

Global Innovation Index 2023

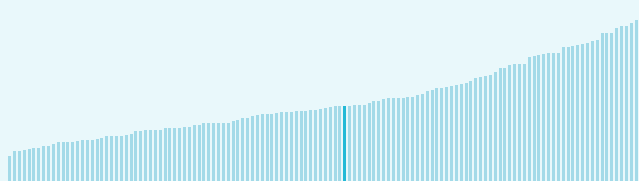


The Global Innovation Index (GII) **ranks world economies according to their innovation capabilities.**

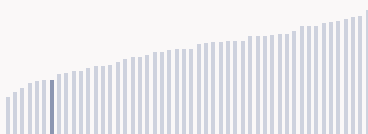
Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation.**

Uruguay ranking in the Global Innovation Index 2023

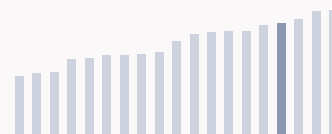
> Uruguay ranks **63rd** among the 132 economies featured in the GII 2023.



> Uruguay ranks **44th** among the 50 high-income group economies.



> Uruguay ranks **4th** among the 19 economies in Latin America and the Caribbean.



> Uruguay GII Ranking (2020-2023)

The table shows the rankings of Uruguay 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 Uruguay in the GII 2023 is between ranks 56 and 68.

	GII Position	Innovation Inputs	Innovation Outputs
2020	69th	69th	65th
2021	65th	69th	63rd
2022	64th	57th	76th
2023	63rd	56th	73rd

Uruguay performs worse in innovation outputs than innovation inputs in 2023.

This year Uruguay ranks 56th in innovation inputs. This position is higher than last year.

Uruguay ranks 73rd in innovation outputs. This position is higher than last year.

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→ Expected vs. observed innovation performance

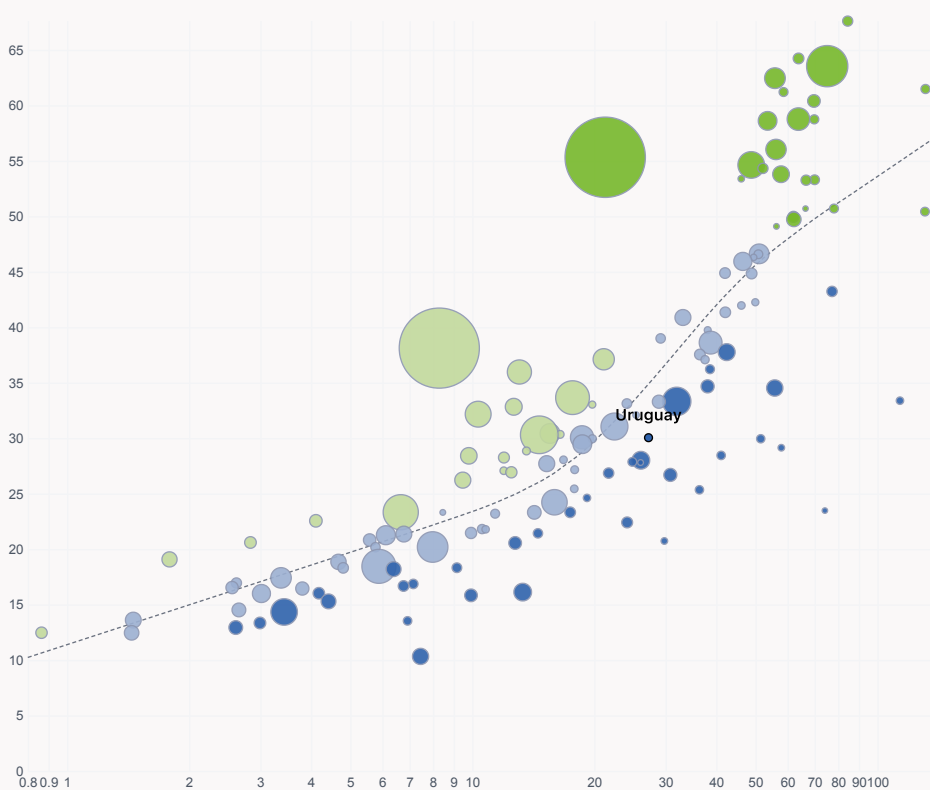
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.



