Greece ranks 43rd among the 131 economies featured in the GII 2020.

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 Greece 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 Greece in the GII 2020 is between ranks 42 and 46.

<table>
<thead>
<tr>
<th>Year</th>
<th>GII</th>
<th>Innovation inputs</th>
<th>Innovation outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>43</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>2019</td>
<td>41</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>2018</td>
<td>42</td>
<td>40</td>
<td>52</td>
</tr>
</tbody>
</table>

- Greece performs better in innovation inputs than innovation outputs in 2020.
- This year Greece ranks 40th in innovation inputs, the same as last year and the same compared to 2018.
- As for innovation outputs, Greece ranks 52nd. This position is higher than last year and the same as 2018.

Greece ranks 39th among the 49 high-income group economies.

Greece ranks 29th among the 39 economies in Europe.
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, Greece's performance matches expectations for its level of 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.

Greece produces less innovation outputs relative to its level of innovation investments.
BENCHMARKING GREECE AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND EUROPE

Greece’s scores in the seven GII pillars

High-income group economies

Greece has high scores in one of the seven GII pillars: Human capital & research, which are above average for the high-income group.

Conversely, Greece scores below average for its income group in six pillars: Institutions, Infrastructure, Market sophistication, Business sophistication, Knowledge & technology outputs and Creative outputs.

Europe

Compared to other economies in Europe, Greece performs:

- above average in one of the seven GII pillars: Human capital & research; and
- below average in six out of the seven GII pillars: Institutions, Infrastructure, Market sophistication, Business sophistication, Knowledge & technology outputs and Creative outputs.
OVERVIEW OF GREECE RANKINGS IN THE SEVEN GII AREAS

Greece performs best in Human capital & research and its weakest performance is in Market sophistication.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Greece in the GII 2020.

### Strengths

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1</td>
<td>Ease of starting a business*</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Human capital &amp; research</td>
<td>20</td>
</tr>
<tr>
<td>2.1.3</td>
<td>School life expectancy, years</td>
<td>5</td>
</tr>
<tr>
<td>2.1.5</td>
<td>Pupil-teacher ratio, secondary</td>
<td>15</td>
</tr>
<tr>
<td>2.2</td>
<td>Tertiary education</td>
<td>3</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Tertiary enrolment, % gross</td>
<td>1</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Graduates in science &amp; engineering, %</td>
<td>17</td>
</tr>
<tr>
<td>3.3.3</td>
<td>ISO 14001 environmental certificates/bn PPP$ GDP</td>
<td>21</td>
</tr>
<tr>
<td>6.1.4</td>
<td>Scientific &amp; technical articles/bn PPP$ GDP</td>
<td>23</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Computer software spending, % GDP</td>
<td>13</td>
</tr>
<tr>
<td>6.2.4</td>
<td>ISO 9001 quality certificates/bn PPP$ GDP</td>
<td>13</td>
</tr>
<tr>
<td>7.2.2</td>
<td>National feature films/mn pop. 15–69</td>
<td>14</td>
</tr>
</tbody>
</table>

### Weaknesses

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.3</td>
<td>Gross capital formation, % GDP</td>
<td>122</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Ease of getting credit*</td>
<td>101</td>
</tr>
<tr>
<td>4.2</td>
<td>Investment</td>
<td>101</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Market capitalization, % GDP</td>
<td>58</td>
</tr>
<tr>
<td>5.2.1</td>
<td>University/industry research collaboration†</td>
<td>119</td>
</tr>
<tr>
<td>5.2.2</td>
<td>State of cluster development†</td>
<td>118</td>
</tr>
<tr>
<td>5.3.2</td>
<td>High-tech imports, % total trade</td>
<td>104</td>
</tr>
<tr>
<td>6.1.3</td>
<td>Utility models by origin/bn PPP$ GDP</td>
<td>62</td>
</tr>
<tr>
<td>6.2.1</td>
<td>Growth rate of PPP$ GDP/worker, %</td>
<td>91</td>
</tr>
<tr>
<td>6.3.4</td>
<td>FDI net outflows, % GDP</td>
<td>122</td>
</tr>
<tr>
<td>7.1.4</td>
<td>ICTs &amp; organizational model creation†</td>
<td>97</td>
</tr>
</tbody>
</table>
STRENGTHS

GII strengths for Greece are found in five of the seven GII pillars.

- Institutions (52): the indicator Ease of starting a business (11) exhibits a strength.
- Human capital & research (20): shows strengths in the sub-pillar Tertiary education (3) and in the indicators School life expectancy (5), Pupil–teacher ratio (15), Tertiary enrolment (1) and Graduates in science & engineering (17).
- Infrastructure (41): the indicator ISO 14001 environmental certificates (21) reveals a strength.
- Knowledge & technology outputs (47): shows strengths in the indicators Scientific & technical articles (23), Computer software spending (13) and ISO 9001 quality certificates (13).
- Creative outputs (59): displays strength in the indicator National feature films (14).

