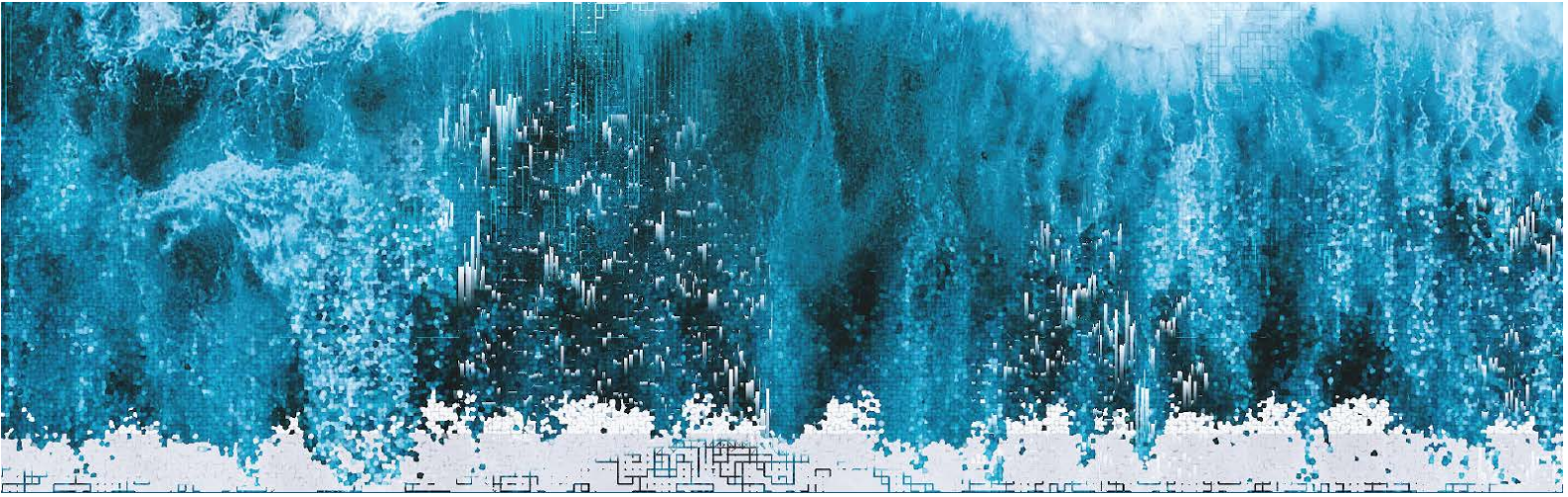


GLOBAL INNOVATION INDEX 2018

Uruguay

62nd Uruguay is ranked 62nd in the GII 2018, moving up 5 positions from the previous year.

The GII indicators are grouped into innovation inputs and outputs. The following table reflects Uruguay's rankings over time[1].

Uruguay's ranking over time

	GII	Input	Output	Efficiency
2018	62	67	59	51
2017	67	61	64	82
2016	62	61	66	81

- Uruguay loses positions in innovation inputs, ranking 67th this year, down 6 positions from 2017-2016.
- It improves in innovation outputs, taking the 59th spot this year and moving up 5 positions from 2017 and 7 from 2016.
- This year Uruguay proves to be quite efficient in translating its innovation inputs into more outputs, as demonstrated by the Innovation Efficiency Ratio, in which it ranks 51st worldwide. The Efficiency Ratio improves markedly this year, moving up from the 81st-82nd position it held over the last two years. This improvement is partly influenced by the better ranking achieved in innovation outputs (59th) compared to inputs (67th).