> Relative to GDP, Uruguay's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic development

↑ **GII Score**



- Innovation leader
- Performing above expectations for level of development
- Performing at expectations for level of development
- Performing below expectations for level of development

Size legend (Population)



→ GDP per capita, PPP logarithmic scale (thousands of \$)

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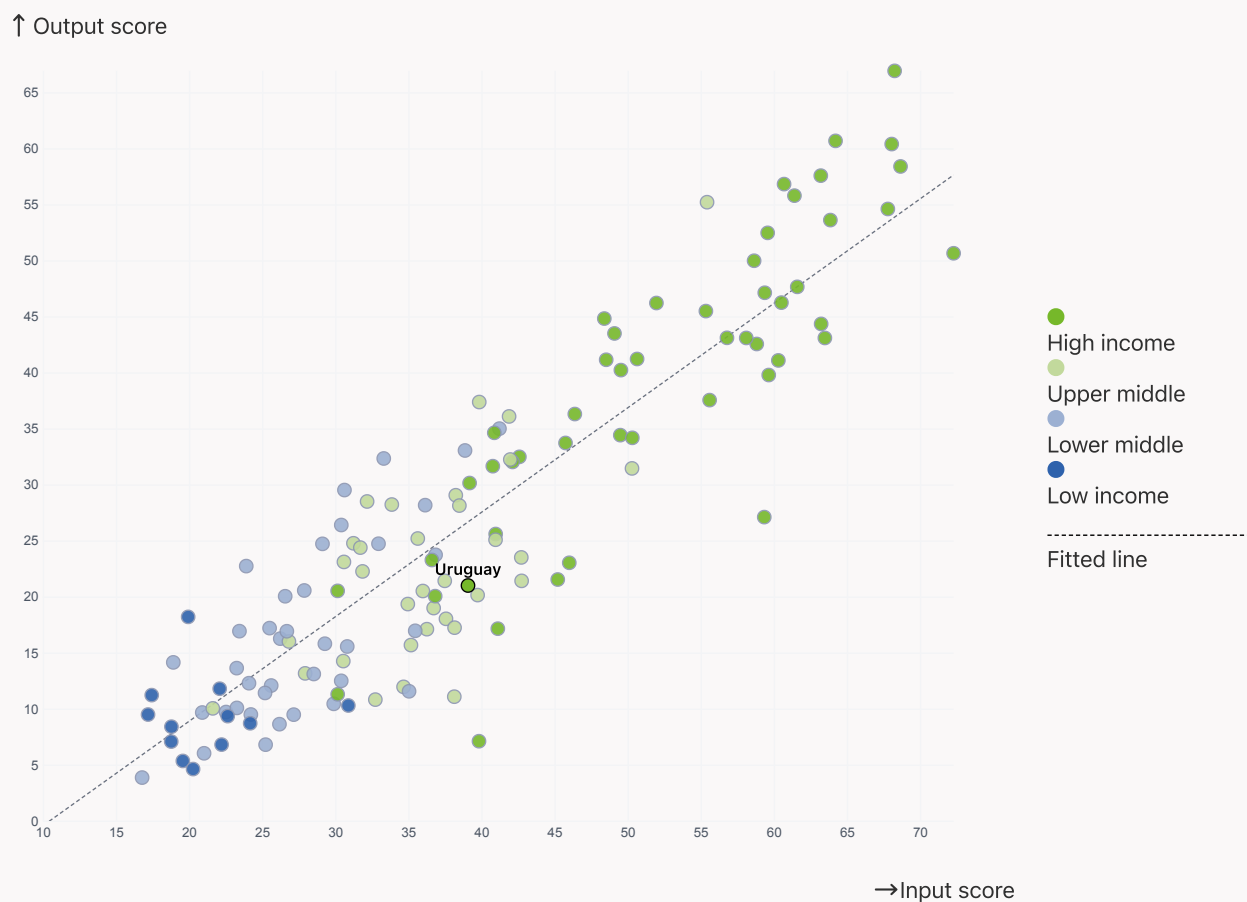
→ Effectively translating innovation investments into innovation outputs

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.



