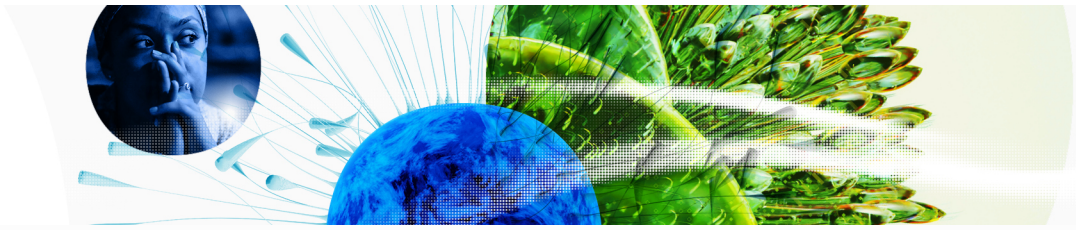
Global Innovation Index 2023



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

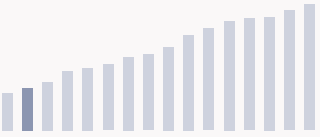
Consisting of **roughly 80 indicators**, grouped into innovation inputs and outputs, the GII **aims to capture the multi-dimensional facets of innovation**.

Cambodia ranking in the Global Innovation Index 2023

> Cambodia ranks 101st among the 132 economies featured in the GII 2023.

> Cambodia ranks 21st among the 37 lower-middle-income group economies.

> Cambodia ranks 15th among the 16 economies in South East Asia, East Asia, and Oceania.



> Cambodia GII Ranking (2020-2023)

The table shows the rankings of Cambodia 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 Cambodia in the GII 2023 is between ranks 97 and 104.

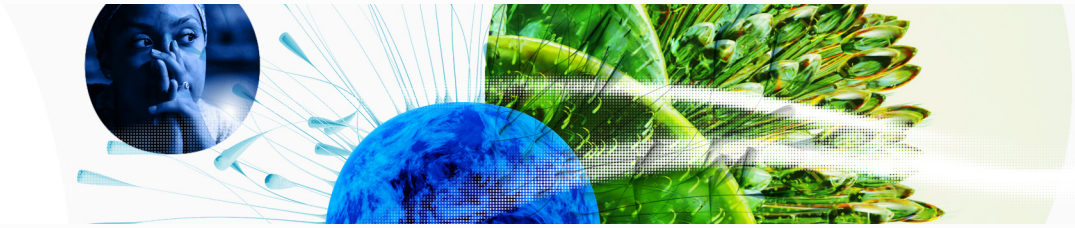
	GII Position	Innovation Inputs	Innovation Outputs
2020	110th	117th	101st
2021	109th	106th	104th
2022	97th	92nd	102nd
2023	101st	97th	100th

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

This year **Cambodia ranks 97th in innovation inputs.** This position is lower than last year.

Cambodia ranks 100th in innovation outputs. This position is higher than last year.

