Global Innovation Index 2021

CHILE

53rd Chile ranks 53rd 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 Chile 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 Chile in the GII 2021 is between ranks 49 and 55.

Rankings for Chile (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	53	44	61
2020	54	41	66
2019	51	43	62

- Chile performs better in innovation inputs than innovation outputs in 2021.
- This year Chile ranks 44th in innovation inputs, lower than both 2020 and 2019.
- As for innovation outputs, Chile ranks 61st. This position is higher than both 2020 and 2019.

42nd Chile ranks 42nd among the 51 high-income group economies.

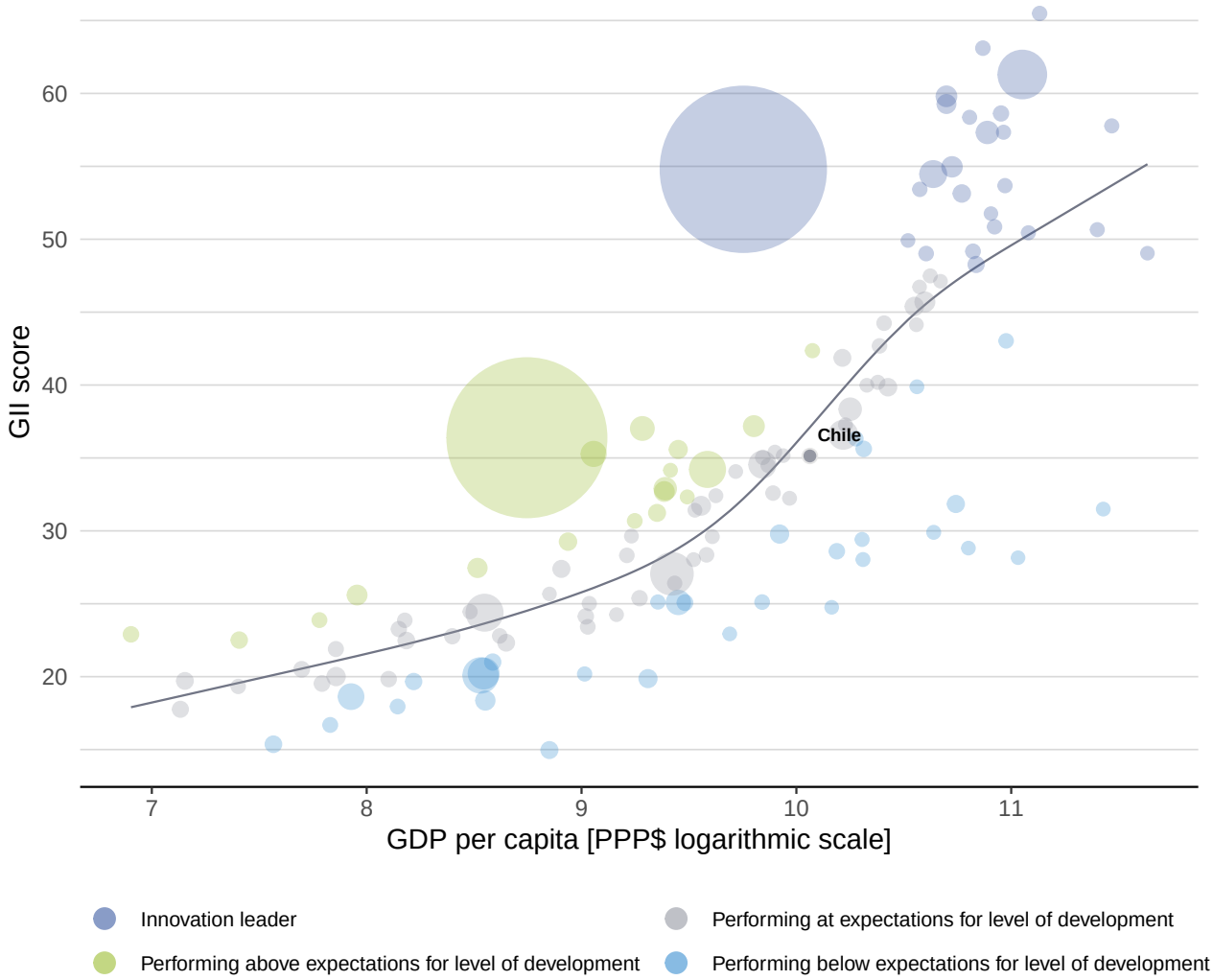
1st Chile ranks 1st among the 18 economies in Latin America and the Caribbean.

