

JAMAICA

72nd Jamaica ranks 72nd among the 131 economies featured in the GII 2020.

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 Jamaica 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 Jamaica in the GII 2020 is between ranks 70 and 78.

Rankings of Jamaica (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	72	86	62
2019	81	84	69
2018	81	83	76

- Jamaica performs better in innovation outputs than innovation inputs in 2020.
- This year Jamaica ranks 86th in innovation inputs, lower than last year and lower compared to 2018.
- As for innovation outputs, Jamaica ranks 62nd. This position is higher than last year and higher compared to 2018.

21st Jamaica ranks 21st among the 37 upper middle-income group economies.

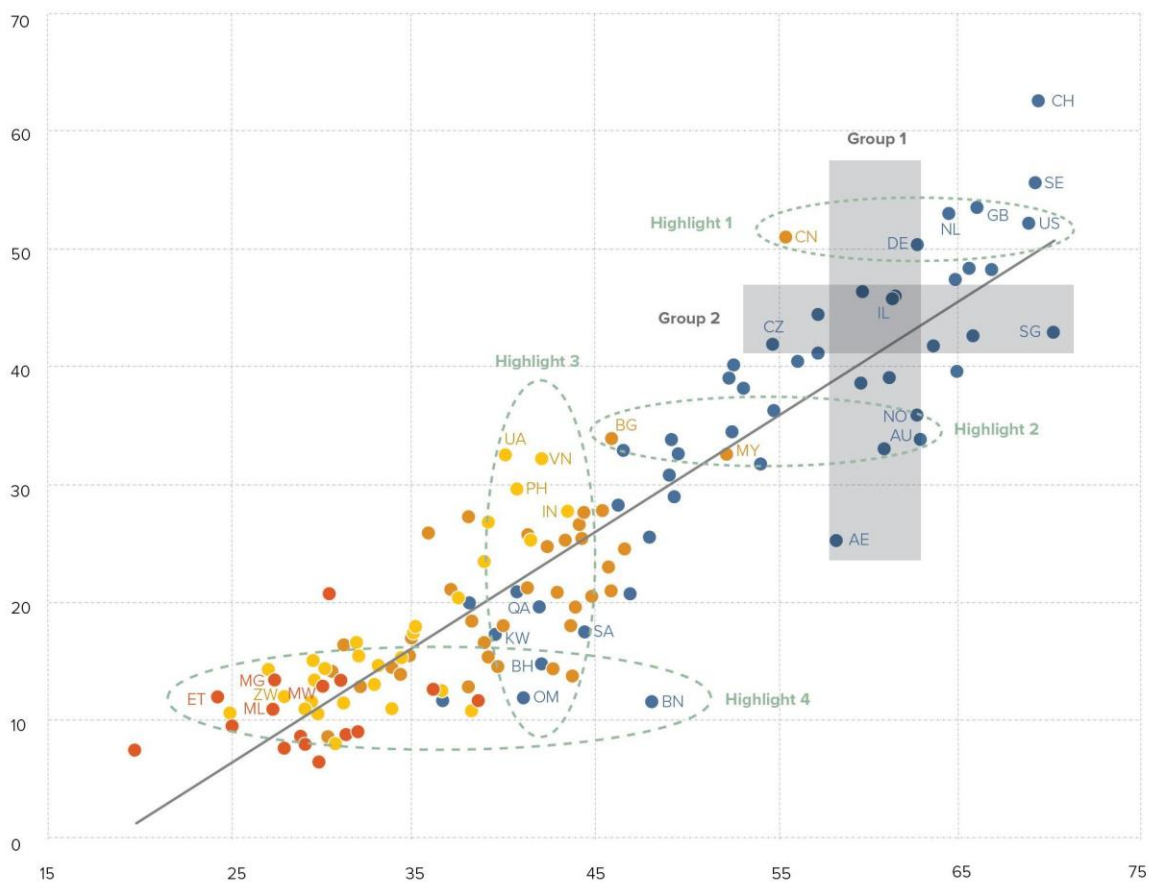
7th Jamaica ranks 7th among the 18 economies in Latin America and the Caribbean.

