



GLOBAL INNOVATION INDEX 2019

COSTA RICA

55th

Costa Rica ranks 55th among the 129 economies featured in the GII 2019.

The Global Innovation Index (GII) is a ranking of world economies based on 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 Costa Rica over the past three years, noting that data availability and the GII model influence year-on-year comparisons of the GII ranks. The confidence interval for Costa Rica's ranking in the GII 2019 is between 51 and 57.

Costa Rica's Rankings, 2017 - 2019

	GII	Innovation Inputs	Innovation Outputs
2019	55	68	48
2018	54	64	51
2017	53	57	50

- Costa Rica performs better in Innovation Outputs than Inputs.
- This year Costa Rica ranks 68th in Innovation Inputs, worse than last year and compared to 2017.
- As for Innovation Outputs, Costa Rica ranks 48th. This position is better than last year and compared to 2017.

9th

Costa Rica ranks 9th among the 34 upper middle-income economies.

2nd

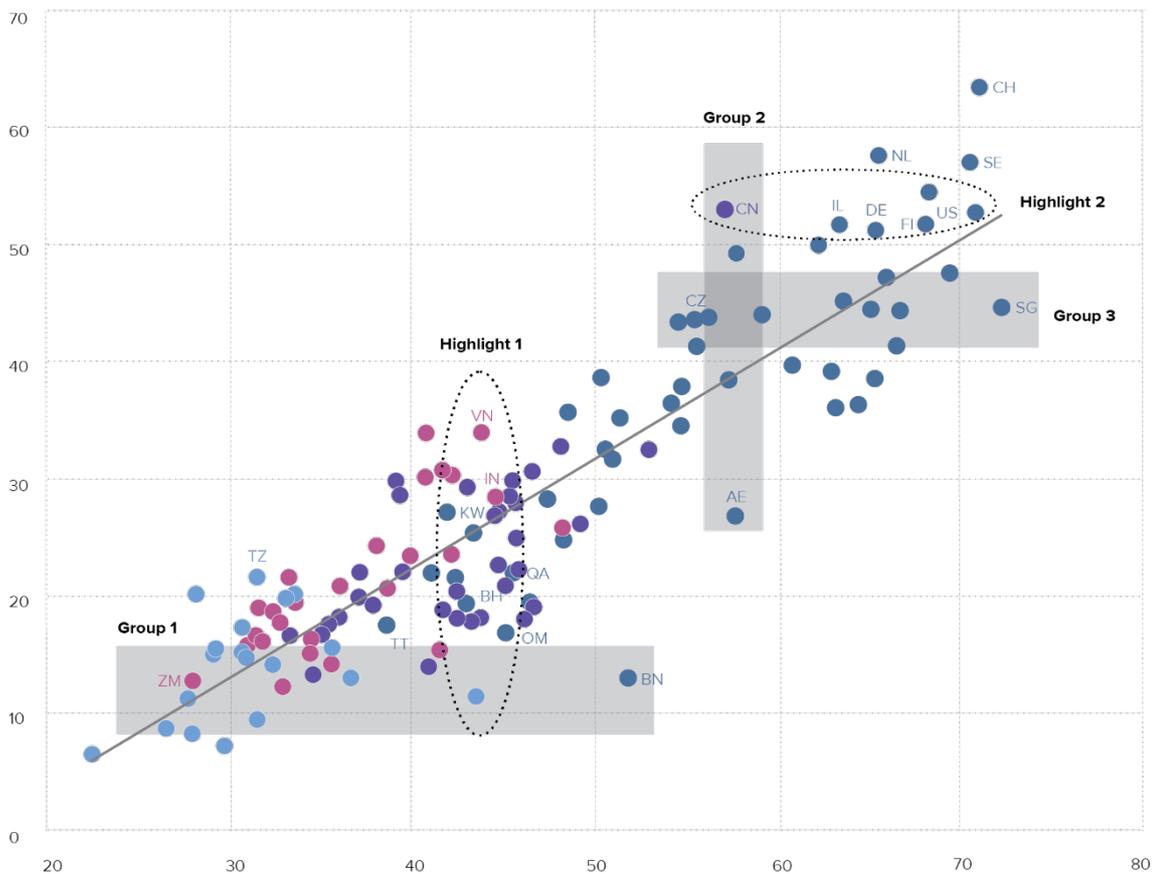
Costa Rica ranks 2nd among the 19 economies in Latin America and the Caribbean.

EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs, indicating which economies best translate innovation inputs into innovation outputs. Economies appearing above the line are effectively translating their costly innovation investments into more and higher-quality outputs. In contrast, those below the line are not effectively translating innovation inputs into outputs.

Costa Rica produces more innovation outputs relative to its level of innovation investments.

Innovation input/output performance by income group, 2019

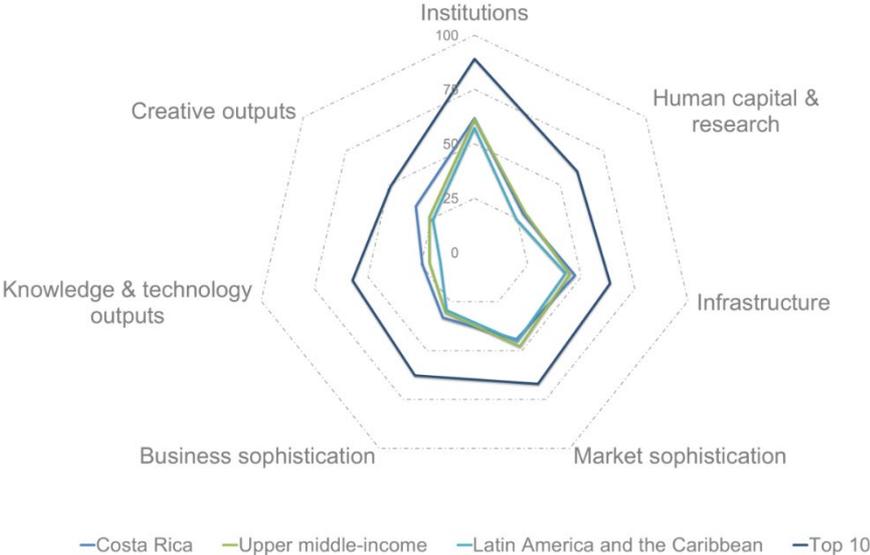


▲ Output score
 ▶ Input score
 ● High income
 ● Upper-middle income
 ● Lower-middle income
 ● Low income
 — Fitted values

- | | | | |
|-------------------------|-------------------|------------------------|--------------------------------|
| AE United Arab Emirates | CZ Czech Republic | NL Netherlands | TZ United Republic of Tanzania |
| BH Bahrain | DE Germany | OM Oman | US United States of America |
| BN Brunei Darussalam | FI Finland | QA Qatar | VN Viet Nam |
| CH Switzerland | IL Israel | SE Sweden | ZM Zambia |
| CN China | IN India | SG Singapore | |
| | KW Kuwait | TT Trinidad and Tobago | |

BENCHMARKING COSTA RICA TO OTHER UPPER MIDDLE-INCOME ECONOMIES AND THE LATIN AMERICA AND THE CARIBBEAN REGION

Costa Rica’s scores in the seven GII pillars



Upper middle-income economies

Costa Rica has high scores in 5 out of the 7 GII pillars: Institutions, Infrastructure, Business sophistication, Knowledge & technology outputs, and Creative outputs, which are above the average of the upper middle-income group.

