

BENIN

126th Benin ranks 126th 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 Benin 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 Benin in the GII 2020 is between ranks 126 and 130.

Rankings of Benin (2018–2020)

	GII	Innovation inputs	Innovation outputs
2020	126	116	131
2019	123	114	125
2018	121	110	123

- Benin performs better in innovation inputs than innovation outputs in 2020.
- This year Benin ranks 116th in innovation inputs, lower than last year and lower compared to 2018.
- As for innovation outputs, Benin ranks 131st. This position is lower than last year and lower compared to 2018.

12th Benin ranks 12th among the 16 low-income group economies.

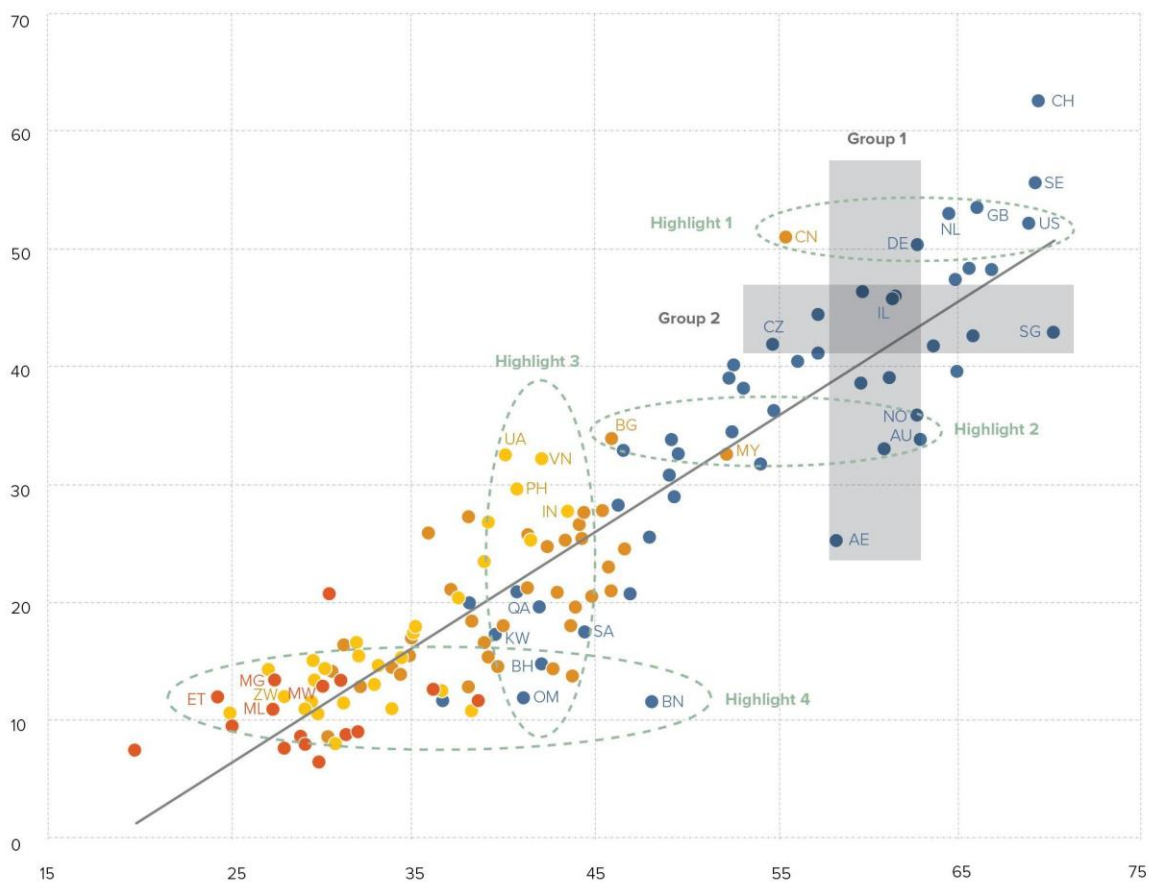
23rd Benin ranks 23rd among the 26 economies in Sub-Saharan Africa.

EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Benin produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance, 2020

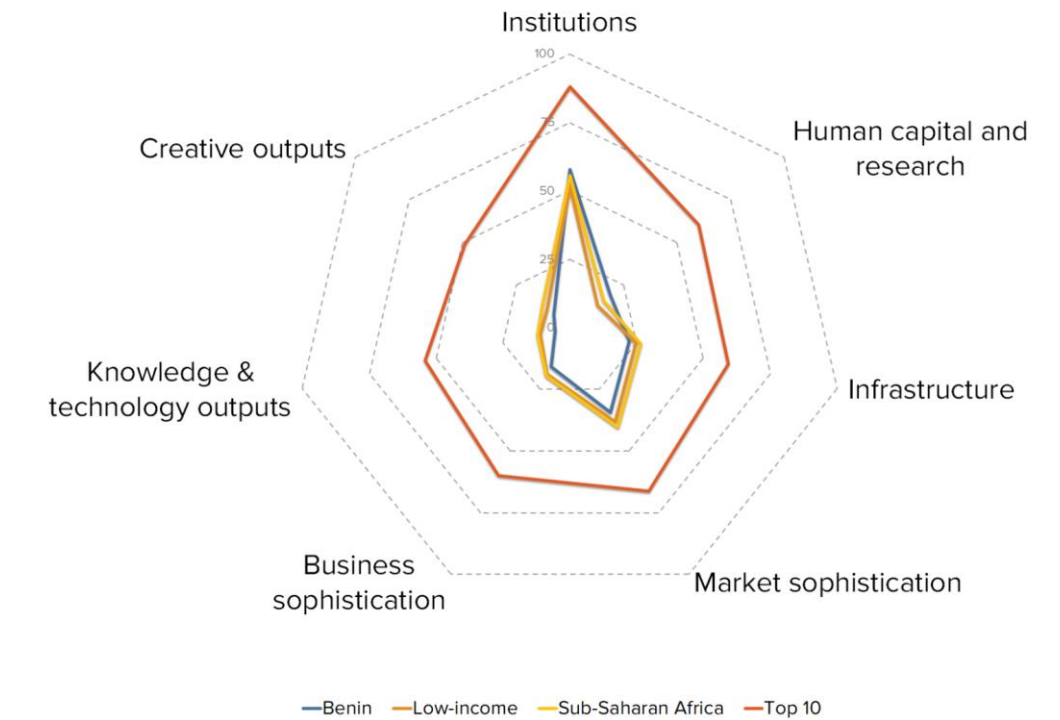


▲ Output score ● High income group ● Lower middle-income group — Fitted values
 ► Input score ● Upper middle-income group ● Low income group

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 BENIN AGAINST OTHER LOW-INCOME GROUP ECONOMIES AND SUB-SAHARAN AFRICA

Benin's scores in the seven GII pillars



Low-income group economies

Benin has high scores in two out of the seven GII pillars: Institutions and Human capital & research, which are above average for the low-income group.

Conversely, Benin scores below average for its income group in five pillars: Infrastructure, Market sophistication, Business sophistication, Knowledge & technology outputs and Creative outputs.

