Global Innovation Index 2025

Malaysia ranking in the Global Innovation Index 2025

Malaysia ranks 34th 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.

Malaysia ranks 2nd among the 36 Upper middle-income group economies.

Malaysia ranks 8th among the 17 economies in South East Asia, East Asia, and Oceania.

Malaysia GII Ranking (2020-2025)

The table shows the rankings of Malaysia 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 Malaysia in the GII 2025 is between ranks 33 and 36.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	33rd	34th	36th
2021	36th	36th	34th
2022	36th	35th	37th
2023	36th	30th	46th
2024	33rd	28th	41st
2025	34th	30th	39th

Malaysia performs worse in innovation outputs than innovation inputs in 2025.

This year Malaysia ranks 30th in innovation inputs. This position is lower than last year.

Malaysia ranks 39th in innovation outputs. This position is higher than last year.

Malaysia 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 Malaysia, how rapidly is technology being embraced and what are the resulting societal impacts.

For Malaysia, 7 indicators have improved in the short-term and 5 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▼ -3 % 2023 - 2024	▼ -5 % 2018 - 2020	▼ -7.4 % 2023 - 2024	▼ -4.7 % 2023 - 2024
Long term (annual growth)	▲ 3.1 % 2014 - 2024	▲ 3.1 % 2010 - 2020	▼ -6.7 % 2020 - 2024	▼ -9.1 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	▲ 0.2% 2023 - 2024	▲ 8.3% 2022 - 2023	▲ 70.3% 2022 - 2023	▲ 3.1% 2022 - 2023	▲ 77.1% 2023 - 2024
Long term (annual growth)	▲ 0.6% 2014 - 2024	▲ 4.5% 2013 - 2023	n/a	▲ 12.9% 2013 - 2023	▲ 116.8% 2014 - 2024
Penetration	85.8 per 100 inhabitants in 2024	13 per 100 inhabitants in 2023	80.2 per 100 inhabitants in 2023	n/a	0.5 per 100 cars in 2024

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 1.8 % 2023 - 2024	▲ 1.6 % 2022 - 2023	+ 1.6 °C 2024
Long term (annual growth)	▲ 2.1 % 2014 - 2024	▲ 0.2 % 2013 - 2023	+ 0.9 °C 2014
Level	81,288.6 USD in 2024	76.7 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 Malaysia 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.

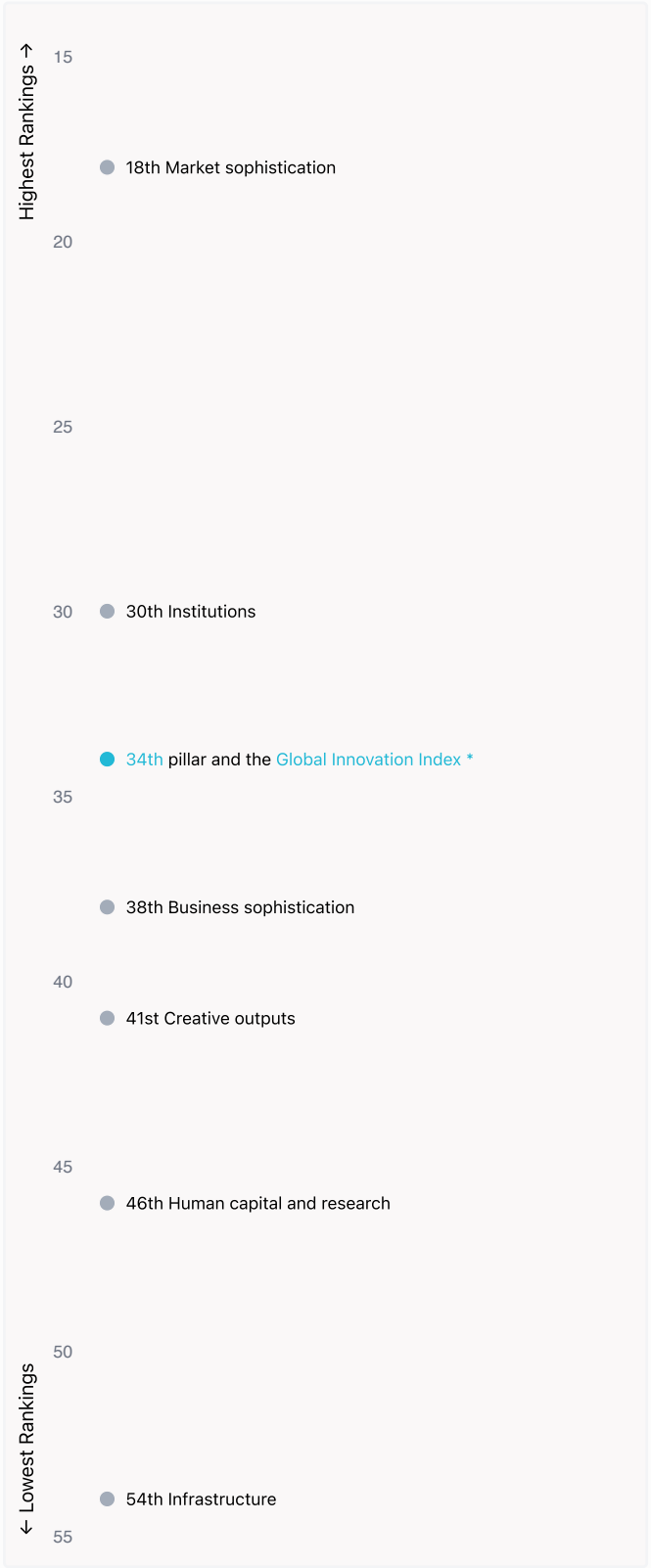
Malaysia produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