Global Innovation Index 2023

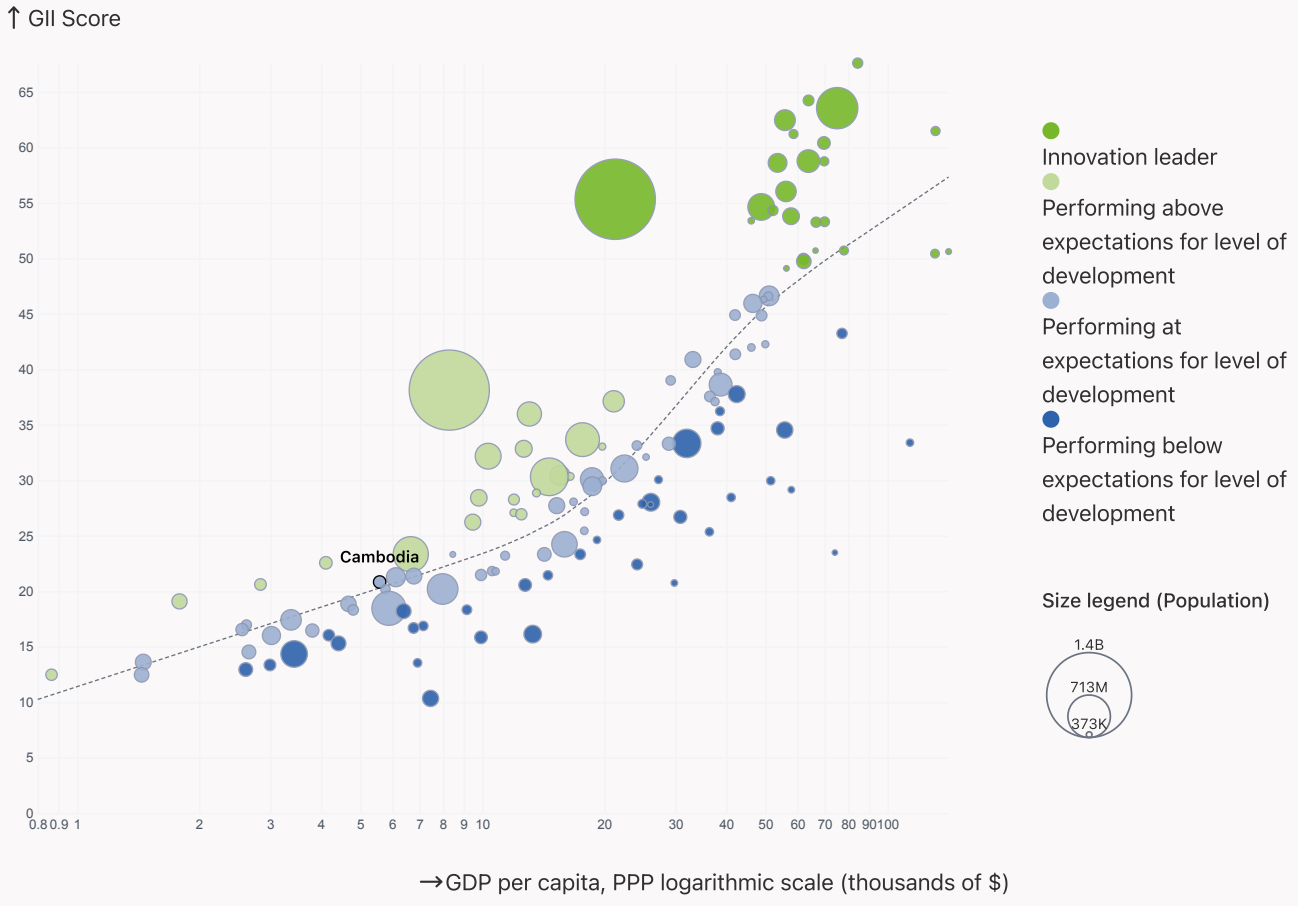


→ Expected vs. observed innovation performance

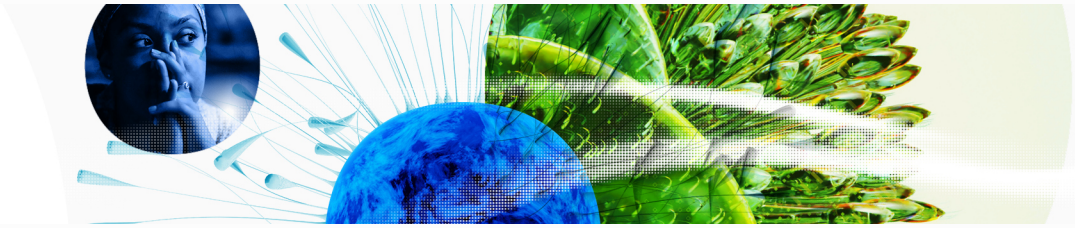
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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

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

> Innovation overperformers relative to their economic development



Global Innovation Index 2023

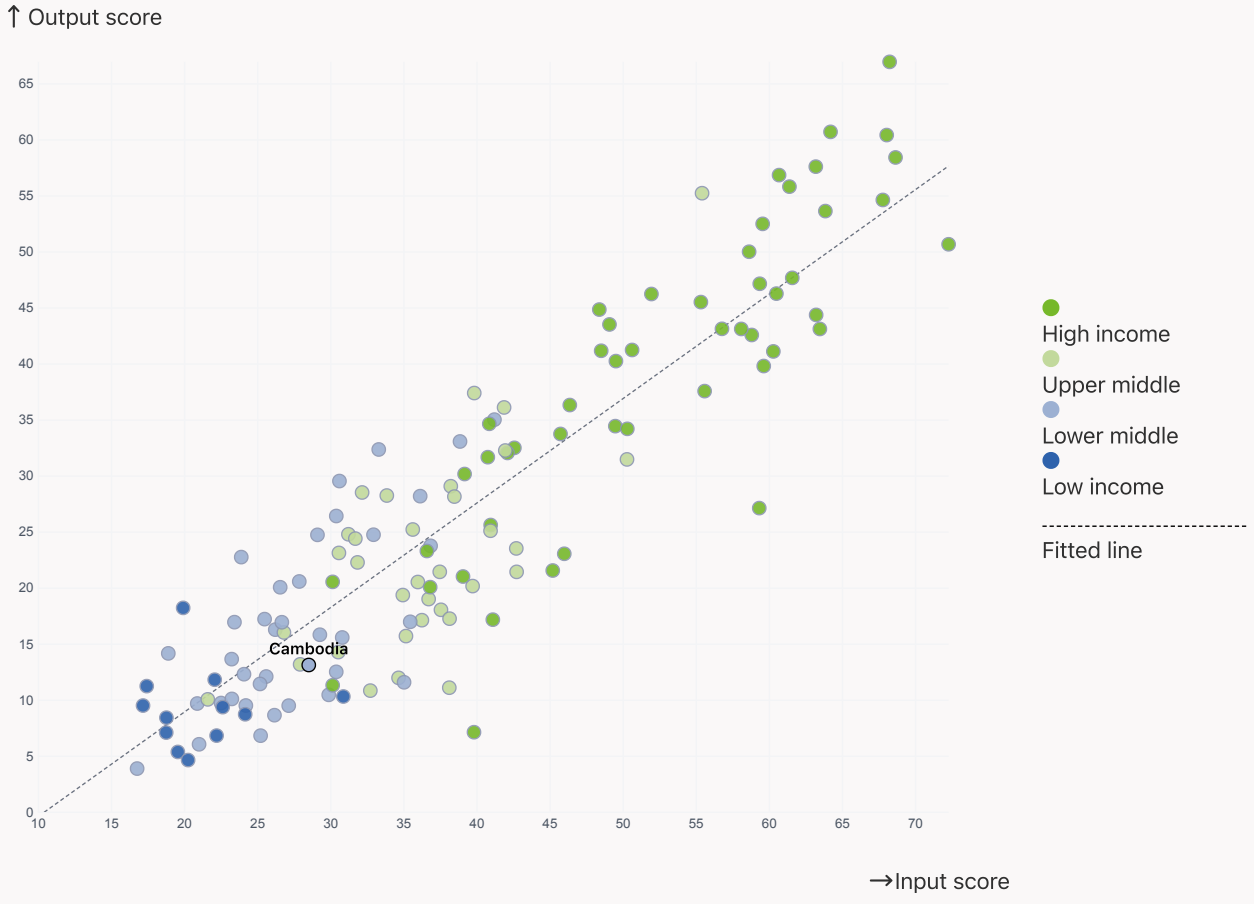


→ Effectively translating innovation investments into innovation outputs

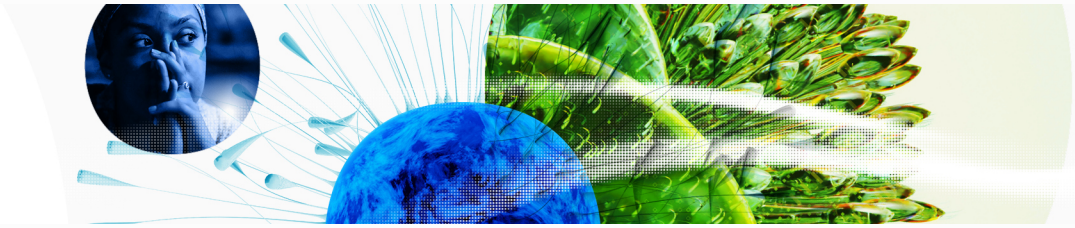
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

