Global Innovation Index 2021

CAMBODIA

109th Cambodia ranks 109th among the 132 economies featured in the GII 2021.

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 Cambodia 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 Cambodia in the GII 2021 is between ranks 102 and 110.

Rankings for Cambodia (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	109	106	104
2020	110	117	101
2019	98	104	84

- Cambodia performs better in innovation outputs than innovation inputs in 2021.
- This year Cambodia ranks 106th in innovation inputs, higher than last year but lower than 2019.
- As for innovation outputs, Cambodia ranks 104th. This position is lower than both 2020 and 2019.

21st Cambodia ranks 21st among the 34 lower middle-income group economies.

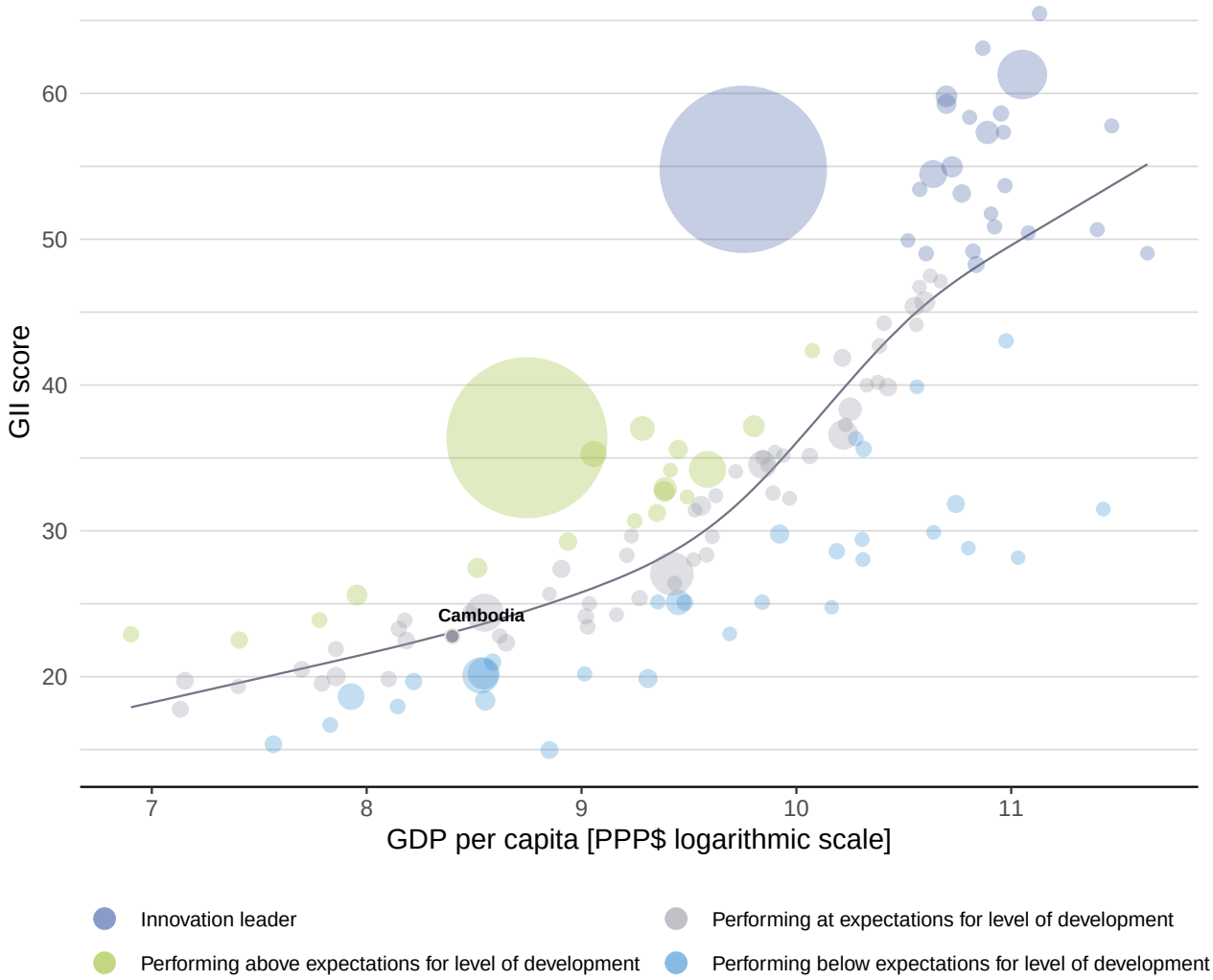
15th Cambodia ranks 15th among the 17 economies in South East Asia, East Asia, and Oceania.