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

The positive relationship between innovation and development

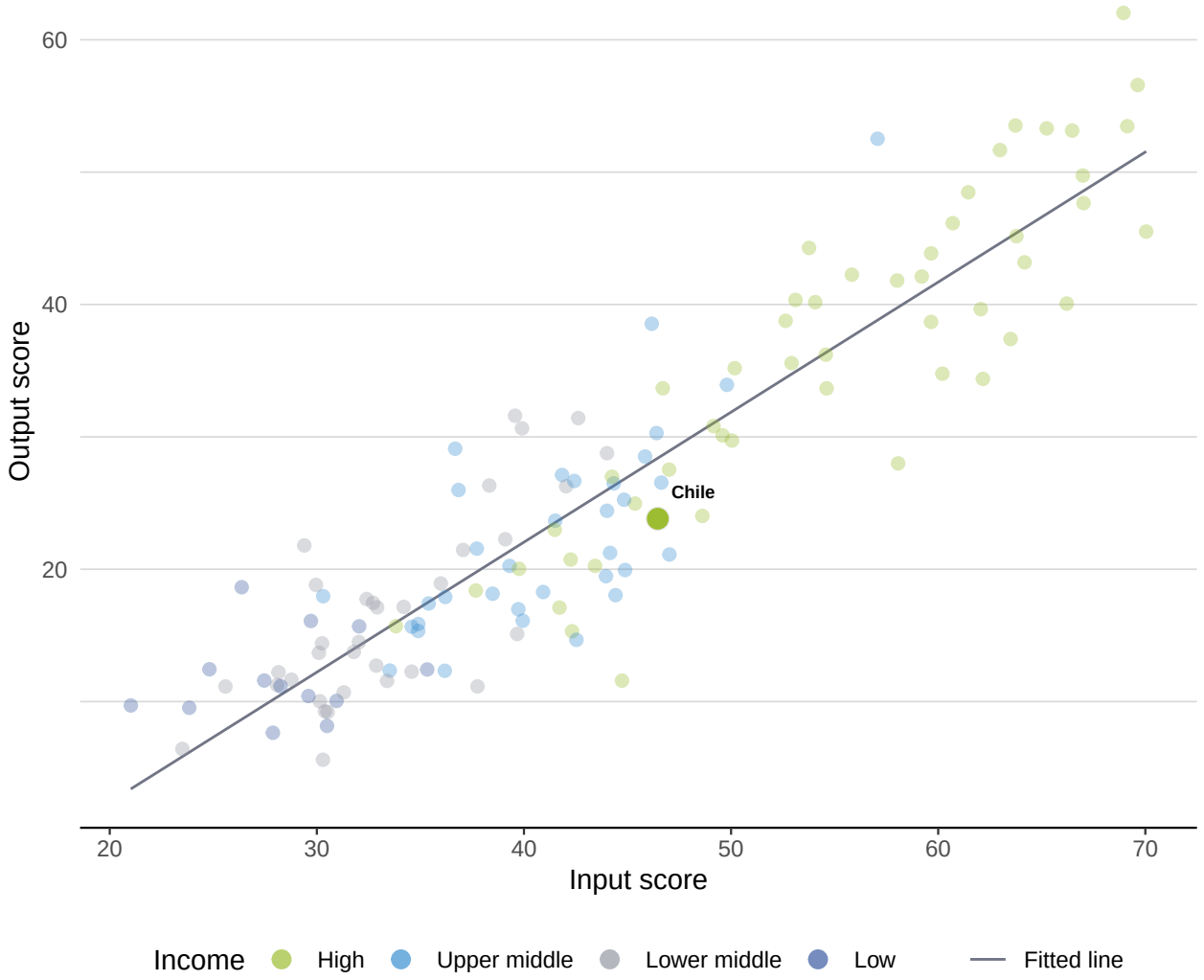


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Chile 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 Chile

