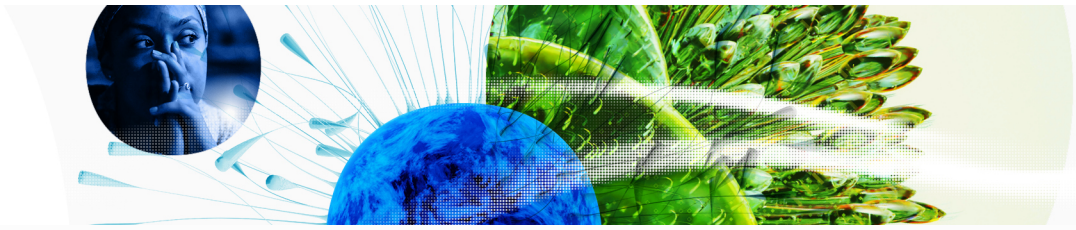
# Global Innovation Index 2023



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**.

## Brazil ranking in the Global Innovation Index 2023

> Brazil ranks 49th among the 132 economies featured in the GII 2023.



> Brazil ranks 6th among the 33 upper-middle-income group economies.



> Brazil ranks 1st among the 19 economies in Latin America and the Caribbean.



### > Brazil GII Ranking (2020-2023)

The table shows the rankings of Brazil over the past four years. 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 Brazil in the GII 2023 is between ranks 48 and 53.

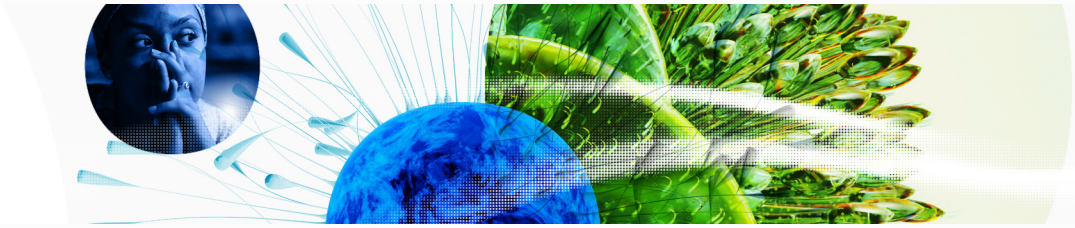
| | GII Position | Innovation Inputs | Innovation Outputs |
|---|---|---|---|
| 2020 | 62nd | 59th | 64th |
| 2021 | 57th | 56th | 59th |
| 2022 | 54th | 58th | 53rd |
| 2023 | 49th | 59th | 49th |

Brazil performs better in innovation outputs than innovation inputs in 2023.

This year Brazil ranks 59th in innovation inputs. This position is lower than last year.

Brazil ranks 49th in innovation outputs. This position is higher than last year.

# Global Innovation Index 2023



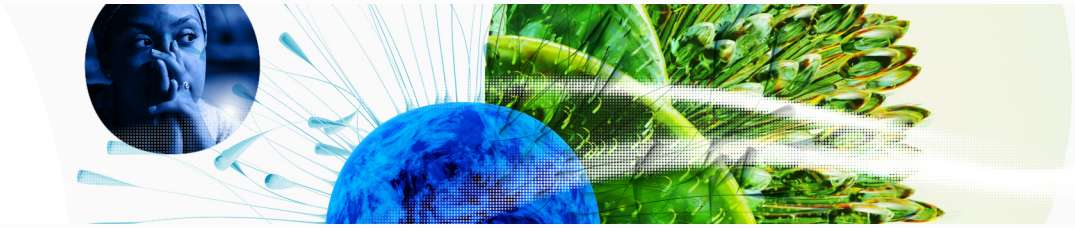
## → Expected vs. observed innovation performance

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, Brazil is performing above expectations for its level of development.