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.

The positive relationship between innovation and development

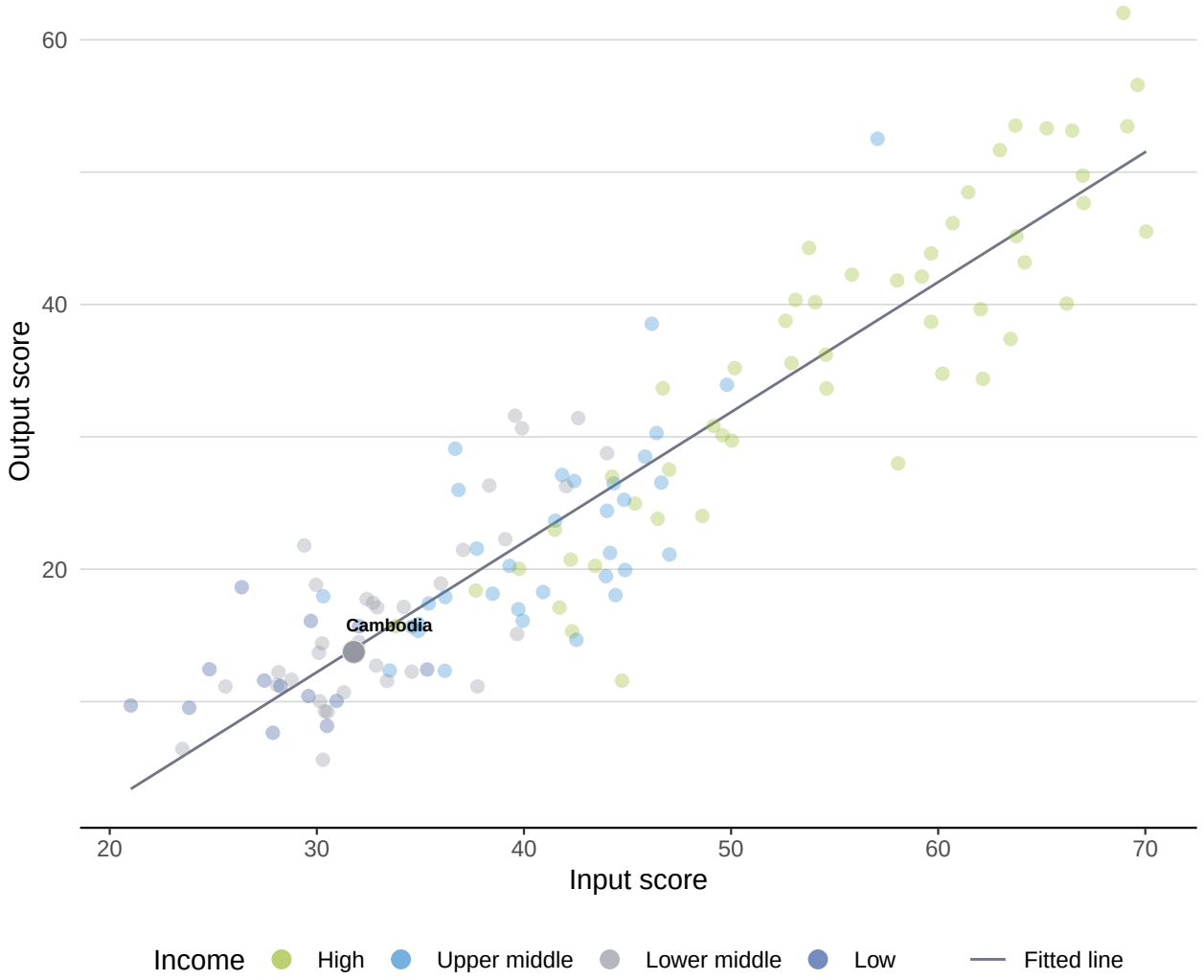


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

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.

