

## BURKINA FASO

**118th** Burkina Faso ranks 118th 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 Burkina Faso 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 Burkina Faso in the GII 2020 is between ranks 116 and 123.

**Rankings of Burkina Faso (2018–2020)**

	GII	Innovation inputs	Innovation outputs
<b>2020</b>	118	106	124
<b>2019</b>	117	111	115
<b>2018</b>	124	117	125

- Burkina Faso performs better in innovation inputs than innovation outputs in 2020.
- This year Burkina Faso ranks 106th in innovation inputs, higher than last year and higher compared to 2018.
- As for innovation outputs, Burkina Faso ranks 124th. This position is lower than last year and higher compared to 2018.

**8th** Burkina Faso ranks 8th among the 16 low-income group economies.

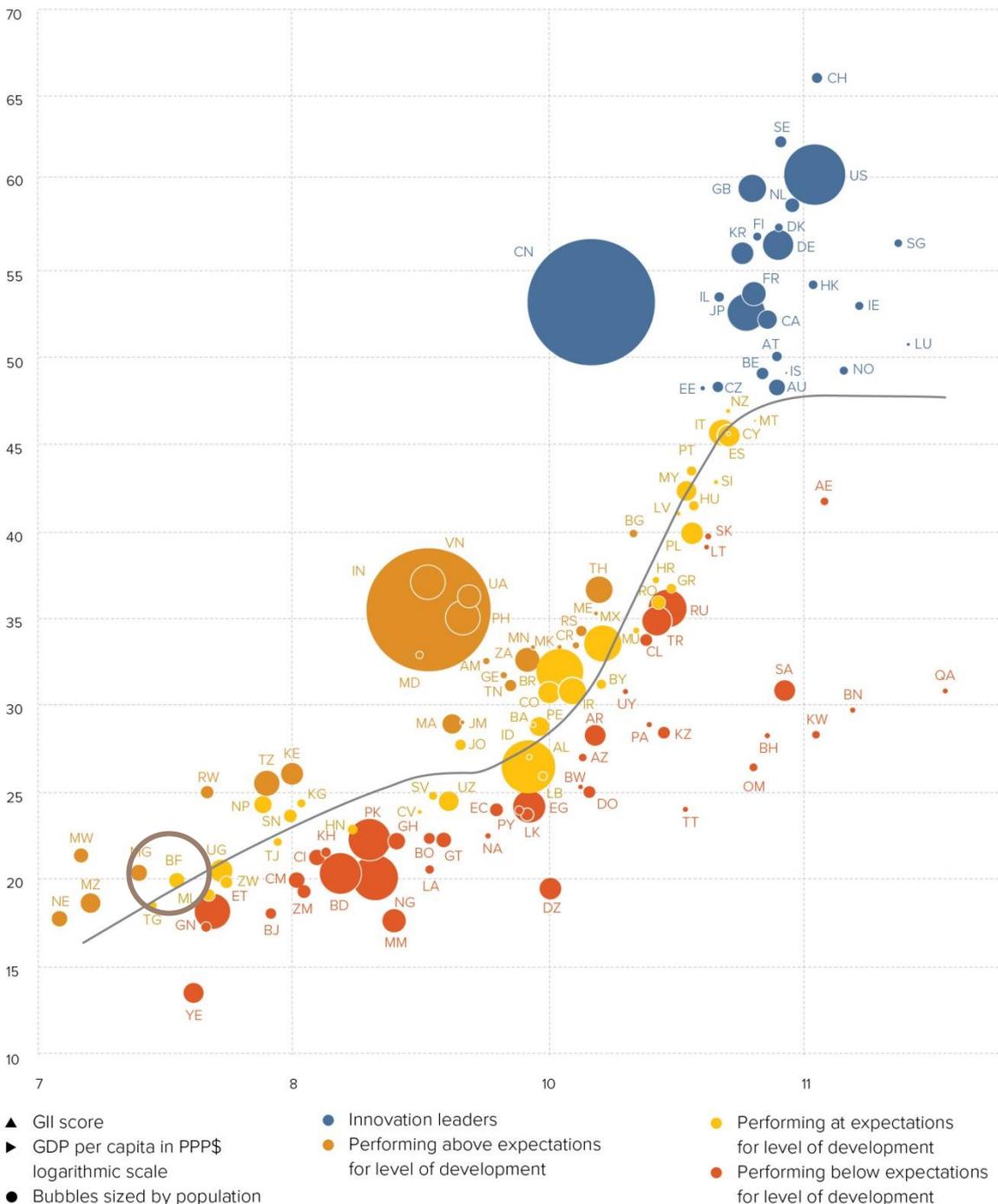
**16th** Burkina Faso ranks 16th among the 26 economies in Sub-Saharan Africa.

