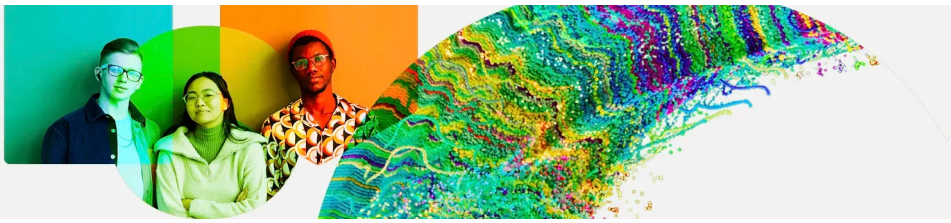
Global Innovation Index 2024



Mexico ranking in the Global Innovation Index 2024

Mexico ranks 56th among the 133 economies featured in the GII 2024.

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.

Mexico ranks 10th among the 34 upper-middle-income group economies.

Mexico ranks 3rd among the 20 economies in Latin America and the Caribbean.

Mexico GII Ranking (2020-2024)

The table shows the rankings of Mexico 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 Mexico in the GII 2024 is between ranks 51 and 60.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	55th	61st	57th
2021	55th	62nd	51st
2022	58th	70th	55th
2023	58th	77th	51st
2024	56th	73rd	52nd

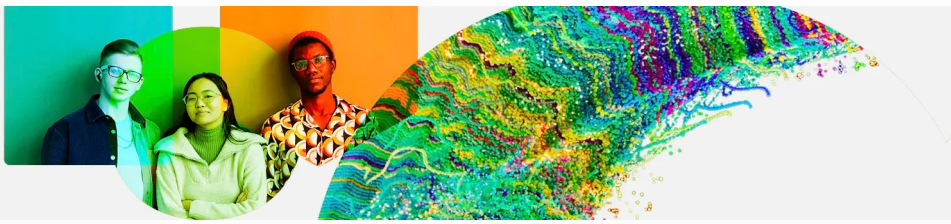
Mexico performs better in innovation outputs than innovation inputs in 2024.

This year Mexico ranks 73rd in innovation inputs. This position is higher than last year.

Mexico ranks 52nd in innovation outputs. This position is lower than last year.

Mexico has no clusters in the top 100 S&T clusters of the Global Innovation Index.

Global Innovation Index 2024



> Global Innovation Tracker

The Global Innovation Tracker 2024 shows what is the current state of innovation in Mexico, how rapidly is technology being embraced and what are the resulting societal impacts.

For Mexico, 6 indicators have improved in the short-term and 6 indicators have worsened.

Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -7.2% 2022 - 2023	▼ -1.2% 2021 - 2022	▼ -17% 2022 - 2023	▼ -65.4% 2022 - 2023	▼ -18.4% 2022 - 2023
▲ 4.3% 2013 - 2023	▼ -2.8% 2012 - 2022	▲ 16.6% 2013 - 2023	▲ 21.5% 2013 - 2023	▼ -4% 2013 - 2023

Technology adoption

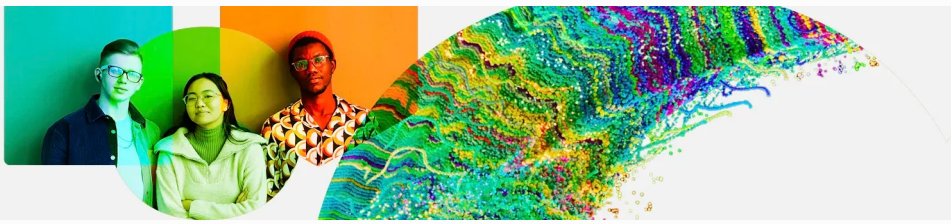
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 4.1% 2021 - 2022	▲ 5.6% 2021 - 2022	n/a	▲ 13.1% 2021 - 2022	▲ 66.7% 2022 - 2023
▲ 4.9% 2012 - 2022	▲ 6.1% 2012 - 2022		▲ 29.1% 2012 - 2022	▲ 82.1% 2013 - 2023
62.5 per 100 inhabitants in 2022	20.5 per 100 inhabitants in 2022	18.9 per 100 inhabitants in 2022		0.1 per 100 inhabitants in 2023

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 0.4% 2022 - 2023	▲ 6.6% 2021 - 2022	▲ 1.7°C 2023
▼ -0.6% 2013 - 2023	0% 2012 - 2022	n/a
56,508 USD in 2023	74.8 years in 2022	

Notes: Not all indicators of the Global Innovation Tracker are used to calculate the Global Innovation Index. Long-term annual growth refers to the compound annual growth rate (CAGR) over the indicated period. For each variable, a one-year growth rate is set for the short run, and ten-year CAGR is set for the long run; time windows might differ when gaps exist in data availability. The end period corresponds to the most recent available observation, which may differ among countries. Temperature change is an exception: it indicates the change in degrees Celsius with respect to the average temperature in the country from 1951–1980. Figures are rounded.

