CAMBODIA

97th  Cambodia ranks 97th among the 132 economies featured in the GII 2022.

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of 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 2022 is between ranks 93 and 98.

<table>
<thead>
<tr>
<th>GIIYR</th>
<th>GII</th>
<th>Innovation inputs</th>
<th>Innovation outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>110</td>
<td>117</td>
<td>101</td>
</tr>
<tr>
<td>2021</td>
<td>109</td>
<td>106</td>
<td>104</td>
</tr>
<tr>
<td>2022</td>
<td>97</td>
<td>92</td>
<td>102</td>
</tr>
</tbody>
</table>

• Cambodia performs better in innovation inputs than innovation outputs in 2022.
• This year Cambodia ranks 92nd in innovation inputs, higher than both 2021 and 2020.
• As for innovation outputs, Cambodia ranks 102nd. This position is higher than last year but lower than 2020.

17th  Cambodia ranks 17th among the 36 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**
The seven GII pillar scores for Cambodia

Lower-middle-income group economies

Cambodia performs above the lower-middle-income group average in two pillars, namely: Institutions; and, Market sophistication.

South East Asia, East Asia, and Oceania

Cambodia performs below the regional average in all GII pillars.
Cambodia performs best in Market sophistication and its weakest performance is in Business sophistication.

The seven GII pillar ranks for Cambodia

- Market sophistication: 44
- Institutions: 87
- Global Innovation Index: 97
- Human capital and research: 99
- Knowledge and technology outputs: 101
- Infrastructure: 103
- Creative outputs: 104
- Business sophistication: 117

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

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

INNOVATION STRENGTHS AND WEAKNESSES

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

### Strengths and weaknesses for Cambodia

| Code  | Indicator name                                      | Rank | | Code  | Indicator name                                      | Rank |
|-------|----------------------------------------------------|------| |-------|----------------------------------------------------|------|
| 2.2.2 | Graduates in science and engineering, %            | 47   | | 2.1.1 | Expenditure on education, % GDP                     | 122  |
| 3.2.3 | Gross capital formation, % GDP                     | 36   | | 2.3.1 | Researchers, FTE/mn pop.                           | 102  |
| 4.1.2 | Domestic credit to private sector, % GDP           | 14   | | 2.3.2 | Gross expenditure on R&D, % GDP                    | 103  |
| 4.1.3 | Loans from microfinance institutions, % GDP        | 1    | | 2.3.3 | Global corporate R&D investors, top 3, mn USD       | 38   |
| 4.2.2 | Venture capital investors, deals/bn PPP$ GDP       | 41   | | 2.3.4 | QS university ranking, top 3                        | 72   |
| 4.2.3 | Venture capital recipients, deals/bn PPP$ GDP      | 37   | | 5.2.5 | Patent families/bn PPP$ GDP                        | 101  |
| 5.2.4 | Joint venture/strategic alliance deals/bn PPP$ GDP | 54   | | 5.3.2 | High-tech imports, % total trade                    | 126  |
| 5.3.4 | FDI net inflows, % GDP                             | 9    | | 6.1.1 | Patents by origin/bn PPP$ GDP                       | 128  |
| 6.2.1 | Labor productivity growth, %                       | 27   | | 7.1.3 | Global brand value, top 5,000, % GDP                | 77   |
| 7.2.5 | Creative goods exports, % total trade              | 57   | | 7.3.2 | Country-code TLDs/th pop. 15–69                     | 121  |
# Cambodia

<table>
<thead>
<tr>
<th>Score/Value Rank</th>
<th>Output rank</th>
<th>Input rank</th>
<th>Income</th>
<th>Region</th>
<th>Population (mn)</th>
<th>GDP, PPP$ (bn)</th>
<th>GDP per capita, PPP$</th>
</tr>
</thead>
<tbody>
<tr>
<td>102</td>
<td>92</td>
<td>Lower middle</td>
<td>SEAO</td>
<td>16.9</td>
<td>78.1</td>
<td>4,930</td>
<td></td>
</tr>
</tbody>
</table>

