Creative outputs, Market sophistication, Human capital and research, Infrastructure, Institutions.

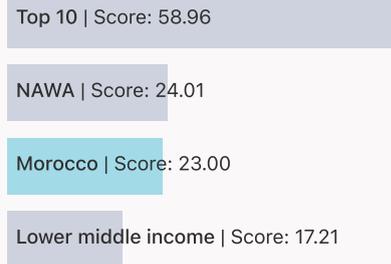


> Northern Africa And Western Asia

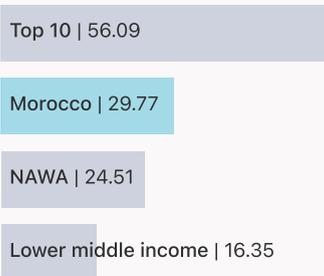
Morocco performs below the regional average in Knowledge and technology outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure, Institutions.



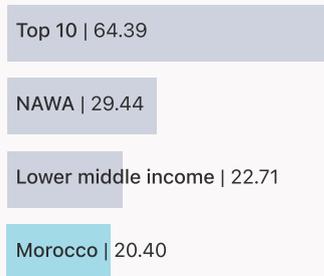
Knowledge and technology outputs



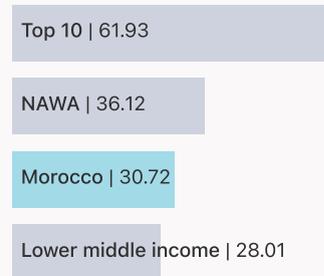
Creative outputs



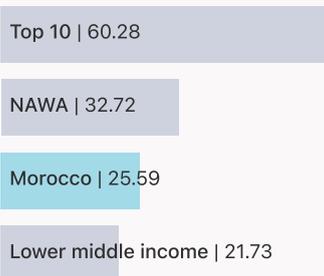
Business sophistication



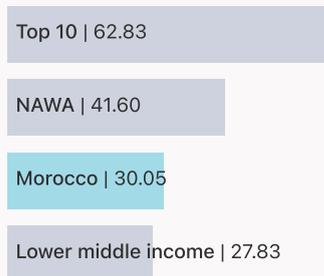
Market sophistication



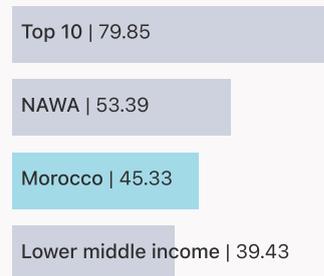
Human capital and research



Infrastructure



Institutions



Global Innovation Index 2023



→ Innovation strengths and weaknesses in Morocco

The table below gives an overview of the indicator strengths and weaknesses of Morocco in the GII 2023.



> Morocco's main innovation strengths are **Industrial designs by origin/bn PPP\$ GDP** (rank 10), **High-tech manufacturing, %** (rank 23) and **Graduates in science and engineering, %** (rank 24).

Strengths

Weaknesses

Rank	Code	Indicator name	Rank	Code	Indicator name
10	7.1.4	Industrial designs by origin/bn PPP\$ GDP	118	3.3.2	Environmental performance
23	6.2.4	High-tech manufacturing, %	111	3.1.4	E-participation
24	2.2.2	Graduates in science and engineering, %	111	5.1.1	Knowledge-intensive employment, %
26	3.2.3	Gross capital formation, % GDP	86	4.2.4	VC received, value, % GDP
30	6.3.4	ICT services exports, % total trade	76	7.2.2	National feature films/mn pop. 15-69
33	4.3.2	Domestic industry diversification	75	2.1.4	PISA scales in reading, maths and science
34	4.1.2	Domestic credit to private sector, % GDP	71	2.3.4	QS university ranking, top 3
34	1.3.1	Policies for doing business	59	7.2.3	Entertainment and media market/th pop. 15-69
38	7.1.2	Trademarks by origin/bn PPP\$ GDP	48	6.2.2	Unicorn valuation, % GDP
42	3.1.1	ICT access	40	2.3.3	Global corporate R&D investors, top 3, mn US\$