WEAKNESSES

GII weaknesses for Greece are found in five of the seven GII pillars.

- Infrastructure (41): the indicator Gross capital formation (122) reveals a weakness.
- Market sophistication (75): shows weaknesses in the sub-pillar Investment (101) and in the indicators Ease of getting credit (101) and Market capitalization (58).
- Business sophistication (62): demonstrates weaknesses in the indicators University/industry research collaboration (119), State of cluster development (118) and High-tech imports (104).
- Knowledge & technology outputs (47): displays weaknesses in the indicators Utility models by origin (62), Growth rate of PPP (91) and FDI net outflows (122).
- Creative outputs (59): the indicator ICTs & organizational model creation (97) demonstrates a weakness.
Greece 2020 rank 43

<table>
<thead>
<tr>
<th>Output rank</th>
<th>Input rank</th>
<th>Income</th>
<th>Region</th>
<th>Population (mm)</th>
<th>GDP, PPP$</th>
<th>GDP per capita, PPP$</th>
<th>GII 2019 rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>40</td>
<td>High</td>
<td>EUR</td>
<td>10.5</td>
<td>324.1</td>
<td>26,410.8</td>
<td>41</td>
</tr>
</tbody>
</table>

**Institutions**

- Political environment: 62.3
- Government effectiveness: 67.7
- Regulatory quality: 67.2
- Rule of law: 50.7
- Ease of starting a business: 96.0
- Ease of resolving insolvency: 53.1

**Human Capital & Research**

- Education: 53.7
- Tertiary education: 64.6
- Research & development (R&D): 31.3
- Information & communication technologies (ICTs): 80.6
- ICT access: 80.2
- ICT use: 74.2
- Government’s online service: 81.9
- E-participation: 87.6

**Infrastructure**

- General infrastructure: 22.0
- Electricity output, kWh/mm pop: 4898.0
- Logistics performance: 53.2
- Gross capital formation / GDP: 13.9

**Ecological sustainability**

- Environmental performance: 69.1
- ISO 14001 environmental certificates/bn PPP$: 4.5

**Market Sophistication**

- Credit: 42.1
- Domestic credit to private sector, % GDP: 89.2
- Microfinance gross loans, % GDP: 0.6
- Investment: 28.5
- Business capitalization, % GDP: 20.5
- Venture capital deals/bn PPP$: 0.0

**Trade, competition, and market scale**

- Trade, competition, and market scale: 67.6
- Applied tariff rate, weighted avg, %: 17
- Domestic market scale, bn PPP$: 32.4

**Business Sophistication**

- Knowledge workers: 36.0
- Knowledge-intensive employment, %: 30.0
- Firms offering formal training, %: 26.9
- GERD performed by business, % GDP: 0.6
- GERD financed by business, %: 42.6
- Females employed w/in advanced degrees, %: 18.0

**Knowledge & Technology Outputs**

- Knowledge creation: 45.0
- Patents by origin/bn PPP$: 0.5
- ICT services imports, % total trade: 1.6
- ISCO 9001 quality certificates/bn PPP$: 20.7
- High- and medium-high-tech manufacturing, %: 19.3

**Creative Outputs**

- Intangible assets: 22.1
- Trademarks by origin/bn PPP$: na
- Brand value, top 5000, % GDP: 3.3
- Industrial designs by origin/bn PPP$: 3.7
- ICTs & organizational model creation: 44.6

**Notes**

- Indicates a strength
- Indicates a weakness
- An income group strength
- An income group weakness
- An indicator
- A survey question
- Indicates that the economy’s data are older than the base year; see Appendix I for details, including the year of the data, at http://globalinnovationindex.org. Square brackets [ ] indicate that the data minimum coverage (DNC) 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 Greece.

Missing data

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Country year</th>
<th>Model year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.3</td>
<td>Microfinance gross loans, % GDP</td>
<td>n/a</td>
<td>2018</td>
<td>Microfinance Information Exchange</td>
</tr>
<tr>
<td>7.1.1</td>
<td>Trademarks by origin/bn PPP$ GDP</td>
<td>n/a</td>
<td>2018</td>
<td>World Intellectual Property Organization</td>
</tr>
</tbody>
</table>

Outdated data

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Country year</th>
<th>Model year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.5</td>
<td>Pupil-teacher ratio, secondary</td>
<td>2017</td>
<td>2018</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Firms offering formal training, %</td>
<td>2017</td>
<td>2018</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. In 2020, the GII presents its 13th edition devoted to the theme *Who Will Finance Innovation?*

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.