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.

Jamaica produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020

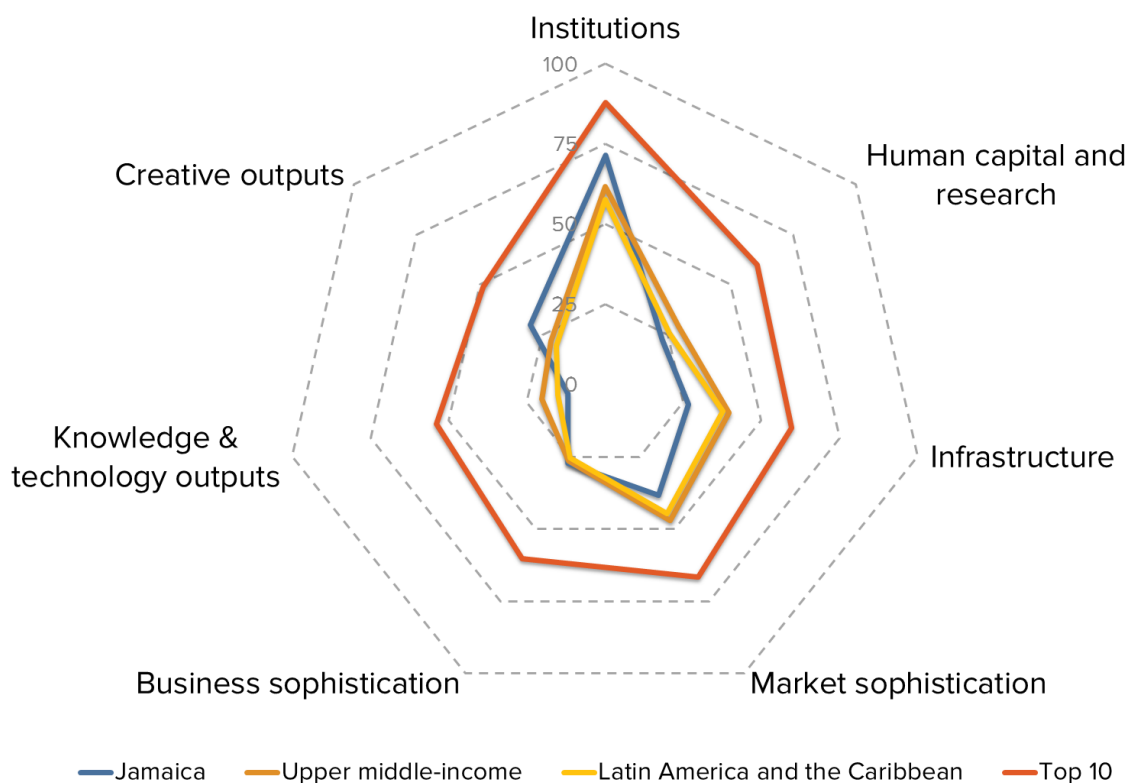


- ▲ Output score
- ▶ Input score
- High income group
- Upper middle-income group
- Lower middle-income group
- Low income group
- Fitted values

AU	Australia	IN	India	NL	Netherlands	CH	Switzerland
BH	Bahrain	IL	Israel	NO	Norway	UA	Ukraine
BN	Brunei Darussalam	KW	Kuwait	OM	Oman	AE	United Arab Emirates
BG	Bulgaria	MG	Madagascar	PH	Philippines	GB	United Kingdom
CN	China	MW	Malawi	QA	Qatar	US	United States of America
CZ	Czech Republic	ML	Mali	SA	Saudi Arabia	VN	Viet Nam
ET	Ethiopia	MY	Malaysia	SG	Singapore	ZW	Zimbabwe
DE	Germany			SE	Sweden		

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

Jamaica's scores in the seven GII pillars



Upper middle-income group economies

Jamaica has high scores in three out of the seven GII pillars: Institutions, Business sophistication and Creative outputs, which are above average for the upper middle-income group.

Conversely, Jamaica scores below average for its income group in four pillars: Human capital & research, Infrastructure, Market sophistication and Knowledge & technology outputs.

