Global Innovation Index 2022

DOMINICAN REPUBLIC

90th Dominican Republic ranks 90th among the 132 economies featured in the GII 2022.

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 2022 is between ranks 88 and 93.

Rankings for Dominican Republic (2020–2022)

GIIYR	GII	Innovation inputs	Innovation outputs
2020	90	94	85
2021	93	93	98
2022	90	90	92

- Dominican Republic performs better in innovation inputs than innovation outputs in 2022.
- This year Dominican Republic ranks 90th in innovation inputs, higher than both 2021 and 2020.
- As for innovation outputs, Dominican Republic ranks 92nd. This position is higher than last year but lower than 2020.

30th Dominican Republic ranks 30th among the 36 upper-middle-income group economies.

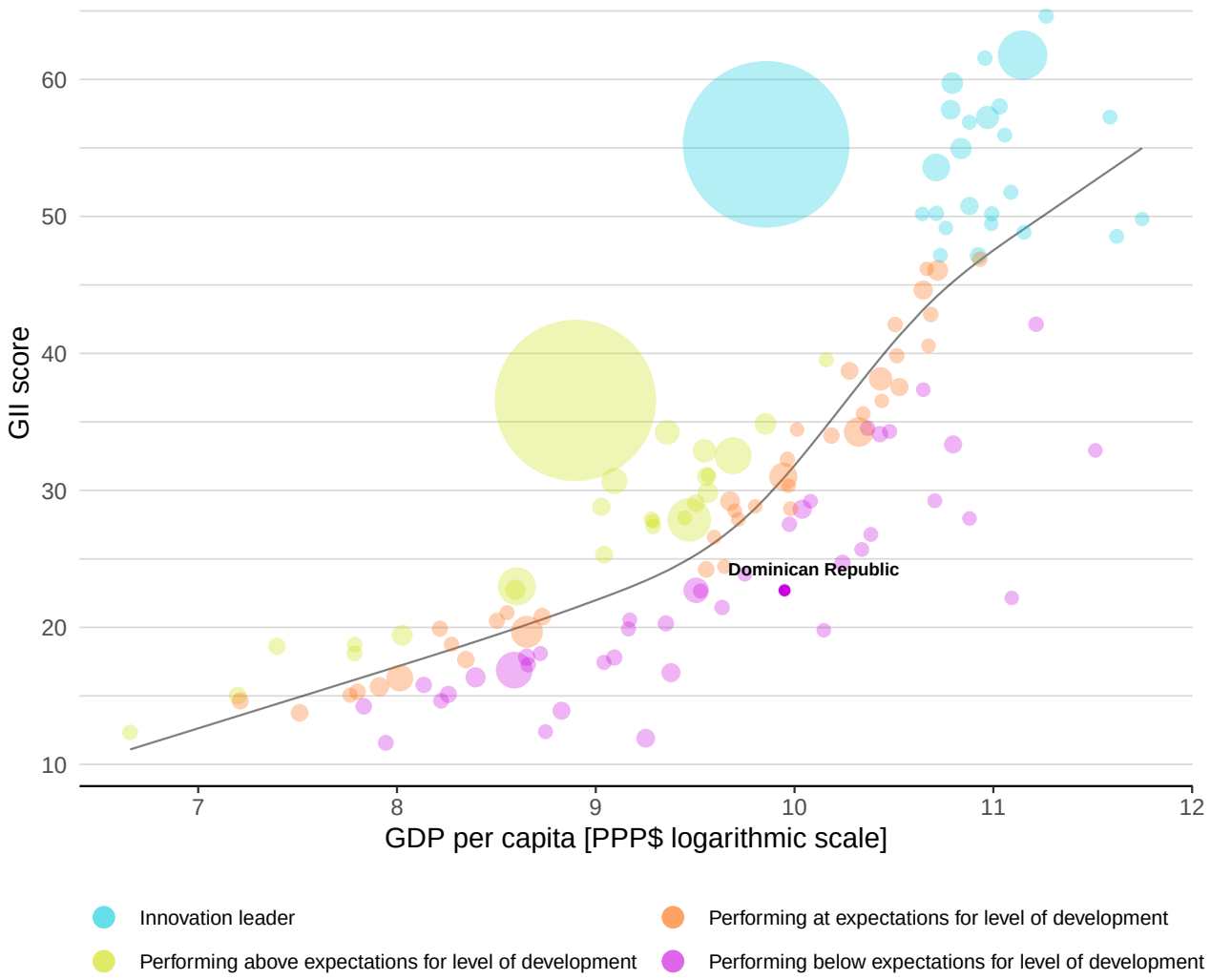
11th Dominican Republic ranks 11th among the 18 economies in Latin America and the Caribbean.

