Global Innovation Index 2021

URUGUAY

65th Uruguay ranks 65th 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 Uruguay 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 Uruguay in the GII 2021 is between ranks 62 and 66.

Rankings for Uruguay (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	65	69	63
2020	69	69	65
2019	62	66	61

- Uruguay performs better in innovation outputs than innovation inputs in 2021.
- This year Uruguay ranks 69th in innovation inputs, the same as last year but lower than 2019.
- As for innovation outputs, Uruguay ranks 63rd. This position is higher than last year but lower than 2019.

43rd Uruguay ranks 43rd among the 51 high-income group economies.

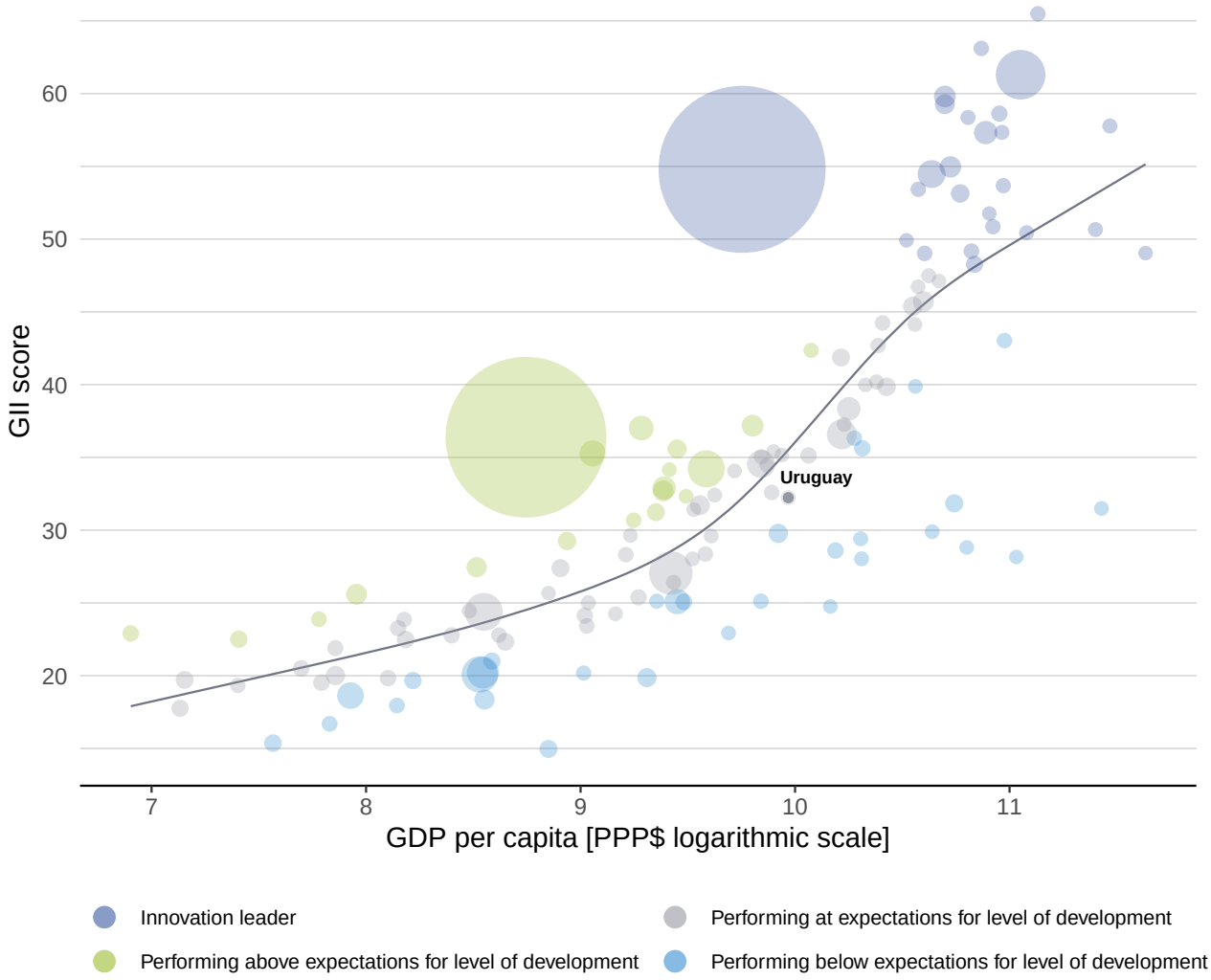
5th Uruguay ranks 5th among the 18 economies in Latin America and the Caribbean.