Global Innovation Index 2024



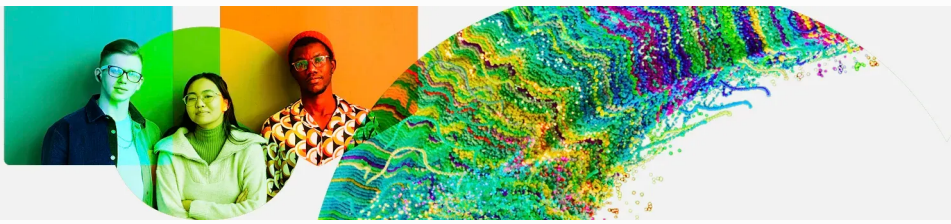
Expected vs. observed innovation performance

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.

> Innovation overperformers relative to their economic development

Global Innovation Index 2024

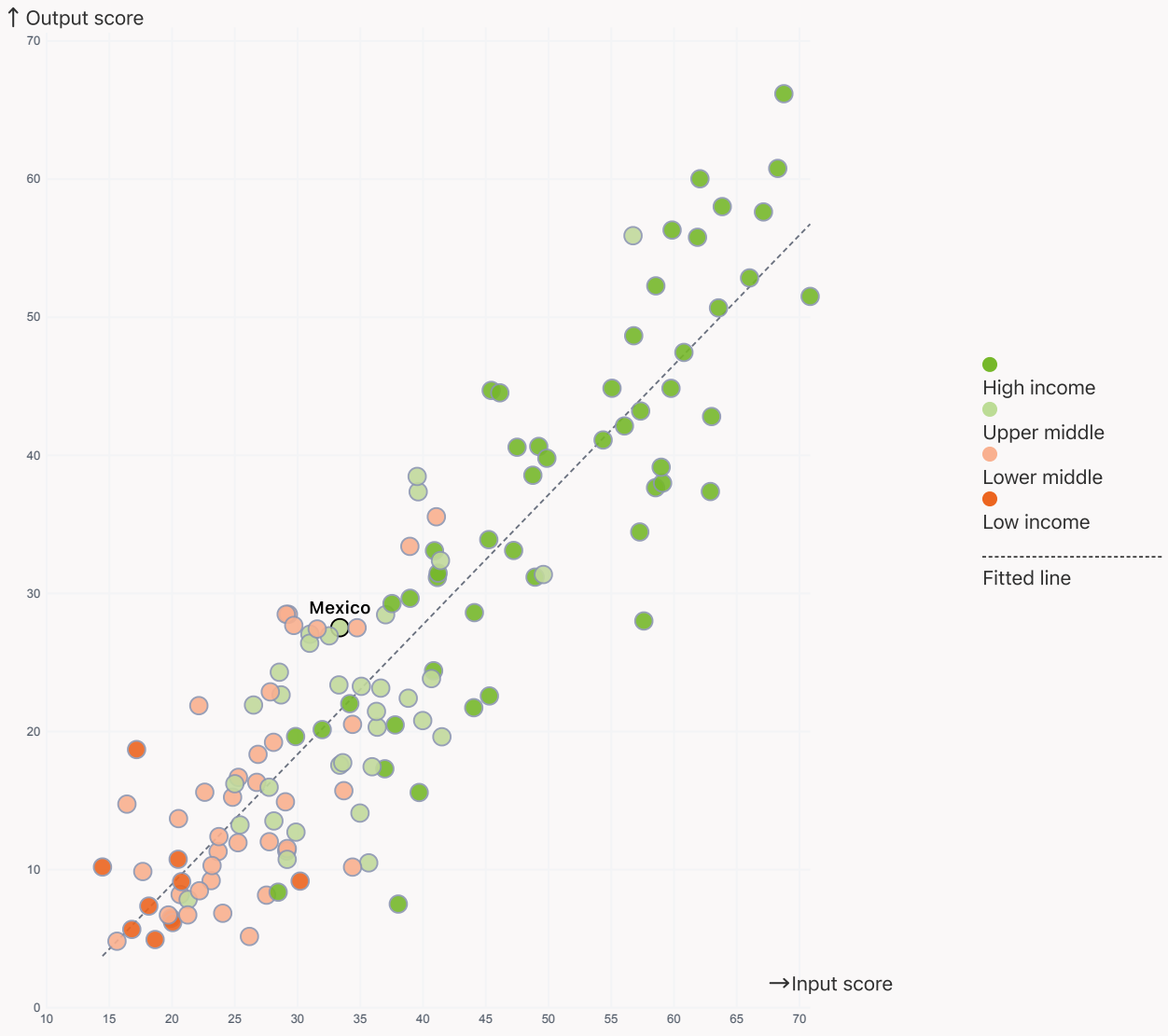


Effectively translating innovation investments into innovation outputs

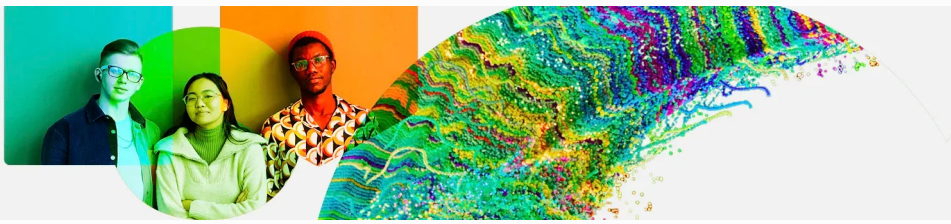
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