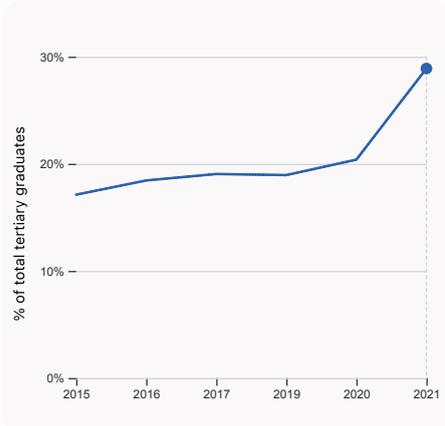
Global Innovation Index 2023



→ Morocco's innovation system

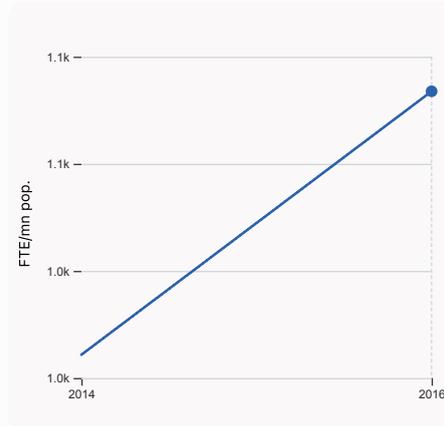
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Morocco



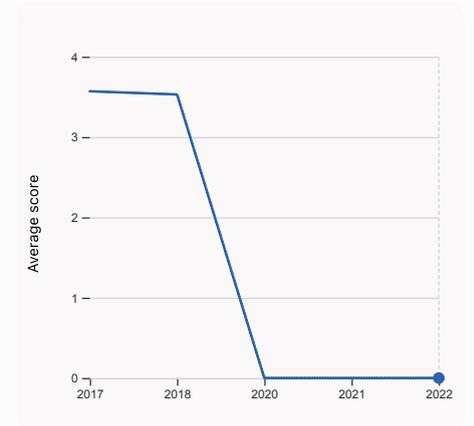
2.2.2 Graduates in science and engineering, %

was equal to 28.9% of total tertiary graduates in 2021, up by 8.51 percentage points from the year prior – and equivalent to an indicator rank of 24.



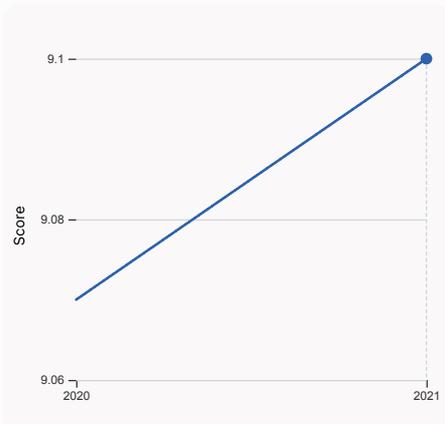
2.3.1 Researchers, FTE/mn pop.

was equal to 1,073.54 FTE/mn pop. in 2016, up by 4.8% from the year prior – and equivalent to an indicator rank of 51.



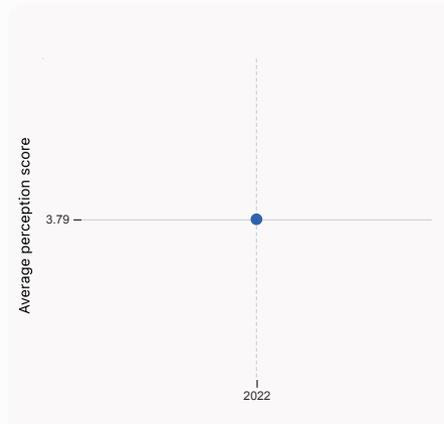
2.3.4 QS university ranking, top 3

was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.



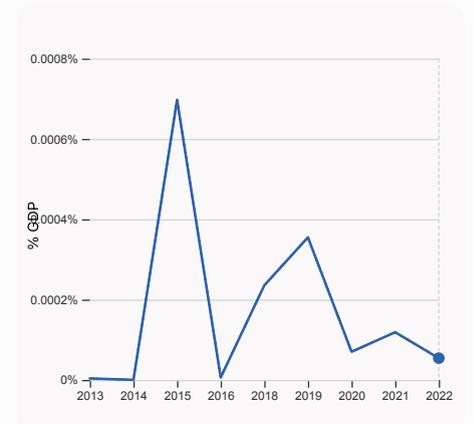
3.1.1 ICT access

was equal to a score of 9.1 in 2021, up by 0.33% from the year prior – and equivalent to an indicator rank of 42.



4.1.1 Finance for startups and scaleups

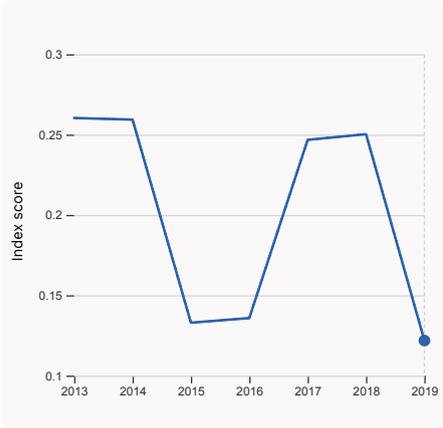
was equal to an average perception score of 3.79 in 2022, equivalent to an indicator rank of 63.