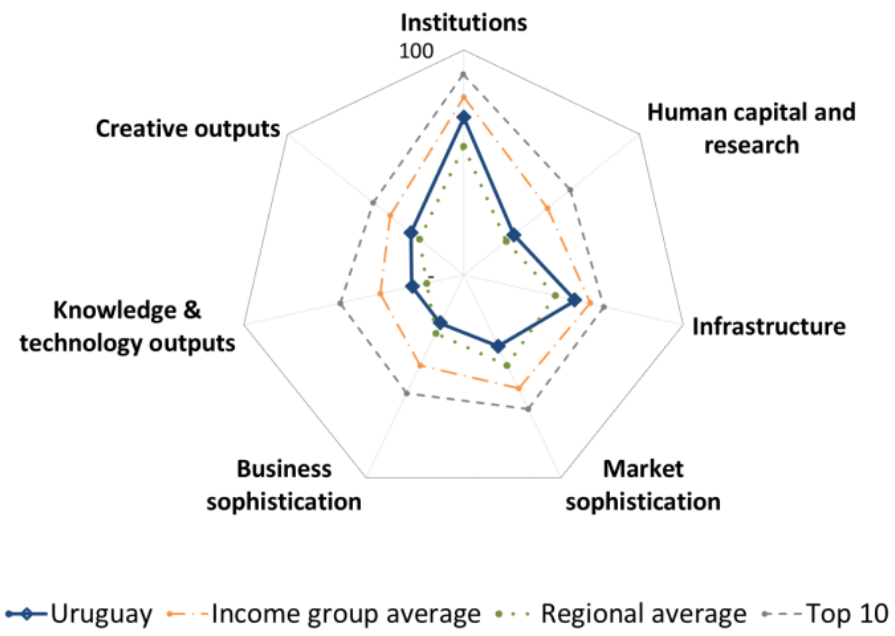
43rd Uruguay is ranked 43rd among the 47 high-income countries in the GII 2018.

4th Uruguay is ranked 4th among the 18 countries in Latin America and the Caribbean.

[1] Note that year-on-year comparisons of the GII ranks are imperfect and influenced by changes in the GII model and data availability.

Benchmarking Uruguay to other high-income countries and the Latin America and the Caribbean region

Uruguay's scores by area



High-income countries

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

Latin America and the Caribbean region

Compared to other countries in the Latin America and the Caribbean region, Uruguay performs above average in 5 of the 7 GII areas: **Institutions, Human Capital & Research, Infrastructure, Knowledge & Technology Outputs,** and **Creative Outputs**.

Uruguay's innovation profile

Strengths

- Uruguay presents most of its comparative strengths on the **innovation input** side, and especially in the area **Infrastructure** (42nd).

- **Infrastructure** (42nd) is the top-ranked GII area for Uruguay. Here the country shows particularly strong performance in two of its three components: *Information & communication technologies - ICTs* (33rd) and *Ecological sustainability* (34th). At the indicator level, four of the seven indicators that belong to these two areas present strong ranks. These are *ICT use* (31st), *Government's online service* (28th), *GDP per unit of energy use* (19th), and *ISO 14001 environmental certificates* (30th).

- Other strong indicators on the input side are found in the following areas.

- In **Institutions** (42nd), Uruguay performs strongly in the indicator *Political stability & safety*, where it ranks 9th worldwide.

- In **Human Capital & Research** (72nd), Uruguay demonstrates GII strength in the indicator *School life expectancy* (34th).

- Finally, the indicator *Firms offering formal training* (22nd) is highlighted as a strength in **Business Sophistication** (102nd).

- On the **innovation output** side, GII strengths are exhibited in both the areas capturing outputs in the GII.

- In **Knowledge & Technology Outputs** (61st), Uruguay shows strong performance in the indicators *ISO 9001 quality certificates* (18th) and *FDI outflows* (27th).

- The indicator *Wikipedia edits* (14th) is strong in **Creative Outputs** (55th).

Weaknesses

- Most GII weaknesses for Uruguay are found on the **innovation input** side of the GII, and especially in **Market Sophistication** (113th) and **Business Sophistication** (102nd).

- **Market Sophistication** (113th), the lowest-ranked area for Uruguay, is itself signaled as a weakness. Here the area *Investment* (114th) and two indicators – *Microfinance gross loans* (69th) and *Intensity of local competition* (104th) – presents relatively weak performance.

