

# GLOBAL INNOVATION INDEX 2018

Kuwait

**60<sup>th</sup>** Kuwait is ranked 60th in the GII 2018, moving down 4 positions from last year.

The GII indicators are grouped into innovation inputs and outputs. The following table reflects Kuwait's ranking over time<sup>1</sup>.

Kuwait's ranking over time

	GII	Input	Output	Efficiency
2018	60	81	49	26
2017	56	80	45	18
2016	67	78	56	42

- Kuwait performs better in innovation outputs than inputs.
- Over the last three years, Kuwait's position in innovation inputs has slightly deteriorated, ranking 81st this year, down 1 spot from last year and 3 from 2016.
- Kuwait places 49th in innovation outputs, dropping 4 positions from last year.
- Kuwait is highly efficient in translating its innovation inputs into outputs, as demonstrated by the Innovation Efficiency Ratio, where Kuwait positions the 26th globally. In the Efficiency Ratio (26th) it ranks much better than in the overall GII (60th). This is partly influenced by a much higher ranking in innovation outputs (49th) compared to inputs (81st).

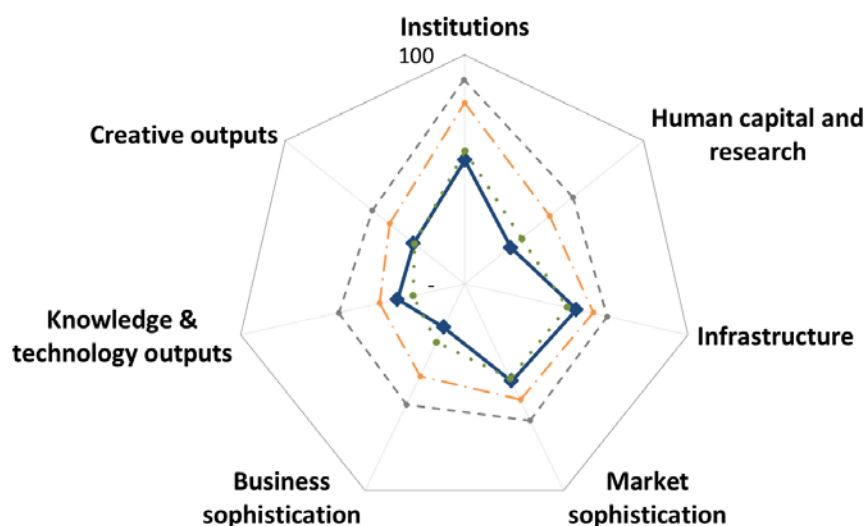
**41<sup>st</sup>** Kuwait is ranked 41st among the 47 high-income countries in the GII 2018.

**7<sup>th</sup>** Kuwait is ranked 7th among the 19 countries in Northern Africa and Western Asia.

<sup>1</sup> Note that year-on-year comparisons of the GII ranks are imperfect and influenced by changes in the GII model and data availability.

## Benchmarking Kuwait to other high-income countries and the Northern Africa and Western Asia region

Kuwait's scores by area



—◆— Kuwait —■— Income group average —●— Regional average - - - Top 10

### High-income countries

Kuwait scores below the average of the high-income group in all 7 GII areas.

### Northern Africa and Western Asia region

Compared to other countries in the Northern Africa and Western Asia region, Kuwait performs above-average in 4 of the 7 GII areas: **Infrastructure**, **Market Sophistication**, **Knowledge & Technology Outputs**, and **Creative Outputs**.

