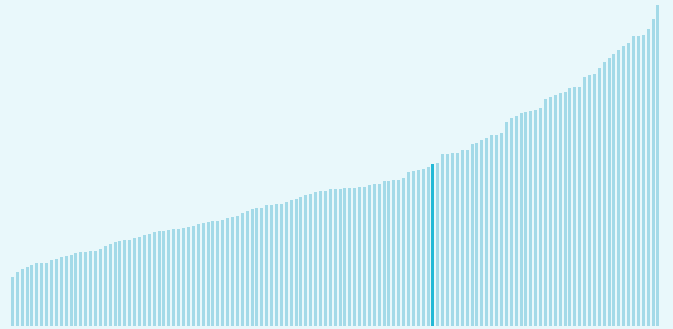


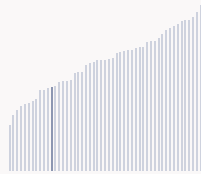
Saudi Arabia ranking in the Global Innovation Index 2024

Saudi Arabia ranks **47th** among the 133 economies featured in the GII 2024.

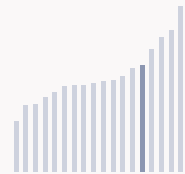
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Saudi Arabia ranks **40th** among the 51 high-income group economies.



Saudi Arabia ranks **5th** among the 18 economies in Northern Africa and Western Asia.



> Saudi Arabia GII Ranking (2020-2024)

The table shows the rankings of Saudi Arabia 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 Saudi Arabia in the GII 2024 is between ranks 46 and 54.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	66th	50th	77th
2021	66th	59th	72nd
2022	51st	37th	65th
2023	48th	37th	67th
2024	47th	36th	66th

Saudi Arabia performs worse in innovation outputs than innovation inputs in 2024.

This year Saudi Arabia ranks **36th** in innovation inputs. This position is higher than last year.

Saudi Arabia ranks **66th** in innovation outputs. This position is higher than last year.

Saudi Arabia 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 Saudi Arabia, how rapidly is technology being embraced and what are the resulting societal impacts.



For Saudi Arabia, 5 indicators have improved in the short-term and 6 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -0.4% 2022 - 2023	▲ 13% 2021 - 2022	▼ -1.6% 2022 - 2023	▲ 23.3% 2022 - 2023	▼ -18.9% 2022 - 2023
▲ 16.4% 2013 - 2023	▼ -3.7% 2012 - 2022	▲ 26.1% 2013 - 2023	▲ 104.4% 2013 - 2023	▲ 7.4% 2013 - 2023

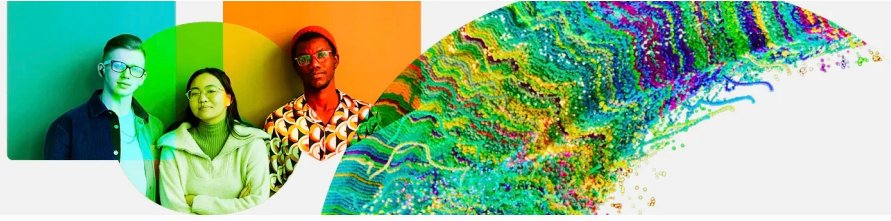
Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
0% 2021 - 2022	▲ 25.5% 2021 - 2022	▼ -29.7% 2021 - 2022	▲ 13.1% 2021 - 2022	n/a
0% 2012 - 2022	▲ 16.2% 2012 - 2022		▲ 23.5% 2012 - 2022	n/a
79.9 per 100 inhabitants in 2022	37 per 100 inhabitants in 2022	53 per 100 inhabitants in 2022		n/a

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▼ -3.2% 2022 - 2023	▲ 1.3% 2021 - 2022	▲ 1.8°C 2023
▼ -1.6% 2013 - 2023	▲ 0.2% 2012 - 2022	n/a
144,011 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, Saudi Arabia's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic development





