Global Innovation Index 2025

Türkiye ranking in the Global Innovation Index 2025

Türkiye ranks 43rd among the 139 economies featured in the GII 2025.

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.

Türkiye ranks 3rd among the 36 Upper middle-income group economies.

Türkiye ranks 4th among the 18 economies in Northern Africa and Western Asia.

Türkiye GII Ranking (2020-2025)

The table shows the rankings of Türkiye over the past six 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 Türkiye in the GII 2025 is between ranks 39 and 45.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	51st	52nd	53rd
2021	41st	45th	41st
2022	37th	49th	33rd
2023	39th	52nd	32nd
2024	37th	51st	28th
2025	43rd	49th	35th

Türkiye performs better in innovation outputs than innovation inputs in 2025.

This year **Türkiye ranks 49th in innovation inputs.** This position is higher than last year.

Türkiye ranks 35th in innovation outputs. This position is lower than last year.

Türkiye has 1 cluster in the world's top innovation clusters of the Global Innovation Index.

Global Innovation Index 2025

> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Türkiye, how rapidly is technology being embraced and what are the resulting societal impacts.

For Türkiye, 8 indicators have improved in the short-term and 3 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▲ 3.4 % 2023 - 2024	▲ 13 % 2022 - 2023	▼ -39.7 % 2023 - 2024	▲ 3.8 % 2023 - 2024
Long term (annual growth)	▲ 6 % 2014 - 2024	▲ 11 % 2013 - 2023	▲ 1.6 % 2020 - 2024	▲ 8.8 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	▲ 2.2% 2023 - 2024	▲ 3.2% 2022 - 2023	n/a	▲ 15.6% 2022 - 2023	▲ 134.4% 2023 - 2024
Long term (annual growth)	▲ 2.5% 2014 - 2024	▲ 8.2% 2013 - 2023	n/a	▲ 18% 2013 - 2023	▲ 93.6% 2014 - 2024
Penetration	78.9 per 100 inhabitants in 2024	22.5 per 100 inhabitants in 2023	n/a	n/a	1.4 per 100 cars in 2024

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 3.3 % 2023 - 2024	▼ -0.6 % 2022 - 2023	+ 2.8 °C 2024
Long term (annual growth)	▲ 3.1 % 2014 - 2024	▲ 0.1 % 2013 - 2023	+ 1.3 °C 2014
Level	117,358 USD in 2024	77.2 years in 2023	n/a

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 countries. from 1951–1980. Figures are rounded.