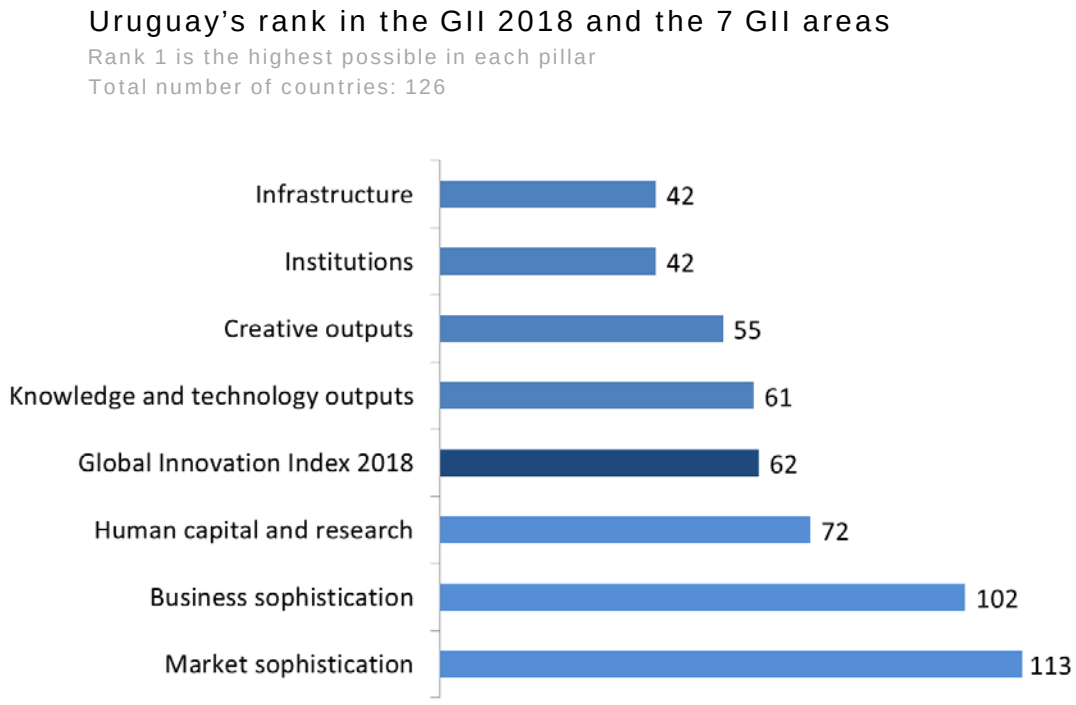
- The area *Knowledge absorption* (113th) and three indicators – *R&D performed by business* (78th), *ICT services imports* (107th), and *Research talent in business enterprise* (80th) – are marked as relatively weak within **Business Sophistication** (102nd).

- In **Human Capital & Research** (72nd), Uruguay exhibits weaknesses in the indicators *Graduates in science & engineering* (81st) and *Global R&D companies' expenditures* (40th).

- Only one indicator, *Gross capital formation* (103rd), is weak in **Infrastructure** (42nd).

- On the **innovation output** side, only two indicators are signaled as weaknesses for Uruguay: *Intellectual property receipts* (100th) in **Knowledge & Technology Outputs** (61st) and *Industrial designs by origin* (113th) in **Creative Outputs** (55th).