### > Innovation overperformers relative to their economic development

# Global Innovation Index 2023

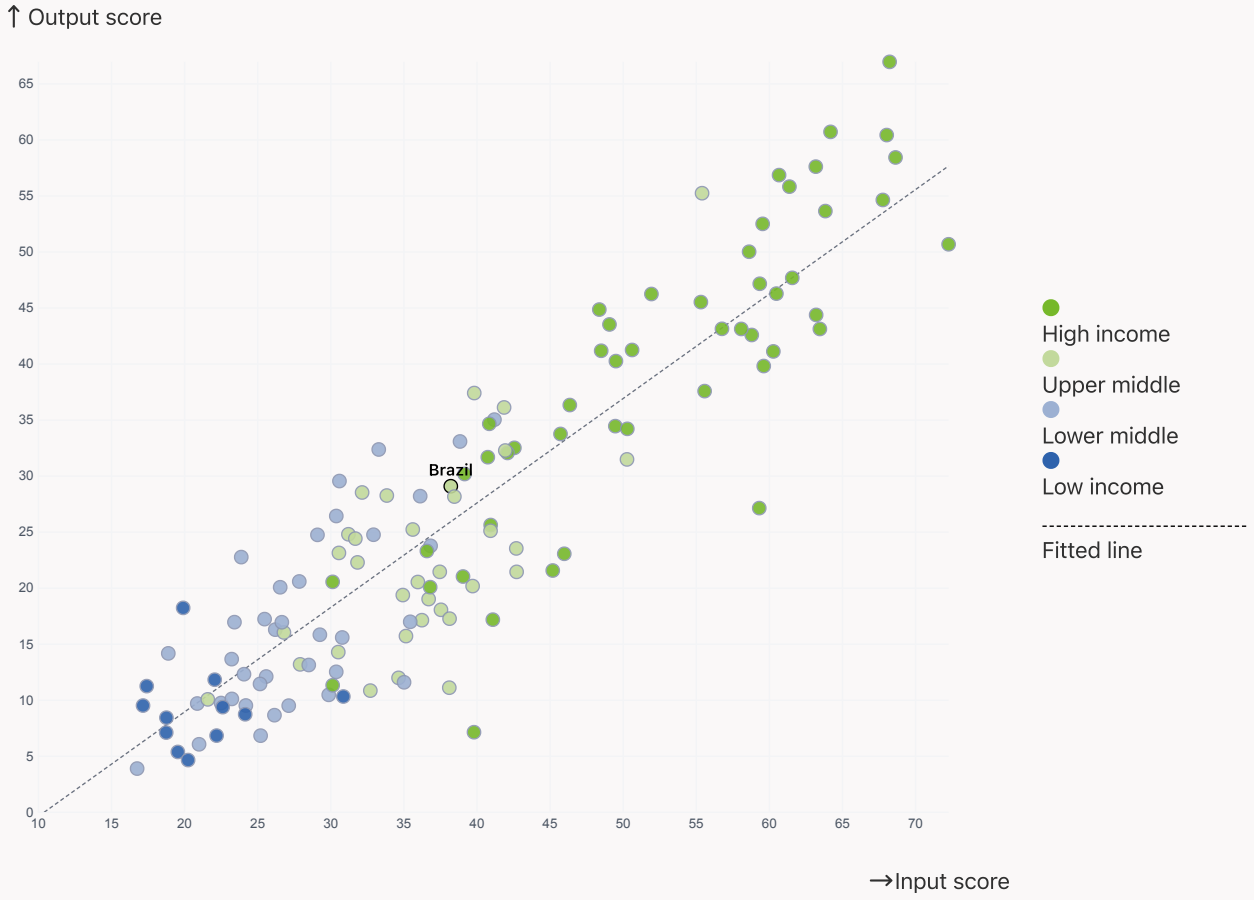


## → Effectively translating innovation investments into innovation outputs

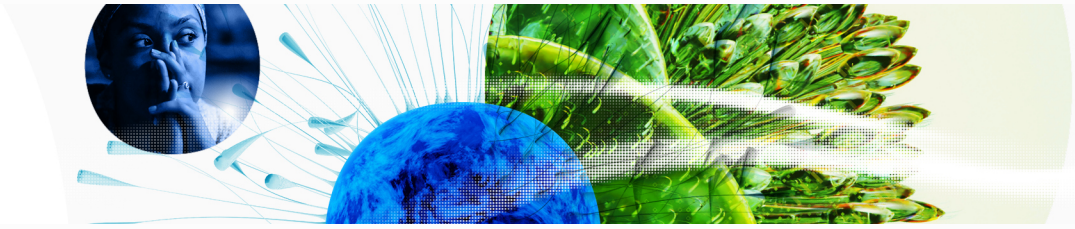
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

> Brazil produces more innovation outputs relative to its level of innovation investments.

### > Relationship between innovation inputs and outputs

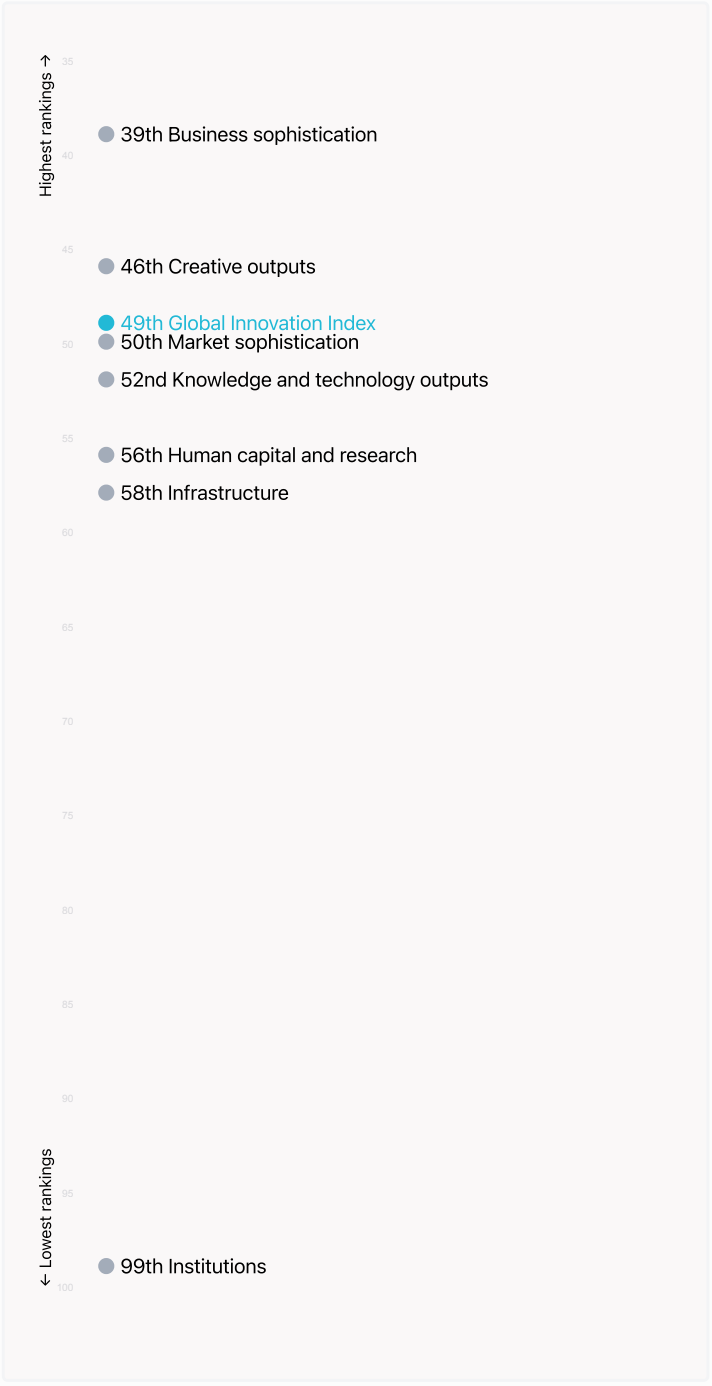


# Global Innovation Index 2023



## → Overview of Brazil's rankings in the seven areas of the GII in 2023

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Brazil are those that rank above the GII (shown in blue) and the weakest are those that rank below.




### > Highest rankings

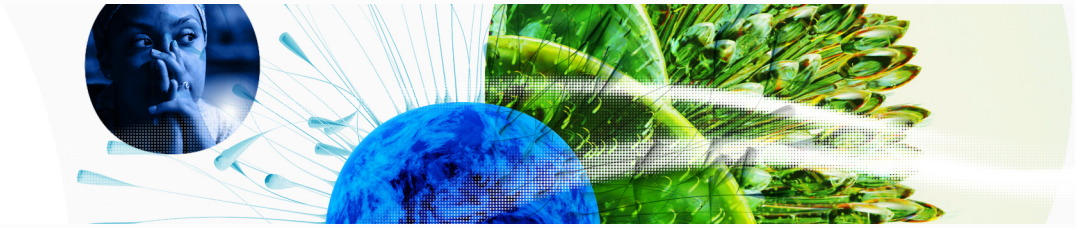
Brazil ranks highest in Business sophistication (39th) and Creative outputs (46th).

### > Lowest rankings

Brazil ranks lowest in Institutions (99th), Infrastructure (58th) and Human capital and research (56th).

The full WIPO Intellectual Property Statistics profile for Brazil can be found on this link.

# Global Innovation Index 2023



## → Benchmark of Brazil against other country groupings for each of the seven areas of the GII Index

The charts shows the relative position of Brazil (blue bar) against other country groupings (grey bars), for each of the seven areas of the GII Index.

### > Upper-Middle-Income economies

Brazil performs above the upper-middle-income group average in Knowledge and technology outputs, Creative outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure.

### > Latin America And The Caribbean

Brazil performs above the regional average in Knowledge and technology outputs, Creative outputs, Business sophistication, Market sophistication, Human capital and research, Infrastructure.