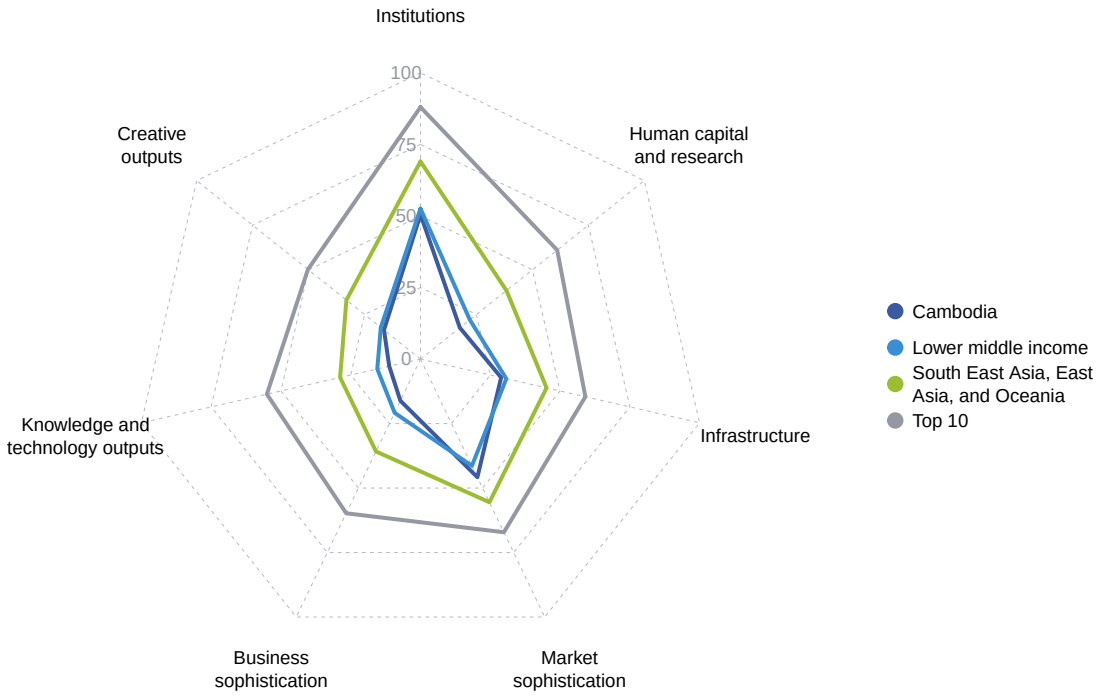
Cambodia produces less innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER LOWER MIDDLE-INCOME GROUP ECONOMIES AND SOUTH EAST ASIA, EAST ASIA, AND OCEANIA

The seven GII pillar scores for Cambodia



Lower middle-income group economies

Cambodia performs above the lower middle-income group average in Market sophistication.

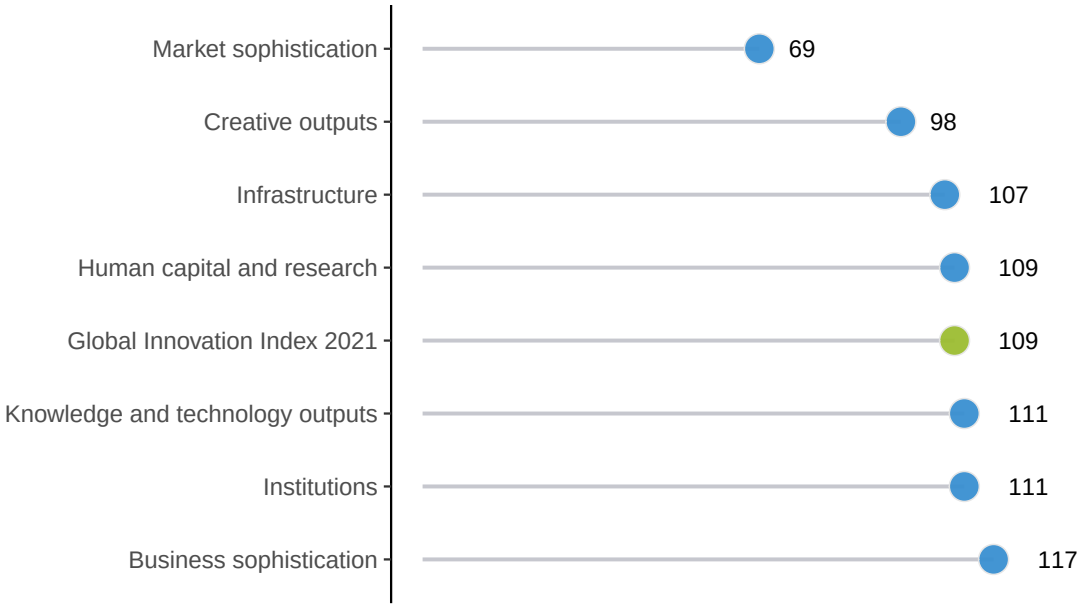
South East Asia, East Asia, and Oceania

Cambodia performs below the regional average in all GII pillars.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Cambodia performs best in Market sophistication and its weakest performance is in Business sophistication.

