

Global Innovation Index 2022



BURKINA FASO

120th

Burkina Faso ranks 120th 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 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 2022 is between ranks 119 and 126.

Rankings for Burkina Faso (2020–2022)

| GIIYR | GII | Innovation inputs | Innovation outputs |
|-------|-----|-------------------|--------------------|
| 2020 | 118 | 106 | 124 |
| 2021 | 115 | 108 | 123 |
| 2022 | 120 | 114 | 124 |

- Burkina Faso performs better in innovation inputs than innovation outputs in 2022.
- This year Burkina Faso ranks 114th in innovation inputs, lower than both 2021 and 2020.
- As for innovation outputs, Burkina Faso ranks 124th. This position is lower than last year but the same as 2020.

5th

Burkina Faso ranks 5th among the 12 low-income group economies.

17th

Burkina Faso ranks 17th among the 27 economies in Sub-Saharan Africa.

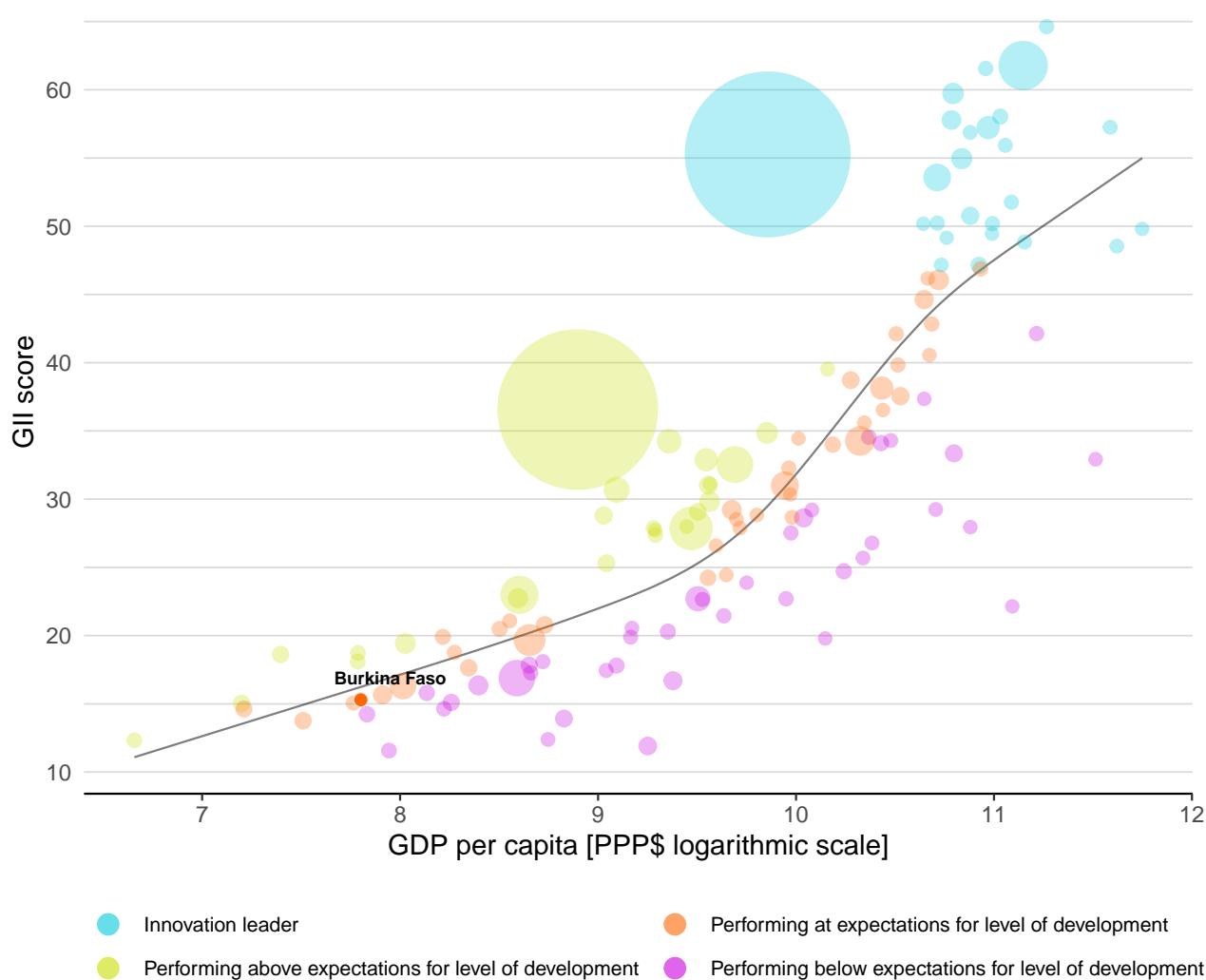


EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

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 is at expectations for its level of development.