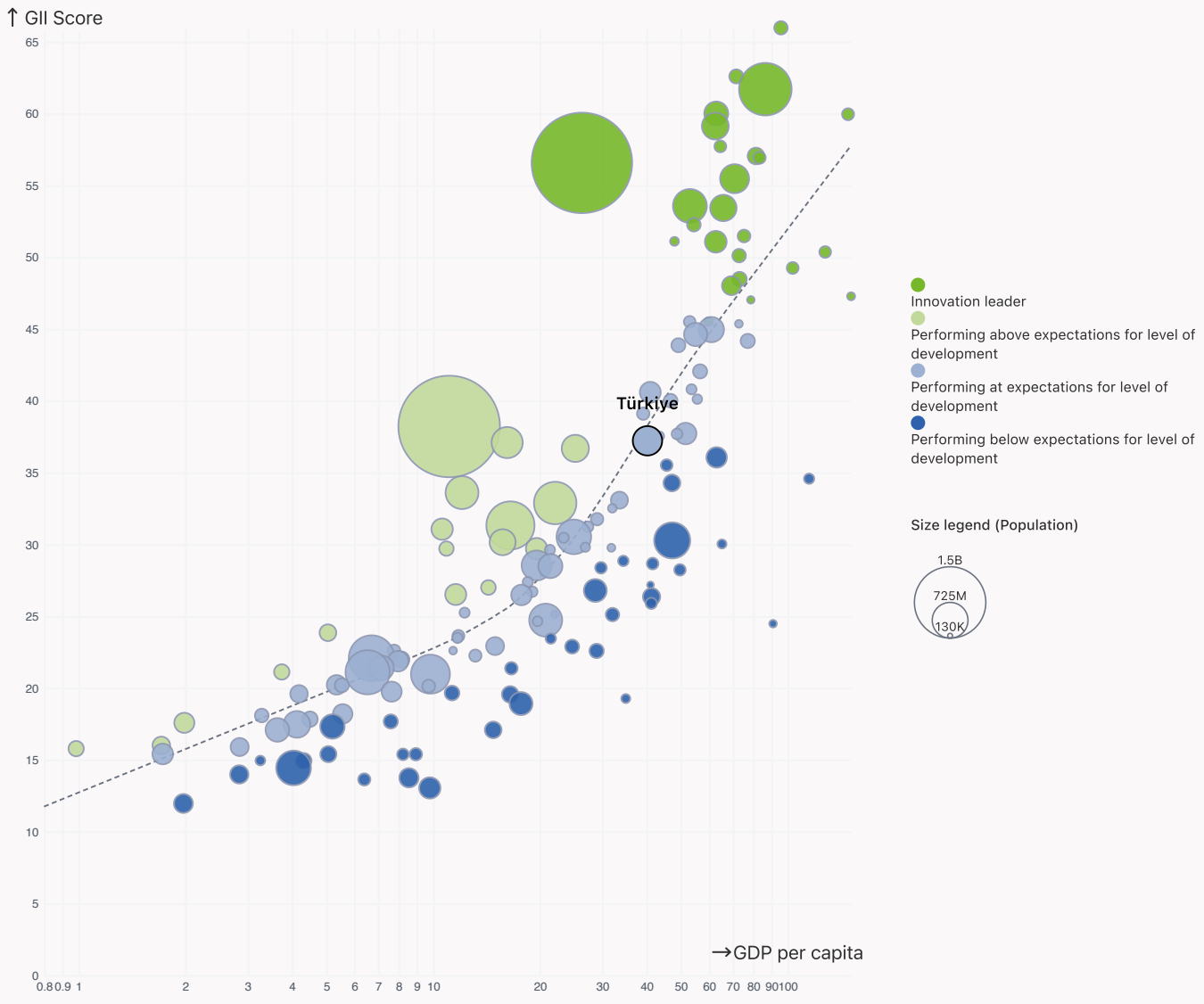
Global Innovation Index 2025

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 Türkiye performs at expectations for its level of development.

> Innovation overperformers relative to their economic development



Global Innovation Index 2025

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.

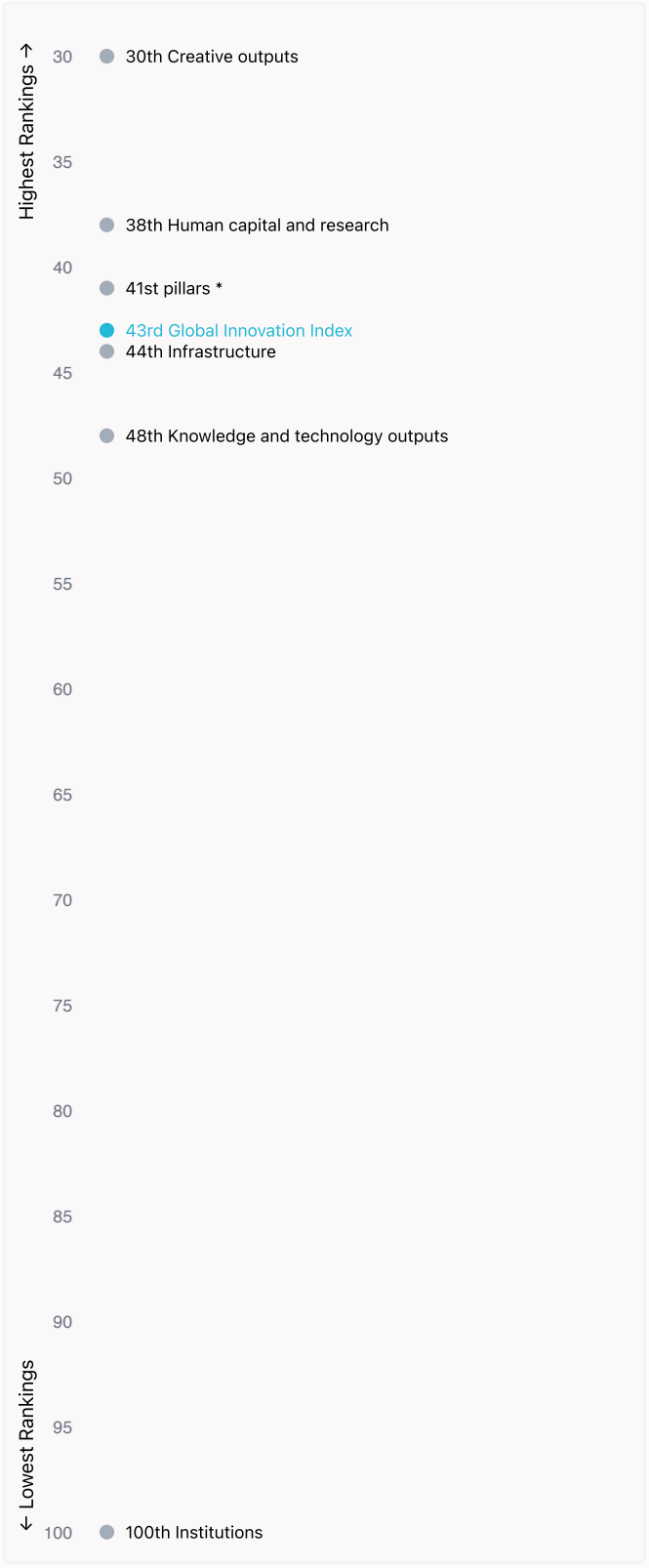
Türkiye produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

Overview of Türkiye's rankings in the seven areas of the GII in 2025

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



Highest Rankings

Türkiye ranks highest in Creative outputs (30th), Human capital and research (38th) and Market sophistication, Business sophistication (41st).