High-income group economies

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

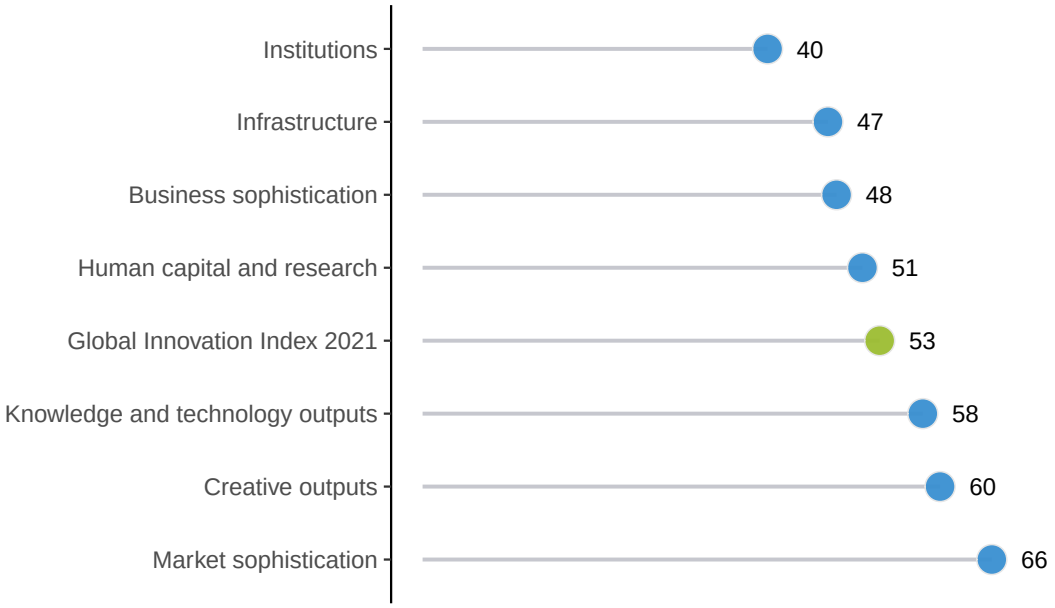
Latin America and the Caribbean

Chile performs above the regional average in all GII pillars.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

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

The seven GII pillar ranks for Chile



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 Chile in the GII 2021.

Strengths and weaknesses for Chile

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.2.1	Regulatory quality	25	1.2.3	Cost of redudancy dismissal	110
2.1.1	Expenditure on education, % GDP	22	2.1.5	Pupil-teacher ratio, secondary	87
2.1.3	School life expectancy, years	22	2.2.3	Tertiary inbound mobility, %	100
2.2.1	Tertiary enrolment, % gross	8	2.3.3	Global corporate R&D investors, top 3, mn US$	41
4.1.2	Domestic credit to private sector, % GDP	16	4.1.1	Ease of getting credit	88
4.3.1	Applied tariff rate, weighted avg., %	4	4.2.4	Venture capital recipients, deals/bn PPP$ GDP	67
5.1.2	Firms offering formal training, %	10	4.3.2	Domestic industry diversification	103
5.3.1	Intellectual property payments, % total trade	12	5.2	Innovation linkages	93
6.2	Knowledge impact	24	6.3	Knowledge diffusion	96
6.2.2	New businesses/th pop. 15–64	12	6.3.4	ICT services exports, % total trade	100
6.2.3	Software spending, % GDP	7	7.1.3	Industrial designs by origin/bn PPP$ GDP	108
			7.2.4	Printing and other media, % manufacturing	78
			7.2.5	Creative goods exports, % total trade	92

Chile

GII 2021 rank

53

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
61	**44**	**High**	**LCN**	**19.1**	**456.4**	**23,455**	**54**