> Relationship between innovation inputs and outputs

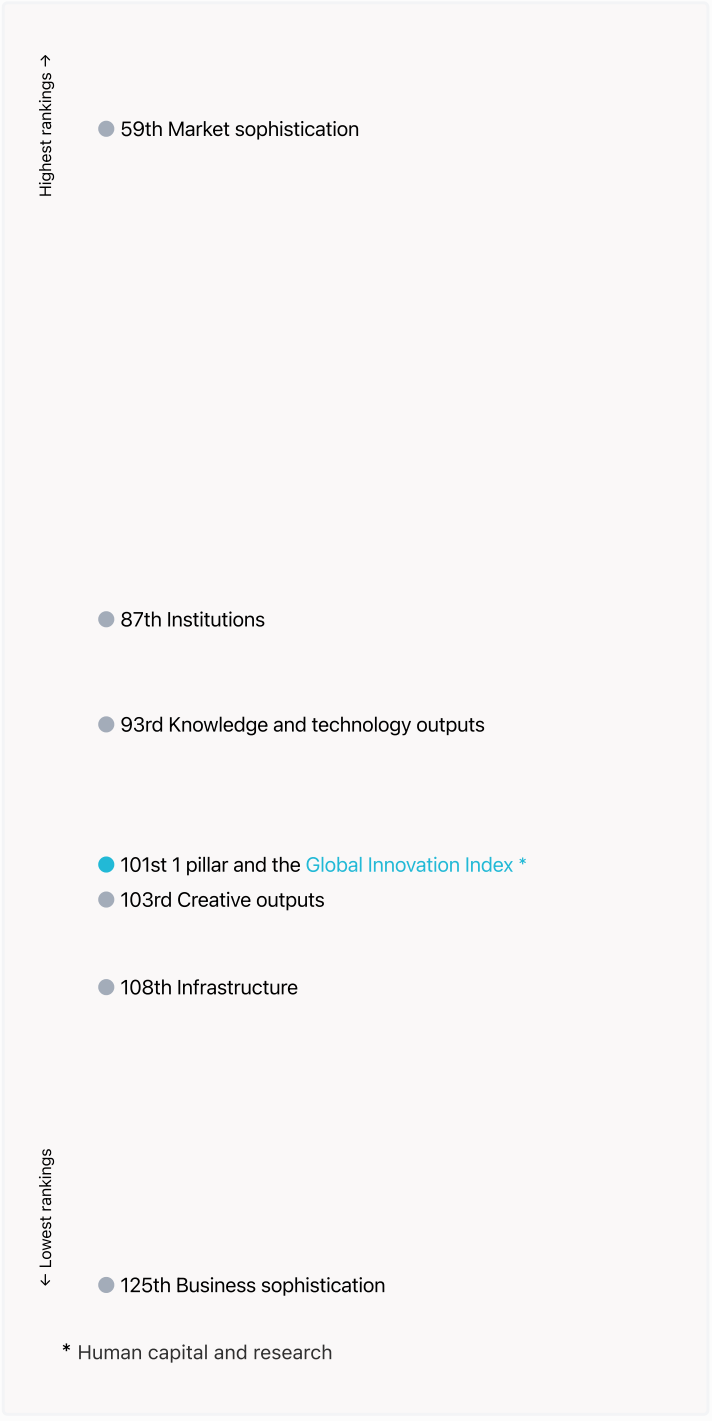


Global Innovation Index 2023



→ Overview of Cambodia'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 Cambodia are those that rank above the GII (shown in blue) and the weakest are those that rank below.



> Highest rankings

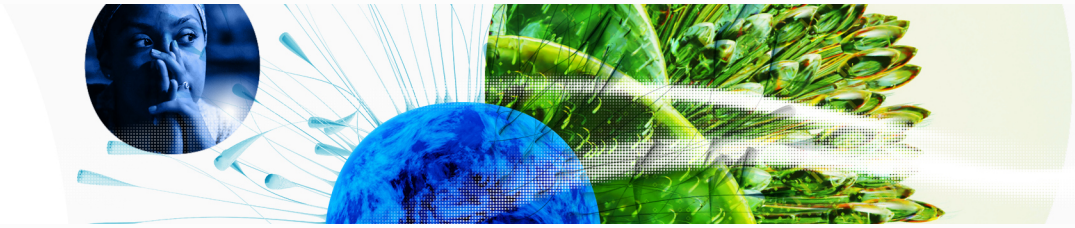
Cambodia ranks highest in Market sophistication (59th), Institutions (87th), Knowledge and technology outputs (93rd) and Human capital and research (101st).

> Lowest rankings

Cambodia ranks lowest in Business sophistication (125th), Infrastructure (108th) and Creative outputs (103rd).

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

Global Innovation Index 2023



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

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

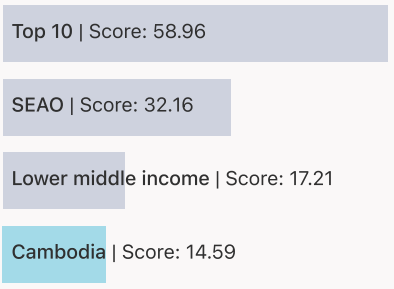
> Lower-Middle-Income economies

Cambodia performs below the lower-middle-income group average in Knowledge and technology outputs, Creative outputs, Business sophistication, Human capital and research, Infrastructure.

> South East Asia, East Asia, And Oceania

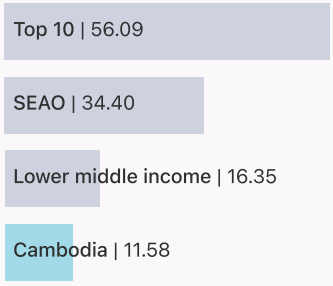
Cambodia performs below the regional average in all the pillars.