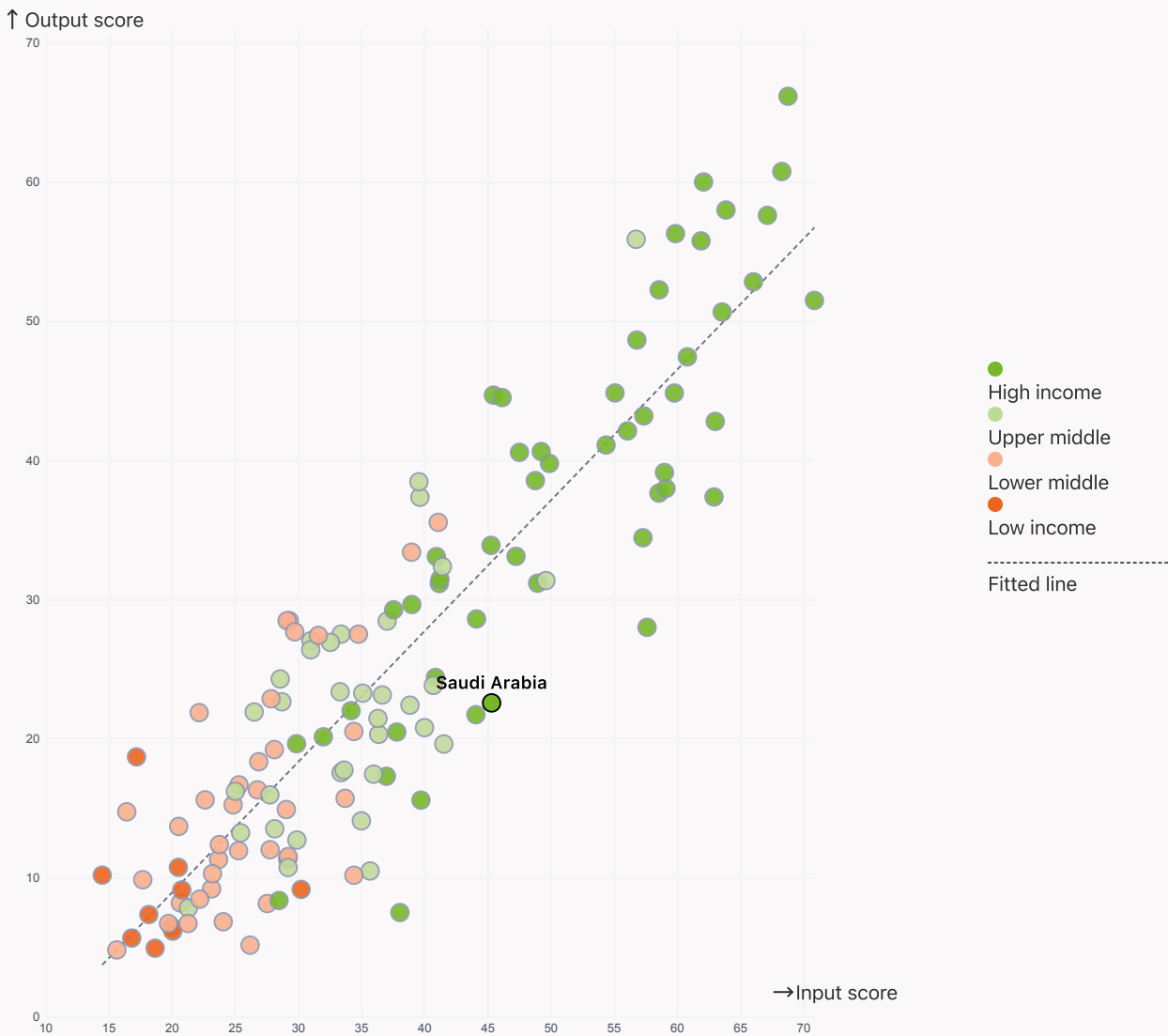
Effectively translating innovation investments into innovation outputs

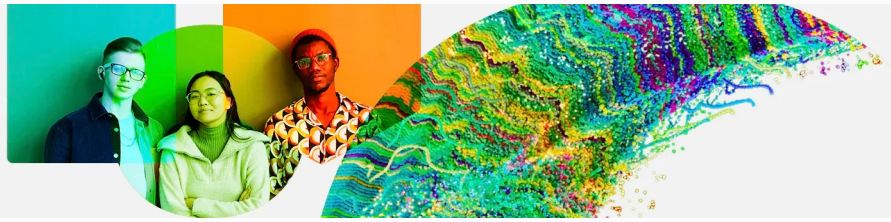
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.



Saudi Arabia produces less innovation outputs relative to its level of innovation investments.

