



# Global Innovation Index 2021



## QATAR

**68th** Qatar ranks 68th among the 132 economies featured in the GII 2021.

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.

The following table shows the rankings of Qatar over the past three years, noting that 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 Qatar in the GII 2021 is between ranks 67 and 71.

### Rankings for Qatar (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	68	64	70
2020	70	64	72
2019	65	53	70

- Qatar performs better in innovation inputs than innovation outputs in 2021.
- This year Qatar ranks 64th in innovation inputs, the same as last year but lower than 2019.
- As for innovation outputs, Qatar ranks 70th. This position is higher than last year but the same as 2019.

**45th** Qatar ranks 45th among the 51 high-income group economies.

**7th** Qatar ranks 7th among the 19 economies in Northern Africa and Western Asia.

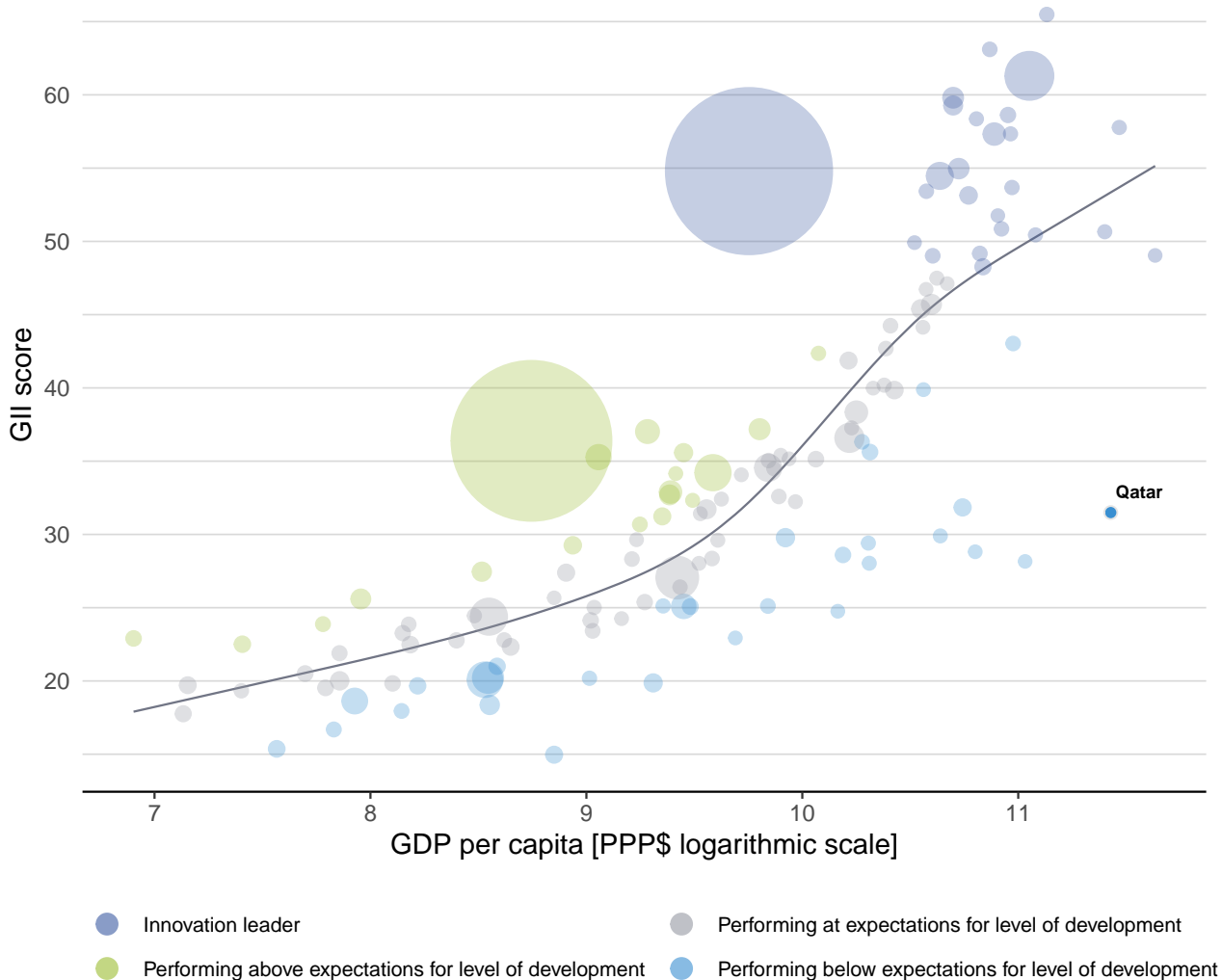


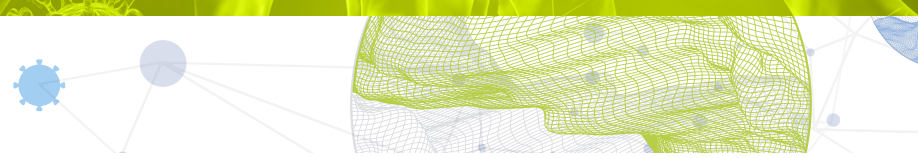
## EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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, Qatar's performance is below expectations for its level of development.

