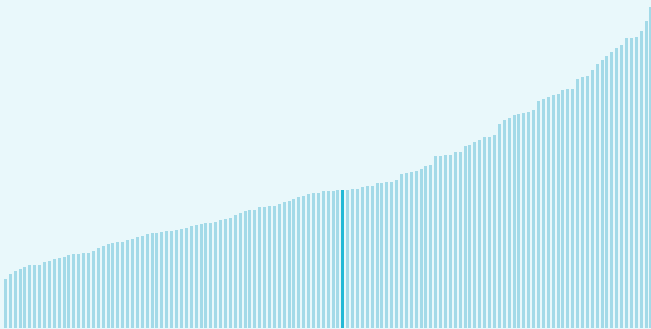




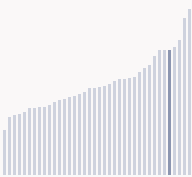
Iran (Islamic Republic of) ranking in the Global Innovation Index 2024

Iran (Islamic Republic of) ranks **64th** among the 133 economies featured in the GII 2024.

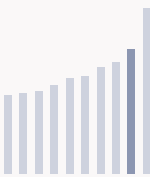
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Iran (Islamic Republic of) ranks **5th** among the 38 lower-middle-income economies.



Iran (Islamic Republic of) ranks **2nd** among the 10 economies in Central and Southern Asia.



➤ Iran (Islamic Republic of) GII Ranking (2020-2024)

The table shows the rankings of Iran (Islamic Republic of) 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 Iran (Islamic Republic of) in the GII 2024 is between ranks 56 and 80.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	67th	90th	50th
2021	60th	86th	44th
2022	53rd	73rd	38th
2023	62nd	87th	48th
2024	64th	85th	48th

Iran (Islamic Republic of) performs better in innovation outputs than innovation inputs in 2024.

This year Iran (Islamic Republic of) ranks 85th in innovation inputs. This position is higher than last year.

Iran (Islamic Republic of) ranks 48th in innovation outputs. This position is the same as last year.

Iran (Islamic Republic of) has 1 cluster 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 Iran (Islamic Republic of), how rapidly is technology being embraced and what are the resulting societal impacts.



For Iran (Islamic Republic of), 5 indicators have improved in the short-term and 3 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -9.5% 2022 - 2023	▼ -0.6% 2017 - 2019	n/a	n/a	▲ 2.3% 2022 - 2023
▲ 4.6% 2013 - 2023	▲ 12.6% 2009 - 2019	n/a	n/a	▲ 56.9% 2013 - 2023

Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
n/a	▲ 1.7% 2021 - 2022	n/a	▲ 11.1% 2021 - 2022	n/a
n/a	▲ 9.6% 2012 - 2022		▼ -9% 2012 - 2022	n/a
n/a	12.3 per 100 inhabitants in 2022	n/a		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 1.4% 2022 - 2023	▲ 0.9% 2021 - 2022	▲ 2.2°C 2023
▲ 0.6% 2013 - 2023	0% 2012 - 2022	n/a
61,884 USD in 2023	74.6 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, Iran (Islamic Republic of)'s performance is at expectations for its level of development.

> Innovation overperformers relative to their economic development





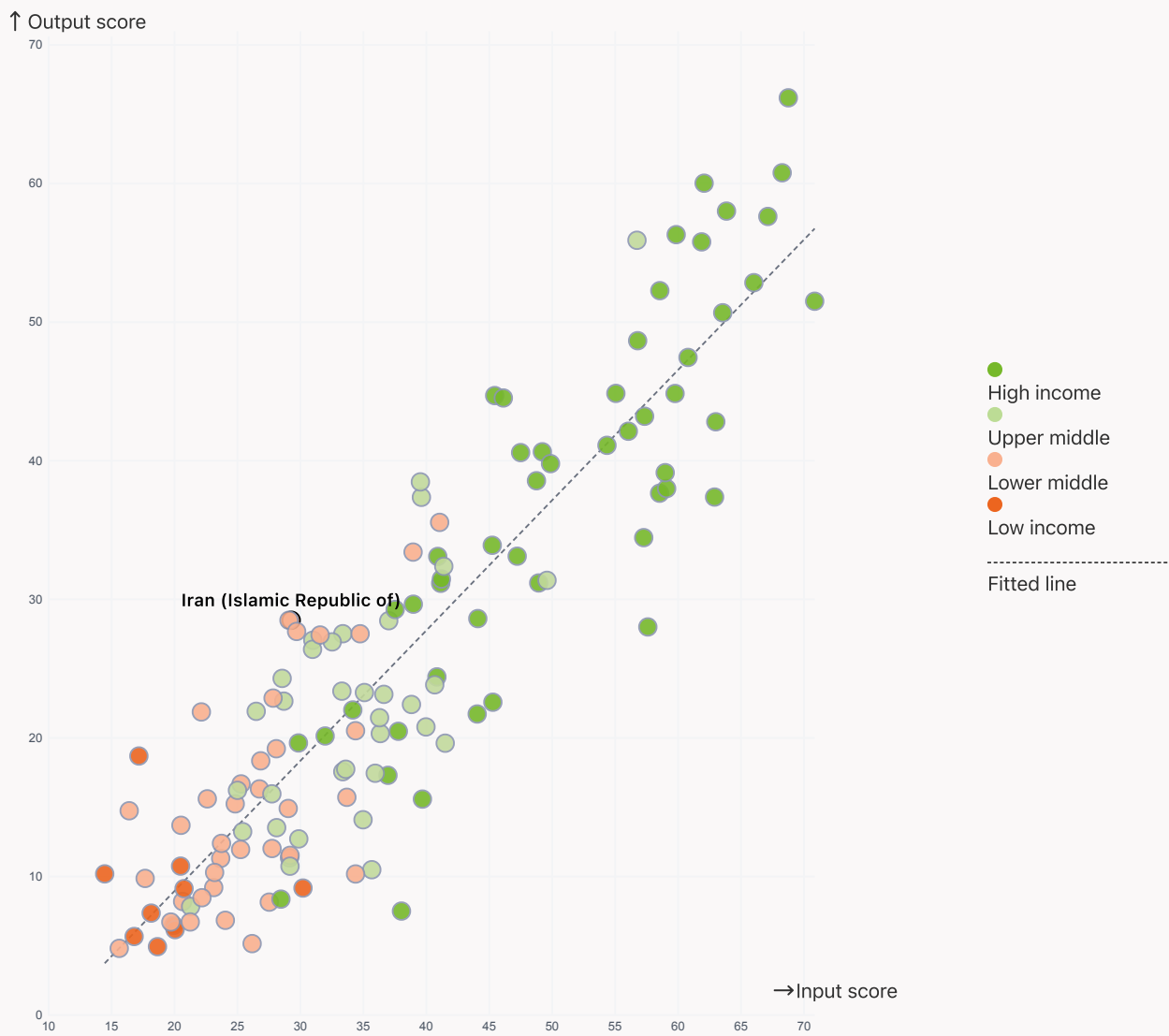
Effectively translating innovation investments into innovation outputs