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

> Relationship between innovation inputs and outputs

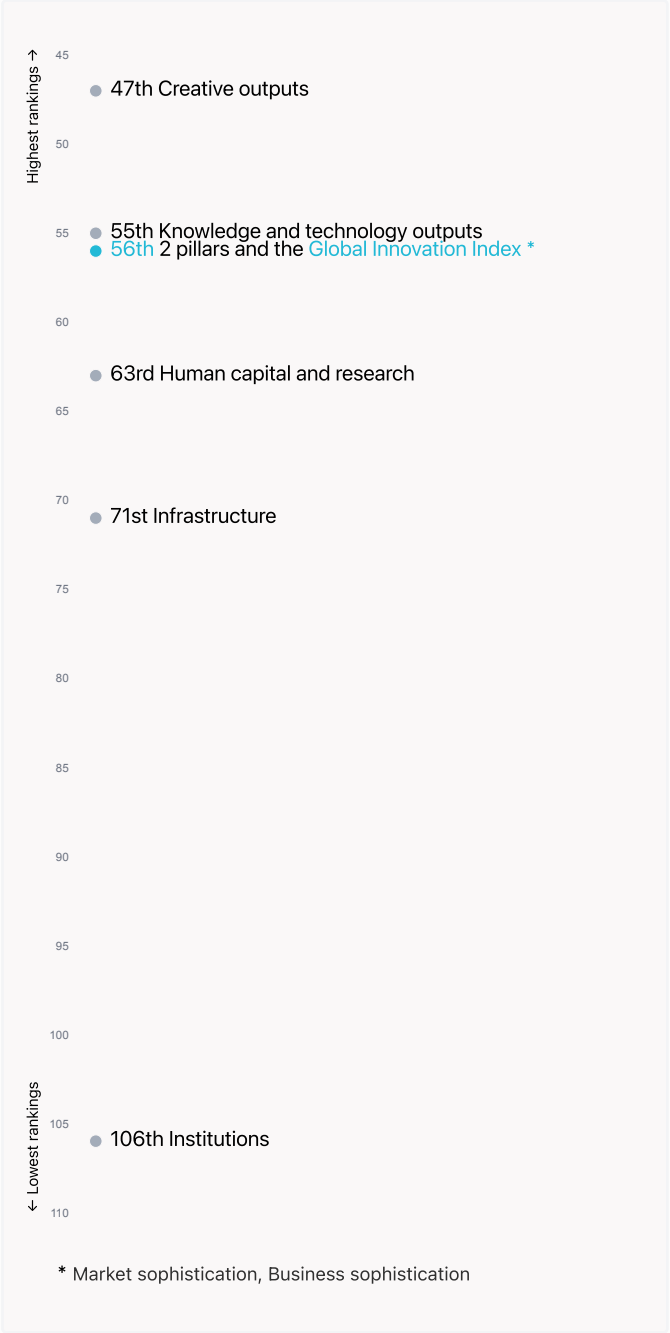


Global Innovation Index 2024



Overview of Mexico's rankings in the seven areas of the GII in 2024

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Mexico are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest rankings

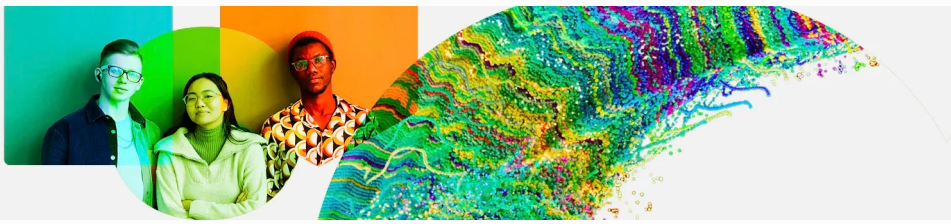
Mexico ranks highest in Creative outputs (47th), Knowledge and technology outputs (55th) and Market sophistication, Business sophistication (56th).

Lowest rankings

Mexico ranks lowest in Institutions (106th), Infrastructure (71st) and Human capital and research (63rd).

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

Global Innovation Index 2024



Benchmark of Mexico against other economy groupings for each of the seven areas of the GII Index

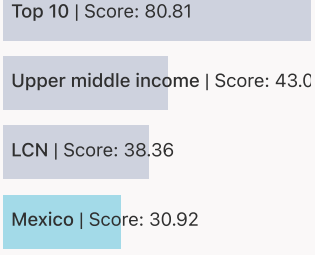
The charts shows the relative position of Mexico (blue bar) against other economy groupings (grey bars), for each of the seven areas of the GII Index.