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, Uruguay's performance is at expectations for its level of development.

The positive relationship between innovation and development

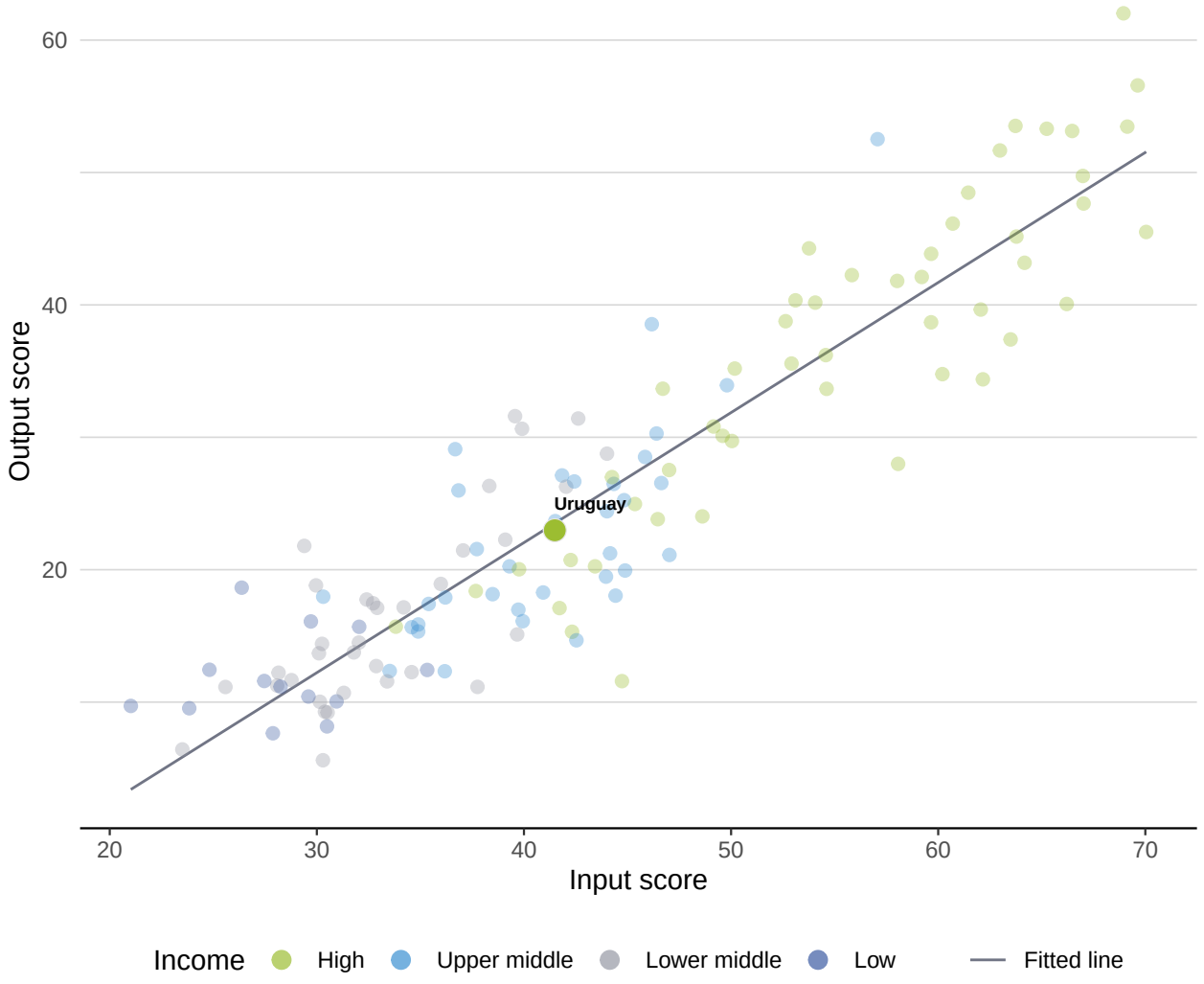


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

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

Innovation input to output performance



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

The seven GII pillar scores for Uruguay

High-income group economies

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