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.



Iran (Islamic Republic of) produces more innovation outputs relative to its level of innovation investments.

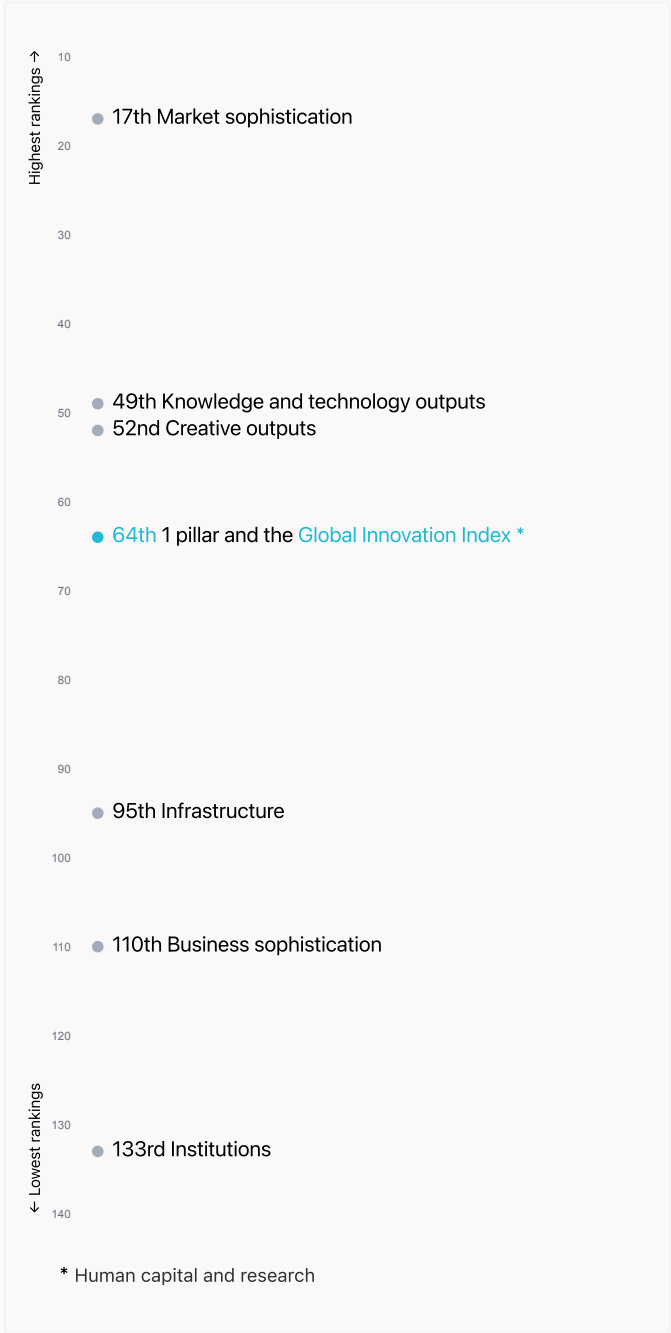
> Relationship between innovation inputs and outputs





Overview of Iran (Islamic Republic of)'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 Iran (Islamic Republic of) are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest rankings



Iran (Islamic Republic of) ranks highest in Market sophistication (17th), Knowledge and technology outputs (49th), Creative outputs (52nd) and Human capital and research (64th).

Lowest rankings



Iran (Islamic Republic of) ranks lowest in Institutions (133rd), Business sophistication (110th) and Infrastructure (95th).

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



Benchmark of Iran (Islamic Republic of) against other economy groupings for each of the seven areas of the GII Index

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



Lower-Middle-Income economies

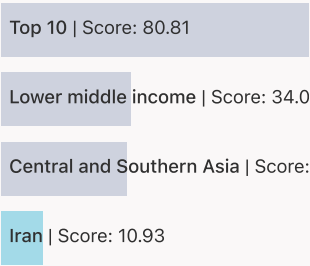
Iran (Islamic Republic of) performs above the lower-middle-income group average in Human capital and research, Market sophistication, Knowledge and technology outputs, Creative outputs.



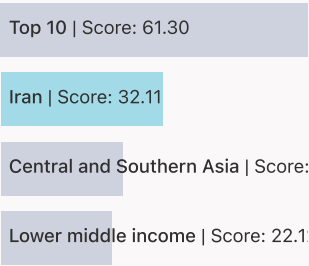
Central And Southern Asia

Iran (Islamic Republic of) performs above the regional average in Human capital and research, Market sophistication, Knowledge and technology outputs, Creative outputs.

