FOR REFERENCE PURPOSES ONLY

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 1.2.02
Current Account Balance (% to GDP)

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.2.02: Current Account Balance (% to GDP)

INDICATOR DEFINITION

Current account equals the trade balance plus the balance of other goods, services, and income, private unrequited transfers, and official unrequited transfers not included elsewhere. (*Defined in World Competitiveness Yearbook, 2025*)

DATA SOURCE FROM WCY

- OECD Main Economic Indicators – complete database
- IMF World Economic Outlook April 2024
- National Sources

DETAILED DATA BREAKDOWN

*The Current Account Balance (CAB) is made up of **four standard components**, as defined in the Balance of Payments (BOP) framework:*

$$\boldsymbol{Current\ Account\ Balance\ (CAB) =}$$

Balance of Goods + Balance on Services + Net Primary Income + Net Secondary Income

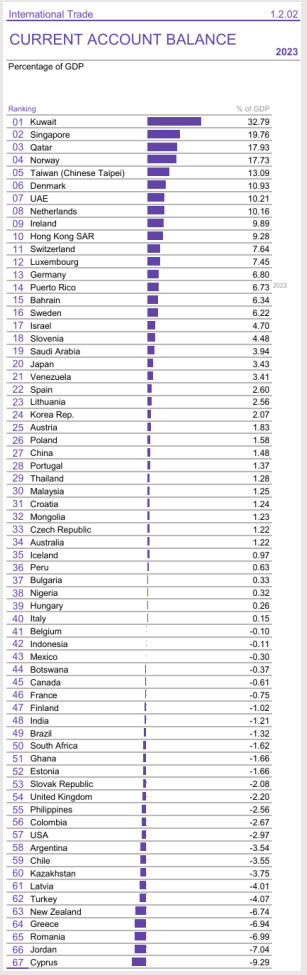
So, if we expressed in term of % to GDP

$$\frac{Current\ Account\ Balance\ (US\$Bn)}{Total\ GDP\ (US\$Bn)}$$

Definitions of components:

- ***Balance on Goods** = Exports of goods minus imports of goods*
- ***Balance on Services** = Exports of services minus imports of services*
- ***Net Primary Income** = Net income from investments (such as dividends, interest, remittances)*
- ***Net Secondary Income** = Transfers such as remittances, foreign aid, pensions, etc.*

WHAT DOES THE SCORE INDICATE?



International Trade 1.2.02

CURRENT ACCOUNT BALANCE 2023

Percentage of GDP

Ranking		% of GDP
01	Kuwait	32.79
02	Singapore	19.76
03	Qatar	17.93
04	Norway	17.73
05	Taiwan (Chinese Taipei)	13.09
06	Denmark	10.93
07	UAE	10.21
08	Netherlands	10.16
09	Ireland	9.89
10	Hong Kong SAR	9.28
11	Switzerland	7.64
12	Luxembourg	7.45
13	Germany	6.80
14	Puerto Rico	6.73
15	Bahrain	6.34
16	Sweden	6.22
17	Israel	4.70
18	Slovenia	4.48
19	Saudi Arabia	3.94
20	Japan	3.43
21	Venezuela	3.41
22	Spain	2.60
23	Lithuania	2.56
24	Korea Rep.	2.07
25	Austria	1.83
26	Poland	1.58
27	China	1.48
28	Portugal	1.37
29	Thailand	1.28
30	Malaysia	1.25
31	Croatia	1.24
32	Mongolia	1.23
33	Czech Republic	1.22
34	Australia	1.22
35	Iceland	0.97
36	Peru	0.63
37	Bulgaria	0.33
38	Nigeria	0.32
39	Hungary	0.26
40	Italy	0.15
41	Belgium	-0.10
42	Indonesia	-0.11
43	Mexico	-0.30
44	Botswana	-0.37
45	Canada	-0.61
46	France	-0.75
47	Finland	-1.02
48	India	-1.21
49	Brazil	-1.32
50	South Africa	-1.62
51	Ghana	-1.66
52	Estonia	-1.66
53	Slovak Republic	-2.08
54	United Kingdom	-2.20
55	Philippines	-2.56
56	Colombia	-2.67
57	USA	-2.97
58	Argentina	-3.54
59	Chile	-3.55
60	Kazakhstan	-3.75
61	Latvia	-4.01
62	Turkey	-4.07
63	New Zealand	-6.74
64	Greece	-6.94
65	Romania	-6.99
66	Jordan	-7.04
67	Cyprus	-9.29

The higher the value, the higher the rank.

***Source:** IMD World Competitiveness Yearbook 2025*

RATIONALITY?

A strong Current Account Balance (% of GDP) is widely recognized as an indicator of external strength and macroeconomic stability.

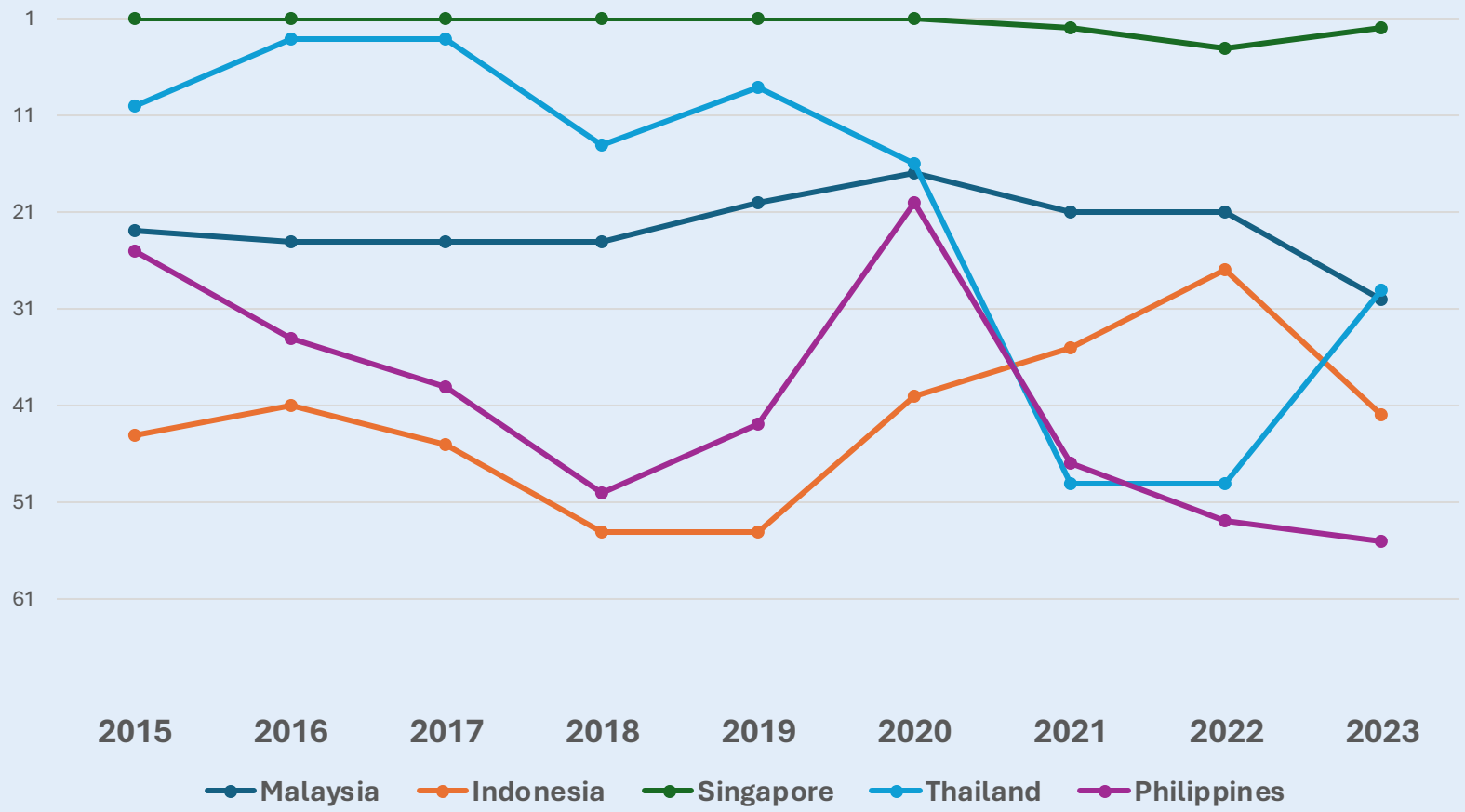
It generally reflects greater national competitiveness because it signals that the country earns more from its exports of goods, services, and investment income than it spends on imports and payments abroad. In other words, the economy is generating a surplus of external earnings that can be used to accumulate reserves, reduce foreign debt, and support future investment.

The current account captures not only trade in goods, but also services, cross-border income flows, and unilateral transfers. Countries with persistent deficits may become reliant on foreign borrowing, exposing them to exchange rate volatility, rising debt service costs, or financial instability.

Conversely, countries with current account surpluses tend to exhibit healthier foreign balance sheets, stronger currency credibility, and more capacity to weather global financial shocks.

INDICATOR 1.2.02: Current Account Balance (% to GDP)

Where are Malaysia now? Indicators ranking among ASEAN countries



Source: IMD (2025)

Before moving deeper into the data and its components, it is important to first observe Malaysia's current position in the Current Account Balance (% of GDP) indicator compared to ASEAN peers. As explained earlier, this indicator reflects a country's ability to generate external earnings relative to its economic size — an important signal of competitiveness and financial resilience.

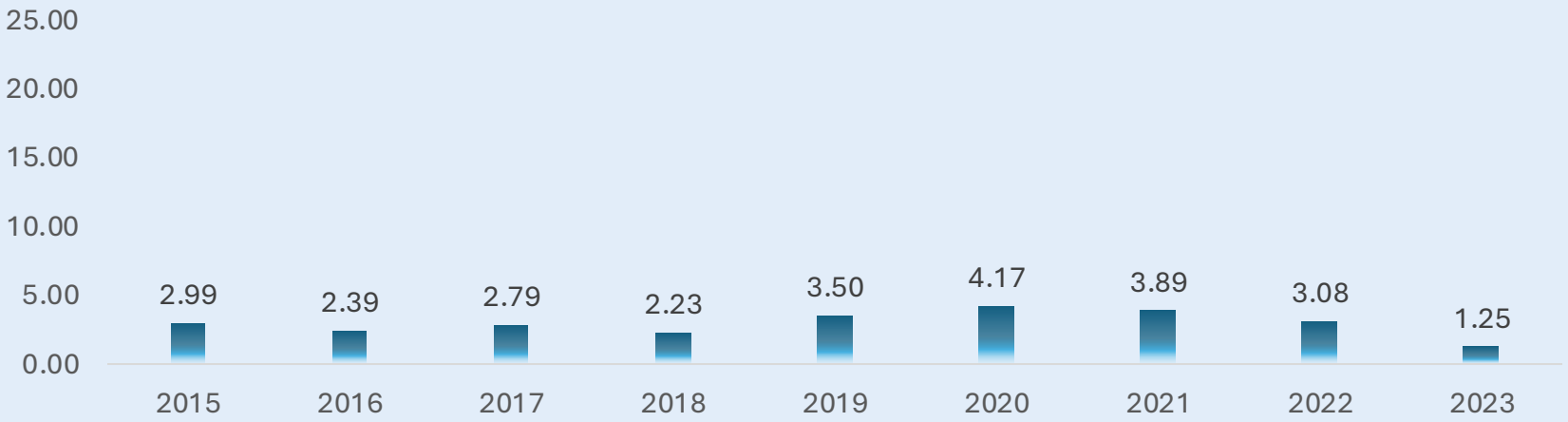
Figure left shows that Malaysia's ranking has gradually declined over the years. From being relatively strong within the region in 2015–2019, Malaysia's position started to deteriorate after 2020, moving lower in the ASEAN ranking — now behind peers such as Singapore (which consistently leads), and occasionally Thailand.

This pattern highlights an area of concern: Malaysia's declining current account performance may reflect either weakening rising income outflows, or structural imbalances that warrant closer examination.

INDICATOR 1.2.02: Current Account Balance (% to GDP)

How do the indicators perform across years?

Indicator **Value (% to GDP)**



Indicator **Rank**

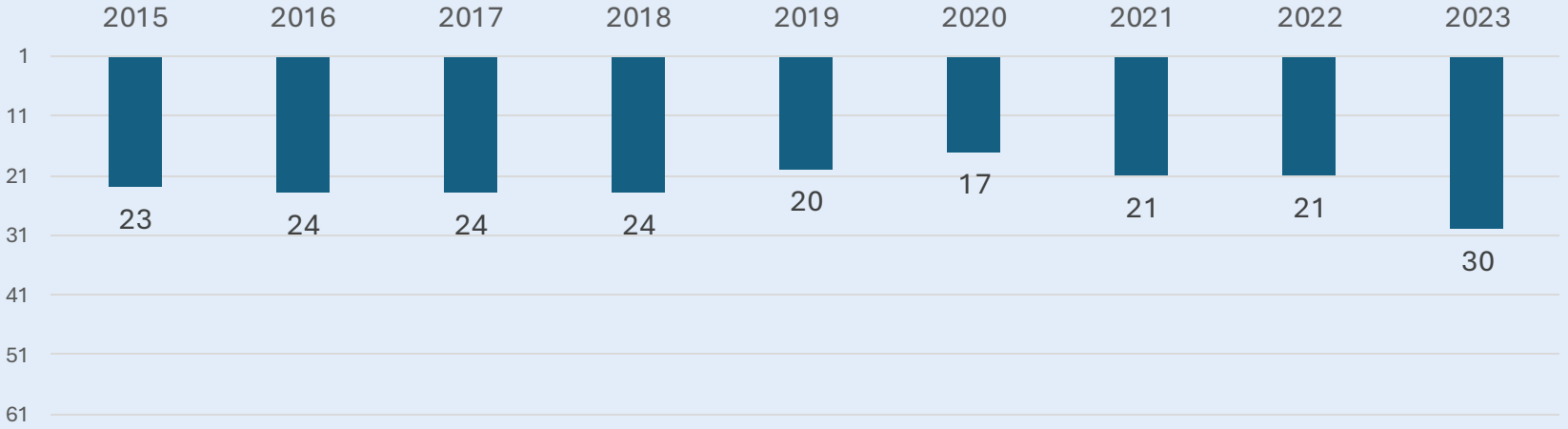


Figure left presents the trend of Malaysia's Current Account Balance (CAB) as a percentage of GDP alongside its corresponding ranking in the IMD World Competitiveness Yearbook, covering the years 2015–2023. The data shows that while Malaysia's CAB remained positive throughout the period, the magnitude of the surplus has narrowed in recent years — from 4.17% of GDP in 2020 to just 1.25% in 2023.

This decline in value is reflected in Malaysia's ranking trajectory, which slipped from 17th place in 2020 to 30th place in 2023. The weakening of the current account balance signals potential underlying issues, such as changes in income flows. It also suggests a growing vulnerability in Malaysia's external position, which could have implications for macroeconomic stability and global competitiveness if not addressed.

Notes: The chart scale is set at 30% because the top-performing country (Kuwait) currently records a Current Account Balance of approximately 30% of GDP.

Source: IMD (2025)

INDICATOR 1.2.02: Current Account Balance (% to GDP)

Comparative Measurement Assessment of Indicator

Extracting the Current Account Balance for both US$Bn & % to GDP (2016–2022)

Data sourced from **IMF**

To access the **CAB** data, follow these steps:

1. Go to https://www.imf.org/en/Publications/WEO/weo-database/2025/april
2. Click on "**country-level data**".
3. From the selected Country Group, select "**Emerging and Developing Asia**".
4. On filtering the data, select "**Clear All**". Then, search and click on "**Malaysia**". Click "**continue**" to go for the next section.
5. Search for the **Balance of Payments** category and select both "**Current account balance U.S Dollars**" and "**Current account balance Percent of GDP**". Click "**continue**" to go for the next section.
6. Select your **Date Range**, then click on "**Prepare Report**".
7. If you satisfied with the overall data customization, click on "**Download Report**".

Data sourced from **DOSM**

To access the **CAB** data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**Balance of Payment**"
5. Click "**Search**"
6. Find "**Quarterly Balance of Payments, Malaysia**", for every First Quarter of the year.
7. Download the excel file.
8. For the recent year, Go to "**TABLE 1**". For a longer period time series, please go to "**TABLE 4**".

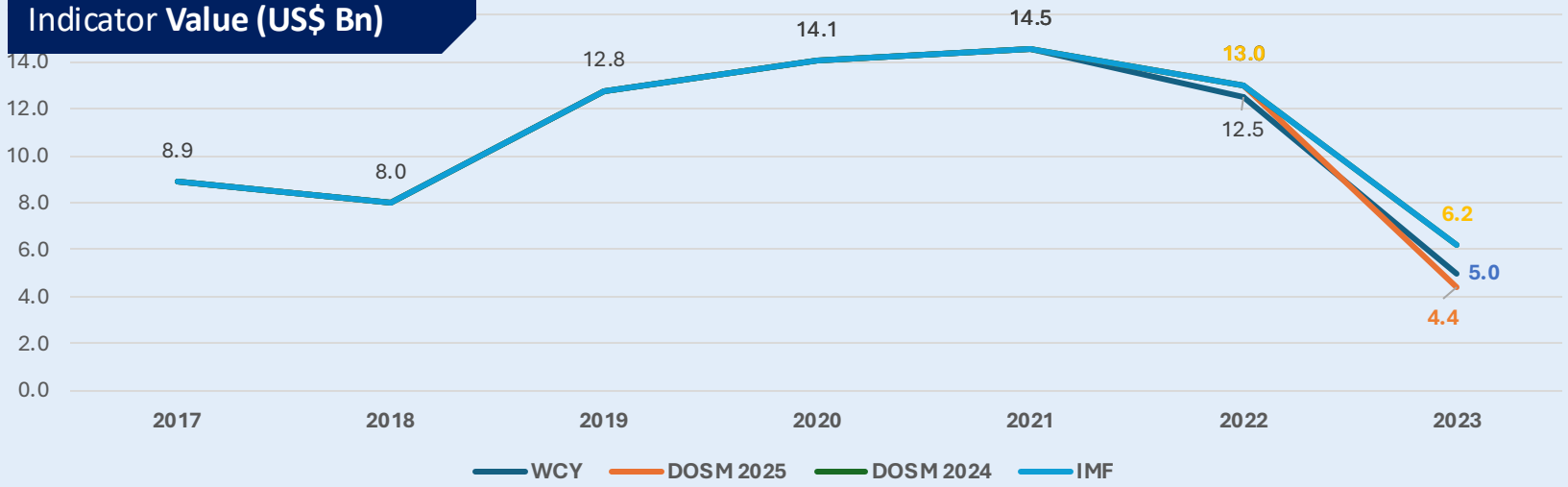
To access the **GDP** data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**National Account**"
5. Click "**Search**"
6. Find "**Annual National Accounts Gross Domestic Product (GDP), Malaysia**", for every year of interest.
7. Download the excel file.
8. For the recent year, Go to "**TABLE 1**". For a longer period time series, please go to "**TABLE 2**" or "**TABLE 8**".

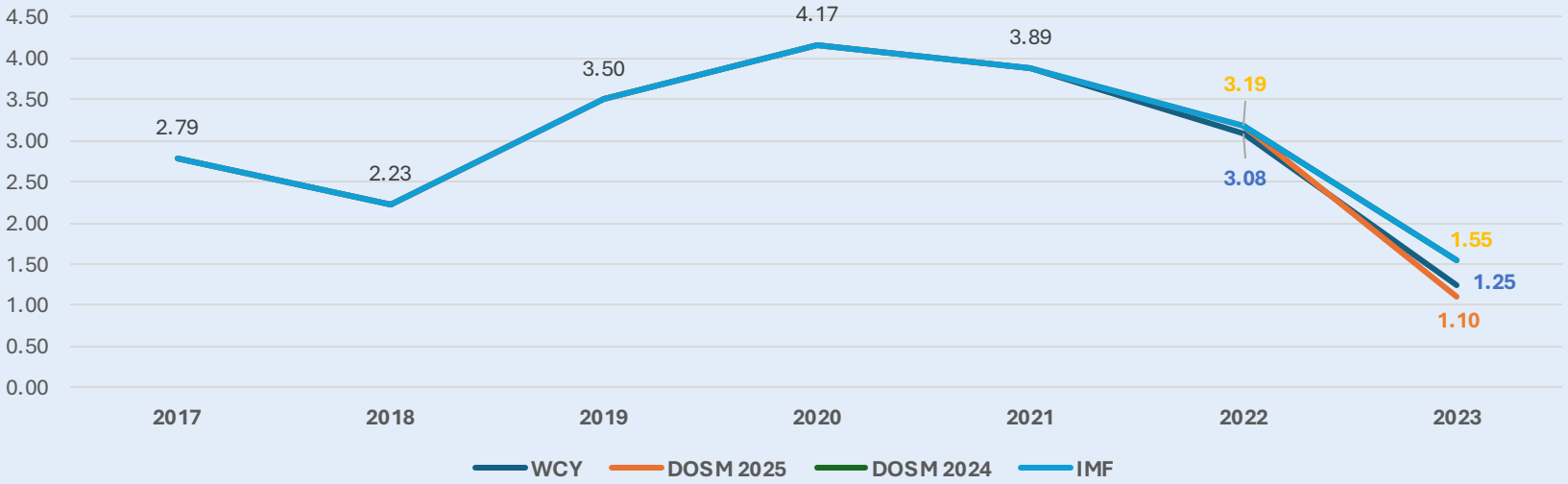
INDICATOR 1.2.02: Current Account Balance (% to GDP)

Comparative Measurement Assessment of Indicator

Indicator Value (US$ Bn)



Indicator Value (% to GDP)



In the earlier period (2017–2021), the data published by WCY, IMF, and DOSM show consistent trends and values.

However, beginning from 2022, discrepancies start to appear between the sources.

If WCY were using the same DOSM-published data (2024 version) as the IMF, the figures should match — but noticeable differences are observed, especially in 2023.

This raises questions about possible adjustments or lags in data transfer, or differing methodologies used in WCY.

Further clarity is needed to understand the data handling process and ensure alignment across all platforms.

Notes:

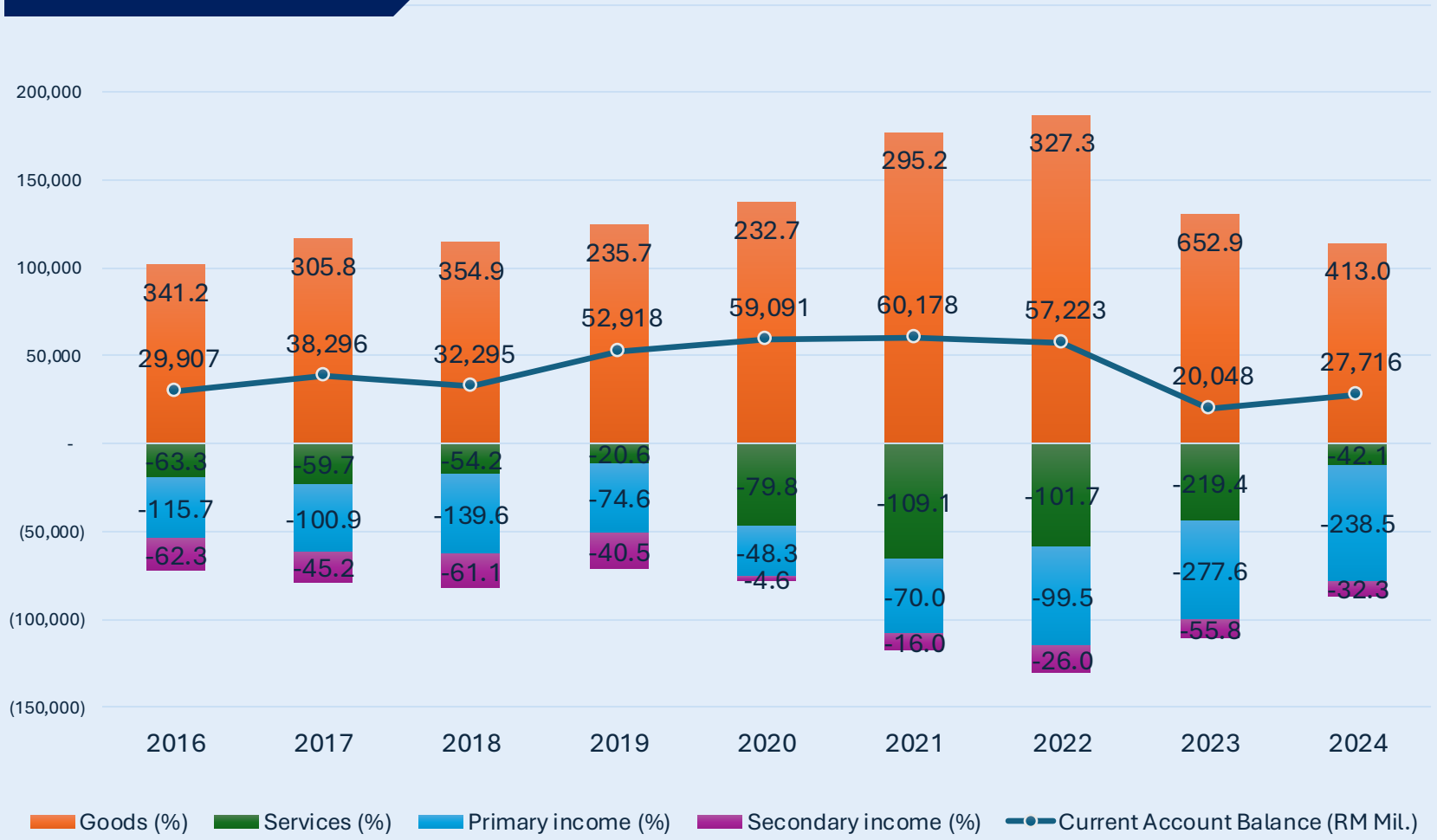
- DOSM 2024 refers to DOSM published data for the year 2023 in 2024.
- DOSM 2025 refers to revised DOSM data for the year 2023 in 2025.
- IMF figures follow DOSM published data in 2024.

Source: IMD (2025), IMF (2025), DOSM (2024 & 2025)

INDICATOR 1.2.02: Current Account Balance (% to GDP)

Areas of improvement for this indicators

CAB Detailed Breakdown



Despite differences across sources, the Current Account Balance (CAB) consistently shows a declining pattern in recent years, as illustrated in the detailed breakdown.

The data indicates that the main contributors to the persistent outflows are the services balance and primary income.

For services, the largest deficit component is in transport services, reflecting sustained import-related costs and logistics dependencies.

Meanwhile, the outflows in primary income are mainly driven by income payments on direct investments, as returns to foreign investors continue to outweigh Malaysia's income receipts abroad.

These structural imbalances highlight the need for targeted strategies to address competitiveness gaps in services and to enhance returns from Malaysian outward investments.

Source: DOSM 2025

THANK YOU

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HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 2.4.01
TARIFF BARRIERS

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 2.4.01: Tariff Barriers

INDICATOR DEFINITION

Weighted mean applied tariff is the average of effectively applied rates weighted by the product import shares corresponding to each partner country. (*Defined in World Competitiveness Yearbook, 2025*) – follows definition from World Bank

DATA SOURCE FROM WCY

World Development Indicators (World Bank)

DETAILED DATA BREAKDOWN

The weighted mean tariff is calculated by:

- *Taking the tariff rate applied on each imported product,*
- *Multiplying it by how much of that product we actually import (its share of total imports),*
- *Adding up all these products,*
- *Then dividing by the total imports — to get an average tariff, weighted by what the country really imports.*

Mathematically, it looks like this:

$$Weighted\ Mean\ Tariff\ (\%) = \frac{\sum_{i=1}^{N}(Tariff\ Rate_i \times Import\ Value_i)}{\sum_{i=1}^{N}(Import\ Value_i)}$$

Where:

- ***Tariff Rate i*** *= the applied tariff rate (ad valorem equivalent) on product i*
- ***Import Value i*** *= value of imports of product i*
- ***N*** *= total number of tariff lines/products*

WHAT DOES THE SCORE INDICATE?

Business Legislation - Openness 2.4.01

TARIFF BARRIERS 2021

Tariffs on imports: Applied weighted mean tariff rate for all products

Ranking		%
01	Hong Kong SAR	0.00
01	Singapore	0.00
03	Chile	0.43
04	Peru	0.65
05	United Kingdom	0.72
06	Australia	0.81
07	New Zealand	0.86
08	Botswana	0.95
09	Mexico	1.21 2018
10	Austria	1.39
10	Belgium	1.39
10	Bulgaria	1.39
10	Croatia	1.39
10	Cyprus	1.39
10	Czech Republic	1.39
10	Denmark	1.39
10	Estonia	1.39
10	Finland	1.39
10	France	1.39
10	Germany	1.39
10	Greece	1.39
10	Hungary	1.39
10	Ireland	1.39
10	Italy	1.39
10	Latvia	1.39
10	Lithuania	1.39
10	Luxembourg	1.39
10	Netherlands	1.39
10	Poland	1.39
10	Portugal	1.39
10	Romania	1.39
10	Slovak Republic	1.39
10	Slovenia	1.39
10	Spain	1.39
10	Sweden	1.39
36	Switzerland	1.40
37	Puerto Rico	1.47
37	USA	1.47
39	Iceland	1.51
40	Taiwan (Chinese Taipei)	1.60
41	Philippines	1.73
42	Indonesia	1.83
43	Japan	1.84
44	Bahrain	2.09
45	Kazakhstan	2.17
46	China	2.31
47	Canada	2.35
48	Colombia	2.58
49	UAE	2.63
50	Kuwait	2.85
51	Israel	2.88
52	Norway	3.00
53	Thailand	3.15
54	Turkey	3.22
55	Qatar	3.53
56	Malaysia	3.62
57	Jordan	3.98 2020
58	Saudi Arabia	4.23 2020
59	South Africa	4.46
60	Korea Rep.	4.85
61	Mongolia	5.28
62	India	5.87
63	Argentina	6.51
64	Brazil	7.76
65	Ghana	10.51
66	Nigeria	12.20
67	Venezuela	13.61

The higher the value, the lower the rank.

Source: *IMD World Competitiveness Yearbook 2025*

RATIONALITY?

Lower tariff barriers (lower weighted mean tariff rates) are generally viewed as a positive indicator of openness and competitiveness in global trade.

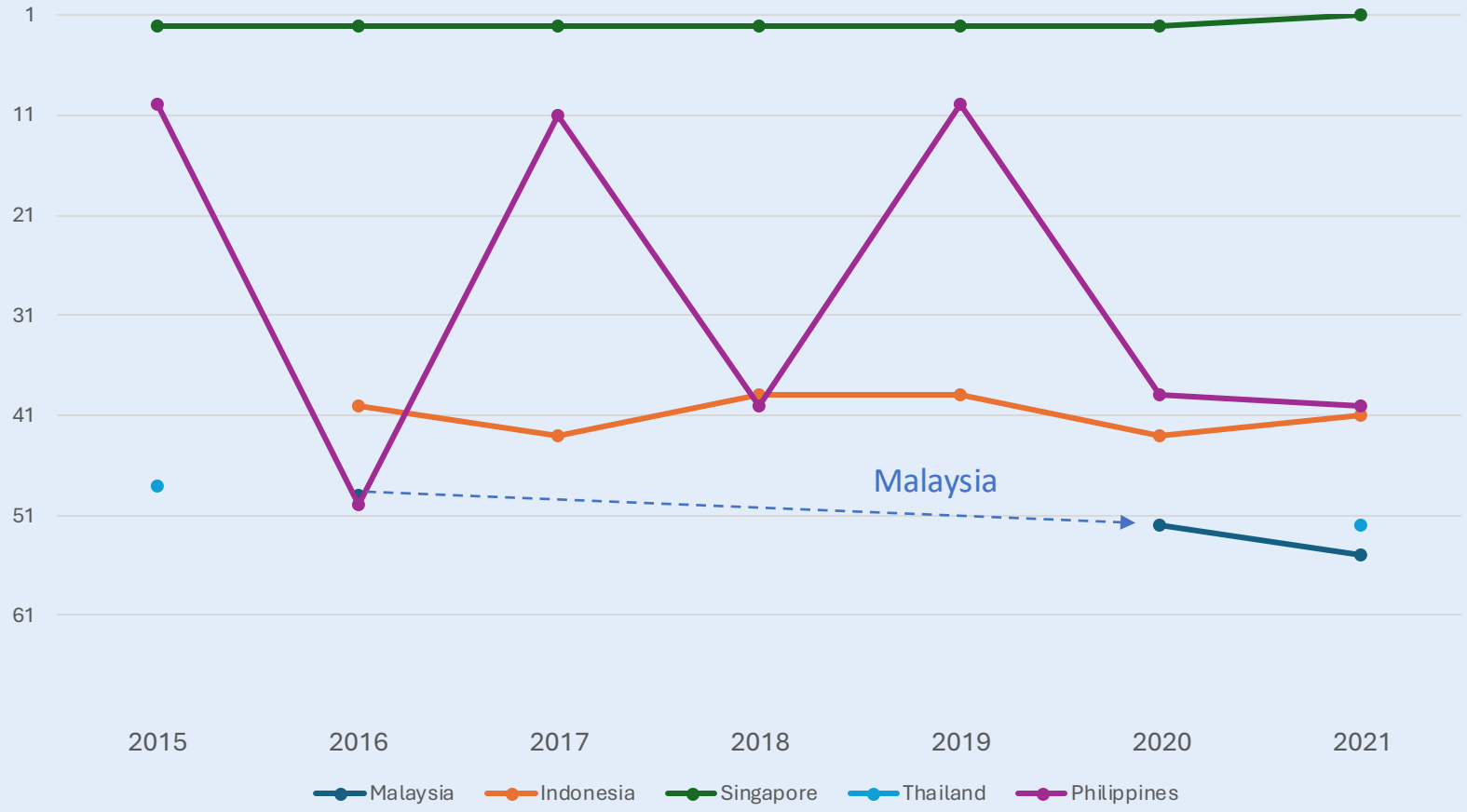
Countries with lower tariffs tend to facilitate more efficient trade flows, promote greater market access, and reduce the cost of imported inputs — which in turn can enhance productivity and export competitiveness.

High tariff barriers, on the other hand, may shield domestic industries but can also distort resource allocation, increase costs for consumers and businesses, and limit integration into global value chains. Excessively high tariffs may also invite retaliatory measures from trading partners, reducing overall trade potential.

In the IMD Competitiveness framework, lower tariffs = better ranking, as they reflect a more open and competitive trade environment, better positioned to attract foreign investment, participate in advanced global production networks, and stimulate domestic innovation through exposure to international markets.

INDICATOR 2.4.01: Tariff Barriers

Where are Malaysia now? Indicators ranking among ASEAN countries



The figure illustrates Malaysia's ranking for tariff barriers among ASEAN countries, based on the available data.

One key limitation is that Malaysia currently reports only three data points over the observed period — suggesting a lack of regular and comprehensive reporting on tariff rates.

Nevertheless, despite the data gaps, Malaysia consistently ranks among the lowest performers in ASEAN for this indicator, reflecting relatively high applied tariffs compared to regional peers.

Improving data coverage and transparency on tariff structures would be an important first step toward identifying areas for policy reform and enhancing Malaysia's trade competitiveness.

Source: IMD (2025)

INDICATOR 2.4.01: Tariff Barriers

How do the indicators perform across years?

Indicator **Value (%)**

Indicator **Rank**

The figure presents the trend of Malaysia's applied weighted mean tariff rate (%) and its corresponding ranking in the IMD World Competitiveness Yearbook for the available years.

Across the observed periods, Malaysia consistently ranks low — with relatively higher tariffs compared to global peers — positioning at 49th to 55th place.

The persistently high tariff rates suggest a restrictive trade environment, which may hinder Malaysia's ability to integrate into global value chains and attract foreign investment.

Moving forward, improving data transparency and pursuing tariff reforms would be important steps toward enhancing Malaysia's trade competitiveness.

Notes: The chart scale is set at 13% because the low-performing country (Venezuela) currently records a Tariff barriers of approximately 13%.

Source: IMD (2025)

Comparative Measurement Assessment of Indicator

Extracting the Tariff Barriers (2015–2022)

Data sourced from **World Bank**

To access the **Tariff Barrier** data, follow these steps:

1. Go to https://data.worldbank.org/indicator
2. Click on the search bar and type "**Tariff rate, applied**".
3. From the suggested list, select "**Tariff rate, applied, weighted mean, all products (%)**".
4. On the right-hand side menu, click on "**Excel**" under the "**Download**" groupings to download the file.
5. The data will be available in "**Data**" sheet. Specifically, for Malaysia is at "**Row 174**".

What do we know so far?

The World Bank estimates the tariff rate from several international sources includes:

UNSD: Import porducts

UN Comtrade Database

UNCTAD: Tariff rate

TRAINS

This indicator is not compiled from national sources.

Instead, it is fully based on international databases and estimation methodologies maintained by the World Bank and its data partners.

The methodology is clearly defined by World Bank as follows:

Tariff rate, applied, weighted mean, all products (%)

Weighted mean applied tariff is the average of effectively applied rates weighted by the product import shares corresponding to each partner country. Data are classified using the Harmonized System of trade at the six- or eight-digit level. Tariff line data were matched to Standard International Trade Classification (SITC) revision 3 codes to define commodity groups and import weights. To the extent possible, specific rates have been converted to their ad valorem equivalent rates and have been included in the calculation of weighted mean tariffs. Import weights were calculated using the United Nations Statistics Division's Commodity Trade (Comtrade) database. Effectively applied tariff rates at the six- and eight-digit product level are averaged for products in each commodity group. When the effectively applied rate is unavailable, the most favored nation rate is used instead.

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Source: World Bank staff estimates using the World Integrated Trade Solution system, based on tariff data from the United Nations Conference on Trade and Development's Trade and Development's Trade Analysis and Information System (TRAINS) database and global imports data from the United Nations Statistics Division's Comtrade database.

Way forward to improve **TARIFF BARRIERS** in Malaysia

Data Transparency and Validation

- Establish a technical working group involving DOSM, MITI, MOF, and key agencies to review the methodology behind World Bank-published data.
- Conduct dialogue sessions with the World Bank and relevant international sources to clarify estimation methods and data sources.
- Ensure alignment and verification between national records and international databases to reduce potential misrepresentation in global rankings.
- Build national capacity to continuously monitor and validate tariff-related data for more timely and accurate international reporting.

Policy Alignment and Tariff Rectification

- Review and update Malaysia's applied tariff structure to reflect current trade priorities and global commitments.
- Identify and rectify potential outdated or non-competitive tariffs to align with regional peers and trade agreements.
- Enhance transparency and accessibility of Malaysia's tariff schedule to improve investor confidence and facilitate trade.
- Strengthen inter-agency coordination (MITI, MOF, Customs, etc.) to ensure tariff policies support broader national economic strategies, including supply chain competitiveness and industrial upgrading.

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HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 1.2.14
EXPORTS OF COMMERCIAL SERVICES

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

INDICATOR DEFINITION

Trade in services records the value of services exchanged between residents and non-residents of an economy, including services provided through foreign affiliates established abroad. *(Define by OECD)*

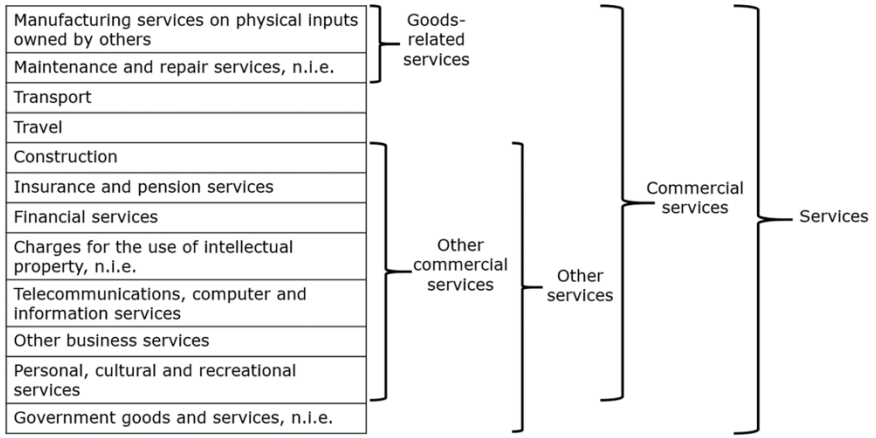
DATA SOURCE FROM WCY

World Trade Organization (WTO)

DETAILED DATA BREAKDOWN

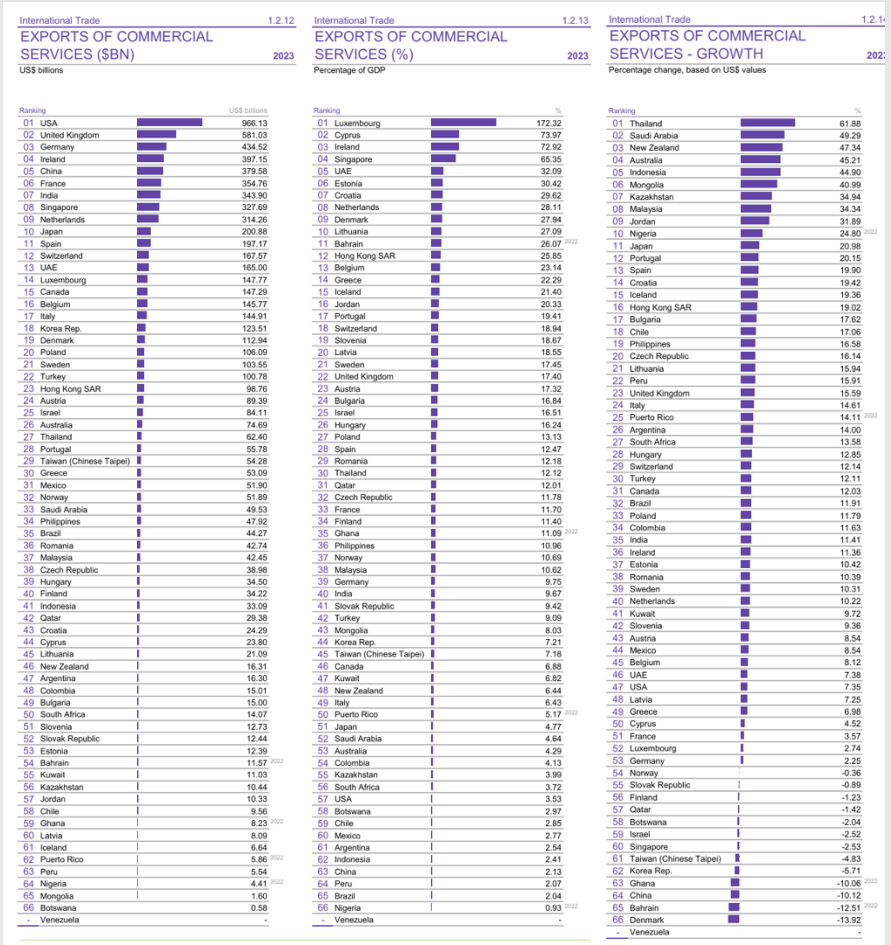
Classification of Trade in Services as in WTO database:

Figure 1: Breakdown of total services (main EBOPS 2010 items)



Sources: annual trade in commercial services data are jointly produced with UNCTAD. Data are sourced from Eurostat, the OECD, the International Monetary Fund (IMF), and national statistical sources. Where possible, reported data are complemented by estimates produced by the WTO and UNCTAD.

WHAT DOES THE SCORE INDICATE?



International Trade 1.2.12
EXPORTS OF COMMERCIAL SERVICES ($BN) 2023
US$ billions

Ranking		US$ billions
01	USA	966.13
02	United Kingdom	581.03
03	Germany	434.52
04	Ireland	397.15
05	China	379.58
06	France	354.76
07	India	343.90
08	Singapore	327.69
09	Netherlands	314.26
10	Japan	200.88
11	Spain	197.17
12	Switzerland	167.57
13	UAE	165.00
14	Luxembourg	147.77
15	Canada	147.29
16	Belgium	145.77
17	Italy	144.91
18	Korea Rep.	123.51
19	Denmark	112.94
20	Poland	106.09
21	Sweden	103.55
22	Turkey	100.78
23	Hong Kong SAR	98.76
24	Austria	89.39
25	Israel	84.11
26	Australia	74.69
27	Thailand	62.40
28	Portugal	55.78
29	Taiwan (Chinese Taipei)	54.28
30	Greece	53.09
31	Mexico	51.90
32	Norway	51.89
33	Saudi Arabia	49.53
34	Philippines	47.92
35	Brazil	44.27
36	Romania	42.74
37	Malaysia	42.45
38	Czech Republic	38.98
39	Hungary	34.50
40	Finland	34.22
41	Indonesia	33.09
42	Qatar	29.38
43	Croatia	24.29
44	Cyprus	23.80
45	Lithuania	21.09
46	New Zealand	16.31
47	Argentina	16.30
48	Colombia	15.01
49	Bulgaria	15.00
50	South Africa	14.07
51	Slovenia	12.73
52	Slovak Republic	12.44
53	Estonia	12.39
54	Bahrain	11.57
55	Kuwait	11.03
56	Kazakhstan	10.44
57	Jordan	10.33
58	Chile	9.56
59	Ghana	8.23
60	Latvia	8.09
61	Iceland	6.64
62	Puerto Rico	5.86
63	Peru	5.54
64	Nigeria	4.41
65	Mongolia	1.60
66	Botswana	0.58
-	Venezuela	-

International Trade 1.2.13
EXPORTS OF COMMERCIAL SERVICES (%) 2023
Percentage of GDP

Ranking		%
01	Luxembourg	172.32
02	Cyprus	73.97
03	Ireland	72.92
04	Singapore	65.35
05	UAE	32.09
06	Estonia	30.42
07	Croatia	29.62
08	Netherlands	28.11
09	Denmark	27.94
10	Lithuania	27.09
11	Bahrain	26.07
12	Hong Kong SAR	25.85
13	Belgium	23.14
14	Greece	22.29
15	Iceland	21.40
16	Jordan	20.33
17	Portugal	19.41
18	Switzerland	18.94
19	Slovenia	18.67
20	Latvia	18.55
21	Sweden	17.45
22	United Kingdom	17.40
23	Austria	17.32
24	Bulgaria	16.84
25	Israel	16.51
26	Hungary	16.24
27	Poland	13.13
28	Spain	12.47
29	Romania	12.18
30	Thailand	12.12
31	Qatar	12.01
32	Czech Republic	11.78
33	France	11.70
34	Finland	11.40
35	Ghana	11.09
36	Philippines	10.96
37	Norway	10.69
38	Malaysia	10.62
39	Germany	9.75
40	India	9.67
41	Slovak Republic	9.42
42	Turkey	9.09
43	Mongolia	8.03
44	Korea Rep.	7.21
45	Taiwan (Chinese Taipei)	7.18
46	Canada	6.88
47	Kuwait	6.82
48	New Zealand	6.44
49	Italy	6.43
50	Puerto Rico	5.17
51	Japan	4.77
52	Saudi Arabia	4.64
53	Australia	4.29
54	Colombia	4.13
55	Kazakhstan	3.99
56	South Africa	3.72
57	USA	3.53
58	Botswana	2.97
59	Chile	2.85
60	Mexico	2.77
61	Argentina	2.54
62	Indonesia	2.41
63	China	2.13
64	Peru	2.07
65	Brazil	2.04
66	Nigeria	0.93
-	Venezuela	-

International Trade 1.2.14
EXPORTS OF COMMERCIAL SERVICES - GROWTH 2023
Percentage change, based on US$ values

Ranking		%
01	Thailand	61.88
02	Saudi Arabia	49.29
03	New Zealand	47.34
04	Australia	45.21
05	Indonesia	44.90
06	Mongolia	40.99
07	Kazakhstan	34.94
08	Malaysia	34.34
09	Jordan	31.89
10	Nigeria	24.80
11	Japan	20.98
12	Portugal	20.15
13	Spain	19.90
14	Croatia	19.42
15	Iceland	19.36
16	Hong Kong SAR	19.02
17	Bulgaria	17.62
18	Chile	17.06
19	Philippines	16.58
20	Czech Republic	16.14
21	Lithuania	15.94
22	Peru	15.91
23	United Kingdom	15.59
24	Italy	14.61
25	Puerto Rico	14.11
26	Argentina	14.00
27	South Africa	13.58
28	Hungary	12.85
29	Switzerland	12.14
30	Turkey	12.11
31	Canada	12.03
32	Brazil	11.91
33	Poland	11.79
34	Colombia	11.63
35	India	11.41
36	Ireland	11.36
37	Estonia	10.42
38	Romania	10.39
39	Sweden	10.31
40	Netherlands	10.22
41	Kuwait	9.72
42	Slovenia	9.36
43	Austria	8.54
44	Mexico	8.54
45	Belgium	8.12
46	UAE	7.38
47	USA	7.35
48	Latvia	7.25
49	Greece	6.98
50	Cyprus	4.52
51	France	3.57
52	Luxembourg	2.74
53	Germany	2.25
54	Norway	-0.36
55	Slovak Republic	-0.89
56	Finland	-1.23
57	Qatar	-1.42
58	Botswana	-2.04
59	Israel	-2.52
60	Singapore	-2.53
61	Taiwan (Chinese Taipei)	-4.83
62	Korea Rep.	-5.71
63	Ghana	-10.06
64	China	-10.12
65	Bahrain	-12.51
66	Denmark	-13.92
-	Venezuela	-

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

Exports of commercial services reflect an economy's ability to generate high-value, knowledge-intensive output that is competitive globally.

A higher level, faster growth, and larger share to GDP indicate strong integration into global markets, structural economic maturity, and resilience in the external sector.

This contributes positively to national competitiveness by enhancing income generation, supporting macroeconomic stability through the balance of payments, and showcasing innovation, efficiency, and global relevance.