## Kuwait's innovation profile

### Strengths

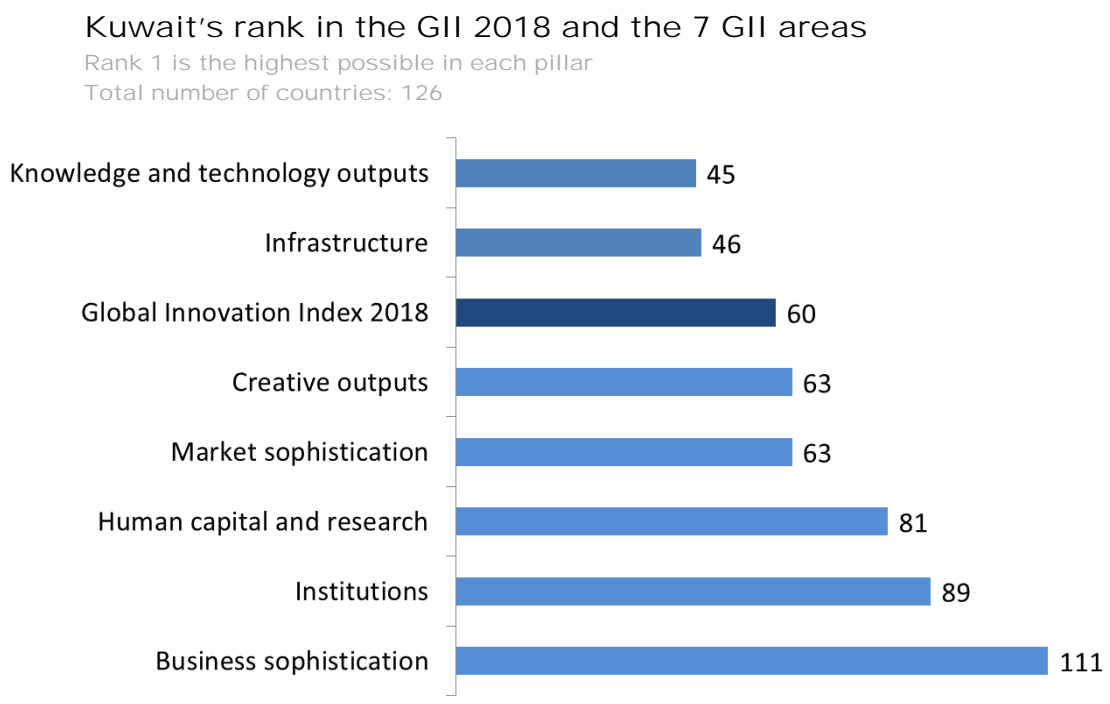
- Kuwait's major GII strengths are the **Innovation Output Sub-Index**, in which it ranks 49th globally and the **Innovation Efficiency Ratio**, in which it is the 26th economy worldwide.
- The other relative strengths for Kuwait lie in 6 of the 7 GII areas, and in particular in **Knowledge & Technology Outputs** (45th) and **Infrastructure** (46th).
- **Knowledge & Technology Outputs** (45th), the top-ranked GII area for Kuwait, is itself marked as a strength. Here the country demonstrates strong performance in the area *Knowledge diffusion* (12th) and in the indicators *Computer software spending* (27th), *ICT services exports* (14th), and *FDI outflows* (10th).
- On the **innovation input side**, **Infrastructure** (46th) is also highlighted as a GII strength. Here the country exhibits strength in the area *General infrastructure* (22nd) as well as in the indicators *ICT access* (51st), *Gross capital formation* (43rd), and *Electricity output*, in which it positions 6th in the world.
- Other strengths are found in **Creative Outputs** (63rd), where the area *Intangible assets* (42nd) is relatively strong. In addition, the indicator *Generic top-level domains (TLDs)* (44th) presents strong performance for Kuwait.
- The last three comparative strengths for Kuwait are found in the following indicators: *Domestic credit to private sector* (26th) in **Market Sophistication** (63rd) and *State of cluster*

*development* (46th) in **Business Sophistication** (111th). Finally, in **Human Capital & Research** (81st), *Pupil-teacher ratio*, where it positions 6th globally, is identified as a strength.