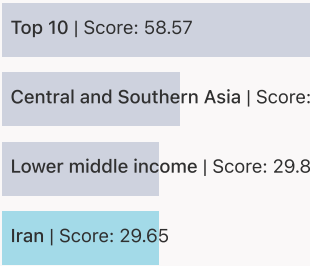
Institutions



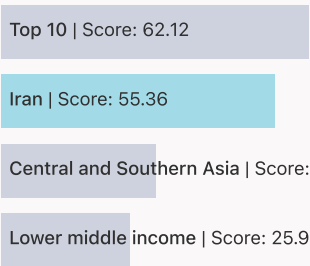
Human capital and research



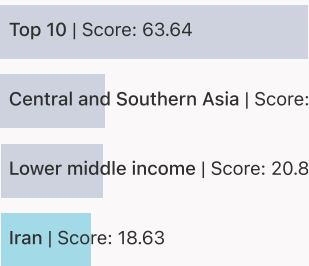
Infrastructure



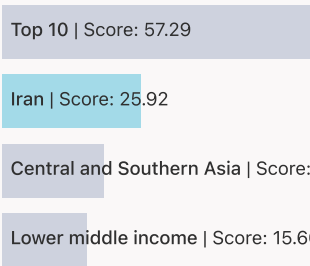
Market sophistication



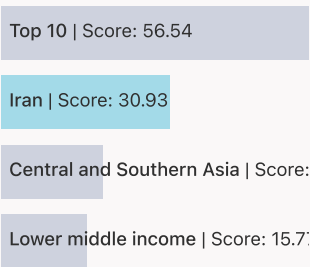
Business sophistication



Knowledge and technology outputs



Creative outputs





Innovation strengths and weaknesses in Iran (Islamic Republic of)

The table below gives an overview of the indicator strengths and weaknesses of Iran (Islamic Republic of) in the GII 2024.



Iran (Islamic Republic of)'s main innovation strengths are **Market capitalization, % GDP** (rank 1), **Trademarks by origin/bn PPP\$ GDP** (rank 1) and **Software spending, % GDP** (rank 3).

Strengths

Rank	Code	Indicator name
1	4.2.1	Market capitalization, % GDP
1	7.1.2	Trademarks by origin/bn PPP\$ GDP
3	6.2.3	Software spending, % GDP
5	3.2.3	Gross capital formation, % GDP
8	2.2.2	Graduates in science and engineering, %
14	6.1.1	Patents by origin/bn PPP\$ GDP
16	7.1.4	Industrial designs by origin/bn PPP\$ GDP
18	5.3.2	High-tech imports, % total trade
19	4.3.3	Domestic market scale, bn PPP\$
28	6.1.4	Scientific and technical articles/bn PPP\$ GDP

Weaknesses

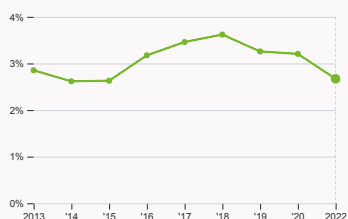
Rank	Code	Indicator name
133	1.2.1	Regulatory quality*
131	4.3.1	Applied tariff rate, weighted avg., %
130	1.1.1	Operational stability for businesses*
128	3.1.4	E-participation*
126	1.3.1	Policy stability for doing business [†]
125	5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP
105	3.2.2	Logistics performance*
85	1.3.2	Entrepreneurship policies and culture [†]
49	6.2.2	Unicorn valuation, % GDP
41	2.3.3	Global corporate R&D investors, top 3, mn USD



Iran (Islamic Republic of)'s innovation system

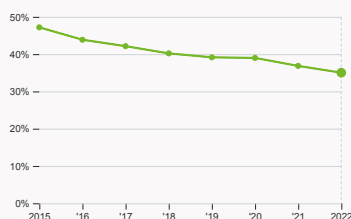
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Iran (Islamic Republic of)



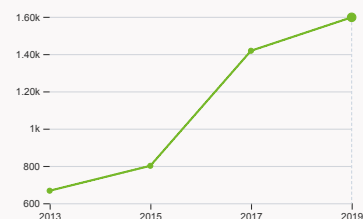
2.1.1 Expenditure on education

was equal to 2.67 % GDP in 2022, down by 0.53 percentage points from the year prior – and equivalent to an indicator rank of 109.



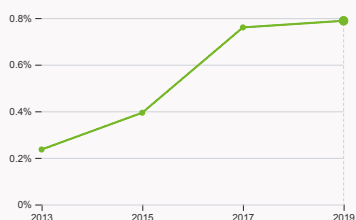
2.2.2 Graduates in science and engineering

was equal to 35.02 % of total graduates in 2022, down by 1.82 percentage points from the year prior – and equivalent to an indicator rank of 8.



2.3.1 Researchers

was equal to 1597.34 FTE per million population in 2019, up by 12.65% from the year prior – and equivalent to an indicator rank of 47.



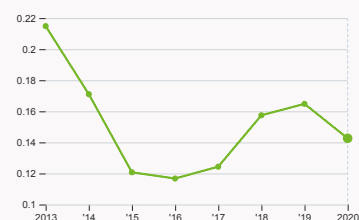
2.3.2 Gross expenditure on R&D

was equal to 0.79 % GDP in 2019, up by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 45.