The seven GII pillar ranks for Cambodia



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

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Cambodia in the GII 2021.

Strengths and weaknesses for Cambodia

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.1.1	Political and operational stability	44	1.3	Business environment	127
3.2.3	Gross capital formation, % GDP	35	1.3.1	Ease of starting a business	132
4.1	Credit	6	2.1.1	Expenditure on education, % GDP	110
4.1.1	Ease of getting credit	23	2.3.1	Researchers, FTE/mn pop.	101
4.1.2	Domestic credit to private sector, % GDP	19	2.3.3	Global corporate R&D investors, top 3, mn US$	41
4.1.3	Microfinance gross loans, % GDP	1	2.3.4	QS university ranking, top 3	74
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	32	4.3	Trade, diversification, and market scale	122
5.2	Innovation linkages	51	5.1	Knowledge workers	122
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	39	5.1.1	Knowledge-intensive employment, %	117
5.3.4	FDI net inflows, % GDP	7	5.1.3	GERD performed by business, % GDP	84
6.2.1	Labor productivity growth, %	19	5.3	Knowledge absorption	127
7.1.4	ICTs and organizational model creation	41	5.3.2	High-tech imports, % total trade	129
			6.1.1	Patents by origin/bn PPP$ GDP	120
			7.1.2	Global brand value, top 5,000, % GDP	80

Cambodia

GII 2021 rank
109

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
104	106	Lower middle	SEAO	16.7	74.3	4,441	110

		Score/ Value	Rank
Institutions		**50.5**	**111**
1.1	**Political environment**	**49.6**	**91**
1.1.1	Political and operational stability*	73.2	44 ● ◆
1.1.2	Government effectiveness*	37.8	103
1.2	**Regulatory environment**	**51.4**	**102**
1.2.1	Regulatory quality*	28.6	106
1.2.2	Rule of law*	22.1	118
1.2.3	Cost of redundancy dismissal	19.4	82
1.3	**Business environment**	**50.5**	**127** ○ ◇
1.3.1	Ease of starting a business*	52.4	132 ○ ◇
1.3.2	Ease of resolving insolvency*	48.5	74
Human capital and research		**17.6**	**109**
2.1	**Education**	**27.6**	**[120]**
2.1.1	Expenditure on education, % GDP	2.2	110 ○ ◇
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	21.7	100
2.2	**Tertiary education**	**24.6**	**86**
2.2.1	Tertiary enrolment, % gross	14.7	102
2.2.2	Graduates in science and engineering, %	23.2	52
2.2.3	Tertiary inbound mobility, %	n/a	n/a
2.3	**Research and development (R&D)**	**0.6**	**112**
2.3.1	Researchers, FTE/mn pop. ◴	30.4	101 ○
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	41 ○ ◇
2.3.4	QS university ranking, top 3*	0.0	74 ○ ◇
Infrastructure		**28.9**	**107**
3.1	**Information and communication technologies (ICTs)**	**44.9**	**100**
3.1.1	ICT access*	46.5	94
3.1.2	ICT use*	46.3	86
3.1.3	Government's online service*	45.3	113
3.1.4	E-participation*	41.7	111
3.2	**General infrastructure**	**23.6**	**89**
3.2.1	Electricity output, GWh/mn pop.	502.9	107
3.2.2	Logistics performance*	24.7	94
3.2.3	Gross capital formation, % GDP	26.6	35 ●
3.3	**Ecological sustainability**	**18.2**	**112**
3.3.1	GDP/unit of energy use	8.2	89
3.3.2	Environmental performance*	33.6	108
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	0.3	94
Market sophistication		**45.8**	**69**
4.1	**Credit**	**70.9**	**6** ● ◆
4.1.1	Ease of getting credit*	80.0	23 ●
4.1.2	Domestic credit to private sector, % GDP	114.2	19 ● ◆
4.1.3	Microfinance gross loans, % GDP	38.4	1 ● ◆
4.2	**Investment**	**23.2**	**100**
4.2.1	Ease of protecting minority investors*	40.0	110
4.2.2	Market capitalization, % GDP	n/a	n/a
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.1	39 ◆
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	0.0	32 ● ◆
4.3	**Trade, diversification, and market scale**	**43.3**	**122** ○ ◇
4.3.1	Applied tariff rate, weighted avg., % ◴	9.8	115
4.3.2	Domestic industry diversification	n/a	n/a
4.3.3	Domestic market scale, bn PPP$	74.3	91