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Detailed calculation of each indicators

Exports of Commercial Services **(in $Bn)**

$$\textbf{\textit{Exports of Commercial Services}}\ (\textit{USD\$Bn}) = \frac{\textit{Exports in Commercial Services (RM Bn)}}{\textit{Exchange rate (LCU per US\$, period average)}}$$

Data source:

Exports in Commercial Services (RM Bn)
1. Department of Statistics Malaysia

Exchange rate (LCU per US$, period average)
1. Department of Statistics Malaysia
2. Bank Negara Malaysia
3. International Monetary Fund
4. Word Development Indicators

Exports of Commercial Services **(% to GDP)**

$$\textbf{\textit{Exports of Commercial Services}}\ (\%\ \textbf{\textit{to GDP}}) = \frac{\textit{Exports in Commercial Services (USD Bn, current price)}}{\textit{GDP (USD Bn, current price)}}$$

Data source:

Exports in Commercial Services (RM Bn, current price)
1. Department of Statistics Malaysia

GDP (RM Bn, current price)
1. Department of Statistics Malaysia
2. International Monetary Fund
3. Word Development Indicators

Exports of Commercial Services **(% growth)**

$$\textbf{\textit{ECS}}\ (\%\ \textbf{\textit{growth}}) = \frac{ECS\ (USD\ Bn)_{year\ 2} - ECS\ (USD\ Bn)_{year\ 1}}{ECS\ (USD\ Bn)_{year\ 1}} \times 100$$

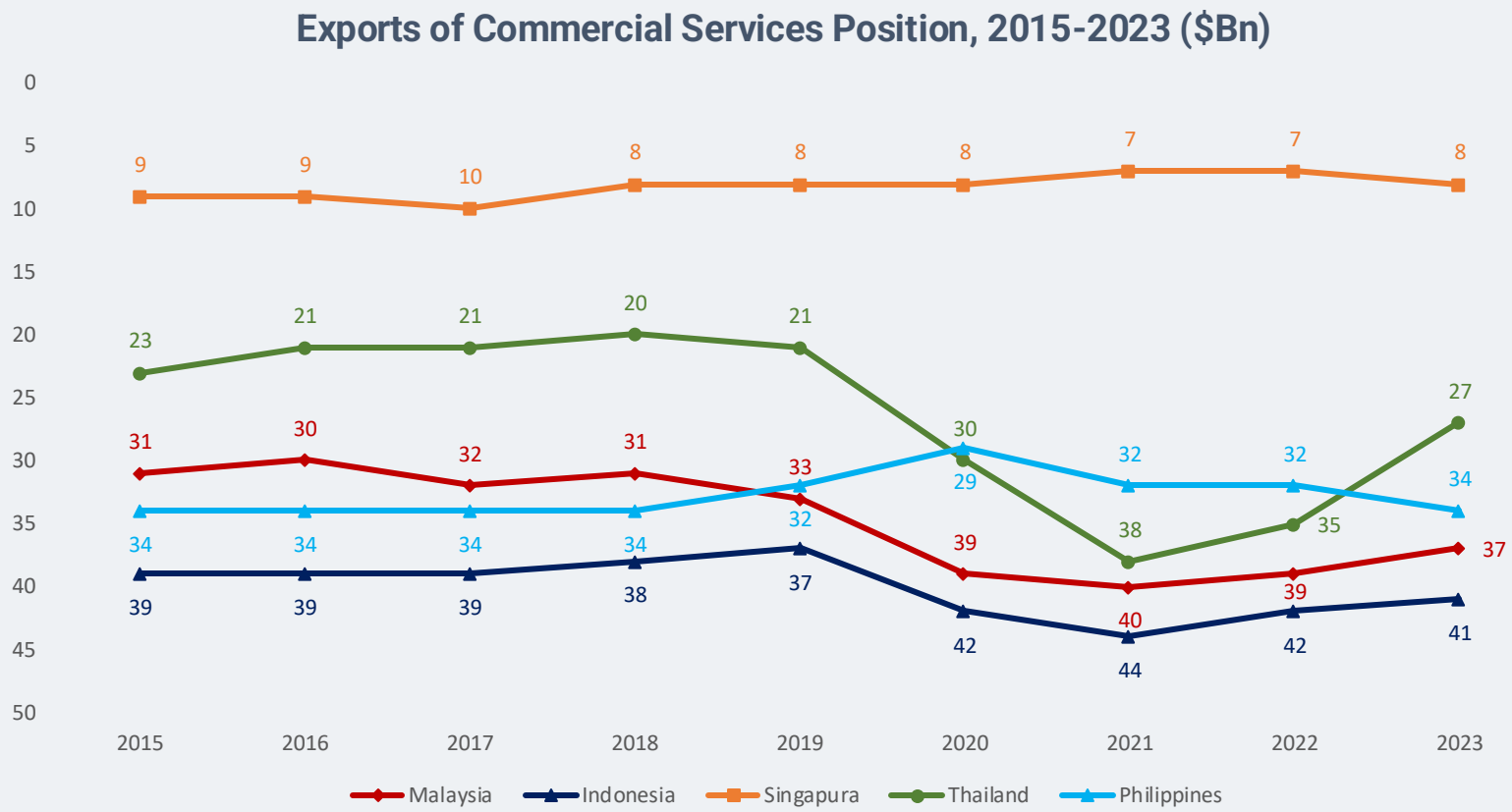
Data source:

Exports in Commercial Services (RM Bn)
1. Department of Statistics Malaysia

Note: LCU refers to local currency unit

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Where are Malaysia now? Indicators ranking among ASEAN countries



From 2015 to 2023, Singapore maintained a strong lead in ASEAN, consistently ranking in the global top 10 for commercial services exports. Thailand showed notable improvement, rebounding to 27th in 2023, while the Philippines remained stable in the low 30s.

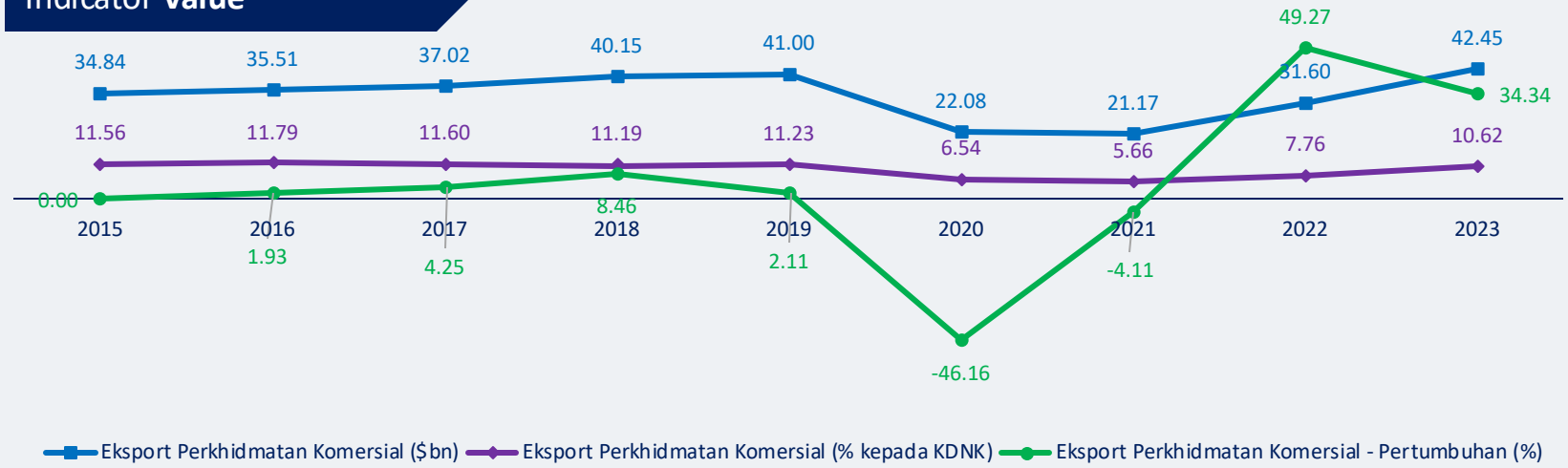
Malaysia held steady around the 30th position until 2019 but declined to 37th by 2023, indicating a loss of momentum. This suggests Malaysia is trailing behind peers in capturing global demand for services, highlighting the need to strengthen its tradable service sectors to boost competitiveness.

Source: IMD (2024)

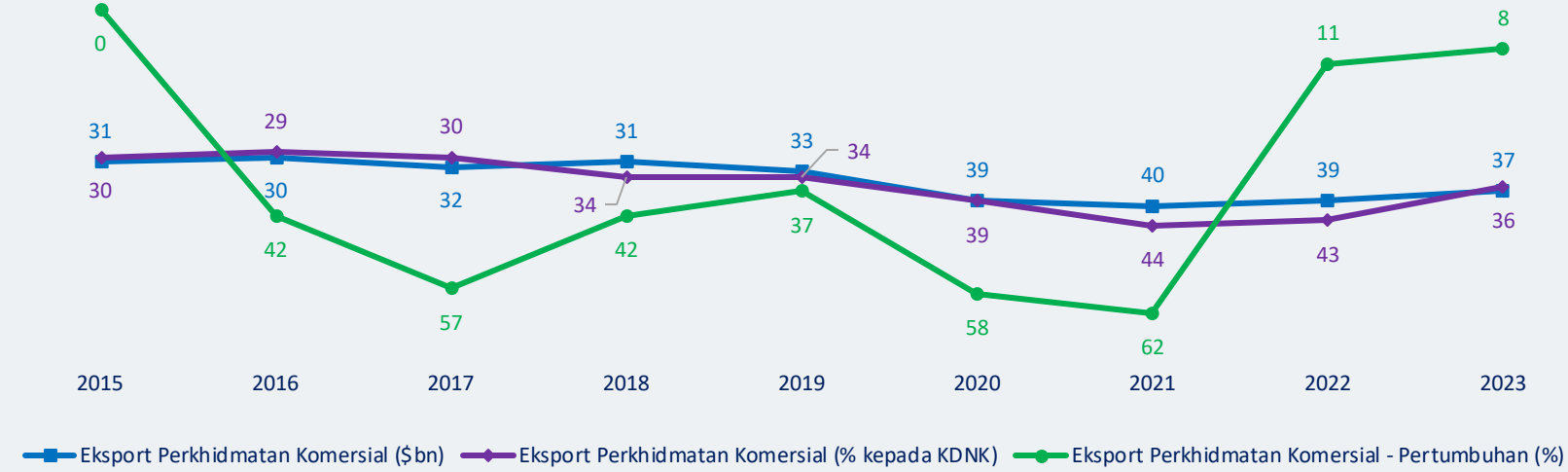
INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

How do the indicators perform across years?

Indicator Value



Indicator Rank



Malaysia's exports of commercial services showed a notable rebound in 2023, rising from US$31.60 billion in 2022 to US$42.45 billion—a growth of 34%. This substantial increase helped Malaysia improve its global ranking from 39th to 37th for export value. Similarly, the growth rate indicator climbed from 11th to 8th position globally, highlighting Malaysia's renewed momentum in service trade expansion.

However, the share of commercial services to GDP remained relatively flat over the years and continued to rank in the mid-30s range (36th in 2023), indicating that while export volumes have grown, the sector's relative contribution to the domestic economy remains moderate. This suggests untapped potential for further integration of services into Malaysia's economic structure.

Overall, the indicator trends reflect strong external performance in 2023, driven by value and growth, though structural improvements are still needed to enhance the strategic role of services within the domestic economy.

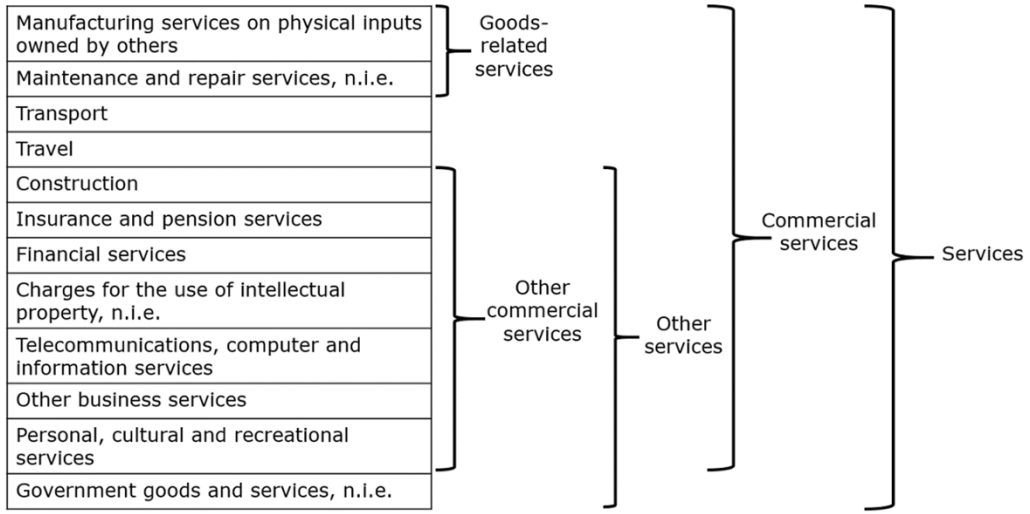
Source: IMD (2024)

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Comparative Measurement Assessment of Indicator

Breakdown from **WTO**

Figure 1: Breakdown of total services (main EBOPS 2010 items)



Sources: annual trade in commercial services data are jointly produced with UNCTAD. Data are sourced from Eurostat, the OECD, the International Monetary Fund (IMF), and national statistical sources. Where possible, reported data are complemented by estimates produced by the WTO and UNCTAD.

To access the data, follow these steps:

1. Go to "**https://stats.wto.org/**"
2. Click detailed on "**International trade statistics**"
3. Click detailed on "**Trade in commercial services**"
4. Select "**Commercial services exports by main sector – preliminary annual estimates based on quarterly statistics (2005-2024) (Million US dollar)**"
5. Select other data preferences
6. Click "**Excel**" on the top right of the screen to download the data.

Breakdown from **DOSM**

DOSM provides a more detailed sectoral breakdown of commercial services compared to the WTO, allowing for deeper national-level analysis.

To access the data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**Balance of Payment**"
5. Click "**Search**"
6. Find "**Statistics of International Trade in Services**"
7. Download the excel file.
8. Go to "**Table 1**" & "**Table 1 (2012-2017)**"

Manufacturing services on physical inputs owned by others
Maintenance and repair services n.i.e.
Transport
- Sea transport
  - *Freight*
  - *Passenger and others*
- Air transport
  - *Freight*
  - *Passenger and others*
- Other transport
  - *Postal and courier services*
  - *Others*

Travel
- Business
- Personal
  - *Health-related*
  - *Education-related*
  - *Others*

Construction
Insurance and pension services
Financial services
Charges for the use of intellectual property n.i.e.
- Usage of intellectual properties
- Licenses to reproduce and distribute of intellectual properties

Telecommunications, computer and information services
- Telecommunications
- Computer
- Information

Other business services
- Research and development services
- Professional and management consulting services
  - *Legal*
  - *Accounting*
  - *Business and management consulting*
- Technical, trade-related and other business services
  - *Architectural, engineering and other technical*
  - *Operating leasing*
  - *Trade-related and other business services*

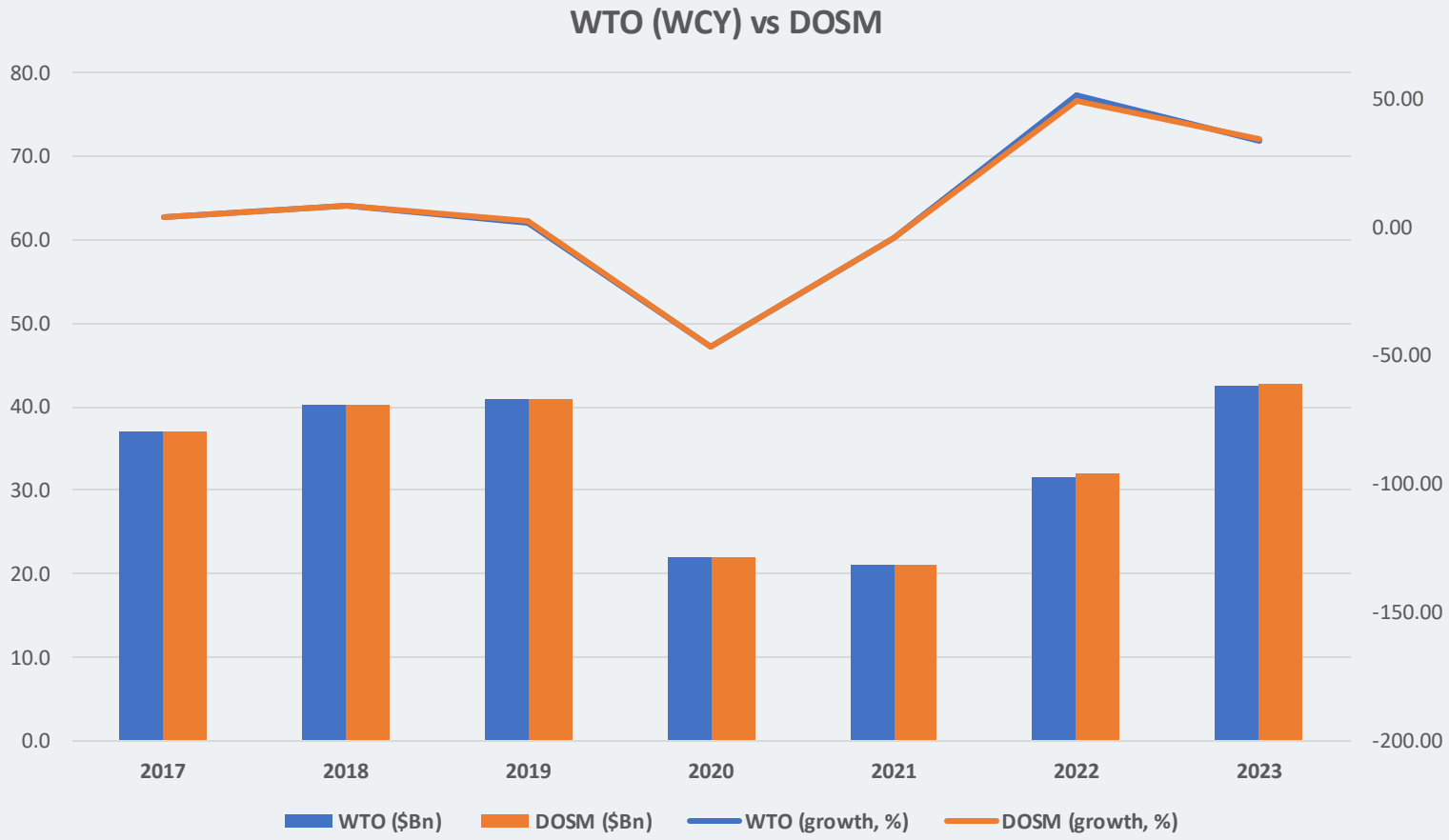
Personal, cultural and recreational services
- Audio visual and related services
- Other personal, cultural and recreational services

Government goods and services n.i.e

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Comparative Measurement Assessment of Indicator

Comparison of Commercial Services Export Data (Value & Growth, 2017–2023)



Notes: For export of commercial services data sourced from DOSM, the exchange rate used is from the Final External Trade Statistics. In this publication, the exchange rate is based on the 12-month average provided by Bank Negara Malaysia (BNM).
Source: IMD World Competitiveness Yearbook 2024, Bank Negara Malaysia (BNM) and Department of Statistics Malaysia (DOSM).

Based on the comparative analysis, export values and growth trends reported by WTO and DOSM are largely consistent.

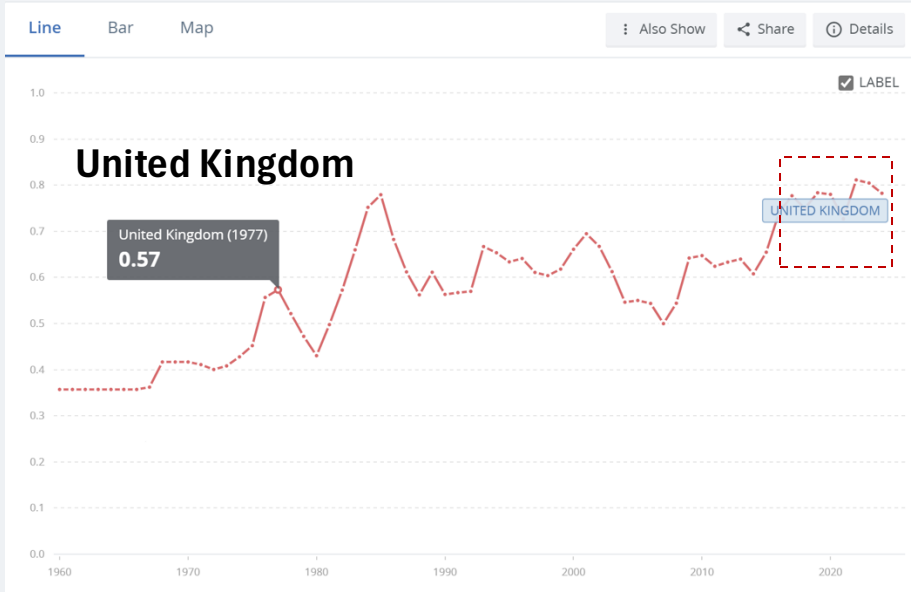
The figures published by WTO—which are used in the IMD World Competitiveness Yearbook—closely align with Malaysia's national data.

This indicates that there are no significant measurement discrepancies, and the indicator can be reliably used for international benchmarking.

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Official exchange rate (LCU per US$, period average) for Top-4 ranking in Exports of Commercial Services ($Bn)

Stable exchange rate improves denominator of export of commercial services



INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Official exchange rate (LCU per US$, period average) for Top-4 ranking in Exports of Commercial Services ($Bn)

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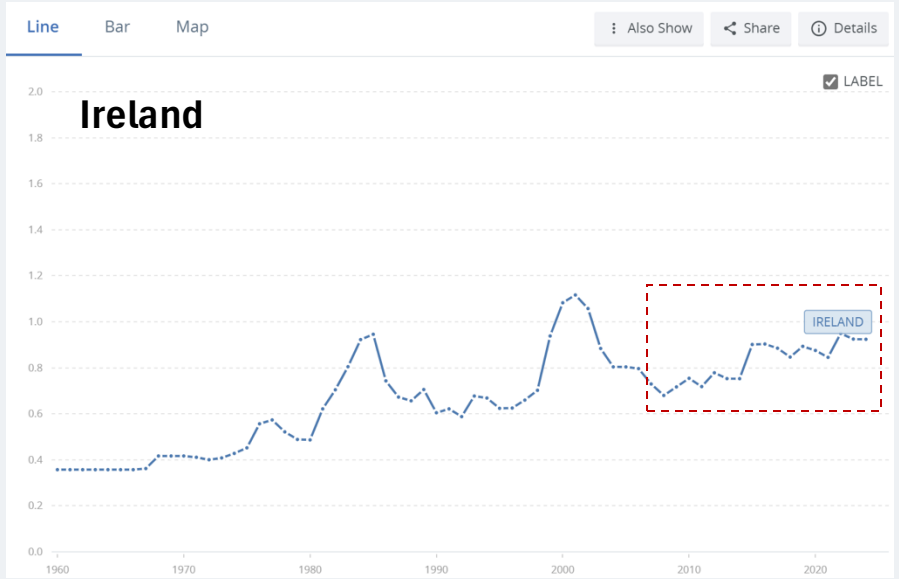
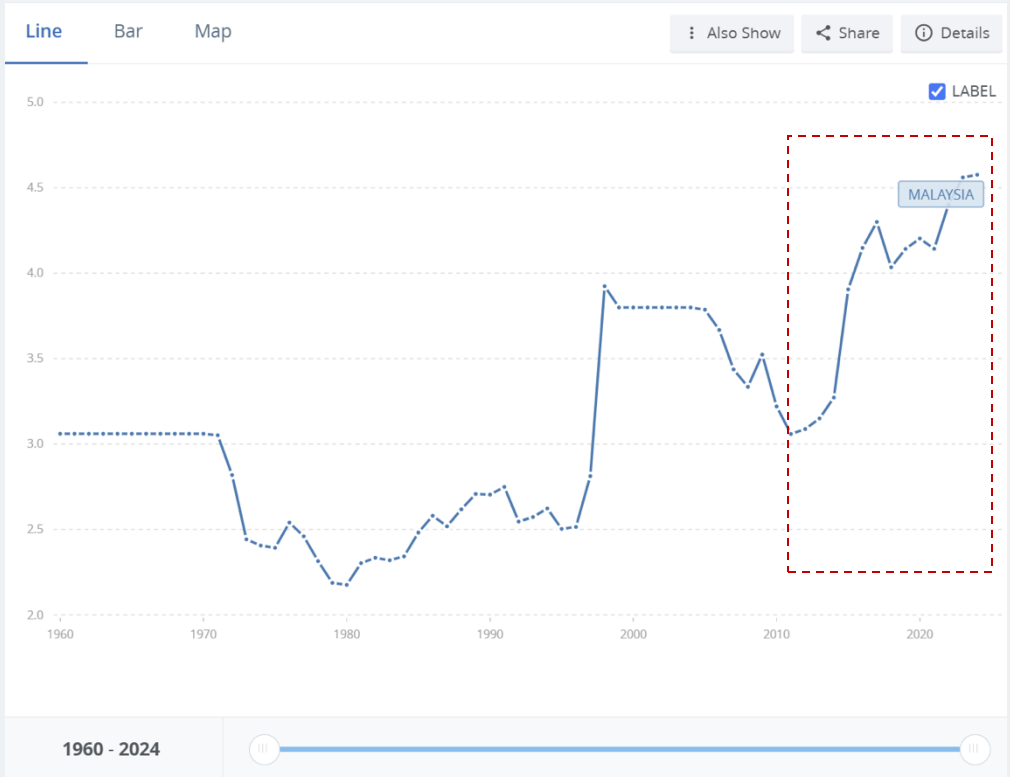


INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Official exchange rate (LCU per US$, period average) for Top-4 ranking in Exports of Commercial Services ($Bn)

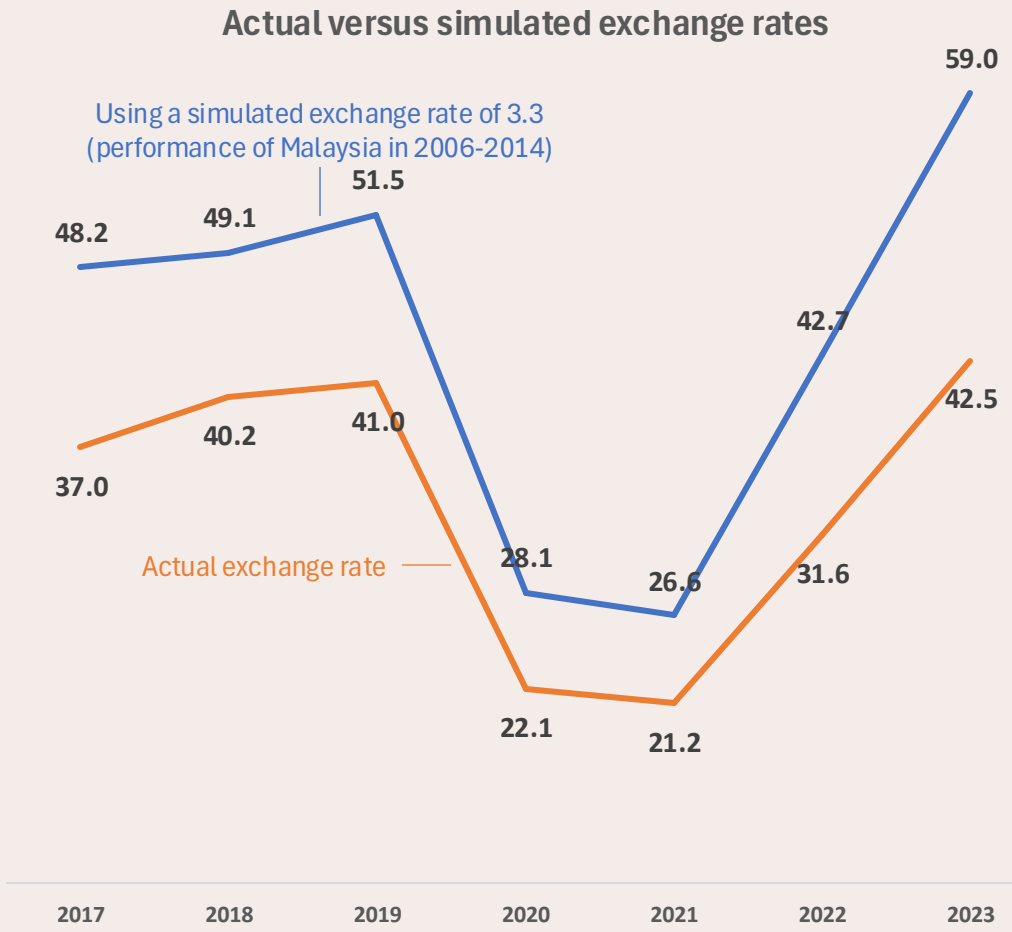
Stable exchange rate improves denominator of export of commercial services

Malaysia



Simulation

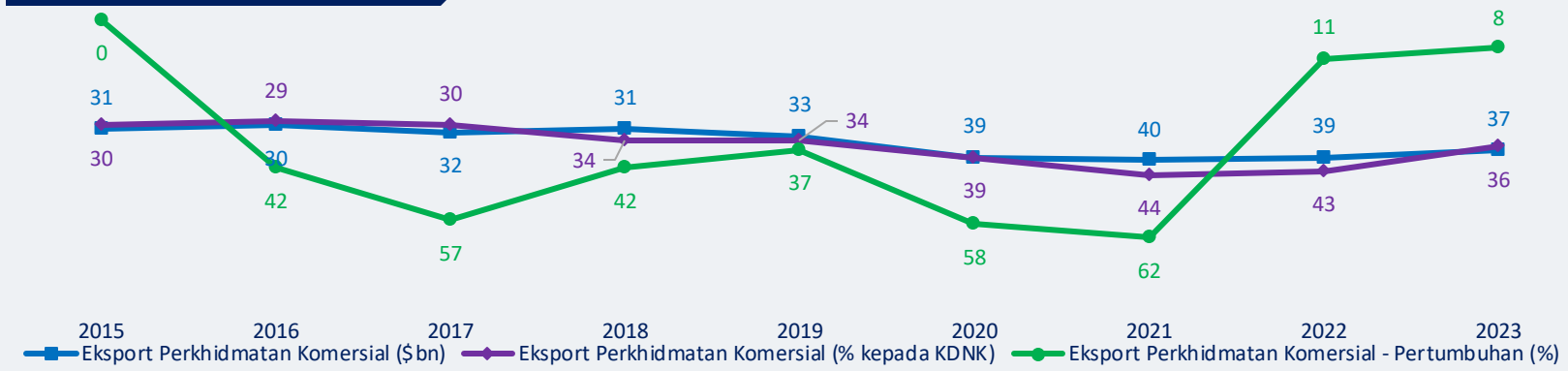
If we take average exchange of 3.3 (MYR-to-USD), we obtain the following scores for exports of commercial services…….a considerable higher level of exports…



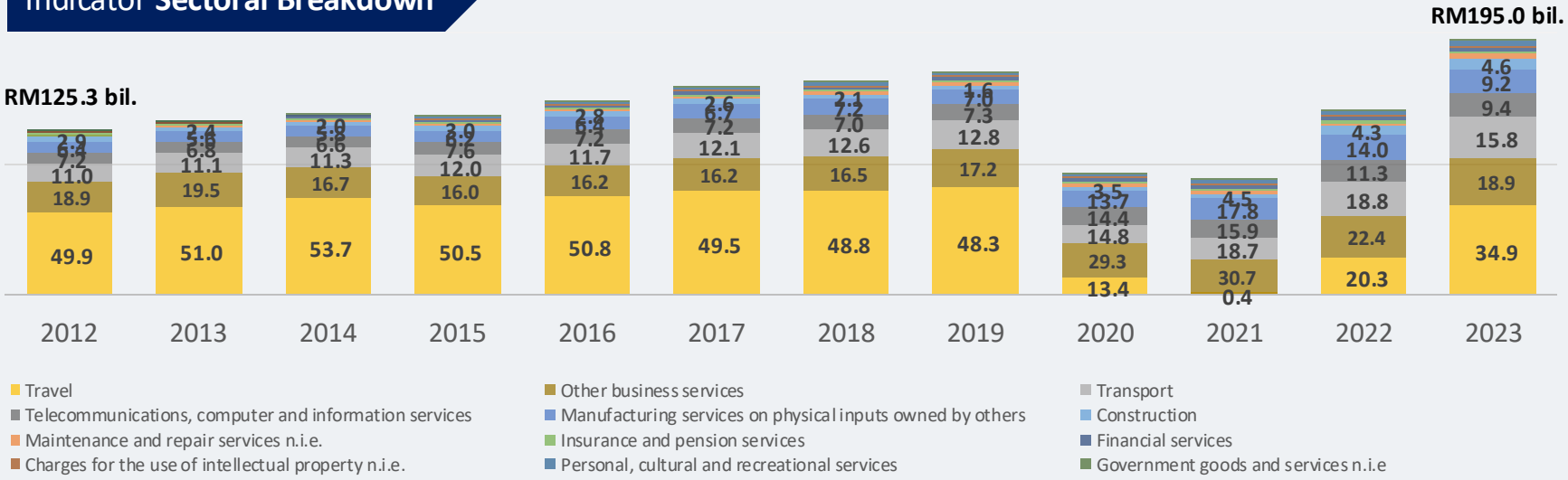
INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Areas of improvement for this indicators

Indicator **Rank**



Indicator **Sectoral Breakdown**



Malaysia's commercial services exports have historically been heavily reliant on the travel (tourism) sector, making the country vulnerable to external shocks—as clearly seen during the pandemic years. However, data from 2022–2023 shows a positive shift: the recovery phase is marked by more diversified sectoral contributions, especially from ICT, Transport, and Other business services.

This trend reflects a strategic opportunity—Malaysia can strengthen competitiveness by deepening sectoral diversification, reducing overdependence on tourism, and boosting high-value, knowledge-based services. Sustaining this shift will be crucial to improve rankings, economic resilience, and long-term growth in commercial services exports.

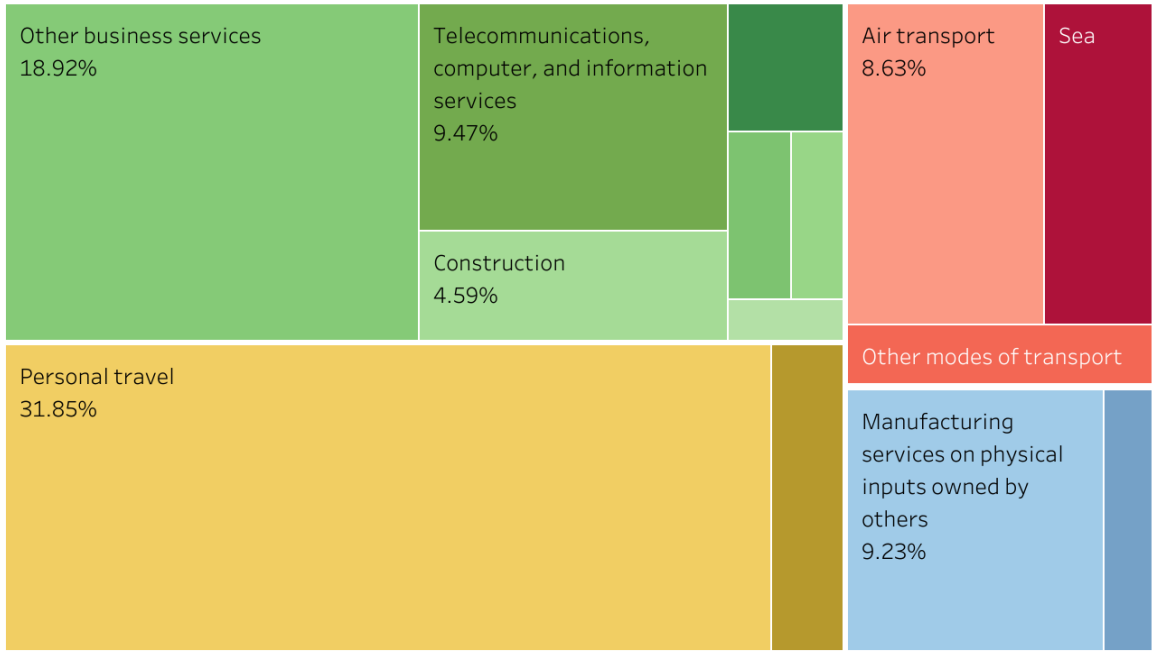
Source: IMD World Competitiveness Yearbook 2024 and Department of Statistics Malaysia (DOSM).

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Areas of improvement for this indicators

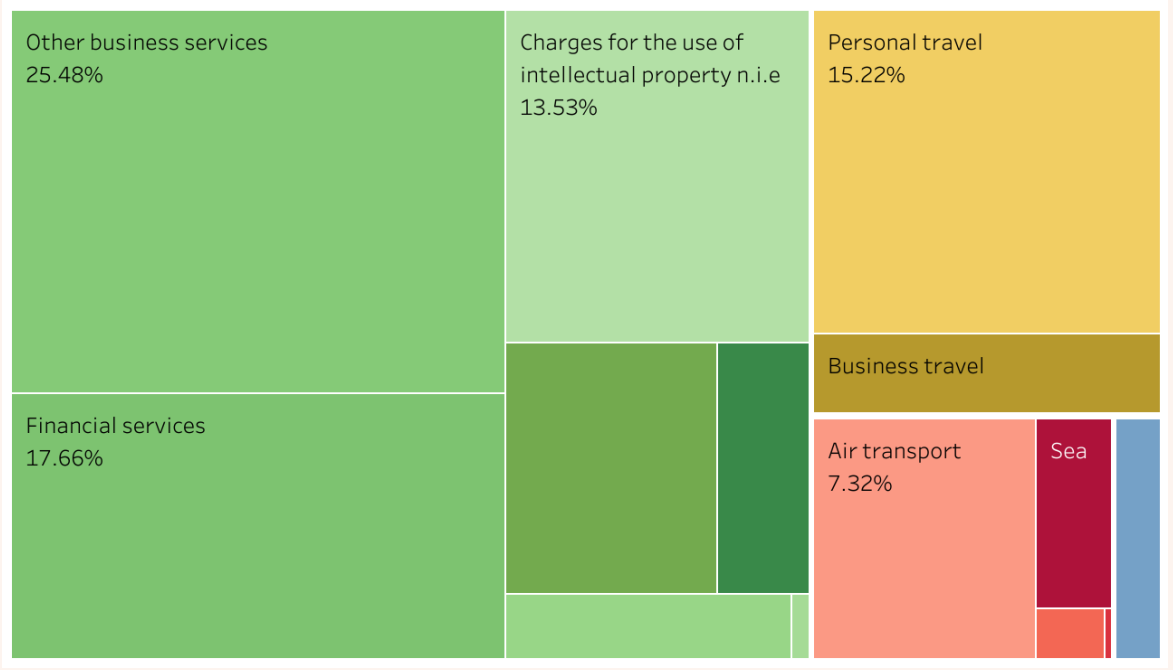
Comparative structure between Malaysia and Top 2 Countries.

Malaysia



SH4, Desc
- 2110, Maintenance and repair services n.i.e.
- 2110, Manufacturing services on physical inputs owned by others
- 2120, Air transport
- 2120, Other modes of transport
- 2120, Postal and courier services
- 2120, Sea transport
- 2130, Business travel
- 2130, Personal travel
- 2140, Charges for the use of intellectual property n.i.e
- 2140, Construction
- 2140, Financial services
- 2140, Insurance and pension services
- 2140, Other business services
- 2140, Personal, cultural, and recreational services
- 2140, Telecommunications, computer, and information services

United States of America



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- 2140, Construction
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- 2140, Insurance and pension services
- 2140, Other business services
- 2140, Personal, cultural, and recreational services
- 2140, Telecommunications, computer, and information services

Malaysia's exports of commercial services are heavily concentrated in tourism and transport, while the U.S. export structure is more diversified and dominated by high-value, knowledge-based services like finance, intellectual property, and professional business services.

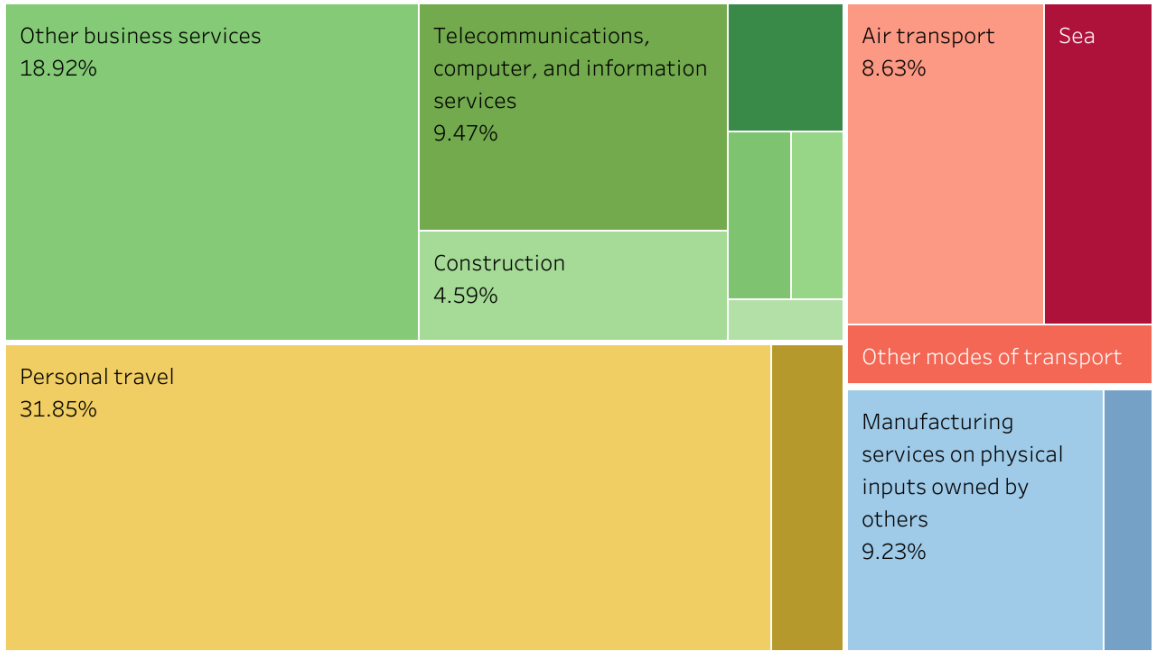
Source: World Trade Organization (WTO)

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Areas of improvement for this indicators

Comparative structure between Malaysia and Top 2 Countries.

Malaysia



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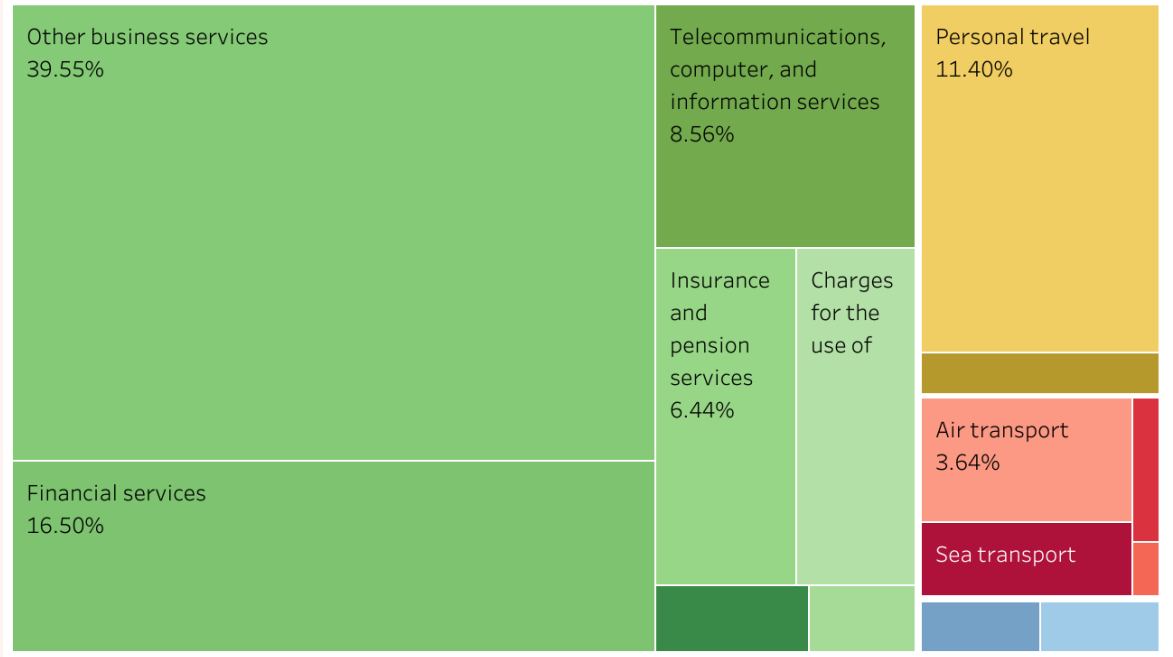
- 2140, Telecommunications, computer, and information services

United Kingdom



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- 2140, Telecommunications, computer, and information services

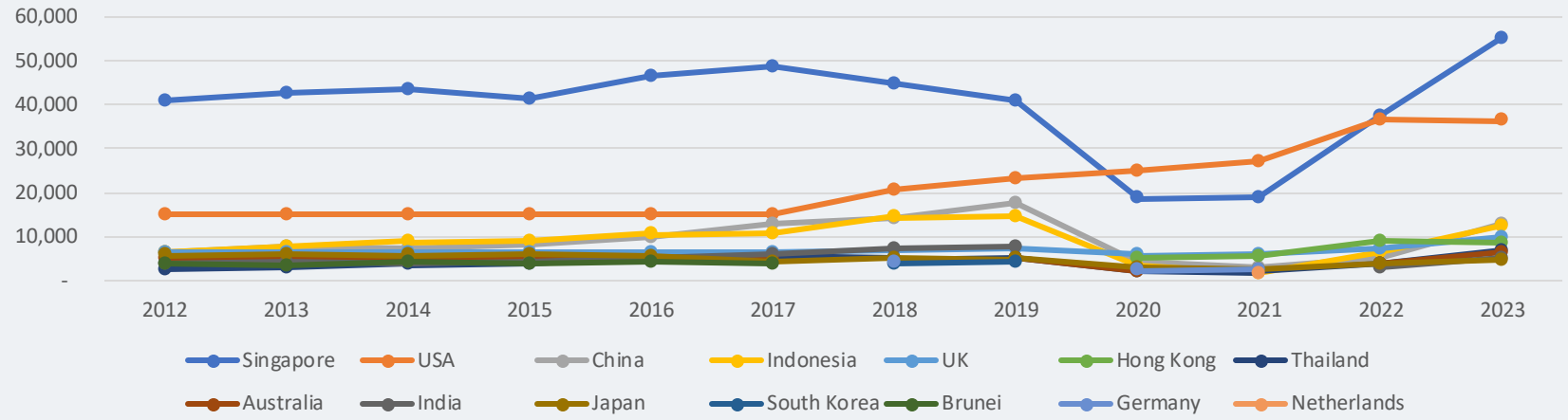
Malaysia's exports of commercial services are concentrated in tourism and transport, whereas the United Kingdom's structure is dominated by high-value services such as other business services, financial services, and ICT, reflecting greater service sophistication and diversification.

Source: World Trade Organization (WTO)

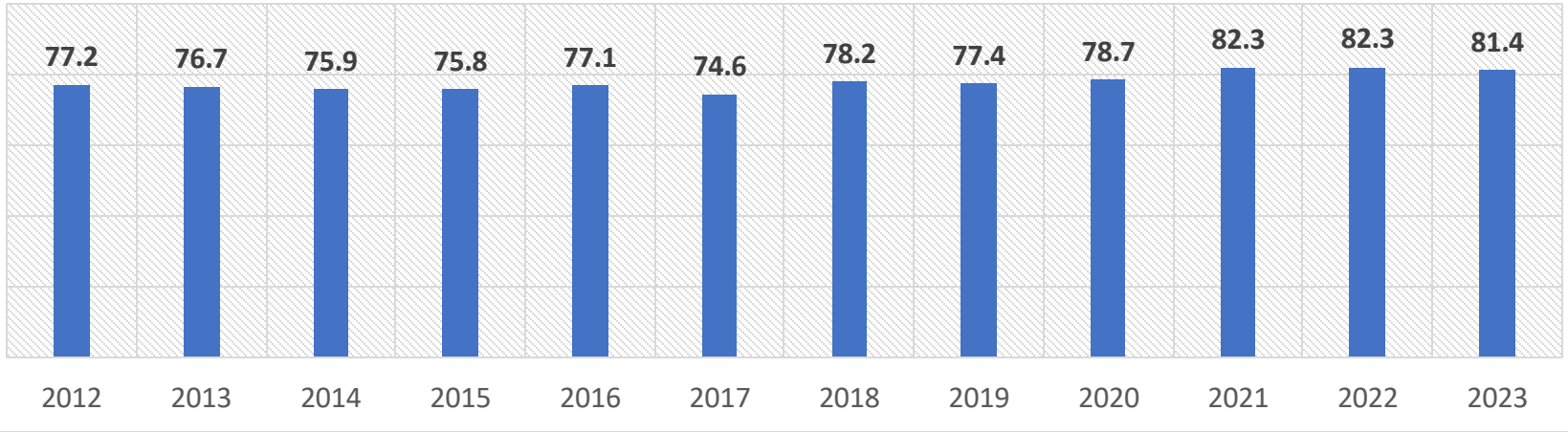
INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Areas of improvement for this indicators

Indicator by **Export Destination**



Top 10 Country Concentration



Malaysia's commercial services exports are highly concentrated among a few key partners, with Singapore, the USA, and China consistently dominating the top spots. Notably, exports to Singapore rebounded sharply in 2023, regaining its lead after a pandemic-induced decline, while the USA and China also saw strong upward trends—indicating recovery and renewed demand from major economies.

An increasing concentration trend, with the top 10 partners accounting for over 81% of total commercial services exports in 2023. This rising concentration raises concerns about overdependence on a narrow set of markets, making Malaysia more exposed to external shocks or policy changes in those economies. It highlights the need to broaden market diversification efforts and tap into emerging markets to build long-term trade resilience and improve competitiveness.

Source: Department of Statistics Malaysia (DOSM).