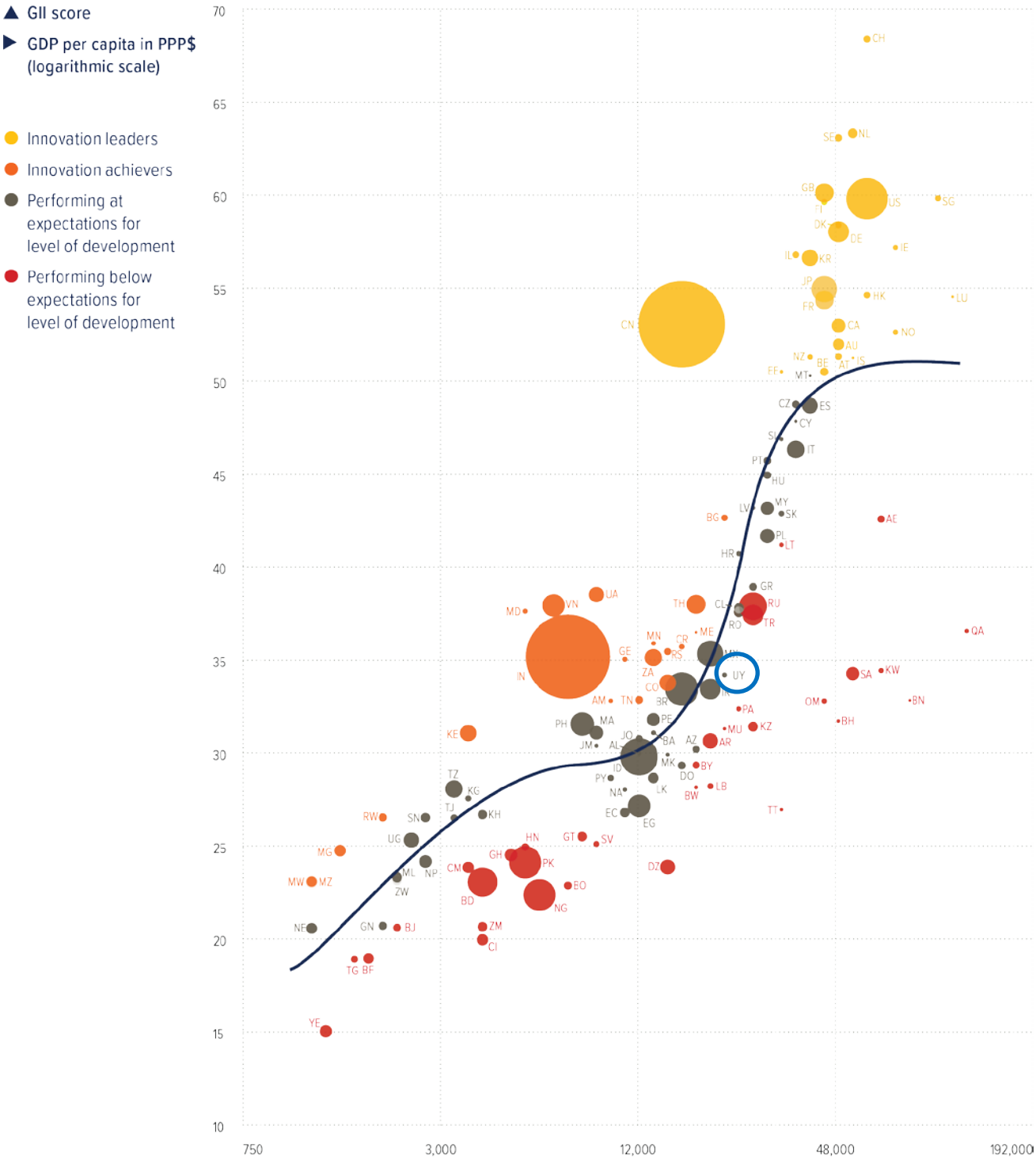
The following figure presents a summary of Uruguay's ranks in the 7 GII areas, as well as the overall rank in the GII 2018.



Expected vs. Observed Innovation Performance

The GII bubble chart shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The depicted trendline gives an indication of the expected innovation performance at different levels of income. Countries located above the trendline are performing better that what would be expected based on their income level. Countries below the line are Innovation Under-performers relative to GDP.

Relative to GDP, Uruguay performs at its expected level of development.



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 Uruguay that is not available or that is outdated.