Knowledge and technology outputs

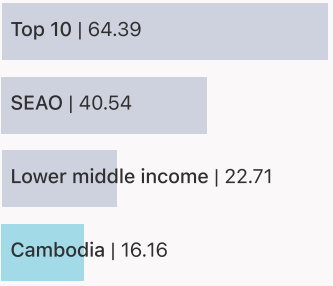


* South East Asia, East Asia, and Oceania

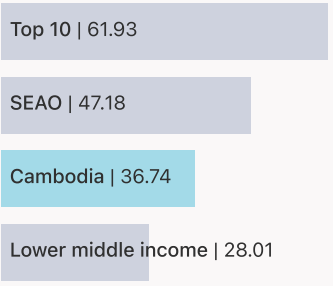
Creative outputs



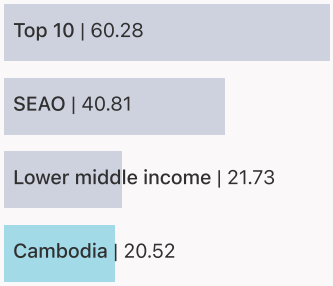
Business sophistication



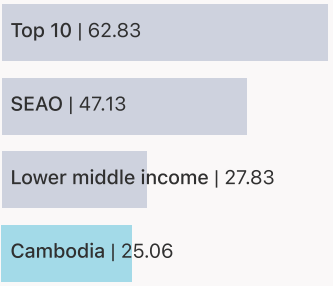
Market sophistication



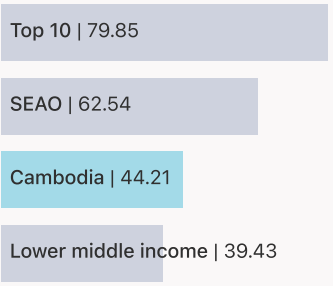
Human capital and research



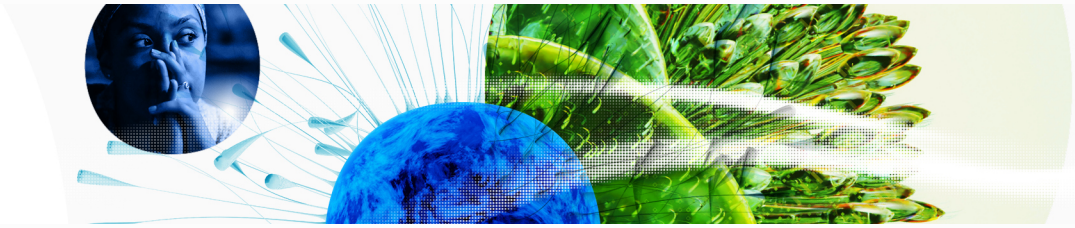
Infrastructure



Institutions



Global Innovation Index 2023



→ Innovation strengths and weaknesses in Cambodia

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

> Cambodia's main innovation strengths are **Loans from microfinance institutions, % GDP** (rank 1), **FDI net inflows, % GDP** (rank 9) and **Domestic credit to private sector, % GDP** (rank 13).

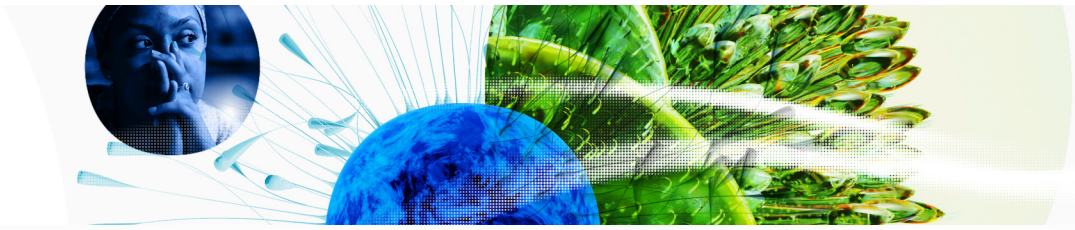
Strengths

Rank	Code	Indicator name
1	4.1.3	Loans from microfinance institutions, % GDP
9	5.3.4	FDI net inflows, % GDP
13	4.1.2	Domestic credit to private sector, % GDP
22	6.2.1	Labor productivity growth, %
31	2.1.5	Pupil-teacher ratio, secondary
53	1.1.1	Operational stability for businesses
54	7.3.4	Mobile app creation/bn PPP$ GDP
54	3.2.3	Gross capital formation, % GDP
57	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP
60	7.2.4	Creative goods exports, % total trade

Weaknesses

Rank	Code	Indicator name
129	6.1.1	Patents by origin/bn PPP$ GDP
124	2.1.1	Expenditure on education, % GDP
118	5.1.1	Knowledge-intensive employment, %
106	2.2.3	Tertiary inbound mobility, %
103	3.2.2	Logistics performance
101	6.1.2	PCT patents by origin/bn PPP$ GDP
74	7.1.3	Global brand value, top 5,000
71	2.3.4	QS university ranking, top 3
48	6.2.2	Unicorn valuation, % GDP
40	2.3.3	Global corporate R&D investors, top 3, mn US$

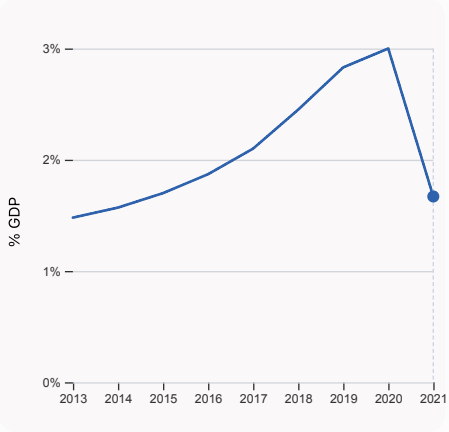
Global Innovation Index 2023



→ Cambodia's innovation system

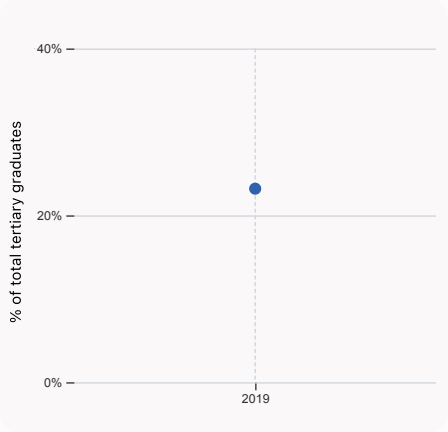
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Cambodia



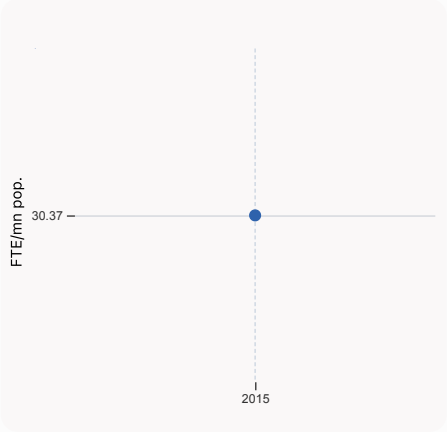
2.1.1 Expenditure on education, % GDP

was equal to 1.67% GDP in 2021, down by 1.33 percentage points from the year prior – and equivalent to an indicator rank of 124.



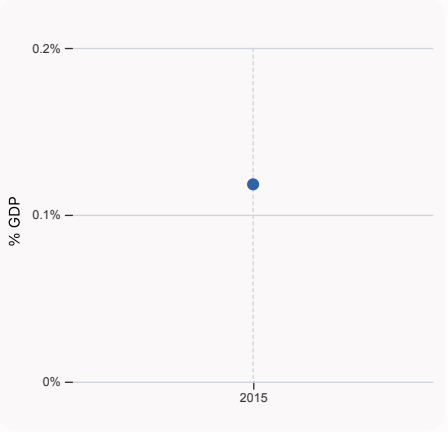
2.2.2 Graduates in science and engineering, %

was equal to 23.2 % of total tertiary graduates in 2019, equivalent to an indicator rank of 53.