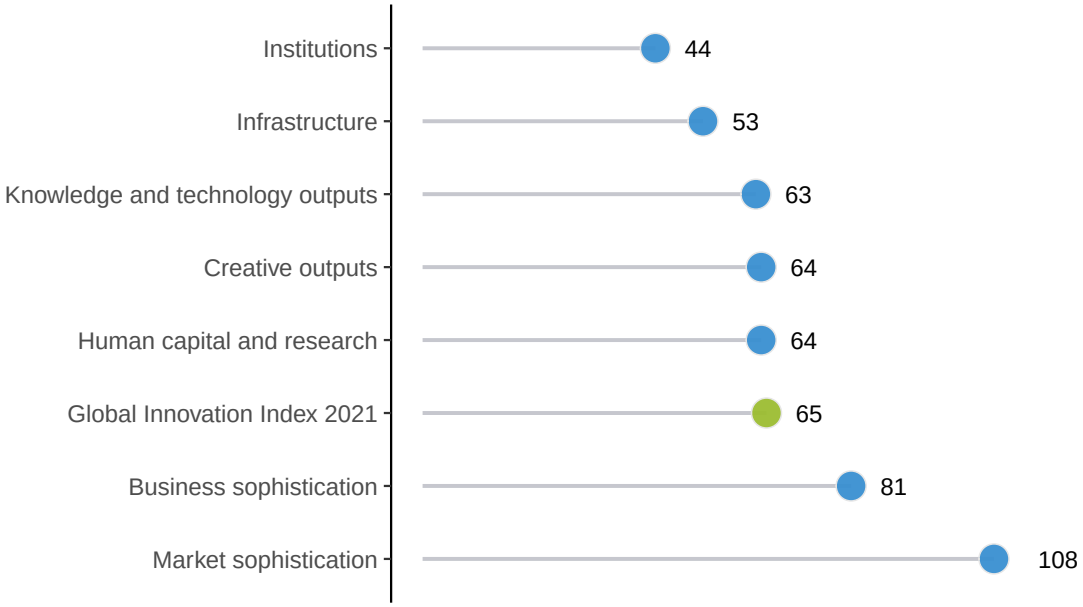
Latin America and the Caribbean

Uruguay performs above the regional average in five pillars, namely: Institutions; Human capital and research; Infrastructure; Knowledge and technology outputs; and, Creative outputs.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Uruguay performs best in Institutions and its weakest performance is in Market sophistication.

The seven GII pillar ranks for Uruguay



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 Uruguay in the GII 2021.