### The positive relationship between innovation and development



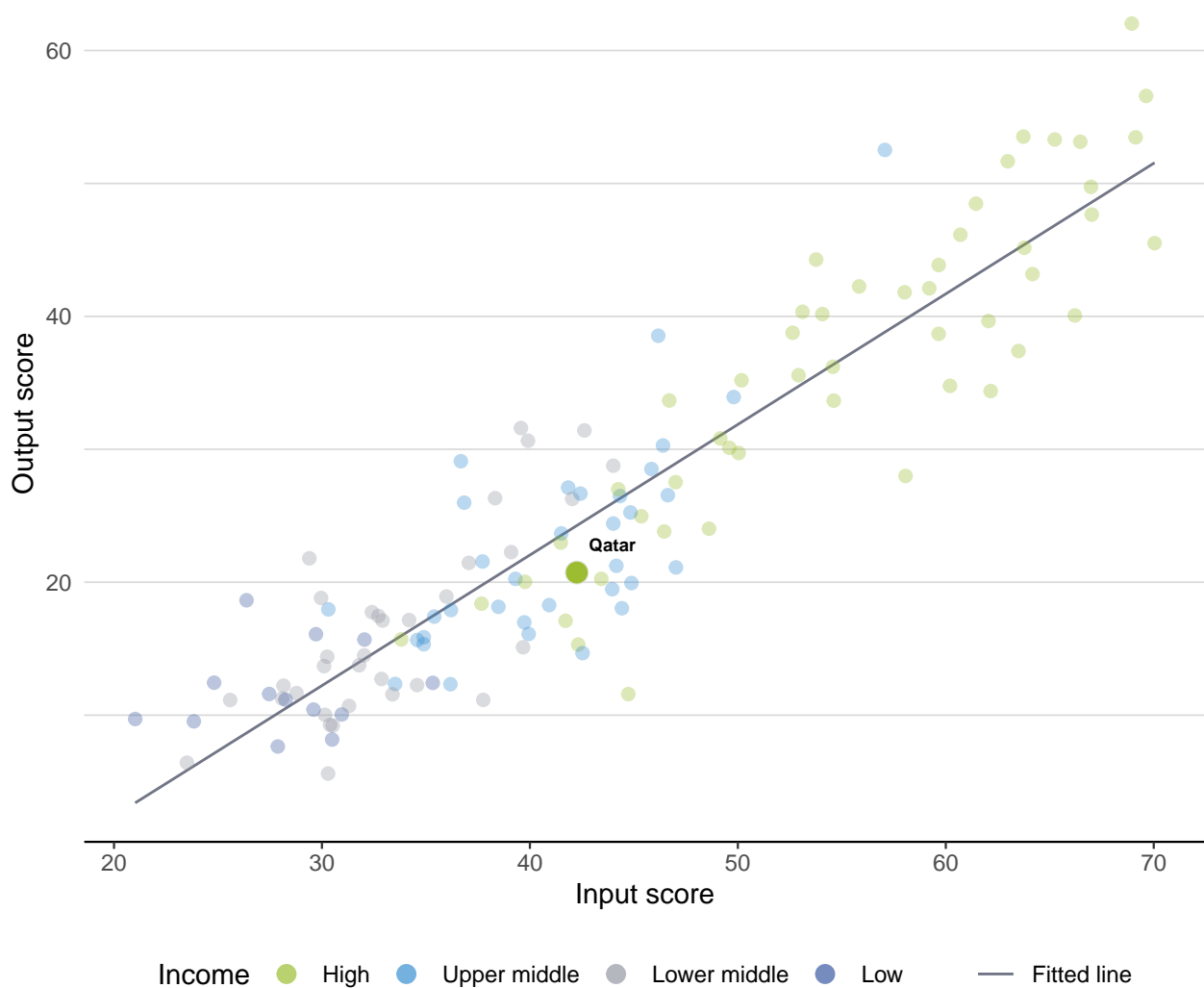


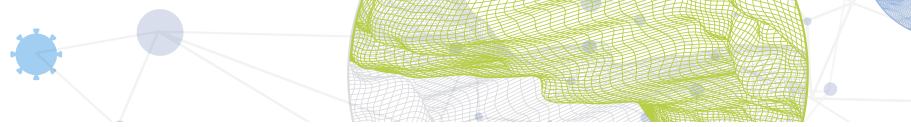
## EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

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

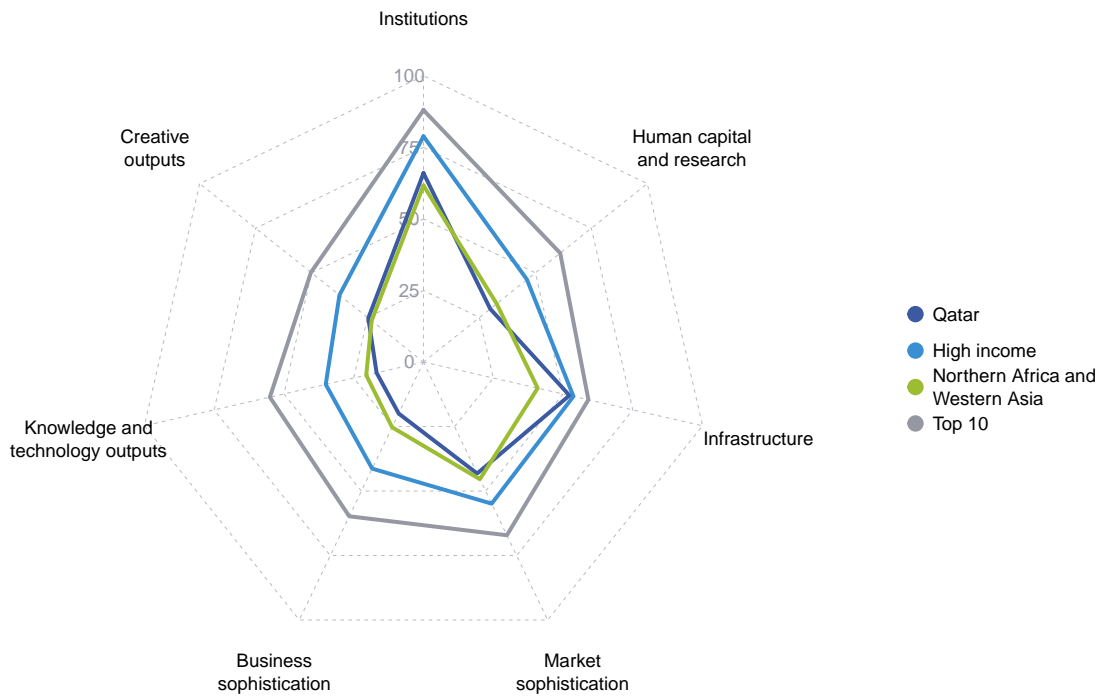
### Innovation input to output performance





# BENCHMARKING AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND NORTHERN AFRICA AND WESTERN ASIA

## The seven GII pillar scores for Qatar

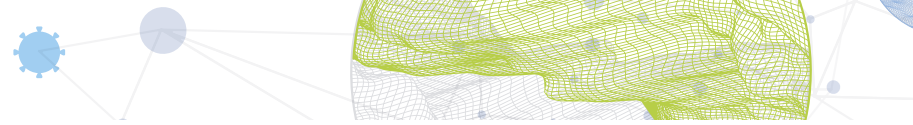


### High-income group economies

Qatar performs below the high-income group average in all GII pillars.