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's performance is below expectations for its level of development.

The positive relationship between innovation and development

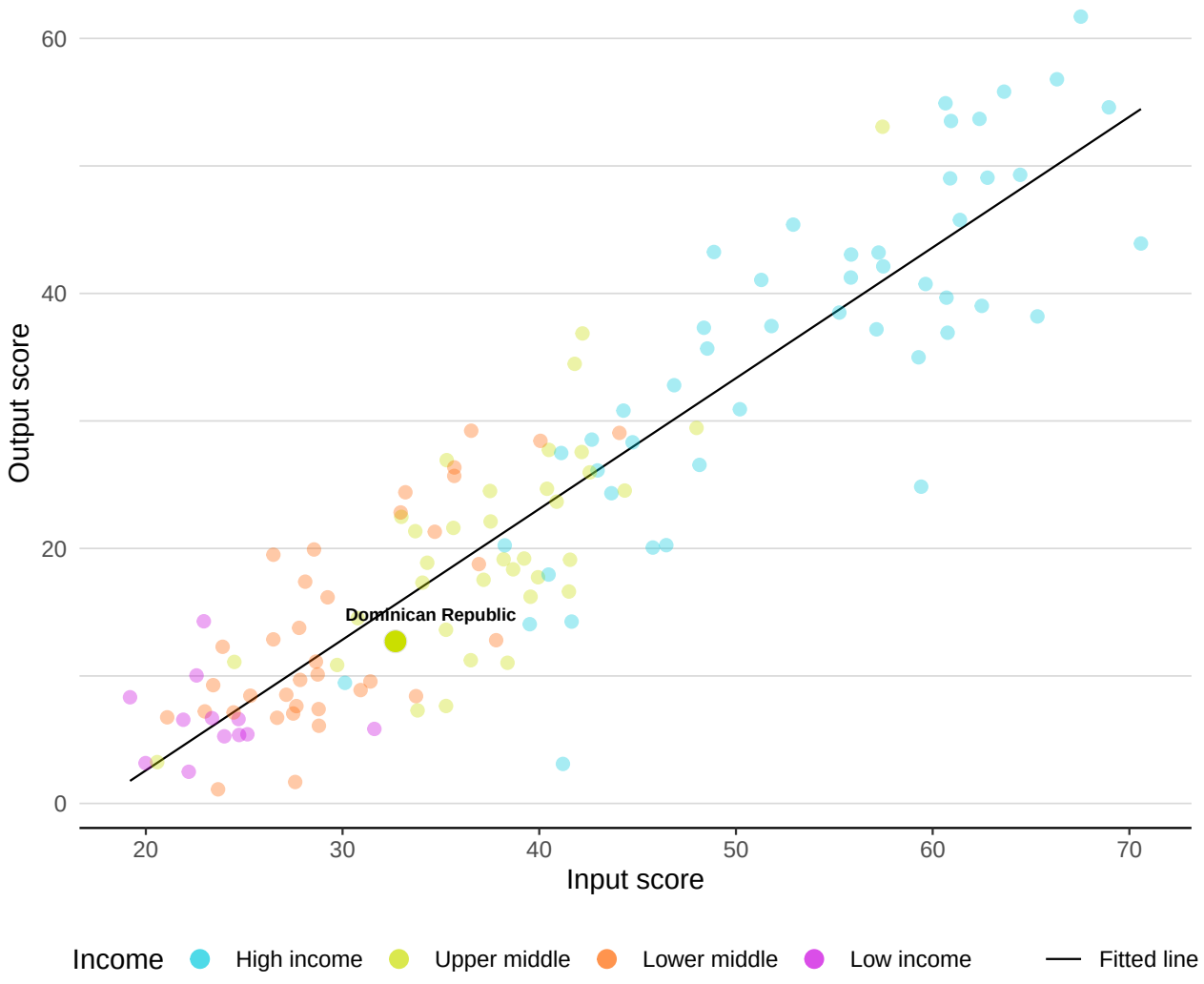


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

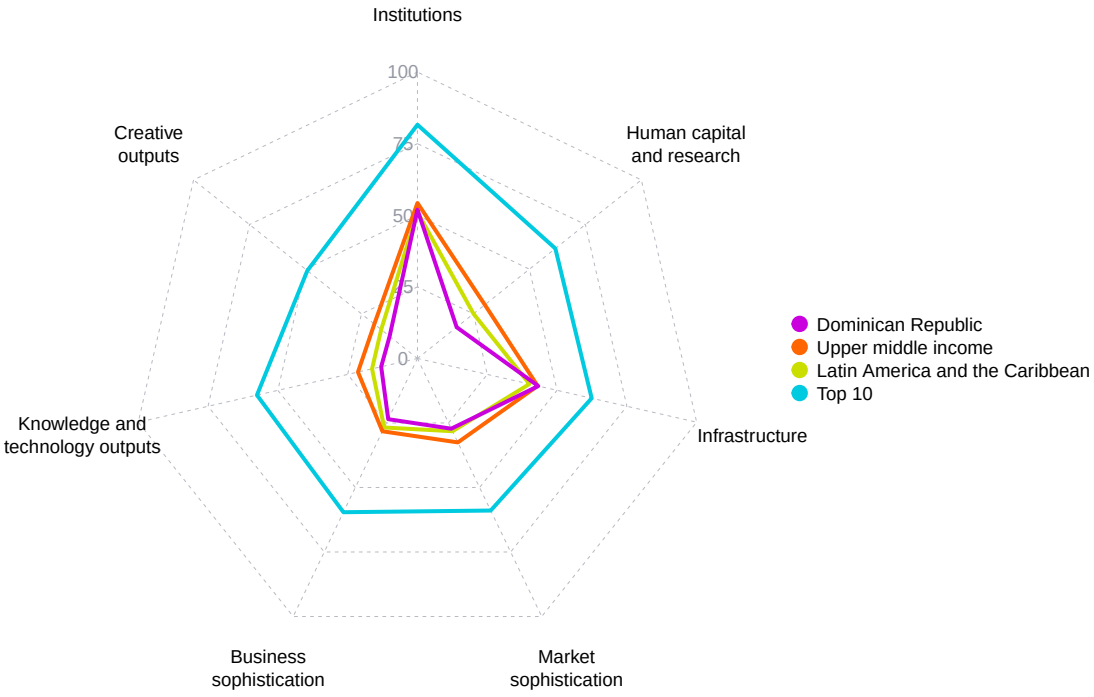
Dominican Republic produces less innovation outputs relative to its level of innovation investments.

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 Dominican Republic