4.2.4 VC received, value, % GDP

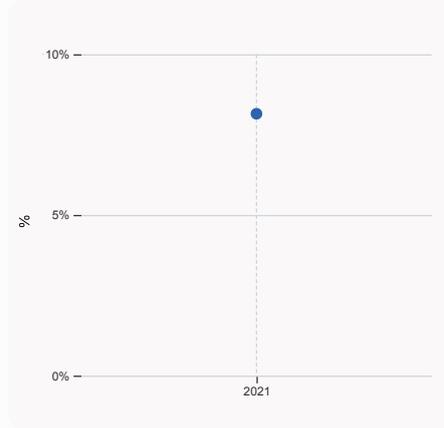
was equal to 0.00005% GDP in 2022, down by 0.000064 percentage points from the year prior – and equivalent to an indicator rank of 86.

Global Innovation Index 2023



4.3.2 Domestic industry diversification

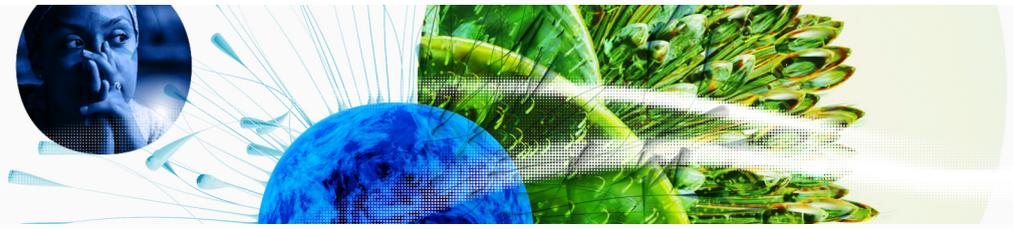
was equal to an index score of 0.122 in 2019, down by 51.33% from the year prior – and equivalent to an indicator rank of 33.



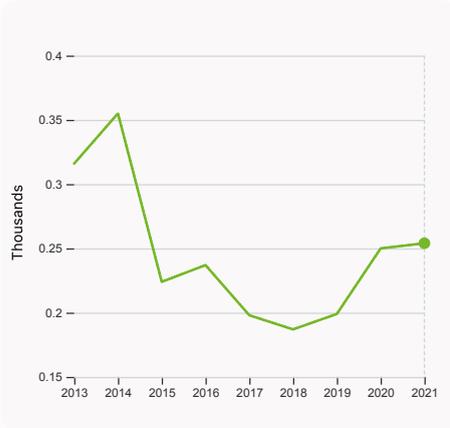
5.1.1 Knowledge-intensive employment, %

was equal to 8.15 % in 2021, equivalent to an indicator rank of 111.

Global Innovation Index 2023

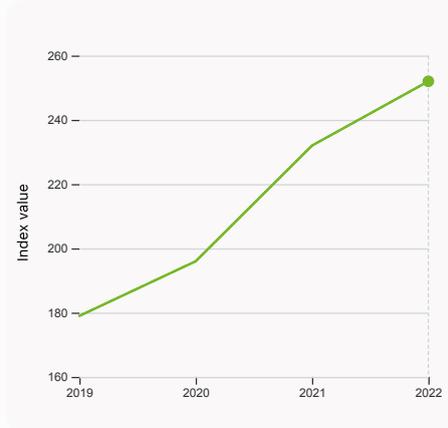


> Innovation outputs in Morocco



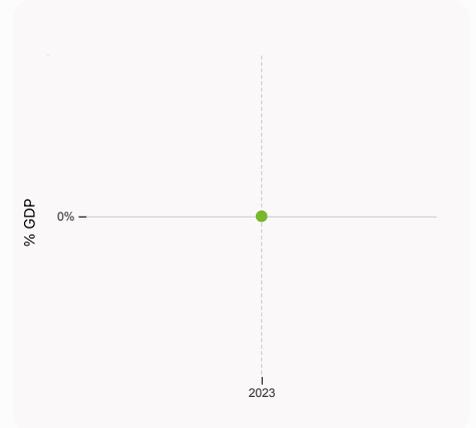
6.1.1 Patents by origin

was equal to 0.25 Thousands in 2021, up by 1.6% from the year prior – and equivalent to an indicator rank of 69.