The positive relationship between innovation and development



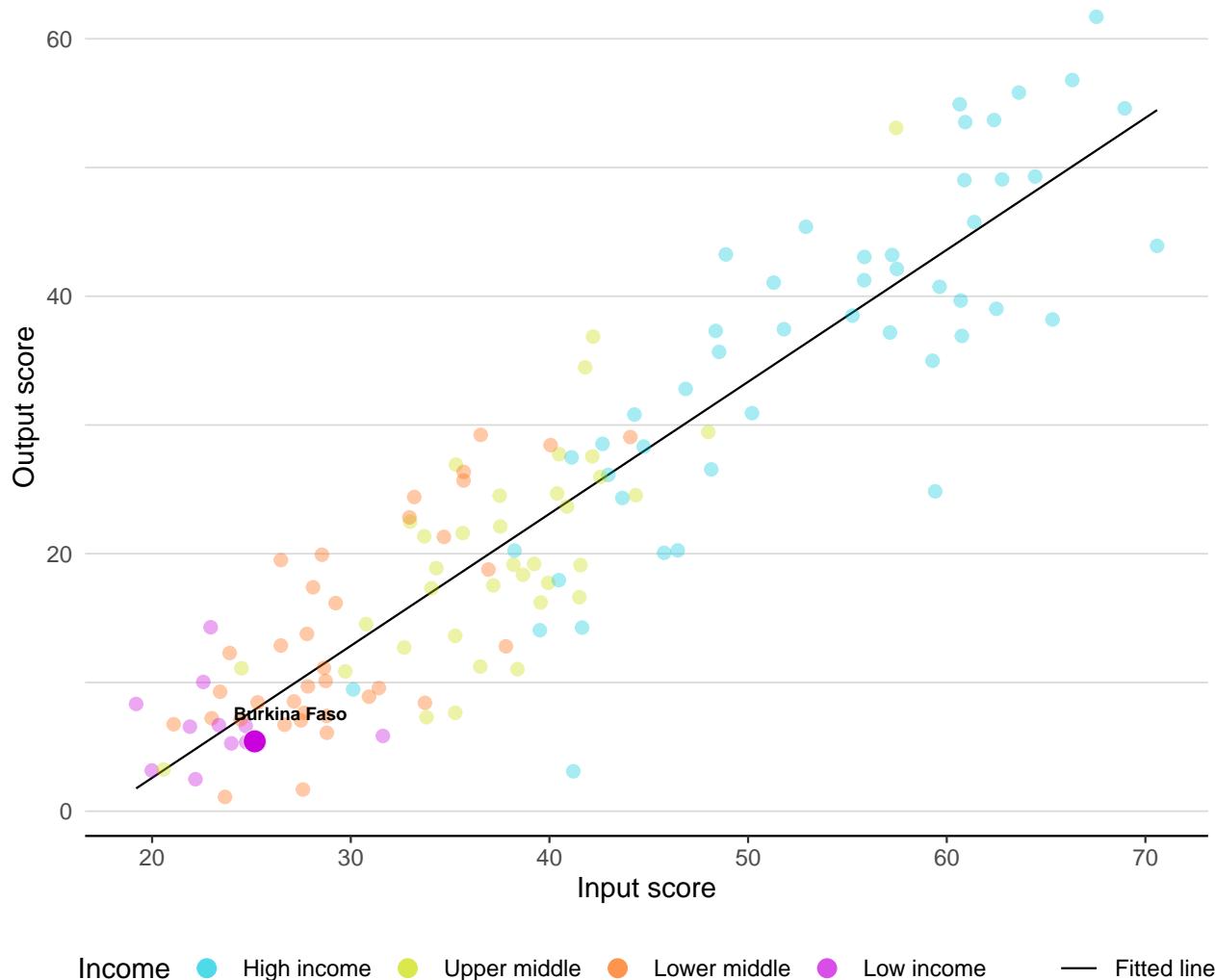


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

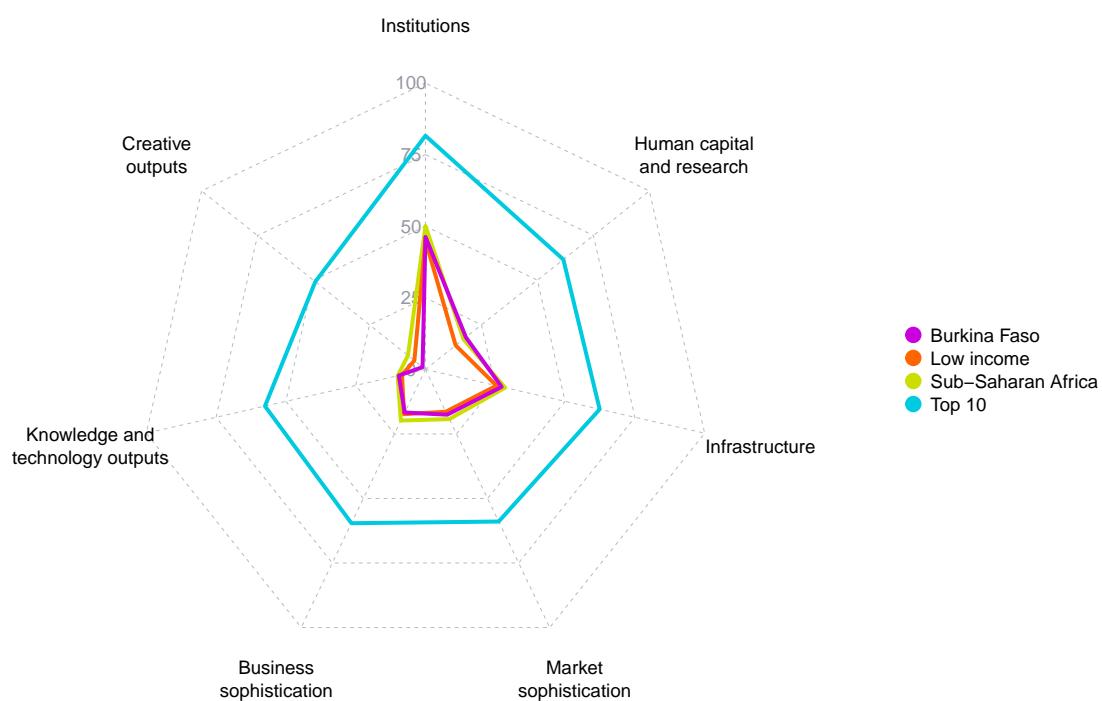
Innovation input to output performance





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

The seven GII pillar scores for Burkina Faso



Low-income group economies

Burkina Faso performs above the low-income group average in five pillars, namely: Institutions; Human capital and research; Infrastructure; Market sophistication; and, Knowledge and technology outputs.

Sub-Saharan Africa

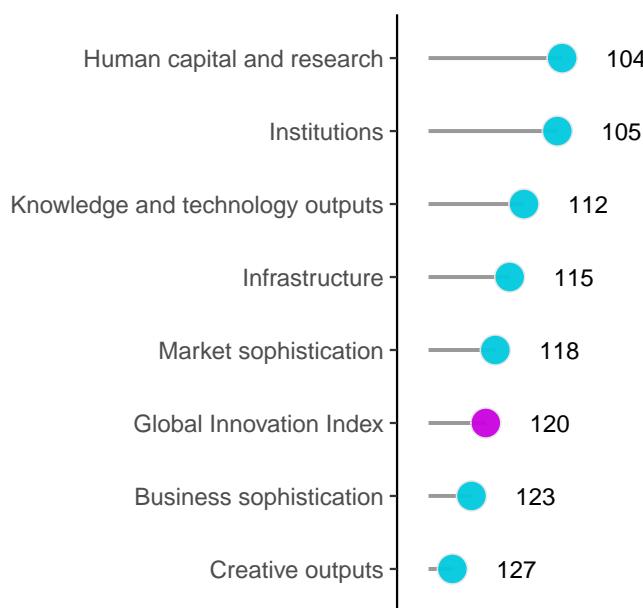
Burkina Faso performs above the regional average in Human capital and research.



OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

Burkina Faso performs best in Human capital and research and its weakest performance is in Creative outputs.

The seven GII pillar ranks for Burkina Faso



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

The full WIPO Intellectual Property Statistics profile for Burkina Faso can be found at:

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



INNOVATION STRENGTHS AND WEAKNESSES

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

Strengths and weaknesses for Burkina Faso

