Global Innovation Index 2021

ARGENTINA

73rd Argentina ranks 73rd 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 Argentina 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 Argentina in the GII 2021 is between ranks 67 and 75.

Rankings for Argentina (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	73	77	71
2020	80	80	73
2019	73	72	75

- Argentina performs better in innovation outputs than innovation inputs in 2021.
- This year Argentina ranks 77th in innovation inputs, higher than last year but lower than 2019.
- As for innovation outputs, Argentina ranks 71st. This position is higher than both 2020 and 2019.

20th Argentina ranks 20th among the 34 upper middle-income group economies.

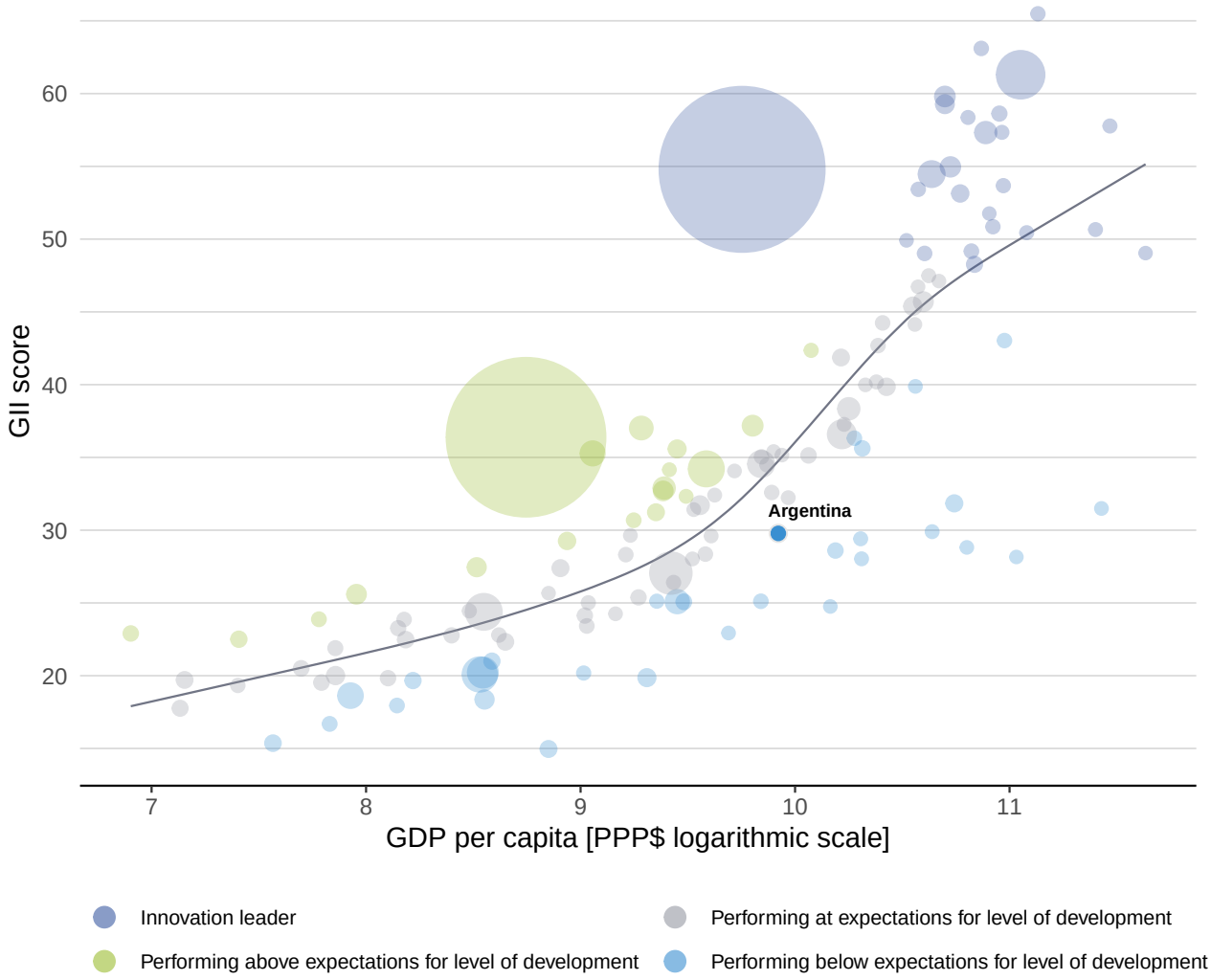
8th Argentina ranks 8th among the 18 economies in Latin America and the Caribbean.