Missing Data

Code	Indicator	Country Year	Model Year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2014	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	n/a	2016	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	n/a	2016	World Bank, World Development Indicators
6.1.2	PCT patents by origin/bn PPP$ GDP	n/a	2017	WIPO, Intellectual Property Statistics
7.2.1	Cultural & creative services exports, % total trade	n/a	2016	WTO, Trade in Commercial Services
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2016	PwC's Global Entertainment and Media Outlook, 2017–2021

Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2011	2014	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2015	2016	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2010	2016	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2015	2016	UNESCO Institute for Statistics
2.2.2	Graduates in science & engineering, %	2015	2016	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2015	2016	UNESCO Institute for Statistics
4.1.3	Microfinance gross loans, % GDP	2015	2016	Microfinance Information Exchange, Mix Market
5.1.2	Firms offering formal training, % firms	2010	2013	World Bank, Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2015	2016	UNESCO Institute for Statistics
6.1.1	Patents by origin/bn PPP$ GDP	2015	2016	WIPO, Intellectual Property Statistics
6.1.3	Utility models by origin/bn PPP$ GDP	2015	2016	WIPO, Intellectual Property Statistics
6.2.5	High- & medium-high-tech manufactures, %	2012	2015	UNIDO, Industrial Statistics
7.1.1	Trademarks by origin/bn PPP$ GDP	2015	2016	WIPO, Intellectual Property Statistics
7.1.2	Industrial designs by origin/bn PPP$ GDP	2015	2016	WIPO, Intellectual Property Statistics
7.2.4	Printing & other media, % manufacturing	2012	2015	UNIDO, Industrial Statistics
7.3.3	Wikipedia edits/mn pop. 15–69	2016	2017	Wikimedia Foundation

URUGUAY

GII 2018 rank **62**

Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2017 rank
59	67	High	LCN	51	3.5	78.4	22,371.3	67

		Score/Value	Rank	
	Institutions	**70.0**	**42**	
1.1	Political environment	69.2	38	
1.1.1	Political stability & safety*	90.0	9	●
1.1.2	Government effectiveness*	58.8	41	◇
1.2	Regulatory environment	69.7	50	
1.2.1	Regulatory quality*	56.6	50	◇
1.2.2	Rule of law*	61.2	39	
1.2.3	Cost of redundancy dismissal, salary weeks	20.8	81	
1.3	Business environment	71.0	57	
1.3.1	Ease of starting a business*	89.8	52	
1.3.2	Ease of resolving insolvency*	52.2	61	
	Human capital & research	**28.6**	**72**	◇
2.1	Education	54.4	41	
2.1.1	Expenditure on education, % GDP[d]	4.4	71	
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3	School life expectancy, years[d]	15.9	34	●
2.1.4	PISA scales in reading, maths & science	430.0	48	◇
2.1.5	Pupil-teacher ratio, secondary[d]	11.3	39	
2.2	Tertiary education	23.9	85	◇
2.2.1	Tertiary enrolment, % gross[d]	55.6	46	
2.2.2	Graduates in science & engineering, %[d]	14.4	81	○ ◇
2.2.3	Tertiary inbound mobility, %	n/a	n/a	
2.3	Research & development (R&D)	7.5	67	◇
2.3.1	Researchers, FTE/mn pop.	645.2	60	◇
2.3.2	Gross expenditure on R&D, % GDP[d]	0.4	71	◇
2.3.3	Global R&D companies, top 3, mn US$	0.0	40	○ ◇
2.3.4	QS university ranking, average score top 3*	14.0	58	
	Infrastructure	**50.6**	**42**	
3.1	Information & communication technologies (ICTs)	73.0	33	●
3.1.1	ICT access*	72.8	44	◇
3.1.2	ICT use*	70.3	31	●
3.1.3	Government's online service*	77.5	28	●
3.1.4	E-participation*	71.2	39	
3.2	General infrastructure	30.9	92	◇
3.2.1	Electricity output, kWh/cap	4,005.8	52	
3.2.2	Logistics performance*	42.2	64	◇
3.2.3	Gross capital formation, % GDP	17.7	103	○ ◇
3.3	Ecological sustainability	48.1	34	●
3.3.1	GDP/unit of energy use	13.3	19	●
3.3.2	Environmental performance*	64.7	43	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	3.3	30	●
	Market sophistication	**35.1**	**113**	○ ◇
4.1	Credit	23.4	106	◇
4.1.1	Ease of getting credit*	60.0	61	
4.1.2	Domestic credit to private sector, % GDP	28.2	102	◇
4.1.3	Microfinance gross loans, % GDP[d]	0.0	69	○
4.2	Investment	30.2	114	○ ◇
4.2.1	Ease of protecting minority investors*	43.3	105	◇
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital deals/bn PPP$ GDP	0.0	51	
4.3	Trade, competition, & market scale	51.8	95	◇
4.3.1	Applied tariff rate, weighted mean, %	5.7	93	◇
4.3.2	Intensity of local competition†	60.3	104	○ ◇
4.3.3	Domestic market scale, bn PPP$	78.4	84	