### Knowledge and technology outputs

- Top 10 | Score: 58.96
- Brazil | Score: 26.84
- Upper middle income | Score: 22.36
- LCN | Score: 17.14

### Creative outputs

- Top 10 | 56.09
- Brazil | 31.24
- Upper middle income | 23.16
- LCN | 18.91

### Business sophistication

- Top 10 | 64.39
- Brazil | 37.64
- Upper middle income | 29.27
- LCN | 26.15

### Market sophistication

- Top 10 | 61.93
- Brazil | 38.09
- Upper middle income | 35.45
- LCN | 29.74

### Human capital and research

- Top 10 | 60.28
- Brazil | 33.53
- Upper middle income | 29.68
- LCN | 24.92

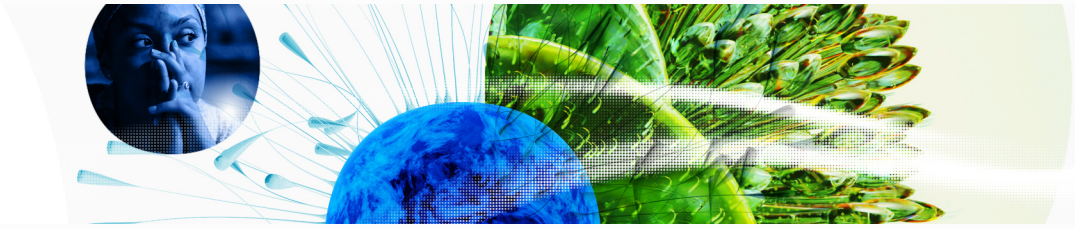
### Infrastructure

- Top 10 | 62.83
- Brazil | 43.52
- Upper middle income | 40.40
- LCN | 35.88

### Institutions

- Top 10 | 79.85
- Upper middle income | 47.71
- LCN | 41.12
- Brazil | 38.47

# Global Innovation Index 2023



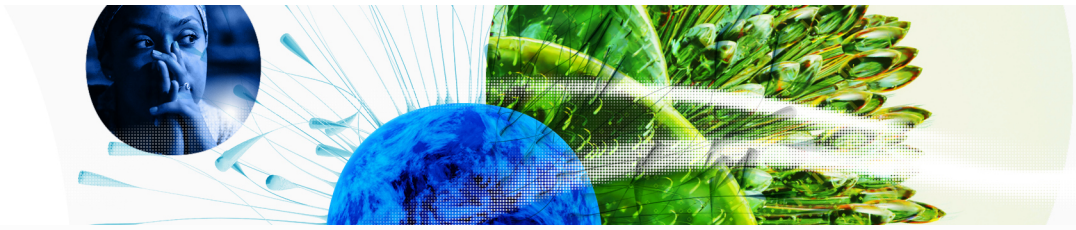
## → Innovation strengths and weaknesses in Brazil

The table below gives an overview of the indicator strengths and weaknesses of Brazil in the GII 2023.

> Brazil's main innovation strengths are **Domestic market scale, bn PPP$** (rank 8), **E-participation** (rank 11) and **Trademarks by origin/bn PPP$ GDP** (rank 13).

| Strengths | | | Weaknesses | | |
|---|---|---|---|---|---|
| **Rank** | **Code** | **Indicator name** | **Rank** | **Code** | **Indicator name** |
| 8 | 4.3.3 | Domestic market scale, bn PPP$ | 107 | 4.3.1 | Applied tariff rate, weighted avg., % |
| 11 | 3.1.4 | E-participation | 107 | 2.2.3 | Tertiary inbound mobility, % |
| 13 | 7.1.2 | Trademarks by origin/bn PPP$ GDP | 104 | 3.2.3 | Gross capital formation, % GDP |
| 14 | 3.1.3 | Government's online service | 103 | 1.3.1 | Policies for doing business |
| 17 | 5.3.1 | Intellectual property payments, % total trade | 100 | 6.2.1 | Labor productivity growth, % |
| 19 | 2.1.1 | Expenditure on education, % GDP | 90 | 2.2.2 | Graduates in science and engineering, % |
| 19 | 5.3.2 | High-tech imports, % total trade | 79 | 1.3.2 | Entrepreneurship policies and culture |
| 22 | 6.2.2 | Unicorn valuation, % GDP | 68 | 2.1.4 | PISA scales in reading, maths and science |
| 23 | 6.1.5 | Citable documents H-index | 63 | 7.2.2 | National feature films/mn pop. 15-69 |
| 30 | 2.3.4 | QS university ranking, top 3 | 55 | 4.1.3 | Loans from microfinance institutions, % GDP |

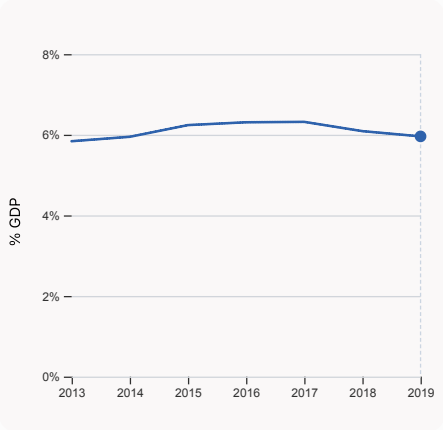
# Global Innovation Index 2023



## → Brazil's innovation system

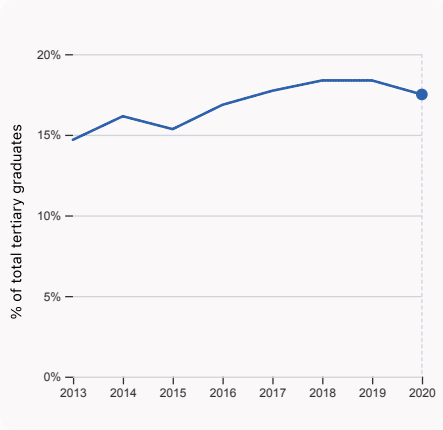
As far as practicable, the plots below present unscaled indicator data.

### > Innovation inputs in Brazil



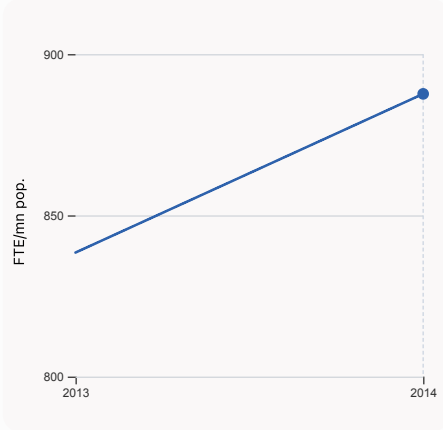

#### 2.1.1 Expenditure on education, % GDP

was equal to 5.96% GDP in 2019, down by 0.13 percentage points from the year prior – and equivalent to an indicator rank of 19.



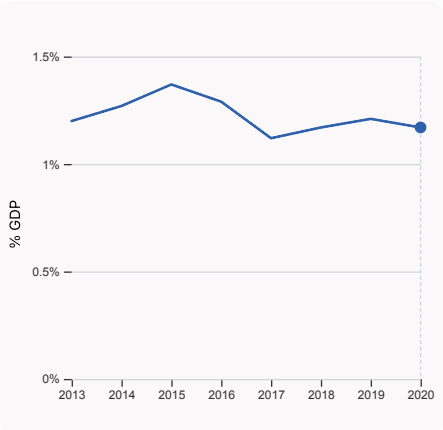

#### 2.2.2 Graduates in science and engineering, %

was equal to 17.5% of total tertiary graduates in 2020, down by 0.87 percentage points from the year prior – and equivalent to an indicator rank of 90.



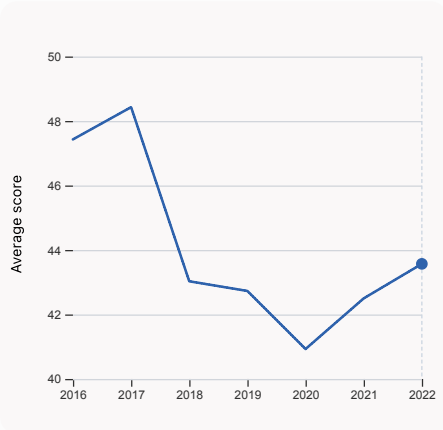

#### 2.3.1 Researchers, FTE/mn pop.

was equal to 887.68 FTE/mn pop. in 2014, up by 5.87% from the year prior – and equivalent to an indicator rank of 54.



