

GLOBAL INNOVATION INDEX 2018

Argentina

80th Argentina is ranked 80th in the GII 2018, moving down 4 positions from the previous year.

The GII indicators are grouped into innovation inputs and outputs. The following table reflects Argentina's rankings over time¹.

Argentina's ranking over time

	GII	Input	Output	Efficiency
2018	80	72	81	91
2017	76	72	81	94
2016	81	77	89	98

- Argentina ranks 72nd in innovation inputs for the second consecutive years, up from the 77th position it held in 2016.
- Innovation outputs are also stable, keeping the same position (81st) as last year.
- Relative to its GII position (80th), Argentina's Innovation Efficiency Ratio (91st) ranks rather low. This is partly influenced by higher ranking in innovation inputs (72nd) compared to outputs (81st). The ratio indicates that Argentina's efficiency in translating its innovation inputs into outputs is an area of opportunity for the country.

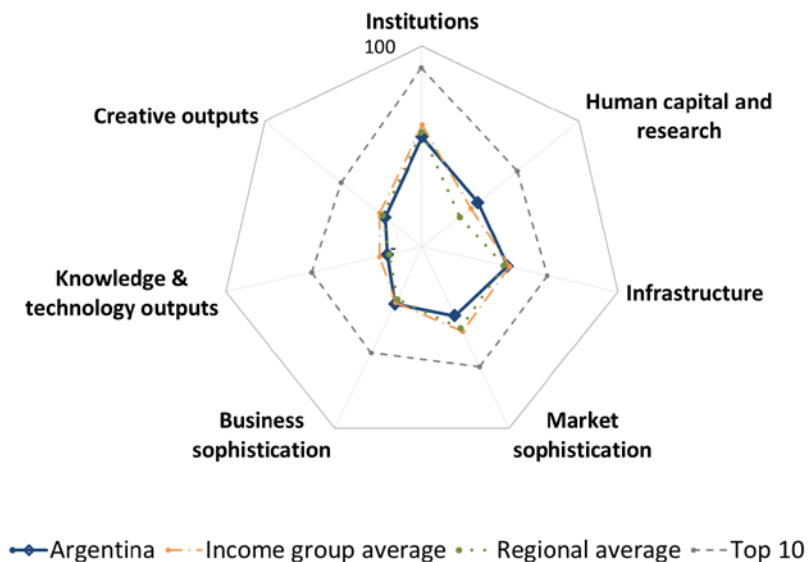
22nd Argentina is ranked 22nd among the 34 upper-middle-income countries in the GII 2018.

9th Argentina is ranked 9th 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 Argentina to other upper-middle-income countries and the Latin America and the Caribbean region

Argentina's scores by area



Upper-middle-income countries

Argentina has high scores in 2 out of the 7 GII areas – **Human Capital & Research** and **Business Sophistication**, in which it scores above the average of the upper-middle-income group.

Top scores in the areas *Education* and *Knowledge workers* are behind these high rankings.

Latin America and the Caribbean region

Compared to other countries in the Latin America and the Caribbean region, Argentina performs above-average in 4 out of the 7 GII areas: Human Capital & Research, Infrastructure, Business Sophistication, and Knowledge & Technology Outputs.

Argentina's innovation profile

Strengths

- Most of Argentina's strengths are accrued within the area **Human Capital & Research** (51st), where the area *Education* (31st) is marked as a strength. At the indicator level, *Expenditure on education* (25th), *School life expectancy* (13th), *Tertiary enrolment* (9th), and *Quality of universities* (29th) present strong ranks.
- Argentina also performs strongly in various indicators within **Business Sophistication** (59th): *Firms offering formal training* (5th), *Intellectual property payments* (7th), and *High-tech imports* (18th).
- On the input side, in **Market Sophistication** (108th), the indicator *Domestic market scale* (27th) is also marked as a strength.
- On the **innovation output** side, comparative strengths for Argentina are found in two indicators: *Quality of scientific publications* (36th) within **Knowledge & Technology Outputs** (87th) and *Trademarks by origin* (31st) within **Creative Outputs** (82nd).