INDICATOR 1.2.14: Exports of Commercial Services ($Bn, % to GDP ratio, growth)

Areas of improvement for this indicators

Detailed **Breakdown**

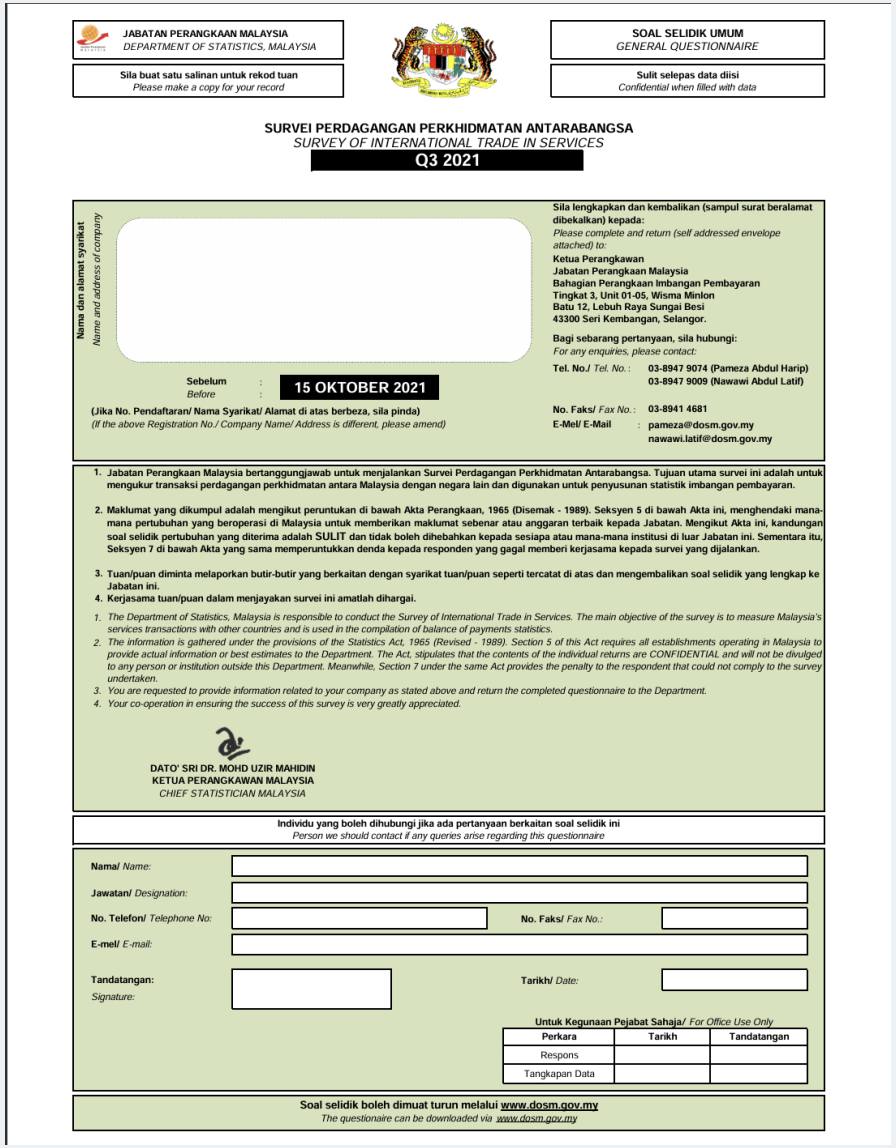
Detailed breakdowns of exports of commercial services can potentially include categories such as:

- By state level
- By firm size

However, these disaggregated data are not available in the public domain. It is recommended that MPC first review the existing Survey of International Trade in Services to assess what detailed variables are currently collected and identify potential gaps.

Any proposed enhancements or additional data needs can then be discussed and coordinated with the Department of Statistics Malaysia (DOSM) to determine feasibility and relevance for future data collection..

Survey of International Trade in Services



JABATAN PERANGKAAN MALAYSIA
DEPARTMENT OF STATISTICS, MALAYSIA

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Please make a copy for your record

SOAL SELIDIK UMUM
GENERAL QUESTIONNAIRE

Sulit selepas data diisi
Confidential when filled with data

SURVEI PERDAGANGAN PERKHIDMATAN ANTARABANGSA
SURVEY OF INTERNATIONAL TRADE IN SERVICES
Q3 2021

Nama dan alamat syarikat
Name and address of company

Sila lengkapkan dan kembalikan (sampul surat beralamat dibekalkan) kepada:
Please complete and return (self addressed envelope attached) to:
Ketua Perangkawan
Jabatan Perangkaan Malaysia
Bahagian Perangkaan Imbangan Pembayaran
Tingkat 3, Unit 01-05, Wisma Minlon
Batu 12, Lebuh Raya Sungai Besi
43300 Seri Kembangan, Selangor.

Bagi sebarang pertanyaan, sila hubungi:
For any enquiries, please contact:
Tel. No./ *Tel. No.* : 03-8947 9074 (Pameza Abdul Harip)
03-8947 9009 (Nawawi Abdul Latif)

Sebelum / *Before* : 15 OKTOBER 2021

(Jika No. Pendaftaran/ Nama Syarikat/ Alamat di atas berbeza, sila pinda)
(If the above Registration No./ Company Name/ Address is different, please amend)

No. Faks/ *Fax No.* : 03-8941 4681
E-Mel/ E-Mail : pameza@dosm.gov.my
nawawi.latif@dosm.gov.my

1. Jabatan Perangkaan Malaysia bertanggungjawab untuk menjalankan Survei Perdagangan Perkhidmatan Antarabangsa. Tujuan utama survei ini adalah untuk mengukur transaksi perdagangan perkhidmatan antara Malaysia dengan negara lain dan digunakan untuk penyusunan statistik imbangan pembayaran.
2. Maklumat yang dikumpul adalah mengikut peruntukan di bawah Akta Perangkaan, 1965 (Disemak - 1989). Seksyen 5 di bawah Akta ini, menghendaki mana-mana pertubuhan yang beroperasi di Malaysia untuk memberikan maklumat sebenar atau anggaran terbaik kepada Jabatan. Mengikut Akta ini, kandungan soal selidik pertubuhan yang diterima adalah SULIT dan tidak boleh dihebahkan kepada sesiapa atau mana-mana institusi di luar Jabatan ini. Sementara itu, Seksyen 7 di bawah Akta yang sama memperuntukkan denda kepada responden yang gagal memberi kerjasama kepada survei yang dijalankan.
3. Tuan/puan diminta melaporkan butir-butir yang berkaitan dengan syarikat tuan/puan seperti tercatat di atas dan mengembalikan soal selidik yang lengkap ke Jabatan ini.
4. Kerjasama tuan/puan dalam menjayakan survei ini amatlah dihargai.

1. *The Department of Statistics, Malaysia is responsible to conduct the Survey of International Trade in Services. The main objective of the survey is to measure Malaysia's services transactions with other countries and is used in the compilation of balance of payments statistics.*
2. *The information is gathered under the provisions of the Statistics Act, 1965 (Revised - 1989). Section 5 of this Act requires all establishments operating in Malaysia to provide actual information or best estimates to the Department. The Act, stipulates that the contents of the individual returns are CONFIDENTIAL and will not be divulged to any person or institution outside this Department. Meanwhile, Section 7 under the same Act provides the penalty to the respondent that could not comply to the survey undertaken.*
3. *You are requested to provide information related to your company as stated above and return the completed questionnaire to the Department.*
4. *Your co-operation in ensuring the success of this survey is very greatly appreciated.*

DATO' SRI DR. MOHD UZIR MAHIDIN
KETUA PERANGKAWAN MALAYSIA
CHIEF STATISTICIAN MALAYSIA

Individu yang boleh dihubungi jika ada pertanyaan berkaitan soal selidik ini
Person we should contact if any queries arise regarding this questionnaire

Nama/ *Name:*
Jawatan/ *Designation:*
No. Telefon/ *Telephone No:*
No. Faks/ *Fax No.:*
E-mel/ *E-mail:*
Tandatangan: / *Signature:*
Tarikh/ *Date:*

Untuk Kegunaan Pejabat Sahaja/ *For Office Use Only*

Perkara	Tarikh	Tandatangan
Respons		
Tangkapan Data		

Soal selidik boleh dimuat turun melalui www.dosm.gov.my
The questionaire can be downloaded via www.dosm.gov.my

Source: Department of Statistics Malaysia (DOSM)

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 1.2.17
EXPORT CONCENTRATION BY TRADE PARTNERS

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.2.17: Export Concentration by Partner (% of total exports)

INDICATOR DEFINITION

Export concentration reflects the degree to which a country's exports are concentrated on a small number of trading partners. A country that exports to only one trading partner has a perfectly concentrated export portfolio and vice versa. *(Defined by UNDP)*

DATA SOURCE FROM WCY

United Nation Trade and Development (UNCTAD)

DETAILED DATA BREAKDOWN

Export concentration (EC) by partner is calculated as:

$$\boldsymbol{Export\ Concentration\ Ratio(ECR)} = \frac{Summation\ of\ top\ 5\ trading\ partner's\ exports}{Total\ exports}$$

WHAT DOES THE SCORE INDICATE?

International Trade 1.2.17

EXPORT CONCENTRATION BY PARTNER 2022

Exports to top 5 countries, percentage of total exports

Ranking		%
01	Turkey	30.4
02	Greece	34.9
03	India	35.3
04	Germany	37.0
05	China	37.9
06	Lithuania	41.9
07	Argentina	42.3
08	Cyprus	42.9
09	United Kingdom	43.2
10	South Africa	43.5
11	Italy	43.6
12	Hungary	44.4
13	Finland	44.7
14	Sweden	45.7
15	Thailand	46.3
16	Bulgaria	46.5
17	France	47.1
18	Romania	47.3
19	Latvia	47.3
20	UAE	47.4
21	Denmark	47.6
22	USA	48.0
23	Israel	49.0
24	Singapore	49.0
25	Nigeria	49.0
26	Spain	49.1
27	Bahrain	49.2
28	Brazil	49.3
29	Poland	49.9
30	Estonia	50.0
31	Colombia	51.4
32	Austria	51.7
33	Malaysia	51.8
34	Switzerland	52.3
35	Indonesia	52.5
36	Kazakhstan	54.5
37	Saudi Arabia	54.8
38	Slovak Republic	55.4
39	Korea Rep.	56.4
40	Croatia	56.5
41	Qatar	56.5
42	Japan	56.7
43	Slovenia	57.0
44	Netherlands	57.1
45	Czech Republic	57.2
46	Belgium	59.3
47	Jordan	59.4
48	Ghana	59.4
49	Peru	60.1
50	Luxembourg	60.8
51	New Zealand	61.4
52	Portugal	62.4
53	Philippines	63.3
54	Kuwait	65.8
55	Iceland	67.1
56	Venezuela	67.3
57	Ireland	68.7
58	Australia	69.8
59	Taiwan (Chinese Taipei)	69.8
60	Chile	72.2
61	Norway	72.7
62	Hong Kong SAR	73.0
63	Botswana	77.4
64	Canada	86.5
65	Puerto Rico	88.1
66	Mexico	90.3
67	Mongolia	98.3

The higher the value, the lower the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

The IMD Competitiveness Yearbook considers high export concentration—where a large share of exports is directed to just a few trading partners—as a negative indicator of competitiveness. This is because such dependency exposes a country to external vulnerabilities, such as economic downturns, trade restrictions, or political instability in those specific markets.

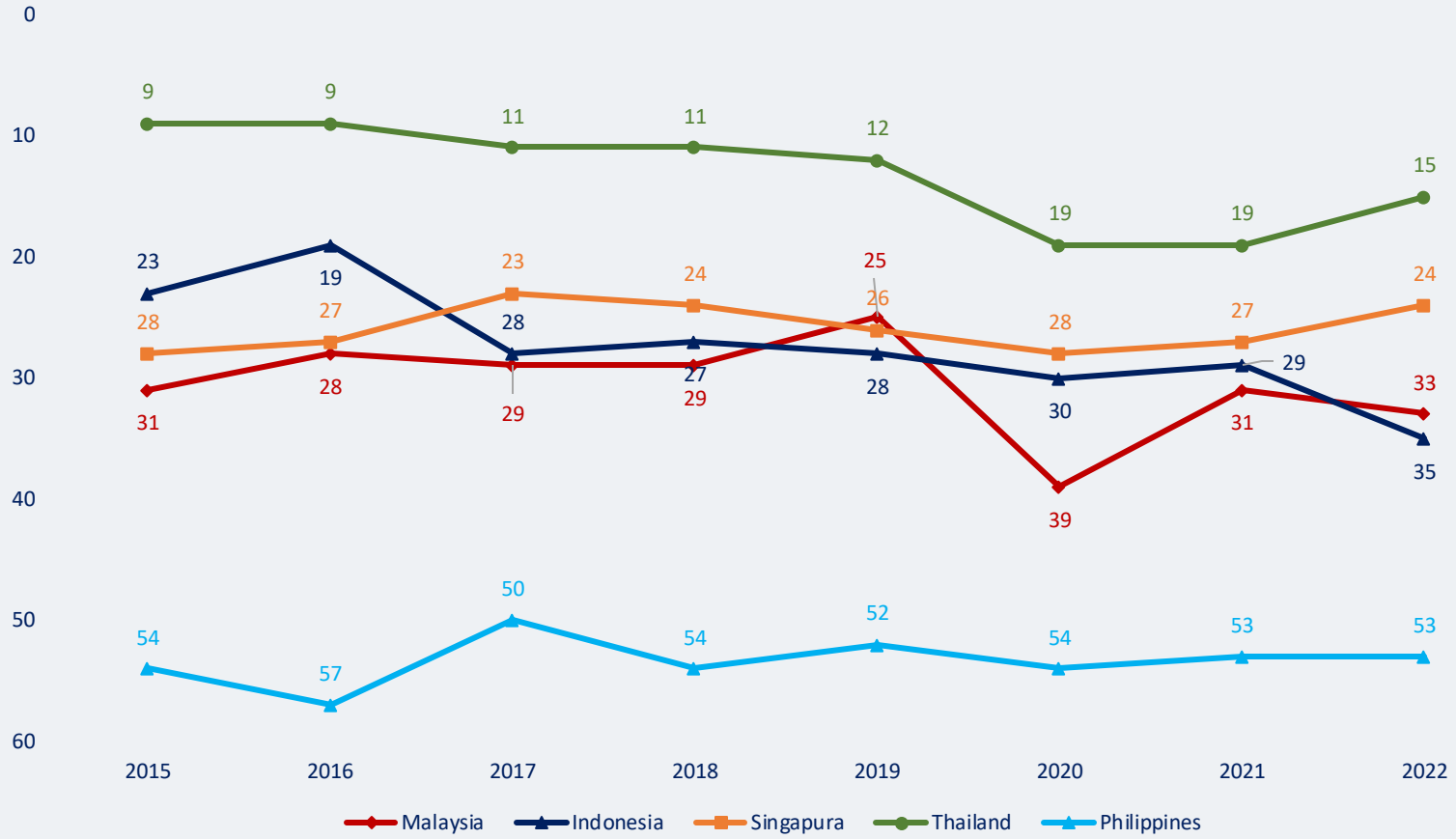
If any of the top trading partners reduce their demand, the exporting country could face significant disruptions in trade revenue and economic performance.

In contrast, a more diversified export structure reflects stronger global market integration, wider demand coverage, and greater economic adaptability. It enhances resilience against external shocks and supports more sustainable growth.

Thus, countries with lower export concentration are seen as more competitive, as they are better positioned to navigate global uncertainties and leverage broader trade opportunities.

INDICATOR 1.2.17: Export Concentration by Partner (% of total exports)

Where are Malaysia now? Indicators ranking among ASEAN countries



Between 2015 and 2022, Malaysia consistently ranked in the mid-to-lower tier among ASEAN countries for export concentration, peaking at 39th in 2020—signaling higher reliance on a few trading partners.

While the ranking slightly improved to 33rd in 2022, it still lags behind regional peers like Thailand and Indonesia, which maintained more diversified export destinations.

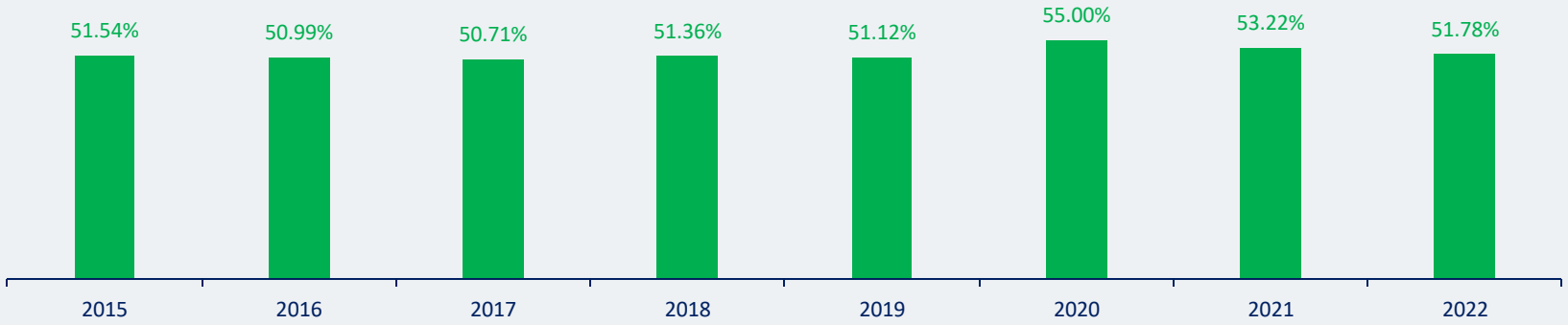
This suggests Malaysia faces structural exposure to external market risks, highlighting the need for greater market diversification to strengthen trade resilience and improve competitiveness.

Source: IMD (2024)

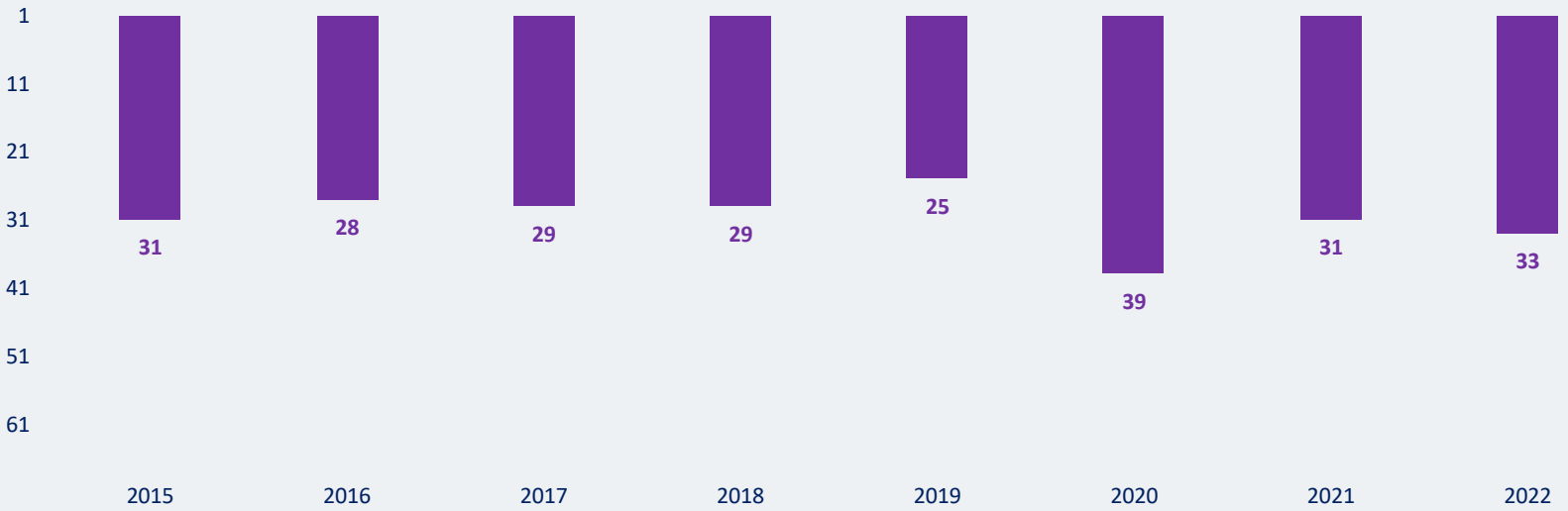
INDICATOR 1.2.17: Export Concentration by Partner (% of total exports)

How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**



Over the period 2015–2022, Malaysia's export concentration ratio remained consistently above 50%, indicating that more than half of total exports were directed to its top five trading partners.

The ratio peaked in 2020 at 55.00%, coinciding with Malaysia's lowest ranking of 39th, reflecting reduced trade diversification.

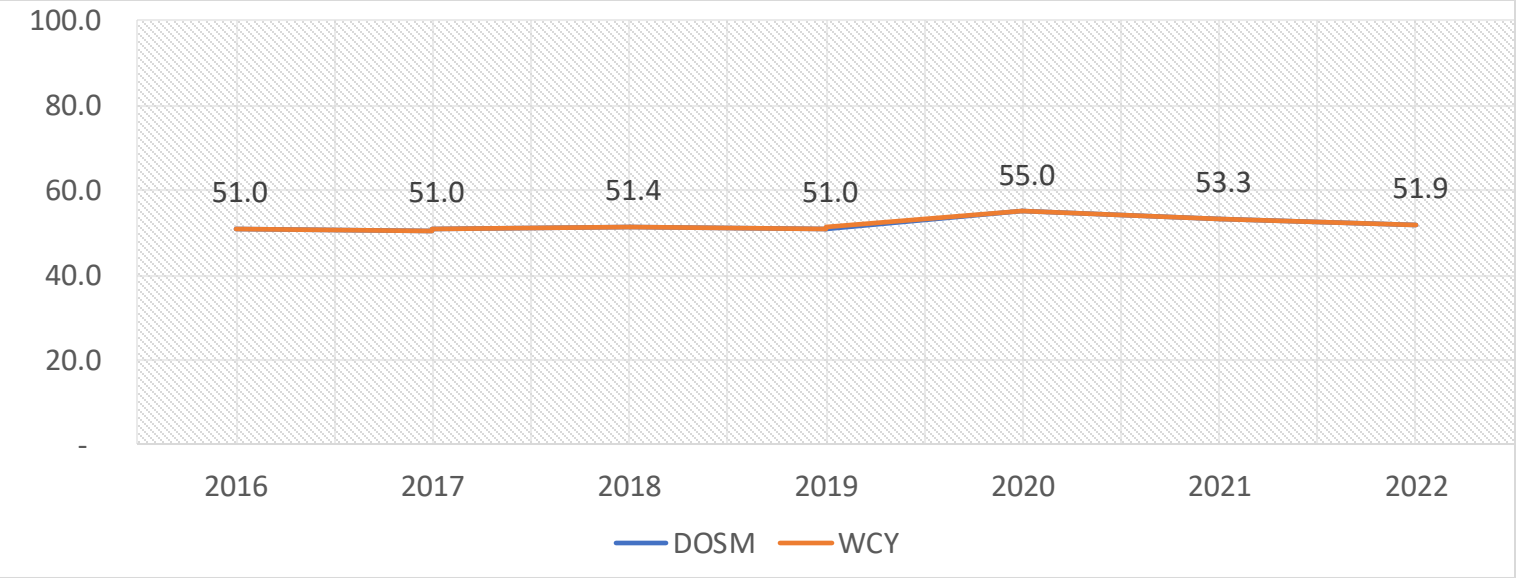
Although the ratio slightly improved to 51.78% in 2022, Malaysia's global ranking remained relatively weak at 33rd, underscoring the ongoing need to diversify export markets to enhance resilience and competitiveness.

Source: IMD (2024)

INDICATOR 1.2.17: Export Concentration by Partner (% of total exports)

Comparative Measurement Assessment of Indicator

Comparison of Export Concentration by Partner Data (% of total exports, 2016–2022)



Source: IMD World Competitiveness Yearbook 2024, Department of Statistics Malaysia (DOSM).

A comparison between WCY (IMD) and national data from DOSM shows that the export concentration values are largely consistent, suggesting alignment in methodology and data integrity.

However, although WCY cites UNCTAD as the original source, this specific dataset is not currently accessible via public UNCTAD platforms, warranting further investigation and clarification on how the data is compiled and sourced for competitiveness rankings.

Breakdown from **UNCTAD**

To access the data, follow these steps:

1. Go to "**https://unctadstat.unctad.org/datacentre/**"

Breakdown from **DOSM**

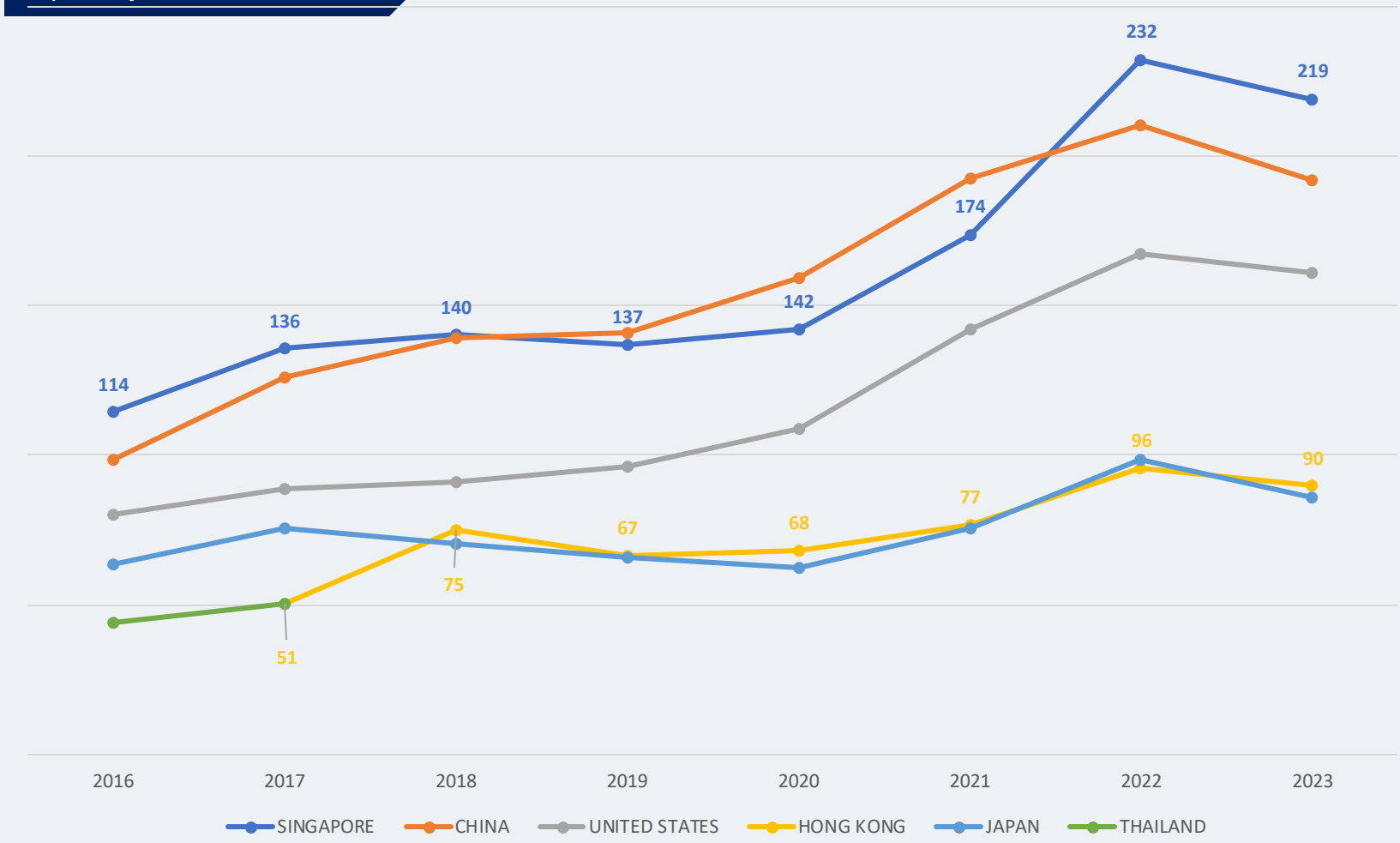
To access the data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**External trade**"
5. Click "**Search**"
6. Find "**Final External Trade Statistics Malaysia**"
7. Download the excel file.
8. Go to "**Jad 5**"

INDICATOR 1.2.17: Export Concentration by Partner (% of total exports)

Areas of improvement for this indicators

Top 5 Exports Destination



Between 2016 and 2023, Malaysia's exports to its top five trading partners—Singapore, China, the United States, Japan, and Hong Kong—have shown a steady upward trend, with a notable surge between 2021 and 2022.

The sharp increases in exports to Singapore and China particularly highlight Malaysia's recovery momentum post-pandemic. However, the dominance of a few partners, especially Singapore and China, reinforces Malaysia's structural concentration risk in its export market.

This concentration indicates a potential vulnerability, as any economic or policy shifts in these major destinations could significantly impact Malaysia's trade performance.

To strengthen export resilience and reduce external risk exposure, Malaysia must focus on diversifying both export destinations and sectoral composition, tapping into emerging markets and expanding into high-value service segments. This strategic shift is vital for sustaining long-term competitiveness and mitigating future shocks.

Source: IMD World Competitiveness Yearbook 2024 and Department of Statistics Malaysia (DOSM).

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 1.2.18

Export Concentration by Product (% of total exports)

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.2.18: Export Concentration by Product (% of total exports)

INDICATOR DEFINITION

Top five named export products, as a percentage of total exports, using the UNCTAD product data based on the SITC commodity classification, Revision 3, at the two-digit level; giving 65 product categories. (*Defined in World Competitiveness Yearbook, 2025*)

DATA SOURCE FROM WCY

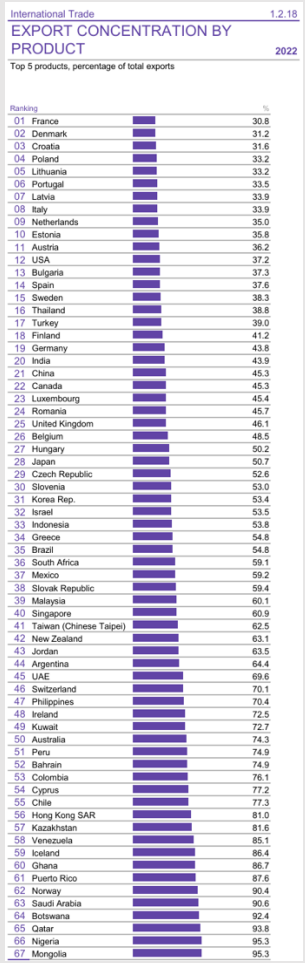
- UNCTAD

DETAILED DATA BREAKDOWN

Export concentration (EC) by product is calculated as:

$$\boldsymbol{Export\ Concentration\ Ratio(ECR)} = \frac{Summation\ of\ top\ 5\ trading\ products\ exports}{Total\ exports}$$

WHAT DOES THE SCORE INDICATE?



International Trade 1.2.18

EXPORT CONCENTRATION BY PRODUCT 2022

Top 5 products, percentage of total exports

Ranking		%
01	France	30.8
02	Denmark	31.2
03	Croatia	31.6
04	Poland	33.2
05	Lithuania	33.2
06	Portugal	33.5
07	Latvia	33.9
08	Italy	33.9
09	Netherlands	35.0
10	Estonia	35.8
11	Austria	36.2
12	USA	37.2
13	Bulgaria	37.3
14	Spain	37.6
15	Sweden	38.3
16	Thailand	38.8
17	Turkey	39.0
18	Finland	41.2
19	Germany	43.8
20	India	43.9
21	China	45.3
22	Canada	45.3
23	Luxembourg	45.4
24	Romania	45.7
25	United Kingdom	46.1
26	Belgium	48.5
27	Hungary	50.2
28	Japan	50.7
29	Czech Republic	52.6
30	Slovenia	53.0
31	Korea Rep.	53.4
32	Israel	53.5
33	Indonesia	53.8
34	Greece	54.8
35	Brazil	54.8
36	South Africa	59.1
37	Mexico	59.2
38	Slovak Republic	59.4
39	Malaysia	60.1
40	Singapore	60.9
41	Taiwan (Chinese Taipei)	62.5
42	New Zealand	63.1
43	Jordan	63.5
44	Argentina	64.4
45	UAE	69.6
46	Switzerland	70.1
47	Philippines	70.4
48	Ireland	72.5
49	Kuwait	72.7
50	Australia	74.3
51	Peru	74.9
52	Bahrain	74.9
53	Colombia	76.1
54	Cyprus	77.2
55	Chile	77.3
56	Hong Kong SAR	81.0
57	Kazakhstan	81.6
58	Venezuela	85.1
59	Iceland	86.4
60	Ghana	86.7
61	Puerto Rico	87.6
62	Norway	90.4
63	Saudi Arabia	90.6
64	Botswana	92.4
65	Qatar	93.8
66	Nigeria	95.3
67	Mongolia	95.3

The higher the value, the lower the rank.

Source: *IMD World Competitiveness Yearbook 2025*

RATIONALITY?

A lower Export Concentration by Product (% of total exports) indicates a more diversified and competitive export structure.

When a country's exports rely heavily on only a few product categories, it signals potential vulnerabilities — for example, exposure to commodity price fluctuations, demand shocks, or disruptions in specific supply chains.

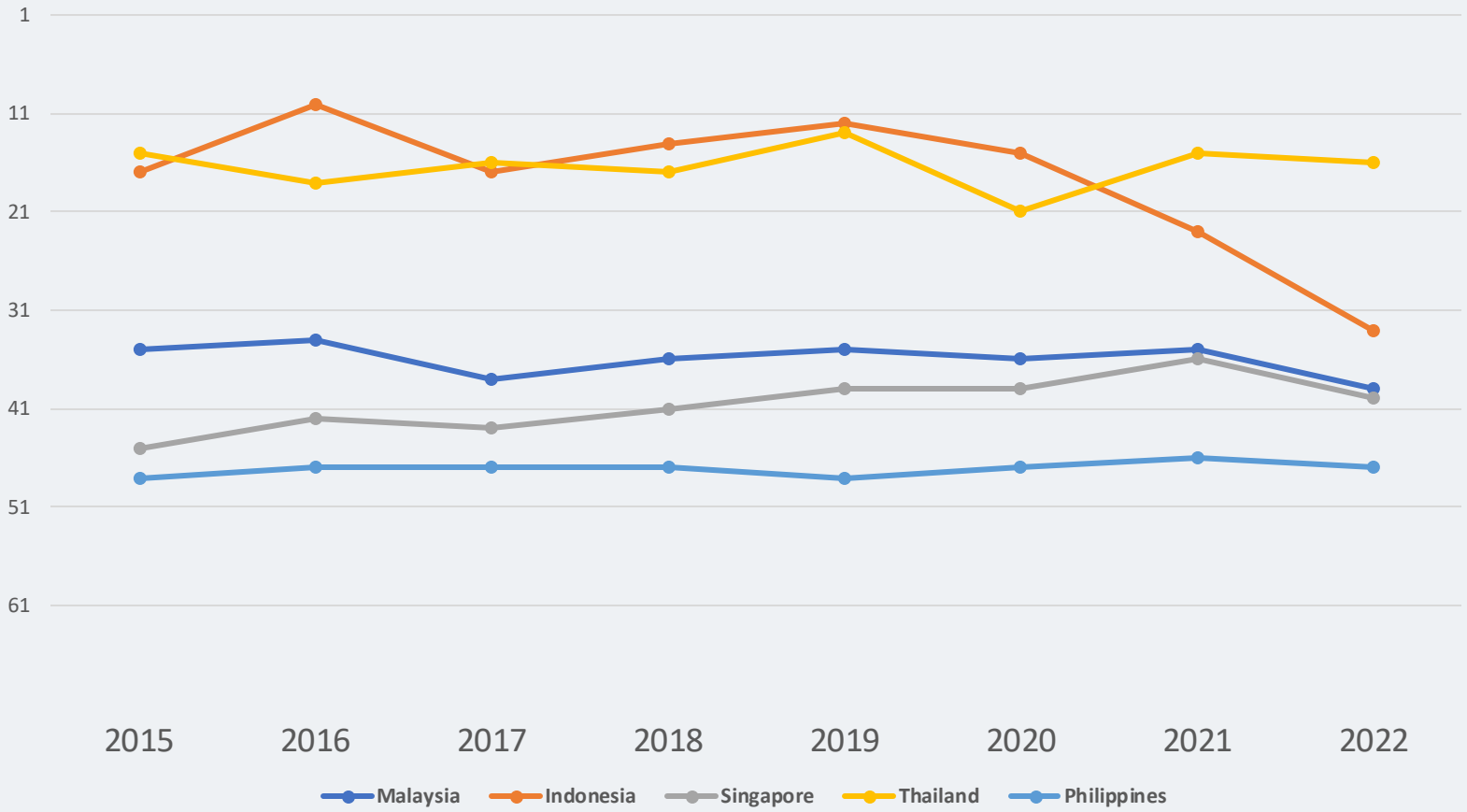
High product concentration often reflects limited value-added activities, reduced technological sophistication, and greater susceptibility to global market volatility.

Conversely, a broader and more balanced product export base supports resilience, stimulates innovation, attracts investment, and helps the country move up global value chains.

For these reasons, in competitiveness rankings such as WCY, the lower the concentration (value), the higher the rank — countries with more balanced and diversified exports are seen as more competitive and better equipped to sustain long-term growth.

INDICATOR 1.2.18: Export Concentration by Products (% of total exports)

Where are Malaysia now? Indicators ranking among ASEAN countries



Source: IMD (2025)

Before moving deeper into the data and its components, it is important to first observe Malaysia's current position in the Export Concentration by Products (% of total exports) indicator compared to ASEAN peers.

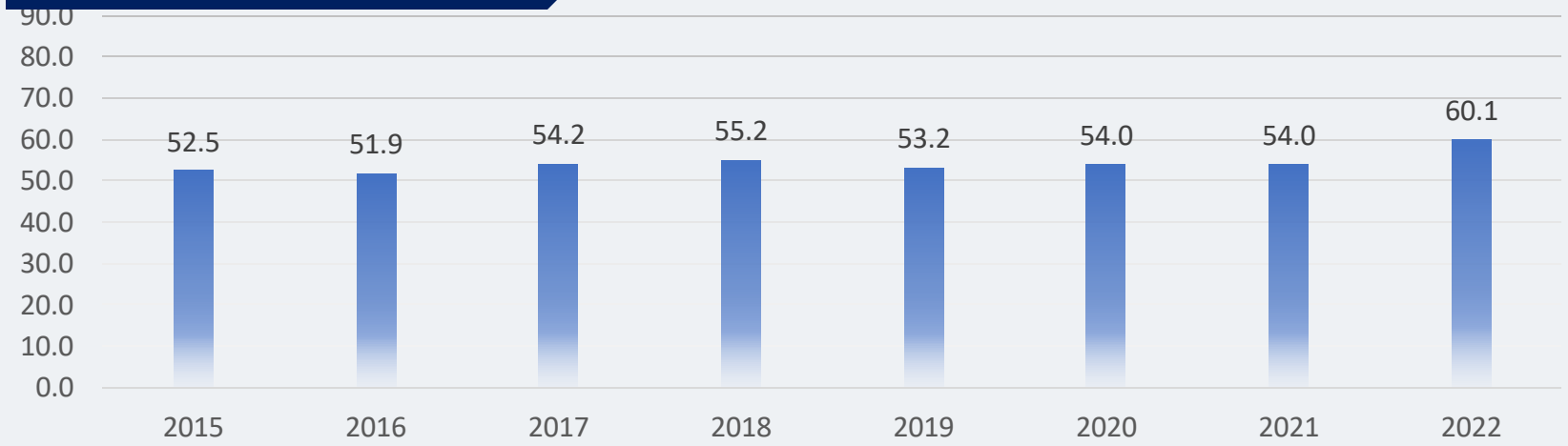
Figure left shows that Malaysia's ranking in this indicator has remained stable but modest among ASEAN peers from 2015–2022. Malaysia consistently ranks below Singapore — which demonstrates a more diversified product export base — but has remained ahead of peers like Indonesia and Thailand.

This trend suggests that while Malaysia's export structure is not excessively concentrated, there is still room to broaden and diversify exports across more product categories, especially in moving towards more high-value, knowledge-intensive exports. Without such diversification, Malaysia remains exposed to sector-specific risks and fluctuating global demand in its top product groups.

INDICATOR 1.2.18: Export Concentration by Products (% of total exports)

How do the indicators perform across years?

Indicator Value (% of total exports)



Indicator Rank

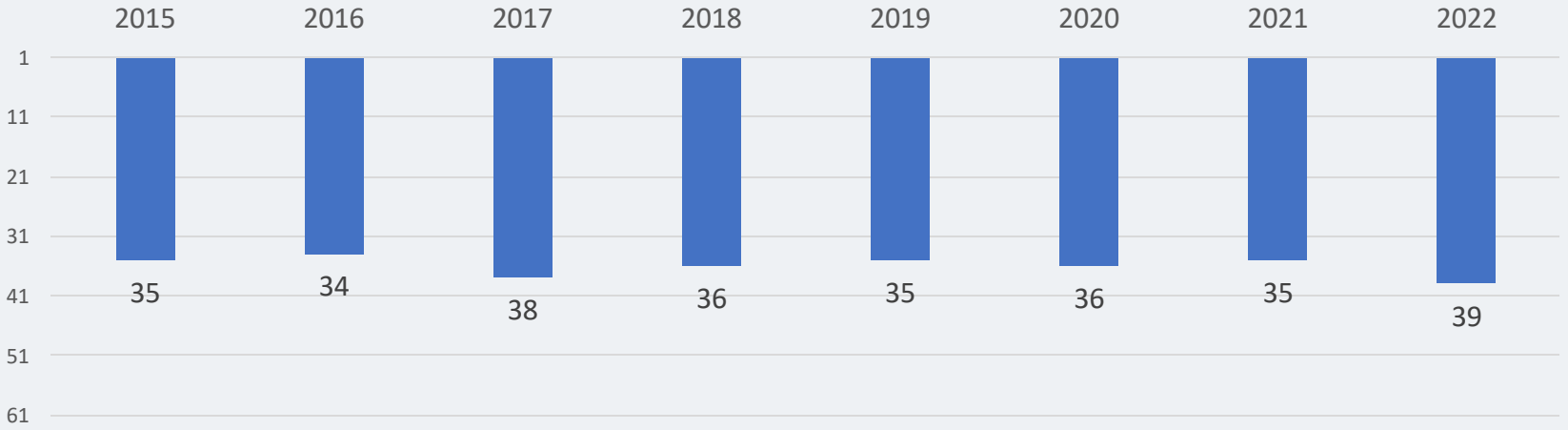


Figure left presents Malaysia's trend in Export Concentration by Products (% of total exports), along with its corresponding global ranking in the IMD World Competitiveness Yearbook, covering the years 2015–2022.

Malaysia's export concentration has remained relatively stable in the range of 52%–54% between 2015 and 2021, before rising to 60.1% in 2022 — indicating that a larger share of Malaysia's exports is dominated by its top five products. This level of concentration suggests moderate dependence on a few key sectors for export earnings.

Malaysia's global ranking fluctuated modestly, from 35th in 2015 to 39th in 2022, showing that the export structure is not yet highly diversified compared to global peers.

Notes: The chart scale is set at 30% because the top-performing country (Mongolia) currently records an exports products of approximately 95% of total exports.

Source: IMD (2025)

Comparative Measurement Assessment of Indicator

Extracting the Export Concentration by Products, 2015-2022 (% of total exports)

Data sourced from **UNCTAD**

To access the data, follow these steps:

1. Go to https://unctadstat.unctad.org/datacentre/
2. Under the "**International trade"** group, click on "**Trade in merchandise**".
3. From the drop-down list, select "**Merchandise trade matrix, annual (analytical)**".
4. On filtering the data, select "**Design Table**" to start customize the data as follows:
    1. Product: Double click on "**Product**" to deselect all product. Then select the "**SITC 2-DIGIT CLASSIFICATION**" product.
    2. Year: Double click on "Year" to deselect all year. Then, select the year 2015 to 2022 only.
    3. Economy: Double click on "**Economy**" to deselect all economy. Then click on drop down list of "**Individual economies**". Then, search and select "**Malaysia**".
    4. Flow: Deselect Imports
    5. Partner: Double click on "**Partner**" to deselect all partner. Then select the "**World**" to get the total flow.
5. Click "Apply".
6. Click on drop-down list for each of the sub-groups to get only the 2-Digit classification.
7. Click on **CSV** icon to download as an Excel file.

Data sourced from **DOSM**

To access the data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**External Trade**"
5. Click "**Search**"
6. Find "**Final external trade statistics**".
7. Download the excel file.
8. Go to "**JAD 4**".

INDICATOR 1.2.18: Export Concentration by Products (% of total exports)

Comparative Measurement Assessment of Indicator

Sourced from **UNCTAD** – SITC Rev. 3 (US$ '000)

Product_Label	2015	2016	2017	2018	2019	2020	2021	2022	2023
Live animals other than animals of division 03	182,305	178,936	182,247	203,520	201,841	209,755	234,130	202,896	241,462
Meat and meat preparations	146,454	151,615	149,976	166,191	173,181	160,883	216,836	238,456	253,103
Dairy products and birds' eggs	491,494	412,752	420,479	453,884	467,478	435,535	425,705	411,001	432,511
Fish, crustaceans, molluscs and preparations	639,041	656,339	662,420	702,987	837,372	792,885	875,887	874,716	866,633
Cereals and cereal preparations	755,921	828,160	827,140	918,584	868,716	692,525	930,587	1,076,270	1,148,007
Vegetables and fruits	528,827	625,276	638,226	648,233	584,856	593,192	761,495	775,273	902,654
Sugar, sugar preparations and honey	239,900	242,293	239,766	199,683	230,686	290,199	321,386	343,047	351,495
Coffee, tea, cocoa, spices, and manufactures	1,900,762	1,993,223	1,922,900	2,040,529	2,239,599	2,096,283	2,318,988	2,457,092	2,452,844
Feedstuff for animals (excluding unmilled cere	416,514	435,910	437,795	534,027	521,953	642,351	722,297	840,288	729,111
Miscellaneous edible products and preparatio	1,725,242	1,759,087	1,926,986	1,962,112	2,110,676	2,127,642	2,537,580	2,922,541	2,821,735
Beverages	803,626	812,836	778,942	716,262	696,098	539,017	552,324	584,338	618,953
Tobacco and tobacco manufactures	378,263	369,743	250,812	168,642	137,379	78,313	50,530	41,999	51,948
Hides, skins and furskins, raw	8,952	6,451	4,557	4,052	4,700	1,764	2,046	2,451	2,301
Oil seeds and oleaginous fruits	27,315	36,212	40,165	21,957	16,406	21,006	16,259	24,359	24,823
Crude rubber (including synthetic and reclaim	1,422,658	1,548,431	2,392,004	1,911,907	1,779,288	1,734,411	2,170,896	1,915,882	1,523,865
Cork and wood	1,660,970	1,536,418	1,577,387	1,551,369	1,407,485	1,038,583	1,090,836	1,182,160	1,032,976
Pulp and waste paper	38,860	1,106	2,172	12,168	213,975	383,533	394,068	425,345	491,616
Textiles fibres and their wastes	337,369	342,733	423,698	457,559	425,751	285,502	418,808	421,175	334,598
Crude fertilizers other than division 56, and cr	189,778	235,911	247,145	251,278	330,407	311,203	356,516	323,732	354,018
Metalliferous ores and metal scrap	1,545,407	1,486,945	1,727,430	1,862,170	2,090,077	1,887,906	2,288,482	2,545,947	2,431,451

Sourced from **DOSM** – HS Code (RM mi.)

	COMMODITY GROUPS	2019	2020	2021	2022	2023
	JUMLAH/TOTAL	**995,072**	**983,827**	**1,241,022**	**1,550,009**	**1,426,199**
001	LIVE ANIMALS OTHER THAN ANIMALS OF DIVISION 03	836	882	970	893	1,101
011	MEAT OF BOVINE ANIMALS, FRESH, CHILLED OR FROZEN	12	11	17	21	17
012	OTHER MEAT AND EDIBLE MEAT OFFAL, FRESH, CHILLED OR FROZEN (EXCEPT MEAT AND ME/	94	112	103	127	156
016	MEAT AND EDIBLE MEAT OFFAL, SALTED, IN BRINE, DRIED OR SMOKED; EDIBLE FLOURS AND	2	27	105	109	183
017	MEAT AND EDIBLE MEAT OFFAL, PREPARED OR PRESERVED, N.E.S.	610	526	674	792	799
022	MILK AND CREAM AND MILK PRODUCTS OTHER THAN BUTTER OR CHEESE	1,201	1,170	1,031	941	1,103
023	BUTTER AND OTHER FATS AND OILS DERIVED FROM MILK	103	92	81	121	119
024	CHEESE AND CURD	22	32	34	61	58
025	EGGS, BIRDS', AND EGG YOLKS, FRESH, DRIED OR OTHERWISE PRESERVED, SWEETENED O	610	536	617	686	692
034	FISH, FRESH (LIVE OR DEAD), CHILLED OR FROZEN	727	931	866	893	910
035	FISH, DRIED, SALTED OR IN BRINE; SMOKED FISH (WHETHER OR NOT COOKED BEFORE OR D	91	73	53	71	56
036	CRUSTACEANS, MOLLUSCS AND AQUATIC INVERTEBRATES, WHETHER IN SHELL OR NOT, FRE	1,867	1,594	1,900	1,952	2,007
037	FISH, CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC INVERTEBRATES, PREPARED OR PRE	784	735	808	934	978
041	WHEAT (INCLUDING SPELT) AND MESLIN, UNMILLED	1	1	1	2	2
042	RICE	45	97	162	197	221
043	BARLEY, UNMILLED	*	1	*	*	1
044	MAIZE (NOT INCLUDING SWEET CORN), UNMILLED	7	14	15	22	10
045	CEREALS, UNMILLED (OTHER THAN WHEAT, RICE, BARLEY AND MAIZE)	1	4	1	2	1
046	MEAL AND FLOUR OF WHEAT AND FLOUR OF MESLIN	174	125	120	147	174
047	OTHER CEREAL MEALS AND FLOURS	10	13	15	30	30

The comparative table illustrates that data on export concentration by products can be mapped to Malaysia's national sources, primarily using HS Code classifications from DOSM.

However, differences in classification frameworks — with UNCTAD data based on SITC Rev.3 at the two-digit level, while DOSM uses HS Code (customs-based) categories — present challenges in ensuring full alignment.

Certain product groupings and aggregation methods differ between SITC and HS, making it difficult to establish exact one-to-one correspondence between the categories.

This gap in classification frameworks needs to be acknowledged, especially when interpreting consistency across international and national datasets.