| Strengths | | | Weaknesses | | |
|-----------|--|------|------------|--|------|
| Code | Indicator name | Rank | Code | Indicator name | Rank |
| 1.2.3 | Cost of redundancy dismissal | 32 | 2.3.3 | Global corporate R&D investors, top 3, mn USD | 38 |
| 1.3.1 | Policies for doing business | 73 | 2.3.4 | QS university ranking, top 3 | 72 |
| 2.1.1 | Expenditure on education, % GDP | 25 | 3.2.1 | Electricity output, GWh/mn pop. | 125 |
| 2.2.2 | Graduates in science and engineering, % | 66 | 4.1.1 | Finance for startups and scaleups | 72 |
| 3.2.3 | Gross capital formation, % GDP | 62 | 4.2.4 | Venture capital received, value, % GDP | 101 |
| 4.1.3 | Loans from microfinance institutions, % GDP | 17 | 5.2.2 | State of cluster development and depth | 127 |
| 4.2.3 | Venture capital recipients, deals/bn PPP\$ GDP | 43 | 6.1.2 | PCT patents by origin/bn PPP\$ GDP | 101 |
| 5.2.3 | GERD financed by abroad, % GDP | 55 | 7.1.3 | Global brand value, top 5,000, % GDP | 77 |
| 5.3.3 | ICT services imports, % total trade | 36 | 7.3.1 | Generic top-level domains (TLDs)/th pop. 15–69 | 125 |
| 6.2.1 | Labor productivity growth, % | 40 | 7.3.2 | Country-code TLDs/th pop. 15–69 | 125 |
| | | | 7.3.3 | GitHub commit pushes received/mn pop. 15–69 | 129 |