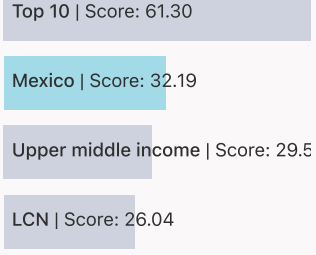
Upper-Middle-Income economies

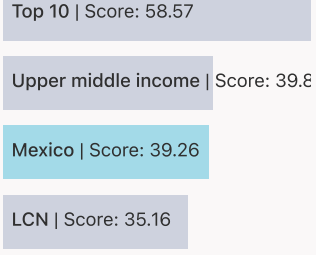
Mexico performs above the upper-middle-income group average in Human capital and research, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

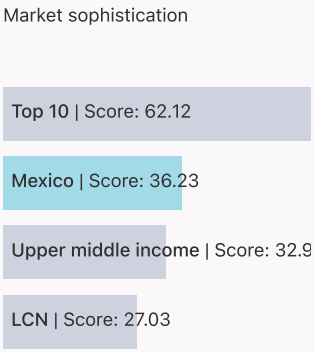
Latin America And The Caribbean

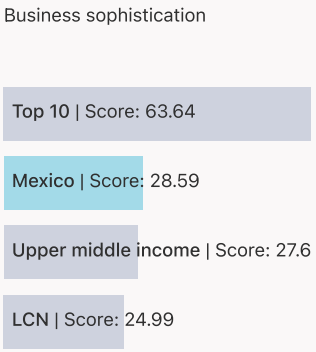
Mexico performs above the regional average in Human capital and research, Infrastructure, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

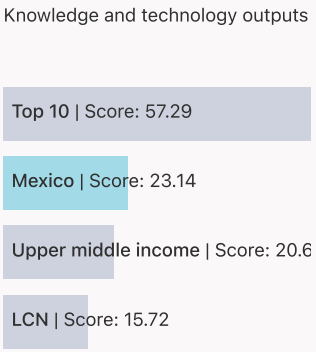


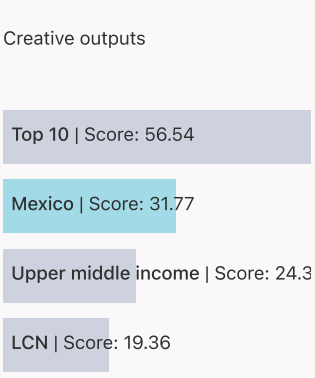




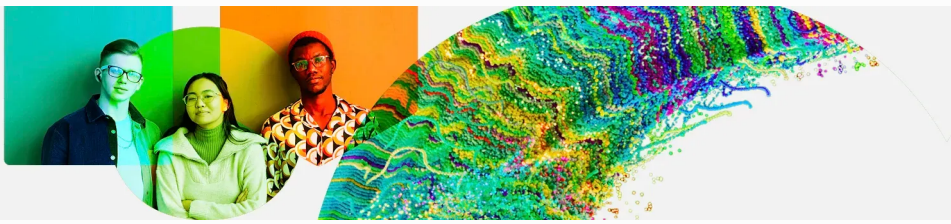








Global Innovation Index 2024



Innovation strengths and weaknesses in Mexico

The table below gives an overview of the indicator strengths and weaknesses of Mexico in the GII 2024.

Mexico's main innovation strengths are **Creative goods exports, % total trade** (rank 1), **High-tech exports, % total trade** (rank 11) and **Domestic market scale, bn PPP$** (rank 12).

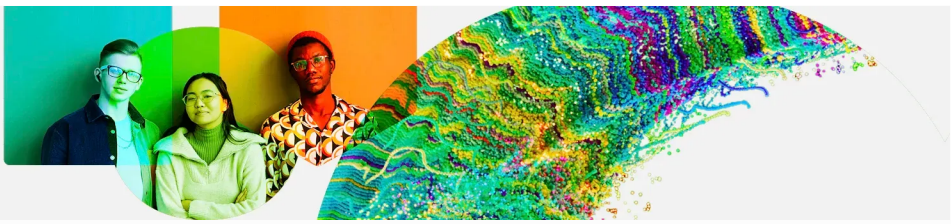
Strengths

Rank	Code	Indicator name
1	7.2.4	Creative goods exports, % total trade
11	6.3.3	High-tech exports, % total trade
12	4.3.3	Domestic market scale, bn PPP$
15	7.1.1	Intangible asset intensity, top 15, %
15	6.2.4	High-tech manufacturing, %
16	5.3.2	High-tech imports, % total trade
19	4.3.1	Applied tariff rate, weighted avg., %
22	6.3.2	Production and export complexity
30	2.3.4	QS university ranking, top 3*
30	2.3.3	Global corporate R&D investors, top 3, mn USD

Weaknesses

Rank	Code	Indicator name
124	6.3.4	ICT services exports, % total trade
123	6.2.1	Labor productivity growth, %
120	1.3.1	Policy stability for doing business†
113	1.2.2	Rule of law*
108	5.2.1	Public Research-Industry co-publications, %
104	6.1.4	Scientific and technical articles/bn PPP$ GDP
99	5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP
90	7.2.1	Cultural and creative services exports, % total trade
88	2.2.3	Tertiary inbound mobility, %
67	1.3.2	Entrepreneurship policies and culture†

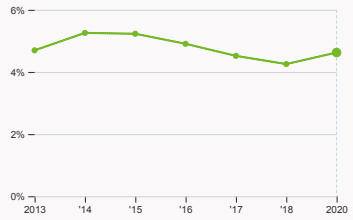
Global Innovation Index 2024



Mexico's innovation system

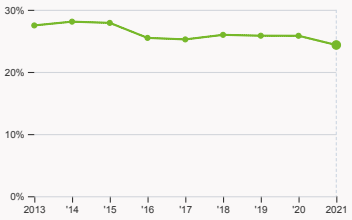
As far as practicable, the plots below present unscaled indicator data.