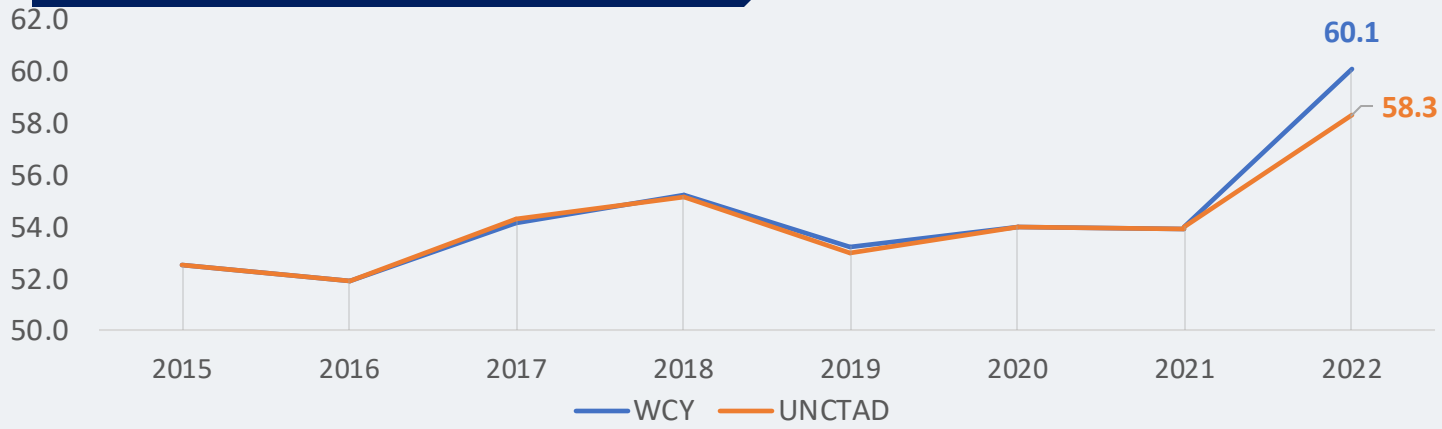
Further technical clarification and mapping refinement would improve transparency of measurement and enhance the accuracy of tracking Malaysia's export concentration by products.

Source: IMD (2025), IMF (2025), DOSM (2024 & 2025)

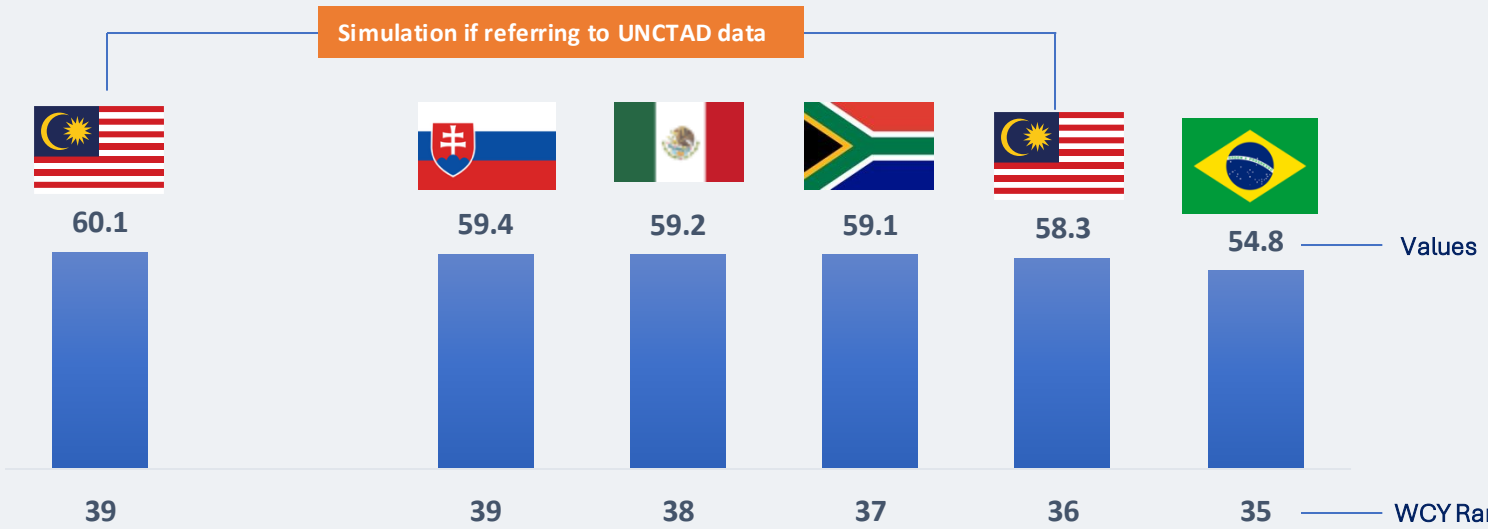
INDICATOR 1.2.18: Export Concentration by Products (% of total exports)

Comparative Measurement Assessment of Indicator

Indicator **Value (% of total exports)**



Simulated Indicator **Value and Rank (% of total exports)**



The comparative analysis highlights emerging discrepancies between the real data sources (UNCTAD) and the indicator values as published in the WCY dataset.

In earlier years (2015–2021), the WCY-reported figures align with UNCTAD trends. However, starting in 2022, notable gaps are observed — raising questions about possible lags in data updates, differences in extraction methods, or adjustments made in WCY's compilation.

The simulated ranking below demonstrates that if the latest real UNCTAD data were used, Malaysia's rank could have improved — from 39th to 36th — indicating potential missed visibility in global competitiveness positioning.

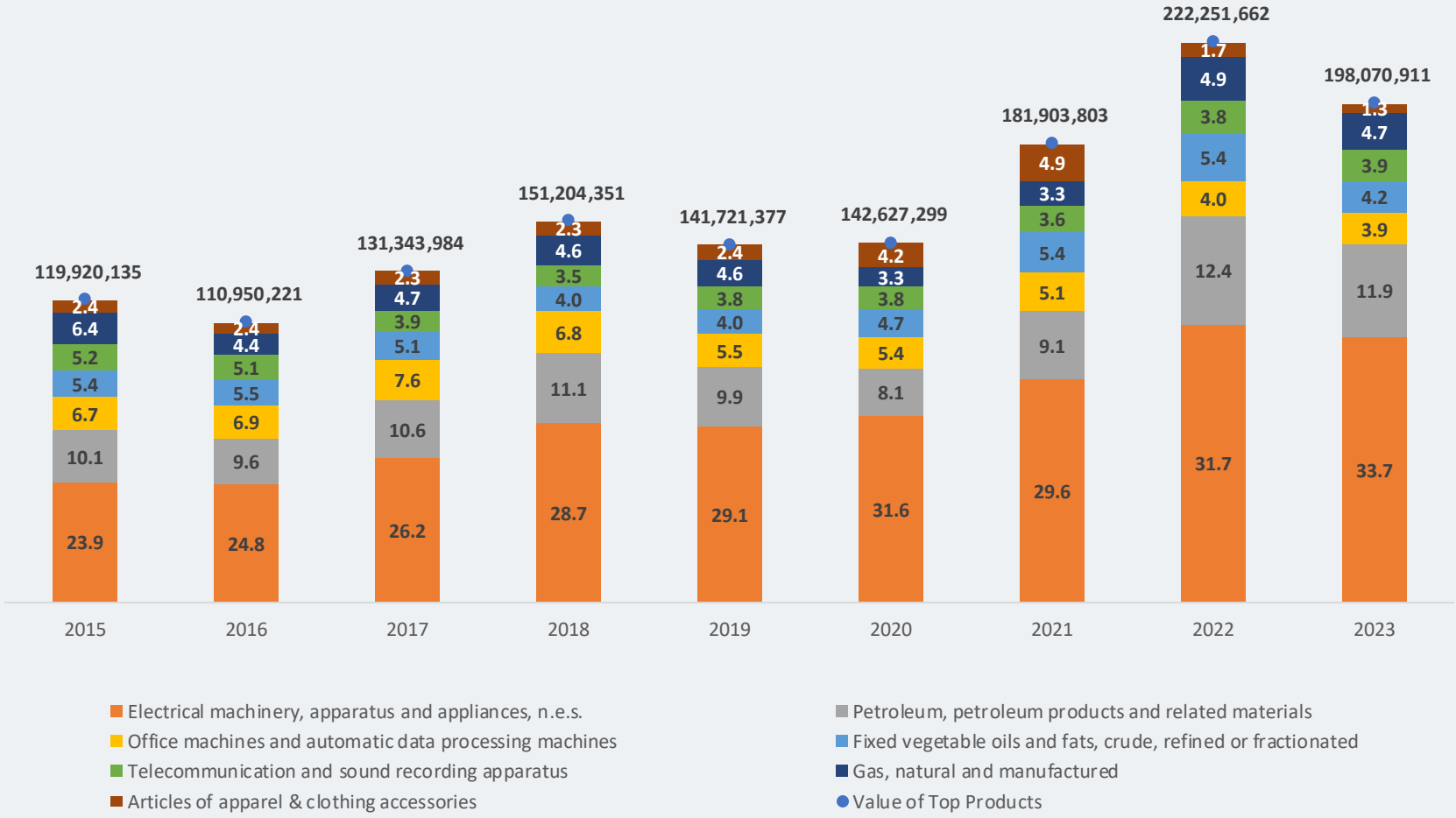
To ensure accuracy and credibility in international benchmarking, technical clarification and closer collaboration with WCY data teams are essential, particularly on data flow and update cycles between UNCTAD and IMD WCY.

Source: UNCTAD 2025 and WCY 2025

INDICATOR 1.2.18: Export Concentration by Products (% of total exports)

Areas of improvement for this indicators

Top products Detailed Breakdown (US$ '000)



Despite variations in data sources and ranking positions, the underlying structural issue of export concentration remains evident — with Malaysia's top five products consistently accounting for over half of total exports.

This concentration exposes the economy to product-specific demand shifts and global price volatility.

In particular, persistent dependence on petroleum-based and electrical & electronic (E&E) products underscores the need to broaden Malaysia's export base and advance value chain upgrading in key sectors.

For policy planning, this signals a critical imperative: Malaysia must deepen efforts in export diversification, R&D-driven product innovation, and supply chain resilience — especially to mitigate external shocks, enhance trade competitiveness, and achieve more sustainable export growth.

Source: DOSM 2025

Way forward to improve **EXPORT CONCENTRATION BY PRODUCTS** in Malaysia

Data Transparency and Validation

- Establish a technical working group involving relevant stakeholder to review and bridge the national and international sources data.
- Develop and maintain a mapped classification between national HS codes and international SITC (Rev.3), to enhance data transparency, consistency, and reliability.
- Facilitate regular dialogue with WCY/IMD team to ensure that the data recorded and published reflects accurate, verified national sources.

Policy Alignment and Export Diversification

- Leverage detailed product concentration diagnostics to identify high-risk product dependencies and underexploited growth segments, to guide targeted export promotion and diversification strategies.
- Promote R&D and innovation incentives in sectors with low export participation but high value potential — e.g., advanced manufacturing, digital economy, green technologies.
- Align product-level export strategies with Malaysia's sectoral productivity roadmap and industry transformation agendas (such as NIMP 2030).
- Strengthen collaboration with industry associations and chambers to encourage firms to expand product range, upgrade value chains, and reduce concentration risks.

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL INVESTMENT

INDICATOR 1.3.03
DIRECT INVESTMENT STOCKS ABROAD

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

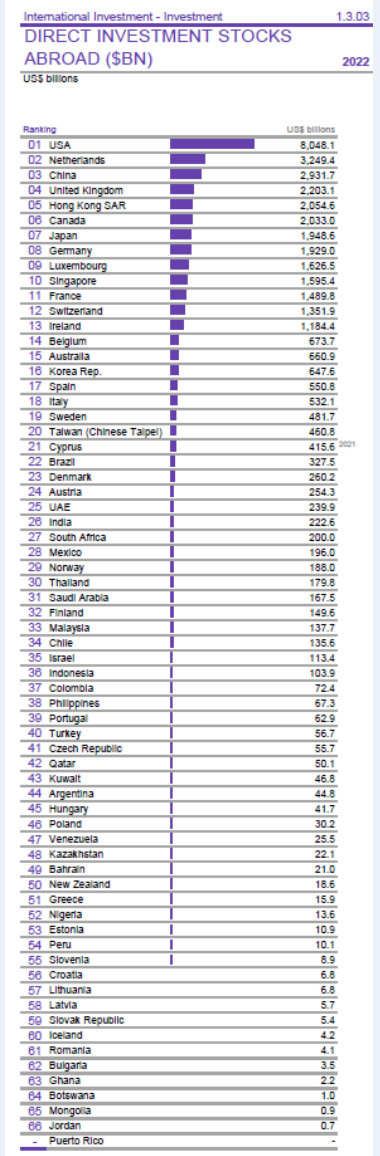
INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

INDICATOR DEFINITION

FDI stock is the value of the share of capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises. It is approximated by the accumulated value of past FDI flows.

WCY DATA SOURCE

United Nations Conference on Trade and Development (UNCTAD)



International Investment - Investment 1.3.03

DIRECT INVESTMENT STOCKS ABROAD ($BN) 2022

US$ billions

Ranking		US$ billions
01	USA	8,048.1
02	Netherlands	3,249.4
03	China	2,931.7
04	United Kingdom	2,203.1
05	Hong Kong SAR	2,054.6
06	Canada	2,033.0
07	Japan	1,948.6
08	Germany	1,929.0
09	Luxembourg	1,626.5
10	Singapore	1,595.4
11	France	1,489.8
12	Switzerland	1,351.9
13	Ireland	1,184.4
14	Belgium	673.7
15	Australia	660.9
16	Korea Rep.	647.6
17	Spain	550.8
18	Italy	532.1
19	Sweden	481.7
20	Taiwan (Chinese Taipei)	460.8
21	Cyprus	415.6 2021
22	Brazil	327.5
23	Denmark	260.2
24	Austria	254.3
25	UAE	239.9
26	India	222.6
27	South Africa	200.0
28	Mexico	196.0
29	Norway	188.0
30	Thailand	179.8
31	Saudi Arabia	167.5
32	Finland	149.6
33	Malaysia	137.7
34	Chile	135.6
35	Israel	113.4
36	Indonesia	103.9
37	Colombia	72.4
38	Philippines	67.3
39	Portugal	62.9
40	Turkey	56.7
41	Czech Republic	55.7
42	Qatar	50.1
43	Kuwait	46.8
44	Argentina	44.8
45	Hungary	41.7
46	Poland	30.2
47	Venezuela	25.5
48	Kazakhstan	22.1
49	Bahrain	21.0
50	New Zealand	18.6
51	Greece	15.9
52	Nigeria	13.6
53	Estonia	10.9
54	Peru	10.1
55	Slovenia	8.9
56	Croatia	6.8
57	Lithuania	6.8
58	Latvia	5.7
59	Slovak Republic	5.4
60	Iceland	4.2
61	Romania	4.1
62	Bulgaria	3.5
63	Ghana	2.2
64	Botswana	1.0
65	Mongolia	0.9
66	Jordan	0.7
-	Puerto Rico	-

WHAT DOES THE CORE INDICATE?

The higher the value, the higher the rank

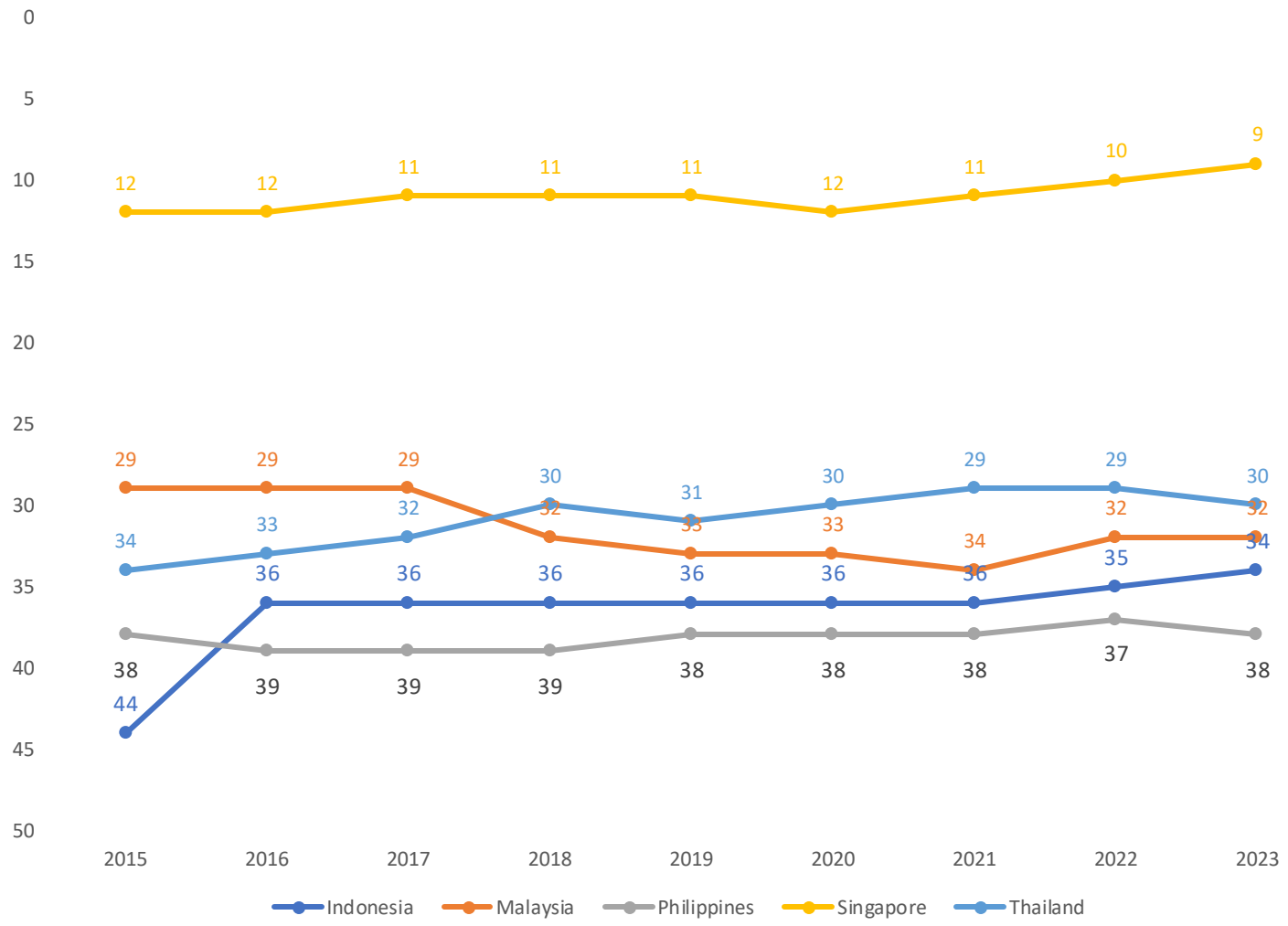
RATIONALE FOR MEASUREMENT

- The Direct Investment Stocks Abroad (DISA) is one of the component in the Balance of Payment (BOP), capturing the accumulated value of residents' investments in foreign economies.
- Using stock data instead of flow for analysis provides a more comprehensive and stable view of a country's direct investment abroad. It allows for better cross-country comparisons, reduces the noise of short-term volatility, and aligns with the definition of FDI as a lasting interest.
- Part of domestic savings may flow into investment projects abroad due to the attractiveness in the rate of return (RR) compared to the RR offered locally. Higher DISA may reduce domestic investment in short terms. But increases GNI through future income. Lower DISA means keeps savings local but limits global income potential.
- A balanced flow between DISA and inward FDI is crucial to ease pressure on the national account and protect foreign reserves.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

Where are Malaysia now? Indicators ranking among ASEAN countries



Singapore topped ASEAN throughout the period, reflecting its global investment footprint and the internationalization of its companies. Malaysia was the second-largest outward investor in most years, indicating a relatively strong international presence of Malaysian firms, although growth has plateaued in recent years.

Other ASEAN nations, like Thailand and Indonesia, showed slower progress, with outward investment remaining comparatively small. Malaysia's challenge lies in sustaining and diversifying this outward investment to newer high-growth sectors and markets.

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

INDICATOR FOOTPRINT

MALAYSIAN COMPANIES	BNM	DOSM	IMF	UNCTAD	WCY
Report outward investments via BNM's International Transactions Information System (ITIS)	Compiles data using IMF Balance of Payments and International Investment Position Manual, 6th Edition (BPM6) methodology This activity is known as the Survey on International Investment Position (IIP). A structured, periodic effort to collect data on Malaysia's external financial positions (assets/liabilities)	Publishes national IIP data through quarterly *International Investment Position Report.* Malaysia's IIP data is compiled quarterly by Bank Negara Malaysia (BNM) and DOSM, and submitted to the IMF Statistics Department.	Collects data through the Direct Investment Positions by Counterpart Economy (formerly known as Coordinated Direct Investment Survey (CDIS))	**Outward stock** 1980-1994 data are based on the IMF. 1995-1999 data are estimated by adding outflows to the 1994 stock. Data for 2000-2023 are from the national institution.	

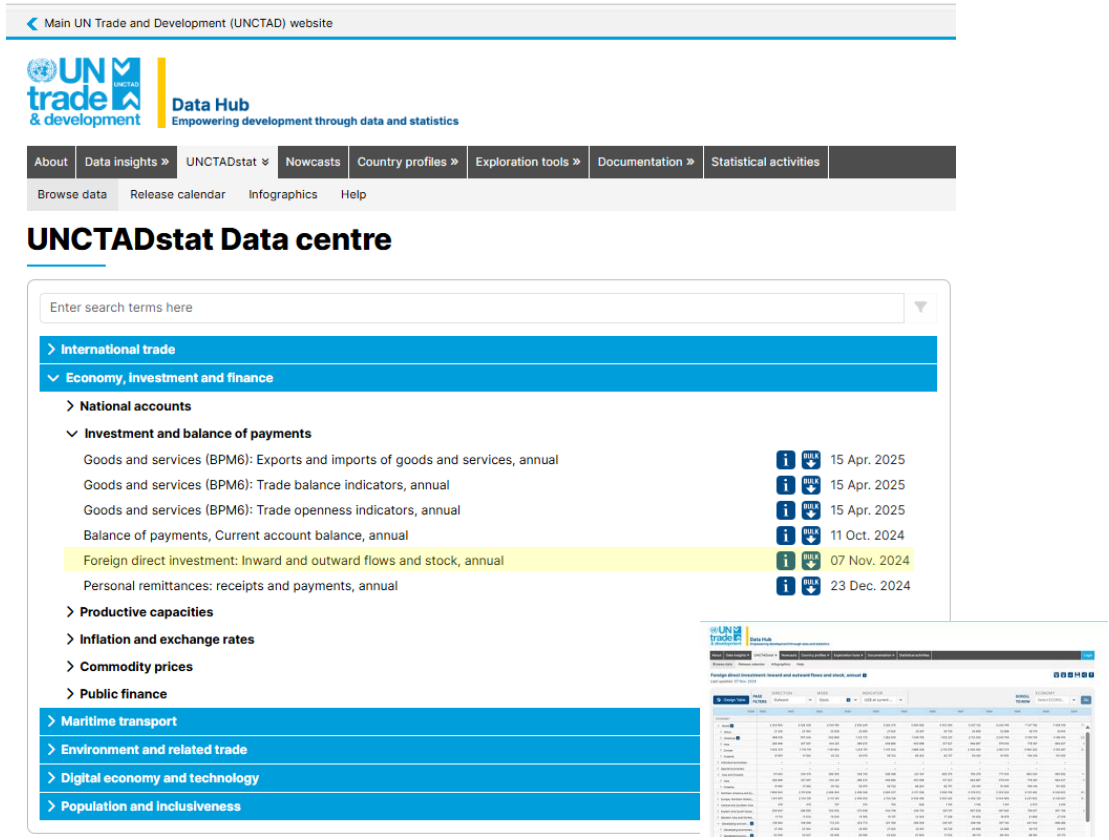
National institution

International institution

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

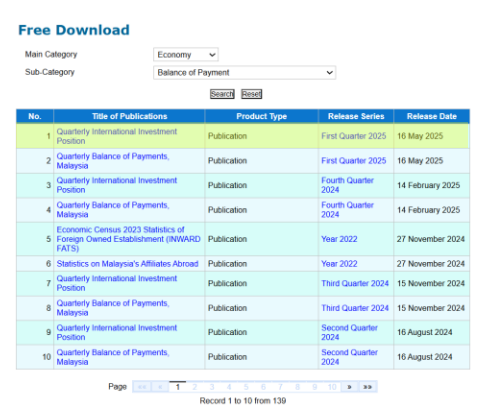
GETTING THE DATA

1. Go to: https://unctadstat.unctad.org/datacentre/
2. Click option: **Economy, investment and finance**
3. Select: **Investment and balance of payments**
4. Download: **Foreign direct investment: Inward and outward flows of stock, annual**

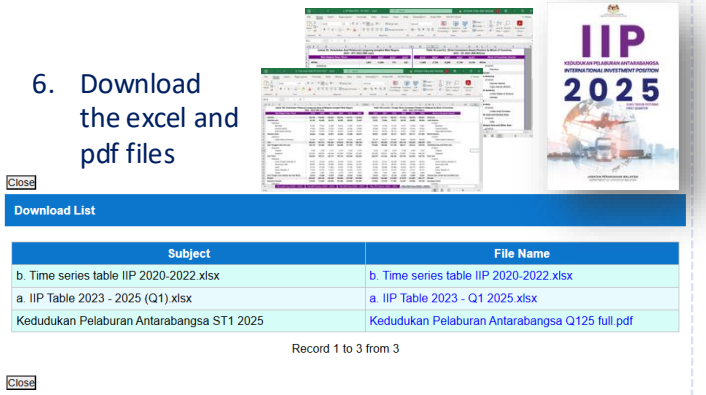


1. Go to: https://newss.statistics.gov.my/newss-portalx/ep/epLogin.seam
2. Login (existing user) / Register account (new user)
3. Select from left panel: **Publications: Free Download**
4. Fill in Main Category: **Economy** and Sub- Category: **Balance of Payment**
5. Click: **Search**, Click: **Quarterly International Investment Position**

PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA

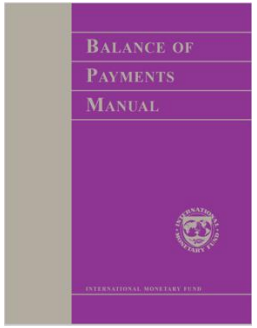


6. Download the excel and pdf files



STANDARD COMPONENTS OF A NATIONAL BALANCE OF PAYMENTS
(*EXTRACTED WITH RELATION TO INDICATORS ONLY*)

FROM IMF MANUAL



Source:

https://www.imf.org/external/pubs/ft/bopman/bopman.pdf

B. FINANCIAL ACCOUNT

1. DIRECT INVESTMENT

1.1 ABROAD

1.1.1 EQUITY CAPITAL

1.1.1.1 Claims on affiliated enterprises

1.1.1.2 Liabilities to affiliated enterprises

1.1.2 REINVESTED EARNINGS

1.1.3 OTHER CAPITALS

1.1.3.1 Claims on affiliated enterprises

1.1.3.2 Liabilities to affiliated enterprises

FROM PUBLISHED BOP BY DOSM

Pelaburan Langsung Mengikut Prinsip Arah Aliran

Pelaburan langsung

Di luar negeri

Ekuiti & dana pelaburan saham

Instrumen hutang

Source: Department of Statistics Malaysia

- The reporting work at macro level will start with BOP. Input from BOP will be used in IIP.
- Both reports will be sent to IMF.

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

BALANCE OF PAYMENT METHODOLOGY: DOSM

Direct investment is a category of international investment that reflects the objective of a resident entity in one economy **obtaining a lasting interest in an enterprise resident in another economy.** The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. An **ownership of at least 10 per cent of the voting power** of the enterprise is evidence of such relationship.

Direct investment covers **all transactions** between direct investors and direct investment enterprises **within the Foreign Direct Investment Relationship (FDIR).** Financial instruments covered under direct investment include equity, reinvestment of earnings and debt instruments (such as inter-company loans and advances, trade credits). According to the assets and liabilities basis:

i. **asset** refers to all investment abroad by both direct investors and direct investment enterprises in Malaysia; while
ii. **liabilities** refers to all investment in Malaysia by both direct investors and direct investment enterprises abroad.

Based on directional principal basis, DIA is derived by netting off the assets of Malaysia's direct investors with its liabilities.

DATA SOURCES

The source of data in compiling the Balance of Payments estimates are as follows:

(I) Primary sources:

- *Survey on International Trade in Services conducted by the Department;*
- *DOSM-BNM Joint Survey on International Investment Position; and*
- *Survey on Expenditure of Malaysian Residents at Border Town conducted by the Department.*

(II) Secondary sources:

- *Tourism statistics compiled by the Malaysia Tourism Promotion Board, using data emanating from its Departing Visitors' Survey with supplementary data from the Immigration Department;*
- *BNM's International Transactions Information System (ITIS); and*
- *Administrative records of the public and private sectors - public sector refers to administrative record of other government agencies, Accountant-General's Office, Royal Malaysian Customs Department, Ministry of Defence, Ministry of Foreign Affairs and etc. are used.*

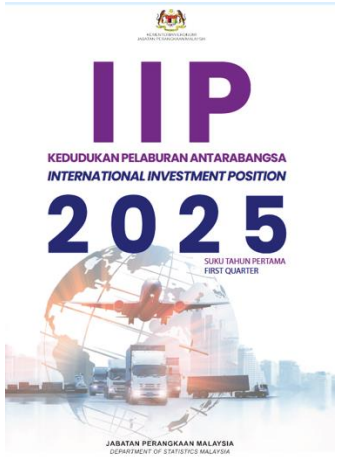
DATA RELEASE AND REVISION PRACTICE

The practice adopted by DOSM for preliminary data release and revisions are:

- *Revision data for the previous year will be published in the first quarter of the current year; and*

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

INTERNATIONAL INVESTMENT POSITION METHODOLOGY: DOSM



This publication provides quarterly International Investment Position (IIP) statistics that **measures the stock** of Malaysia's external financial assets and liabilities with the rest of the world. The compilation is in accordance with the methodology set forth in the Balance of Payments Manual and International Investment Position Sixth Edition (BPM6).

This statistics portray Malaysia's investment abroad (assets) and foreign investment in Malaysia (liabilities). The difference between the assets and liabilities reflects Malaysia's net IIP.

Direct investment covers **all transactions** between direct investors and direct investment enterprises **within the Foreign Direct Investment Relationship (FDIR).** Financial instruments covered under direct investment include equity, reinvestment of earnings and debt instruments (such as inter-company loans and advances, trade credits). According to the assets and liabilities basis:

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ii. **liabilities** refers to all investment in Malaysia by both direct investors and direct investment enterprises abroad.

Based on directional principal basis, DIA is derived by netting off the assets of Malaysia's direct investors with its liabilities.

DATA SOURCES	*IIP are compiled from several sources:*
Primary source	*Survey on International Investment Position, IIP (joint effort between DOSM and BNM).*
Secondary source	*Data on reserve assets are provided by BNM.*

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

METHODOLOGY: UNCTAD

FDI flows

UNCTAD regularly collects published and unpublished national official FDI data flows directly from central banks, statistical offices or national authorities on an aggregated and disaggregated basis for its FDI/MNE database (https://unctad.org/fdistatistics). These data constitute the main source (more than 90 per cent) for the reported data on FDI. These data are complemented by data obtained from other international organizations with partial data availability (or data based on asset/liability principle) such as the International Monetary Fund (IMF), the World Bank and the Organisation for Economic Co-operation and Development (OECD) as well as regional organizations such as the ASEAN Secretariat, the European Bank for Reconstruction and Development (EBRD), Banque Centrale des Etats de l'Afrique de l'Ouest, Banque des Etats de l'Afrique Centrale and Eastern Caribbean Central Bank.

Malaysia

- National institution reporting FDI:
  - Department of Statistics Malaysia
- Data collection system used:
  - Surveys.
- Valuation system used:
  - Market price and book value.
- Data source used in the report:

Inflows
IMF for 1980–1989 and the national institution mentioned above thereafter.

Outflows
The national institution.

Inward stock
1980–1989 data are based on the IMF. 1990–1994 and 2000–2023 data are from the national institution. 1995–1999 data are estimated by adding inflows to the 1995 stock.

Outward stock
1980–1994 data are based on the IMF. 1995–1999 data are estimated by adding outflows to the 1994 stock. Data for 2000–2023 are from the national institution.

- Availability of all FDI flows and stock components:
  - Stock from 2001.

Flows of FDI comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. FDI has three components: equity capital, reinvested earnings and intracompany loans.

i. **Equity capital** is the foreign direct investor's purchase of shares of an enterprise in a country other than its own.

ii. **Reinvested earnings** comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are deemed reinvested.

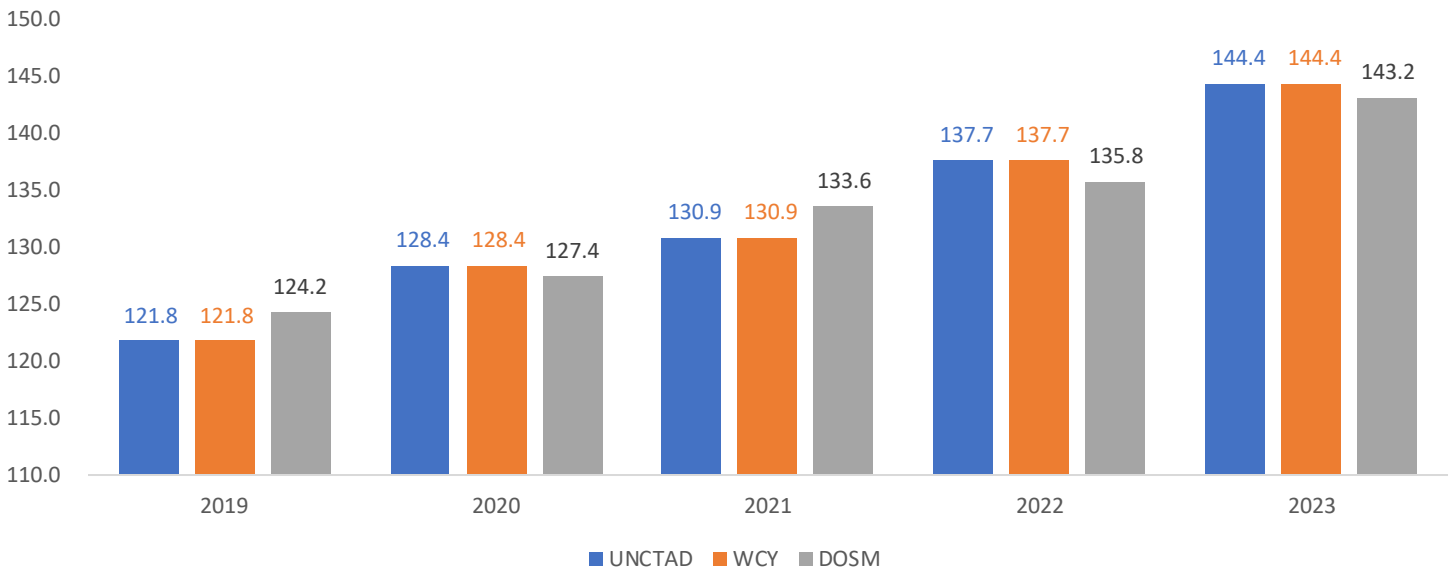
iii. **Intracompany loans or intracompany debt** transactions refer to short or long term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises.

FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise.

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

Comparative Measurement Assessment of Indicator

Direct Investment Stocks Abroad, 2019 - 2023 (USD Bn)



	2019	2020	2021	2022	2023
Difference (%)	2.03	- 0.73	2.09	- 1.36	- 0.82

Source: UNCTAD (selected in USD bn), WCY and Department of Statistics Malaysia

Based on the comparative analysis, Direct Investment Stocks Abroad reported by UNCTAD and DOSM are mostly consistent.

The figures published by UNCTAD—which are used in the IMD World Competitiveness Yearbook—closely align with Malaysia's national data. Differences may be due to exchange rate used.

This indicates that there are no significant measurement discrepancies, and the indicator can be reliably used for international benchmarking.

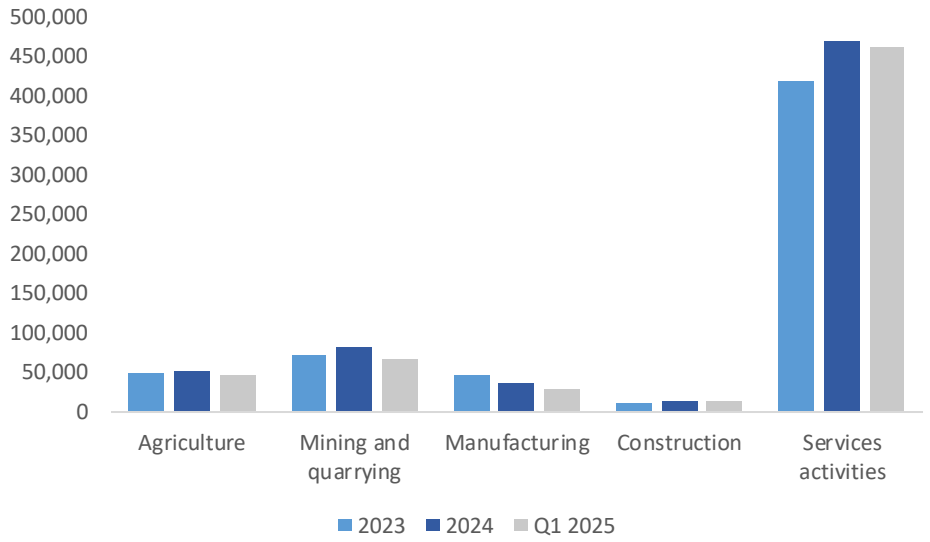
Global foreign direct investment (FDI) flows declined in 2023. Investor uncertainty about the state of the economy and the potential impact of economic fracturing trends affected flows in both developed and developing economies. Tighter financial conditions depressed international project finance deals and cross-border mergers and acquisitions (M&As). Greenfield project announcements increased, potentially signalling better prospects going forward. Combining these trends with stabilizing costs of finance makes expectations for 2024 moderately positive.

Global foreign direct investment (FDI) flows, absent the financial flows to a handful of European conduit economies, continued to decline in 2024. The outlook for 2025 is increasingly pessimistic as early first-quarter data point to record lows in deals and announced projects, underscoring the fragility of global investment dynamics.

Source:
World Investment Report 2024 and 2025

INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

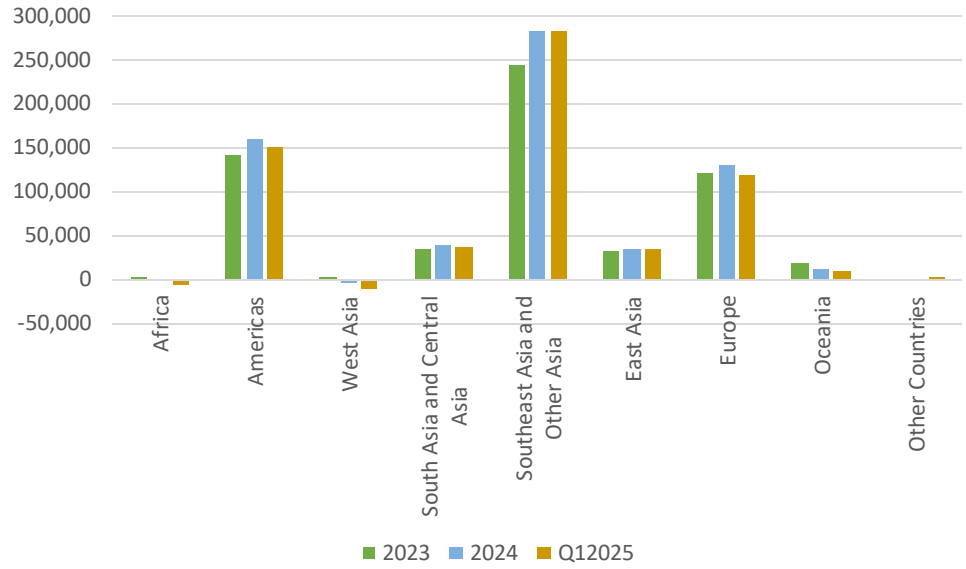
Direct Investment Abroad Position by Sector, 2023 - Q1 2025 (RM Million)



Malaysia's outward direct investment has levelled off in recent years, with companies becoming more selective and cautious in expanding abroad.

Although data is readily available and format used is as indicated by IMF, further micro analysis can determine types of investors, whether institutional investors, private entity or individuals are participating actively in investing abroad.

Direct Investment Abroad Position by Block of Countries, 2023 – Q1 2025 (RM Million)



While ASEAN remains the main destination, there are early signs of Malaysian investment in high-potential regions like Africa and the Middle East. This cautious approach reflects both rising global uncertainties and limited support for higher-risk ventures.

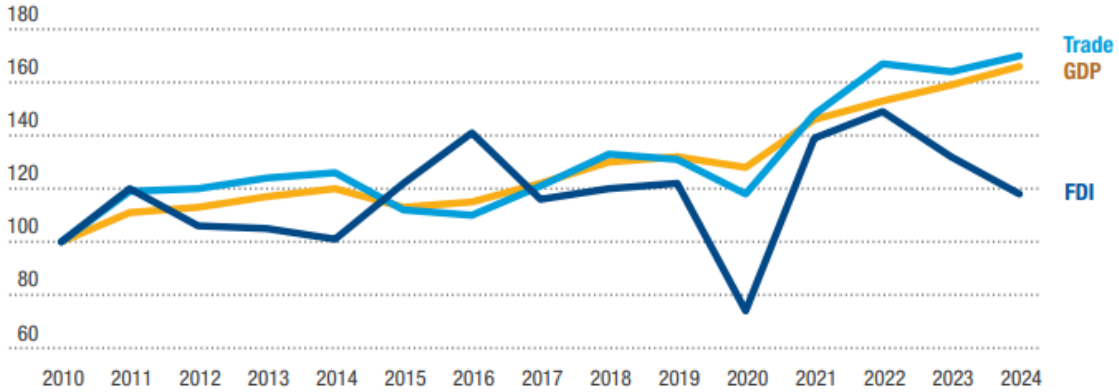
INDICATOR 1.3.03: Direct Investment Stocks Abroad ($Bn)

CURRENT SITUATION AND CHALLENGES AHEAD

Global trends and prospects

Global FDI in 2024 increased marginally, by 4 per cent, from $1.45 trillion to $1.51 trillion. However, this headline figure masks significant underlying weaknesses. It was inflated by volatile financial flows through several European economies with high levels of conduit flows.[1] When these are excluded, global FDI flows in fact declined by 11 per cent on a like-for-like basis, from $1.67 trillion to $1.49 trillion – marking the second consecutive year of double-digit contraction and confirming persistent fragility in international investment flows. The decline in FDI flows is in stark contrast to other macroeconomic variables, including gross domestic product (GDP) and trade (figure I.1).

Figure I.1
FDI is losing pace with GDP and trade
FDI, GDP and trade indexed, 2010 = 100



Source: UNCTAD, based on IMF for GDP and trade.
Note: GDP at current prices, trade is value of goods and services exports.
Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; IMF, International Monetary Fund.

IPF activity in developing Asia declined sharply in 2024. The number of deals fell by 27 per cent – broadly in line with the global average – but the total value dropped by a steeper 43 per cent.

The contraction was most pronounced in South-East Asia, where the value of IPF deals fell by more than 60 per cent. Major pullbacks occurred in Malaysia (87 per cent), Indonesia (66 per cent) and the Philippines (-61 per cent).

Countries such as India, Malaysia and Viet Nam have enhanced their appeal as manufacturing hubs, bolstered by trade shifts and industrial policies. Increasing average project sizes implies larger, more integrated operations, signaling long-term confidence in the industry's productivity and export potential.

Source:
World Investment Report 2025

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL INVESTMENT

INDICATOR 1.3.07
DIRECT INVESTMENT STOCKS INWARD

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.3.07: Direct Investment Stocks Inward ($Bn)

INDICATOR DEFINITION

FDI stock is the value of the share of capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises. It is approximated by the accumulated value of past FDI flows.

WCY DATA SOURCE

United Nations Conference on Trade and Development (UNCTAD)

WCY DATA SOURCE

United Nations Conference on Trade and Development (UNCTAD)

Source: *IMD World Competitiveness Yearbook 2024*

International Investment - Investment 1.3.07

DIRECT INVESTMENT STOCKS INWARD ($BN) 2022

US$ billions

Ranking		US$ billions
01	USA	10,461.7
02	China	3,822.5
03	United Kingdom	2,698.6
04	Netherlands	2,683.6
05	Singapore	2,368.4
06	Hong Kong SAR	2,090.6
07	Canada	1,439.9
08	Ireland	1,408.8
09	Luxembourg	1,155.3
10	Switzerland	1,036.9
11	Germany	1,007.5
12	France	896.8
13	Brazil	815.6
14	Spain	787.3
15	Australia	758.0
16	Mexico	649.3
17	Belgium	523.9
18	India	510.7
19	Italy	448.5
20	Sweden	353.8
21	Thailand	306.2
22	Korea Rep.	272.3
23	Poland	269.8
24	Saudi Arabia	268.9
25	Indonesia	262.9
26	Chile	256.1
27	Israel	235.2
28	Colombia	233.9
29	Japan	225.4
30	Austria	204.0
31	Czech Republic	202.7
32	Malaysia	199.2
33	UAE	194.3
34	Portugal	177.3
35	South Africa	173.6
36	Turkey	164.9
37	Kazakhstan	154.2
38	Norway	145.5
39	Denmark	142.6
40	Taiwan (Chinese Taipei)	137.3
41	Peru	129.5
42	Argentina	116.7
43	Romania	116.0
44	Philippines	113.0
45	Hungary	104.3
46	Finland	99.9
47	New Zealand	93.9
48	Nigeria	88.2
49	Cyprus	58.3
50	Bulgaria	57.4
51	Slovak Republic	57.4
52	Greece	49.2
53	Ghana	42.5
54	Jordan	38.4
55	Croatia	38.3
56	Bahrain	35.4
57	Estonia	30.0
58	Mongolia	28.5
59	Qatar	27.6
60	Lithuania	27.5
61	Latvia	24.1
62	Venezuela	21.9
63	Slovenia	21.1
64	Kuwait	15.1
65	Iceland	8.3
66	Botswana	5.2
-	Puerto Rico	-

WHAT DOES THE CORE INDICATE?

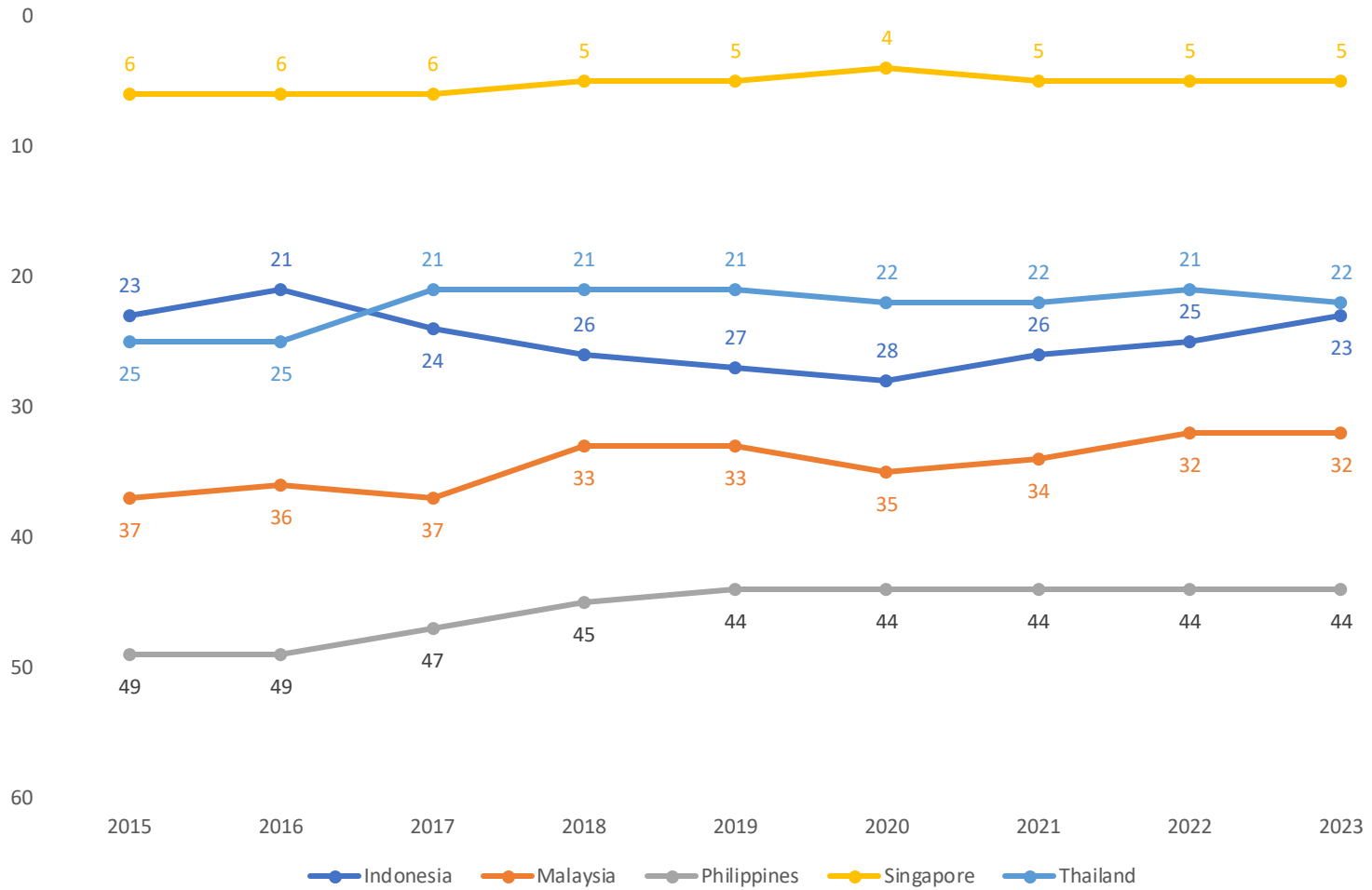
The higher the value, the higher the rank

RATIONALE FOR MEASUREMENT

- The Direct Investment Stocks Inward (DISI) is one of the component in the Balance of Payment (BOP), capturing the accumulated value of foreign resident investments in domestic economies.
- Using stock data instead of flow for analysis provides a more comprehensive and stable view of a country's direct investment abroad. It allows for better cross-country comparisons, reduces the noise of short-term volatility, and aligns with the definition of FDI as a lasting interest.
- Foreign investors are drawn to invest in a domestic economy when the rate of return (RR) is competitive, the market is stable, and policies are favorable. Higher DISI reflects stronger foreign confidence and brings in capital, technology, and expertise that can stimulate domestic productivity and job creation. However, overdependence on DISI could risk external influence on strategic sectors.
- Maintaining a healthy balance between inward and outward direct investment is vital. Strong DISI can support current account sustainability by generating reinvested earnings and income flows. But if DISI grows much faster than domestic capacity to absorb it efficiently, it may lead to profit repatriation pressures or limited spillover benefits. Therefore, attracting quality DISI, not just quantity is important for long-term economic resilience.