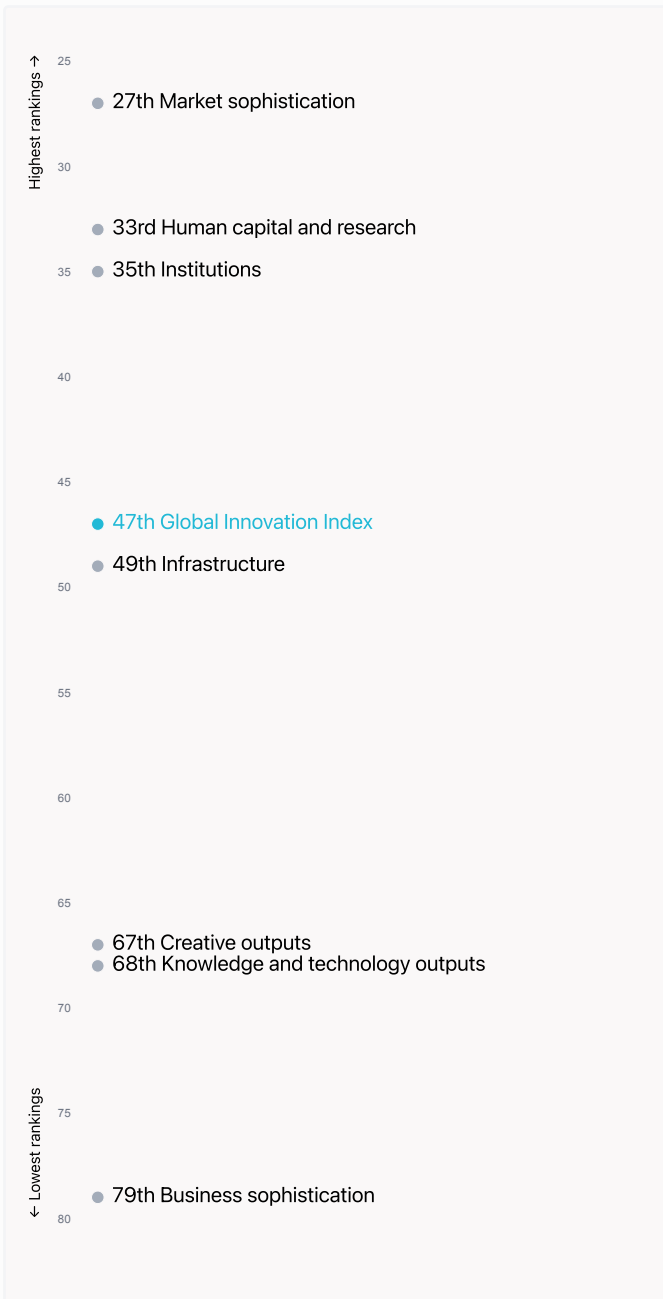
> Relationship between innovation inputs and outputs





Overview of Saudi Arabia'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 Saudi Arabia are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest rankings



Saudi Arabia ranks highest in Market sophistication (27th), Human capital and research (33rd) and Institutions (35th).

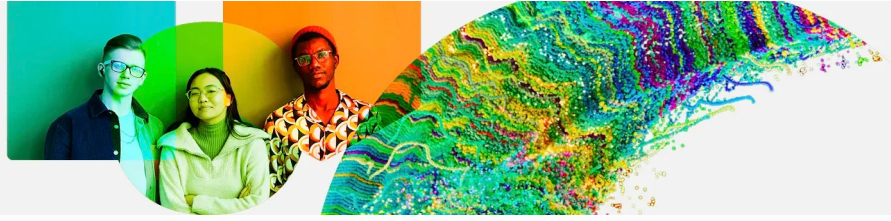
Lowest rankings



Saudi Arabia ranks lowest in Business sophistication (79th), Knowledge and technology outputs (68th) and Creative outputs (67th).

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

Global Innovation Index 2024



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

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



High-Income economies

Saudi Arabia performs above the high-income group average in Market sophistication.



Northern Africa And Western Asia

Saudi Arabia performs above the regional average in Institutions, Human capital and research, Infrastructure, Market sophistication.