Weaknesses

- In **innovation inputs**, Argentina shows most of its relative GII weaknesses in the area **Market Sophistication** (108th), and in particular in one of its components – *Credit* (117th) and two of its three indicators – *Domestic credit to private sector* (119th) and *Microfinance*

gross loans (73rd). Indicator *Intensity of local competition* (114th) also presents a relatively weak performance.

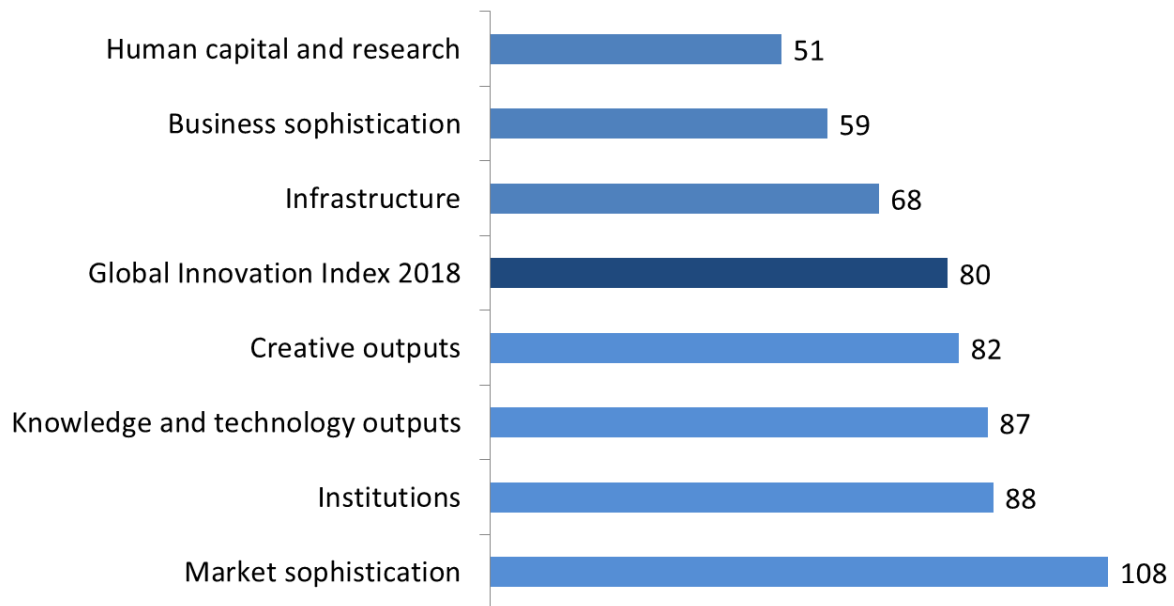
- In **Institutions** (88th), Argentina shows two weaknesses in indicators *Cost of redundancy dismissal* (112th) and *Ease of starting a business* (115th).
- In **Human Capital & Research** (51st), the country performs relatively weakly in two indicators: *Graduates in science & engineering* (85th) and *Global R&D companies' expenditures* (40th).
- Other GII weaknesses on the innovation input side are also found in the indicator *Gross capital formation* (110th) in **Infrastructure** (68th); as well as in *Joint venture–strategic alliance deals* (103rd) in **Business Sophistication** (59th).
- On the **innovation output** side, Argentina exhibits only one weakness within **Knowledge & Technology Outputs** (87th) in the indicator *Productivity growth* (104th).