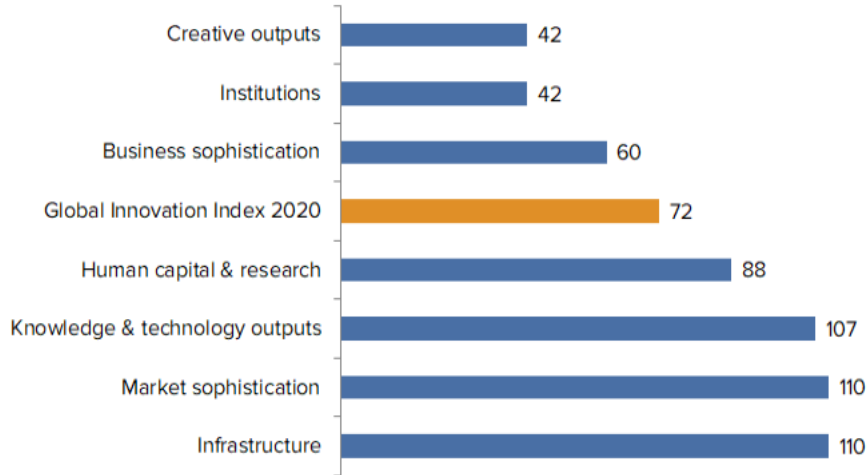
Latin America and the Caribbean

Compared to other economies in Latin America and the Caribbean, Jamaica performs:

- above average in three out of the seven GII pillars: Institutions, Business sophistication and Creative outputs; and
- below average in four out of the seven GII pillars: Human capital & research, Infrastructure, Market sophistication and Knowledge & technology outputs.

OVERVIEW OF JAMAICA RANKINGS IN THE SEVEN GII AREAS

Jamaica performs best in Creative outputs, Institutions and its weakest performance is in Infrastructure, Market sophistication.



*The highest possible ranking in each pillar is 1.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Jamaica in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.3	Business environment	23	2.3.3	Global R&D companies, top 3, mn US\$	42
1.3.1	Ease of starting a business*	6	2.3.4	QS university ranking, average score top 3*	77
2.1.1	Expenditure on education, % GDP	27	3.1.3	Government's online service*	118
2.1.2	Government funding/pupil, secondary, % GDP/cap	13	3.1.4	E-participation*	119
4.1.1	Ease of getting credit*	14	3.2	General infrastructure	121
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	27	3.2.2	Logistics performance*	106
5.3.4	FDI net inflows, % GDP	21	4.3	Trade, competition, and market scale	123
6.2.3	Computer software spending, % GDP	26	4.3.1	Applied tariff rate, weighted avg., %	119
7.1	Intangible assets	10	4.3.3	Domestic market scale, bn PPP\$	121
7.1.1	Trademarks by origin/bn PPP\$ GDP	4	5.3.2	High-tech imports, % total trade	114
7.1.2	Global brand value, top 5000, % GDP	20	6.2.1	Growth rate of PPP\$ GDP/worker, %	112
7.1.3	Industrial designs by origin/bn PPP\$ GDP	27	6.3.2	High-tech net exports, % total trade	123

STRENGTHS

GII strengths for Jamaica are found in six of the seven GII pillars.

- Institutions (42): exhibits strengths in the sub-pillar Business environment (23) and in the indicator Ease of starting a business (6).
- Human capital & research (88): shows strengths in the indicators Expenditure on education (27) and Government funding per pupil (13).
- Market sophistication (110): the indicator Ease of getting credit (14) is a strength.
- Business sophistication (60): displays strengths in the indicators JV–strategic alliance deals (27) and FDI net inflows (21).
- Knowledge & technology outputs (107): the indicator Computer software spending (26) is a strength.
- Creative outputs (42): has strengths in the sub-pillar Intangible assets (10) and in the indicators Trademarks by origin (4), Global brand value (20) and Industrial designs by origin (27).

WEAKNESSES

GII weaknesses for Jamaica are found in five of the seven GII pillars.