Institutions

Top 10 | Score: 80.81

High income | Score: 67.41

Saudi Arabia | Score: 64.87

NAWA | Score: 51.34

Human capital and research

Top 10 | Score: 61.30

High income | Score: 46.99

Saudi Arabia | Score: 43.44

NAWA | Score: 34.27

Infrastructure

Top 10 | Score: 58.57

High income | Score: 51.96

Saudi Arabia | Score: 46.09

NAWA | Score: 39.94

Market sophistication

Top 10 | Score: 62.12

Saudi Arabia | Score: 48.68

High income | Score: 44.90

NAWA | Score: 33.58

Business sophistication

Top 10 | Score: 63.64

High income | Score: 44.71

NAWA | Score: 27.20

Saudi Arabia | Score: 23.70

Knowledge and technology outputs

Top 10 | Score: 57.29

High income | Score: 35.79

NAWA | Score: 22.11

Saudi Arabia | Score: 20.59

Creative outputs

Top 10 | Score: 56.54

High income | Score: 39.44

NAWA | Score: 26.23

Saudi Arabia | Score: 24.44



Innovation strengths and weaknesses in Saudi Arabia

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



Saudi Arabia's main innovation strengths are **ICT access*** (rank 1), **Market capitalization, % GDP** (rank 1) and **State of cluster development[†]** (rank 2).

Strengths

Weaknesses

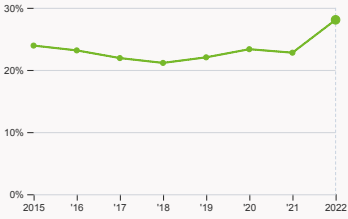
Rank	Code	Indicator name	Rank	Code	Indicator name
1	3.1.1	ICT access*	128	6.2.1	Labor productivity growth, %
1	4.2.1	Market capitalization, % GDP	128	3.3.2	Low-carbon energy use, %
2	5.2.3	State of cluster development [†]	121	5.3.1	Intellectual property payments, % total trade
5	1.3.2	Entrepreneurship policies and culture [†]	107	7.1.2	Trademarks by origin/bn PPP\$ GDP
6	4.1.1	Finance for startups and scaleups [†]	104	7.2.1	Cultural and creative services exports, % total trade
10	1.3.1	Policy stability for doing business [†]	102	5.1.2	Firms offering formal training, %
13	3.2.1	Electricity output, GWh/mn pop.	87	4.3.2	Domestic industry diversification
16	2.3.3	Global corporate R&D investors, top 3, mn USD	80	7.2.2	National feature films/mn pop. 15–69
17	4.3.3	Domestic market scale, bn PPP\$	70	5.3.5	Research talent, % in businesses
17	3.1.2	ICT use*	68	2.1.4	PISA scales in reading, maths and science



Saudi Arabia's innovation system

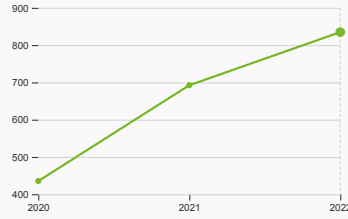
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Saudi Arabia



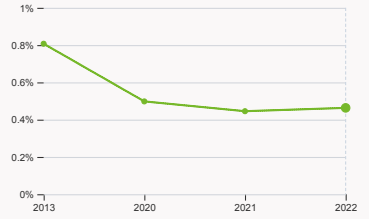
2.2.2 Graduates in science and engineering

was equal to 28.07 % of total graduates in 2022, up by 5.29 percentage points from the year prior – and equivalent to an indicator rank of 30.



2.3.1 Researchers

was equal to 834.81 FTE per million population in 2022, up by 20.58% from the year prior – and equivalent to an indicator rank of 57.



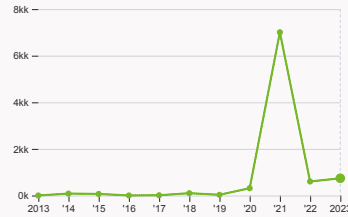
2.3.2 Gross expenditure on R&D

was equal to 0.46 % GDP in 2022, up by 0.02 percentage points from the year prior – and equivalent to an indicator rank of 60.



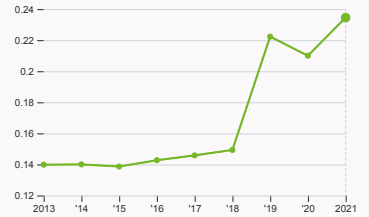
2.3.4 QS university ranking

was equal to an average score of 48.4 for the top three universities in 2023, down by 0.55% from the year prior – and equivalent to an indicator rank of 23.



