GLOBAL INNOVATION INDEX 2020

DOMINICAN REPUBLIC

90th Dominican Republic ranks 90th 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 Dominican Republic 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 Dominican Republic in the GII 2020 is between ranks 86 and 99.

Rankings of Dominican Republic (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	90	94	85
2019	87	90	88
2018	87	92	77

- Dominican Republic performs better in innovation outputs than innovation inputs in 2020.
- This year Dominican Republic ranks 94th in innovation inputs, lower than last year and lower compared to 2018.
- As for innovation outputs, Dominican Republic ranks 85th. This position is higher than last year and lower compared to 2018.

31st Dominican Republic ranks 31st among the 37 upper middle-income group economies.

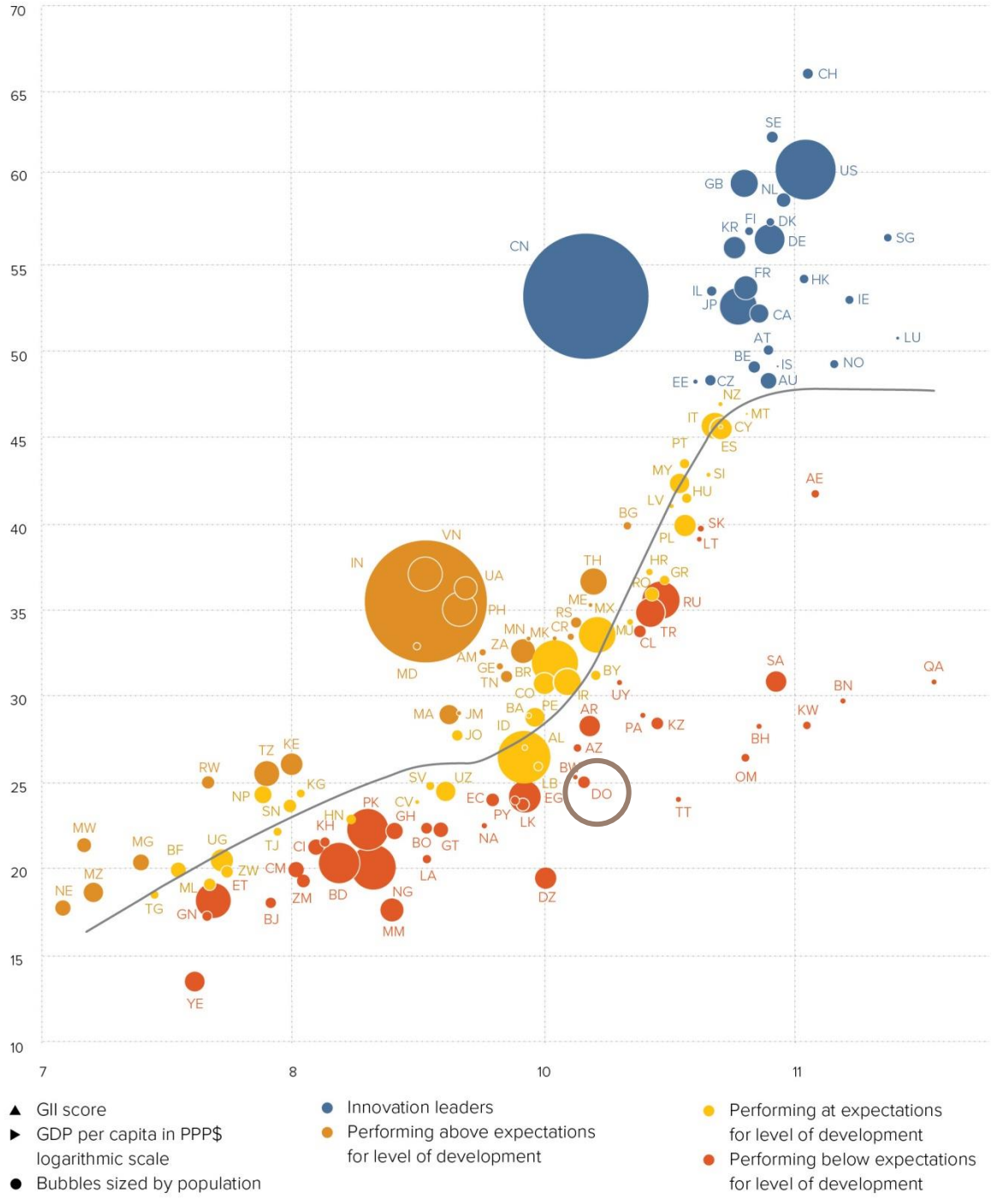
11th Dominican Republic ranks 11th among the 18 economies in Latin America and the Caribbean.