2.3.4 QS university ranking

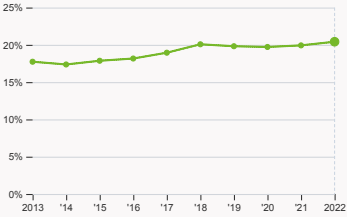
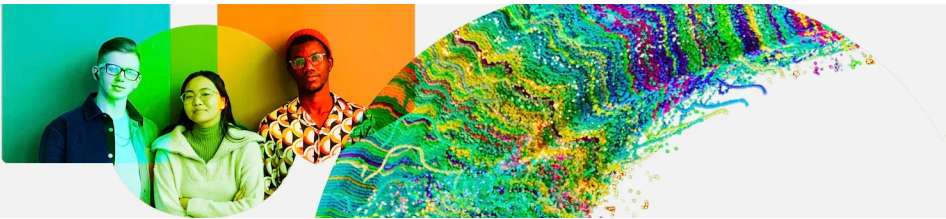
was equal to an average score of 30.87 for the top three universities in 2023, up by 15.75% from the year prior – and equivalent to an indicator rank of 42.



4.3.2 Domestic industry diversification

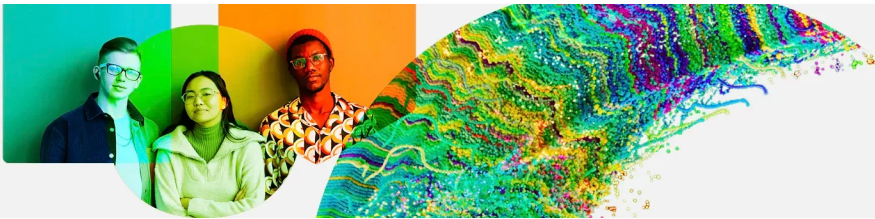
was equal to an index score of 0.14 in 2020, down by 13.45% from the year prior – and equivalent to an indicator rank of 58.

Global Innovation Index 2024



5.1.1 Knowledge-intensive employment

was equal to 20.42 % in 2022, up by 0.49 percentage points from the year prior – and equivalent to an indicator rank of 78.

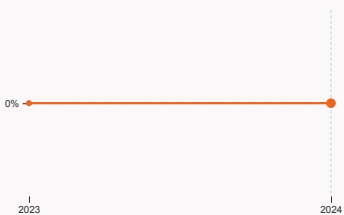


> Innovation outputs in Iran (Islamic Republic of)



6.1.1 Patents by origin

was equal to 8.27 thousand patents in 2022, down by 19.001% from the year prior – and equivalent to an indicator rank of 14.



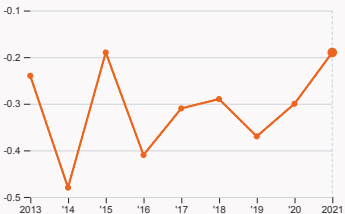
6.2.2 Unicorn valuation

was equal to 0 % GDP in 2024 with no change from the year prior – and equivalent to an indicator rank of 49.



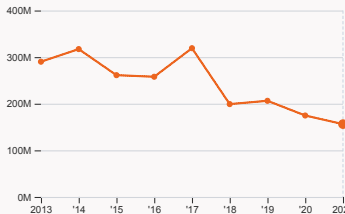
6.2.4 High-tech manufacturing

was equal to 30.82 % of total manufacturing output in 2020, up by 1.95 percentage points from the year prior – and equivalent to an indicator rank of 37.



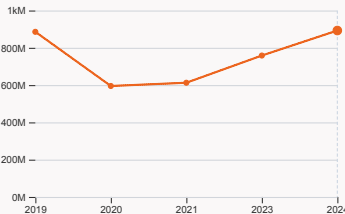
6.3.2 Production and export complexity

was equal to a score of -0.19 in 2021, up by 36.67% from the year prior – and equivalent to an indicator rank of 72.



6.3.3 High-tech exports

was equal to 156.29 million USD in 2021, down by 10.57% from the year prior – and equivalent to an indicator rank of 107.



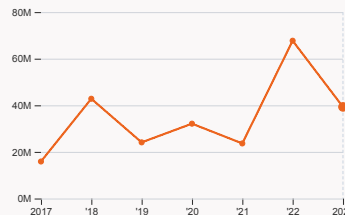
7.1.3 Global brand value

was equal to 892.75 million USD for the brands in the top 5,000 in 2024, up by 17.69% from the year prior – and equivalent to an indicator rank of 71.



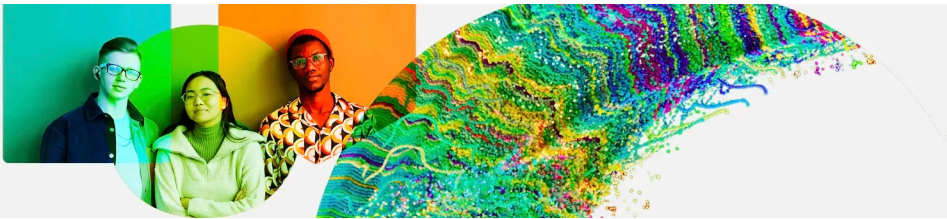
7.2.2 National feature films

was equal to 90 films in 2022, down by 10% from the year prior – and equivalent to an indicator rank of 63.



7.3.3 Mobile app creation

was equal to 39.31 million global downloads of mobile apps in 2023, down by 41.94% from the year prior – and equivalent to an indicator rank of 93.



Iran (Islamic Republic of)'s innovation top performers

2.3.4 QS university ranking of Iran (Islamic Republic of)'s top universities

Rank	University	Score
334	SHARIF UNIVERSITY OF TECHNOLOGY	32.40
360	UNIVERSITY OF TEHRAN	30.70
375	AMIRKABIR UNIVERSITY OF TECHNOLOGY	29.50

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".