- Human capital & research (88): has weaknesses in the indicators Global R&D companies (42) and QS university ranking (77).
- Infrastructure (110): displays weaknesses in the sub-pillar General infrastructure (121) and in the indicators Government's online service (118), E-participation (119) and Logistics performance (106).
- Market sophistication (110): shows weaknesses in the sub-pillar Trade, competition, and market scale (123) and in the indicators Applied tariff rate (119) and Domestic market scale (121).
- Business sophistication (60): the indicator High-tech imports (114) is a weakness.
- Knowledge & technology outputs (107): displays weaknesses in the indicators Growth rate of GDP per worker (112) and High-tech net exports (123).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
62	86	Upper middle	LCN	2.9	27.9	8,461.3	81
				Score/Value	Rank		
INSTITUTIONS				71.8	42		
1.1	Political environment	65.2	46				
1.1.1	Political and operational stability*	73.2	49				
1.1.2	Government effectiveness*	61.2	43				
1.2	Regulatory environment	66.5	61				
1.2.1	Regulatory quality*	49.1	59				
1.2.2	Rule of law*	40.5	75				
1.2.3	Cost of redundancy dismissal, salary weeks	14.0	52				
1.3	Business environment	83.7	23				
1.3.1	Ease of starting a business*	97.4	6				
1.3.2	Ease of resolving insolvency*	70.1	32				
HUMAN CAPITAL & RESEARCH				22.6	[88]		
2.1	Education	48.5	59				
2.1.1	Expenditure on education, % GDP	5.4	27				
2.1.2	Government funding/pupil, secondary, % GDP/cap	29.6	13				
2.1.3	School life expectancy, years	12.3	88				
2.1.4	PISA scales in reading, maths, & science	n/a	n/a				
2.1.5	Pupil-teacher ratio, secondary	16.7	81				
2.2	Tertiary education	19.4	[97]				
2.2.1	Tertiary enrolment, % gross	27.1	86				
2.2.2	Graduates in science & engineering, %	n/a	n/a				
2.2.3	Tertiary inbound mobility, %	n/a	n/a				
2.3	Research & development (R&D)	0.0	[121]				
2.3.1	Researchers, FTE/mn pop	n/a	n/a				
2.3.2	Gross expenditure on R&D, % GDP	n/a	n/a				
2.3.3	Global R&D companies, avg. exp. top 3, mn \$US	0.0	42				
2.3.4	QS university ranking, average score top 3*	0.0	77				
INFRASTRUCTURE				26.4	110		
3.1	Information & communication technologies (ICTs)	39.7	109				
3.1.1	ICT access*	54.6	82				
3.1.2	ICT use*	40.8	99				
3.1.3	Government's online service*	31.9	118				
3.1.4	E-participation*	31.5	119				
3.2	General infrastructure	14.5	121				
3.2.1	Electricity output, kWh/mn pop	1,515.2	89				
3.2.2	Logistics performance*	21.1	106				
3.2.3	Gross capital formation, % GDP	18.8	104				
3.3	Ecological sustainability	25.1	80				
3.3.1	GDP/unit of energy use	8.6	71				
3.3.2	Environmental performance*	48.2	60				
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	0.4	89				
MARKET SOPHISTICATION				38.0	110		
4.1	Credit	39.5	73				
4.1.1	Ease of getting credit*	85.0	14				
4.1.2	Domestic credit to private sector, % GDP	32.0	92				
4.1.3	Microfinance gross loans, % GDP	0.2	53				
4.2	Investment	27.5	105				
4.2.1	Ease of protecting minority investors*	62.0	60				
4.2.2	Market capitalization, % GDP	32.0	43				