Burkina Faso

120

| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP\$ (bn) | GDP per capita, PPP\$ |
|--|------------|--------|---------|---|-----------------|-----------------------|
| 124 | 114 | Low | SSA | 21.5 | 52.6 | 2,444 |
| | | | | Score/ Value | Score/ Value | Score/ Value |
| | | | | Rank | Rank | Rank |
| Institutions | | 46.3 | 105 | Business sophistication | | 16.7 123 |
| 1.1 Political environment | | 43.1 | 121 | 5.1 Knowledge workers | | 10.1 [120] |
| 1.1.1 Political and operational stability* | | 50.9 | 121 | 5.1.1 Knowledge-intensive employment, % | ⊖ | 13.3 96 ◆ |
| 1.1.2 Government effectiveness* | | 35.3 | 107 | 5.1.2 Firms offering formal training, % | n/a | n/a |
| 1.2 Regulatory environment | | 65.0 | 66 ● | 5.1.3 GERD performed by business, % GDP | n/a | n/a |
| 1.2.1 Regulatory quality* | | 34.5 | 96 | 5.1.4 GERD financed by business, % | n/a | n/a |
| 1.2.2 Rule of law* | | 35.2 | 89 | 5.1.5 Females employed w/advanced degrees, % | ⊖ | 0.8 119 |
| 1.2.3 Cost of redundancy dismissal | | 10.5 | 32 ● | 5.2 Innovation linkages | | 16.5 114 |
| 1.3 Business environment | | 30.8 | 108 | 5.2.1 University-industry R&D collaboration [†] | ⊖ | 30.2 115 |
| 1.3.1 Policies for doing business [†] | ⊖ | 47.3 | 73 ● | 5.2.2 State of cluster development and depth [†] | ⊖ | 28.7 127 ○ ◇ |
| 1.3.2 Entrepreneurship policies and culture* | ⊖ | 14.2 | 65 | 5.2.3 GERD financed by abroad, % GDP | ⊖ | 0.0 55 ● |
| Human capital and research | | 18.1 | 104 ◆ | 5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP | ⊖ | 0.0 117 |
| 2.1 Education | | 38.4 | 101 | 5.2.5 Patent families/bn PPP\$ GDP | n/a | n/a |
| 2.1.1 Expenditure on education, % GDP | | 5.5 | 25 ● ◆ | 5.3 Knowledge absorption | | 23.4 96 |
| 2.1.2 Government funding/pupil, secondary, % GDP/cap | ⊖ | 15.7 | 78 | 5.3.1 Intellectual property payments, % total trade | ⊖ | 0.0 117 |
| 2.1.3 School life expectancy, years | | 9.1 | 109 | 5.3.2 High-tech imports, % total trade | 4.1 | 122 |
| 2.1.4 PISA scales in reading, maths and science | | n/a | n/a | 5.3.3 ICT services imports, % total trade | ⊖ | 2.1 36 ● |
| 2.1.5 Pupil-teacher ratio, secondary | | 20.9 | 97 | 5.3.4 FDI net inflows, % GDP | 1.2 | 95 |
| 2.2 Tertiary education | | 14.9 | 102 | 5.3.5 Research talent, % in businesses | n/a | n/a |
| 2.2.1 Tertiary enrolment, % gross | | 7.8 | 117 | 6.1 Knowledge creation | | 4.5 111 |
| 2.2.2 Graduates in science and engineering, % | | 20.3 | 66 ● | 6.1.1 Patents by origin/bn PPP\$ GDP | 0.2 | 101 |
| 2.2.3 Tertiary inbound mobility, % | | 2.1 | 77 | 6.1.2 PCT patents by origin/bn PPP\$ GDP | 0.0 | 101 ○ ◇ |
| 2.3 Research and development (R&D) | | 0.9 | 98 | 6.1.3 Utility models by origin/bn PPP\$ GDP | ⊖ | 0.1 59 |
| 2.3.1 Researchers, FTE/mn pop. | | n/a | n/a | 6.1.4 Scientific and technical articles/bn PPP\$ GDP | 10.5 | 83 |
| 2.3.2 Gross expenditure on R&D, % GDP | | 0.2 | 84 | 6.1.5 Citable documents H-index | 4.6 | 101 |
| 2.3.3 Global corporate R&D investors, top 3, mn USD | | 0.0 | 38 ○ ◇ | 6.2 Knowledge impact | | 16.5 104 |