7.1.3 Top 5,000 companies in Iran (Islamic Republic of) with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	BANK PASARGAD	Banking	892.8

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

Global Innovation Index 2024



Iran (Islamic Republic of)

GII 2024 rank

64

Output rank
48

Input rank
85

Income
Lower middle

Region
CSA

Population (mn)
90.6

GDP, PPP\$ (bn)
1,725.9

GDP per capita, PPP\$
19,941.5

Score / Value Rank

Score / Value Rank

Institutions		10.9	133	○ ◇
1.1 Institutional environment		20.1	127	◇
1.1.1 Operational stability for businesses*		19.3	130	○ ◇
1.1.2 Government effectiveness*		20.9	120	
1.2 Regulatory environment		7.3	131	○ ◇
1.2.1 Regulatory quality*		0	133	○ ◇
1.2.2 Rule of law*		14.7	118	
1.3 Business environment		5.3	128	○ ◇
1.3.1 Policy stability for doing business*		10.6	126	○ ◇
1.3.2 Entrepreneurship policies and culture*		0	85	○ ◇
Human capital and research		32.1	64	◆
2.1 Education		40	93	
2.1.1 Expenditure on education, % GDP		2.7	109	
2.1.2 Government funding/pupil, secondary, % GDP/cap		16	67	
2.1.3 School life expectancy, years	🕒	14.1	66	◆
2.1.4 PISA scales in reading, maths and science		n/a	n/a	
2.1.5 Pupil-teacher ratio, secondary	🕒	19	96	
2.2 Tertiary education		41.3	35	◆
2.2.1 Tertiary enrolment, % gross		60.7	54	◆
2.2.2 Graduates in science and engineering, %		35	8	◆◆
2.2.3 Tertiary inbound mobility, %	🕒	0.8	94	
2.3 Research and development (R&D)		15	48	◆
2.3.1 Researchers, FTE/mn pop.	🕒	1,597.3	47	◆
2.3.2 Gross expenditure on R&D, % GDP	🕒	0.8	45	◆
2.3.3 Global corporate R&D investors, top 3, mn USD		0	41	○ ◇
2.3.4 QS university ranking, top 3*		31.2	42	◆
Infrastructure		29.6	95	
3.1 Information and communication technologies (ICTs)		50.9	102	
3.1.1 ICT access*	🕒	73.1	89	
3.1.2 ICT use*		78.1	65	◆
3.1.3 Government's online service*		35.9	115	
3.1.4 E-participation*		16.3	128	○ ◇
3.2 General infrastructure		34.9	50	
3.2.1 Electricity output, GWh/mn pop.	🕒	3,914.3	54	◆
3.2.2 Logistics performance*		9.1	105	○
3.2.3 Gross capital formation, % GDP		40.1	5	◆◆
3.3 Ecological sustainability		3.2	130	○ ◇
3.3.1 GDP/unit of energy use		4.4	122	◇
3.3.2 Low-carbon energy use, %		1.2	120	◇
3.3.3 ISO 14001 environment/bn PPP\$ GDP		0.4	104	
Market sophistication		55.4	17	◆◆
4.1 Credit		24.2	72	
4.1.1 Finance for startups and scaleups†		28	70	
4.1.2 Domestic credit to private sector, % GDP	🕒	60.3	52	
4.1.3 Loans from microfinance institutions, % GDP		n/a	n/a	
4.2 Investment		100	[1]	
4.2.1 Market capitalization, % GDP		484.1	1	◆◆
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP		n/a	n/a	
4.2.3 VC recipients, deals/bn PPP\$ GDP		n/a	n/a	
4.2.4 VC received, value, % GDP		n/a	n/a	
4.3 Trade, diversification and market scale		41.9	97	
4.3.1 Applied tariff rate, weighted avg., %		11.7	131	○ ◇
4.3.2 Domestic industry diversification	🕒	83.7	58	
4.3.3 Domestic market scale, bn PPP\$		1,725.9	19	◆◆

Business sophistication		18.6	110	
5.1 Knowledge workers		19.8	[104]	
5.1.1 Knowledge-intensive employment, %		20.4	78	
5.1.2 Firms offering formal training, %		n/a	n/a	
5.1.3 GERD performed by business, % GDP	🕒	0.2	53	
5.1.4 GERD financed by business, %		n/a	n/a	
5.1.5 Females employed w/advanced degrees, %	🕒	8	86	
5.2 Innovation linkages		12.7	114	
5.2.1 Public Research-Industry co-publications, %		1.1	82	
5.2.2 University-industry R&D collaboration†		19.2	121	◇
5.2.3 State of cluster development†		32.5	99	
5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	🕒	0.0003	125	○ ◇
5.2.5 Patent families/bn PPP\$ GDP		0.02	88	
5.3 Knowledge absorption		23.4	76	
5.3.1 Intellectual property payments, % total trade		0.2	94	
5.3.2 High-tech imports, % total trade	🕒	13.5	18	◆◆
5.3.3 ICT services imports, % total trade		0.7	101	
5.3.4 FDI net inflows, % GDP		0.4	108	
5.3.5 Research talent, % in businesses	🕒	19.2	55	
Knowledge and technology outputs		25.9	49	◆
6.1 Knowledge creation		30	32	◆
6.1.1 Patents by origin/bn PPP\$ GDP		5.1	14	◆◆
6.1.2 PCT patents by origin/bn PPP\$ GDP		0.2	46	◆
6.1.3 Utility models by origin/bn PPP\$ GDP		-	-	
6.1.4 Scientific and technical articles/bn PPP\$ GDP		23.3	28	◆◆
6.1.5 Citable documents H-index		23.5	40	◆
6.2 Knowledge impact		39	26	◆◆
6.2.1 Labor productivity growth, %		0.7	68	
6.2.2 Unicorn valuation, % GDP		0	49	○ ◇
6.2.3 Software spending, % GDP		0.7	3	◆◆
6.2.4 High-tech manufacturing, %	🕒	30.8	37	◆
6.3 Knowledge diffusion		8.8	99	
6.3.1 Intellectual property receipts, % total trade		0.01	95	
6.3.2 Production and export complexity		38.3	72	
6.3.3 High-tech exports, % total trade	🕒	0.2	107	
6.3.4 ICT services exports, % total trade		0.2	125	
6.3.5 ISO 9001 quality/bn PPP\$ GDP		1.3	108	
Creative outputs		30.9	52	◆
7.1 Intangible assets		49.2	23	◆◆
7.1.1 Intangible asset intensity, top 15, %		n/a	n/a	
7.1.2 Trademarks by origin/bn PPP\$ GDP		218.3	1	◆◆
7.1.3 Global brand value, top 5,000, % GDP		0.2	71	
7.1.4 Industrial designs by origin/bn PPP\$ GDP		5	16	◆◆
7.2 Creative goods and services		4.3	102	
7.2.1 Cultural and creative services exports, % total trade		0.2	79	
7.2.2 National feature films/mn pop. 15-69		1.4	63	
7.2.3 Entertainment and media market/th pop. 15-69		1.1	59	
7.2.4 Creative goods exports, % total trade	🕒	0.2	74	
7.3 Online creativity		20.9	95	
7.3.1 Top-level domains (TLDs)/th pop. 15-69		4.1	61	◆
7.3.2 GitHub commits/mn pop. 15-69		1.9	105	
7.3.3 Mobile app creation/bn PPP\$ GDP		56.7	93	