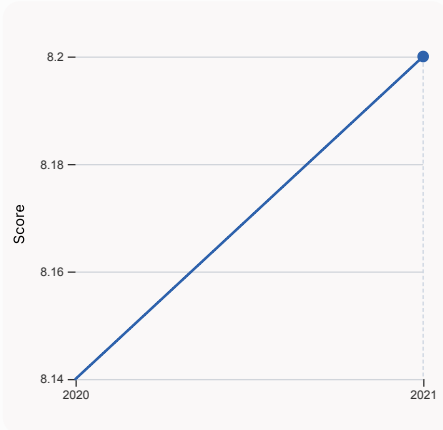

#### 2.3.2 Gross expenditure on R&D, % GDP

was equal to 1.17% GDP in 2020, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 34.




#### 2.3.4 QS university ranking, top 3

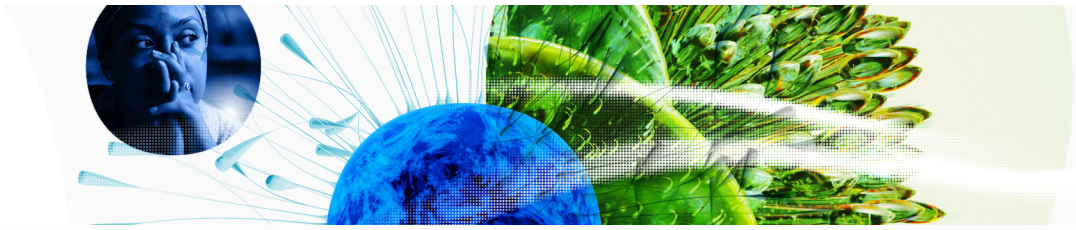
was equal to an average score of 43.57 for the top 3 universities in 2022, up by 2.52% from the year prior – and equivalent to an indicator rank of 30.

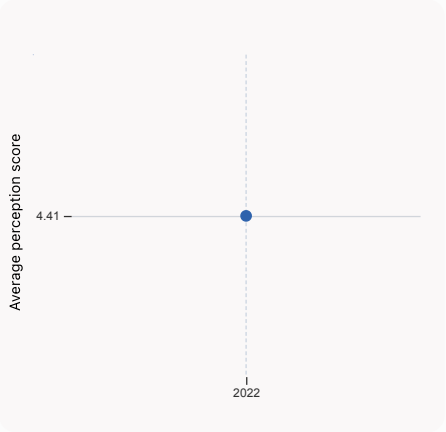



#### 3.1.1 ICT access

was equal to a score of 8.2 in 2021, up by 0.74% from the year prior – and equivalent to an indicator rank of 84.

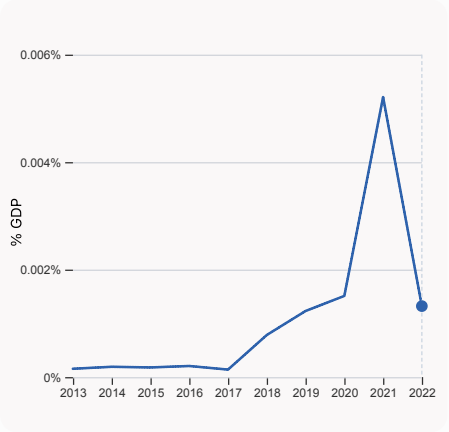
# Global Innovation Index 2023





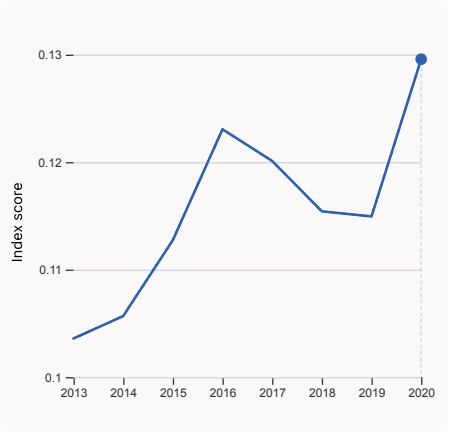

### 4.1.1 Finance for startups and scaleups

was equal to an average perception score of 4.41 in 2022, equivalent to an indicator rank of 51.



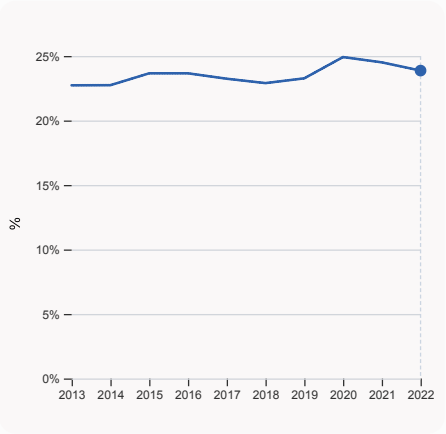

### 4.2.4 VC received, value, % GDP

was equal to 0.00132% GDP in 2022, down by 0.0039 percentage points from the year prior – and equivalent to an indicator rank of 27.




### 4.3.2 Domestic industry diversification

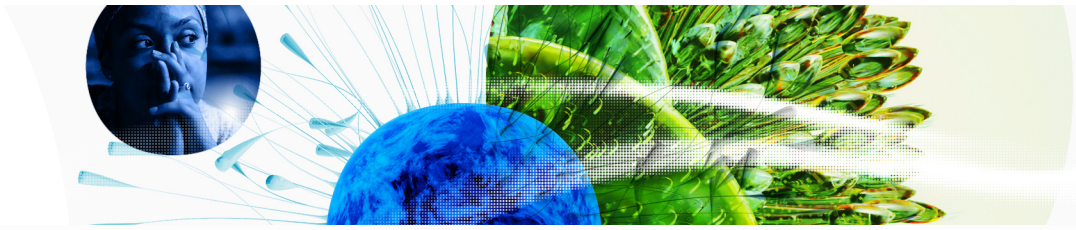
was equal to an index score of 0.13 in 2020, up by 12.72% from the year prior – and equivalent to an indicator rank of 39.



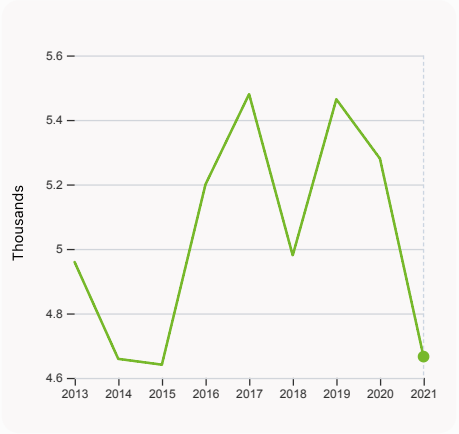

### 5.1.1 Knowledge-intensive employment, %

was equal to 23.87% in 2022, down by 0.64 percentage points from the year prior – and equivalent to an indicator rank of 60.