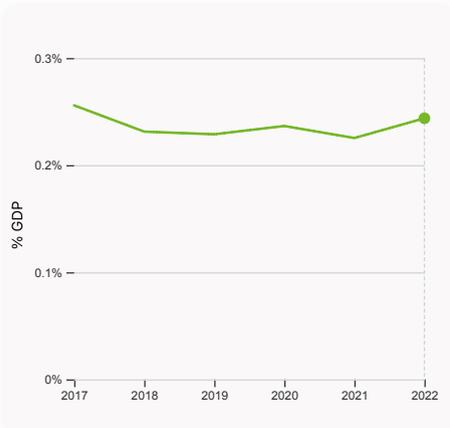
6.1.5 Citable documents H-index

was equal to an index value of 252 in 2022, up by 8.62% from the year prior – and equivalent to an indicator rank of 69.



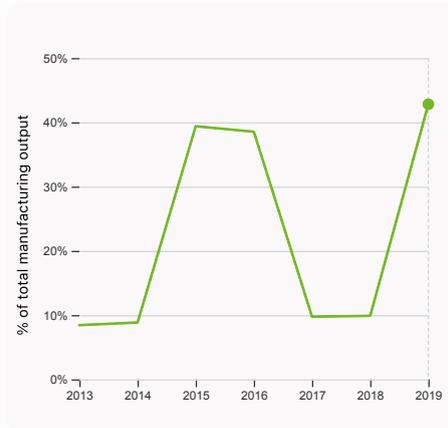
6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.



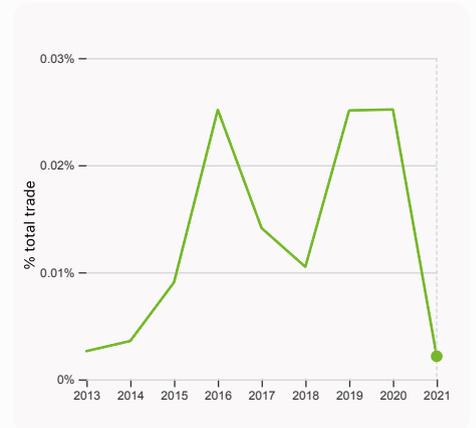
6.2.3 Software spending, % GDP

was equal to 0.244% GDP in 2022, up by 0.018 percentage points from the year prior – and equivalent to an indicator rank of 61.



6.2.4 High-tech manufacturing, %

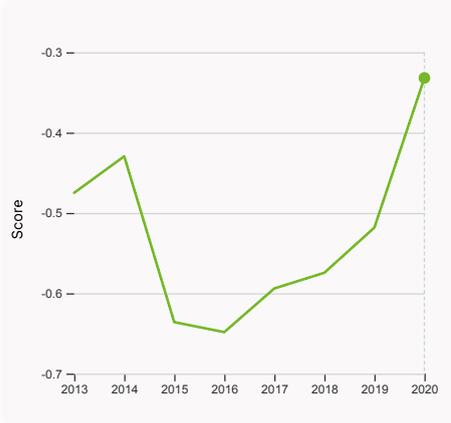
was equal to 42.82% of total manufacturing output in 2019, up by 32.93 percentage points from the year prior – and equivalent to an indicator rank of 23.



6.3.1 Intellectual property receipts, % total trade

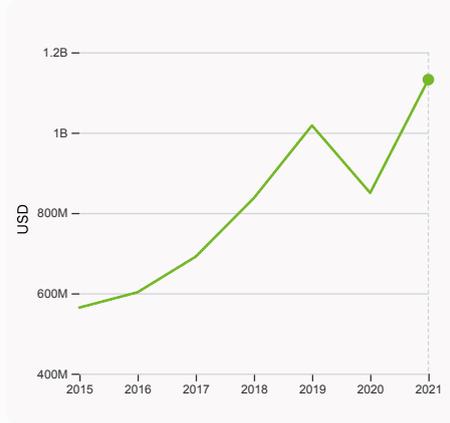
was equal to 0.002% total trade in 2021, down by 0.023 percentage points from the year prior – and equivalent to an indicator rank of 86.

Global Innovation Index 2023



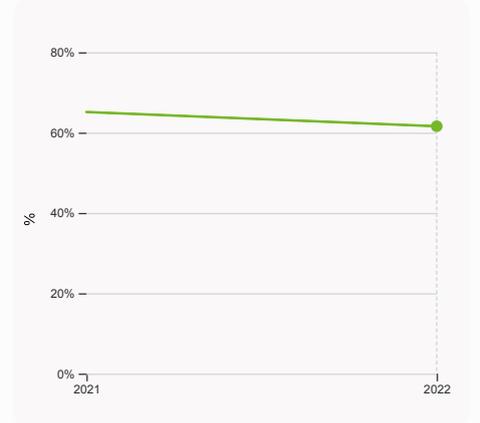
6.3.2 Production and export complexity

was equal to a score of -0.332 in 2020, up by 35.95% from the year prior – and equivalent to an indicator rank of 79.