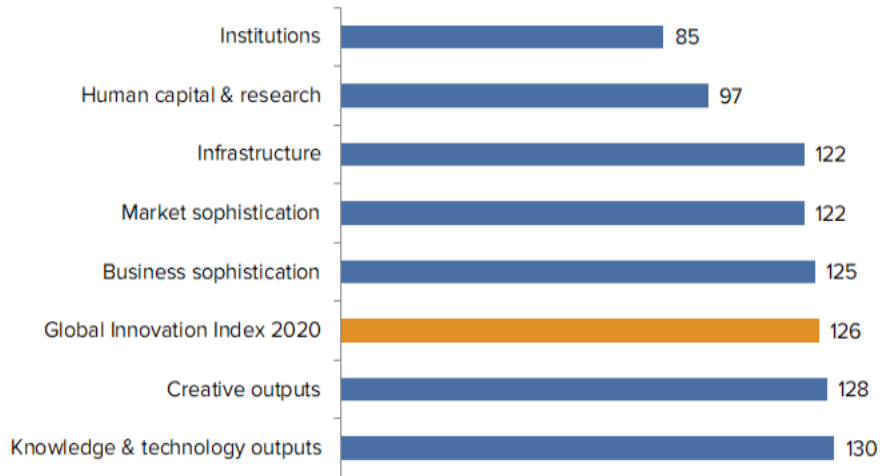
Sub-Saharan Africa

Compared to other economies in Sub-Saharan Africa, Benin performs:

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

OVERVIEW OF BENIN RANKINGS IN THE SEVEN GII AREAS

Benin performs best in Institutions and its weakest performance is in Knowledge & technology outputs.



*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 Benin in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.2	Regulatory environment	75	2.3.3	Global R&D companies, top 3, mn US\$	42
1.2.3	Cost of redundancy dismissal, salary weeks	37	2.3.4	QS university ranking, average score top 3*	77
1.3.1	Ease of starting a business*	55	3.2.1	Electricity output, GWh/mn pop	121
2.1.1	Expenditure on education, % GDP	71	3.3	Ecological sustainability	131
2.1.5	Pupil-teacher ratio, secondary	42	3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	128
2.2.3	Tertiary inbound mobility, %	34	4.3	Trade, competition, and market scale	128
3.2.2	Logistics performance*	75	4.3.1	Applied tariff rate, weighted avg., %	130
3.2.3	Gross capital formation, % GDP	39	5.2.5	Patent families 2+ offices/bn PPP\$ GDP	101
4.1.3	Microfinance gross loans, % GDP	12	5.3.1	Intellectual property payments, % total trade	117
5.3.3	ICT services imports, % total trade	64	6	Knowledge & technology outputs	130
6.1.4	Scientific & technical articles/bn PPP\$ GDP	72	6.3	Knowledge diffusion	129
			6.3.1	Intellectual property receipts, % total trade	108
			7	Creative outputs	128
			7.1	Intangible assets	127
			7.1.2	Global brand value, top 5000, % GDP	80
			7.3.2	Country-code TLDs/th pop. 15–69	127

STRENGTHS

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

- Institutions (85): exhibits strengths in the sub-pillar Regulatory environment (75) and in the indicators Cost of redundancy dismissal (37) and Ease of starting a business (55).
- Human capital & research (97): shows strengths in the indicators Expenditure on education (71), Pupil–teacher ratio, secondary (42) and Tertiary inbound mobility (34).
- Infrastructure (122): demonstrates strengths in the indicators Logistics performance (75) and Gross capital formation (39).
- Market sophistication (122): has strength in the indicator Microfinance gross loans (12).
- Business sophistication (125): the indicator ICT services imports (64) is a strength.
- Knowledge & technology outputs (130): the indicator Scientific & technical articles (72) is a strength.

WEAKNESSES

GII weaknesses for Benin are found in six of the seven GII pillars.

- Human capital & research (97): has weaknesses in the indicators Global R&D companies (42) and QS university ranking (77).
- Infrastructure (122): displays weaknesses in the sub-pillar Ecological sustainability (131) and in the indicators Electricity output (121) and ISO 14001 environmental certificates (128).
- Market sophistication (122): shows weaknesses in the sub-pillar Trade, competition, and market scale (128) and in the indicator Applied tariff rate (130).
- Business sophistication (125): demonstrates weaknesses in the indicators Patent families (101) and Intellectual property payments (117).
- Knowledge & technology outputs (130): displays weaknesses in the sub-pillar Knowledge diffusion (129) and in the indicator Intellectual property receipts (108).
- Creative outputs (128): has weaknesses in the sub-pillar Intangible assets (127) and in the indicators Global brand value (80) and Country-code TLDs (127).