4.2.3	Venture capital deals/bn PPP\$ GDP	0.0	42				
4.3	Trade, competition, and market scale	47.1	123				
4.3.1	Applied tariff rate, weighted avg., %	10.8	119				
4.3.2	Intensity of local competition*	72.1	45				
4.3.3	Domestic market scale, bn PPP\$	27.9	121				
BUSINESS SOPHISTICATION				27.0	60		
5.1	Knowledge workers	30.5	[64]				
5.1.1	Knowledge-intensive employment, %	21.6	72				
5.1.2	Firms offering formal training, %	25.9	60				
5.1.3	GERD performed by business, % GDP	n/a	n/a				
5.1.4	GERD financed by business, %	n/a	n/a				
5.1.5	Females employed w/advanced degrees, %	n/a	n/a				
5.2	Innovation linkages	25.8	44				
5.2.1	University/industry research collaboration†	44.8	53				
5.2.2	State of cluster development†	46.5	69				
5.2.3	GERD financed by abroad, % GDP	n/a	n/a				
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	0.1	27				
5.2.5	Patent families 2+ offices/bn PPP\$ GDP	0.1	60				
5.3	Knowledge absorption	24.8	79				
5.3.1	Intellectual property payments, % total trade	0.8	45				
5.3.2	High-tech imports, % total trade	4.5	114				
5.3.3	ICT services imports, % total trade	1.2	59				
5.3.4	FDI net inflows, % GDP	5.8	21				
5.3.5	Research talent, % in business enterprise	n/a	n/a				
KNOWLEDGE & TECHNOLOGY OUTPUTS				12.0	107		
6.1	Knowledge creation	6.4	[94]				
6.1.1	Patents by origin/bn PPP\$ GDP	1.0	65				
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	n/a				
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	n/a				
6.1.4	Scientific & technical articles/bn PPP\$ GDP	3.1	104				
6.1.5	Citable documents H-index	5.2	102				
6.2	Knowledge impact	15.6	96				
6.2.1	Growth rate of PPP\$ GDP/worker, %	-1.8	112				
6.2.2	New businesses/th pop. 15-64	1.6	64				
6.2.3	Computer software spending, % GDP	0.0	26				
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	1.1	104				
6.2.5	High- and medium-high-tech manufacturing, %	n/a	n/a				
6.3	Knowledge diffusion	14.1	101				
6.3.1	Intellectual property receipts, % total trade	0.1	59				
6.3.2	High-tech net exports, % total trade	0.0	123				
6.3.3	ICT services exports, % total trade	1.9	58				
6.3.4	FDI net outflows, % GDP	0.7	65				
CREATIVE OUTPUTS				30.0	42		
7.1	Intangible assets	52.5	10				
7.1.1	Trademarks by origin/bn PPP\$ GDP	185.8	4				
7.1.2	Global brand value, top 5,000, % GDP	95.0	20				
7.1.3	Industrial designs by origin/bn PPP\$ GDP	4.2	27				
7.1.4	ICTs & organizational model creation†	55.2	60				
7.2	Creative goods and services	2.2	[116]				
7.2.1	Cultural & creative services exports, % total trade	0.1	90				
7.2.2	National feature films/mn pop. 15-69	n/a	n/a				
7.2.3	Entertainment & Media market/th pop. 15-69	n/a	n/a				
7.2.4	Printing and other media, % manufacturing	n/a	n/a				
7.2.5	Creative goods exports, % total trade	0.2	78				
7.3	Online creativity	12.7	74				
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	1.7	83				
7.3.2	Country-code TLDs/th pop. 15-69	1.0	83				
7.3.3	Wikipedia edits/mn pop. 15-69	38.5	81				
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	n/a				