Upper-middle-income group economies

Dominican Republic performs above the upper-middle-income group average in Infrastructure.

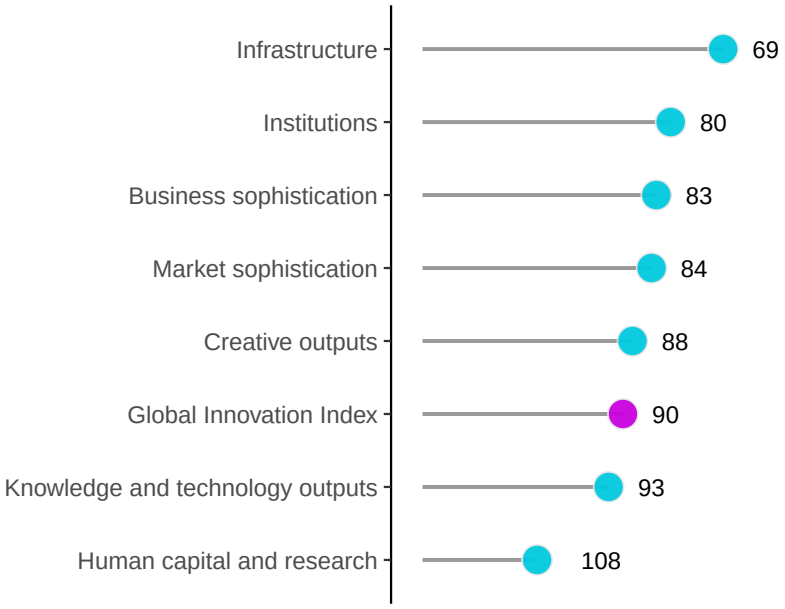
Latin America and the Caribbean

Dominican Republic performs above the regional average in two pillars, namely: Institutions; and, Infrastructure.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

Dominican Republic performs best in Infrastructure and its weakest performance is in Human capital and research.

