Global Innovation Index 2021

MEXICO

55th Mexico ranks 55th 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 Mexico 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 Mexico in the GII 2021 is between ranks 51 and 56.

Rankings for Mexico (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	55	62	51
2020	55	61	57
2019	56	59	55

- Mexico performs better in innovation outputs than innovation inputs in 2021.
- This year Mexico ranks 62nd in innovation inputs, lower than both 2020 and 2019.
- As for innovation outputs, Mexico ranks 51st. This position is higher than both 2020 and 2019.

9th Mexico ranks 9th among the 34 upper middle-income group economies.

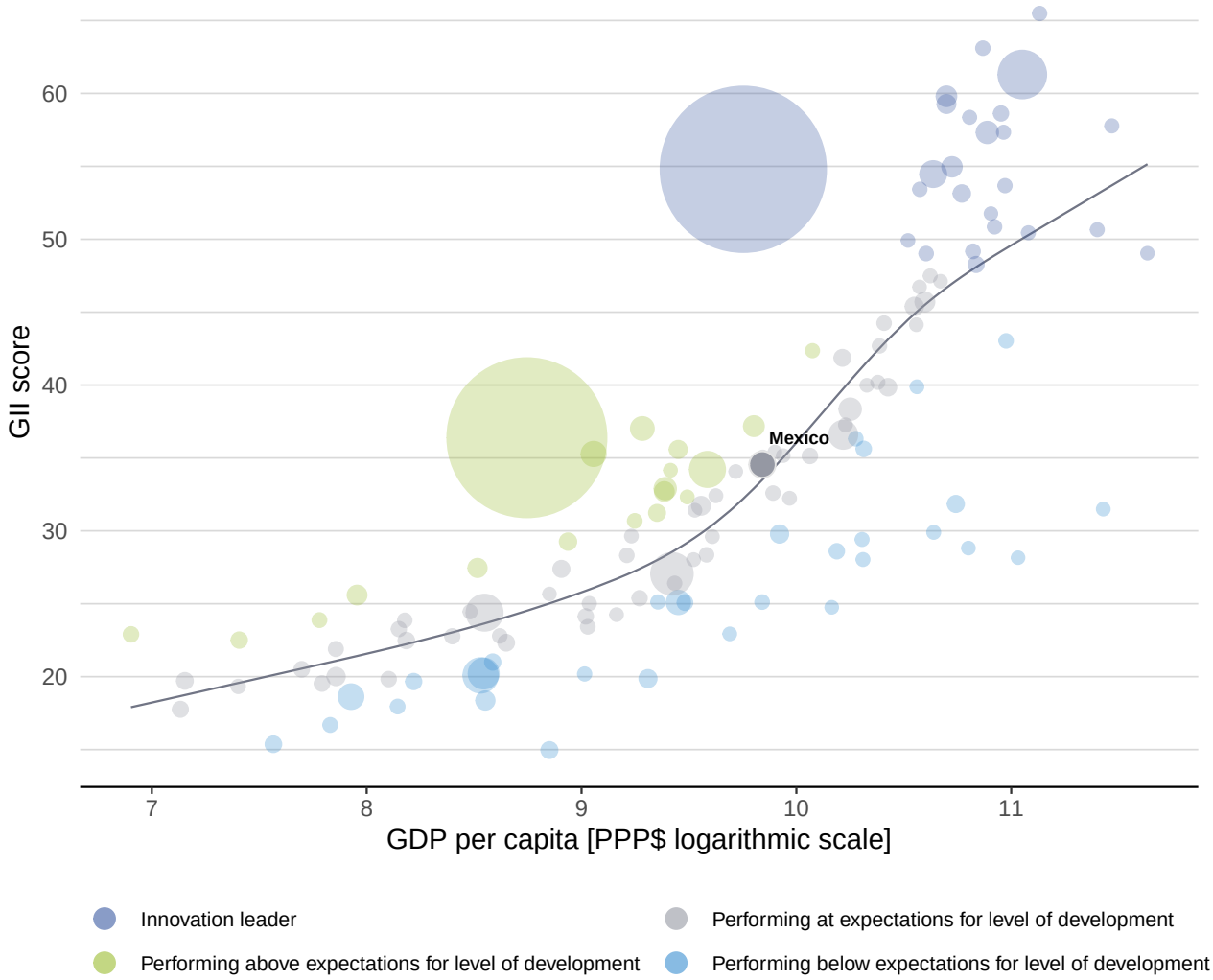
2nd Mexico ranks 2nd among the 18 economies in Latin America and the Caribbean.