# Global Innovation Index 2023

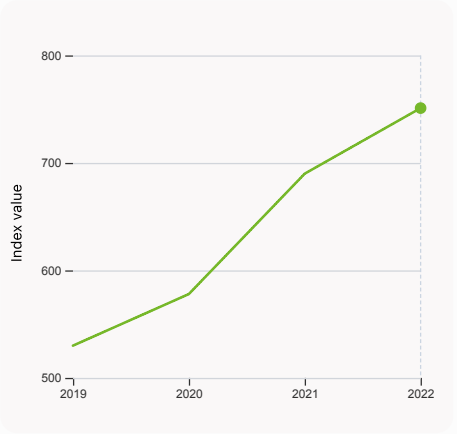


## > Innovation outputs in Brazil



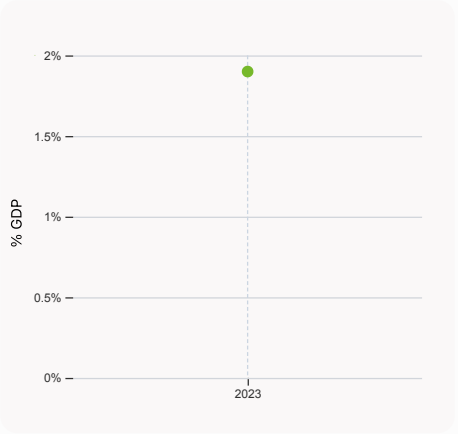

### 6.1.1 Patents by origin

was equal to 4.67 Thousands in 2021, down by 11.63% from the year prior – and equivalent to an indicator rank of 49.



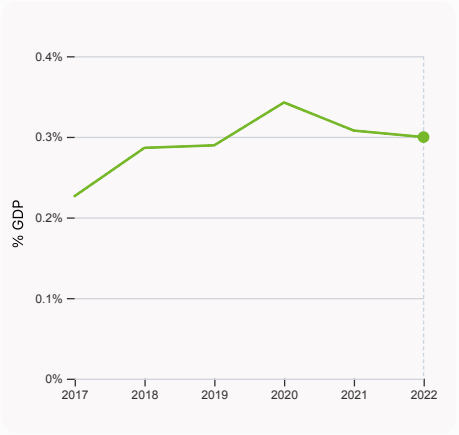

### 6.1.5 Citable documents H-index

was equal to an index value of 751 in 2022, up by 8.84% from the year prior – and equivalent to an indicator rank of 23.



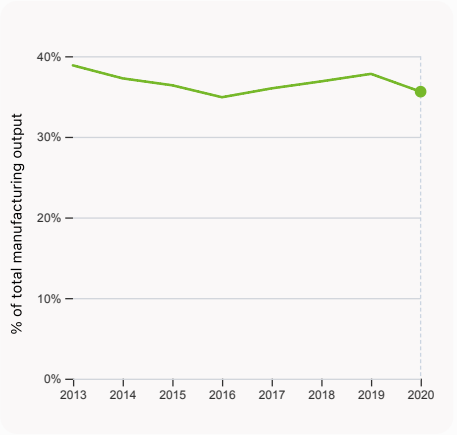

### 6.2.2 Unicorn valuation, % GDP

was equal to 1.9 % GDP in 2023 – and equivalent to an indicator rank of 22.



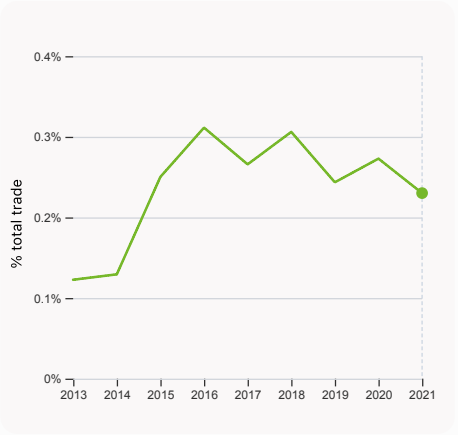

### 6.2.3 Software spending, % GDP

was equal to 0.3% GDP in 2022, down by 0.0081 percentage points from the year prior – and equivalent to an indicator rank of 44.




### 6.2.4 High-tech manufacturing, %

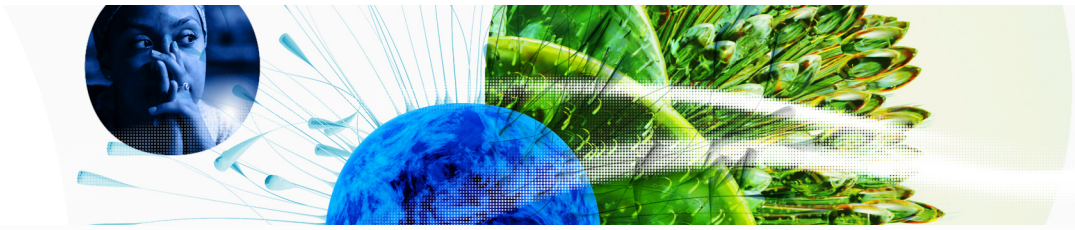
was equal to 35.6% of total manufacturing output in 2020, down by 2.21 percentage points from the year prior – and equivalent to an indicator rank of 33.

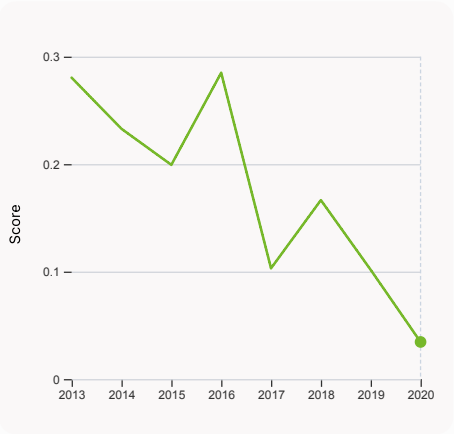



### 6.3.1 Intellectual property receipts, % total trade

was equal to 0.23% total trade in 2021, down by 0.043 percentage points from the year prior – and equivalent to an indicator rank of 41.

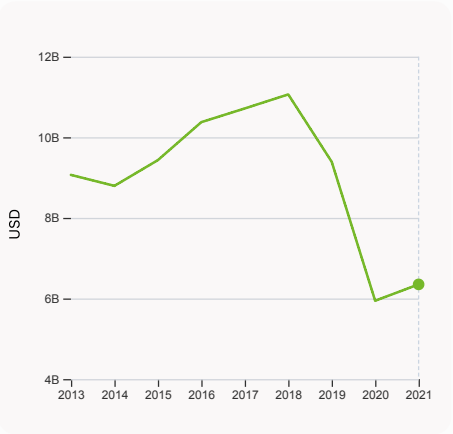
# Global Innovation Index 2023





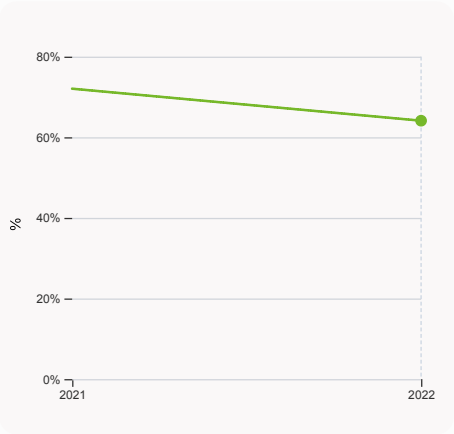

### 6.3.2 Production and export complexity

was equal to a score of 0.035 in 2020, down by 65.99% from the year prior – and equivalent to an indicator rank of 59.