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 Iran (Islamic Republic of).



Iran (Islamic Republic of) has missing data for nine indicators and outdated data for seventeen indicators.

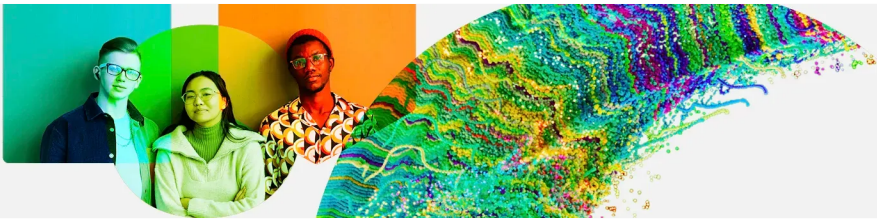
Missing data for Iran (Islamic Republic of)

Code	Indicator name	Economy Year	Model Year	Source
2.1.4	PISA scales in reading, maths and science	n/a	2022	OECD, PISA
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
4.2.2	Venture capital (VC) investors, deals/bn PPP\$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.3	VC recipients, deals/bn PPP\$ GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
4.2.4	VC received, value, % GDP	n/a	2023	LSEG Data & Analytics; International Monetary Fund
5.1.2	Firms offering formal training, %	n/a	2023	World Bank Enterprise Surveys
5.1.4	GERD financed by business, %	n/a	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund
7.1.1	Intangible asset intensity, top 15, %	n/a	2023	Brand Finance

Outdated data for Iran (Islamic Republic of)

Code	Indicator name	Economy Year	Model Year	Source
2.1.3	School life expectancy, years	2020	2022	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2017	2022	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2020	2022	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2019	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2019	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.1.1	ICT access*	2021	2022	World Intellectual Property Organization; International Telecommunication Union ITU DataHub (accessed May 1st, 2024)
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency

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Code	Indicator name	Economy Year	Model Year	Source
4.1.2	Domestic credit to private sector, % GDP	2016	2022	International Monetary Fund; World Bank and OECD GDP estimates.
4.3.2	Domestic industry diversification	2020	2021	United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database (INDSTAT) Rev.3 and 4
5.1.3	GERD performed by business, % GDP	2017	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2022	2023	International Labour Organization
5.2.4	Joint venture/strategic alliance deals/bn PPP\$ GDP	2022	2023	LSEG Data & Analytics; International Monetary Fund
5.3.2	High-tech imports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development
5.3.5	Research talent, % in businesses	2017	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.2.4	High-tech manufacturing, %	2020	2021	United Nations Industrial Development Organization
6.3.3	High-tech exports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development; Trade Data Monitor.
7.2.4	Creative goods exports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development