## 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, Burkina Faso's performance matches expectations for its level of development.

### The positive relationship between innovation and development

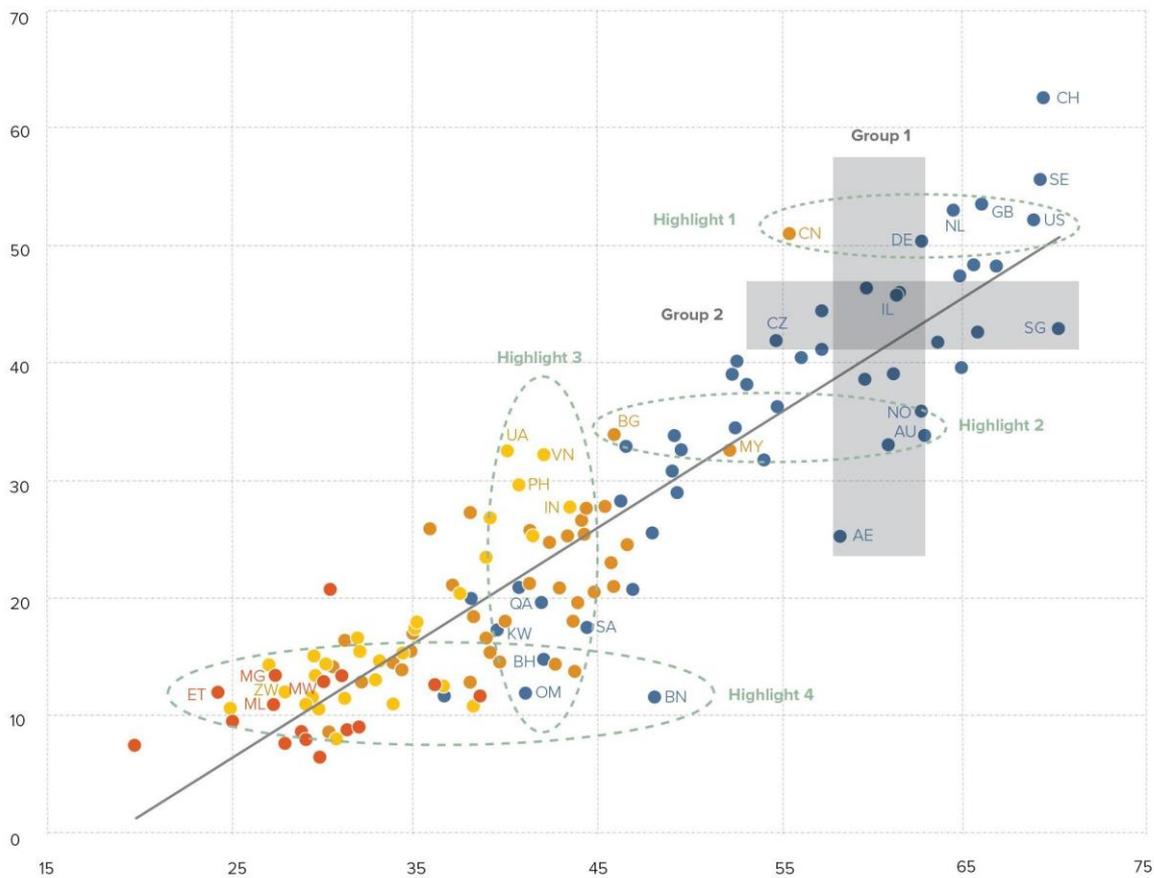


# EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

Burkina Faso produces less innovation outputs relative to its level of innovation investments.