The seven GII pillar ranks for Dominican Republic



Note: The highest possible ranking in each pillar is 1.

The full WIPO Intellectual Property Statistics profile for Dominican Republic can be found at:

https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=DO.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the indicator strengths and weaknesses of Dominican Republic in the GII 2022.

Strengths and weaknesses for Dominican Republic

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.3.1	Policies for doing business	55	2.1.4	PISA scales in reading, maths and science	78
2.2.1	Tertiary enrolment, % gross	48	2.2.2	Graduates in science and engineering, %	104
3.1.3	Government's online service	49	2.3.3	Global corporate R&D investors, top 3, mn USD	38
3.1.4	E-participation	51	2.3.4	QS university ranking, top 3	72
3.2.3	Gross capital formation, % GDP	34	4.1.1	Finance for startups and scaleups	71
3.3.1	GDP/unit of energy use	9	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	126
5.2.2	State of cluster development and depth	55	6.1.4	Scientific and technical articles/bn PPP$ GDP	130
5.3.4	FDI net inflows, % GDP	42	6.1.5	Citable documents H-index	123
6.2.1	Labor productivity growth, %	28	6.3.1	Intellectual property receipts, % total trade	113
6.3.3	High-tech exports, % total trade	50	7.1.4	Industrial designs by origin/bn PPP$ GDP	120
7.2.5	Creative goods exports, % total trade	24			

GII 2022 rank

Dominican Republic

90

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
92	90	Upper middle	LCN	11.0	220.7	20,944

		Score/ Value	Rank	
Institutions		**51.9**	**80**	
1.1	**Political environment**	56.7	75	
1.1.1	Political and operational stability*	70.9	53	
1.1.2	Government effectiveness*	42.6	87	
1.2	**Regulatory environment**	53.0	100	
1.2.1	Regulatory quality*	44.6	75	
1.2.2	Rule of law*	39.2	76	
1.2.3	Cost of redundancy dismissal	26.2	107	◇
1.3	**Business environment**	46.1	71	
1.3.1	Policies for doing business†	53.2	55	●
1.3.2	Entrepreneurship policies and culture*	39.1	40	
Human capital and research		**17.5**	**108**	◇
2.1	**Education**	35.5	108	◇
2.1.1	Expenditure on education, % GDP	4.6	57	
2.1.2	Government funding/pupil, secondary, % GDP/cap	13.1	88	
2.1.3	School life expectancy, years	14.2	69	
2.1.4	PISA scales in reading, maths and science	334.1	78	○ ◇
2.1.5	Pupil-teacher ratio, secondary	18.6	90	
2.2	**Tertiary education**	17.0	98	◇
2.2.1	Tertiary enrolment, % gross	61.2	48	●
2.2.2	Graduates in science and engineering, %	11.6	104	○ ◇
2.2.3	Tertiary inbound mobility, %	1.7	81	
2.3	**Research and development (R&D)**	0.0	[120]	
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 corporate R&D investors, top 3, mn USD	0.0	38	○ ◇
2.3.4	QS university ranking, top 3*	0.0	72	○ ◇
Infrastructure		**43.3**	**69**	
3.1	**Information and communication technologies (ICTs)**	71.4	73	
3.1.1	ICT access*	70.6	97	◇
3.1.2	ICT use*	61.1	71	
3.1.3	Government's online service*	76.5	49	●
3.1.4	E-participation*	77.4	51	●
3.2	**General infrastructure**	25.4	78	
3.2.1	Electricity output, GWh/mn pop.	1,849.2	87	
3.2.2	Logistics performance*	28.4	84	
3.2.3	Gross capital formation, % GDP	27.2	34	●
3.3	**Ecological sustainability**	33.1	45	●
3.3.1	GDP/unit of energy use	19.4	9	● ◆
3.3.2	Environmental performance*	42.2	65	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.2	118	
Market sophistication		**27.2**	**84**	
4.1	**Credit**	14.7	101	
4.1.1	Finance for startups and scaleups*	19.5	71	○ ◇
4.1.2	Domestic credit to private sector, % GDP	30.5	92	
4.1.3	Loans from microfinance institutions, % GDP	n/a	n/a	
4.2	**Investment**	n/a	[n/a]	
4.2.1	Market capitalization, % GDP	n/a	n/a	
4.2.2	Venture capital investors, deals/bn PPP$ GDP	n/a	n/a	
4.2.3	Venture capital recipients, deals/bn PPP$ GDP	n/a	n/a	
4.2.4	Venture capital received, value, % GDP	n/a	n/a	
4.3	**Trade, diversification, and market scale**	39.8	100	◇
4.3.1	Applied tariff rate, weighted avg., %	3.9	81	
4.3.2	Domestic industry diversification	n/a	n/a	
4.3.3	Domestic market scale, bn PPP$	220.7	64	