Overview of Malaysia'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 Malaysia are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest Rankings

Malaysia ranks highest in Market sophistication (18th), Institutions (30th) and Knowledge and technology outputs (34th).

Lowest Rankings

Malaysia ranks lowest in Infrastructure (54th), Human capital and research (46th) and Creative outputs (41st).

* Knowledge and technology outputs

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

Global Innovation Index 2025

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

Upper middle-income economies

Malaysia performs above the Upper middle-income group average in all pillars.

South East Asia, East Asia, and Oceania

Malaysia performs above the regional average in Institutions, Market sophistication, Knowledge and technology outputs, Creative outputs.

Institutions

- Top 10 | Score: 78.63
- Malaysia | Score: 67.98
- SEAO | Score: 60.86
- Upper middle-income | Score: 44.7

Human capital and research

- Top 10 | Score: 59.30
- SEAO | Score: 39.16
- Malaysia | Score: 37.66
- Upper middle-income | Score: 29.7

Infrastructure

- Top 10 | Score: 61.36
- SEAO | Score: 48.25
- Malaysia | Score: 47.37
- Upper middle-income | Score: 41.1

Market sophistication

- Top 10 | Score: 61.82
- Malaysia | Score: 54.87
- SEAO | Score: 48.50
- Upper middle-income | Score: 34.8

Business sophistication

- Top 10 | Score: 59.10
- SEAO | Score: 39.02
- Malaysia | Score: 37.96
- Upper middle-income | Score: 27.7

Knowledge and technology outputs

- Top 10 | Score: 54.93
- Malaysia | Score: 30.97
- SEAO | Score: 29.47
- Upper middle-income | Score: 20.0

Creative outputs

- Top 10 | Score: 55.98
- Malaysia | Score: 33.02
- SEAO | Score: 32.64
- Upper middle-income | Score: 22.6

Global Innovation Index 2025

Innovation strengths and weaknesses in Malaysia

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

Malaysia's best-ranked innovation strengths are **Creative goods exports, % total trade** (rank 1), **High-tech exports, % total trade** (rank 1) and **Graduates in science and engineering, %** (rank 1).