INDICATOR 1.3.07: Direct Investment Stocks Inward ($Bn)

Where are Malaysia now? Indicators ranking among ASEAN countries



From 2015 to 2023, Singapore consistently led ASEAN in inward direct investment stocks, maintaining a commanding position with a sizeable lead over its regional peers. This dominance reflects its role as a financial hub with a stable investment climate.

Malaysia remained in the mid-tier among ASEAN countries, showing stable performance but without significant gains in rank, indicating moderate success in attracting FDI. Vietnam and Indonesia displayed upward trends, gradually improving their attractiveness to foreign investors, while Thailand held steady. This highlights that while Malaysia is stable, it risks losing ground to faster-growing investment destinations in the region.

INDICATOR 1.3.07: Direct Investment Stocks Inward ($Bn)

INDICATOR FOOTPRINT

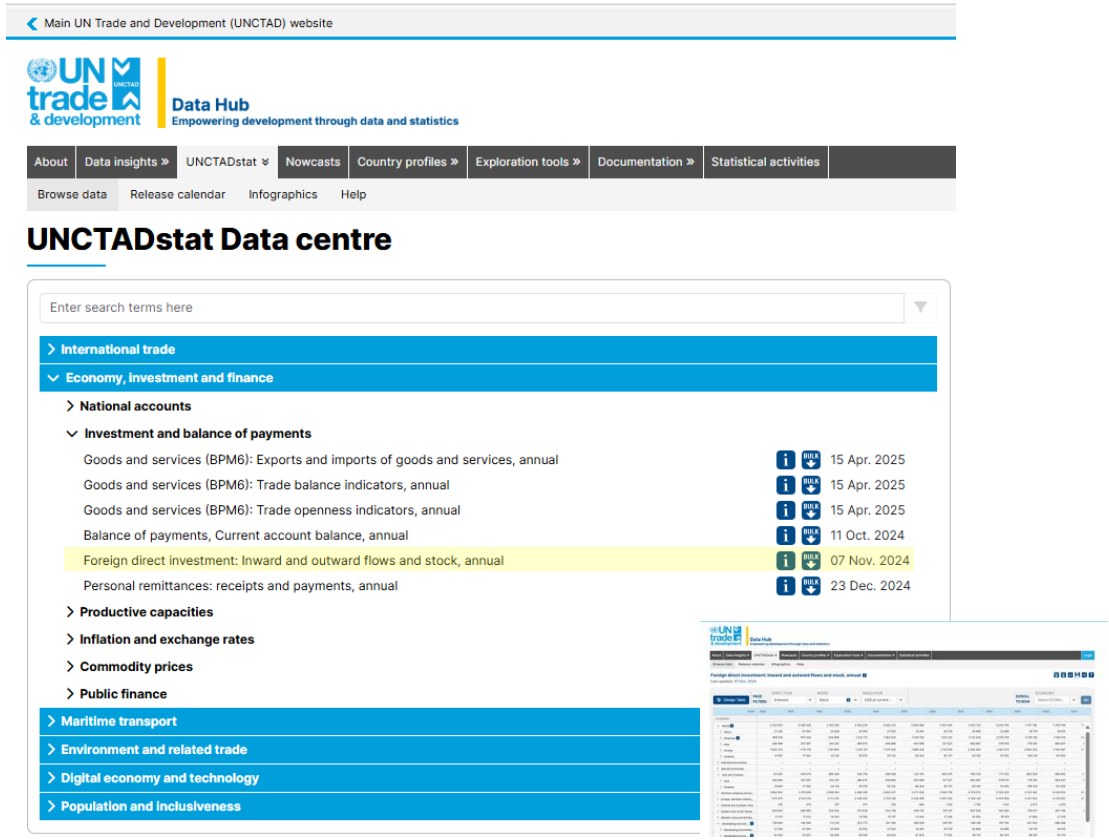
FOREIGN COMPANIES/ INVESTORS	BNM	DOSM	IMF	UNCTAD	WCY
Report inward investments via BNM's International Transactions Information System (ITIS)	Compiles data using IMF Balance of Payments and International Investment Position Manual, 6th Edition (BPM6) methodology This activity is known as the Survey on International Investment Position (IIP). A structured, periodic effort to collect data on Malaysia's external financial positions (assets/liabilities)	Publishes national IIP data through quarterly *International Investment Position Report.* Malaysia's IIP data is compiled quarterly by Bank Negara Malaysia (BNM) and DOSM, and submitted to the IMF Statistics Department.	Collects data through the Direct Investment Positions by Counterpart Economy (formerly known as Coordinated Direct Investment Survey (CDIS))	**Inward stock** 1980-1989 data are based on the IMF. 1990-1994 and 2000-2023 data are from the national institution. 1995-1999 data are estimated by adding inflows to the 1995 stock.	

National institution | **International institution**

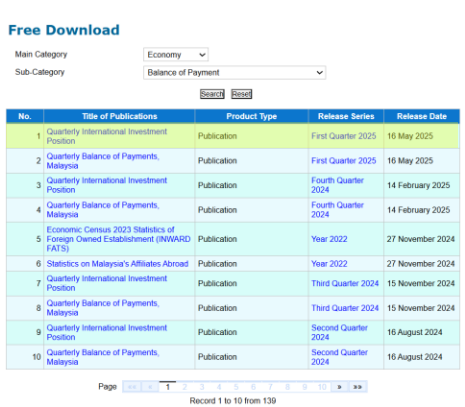
INDICATOR 1.3.07: Direct Investment Stocks Inward ($Bn)

GETTING THE DATA

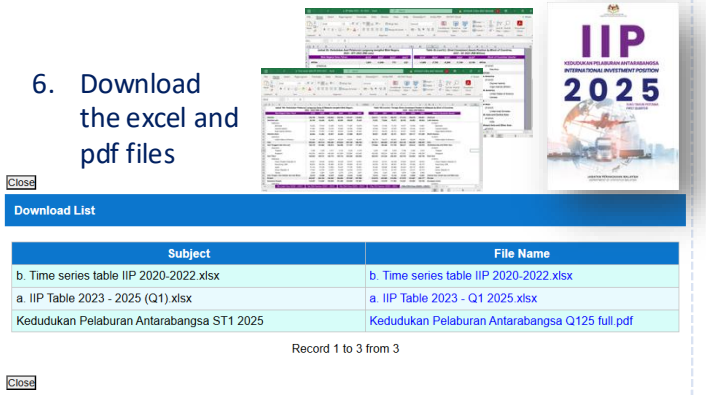
1. Go to: https://unctadstat.unctad.org/datacentre/
2. Click option: **Economy, investment and finance**
3. Select: **Investment and balance of payments**
4. Download: **Foreign direct investment: Inward and outward flows of stock, annual**



1. Go to: https://newss.statistics.gov.my/newss-portalx/ep/epLogin.seam
2. Login (existing user) / Register account (new user)
3. Select from left panel: **Publications: Free Download**
4. Fill in Main Category: **Economy** and Sub- Category: **Balance of Payment**
5. Click: **Search**, Click: **Quarterly International Investment Position**

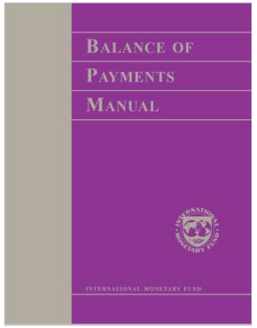


6. Download the excel and pdf files



STANDARD COMPONENTS OF A NATIONAL BALANCE OF PAYMENTS
(*EXTRACTED WITH RELATION TO INDICATORS ONLY*)

FROM IMF MANUAL



Source:

https://www.imf.org/external/pubs/ft/bopman/bopman.pdf

FINANCIAL ACCOUNT

B. LIABILITIES

1. **DIRECT INVESTMENT IN REPORTING ECONOMY***

1.1 EQUITY CAPITAL AND REINVESTED EARNINGS

1.1.1 Claims on direct investors

1.1.2 Liabilities to direct investors

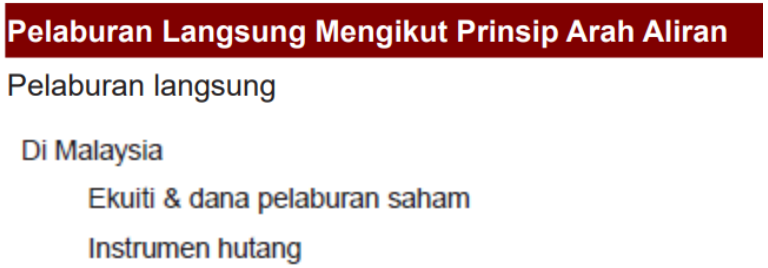
1.2 OTHER CAPITALS

1.2.1 Claims on direct investors

1.2.2 Liabilities to direct investors

* Because direct investment is classified primarily on a directional basis—abroad under the heading Assets and in the reporting economy under the heading Liabilities—claim/liability breakdowns are shown for the components of each, although these sub-items do not strictly conform to the overall headings of Assets and Liabilities.

FROM PUBLISHED BOP BY DOSM



Source: Department of Statistics Malaysia

- The reporting work at macro level will start with BOP. Input from BOP will be used in IIP.
- Both reports will be sent to IMF.

BALANCE OF PAYMENT METHODOLOGY: DOSM

Direct investment is a category of international investment that reflects the objective of a resident entity in one economy **obtaining a lasting interest in an enterprise resident in another economy.** The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. An **ownership of at least 10 per cent of the voting power** of the enterprise is evidence of such relationship.

Direct investment covers **all transactions** between direct investors and direct investment enterprises **within the Foreign Direct Investment Relationship (FDIR).** Financial instruments covered under direct investment include equity, reinvestment of earnings and debt instruments (such as inter-company loans and advances, trade credits). According to the assets and liabilities basis:

i. **asset** refers to all investment abroad by both direct investors and direct investment enterprises in Malaysia; while
ii. **liabilities** refers to all investment in Malaysia by both direct investors and direct investment enterprises abroad.

Based on directional principal basis, DIA is derived by netting off the assets of Malaysia's direct investors with its liabilities.

DATA SOURCES

The source of data in compiling the Balance of Payments estimates are as follows:

(I) Primary sources:

- *Survey on International Trade in Services conducted by the Department;*
- *DOSM-BNM Joint Survey on International Investment Position; and*
- *Survey on Expenditure of Malaysian Residents at Border Town conducted by the Department.*

(II) Secondary sources:

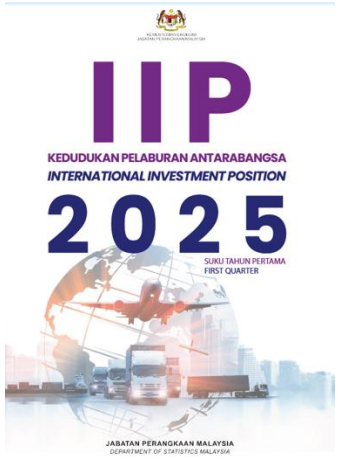
- *Tourism statistics compiled by the Malaysia Tourism Promotion Board, using data emanating from its Departing Visitors' Survey with supplementary data from the Immigration Department;*
- *BNM's International Transactions Information System (ITIS); and*
- *Administrative records of the public and private sectors - public sector refers to administrative record of other government agencies, Accountant-General's Office, Royal Malaysian Customs Department, Ministry of Defence, Ministry of Foreign Affairs and etc. are used.*

DATA RELEASE AND REVISION PRACTICE

The practice adopted by DOSM for preliminary data release and revisions are:

- *Revision data for the previous year will be published in the first quarter of the current year; and*

INTERNATIONAL INVESTMENT POSITION METHODOLOGY: DOSM



This publication provides quarterly International Investment Position (IIP) statistics that **measures the stock** of Malaysia's external financial assets and liabilities with the rest of the world. The compilation is in accordance with the methodology set forth in the Balance of Payments Manual and International Investment Position Sixth Edition (BPM6).

This statistics portray Malaysia's investment abroad (assets) and foreign investment in Malaysia (liabilities). The difference between the assets and liabilities reflects Malaysia's net IIP.

Direct investment covers **all transactions** between direct investors and direct investment enterprises **within the Foreign Direct Investment Relationship (FDIR).** Financial instruments covered under direct investment include equity, reinvestment of earnings and debt instruments (such as inter-company loans and advances, trade credits). According to the assets and liabilities basis:

i. **asset** refers to all investment abroad by both direct investors and direct investment enterprises in Malaysia; while
ii. **liabilities** refers to all investment in Malaysia by both direct investors and direct investment enterprises abroad.

Based on directional principal basis, DIA is derived by netting off the assets of Malaysia's direct investors with its liabilities.

DATA SOURCES	*IIP are compiled from several sources:*
Primary source	*Survey on International Investment Position, IIP (joint effort between DOSM and BNM).*
Secondary source	*Data on reserve assets are provided by BNM.*

INDICATOR 1.3.07: Direct Investment Stocks Inward ($Bn)

METHODOLOGY: UNCTAD

FDI flows

UNCTAD regularly collects published and unpublished national official FDI data flows directly from central banks, statistical offices or national authorities on an aggregated and disaggregated basis for its FDI/MNE database (https://unctad.org/fdistatistics). These data constitute the main source (more than 90 per cent) for the reported data on FDI. These data are complemented by data obtained from other international organizations with partial data availability (or data based on asset/liability principle) such as the International Monetary Fund (IMF), the World Bank and the Organisation for Economic Co-operation and Development (OECD) as well as regional organizations such as the ASEAN Secretariat, the European Bank for Reconstruction and Development (EBRD), Banque Centrale des Etats de l'Afrique de l'Ouest, Banque des Etats de l'Afrique Centrale and Eastern Caribbean Central Bank.

Malaysia

- National institution reporting FDI:
  - Department of Statistics Malaysia
- Data collection system used:
  - Surveys.
- Valuation system used:
  - Market price and book value.
- Data source used in the report:

Inflows
IMF for 1980–1989 and the national institution mentioned above thereafter.

Outflows
The national institution.

Inward stock
1980–1989 data are based on the IMF. 1990–1994 and 2000–2023 data are from the national institution. 1995–1999 data are estimated by adding inflows to the 1995 stock.

Outward stock
1980–1994 data are based on the IMF. 1995–1999 data are estimated by adding outflows to the 1994 stock. Data for 2000–2023 are from the national institution.

- Availability of all FDI flows and stock components:
  - Stock from 2001.

Flows of FDI comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. FDI has three components: equity capital, reinvested earnings and intracompany loans.

i. **Equity capital** is the foreign direct investor's purchase of shares of an enterprise in a country other than its own.

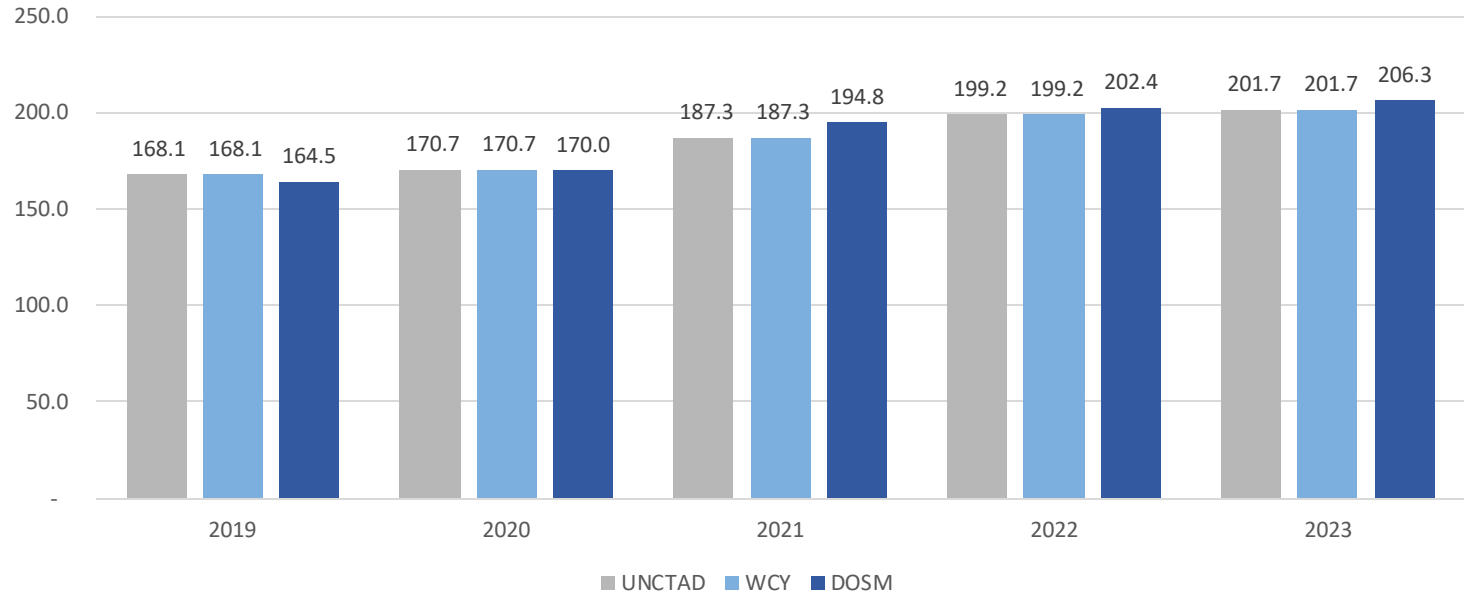
ii. **Reinvested earnings** comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are deemed reinvested.

iii. **Intracompany loans or intracompany debt** transactions refer to short or long term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises.

FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise.

Comparative Measurement Assessment of Indicator

Direct Investment Stocks Inward, 2019 - 2023 (USD Bn)



	2019	2020	2021	2022	2023
Difference (%)	- 2.12	- 0.40	4.02	1.59	2.24

Source: UNCTAD (selected in USD bn), WCY and Department of Statistics Malaysia

Based on the comparative analysis, Direct Investment Stocks Inward reported by UNCTAD and DOSM are mostly consistent.

The figures published by UNCTAD—which are used in the IMD World Competitiveness Yearbook—closely align with Malaysia's national data. Differences may be due to exchange rate used.

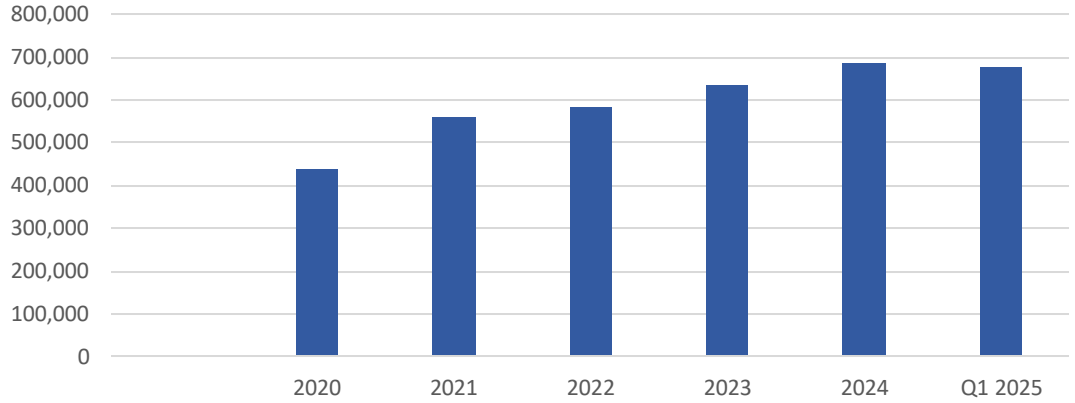
This indicates that there are no significant measurement discrepancies, and the indicator can be reliably used for international benchmarking.

Global foreign direct investment (FDI) flows declined in 2023. Investor uncertainty about the state of the economy and the potential impact of economic fracturing trends affected flows in both developed and developing economies. Tighter financial conditions depressed international project finance deals and cross-border mergers and acquisitions (M&As). Greenfield project announcements increased, potentially signalling better prospects going forward. Combining these trends with stabilizing costs of finance makes expectations for 2024 moderately positive.

Global foreign direct investment (FDI) flows, absent the financial flows to a handful of European conduit economies, continued to decline in 2024. The outlook for 2025 is increasingly pessimistic as early first-quarter data point to record lows in deals and announced projects, underscoring the fragility of global investment dynamics.

Source:
World Investment Report 2024 and 2025

Portfolio Investment Liabilities 2020 - Q1 2025 (RM Million)

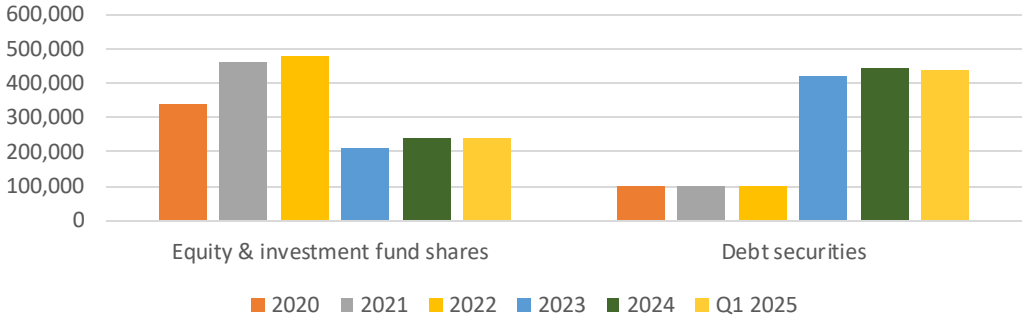


Malaysia's portfolio investment liabilities have grown steadily from 2020 to Q1 2025, reaching around RM680 billion in early 2025. This marks a strong recovery from pandemic-era levels and reflects sustained foreign investor interest in Malaysian financial assets. The breakdown shows a shift in composition:

- While equity holdings increased significantly up to 2022, debt securities have become the dominant component from 2023 onward.
- This indicates a growing preference among foreign investors for Malaysian bonds, likely driven by interest rate trends and demand for more stable returns.

The data suggests Malaysia is benefiting from consistent portfolio inflows, but the changing composition also highlights exposure to global financial conditions.

Portfolio Investment Liabilities by types 2020 - Q1 2025 (RM Million)



Investor's shift in portfolio investment can be seen significantly towards debt securities. The shift from equity to debt securities in Malaysia's portfolio investment liabilities suggests that foreign investors are becoming more risk-averse, favouring stable, fixed-income returns amid global interest rate hikes and market uncertainties.

This trend reflects confidence in Malaysia's bond market and macroeconomic stability but also signals reduced appetite for higher-risk, long-term equity investments. While this supports debt market development, it raises concerns over potential capital flight if global rates change and highlights the need to reinvigorate equity market appeal to ensure balanced, resilient capital inflows.

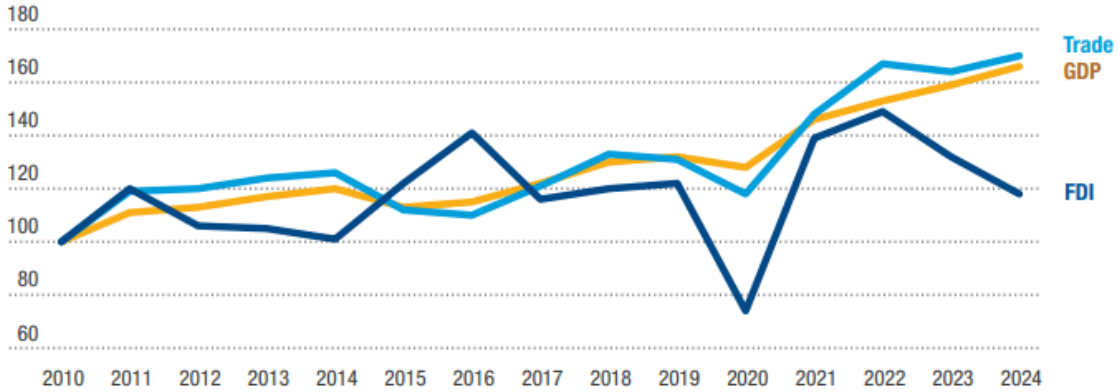
Although data is readily available and format used is as indicated by IMF, further micro analysis can determine types of investors, whether institutional investors, private entity or individuals are participating actively in investing locally.

CURRENT SITUATION AND CHALLENGES AHEAD

Global trends and prospects

Global FDI in 2024 increased marginally, by 4 per cent, from $1.45 trillion to $1.51 trillion. However, this headline figure masks significant underlying weaknesses. It was inflated by volatile financial flows through several European economies with high levels of conduit flows.[1] When these are excluded, global FDI flows in fact declined by 11 per cent on a like-for-like basis, from $1.67 trillion to $1.49 trillion – marking the second consecutive year of double-digit contraction and confirming persistent fragility in international investment flows. The decline in FDI flows is in stark contrast to other macroeconomic variables, including gross domestic product (GDP) and trade (figure I.1).

Figure I.1
FDI is losing pace with GDP and trade
FDI, GDP and trade indexed, 2010 = 100



Source: UNCTAD, based on IMF for GDP and trade.
Note: GDP at current prices, trade is value of goods and services exports.
Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; IMF, International Monetary Fund.

IPF activity in developing Asia declined sharply in 2024. The number of deals fell by 27 per cent – broadly in line with the global average – but the total value dropped by a steeper 43 per cent.

The contraction was most pronounced in South-East Asia, where the value of IPF deals fell by more than 60 per cent. Major pullbacks occurred in Malaysia (87 per cent), Indonesia (66 per cent) and the Philippines (-61 per cent).

Countries such as India, Malaysia and Viet Nam have enhanced their appeal as manufacturing hubs, bolstered by trade shifts and industrial policies. Increasing average project sizes implies larger, more integrated operations, signaling long-term confidence in the industry's productivity and export potential.

Source:
World Investment Report 2025

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL INVESTMENT

INDICATOR 1.3.15
PORTFOLIO INVESTMENT LIABILITIES

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

INDICATOR DEFINITION

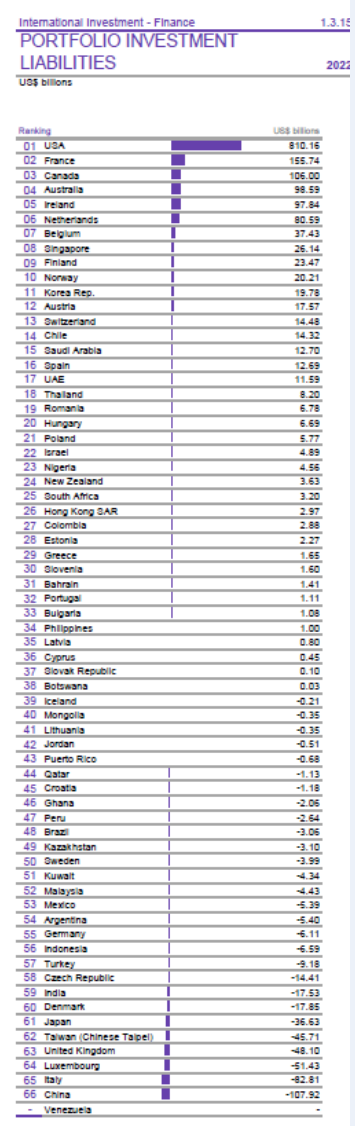
FDI stock is the value of the share of capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises. It is approximated by the accumulated value of past FDI flows.

WCY DATA SOURCE

IMF International Financial Statistics (IMF)

IMF DATA SOURCE

International Investment Position (IIP) by Department of Statistics Malaysia (DOSM)



International Investment - Finance 1.3.15

PORTFOLIO INVESTMENT LIABILITIES 2022

US$ billions

Ranking		US$ billions
01	USA	810.16
02	France	155.74
03	Canada	106.00
04	Australia	98.59
05	Ireland	97.84
06	Netherlands	80.59
07	Belgium	37.43
08	Singapore	26.14
09	Finland	23.47
10	Norway	20.21
11	Korea Rep.	19.78
12	Austria	17.57
13	Switzerland	14.48
14	Chile	14.32
15	Saudi Arabia	12.70
16	Spain	12.69
17	UAE	11.59
18	Thailand	8.20
19	Romania	6.78
20	Hungary	6.69
21	Poland	5.77
22	Israel	4.89
23	Nigeria	4.56
24	New Zealand	3.63
25	South Africa	3.20
26	Hong Kong SAR	2.97
27	Colombia	2.88
28	Estonia	2.27
29	Greece	1.65
30	Slovenia	1.60
31	Bahrain	1.41
32	Portugal	1.11
33	Bulgaria	1.08
34	Philippines	1.00
35	Latvia	0.80
36	Cyprus	0.45
37	Slovak Republic	0.10
38	Botswana	0.03
39	Iceland	-0.21
40	Mongolia	-0.35
41	Lithuania	-0.35
42	Jordan	-0.51
43	Puerto Rico	-0.68
44	Qatar	-1.13
45	Croatia	-1.16
46	Ghana	-2.06
47	Peru	-2.64
48	Brazil	-3.06
49	Kazakhstan	-3.10
50	Sweden	-3.99
51	Kuwait	-4.34
52	Malaysia	-4.43
53	Mexico	-5.39
54	Argentina	-5.40
55	Germany	-6.11
56	Indonesia	-6.59
57	Turkey	-9.18
58	Czech Republic	-14.41
59	India	-17.53
60	Denmark	-17.85
61	Japan	-36.63
62	Taiwan (Chinese Taipei)	-45.71
63	United Kingdom	-48.10
64	Luxembourg	-51.43
65	Italy	-82.81
66	China	-107.92
-	Venezuela	-

WHAT DOES THE CORE INDICATE?

The higher the value, the higher the rank

RATIONALE FOR MEASUREMENT

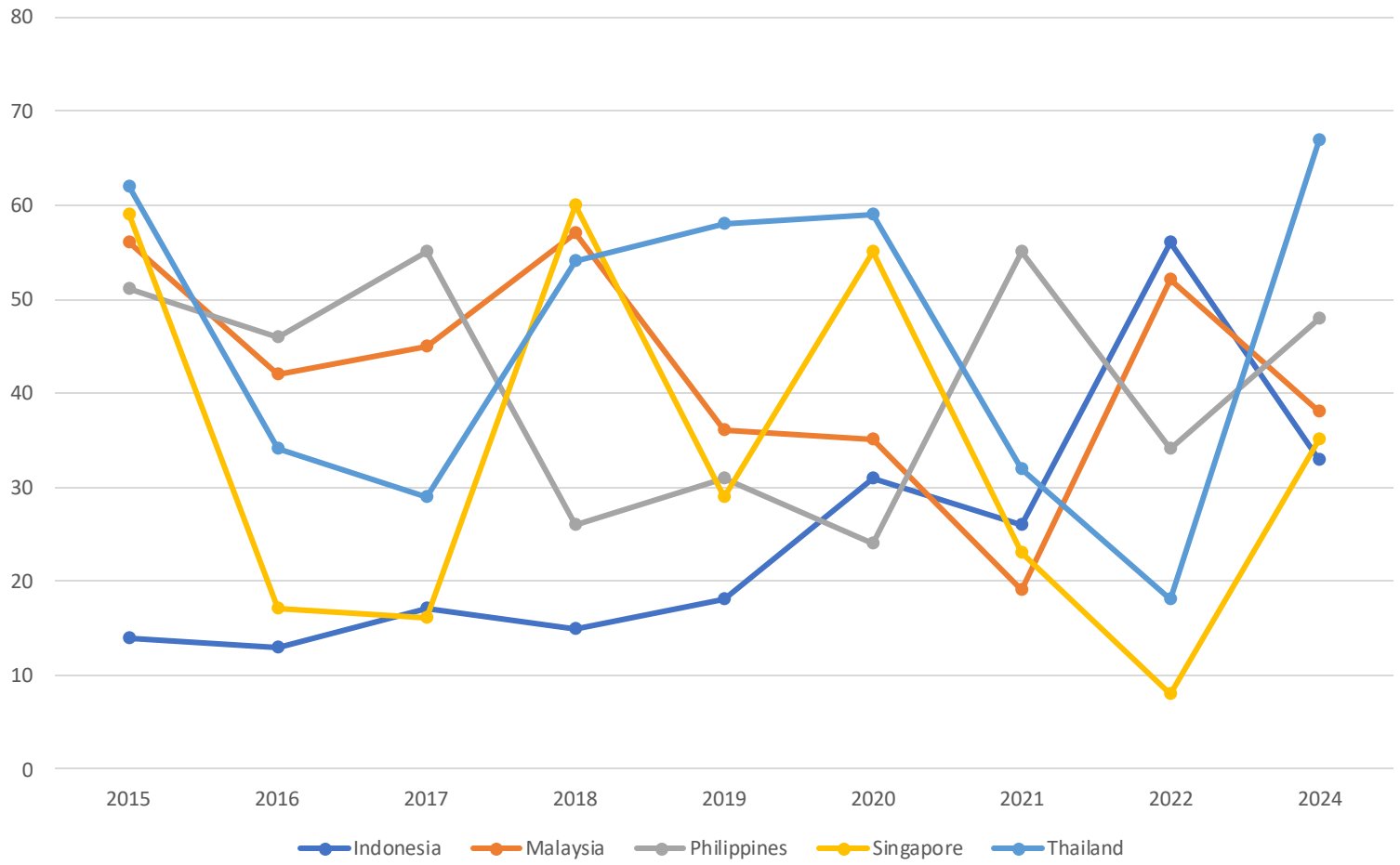
Portfolio Investment Liabilities (PIL) capture non-resident holdings of domestic debt and equity securities, reflecting investor confidence and the openness of domestic financial markets.

- Signals attractiveness of Malaysia's capital markets to foreign investors, driven by returns, liquidity, and macroeconomic stability.
- Provides insight into external vulnerabilities—sudden capital reversals can impact exchange rates, reserves, and financial stability.
- Enables monitoring of market exposure to global sentiment and interest rate movements, especially in short-term instruments.
- Complements policy design by guiding measures to deepen capital markets, improve transparency, and manage capital flow risks.
- Supports cross-country comparison in investor sentiment, particularly for benchmarking against regional peers.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

Where are Malaysia now? Indicators ranking among ASEAN countries



Singapore consistently attracted the largest portfolio investment liabilities in ASEAN from 2015 to 2023, supported by its sophisticated financial markets and investor-friendly policies. Malaysia followed in second place throughout the period, maintaining a solid position in regional capital markets.

However, its growth has been modest, allowing countries like Thailand and Indonesia to close the gap. This signals a need for Malaysia to strengthen its financial markets, improve transparency, and broaden its investor base to remain competitive in attracting portfolio flows.

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

INDICATOR FOOTPRINT

BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA

INTERNATIONAL MONETARY FUND

IMD World Competitiveness Ranking

FOREIGN INVESTORS/ FUND MANAGERS	CUSTODIAN BANKS/ CORPORATIONS/ SECURITIES FIRM	BNM	DOSM	IMF	WCY
Invest in Malaysian stocks, bonds, sukuk	Report holdings via ITIS/ BOP surveys. BOP survey is conducted through ITS platform, which acts as the reporting interface. Large firms and financial institutions are legally required to submit the data quarterly. ACT 701- Central Bank of Malaysia Acy 2009	Compiles data under BPM6 financial account disaggregating equity and debt securities	Publishes national IIP data through quarterly *International Investment Position Report.* Malaysia's IIP data is compiled quarterly by Bank Negara Malaysia (BNM) and DOSM, and submitted to the IMF Statistics Department.	Use Special Data Dissemination Standard (SDDS) to release macroeconomic statistic. Data for Indicator 1.3.15 is available on the International Financial Statistics (IFS) is the IMF's global database that compiles economic data across 200+ countries.	

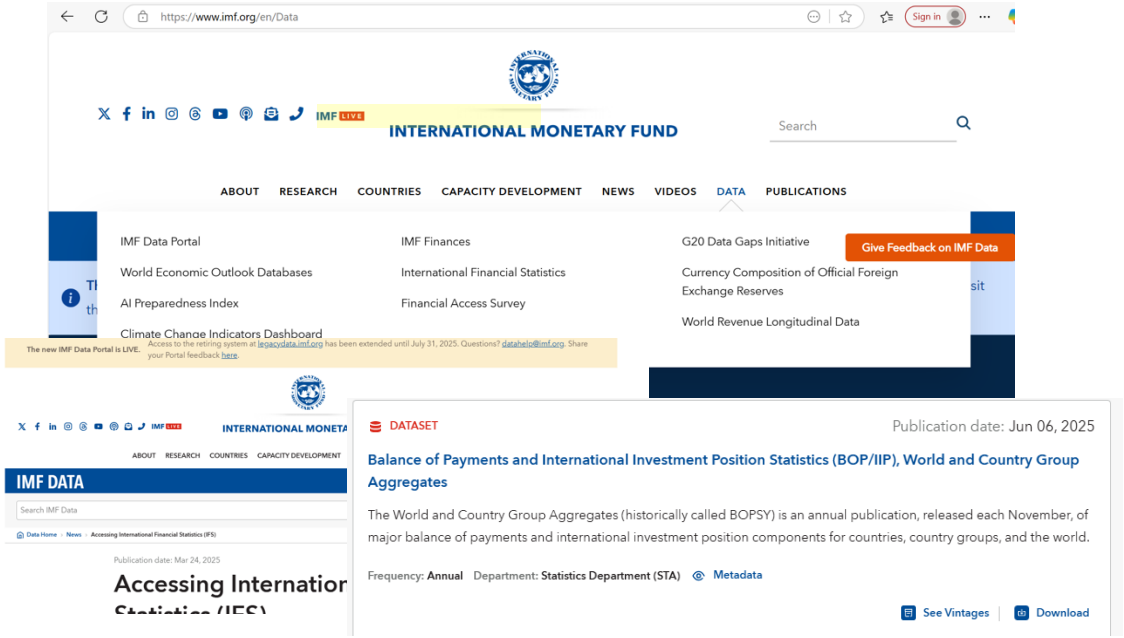
National institution

International institution

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

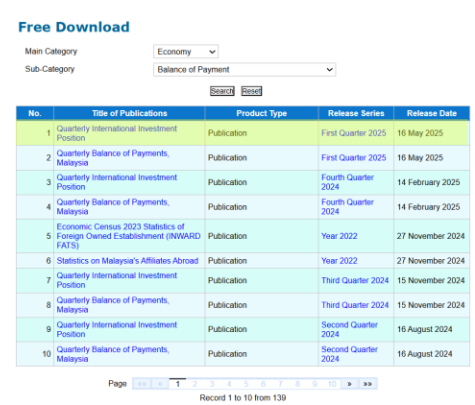
GETTING THE DATA

1. Go to: https://www.imf.org/
2. Click option: **Data**
3. Select: **International Financial Statistics**
4. In the dialogue box, key in: **International Investment Position**
5. Select: **Balance of Payments and International Investment Position Statistics (BOP/IIP), World and Country Group Aggregates**
6. Download the data

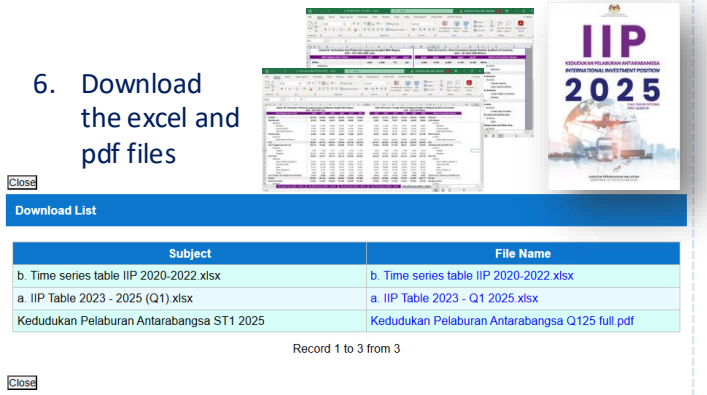


1. Go to: https://newss.statistics.gov.my/newss-portalx/ep/epLogin.seam
2. Login (existing user) / Register account (new user)
3. Select from left panel: **Publications: Free Download**
4. Fill in Main Category: **Economy** and Sub- Category: **Balance of Payment**
5. Click: **Search**, Click: **Quarterly International Investment Position**

PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA

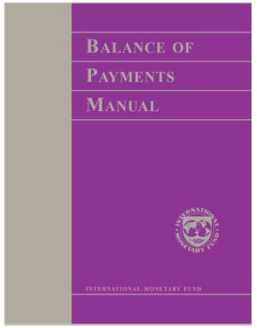


6. Download the excel and pdf files



STANDARD COMPONENTS OF A NATIONAL BALANCE OF PAYMENTS
(*EXTRACTED WITH RELATION TO INDICATORS ONLY*)

FROM IMF MANUAL



Source:

https://www.imf.org/external/pubs/ft/bopman/bopman.pdf

FINANCIAL ACCOUNT

B. LIABILITIES

2. *Portfolio investment*
   - 2.1 Equity securities
     - 2.1.1 Banks
     - 2.1.2 Other sectors
   - 2.2 Debt securities
     - 2.2.1 Bonds and notes
       - 2.2.1.1 Monetary authorities
       - 2.2.1.2 General government
       - 2.2.1.3 Banks
       - 2.2.1.4 Other sectors
     - 2.2.2 Money market instruments
       - 2.2.2.1 Monetary authorities
       - 2.2.2.2 General government
       - 2.2.2.3 Banks
       - 2.2.2.4 Other sectors
     - 2.2.3 Financial derivatives
       - 2.2.3.1 Monetary authorities
       - 2.2.3.2 General government
       - 2.2.3.3 Banks
       - 2.2.3.4 Other sectors

FROM PUBLISHED BOP BY DOSM

Source: Department of Statistics Malaysia

- The reporting work at macro level will start with BOP. Input from BOP will be used in IIP.
- Both reports will be sent to IMF.

FINANCIAL ACCOUNT

1. *Direct investment*
   - *1.1 Assets*
   - *1.2 Liabilities*
2. *Portfolio investment*
   - *2.1 Assets*
   - *2.2 Liabilities*
3. *Financial derivatives*
4. *Other investment*
   - *4.1 Assets*
   - *4.2 Liabilities*

BALANCE OF PAYMENT METHODOLOGY: DOSM

Direct investment is a category of international investment that reflects the objective of a resident entity in one economy **obtaining a lasting interest in an enterprise resident in another economy.** The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. An **ownership of at least 10 per cent of the voting power** of the enterprise is evidence of such relationship.

Portfolio investment income comprises income transactions between residents and non-residents and is derived from holdings of shares, bonds, notes, and money market instruments.

Portfolio investment involves international transactions in equity securities (e.g. shares) and debt securities (e.g. bonds and notes, sukuk and money market instruments), apart from those included in direct investment and reserve assets.

DATA SOURCES

The source of data in compiling the Balance of Payments estimates are as follows:

(I) Primary sources:

- *Survey on International Trade in Services conducted by the Department;*
- *DOSM-BNM Joint Survey on International Investment Position; and*
- *Survey on Expenditure of Malaysian Residents at Border Town conducted by the Department.*

(II) Secondary sources:

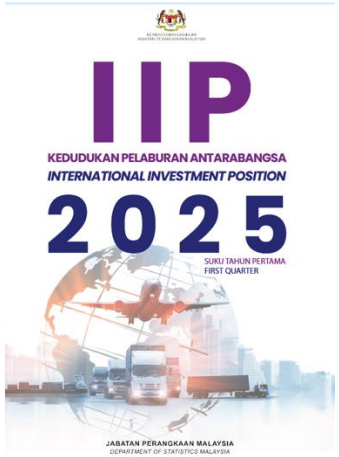
- *Tourism statistics compiled by the Malaysia Tourism Promotion Board, using data emanating from its Departing Visitors' Survey with supplementary data from the Immigration Department;*
- *BNM's International Transactions Information System (ITIS); and*
- *Administrative records of the public and private sectors - public sector refers to administrative record of other government agencies, Accountant-General's Office, Royal Malaysian Customs Department, Ministry of Defence, Ministry of Foreign Affairs and etc. are used.*

DATA RELEASE AND REVISION PRACTICE

The practice adopted by DOSM for preliminary data release and revisions are:

- *Revision data for the previous year will be published in the first quarter of the current year; and*

INTERNATIONAL INVESTMENT POSITION METHODOLOGY: DOSM



This publication provides quarterly International Investment Position (IIP) statistics that **measures the stock** of Malaysia's external financial assets and liabilities with the rest of the world. The compilation is in accordance with the methodology set forth in the Balance of Payments Manual and International Investment Position Sixth Edition (BPM6).

This statistics portray Malaysia's investment abroad (assets) and foreign investment in Malaysia (liabilities). The difference between the assets and liabilities reflects Malaysia's net IIP.

DATA SOURCES	*IIP are compiled from several sources:*
Primary source	*Survey on International Investment Position, IIP (joint effort between DOSM and BNM).*
Secondary source	*Data on reserve assets are provided by BNM.*

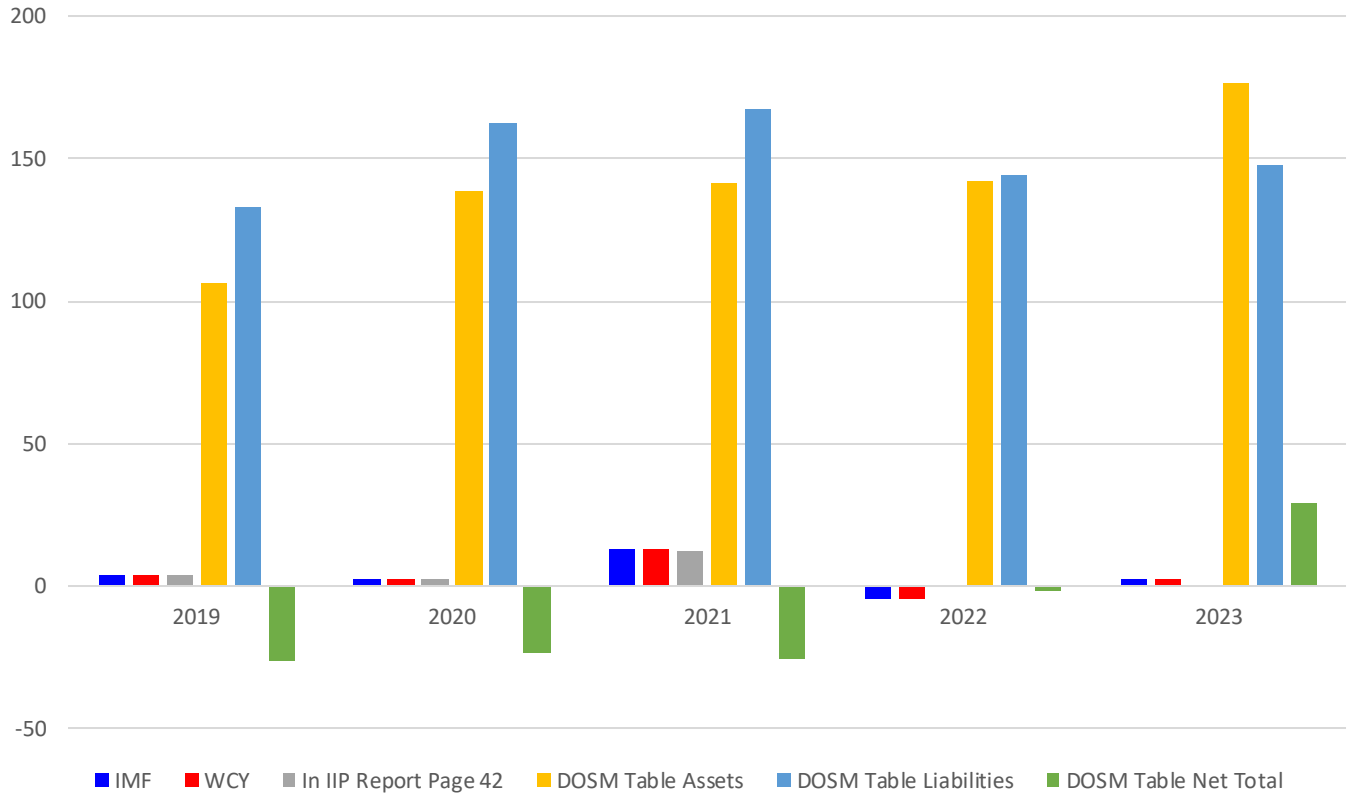
Portfolio Investment

Portfolio investment involves international transactions in equity securities (e.g. shares) and debt securities (e.g. bonds and notes, sukuk and money market instruments), apart from those included in direct investment and reserve assets.

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

Comparative Measurement Assessment of Indicator

Portfolio Investment Liabilities, 2019 - 2023 (USD Bn)



Source: IMF (selected in USD bn), WCY and Department of Statistics Malaysia

Based on data extracted from the IIP 2025 Report, Portfolio Investment Liabilities are almost similar as reported in IMF International Financial Statistics and WCY.

However, the data from excel files indicate different data.