		Score/Value	Rank	
	Business sophistication	**23.8**	**102**	◇
5.1	Knowledge workers	31.5	76	◇
5.1.1	Knowledge-intensive employment, %	21.4	71	◇
5.1.2	Firms offering formal training, % firms[d]	48.6	22	●
5.1.3	GERD performed by business, % GDP[d]	0.0	78	○ ◇
5.1.4	GERD financed by business, %	4.6	80	◇
5.1.5	Females employed w/advanced degrees, %	9.5	64	◇
5.2	Innovation linkages	21.3	97	◇
5.2.1	University/industry research collaboration†	38.4	77	◇
5.2.2	State of cluster development†	37.9	94	◇
5.2.3	GERD financed by abroad, %	7.4	50	
5.2.4	JV–strategic alliance deals/bn PPP$ GDP	0.0	86	◇
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.1	59	
5.3	Knowledge absorption	18.5	113	○ ◇
5.3.1	Intellectual property payments, % total trade	0.4	70	
5.3.2	High-tech net imports, % total trade	8.8	55	
5.3.3	ICT services imports, % total trade	0.4	107	○ ◇
5.3.4	FDI net inflows, % GDP	3.5	44	
5.3.5	Research talent, % in business enterprise	0.7	80	○ ◇
	Knowledge & technology outputs	**23.5**	**61**	◇
6.1	Knowledge creation	10.9	66	◇
6.1.1	Patents by origin/bn PPP$ GDP[d]	0.4	86	
6.1.2	PCT patents by origin/bn PPP$ GDP	n/a	n/a	
6.1.3	Utility models by origin/bn PPP$ GDP[d]	0.6	34	
6.1.4	Scientific & technical articles/bn PPP$ GDP	8.9	57	
6.1.5	Citable documents H index	9.8	67	
6.2	Knowledge impact	37.5	59	
6.2.1	Growth rate of PPP$ GDP/worker, %	1.8	42	
6.2.2	New businesses/th pop. 15–64	2.1	50	
6.2.3	Computer software spending, % GDP	0.2	68	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	18.0	18	●
6.2.5	High- & medium-high-tech manufactures, %[d]	0.1	72	◇
6.3	Knowledge diffusion	22.1	50	
6.3.1	Intellectual property receipts, % total trade	0.0	100	○ ◇
6.3.2	High-tech net exports, % total trade	1.4	61	
6.3.3	ICT services exports, % total trade	2.8	38	
6.3.4	FDI net outflows, % GDP	2.1	27	●
	Creative outputs	**30.1**	**55**	◇
7.1	Intangible assets	42.9	62	◇
7.1.1	Trademarks by origin/bn PPP$ GDP[d]	50.4	49	
7.1.2	Industrial designs by origin/bn PPP$ GDP[d]	0.1	113	○ ◇
7.1.3	ICTs & business model creation†	66.3	41	
7.1.4	ICTs & organizational model creation†	60.2	38	
7.2	Creative goods & services	15.3	77	◇
7.2.1	Cultural & creative services exports, % total trade	n/a	n/a	
7.2.2	National feature films/mn pop. 15–69	4.7	41	
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing & other media, % manufacturing[d]	1.1	53	
7.2.5	Creative goods exports, % total trade	0.1	102	◇
7.3	Online creativity	19.1	38	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	6.3	50	
7.3.2	Country-code TLDs/th pop. 15–69	9.8	38	
7.3.3	Wikipedia edits/mn pop. 15–69[d]	68.1	14	●
7.3.4	Mobile app creation/bn PPP$ GDP	14.3	50	

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