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

Argentina's rank in the GII 2018 and the 7 GII areas

Rank 1 is the highest possible in each pillar

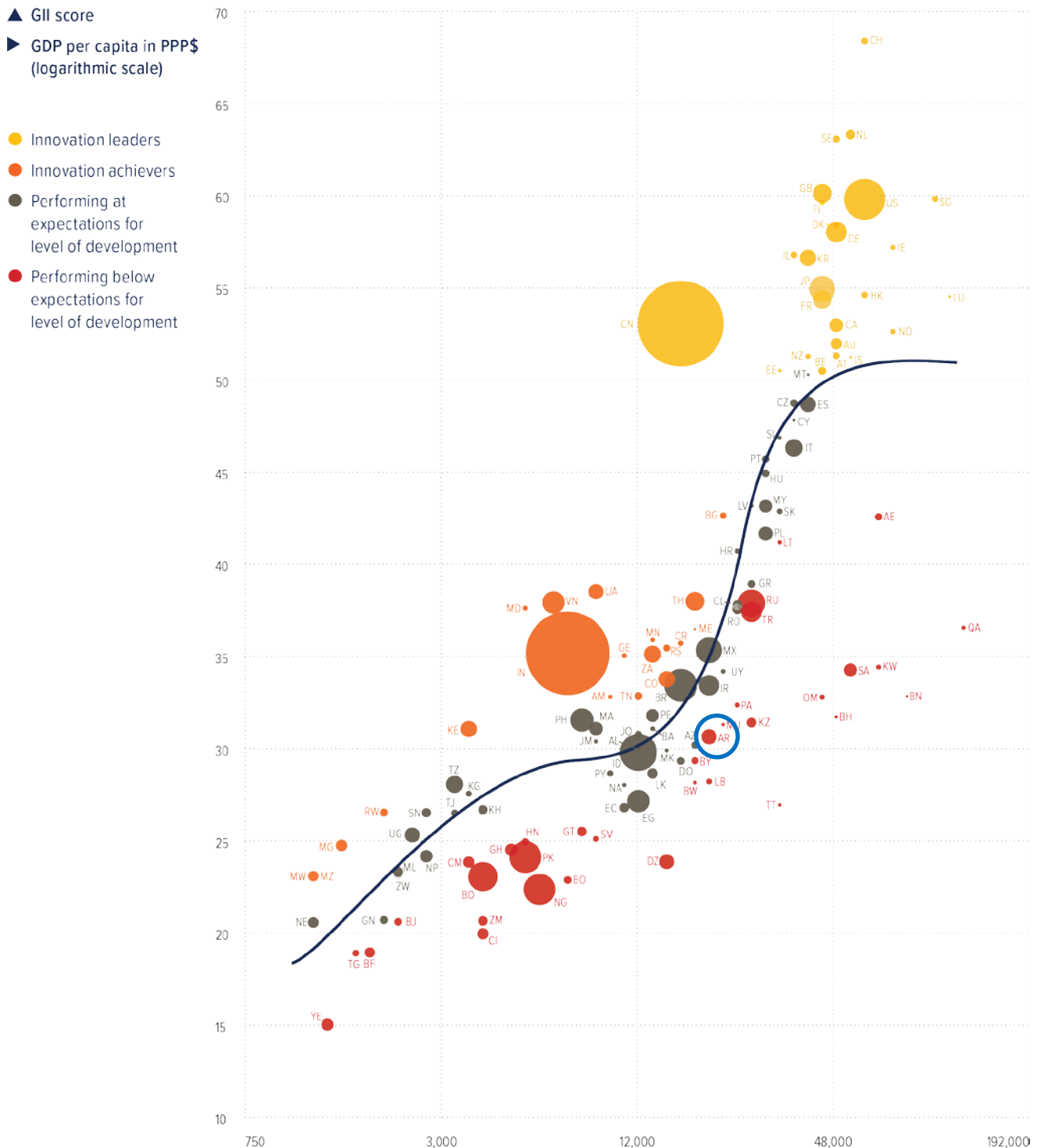
Total number of countries: 126



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 than what would be expected based on their income level. Countries below the line are Innovation Under-performers relative to GDP.

Relative to GDP, Argentina performs below 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 Argentina that is not available or that is outdated.