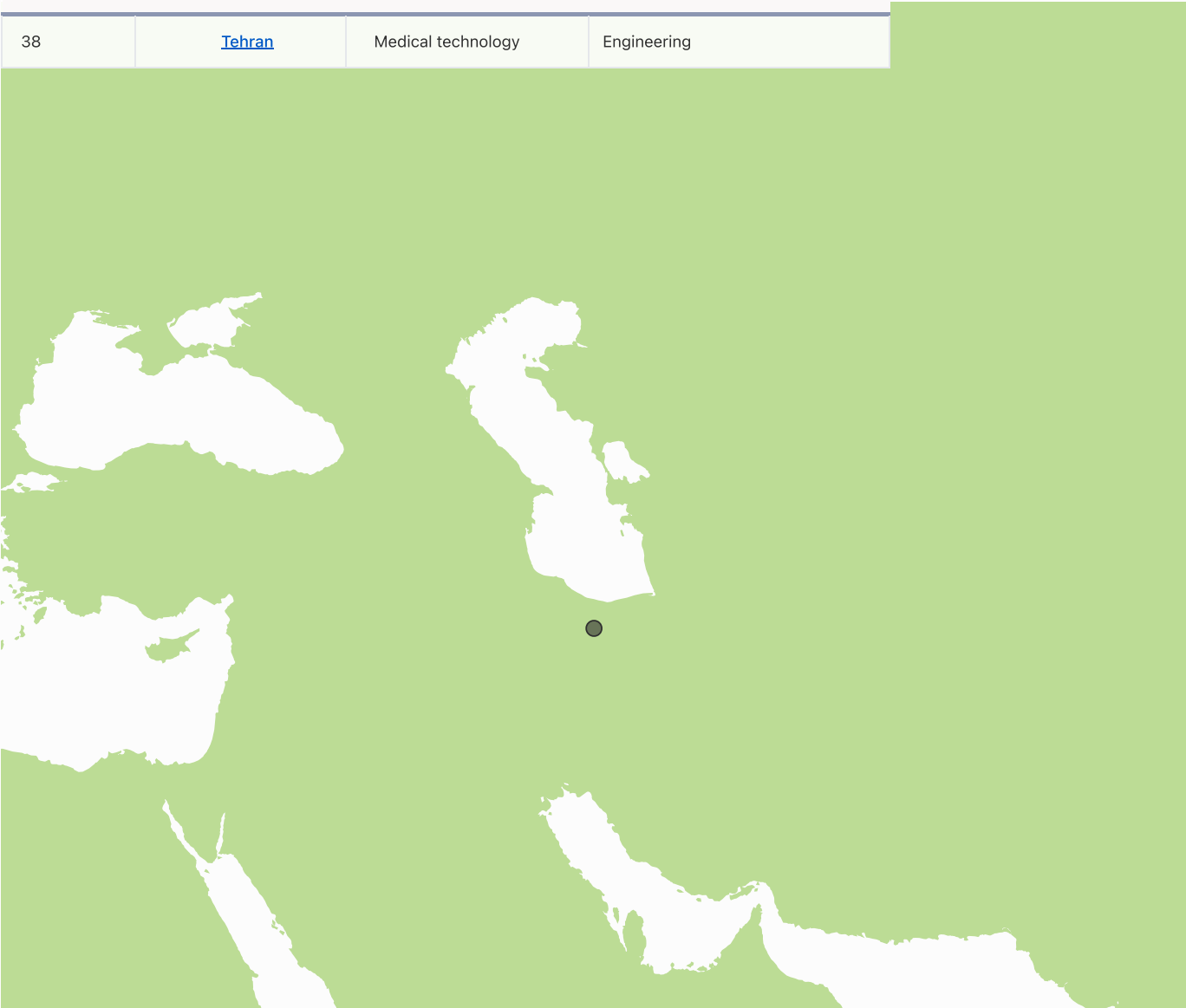
Top science and technology clusters in Iran (Islamic Republic of)

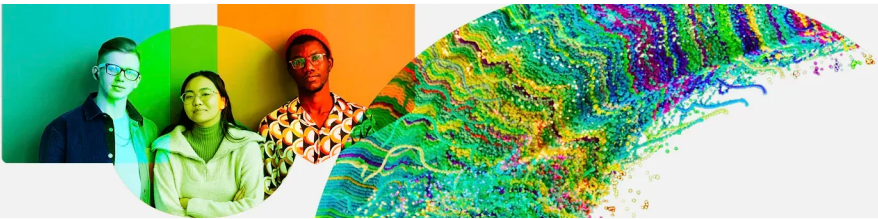


Iran (Islamic Republic of) has 1 cluster in the top 100 S&T clusters of the Global Innovation Index, the same number as in 2023.

The table and map below give an overview of the top science and technology clusters in Iran (Islamic Republic of).

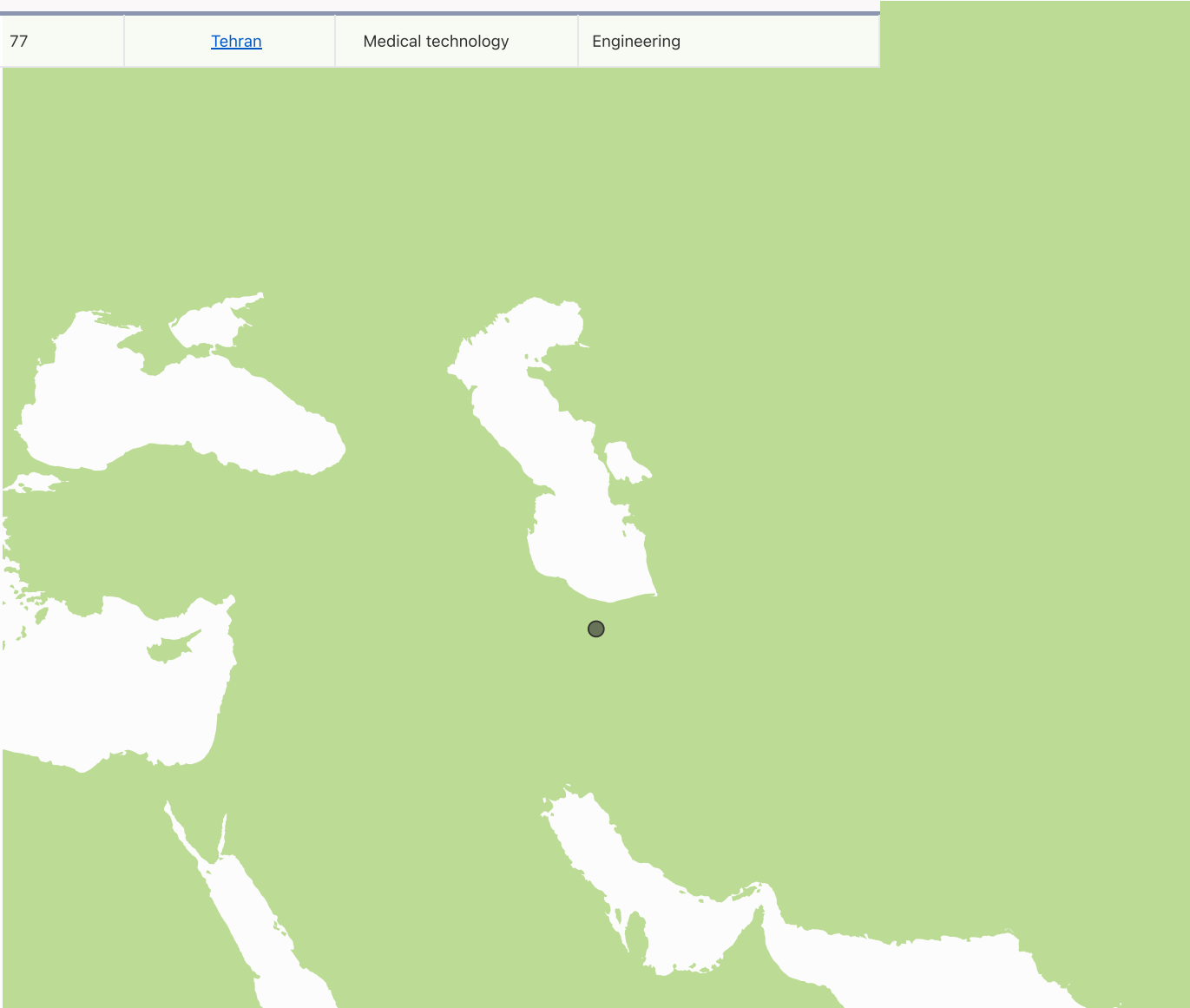
Rank	Cluster name	Top patent field	Top academic subject
38	Tehran	Medical technology	Engineering