Innovation inputs in Mexico



2.1.1 **Expenditure on education**

was equal to 4.63 % GDP in 2020, up by 0.37 percentage points from the year prior – and equivalent to an indicator rank of 52.

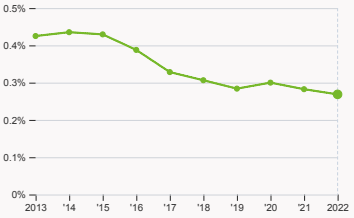


2.2.2 **Graduates in science and engineering**

was equal to 24.34 % of total graduates in 2021, down by 1.48 percentage points from the year prior – and equivalent to an indicator rank of 50.

2.3.1 **Researchers**

was equal to 384.09 FTE per million population in 2021, up by 7.29% from the year prior – and equivalent to an indicator rank of 80.



2.3.2 **Gross expenditure on R&D**

was equal to 0.27 % GDP in 2022, down by 0.01 percentage points from the year prior – and equivalent to an indicator rank of 80.

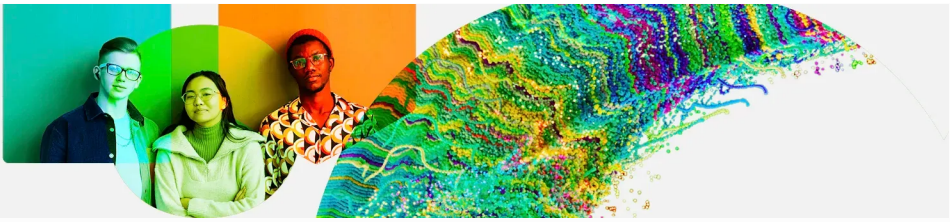
2.3.4 **QS university ranking**

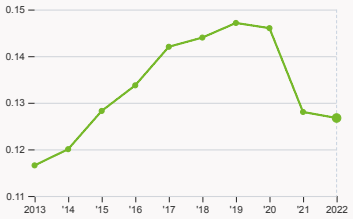
was equal to an average score of 42.33 for the top three universities in 2023, down by 4.81% from the year prior – and equivalent to an indicator rank of 30.

4.2.4 **VC received, value**

was equal to 465.13 thousand USD in 2023, down by 65.43% from the year prior – and equivalent to an indicator rank of 47.

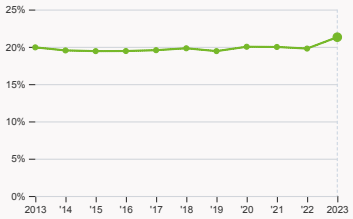
Global Innovation Index 2024





4.3.2 Domestic industry diversification

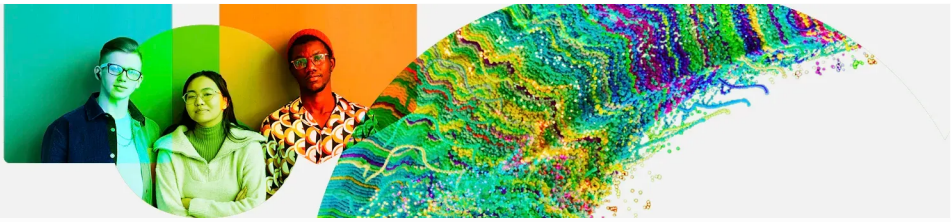
was equal to an index score of 0.13 in 2022, down by 1.01% from the year prior – and equivalent to an indicator rank of 46.



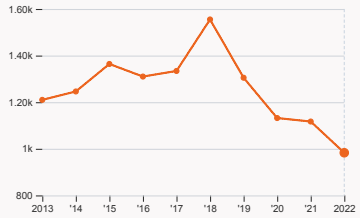
5.1.1 Knowledge-intensive employment

was equal to 21.3 % in 2023, up by 1.53 percentage points from the year prior – and equivalent to an indicator rank of 73.

Global Innovation Index 2024

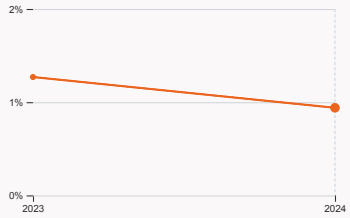


Innovation outputs in Mexico



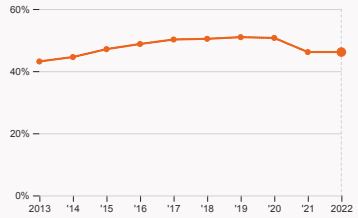
6.1.1 Patents by origin

was equal to 983 patents in 2022, down by 12% from the year prior – and equivalent to an indicator rank of 89.