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

The positive relationship between innovation and development

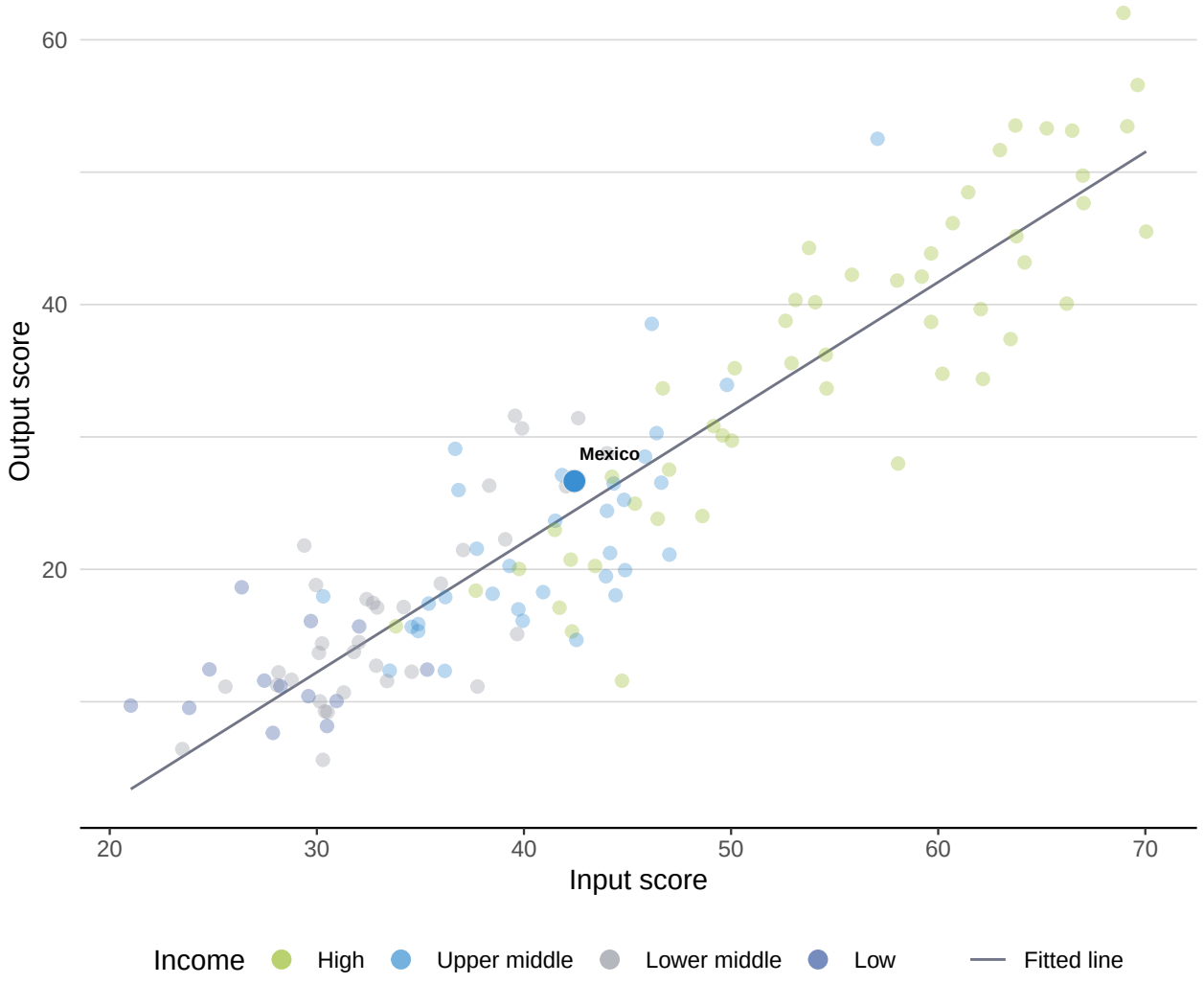


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Mexico produces more 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 Mexico

Upper middle-income group economies

Mexico performs above the upper middle-income group average in six pillars, namely: Human capital and research; Infrastructure; Market sophistication; Business sophistication; Knowledge and technology outputs; and, Creative outputs.