> Uruguay produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

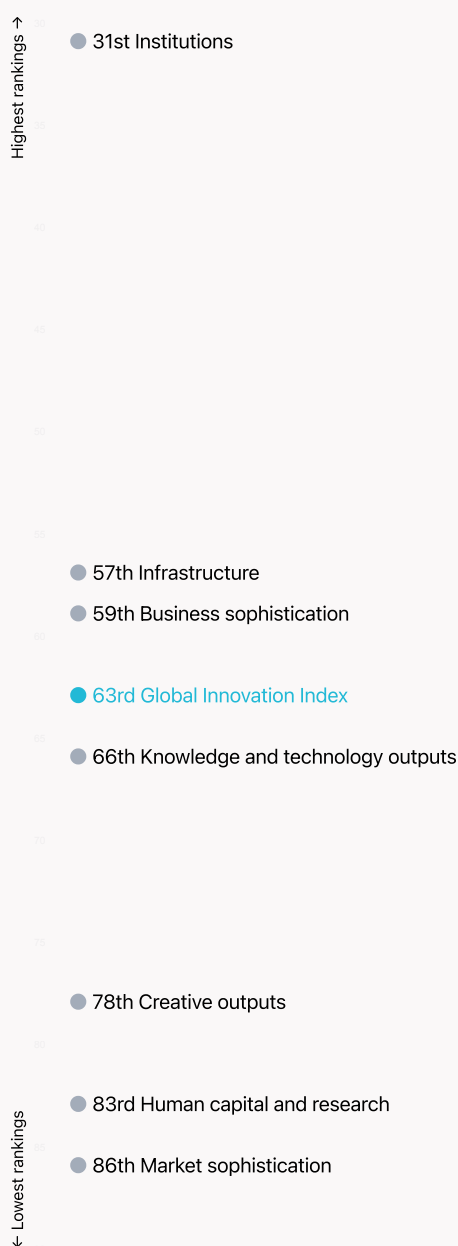


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→ Overview of Uruguay's rankings in the seven areas of the GII in 2023

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



> Highest rankings



Uruguay ranks highest in Institutions (31st), Infrastructure (57th) and Business sophistication (59th).

> Lowest rankings



Uruguay ranks lowest in Market sophistication (86th), Human capital and research (83rd) and Creative outputs (78th).



The full WIPO Intellectual Property Statistics profile for Uruguay can be found on [this link](#).

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

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

> High-Income economies

Uruguay performs below the high-income group average in all the pillars.



> Latin America And The Caribbean

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



Knowledge and technology outputs

Top 10 | Score: 58.96

High income | Score: 38.62

Uruguay | Score: 22.78

LCN | Score: 17.14

Creative outputs

Top 10 | 56.09

High income | 40.27

Uruguay | 19.18

LCN | 18.91

Business sophistication

Top 10 | 64.39

High income | 46.38

Uruguay | 29.23

LCN | 26.15

Market sophistication

Top 10 | 61.93

High income | 46.42

LCN | 29.74

Uruguay | 28.09

Human capital and research

Top 10 | 60.28

High income | 46.30

Uruguay | 26.70

LCN | 24.92

Infrastructure

Top 10 | 62.83

High income | 55.85

Uruguay | 43.88

LCN | 35.88

Institutions

Top 10 | 79.85

High income | 68.16

Uruguay | 67.54

LCN | 41.12

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→ Innovation strengths and weaknesses in Uruguay

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



> Uruguay's main innovation strengths are **Policies for doing business** (rank 4), **ICT services imports, % total trade** (rank 5) and **ICT services exports, % total trade** (rank 7).

Strengths

Weaknesses

Rank	Code	Indicator name	Rank	Code	Indicator name
4	1.3.1	Policies for doing business	113	7.2.4	Creative goods exports, % total trade
5	5.3.3	ICT services imports, % total trade	108	3.2.3	Gross capital formation, % GDP
7	6.3.4	ICT services exports, % total trade	99	2.2.2	Graduates in science and engineering, %
10	1.1.1	Operational stability for businesses	82	5.1.4	GERD financed by business, %
16	5.1.2	Firms offering formal training, %	80	5.3.5	Research talent, % in businesses
17	6.3.5	ISO 9001 quality/bn PPP\$ GDP	74	7.1.3	Global brand value, top 5,000
17	4.2.2	Venture capital (VC) investors, deals/bn PPP\$ GDP	71	4.1.1	Finance for startups and scaleups
21	2.1.3	School life expectancy, years	48	6.2.2	Unicorn valuation, % GDP
25	3.1.2	ICT use	40	2.3.3	Global corporate R&D investors, top 3, mn US\$
26	3.3.3	ISO 14001 environment/bn PPP\$ GDP			

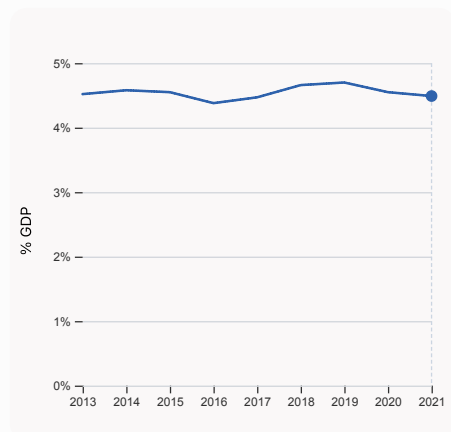
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→ Uruguay's innovation system