Data from IIP 2025 Report

	2016	2017	2018	2019	2020	2021
2. Pelaburan portfolio	-14,203	-15,358	-49,396	-32,403	-49,584	18,802
2.1 Aset	-15,009	-19,442	-11,984	-46,919	-60,695	-35,788
2.2 Liabiliti	806	4,084	-37,411	14,517	11,110	54,590

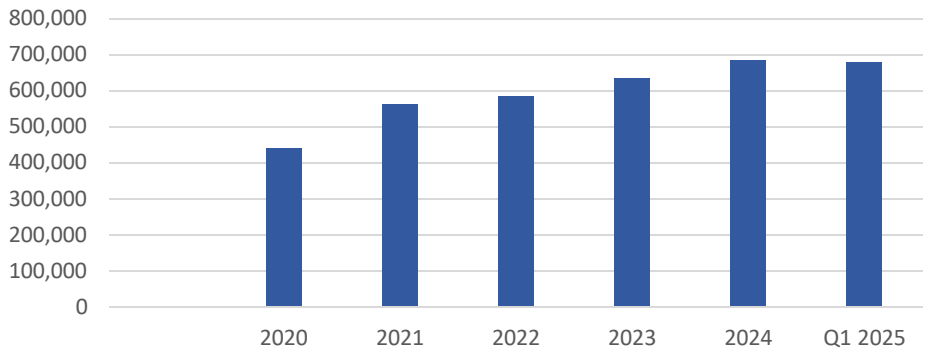
Data from excel in eStatistic for IIP 2025 Report

Jadual 6: Kedudukan Pelaburan Langsung, 2020- 2022 (RM Juta)

Komponen/ Suku Tahun	Q120	Q220	Q320	Q420	Q121	Q221
LIABILITI	1,803,870	1,850,411	1,808,681	1,823,104	1,920,492	1,914,175
2. Pelaburan Portfolio	550,612	605,299	607,863	631,599	643,658	673,552
2.1 Ekuiti & dana pelaburan saham	195,706	219,026	220,335	234,233	225,974	225,532
2.2 Sekuriti hutang	354,906	386,273	387,527	397,365	417,684	448,020

Since data cannot be determined at this stage, to discuss with DOSM and BNM, which data was used to measure this indicator

Portfolio Investment Liabilities 2023 - Q1 2025 (RM Million)

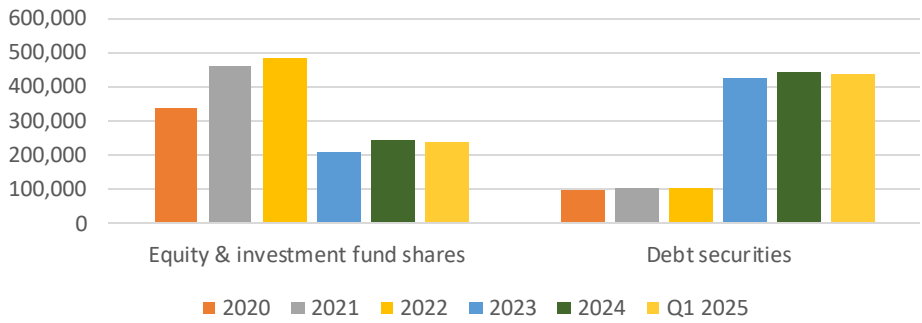


Malaysia's portfolio investment liabilities have grown steadily from 2020 to Q1 2025, reaching around RM680 billion in early 2025. This marks a strong recovery from pandemic-era levels and reflects sustained foreign investor interest in Malaysian financial assets. The breakdown shows a shift in composition:

- While equity holdings increased significantly up to 2022, debt securities have become the dominant component from 2023 onward.
- This indicates a growing preference among foreign investors for Malaysian bonds, likely driven by interest rate trends and demand for more stable returns.

The data suggests Malaysia is benefiting from consistent portfolio inflows, but the changing composition also highlights exposure to global financial conditions.

Portfolio Investment Liabilities by types 2023 - Q1 2025 (RM Million)

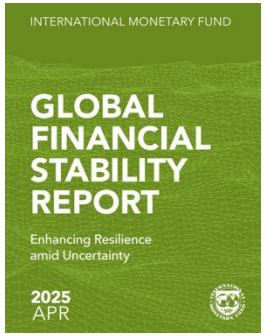


Investor's shift in portfolio investment can be seen significantly towards debt securities. The shift from equity to debt securities in Malaysia's portfolio investment liabilities suggests that foreign investors are becoming more risk-averse, favouring stable, fixed-income returns amid global interest rate hikes and market uncertainties.

This trend reflects confidence in Malaysia's bond market and macroeconomic stability but also signals reduced appetite for higher-risk, long-term equity investments. While this supports debt market development, it raises concerns over potential capital flight if global rates change and highlights the need to reinvigorate equity market appeal to ensure balanced, resilient capital inflows.

INDICATOR 1.3.15: Portfolio Investment Liabilities ($Bn)

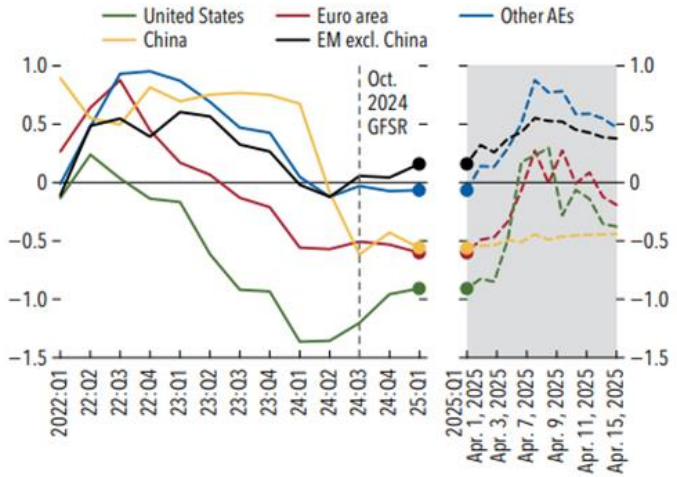
CURRENT SITUATION AND CHALLENGES AHEAD



Global Financial Stability Report assesses that global financial stability risks have increased significantly, primarily due to the tightening of global financial conditions

Financial Conditions Index

(Number of standard deviations over long-term averages)



Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Note: The IMF FCI is designed to capture the pricing of risk. It incorporates various pricing indicators, including real house prices. Balance sheet or credit growth metrics are not included. For details, see Online Annex 1.1 in the October 2018 *Global Financial Stability Report*. The shaded area on the right side shows the daily FCIs starting April 1, 2025. These daily FCIs are approximate values estimated using the available high-frequency market data, while the long-term standard deviations and averages are calculated over 1990:Q1 and 2025:Q1. GFSR = *Global Financial Stability Report*; AEs = advanced economies; EM = emerging markets; excl. = excluding.

Heightened Global Uncertainty Is Pressuring Portfolio Investment

Ongoing geopolitical tensions, trade policy shifts (especially recent US tariffs), and elevated economic uncertainty have significantly raised financial volatility. These conditions are leading to investor caution and reevaluation of asset allocations, including within portfolio investment markets. The increased unpredictability limits risk appetite, particularly in emerging markets where vulnerabilities are higher.

Turbulence in Sovereign Bond Markets Could Undermine Investor Confidence

Governments, particularly in advanced and emerging markets with high debt, face refinancing challenges amid rising yields and liquidity constraints. This sovereign risk can affect investor sentiment in bond markets and impact portfolio flows. Investors may demand higher premiums, or reallocate funds to safer assets, impacting debt portfolios globally

Emerging Markets Face Heightened Capital Outflow Risks

Emerging markets, already burdened with the highest real financing costs in over a decade, are now more vulnerable to portfolio outflows. As carry-trade opportunities diminish and growth prospects weaken, portfolio investors may retreat from these markets, further destabilizing local financial systems and currencies.

THANK YOU

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HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: TECHNOLOGICAL INFRASTRUCTURE

INDICATOR 4.2.01
INVESTMENT IN TELECOMMUNICATIONS

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.2.01: Investment in Telecommunications (% of GDP)

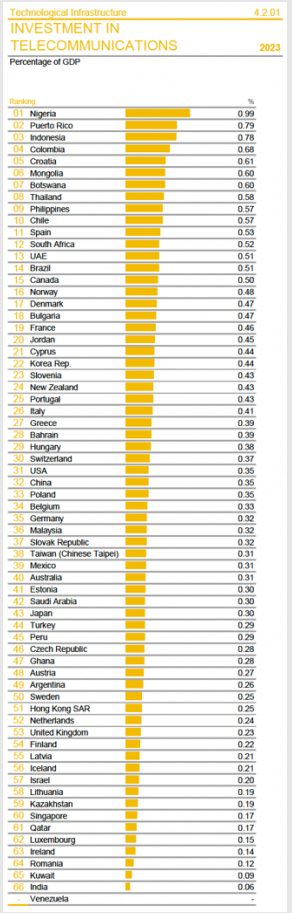
INDICATOR DEFINITION

Investment refers to as the annual capital expenditure; this is the gross annual investment in telecom (including fixed, mobile and other services) for acquiring property and network. The term investment means the expenditure associated with acquiring the ownership of property (including intellectual and non-tangible property such as computer software) and plant. This includes expenditure on initial installations and on additions to existing installations where the usage is expected to be over an extended period of time. Note that this applies to telecom services that are available to the public, and exclude investment in telecom software or equipment for private use

DATA SOURCE FROM WCY

Euromonitor International

WHAT DOES THE SCORE INDICATE?



Technological Infrastructure 4.2.01

INVESTMENT IN TELECOMMUNICATIONS 2023

Percentage of GDP

Ranking		%
01	Nigeria	0.99
02	Puerto Rico	0.79
03	Indonesia	0.78
04	Colombia	0.68
05	Croatia	0.61
06	Mongolia	0.60
07	Botswana	0.60
08	Thailand	0.58
09	Philippines	0.57
10	Chile	0.57
11	Spain	0.53
12	South Africa	0.52
13	UAE	0.51
14	Brazil	0.51
15	Canada	0.50
16	Norway	0.48
17	Denmark	0.47
18	Bulgaria	0.47
19	France	0.46
20	Jordan	0.45
21	Cyprus	0.44
22	Korea Rep.	0.44
23	Slovenia	0.43
24	New Zealand	0.43
25	Portugal	0.43
26	Italy	0.41
27	Greece	0.39
28	Bahrain	0.39
29	Hungary	0.38
30	Switzerland	0.37
31	USA	0.35
32	China	0.35
33	Poland	0.35
34	Belgium	0.33
35	Germany	0.32
36	Malaysia	0.32
37	Slovak Republic	0.32
38	Taiwan (Chinese Taipei)	0.31
39	Mexico	0.31
40	Australia	0.31
41	Estonia	0.30
42	Saudi Arabia	0.30
43	Japan	0.30
44	Turkey	0.29
45	Peru	0.29
46	Czech Republic	0.28
47	Ghana	0.28
48	Austria	0.27
49	Argentina	0.26
50	Sweden	0.25
51	Hong Kong SAR	0.25
52	Netherlands	0.24
53	United Kingdom	0.23
54	Finland	0.22
55	Latvia	0.21
56	Iceland	0.21
57	Israel	0.20
58	Lithuania	0.19
59	Kazakhstan	0.19
60	Singapore	0.17
61	Qatar	0.17
62	Luxembourg	0.15
63	Ireland	0.14
64	Romania	0.12
65	Kuwait	0.09
66	India	0.06
-	Venezuela	-

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2025*

RATIONALITY?

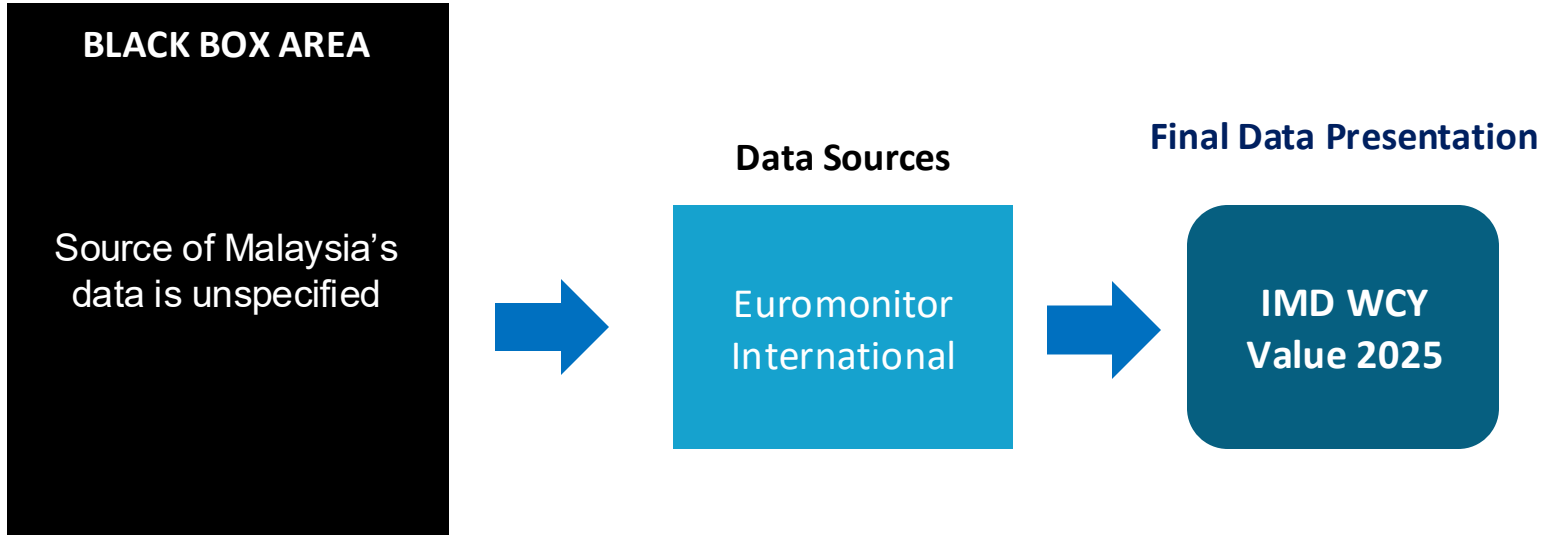
This indicator measures the scale of investment in the telecommunications sector relative to the overall economy. It reflects both public and private capital expenditures aimed at expanding or upgrading telecom infrastructure, such as broadband networks, mobile towers, and digital communication systems.

A higher score (i.e., a larger share of GDP) suggests that a country is prioritizing telecommunications development, which may lead to:

- *Broader digital connectivity*
- *Improved digital infrastructure quality*
- *Greater readiness for digital transformation and inclusive access*

DATA SOURCE FROM WCY

Euromonitor International

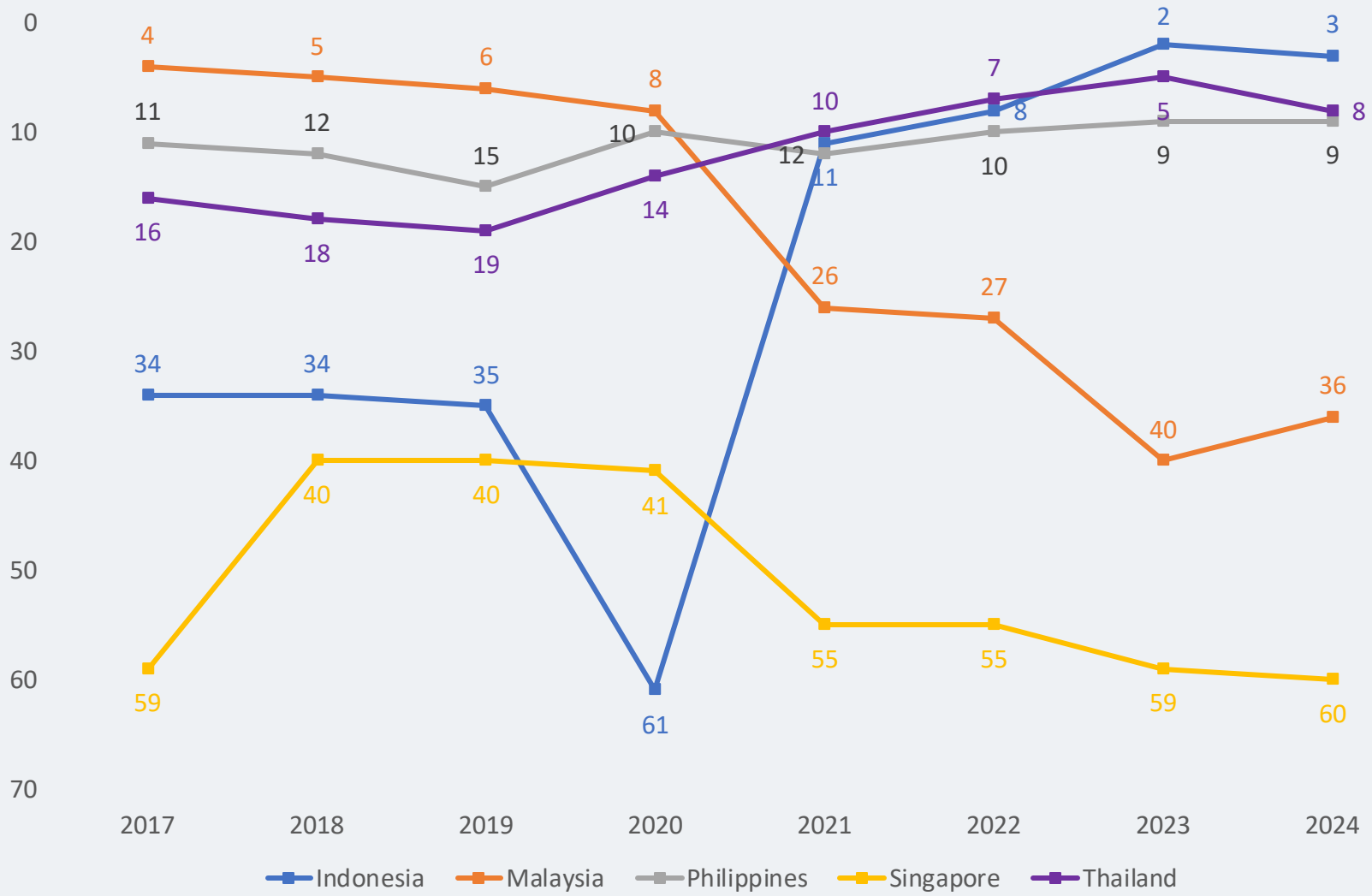


Calculation:

$$\left(\frac{Annual\ Capital\ Expenditure}{Gross\ Domestic\ Product\ Current\ Price}\right) X\ 100$$

INDICATOR 4.2.01: Investment in Telecommunications (% of GDP)

Where are Malaysia now? Indicators ranking among ASEAN countries



Singapore's lower ranking in this indicator does not reflect weak performance, but rather its status as a digitally advanced and infrastructure-mature economy. Having already established a robust telecommunications ecosystem, Singapore's relative investment as a percentage of GDP is naturally lower due to diminishing marginal infrastructure needs. In other words, high digital readiness results in less need for ongoing heavy capital investments.

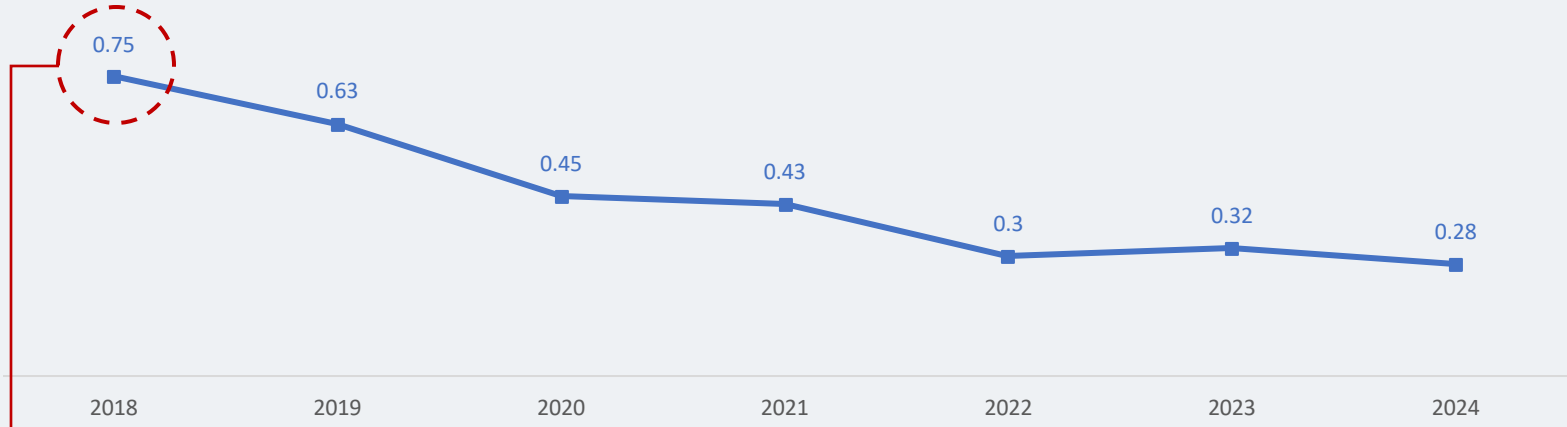
Higher rankings in countries like Indonesia, Thailand, and the Philippines reflect their aggressive push in recent years to expand digital connectivity and close infrastructure gaps. These countries are still scaling their telecommunications systems, leading to higher investment-to-GDP ratios. This dynamic positions them as rapidly improving economies in terms of digital infrastructure readiness.

Source: IMD (2024)

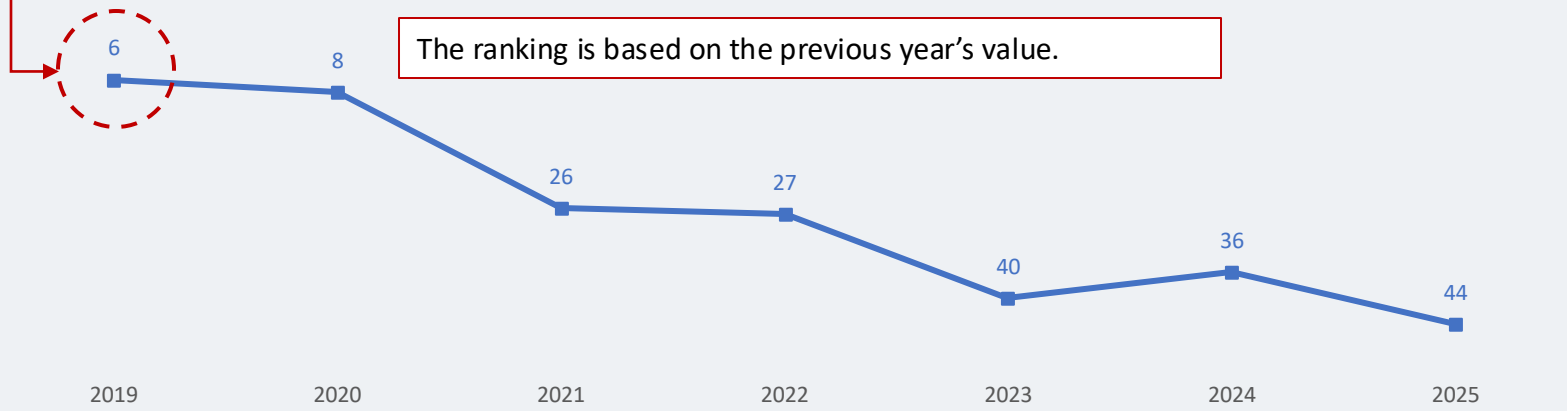
INDICATOR 4.2.01: Investment in Telecommunications (% of GDP)

How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**



The ranking is based on the previous year's value.

Between 2018 and 2024, Malaysia's investment in telecommunications (% of GDP) declined from 0.75% to 0.28%, reflecting a substantial drop in relative spending on digital infrastructure. This has translated into a steady decline in Malaysia's global ranking—from 6th in 2019 to 44th in 2025—signaling a widening gap between Malaysia and regional peers in terms of proportional investment.

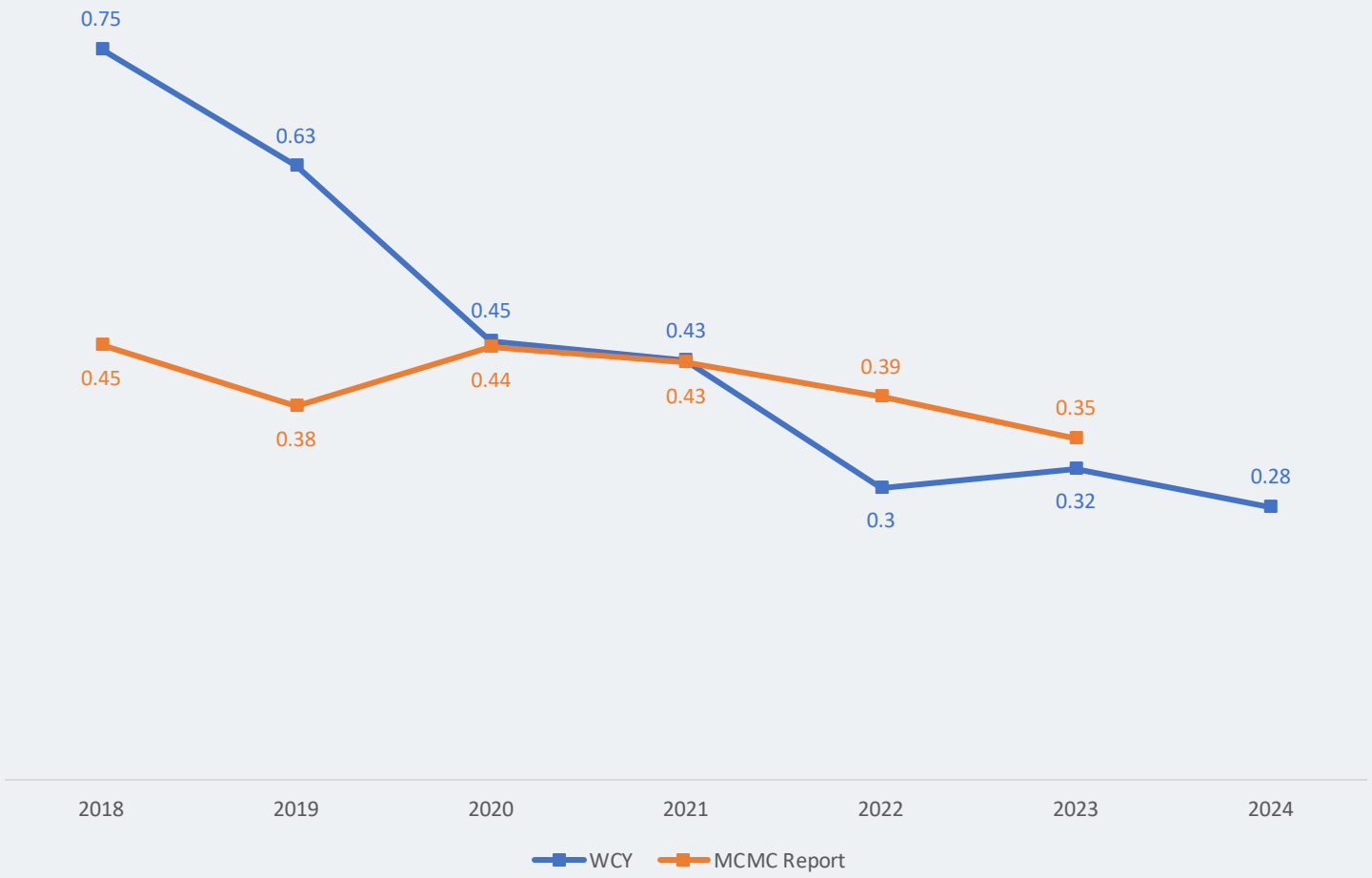
Nevertheless, Malaysia's declining share should not be misinterpreted as stagnation. The country has made notable progress, particularly through the rollout of 5G and the implementation of targeted digital economy initiatives. Rather than high capital intensity, Malaysia appears to be adopting a more efficient, outcome-focused strategy. This includes upgrading high-impact areas, expanding fibre access, and bridging rural digital divides. Going forward, ensuring sustained, inclusive, and future-ready investment will be critical to strengthen Malaysia's digital infrastructure and support its broader transformation goals.

Source: IMD (2019 – 2025)

INDICATOR 4.2.01: Investment in Telecommunications (% of GDP)

Comparative Measurement Assessment of Indicator

Comparison of Investment in Telecommunications (% of GDP), 2019–2023



Source: IMD World Competitiveness Yearbook 2019 - 2024, Industry Performance Report, Malaysian Communications and Multimedia Commission (MCMC), 2024.

The comparative measurement of telecommunications investment (as a percentage of GDP) reveals noticeable variation between the IMD World Competitiveness Yearbook (WCY) and national data published by the Malaysian Communications and Multimedia Commission (MCMC). While both sources show a declining trend from 2018 to 2023, WCY data—sourced from Euromonitor International—indicates a sharper drop compared to MCMC's more moderated figures, which are derived from Omdia.

This discrepancy highlights the importance of understanding the underlying data sources and methodologies. Differences in scope, estimation techniques, and definitions of capital investment in telecommunications infrastructure can lead to diverging outcomes. As global digital competitiveness increasingly relies on data transparency and comparability, harmonizing indicator definitions and enhancing alignment between national and international reporting frameworks will be critical to accurately positioning Malaysia's digital investment performance on the global stage.

THANK YOU

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HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: TECHNOLOGICAL INFRASTRUCTURE

INDICATOR 4.2.05
SECURE INTERNET SERVERS

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.2.05: Secure Internet Servers

INDICATOR DEFINITION

publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey.

DATA SOURCE FROM WCY

Netcraft and World Bank population estimates.

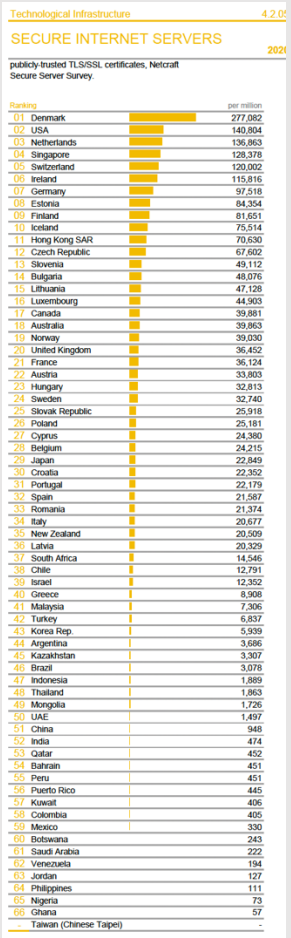
DEFINITION BY DATA SOURCES

The number of distinct, publicly-trusted TLS/SSL certificates found in the Netcraft Secure Server Survey.

Primary Source → **Estimation**

Secure Server Survey by Netcraft → **World Bank**

WHAT DOES THE SCORE INDICATE?



Technological Infrastructure 4.2.05

SECURE INTERNET SERVERS 2026

publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey.

Ranking		per million
01	Denmark	277,082
02	USA	140,804
03	Netherlands	136,863
04	Singapore	128,378
05	Switzerland	120,002
06	Ireland	115,816
07	Germany	97,518
08	Estonia	84,354
09	Finland	81,651
10	Iceland	75,514
11	Hong Kong SAR	70,630
12	Czech Republic	67,602
13	Slovenia	49,112
14	Bulgaria	48,076
15	Lithuania	47,128
16	Luxembourg	44,903
17	Canada	39,881
18	Australia	39,863
19	Norway	39,030
20	United Kingdom	36,452
21	France	36,124
22	Austria	33,803
23	Hungary	32,813
24	Sweden	32,740
25	Slovak Republic	25,918
26	Poland	25,181
27	Cyprus	24,380
28	Belgium	24,215
29	Japan	22,849
30	Croatia	22,352
31	Portugal	22,179
32	Spain	21,587
33	Romania	21,374
34	Italy	20,677
35	New Zealand	20,509
36	Latvia	20,329
37	South Africa	14,546
38	Chile	12,791
39	Israel	12,352
40	Greece	8,908
41	Malaysia	7,306
42	Turkey	6,837
43	Korea Rep.	5,939
44	Argentina	3,686
45	Kazakhstan	3,307
46	Brazil	3,078
47	Indonesia	1,889
48	Thailand	1,863
49	Mongolia	1,726
50	UAE	1,497
51	China	948
52	India	474
53	Qatar	452
54	Bahrain	451
55	Peru	451
56	Puerto Rico	445
57	Kuwait	406
58	Colombia	405
59	Mexico	330
60	Botswana	243
61	Saudi Arabia	222
62	Venezuela	194
63	Jordan	127
64	Philippines	111
65	Nigeria	73
66	Ghana	57
-	Taiwan (Chinese Taipei)	-

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

This indicator reflects the number of secure internet servers per 1 million people in a country. Secure servers use encryption protocols (e.g., HTTPS via SSL/TLS certificates) to protect data exchanged online, ensuring privacy, security, and trust in digital transactions.

A higher score indicates:

- *Broader adoption of secure digital infrastructure*
- *Increased use of encrypted communication across websites, businesses, and public platforms*
- *A stronger foundation for safe e-commerce, online services, and digital governance*

This serves as a proxy for a country's cybersecurity maturity, digital trust environment, and overall readiness for the digital economy.

INDICATOR 4.2.05: Secure Internet Servers

Methodology of Secure Internet Servers

Netcraft Secure Server Survey

Unlike traditional surveys involving respondent input, the survey conducts a monthly automated scan of the global internet to identify and count websites that deploy secure technologies such as HTTPS to ensure encrypted and safe online communication.

How it works

Scan the Internet

Netcraft systematically scans websites around the world to detect those using HTTPS—a secure version of the internet that protects user information. It looks at millions of websites to identify which ones use security certificates (called SSL/TLS certificates).

Validating Secure Servers

Only websites that meet strict criteria are counted:

1. The certificate must be valid and active (not expired).
2. It must be issued by a trusted authority (not self-signed or private).
3. It must match the website's name (no misconfigurations).

Deduplication and Accuracy Controls

Duplicate certificates (e.g., used across many domains or servers) are filtered out to ensure only unique secure servers are counted

Assigning to Countries

Each secure server is then linked to a country by analyzing its:

1. Internet address (IP)
2. Web domain
3. Location of the hosting infrastructure

Number of Secure Internet Servers by Country

World Bank

Indicator Calculation

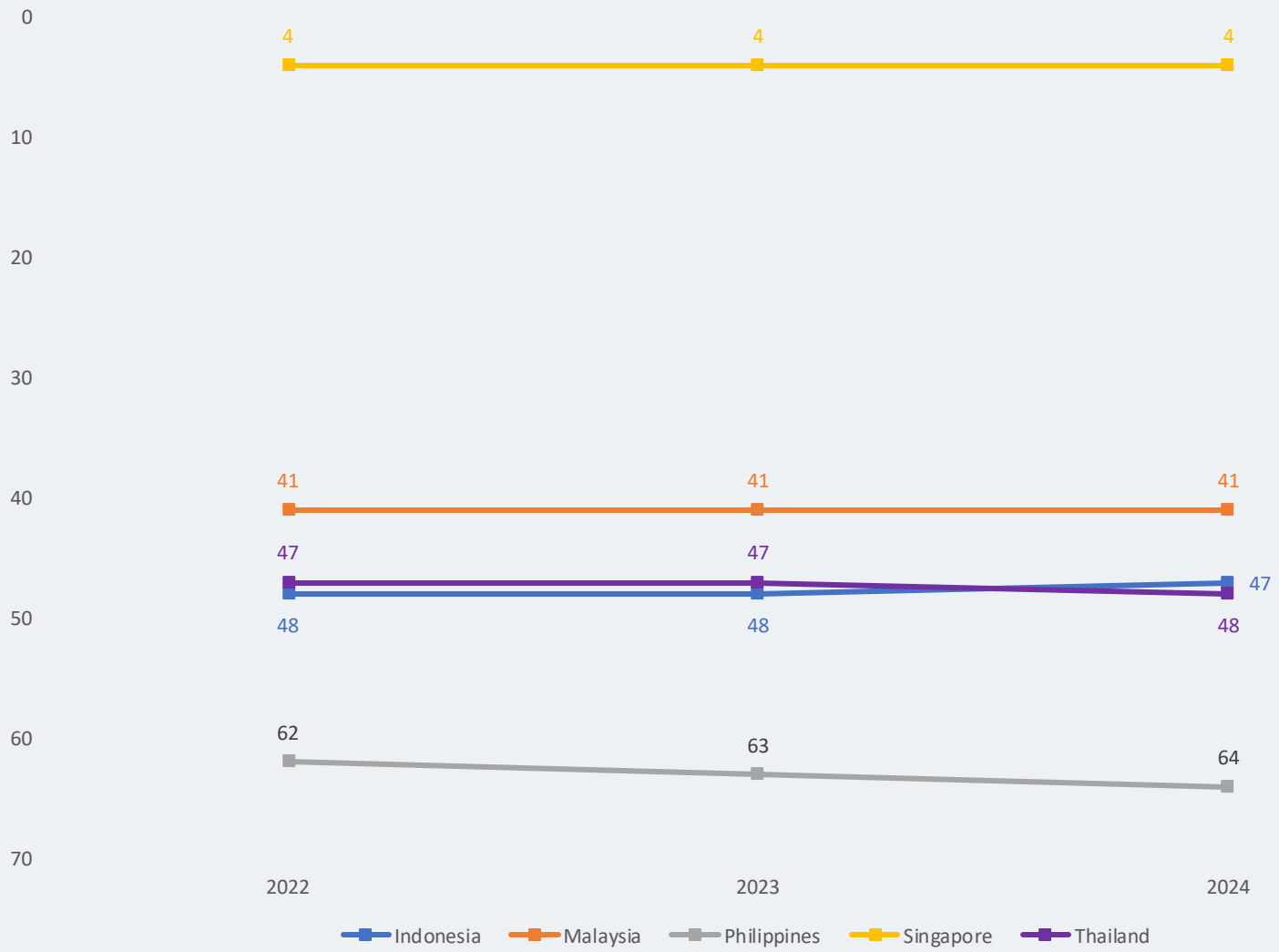
Secure Internet Servers =

$$\left(\frac{Number\ of\ Valid\ Secure\ Servers}{Population}\right) X\ 1{,}000{,}000$$

- 4.2.05: Secure Internet Servers

INDICATOR 4.2.05: Secure Internet Servers

Where are Malaysia now? Indicators ranking among ASEAN countries



From 2022 to 2024, Singapore consistently held the top position in ASEAN for Secure Internet Servers, maintaining a global rank of 4th. Malaysia remained stable at 41st globally and 2nd in the region, reflecting no recorded progress during this period due to unchanged source data.

While this signals a steady standing, it also suggests a potential stagnation in digital infrastructure development, underscoring the need for renewed efforts to enhance secure server deployment and stay competitive in the digital economy.

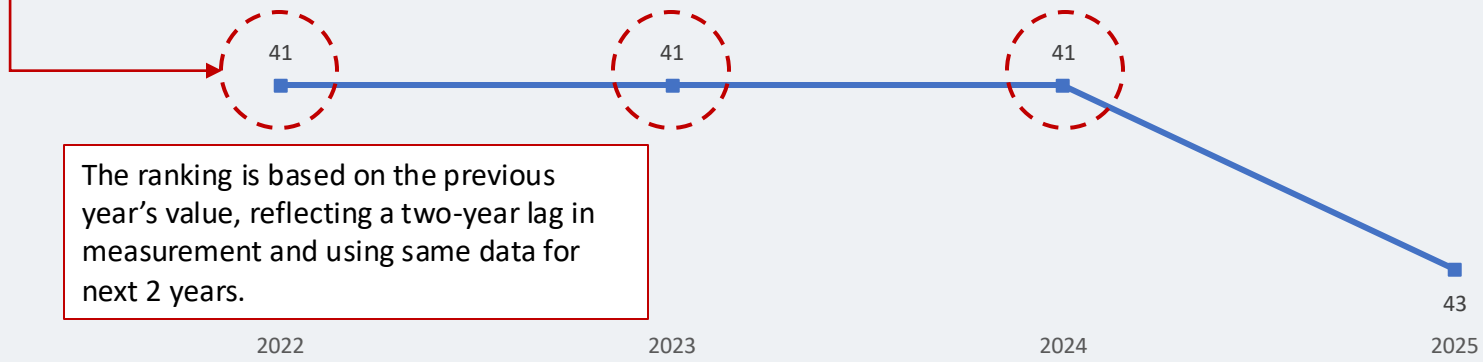
Source: IMD (2024)

INDICATOR 4.2.05: Secure Internet Servers

How do the indicators perform across years?

Indicator **Value**

Indicator **Rank**



The ranking is based on the previous year's value, reflecting a two-year lag in measurement and using same data for next 2 years.

Malaysia's Secure Internet Servers indicator saw an upward trend in value, rising from 7,306 in 2020 to 8,083 in 2022—signaling continued investment in digital trust infrastructure. However, despite the positive trajectory in value, Malaysia's global rank remained static at 41st from 2022 to 2024 due to the WCY's methodology, which applies a two-year lag in reporting.

The rank only adjusted in 2025 based on the 2022 value, slipping slightly to 43rd, indicating that while Malaysia made progress, other economies advanced at a faster pace. This highlights the importance of accelerating cybersecurity initiatives and digital infrastructure enhancement to remain competitive in a rapidly evolving digital landscape. Strategic focus on secure data environments, digital trust, and broader adoption of encrypted technologies could improve future rankings.

Source: IMD (2024)

THANK YOU

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HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: TECHNOLOGICAL INFRASTRUCTURE

INDICATOR 4.2.07
BROADBAND SUBSCRIBERS

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

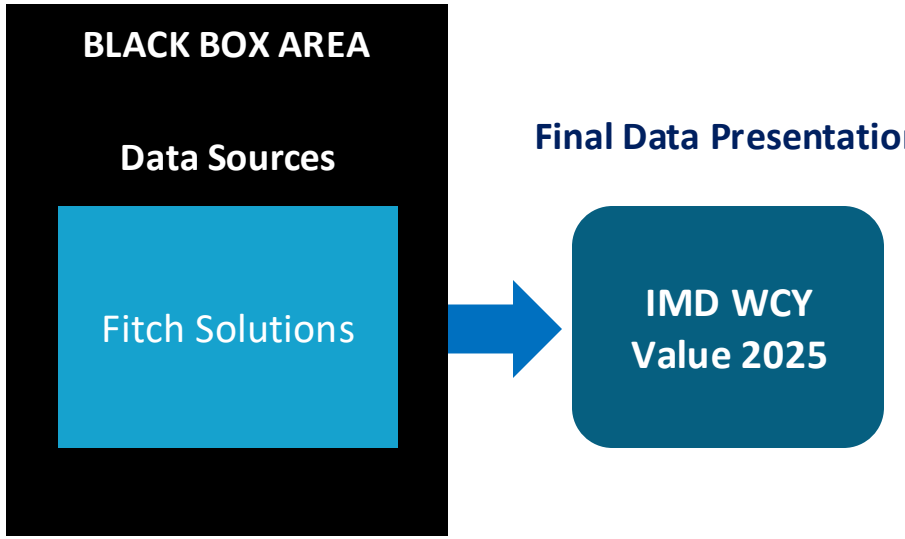
INDICATOR 4.2.07: Broadband Subscribers

INDICATOR DEFINITION

Total number of dedicated internet connections with download speeds higher than 256kbps. Includes both fixed and mobile connections (dedicated mobile data connections on data SIMs, USB dongles and M2M connections, but excluding smartphone-based voice and data 3G/4G connections). Per 1'000 inhabitants.

DATA SOURCE FROM WCY

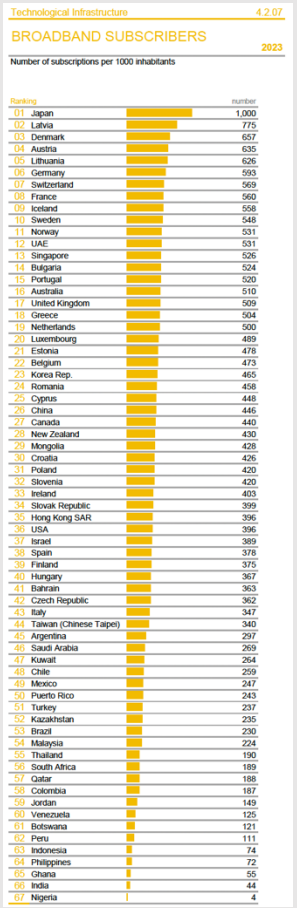
Fitch Solutions



Calculation:

$$\left(\frac{Number\ of\ Broadband\ Subscribers}{Population}\right) X\ 1{,}000{,}000$$

WHAT DOES THE SCORE INDICATE?



Technological Infrastructure 4.2.07

BROADBAND SUBSCRIBERS 2023

Number of subscriptions per 1000 inhabitants

Ranking		number
01	Japan	1,000
02	Latvia	775
03	Denmark	657
04	Austria	635
05	Lithuania	626
06	Germany	593
07	Switzerland	569
08	France	560
09	Iceland	558
10	Sweden	548
11	Norway	531
12	UAE	531
13	Singapore	526
14	Bulgaria	524
15	Portugal	520
16	Australia	510
17	United Kingdom	509
18	Greece	504
19	Netherlands	500
20	Luxembourg	489
21	Estonia	478
22	Belgium	473
23	Korea Rep.	465
24	Romania	458
25	Cyprus	448
26	China	446
27	Canada	440
28	New Zealand	430
29	Mongolia	428
30	Croatia	426
31	Poland	420
32	Slovenia	420
33	Ireland	403
34	Slovak Republic	399
35	Hong Kong SAR	396
36	USA	396
37	Israel	389
38	Spain	378
39	Finland	375
40	Hungary	367
41	Bahrain	363
42	Czech Republic	362
43	Italy	347
44	Taiwan (Chinese Taipei)	340
45	Argentina	297
46	Saudi Arabia	269
47	Kuwait	264
48	Chile	259
49	Mexico	247
50	Puerto Rico	243
51	Turkey	237
52	Kazakhstan	235
53	Brazil	230
54	Malaysia	224
55	Thailand	190
56	South Africa	189
57	Qatar	188
58	Colombia	187
59	Jordan	149
60	Venezuela	125
61	Botswana	121
62	Peru	111
63	Indonesia	74
64	Philippines	72
65	Ghana	55
66	India	44
67	Nigeria	4

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

his indicator measures the number of fixed and/or mobile broadband subscribers per 100 inhabitants, capturing the reach and accessibility of high-speed internet in a country.

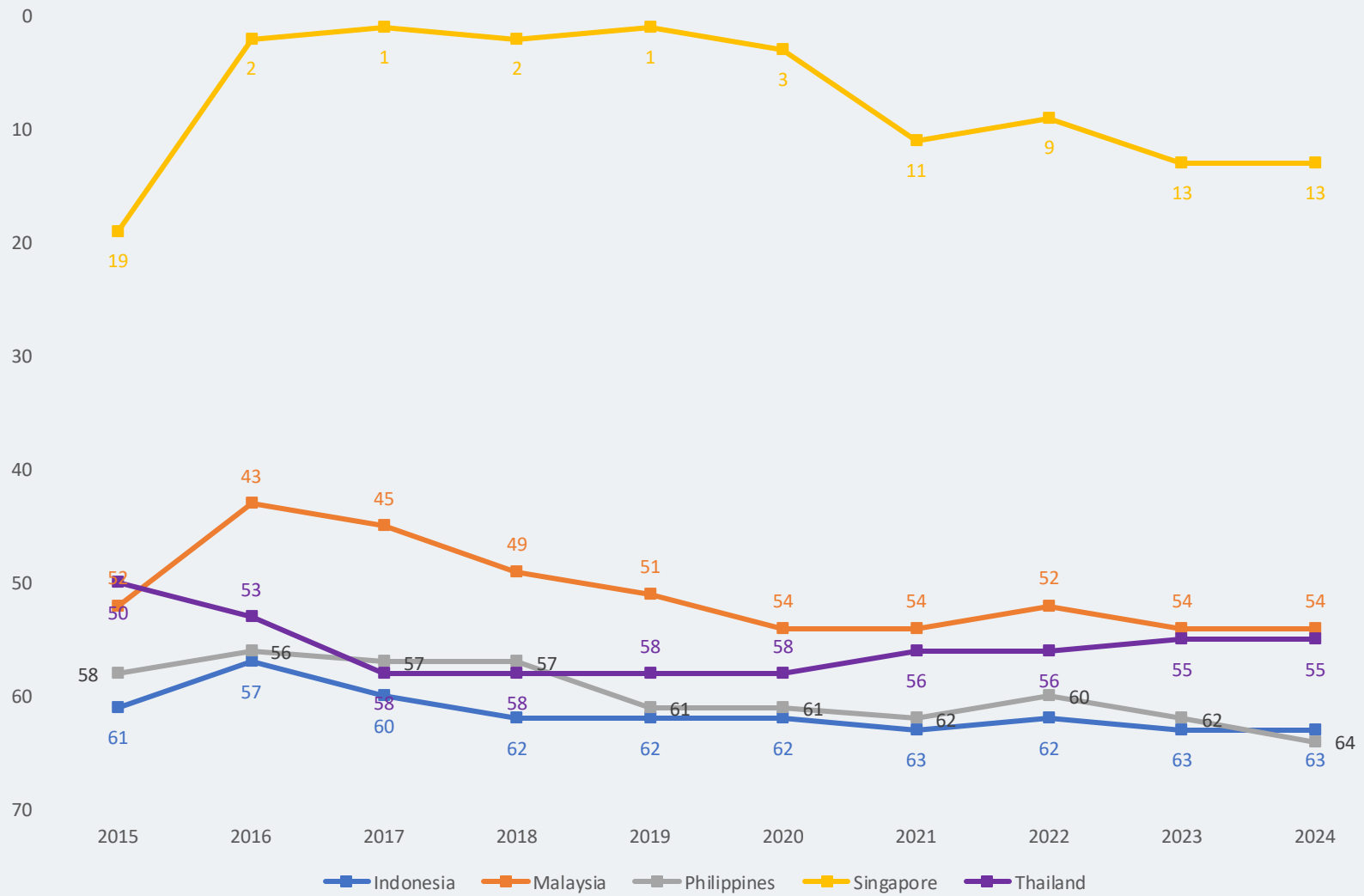
A higher score reflects:

- *Greater digital connectivity among the population*
- *Wider access to online services, including education, e-commerce, and digital government*
- *Stronger potential for inclusive digital participation and economic transformation*

Broadband subscription rates are commonly used as a proxy for digital infrastructure penetration and the population's ability to engage meaningfully in the digital economy.

INDICATOR 4.2.07: Broadband Subscribers

Where are Malaysia now? Indicators ranking among ASEAN countries



From 2015 to 2024, Singapore consistently outperformed other ASEAN countries in broadband subscriptions, maintaining a strong position within the global top 15. This reflects its mature digital infrastructure and high internet penetration. Malaysia, while remaining the second-highest ranked in the region, saw its global position peak at 43rd in 2016 before declining and stabilizing at 54th from 2021 to 2024.