4.2.4 VC received, value

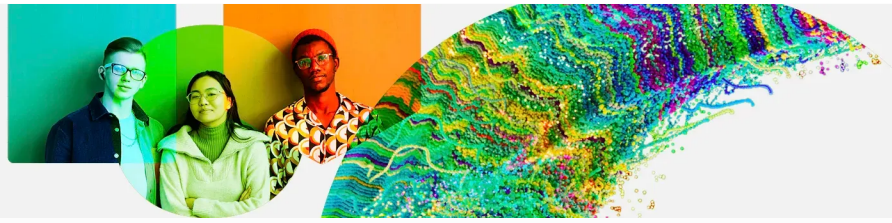
was equal to 739.57 thousand USD in 2023, up by 23.29% from the year prior – and equivalent to an indicator rank of 24.



4.3.2 Domestic industry diversification

was equal to an index score of 0.23 in 2021, up by 11.68% from the year prior – and equivalent to an indicator rank of 87.

Global Innovation Index 2024

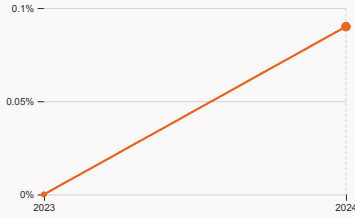


› Innovation outputs in Saudi Arabia



6.1.1 Patents by origin

was equal to 2.61 thousand patents in 2022, up by 76.35% from the year prior – and equivalent to an indicator rank of 48.



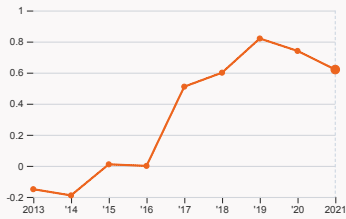
6.2.2 Unicorn valuation

was equal to 0.09 % GDP in 2024, up by 0.09 percentage points from the year prior – and equivalent to an indicator rank of 48.



6.2.4 High-tech manufacturing

was equal to 26.3 % of total manufacturing output in 2021, up by 0.36 percentage points from the year prior – and equivalent to an indicator rank of 47.



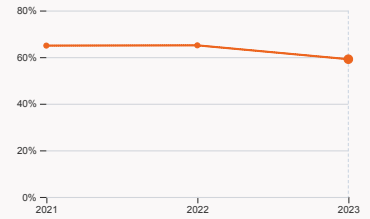
6.3.2 Production and export complexity

was equal to a score of 0.62 in 2021, down by 16.22% from the year prior – and equivalent to an indicator rank of 38.



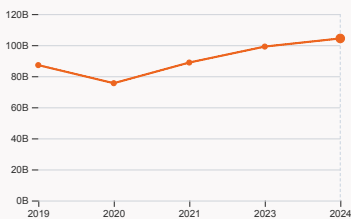
6.3.3 High-tech exports

was equal to 1.92 billion USD in 2021, up by 45.45% from the year prior – and equivalent to an indicator rank of 83.



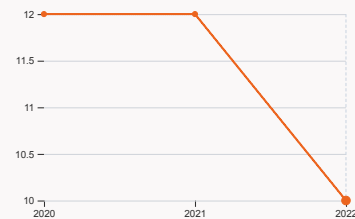
7.1.1 Intangible asset intensity

was equal to 59.12 % for the top 15 companies in 2023, down by 5.94 percentage points from the year prior – and equivalent to an indicator rank of 33.



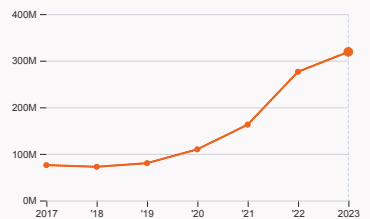
7.1.3 Global brand value

was equal to 104.32 billion USD for the brands in the top 5,000 in 2024, up by 5.29% from the year prior – and equivalent to an indicator rank of 20.