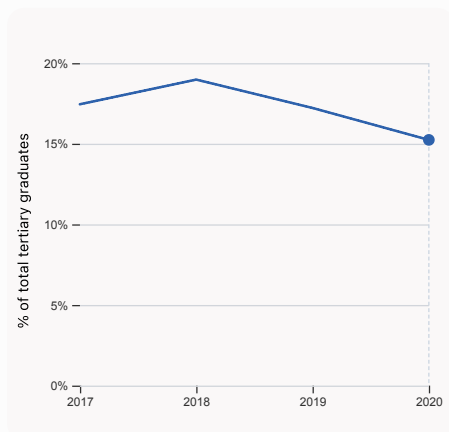
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Uruguay



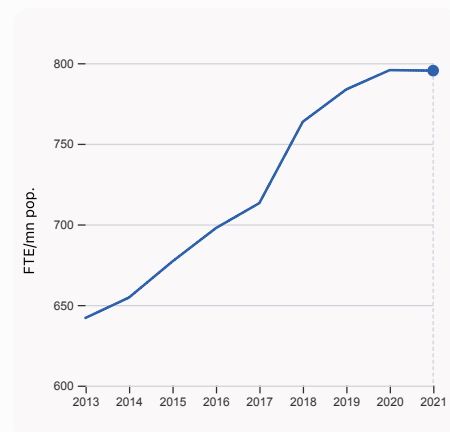
2.1.1 Expenditure on education, % GDP

was equal to 4.49% GDP in 2021, down by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 55.



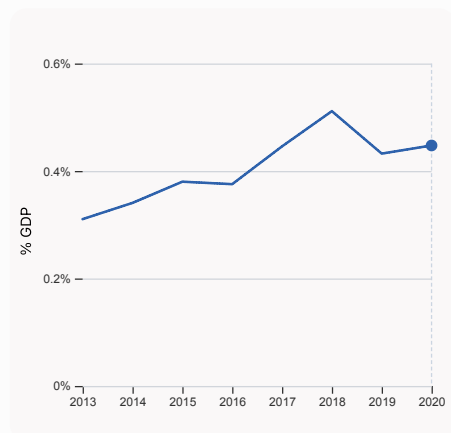
2.2.2 Graduates in science and engineering, %

was equal to 15.24% of total tertiary graduates in 2020, down by 1.98 percentage points from the year prior – and equivalent to an indicator rank of 99.



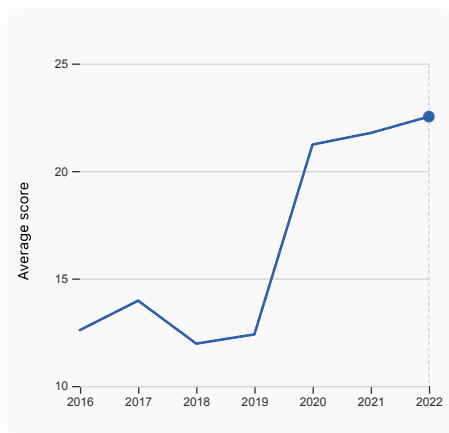
2.3.1 Researchers, FTE/mn pop.

was equal to 795.37 FTE/mn pop. in 2021, down by 0.04% from the year prior – and equivalent to an indicator rank of 57.



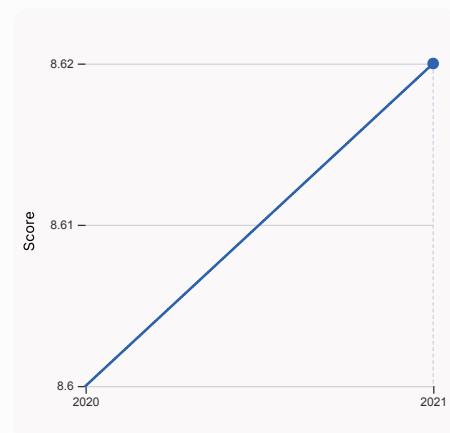
2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.45% GDP in 2020, up by 0.015 percentage points from the year prior – and equivalent to an indicator rank of 64.