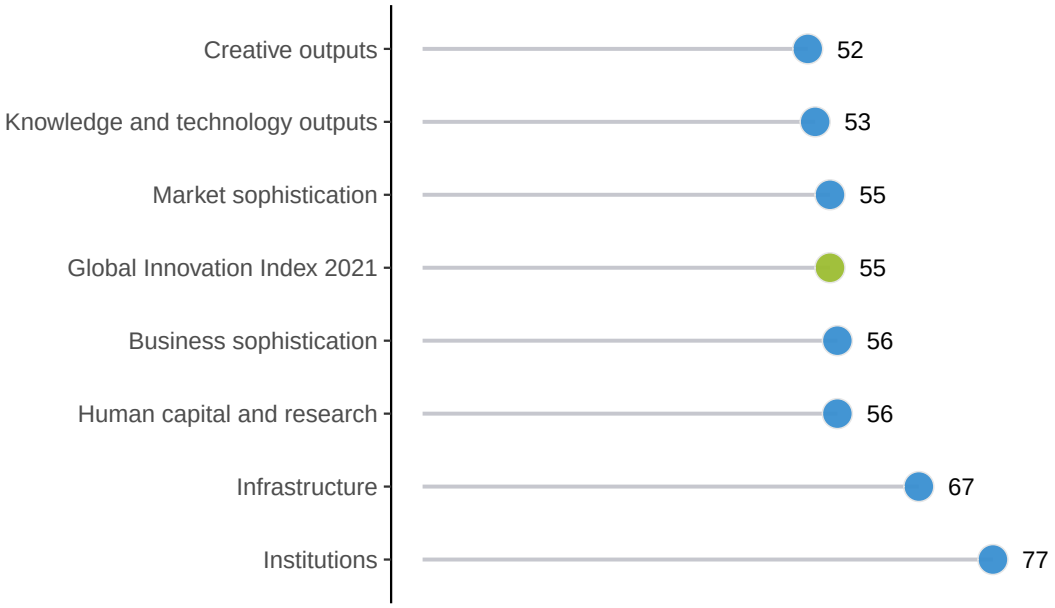
Latin America and the Caribbean

Mexico performs above the regional average in all GII pillars.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Mexico performs best in Creative outputs and its weakest performance is in Institutions.

The seven GII pillar ranks for Mexico



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 Mexico in the GII 2021.

Strengths and weaknesses for Mexico

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
2.3.4	QS university ranking, top 3	27	1.1.1	Political and operational stability	112
4.1.1	Ease of getting credit	10	2.2.3	Tertiary inbound mobility, %	107
4.3	Trade, diversification, and market scale	14	4.2	Investment	118
4.3.1	Applied tariff rate, weighted avg., %	15	4.2.3	Venture capital investors, deals/bn PPP$ GDP	80
4.3.3	Domestic market scale, bn PPP$	11	5.2.3	GERD financed by abroad, % GDP	91
5.1.2	Firms offering formal training, %	17	5.3.3	ICT services imports, % total trade	130
5.3.2	High-tech imports, % total trade	9	6.2.1	Labor productivity growth, %	110
6.2.5	High-tech manufacturing, %	12	6.3.1	Intellectual property receipts, % total trade	107
6.3.2	Production and export complexity	19	6.3.4	ICT services exports, % total trade	131
6.3.3	High-tech exports, % total trade	8	7.2.1	Cultural and creative services exports, % total trade	111
7.2	Creative goods and services	16	7.2.4	Printing and other media, % manufacturing	93
7.2.5	Creative goods exports, % total trade	1			

Mexico

GII 2021 rank

55

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
51	62	Upper middle	LCN	128.9	2,424.5	18,804	55