## Human capital and research

### Education

- **2.1 Education**
  - 3.22 Expenditure on education, % GDP
  - 2.22 School life expectancy, years
  - 2.21 Tertiary enrolment, % gross
  - 2.22 Graduates in science and engineering, %
  - 2.23 Tertiary inbound mobility, %

### Research and development (R&D)

- **2.3 Research and development (R&D)**
  - 3.23 Gross expenditure on R&D, % GDP
  - 3.24 Global corporate R&D invests, top 3, %
  - 3.25 QS university ranking, top 3

### Infrastructure

- **3.1 Information and communication technologies (ICTs)**
  - 3.1.1 ICT access
  - 3.1.2 ICT use
  - 3.1.3 Government's online service
  - 3.1.4 E-participation
  - 3.2 General infrastructure
  - 3.2.1 Electricity output, GWh/mn pop.
  - 3.2.2 Logistics performance
  - 3.2.3 Gross capital formation, % GDP
  - 3.2.4 ISO 9001 quality certificates/bn PPP$ GDP

### Ecological sustainability

- **3.3 Ecological sustainability**
  - 3.3.1 GDP/unit of energy use
  - 3.3.2 Environmental performance
  - 3.3.3 ISO 14001 environmental certificates/bn PPP$ GDP

## Market sophistication

- **4.1 Credit**
  - 4.1.1 Finance for startups and scaleups
  - 4.1.2 Domestic credit to private sector, % GDP
  - 4.1.3 Loans from microfinance institutions, % GDP
  - 4.2 Investment
  - 4.2.1 Market capitalization, % GDP
  - 4.2.2 Venture capital investors, deals/bn PPP$ GDP
  - 4.2.3 Venture capital recipients, deals/bn PPP$ GDP
  - 4.2.4 Venture capital received, value, % GDP
  - 4.3 Trade, diversification, and market scale
  - 4.3.1 Applied tariff rate, weighted avg., %
  - 4.3.2 Domestic industry diversification
  - 4.3.3 Domestic market scale, bn PPP$

## Business sophistication

- **5.1 Knowledge workers**
  - 5.1.1 Knowledge-intensive employment, %
  - 5.1.2 Firms offering formal training, %
  - 5.1.3 GERD performed by business, % GDP
  - 5.1.4 GERD financed by business, %
  - 5.1.5 Females employed w/advanced degrees, %

## Knowledge and technology outputs

- **6.1 Knowledge creation**
  - 6.1.1 Patents by origin/bn PPP$ GDP
  - 6.1.2 PCT patents by origin/bn PPP$ GDP
  - 6.1.3 Utility models by origin/bn PPP$ GDP
  - 6.1.4 Scientific and technical articles/bn PPP$ GDP
  - 6.1.5 Citable documents H-index

- **6.2 Knowledge impact**
  - 6.2.1 Labor productivity growth, %
  - 6.2.2 New businesses/th pop. 15–64
  - 6.2.3 Software spending, % GDP
  - 6.2.4 ISO 9001 quality certificates/bn PPP$ GDP
  - 6.2.5 High-tech manufacturing, %

## Creative outputs

- **7.1 Intangible assets**
  - 7.1.1 Intangible asset intensity, top 15, %
  - 7.1.2 Trademarks by origin/bn PPP$ GDP
  - 7.1.3 Global brand value, top 5,000, % GDP
  - 7.1.4 Industrial design by origin/bn PPP$ GDP
  - 7.2 Creative goods and services
  - 7.2.1 Cultural and creative services exports, % total trade
  - 7.2.2 National feature films/mn pop.
  - 7.2.3 Entertainment and media market/th pop. 15–69
  - 7.2.4 Printing and other media, % manufacturing
  - 7.2.5 Creative goods exports, % total trade