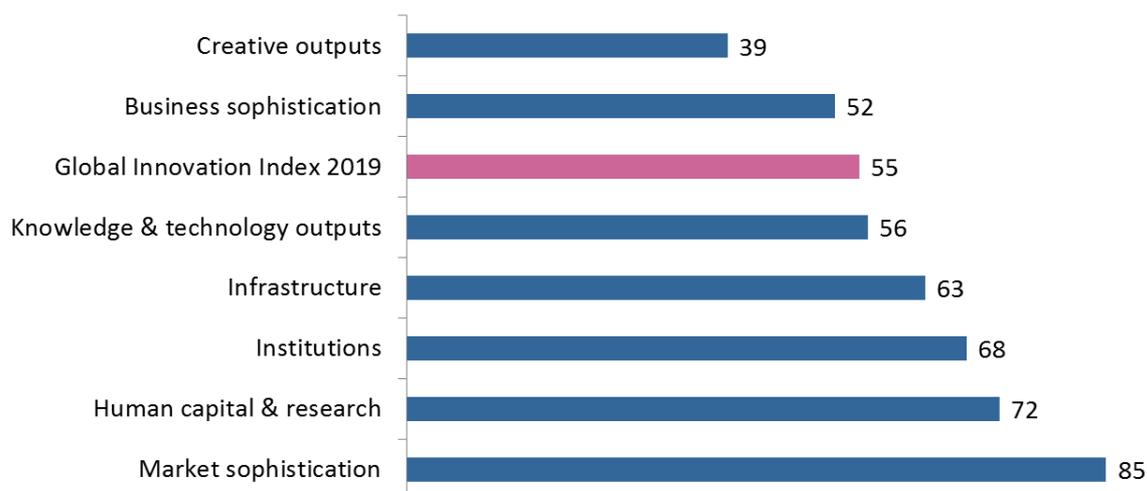
Latin America and the Caribbean Region

Compared to other economies in Latin America and the Caribbean, Costa Rica performs above average in all GII pillars but Market sophistication.

Costa Rica ranks in the top 40 in the following areas: Education, Ecological sustainability, Knowledge absorption, Knowledge diffusion, and Creative goods & services.

OVERVIEW OF COSTA RICA'S RANKINGS IN THE 7 GII AREAS

Costa Rica performs the best in Creative outputs and its weakest performance is in Market sophistication.



*The highest possible ranking in each pillar is 1.

COSTA RICA'S INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of Costa Rica's strengths and weaknesses in the GII 2019.

Strengths		
Code	Indicator name	Rank
2.1.1	Expenditure on education, % GDP	7
3.3.1	GDP/unit of energy use	15
4.1.1	Ease of getting credit*	11
4.3.1	Applied tariff rate, weighted mean, %	22
5.1.2	Firms offering formal training, % firms	14
5.3.1	Intellectual property payments, % total trade	8
6.3.3	ICT services exports, % total trade	7
7.1.1	Trademarks by origin/bn PPP\$ GDP	19
7.2	Creative goods & services	16
7.2.1	Cultural & creative services exports, % total trade	1
7.2.4	Printing & other media, % manufacturing	15

Weaknesses		
Code	Indicator name	Rank
1.3	Business environment	110
1.3.2	Ease of resolving insolvency*	111
2.2.2	Graduates in science & engineering, %	90
2.3.3	Global R&D companies, top 3, in mn US\$	43
3.2.3	Gross capital formation, % GDP	105
4.1.3	Microfinance gross loans, % GDP	71
4.2	Investment	112
4.2.2	Market capitalization, % GDP	74
5.1.4	GERD financed by business, %	87
5.2.3	GERD financed by abroad, %	88
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	109
7.1.2	Industrial designs by origin/bn PPP\$ GDP	113

STRENGTHS

- GII strengths for Costa Rica are found in six of the seven GII pillars.
- Several of these strengths are in Creative outputs (39), the best ranked pillar for Costa Rica. Here, strengths are sub-pillar Creative goods & services (16) and indicators Trademarks by origin (19), Printing & other media (15), and Cultural & creative services exports – where Costa Rica positions 1st globally.
- In Human capital & research (72), Costa Rica's strength is indicator Expenditure on education (7).
- In Infrastructure (63), a GII strength is indicator GDP per unit of energy use (15).
- In Market sophistication (85), Costa Rica present two strengths: indicators Ease of getting credit (11) and Applied tariff rate (22).
- In Business sophistication (52), GII strengths are indicators Firms offering formal training (14) and Intellectual property payments (8).
- In Knowledge & technology outputs (56), indicator ICT services exports (7) is a strength for Costa Rica.