**Innovation input to output performance, 2020**

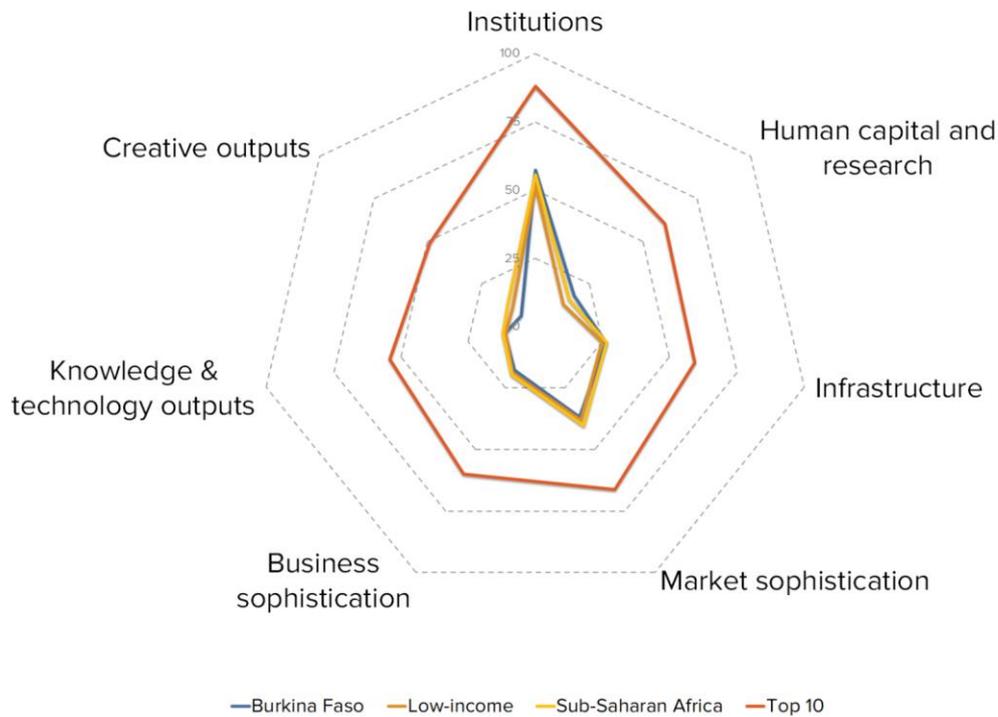


▲ Output score      ● High income group      ● Lower middle-income group      — Fitted values  
 ► Input score      ● Upper middle-income group      ● Low income group

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 BURKINA FASO AGAINST OTHER LOW-INCOME GROUP ECONOMIES AND SUB-SAHARAN AFRICA

### Burkina Faso's scores in the seven GII pillars



### Low-income group economies

Burkina Faso has high scores in four out of the seven GII pillars: Institutions, Human capital & research, Infrastructure and Knowledge & technology outputs, which are above average for the low-income group.

Conversely, Burkina Faso scores below average for its income group in three pillars: Market sophistication, Business sophistication and Creative outputs.