Strengths

Rank	Code	Indicator name
1	7.2.4	Creative goods exports, % total trade
1	6.3.3	High-tech exports, % total trade
1	2.2.2	Graduates in science and engineering, %
3	5.3.2	High-tech imports, % total trade
13	4.3.1	Applied tariff rate, weighted avg., %
13	7.1.3	Global brand value, top 5,000, % GDP
15	2.3.4	QS university ranking, top 3*
18	4.1.2	Domestic credit to private sector, % GDP
18	1.1.1	Operational stability for businesses*

Weaknesses

Rank	Code	Indicator name
103	3.3.2	Low-carbon energy use, %
100	7.1.2	Trademarks by origin/bn PPP$ GDP
98	2.1.3	School life expectancy, years
91	2.1.1	Expenditure on education, % GDP
87	7.1.4	Industrial designs by origin/bn PPP$ GDP
85	2.2.1	Tertiary enrolment, % gross
58	2.1.4	PISA scales in reading, maths and science
56	6.1.3	Utility models by origin/bn PPP$ GDP
55	5.3.5	Research talent, % in businesses
44	2.3.3	Global corporate R&D investors, top 3, mn USD

Global Innovation Index 2025

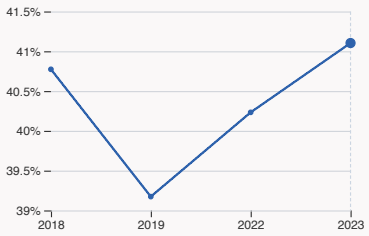
Malaysia's innovation system

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

Innovation inputs in Malaysia

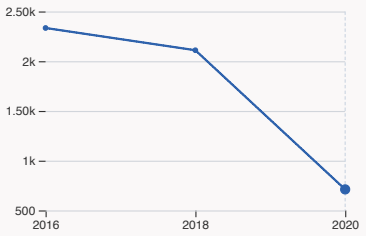
2.1.1 Expenditure on education

was equal to 3.63 % GDP in 2023, up by 0.13 percentage points from the year prior – and equivalent to an indicator rank of 91.



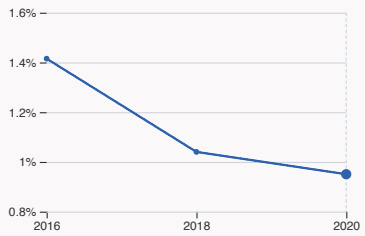
2.2.2 Graduates in science and engineering

was equal to 41.1 % of total graduates in 2023, up by 0.87 percentage points from the year prior – and equivalent to an indicator rank of 1.



2.3.1 Researchers

was equal to 711.51 FTE per million population in 2020, down by 66.29% from the year prior – and equivalent to an indicator rank of 64.

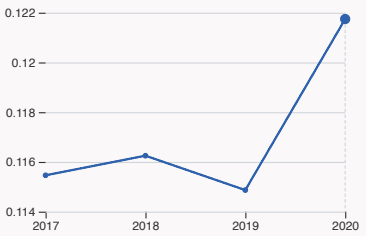


2.3.2 Gross expenditure on R&D

was equal to 0.95 % GDP in 2020, down by 0.09 percentage points from the year prior – and equivalent to an indicator rank of 42.

2.3.4 QS university ranking

was equal to an average score of 59.23 for the top three universities in 2024, up by 3.49% from the year prior – and equivalent to an indicator rank of 15.

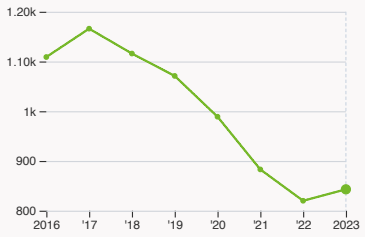


4.3.2 Domestic industry diversification

was equal to an index score of 0.122 in 2020, up by 5.99% from the year prior – and equivalent to an indicator rank of 42.