## Weaknesses

- Kuwait's relative weaknesses are mainly accrued on the **innovation input** side, among four of the five GII input areas.
- Most of these relative weaknesses are found in **Business Sophistication** (111th), the lowest-ranked GII area for the country, signaled itself as a weakness. Here Kuwait performs relatively weakly in the indicators *R&D financed by business* (88th), *R&D financed by abroad* (89th), *Patent families in 2 or more offices* (101st), and *FDI inflows* (121st).
- In **Institutions** (89th), two indicators – *Cost of redundancy dismissal* (109th) and *Ease of starting a business* (110th) – present relatively weak performance for Kuwait.
- Finally, on the innovation input side, the indicator *Global R&D companies expenditures* (40th) is a relative weakness in **Human Capital & Research** (81st), while *Ease of getting credit* (106th) is signaled as a weak indicator in **Market Sophistication** (63rd).
- On the **innovation output** side, Kuwait demonstrates relative weakness in only two indicators: *Scientific & technical articles* (112th) in **Knowledge & Technology Outputs** (45th) and *Printing & other media* (89th) in **Creative Outputs** (63rd).

The following figure presents a summary of Kuwait's ranks in the 7 GII areas, as well as the overall rank in the GII 2018.





## Missing and Outdated Data

More and better data improves the ability of a country to understand its strengths and weaknesses and give policymakers greater capacity to plan and adapt public policies accordingly. The GII 2018 covers 126 countries that complied with the minimum indicator coverage of 35 indicators in the Innovation Input Sub-Index (66%) and 18 indicators in the Innovation Output Sub-Index (66%).

The following tables show data for Kuwait that is not available or that is outdated.








### Missing Data

Code	Indicator	Country Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	n/a	2014	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths & science	n/a	2015	OECD PISA
2.2.2	Graduates in science & engineering, %	n/a	2016	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	n/a	2016	UNESCO Institute for Statistics
4.1.3	Microfinance gross loans, % GDP	n/a	2016	Microfinance Information Exchange, Mix Market
4.2.2	Market capitalization, % GDP	n/a	2016	World Bank, World Development Indicators
5.1.2	Firms offering formal training, % firms	n/a	2013	World Bank, Enterprise Surveys
5.1.3	GERD performed by business, % GDP	n/a	2016	UNESCO Institute for Statistics
5.1.5	Females employed w/advanced degrees, %	n/a	2016	ILO, ILOSTAT
5.3.1	Intellectual property payments, % total trade	n/a	2016	WTO, Trade in Commercial Services
5.3.5	Research talent, % in business enterprise	n/a	2016	UNESCO Institute for Statistics
6.1.1	Patents by origin/bn PPP\$ GDP	n/a	2016	WIPO, Intellectual Property Statistics
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2017	WIPO, Intellectual Property Statistics
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2016	WIPO, Intellectual Property Statistics
6.2.2	New businesses/th pop. 15–64	n/a	2016	World Bank, Doing Business
6.3.1	Intellectual property receipts, % total trade	n/a	2016	WTO, Trade in Commercial Services
7.1.1	Trademarks by origin/bn PPP\$ GDP	n/a	2016	WIPO, Intellectual Property Statistics
7.1.2	Industrial designs by origin/bn PPP\$ GDP	n/a	2016	WIPO, Intellectual Property Statistics
7.2.1	Cultural & creative services exports, % total trade	n/a	2016	WTO, Trade in Commercial Services
7.2.2	National feature films/mn pop. 15–69	n/a	2015	UNESCO Institute for Statistics

### Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.3	School life expectancy, years	2013	2016	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2015	2016	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2013	2016	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2012	2016	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2013	2016	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	2013	2015	UNESCO Institute for Statistics
5.2.3	GERD financed by abroad, %	2009	2015	UNESCO Institute for Statistics
7.2.5	Creative goods exports, % total trade	2015	2016	UN COMTRADE
7.3.3	Wikipedia edits/mn pop. 15–69	2014	2017	Wikimedia Foundation



Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2017 rank
49 ●	81	High	NAWA	26 ●	4.1	302.5	66,162.9	56
				Score/Value	Rank			
	<b>Institutions</b> .....	<b>54.1</b>	<b>89</b> ◇					
1.1	Political environment.....	47.5	77 ◇					
1.1.1	Political stability & safety*.....	61.2	73 ◇					
1.1.2	Government effectiveness*.....	40.7	82 ◇					
1.2	Regulatory environment.....	56.4	92 ◇					
1.2.1	Regulatory quality*.....	42.2	73 ◇					
1.2.2	Rule of law*.....	44.8	58 ◇					
1.2.3	Cost of redundancy dismissal, salary weeks.....	28.1	109 ○◇					
1.3	Business environment.....	58.3	104 ◇					
1.3.1	Ease of starting a business*.....	77.2	110 ○◇					
1.3.2	Ease of resolving insolvency*.....	39.4	96 ◇					
	<b>Human capital &amp; research</b> .....	<b>25.5</b>	<b>81</b> ◇					
2.1	Education.....	46.7	67 ◇					
2.1.1	Expenditure on education, % GDP.....	n/a	n/a					
2.1.2	Government funding/pupil, secondary, % GDP/cap.....	17.6	61 ◇					
2.1.3	School life expectancy, years <sup>Ⓔ</sup> .....	13.6	70 ◇					
2.1.4	PISA scales in reading, maths & science.....	n/a	n/a					
2.1.5	Pupil-teacher ratio, secondary <sup>Ⓔ</sup> .....	7.6	6 ●◆					
2.2	Tertiary education.....	26.3	[79]					
2.2.1	Tertiary enrolment, % gross <sup>Ⓔ</sup> .....	32.6	76 ◇					
2.2.2	Graduates in science & engineering, %.....	n/a	n/a					
2.2.3	Tertiary inbound mobility, %.....	n/a	n/a					
2.3	Research & development (R&D).....	3.6	84 ◇					
2.3.1	Researchers, FTE/mn pop. <sup>Ⓔ</sup> .....	129.3	84 ◇					
2.3.2	Gross expenditure on R&D, % GDP <sup>Ⓔ</sup> .....	0.3	78 ◇					
2.3.3	Global R&D companies, top 3, mn US\$.....	0.0	40 ○◇					
2.3.4	QS university ranking, average score top 3*.....	6.3	68 ◇					
	<b>Infrastructure</b> .....	<b>49.8</b>	<b>46</b> ●◇					
3.1	Information & communication technologies (ICTs).....	62.7	58 ◇					
3.1.1	ICT access*.....	71.2	51 ●◇					
3.1.2	ICT use*.....	49.9	66 ◇					
3.1.3	Government's online service*.....	65.2	53					
3.1.4	E-participation*.....	64.4	54					
3.2	General infrastructure.....	52.4	22 ●					
3.2.1	Electricity output, kWh/cap.....	17,459.6	6 ●◆					
3.2.2	Logistics performance*.....	50.3	52 ◇					
3.2.3	Gross capital formation, % GDP.....	24.7	43 ●					
3.3	Ecological sustainability.....	34.4	78 ◇					
3.3.1	GDP/unit of energy use.....	7.7	78					
3.3.2	Environmental performance*.....	62.3	54 ◇					
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP.....	0.5	85 ◇					
	<b>Market sophistication</b> .....	<b>47.1</b>	<b>63</b>					
4.1	Credit.....	39.6	54					
4.1.1	Ease of getting credit*.....	35.0	106 ○◇					
4.1.2	Domestic credit to private sector, % GDP.....	103.6	26 ●					
4.1.3	Microfinance gross loans, % GDP.....	n/a	n/a					
4.2	Investment.....	37.2	82					
4.2.1	Ease of protecting minority investors*.....	55.0	78					
4.2.2	Market capitalization, % GDP.....	n/a	n/a					
4.2.3	Venture capital deals/bn PPP\$ GDP.....	0.0	64					
4.3	Trade, competition, & market scale.....	64.3	53					
4.3.1	Applied tariff rate, weighted mean, %.....	3.0	63					
4.3.2	Intensity of local competition <sup>†</sup> .....	63.7	84 ◇					
4.3.3	Domestic market scale, bn PPP\$.....	302.5	52					
	<b>Business sophistication</b> .....	<b>21.0</b>	<b>111</b> ○◇					
5.1	Knowledge workers.....	18.7	[105]					
5.1.1	Knowledge-intensive employment, %.....	17.9	79 ◇					
5.1.2	Firms offering formal training, % firms.....	n/a	n/a					