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, Dominican Republic is performing below expectations for its level of development.

The positive relationship between innovation and development

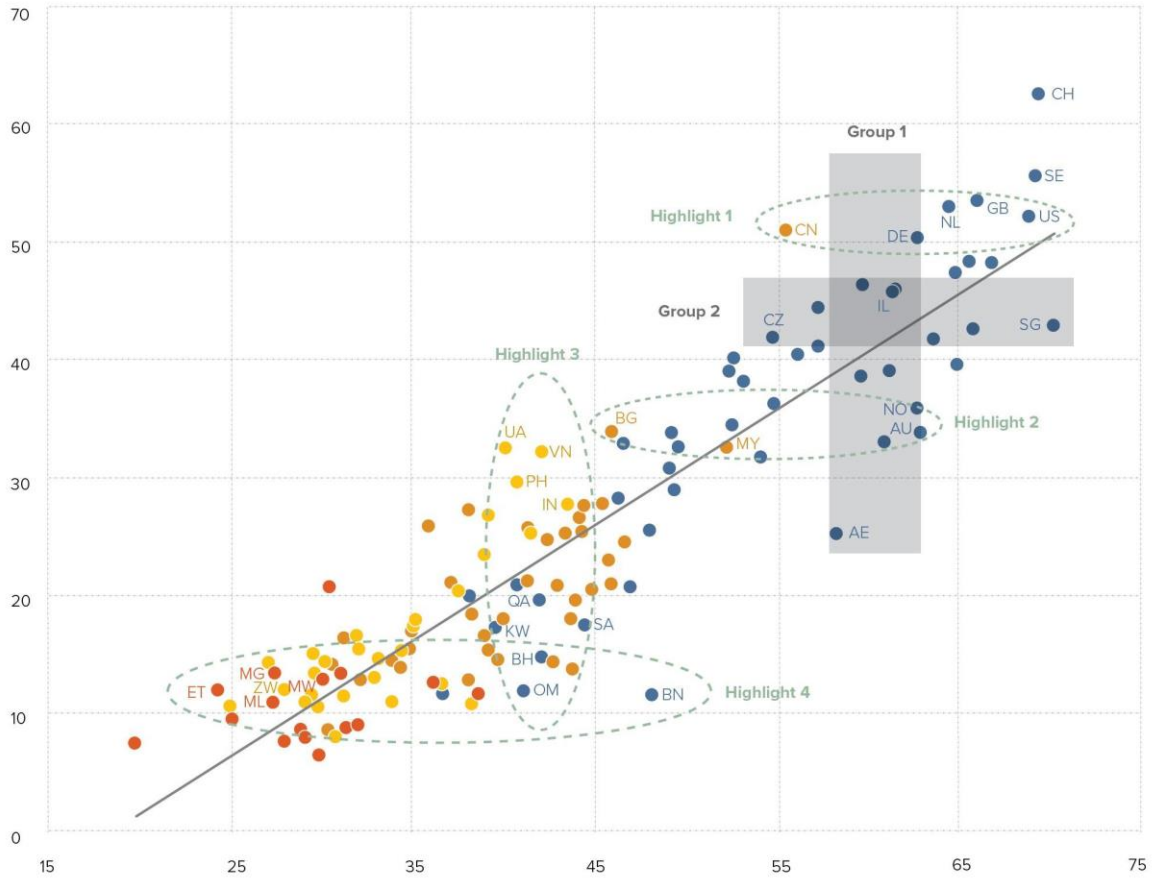


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Dominican Republic produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020