### Northern Africa and Western Asia

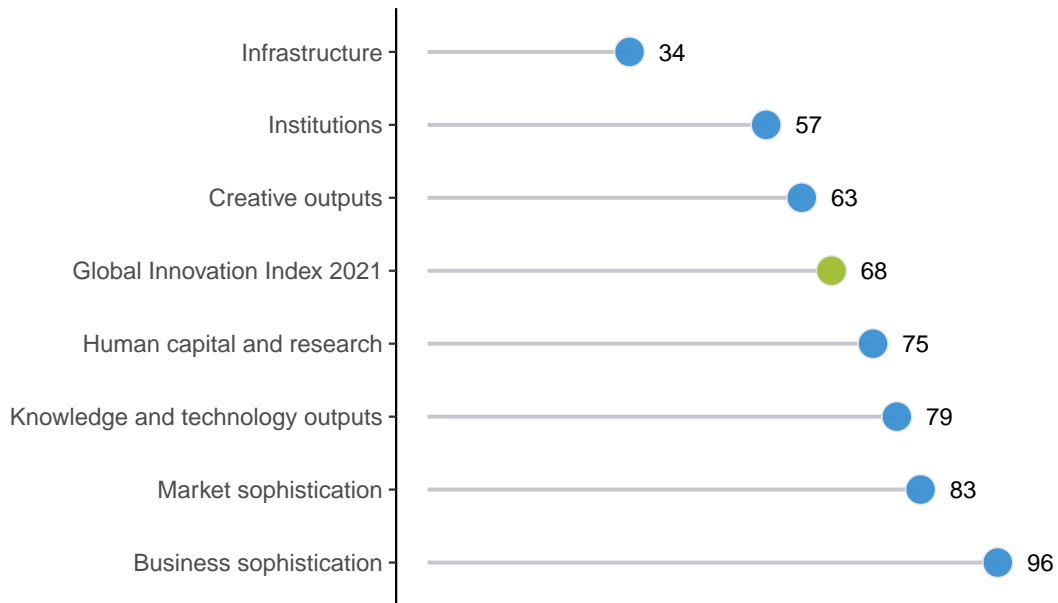
Qatar performs above the regional average in three pillars, namely: Institutions; Infrastructure; and, Creative outputs.



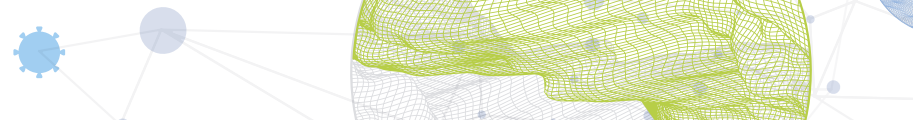
## OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Qatar performs best in Infrastructure and its weakest performance is in Business sophistication.

### The seven GII pillar ranks for Qatar



Note: The highest possible ranking in each pillar is one.







## INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Qatar in the GII 2021.

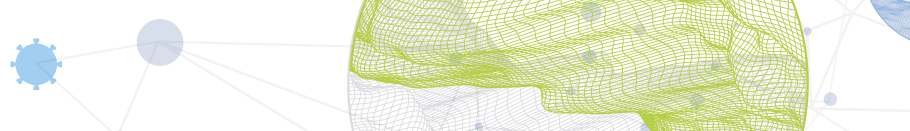
### Strengths and weaknesses for Qatar

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
2.2.3	Tertiary inbound mobility, %	1	2.1.1	Expenditure on education, % GDP	105
3.2	General infrastructure	2	2.3.3	Global corporate R&D investors, top 3, mn US\$	41
3.2.1	Electricity output, GWh/mn pop.	6	4.1.1	Ease of getting credit	101
3.2.2	Logistics performance	29	4.2	Investment	128
4.1.2	Domestic credit to private sector, % GDP	24	4.2.1	Ease of protecting minority investors	124
4.2.2	Market capitalization, % GDP	17	4.2.4	Venture capital recipients, deals/bn PPP\$ GDP	89
5.2.1	University-industry R&D collaboration	14	5.1	Knowledge workers	118
5.3.3	ICT services imports, % total trade	9	5.2.3	GERD financed by abroad, % GDP	93
6.2.2	New businesses/th pop. 15–64	26	5.3.1	Intellectual property payments, % total trade	102
7.1.2	Global brand value, top 5,000, % GDP	20	5.3.4	FDI net inflows, % GDP	123
7.2.2	National feature films/mn pop. 15–69	4	6.2.1	Labor productivity growth, %	109
			7.1.1	Trademarks by origin/bn PPP\$ GDP	121

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$	GII 2020 rank
70	64	High	NAWA	2.9	257.5	91,897	70