Strengths and weaknesses for Uruguay

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.1.1	Political and operational stability	13	2.2.2	Graduates in science and engineering, %	86
2.1.3	School life expectancy, years	20	2.3.3	Global corporate R&D investors, top 3, mn US$	41
3.3.1	GDP/unit of energy use	25	3.2	General infrastructure	111
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	29	3.2.3	Gross capital formation, % GDP	107
4.2.3	Venture capital investors, deals/bn PPP$ GDP	19	4.1	Credit	113
5.1.2	Firms offering formal training, %	14	4.1.3	Microfinance gross loans, % GDP	68
5.3.3	ICT services imports, % total trade	12	4.2.1	Ease of protecting minority investors	122
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	22	4.3.2	Domestic industry diversification	89
6.3.4	ICT services exports, % total trade	25	5.1.4	GERD financed by business, %	83
7.2.1	Cultural and creative services exports, % total trade	20	5.3.5	Research talent, % in businesses	81
			7.1.2	Global brand value, top 5,000, % GDP	80
			7.2.5	Creative goods exports, % total trade	112

Uruguay

GII 2021 rank

65

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
63	69	High	LCN	3.5	75.3	21,338	69

		Score/ Value	Rank	
Institutions		**70.3**	**44**	
1.1	**Political environment**	**72.0**	**38**	
1.1.1	Political and operational stability*	83.9	13	●
1.1.2	Government effectiveness*	66.1	40	
1.2	**Regulatory environment**	**67.3**	**60**	◇
1.2.1	Regulatory quality*	56.8	48	◇
1.2.2	Rule of law*	63.1	37	
1.2.3	Cost of redundancy dismissal	20.8	89	
1.3	**Business environment**	**71.6**	**65**	
1.3.1	Ease of starting a business*	89.6	56	
1.3.2	Ease of resolving insolvency*	53.6	65	
Human capital and research		**31.7**	**64**	◇
2.1	**Education**	**52.3**	**59**	
2.1.1	Expenditure on education, % GDP	5.0	37	
2.1.2	Government funding/pupil, secondary, % GDP/cap	16.1	69	◇
2.1.3	School life expectancy, years ◴	16.8	20	●
2.1.4	PISA scales in reading, maths and science	423.5	52	◇
2.1.5	Pupil-teacher ratio, secondary ◴	12.7	55	
2.2	**Tertiary education**	**33.4**	**65**	◇
2.2.1	Tertiary enrolment, % gross ◴	63.1	45	
2.2.2	Graduates in science and engineering, % ◴	17.5	86	○ ◇
2.2.3	Tertiary inbound mobility, %	n/a	n/a	
2.3	**Research and development (R&D)**	**9.4**	**61**	◇
2.3.1	Researchers, FTE/mn pop. ◴	696.4	58	◇
2.3.2	Gross expenditure on R&D, % GDP ◴	0.4	71	◇
2.3.3	Global corporate R&D investors, top 3, mn US$	0.0	41	○ ◇
2.3.4	QS university ranking, top 3*	21.2	49	
Infrastructure		**45.4**	**53**	◇
3.1	**Information and communication technologies (ICTs)**	**80.5**	**30**	
3.1.1	ICT access*	77.7	42	
3.1.2	ICT use*	74.4	36	
3.1.3	Government's online service*	84.1	31	
3.1.4	E-participation*	85.7	29	
3.2	**General infrastructure**	**20.0**	**111**	○ ◇
3.2.1	Electricity output, GWh/mn pop.	4,653.2	50	
3.2.2	Logistics performance*	29.6	84	◇
3.2.3	Gross capital formation, % GDP	16.3	107	○ ◇
3.3	**Ecological sustainability**	**35.8**	**45**	
3.3.1	GDP/unit of energy use	14.6	25	●
3.3.2	Environmental performance*	49.1	58	◇
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	2.9	29	●
Market sophistication		**37.6**	**108**	○ ◇
4.1	**Credit**	**27.9**	**113**	○ ◇
4.1.1	Ease of getting credit*	60.0	74	
4.1.2	Domestic credit to private sector, % GDP	28.1	100	◇
4.1.3	Microfinance gross loans, % GDP ◴	0.0	68	○
4.2	**Investment**	**23.9**	**95**	
4.2.1	Ease of protecting minority investors*	30.0	122	○ ◇
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.2	19	●
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	66	
4.3	**Trade, diversification, and market scale**	**61.1**	**91**	◇
4.3.1	Applied tariff rate, weighted avg., %	5.3	89	◇
4.3.2	Domestic industry diversification ◴	75.1	89	○
4.3.3	Domestic market scale, bn PPP$	75.3	90	