▲ Output score
► Input score

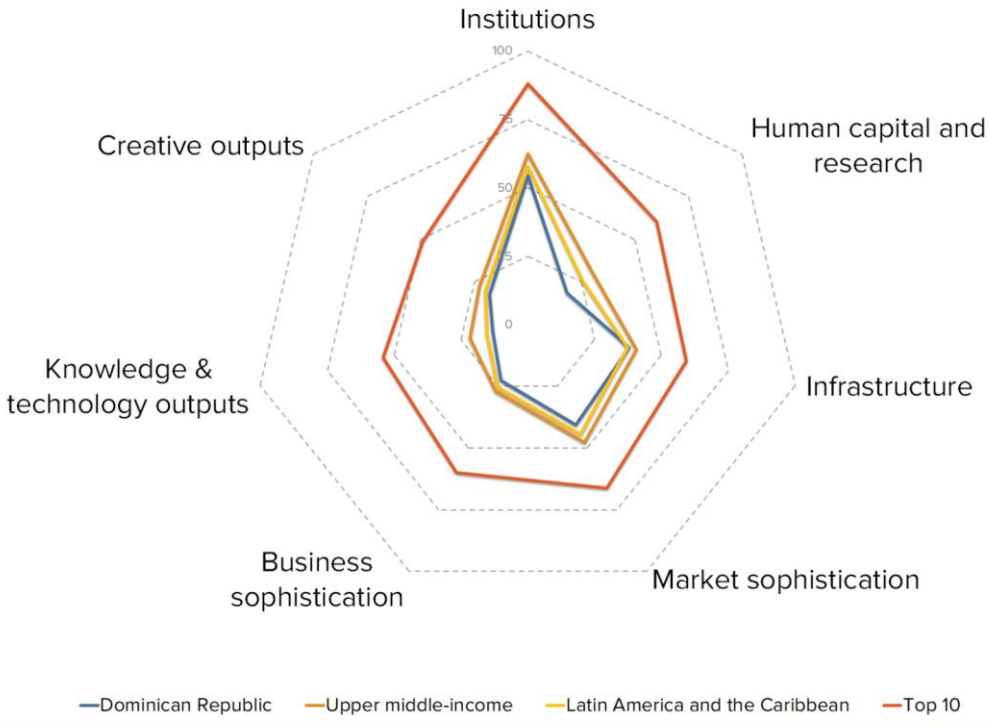
● High income group
● Upper middle-income group
● Lower middle-income group
● Low income group

— 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 DOMINICAN REPUBLIC AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND LATIN AMERICA AND THE CARIBBEAN

Dominican Republic's scores in the seven GII pillars



Upper middle-income group economies

Dominican Republic scores below average for its income group in all pillars.

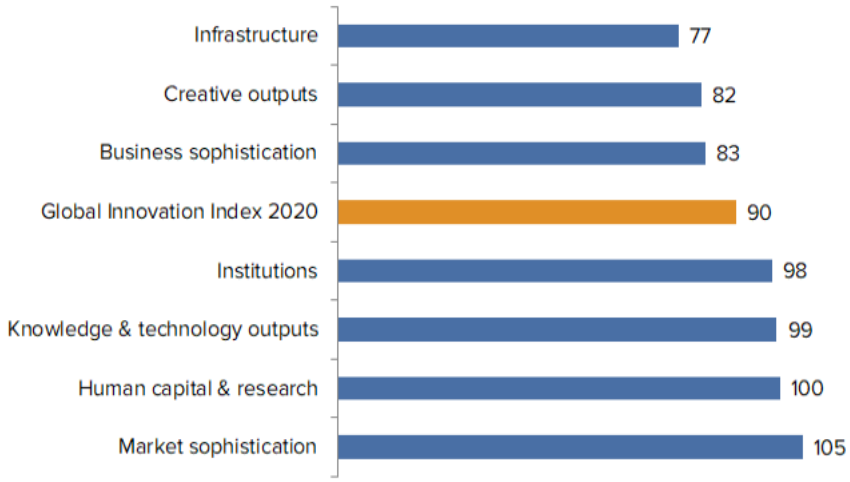
Latin America and the Caribbean

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

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

OVERVIEW OF DOMINICAN REPUBLIC RANKINGS IN THE SEVEN GII AREAS

Dominican Republic performs best in Infrastructure and its weakest performance is in 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 Dominican Republic in the GII 2020.