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 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.

DATA AVAILABILITY

The following tables list data that are either missing or outdated for Jamaica.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.4	PISA scales in reading, maths & science	n/a	2018	OECD Programme for International Student Assessment (PISA)
2.2.2	Graduates in science & engineering, %	n/a	2017	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	n/a	2017	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.3	GERD performed by business, % GDP	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.4	GERD financed by business, %	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	n/a	2018	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	n/a	2017	UNESCO Institute for Statistics
5.3.5	Research talent, % in business enterprise	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2019	World Intellectual Property Organization
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2018	World Intellectual Property Organization
6.2.5	High- & medium-high-tech manufacturing, %	n/a	2017	United Nations Industrial Development Organization
7.2.2	National feature films/mn pop. 15–69	n/a	2017	UNESCO Institute for Statistics
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2018	PwC
7.2.4	Printing & other media, % manufacturing	n/a	2017	United Nations Industrial Development Organization
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	2019	App Annie

Outdated data

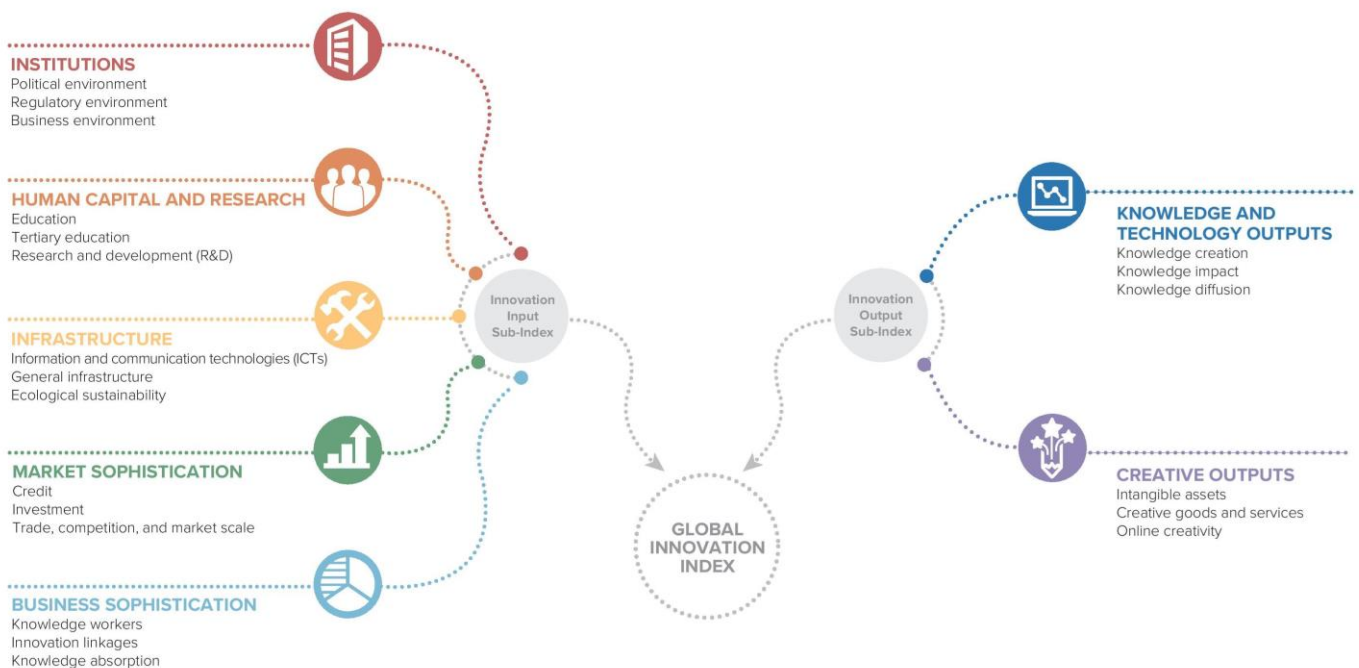
Code	Indicator name	Country year	Model year	Source
2.1.3	School life expectancy, years	2015	2017	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2015	2017	UNESCO Institute for Statistics
4.1.2	Domestic credit to private sector, % GDP	2016	2018	International Monetary Fund
4.2.2	Market capitalization, % GDP	2011	2018	World Federation of Exchanges
4.3.1	Applied tariff rate, weighted mean, %	2016	2018	World Bank
5.1.1	Knowledge-intensive employment, %	2017	2018	Source: International Labour Organization
5.1.2	Firms offering formal training, %	2009	2018	World Bank
5.3.2	High-tech imports, % total trade	2017	2018	United Nations, COMTRADE
6.3.2	High-tech net exports, % total trade	2017	2018	United Nations, COMTRADE
7.2.5	Creative goods exports, % total trade	2017	2018	United Nations, COMTRADE

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2020, the GII presents its 13th edition devoted to the theme *Who Will Finance Innovation?*

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.

Framework of the Global Innovation Index 2020



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.

