Mexico ranks 58th 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 Mexico 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 Mexico in the GII 2022 is between ranks 54 and 58.

<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>55</td>
<td>61</td>
<td>57</td>
</tr>
<tr>
<td>2021</td>
<td>55</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>2022</td>
<td>58</td>
<td>70</td>
<td>55</td>
</tr>
</tbody>
</table>

- Mexico performs better in innovation outputs than innovation inputs in 2022.
- This year Mexico ranks 70th in innovation inputs, lower than both 2021 and 2020.
- As for innovation outputs, Mexico ranks 55th. This position is lower than last year but higher than 2020.

Mexico ranks 12th among the 36 upper-middle-income group economies.

Mexico ranks 3rd among the 18 economies in Latin America and the Caribbean.
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, Mexico's performance is at expectations for its level of development.

The positive relationship between innovation and development

- **GDP per capita [PPP$ logarithmic scale]**
- **GII score**

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

Mexico produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance
BENCHMARKING AGAINST OTHER UPPER MIDDLE-INCOME GROUP ECONOMIES AND LATIN AMERICA AND THE CARIBBEAN

The seven GII pillar scores for Mexico

Upper-middle-income group economies

Mexico performs above the upper-middle-income group average in five pillars, namely: Human capital and research; Infrastructure; Market sophistication; Knowledge and technology outputs; and, Creative outputs.

Latin America and the Caribbean

Mexico performs above the regional average in five pillars, namely: Human capital and research; Infrastructure; Market sophistication; Knowledge and technology outputs; and, Creative outputs.
OVERVIEW OF RANKINGS IN THE SEVEN GII 2022 AREAS

Mexico performs best in Creative outputs and its weakest performance is in Institutions.

The seven GII pillar ranks for Mexico

<table>
<thead>
<tr>
<th>Area</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative outputs</td>
<td>50</td>
</tr>
<tr>
<td>Market sophistication</td>
<td>54</td>
</tr>
<tr>
<td>Knowledge and technology outputs</td>
<td>58</td>
</tr>
<tr>
<td>Human capital and research</td>
<td>58</td>
</tr>
<tr>
<td>Global Innovation Index</td>
<td>58</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>63</td>
</tr>
<tr>
<td>Business sophistication</td>
<td>76</td>
</tr>
<tr>
<td>Institutions</td>
<td>93</td>
</tr>
</tbody>
</table>

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

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

INNOVATION STRENGTHS AND WEAKNESSES

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

**Strengths and weaknesses for Mexico**

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator name</th>
<th>Rank</th>
<th>Code</th>
<th>Indicator name</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.4</td>
<td>QS university ranking, top 3</td>
<td>29</td>
<td>1.1.1</td>
<td>Political and operational stability</td>
<td>116</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Applied tariff rate, weighted avg., %</td>
<td>13</td>
<td>1.3.1</td>
<td>Policies for doing business</td>
<td>120</td>
</tr>
<tr>
<td>4.3.3</td>
<td>Domestic market scale, bn PPP$</td>
<td>13</td>
<td>2.1.2</td>
<td>Government funding/pupil, secondary, % GDP/cap</td>
<td>90</td>
</tr>
<tr>
<td>5.3.2</td>
<td>High-tech imports, % total trade</td>
<td>9</td>
<td>2.2.3</td>
<td>Tertiary inbound mobility, %</td>
<td>95</td>
</tr>
<tr>
<td>6.1.5</td>
<td>Citable documents H-index</td>
<td>34</td>
<td>4.2.2</td>
<td>Venture capital investors, deals/bn PPP$ GDP</td>
<td>80</td>
</tr>
<tr>
<td>6.2.5</td>
<td>High-tech manufacturing, %</td>
<td>11</td>
<td>5.3.3</td>
<td>ICT services imports, % total trade</td>
<td>131</td>
</tr>
<tr>
<td>6.3.2</td>
<td>Production and export complexity</td>
<td>18</td>
<td>6.2.1</td>
<td>Labor productivity growth, %</td>
<td>106</td>
</tr>
<tr>
<td>6.3.3</td>
<td>High-tech exports, % total trade</td>
<td>9</td>
<td>6.3.4</td>
<td>ICT services exports, % total trade</td>
<td>132</td>
</tr>
<tr>
<td>7.1.1</td>
<td>Intangible asset intensity, top 15, %</td>
<td>16</td>
<td>7.2.1</td>
<td>Cultural and creative services exports, % total trade</td>
<td>112</td>
</tr>
<tr>
<td>7.2.5</td>
<td>Creative goods exports, % total trade</td>
<td>1</td>
<td>7.2.4</td>
<td>Printing and other media, % manufacturing</td>
<td>90</td>
</tr>
<tr>
<td>Region</td>
<td>Population (mn)</td>
<td>GDP, PPP$ (bn)</td>
<td>GDP per capita, PPP$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCN</td>
<td>130.3</td>
<td>2,685.2</td>
<td>20,820</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Political environment
- **Score/Value**
  - **Political and operational stability**: 50.5/96
  - **Government effectiveness**: 54.5/74
  - **Regulatory quality**: 46.9/97
  - **Government expenditure on education**: 12.0/79
  - **Rule of law**: 28.7/104