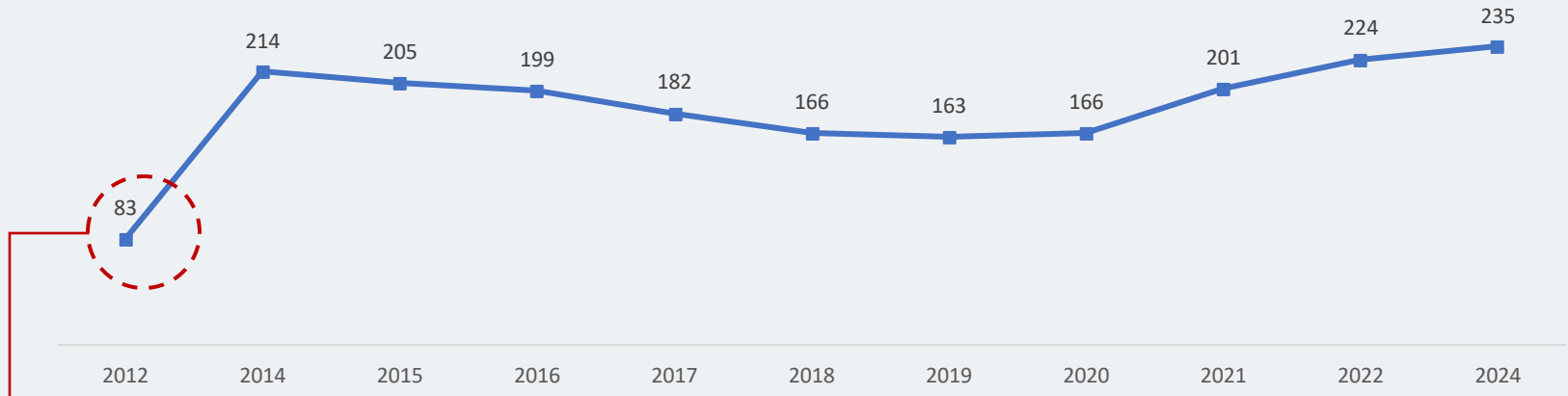
This trend indicates a relative loss of momentum in broadband expansion compared to global peers. While regional standing remains stable, Malaysia may need to accelerate investments in high-speed connectivity and ensure broader accessibility, especially in underserved areas, to maintain competitiveness and support the digital economy agenda.

Source: IMD (2024)

INDICATOR 4.2.07: Broadband Subscribers

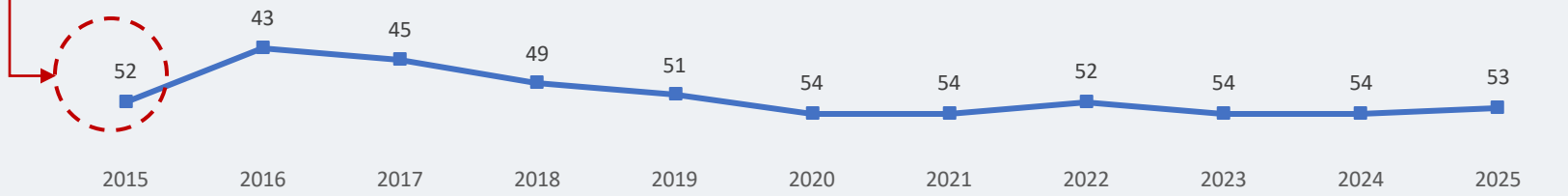
How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**

The ranking is based on the previous year's value, reflecting a two-year lag in measurement.



Malaysia's broadband subscribers per 1,000 inhabitants have shown a positive long-term trajectory, rising significantly from 83 in 2012 to 235 in 2023, reflecting continued progress in digital connectivity and internet accessibility. However, this improvement in absolute value has not translated into substantial gains in global ranking, which shifted only marginally from 52nd in 2015 to 53rd in 2025. The ranking trend also reflects a two-year lag in measurement, whereby gains in broadband adoption are only reflected in subsequent WCY cycles.

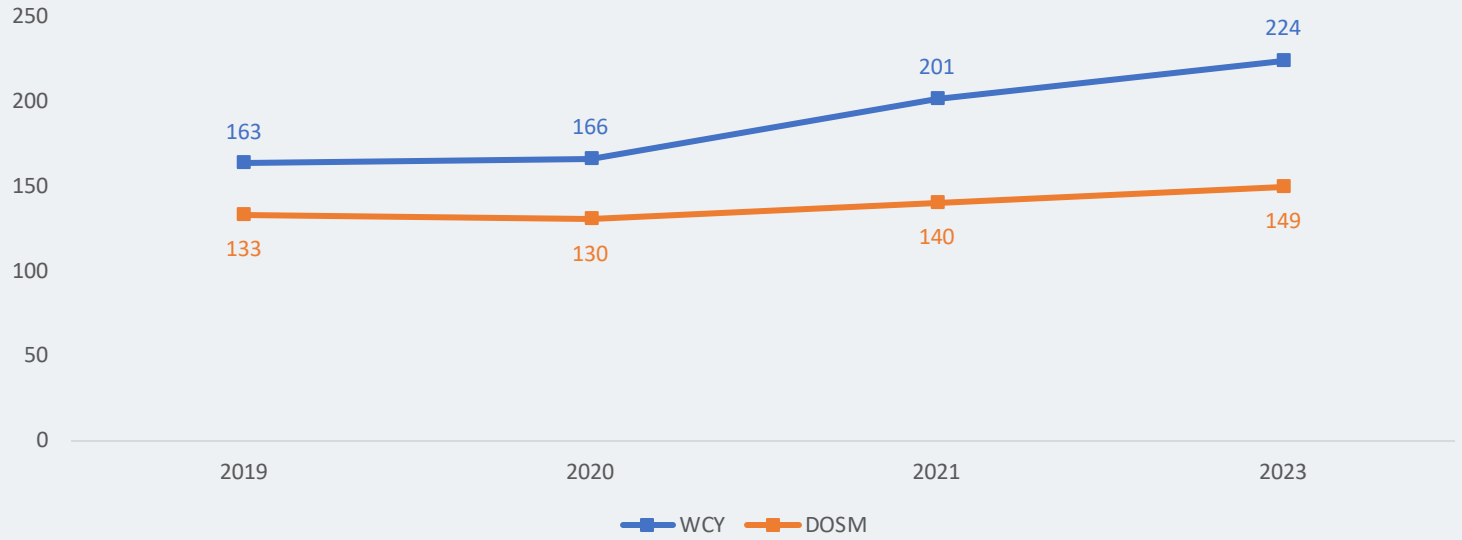
This suggests that while domestic efforts have expanded broadband access, the pace of improvement remains modest relative to global peers. As other countries rapidly scale their digital infrastructure, Malaysia must intensify efforts in broadband quality, speed, and affordability to remain competitive and to support broader digital transformation goals under initiatives like JENDELA and Malaysia MADANI.

Source: IMD (2024)

INDICATOR 4.2.07: Broadband Subscribers

Comparative Measurement Assessment of Indicator

Comparison of Broadband Subscribers (% per 1000 population, 2019–2023)



Source: IMD World Competitiveness Yearbook 2024, Department of Statistics Malaysia (DOSM).

The comparative measurement of broadband subscribers highlights noticeable discrepancies between the data reported in the IMD World Competitiveness Yearbook (WCY) and official national statistics from DOSM. While both sources reflect a positive trend in broadband penetration between 2019 and 2023, the WCY data consistently shows higher values due to its broader inclusion of cable, FTTx, xDSL, and other fixed broadband types as reported by Fitch Solutions. In contrast, DOSM's figures primarily focus on fixed and mobile broadband, resulting in lower aggregated values.

Breakdown indicator from **Fitch Solution**

1. **Cable broadband subscriptions**
2. **FTTx broadband subscriptions**
3. **Fixed broadband subscriptions**
4. **Other fixed broadband subscriptions**
5. **xDSL broadband subscriptions**
6. **Total broadband subscriptions**

Breakdown from **DOSM**

To access the data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. Search for Malaysia Digital Economu
5. Click "**Search**"
6. Find "**Final External Trade Statistics Malaysia**"
7. Download the excel file.
8. Go to "**Table D4.3**"

1. **Fixed broadband**
2. **Mobile broadband**

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: TECHNOLOGICAL INFRASTRUCTURE

INDICATOR 4.2.08
INTERNET BANDWITH SPEED

24 – 25 JUNE 2025 | HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.2.08: Internet Bandwidth Speed

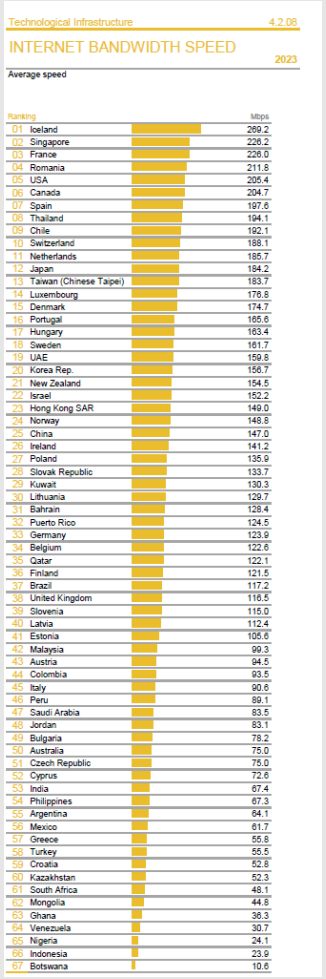
INDICATOR DEFINITION

Internet bandwidth speed is the measurement of the rate at which data is transferred over an internet connection. It is essential for assessing the quality of the internet experience, impacting everything from loading websites to streaming high-definition videos. The speed is usually measured in Mbps or Gbps, with download speed being the most commonly referenced metric for general internet use.

DATA SOURCE FROM WCY

Values presented are an average compiled from three different sources:
i) M-Labs / cable.co.uk
ii) Ookla /Speedtest
iii) Bandwith Place

WHAT DOES THE SCORE INDICATE?



Technological Infrastructure 4.2.08

INTERNET BANDWIDTH SPEED 2023

Average speed

Ranking		Mbps
01	Iceland	289.2
02	Singapore	226.2
03	France	226.0
04	Romania	211.8
05	USA	205.4
06	Canada	204.7
07	Spain	197.6
08	Thailand	194.1
09	Chile	192.1
10	Switzerland	188.1
11	Netherlands	185.7
12	Japan	184.2
13	Taiwan (Chinese Taipei)	183.7
14	Luxembourg	176.8
15	Denmark	174.7
16	Portugal	165.6
17	Hungary	163.4
18	Sweden	161.7
19	UAE	159.8
20	Korea Rep.	156.7
21	New Zealand	154.5
22	Israel	152.2
23	Hong Kong SAR	149.0
24	Norway	148.8
25	China	147.0
26	Ireland	141.2
27	Poland	135.9
28	Slovak Republic	133.7
29	Kuwait	130.3
30	Lithuania	129.7
31	Bahrain	128.4
32	Puerto Rico	124.5
33	Germany	123.9
34	Belgium	122.6
35	Qatar	122.1
36	Finland	121.5
37	Brazil	117.2
38	United Kingdom	116.5
39	Slovenia	115.0
40	Latvia	112.4
41	Estonia	105.6
42	Malaysia	99.3
43	Austria	94.5
44	Colombia	93.5
45	Italy	90.6
46	Peru	89.1
47	Saudi Arabia	83.5
48	Jordan	83.1
49	Bulgaria	78.2
50	Australia	75.0
51	Czech Republic	75.0
52	Cyprus	72.6
53	India	67.4
54	Philippines	67.3
55	Argentina	64.1
56	Mexico	61.7
57	Greece	55.8
58	Turkey	55.5
59	Croatia	52.8
60	Kazakhstan	52.3
61	South Africa	48.1
62	Mongolia	44.8
63	Ghana	36.3
64	Venezuela	30.7
65	Nigeria	24.1
66	Indonesia	23.9
67	Botswana	10.6

The higher the value, the higher the ranking.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

A country's technological infrastructure and economic competitiveness. This approach assumes that faster broadband speeds, as measured by sources like Ookla's Speedtest Global Index, enhance digital innovation, economic growth, and global connectivity.

For Malaysia, ranked 39th, the higher speeds in urban areas contribute positively, but the ranking may be tempered by rural disparities and methodological limitations, such as underrepresentation of lower-speed regions.

This suggests the ranking priorities aggregate speed performance, potentially overlooking equitable distribution, which critical analysis indicates could skew the true competitiveness picture.

INDICATOR 4.2.08: Internet Bandwidth Speed

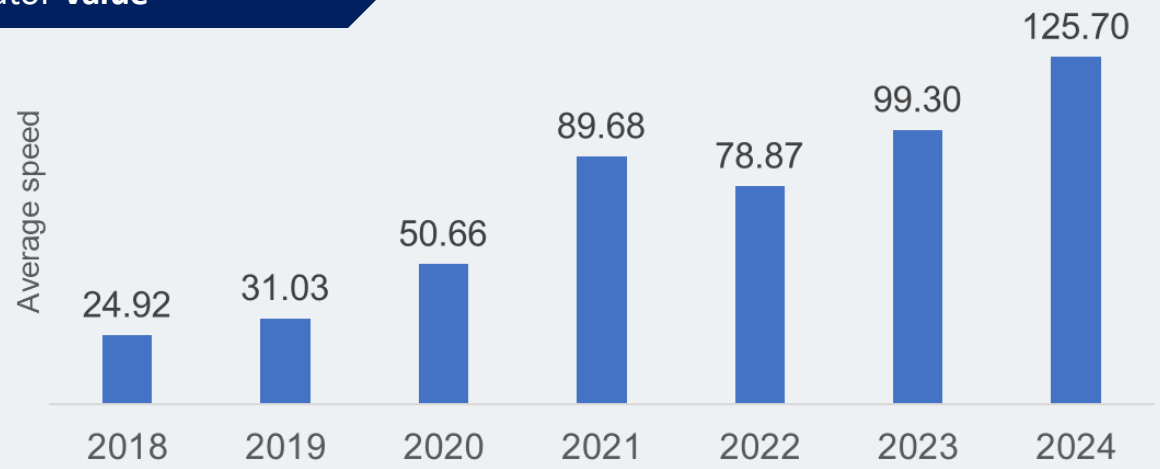
How do the indicators perform across years?

Indicator **Rank**

The ranking of the Internet Bandwidth indicator began at 36th in 2018 and experienced a sharp decline to 42th in 2023 and rise slightly to 39th.

Meanwhile the value also shown increasing from 99.30 in 2023 to 125.70 in 2024 .

Indicator **Value**



Source: IMD (2024)

Our understanding on the data sources

Data sources from WCY for indicator Internet Bandwidth Speed is calculated

$$\text{Indicator 4.2.08 Internet Bandwidth Speed} = \frac{\text{Sources from } \textbf{M-Labs / cable.co.uk} + \text{Sources from } \textbf{Ookla / Speedtest} + \text{Sources from } \textbf{Bandwith Place}}{3}$$

Methodological Summary of Global Broadband Speed and Data Sources

Platform	Method & Focus
M-Lab (NDT) / Cable.co.uk	• Single-stream TCP, 10 s off-net bulk throughput, open-source tests, diagnostic focus • Annual ranking using filtered M-Lab >9-15 s tests, IP-averaging, comparative emphasis
Bandwidth Place	Multi-metric (download/upload/ping), practical user guidance, recognizes device/time biases

How the data collected from Ookla

Consumer-initiated testing measures a fixed broadband or mobile network's QoS: full throughput capacity, latency, ping, and jitter

Mobile network samples measure a radio network's QoS, including signal, coverage, and availability, as well as quality of connected experiences (including Wi-Fi)

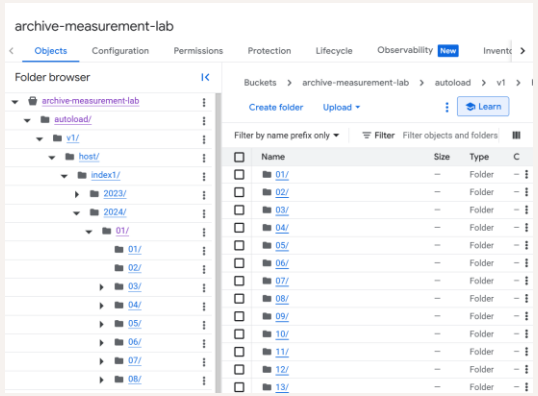
Consumer QoE measures quality of video streaming, video conferencing, gaming, CDN and cloud provider performance, and web browsing on mobile networks

Our understanding on the data sources

Methodological and Data Limitations in M-Labs / Cable.co.uk, Ookla / Speedtest, and Bandwidth Place as well as MCMC

Sources from **M-Labs / cable.co.uk**

The raw data provided is to test technical results



Sources from **Ookla / Speedtest**

Raw data unavailable to obtain

Certain information obtain through published articles

Platform	Type
Ookla	Android-App
	iOS-App
	Desktop WiFi-App
	Desktop Ethernet-App
	Net-Web
M-Lab	NDT-Web

It covered urban and rural areas; however, the rural areas may be underrepresented due to lower population density and less frequent testing.

Sources from **Bandwith Place**

Data not be disclosed

Unknown sample size

User-initiated bias

Sources from **MCMC**

Data is not available for open sharing.

Relies on isolated data sources for network performance, which excludes consumers from the process.

Sources:
M-Labs, Ookla, Bandwidth Place and MCMC website, (https://theedgemalaysia.com/node/751020)
Paul, U., Liu, J., Gu, M., Gupta, A., & Belding, E. (2022). The importance of contextualization of crowdsourced active speedtest measurements (pp. 274–289). ACM, New York, USA. https://doi.org/10.1145/3517745.3561441

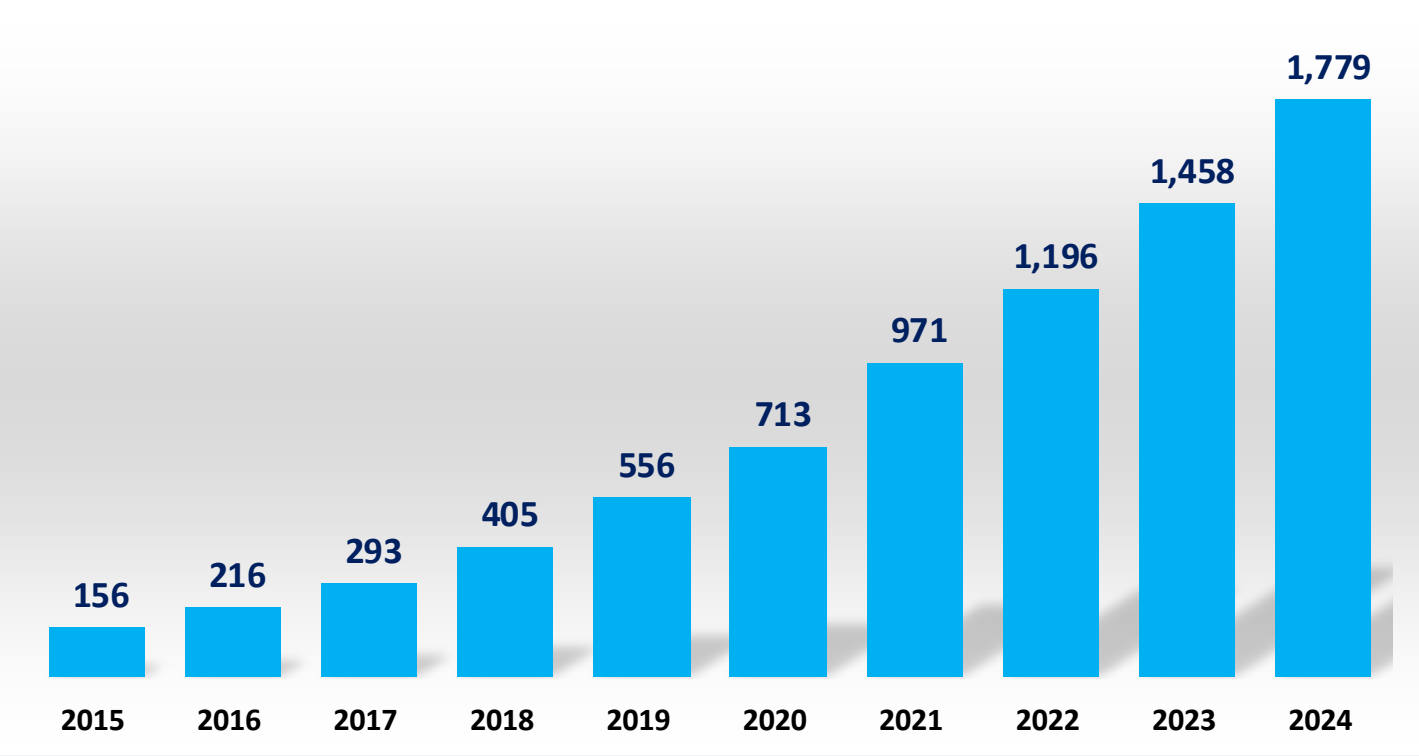
Our understanding on the data sources

DATA SOURCES COMPARISON			
Source	**Methodology**	**Key Gaps**	**Impact on Malaysia**
M-Labs	• *Single-stream NDT,* • *off-net* • *700 Mbps cap*	• *Underreports speeds* • *Underestimates limited to 700 Mbp* • *IP-based location lacks granularity*	*Underestimates Malaysia's gigabit fiber (e.g., TIME's 1 Gbps plans)*
Cable.co.uk	• *Aggregates M-Labs data* • *averages speeds*	• *Inherits M-Labs' flaws* • *small sample sizes* • *no urban-rural split*	*May not reflect Malaysia's 5G (485.25 Mbps) or fiber growth*
Ookla/ Speedtest	• *Multi-stream* • *on-net (for example: transferring data from one device to another within the same office network)* • *median speeds*	• *Overestimates speeds* • *Proprietary data* • *IP approximation in rural areas*	*Inflates urban speeds but may miss rural challenges*
Bandwidth Place	• *Browser-based test* • *Unclear methodology*	• *Opaque methodology* • *unknown sample size* • *user-initiated bias*	*Unreliable for Malaysia's diverse connectivity*
MCMC	• *Official surveys* • *network performance metrics*	• *Limited real-time granularity may lag in reflecting rapid changes*	*Provides baseline for Malaysia's internet infrastructure but may underrepresent private sector innovations*

Sources:
M-Labs, Ookla, Bandwidth Place and MCMC website, (https://theedgemalaysia.com/node/751020)
Paul, U., Liu, J., Gu, M., Gupta, A., & Belding, E. (2022). The importance of contextualization of crowdsourced active speedtest measurements (pp. 274–289). ACM, New York, USA. https://doi.org/10.1145/3517745.3561441

Trend of Global International Bandwidth Usage (2015 – 2024)

The global international bandwidth usage has been steadily increasing over the last decade

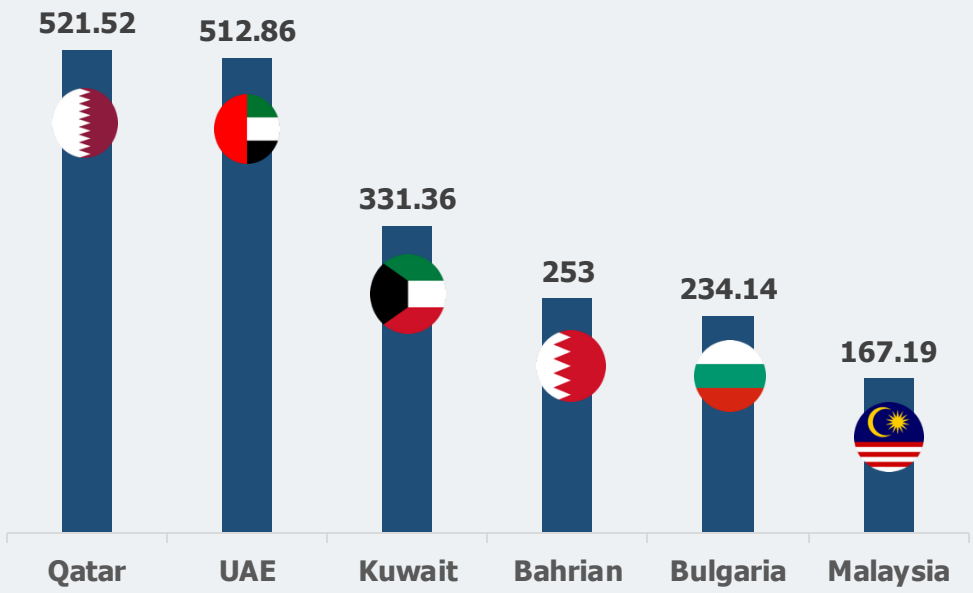


*The data shows an exponential growth pattern, particularly noticeable in the 2019-2024 period, where the **increase went from 713 in 2020 to 1779 in 2024**.*

Source: ITU (2024)

GLOBAL INDEX FOR MOBILE

Mobile - The Speedtest Global Index Ranks by Countries (April, 2024 & 2025)



#	Country	Mbps
1	Qatar	521.52
2	United Arab Emirates (UAE)	512.86
3	Kuwait	331.36
4	Bahrain	253.00
5	Bulgaria	234.14
15	Malaysia	167.19

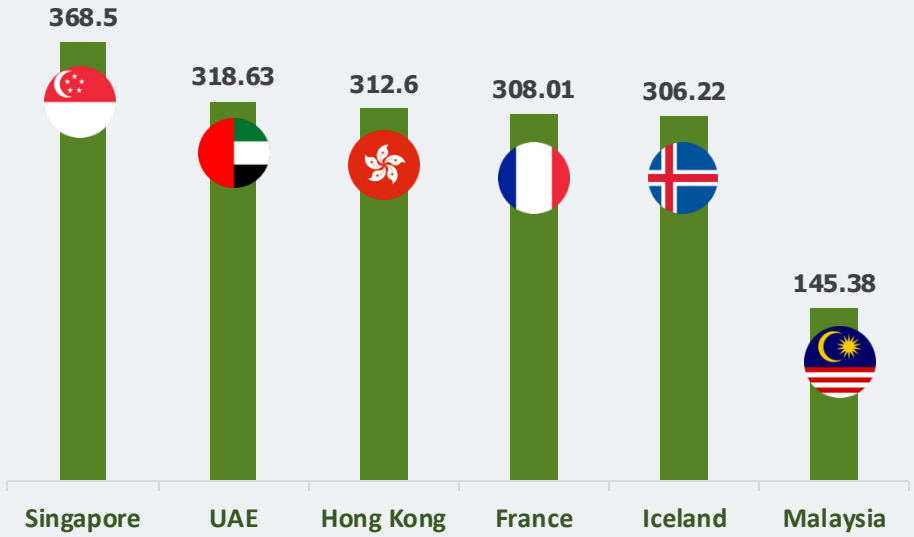
In the Speedtest Global Index (2025), the rankings for mobile internet speed have showcased significant shifts. These countries have developed strong mobile networks driven by advanced infrastructure, high adoption of 5G, and government initiatives.

Qatar, UAE, and Kuwait lead the world in mobile internet speeds, with Singapore topping the rankings due to advanced infrastructure and 5G adoption, followed by the UAE and Kuwait, both benefiting from significant investments in 5G technology and telecom infrastructure.

Source: Speedtest Global Index (2025)

GLOBAL INDEX FOR FIXED BROADBAND

Fixed Broadband - The Speedtest Global Index Ranks by Countries (April, 2024 & 2025)



#	Country	Mbps
1	Singapore	368.50
2	United Arab Emirates	318.63
3	Hong Kong (SAR)	312.60
4	France	308.01
5	Iceland	306.22
41	Malaysia	145.38

In the 2025 Speedtest Global Index, Singapore ranks 1st for fixed broadband, driven by its advanced infrastructure, fiber networks, and strong government support for digital innovation. The country's focus on becoming a Smart Nation ensures fast and reliable internet access across all areas.

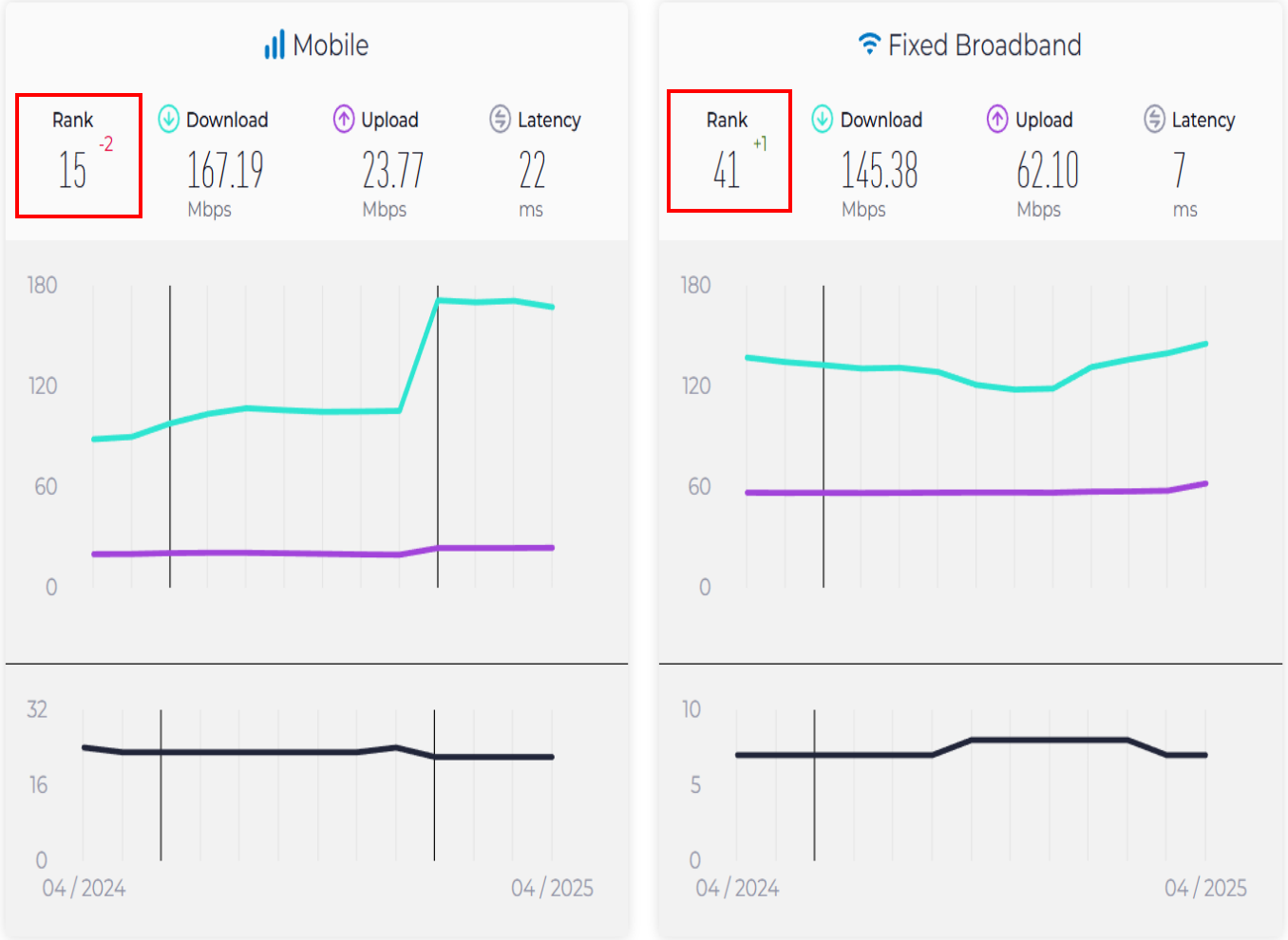
The UAE takes 2nd place due to significant investments in fiber broadband and a competitive telecom market, expanding high-speed access nationwide.

Hong Kong ranks 3rd, benefiting from its dense urban environment and well-developed fiber optic networks, ensuring fast and consistent broadband speeds.

Source: Speedtest Global Index (2025)

Malaysia Speedtest Index (April 2025)

The Speedtest Global Index ranks countries based on download speeds, upload speeds, and latency. By 2025, several overarching trends are evident:



Malaysia was place at 15 as Malaysia's mobile broadband speeds could see substantial growth due to the 5G rollouts initiated by major telecom operators (e.g., Maxis, Digi, Celcom) in 2025, likely reaching 150-200 Mbps in urban centers.

As of 2025, Malaysia's position in the Speedtest Global Index is influenced by several factors, including investments in broadband infrastructure, 5G rollouts, and urban-rural divides in access to high-speed internet.

Latency is expected to improve due to 5G and fiber upgrades, but still may be higher compared to top performers like Iceland or Singapore, with averages around 30-50 ms.

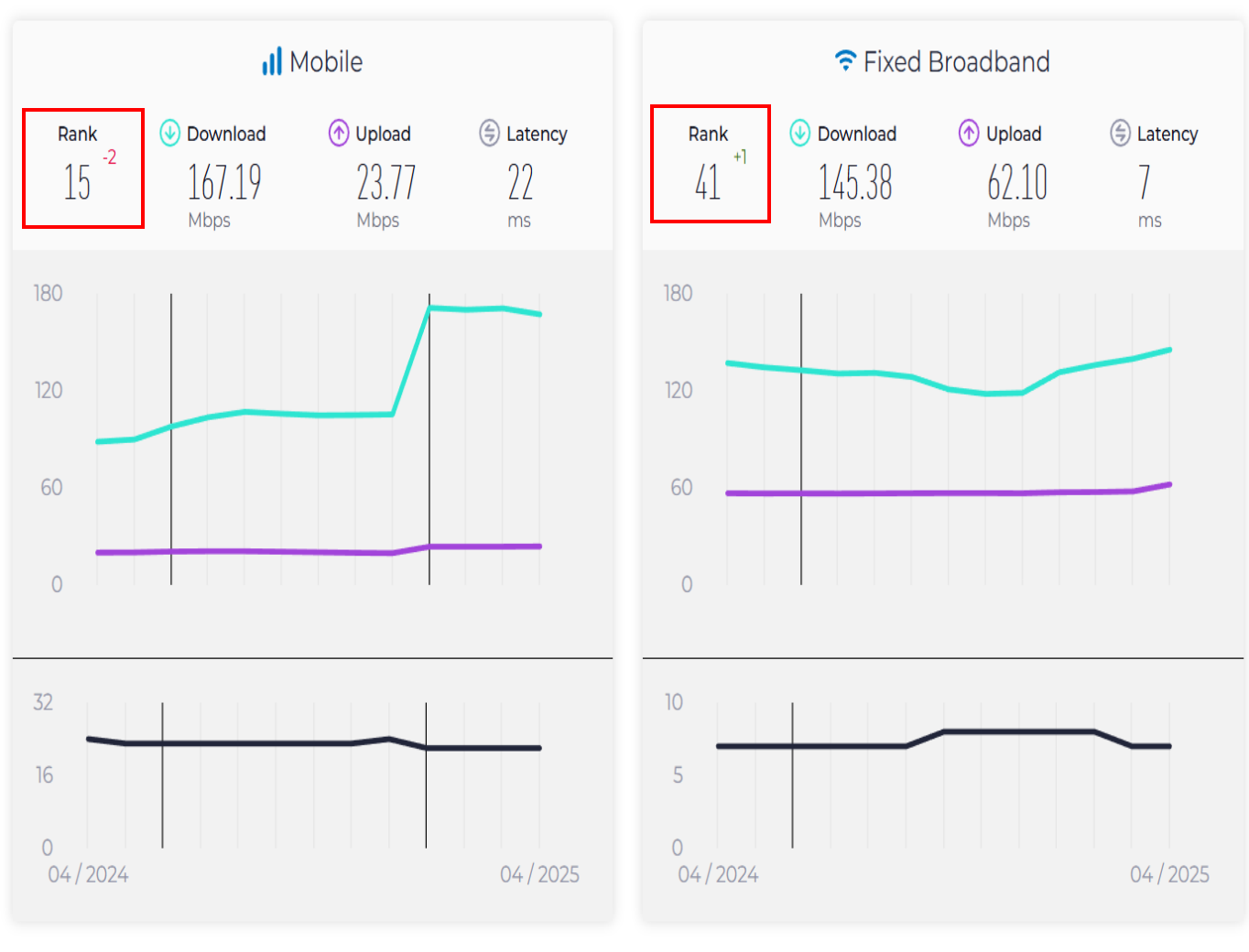
Malaysia's fixed broadband speed is not in the top 15 of global rankings for several reasons, despite ongoing improvements in infrastructure and government initiatives.

Fixed Broadband Speed in Malaysia is expected to have an average fixed broadband download speed of around 100-150 Mbps in urban areas, with some improvements in rural regions driven by government initiatives like MyDIGITAL and Jalinan Digital Negara (JENDELA).

Source: Speedtest Global Index (2025)

INDICATOR 4.2.08: Internet Bandwidth Speed

Malaysia's rapid 5G and fiber growth contrasts with WCR's 39th rank, suggesting data gaps."



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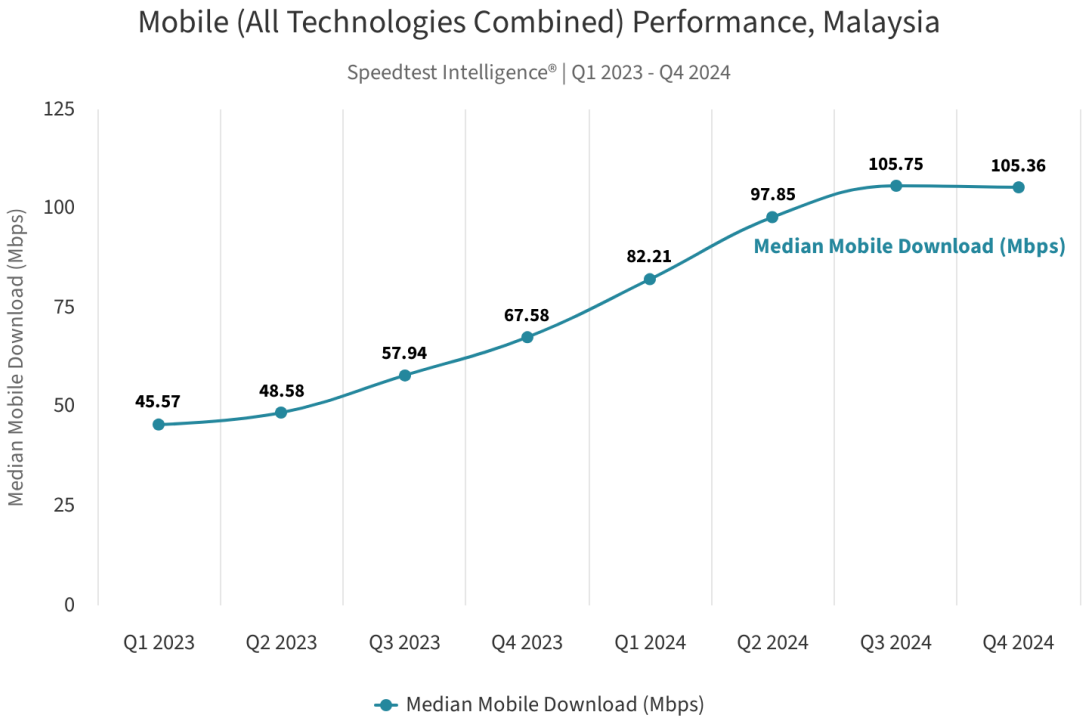
Source: Speedtest Global Index (2025)

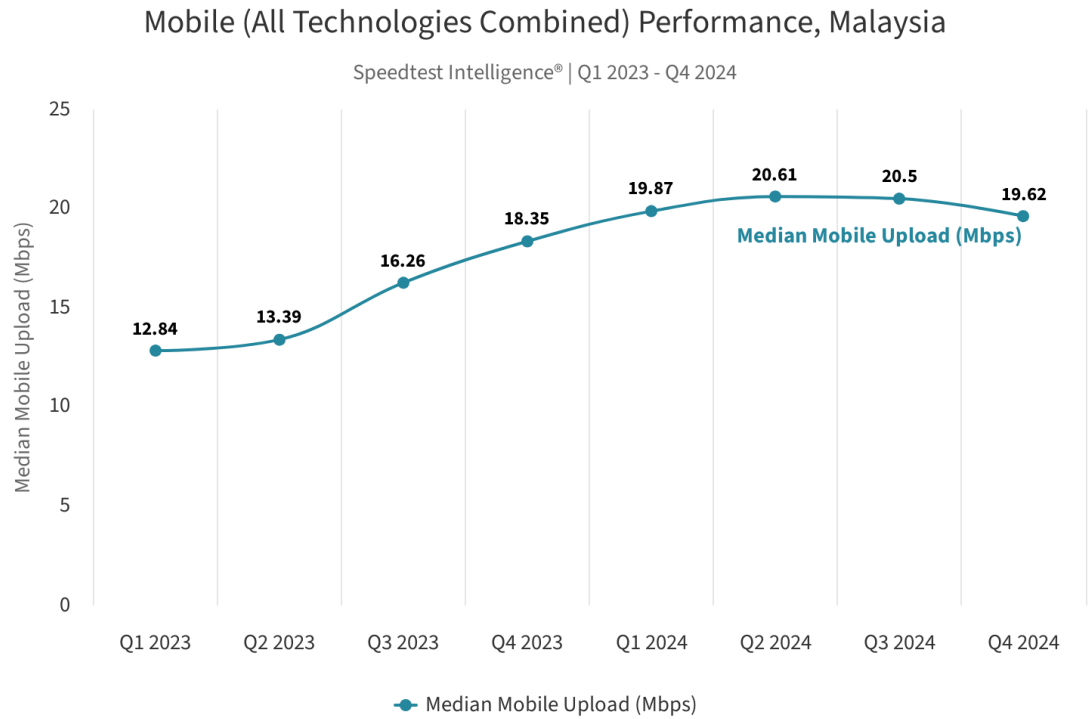
Our understanding on the data sources

5G adoption pushes Malaysia's mobile download speeds past 100 Mbps

MEDIAN MOBILE DOWNLOAD



MEDIAN MOBILE UPLOAD



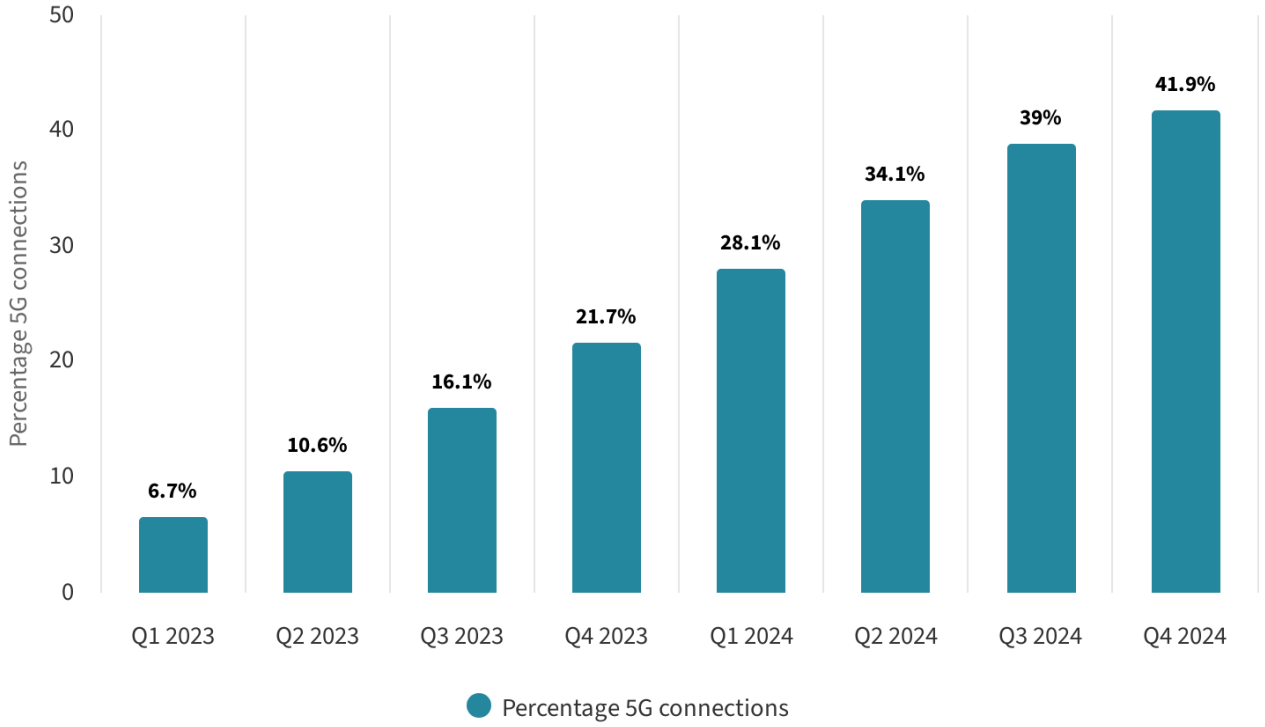
*The figure shown a **median mobile download speeds** for all technologies combined in Malaysia **increased 2.3 times from 45.57 Mbps up to 105.36 Mbps** between Q1 2023 and Q4 2024. There was **a slight improvement** across upload speeds, with the median mobile upload speed in the market **increasing in the same period from 12.84 Mbps to 19.62 Mbps.***

***Source:** Ookla, 2024 & Speedtest*

Our understanding on the data sources

The continuous expansion of the 5G network by the nation's 5G single wholesale network (SWN) provider, Digital Nasional Berhad (DNB), and increased 5G adoption has helped with the upward increase of mobile speed in the past two years.

Percentage of Mobile Connection on 5G in Malaysia (Q1, 2023 – Q4, 2024)



*The data shows **a steady and consistent increase** in the in Malaysia from Q1 2023 to Q4 2024. 5G connections **grew from 6.7% in** Q1 2023 **to 21.7%** by Q4 2023, and **further to 41.9%** by Q4 2024. **percentage of 5G connections.***

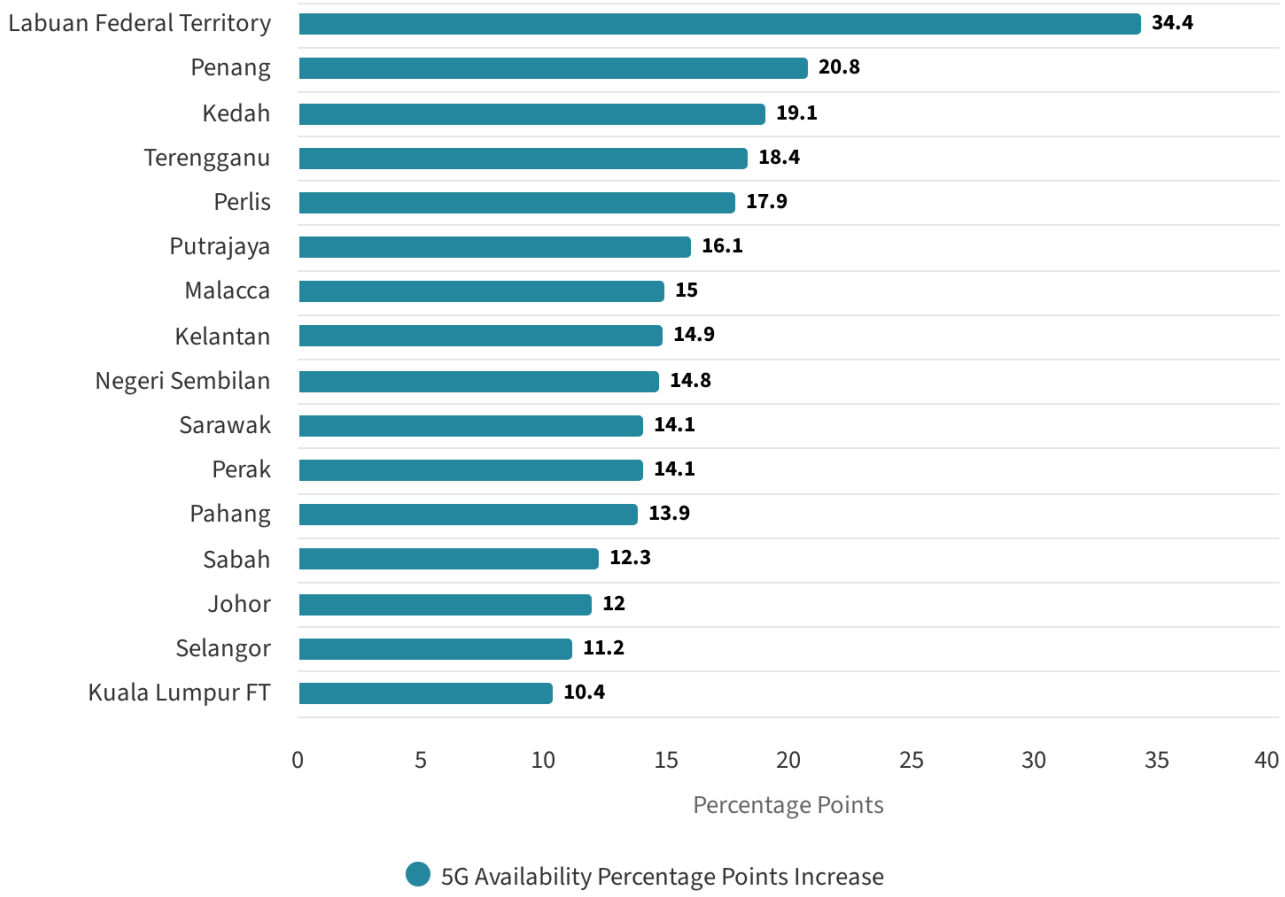
This sustained growth reflects expanding 5G coverage, the increasing availability of 5G devices, and growing consumer and enterprise demand for faster, more reliable mobile connectivity. The rollout by DNB and efforts by mobile operators to make 5G plans more accessible have contributed to this adoption.

***Source:** Ookla, 2024 & GSMA Intelligence*

Our understanding on the data sources

5G Deployment Focus Shifts Toward Broader State-Level Coverage

Percentage Point Growth in 5G Availability Across Malaysian States | Q1, 2023 – Q4, 2024



By mid-2023, deployment efforts began shifting toward smaller and more rural states. ***This shift is reflected in the substantial increases in 5G Availability in areas such as Labuan Federal Territory (34.4%), Penang (20.8%), Kedah (19.1%), and Terengganu (18.4%).*** *These gains align with the objectives of JENDELA Phase 2, which aims to extend 5G connectivity nationwide.*

Urbanized states and territories *continued to* ***see steady growth*** *in 5G Availability, though at* ***a slower rate compared to more rural states****. For example,* ***Putrajaya and Kuala Lumpur*** *reported* ***smaller increases of 16.1%*** *and* ***10.4%*** *respectively, showing that* ***these areas were already well covered*** *and improvements were focused on coverage quality and capacity enhancements rather than new deployments.*

This deployment strategy reflects a balanced national approach — solidifying urban 5G readiness while ***expanding access into smaller cities and rural regions to meet nationwide targets****.*

Source: *Ookla, 2024 & Speedtest Intelligence*

Our understanding on the data sources

Rural states show lower 5G Availability but experience faster 5G speeds. Data for Q4 2024 highlights significant differences in 5G performance across Malaysian states.