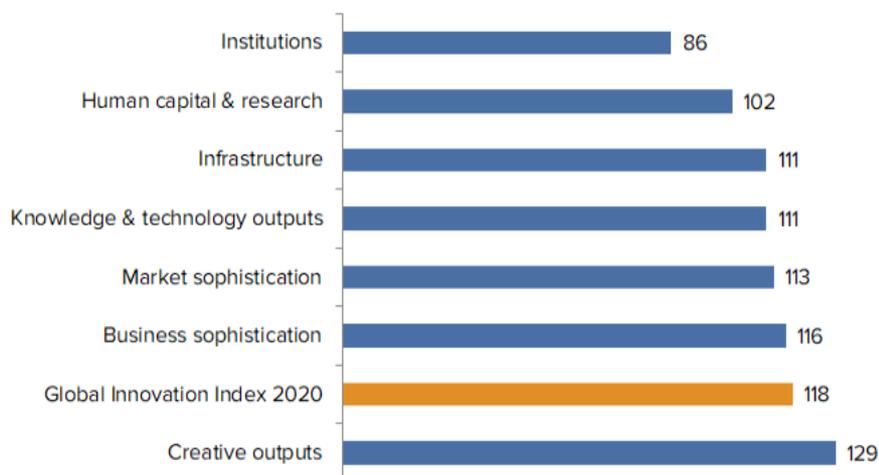
### Sub-Saharan Africa

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

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

## OVERVIEW OF BURKINA FASO RANKINGS IN THE SEVEN GII AREAS

Burkina Faso performs best in Institutions and its weakest performance is in Creative 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 Burkina Faso in the GII 2020.

Strengths			Weaknesses		
Code	Indicator name	Rank	Code	Indicator name	Rank
1.2	Regulatory environment	68	2.3.3	Global R&D companies, top 3, mn US\$	42
1.2.3	Cost of redundancy dismissal, salary weeks	33	2.3.4	QS university ranking, average score top 3*	77
1.3.1	Ease of starting a business*	71	3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	125
2.1.1	Expenditure on education, % GDP	15	4.1.1	Ease of getting credit*	122
2.1.2	Government funding/pupil, secondary, % GDP/cap	58	5.1.5	Females employed w/advanced degrees, %	116
2.3.2	Gross expenditure on R&D, % GDP	52	5.2.2	State of cluster development†	125
4.1.3	Microfinance gross loans, % GDP	21	5.3.1	Intellectual property payments, % total trade	116
5.3.3	ICT services imports, % total trade	24	7.1.2	Global brand value, top 5,000, % GDP	80
5.3.4	FDI net inflows, % GDP	71	7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	125
6.1.4	Scientific & technical articles/bn PPP\$ GDP	74	7.3.2	Country-code TLDs/th pop. 15–69	125
6.2.1	Growth rate of PPP\$ GDP/worker, %	27			

## **STRENGTHS**

GII strengths for Burkina Faso are found in five of the seven GII pillars.

- Institutions (86): exhibits strengths in the sub-pillar Regulatory environment (68) and in the indicators Cost of redundancy dismissal (33) and Ease of starting a business (71).
- Human capital & research (102): shows strengths in the indicators Expenditure on education (15), Government funding/pupil (58) and Gross expenditure on R&D (52).
- Market sophistication (113): has strength in the indicator Microfinance gross loans (21).
- Business sophistication (116): displays strengths in the indicators ICT services imports (24) and FDI net inflows (71).
- Knowledge & technology outputs (111): reveals strengths in the indicators Scientific & technical articles (74) and Growth rate of PPP (27).

## **WEAKNESSES**

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

- Human capital & research (102): has weaknesses in the indicators Global R&D companies (42) and QS university ranking (77).
- Infrastructure (111): the indicator ISO 14001 environmental certificates (125) demonstrates a weakness.
- Market sophistication (113): the indicator Ease of getting credit (122) reveals a weakness.
- Business sophistication (116): displays weaknesses in the indicators Females employed w/advanced degrees (116), State of cluster development (125) and Intellectual property payments (116).
- Creative outputs (129): exhibits weaknesses in the indicators Global brand value (80), Generic top-level domains (TLDs) (125) and Country-code TLDs (125).