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

The positive relationship between innovation and development

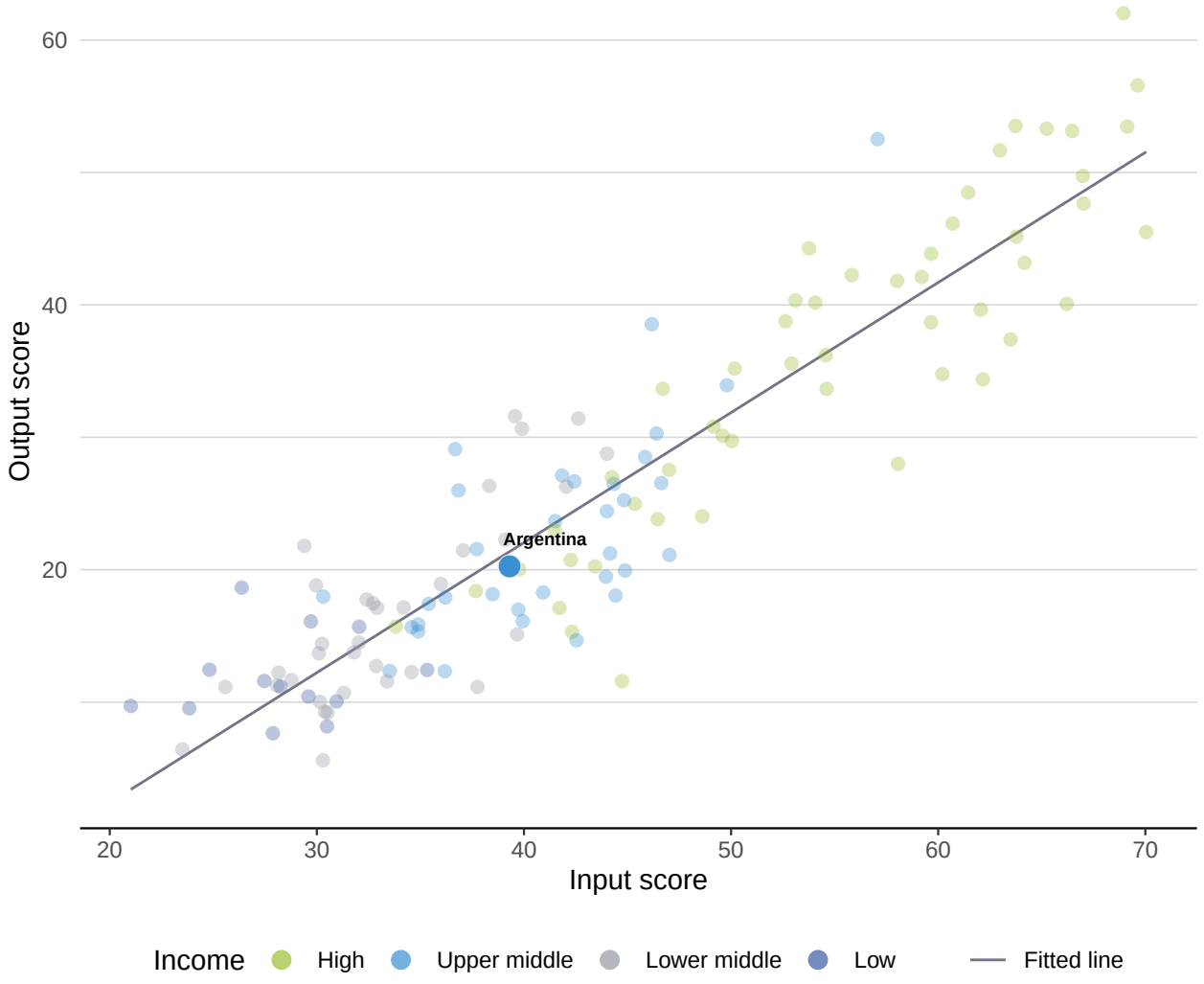


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

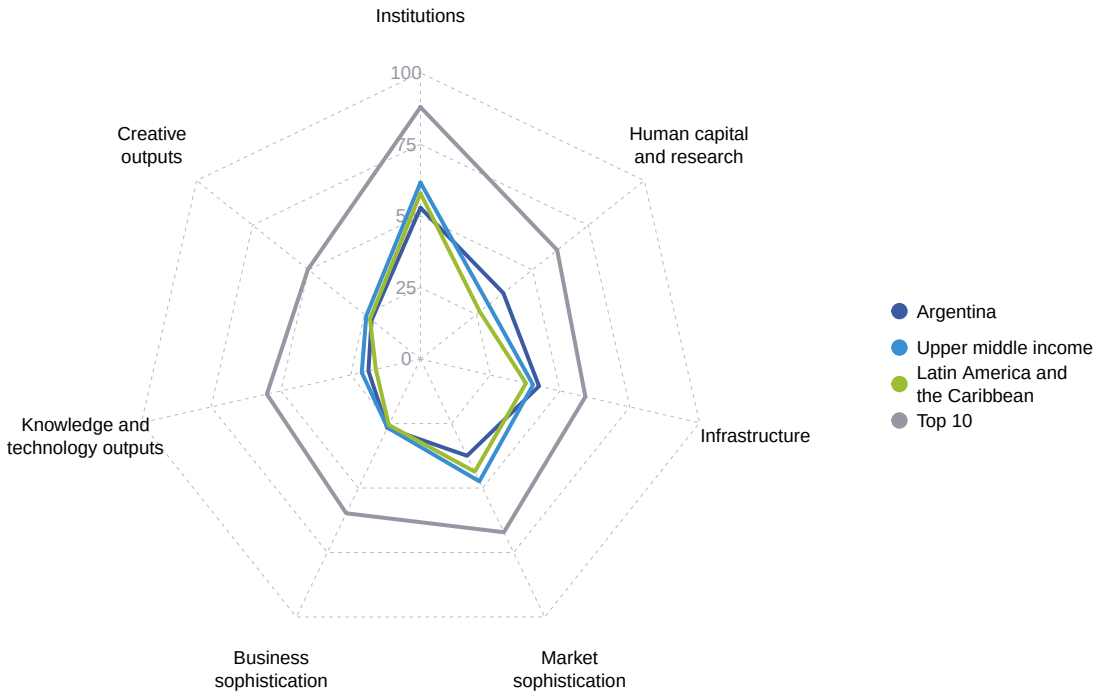
Argentina produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND LATIN AMERICA AND THE CARIBBEAN

The seven GII pillar scores for Argentina



Upper middle-income group economies

Argentina performs above the upper middle-income group average in three pillars, namely: Human capital and research; Infrastructure; and, Business sophistication.