		Score/ Value	Rank	
Institutions		**72.7**	**40**	
1.1	**Political environment**	**73.9**	**35**	
1.1.1	Political and operational stability*	73.2	44	
1.1.2	Government effectiveness*	74.2	29	
1.2	**Regulatory environment**	**68.4**	**55**	◇
1.2.1	Regulatory quality*	75.5	25	●
1.2.2	Rule of law*	75.0	26	
1.2.3	Cost of redundancy dismissal	27.4	110	○ ◇
1.3	**Business environment**	**75.7**	**46**	
1.3.1	Ease of starting a business*	91.4	50	
1.3.2	Ease of resolving insolvency*	60.1	48	
Human capital and research		**35.2**	**51**	
2.1	**Education**	**53.5**	**55**	
2.1.1	Expenditure on education, % GDP	5.4	22	●
2.1.2	Government funding/pupil, secondary, % GDP/cap	18.7	57	
2.1.3	School life expectancy, years	16.6	22	●
2.1.4	PISA scales in reading, maths and science	437.8	46	◇
2.1.5	Pupil-teacher ratio, secondary ◴	18.0	87	○ ◇
2.2	**Tertiary education**	**38.8**	**44**	
2.2.1	Tertiary enrolment, % gross	90.9	8	●
2.2.2	Graduates in science and engineering, %	20.9	67	
2.2.3	Tertiary inbound mobility, %	0.5	100	○ ◇
2.3	**Research and development (R&D)**	**13.4**	**51**	◇
2.3.1	Researchers, FTE/mn pop. ◴	491.5	68	◇
2.3.2	Gross expenditure on R&D, % GDP ◴	0.3	76	◇
2.3.3	Global corporate R&D investors, top 3, mn US$	0.0	41	○ ◇
2.3.4	QS university ranking, top 3*	41.0	30	
Infrastructure		**47.4**	**47**	◇
3.1	**Information and communication technologies (ICTs)**	**78.3**	**37**	
3.1.1	ICT access*	72.3	56	◇
3.1.2	ICT use*	70.0	46	
3.1.3	Government's online service*	85.3	24	
3.1.4	E-participation*	85.7	29	
3.2	**General infrastructure**	**31.9**	**53**	
3.2.1	Electricity output, GWh/mn pop.	4,385.3	51	
3.2.2	Logistics performance*	59.0	33	
3.2.3	Gross capital formation, % GDP	22.1	64	
3.3	**Ecological sustainability**	**31.9**	**52**	
3.3.1	GDP/unit of energy use	10.9	60	
3.3.2	Environmental performance*	55.3	42	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	2.0	43	
Market sophistication		**46.4**	**66**	
4.1	**Credit**	**45.1**	**48**	
4.1.1	Ease of getting credit*	55.0	88	○
4.1.2	Domestic credit to private sector, % GDP	122.5	16	●
4.1.3	Microfinance gross loans, % GDP	0.8	26	◆
4.2	**Investment**	**25.9**	**82**	
4.2.1	Ease of protecting minority investors*	66.0	50	
4.2.2	Market capitalization, % GDP	87.5	16	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.0	61	
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	67	○
4.3	**Trade, diversification, and market scale**	**68.3**	**68**	
4.3.1	Applied tariff rate, weighted avg., %	0.4	4	●
4.3.2	Domestic industry diversification	61.4	103	○ ◇
4.3.3	Domestic market scale, bn PPP$	456.4	43	

		Score/ Value	Rank	
Business sophistication		**30.6**	**48**	
5.1	**Knowledge workers**	**39.5**	**43**	
5.1.1	Knowledge-intensive employment, %	31.9	44	
5.1.2	Firms offering formal training, % ◴	57.5	10	● ◆
5.1.3	GERD performed by business, % GDP ◴	0.1	60	◇
5.1.4	GERD financed by business, %	29.9	62	
5.1.5	Females employed w/advanced degrees, %	11.9	63	◇
5.2	**Innovation linkages**	**17.4**	**93**	○ ◇
5.2.1	University-industry R&D collaboration†	39.7	77	◇
5.2.2	State of cluster development and depth†	44.8	78	◇
5.2.3	GERD financed by abroad, % GDP	0.0	70	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	60	
5.2.5	Patent families/bn PPP$ GDP	0.2	43	
5.3	**Knowledge absorption**	**34.8**	**43**	
5.3.1	Intellectual property payments, % total trade	2.2	12	●
5.3.2	High-tech imports, % total trade	8.5	56	
5.3.3	ICT services imports, % total trade	0.7	88	◇
5.3.4	FDI net inflows, % GDP	3.0	51	
5.3.5	Research talent, % in businesses ◴	27.5	44	
Knowledge and technology outputs		**22.3**	**58**	
6.1	**Knowledge creation**	**17.4**	**58**	
6.1.1	Patents by origin/bn PPP$ GDP	0.9	67	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.6	33	
6.1.3	Utility models by origin/bn PPP$ GDP	0.2	45	
6.1.4	Scientific and technical articles/bn PPP$ GDP	23.6	39	
6.1.5	Citable documents H-index	24.3	37	
6.2	**Knowledge impact**	**39.9**	**24**	●
6.2.1	Labor productivity growth, %	1.4	34	◆
6.2.2	New businesses/th pop. 15–64	10.3	12	●
6.2.3	Software spending, % GDP	0.5	7	●
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	6.8	40	
6.2.5	High-tech manufacturing, % ◴	23.9	54	
6.3	**Knowledge diffusion**	**9.6**	**96**	○ ◇
6.3.1	Intellectual property receipts, % total trade	0.1	67	
6.3.2	Production and export complexity	39.7	71	◇
6.3.3	High-tech exports, % total trade	0.8	76	
6.3.4	ICT services exports, % total trade	0.6	100	○
Creative outputs		**25.3**	**60**	◇
7.1	**Intangible assets**	**36.5**	**47**	
7.1.1	Trademarks by origin/bn PPP$ GDP	68.7	25	
7.1.2	Global brand value, top 5,000, % GDP	39.1	40	
7.1.3	Industrial designs by origin/bn PPP$ GDP	0.1	108	○
7.1.4	ICTs and organizational model creation†	57.8	54	
7.2	**Creative goods and services**	**8.1**	**89**	◇
7.2.1	Cultural and creative services exports, % total trade ◴	0.3	63	
7.2.2	National feature films/mn pop. 15–69	3.7	51	
7.2.3	Entertainment and media market/th pop. 15–69	13.8	32	◇
7.2.4	Printing and other media, % manufacturing ◴	0.7	78	○
7.2.5	Creative goods exports, % total trade	0.1	92	○
7.3	**Online creativity**	**20.2**	**57**	◇
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.1	76	◇
7.3.2	Country-code TLDs/th pop. 15–69	14.7	33	
7.3.3	Wikipedia edits/mn pop. 15–69	60.4	51	
7.3.4	Mobile app creation/bn PPP$ GDP	2.3	68	