DATA AVAILABILITY

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

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)
2.3.1	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
5.1.1	Knowledge-intensive employment, %	n/a	2018	Source: International Labour Organization
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
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2018	World Intellectual Property Organization
6.2.1	Growth rate of PPP\$ GDP/worker, %	n/a	2019	The Conference Board
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

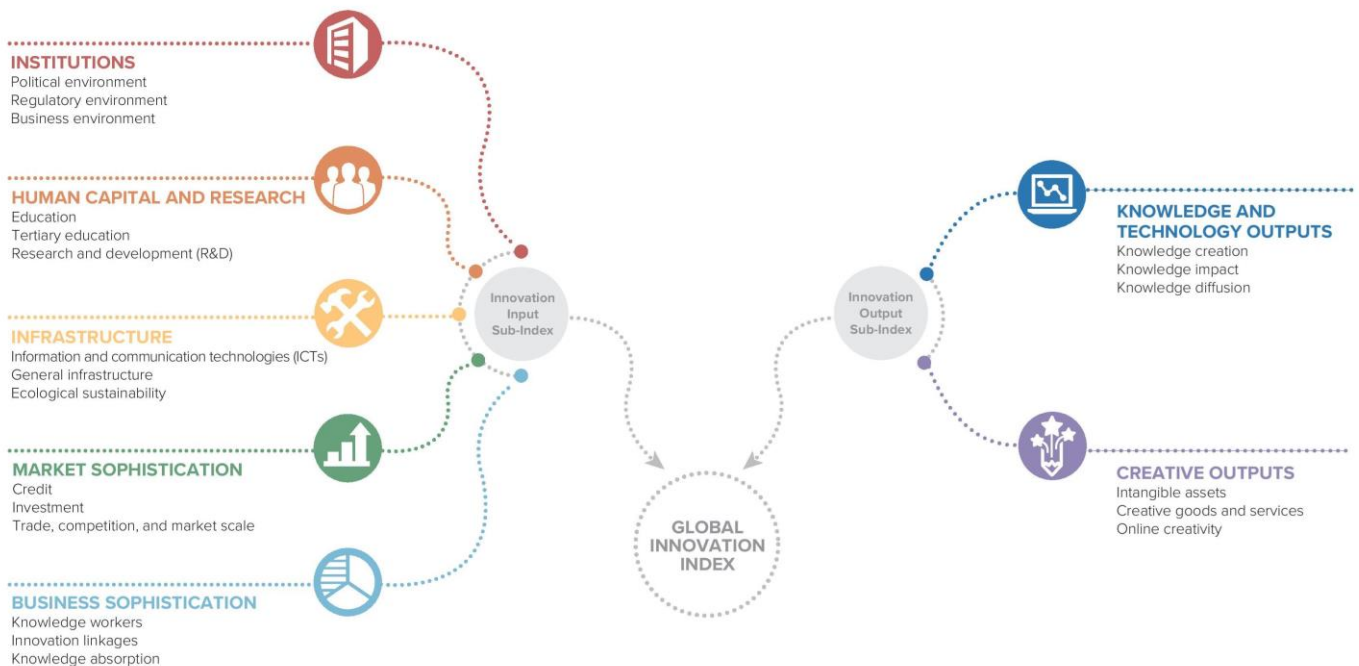
Code	Indicator name	Country year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	2015	2016	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2016	2017	UNESCO Institute for Statistics
2.1.5	Pupil-teacher ratio, secondary	2016	2018	UNESCO Institute for Statistics
2.2.2	Graduates in science & engineering, %	2015	2017	UNESCO Institute for Statistics
5.1.2	Firms offering formal training, %	2015	2018	World Bank
5.1.5	Females employed w/advanced degrees, %	2011	2018	International Labour Organization
5.3.1	Intellectual property payments, % total trade	2017	2018	World Trade Organization
5.3.3	ICT services imports, % total trade	2017	2018	World Trade Organization
6.3.1	Intellectual property receipts, % total trade	2016	2018	World Trade Organization
6.3.3	ICT services exports, % total trade	2017	2018	World Trade Organization
7.2.1	Cultural & creative services exports, % total trade	2011	2018	World Trade Organization

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.