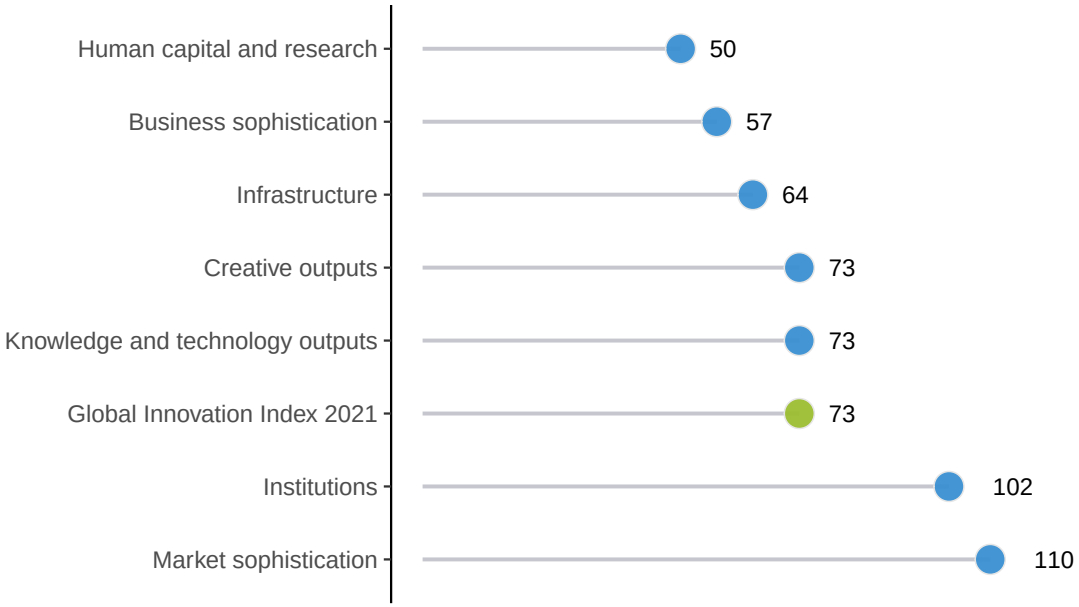
Latin America and the Caribbean

Argentina performs above the regional average in four pillars, namely: Human capital and research; Infrastructure; Business sophistication; and, Knowledge and technology outputs.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Argentina performs best in Human capital and research and its weakest performance is in Market sophistication.

The seven GII pillar ranks for Argentina



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 Argentina in the GII 2021.

Strengths and weaknesses for Argentina

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
2.1.3	School life expectancy, years	14	1.2	Regulatory environment	117
2.2.1	Tertiary enrolment, % gross	6	1.2.3	Cost of redudancy dismissal	119
2.3.4	QS university ranking, top 3	29	2.1.4	PISA scales in reading, maths and science	69
3.1.3	Government's online service	30	4.1	Credit	121
3.1.4	E-participation	29	4.1.2	Domestic credit to private sector, % GDP	117
4.3.3	Domestic market scale, bn PPP$	28	4.1.3	Microfinance gross loans, % GDP	75
5.3.1	Intellectual property payments, % total trade	9	4.2	Investment	124
6.3.1	Intellectual property receipts, % total trade	28	4.2.2	Market capitalization, % GDP	67
7.2.1	Cultural and creative services exports, % total trade	22	4.2.3	Venture capital investors, deals/bn PPP$ GDP	82
7.2.2	National feature films/mn pop. 15–69	26	4.2.4	Venture capital recipients, deals/bn PPP$ GDP	86
			5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	109
			6.2.1	Labor productivity growth, %	105
			6.2.2	New businesses/th pop. 15–64	111

Argentina

GII 2021 rank

73

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
71	77	Upper middle	LCN	45.2	924.5	20,370	80

		Score/ Value	Rank	
Institutions		**52.8**	**102**	◇
1.1	**Political environment**	**53.9**	**81**	
1.1.1	Political and operational stability*	64.3	80	
1.1.2	Government effectiveness*	48.7	79	
1.2	**Regulatory environment**	**44.4**	**117**	○ ◇
1.2.1	Regulatory quality*	30.6	103	◇
1.2.2	Rule of law*	35.4	89	
1.2.3	Cost of redundancy dismissal	30.3	119	○ ◇
1.3	**Business environment**	**60.2**	**106**	