		Score/ Value	Rank	
Business sophistication		**22.4**	**81**	◇
5.1	**Knowledge workers**	**27.0**	**82**	◇
5.1.1	Knowledge-intensive employment, %	22.3	71	◇
5.1.2	Firms offering formal training, % ◴	53.3	14	●
5.1.3	GERD performed by business, % GDP ◴	0.1	63	◇
5.1.4	GERD financed by business, %	4.6	83	○ ◇
5.1.5	Females employed w/advanced degrees, %	10.4	68	◇
5.2	**Innovation linkages**	**17.0**	**95**	◇
5.2.1	University-industry R&D collaboration†	39.5	79	◇
5.2.2	State of cluster development and depth†	45.2	76	
5.2.3	GERD financed by abroad, % GDP	0.0	59	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	88	
5.2.5	Patent families/bn PPP$ GDP	0.2	44	
5.3	**Knowledge absorption**	**23.1**	**74**	◇
5.3.1	Intellectual property payments, % total trade	0.8	52	
5.3.2	High-tech imports, % total trade	6.6	85	
5.3.3	ICT services imports, % total trade	2.8	12	●
5.3.4	FDI net inflows, % GDP	3.0	50	
5.3.5	Research talent, % in businesses ◴	0.6	81	○ ◇
Knowledge and technology outputs		**21.4**	**63**	
6.1	**Knowledge creation**	**11.7**	**72**	◇
6.1.1	Patents by origin/bn PPP$ GDP ◴	0.3	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 ◴	0.3	42	
6.1.4	Scientific and technical articles/bn PPP$ GDP	16.2	51	
6.1.5	Citable documents H-index	11.2	68	
6.2	**Knowledge impact**	**32.2**	**57**	
6.2.1	Labor productivity growth, %	2.1	27	◆
6.2.2	New businesses/th pop. 15–64	1.3	78	
6.2.3	Software spending, % GDP	0.2	62	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	13.2	22	●
6.2.5	High-tech manufacturing, % ◴	15.3	73	◇
6.3	**Knowledge diffusion**	**20.3**	**53**	
6.3.1	Intellectual property receipts, % total trade	0.3	32	
6.3.2	Production and export complexity	44.4	60	◇
6.3.3	High-tech exports, % total trade	0.8	77	
6.3.4	ICT services exports, % total trade	3.6	25	●
Creative outputs		**24.5**	**64**	◇
7.1	**Intangible assets**	**29.5**	**72**	
7.1.1	Trademarks by origin/bn PPP$ GDP	52.6	43	
7.1.2	Global brand value, top 5,000, % GDP	0.0	80	○ ◇
7.1.3	Industrial designs by origin/bn PPP$ GDP ◴	0.7	77	
7.1.4	ICTs and organizational model creation†	58.4	50	
7.2	**Creative goods and services**	**14.4**	**64**	
7.2.1	Cultural and creative services exports, % total trade	1.3	20	●
7.2.2	National feature films/mn pop. 15–69 ◴	4.7	46	
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a	
7.2.4	Printing and other media, % manufacturing ◴	1.1	46	
7.2.5	Creative goods exports, % total trade	0.0	112	○
7.3	**Online creativity**	**24.7**	**48**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	6.4	49	
7.3.2	Country-code TLDs/th pop. 15–69	11.5	40	
7.3.3	Wikipedia edits/mn pop. 15–69	69.8	37	
7.3.4	Mobile app creation/bn PPP$ GDP	8.6	51	

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 Uruguay.