### Business sophistication
- **Score/Value**
  - **Knowledge workers**: 21.6/91
  - **Knowledge-intensive employment**: 20.4/75
  - **Firms offering formal training**: n/a
  - **GERD performed by business**: 0.1/66
  - **GERD financed by business**: 17.8/9
  - **Females employed with advanced degrees**: 10.2/73

### Research and development (R&D)
- **Score/Value**
  - **Institutes**: 48.2/93
  - **Education**: 43.0/86
  - **Tertiary education**: 4.3/68
  - **Graduates in science and engineering**: 42.8/73
  - **Tertiary enrolment, % gross**: 25.8/37
  - **Tertiary enrolment, %**: 0.7/95

### Human capital and research
- **Score/Value**
  - **Knowledge workers**: 21.6/91
  - **Knowledge-intensive employment**: 20.4/75
  - **Institutes**: 48.2/93
  - **Education**: 43.0/86
  - **Tertiary education**: 4.3/68
  - **Graduates in science and engineering**: 42.8/73
  - **Tertiary enrolment, % gross**: 25.8/37
  - **Tertiary enrolment, %**: 0.7/95

### Infrastructure
- **Score/Value**
  - **Information and communication technologies (ICTs)**: 75.7/57
  - **ICT access**: 77.2/89
  - **ICT use**: 61.1/70
  - **Government's online service**: 82.3/38
  - **E-participation**: 82.1/41

### Internet economy
- **Score/Value**
  - **Internet economy**: 44.1/63
  - **Digital economy**: 43.8/63
  - **Digital government**: 44.0/63
  - **Digital society**: 44.1/63
  - **Digital business**: 44.0/63

### Market sophistication
- **Score/Value**
  - **Credit**: 21.5/84
  - **Investment**: 7.9/60
  - **Trade, diversification, and market scale**: 1.2/13

### Knowledge and technology outputs
- **Score/Value**
  - **Knowledge creation**: 10.1/73
  - **Patents by origin/bn PPPS GDP**: 0.5/73
  - **Utility models by origin/bn PPPS GDP**: 0.1/72
  - **Scientific and technical articles/bn PPPS GDP**: 7.8/101
  - **Citable documents**: 9.4/34

### Creating outputs
- **Score/Value**
  - **Intangible assets**: 35.4/48
  - **Trademark by origin/bn PPPS GDP**: 72.5/16
  - **Brand value, top 5,000, % GDP**: 48.3/48
  - **Global brand value, top 5,000, % GDP**: 49.7/33
  - **National feature films/mn pop.**: 2.5/43

### Business sophistication
- **Score/Value**
  - **Knowledge workers**: 21.6/91
  - **Knowledge-intensive employment**: 20.4/75
  - **Firms offering formal training**: n/a
  - **GERD performed by business**: 0.1/66
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### Creating outputs
- **Score/Value**
  - **Intangible assets**: 35.4/48
  - **Trademark by origin/bn PPPS GDP**: 72.5/16
  - **Brand value, top 5,000, % GDP**: 48.3/48
  - **Global brand value, top 5,000, % GDP**: 49.7/33
  - **National feature films/mn pop.**: 2.5/43

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 Mexico.

**Missing data for Mexico**

<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>5.1.2</td>
<td>Firms offering formal training, %</td>
<td>n/a</td>
<td>2019</td>
<td>World Bank Enterprise Surveys</td>
</tr>
</tbody>
</table>

**Outdated data for Mexico**

<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>4.3.1</td>
<td>Applied tariff rate, weighted avg., %</td>
<td>2018</td>
<td>2020</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
MEXICO’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 4.3% GDP in 2018—down by 6 percentage points from the year prior—and equivalent to an indicator rank of 68.

2.2.2 Graduates in science and engineering was equal to 25.8% of tert. grads in 2019—down by 1 percentage point from the year prior—and equivalent to an indicator rank of 37.