| 2.3.4 QS university ranking, top 3* | | 0.0 | 72 ○ ◇ | 6.2.1 Labor productivity growth, % | 1.8 | 40 ● |
| Infrastructure | | 27.3 | 115 | 6.2.2 New businesses/th pop. 15-64 | ⊖ | 0.3 106 |
| 3.1 Information and communication technologies (ICTs) | | 43.4 | 116 | 6.2.3 Software spending, % GDP | 0.0 | 110 |
| 3.1.1 ICT access* | | 54.6 | 117 | 6.2.4 ISO 9001 quality certificates/bn PPP\$ GDP | 0.6 | 116 |
| 3.1.2 ICT use* | | 21.3 | 124 | 6.2.5 High-tech manufacturing, % | n/a | n/a |
| 3.1.3 Government's online service* | | 46.5 | 110 | 6.3 Knowledge diffusion | | 7.7 112 |
| 3.1.4 E-participation* | | 51.2 | 99 | 6.3.1 Intellectual property receipts, % total trade | ⊖ | 0.0 87 |
| 3.2 General infrastructure | | 19.9 | 109 | 6.3.2 Production and export complexity | 19.7 | 104 |
| 3.2.1 Electricity output, GWh/mn pop. | ⊖ | 91.5 | 125 ○ | 6.3.3 High-tech exports, % total trade | 0.1 | 120 |
| 3.2.2 Logistics performance* | | 26.5 | 86 | 6.3.4 ICT services exports, % total trade | ⊖ | 1.2 82 |
| 3.2.3 Gross capital formation, % GDP | | 24.1 | 62 ● | 7.1 Intangible assets | | 1.5 126 ○ |
| 3.3 Ecological sustainability | | 18.5 | 101 | 7.1.1 Intangible asset intensity, top 15, % | n/a | n/a |
| 3.3.1 GDP/unit of energy use | | 8.0 | 92 | 7.1.2 Trademarks by origin/bn PPP\$ GDP | 6.5 | 115 |
| 3.3.2 Environmental performance* | | 35.5 | 89 ◆ | 7.1.3 Global brand value, top 5,000, % GDP | 0.0 | 77 ○ ◇ |
| 3.3.3 ISO 14001 environmental certificates/bn PPP\$ GDP | | 0.1 | 124 | 7.1.4 Industrial designs by origin/bn PPP\$ GDP | 0.3 | 98 |
| Market sophistication | | 17.5 | 118 | 7.2 Creative goods and services | | 2.2 [112] |
| 4.1 Credit | | 19.1 | 87 ◆ | 7.2.1 Cultural and creative services exports, % total trade | 0.2 | 73 |
| 4.1.1 Finance for startups and scaleups* | ⊖ | 19.1 | 72 ○ | 7.2.2 National feature films/mn pop. 15-69 | n/a | n/a |
| 4.1.2 Domestic credit to private sector, % GDP | | 28.3 | 98 ◆ | 7.2.3 Entertainment and media market/th pop. 15-69 | n/a | n/a |
| 4.1.3 Loans from microfinance institutions, % GDP | | 2.0 | 17 ● | 7.2.4 Printing and other media, % manufacturing | n/a | n/a |
| 4.2 Investment | | 6.1 | [69] | 7.2.5 Creative goods exports, % total trade | 0.0 | 123 |
| 4.2.1 Market capitalization, % GDP | | n/a | n/a | 7.3 Online creativity | | 0.0 131 ○ |
| 4.2.2 Venture capital investors, deals/bn PPP\$ GDP | | n/a | n/a | 7.3.1 Generic top-level domains (TLDs)/th pop. 15-69 | 0.1 | 125 ○ |
| 4.2.3 Venture capital recipients, deals/bn PPP\$ GDP | | 0.0 | 43 ● | 7.3.2 Country-code TLDs/th pop. 15-69 | 0.0 | 125 ○ |
| 4.2.4 Venture capital received, value, % GDP | | 0.0 | 101 ○ ◇ | 7.3.3 GitHub commit pushes received/mn pop. 15-69 | 0.0 | 129 ○ |
| 4.3 Trade, diversification, and market scale | | 27.4 | 116 | 7.3.4 Mobile app creation/bn PPP\$ GDP | n/a | n/a |
| 4.3.1 Applied tariff rate, weighted avg., % | | 7.2 | 102 | | | |
| 4.3.2 Domestic industry diversification | | n/a | n/a | | | |
| 4.3.3 Domestic market scale, bn PPP\$ | | 52.6 | 103 | | | |

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 Burkina Faso.