## Notes:

- ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question. ○ indicates that the economy’s data are older than the base year; see appendices for details, including the year of the data, at https://www.wipo.int/global_innovation_index/en/2022. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.
DATA AVAILABILITY

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

### Missing data for Cambodia

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Economy year</th>
<th>Model year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.2</td>
<td>Entrepreneurship policies and culture</td>
<td>n/a</td>
<td>2021</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Government funding/pupil, secondary, % GDP/cap</td>
<td>n/a</td>
<td>2018</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.1.3</td>
<td>School life expectancy, years</td>
<td>n/a</td>
<td>2019</td>
<td>UNESCO Institute for Statistics</td>
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<tr>
<td>2.1.4</td>
<td>PISA scales in reading, maths and science</td>
<td>n/a</td>
<td>2018</td>
<td>OECD, PISA</td>
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<tr>
<td>2.2.3</td>
<td>Tertiary inbound mobility, %</td>
<td>n/a</td>
<td>2019</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Finance for startups and scaleups</td>
<td>n/a</td>
<td>2021</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Market capitalization, % GDP</td>
<td>n/a</td>
<td>2020</td>
<td>World Federation of Exchanges</td>
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<tr>
<td>4.3.2</td>
<td>Domestic industry diversification</td>
<td>n/a</td>
<td>2019</td>
<td>United Nations Industrial Development Organization</td>
</tr>
<tr>
<td>6.1.3</td>
<td>Utility models by origin/bn PPP$ GDP</td>
<td>n/a</td>
<td>2020</td>
<td>World Intellectual Property Organization</td>
</tr>
<tr>
<td>6.2.5</td>
<td>High-tech manufacturing, %</td>
<td>n/a</td>
<td>2019</td>
<td>United Nations Industrial Development Organization</td>
</tr>
<tr>
<td>7.1.1</td>
<td>Intangible asset intensity, top 15, %</td>
<td>n/a</td>
<td>2021</td>
<td>Brand Finance</td>
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<tr>
<td>7.2.1</td>
<td>Cultural and creative services exports, % total trade</td>
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<td>2020</td>
<td>World Trade Organization and United Nations Conference on Trade and Development</td>
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<tr>
<td>7.2.2</td>
<td>National feature films/mn pop. 15–69</td>
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<td>2019</td>
<td>OMDIA</td>
</tr>
<tr>
<td>7.2.3</td>
<td>Entertainment and media market/th pop. 15–69</td>
<td>n/a</td>
<td>2021</td>
<td>PwC, GEMO</td>
</tr>
<tr>
<td>7.2.4</td>
<td>Printing and other media, % manufacturing</td>
<td>n/a</td>
<td>2019</td>
<td>United Nations Industrial Development Organization</td>
</tr>
</tbody>
</table>

### Outdated data for Cambodia

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Economy year</th>
<th>Model year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1</td>
<td>Expenditure on education, % GDP</td>
<td>2018</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Graduates in science and engineering, %</td>
<td>2019</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Researchers, FTE/mn pop.</td>
<td>2015</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Gross expenditure on R&amp;D, % GDP</td>
<td>2015</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Electricity output, GWh/mn pop.</td>
<td>2019</td>
<td>2020</td>
<td>International Energy Agency</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Venture capital recipients, deals/bn PPP$ GDP</td>
<td>2020</td>
<td>2021</td>
<td>Refinitiv</td>
</tr>
<tr>
<td>Code</td>
<td>Indicator name</td>
<td>Economy year</td>
<td>Model year</td>
<td>Source</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Venture capital received, value, % GDP</td>
<td>2020</td>
<td>2021</td>
<td>Refinitiv</td>
</tr>
<tr>
<td>5.1.1</td>
<td>Knowledge-intensive employment, %</td>
<td>2019</td>
<td>2021</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Firms offering formal training, %</td>
<td>2016</td>
<td>2019</td>
<td>World Bank Enterprise Surveys</td>
</tr>
<tr>
<td>5.1.3</td>
<td>GERD performed by business, % GDP</td>
<td>2015</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.1.4</td>
<td>GERD financed by business, %</td>
<td>2015</td>
<td>2019</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.1.5</td>
<td>Females employed w/advanced degrees, %</td>
<td>2019</td>
<td>2021</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>5.2.3</td>
<td>GERD financed by abroad, % GDP</td>
<td>2015</td>
<td>2019</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Research talent, % in businesses</td>
<td>2015</td>
<td>2020</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>6.1.1</td>
<td>Patents by origin/bn PPP$ GDP</td>
<td>2018</td>
<td>2020</td>
<td>World Intellectual Property Organization</td>
</tr>
<tr>
<td>7.1.2</td>
<td>Trademarks by origin/bn PPP$ GDP</td>
<td>2019</td>
<td>2020</td>
<td>World Intellectual Property Organization</td>
</tr>
</tbody>
</table>
CAMBODIA’S INNOVATION SYSTEM