2.3.1 Researchers was equal to 348.8 FTE/mn pop. in 2020—up by 7 percentage points from the year prior—and equivalent to an indicator rank of 78.

2.3.2 Gross expenditure on R&D was equal to 0.3% GDP in 2020—up by 5 percentage points from the year prior—and equivalent to an indicator rank of 78.
2.3.4 **QS university ranking** was equal to 42.7 in 2021—down by 1 percentage point from the year prior—and equivalent to an indicator rank of 29.

3.1.1 **ICT access** was equal to 7.7 in 2020 and equivalent to an indicator rank of 89.

4.2.4 **Venture capital received** was equal to 3.3 bn USD in 2021—up by 322 percentage points from the year prior—and equivalent to an indicator rank of 36.

4.3.2 **Domestic industry diversification** was equal to 0.2 in 2019—up by 3 percentage points from the year prior—and equivalent to an indicator rank of 57.

5.1.1 **Knowledge-intensive employment** was equal to 11.2 mn people in 2021—up by 9 percentage points from the year prior—and equivalent to an indicator rank of 75.
Innovation outputs

6.1.1 Patents by origin was equal to 1.1 thsd in 2020—down by 13 percentage points from the year prior—and equivalent to an indicator rank of 77.

6.1.5 Citable documents H-index was equal to 536.0 in 2021—up by 18 percentage points from the year prior—and equivalent to an indicator rank of 34.

6.2.5 High-tech manufacturing was equal to 50.3% of mfg. output in 2019—up by 1 percentage point from the year prior—and equivalent to an indicator rank of 11.

6.3.1 Intellectual property receipts was equal to 7.7 mn USD in 2020—up by 5 percentage points from the year prior—and equivalent to an indicator rank of 101.
6.3.2 Production and export complexity was equal to 1.3 in 2019—up by 2 percentage points from the year prior—and equivalent to an indicator rank of 18.

6.3.3 High-tech exports was equal to 71.3 bn USD in 2020—down by 5 percentage points from the year prior—and equivalent to an indicator rank of 9.

7.1.1 Intangible asset intensity was equal to 72.5% of total value in 2021 and equivalent to an indicator rank of 16.

7.1.3 Global brand value was equal to 63.9 bn USD in 2021—down by 4 percentage points from the year prior—and equivalent to an indicator rank of 33.

7.2.1 Cultural and creative services exports was equal to 2.4 mn USD in 2020—down by 52 percentage points from the year prior—and equivalent to an indicator rank of 112.
MEXICO’S INNOVATION TOP PERFORMERS

2.3.3 Global corporate R&D investors

<table>
<thead>
<tr>
<th>Firm</th>
<th>Industry</th>
<th>R&amp;D [mn EUR]</th>
<th>R&amp;D Growth [%]</th>
<th>R&amp;D Intensity [%]</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMEX</td>
<td>Construction &amp; Materials</td>
<td>58</td>
<td>-49.3</td>
<td>0.5</td>
<td>1,806</td>
</tr>
</tbody>
</table>

Note: European Commission’s Joint Research Centre ranks the top 2,500 firms by R&D investment annually.

2.3.4 QS university ranking

<table>
<thead>
<tr>
<th>University</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO</td>
<td>58.3</td>
<td>105=</td>
</tr>
<tr>
<td>TECNOLÓGICO DE MONTERREY</td>
<td>48.2</td>
<td>161=</td>
</tr>
<tr>
<td>UNIVERSIDAD PARAMERICANA</td>
<td>21.7</td>
<td>551-560</td>
</tr>
</tbody>
</table>

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".

7.1.1 Intangible asset intensity, top 15

<table>
<thead>
<tr>
<th>Firm</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMERICA MOVIL</td>
<td>1</td>
</tr>
<tr>
<td>GRUPO MEXICO</td>
<td>2</td>
</tr>
<tr>
<td>FOMENTO ECONOMICO MEXICA</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Brand Finance only provides within economy ranks.

7.1.3 Global brand value, top 5,000

<table>
<thead>
<tr>
<th>Brand</th>
<th>Industry</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORONA</td>
<td>Beers</td>
<td>1</td>
</tr>
<tr>
<td>CLARO</td>
<td>Telecoms</td>
<td>2</td>
</tr>
<tr>
<td>PEMEX</td>
<td>Oil &amp; Gas</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Rank corresponds to within economy ranks.
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.

Source: Global Innovation Index Database, WIPO, 2022.