Missing data for Burkina Faso

| Code | Indicator name | Economy year | Model year | Source |
|-------|---|--------------|------------|--|
| 2.1.4 | PISA scales in reading, maths and science | n/a | 2018 | OECD, PISA |
| 2.3.1 | Researchers, FTE/mn pop. | n/a | 2020 | UNESCO Institute for Statistics |
| 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 |
| 4.3.2 | Domestic industry diversification | n/a | 2019 | United Nations Industrial Development Organization |
| 5.1.2 | Firms offering formal training, % | n/a | 2019 | World Bank Enterprise Surveys |
| 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 |
| 5.2.5 | Patent families/bn PPP\$ GDP | n/a | 2018 | World Intellectual Property Organization |
| 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 |
| 7.2.2 | 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 |
| 7.3.4 | Mobile app creation/bn PPP\$ GDP | n/a | 2021 | data.ia |

Outdated data for Burkina Faso

| Code | Indicator name | Economy year | Model year | Source |
|-------|--|--------------|------------|--|
| 1.3.1 | Policies for doing business | 2019 | 2021 | World Economic Forum, Executive Opinion Survey (EOS) |
| 1.3.2 | Entrepreneurship policies and culture | 2020 | 2021 | Global Entrepreneurship Monitor |
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap | 2016 | 2018 | UNESCO Institute for Statistics |
| 3.2.1 | Electricity output, GWh/mn pop. | 2019 | 2020 | International Energy Agency |
| 4.1.1 | Finance for startups and scaleups | 2020 | 2021 | Global Entrepreneurship Monitor |
| 5.1.1 | Knowledge-intensive employment, % | 2018 | 2021 | International Labour Organization |



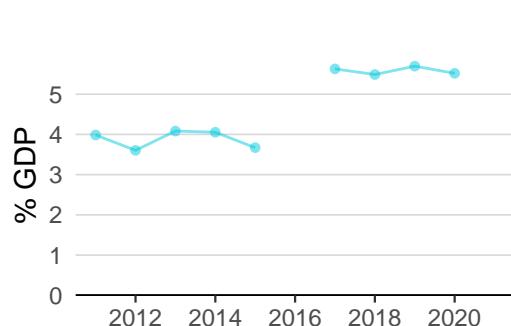
| Code | Indicator name | Economy year | Model year | Source |
|-------|---|--------------|------------|---|
| 5.1.5 | Females employed w/advanced degrees, % | 2018 | 2021 | International Labour Organization |
| 5.2.1 | University-industry R&D collaboration | 2019 | 2021 | World Economic Forum, Executive Opinion Survey (EOS) |
| 5.2.2 | State of cluster development and depth | 2019 | 2021 | World Economic Forum, Executive Opinion Survey (EOS) |
| 5.2.3 | GERD financed by abroad, % GDP | 2017 | 2019 | UNESCO Institute for Statistics |
| 5.2.4 | Joint venture/strategic alliance deals/bn PPP\$ GDP | 2020 | 2021 | Refinitiv |
| 5.3.1 | Intellectual property payments, % total trade | 2019 | 2020 | World Trade Organization and United Nations Conference on Trade and Development |
| 5.3.3 | ICT services imports, % total trade | 2019 | 2020 | World Trade Organization and United Nations Conference on Trade and Development |
| 6.1.3 | Utility models by origin/bn PPP\$ GDP | 2019 | 2020 | World Intellectual Property Organization |
| 6.2.2 | New businesses/th pop. 15–64 | 2018 | 2020 | World Bank, Entrepreneurship Database |
| 6.3.1 | Intellectual property receipts, % total trade | 2019 | 2020 | World Trade Organization and United Nations Conference on Trade and Development |
| 6.3.4 | ICT services exports, % total trade | 2019 | 2020 | World Trade Organization and United Nations Conference on Trade and Development |