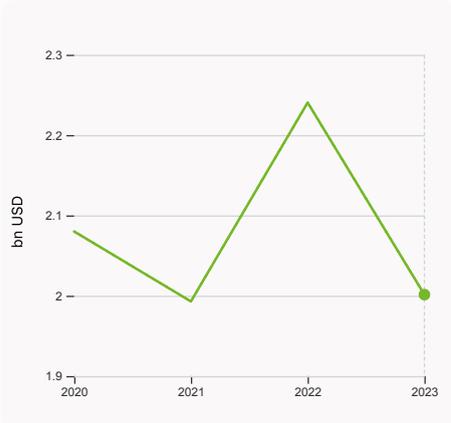
6.3.3 High-tech exports

was equal to 1,132,107,298 USD in 2021, up by 33.19% from the year prior – and equivalent to an indicator rank of 57.



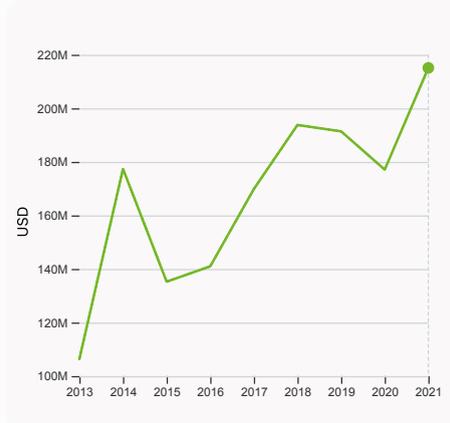
7.1.1 Intangible asset intensity, top 15, %

was equal to 61.59% in 2022, down by 3.55 percentage points from the year prior – and equivalent to an indicator rank of 35.



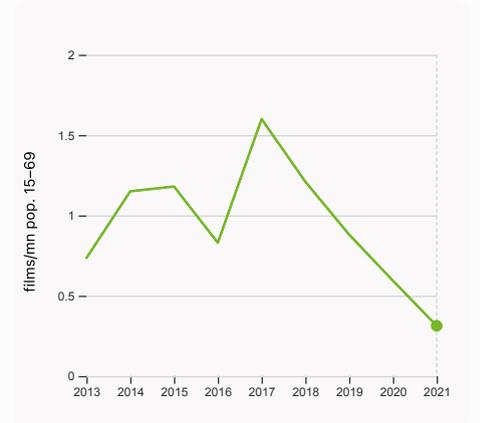
7.1.3 Global brand value, top 5,000

was equal to 2.001 bn USD in 2023, down by 10.67% from the year prior – and equivalent to an indicator rank of 50.



7.2.1 Cultural and creative services exports

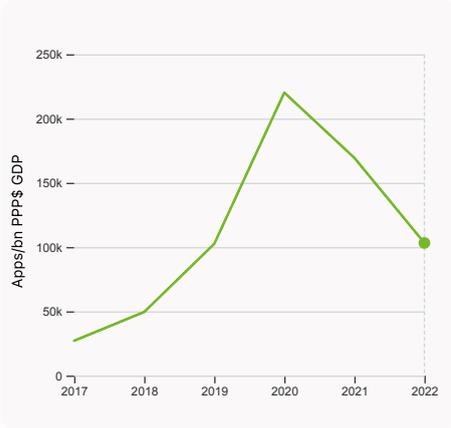
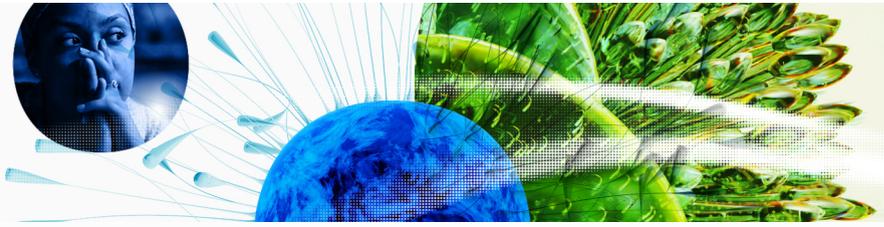
was equal to 215,103,000 USD in 2021, up by 21.45% from the year prior – and equivalent to an indicator rank of 59.



7.2.2 National feature films/mn pop. 15-69

was equal to 0.313 films/mn pop. 15-69 in 2021, down by 47.28% from the year prior – and equivalent to an indicator rank of 76.