Lowest Rankings

Türkiye ranks lowest in Institutions (100th), Knowledge and technology outputs (48th) and Infrastructure (44th).

* Market sophistication, Business sophistication

The full WIPO Intellectual Property Statistics profile for Türkiye can be found on https://www.wipo.int/edocs/statistics-country-profile/en/tr.pdf

Global Innovation Index 2025

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

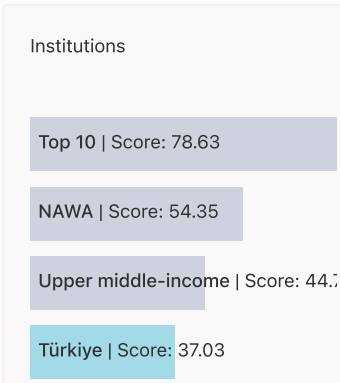
The charts shows the relative position of Türkiye (blue bar) against other economy groupings (grey bars)

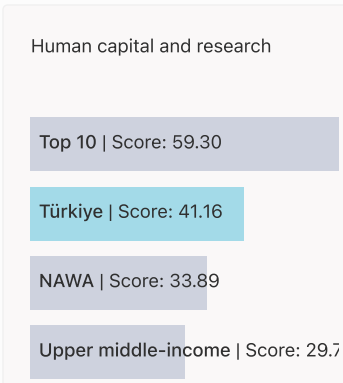
Upper middle-income economies

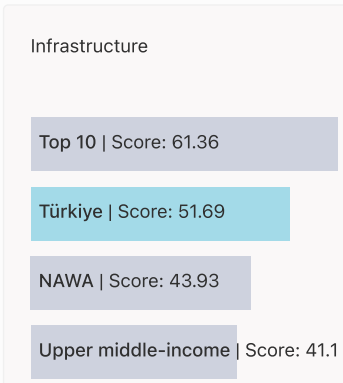
Türkiye performs above the Upper middle-income group average in Human capital and research, Infrastructure, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

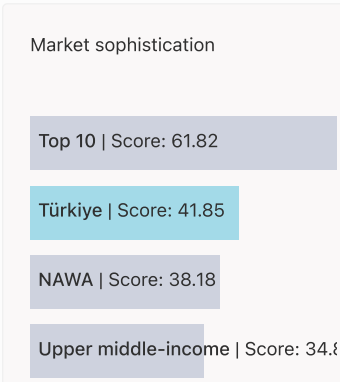
Northern Africa and Western Asia

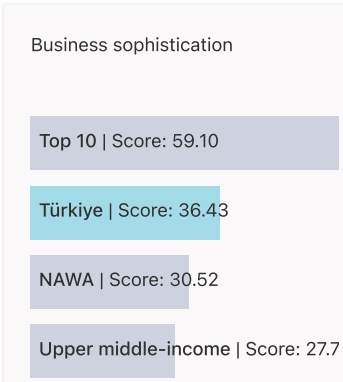
Türkiye performs above the regional average in Human capital and research, Infrastructure, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

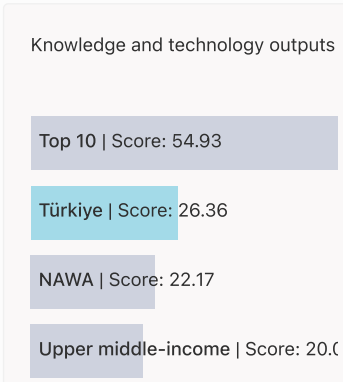


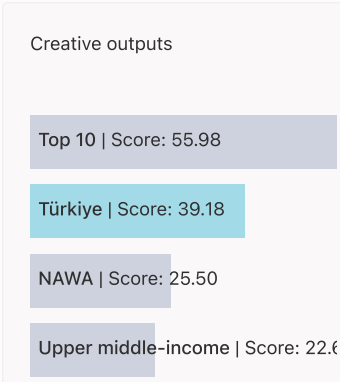












Global Innovation Index 2025

Innovation strengths and weaknesses in Türkiye

The table below gives an overview of the indicator strengths and weaknesses of Türkiye in the GII 2025.

Türkiye's best-ranked innovation strengths are **Tertiary enrolment, % gross** (rank 2), **School life expectancy, years** (rank 3) and **Industrial designs by origin/bn PPP$ GDP** (rank 4).

Strengths

Rank	Code	Indicator name
2	2.2.1	Tertiary enrolment, % gross
3	2.1.3	School life expectancy, years
4	7.1.4	Industrial designs by origin/bn PPP$ GDP
6	4.3.2	Domestic industry diversification
6	7.1.2	Trademarks by origin/bn PPP$ GDP
7	5.3.5	Research talent, % in businesses
12	4.3.3	Domestic market scale, bn PPP$
13	3.1.3	Government's online service*
18	3.3.1	GDP/unit of energy use
20	7.2.4	Creative goods exports, % total trade