WEAKNESSES

- Costa Rica's weaknesses in the GII are found in six of the seven GII pillars.
- In Institutions (68), Costa Rica's weaknesses are sub-pillar Business environment (110) and indicator Ease of resolving insolvency (111).
- In Human capital & research (72), two GII weaknesses are found in two important indicators: Graduates in science & engineering (90) and Global R&D companies (43).
- In Infrastructure (63), indicator Gross capital formation (105) is a relative weakness for this country.
- In Market sophistication (85), Costa Rica's relative weaknesses are sub-pillar Investment (112) as well as indicators Microfinance gross loans (71) and Market capitalization (74).
- In Business sophistication (52), three indicators – R&D financed by business (87), R&D financed by abroad (88), and JV–strategic alliance deals (109) – are GII weaknesses of Costa Rica.
- In Creative outputs (39), only one indicator – Industrial designs by origin (113) – is a relative weakness for this country.

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2018 rank
48	68	Upper middle	LCN	5.0	88.7	17,559.1	54
				Score/Value	Rank		
INSTITUTIONS.....				61.9	68		
1.1	Political environment.....		58.4	58			
1.1.1	Political and operational stability*.....		70.2	61			
1.1.2	Government effectiveness*.....		52.5	56			
1.2	Regulatory environment.....		69.9	54			
1.2.1	Regulatory quality*.....		54.0	48			
1.2.2	Rule of law*.....		58.4	43	◆		
1.2.3	Cost of redundancy dismissal, salary weeks.....		18.7	76			
1.3	Business environment.....		57.2	110	○ ◆		
1.3.1	Ease of starting a business*.....		79.9	108			
1.3.2	Ease of resolving insolvency*.....		34.5	111	○ ◆		
HUMAN CAPITAL & RESEARCH.....				28.5	72		
2.1	Education.....		57.5	36			
2.1.1	Expenditure on education, % GDP.....		7.4	7	● ◆		
2.1.2	Government funding/pupil, secondary, % GDP/cap... ..		23.9	28			
2.1.3	School life expectancy, years.....		15.4	41			
2.1.4	PISA scales in reading, maths, & science.....		415.8	54			
2.1.5	Pupil-teacher ratio, secondary... ..		12.7	55			
2.2	Tertiary education.....		19.6	95			
2.2.1	Tertiary enrolment, % gross.....		55.6	52			
2.2.2	Graduates in science & engineering, %.....		14.4	90	○ ◆		
2.2.3	Tertiary inbound mobility, %.....		1.3	84			
2.3	Research & development (R&D).....		8.3	64			
2.3.1	Researchers, FTE/mn pop... ..		529.9	66			
2.3.2	Gross expenditure on R&D, % GDP... ..		0.5	66			
2.3.3	Global R&D companies, avg. exp. top 3, mn US\$.....		0.0	43	○ ◆		
2.3.4	QS university ranking, average score top 3*.....		17.1	54			
INFRASTRUCTURE.....				47.0	63		
3.1	Information & communication technologies (ICTs).....		68.7	59			
3.1.1	ICT access*.....		65.6	67			
3.1.2	ICT use*.....		64.8	46	◆		
3.1.3	Government's online service*.....		67.4	74			
3.1.4	E-participation*.....		77.0	57			
3.2	General infrastructure.....		23.4	108			
3.2.1	Electricity output, kWh/mn pop.....		2,238.9	73			
3.2.2	Logistics performance*.....		34.1	72			
3.2.3	Gross capital formation, % GDP.....		17.8	105	○		
3.3	Ecological sustainability.....		49.0	34	◆		
3.3.1	GDP/unit of energy use.....		14.5	15	● ◆		
3.3.2	Environmental performance*.....		67.9	29	◆		
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP..		1.4	59			
MARKET SOPHISTICATION.....				44.2	85		
4.1	Credit.....		37.8	60			
4.1.1	Ease of getting credit*.....		85.0	11	● ◆		
4.1.2	Domestic credit to private sector, % GDP.....		62.0	53			
4.1.3	Microfinance gross loans, % GDP... ..		0.0	71	○		
4.2	Investment.....		32.2	112	○		
4.2.1	Ease of protecting minority investors*.....		48.3	99			