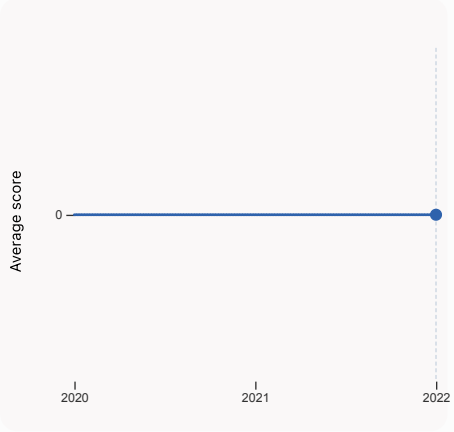
2.3.1 Researchers, FTE/mn pop.

was equal to 30.37 FTE/mn pop. in 2015, equivalent to an indicator rank of 99.



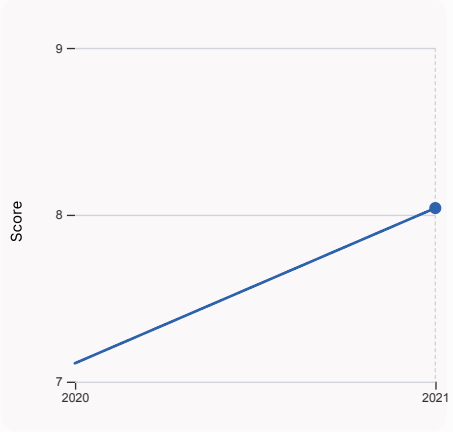
2.3.2 Gross expenditure on R&D, % GDP

was equal to 0.118 % GDP in 2015, equivalent to an indicator rank of 102.



2.3.4 QS university ranking, top 3

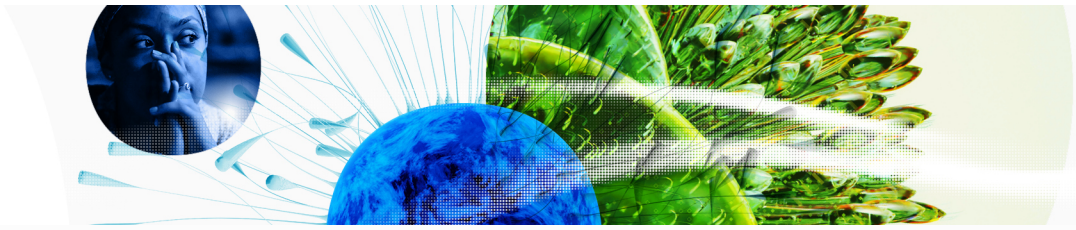
was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.

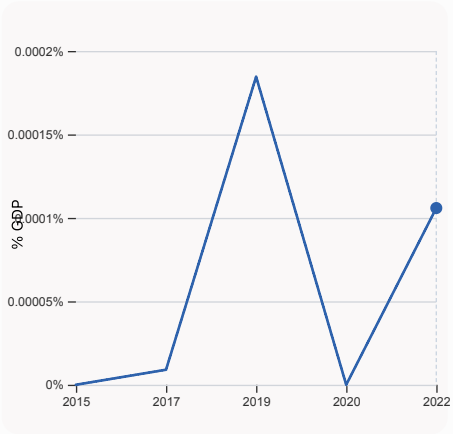


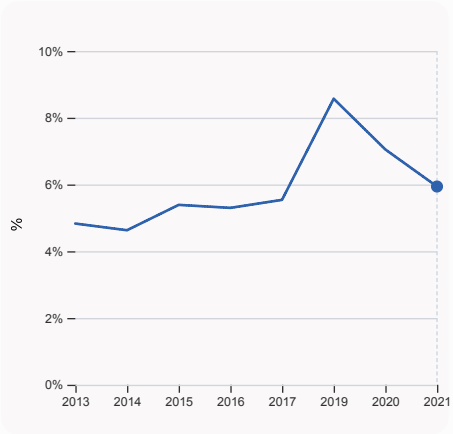
3.1.1 ICT access

was equal to a score of 8.04 in 2021, up by 13.08% from the year prior – and equivalent to an indicator rank of 89.

Global Innovation Index 2023







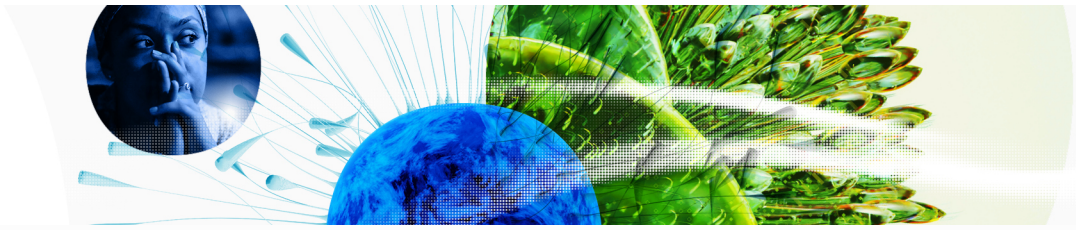
4.2.4 VC received, value, % GDP

was equal to 0.00011 % GDP in 2022, equivalent to an indicator rank of 89.

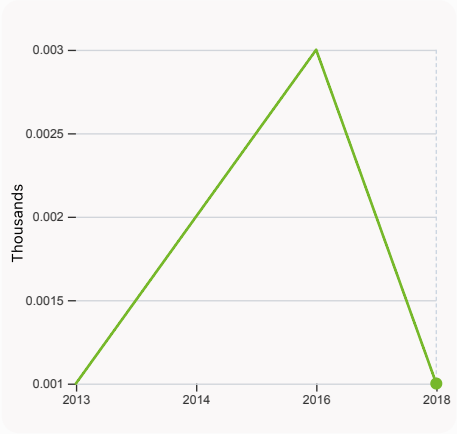
5.1.1 Knowledge-intensive employment, %

was equal to 5.94% in 2021, down by 1.11 percentage points from the year prior – and equivalent to an indicator rank of 118.