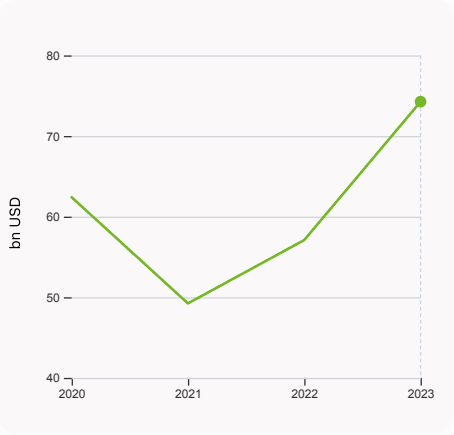

### 6.3.3 High-tech exports

was equal to 6,350,114,828 USD in 2021, up by 6.82% from the year prior – and equivalent to an indicator rank of 58.



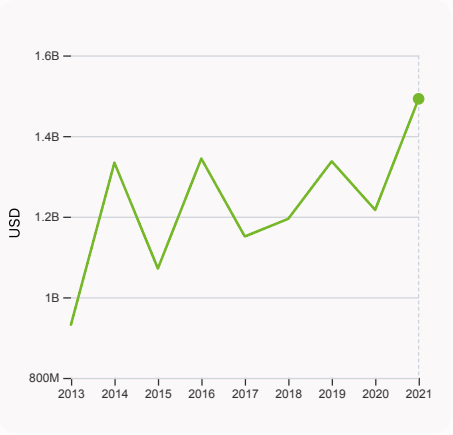

### 7.1.1 Intangible asset intensity, top 15, %

was equal to 64.11% in 2022, down by 7.94 percentage points from the year prior – and equivalent to an indicator rank of 30.



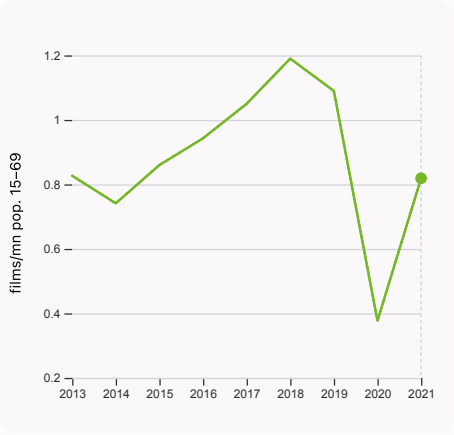

### 7.1.3 Global brand value, top 5,000

was equal to 74.262 bn USD in 2023, up by 30.06% from the year prior – and equivalent to an indicator rank of 39.




### 7.2.1 Cultural and creative services exports

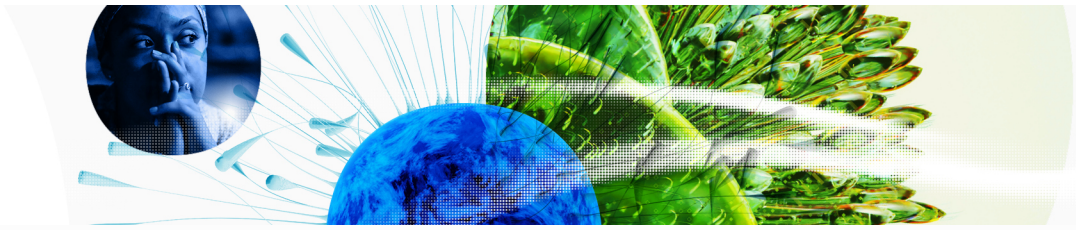
was equal to 1,492,300,000 USD in 2021, up by 22.65% from the year prior – and equivalent to an indicator rank of 53.

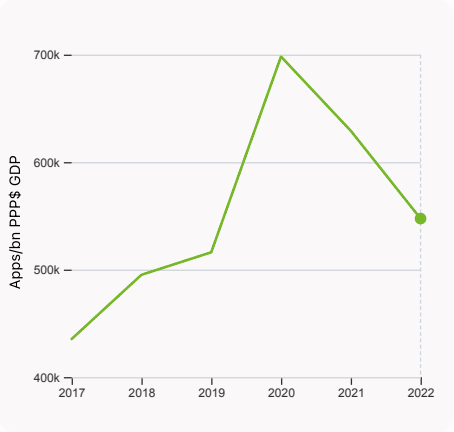



### 7.2.2 National feature films/mn pop. 15-69

was equal to 0.819 films/mn pop. 15–69 in 2021, up by 117.2% from the year prior – and equivalent to an indicator rank of 63.

# Global Innovation Index 2023

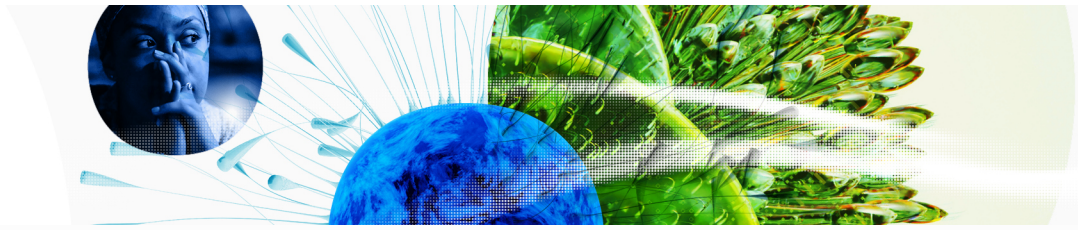





### 7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 547,505.07 Apps/bn PPP$ GDP in 2022, down by 12.98% from the year prior – and equivalent to an indicator rank of 40.

# Global Innovation Index 2023



## → Brazil's innovation top performers

### > 2.3.3 Global corporate R&D investors from Brazil

| Rank | Firm | Industry | R&D | R&D Growth | R&D Intensity |
|---|---|---|---|---|---|
| | | | [mn EUR] | [%] | [%] |
| 1019 | EMBRAER | Aerospace & Defence | 152 | 56 | 4 |
| 1156 | PETROBRAS | Oil & Gas Producers | 131 | 20 | 0 |
| 1465 | TOTVS | Software & Computer Services | 96 | 35 | 19 |
| 1588 | WEG | Industrial Engineering | 87 | 17 | 2 |

Source: European Commission's Joint Research Centre (https://iri.jrc.ec.europa.eu/scoreboard/2022-eu-industrial-rd-investment-scoreboard).
Note: European Commission's Joint Research Centre ranks the top 2,500 firms by R&D investment annually.

### > 2.3.4 QS university ranking of Brazil's top universities

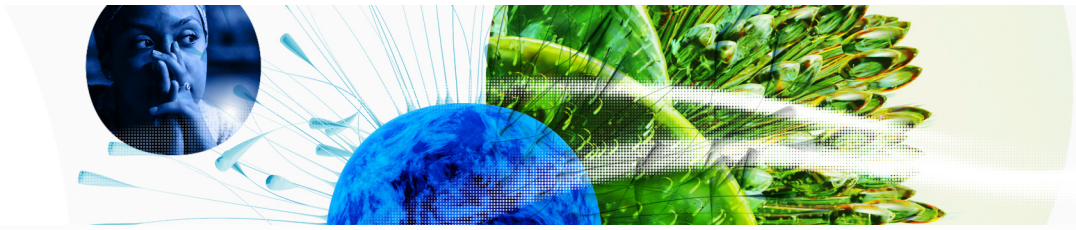
| Rank | University | Score |
|---|---|---|
| 115 | UNIVERSIDADE DE SAO PAULO | 56.10 |
| 210 | UNIVERSIDADE ESTADUAL DE CAMPINAS (UNICAMP) | 42.50 |
| 333 | UNIVERSIDADE FEDERAL DO RIO DE JANEIRO | 32.10 |

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2023).
Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100]. Ranks can represent a single value "x", a tie "x=" or a range "x-y".