2.3.4 QS university ranking, top 3

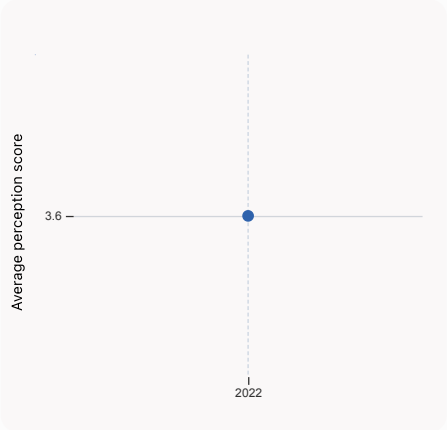
was equal to an average score of 22.53 for the top 3 universities in 2022, up by 3.49% from the year prior – and equivalent to an indicator rank of 48.



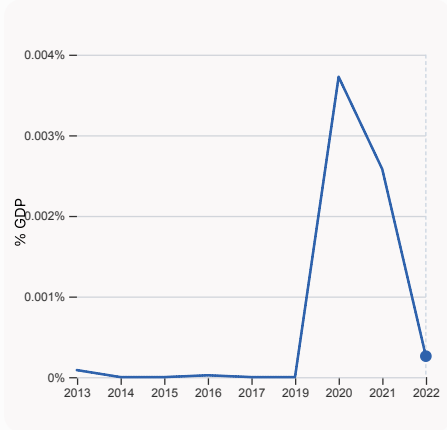
3.1.1 ICT access

was equal to a score of 8.62 in 2021, up by 0.23% from the year prior – and equivalent to an indicator rank of 74.

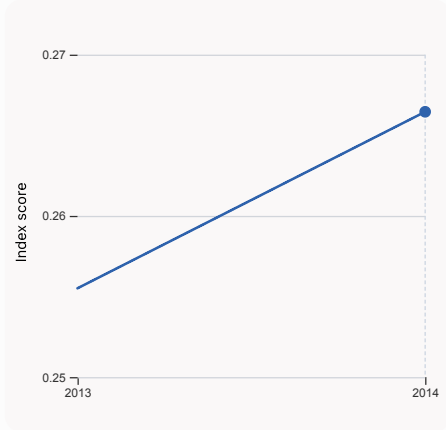
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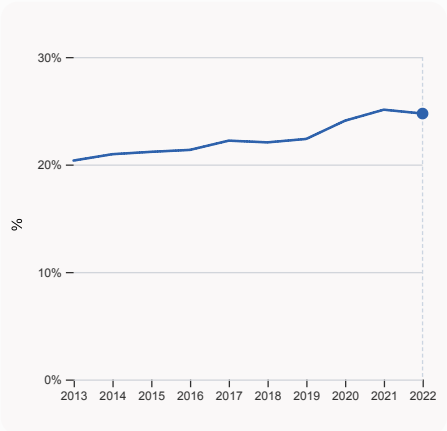
4.1.1 Finance for startups and scaleups
was equal to an average perception score of 3.6 in 2022, equivalent to an indicator rank of 71.



4.2.4 VC received, value, % GDP
was equal to 0.00026% GDP in 2022, down by 0.0023 percentage points from the year prior – and equivalent to an indicator rank of 31.



4.3.2 Domestic industry diversification
was equal to an index score of 0.266 in 2014, up by 4.28% from the year prior – and equivalent to an indicator rank of 89.

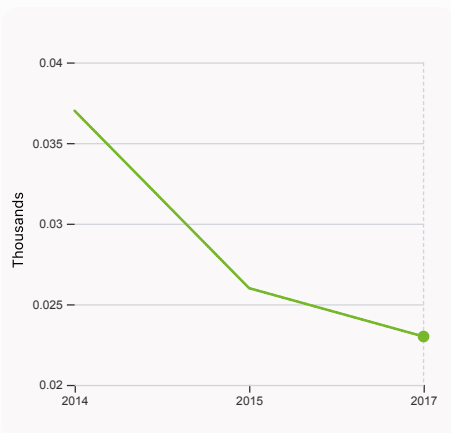


5.1.1 Knowledge-intensive employment, %
was equal to 24.74% in 2022, down by 0.36 percentage points from the year prior – and equivalent to an indicator rank of 56.