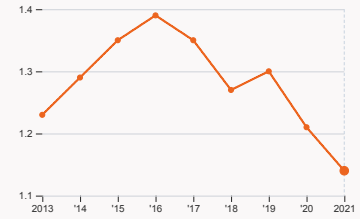
6.2.2 Unicorn valuation

was equal to 0.94 % GDP in 2024, down by 0.33 percentage points from the year prior – and equivalent to an indicator rank of 33.



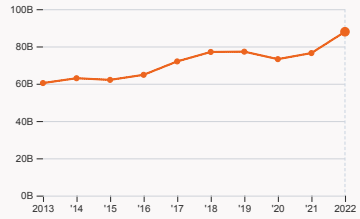
6.2.4 High-tech manufacturing

was equal to 46.14 % of total manufacturing output in 2022 with no change from the year prior – and equivalent to an indicator rank of 15.



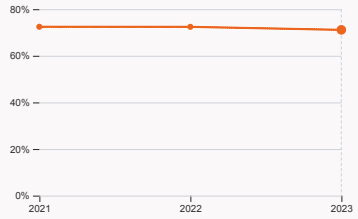
6.3.2 Production and export complexity

was equal to a score of 1.14 in 2021, down by 5.79% from the year prior – and equivalent to an indicator rank of 22.



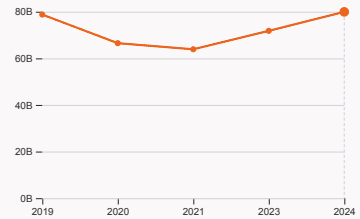
6.3.3 High-tech exports

was equal to 87.89 billion USD in 2022, up by 14.96% from the year prior – and equivalent to an indicator rank of 11.



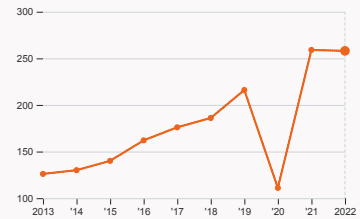
7.1.1 Intangible asset intensity

was equal to 71.12 % for the top 15 companies in 2023, down by 1.3 percentage points from the year prior – and equivalent to an indicator rank of 15.



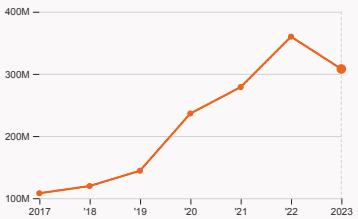
7.1.3 Global brand value

was equal to 79.94 billion USD for the brands in the top 5,000 in 2024, up by 11.34% from the year prior – and equivalent to an indicator rank of 35.



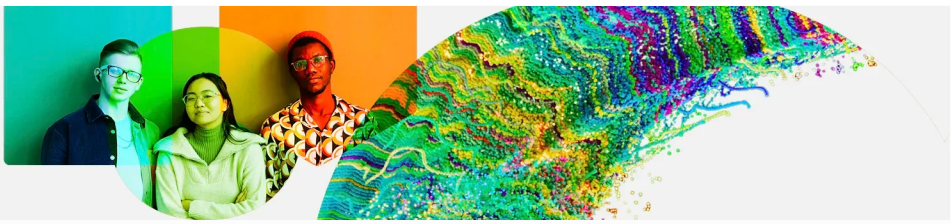
7.2.2 National feature films

was equal to 258 films in 2022, down by 0.39% from the year prior – and equivalent to an indicator rank of 45.



7.3.3 Mobile app creation

was equal to 307.88 million global downloads of mobile apps in 2023, down by 14.46% from the year prior – and equivalent to an indicator rank of 75.



Mexico's innovation top performers

2.3.4 QS university ranking of Mexico's top universities

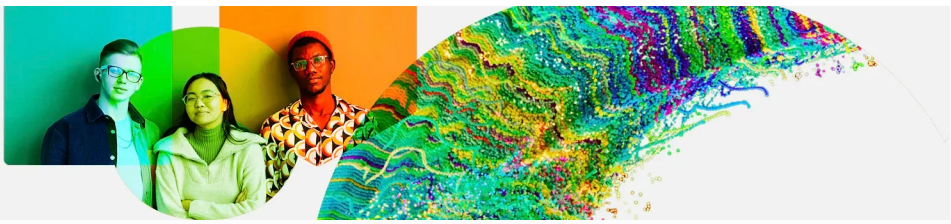
Rank	University	Score
93	UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO (UNAM)	61.40
184	TECNOLOGICO DE MONTERREY (ITESM)	47.60
651-660	INSTITUTO TECNOLOGICO AUTONOMO DE MEXICO (ITAM)	18.00

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2023).
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".