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$	GDP per capita, PPP\$	GII 2019 rank
124	106	Low	SSF	20.3	42.2	1,813.5	117
				Score/Value	Rank		
<b>INSTITUTIONS</b>				57.3	86		
<b>1.1</b>	<b>Political environment</b>	<b>43.3</b>	<b>112</b>				
1.1.1	Political and operational stability*	55.4	116				
1.1.2	Government effectiveness*	37.2	105				
<b>1.2</b>	<b>Regulatory environment</b>	<b>64.2</b>	<b>68</b> ●				
1.2.1	Regulatory quality*	31.6	100				
1.2.2	Rule of law*	35.1	93				
1.2.3	Cost of redundancy dismissal, salary weeks	10.5	33 ●				
<b>1.3</b>	<b>Business environment</b>	<b>64.5</b>	<b>85</b>				
1.3.1	Ease of starting a business*	88.2	71 ●				
1.3.2	Ease of resolving insolvency*	40.8	96				
<b>HUMAN CAPITAL &amp; RESEARCH</b>				18.1	102	◆	
<b>2.1</b>	<b>Education</b>	<b>35.8</b>	<b>94</b>				
2.1.1	Expenditure on education, % GDP	6.0	15 ● ◆				
2.1.2	Government funding/pupil, secondary, % GDP/cap	18.5	58 ● ◆				
2.1.3	School life expectancy, years	9.3	111				
2.1.4	PISA scales in reading, maths, & science	n/a	n/a				
2.1.5	Pupil-teacher ratio, secondary	23.1	104				
<b>2.2</b>	<b>Tertiary education</b>	<b>15.1</b>	<b>105</b>				
2.2.1	Tertiary enrolment, % gross	6.5	117				
2.2.2	Graduates in science & engineering, %	19.7	74				
2.2.3	Tertiary inbound mobility, %	2.7	70				
<b>2.3</b>	<b>Research &amp; development (R&amp;D)</b>	<b>3.6</b>	<b>83</b> ◆				
2.3.1	Researchers, FTE/mn pop.	47.6	94				
2.3.2	Gross expenditure on R&D, % GDP	0.7	52 ● ◆				
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 ○ ◆				
<b>INFRASTRUCTURE</b>				26.4	111		
<b>3.1</b>	<b>Information &amp; communication technologies (ICTs)</b>	<b>41.0</b>	<b>107</b>				
3.1.1	ICT access*	32.9	118				
3.1.2	ICT use*	15.3	118				
3.1.3	Government's online service*	53.5	102				
3.1.4	E-participation*	62.4	85				
<b>3.2</b>	<b>General infrastructure</b>	<b>18.8</b>	<b>109</b>				
3.2.1	Electricity output, kWh/mn pop.	n/a	n/a				
3.2.2	Logistics performance*	25.9	87				
3.2.3	Gross capital formation, % GDP	18.4	109				
<b>3.3</b>	<b>Ecological sustainability</b>	<b>19.5</b>	<b>105</b>				
3.3.1	GDP/unit of energy use	n/a	n/a				
3.3.2	Environmental performance*	38.3	93 ◆				
3.3.3	ISO 14001 environmental certificates/bn PPP\$ GDP	0.1	125 ○				
<b>MARKET SOPHISTICATION</b>				36.9	113		
<b>4.1</b>	<b>Credit</b>	<b>21.5</b>	<b>123</b>				
4.1.1	Ease of getting credit*	30.0	122 ○				
4.1.2	Domestic credit to private sector, % GDP	29.9	94				
4.1.3	Microfinance gross loans, % GDP	1.7	21 ●				
<b>4.2</b>	<b>Investment</b>	<b>42.0</b>	<b>[47]</b>				
4.2.1	Ease of protecting minority investors*	42.0	102				
4.2.2	Market capitalization, % GDP	n/a	n/a				
4.2.3	Venture capital deals/bn PPP\$ GDP	n/a	n/a				
<b>4.3</b>	<b>Trade, competition, and market scale</b>	<b>47.2</b>	<b>122</b>				
4.3.1	Applied tariff rate, weighted avg., %	7.8	102				
4.3.2	Intensity of local competition*	57.7	116				
4.3.3	Domestic market scale, bn PPP\$	42.2	108				