Missing Data







Code	Indicator	Country Year	Model Year	Source
2.2.3	Tertiary inbound mobility, %	n/a	2016	UNESCO Institute for Statistics
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2017	WIPO, Intellectual Property Statistics
6.2.5	High- & medium-high-tech manufactures, %	n/a	2015	UNIDO, Industrial Statistics
7.2.4	Printing & other media, % manufacturing	n/a	2015	UNIDO, Industrial Statistics

Outdated Data

Code	Indicator	Country Year	Model Year	Source
2.1.3	School life expectancy, years	2015	2016	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2008	2016	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2015	2016	UNESCO Institute for Statistics
2.2.2	Graduates in science & engineering, %	2011	2016	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2015	2016	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	2015	2016	UNESCO Institute for Statistics
5.1.1	Knowledge-intensive employment, %	2014	2016	ILO, ILOSTAT
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
5.1.5	Females employed w/advanced degrees, %	2014	2016	ILO, ILOSTAT
5.3.5	Research talent, % in business enterprise	2015	2016	UNESCO Institute for Statistics
6.2.2	New businesses/th pop. 15–64	2014	2016	World Bank, Doing Business



Output rank	Input rank	Income	Region	Efficiency ratio	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2017 rank
81	72	Upper-middle	LCN	91	44.3	911.5	20,875.8	76