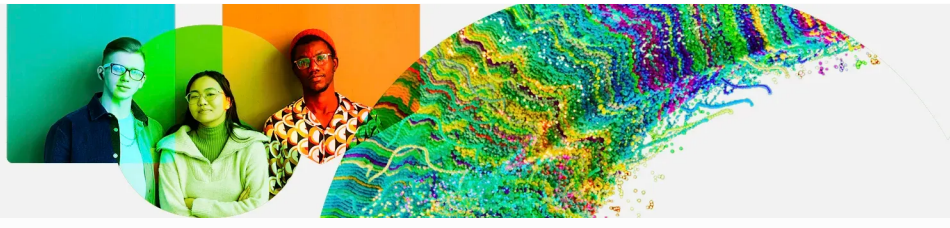
7.2.2 National feature films

was equal to 10 films in 2022, down by 16.67% from the year prior – and equivalent to an indicator rank of 80.



7.3.3 Mobile app creation

was equal to 318.95 million global downloads of mobile apps in 2023, up by 15.46% from the year prior – and equivalent to an indicator rank of 70.



Saudi Arabia's innovation top performers

2.3.4 QS university ranking of Saudi Arabia's top universities

Rank	University	Score
143	KING ABDUL AZIZ UNIVERSITY (KAU)	52.00
180	KING FAHD UNIVERSITY OF PETROLEUM & MINERALS (KFUPM)	48.00
203	KING SAUD UNIVERSITY (KSU)	45.20

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

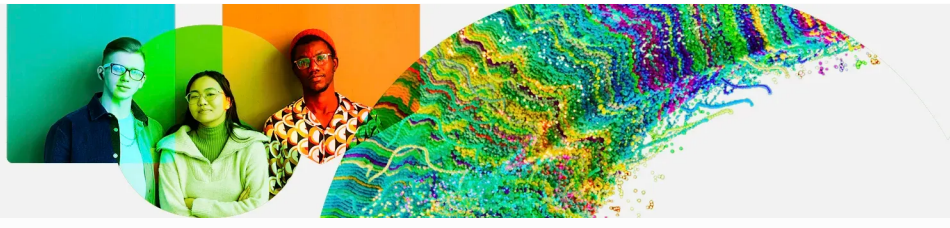
Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].

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

6.2.2 Top Unicorn Companies in Saudi Arabia

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	TAMARA	Financial Services	Riyadh	1

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



7.1.1 Top 15 intangible-asset intensive companies in Saudi Arabia

Rank	Firm	Intensity, %
1	SAUDI ARABIAN OIL COMPANY	83.78
2	AL RAJHI BANKING AND INVESTMENT CORPORATION	53.28
3	ACWA POWER COMPANY	75.90

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 Saudi Arabia with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	ARAMCO	Oil & Gas	41,561.9
2	STC	Telecoms	13,858.6
3	AL-RAJHI BANK	Banking	6,401.4