<b>BUSINESS SOPHISTICATION</b>				17.6	[116]		
<b>5.1</b>	<b>Knowledge workers</b>	<b>10.2</b>	<b>[123]</b>				
5.1.1	Knowledge-intensive employment, %	n/a	n/a				
5.1.2	Firms offering formal training, %	n/a	n/a				
5.1.3	GERD performed by business, % GDP	n/a	n/a				
5.1.4	GERD financed by business, %	11.9	73 ○ ◆				
5.1.5	Females employed w/advanced degrees, %	0.5	116 ○				
<b>5.2</b>	<b>Innovation linkages</b>	<b>19.7</b>	<b>[70]</b>				
5.2.1	University/industry research collaboration†	30.2	110				
5.2.2	State of cluster development†	28.7	125 ○ ◆				
5.2.3	GERD financed by abroad, % GDP	0.0	58				
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	n/a	n/a				
5.2.5	Patent families 2+ offices/bn PPP\$ GDP	n/a	n/a				
<b>5.3</b>	<b>Knowledge absorption</b>	<b>22.8</b>	<b>89</b>				
5.3.1	Intellectual property payments, % total trade	0.0	116 ○				
5.3.2	High-tech imports, % total trade	6.6	82				
5.3.3	ICT services imports, % total trade	2.2	24 ●				
5.3.4	FDI net inflows, % GDP	2.3	71 ●				
5.3.5	Research talent, % in business enterprise	n/a	n/a				
<b>KNOWLEDGE &amp; TECHNOLOGY OUTPUTS</b>				11.1	111		
<b>6.1</b>	<b>Knowledge creation</b>	<b>5.5</b>	<b>105</b>				
6.1.1	Patents by origin/bn PPP\$ GDP	0.2	105				
6.1.2	PCT patents by origin/bn PPP\$ GDP	0.0	90 ◆				
6.1.3	Utility models by origin/bn PPP\$ GDP	0.1	53				
6.1.4	Scientific & technical articles/bn PPP\$ GDP	6.0	74 ●				
6.1.5	Citable documents H-index	5.6	98				
<b>6.2</b>	<b>Knowledge impact</b>	<b>15.9</b>	<b>94</b>				
6.2.1	Growth rate of PPP\$ GDP/worker, %	3.0	27 ●				
6.2.2	New businesses/th pop. 15-64	0.3	107				
6.2.3	Computer software spending, % GDP	0.0	111				
6.2.4	ISO 9001 quality certificates/bn PPP\$ GDP	0.6	118				
6.2.5	High- and medium-high-tech manufacturing, %	n/a	n/a				
<b>6.3</b>	<b>Knowledge diffusion</b>	<b>12.0</b>	<b>107</b>				
6.3.1	Intellectual property receipts, % total trade	0.0	82				
6.3.2	High-tech net exports, % total trade	0.1	105				
6.3.3	ICT services exports, % total trade	1.2	75				
6.3.4	FDI net outflows, % GDP	0.3	83				
<b>CREATIVE OUTPUTS</b>				6.3	[129]		
<b>7.1</b>	<b>Intangible assets</b>	<b>11.8</b>	<b>124</b>				
7.1.1	Trademarks by origin/bn PPP\$ GDP	5.3	117				
7.1.2	Global brand value, top 5,000, % GDP	0.0	80 ○ ◆				
7.1.3	Industrial designs by origin/bn PPP\$ GDP	0.2	104				
7.1.4	ICTs & organizational model creation†	39.5	113				
<b>7.2</b>	<b>Creative goods and services</b>	<b>1.7</b>	<b>[121]</b>				
7.2.1	Cultural & creative services exports, % total trade	0.2	69				
7.2.2	National feature films/mn pop. 15-69	0.5	100				
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	0.0	117				
<b>7.3</b>	<b>Online creativity</b>	<b>0.0</b>	<b>[129]</b>				
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	0.1	125 ○				
7.3.2	Country-code TLDs/th pop. 15-69	0.0	125 ○				
7.3.3	Wikipedia edits/mn pop. 15-69	n/a	n/a				
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 Burkina Faso.