1.3.1	Ease of starting a business*	80.4	109	
1.3.2	Ease of resolving insolvency*	40.0	97	
Human capital and research		**37.0**	**50**	
2.1	**Education**	**48.3**	**71**	
2.1.1	Expenditure on education, % GDP	4.9	43	
2.1.2	Government funding/pupil, secondary, % GDP/cap	17.5	63	
2.1.3	School life expectancy, years	17.7	14	● ◆
2.1.4	PISA scales in reading, maths and science	395.0	69	○
2.1.5	Pupil-teacher ratio, secondary	n/a	n/a	
2.2	**Tertiary education**	**34.8**	**62**	
2.2.1	Tertiary enrolment, % gross	91.6	6	● ◆
2.2.2	Graduates in science and engineering, %	16.0	94	
2.2.3	Tertiary inbound mobility, %	2.8	68	
2.3	**Research and development (R&D)**	**28.0**	**39**	◆
2.3.1	Researchers, FTE/mn pop.	1,210.5	49	
2.3.2	Gross expenditure on R&D, % GDP	0.6	61	
2.3.3	Global corporate R&D investors, top 3, mn US$	44.0	36	◆
2.3.4	QS university ranking, top 3*	42.8	29	● ◆
Infrastructure		**42.5**	**64**	
3.1	**Information and communication technologies (ICTs)**	**75.8**	**46**	
3.1.1	ICT access*	70.3	60	
3.1.2	ICT use*	62.6	59	
3.1.3	Government's online service*	84.7	30	●
3.1.4	E-participation*	85.7	29	●
3.2	**General infrastructure**	**21.7**	**100**	
3.2.1	Electricity output, GWh/mn pop.	3,096.3	65	
3.2.2	Logistics performance*	39.0	60	
3.2.3	Gross capital formation, % GDP	17.3	102	
3.3	**Ecological sustainability**	**29.9**	**60**	
3.3.1	GDP/unit of energy use	10.8	62	
3.3.2	Environmental performance*	52.2	52	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	1.5	56	
Market sophistication		**37.5**	**110**	◇
4.1	**Credit**	**21.8**	**121**	○ ◇
4.1.1	Ease of getting credit*	50.0	94	◇
4.1.2	Domestic credit to private sector, % GDP	16.0	117	○ ◇
4.1.3	Microfinance gross loans, % GDP	0.0	75	○
4.2	**Investment**	**17.1**	**124**	○ ◇
4.2.1	Ease of protecting minority investors*	62.0	60	
4.2.2	Market capitalization, % GDP	11.5	67	○
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.0	82	○
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	86	○
4.3	**Trade, diversification, and market scale**	**73.6**	**50**	
4.3.1	Applied tariff rate, weighted avg., %	7.3	99	
4.3.2	Domestic industry diversification	86.6	64	
4.3.3	Domestic market scale, bn PPP$	924.5	28	●