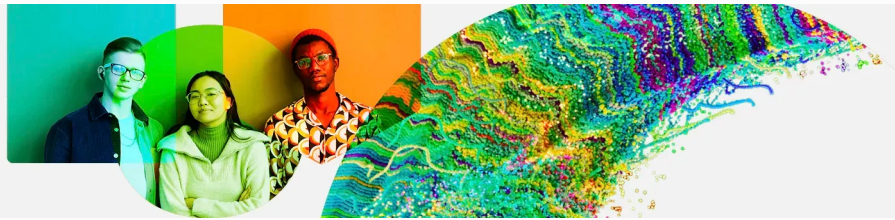


The table and map below give an overview of the top science and technology clusters by intensity in Iran (Islamic Republic of).

Rank	Cluster name	Top patent field	Top academic subject
77	Tehran	Medical technology	Engineering

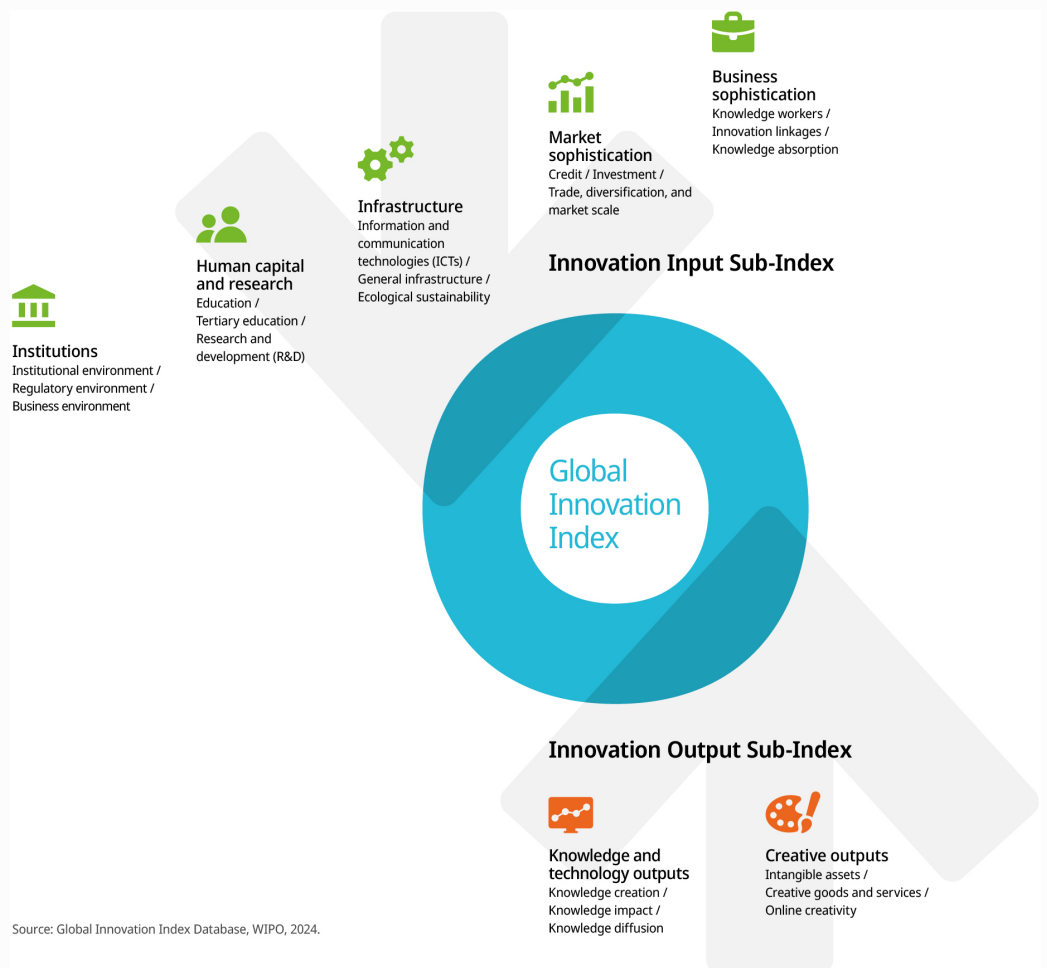


Global Innovation Index 2024



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.