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

Global Innovation Index 2024



Saudi Arabia

GII 2024 rank

47

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
66	36	High	NAWA	32.3	2,246.5	68,452.9
			Score / Value Rank			
Institutions			64.9 35	Business sophistication 23.7 79		
1.1 Institutional environment			63.3 44	5.1 Knowledge workers 17.7 [109]		
1.1.1 Operational stability for businesses*			67.3 48	5.1.1 Knowledge-intensive employment, %		
1.1.2 Government effectiveness*			59.2 42	5.1.2 Firms offering formal training, %		
1.2 Regulatory environment			52.5 53	5.1.3 GERD performed by business, % GDP		
1.2.1 Regulatory quality*			52.8 53	5.1.4 GERD financed by business, %		
1.2.2 Rule of law*			52.2 54	5.1.5 Females employed w/advanced degrees, %		
1.3 Business environment			78.8 9	5.2 Innovation linkages 37.4 31		
1.3.1 Policy stability for doing business*			78.8 10	5.2.1 Public Research-Industry co-publications, %		
1.3.2 Entrepreneurship policies and culture*			78.9 5	5.2.2 University-industry R&D collaboration+		
Human capital and research			43.4 33	5.2.3 State of cluster development*		
2.1 Education			57.4 [48]	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		
2.1.1 Expenditure on education, % GDP			n/a n/a	5.2.5 Patent families/bn PPP\$ GDP		
2.1.2 Government funding/pupil, secondary, % GDP/cap			n/a n/a	5.3 Knowledge absorption 16 118		
2.1.3 School life expectancy, years			16.9 21	5.3.1 Intellectual property payments, % total trade		
2.1.4 PISA scales in reading, maths and science			387.2 68	5.3.2 High-tech imports, % total trade		
2.1.5 Pupil-teacher ratio, secondary			14.4 70	5.3.3 ICT services imports, % total trade		
2.2 Tertiary education			39.8 40	5.3.4 FDI net inflows, % GDP		
2.2.1 Tertiary enrolment, % gross			73.7 34	5.3.5 Research talent, % in businesses		
2.2.2 Graduates in science and engineering, %			28.1 30	Knowledge and technology outputs 20.6 68		
2.2.3 Tertiary inbound mobility, %			4.1 57	6.1 Knowledge creation 22.1 52		
2.3 Research and development (R&D)			33.2 31	6.1.1 Patents by origin/bn PPP\$ GDP		
2.3.1 Researchers, FTE/mn pop.			834.8 57	6.1.2 PCT patents by origin/bn PPP\$ GDP		
2.3.2 Gross expenditure on R&D, % GDP			0.5 60	6.1.3 Utility models by origin/bn PPP\$ GDP		
2.3.3 Global corporate R&D investors, top 3, mn USD			67.9 16	6.1.4 Scientific and technical articles/bn PPP\$ GDP		
2.3.4 QS university ranking, top 3*			49 23	6.1.5 Citable documents H-index		
Infrastructure			46.1 49	6.2 Knowledge impact 22.1 85		
3.1 Information and communication technologies (ICTs)			85 26	6.2.1 Labor productivity growth, %		
3.1.1 ICT access*			100 1	6.2.2 Unicorn valuation, % GDP		
3.1.2 ICT use*			91.2 17	6.2.3 Software spending, % GDP		
3.1.3 Government's online service*			80.3 32	6.2.4 High-tech manufacturing, %		
3.1.4 E-participation*			68.6 43	6.3 Knowledge diffusion 17.6 66		
3.2 General infrastructure			47 25	6.3.1 Intellectual property receipts, % total trade		
3.2.1 Electricity output, GWh/mn pop.			11,373.9 13	6.3.2 Production and export complexity		
3.2.2 Logistics performance*			59.1 37	6.3.3 High-tech exports, % total trade		
3.2.3 Gross capital formation, % GDP			26.6 38	6.3.4 ICT services exports, % total trade		
3.3 Ecological sustainability			6.3 123	6.3.5 ISO 9001 quality/bn PPP\$ GDP		
3.3.1 GDP/unit of energy use			7.2 98	Creative outputs 24.4 67		
3.3.2 Low-carbon energy use, %			0.07 128	7.1 Intangible assets 33.5 51		
3.3.3 ISO 14001 environment/bn PPP\$ GDP			0.8 80	7.1.1 Intangible asset intensity, top 15, %		
Market sophistication			48.7 27	7.1.2 Trademarks by origin/bn PPP\$ GDP		
4.1 Credit			49.4 24	7.1.3 Global brand value, top 5,000, % GDP		
4.1.1 Finance for startups and scaleups*			81.8 6	7.1.4 Industrial designs by origin/bn PPP\$ GDP		
4.1.2 Domestic credit to private sector, % GDP			52 64	7.2 Creative goods and services 7.9 82		
4.1.3 Loans from microfinance institutions, % GDP			n/a n/a	7.2.1 Cultural and creative services exports, % total trade		
4.2 Investment			37.2 21	7.2.2 National feature films/mn pop. 15-69		
4.2.1 Market capitalization, % GDP			291.5 1	7.2.3 Entertainment and media market/th pop. 15-69		
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP			0.07 55	7.2.4 Creative goods exports, % total trade		
4.2.3 VC recipients, deals/bn PPP\$ GDP			0.03 76	7.3 Online creativity 22.9 84		
4.2.4 VC received, value, % GDP			0.003 24	7.3.1 Top-level domains (TLDs)/th pop. 15-69		
4.3 Trade, diversification and market scale			59.4 54	7.3.2 GitHub commits/mn pop. 15-69		
4.3.1 Applied tariff rate, weighted avg., %			3.9 90	7.3.3 Mobile app creation/bn PPP\$ GDP		
4.3.2 Domestic industry diversification			64.8 87			
4.3.3 Domestic market scale, bn PPP\$			2,246.5 17			

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 Saudi Arabia.