	Score/Value	Rank		Score/Value	Rank	
 Institutions	54.7	88		31.4	59	
1.1 Political environment.....	56.3	54		5.1 Knowledge workers.....	42.0	50
1.1.1 Political stability & safety*.....	69.8	52		5.1.1 Knowledge-intensive employment, % [Ⓔ]	21.8	69
1.1.2 Government effectiveness*.....	49.6	59		5.1.2 Firms offering formal training, % firms [Ⓔ]	63.6	5 ◆
1.2 Regulatory environment.....	49.6	106	◇	5.1.3 GERD performed by business, % GDP [Ⓔ]	0.1	57
1.2.1 Regulatory quality*.....	32.1	101		5.1.4 GERD financed by business, %.....	17.2	69
1.2.2 Rule of law*.....	34.4	83		5.1.5 Females employed w/advanced degrees, % [Ⓔ]	13.6	48
1.2.3 Cost of redundancy dismissal, salary weeks.....	30.3	112	○	5.2 Innovation linkages.....	18.5	112
1.3 Business environment.....	58.2	105	◇	5.2.1 University/industry research collaboration [†]	38.2	78
1.3.1 Ease of starting a business*.....	75.2	115	○ ◇	5.2.2 State of cluster development [†]	37.9	93
1.3.2 Ease of resolving insolvency*.....	41.2	90		5.2.3 GERD financed by abroad, %.....	3.3	67
				5.2.4 JV-strategic alliance deals/bn PPP\$ GDP.....	0.0	103 ○
				5.2.5 Patent families 2+ offices/bn PPP\$ GDP.....	0.1	69
 Human capital & research	35.5	51		5.3 Knowledge absorption.....	33.6	48
2.1 Education.....	57.0	31	●	5.3.1 Intellectual property payments, % total trade.....	3.0	7 ◆
2.1.1 Expenditure on education, % GDP.....	5.9	25	●	5.3.2 High-tech net imports, % total trade.....	12.3	18 ●
2.1.2 Government funding/pupil, secondary, % GDP/cap.....	23.4	35		5.3.3 ICT services imports, % total trade.....	1.3	52
2.1.3 School life expectancy, years [Ⓔ]	17.4	13	◆	5.3.4 FDI net inflows, % GDP.....	1.2	98
2.1.4 PISA scales in reading, maths & science.....	468.9	39	◆	5.3.5 Research talent, % in business enterprise [Ⓔ]	8.6	67
2.1.5 Pupil-teacher ratio, secondary [Ⓔ]	12.2	46				
2.2 Tertiary education.....	30.7	68		 Knowledge & technology outputs	17.9	87
2.2.1 Tertiary enrolment, % gross [Ⓔ]	85.7	9	◆	6.1 Knowledge creation.....	11.0	65
2.2.2 Graduates in science & engineering, % [Ⓔ]	13.6	85	○ ◇	6.1.1 Patents by origin/bn PPP\$ GDP.....	1.0	62
2.2.3 Tertiary inbound mobility, %.....	n/a	n/a		6.1.2 PCT patents by origin/bn PPP\$ GDP.....	n/a	n/a
2.3 Research & development (R&D).....	18.9	45		6.1.3 Utility models by origin/bn PPP\$ GDP.....	0.2	43
2.3.1 Researchers, FTE/mn pop. [Ⓔ]	1,220.0	45		6.1.4 Scientific & technical articles/bn PPP\$ GDP.....	6.7	67
2.3.2 Gross expenditure on R&D, % GDP [Ⓔ]	0.6	51		6.1.5 Citable documents H index.....	25.7	36 ◆
2.3.3 Global R&D companies, top 3, mn US\$.....	0.0	40	○ ◇	6.2 Knowledge impact.....	25.8	99
2.3.4 QS university ranking, average score top 3*.....	46.4	29	◆	6.2.1 Growth rate of PPP\$ GDP/worker, %.....	(3.5)	104 ○ ◇
				6.2.2 New businesses/th pop. 15-64 [Ⓔ]	0.4	89
 Infrastructure	43.4	68		6.2.3 Computer software spending, % GDP.....	0.2	75
3.1 Information & communication technologies (ICTs).....	65.5	47		6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP.....	8.1	44
3.1.1 ICT access*.....	68.7	58		6.2.5 High- & medium-high-tech manufactures, %.....	n/a	n/a
3.1.2 ICT use*.....	59.6	47	◆	6.3 Knowledge diffusion.....	16.8	80
3.1.3 Government's online service*.....	71.0	43		6.3.1 Intellectual property receipts, % total trade.....	0.3	34 ◆
3.1.4 E-participation*.....	62.7	59		6.3.2 High-tech net exports, % total trade.....	1.9	55
3.2 General infrastructure.....	28.7	103		6.3.3 ICT services exports, % total trade.....	2.1	52
3.2.1 Electricity output, kWh/cap.....	3,338.5	57		6.3.4 FDI net outflows, % GDP.....	0.3	81
3.2.2 Logistics performance*.....	41.6	65				
3.2.3 Gross capital formation, % GDP.....	16.4	110	○ ◇	 Creative outputs	23.6	82
3.3 Ecological sustainability.....	35.9	70		7.1 Intangible assets.....	38.0	80
3.3.1 GDP/unit of energy use.....	8.2	71		7.1.1 Trademarks by origin/bn PPP\$ GDP.....	63.8	31 ●
3.3.2 Environmental performance*.....	59.3	65		7.1.2 Industrial designs by origin/bn PPP\$ GDP.....	1.3	64
3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP.....	1.9	50		7.1.3 ICTs & business model creation [†]	51.0	101
				7.1.4 ICTs & organizational model creation [†]	48.8	81
 Market sophistication	37.8	108	◇	7.2 Creative goods & services.....	11.2	88
4.1 Credit.....	19.6	117	○ ◇	7.2.1 Cultural & creative services exports, % total trade.....	0.3	36
4.1.1 Ease of getting credit*.....	55.0	70		7.2.2 National feature films/mn pop. 15-69.....	6.2	31 ◆
4.1.2 Domestic credit to private sector, % GDP.....	14.0	119	○ ◇	7.2.3 Entertainment & Media market/th pop. 15-69.....	9.8	36 ◆
4.1.3 Microfinance gross loans, % GDP.....	0.0	73	○	7.2.4 Printing & other media, % manufacturing.....	n/a	n/a
4.2 Investment.....	33.4	100		7.2.5 Creative goods exports, % total trade.....	0.1	91
4.2.1 Ease of protecting minority investors*.....	63.3	42		7.3 Online creativity.....	7.3	60
4.2.2 Market capitalization, % GDP.....	10.9	77		7.3.1 Generic top-level domains (TLDs)/th pop. 15-69.....	3.0	64
4.2.3 Venture capital deals/bn PPP\$ GDP.....	0.0	63		7.3.2 Country-code TLDs/th pop. 15-69.....	4.7	52
4.3 Trade, competition, & market scale.....	60.4	64		7.3.3 Wikipedia edits/mn pop. 15-69.....	12.1	61
4.3.1 Applied tariff rate, weighted mean, %.....	7.5	102	◇	7.3.4 Mobile app creation/bn PPP\$ GDP.....	13.5	52
4.3.2 Intensity of local competition [†]	55.5	114	○ ◇			
4.3.3 Domestic market scale, bn PPP\$.....	911.5	27	●			

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.