		Score/ Value	Rank	
Business sophistication		**23.5**	**83**	
5.1	**Knowledge workers**	25.6	[76]	
5.1.1	Knowledge-intensive employment, %	15.6	88	◇
5.1.2	Firms offering formal training, %	23.4	68	
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, %	9.6	75	
5.2	**Innovation linkages**	22.1	72	
5.2.1	University-industry R&D collaboration†	37.2	93	
5.2.2	State of cluster development and depth†	49.0	55	●
5.2.3	GERD financed by abroad, % GDP	n/a	n/a	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	126	○
5.2.5	Patent families/bn PPP$ GDP	0.0	76	
5.3	**Knowledge absorption**	22.9	99	
5.3.1	Intellectual property payments, % total trade	0.2	89	
5.3.2	High-tech imports, % total trade	8.5	64	
5.3.3	ICT services imports, % total trade	0.7	101	
5.3.4	FDI net inflows, % GDP	3.2	42	●
5.3.5	Research talent, % in businesses	n/a	n/a	
Knowledge and technology outputs		**13.0**	**93**	
6.1	**Knowledge creation**	1.0	130	○ ◇
6.1.1	Patents by origin/bn PPP$ GDP	0.1	120	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	98	
6.1.3	Utility models by origin/bn PPP$ GDP	0.1	64	
6.1.4	Scientific and technical articles/bn PPP$ GDP	1.2	130	○ ◇
6.1.5	Citable documents H-index	1.9	123	○
6.2	**Knowledge impact**	19.1	96	
6.2.1	Labor productivity growth, %	2.4	28	●
6.2.2	New businesses/th pop. 15–64	1.5	71	
6.2.3	Software spending, % GDP	0.0	115	◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	1.1	102	
6.2.5	High-tech manufacturing, %	n/a	n/a	
6.3	**Knowledge diffusion**	18.9	76	
6.3.1	Intellectual property receipts, % total trade	0.0	113	○ ◇
6.3.2	Production and export complexity	37.3	67	
6.3.3	High-tech exports, % total trade	2.9	50	●
6.3.4	ICT services exports, % total trade	0.5	98	
Creative outputs		**12.4**	**88**	
7.1	**Intangible assets**	10.3	99	
7.1.1	Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2	Trademarks by origin/bn PPP$ GDP	41.5	58	
7.1.3	Global brand value, top 5,000, % GDP	2.9	73	
7.1.4	Industrial designs by origin/bn PPP$ GDP	0.0	120	○
7.2	**Creative goods and services**	27.6	[37]	
7.2.1	Cultural and creative services exports, % total trade	n/a	n/a	
7.2.2	National feature films/mn pop. 15–69	n/a	n/a	
7.2.3	Entertainment and 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	2.3	24	●
7.3	**Online creativity**	1.6	91	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.5	74	
7.3.2	Country-code TLDs/th pop. 15–69	1.3	78	
7.3.3	GitHub commit pushes received/mn pop. 15–69	2.5	78	
7.3.4	Mobile app creation/bn PPP$ GDP	0.2	92	

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 appendices for details, including the year of the data, at https://www.wipo.int/global_innovation_index/en/2022. 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 indicators that are either missing or outdated for Dominican Republic.