### > 6.2.2 Top Unicorn Companies in Brazil

| Rank | Unicorn Company | Industry | City | Valuation, bn USD |
|---|---|---|---|---|
| 1 | QUINTOANDAR | E-commerce & direct-to-consumer | Campinas | 5 |
| 2 | C6 BANK | Fintech | Sao Paulo | 5 |
| 3 | CREDITAS | Fintech | Sao Paulo | 5 |

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: https://www.cbinsights.com/research-unicorn-companies



## > 7.1.1 Top 15 intangible-asset intensive companies in Brazil

| Rank | Firm | Intensity, % |
|---|---|---|
| 1 | VALE SA | 52.97 |
| 2 | WEG SA | 92.93 |
| 3 | B3 SA - BRASIL BOLSA BALCAO | 95.08 |

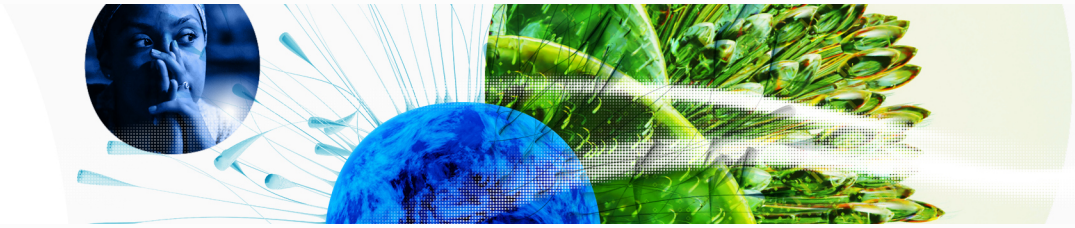
Source: Brand Finance (https://brandirectory.com/reports/gift-2022).
Note: Brand Finance only provides within economy ranks.

## > 7.1.3 Top 5,000 companies in Brazil with highest global brand value

| Rank | Brand | Industry | Brand Value, mn USD |
|---|---|---|---|
| 1 | ITAU | Banking | 8,716.5 |
| 2 | BRADESCO | Banking | 5,091.8 |
| 3 | BANCO DO BRASIL | Banking | 4,903.6 |

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

# Global Innovation Index 2023



## Brazil

GII 2023 rank **49**

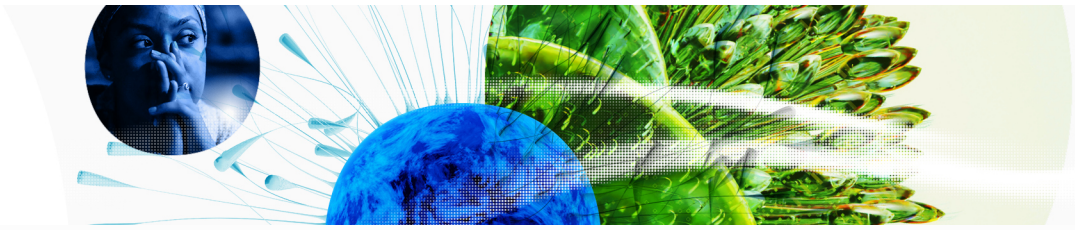
| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP$ (bn) | GDP per capita, PPP$ |
|---|---|---|---|---|---|---|
| 49 | 59 | Upper middle | LCN | 215.3 | 3,782.8 | 17,683.8 |

| | Score / Value | Rank | |
|---|---|---|---|
| **Institutions** | **38.5** | **99** | |
| **1.1 Institutional environment** | **34.9** | **91** | |
| 1.1.1 Operational stability for businesses* | 45.8 | 79 | |
| 1.1.2 Government effectiveness* | 24.0 | 98 | |
| **1.2 Regulatory environment** | **60.3** | **70** | |
| 1.2.1 Regulatory quality* | 39.2 | 79 | |
| 1.2.2 Rule of law* | 31.5 | 81 | |
| 1.2.3 Cost of redundancy dismissal | 15.4 | 62 | |
| **1.3 Business environment** | **20.2** | **118** | ○ ◇ |
| 1.3.1 Policies for doing business† | 31.7 | 103 | ○ |
| 1.3.2 Entrepreneurship policies and culture† | 8.7 | 79 | ○ ◇ |
| **Human capital and research** | **33.5** | **56** | |
| **2.1 Education** | **50.0** | **68** | |
| 2.1.1 Expenditure on education, % GDP | 6.0 | 19 | ● ◆ |
| 2.1.2 Government funding/pupil, secondary, % GDP/cap | 21.4 | 44 | |
| 2.1.3 School life expectancy, years | 15.1 | 49 | |
| 2.1.4 PISA scales in reading, maths and science | 400.0 | 68 | ○ |
| 2.1.5 Pupil-teacher ratio, secondary | 16.3 | 84 | |
| **2.2 Tertiary education** | **19.8** | **90** | |
| 2.2.1 Tertiary enrolment, % gross | 54.6 | 63 | |
| 2.2.2 Graduates in science and engineering, % | 17.5 | 90 | ○ |
| 2.2.3 Tertiary inbound mobility, % | 0.2 | 107 | ○ ◇ |
| **2.3 Research and development (R&D)** | **30.8** | **35** | ◆ |
| 2.3.1 Researchers, FTE/mn pop. | 887.7 | 54 | |
| 2.3.2 Gross expenditure on R&D, % GDP | 1.2 | 34 | ◆ |
| 2.3.3 Global corporate R&D investors, top 3, mn US$ | 48.9 | 34 | ◆ |
| 2.3.4 QS university ranking, top 3* | 44.1 | 30 | ● ◆ |
| **Infrastructure** | **43.5** | **58** | |
| **3.1 Information and communication technologies (ICTs)** | **81.0** | **36** | ◆ |
| 3.1.1 ICT access* | 72.9 | 84 | |
| 3.1.2 ICT use* | 73.1 | 66 | |
| 3.1.3 Government's online service* | 88.5 | 14 | ● ◆ |
| 3.1.4 E-participation* | 89.5 | 11 | ● ◆ |
| **3.2 General infrastructure** | **25.6** | **70** | |
| 3.2.1 Electricity output, GWh/mn pop. | 3,065.9 | 66 | |
| 3.2.2 Logistics performance* | 50.0 | 50 | |
| 3.2.3 Gross capital formation, % GDP | 18.8 | 104 | ○ |
| **3.3 Ecological sustainability** | **23.9** | **65** | |
| 3.3.1 GDP/unit of energy use | 10.2 | 63 | |
| 3.3.2 Environmental performance* | 41.9 | 60 | |
| 3.3.3 ISO 14001 environment/bn PPP$ GDP | 0.9 | 69 | |
| **Market sophistication** | **38.1** | **50** | |
| **4.1 Credit** | **24.1** | **80** | |
| 4.1.1 Finance for startups and scaleups† | 46.6 | 51 | |
| 4.1.2 Domestic credit to private sector, % GDP | 70.0 | 52 | |
| 4.1.3 Loans from microfinance institutions, % GDP | 0.0 | 55 | ○ |
| **4.2 Investment** | **16.9** | **44** | |
| 4.2.1 Market capitalization, % GDP | 59.8 | 30 | |
| 4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP | 0.1 | 53 | |
| 4.2.3 VC recipients, deals/bn PPP$ GDP | 0.0 | 46 | |
| 4.2.4 VC received, value, % GDP | 0.0 | 27 | |
| **4.3 Trade, diversification, and market scale** | **73.3** | **18** | ● ◆ |
| 4.3.1 Applied tariff rate, weighted avg., % | 8.4 | 107 | ○ ◇ |
| 4.3.2 Domestic industry diversification | 93.1 | 39 | |
| 4.3.3 Domestic market scale, bn PPP$ | 3,782.8 | 8 | ● ◆ |