Missing data for Uruguay

Code	Indicator name	Economy year	Model year	Source
2.2.3	Tertiary inbound mobility, %	n/a	2018	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	n/a	2019	World Federation of Exchanges
6.1.2	PCT patents by origin/bn PPP$ GDP	n/a	2020	World Intellectual Property Organization
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC

Outdated data for Uruguay

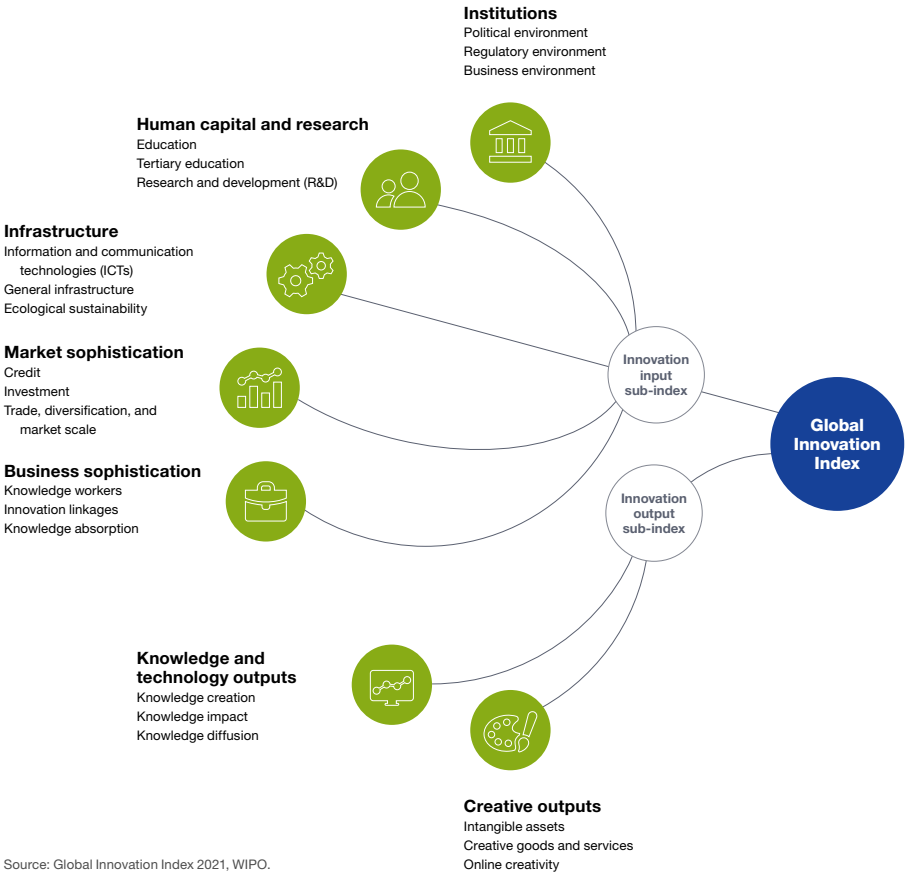
Code	Indicator name	Economy year	Model year	Source
2.1.3	School life expectancy, years	2017	2018	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2010	2019	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2017	2018	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
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
4.1.3	Microfinance gross loans, % GDP	2015	2018	Microfinance Information Exchange
4.3.2	Domestic industry diversification	2016	2018	United Nations Industrial Development Organization
5.1.2	Firms offering formal training, %	2017	2019	World Bank

Code	Indicator name	Economy year	Model year	Source
5.1.3	GERD performed by business, % GDP	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.3.5	Research talent, % in businesses	2018	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.1.1	Patents by origin/bn PPP$ GDP	2017	2019	World Intellectual Property Organization
6.1.3	Utility models by origin/bn PPP$ GDP	2017	2019	World Intellectual Property Organization
6.2.5	High-tech manufacturing, %	2016	2018	United Nations Industrial Development Organization
7.1.3	Industrial designs by origin/bn PPP$ GDP	2017	2019	World Intellectual Property Organization
7.2.2	National feature films/mn pop. 15–69	2015	2017	UNESCO Institute for Statistics
7.2.4	Printing and other media, % manufacturing	2014	2018	United Nations Industrial Development Organization

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.