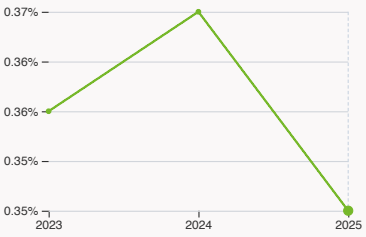
Global Innovation Index 2025

Innovation outputs in Malaysia



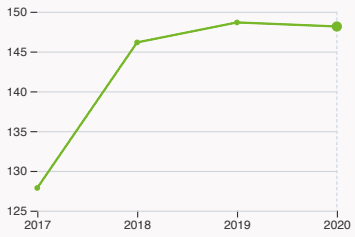
6.1.1 Patents by origin

was equal to 843 patents in 2023, up by 2.8% from the year prior – and equivalent to an indicator rank of 67.



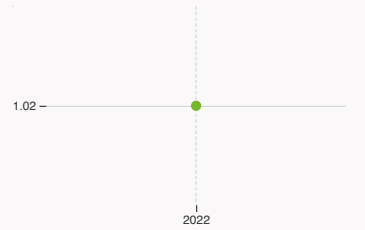
6.2.2 Unicorn valuation

was equal to 0.35 % GDP in 2025, down by 0.02 percentage points from the year prior – and equivalent to an indicator rank of 45.



6.2.4 High-tech manufacturing

was equal to 148.15 high-tech manufacturing output in billion USD in 2020, down by 0.34% from the year prior – and equivalent to an indicator rank of 16.

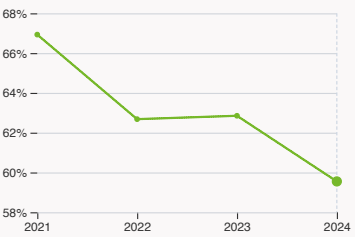


6.3.2 Production and export complexity

was equal to a score of 1.02 in 2022 – and equivalent to an indicator rank of 28.

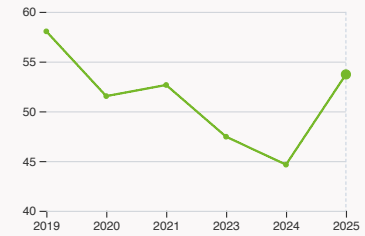
6.3.3 High-tech exports

was equal to 127.62 billion USD in 2023, down by 5.4% from the year prior – and equivalent to an indicator rank of 1.



7.1.1 Intangible asset intensity, top 15

was equal to 59.55 % for the top 15 companies in 2024, down by 3.3 percentage points from the year prior – and equivalent to an indicator rank of 36.



7.1.3 Global brand value, top 5,000

was equal to 53.71 billion USD in 2025, up by 20.32% from the year prior – and equivalent to an indicator rank of 13.

7.2.2 National feature films

was equal to 62 films in 2023, up by 31.91% from the year prior – and equivalent to an indicator rank of 55.

7.3.3 Mobile app creation

was equal to 126.36 million global downloads of mobile apps in 2024, down by 4.19% from the year prior – and equivalent to an indicator rank of 76.

Global Innovation Index 2025

Malaysia's innovation top performers

Data not available for 2.3.3 Global corporate R&D investors.

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

2.3.4 QS university ranking of Malaysia's top universities

Rank	University	Score
60	UNIVERSITI MALAYA (UM)	71.20
138	UNIVERSITI KEBANGSAAN MALAYSIA	53.80
146	UNIVERSITI SAINS MALAYSIA (USM)	52.70

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	UNIVERSITI TEKNOLOGI PETRONAS	79.10
2	UNIVERSITY OF MALAYA	74.85
3	UNIVERSITI TEKNOLOGI MALAYSIA	71.20

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 Malaysia

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	CARSOME	Industrials	Selangor	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 Malaysia

Rank	Firm	Intensity, %
1	CELCOMDIGI BERHAD	82.43
2	IHH HEALTHCARE BERHAD	66.39
3	MALAYAN BANKING BERHAD	24.03

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 Malaysia with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	PETRONAS	Oil & Gas	14,365.9
2	MAYBANK	Banking	5,158.3
3	GENTING	Leisure & Tourism	4,860.6

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

Malaysia

GII 2025 rank **34**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
39	30	Upper middle	South East Asia, East Asia, and Oceania	35.6	1,372.6	41,022