Saudi Arabia has missing data for seven indicators and outdated data for six indicators.

Missing data for Saudi Arabia

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	n/a	2022	UNESCO Institute for Statistics
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2020	UNESCO Institute for Statistics
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
5.1.1	Knowledge-intensive employment, %	n/a	2022	International Labour Organization
5.1.5	Females employed w/advanced degrees, %	n/a	2023	International Labour Organization
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund
6.3.1	Intellectual property receipts, % total trade	n/a	2022	World Trade Organization Global Services Trade Data Hub

Outdated data for Saudi Arabia

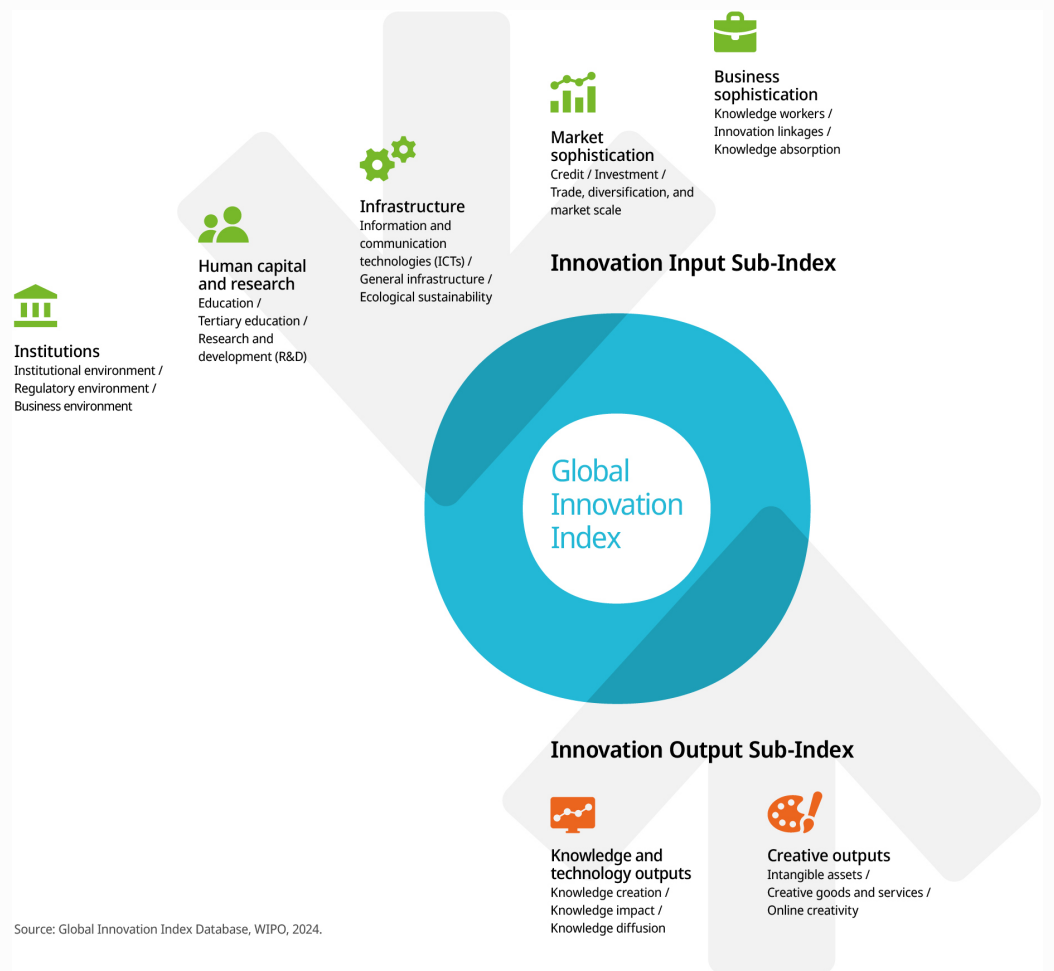
Code	Indicator name	Economy Year	Model Year	Source
3.2.1	Electricity output, GWh/mn pop.	2021	2022	International Energy Agency
4.1.2	Domestic credit to private sector, % GDP	2017	2022	International Monetary Fund; World Bank and OECD GDP estimates.
5.1.2	Firms offering formal training, %	2022	2023	World Bank Enterprise Surveys
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
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

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.