Global Innovation Index 2023



7.3.4 Mobile app creation/bn PPP\$ GDP

was equal to 103,219.03 Apps/bn PPP\$ GDP in 2022, down by 39.087% from the year prior – and equivalent to an indicator rank of 64.



→ Morocco's innovation top performers

> 7.1.1 Top 15 intangible-asset intensive companies in Morocco

Rank	Firm	Intensity, %
1	ITISSALAT AL-MAGHRIB	86.91
2	ATTIJARIWAFI BANK	33.73
3	LAFARGEHOLCIM MAROC SA	74.53

Source: Brand Finance (<https://brandirectory.com/reports/gift-2022>).
Note: Brand Finance only provides within economy ranks.

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

Rank	Brand	Industry	Brand Value, mn USD
1	MAROC TELECOM	Telecoms	655.4
2	ATTIJARIWAFI BANK	Banking	487.9
3	BANQUE POPULAIRE DU MAROC	Banking	408.9

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

Global Innovation Index 2023



GII 2023 rank

70

Morocco

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
55	90	Lower middle	NAWA	37.5	359.7	9,808.3

Score / Value Rank

Score / Value Rank

Institutions		45.3 83		Business sophistication		20.4 107	
1.1 Institutional environment		39.7 78		5.1 Knowledge workers		20.2 [98]	
1.1.1 Operational stability for businesses*		44.4 82		5.1.1 Knowledge-intensive employment, %		8.1 111 ○	
1.1.2 Government effectiveness*		34.9 74		5.1.2 Firms offering formal training, %		35.7 45	
1.2 Regulatory environment		55.2 87		5.1.3 GERD performed by business, % GDP		n/a n/a	
1.2.1 Regulatory quality*		38.9 80 ◆		5.1.4 GERD financed by business, %		n/a n/a	
1.2.2 Rule of law*		32.3 78		5.1.5 Females employed w/advanced degrees, %		3.0 102	
1.2.3 Cost of redundancy dismissal		20.7 90		5.2 Innovation linkages		16.3 93	
1.3 Business environment		41.1 82		5.2.1 University-industry R&D collaboration+		28.8 99	
1.3.1 Policies for doing business*		63.1 34 ●◆		5.2.2 State of cluster development†		32.7 88	
1.3.2 Entrepreneurship policies and culture*		19.1 70		5.2.3 GERD financed by abroad, % GDP		n/a n/a	
Human capital and research		25.6 86		5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		0.0 103	
2.1 Education		43.4 [86]		5.2.5 Patent families/bn PPP\$ GDP		0.0 71	
2.1.1 Expenditure on education, % GDP		n/a n/a		5.3 Knowledge absorption		24.8 105	
2.1.2 Government funding/pupil, secondary, % GDP/cap		n/a n/a		5.3.1 Intellectual property payments, % total trade		0.3 81	
2.1.3 School life expectancy, years		14.2 69 ◆		5.3.2 High-tech imports, % total trade		8.1 68	
2.1.4 PISA scales in reading, maths and science		367.9 75 ○		5.3.3 ICT services imports, % total trade		1.2 75	
2.1.5 Pupil-teacher ratio, secondary		20.6 99		5.3.4 FDI net inflows, % GDP		1.3 93	
2.2 Tertiary education		29.7 68		5.3.5 Research talent, % in businesses		7.0 64	
2.2.1 Tertiary enrolment, % gross		43.4 74		Knowledge and technology outputs		23.0 65	
2.2.2 Graduates in science and engineering, %		28.9 24 ●◆		6.1 Knowledge creation		13.1 69	
2.2.3 Tertiary inbound mobility, %		1.9 79		6.1.1 Patents by origin/bn PPP\$ GDP		0.8 69	
2.3 Research and development (R&D)		3.7 82		6.1.2 PCT patents by origin/bn PPP\$ GDP		0.1 58 ◆	
2.3.1 Researchers, FTE/mn pop.		1,073.5 51 ◆		6.1.3 Utility models by origin/bn PPP\$ GDP		n/a n/a	
2.3.2 Gross expenditure on R&D, % GDP		n/a n/a		6.1.4 Scientific and technical articles/bn PPP\$ GDP		n/a n/a	
2.3.3 Global corporate R&D investors, top 3, mn US\$		0.0 40 ○◇		6.1.5 Citable documents H-index		11.6 69	
2.3.4 QS university ranking, top 3*		0.0 71 ○◇		6.2 Knowledge impact		33.2 46	
Infrastructure		30.0 94		6.2.1 Labor productivity growth, %		1.3 53	
3.1 Information and communication technologies (ICTs)		56.0 88		6.2.2 Unicorn valuation, % GDP		0.0 48 ○◇	
3.1.1 ICT access*		86.7 42 ●◆		6.2.3 Software spending, % GDP		0.2 61	
3.1.2 ICT use*		70.0 72 ◆		6.2.4 High-tech manufacturing, %		42.8 23 ●◆	
3.1.3 Government's online service*		41.7 105		6.3 Knowledge diffusion		22.7 63	
3.1.4 E-participation*		25.6 111 ○		6.3.1 Intellectual property receipts, % total trade		0.0 86	
3.2 General infrastructure		17.1 101		6.3.2 Production and export complexity		45.6 79	
3.2.1 Electricity output, GWh/mn pop.		1,129.2 94		6.3.3 High-tech exports, % total trade		2.1 57	
3.2.2 Logistics performance*		n/a n/a		6.3.4 ICT services exports, % total trade		3.7 30 ●◆	
3.2.3 Gross capital formation, % GDP		29.3 26 ●◆		6.3.5 ISO 9001 quality/bn PPP\$ GDP		3.6 68	
3.3 Ecological sustainability		17.1 98		Creative outputs		29.8 55 ◆	
3.3.1 GDP/unit of energy use		12.3 42		7.1 Intangible assets		49.2 28 ●◆	
3.3.2 Environmental performance*		16.1 118 ○		7.1.1 Intangible asset intensity, top 15, %		61.6 35	
3.3.3 ISO 14001 environment/bn PPP\$ GDP		0.8 73		7.1.2 Trademarks by origin/bn PPP\$ GDP		61.3 38 ●◆	
Market sophistication		30.7 80		7.1.3 Global brand value, top 5,000		1.3 50	
4.1 Credit		25.1 78		7.1.4 Industrial designs by origin/bn PPP\$ GDP		9.6 10 ●◆	
4.1.1 Finance for startups and scaleups†		33.4 63		7.2 Creative goods and services		2.9 98	
4.1.2 Domestic credit to private sector, % GDP		91.0 34 ●◆		7.2.1 Cultural and creative services exports, % total trade		0.4 59	
4.1.3 Loans from microfinance institutions, % GDP		0.7 35		7.2.2 National feature films/mn pop. 15-69		0.3 76 ○	
4.2 Investment		7.6 60		7.2.3 Entertainment and media market/th pop. 15-69		0.1 59 ○◇	
4.2.1 Market capitalization, % GDP		50.9 35		7.2.4 Creative goods exports, % total trade		0.1 91	
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP		0.0 65		7.3 Online creativity		17.8 80	
4.2.3 VC recipients, deals/bn PPP\$ GDP		0.0 64		7.3.1 Generic top-level domains (TLDs)/th pop. 15-69		1.8 90	
4.2.4 VC received, value, % GDP		0.0 86 ○		7.3.2 Country-code TLDs/th pop. 15-69		1.3 84	
4.3 Trade, diversification, and market scale		59.5 58		7.3.3 GitHub commits/mn pop. 15-69		2.9 91	
4.3.1 Applied tariff rate, weighted avg., %		3.6 80		7.3.4 Mobile app creation/bn PPP\$ GDP		65.1 64	
4.3.2 Domestic industry diversification		94.2 33 ●◆					
4.3.3 Domestic market scale, bn PPP\$		359.7 54					