6.2.2 Top Unicorn Companies in Mexico

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	KAVAK	Industrials	Lerma de Villada	9
2	BITSO	Financial Services	Mexico City	2
3	CLIP	Financial Services	Mexico City	2

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: https://www.cbinsights.com/research-unicorn-companies



7.1.1 Top 15 intangible-asset intensive companies in Mexico

Rank	Firm	Intensity, %
1	AMERICA MOVIL, S.A.B. DE C.V.	56.89
2	FOMENTO ECONOMICO MEXICANO, S.A.B. DE C.V.	72.27
3	GRUPO BIMBO, S.A.B. DE C.V.	75.12

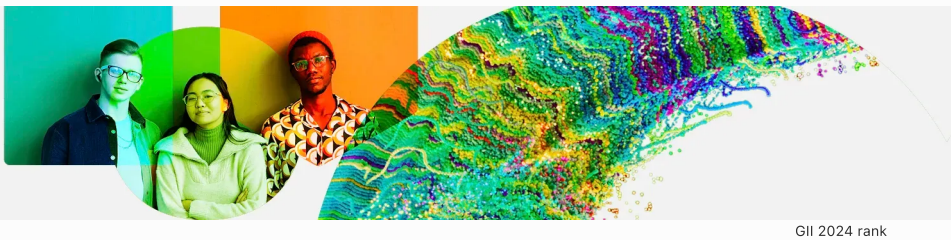
Source: Brand Finance (https://brandirectory.com/reports/gift-2022).
Note: Brand Finance only provides within economy ranks.

7.1.3 Top 5,000 companies in Mexico with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	CORONA EXTRA	Beers	10,388.9
2	MODELO ESPECIAL	Beers	5,243.5
3	BODEGA AURRERA	Retail	4,601.8

Source: Brand Finance (https://brandirectory.com).
Note: Rank corresponds to within economy ranks.

Global Innovation Index 2024



Mexico

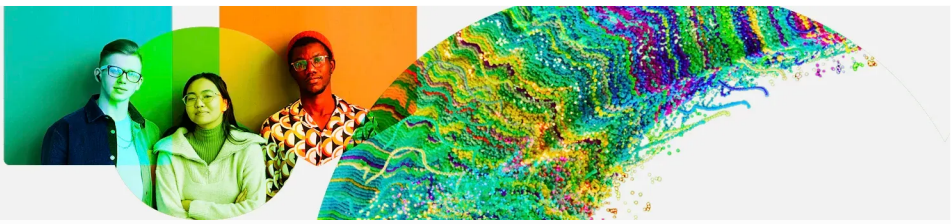
GII 2024 rank **56**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
52	73	Upper middle	LCN	129.7	3,277.6	24,976

	Score / Value	Rank	
Institutions	**30.9**	**106**	○
1.1 Institutional environment	**43**	**90**	
1.1.1 Operational stability for businesses*	49.3	95	
1.1.2 Government effectiveness*	36.6	83	
1.2 Regulatory environment	**28.5**	**97**	
1.2.1 Regulatory quality*	37.9	79	
1.2.2 Rule of law*	19	113	○ ◇
1.3 Business environment	**21.3**	**114**	○
1.3.1 Policy stability for doing business†	22.3	120	○ ◇
1.3.2 Entrepreneurship policies and culture†	20.3	67	○
Human capital and research	**32.2**	**63**	
2.1 Education	**44.4**	**83**	
2.1.1 Expenditure on education, % GDP	4.6	52	
2.1.2 Government funding/pupil, secondary, % GDP/cap	14.1	72	
2.1.3 School life expectancy, years	14.5	61	
2.1.4 PISA scales in reading, maths and science	406.8	55	
2.1.5 Pupil–teacher ratio, secondary	15.2	78	
2.2 Tertiary education	**27**	**84**	
2.2.1 Tertiary enrolment, % gross	46.4	72	
2.2.2 Graduates in science and engineering, %	24.3	50	
2.2.3 Tertiary inbound mobility, %	1.2	88	○
2.3 Research and development (R&D)	**25.2**	**39**	◆
2.3.1 Researchers, FTE/mn pop.	384.1	80	
2.3.2 Gross expenditure on R&D, % GDP	0.3	80	
2.3.3 Global corporate R&D investors, top 3, mn USD	49.7	30	● ◆
2.3.4 QS university ranking, top 3*	42.8	30	● ◆
Infrastructure	**39.3**	**71**	
3.1 Information and communication technologies (ICTs)	**77.2**	**49**	
3.1.1 ICT access*	77.4	87	
3.1.2 ICT use*	78.8	62	
3.1.3 Government's online service*	80.6	31	
3.1.4 E-participation*	72.1	32	
3.2 General infrastructure	**25.1**	**87**	
3.2.1 Electricity output, GWh/mn pop.	3,076.4	63	
3.2.2 Logistics performance*	36.4	65	
3.2.3 Gross capital formation, % GDP	22.8	79	
3.3 Ecological sustainability	**15.5**	**90**	
3.3.1 GDP/unit of energy use	12.7	44	
3.3.2 Low-carbon energy use, %	10	86	
3.3.3 ISO 14001 environment/bn PPP$ GDP	1	70	
Market sophistication	**36.2**	**56**	
4.1 Credit	**18.7**	**90**	
4.1.1 Finance for startups and scaleups†	36.3	59	
4.1.2 Domestic credit to private sector, % GDP	34.3	89	
4.1.3 Loans from microfinance institutions, % GDP	0.9	34	
4.2 Investment	**9**	**64**	
4.2.1 Market capitalization, % GDP	33.9	44	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.03	79	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.03	78	
4.2.4 VC received, value, % GDP	0.001	47	
4.3 Trade, diversification and market scale	**81**	**12**	● ◆
4.3.1 Applied tariff rate, weighted avg., %	1.1	19	● ◆
4.3.2 Domestic industry diversification	87	46	
4.3.3 Domestic market scale, bn PPP$	3,277.6	12	● ◆