Global Innovation Index 2023

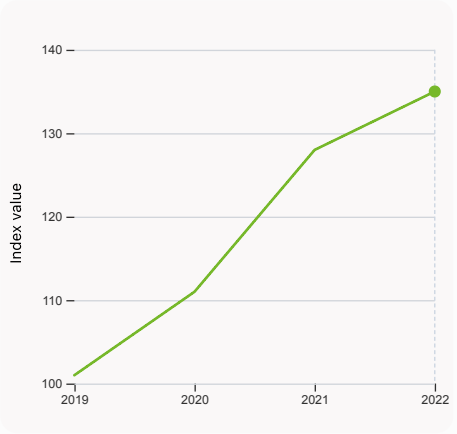


> Innovation outputs in Cambodia



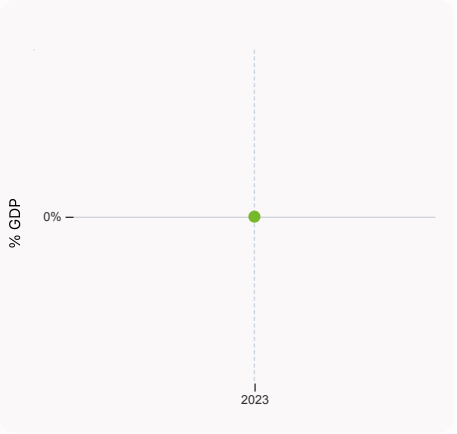
6.1.1 Patents by origin

was equal to 0.001 Thousands in 2018, down by 66.67% from the year prior – and equivalent to an indicator rank of 129.



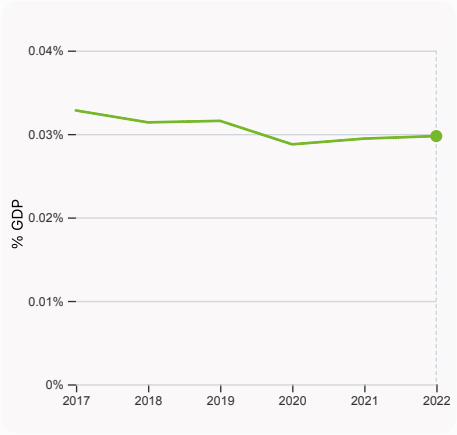
6.1.5 Citable documents H-index

was equal to an index value of 135 in 2022, up by 5.47% from the year prior – and equivalent to an indicator rank of 101.



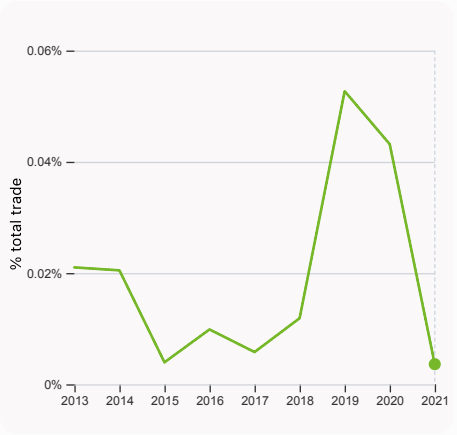
6.2.2 Unicorn valuation, % GDP

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



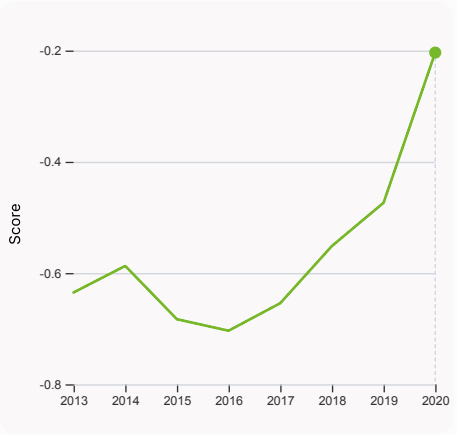
6.2.3 Software spending, % GDP

was equal to 0.03% GDP in 2022, up by 0.0003 percentage points from the year prior – and equivalent to an indicator rank of 114.



6.3.1 Intellectual property receipts, % total trade

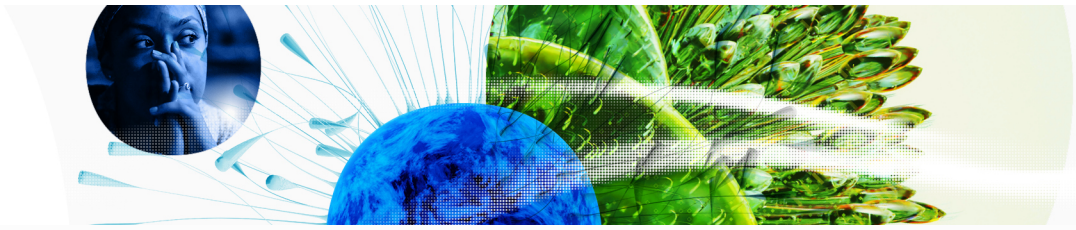
was equal to 0.004% total trade in 2021, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 79.

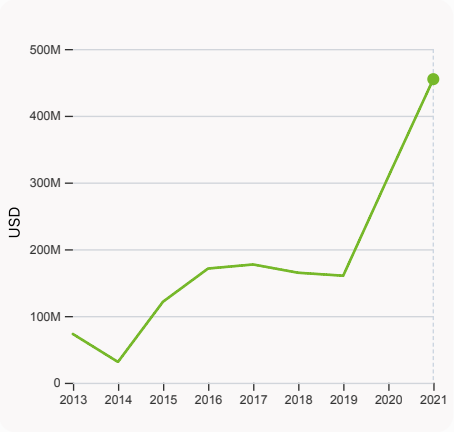


6.3.2 Production and export complexity

was equal to a score of -0.204 in 2020, up by 56.99% from the year prior – and equivalent to an indicator rank of 72.

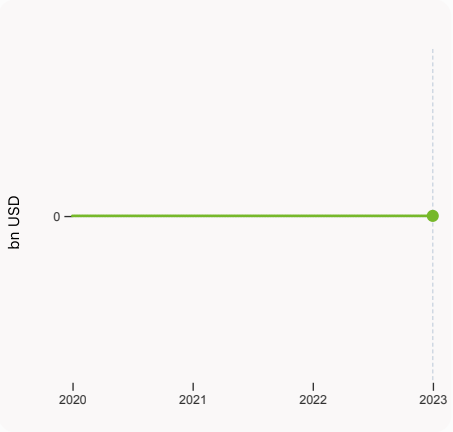
Global Innovation Index 2023





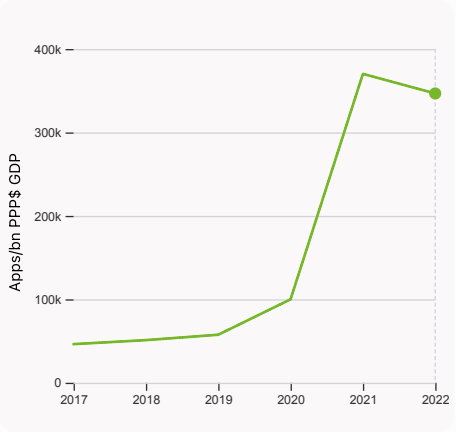
6.3.3 High-tech exports

was equal to 454,821,929 USD in 2021, up by 47.47% from the year prior – and equivalent to an indicator rank of 65.