	Score/Value	Rank		Score/Value	Rank
 <b>Institutions</b>	66.0	57	 <b>Business sophistication</b>	19.9	96
<b>1.1 Political environment</b>	69.2	41	<b>5.1 Knowledge workers</b>	12.9	118
1.1.1 Political and operational stability*	75.0	40	5.1.1 Knowledge-intensive employment, %	18.1	86
1.1.2 Government effectiveness*	66.3	39	5.1.2 Firms offering formal training, %	n/a	n/a
<b>1.2 Regulatory environment</b>	66.8	61	5.1.3 GERD performed by business, % GDP	0.1	69
1.2.1 Regulatory quality*	61.3	40	5.1.4 GERD financed by business, %	9.3	77
1.2.2 Rule of law*	66.1	36	5.1.5 Females employed w/advanced degrees, %	4.5	96
1.2.3 Cost of redundancy dismissal	23.2	100	<b>5.2 Innovation linkages</b>	22.8	55
<b>1.3 Business environment</b>	62.0	98	5.2.1 University-industry R&D collaboration†	65.4	14
1.3.1 Ease of starting a business*	86.1	84	5.2.2 State of cluster development and depth†	54.1	38
1.3.2 Ease of resolving insolvency*	38.0	107	5.2.3 GERD financed by abroad, % GDP	0.0	93
			5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.1	34
			5.2.5 Patent families/bn PPP\$ GDP	0.0	69
 <b>Human capital and research</b>	29.8	75	<b>5.3 Knowledge absorption</b>	24.1	72
<b>2.1 Education</b>	40.1	94	5.3.1 Intellectual property payments, % total trade	0.1	102
2.1.1 Expenditure on education, % GDP	2.7	105	5.3.2 High-tech imports, % total trade	7.5	68
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	5.3.3 ICT services imports, % total trade	2.9	9
2.1.3 School life expectancy, years	12.3	89	5.3.4 FDI net inflows, % GDP	-0.7	123
2.1.4 PISA scales in reading, maths and science	413.5	60	5.3.5 Research talent, % in businesses	16.1	57
2.1.5 Pupil-teacher ratio, secondary	11.8	47	 <b>Knowledge and technology outputs</b>	16.8	79
<b>2.2 Tertiary education</b>	42.0	37	<b>6.1 Knowledge creation</b>	8.7	87
2.2.1 Tertiary enrolment, % gross	18.9	98	6.1.1 Patents by origin/bn PPP\$ GDP	0.2	102
2.2.2 Graduates in science and engineering, %	24.2	43	6.1.2 PCT patents by origin/bn PPP\$ GDP	0.1	66
2.2.3 Tertiary inbound mobility, %	35.3	1	6.1.3 Utility models by origin/bn PPP\$ GDP	n/a	n/a
<b>2.3 Research and development (R&amp;D)</b>	7.4	67	6.1.4 Scientific and technical articles/bn PPP\$ GDP	12.2	70
2.3.1 Researchers, FTE/mn pop.	577.3	63	6.1.5 Citable documents H-index	10.2	76
2.3.2 Gross expenditure on R&D, % GDP	0.5	66	<b>6.2 Knowledge impact</b>	30.0	62
2.3.3 Global corporate R&D investors, top 3, mn US\$	0.0	41	6.2.1 Labor productivity growth, %	-2.6	109
2.3.4 QS university ranking, top 3*	12.6	61	6.2.2 New businesses/th pop. 15-64	6.3	26
			6.2.3 Software spending, % GDP	0.3	32
 <b>Infrastructure</b>	52.3	34	6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP	3.1	73
<b>3.1 Information and communication technologies (ICTs)</b>	70.8	57	6.2.5 High-tech manufacturing, %	34.7	35
3.1.1 ICT access*	79.8	34	<b>6.3 Knowledge diffusion</b>	11.8	86
3.1.2 ICT use*	72.1	41	6.3.1 Intellectual property receipts, % total trade	n/a	n/a
3.1.3 Government's online service*	65.9	76	6.3.2 Production and export complexity	36.7	74
3.1.4 E-participation*	65.5	77	6.3.3 High-tech exports, % total trade	0.3	96
<b>3.2 General infrastructure</b>	64.4	2	6.3.4 ICT services exports, % total trade	1.1	79
3.2.1 Electricity output, GWh/mn pop.	17,222.5	6	 <b>Creative outputs</b>	24.7	63
3.2.2 Logistics performance*	66.3	29	<b>7.1 Intangible assets</b>	32.7	58
3.2.3 Gross capital formation, % GDP	n/a	n/a	7.1.1 Trademarks by origin/bn PPP\$ GDP	5.0	121
<b>3.3 Ecological sustainability</b>	21.7	89	7.1.2 Global brand value, top 5,000, % GDP	97.5	20
3.3.1 GDP/unit of energy use	7.7	94	7.1.3 Industrial designs by origin/bn PPP\$ GDP	n/a	n/a
3.3.2 Environmental performance*	37.1	99	7.1.4 ICTs and organizational model creation†	63.9	33
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP	1.7	51	<b>7.2 Creative goods and services</b>	20.4	50
			7.2.1 Cultural and creative services exports, % total trade	0.3	62
 <b>Market sophistication</b>	43.2	83	7.2.2 National feature films/mn pop. 15-69	23.0	4
<b>4.1 Credit</b>	43.2	55	7.2.3 Entertainment and media market/th pop. 15-69	19.6	28
4.1.1 Ease of getting credit*	45.0	101	7.2.4 Printing and other media, % manufacturing	0.7	72
4.1.2 Domestic credit to private sector, % GDP	100.9	24	7.2.5 Creative goods exports, % total trade	0.2	82
4.1.3 Microfinance gross loans, % GDP	n/a	n/a	<b>7.3 Online creativity</b>	12.9	81
<b>4.2 Investment</b>	15.6	128	7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	3.4	60
4.2.1 Ease of protecting minority investors*	28.0	124	7.3.2 Country-code TLDs/th pop. 15-69	2.6	63
4.2.2 Market capitalization, % GDP	87.0	17	7.3.3 Wikipedia edits/mn pop. 15-69	45.8	73
4.2.3 Venture capital investors, deals/bn PPP\$ GDP	0.0	60	7.3.4 Mobile app creation/bn PPP\$ GDP	0.4	83
4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	0.0	89			
<b>4.3 Trade, diversification, and market scale</b>	70.8	59			
4.3.1 Applied tariff rate, weighted avg., %	3.5	67			
4.3.2 Domestic industry diversification	81.8	72			
4.3.3 Domestic market scale, bn PPP\$	257.5	59			

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 Appendix IV for details, including the year of the data, at <http://globalinnovationindex.org>. 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 data that are either missing or outdated for Qatar.