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 Chile.

Missing data for Chile

Code	Indicator name	Economy year	Model year	Source

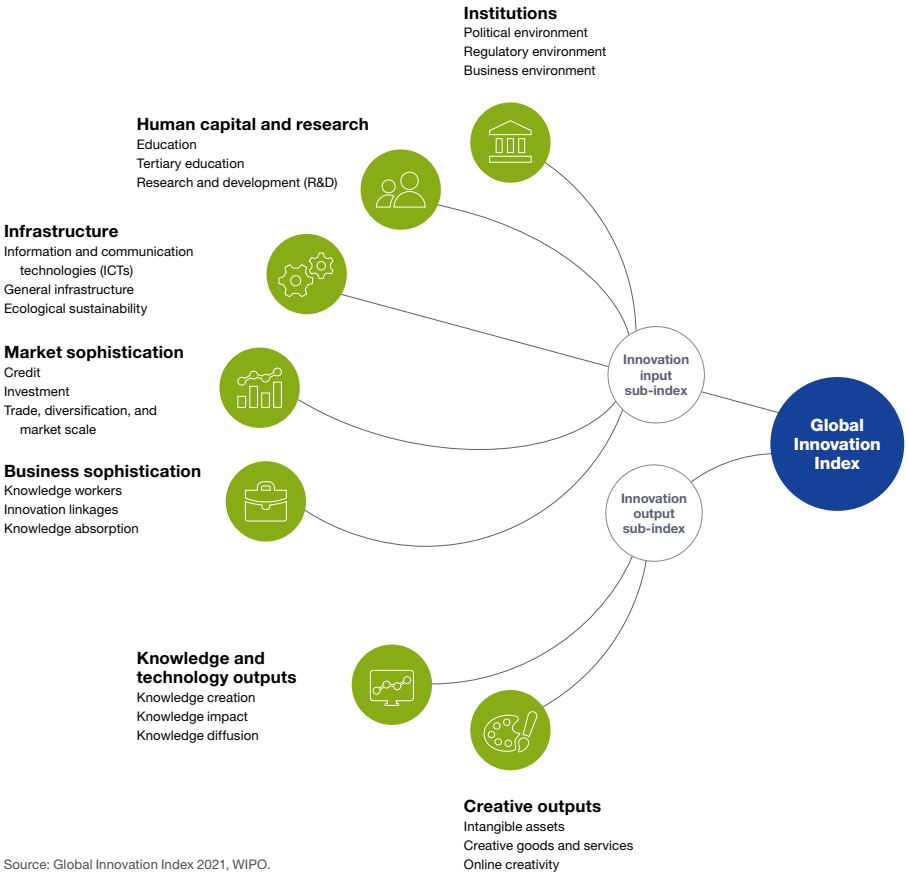
Outdated data for Chile

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2018	2019	UNESCO Institute for Statistics
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
5.1.2	Firms offering formal training, %	2010	2019	World Bank
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
6.2.5	High-tech manufacturing, %	2017	2018	United Nations Industrial Development Organization
7.2.1	Cultural and creative services exports, % total trade	2018	2019	World Trade Organization
7.2.4	Printing and other media, % manufacturing	2017	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.