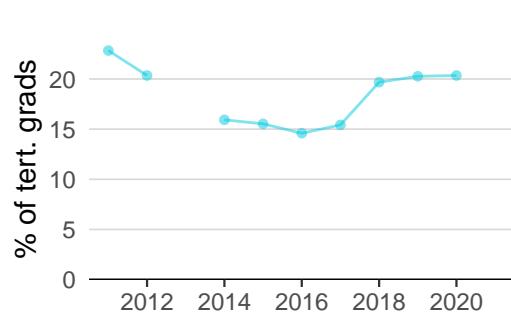
BURKINA FASO'S INNOVATION SYSTEM

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

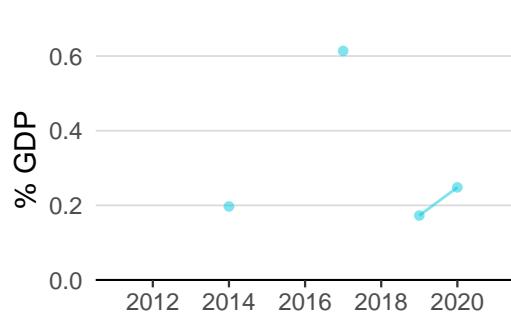
Innovation inputs



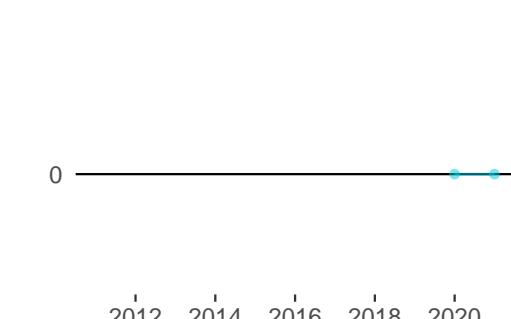
2.1.1 Expenditure on education was equal to 5.5% GDP in 2020—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 25.



2.2.2 Graduates in science and engineering was equal to 20.3% of tert. grads in 2020—effectively unchanged from the year prior—and equivalent to an indicator rank of 66.



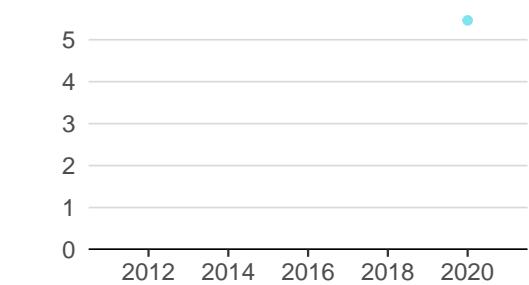
2.3.2 Gross expenditure on R&D was equal to 0.2% GDP in 2020—up by 44 percentage points from the year prior—and equivalent to an indicator rank of 84.



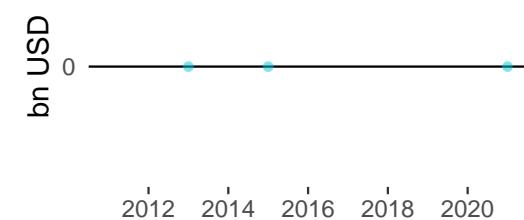
2.3.4 QS university ranking was equal to 0.0 in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 72.



3.1.1 ICT access was equal to 5.5 in 2020 and equivalent to an indicator rank of 117.



4.2.4 Venture capital received was equal to 0.0 bn USD in 2021 and equivalent to an indicator rank of 101.



5.1.1 Knowledge-intensive employment was equal to 571.5 thsd people in 2018 and equivalent to an indicator rank of 96.

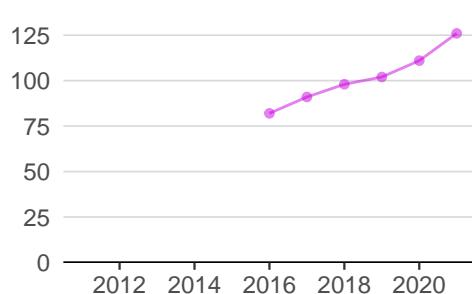




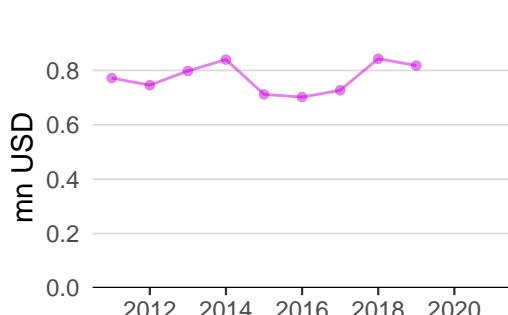
Innovation outputs



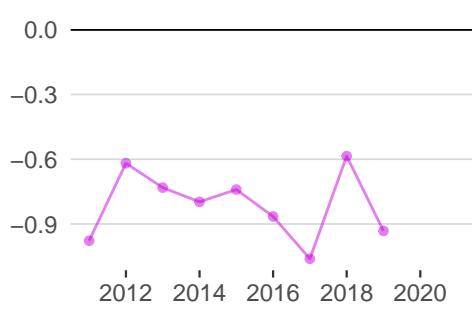
6.1.1 Patents by origin was equal to 9.0 in 2020—up by 1.1 percentage points from the year prior—and equivalent to an indicator rank of 101.