### 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)
3.2.1	Electricity output, GWh/mn pop	n/a	2017	International Energy Agency
3.3.1	GDP/unit of energy use	n/a	2017	International Energy Agency
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	International Labour Organization
5.1.2	Firms offering formal training, %	n/a	2018	World Bank
5.1.3	GERD performed by business, % GDP	n/a	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.2.4	JV-strategic alliance deals/bn PPP\$ GDP	n/a	2019	Thomson Reuters
5.2.5	Patent families 2+ offices/bn PPP\$ GDP	n/a	2016	World Intellectual Property Organization
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
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
7.3.3	Wikipedia edits/mn pop. 15–69	n/a	2019	Wikimedia Foundation
7.3.4	Mobile app creation/bn PPP\$ GDP	n/a	2019	App Annie

### Outdated data

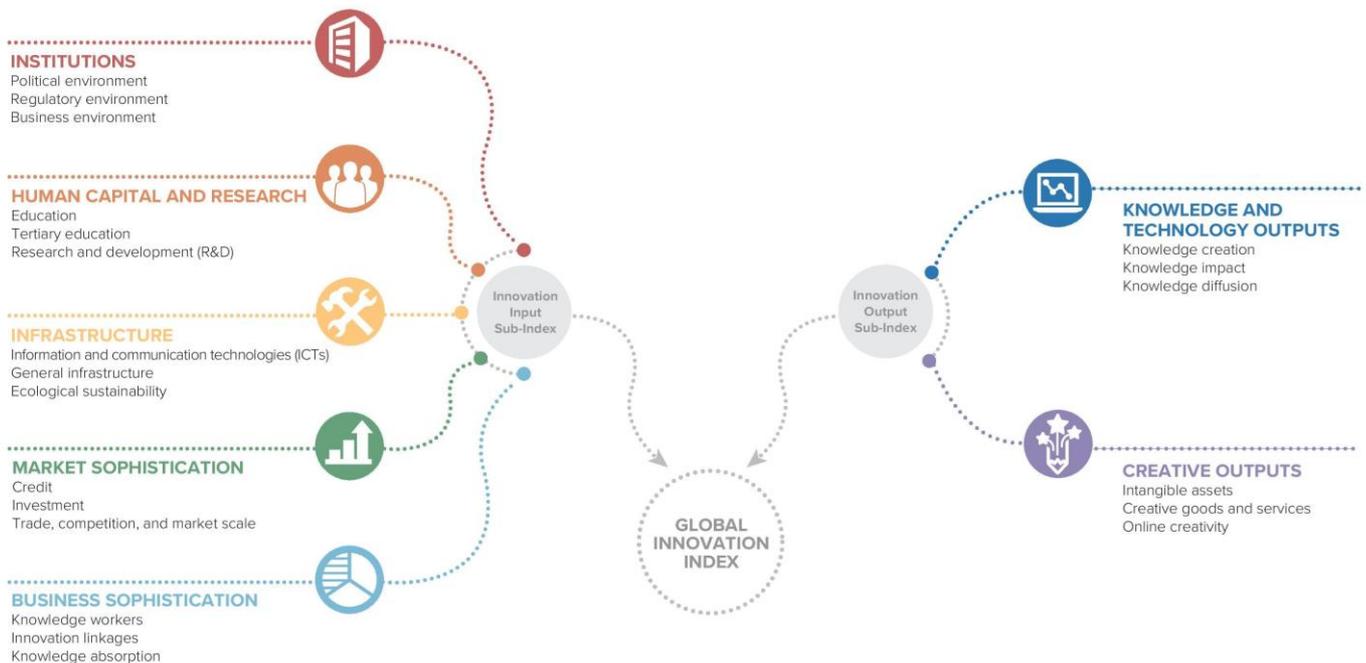
Code	Indicator name	Country year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2010	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
2.3.2	Gross expenditure on R&D, % GDP	2017	2018	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2009	2017	UNESCO Institute for Statistics; Eurostat; OECD – Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2014	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
6.1.3	Utility models by origin/bn PPP\$ GDP	2010	2018	World Intellectual Property Organization
6.3.1	Intellectual property receipts, % total trade	2017	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	2016	2018	World Trade Organization
7.2.2	National feature films/mn pop. 15–69	2015	2017	UNESCO Institute for Statistics

## 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 13<sup>th</sup> 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.