4.2.2	Market capitalization, % GDP.....		4.6	74	○ ◆		
4.2.3	Venture capital deals/bn PPP\$ GDP.....		n/a	n/a			
4.3	Trade, competition, & market scale.....		62.4	58			
4.3.1	Applied tariff rate, weighted avg., %... ..		1.8	22	●		
4.3.2	Intensity of local competition*.....		72.9	39			
4.3.3	Domestic market scale, bn PPP\$.....		88.7	84			
BUSINESS SOPHISTICATION.....				33.2	52		
5.1	Knowledge workers.....		37.0	65			
5.1.1	Knowledge-intensive employment, %.....		24.4	58			
5.1.2	Firms offering formal training, % firms... ..		54.7	14	●		
5.1.3	GERD performed by business, % GDP... ..		0.2	54			
5.1.4	GERD financed by business, %.....		2.8	87	○ ◆		
5.1.5	Females employed w/advanced degrees, %.....		10.5	63			
5.2	Innovation linkages.....		18.8	95			
5.2.1	University/industry research collaboration*.....		45.1	51			
5.2.2	State of cluster development*.....		49.6	51			
5.2.3	GERD financed by abroad, %.....		1.3	88	○		
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP.....		0.0	109	○ ◆		
5.2.5	Patent families 2+ offices/bn PPP\$ GDP.....		0.0	70			
5.3	Knowledge absorption.....		43.8	29	◆		
5.3.1	Intellectual property payments, % total trade.....		2.8	8	● ◆		
5.3.2	High-tech imports, % total trade.....		9.1	43			
5.3.3	ICT services imports, % total trade.....		1.4	50			
5.3.4	FDI net inflows, % GDP.....		5.0	30			
5.3.5	Research talent, % in business enterprise.....		n/a	n/a			
KNOWLEDGE & TECHNOLOGY OUTPUTS....				24.3	56		
6.1	Knowledge creation.....		5.9	91			
6.1.1	Patents by origin/bn PPP\$ GDP.....		0.2	94			
6.1.2	PCT patents by origin/bn PPP\$ GDP.....		0.1	57			
6.1.3	Utility models by origin/bn PPP\$ GDP.....		0.1	49			
6.1.4	Scientific & technical articles/bn PPP\$ GDP.....		5.0	81			
6.1.5	Citable documents H-index.....		10.1	66			
6.2	Knowledge impact.....		36.9	62			
6.2.1	Growth rate of PPP\$ GDP/worker, %.....		2.3	38			
6.2.2	New businesses/th pop. 15-64.....		2.1	49			
6.2.3	Computer software spending, % GDP.....		0.3	46			
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP.....		3.6	67			
6.2.5	High- & medium-high-tech manufactures, %.....		0.3	41			
6.3	Knowledge diffusion.....		30.2	30	◆		
6.3.1	Intellectual property receipts, % total trade.....		0.0	79			
6.3.2	High-tech net exports, % total trade.....		5.7	28			
6.3.3	ICT services exports, % total trade.....		6.1	7	● ◆		
6.3.4	FDI net outflows, % GDP.....		0.7	60			
CREATIVE OUTPUTS.....				34.3	39	◆	
7.1	Intangible assets.....		48.6	41			
7.1.1	Trademarks by origin/bn PPP\$ GDP.....		94.1	19	●		
7.1.2	Industrial designs by origin/bn PPP\$ GDP.....		0.1	113	○		
7.1.3	ICTs & business model creation*.....		68.3	34	◆		
7.1.4	ICTs & organizational model creation*.....		63.0	36	◆		
7.2	Creative goods & services.....		34.8	16	● ◆		
7.2.1	Cultural & creative services exports, % total trade.....		4.2	1	● ◆		
7.2.2	National feature films/mn pop. 15-69.....		3.7	50			
7.2.3	Entertainment & Media market/th pop. 15-69.....		n/a	n/a			
7.2.4	Printing & other media, % manufacturing.....		2.2	15	●		
7.2.5	Creative goods exports, % total trade.....		0.4	65			
7.3	Online creativity.....		5.1	65			
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69.....		11.3	37	◆		
7.3.2	Country-code TLDs/th pop. 15-69.....		1.4	70			
7.3.3	Wikipedia edits/mn pop. 15-69... ..		11.0	62			
7.3.4	Mobile app creation/bn PPP\$ GDP.....		0.4	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 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 missing or are outdated for Costa Rica.