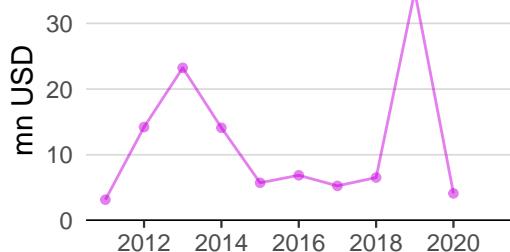
6.1.5 Citable documents H-index was equal to 126.0 in 2021—up by 14 percentage points from the year prior—and equivalent to an indicator rank of 101.



6.3.1 Intellectual property receipts was equal to 0.8 mn USD in 2019—down by 3 percentage points from the year prior—and equivalent to an indicator rank of 87.



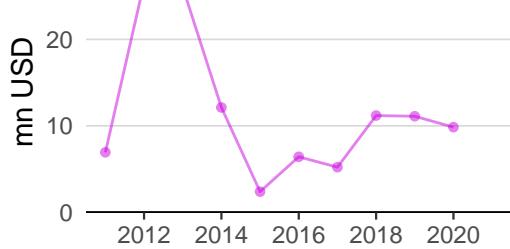
6.3.2 Production and export complexity was equal to -0.9 in 2019—down by 59 percentage points from the year prior—and equivalent to an indicator rank of 104.



6.3.3 High-tech exports was equal to 4.1 mn USD in 2020—down by 88 percentage points from the year prior—and equivalent to an indicator rank of 120.



7.1.3 Global brand value was equal to 0.0 mn USD in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 77.



7.2.1 Cultural and creative services exports was equal to 9.8 mn USD in 2020—down by 11 percentage points from the year prior—and equivalent to an indicator rank of 73.



BURKINA FASO'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 |
|-------|----------|------|
|-------|----------|------|

No observations

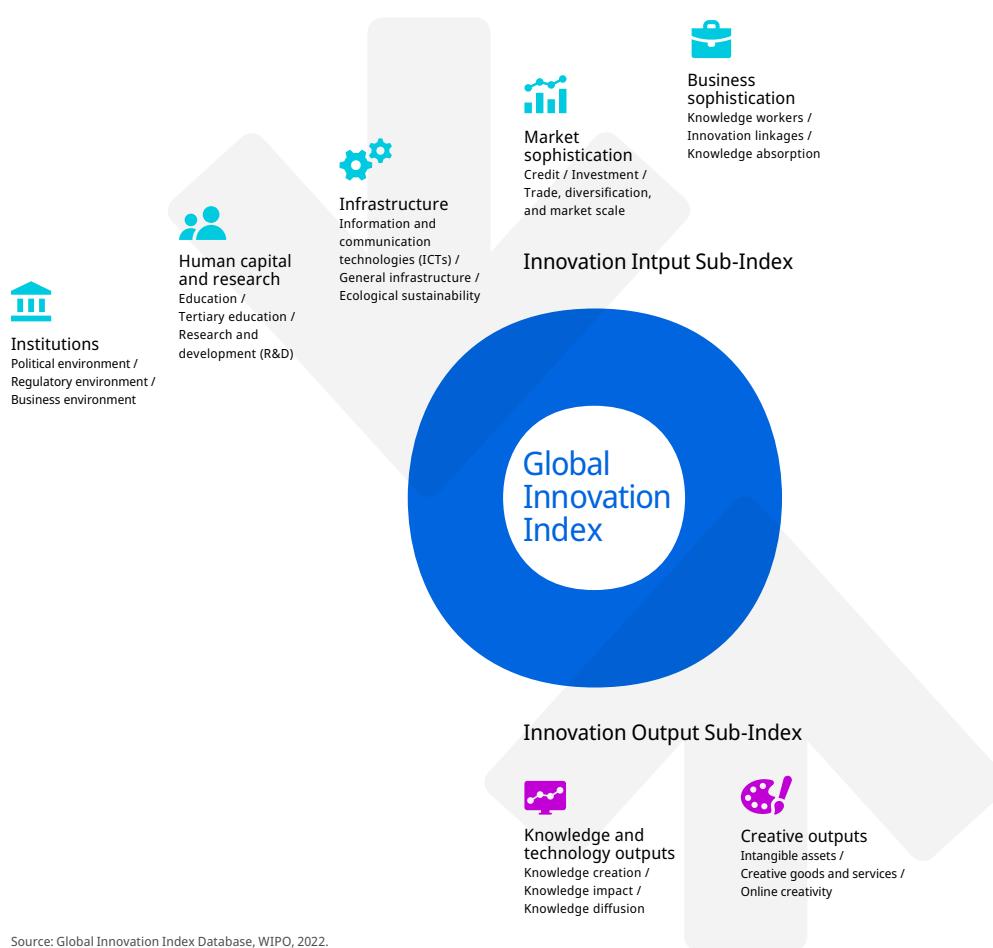
Source: Brand Finance (<https://brandirectory.com>).



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.