	Score / Value	Rank	
Institutions	**68**	**30**	◆
1.1 Institutional environment	**73**	**29**	◆
1.1.1 Operational stability for businesses*	81.3	18	●◆
1.1.2 Government effectiveness*	64.6	32	◆
1.2 Regulatory environment	**64.1**	**41**	◆
1.2.1 Regulatory quality*	62	42	◆
1.2.2 Rule of law*	66.1	41	◆
1.3 Business environment	**66.9**	**21**	◆
1.3.1 Policy stability for doing business†	64.8	36	◆
1.3.2 Entrepreneurship policies and culture†	69	14	
Human capital and research	**37.7**	**46**	
2.1 Education	**44.1**	**90**	
2.1.1 Expenditure on education, % GDP	3.6	91	○
2.1.2 Government funding/pupil, secondary, % GDP/cap	20.6	42	
2.1.3 School life expectancy, years	11.7	98	○◇
2.1.4 PISA scales in reading, maths and science	404.4	58	○
2.1.5 Pupil–teacher ratio, secondary	11	43	
2.2 Tertiary education	**48.3**	**13**	◆
2.2.1 Tertiary enrolment, % gross	37.3	85	○
2.2.2 Graduates in science and engineering, %	41.1	1	●◆
2.2.3 Tertiary inbound mobility, %	9.6	31	◆
2.3 Research and development (R&D)	**20.6**	**46**	
2.3.1 Researchers, FTE/mn pop.	711.5	64	
2.3.2 Gross expenditure on R&D, % GDP	1	42	
2.3.3 Global corporate R&D investors, top 3, mn USD	0	44	○◇
2.3.4 QS university ranking, top 3*	60.7	15	●◆
Infrastructure	**47.4**	**54**	
3.1 Information and communication technologies (ICTs)	**84.7**	**44**	
3.1.1 ICT access*	97.2	26	◆
3.1.2 ICT use*	89.6	22	◆
3.1.3 Government's online service*	67.3	68	
3.2 General infrastructure	**41.8**	**41**	◆
3.2.1 Electricity output, GWh/mn pop.	5,518.6	41	◆
3.2.2 Logistics performance*	68.2	25	◆
3.2.3 Gross capital formation, % GDP	22.9	79	
3.3 Ecological sustainability	**15.6**	**94**	
3.3.1 GDP/unit of energy use	9.7	79	
3.3.2 Low-carbon energy use, %	7.1	103	○
3.3.3 ISO 14001 environment/bn PPP$ GDP	2.3	41	
Market sophistication	**54.9**	**18**	◆
4.1 Credit	**69.5**	**6**	◆
4.1.1 Finance for startups and scaleups†	93.7	2	
4.1.2 Domestic credit to private sector, % GDP	117.2	18	●◆
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**11.6**	**44**	
4.2.1 Market capitalization, % GDP	111.2	14	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.09	62	
4.2.3 Late-stage VC deal count, % global VC	0.1	30	
4.2.4 VC investors, deal count/bn PPP$ GDP	0.1	64	
4.2.5 VC investor co-participation/bn PPP$ GDP	0.06	58	
4.3 Trade, diversification and market scale	**83.5**	**15**	◆
4.3.1 Applied tariff rate, weighted avg., %	0.9	13	●
4.3.2 Domestic industry diversification	88.7	42	
4.3.3 Domestic market scale, bn PPP$	1,372.6	28	