7.1.3 Global brand value, top 5,000

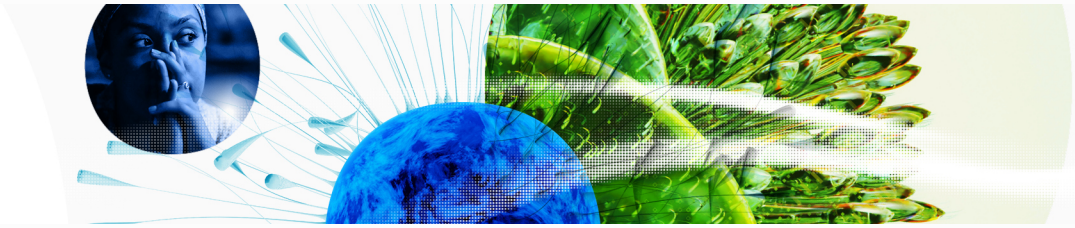
was equal to 0 bn USD in 2023 – and equivalent to an indicator rank of 74.



7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 346,718.38 Apps/bn PPP$ GDP in 2022, down by 6.34% from the year prior – and equivalent to an indicator rank of 54.

Global Innovation Index 2023



Cambodia

GII 2023 rank **101**

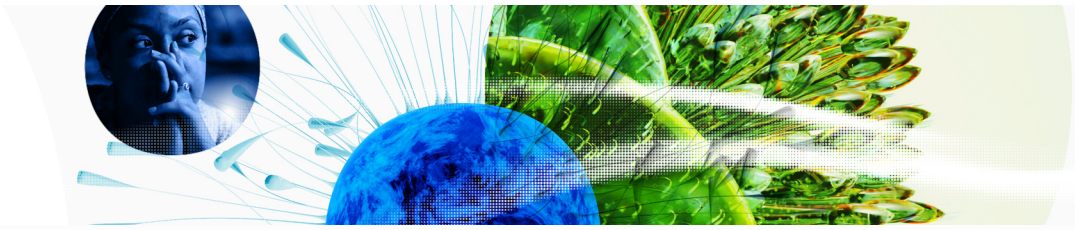
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
100	97	Lower middle	SEAO	16.8	89.3	5,583.0

	Score / Value	Rank	
Institutions	**44.2**	**87**	
1.1 Institutional environment	**41.4**	**74**	
1.1.1 Operational stability for businesses*	57.6	53	●
1.1.2 Government effectiveness*	25.1	96	
1.2 Regulatory environment	**48.4**	**104**	
1.2.1 Regulatory quality*	25.4	110	
1.2.2 Rule of law*	13.4	116	
1.2.3 Cost of redundancy dismissal	19.4	84	
1.3 Business environment	**42.8**	**74**	
1.3.1 Policies for doing business†	42.8	78	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**20.5**	**101**	
2.1 Education	**45.2**	**81**	
2.1.1 Expenditure on education, % GDP	1.7	124	○ ◇
2.1.2 Government funding/pupil, secondary, % GDP/cap	n/a	n/a	
2.1.3 School life expectancy, years	n/a	n/a	
2.1.4 PISA scales in reading, maths and science	n/a	n/a	
2.1.5 Pupil-teacher ratio, secondary	9.9	31	●
2.2 Tertiary education	**15.9**	**100**	
2.2.1 Tertiary enrolment, % gross	13.0	107	
2.2.2 Graduates in science and engineering, %	23.2	53	
2.2.3 Tertiary inbound mobility, %	0.3	106	○
2.3 Research and development (R&D)	**0.5**	**109**	
2.3.1 Researchers, FTE/mn pop.	30.4	99	
2.3.2 Gross expenditure on R&D, % GDP	0.1	102	
2.3.3 Global corporate R&D investors, top 3, mn US$	0.0	40	○ ◇
2.3.4 QS university ranking, top 3*	0.0	71	○ ◇
Infrastructure	**25.1**	**108**	
3.1 Information and communication technologies (ICTs)	**49.9**	**100**	
3.1.1 ICT access*	70.5	89	
3.1.2 ICT use*	66.5	79	
3.1.3 Government's online service*	35.7	116	
3.1.4 E-participation*	26.7	106	
3.2 General infrastructure	**12.6**	**117**	
3.2.1 Electricity output, GWh/mn pop.	537.1	109	
3.2.2 Logistics performance*	13.6	103	○
3.2.3 Gross capital formation, % GDP	25.0	54	●
3.3 Ecological sustainability	**12.7**	**115**	
3.3.1 GDP/unit of energy use	7.9	88	
3.3.2 Environmental performance*	19.0	112	
3.3.3 ISO 14001 environment/bn PPP$ GDP	0.4	95	
Market sophistication	**36.7**	**59**	
4.1 Credit	**76.5**	**3**	
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	139.6	13	●
4.1.3 Loans from microfinance institutions, % GDP	28.7	1	●
4.2 Investment	**2.9**	**94**	
4.2.1 Market capitalization, % GDP	n/a	n/a	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.0	75	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.0	71	
4.2.4 VC received, value, % GDP	0.0	89	
4.3 Trade, diversification, and market scale	**30.8**	**114**	
4.3.1 Applied tariff rate, weighted avg., %	6.2	98	
4.3.2 Domestic industry diversification	n/a	n/a	
4.3.3 Domestic market scale, bn PPP$	89.3	90	