5.1.3	GERD performed by business, % GDP.....	n/a	n/a					
5.1.4	GERD financed by business, % <sup>Ⓔ</sup> .....	1.4	88 ○◇					
5.1.5	Females employed w/advanced degrees, %.....	n/a	n/a					
5.2	Innovation linkages.....	21.0	100 ◇					
5.2.1	University/industry research collaboration <sup>†</sup> .....	30.9	99 ◇					
5.2.2	State of cluster development <sup>†</sup> .....	51.1	46 ●					
5.2.3	GERD financed by abroad, % <sup>Ⓔ</sup> .....	1.2	89 ○◇					
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	63					
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....	0.0	101 ○					
5.3	Knowledge absorption.....	23.2	89 ◇					
5.3.1	Intellectual property payments, % total trade.....	n/a	n/a					
5.3.2	High-tech net imports, % total trade.....	6.9	82					
5.3.3	ICT services imports, % total trade.....	0.9	78					
5.3.4	FDI net inflows, % GDP.....	0.3	121 ○					
5.3.5	Research talent, % in business enterprise.....	n/a	n/a					
	<b>Knowledge &amp; technology outputs</b> .....	<b>30.2</b>	<b>45</b> ●					
6.1	Knowledge creation.....	6.0	[86]					
6.1.1	Patents by origin/bn PPP\$ GDP.....	n/a	n/a					
6.1.2	PCT patents by origin/bn PPP\$ GDP.....	n/a	n/a					
6.1.3	Utility models by origin/bn PPP\$ GDP.....	n/a	n/a					
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....	2.0	112 ○◇					
6.1.5	Citable documents H index.....	7.5	81 ◇					
6.2	Knowledge impact.....	36.0	67					
6.2.1	Growth rate of PPP\$ GDP/worker, %.....	0.1	76					
6.2.2	New businesses/th pop. 15-64.....	n/a	n/a					
6.2.3	Computer software spending, % GDP.....	0.4	27 ●					
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....	1.3	97 ◇					
6.2.5	High- & medium-high-tech manufactures, %.....	0.2	62					
6.3	Knowledge diffusion.....	48.5	12 ●					
6.3.1	Intellectual property receipts, % total trade.....	n/a	n/a					
6.3.2	High-tech net exports, % total trade.....	0.2	103 ◇					
6.3.3	ICT services exports, % total trade.....	4.9	14 ●					
6.3.4	FDI net outflows, % GDP.....	6.2	10 ●◆					
	<b>Creative outputs</b> .....	<b>28.6</b>	<b>63</b> ◇					
7.1	Intangible assets.....	49.1	42 ●					
7.1.1	Trademarks by origin/bn PPP\$ GDP.....	n/a	n/a					
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....	n/a	n/a					
7.1.3	ICTs & business model creation <sup>†</sup> .....	51.4	100 ◇					
7.1.4	ICTs & organizational model creation <sup>†</sup> .....	46.9	93 ◇					
7.2	Creative goods & services.....	10.6	91 ◇					
7.2.1	Cultural & creative services exports, % total trade.....	n/a	n/a					
7.2.2	National feature films/mn pop. 15-69.....	n/a	n/a					
7.2.3	Entertainment & Media market/th pop. 15-69.....	11.1	33 ◇					
7.2.4	Printing & other media, % manufacturing.....	0.3	89 ○◇					
7.2.5	Creative goods exports, % total trade <sup>Ⓔ</sup> .....	0.4	59					
7.3	Online creativity.....	5.4	68 ◇					
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....	7.9	44 ●					
7.3.2	Country-code TLDs/th pop. 15-69.....	0.4	96 ◇					
7.3.3	Wikipedia edits/mn pop. 15-69 <sup>Ⓔ</sup> .....	16.3	54 ◇					
7.3.4	Mobile app creation/bn PPP\$ GDP.....	2.2	76 ◇					

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; \* an index; † a survey question.

Ⓔ indicates that the country's data are older than the base year; see Appendix II 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; see page 75 of this appendix for details.