Weaknesses

Rank	Code	Indicator name
110	1.3.1	Policy stability for doing business†
108	2.1.1	Expenditure on education, % GDP
103	5.3.4	FDI net inflows, % GDP
103	1.1.1	Operational stability for businesses*
100	1.2.2	Rule of law*
93	7.2.1	Cultural and creative services exports, % total trade
92	2.2.2	Graduates in science and engineering, %
85	2.1.5	Pupil–teacher ratio, secondary
83	2.1.2	Government funding/pupil, secondary, % GDP/cap
51	7.2.3	Entertainment and media market/th pop. 15–69

Global Innovation Index 2025

Türkiye's innovation system

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

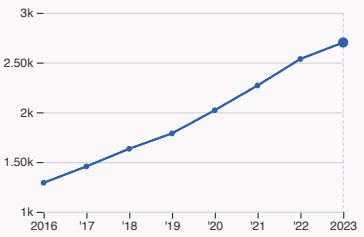
Innovation inputs in Türkiye

2.1.1 Expenditure on education

was equal to 3.06 % GDP in 2023, up by 0.45 percentage points from the year prior – and equivalent to an indicator rank of 108.

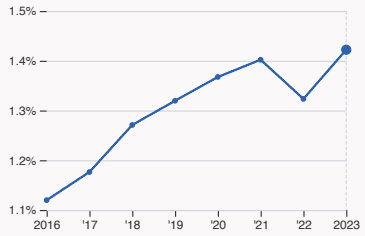
2.2.2 Graduates in science and engineering

was equal to 18.5 % of total graduates in 2022, up by 2.69 percentage points from the year prior – and equivalent to an indicator rank of 92.



2.3.1 Researchers

was equal to 2701.79 FTE per million population in 2023, up by 6.53% from the year prior – and equivalent to an indicator rank of 33.



2.3.2 Gross expenditure on R&D

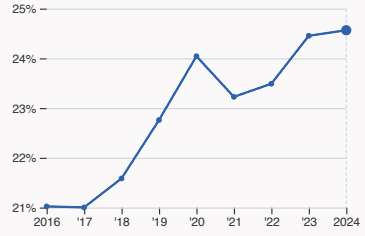
was equal to 1.42 % GDP in 2023, up by 0.1 percentage points from the year prior – and equivalent to an indicator rank of 31.

2.3.4 QS university ranking

was equal to an average score of 33.6 for the top three universities in 2024, up by 17.2% from the year prior – and equivalent to an indicator rank of 40.

4.3.2 Domestic industry diversification

was equal to an index score of 0.07 in 2023, down by 7.69% from the year prior – and equivalent to an indicator rank of 6.



5.1.1 Knowledge-intensive employment

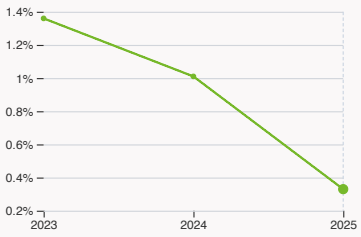
was equal to 24.56 % in 2024, up by 0.11 percentage points from the year prior – and equivalent to an indicator rank of 60.

Global Innovation Index 2025

Innovation outputs in Türkiye

6.1.1 Patents by origin

was equal to 9.05 thousand patents in 2023, down by 3.62% from the year prior – and equivalent to an indicator rank of 21.

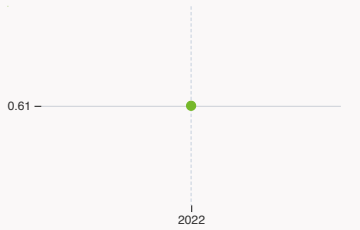


6.2.2 Unicorn valuation

was equal to 0.33 % GDP in 2025, down by 0.68 percentage points from the year prior – and equivalent to an indicator rank of 47.

6.2.4 High-tech manufacturing

was equal to 198.52 high-tech manufacturing output in billion USD in 2023, up by 14.57% from the year prior – and equivalent to an indicator rank of 39.

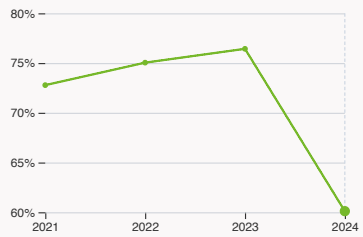


6.3.2 Production and export complexity

was equal to a score of 0.61 in 2022 – and equivalent to an indicator rank of 41.

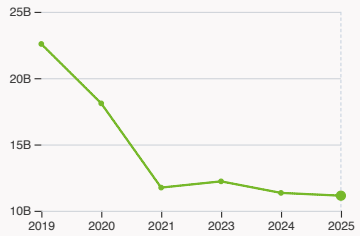
6.3.3 High-tech exports

was equal to 8.08 billion USD in 2023, up by 14.77% from the year prior – and equivalent to an indicator rank of 58.



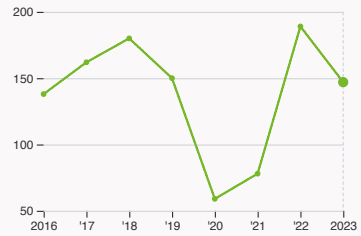
7.1.1 Intangible asset intensity, top 15

was equal to 60.11 % for the top 15 companies in 2024, down by 16.32 percentage points from the year prior – and equivalent to an indicator rank of 34.