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, ● indicates that the economy's data are older than the base year; see appendices for details, including the year of the data, at <https://www.wipo.int/gii-ranking>. Square brackets [] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.



→ Data availability

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



> Morocco has missing data for eight indicators and outdated data for six indicators.

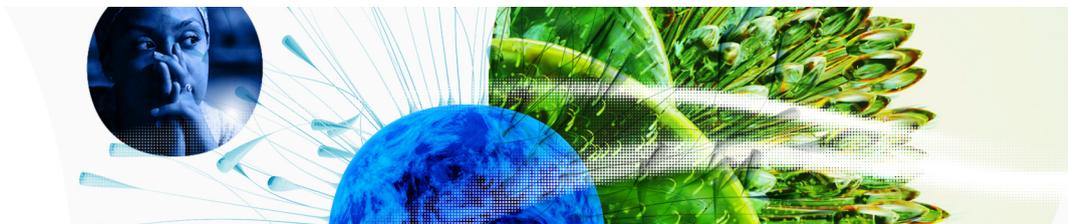
> Missing data for Morocco

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	n/a	2021	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2019	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
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.
5.1.3	GERD performed by business, % GDP	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	n/a	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.2.3	GERD financed by abroad, % GDP	n/a	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2021	World Intellectual Property Organization; International Monetary Fund