| | Score / Value | Rank | |
|---|---|---|---|
| **Business sophistication** | **37.6** | **39** | ◆ |
| **5.1 Knowledge workers** | **44.9** | **[41]** | |
| 5.1.1 Knowledge-intensive employment, % | 23.9 | 60 | |
| 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, % | 43.2 | 39 | |
| 5.1.5 Females employed w/advanced degrees, % | 14.5 | 52 | |
| **5.2 Innovation linkages** | **23.3** | **60** | |
| 5.2.1 University-industry R&D collaboration† | 38.2 | 78 | |
| 5.2.2 State of cluster development† | 47.5 | 50 | |
| 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 | 77 | |
| 5.2.5 Patent families/bn PPP$ GDP | 0.1 | 53 | |
| **5.3 Knowledge absorption** | **44.7** | **32** | ◆ |
| 5.3.1 Intellectual property payments, % total trade | 1.8 | 17 | ● ◆ |
| 5.3.2 High-tech imports, % total trade | 13.5 | 19 | ● ◆ |
| 5.3.3 ICT services imports, % total trade | 2.1 | 34 | |
| 5.3.4 FDI net inflows, % GDP | 3.1 | 45 | |
| 5.3.5 Research talent, % in businesses | 26.1 | 50 | |
| **Knowledge and technology outputs** | **26.8** | **52** | |
| **6.1 Knowledge creation** | **21.2** | **53** | |
| 6.1.1 Patents by origin/bn PPP$ GDP | 1.4 | 49 | |
| 6.1.2 PCT patents by origin/bn PPP$ GDP | 0.1 | 51 | |
| 6.1.3 Utility models by origin/bn PPP$ GDP | 0.7 | 26 | |
| 6.1.4 Scientific and technical articles/bn PPP$ GDP | n/a | n/a | |
| 6.1.5 Citable documents H-index | 39.4 | 23 | ● ◆ |
| **6.2 Knowledge impact** | **37.4** | **37** | ◆ |
| 6.2.1 Labor productivity growth, % | -0.1 | 100 | ○ |
| 6.2.2 Unicorn valuation, % GDP | 1.9 | 22 | ● ◆ |
| 6.2.3 Software spending, % GDP | 0.3 | 44 | |
| 6.2.4 High-tech manufacturing, % | 35.6 | 33 | |
| **6.3 Knowledge diffusion** | **22.0** | **67** | |
| 6.3.1 Intellectual property receipts, % total trade | 0.2 | 41 | |
| 6.3.2 Production and export complexity | 53.2 | 59 | |
| 6.3.3 High-tech exports, % total trade | 2.1 | 58 | |
| 6.3.4 ICT services exports, % total trade | 1.1 | 86 | |
| 6.3.5 ISO 9001 quality/bn PPP$ GDP | 4.8 | 56 | |
| **Creative outputs** | **31.2** | **46** | |
| **7.1 Intangible assets** | **47.4** | **31** | |
| 7.1.1 Intangible asset intensity, top 15, % | 64.1 | 30 | |
| 7.1.2 Trademarks by origin/bn PPP$ GDP | 100.9 | 13 | ● ◆ |
| 7.1.3 Global brand value, top 5,000 | 3.6 | 39 | |
| 7.1.4 Industrial designs by origin/bn PPP$ GDP | 1.3 | 60 | |
| **7.2 Creative goods and services** | **5.6** | **85** | |
| 7.2.1 Cultural and creative services exports, % total trade | 0.5 | 53 | |
| 7.2.2 National feature films/mn pop. 15-69 | 0.8 | 63 | ○ |
| 7.2.3 Entertainment and media market/th pop. 15-69 | 5.4 | 41 | |
| 7.2.4 Creative goods exports, % total trade | 0.2 | 80 | |
| **7.3 Online creativity** | **24.6** | **52** | |
| 7.3.1 Generic top-level domains (TLDs)/th pop. 15-69 | 1.8 | 89 | |
| 7.3.2 Country-code TLDs/th pop. 15-69 | 9.3 | 42 | |
| 7.3.3 GitHub commits/mn pop. 15-69 | 14.1 | 49 | |
| 7.3.4 Mobile app creation/bn PPP$ GDP | 73.2 | 40 | |

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/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

# Global Innovation Index 2023



## → Data availability

The following tables list indicators that are either missing or outdated for Brazil.

> Brazil has missing data for three indicators and outdated data for four indicators.

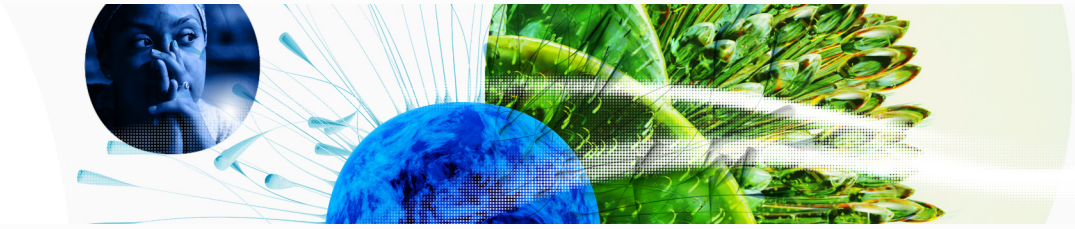
### > Missing data for Brazil

| Code | Indicator name | Economy Year | Model Year | Source |
|---|---|---|---|---|
| 5.1.2 | Firms offering formal training, % | n/a | 2019 | World Bank Enterprise Surveys |
| 5.1.3 | GERD performed by business, % GDP | n/a | 2021 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 5.2.3 | GERD financed by abroad, % GDP | n/a | 2020 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |

### > Outdated data for Brazil

| Code | Indicator name | Economy Year | Model Year | Source |
|---|---|---|---|---|
| 2.1.1 | Expenditure on education, % GDP | 2019 | 2021 | UNESCO Institute for Statistics |
| 2.3.1 | Researchers, FTE/mn pop. | 2014 | 2021 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 2.3.2 | Gross expenditure on R&D, % GDP | 2020 | 2021 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |
| 5.3.5 | Research talent, % in businesses | 2014 | 2021 | UNESCO Institute for Statistics; Eurostat; OECD; RICYT |

# Global Innovation Index 2023



## 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, 2023.

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.