		Score/ Value	Rank	
Institutions		**61.0**	**77**	
1.1	**Political environment**	**49.9**	**90**	
1.1.1	Political and operational stability*	55.4	112	○ ◇
1.1.2	Government effectiveness*	47.2	84	
1.2	**Regulatory environment**	**55.0**	**94**	
1.2.1	Regulatory quality*	46.2	65	
1.2.2	Rule of law*	29.4	105	
1.2.3	Cost of redundancy dismissal	22.0	96	
1.3	**Business environment**	**78.2**	**37**	
1.3.1	Ease of starting a business*	86.1	83	
1.3.2	Ease of resolving insolvency*	70.3	31	◆
Human capital and research		**33.2**	**56**	
2.1	**Education**	**43.6**	**82**	
2.1.1	Expenditure on education, % GDP	4.5	57	
2.1.2	Government funding/pupil, secondary, % GDP/cap	13.3	81	
2.1.3	School life expectancy, years	14.9	54	
2.1.4	PISA scales in reading, maths and science	416.2	57	
2.1.5	Pupil-teacher ratio, secondary	17.0	83	
2.2	**Tertiary education**	**30.4**	**74**	
2.2.1	Tertiary enrolment, % gross	41.5	71	
2.2.2	Graduates in science and engineering, %	26.0	34	
2.2.3	Tertiary inbound mobility, %	0.2	107	○ ◇
2.3	**Research and development (R&D)**	**25.6**	**41**	
2.3.1	Researchers, FTE/mn pop.	327.2	76	
2.3.2	Gross expenditure on R&D, % GDP	0.3	81	
2.3.3	Global corporate R&D investors, top 3, mn US$	49.9	31	◆
2.3.4	QS university ranking, top 3*	43.2	27	● ◆
Infrastructure		**41.8**	**67**	
3.1	**Information and communication technologies (ICTs)**	**70.0**	**58**	
3.1.1	ICT access*	58.4	79	
3.1.2	ICT use*	57.2	68	
3.1.3	Government's online service*	82.3	38	
3.1.4	E-participation*	82.1	41	
3.2	**General infrastructure**	**24.9**	**84**	
3.2.1	Electricity output, GWh/mn pop.	2,693.7	70	
3.2.2	Logistics performance*	46.6	50	
3.2.3	Gross capital formation, % GDP	19.3	92	
3.3	**Ecological sustainability**	**30.6**	**56**	
3.3.1	GDP/unit of energy use	13.0	39	
3.3.2	Environmental performance*	52.6	49	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.7	75	
Market sophistication		**48.8**	**55**	
4.1	**Credit**	**42.2**	**59**	
4.1.1	Ease of getting credit*	90.0	10	● ◆
4.1.2	Domestic credit to private sector, % GDP	36.6	86	
4.1.3	Microfinance gross loans, % GDP	0.2	45	
4.2	**Investment**	**19.1**	**118**	○
4.2.1	Ease of protecting minority investors*	62.0	60	
4.2.2	Market capitalization, % GDP	33.4	43	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.0	80	○
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	79	
4.3	**Trade, diversification, and market scale**	**85.1**	**14**	● ◆
4.3.1	Applied tariff rate, weighted avg., %	1.2	15	●
4.3.2	Domestic industry diversification	88.9	55	
4.3.3	Domestic market scale, bn PPP$	2,424.5	11	● ◆

		Score/ Value	Rank	
Business sophistication		**27.2**	**56**	
5.1	**Knowledge workers**	**28.7**	**76**	
5.1.1	Knowledge-intensive employment, %	20.2	79	
5.1.2	Firms offering formal training, %	50.8	17	●
5.1.3	GERD performed by business, % GDP	0.1	68	
5.1.4	GERD financed by business, %	18.2	68	
5.1.5	Females employed w/advanced degrees, %	9.8	71	
5.2	**Innovation linkages**	**17.5**	**90**	
5.2.1	University-industry R&D collaboration†	38.7	84	
5.2.2	State of cluster development and depth†	55.0	36	
5.2.3	GERD financed by abroad, % GDP	0.0	91	○
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	99	
5.2.5	Patent families/bn PPP$ GDP	0.0	64	
5.3	**Knowledge absorption**	**35.5**	**40**	
5.3.1	Intellectual property payments, % total trade	0.1	110	◇
5.3.2	High-tech imports, % total trade	18.2	9	● ◆
5.3.3	ICT services imports, % total trade	0.0	130	○ ◇
5.3.4	FDI net inflows, % GDP	2.7	61	
5.3.5	Research talent, % in businesses	43.7	30	
Knowledge and technology outputs		**24.8**	**53**	
6.1	**Knowledge creation**	**11.3**	**74**	
6.1.1	Patents by origin/bn PPP$ GDP	0.5	80	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.1	68	
6.1.3	Utility models by origin/bn PPP$ GDP	0.2	47	
6.1.4	Scientific and technical articles/bn PPP$ GDP	7.8	96	
6.1.5	Citable documents H-index	29.1	34	◆
6.2	**Knowledge impact**	**29.6**	**64**	
6.2.1	Labor productivity growth, %	–2.7	110	○
6.2.2	New businesses/th pop. 15–64	1.0	84	
6.2.3	Software spending, % GDP	0.2	65	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	3.0	75	
6.2.5	High-tech manufacturing, %	48.9	12	● ◆
6.3	**Knowledge diffusion**	**33.5**	**28**	◆
6.3.1	Intellectual property receipts, % total trade	0.0	107	○ ◇
6.3.2	Production and export complexity	73.7	19	● ◆
6.3.3	High-tech exports, % total trade	15.3	8	● ◆
6.3.4	ICT services exports, % total trade	0.0	131	○ ◇
Creative outputs		**28.5**	**52**	
7.1	**Intangible assets**	**32.8**	**56**	
7.1.1	Trademarks by origin/bn PPP$ GDP	43.0	54	
7.1.2	Global brand value, top 5,000, % GDP	63.9	30	
7.1.3	Industrial designs by origin/bn PPP$ GDP	0.5	86	
7.1.4	ICTs and organizational model creation†	57.9	53	
7.2	**Creative goods and services**	**36.9**	**16**	● ◆
7.2.1	Cultural and creative services exports, % total trade	0.0	111	○
7.2.2	National feature films/mn pop. 15–69	2.1	65	
7.2.3	Entertainment and media market/th pop. 15–69	8.5	38	
7.2.4	Printing and other media, % manufacturing	0.4	93	○ ◇
7.2.5	Creative goods exports, % total trade	10.4	1	● ◆
7.3	**Online creativity**	**11.6**	**86**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.6	70	
7.3.2	Country-code TLDs/th pop. 15–69	4.1	57	
7.3.3	Wikipedia edits/mn pop. 15–69	39.7	84	
7.3.4	Mobile app creation/bn PPP$ GDP	1.4	73	