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

**Innovation inputs**

2.1.1 Expenditure on education was equal to 2.2% GDP in 2018—down by 32 percentage points from the year prior—and equivalent to an indicator rank of 122.

2.2.2 Graduates in science and engineering was equal to 23.2% of tert. grads in 2019 and equivalent to an indicator rank of 47.

2.3.1 Researchers was equal to 30.4 FTE/mn pop. in 2015 and equivalent to an indicator rank of 102.

2.3.2 Gross expenditure on R&D was equal to 0.1% GDP in 2015 and equivalent to an indicator rank of 103.
2.3.4 QS university ranking was equal to 0.0 in 2021—effectively unchanged from the year prior—and equivalent to an indicator rank of 72.

3.1.1 ICT access was equal to 7.1 in 2020 and equivalent to an indicator rank of 96.

4.2.4 Venture capital received was equal to 0.0 mn USD in 2020—down by 100 percentage points from the year prior—and equivalent to an indicator rank of 82.

5.1.1 Knowledge-intensive employment was equal to 746.8 thsd people in 2019 and equivalent to an indicator rank of 110.
6.1.1 **Patents by origin** was equal to 1.0 in 2018 and equivalent to an indicator rank of 128.

6.1.5 **Citable documents H-index** was equal to 128.0 in 2021—up by 15 percentage points from the year prior—and equivalent to an indicator rank of 98.

6.3.1 **Intellectual property receipts** was equal to 9.3 mn USD in 2020—down by 24 percentage points from the year prior—and equivalent to an indicator rank of 76.

6.3.2 **Production and export complexity** was equal to -0.5 in 2019—up by 13 percentage points from the year prior—and equivalent to an indicator rank of 86.
6.3.3 High-tech exports was equal to 308.4 mn USD in 2020–up by 92 percentage points from the year prior–and equivalent to an indicator rank of 68.

7.1.3 Global brand value was equal to 0.0 mn USD in 2021–effectively unchanged from the year prior–and equivalent to an indicator rank of 77.
### 2.3.3 Global corporate R&D investors

<table>
<thead>
<tr>
<th>Firm</th>
<th>Industry</th>
<th>R&amp;D</th>
<th>R&amp;D Growth</th>
<th>R&amp;D Intensity</th>
<th>Rank</th>
</tr>
</thead>
</table>

No observations


### 2.3.4 QS university ranking

<table>
<thead>
<tr>
<th>University</th>
<th>Score</th>
<th>Rank</th>
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</thead>
</table>

No observations


### 7.1.1 Intangible asset intensity, top 15

<table>
<thead>
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<th>Firm</th>
<th>Rank</th>
</tr>
</thead>
</table>

No observations


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

<table>
<thead>
<tr>
<th>Brand</th>
<th>Industry</th>
<th>Rank</th>
</tr>
</thead>
</table>

No observations

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.