		Score/ Value	Rank
Business sophistication		**16.2**	**117**
5.1	**Knowledge workers**	**11.9**	**122** ○ ◇
5.1.1	Knowledge-intensive employment, % ◴	5.5	117 ○ ◇
5.1.2	Firms offering formal training, % ◴	22.2	68
5.1.3	GERD performed by business, % GDP ◴	0.0	84 ○
5.1.4	GERD financed by business, % ◴	19.4	66
5.1.5	Females employed w/advanced degrees, % ◴	2.2	105
5.2	**Innovation linkages**	**24.0**	**51** ● ◆
5.2.1	University-industry R&D collaboration†	39.0	82
5.2.2	State of cluster development and depth†	45.7	70
5.2.3	GERD financed by abroad, % GDP ◴	0.0	56
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	39 ● ◆
5.2.5	Patent families/bn PPP$ GDP	n/a	n/a
5.3	**Knowledge absorption**	**12.6**	**127** ○ ◇
5.3.1	Intellectual property payments, % total trade	0.1	105
5.3.2	High-tech imports, % total trade	2.4	129 ○ ◇
5.3.3	ICT services imports, % total trade	0.6	95
5.3.4	FDI net inflows, % GDP	13.1	7 ● ◆
5.3.5	Research talent, % in businesses ◴	4.3	73
Knowledge and technology outputs		**11.2**	**111**
6.1	**Knowledge creation**	**3.6**	**117**
6.1.1	Patents by origin/bn PPP$ GDP ◴	0.1	120 ○
6.1.2	PCT patents by origin/bn PPP$ GDP	0.0	94
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	n/a
6.1.4	Scientific and technical articles/bn PPP$ GDP	4.7	111
6.1.5	Citable documents H-index	5.6	98
6.2	**Knowledge impact**	**22.6**	**90**
6.2.1	Labor productivity growth, %	2.7	19 ●
6.2.2	New businesses/th pop. 15–64	0.7	90
6.2.3	Software spending, % GDP	0.0	109 ◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	1.1	107
6.2.5	High-tech manufacturing, %	n/a	n/a
6.3	**Knowledge diffusion**	**7.4**	**106**
6.3.1	Intellectual property receipts, % total trade	0.0	90
6.3.2	Production and export complexity	30.9	89
6.3.3	High-tech exports, % total trade	0.7	83
6.3.4	ICT services exports, % total trade	0.4	103
Creative outputs		**16.3**	**98**
7.1	**Intangible assets**	**26.5**	**82**
7.1.1	Trademarks by origin/bn PPP$ GDP	39.5	59
7.1.2	Global brand value, top 5,000, % GDP	0.0	80 ○ ◇
7.1.3	Industrial designs by origin/bn PPP$ GDP ◴	0.2	104
7.1.4	ICTs and organizational model creation†	60.6	41 ● ◆
7.2	**Creative goods and services**	**6.2**	**[99]**
7.2.1	Cultural and creative services exports, % total trade	n/a	n/a
7.2.2	National feature films/mn pop. 15–69	3.2	57
7.2.3	Entertainment and media market/th pop. 15–69	n/a	n/a
7.2.4	Printing and other media, % manufacturing	n/a	n/a
7.2.5	Creative goods exports, % total trade	0.4	69
7.3	**Online creativity**	**6.0**	**117**
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	0.8	100
7.3.2	Country-code TLDs/th pop. 15–69	0.1	118
7.3.3	Wikipedia edits/mn pop. 15–69	25.0	113
7.3.4	Mobile app creation/bn PPP$ GDP	1.7	71

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question. ◴ indicates that the economy's data are older than the base year; see Appendix IV for details, including the year of the data, at http://globalinnovationindex.org. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