		Score/ Value	Rank	
Business sophistication		**26.7**	**57**	
5.1	**Knowledge workers**	**29.4**	**71**	
5.1.1	Knowledge-intensive employment, %	24.6	60	
5.1.2	Firms offering formal training, %	40.2	28	
5.1.3	GERD performed by business, % GDP	0.2	57	
5.1.4	GERD financed by business, %	17.8	69	
5.1.5	Females employed w/advanced degrees, %	15.2	49	
5.2	**Innovation linkages**	**15.7**	**105**	
5.2.1	University-industry R&D collaboration†	37.6	91	
5.2.2	State of cluster development and depth†	41.0	98	
5.2.3	GERD financed by abroad, % GDP	0.1	52	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	109	○
5.2.5	Patent families/bn PPP$ GDP	0.1	63	
5.3	**Knowledge absorption**	**35.1**	**41**	
5.3.1	Intellectual property payments, % total trade	2.6	9	● ◆
5.3.2	High-tech imports, % total trade	9.0	45	
5.3.3	ICT services imports, % total trade	1.8	38	◆
5.3.4	FDI net inflows, % GDP	1.9	82	
5.3.5	Research talent, % in businesses	9.7	63	
Knowledge and technology outputs		**18.7**	**73**	
6.1	**Knowledge creation**	**12.7**	**70**	
6.1.1	Patents by origin/bn PPP$ GDP	0.4	82	
6.1.2	PCT patents by origin/bn PPP$ GDP	n/a	n/a	
6.1.3	Utility models by origin/bn PPP$ GDP	0.1	52	
6.1.4	Scientific and technical articles/bn PPP$ GDP	11.2	76	
6.1.5	Citable documents H-index	27.5	36	
6.2	**Knowledge impact**	**26.1**	**82**	
6.2.1	Labor productivity growth, %	–2.2	105	○
6.2.2	New businesses/th pop. 15–64	0.2	111	○
6.2.3	Software spending, % GDP	0.2	63	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	6.4	44	
6.2.5	High-tech manufacturing, %	28.1	45	
6.3	**Knowledge diffusion**	**17.2**	**65**	
6.3.1	Intellectual property receipts, % total trade	0.4	28	● ◆
6.3.2	Production and export complexity	39.0	72	
6.3.3	High-tech exports, % total trade	0.8	80	
6.3.4	ICT services exports, % total trade	2.7	42	
Creative outputs		**21.9**	**73**	
7.1	**Intangible assets**	**27.4**	**76**	
7.1.1	Trademarks by origin/bn PPP$ GDP	47.5	47	
7.1.2	Global brand value, top 5,000, % GDP	12.3	56	
7.1.3	Industrial designs by origin/bn PPP$ GDP	1.0	68	
7.1.4	ICTs and organizational model creation†	50.6	80	
7.2	**Creative goods and services**	**14.2**	**66**	
7.2.1	Cultural and creative services exports, % total trade	1.2	22	●
7.2.2	National feature films/mn pop. 15–69	7.4	26	● ◆
7.2.3	Entertainment and media market/th pop. 15–69	5.2	46	
7.2.4	Printing and other media, % manufacturing	n/a	n/a	
7.2.5	Creative goods exports, % total trade	0.3	72	
7.3	**Online creativity**	**18.5**	**63**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	3.0	62	
7.3.2	Country-code TLDs/th pop. 15–69	6.3	46	
7.3.3	Wikipedia edits/mn pop. 15–69	55.6	57	
7.3.4	Mobile app creation/bn PPP$ GDP	8.4	52	

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 Argentina.