7.1.3 Global brand value, top 5,000

was equal to 11.14 billion USD for the brands in the top 5,000 in 2025, down by 1.85% from the year prior – and equivalent to an indicator rank of 62.



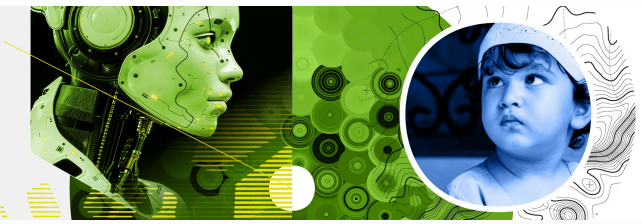
7.2.2 National feature films

was equal to 147 films in 2023, down by 22.22% from the year prior – and equivalent to an indicator rank of 56.

7.3.3 Mobile app creation

was equal to 2.51 billion global downloads of mobile apps in 2024, down by 15.2% from the year prior – and equivalent to an indicator rank of 23.

Global Innovation Index 2025



Türkiye's innovation top performers

Disclaimer: This section contains only the top performers per country. For the complete list, please visit the GII Innovation Ecosystems and Data Explorer website.

2.3.3 Global corporate R&D investors from Türkiye

Rank	Firm	Industry	R&D [mn EUR]	R&D Growth [%]	R&D Intensity [%]
1	ASELSAN ELEKTRONIK SANAYI VE TICARET	Electronic & Electrical Equipment	264	100	12

Source: WIPO, based on European Commission's Joint Research Centre (https://iri.jrc.ec.europa.eu/scoreboard/2024-eu-industrial-rd-investment-scoreboard) and Orbis database (https://www.moodys.com/web/en/us/capabilities/company-reference-data/orbis.html).
Note: Data is based on the 2024 EU Industrial R&D Investment Scoreboard from the European Commission's Joint Research Centre, which ranks the top 2,000 firms by R&D investment annually. For countries not represented in the Scoreboard, companies from Orbis with R&D expenditure above USD 50 million were identified and used to complement the dataset.

2.3.4 QS university ranking of Türkiye's top universities

Rank	University	Score
285	MIDDLE EAST TECHNICAL UNIVERSITY	37.20
326	ISTANBUL TECHNICAL UNIVERSITY	34.00
401	KOC UNIVERSITY	29.60

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2024).
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'.

5.2.3 University industry and international engagement, top 5 universities

Rank	University	Score
1	SABANCI UNIVERSITY	82.20
2	BILKENT UNIVERSITY	79.65
3	KOC UNIVERSITY	74.00

Source: Times Higher Education (THE), World University Rankings 2025.
Note: Rank corresponds to within economy ranks. The score is calculated as the average of the International Outlook score (encompassing international staff, students, and co-authorship) and the industry score (reflecting industry income and patent citations). The 2025 ranking corresponds to data from the academic year that ended in 2022.

6.2.2 Top Unicorn Companies in Türkiye

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	DREAM GAMES	Media & Entertainment	Istanbul	3
2	INSIDER	Enterprise Tech	Istanbul	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 Türkiye

Rank	Firm	Intensity, %
1	BIM BIRLESIK MAGAZALAR A.S.	72.98
2	FORD OTOMOTIV SANAYI A.S.	57.82
3	ANADOLU EFES BIRACILIK VE MALT SANAYII ANONIM SIRKETI	78.48

Source: Brand Finance (https://brandirectory.com/reports/gift-2024).
Note: Brand Finance only provides within economy ranks.

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

Rank	Brand	Industry	Brand Value, mn USD
1	TURKISH AIRLINES	Airlines	2,266.2
2	ISBANK	Banking	1,240.2
3	ARCELIK	Electronics	953.6

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

Türkiye

GII 2025 rank **43**

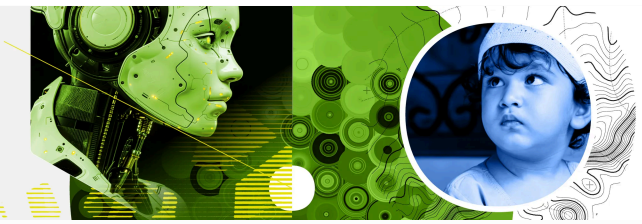
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
35	49	Upper middle	Northern Africa and Western Asia	87.5	3,456.8	40,283.3