> Outdated data for Morocco

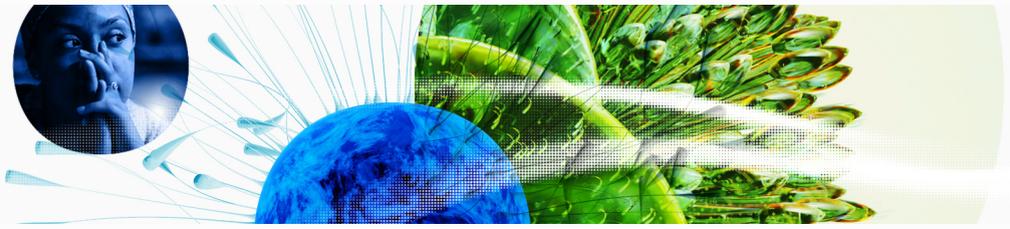
Code	Indicator name	Economy Year	Model Year	Source
2.3.1	Researchers, FTE/mn pop.	2016	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.3.2	Domestic industry diversification	2019	2020	United Nations Industrial Development Organization
5.1.1	Knowledge-intensive employment, %	2021	2022	International Labour Organization

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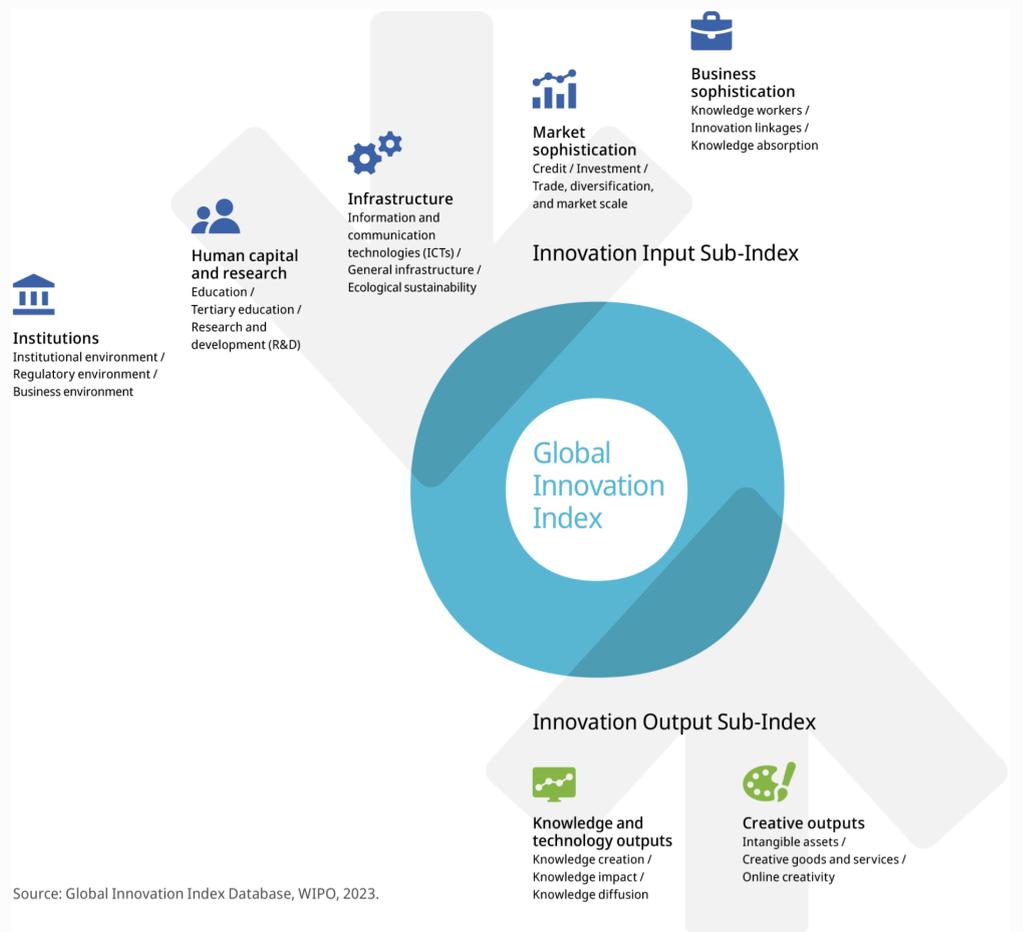
Code	Indicator name	Economy Year	Model Year	Source
5.1.5	Females employed w/advanced degrees, %	2021	2022	International Labour Organization
5.3.5	Research talent, % in businesses	2016	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.2.4	High-tech manufacturing, %	2019	2020	United Nations Industrial Development Organization

Global Innovation Index 2023



→ 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.