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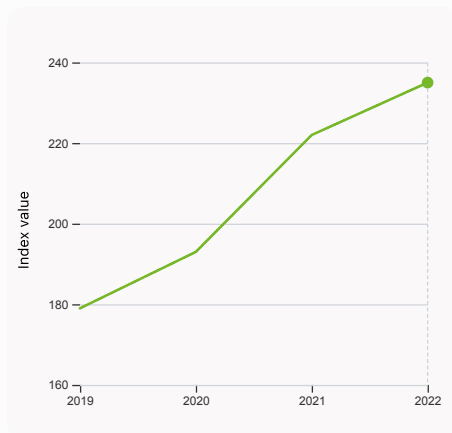


> Innovation outputs in Uruguay



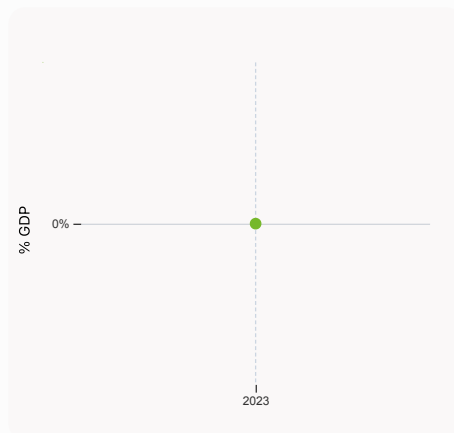
6.1.1 Patents by origin

was equal to 0.023 Thousands in 2017, down by 11.54% from the year prior – and equivalent to an indicator rank of 90.



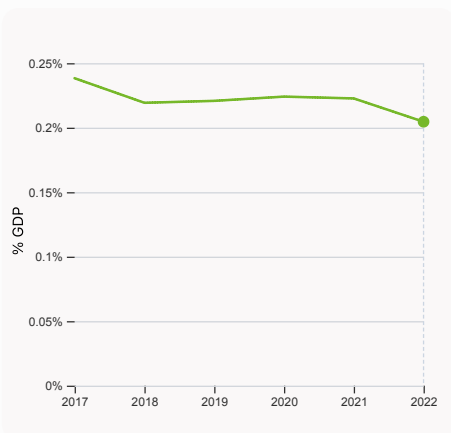
6.1.5 Citable documents H-index

was equal to an index value of 235 in 2022, up by 5.86% from the year prior – and equivalent to an indicator rank of 73.



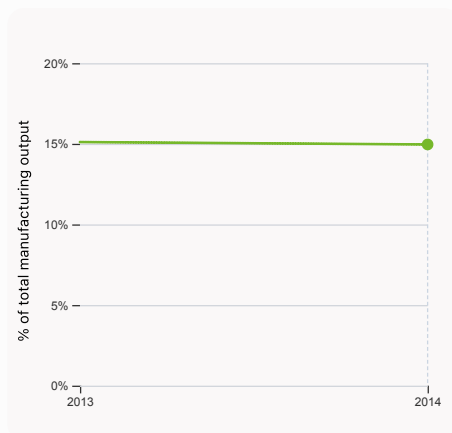
6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.



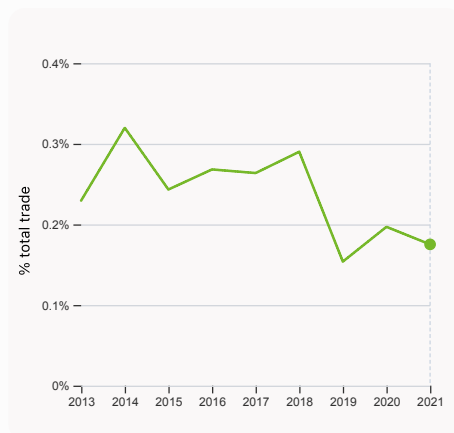
6.2.3 Software spending, % GDP

was equal to 0.205% GDP in 2022, down by 0.018 percentage points from the year prior – and equivalent to an indicator rank of 71.



6.2.4 High-tech manufacturing, %

was equal to 14.96% of total manufacturing output in 2014, down by 0.15 percentage points from the year prior – and equivalent to an indicator rank of 78.



6.3.1 Intellectual property receipts, % total trade

was equal to 0.175% total trade in 2021, down by 0.022 percentage points from the year prior – and equivalent to an indicator rank of 46.

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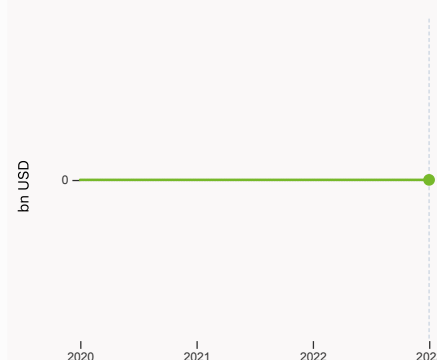
6.3.2 Production and export complexity

was equal to a score of -0.07 in 2020, down by 2599.46% from the year prior – and equivalent to an indicator rank of 64.



6.3.3 High-tech exports

was equal to 132,818,762 USD in 2021, up by 16.57% from the year prior – and equivalent to an indicator rank of 75.