	Score / Value	Rank	
Institutions	**37**	**100**	
1.1 Institutional environment	**41.8**	**94**	
1.1.1 Operational stability for businesses*	46.7	103	○
1.1.2 Government effectiveness*	37	87	
1.2 Regulatory environment	**40.6**	**94**	
1.2.1 Regulatory quality*	41.4	87	
1.2.2 Rule of law*	39.8	100	○
1.3 Business environment	**28.6**	**104**	
1.3.1 Policy stability for doing business†	27.1	110	○
1.3.2 Entrepreneurship policies and culture†	30.1	60	
Human capital and research	**41.2**	**38**	
2.1 Education	**52.1**	**65**	
2.1.1 Expenditure on education, % GDP	3.1	108	○
2.1.2 Government funding/pupil, secondary, % GDP/cap	10.5	83	○
2.1.3 School life expectancy, years	19.8	3	●
2.1.4 PISA scales in reading, maths and science	461.7	38	
2.1.5 Pupil–teacher ratio, secondary	15.5	85	○
2.2 Tertiary education	**37.2**	**42**	
2.2.1 Tertiary enrolment, % gross	127.6	2	●
2.2.2 Graduates in science and engineering, %	18.5	92	○
2.2.3 Tertiary inbound mobility, %	2.9	70	
2.3 Research and development (R&D)	**34.1**	**33**	
2.3.1 Researchers, FTE/mn pop.	2,701.8	33	
2.3.2 Gross expenditure on R&D, % GDP	1.4	31	
2.3.3 Global corporate R&D investors, top 3, mn USD	53.9	30	
2.3.4 QS university ranking, top 3*	34.4	40	
Infrastructure	**51.7**	**44**	
3.1 Information and communication technologies (ICTs)	**87**	**38**	
3.1.1 ICT access*	91.1	52	
3.1.2 ICT use*	79.2	62	
3.1.3 Government's online service*	90.7	13	●
3.2 General infrastructure	**43.7**	**36**	
3.2.1 Electricity output, GWh/mn pop.	3,824	57	
3.2.2 Logistics performance*	59.1	37	
3.2.3 Gross capital formation, % GDP	30.2	24	
3.3 Ecological sustainability	**24.3**	**54**	
3.3.1 GDP/unit of energy use	18.5	18	●
3.3.2 Low-carbon energy use, %	18.8	67	
3.3.3 ISO 14001 environment/bn PPP$ GDP	1	68	
Market sophistication	**41.9**	**41**	
4.1 Credit	**37.4**	**41**	
4.1.1 Finance for startups and scaleups†	57.5	37	
4.1.2 Domestic credit to private sector, % GDP	49.6	65	
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**5.2**	**69**	
4.2.1 Market capitalization, % GDP	28.7	51	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.07	70	
4.2.3 Late-stage VC deal count, % global VC	0.1	26	
4.2.4 VC investors, deal count/bn PPP$ GDP	0.08	73	
4.2.5 VC investor co-participation/bn PPP$ GDP	0.05	61	
4.3 Trade, diversification and market scale	**82.9**	**19**	
4.3.1 Applied tariff rate, weighted avg., %	3.5	81	
4.3.2 Domestic industry diversification	98.4	6	●
4.3.3 Domestic market scale, bn PPP$	3,456.8	12	●

	Score / Value	Rank	
Business sophistication	**36.4**	**41**	
5.1 Knowledge workers	**39.9**	**55**	
5.1.1 Knowledge-intensive employment, %	24.6	60	
5.1.2 Females employed w/advanced degrees, %	12.7	64	
5.1.3 Youth demographic dividend, %	35.4	70	
5.1.4 GERD performed by business, % GDP	0.9	27	
5.1.5 GERD financed by business, %	52.6	23	
5.2 Innovation linkages	**33.4**	**44**	
5.2.1 Public research–industry co-publications, %	1.4	67	
5.2.2 University–industry R&D collaboration†	29.4	86	
5.2.3 University industry & international engagement, top 5*	69.3	26	
5.2.4 State of cluster development†	48.1	65	
5.2.5 Patent families/bn PPP$ GDP	0.3	39	
5.3 Knowledge absorption	**36**	**36**	
5.3.1 Intellectual property payments, % total trade	0.9	43	
5.3.2 High-tech imports, % total trade	8.8	55	
5.3.3 ICT services imports, % total trade	1.1	84	
5.3.4 FDI net inflows, % GDP	1.4	103	○
5.3.5 Research talent, % in businesses	64	7	●
Knowledge and technology outputs	**26.4**	**48**	
6.1 Knowledge creation	**27.4**	**35**	
6.1.1 Patents by origin/bn PPP$ GDP	2.8	21	
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	0.6	32	
6.1.3 Utility models by origin/bn PPP$ GDP	1	17	
6.1.4 Scientific and technical articles/bn PPP$ GDP	13	54	
6.1.5 Citable documents H-index	29.8	33	
6.2 Knowledge impact	**33.6**	**44**	
6.2.1 Labor productivity growth, %	2.3	22	
6.2.2 Unicorn valuation, % GDP	0.3	47	
6.2.3 Software spending, % GDP	0.4	28	
6.2.4 High-tech manufacturing	30.3	39	
6.3 Knowledge diffusion	**18.1**	**71**	
6.3.1 Intellectual property receipts, % total trade	0.1	56	
6.3.2 Production and export complexity	62.4	41	
6.3.3 High-tech exports, % total trade	2.2	58	
6.3.4 ICT services exports, % total trade	0.9	87	
6.3.5 ISO 9001 quality/bn PPP$ GDP	2.5	77	
Creative outputs	**39.2**	**30**	
7.1 Intangible assets	**56.7**	**10**	
7.1.1 Intangible asset intensity, top 15, %	60.1	34	
7.1.2 Trademarks by origin/bn PPP$ GDP	111.7	6	●
7.1.3 Global brand value, top 5,000, % GDP	0.8	62	
7.1.4 Industrial designs by origin/bn PPP$ GDP	16	4	●
7.2 Creative goods and services	**13.6**	**64**	
7.2.1 Cultural and creative services exports, % total trade	0.1	93	○
7.2.2 National feature films/mn pop. 15–69	2.3	56	
7.2.3 Entertainment and media market/th pop. 15–69	2.4	51	○ ◇
7.2.4 Creative goods exports, % total trade	2.9	20	●
7.3 Online creativity	**29.7**	**55**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	9	48	
7.3.2 GitHub commits/mn pop. 15–69	6.3	71	
7.3.3 Mobile app creation/bn PPP$ GDP	73.9	23	

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.