	Score / Value	Rank	
Business sophistication	**28.6**	**56**	
5.1 Knowledge workers	**27.1**	**80**	
5.1.1 Knowledge-intensive employment, %	21.3	73	
5.1.2 Firms offering formal training, %	37.8	42	
5.1.3 GERD performed by business, % GDP	0.06	67	
5.1.4 GERD financed by business, %	17	72	
5.1.5 Females employed w/advanced degrees, %	10.5	72	
5.2 Innovation linkages	**22**	**73**	
5.2.1 Public Research-Industry co-publications, %	0.6	108	○
5.2.2 University-industry R&D collaboration†	42.5	74	
5.2.3 State of cluster development†	57.9	43	
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.007	99	○
5.2.5 Patent families/bn PPP$ GDP	0.03	80	
5.3 Knowledge absorption	**36.8**	**36**	◆
5.3.1 Intellectual property payments, % total trade	0.9	44	
5.3.2 High-tech imports, % total trade	15.5	16	● ◆
5.3.3 ICT services imports, % total trade	0.8	91	
5.3.4 FDI net inflows, % GDP	2.7	57	
5.3.5 Research talent, % in businesses	50.6	26	◆
Knowledge and technology outputs	**23.1**	**55**	
6.1 Knowledge creation	**10.4**	**80**	
6.1.1 Patents by origin/bn PPP$ GDP	0.3	89	
6.1.2 PCT patents by origin/bn PPP$ GDP	0.05	76	
6.1.3 Utility models by origin/bn PPP$ GDP	0.2	40	
6.1.4 Scientific and technical articles/bn PPP$ GDP	5.2	104	○
6.1.5 Citable documents H-index	29.3	35	◆
6.2 Knowledge impact	**30.8**	**50**	
6.2.1 Labor productivity growth, %	-1.4	123	○ ◇
6.2.2 Unicorn valuation, % GDP	0.9	33	
6.2.3 Software spending, % GDP	0.2	83	
6.2.4 High-tech manufacturing, %	46.1	15	● ◆
6.3 Knowledge diffusion	**28.2**	**46**	
6.3.1 Intellectual property receipts, % total trade	0.2	46	
6.3.2 Production and export complexity	71.7	22	● ◆
6.3.3 High-tech exports, % total trade	13.9	11	● ◆
6.3.4 ICT services exports, % total trade	0.2	124	○
6.3.5 ISO 9001 quality/bn PPP$ GDP	3.2	76	
Creative outputs	**31.8**	**47**	
7.1 Intangible assets	**35.7**	**46**	
7.1.1 Intangible asset intensity, top 15, %	71.1	15	● ◆
7.1.2 Trademarks by origin/bn PPP$ GDP	45	39	
7.1.3 Global brand value, top 5,000, % GDP	4	35	
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.3	88	
7.2 Creative goods and services	**32.2**	**29**	● ◆
7.2.1 Cultural and creative services exports, % total trade	0.1	90	○
7.2.2 National feature films/mn pop. 15–69	2.9	45	
7.2.3 Entertainment and media market/th pop. 15–69	8.5	39	
7.2.4 Creative goods exports, % total trade	9.7	1	● ◆
7.3 Online creativity	**23.5**	**78**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	3.1	67	
7.3.2 GitHub commits/mn pop. 15–69	4.4	83	
7.3.3 Mobile app creation/bn PPP$ GDP	63.1	75	

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, 🕓 that the economy's data is outdated. Square brackets [ ] indicate the the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; n/a represents missing values; a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.



Data availability

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

Mexico has missing data for zero indicators and outdated data for five indicators.

Outdated data for Mexico

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2020	2022	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.3	GERD performed by business, % GDP	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
7.2.1	Cultural and creative services exports, % total trade	2021	2022	World Trade Organization Global Services Trade Data Hub

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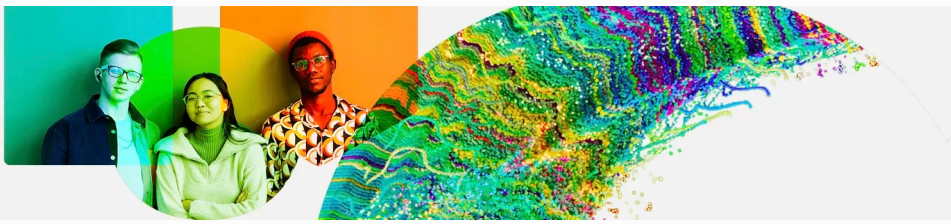

About the Global Innovation Index

- 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, 2024.

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.