Missing data for Dominican Republic

Code	Indicator name	Economy year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	n/a	2020	UNESCO Institute for Statistics
2.3.2	Gross expenditure on R&D, % GDP	n/a	2020	UNESCO Institute for Statistics
4.1.3	Loans from microfinance institutions, % GDP	n/a	2020	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges
4.2.2	Venture capital investors, deals/bn PPP$ GDP	n/a	2021	Refinitiv
4.2.3	Venture capital recipients, deals/bn PPP$ GDP	n/a	2021	Refinitiv
4.2.4	Venture capital received, value, % GDP	n/a	2021	Refinitiv
4.3.2	Domestic industry diversification	n/a	2019	United Nations Industrial Development Organization
5.1.3	GERD performed by business, % GDP	n/a	2020	UNESCO Institute for Statistics
5.1.4	GERD financed by business, %	n/a	2019	UNESCO Institute for Statistics
5.2.3	GERD financed by abroad, % GDP	n/a	2019	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	n/a	2020	UNESCO Institute for Statistics
6.2.5	High-tech manufacturing, %	n/a	2019	United Nations Industrial Development Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2021	Brand Finance
7.2.1	Cultural and creative services exports, % total trade	n/a	2020	World Trade Organization and United Nations Conference on Trade and Development
7.2.2	National feature films/mn pop. 15–69	n/a	2019	OMDIA
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2021	PwC, GEMO
7.2.4	Printing and other media, % manufacturing	n/a	2019	United Nations Industrial Development Organization

Outdated data for Dominican Republic

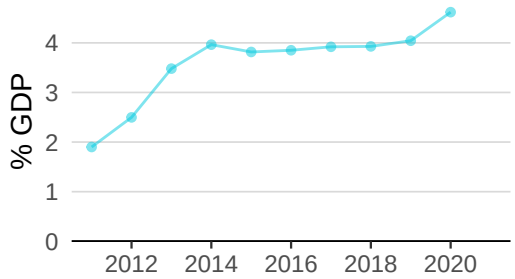
Code	Indicator name	Economy year	Model year	Source
2.1.3	School life expectancy, years	2017	2019	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2017	2019	UNESCO Institute for Statistics
2.2.2	Graduates in science and engineering, %	2017	2020	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2017	2019	UNESCO Institute for Statistics

Code	Indicator name	Economy year	Model year	Source
3.2.1	Electricity output, GWh/mn pop.	2019	2020	International Energy Agency
5.1.1	Knowledge-intensive employment, %	2020	2021	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank Enterprise Surveys
5.1.5	Females employed w/advanced degrees, %	2020	2021	International Labour Organization
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	2020	2021	Refinitiv
6.2.2	New businesses/th pop. 15–64	2018	2020	World Bank, Enterpreneurship Database

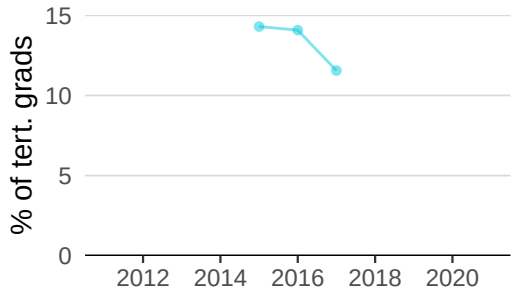
DOMINICAN REPUBLIC'S INNOVATION SYSTEM

As far as practicable, the plots below present unscaled indicator data.

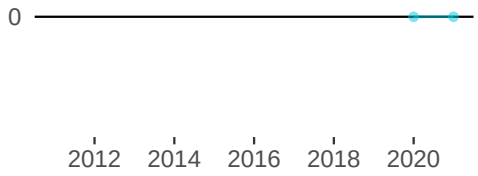
Innovation inputs



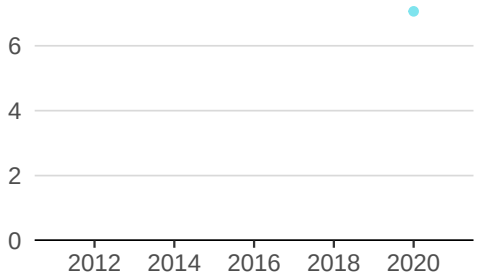
2.1.1 Expenditure on education was equal to 4.6% GDP in 2020–up by 14 percentage points from the year prior–and equivalent to an indicator rank of 57.