7.1.3 Global brand value, top 5,000

was equal to 0 bn USD in 2023 – and equivalent to an indicator rank of 74.



7.2.1 Cultural and creative services exports

was equal to 137,311,000 USD in 2021, up by 16.96% from the year prior – and equivalent to an indicator rank of 40.



7.2.2 National feature films/mn pop. 15-69

was equal to 4.2 films/mn pop. 15-69 in 2021, up by 99.052% from the year prior – and equivalent to an indicator rank of 31.



7.3.4 Mobile app creation/bn PPP\$ GDP

was equal to 435,259.11 Apps/bn PPP\$ GDP in 2022, up by 29.59% from the year prior – and equivalent to an indicator rank of 49.



→ Uruguay's innovation top performers

> 2.3.4 QS university ranking of Uruguay's top universities

Rank	University	Score
449	UNIVERSIDAD DE MONTEVIDEO (UM)	26.20
494	UNIVERSIDAD ORT URUGUAY	24.40
701-750	UNIVERSIDAD CATOLICA DEL URUGUAY (UCU)	0.00

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".

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GII 2023 rank

63

Uruguay

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
73	56	High	LCN	3.4	96.8	27,232.8

Score / Value Rank

Score / Value Rank

Institutions 67.5 31

1.1 Institutional environment	68.9	28
1.1.1 Operational stability for businesses*	77.8	10 ●
1.1.2 Government effectiveness*	59.9	38
1.2 Regulatory environment	67.8	49
1.2.1 Regulatory quality*	60.9	42
1.2.2 Rule of law*	61.2	37
1.2.3 Cost of redundancy dismissal	20.8	91
1.3 Business environment	65.9	27
1.3.1 Policies for doing business*	89.3	4 ●
1.3.2 Entrepreneurship policies and culture*	42.5	44

Human capital and research 26.7 83 ◇

2.1 Education	48.0	73 ◇
2.1.1 Expenditure on education, % GDP	4.5	55
2.1.2 Government funding/pupil, secondary, % GDP/cap	14.5	77 ◇
2.1.3 School life expectancy, years	16.8	21 ●
2.1.4 PISA scales in reading, maths and science	423.5	52 ◇
2.1.5 Pupil-teacher ratio, secondary	15.1	77 ◇
2.2 Tertiary education	22.4	84 ◇
2.2.1 Tertiary enrolment, % gross	67.9	46
2.2.2 Graduates in science and engineering, %	15.2	99 ○ ◇
2.2.3 Tertiary inbound mobility, %	2.1	76 ◇
2.3 Research and development (R&D)	9.7	61 ◇
2.3.1 Researchers, FTE/mn pop.	795.4	57 ◇
2.3.2 Gross expenditure on R&D, % GDP	0.4	64 ◇
2.3.3 Global corporate R&D investors, top 3, mn US\$	0.0	40 ○ ◇
2.3.4 QS university ranking, top 3*	22.8	48

Infrastructure 43.9 57 ◇

3.1 Information and communication technologies (ICTs)	74.8	51
3.1.1 ICT access*	79.3	74 ◇
3.1.2 ICT use*	88.0	25 ●
3.1.3 Government's online service*	73.9	52
3.1.4 E-participation*	58.1	61
3.2 General infrastructure	24.9	75 ◇
3.2.1 Electricity output, GWh/mn pop.	4,545.2	51
3.2.2 Logistics performance*	40.9	60 ◇
3.2.3 Gross capital formation, % GDP	18.4	108 ○ ◇
3.3 Ecological sustainability	31.9	48
3.3.1 GDP/unit of energy use	14.1	31
3.3.2 Environmental performance*	31.4	85 ◇
3.3.3 ISO 14001 environment/bn PPP\$ GDP	3.8	26 ●

Market sophistication 28.1 86 ◇

4.1 Credit	19.1	93 ◇
4.1.1 Finance for startups and scaleups*	29.4	71 ○ ◇
4.1.2 Domestic credit to private sector, % GDP	27.9	103 ◇
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a
4.2 Investment	17.9	40
4.2.1 Market capitalization, % GDP	n/a	n/a
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP	0.3	17 ●
4.2.3 VC recipients, deals/bn PPP\$ GDP	0.0	66
4.2.4 VC received, value, % GDP	0.0	31
4.3 Trade, diversification, and market scale	47.3	92 ◇
4.3.1 Applied tariff rate, weighted avg., %	5.3	92 ◇
4.3.2 Domestic industry diversification	74.0	89
4.3.3 Domestic market scale, bn PPP\$	96.8	88