Global Innovation Index 2025



Data Availability

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

Türkiye has missing data for one indicator and outdated data for six indicators.

Missing data for Türkiye

Code	Indicator name	Economy year	Model year	Source
4.1.3	Loans from microfinance institutions, % GDP	n/a	2023	International Monetary Fund, Financial Access Survey (FAS)

Outdated data for Türkiye

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture†	2021	2024	Global Entrepreneurship Monitor
2.1.3	School life expectancy, years	2022	2023	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2022	2023	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2022	2023	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2022	2023	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups†	2021	2024	Global Entrepreneurship Monitor

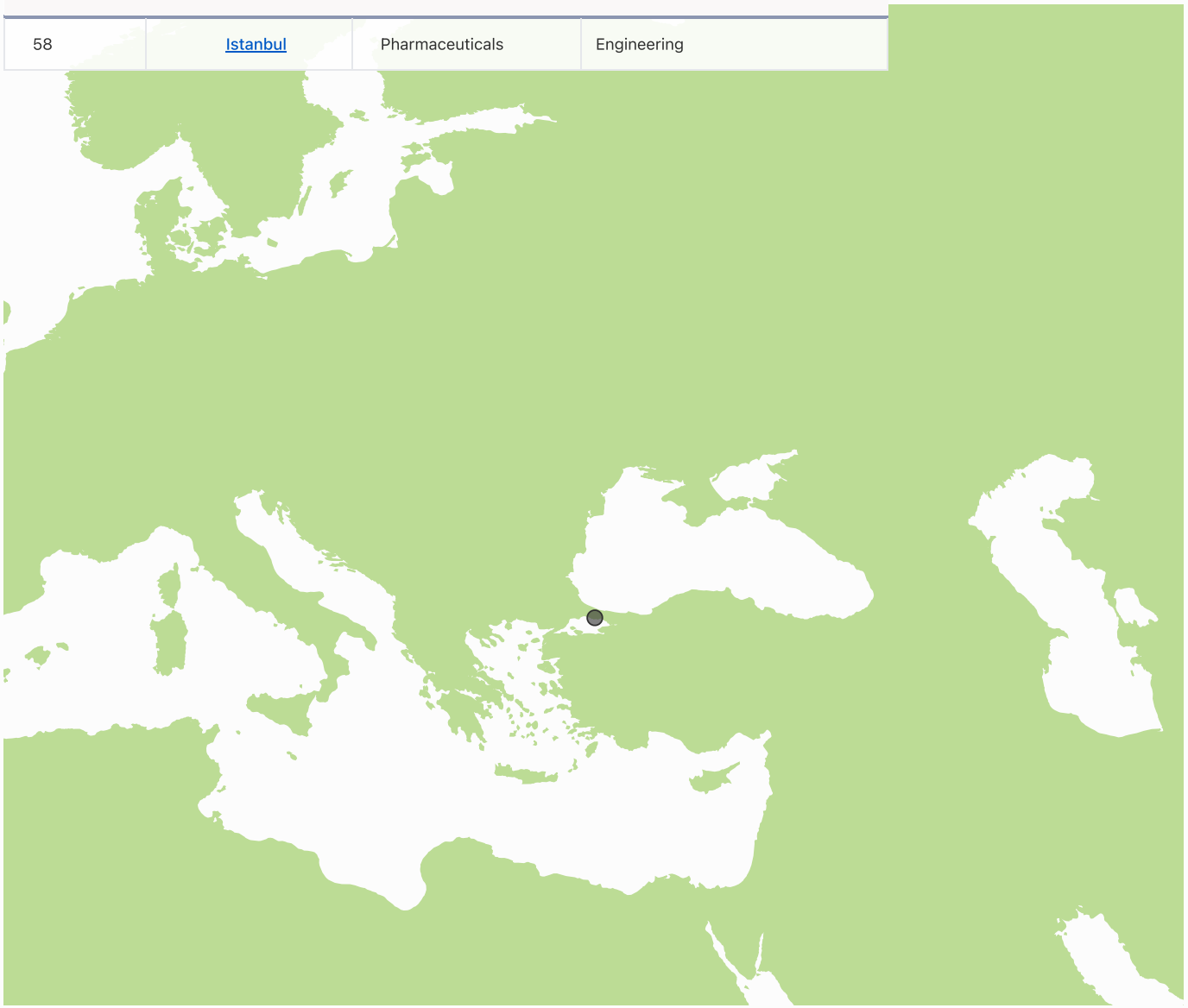
Global Innovation Index 2025

Top innovation clusters in Türkiye

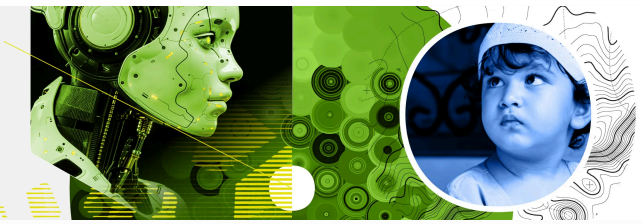
Türkiye has 1 cluster in the world's top innovation clusters of the Global Innovation Index