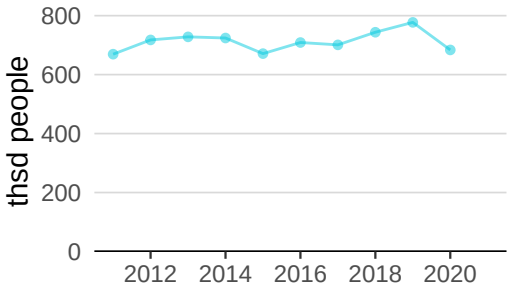
2.2.2 Graduates in science and engineering was equal to 11.6% of tert. grads in 2017–down by 18 percentage points from the year prior–and equivalent to an indicator rank of 104.



2.3.4 QS university ranking was equal to 0.0 in 2021–effectively unchanged from the year prior–and equivalent to an indicator rank of 72.

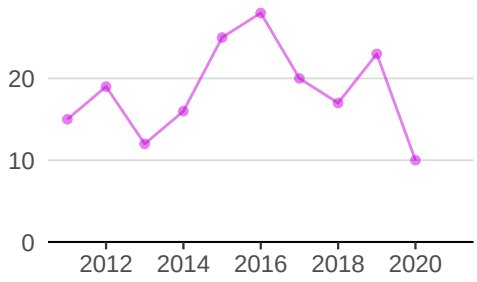


3.1.1 ICT access was equal to 7.1 in 2020 and equivalent to an indicator rank of 97.

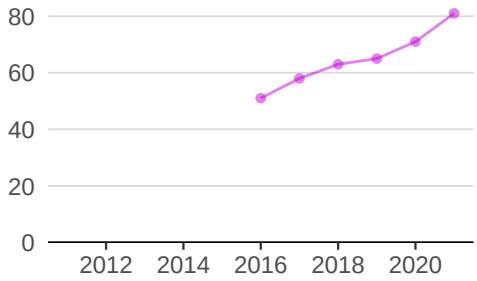


5.1.1 Knowledge-intensive employment was equal to 683.7 thsd people in 2020–down by 12 percentage points from the year prior–and equivalent to an indicator rank of 88.

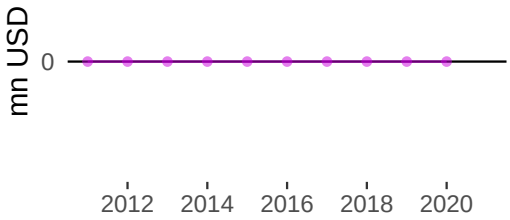
Innovation outputs



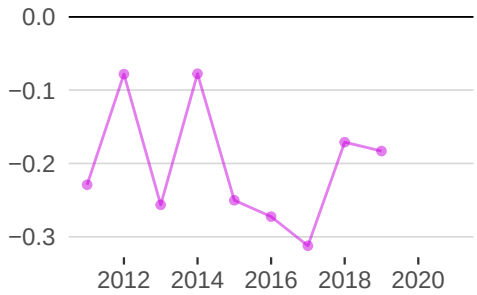
6.1.1 Patents by origin was equal to 10.0 in 2020–down by 57 percentage points from the year prior–and equivalent to an indicator rank of 120.



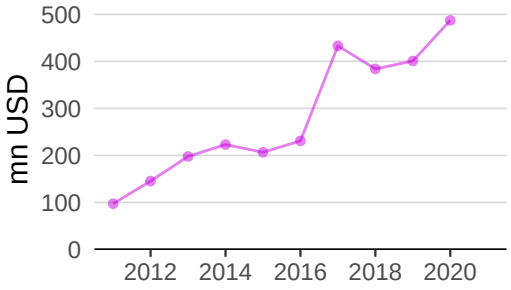
6.1.5 Citable documents H-index was equal to 81.0 in 2021–up by 14 percentage points from the year prior–and equivalent to an indicator rank of 123.



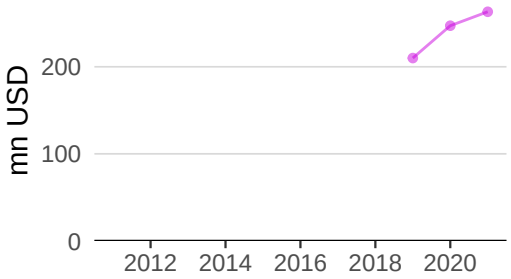
6.3.1 Intellectual property receipts was equal to 0.0 mn USD in 2020–effectively unchanged from the year prior–and equivalent to an indicator rank of 113.