	Score / Value	Rank	
Business sophistication	**38**	**38**	◆
5.1 Knowledge workers	**33.3**	**[81]**	
5.1.1 Knowledge-intensive employment, %	n/a	n/a	
5.1.2 Females employed w/advanced degrees, %	n/a	n/a	
5.1.3 Youth demographic dividend, %	37.8	65	
5.1.4 GERD performed by business, % GDP	0.5	40	
5.1.5 GERD financed by business, %	38.2	49	
5.2 Innovation linkages	**38.5**	**32**	◆
5.2.1 Public research–industry co-publications, %	1.1	82	
5.2.2 University–industry R&D collaboration†	48.7	39	◆
5.2.3 University industry & international engagement, top 5*	65.1	30	◆
5.2.4 State of cluster development†	66.2	39	◆
5.2.5 Patent families/bn PPP$ GDP	0.1	50	
5.3 Knowledge absorption	**42.1**	**25**	◆
5.3.1 Intellectual property payments, % total trade	1	38	
5.3.2 High-tech imports, % total trade	29	3	●◆
5.3.3 ICT services imports, % total trade	1.9	45	
5.3.4 FDI net inflows, % GDP	3.7	45	
5.3.5 Research talent, % in businesses	15.8	55	○
Knowledge and technology outputs	**31**	**34**	◆
6.1 Knowledge creation	**12.9**	**71**	
6.1.1 Patents by origin/bn PPP$ GDP	0.7	67	
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	0.1	58	
6.1.3 Utility models by origin/bn PPP$ GDP	0.08	56	○
6.1.4 Scientific and technical articles/bn PPP$ GDP	10	69	
6.1.5 Citable documents H-index	25.4	38	
6.2 Knowledge impact	**35.6**	**31**	◆
6.2.1 Labor productivity growth, %	1	64	
6.2.2 Unicorn valuation, % GDP	0.3	45	
6.2.3 Software spending, % GDP	0.4	29	◆
6.2.4 High-tech manufacturing, %	45.4	16	◆
6.3 Knowledge diffusion	**44.4**	**19**	◆
6.3.1 Intellectual property receipts, % total trade	0.1	60	
6.3.2 Production and export complexity	71.8	28	◆
6.3.3 High-tech exports, % total trade	48.4	1	●◆
6.3.4 ICT services exports, % total trade	1.5	73	
6.3.5 ISO 9001 quality/bn PPP$ GDP	10.2	25	
Creative outputs	**33**	**41**	◆
7.1 Intangible assets	**37.3**	**44**	
7.1.1 Intangible asset intensity, top 15, %	59.6	36	
7.1.2 Trademarks by origin/bn PPP$ GDP	15.7	100	○
7.1.3 Global brand value, top 5,000, % GDP	11	13	●◆
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.4	87	○
7.2 Creative goods and services	**32.5**	**23**	◆
7.2.1 Cultural and creative services exports, % total trade	0.4	69	
7.2.2 National feature films/mn pop. 15–69	2.4	55	
7.2.3 Entertainment and media market/th pop. 15–69	10.2	36	◆
7.2.4 Creative goods exports, % total trade	7.5	1	●◆
7.3 Online creativity	**25**	**67**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	5.3	60	
7.3.2 GitHub commits/mn pop. 15–69	7.4	65	
7.3.3 Mobile app creation/bn PPP$ GDP	62.4	76	

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 Malaysia.

Malaysia has missing data for three indicators and outdated data for eleven indicators.

Missing data for Malaysia

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)
5.1.1	Knowledge-intensive employment, %	n/a	2024	International Labour Organization
5.1.2	Females employed w/advanced degrees, %	n/a	2024	International Labour Organization

*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

Outdated data for Malaysia

Code	Indicator name	Economy year	Model year*	Source
1.3.2	Entrepreneurship policies and culture†	2017	2024	Global Entrepreneurship Monitor
2.1.2	Government funding/pupil, secondary, % GDP/cap	2020	2021	UNESCO Institute for Statistics
2.3.1	Researchers, FTE/mn pop.	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
2.3.2	Gross expenditure on R&D, % GDP	2020	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
3.2.1	Electricity output, GWh/mn pop.	2022	2023	International Energy Agency
4.1.1	Finance for startups and scaleups†	2017	2024	Global Entrepreneurship Monitor
4.3.2	Domestic industry diversification	2020	2022	United Nations Industrial Development Organization (UNIDO)
5.1.4	GERD performed by business, % GDP	2018	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	GERD financed by business, %	2018	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.3.5	Research talent, % in businesses	2018	2023	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.2.4	High-tech manufacturing, %	2020	2022	United Nations Industrial Development Organization (UNIDO)

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*Model year corresponds to the most frequent data year (the year that appears most often across all economies in the GII).