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 Mexico.

Missing data for Mexico

Code	Indicator name	Economy year	Model year	Source

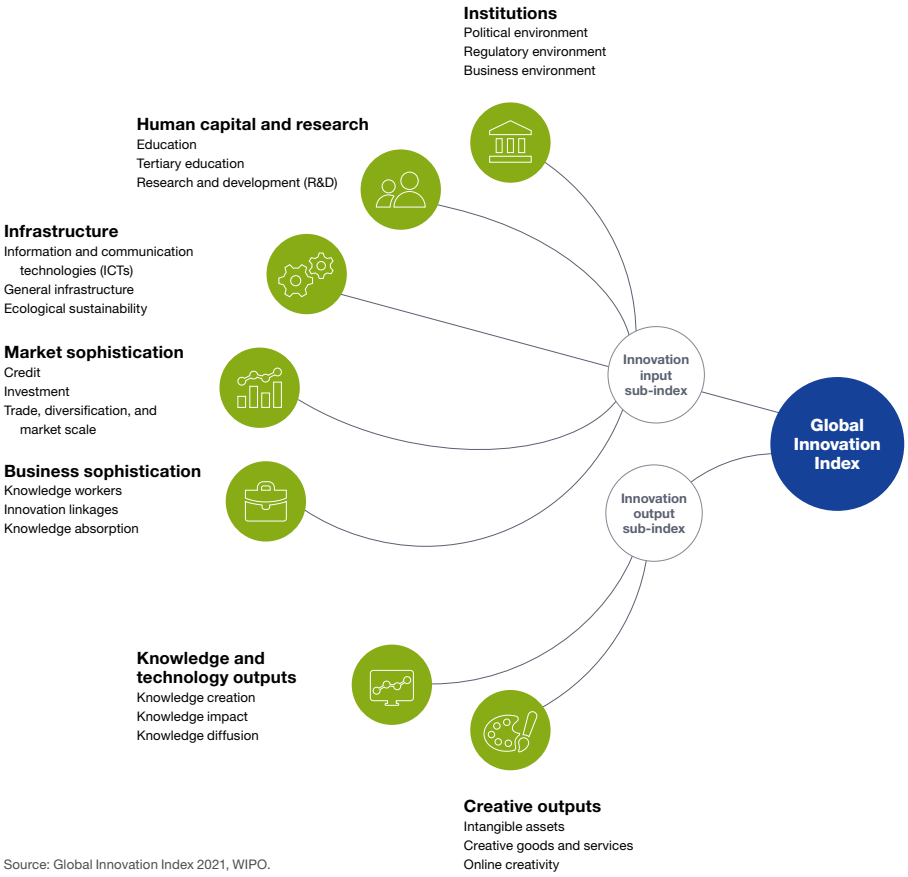
Outdated data for Mexico

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
4.3.1	Applied tariff rate, weighted avg., %	2018	2019	World Bank
5.1.2	Firms offering formal training, %	2010	2019	World Bank

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.