Missing data for Argentina

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	n/a	2019	UNESCO Institute for Statistics
6.1.2	PCT patents by origin/bn PPP$ GDP	n/a	2020	World Intellectual Property Organization
7.2.4	Printing and other media, % manufacturing	n/a	2018	United Nations Industrial Development Organization

Outdated data for Argentina

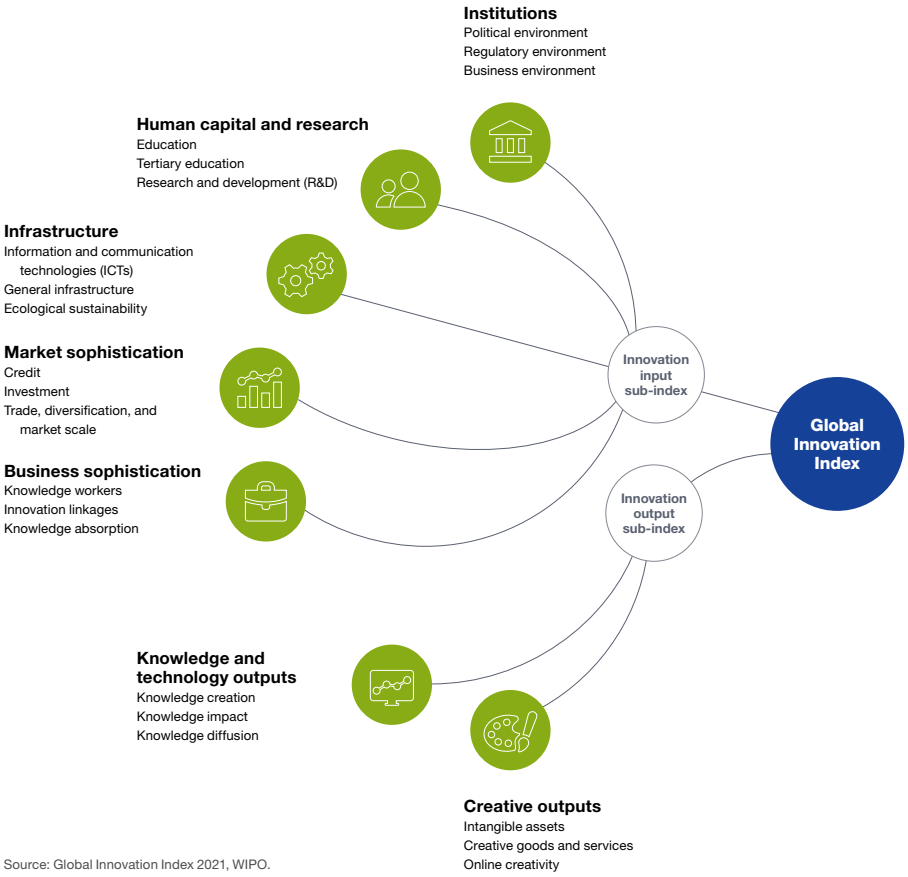
Code	Indicator name	Economy year	Model year	Source
2.2.3	Tertiary inbound mobility, %	2017	2018	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.1.2	Domestic credit to private sector, % GDP	2017	2019	International Monetary Fund
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	2019	2020	Refinitiv Eikon
5.1.2	Firms offering formal training, %	2017	2019	World Bank
5.1.3	GERD performed by business, % GDP	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.2.3	GERD financed by abroad, % GDP	2017	2018	UNESCO Institute for Statistics

Code	Indicator name	Economy year	Model year	Source
5.3.5	Research talent, % in businesses	2017	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators

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.



Source: Global Innovation Index 2021, WIPO.

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.