Strengths

Code	Indicator name	Rank
2.2.1	Tertiary enrolment, % gross	47
3.2.3	Gross capital formation, % GDP	45
3.3	Ecological sustainability	48
3.3.1	GDP/unit of energy use	9
4.1.3	Microfinance gross loans, % GDP	30
4.3.2	Intensity of local competition†	56
5.2.2	State of cluster development†	48
5.3.4	FDI net inflows, % GDP	42
6.2.1	Growth rate of PPP$ GDP/worker, %	38
6.3.2	High-tech net exports, % total trade	52
7.2.5	Creative goods exports, % total trade	26

Weaknesses

Code	Indicator name	Rank
2.1.4	PISA scales in reading, maths & science	79
2.2.2	Graduates in science & engineering, %	101
2.3.3	Global R&D companies, top 3, mn US$	42
2.3.4	QS university ranking, average score top 3*	77
5.2.4	JV–strategic alliance deals/bn PPP$ GDP	119
6.1	Knowledge creation	130
6.1.4	Scientific & technical articles/bn PPP$ GDP	130
6.1.5	Citable documents H-index	123
6.2.3	Computer software spending, % GDP	116
7.1.3	Industrial designs by origin/bn PPP$ GDP	117
7.3.4	Mobile app creation/bn PPP$ GDP	96

STRENGTHS

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

- Human capital & research (100): the indicator Tertiary enrolment (47) reveals a strength.
- Infrastructure (77): demonstrates strengths in the sub-pillar Ecological sustainability (48) and in the indicators Gross capital formation (45) and GDP/unit of energy use (9).
- Market sophistication (105): shows strengths in the indicators Microfinance gross loans (30) and Intensity of local competition (56).
- Business sophistication (83): displays strengths in the indicators State of cluster development (48) and FDI net inflows (42).
- Knowledge & technology outputs (99): reveals strengths in the indicators Growth rate of PPP (38) and High-tech net exports (52).
- Creative outputs (82): exhibits strength in the indicator Creative goods exports (26).

WEAKNESSES

GII weaknesses for Dominican Republic are found in four of the seven GII pillars.

- Human capital & research (100): shows weaknesses in the indicators PISA scales in reading, maths & science (79), Graduates in science & engineering (101), Global R&D companies (42) and QS university ranking (77).
- Business sophistication (83): the indicator JV–strategic alliance deals (119) reveals a weakness.
- Knowledge & technology outputs (99): displays weaknesses in the sub-pillar Knowledge creation (130) and in the indicators Scientific & technical articles (130), Citable documents H-index (123) and Computer software spending (116).
- Creative outputs (82): demonstrates weaknesses in the indicators Industrial designs by origin (117) and Mobile app creation (96).

DOMINICAN REPUBLIC

GII 2020 rank

90

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2019 rank
85	94	Upper middle	LCN	10.7	201.3	16,946.2	87

		Score/Value	Rank	
INSTITUTIONS		**54.3**	**98**	
1.1	**Political environment**	**50.1**	**89**	
1.1.1	Political and operational stability*	67.9	73	
1.1.2	Government effectiveness*	41.2	91	
1.2	**Regulatory environment**	**51.0**	**101**	
1.2.1	Regulatory quality*	39.8	78	
1.2.2	Rule of law*	36.3	86	
1.2.3	Cost of redundancy dismissal, salary weeks	26.2	105	
1.3	**Business environment**	**61.7**	**99**	
1.3.1	Ease of starting a business*	85.4	85	
1.3.2	Ease of resolving insolvency*	38.0	108	◇
HUMAN CAPITAL & RESEARCH		**18.5**	**100**	◇
2.1	**Education**	**34.4**	**96**	
2.1.1	Expenditure on education, % GDP	n/a	n/a	
2.1.2	Government funding/pupil, secondary, % GDP/cap	15.1	78	
2.1.3	School life expectancy, years	14.2	69	
2.1.4	PISA scales in reading, maths, & science	334.1	79	○ ◇
2.1.5	Pupil-teacher ratio, secondary	18.6	92	
2.2	**Tertiary education**	**21.1**	**93**	
2.2.1	Tertiary enrolment, % gross	59.9	47	●
2.2.2	Graduates in science & engineering, %	11.6	101	○ ◇
2.2.3	Tertiary inbound mobility, %	1.7	79	
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 $US	0.0	42	○ ◇
2.3.4	QS university ranking, average score top 3*	0.0	77	○ ◇
INFRASTRUCTURE		**37.9**	**77**	
3.1	**Information & communication technologies (ICTs)**	**57.2**	**85**	
3.1.1	ICT access*	45.4	99	◇
3.1.2	ICT use*	49.4	77	
3.1.3	Government's online service*	66.0	80	
3.1.4	E-participation*	68.0	78	
3.2	**General infrastructure**	**21.4**	**92**	
3.2.1	Electricity output, kWh/mn pop	1,767.6	83	
3.2.2	Logistics performance*	27.8	85	
3.2.3	Gross capital formation, % GDP	25.7	45	●
3.3	**Ecological sustainability**	**35.1**	**48**	●
3.3.1	GDP/unit of energy use	17.5	9	● ◆
3.3.2	Environmental performance*	46.3	68	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.1	120	
MARKET SOPHISTICATION		**40.6**	**105**	
4.1	**Credit**	**24.3**	**117**	◇
4.1.1	Ease of getting credit*	45.0	101	◇
4.1.2	Domestic credit to private sector, % GDP	28.6	95	
4.1.3	Microfinance gross loans, % GDP	0.7	30	●
4.2	**Investment**	**34.0**	**[78]**	
4.2.1	Ease of protecting minority investors*	34.0	118	◇
4.2.2	Market capitalization, % GDP	n/a	n/a	
4.2.3	Venture capital deals/bn PPP$ GDP	n/a	n/a	
4.3	**Trade, competition, and market scale**	**63.3**	**64**	
4.3.1	Applied tariff rate, weighted avg., %	4.2	79	
4.3.2	Intensity of local competition+	70.3	56	●
4.3.3	Domestic market scale, bn PPP$	201.3	66	