Business sophistication 29.2 59 ◇

5.1 Knowledge workers	29.2	73 ◇
5.1.1 Knowledge-intensive employment, %	24.7	56 ◇
5.1.2 Firms offering formal training, %	53.3	16 ●
5.1.3 GERD performed by business, % GDP	0.1	59 ◇
5.1.4 GERD financed by business, %	4.2	82 ○ ◇
5.1.5 Females employed w/advanced degrees, %	10.4	73 ◇
5.2 Innovation linkages	18.8	83 ◇
5.2.1 University-industry R&D collaboration*	43.5	67
5.2.2 State of cluster development*	37.8	79 ◇
5.2.3 GERD financed by abroad, % GDP	0.0	57
5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.0	72
5.2.5 Patent families/bn PPP\$ GDP	0.1	52
5.3 Knowledge absorption	39.6	47
5.3.1 Intellectual property payments, % total trade	0.9	42
5.3.2 High-tech imports, % total trade	6.6	94
5.3.3 ICT services imports, % total trade	4.6	5 ●
5.3.4 FDI net inflows, % GDP	3.2	43
5.3.5 Research talent, % in businesses	0.8	80 ○ ◇

Knowledge and technology outputs 22.8 66 ◇

6.1 Knowledge creation	11.8	74 ◇
6.1.1 Patents by origin/bn PPP\$ GDP	0.3	90 ◇
6.1.2 PCT patents by origin/bn PPP\$ GDP	n/a	n/a
6.1.3 Utility models by origin/bn PPP\$ GDP	0.3	38
6.1.4 Scientific and technical articles/bn PPP\$ GDP	n/a	n/a
6.1.5 Citable documents H-index	10.7	73 ◇
6.2 Knowledge impact	21.4	96 ◇
6.2.1 Labor productivity growth, %	0.5	79
6.2.2 Unicorn valuation, % GDP	0.0	48 ○ ◇
6.2.3 Software spending, % GDP	0.2	71
6.2.4 High-tech manufacturing, %	15.0	78
6.3 Knowledge diffusion	35.2	39
6.3.1 Intellectual property receipts, % total trade	0.2	46
6.3.2 Production and export complexity	51.1	64 ◇
6.3.3 High-tech exports, % total trade	0.8	75 ◇
6.3.4 ICT services exports, % total trade	7.9	7 ●
6.3.5 ISO 9001 quality/bn PPP\$ GDP	16.6	17 ●

Creative outputs 19.2 78 ◇

7.1 Intangible assets	17.1	93 ◇
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a
7.1.2 Trademarks by origin/bn PPP\$ GDP	56.3	41
7.1.3 Global brand value, top 5,000	0.0	74 ○ ◇
7.1.4 Industrial designs by origin/bn PPP\$ GDP	0.7	79
7.2 Creative goods and services	14.6	59 ◇
7.2.1 Cultural and creative services exports, % total trade	0.8	40
7.2.2 National feature films/mn pop. 15-69	4.2	31
7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a
7.2.4 Creative goods exports, % total trade	0.0	113 ○
7.3 Online creativity	27.8	43
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	7.6	51
7.3.2 Country-code TLDs/th pop. 15-69	12.3	38
7.3.3 GitHub commits/mn pop. 15-69	20.7	44
7.3.4 Mobile app creation/bn PPP\$ GDP	70.8	49

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.

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→ Data availability

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



> Uruguay has missing data for five indicators and outdated data for eight indicators.

> Missing data for Uruguay

Code	Indicator name	Economy Year	Model Year	Source
4.1.3	Loans from microfinance institutions, % GDP	n/a	2021	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
6.1.2	PCT patents by origin/bn PPP\$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund
7.1.1	Intangible asset intensity, top 15, %	n/a	2022	Brand Finance
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

> Outdated data for Uruguay

Code	Indicator name	Economy Year	Model Year	Source
2.3.2	Gross expenditure on R&D, % GDP	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.3.2	Domestic industry diversification	2014	2020	United Nations Industrial Development Organization
5.1.2	Firms offering formal training, %	2017	2019	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.1	Patents by origin/bn PPP\$ GDP	2017	2021	World Intellectual Property Organization; International Monetary Fund
6.1.3	Utility models by origin/bn PPP\$ GDP	2017	2021	World Intellectual Property Organization; International Monetary Fund
6.2.4	High-tech manufacturing, %	2014	2020	United Nations Industrial Development Organization
7.1.4	Industrial designs by origin/bn PPP\$ GDP	2017	2021	World Intellectual Property Organization; International Monetary Fund

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→ 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.



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.