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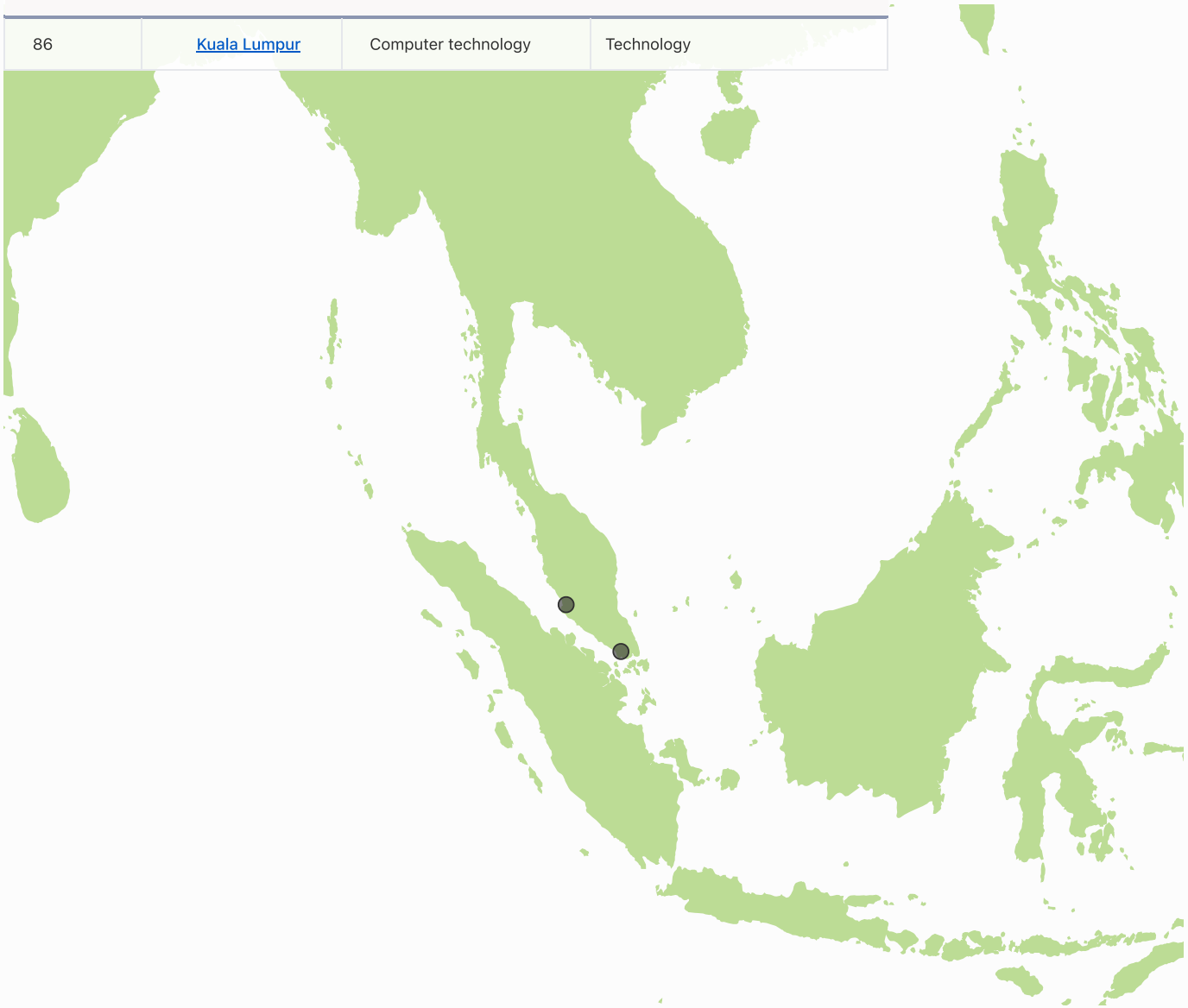
Top innovation clusters in Malaysia

Malaysia 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 Malaysia.