Missing data

Code	Indicator name	Country year	Model year	Source
4.2.3	Venture capital deals/bn PPP\$ GDP	n/a	2018	Thomson Reuters
5.3.5	Research talent, % in business enterprise	n/a	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
7.2.3	Entertainment & Media market/th pop. 15–69	n/a	2017	PwC

Outdated data

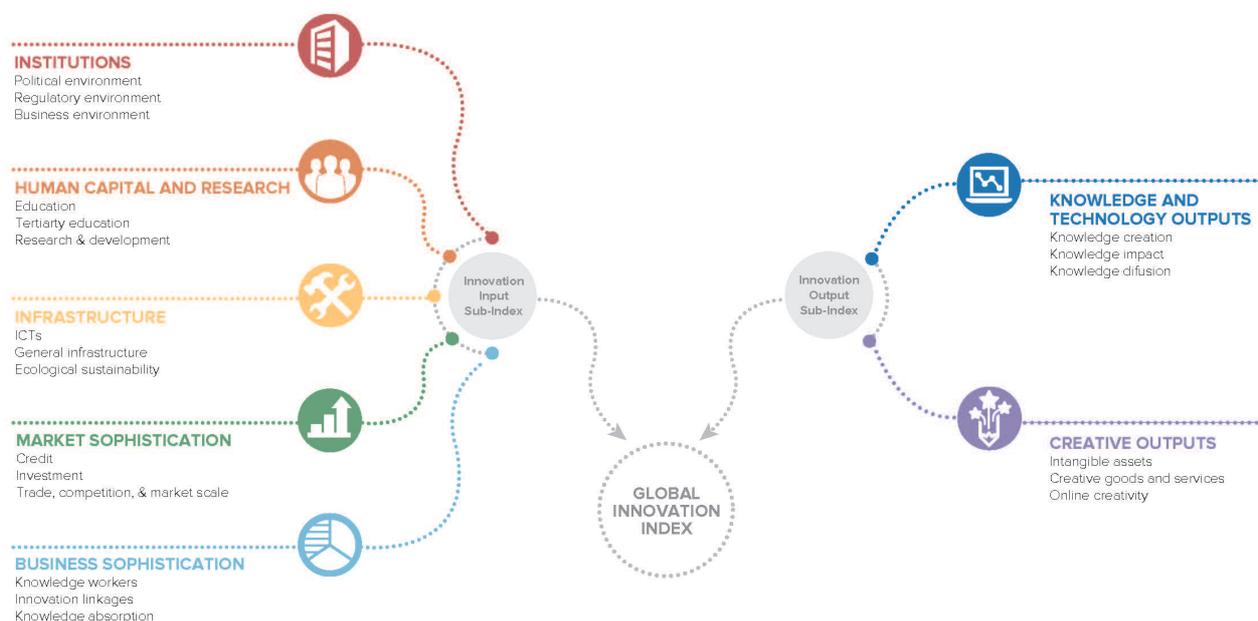
Code	Indicator name	Country year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2016	2017	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2016	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2016	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.1.3	Microfinance gross loans, % GDP	2016	2017	Microfinance Information Exchange
4.3.1	Applied tariff rate, weighted mean, %	2016	2017	World Bank
5.1.2	Firms offering formal training, % firms	2010	2013	World Bank
5.1.3	GERD performed by business, % GDP	2016	2017	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
7.3.3	Wikipedia edits/mn pop. 15–69	2014	2017	Wikimedia Foundation

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 2019, the GII presents its 12th edition devoted to the theme **Creating Healthy Lives—The Future of Medical Innovation**.

Recognizing that innovation is a key driver of economic development, the GII aims to provide a rich innovation ranking and 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 countries that incorporate the GII into their innovation agendas.

Framework of the Global Innovation Index 2019



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that includes 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 containing three sub-pillars.