	Score / Value	Rank	
Business sophistication	**16.2**	**125**	◇
5.1 Knowledge workers	**11.6**	**118**	◇
5.1.1 Knowledge-intensive employment, %	5.9	118	○ ◇
5.1.2 Firms offering formal training, %	22.2	71	
5.1.3 GERD performed by business, % GDP	0.0	83	
5.1.4 GERD financed by business, %	19.4	67	
5.1.5 Females employed w/advanced degrees, %	2.1	108	
5.2 Innovation linkages	**15.6**	**94**	
5.2.1 University-industry R&D collaboration†	26.2	103	
5.2.2 State of cluster development†	37.4	82	
5.2.3 GERD financed by abroad, % GDP	0.0	52	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	57	●
5.2.5 Patent families/bn PPP$ GDP	0.0	86	
5.3 Knowledge absorption	**21.3**	**124**	
5.3.1 Intellectual property payments, % total trade	0.1	102	
5.3.2 High-tech imports, % total trade	4.6	120	
5.3.3 ICT services imports, % total trade	0.7	99	
5.3.4 FDI net inflows, % GDP	13.5	9	●
5.3.5 Research talent, % in businesses	4.3	71	
Knowledge and technology outputs	**14.6**	**93**	
6.1 Knowledge creation	**3.3**	**120**	
6.1.1 Patents by origin/bn PPP$ GDP	0.0	129	○
6.1.2 PCT patents by origin/bn PPP$ GDP	0.0	101	○ ◇
6.1.3 Utility models by origin/bn PPP$ GDP	n/a	n/a	
6.1.4 Scientific and technical articles/bn PPP$ GDP	n/a	n/a	
6.1.5 Citable documents H-index	5.1	101	
6.2 Knowledge impact	**23.6**	**87**	
6.2.1 Labor productivity growth, %	2.6	22	●
6.2.2 Unicorn valuation, % GDP	0.0	48	○ ◇
6.2.3 Software spending, % GDP	0.0	114	◇
6.2.4 High-tech manufacturing, %	n/a	n/a	
6.3 Knowledge diffusion	**16.9**	**89**	
6.3.1 Intellectual property receipts, % total trade	0.0	79	
6.3.2 Production and export complexity	48.3	72	
6.3.3 High-tech exports, % total trade	1.7	65	
6.3.4 ICT services exports, % total trade	0.3	109	
6.3.5 ISO 9001 quality/bn PPP$ GDP	2.6	78	
Creative outputs	**11.6**	**103**	
7.1 Intangible assets	**10.7**	**106**	
7.1.1 Intangible asset intensity, top 15, %	n/a	n/a	
7.1.2 Trademarks by origin/bn PPP$ GDP	39.5	59	
7.1.3 Global brand value, top 5,000	0.0	74	○ ◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.3	99	
7.2 Creative goods and services	**6.7**	**79**	
7.2.1 Cultural and creative services exports, % total trade	n/a	n/a	
7.2.2 National feature films/mn pop. 15-69	n/a	n/a	
7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a	
7.2.4 Creative goods exports, % total trade	0.6	60	●
7.3 Online creativity	**18.3**	**77**	
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	0.8	101	
7.3.2 Country-code TLDs/th pop. 15-69	0.1	123	
7.3.3 GitHub commits/mn pop. 15-69	1.7	103	
7.3.4 Mobile app creation/bn PPP$ GDP	70.4	54	●

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

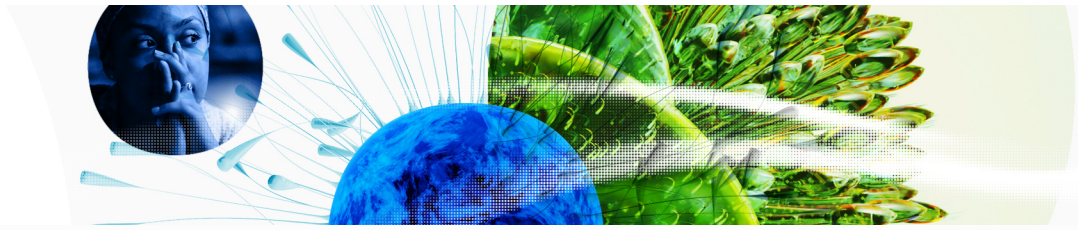
The following tables list indicators that are either missing or outdated for Cambodia.

> Cambodia has missing data for thirteen indicators and outdated data for fourteen indicators.

> Missing data for Cambodia

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2022	Global Entrepreneurship Monitor
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2019	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2020	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD, PISA
4.1.1	Finance for startups and scaleups	n/a	2022	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
4.3.2	Domestic industry diversification	n/a	2020	United Nations Industrial Development Organization
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2021	World Intellectual Property Organization; International Monetary Fund
6.2.4	High-tech manufacturing, %	n/a	2020	United Nations Industrial Development Organization
7.1.1	Intangible asset intensity, top 15, %	n/a	2022	Brand Finance
7.2.1	Cultural and creative services exports, % total trade	n/a	2021	World Trade Organization and United Nations Conference on Trade and Development
7.2.2	National feature films/mn pop. 15-69	n/a	2021	OMDIA; United Nations, World Population Prospects
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

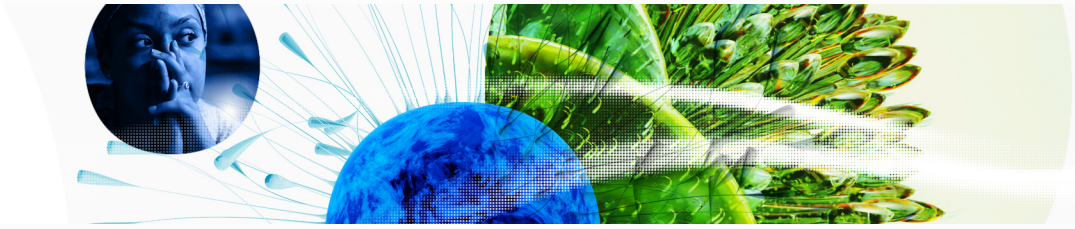
Global Innovation Index 2023



> Outdated data for Cambodia

Code	Indicator name	Economy Year	Model Year	Source
2.2.2	Graduates in science and engineering, %	2019	2020	UNESCO Institute for Statistics; Eurostat; OECD
2.3.1	Researchers, FTE/mn pop.	2015	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2015	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2020	2021	International Energy Agency
5.1.1	Knowledge-intensive employment, %	2021	2022	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2015	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.4	GERD financed by business, %	2015	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2021	2022	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	2015	2020	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	2015	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.1.1	Patents by origin/bn PPP$ GDP	2018	2021	World Intellectual Property Organization; International Monetary Fund
7.1.2	Trademarks by origin/bn PPP$ GDP	2019	2021	World Intellectual Property Organization; International Monetary Fund
7.1.4	Industrial designs by origin/bn PPP$ GDP	2020	2021	World Intellectual Property Organization; International Monetary Fund

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.