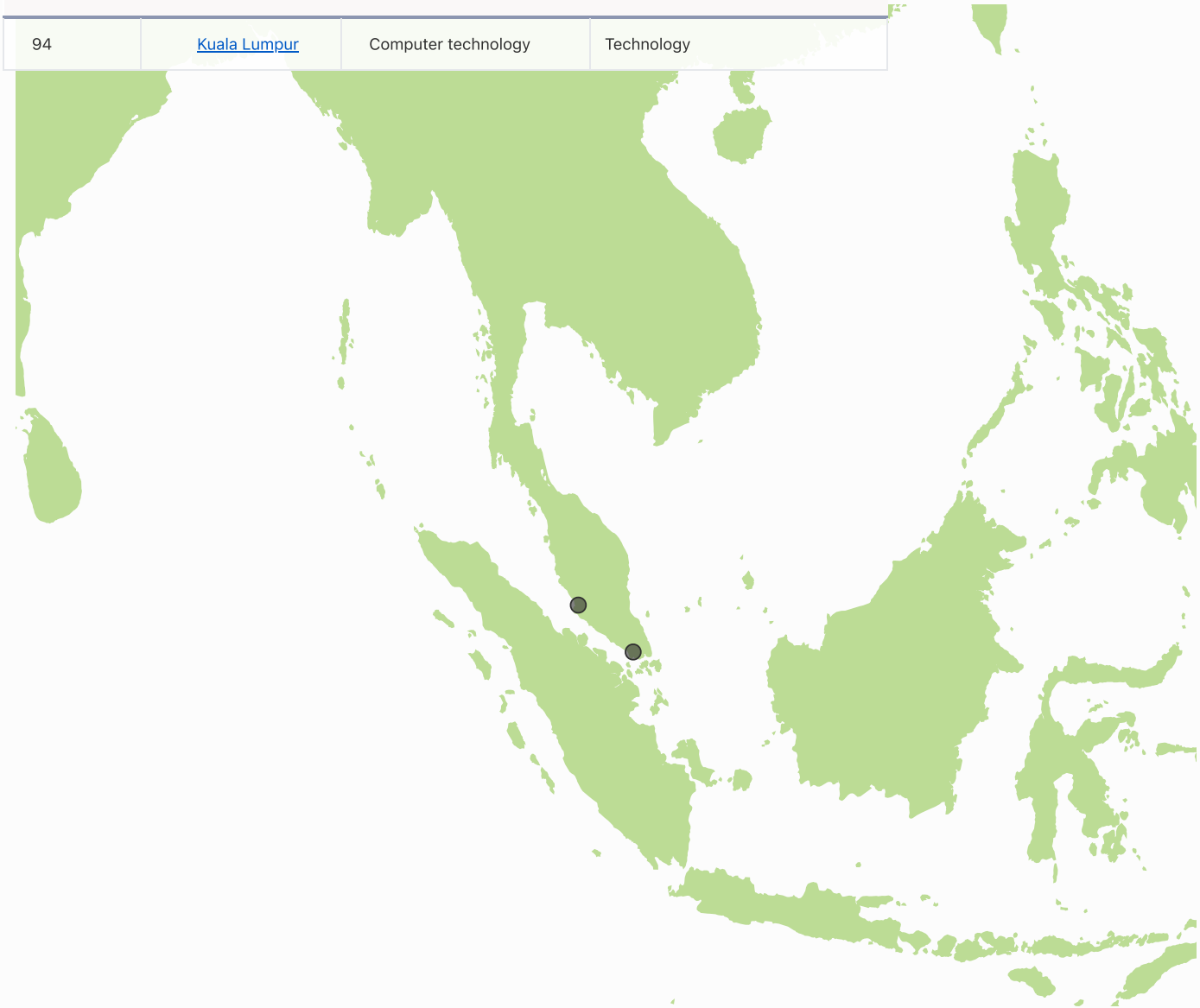
Rank	Cluster name	Top patent field	Top academic subject
86	Kuala Lumpur	Computer technology	Technology



Global Innovation Index 2025

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

Rank	Cluster name	Top patent field	Top academic subject
94	Kuala Lumpur	Computer technology	Technology



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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 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.