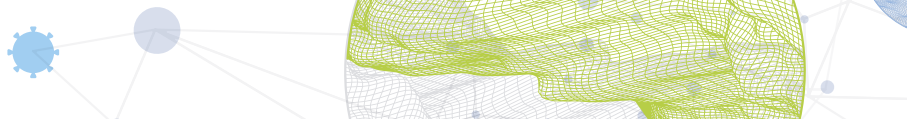
### Missing data for Qatar

Code	Indicator name	Economy year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2017	UNESCO Institute for Statistics
3.2.3	Gross capital formation, % GDP	n/a	2020	International Monetary Fund
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
5.1.2	Firms offering formal training, %	n/a	2019	World Bank
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization
6.3.1	Intellectual property receipts, % total trade	n/a	2019	World Trade Organization
7.1.3	Industrial designs by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization

### Outdated data for Qatar

Code	Indicator name	Economy year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.2.4	Venture capital recipients, deals/bn PPP\$ GDP	2019	2020	Refinitiv Eikon
5.1.1	Knowledge-intensive employment, %	2017	2019	International Labour Organization
5.1.3	GERD performed by business, % GDP	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2013	2019	International Labour Organization
5.3.1	Intellectual property payments, % total trade	2010	2019	World Trade Organization





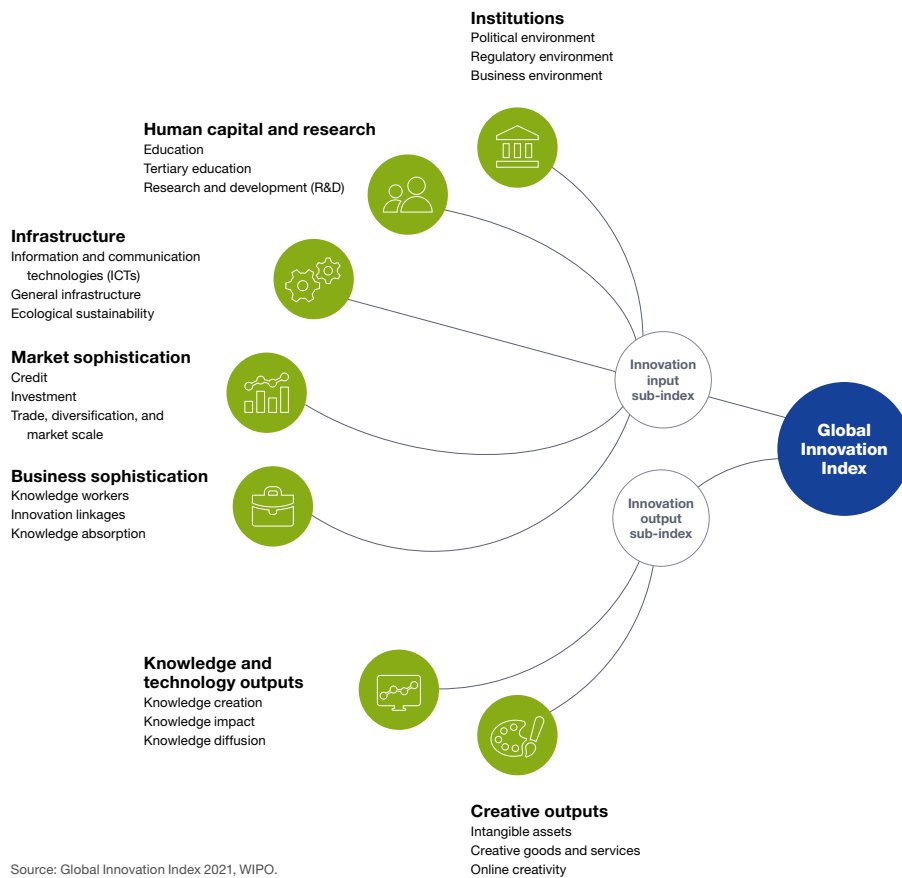
<b>Code</b>	<b>Indicator name</b>	<b>Economy year</b>	<b>Model year</b>	<b>Source</b>
5.3.5	Research talent, % in businesses	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
7.2.5	Creative goods exports, % total trade	2015	2019	United Nations, COMTRADE



## 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.