		Score/Value	Rank	
BUSINESS SOPHISTICATION		**22.5**	**83**	
5.1	**Knowledge workers**	**24.3**	**[85]**	
5.1.1	Knowledge-intensive employment, %	16.4	89	
5.1.2	Firms offering formal training, %	23.4	65	
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, %	9.1	73	
5.2	**Innovation linkages**	**19.7**	**69**	
5.2.1	University/industry research collaboration+	35.2	98	
5.2.2	State of cluster development+	50.2	48	●
5.2.3	GERD financed by abroad, % GDP	n/a	n/a	
5.2.4	JV-strategic alliance deals/bn PPP$ GDP	0.0	119	○ ◇
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.0	86	
5.3	**Knowledge absorption**	**23.5**	**87**	
5.3.1	Intellectual property payments, % total trade	0.6	59	
5.3.2	High-tech imports, % total trade	6.7	78	
5.3.3	ICT services imports, % total trade	0.4	106	
5.3.4	FDI net inflows, % GDP	3.7	42	●
5.3.5	Research talent, % in business enterprise	n/a	n/a	
KNOWLEDGE & TECHNOLOGY OUTPUTS		**13.0**	**99**	
6.1	**Knowledge creation**	**1.3**	**130**	○ ◇
6.1.1	Patents by origin/bn PPP$ GDP	0.1	115	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.1	73	
6.1.3	Utility models by origin/bn PPP$ GDP	0.1	60	
6.1.4	Scientific & technical articles/bn PPP$ GDP	0.4	130	○ ◇
6.1.5	Citable documents H-index	2.9	123	○
6.2	**Knowledge impact**	**15.3**	**98**	
6.2.1	Growth rate of PPP$ GDP/worker, %	2.5	38	●
6.2.2	New businesses/th pop. 15-64	1.5	69	
6.2.3	Computer software spending, % GDP	0.0	116	○ ◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	0.9	111	
6.2.5	High- and medium-high-tech manufacturing, %	n/a	n/a	
6.3	**Knowledge diffusion**	**22.5**	**68**	
6.3.1	Intellectual property receipts, % total trade	n/a	n/a	
6.3.2	High-tech net exports, % total trade	2.2	52	●
6.3.3	ICT services exports, % total trade	0.5	97	
6.3.4	FDI net outflows, % GDP	0.1	100	
CREATIVE OUTPUTS		**17.8**	**82**	
7.1	**Intangible assets**	**19.7**	**91**	
7.1.1	Trademarks by origin/bn PPP$ GDP	44.6	58	
7.1.2	Global brand value, top 5,000, % GDP	2.3	77	
7.1.3	Industrial designs by origin/bn PPP$ GDP	0.0	117	○
7.1.4	ICTs & organizational model creation+	48.9	85	
7.2	**Creative goods and services**	**22.7**	**[46]**	
7.2.1	Cultural & creative services exports, % total trade	n/a	n/a	
7.2.2	National feature films/mn pop. 15-69	3.5	53	
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	2.2	26	●
7.3	**Online creativity**	**9.2**	**88**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	2.5	71	
7.3.2	Country-code TLDs/th pop. 15-69	1.3	80	
7.3.3	Wikipedia edits/mn pop. 15-69	36.7	85	◇
7.3.4	Mobile app creation/bn PPP$ GDP	0.0	96	○

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 Dominican Republic.