DATA AVAILABILITY

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

Missing data for Cambodia

Code	Indicator name	Economy year	Model year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2017	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	n/a	2018	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	n/a	2018	OECD Programme for International Student Assessment (PISA)
2.2.3	Tertiary inbound mobility, %	n/a	2018	UNESCO Institute for Statistics
4.2.2	Market capitalization, % GDP	n/a	2019	World Federation of Exchanges
4.3.2	Domestic industry diversification	n/a	2018	United Nations Industrial Development Organization
5.2.5	Patent families/bn PPP$ GDP	n/a	2017	World Intellectual Property Organization
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2019	World Intellectual Property Organization
6.2.5	High-tech manufacturing, %	n/a	2018	United Nations Industrial Development Organization
7.2.1	Cultural and creative services exports, % total trade	n/a	2019	World Trade Organization
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2020	PwC
7.2.4	Printing and other media, % manufacturing	n/a	2018	United Nations Industrial Development Organization

Outdated data for Cambodia

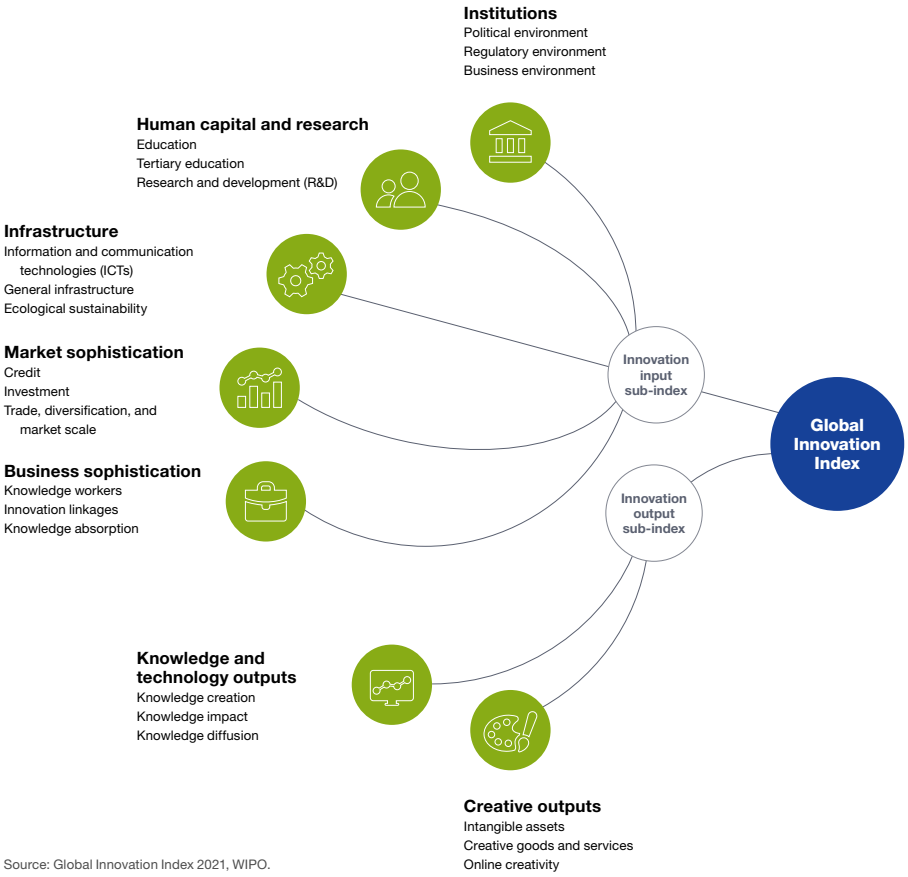
Code	Indicator name	Economy year	Model year	Source
2.3.1	Researchers, FTE/mn pop.	2015	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators

Code	Indicator name	Economy year	Model year	Source
2.3.2	Gross expenditure on R&D, % GDP	2015	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
4.3.1	Applied tariff rate, weighted avg., %	2016	2019	World Bank
5.1.1	Knowledge-intensive employment, %	2017	2019	International Labour Organization
5.1.2	Firms offering formal training, %	2016	2019	World Bank
5.1.3	GERD performed by business, % GDP	2015	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.4	GERD financed by business, %	2015	2018	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
5.1.5	Females employed w/advanced degrees, %	2017	2019	International Labour Organization
5.2.3	GERD financed by abroad, % GDP	2015	2018	UNESCO Institute for Statistics
5.3.5	Research talent, % in businesses	2015	2019	UNESCO Institute for Statistics; Eurostat; OECD - Main Science and Technology Indicators
6.1.1	Patents by origin/bn PPP$ GDP	2016	2019	World Intellectual Property Organization
7.1.3	Industrial designs by origin/bn PPP$ GDP	2015	2019	World Intellectual Property Organization

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 2021, WIPO.

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.