6.3.2 Production and export complexity was equal to -0.2 in 2019–down by 7 percentage points from the year prior–and equivalent to an indicator rank of 67.



6.3.3 High-tech exports was equal to 487.1 mn USD in 2020–up by 22 percentage points from the year prior–and equivalent to an indicator rank of 50.



7.1.3 Global brand value was equal to 263.2 mn USD in 2021–up by 6 percentage points from the year prior–and equivalent to an indicator rank of 73.

DOMINICAN REPUBLIC'S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

Firm	Industry	R&D	R&D Growth	R&D Intensity	Rank

No observations

Source: European Commission's Joint Research Centre (https://iri.jrc.ec.europa.eu/scoreboard/2021-eu-industrial-rd-investment-scoreboard).

2.3.4 QS university ranking

University	Score	Rank

No observations

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2022).

7.1.1 Intangible asset intensity, top 15

Firm	Rank

No observations

Source: Brand Finance (https://brandirectory.com/reports/gift-2021).

7.1.3 Global brand value, top 5,000

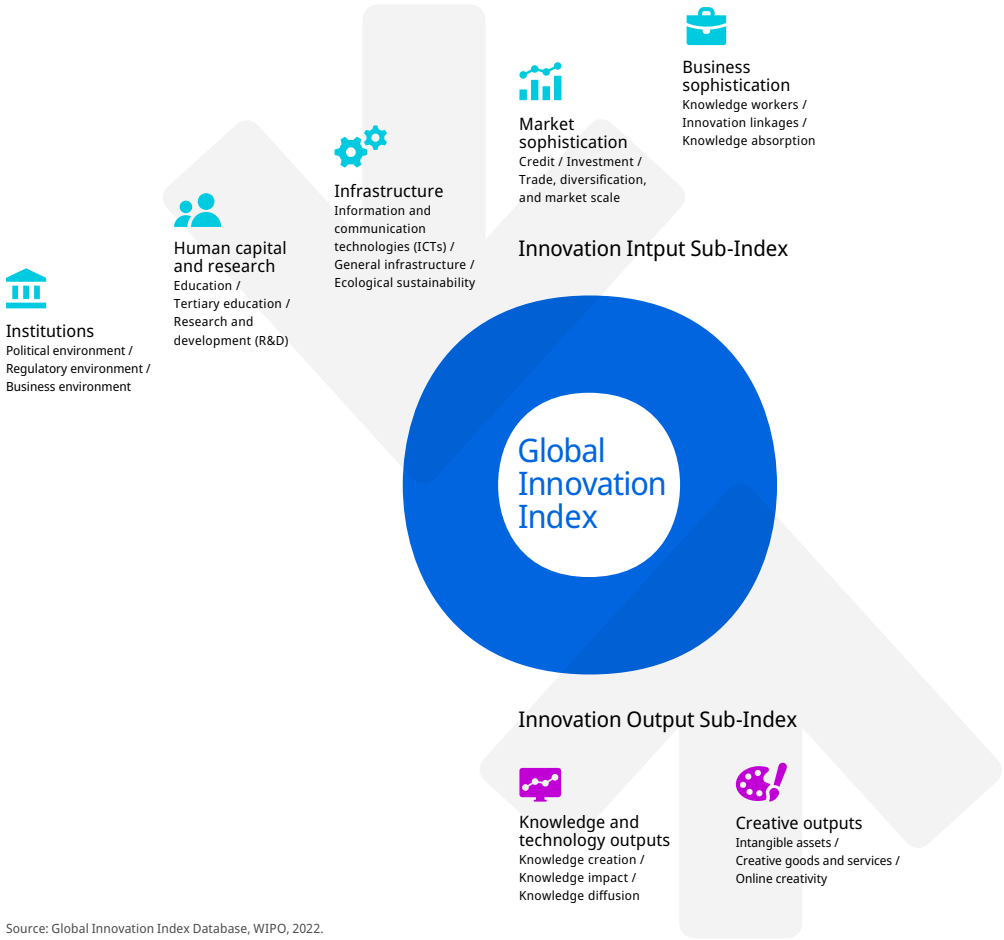
Brand	Industry	Rank
BRUGAL	Spirits	1

Source: Brand Finance (https://brandirectory.com).
Note: Rank corresponds to within economy ranks.

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 Database, WIPO, 2022.

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.