Missing data

Code	Indicator name	Country year	Model year	Source
2.1.1	Expenditure on education, % GDP	n/a	2018	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
4.2.2	Market capitalization, % GDP	n/a	2018	World Federation of Exchanges
4.2.3	Venture capital deals/bn PPP$ GDP	n/a	2019	Thomson Reuters
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
5.2.3	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
6.2.5	High- & medium-high-tech manufacturing, %	n/a	2017	United Nations Industrial Development Organization
6.3.1	Intellectual property receipts, % total trade	n/a	2018	World Trade Organization
7.2.1	Cultural & creative services exports, % total trade	n/a	2018	World Trade Organization
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

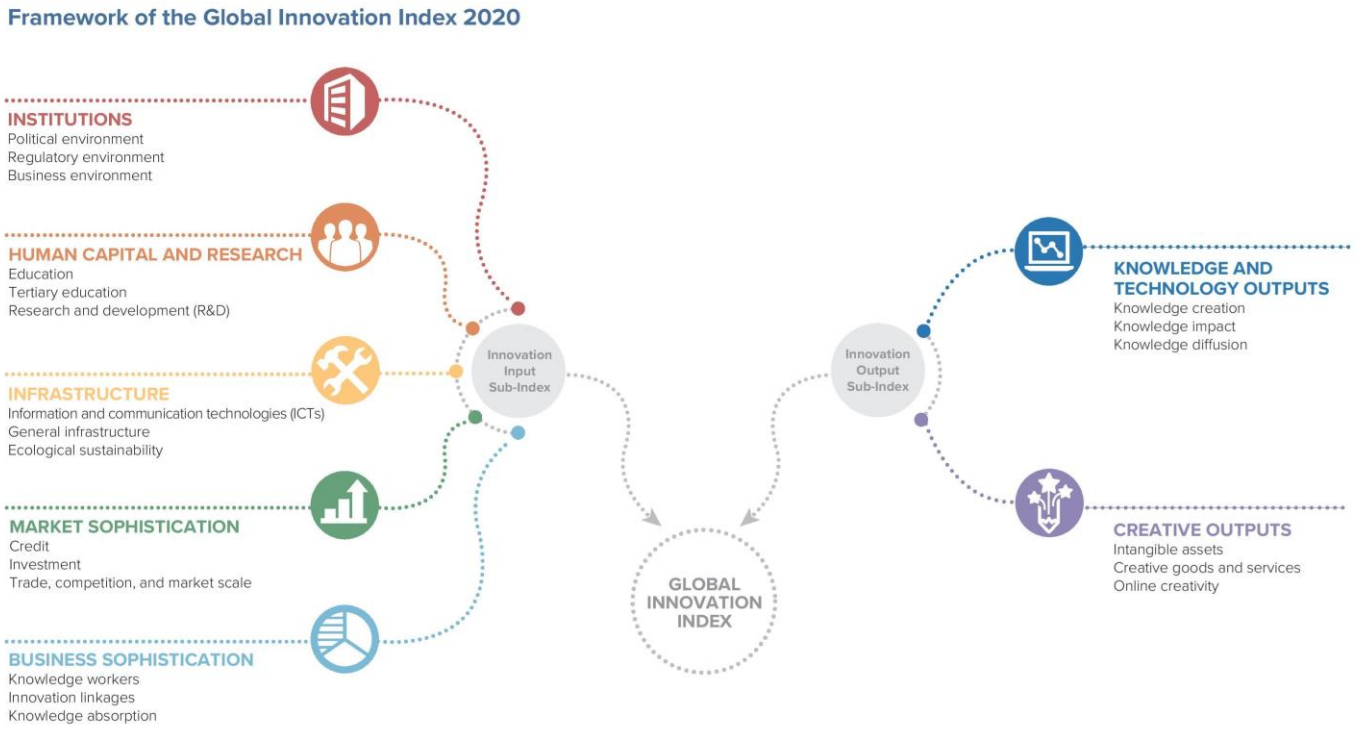
Outdated data

Code	Indicator name	Country year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2017	2018	UNESCO Institute for Statistics
5.1.2	Firms offering formal training, %	2015	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.



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.