The table and map below give an overview of the top innovation clusters in Türkiye.

Rank	Cluster name	Top patent field	Top academic subject
58	Istanbul	Pharmaceuticals	Engineering

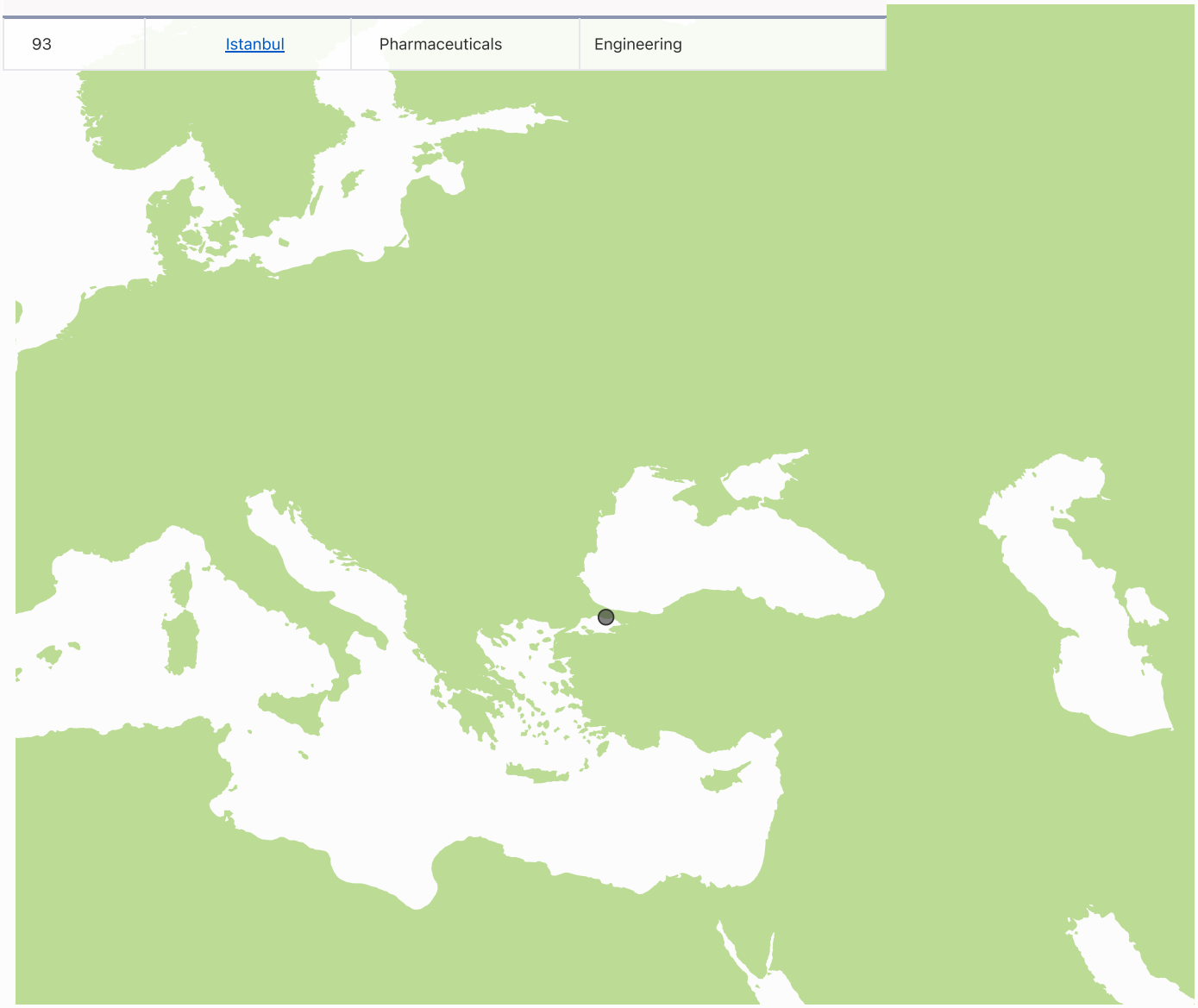


Global Innovation Index 2025



The table and map below give an overview by intensity of the top innovation clusters in Türkiye.

Rank	Cluster name	Top patent field	Top academic subject
93	Istanbul	Pharmaceuticals	Engineering



Global Innovation Index 2025

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 140 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.