Rural states such as Kelantan, Terengganu, and Pahang *report the* ***highest median 5G download speeds****, with Kelantan leading at 392.04 Mbps.*

However, these states also have lower 5G Availability*, with Kelantan at 18.2%, Pahang at 17.3%, and Terengganu at 23.4%.* ***In contrast****, more* ***developed areas such as Putrajaya and the Federal Territory of Kuala Lumpur****, despite having higher 5G Availability rates of 51.5% and 39.7%, show lower median download speeds of 325.47 Mbps and 243.21 Mbps, respectively.*

This is somewhat expected, as the higher 5G speeds in rural states can be attributed to lower user density and less network congestion. With fewer users accessing the network simultaneously, available bandwidth is distributed among a smaller number of connections, resulting in faster speeds. In contrast, urban areas such as Kuala Lumpur, Penang, and Selangor, which have higher 5G Availability, experience lower median speeds due to higher user demand and potential network congestion

#	States	Speed Availability
1	Kuala Lumpur	51.5%
2	Putrajaya	39.7%
3	Labuan FT	35.7%
4	Penang	34.6%
5	Selangor	33.3%
6	Sarawak	30.2%
7	Johor	30%
8	Sabah	28.8%
9	Negeri Sembilan	24.7%
10	Kedah	24.1%
11	Terengganu	23.4%
12	Perlis	21.5%
13	Malacca	21.4%
14	Perak	20.2%
15	Kelantan	18.2%
16	Pahang	17.3%

#	States	Mbps
1	Kelantan	392.04
2	Terengganu	375.377
3	Pahang	366.03
4	Sarawak	363.039
5	Kedah	352.721
6	Perlis	345.618
7	Perak	344.423
8	Sabah	336.08
9	Labuan FT	326.693
10	Putrajaya	325.427
11	Negeri Sembilan	316.489
12	Malacca	310.718
13	Johor	290.51
14	Penang	281.864
15	Selangor	278.383
16	Kuala Lumpur	243.213

Source: *Ookla, 2024 & Speedtest Intelligence*

Areas of Improvement

M-Labs:

- Single-stream testing with a 700 Mbps cap underestimates high-speed areas (e.g., urban gigabit fiber like TIME's 1 Gbps).
- IP-based location lacks rural-urban detail, missing 5G growth (e.g., 485.25 Mbps).
- **Improvement**: Use multi-stream testing and GPS for better speed and location accuracy.

- **Cable.co.uk**:
  - Inherits M-Labs' flaws, uses small samples, and lacks urban-rural split, skewing Malaysia's average.
  - **Improvement**: Increase sample size and add stratified sampling for balanced urban-rural data.

- **Ookla Speedtest**:
  - User-driven tests overrepresent urban speeds (e.g., 650 Mbps) and miss rural areas (e.g., 150 Mbps).
  - Proprietary methods and IP approximation reduce rural accuracy.
  - **Improvement**: Encourage rural testing and share methodology for transparency.

Areas of Improvement

- **MCMC**:
  - Official surveys provide national data but lack real-time granularity, lagging on rapid changes.
  - **Improvement**:
    - Enhance real-time data collection to reflect current trends and innovations.
    - Open Data availability to be shared to open portal.

- **General**:
  - All rely on user data and inconsistent servers, missing service tiers and network conditions.
  - **Improvement**: Combine active/passive measurements and validate with MCMC for a fuller picture

THANK YOU

Finish

HD
HARD DATA

FACTOR: ECONOMIC PERFORMANCE

SUB-FACTOR: INTERNATIONAL TRADE

INDICATOR 4.2.16

ICT Service Exports
(% of service exports)

21 – 23 JUNE 2025 l Pulse Grande Hotel, Putrajaya

INDICATOR 4.2.16: ICT Service Exports (% of service exports)

INDICATOR DEFINITION

ICT service exports (% of service exports). Information and communication technology service exports include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions). (*Defined in World Competitiveness Yearbook, 2025*)

DATA SOURCE FROM WCY

- World Development Indicators (World Bank)
- National Sources

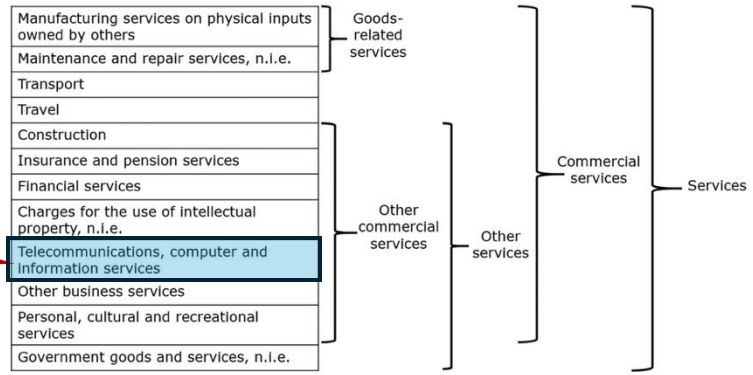
DETAILED DATA BREAKDOWN

ICT services exports is calculated as:

$$\frac{Summation\ of\ ICT's\ exports}{Total\ services\ exports}$$

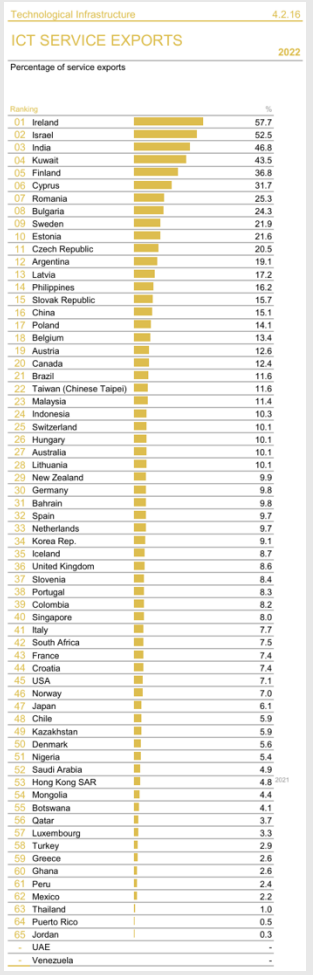
The component considered for this indicator.

Figure 1: Breakdown of total services (main EBOPS 2010 items)



Sources: annual trade in commercial services data are jointly produced with UNCTAD. Data are sourced from Eurostat, the OECD, the International Monetary Fund (IMF), and national statistical sources. Where possible, reported data are complemented by estimates produced by the WTO and UNCTAD.

WHAT DOES THE SCORE INDICATE?



Technological Infrastructure 4.2.16

ICT SERVICE EXPORTS 2022

Percentage of service exports

Ranking		%
01	Ireland	57.7
02	Israel	52.5
03	India	46.8
04	Kuwait	43.5
05	Finland	36.8
06	Cyprus	31.7
07	Romania	25.3
08	Bulgaria	24.3
09	Sweden	21.9
10	Estonia	21.6
11	Czech Republic	20.5
12	Argentina	19.1
13	Latvia	17.2
14	Philippines	16.2
15	Slovak Republic	15.7
16	China	15.1
17	Poland	14.1
18	Belgium	13.4
19	Austria	12.6
20	Canada	12.4
21	Brazil	11.6
22	Taiwan (Chinese Taipei)	11.6
23	Malaysia	11.4
24	Indonesia	10.3
25	Switzerland	10.1
26	Hungary	10.1
27	Australia	10.1
28	Lithuania	10.1
29	New Zealand	9.9
30	Germany	9.8
31	Bahrain	9.8
32	Spain	9.7
33	Netherlands	9.7
34	Korea Rep.	9.1
35	Iceland	8.7
36	United Kingdom	8.6
37	Slovenia	8.4
38	Portugal	8.3
39	Colombia	8.2
40	Singapore	8.0
41	Italy	7.7
42	South Africa	7.5
43	France	7.4
44	Croatia	7.4
45	USA	7.1
46	Norway	7.0
47	Japan	6.1
48	Chile	5.9
49	Kazakhstan	5.9
50	Denmark	5.6
51	Nigeria	5.4
52	Saudi Arabia	4.9
53	Hong Kong SAR	4.8
54	Mongolia	4.4
55	Botswana	4.1
56	Qatar	3.7
57	Luxembourg	3.3
58	Turkey	2.9
59	Greece	2.6
60	Ghana	2.6
61	Peru	2.4
62	Mexico	2.2
63	Thailand	1.0
64	Puerto Rico	0.5
65	Jordan	0.3
-	UAE	-
-	Venezuela	-

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2025*

RATIONALITY?

A high share of ICT service exports (% of total service exports) is viewed as a strong indicator of national competitiveness, reflecting an economy's capacity to produce and export high-value, knowledge-intensive services.

In the IMD Competitiveness framework, countries with a larger ICT export share are seen as more innovative, digitally advanced, and better integrated into global digital markets.

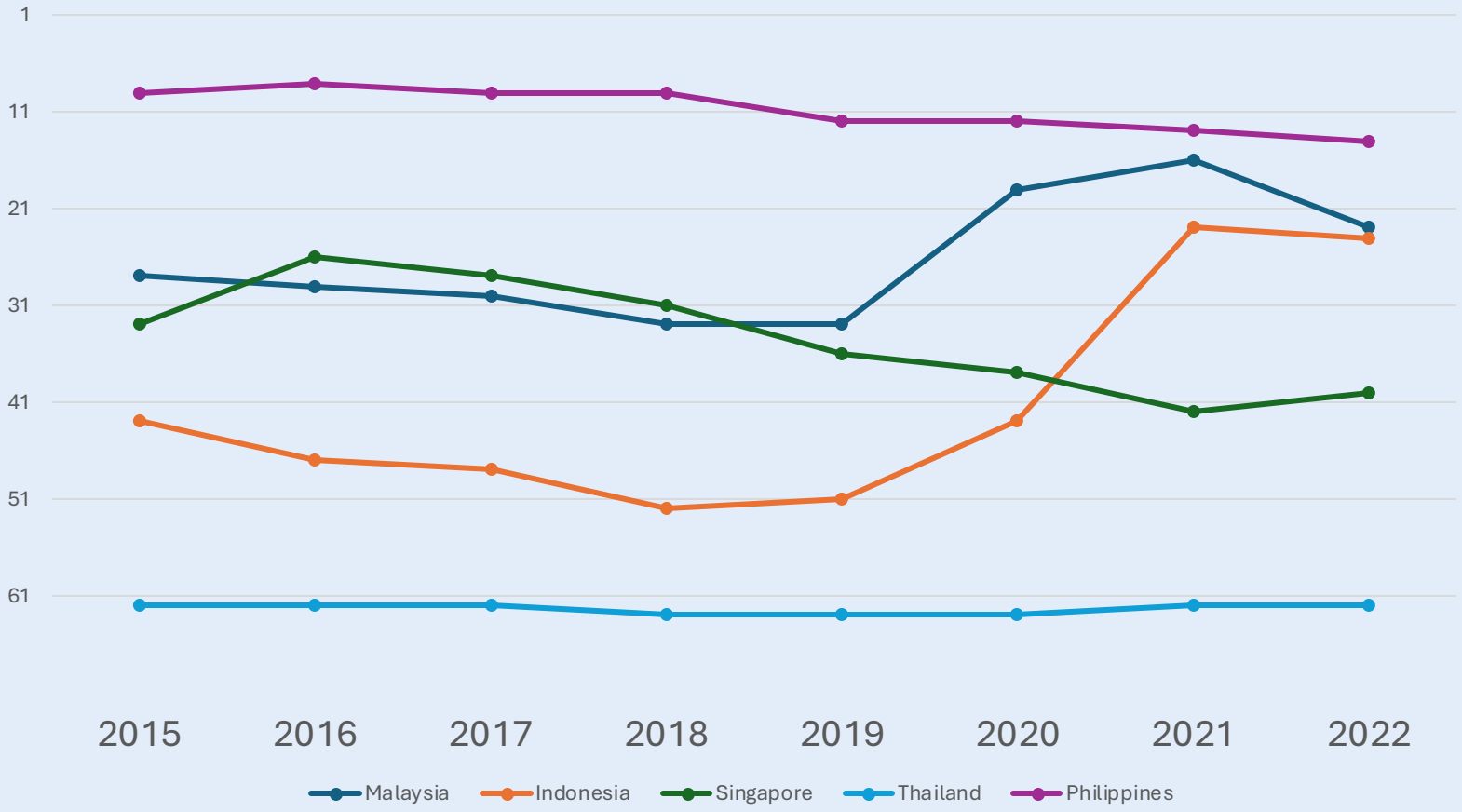
This is important because ICT services typically generate higher productivity, better margins, and greater scalability compared to traditional services.

A strong ICT export sector also helps diversify the economy, reduce dependency on lower value-added services or goods exports, and build resilience against global demand fluctuations.

Countries with growing ICT service exports are often better positioned to adapt to technological changes, attract investment, and support long-term sustainable growth.

INDICATOR 4.2.16: ICT Service Exports (% of service exports)

Where are Malaysia now? Indicators ranking among ASEAN countries



Source: IMD (2025)

Before moving deeper into the detailed data, it is important to first observe Malaysia's position in ICT Service Exports (% of service exports) compared to ASEAN peers.

This indicator reflects a country's capacity to export high-value digital services within its broader services sector — an important signal of digital competitiveness and technological advancement.

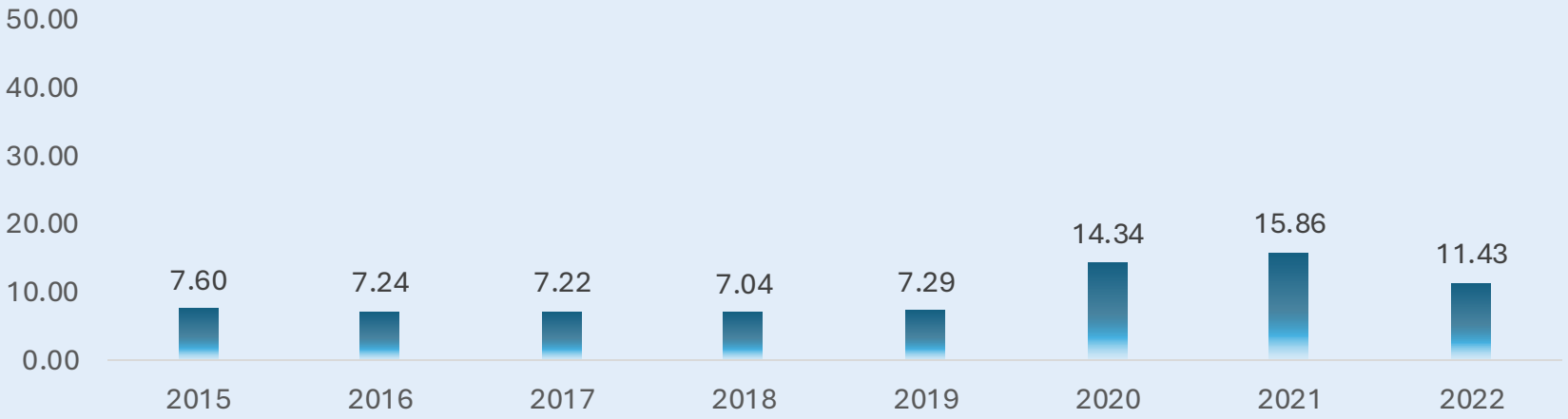
The figure shows that Malaysia has generally remained mid-ranked within ASEAN. However, over the past few years, Malaysia's position has been challenged by improvements in countries such as Indonesia, while Singapore continues to lead the region by a wide margin.

Despite Malaysia's ambitions to grow its digital economy, the current ranking suggests that the ICT services export share remains modest, and further efforts may be needed to strengthen the sector's contribution to overall service exports.

INDICATOR 4.2.16: ICT Service Exports (% of service exports)

How do the indicators perform across years?

Indicator **Value (% to GDP)**



Indicator **Rank**

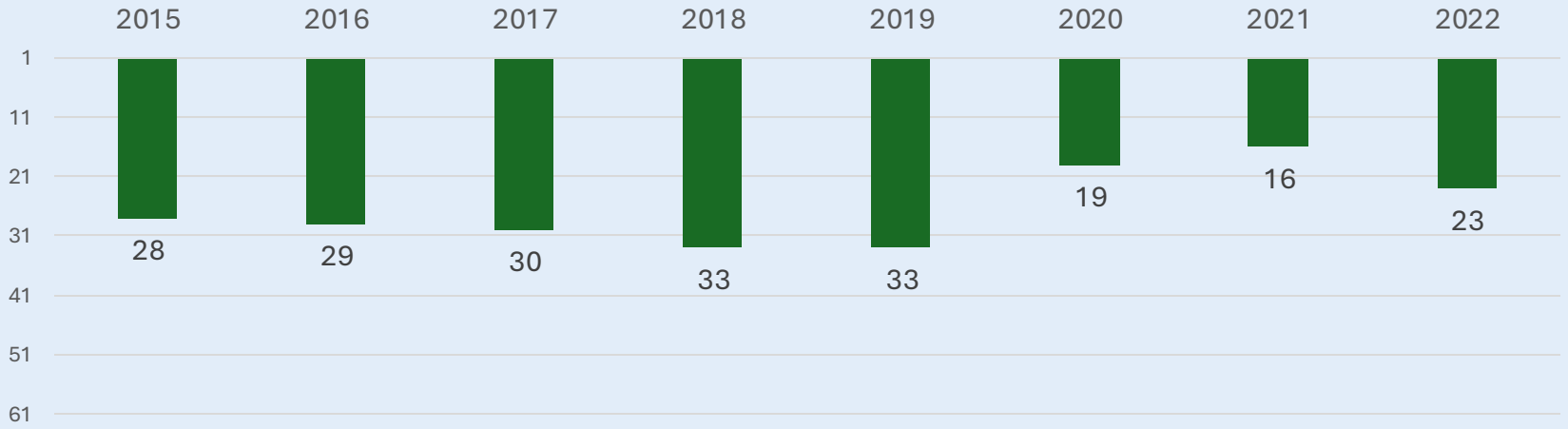


Figure left presents the trend of Malaysia's ICT Service Exports as a percentage of total service exports, alongside its corresponding ranking in the IMD World Competitiveness Yearbook, covering the years 2015–2022.

The data shows that while Malaysia recorded a gradual increase in ICT export share — reaching a peak of 15.86% in 2021 — the figure moderated to 11.43% in 2022.

This movement is reflected in Malaysia's ranking, which improved to 16th place in 2021, before softening to 23rd in 2022. The recent decline highlights potential limitations in Malaysia's ICT export growth momentum, particularly compared to more digitally advanced economies.

Sustained improvement will require greater emphasis on scaling high-value ICT services and enhancing global market penetration.

Notes: The chart scale is set at 60% because the top-performing country (Ireland) currently records a ICT services exports of approximately 60% of total services exports.

Source: IMD (2025)

Comparative Measurement Assessment of Indicator

Extracting the ICT Service Exports (2016–2022)

Data sourced from **World Bank**

To access the **ICT Services Exports** data, follow these steps:

1. Go to https://data.worldbank.org/indicator
2. Click on the search bar and type "**ICT service exports**".
3. From the suggested search, select **"ICT service exports (% of service exports, BoP)**".
4. On the right-hand side menu, click on "**Excel**" under the "**Download**" groupings to download the file.
5. The data will be available in "**Data**" sheet. Specifically, for Malaysia is at "**Row 174**".

Data sourced from **DOSM**

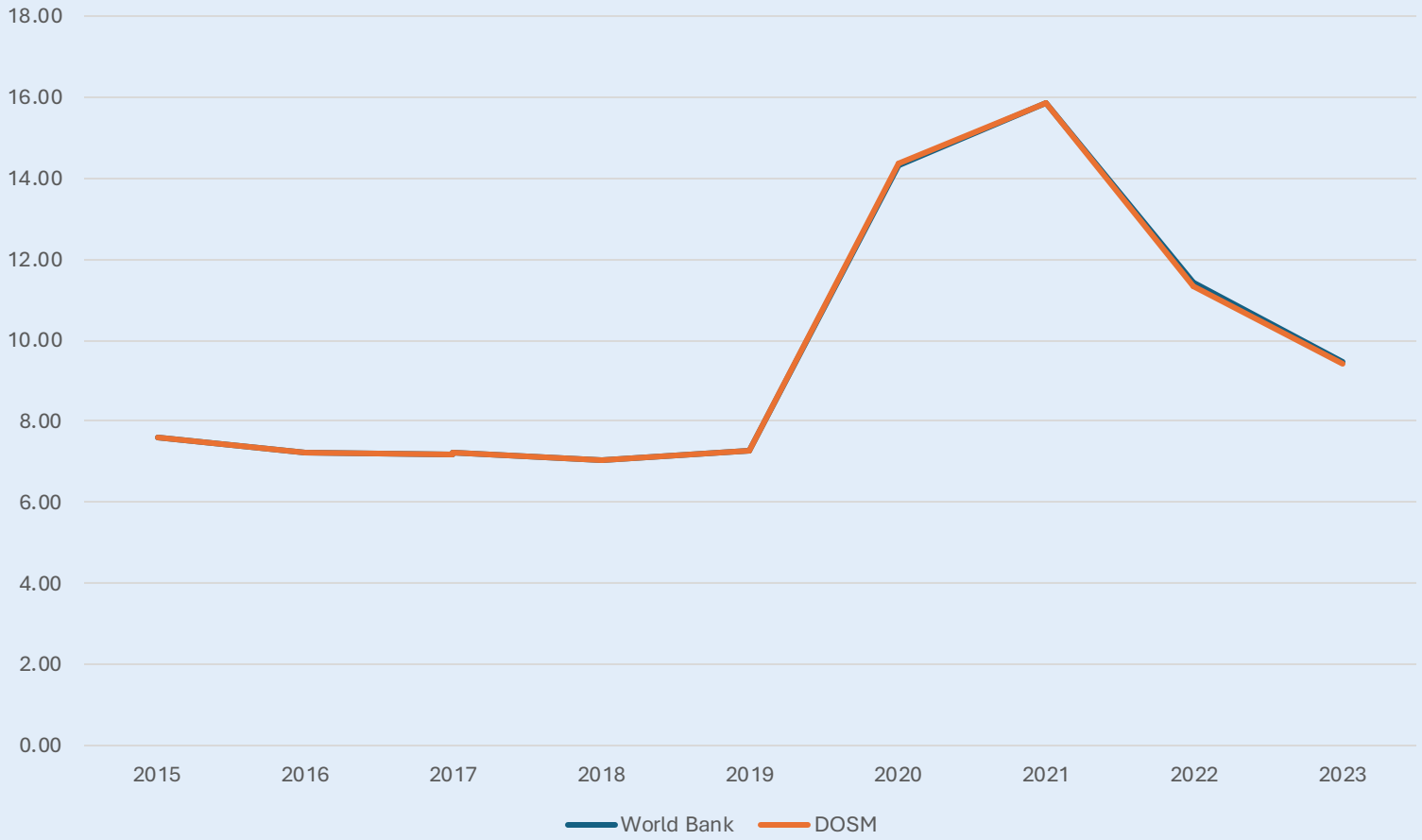
To access the **CAB** data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**Economy**"
4. From Sub-Category, select "**Balance of Payment**"
5. Click "**Search**"
6. Find "**Statistics of International Trade in Services**"
7. Download the excel file.
8. The value of the indicator would be in "**TABLE 1**". The percentage value would be in "**TABLE 2**".

INDICATOR 4.2.16: ICT Service Exports (% of service exports)

Comparative Measurement Assessment of Indicator

Comparison of ICT Services Export Data, 2015–2023 (% of total services exports)



Source: World Bank, World Development Indicators (WDI) and Department of Statistics Malaysia (DOSM).

Based on the comparative analysis, the ICT Services Export (% of service exports) figures reported by the World Bank and DOSM show consistent trends across the period.

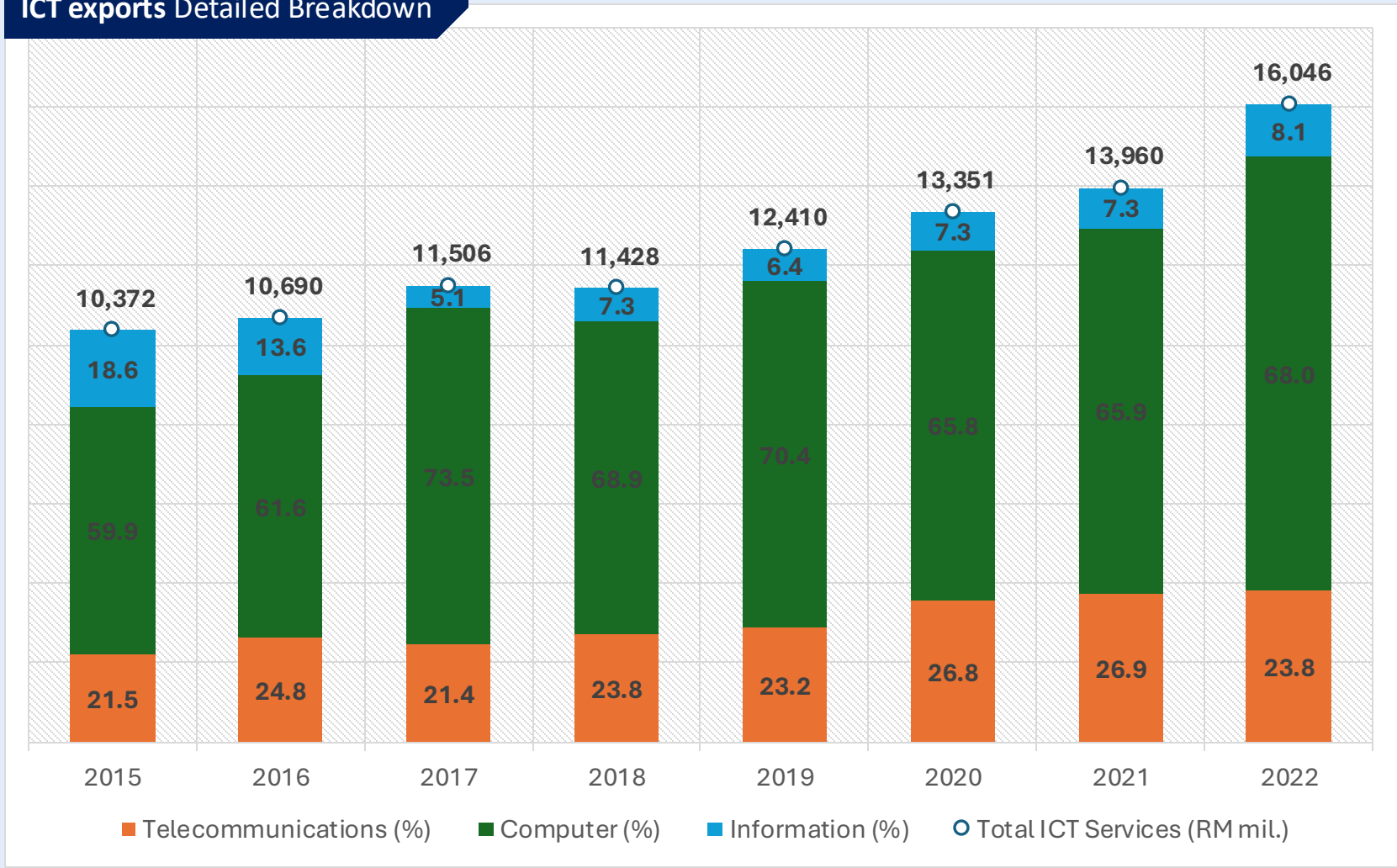
The values used in the IMD World Competitiveness Yearbook, sourced from the World Bank, are well aligned with Malaysia's official national data.

This suggests that there are no significant measurement discrepancies for this indicator, and it can be considered reliable for international benchmarking purposes.

INDICATOR 4.2.16: ICT Service Exports (% of service exports)

Areas of improvement for this indicators

ICT exports Detailed Breakdown



The detailed breakdown shows that Malaysia's ICT service exports remain dominated by computer services, consistently contributing around 65%–73% of the total ICT exports.

Meanwhile, telecommunications services maintain a stable share of approximately 21%–27%, and information services still contribute a relatively small portion.

While the total value of ICT exports has shown steady growth, the composition suggests limited diversification within the ICT sector. The modest contribution from information services — an area typically linked to high-value digital content and emerging technologies — points to potential areas for further development.

Moving forward, enhancing capabilities in higher value ICT segments and promoting diversification within the digital services space will be critical to improving Malaysia's overall competitiveness in ICT exports.

Source: DOSM 2025

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: SCIENTIFIC INFRASTRUCTURE

INDICATOR 4.3.01

Total expenditure on R&D

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.3.01: Total expenditure on R&D

INDICATOR DEFINITION

National estimates, projections or provisional of research and development expenditure data for the most recent year.

DETAILED CALCULATION OF INDICATOR

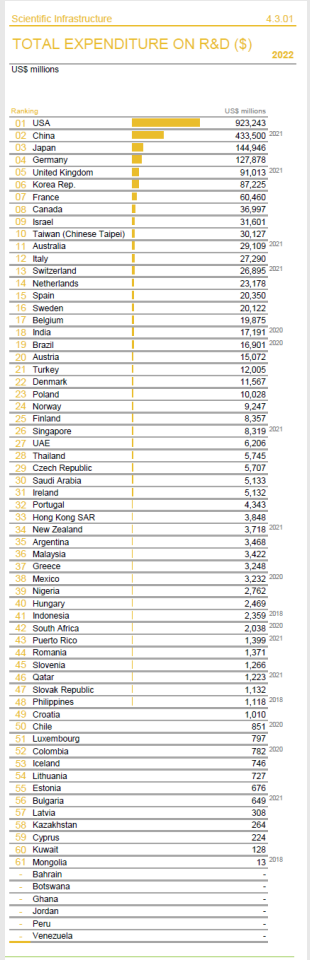
$$\textbf{\textit{Total Expenditure on R\&D}} =$$

$$Business\ R\&D + Higher\ Education\ R\&D + Government\ R\&D + Private\ Non\ Profit\ R\&D$$

DATA SOURCE FROM WCY

OECD Main Science and Technology Indicators
UNESCO
National sources

WHAT DOES THE SCORE INDICATE?



Scientific Infrastructure 4.3.01

TOTAL EXPENDITURE ON R&D ($) 2022

US$ millions

Ranking		US$ millions
01	USA	923,243
02	China	433,500 2021
03	Japan	144,946
04	Germany	127,878
05	United Kingdom	91,013 2021
06	Korea Rep.	87,225
07	France	60,460
08	Canada	36,997
09	Israel	31,601
10	Taiwan (Chinese Taipei)	30,127
11	Australia	29,109 2021
12	Italy	27,290
13	Switzerland	26,895 2021
14	Netherlands	23,178
15	Spain	20,350
16	Sweden	20,122
17	Belgium	19,875
18	India	17,191 2020
19	Brazil	16,901 2020
20	Austria	15,072
21	Turkey	12,005
22	Denmark	11,567
23	Poland	10,028
24	Norway	9,247
25	Finland	8,357
26	Singapore	8,319 2021
27	UAE	6,206
28	Thailand	5,745
29	Czech Republic	5,707
30	Saudi Arabia	5,133
31	Ireland	5,132
32	Portugal	4,343
33	Hong Kong SAR	3,848
34	New Zealand	3,718 2021
35	Argentina	3,468
36	Malaysia	3,422
37	Greece	3,248
38	Mexico	3,232 2020
39	Nigeria	2,762
40	Hungary	2,469
41	Indonesia	2,359 2018
42	South Africa	2,038 2020
43	Puerto Rico	1,399 2021
44	Romania	1,371
45	Slovenia	1,266
46	Qatar	1,223 2021
47	Slovak Republic	1,132
48	Philippines	1,116 2018
49	Croatia	1,010
50	Chile	851 2020
51	Luxembourg	797
52	Colombia	782 2020
53	Iceland	746
54	Lithuania	727
55	Estonia	676
56	Bulgaria	649 2021
57	Latvia	308
58	Kazakhstan	264
59	Cyprus	224
60	Kuwait	128
61	Mongolia	13 2018
..	Bahrain	..
..	Botswana	..
..	Ghana	..
..	Jordan	..
..	Peru	..
..	Venezuela	..

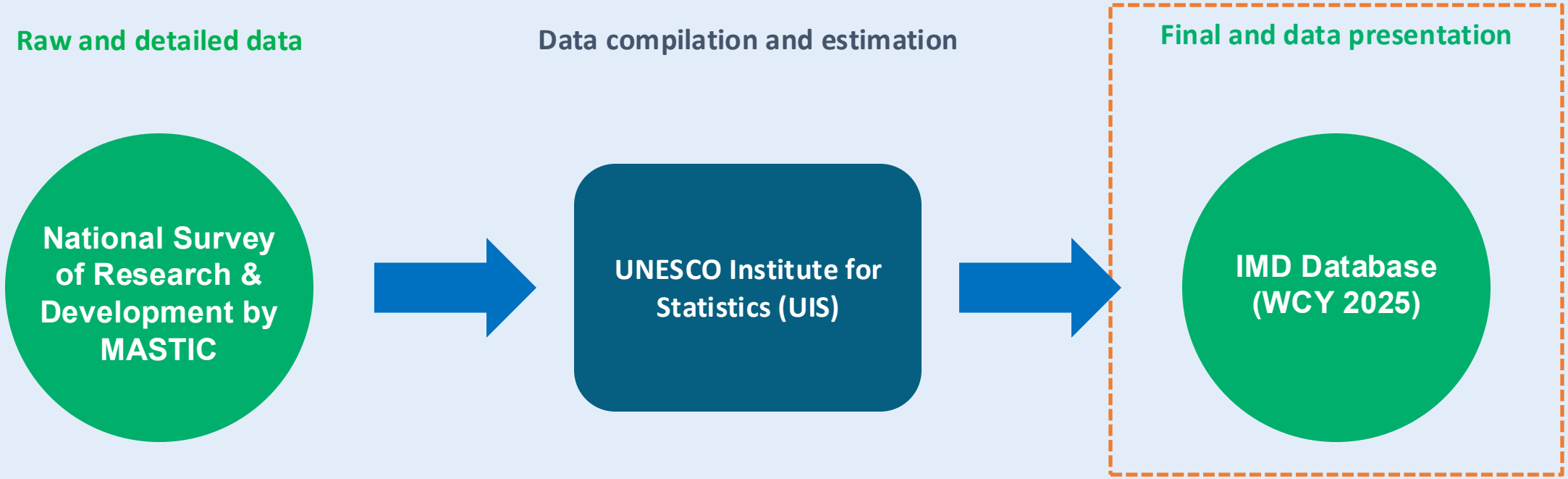
The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

Higher total expenditure on R&D reflects greater investment in innovation, knowledge creation, and technological advancement. It indicates the priority given to fostering a knowledge-based economy, enhancing competitiveness, and driving long-term economic growth.

SOURCE OF DATA

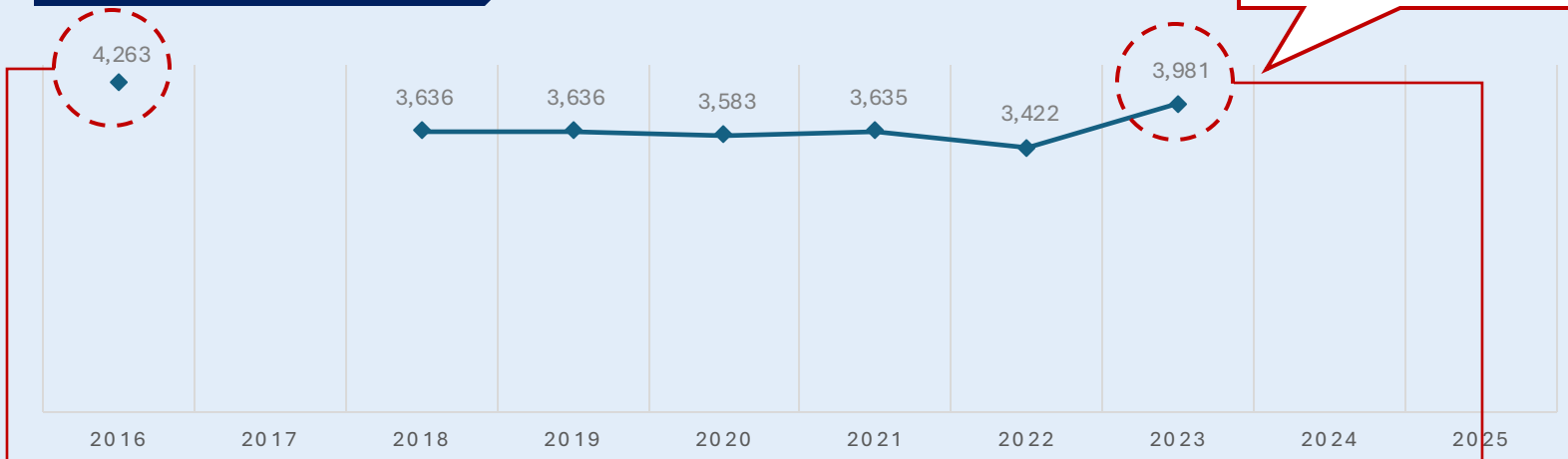


INDICATOR 4.3.01: Total expenditure on R&D

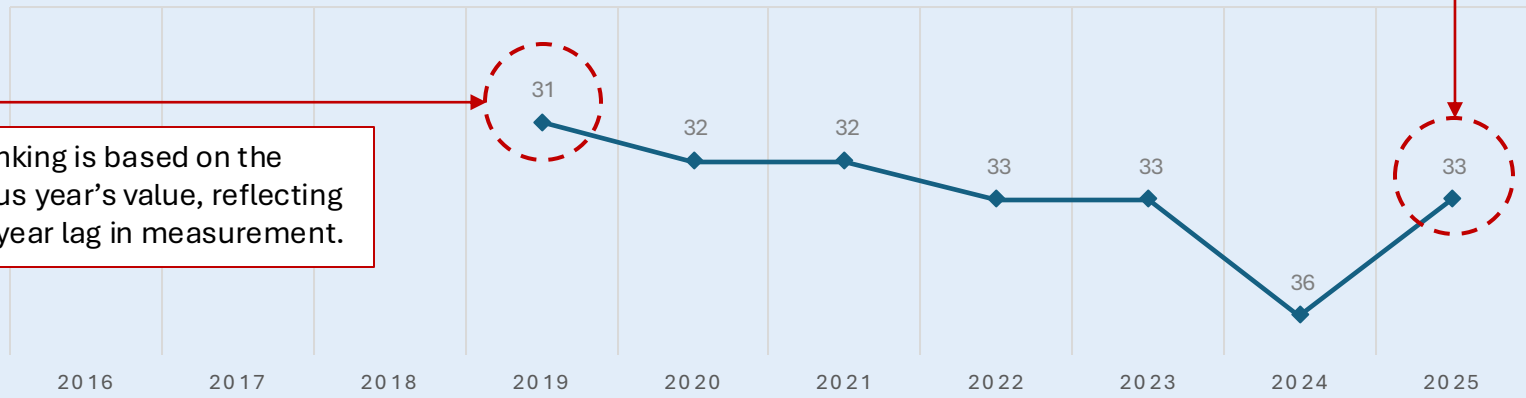
How do the indicators perform across years?

The ranking for WCY 2025 improved since the value of R&D expenditure increase in 2023.

Indicator **Value**



Indicator **Rank**



The ranking is based on the previous year's value, reflecting a two-year lag in measurement.

The indicator shows a positive trend, with an increase in R&D expenditure value in 2023, contributing to an improved rank in WCY 2025.

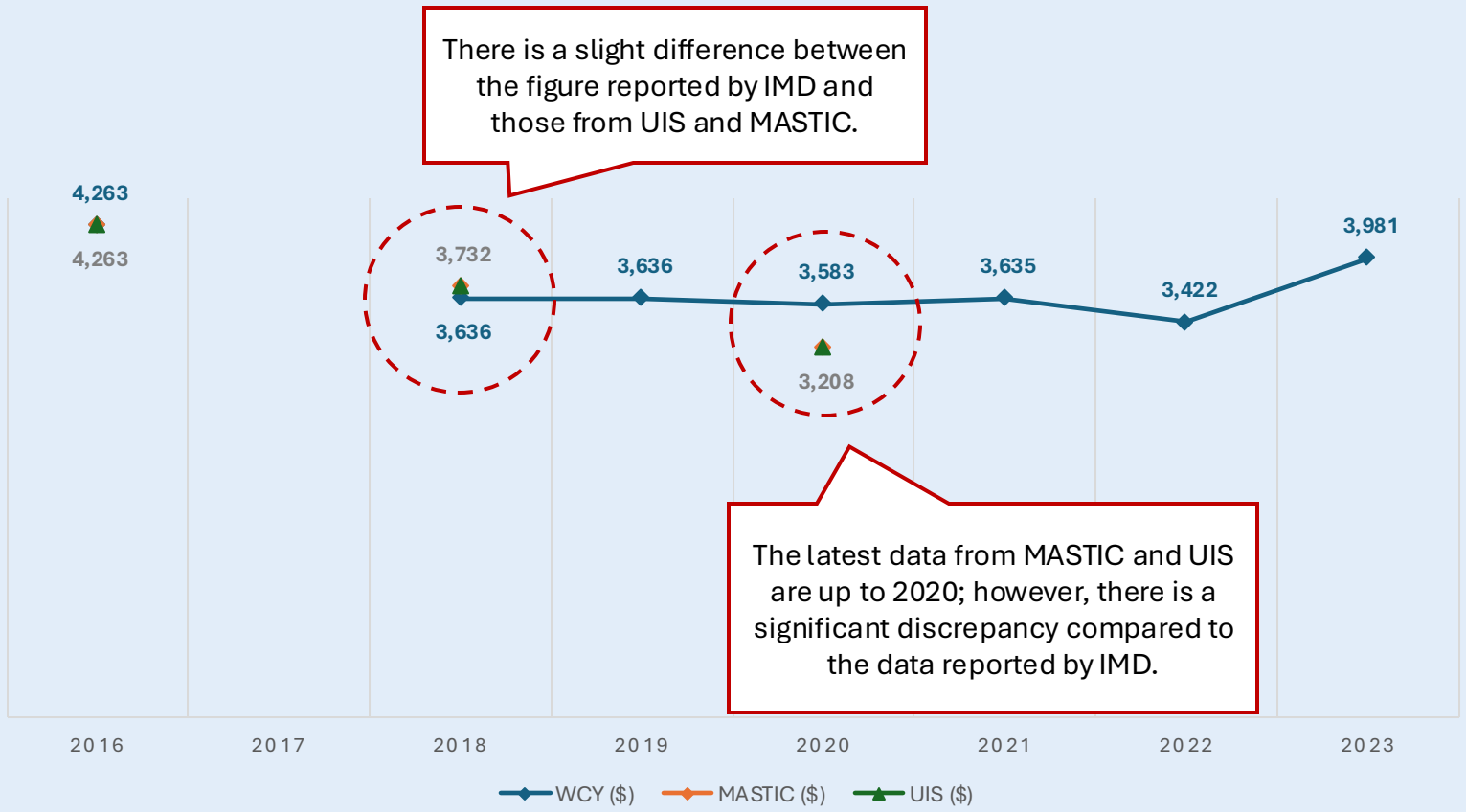
The rank reflects a two-year lag, so the recent upward movement in expenditure is expected to further support future rankings. Sustained investment is needed to remain competitive internationally.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.3.01: Total expenditure on R&D

Comparative Measurement Assessment of Indicator

Indicator **Value**



The R&D expenditure data reported by IMD shows notable differences compared to the figures published by UIS and MASTIC.

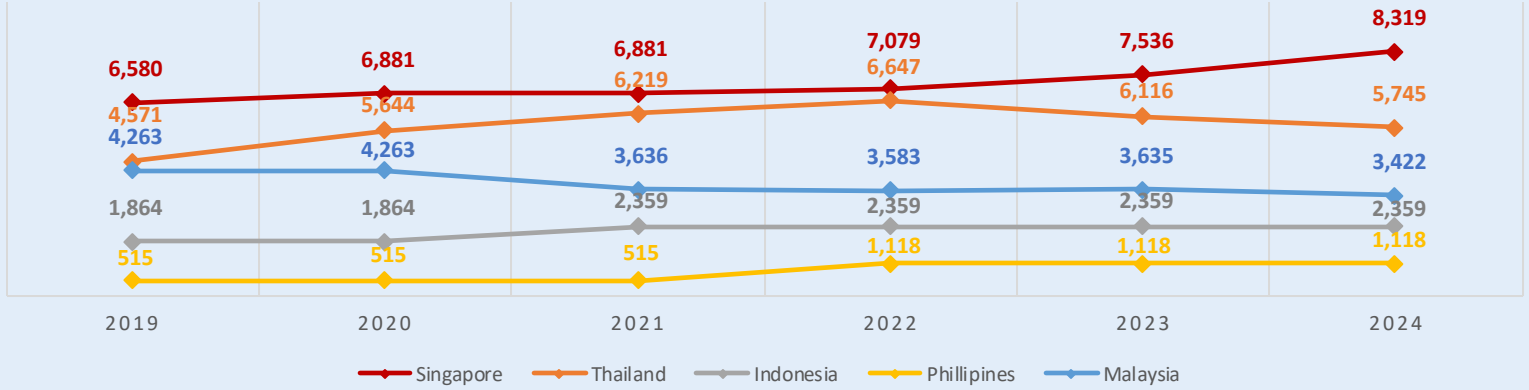
This discrepancy arises from several key factors. First, IMD compiles its data from various international sources, including OECD, UNESCO, and national reports, which may not fully align with the official data submitted by Malaysia to UIS or reported by MASTIC.

Second, IMD often applies its own estimation methods and adjustments to ensure international comparability across countries, whereas MASTIC and UIS rely on Malaysia's national R&D survey methodology.

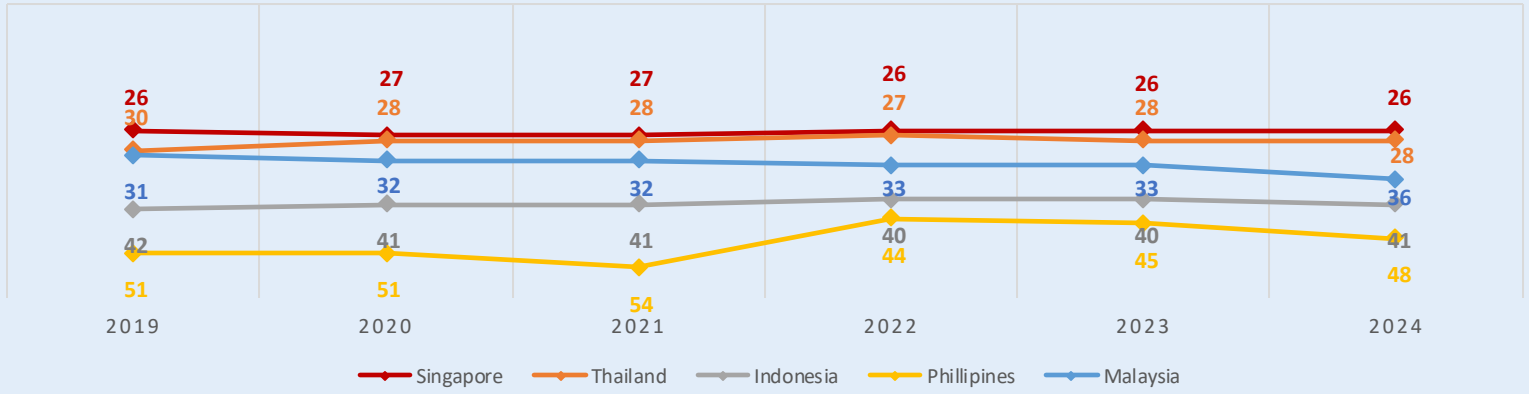
Source: *IMD World Competitiveness Yearbook 2024 and Department of Statistic Malaysia 2023*

INDICATOR 4.3.01: Total expenditure on R&D

Indicator Values for Selected Countries



Indicator Rankings for Selected Countries



Among the ASEAN-5 countries, Singapore remains the clear leader in total R&D expenditure, showing a strong and consistent upward trajectory from 2019 to 2024. Thailand also continues to strengthen its R&D spending and maintains a stable second position. In contrast, Malaysia shows a stagnant trend with a slight decline in 2024, falling behind both Thailand and Indonesia in terms of value improvement and competitiveness ranking. Indonesia, while lower in value, is gradually progressing, while the Philippines remains at a much lower level of R&D expenditure.

Sumber: IMD (2024)

INDICATOR 4.3.01: Total expenditure on R&D

Comparative Measurement Assessment of Indicator

Breakdown from **UIS**

Country		2018	2019	2020	2021	2022	2023
Kazakhstan	0.13	0.12	0.12	0.13	0.13	0.12	0
Kenya						0.41	0
Kuwait	0.08	0.06	0.19	0.18		0.08	0
Kyrgyzstan	0.11	0.10	0.09	0.08	0.07	0.07	0
Lao People's Democratic Rep...							
Latvia	0.51	0.64	0.64	0.73	0.75	0.76	
Lesotho							
Liechtenstein			5.87				
Lithuania	0.90	0.94	0.99	1.13	1.10	1.05	
Luxembourg	1.24	1.17	1.18	1.10	1.04	0.98	
Mada							
Malay				0.95			
Mali			0.16		0.17		

To access the data, follow these steps:

1. Go to "**https://databrowser.uis.unesco.org/**"
2. Click on "**Browse Data**"
3. Search "**Gross domestic expenditure on R&D (GERD)"** on the search box.
4. Click on "**+ Add**" and click on "**Go to View data**" on pop-up notification.
5. Click "**Download filtered data**" on the bottom right of the screen to download "**Excel**" the data.

Breakdown from **MASTIC**

MASTIC provides a more detailed components breakdown of type of R&D expenditure, by sectors and number of personnels and researchers, allowing for deeper national-level analysis.

DATA BERKAITAN GERD 1992 - 2020

TAHUN	GERD (RM JUTA)	GERD/KDNK (%)	PUBLIC		PRIVATE	
			RM JUTA	PUBLIC (%)	RM JUTA	PRIVATE (%)
1992	550.7	0.37	304.4	55.3	246.3	48.5
1994	611.3	0.34	315.8	51.7	292.6	29.4
1996	549.2	0.22	149.1	27.1	400.1	57.0
1998	1,127.0	0.39	380.9	33.8	746.1	66.2
2000	1,671.5	0.50	703.6	42.1	967.9	57.9
2002	2,500.6	0.69	867.5	34.7	1,633.1	65.3
2004	2,843.8	0.63	807.6	28.4	2,033.3	71.6
2006	3,646.7	0.64	550.3	15.1	3,096.4	84.9
2008	6,070.8	0.82	1,791.4	29.5	4,279.4	70.5
2009	7,199.9	1.01	2,170.4	30.1	5,029.5	69.9
2010	8,510.8	1.07	2,978.8	35.0	5,532.0	65.0
2011	9,422.0	1.07	4,083.0	43.3	5,339.0	56.7
2012	10,613.0	1.13	3,773.0	35.6	6,840.0	64.4
2014	13,971.0	1.26	7,592.0	54.3	6,379.0	45.7
2015	15,058.3	1.30	7,234.8	48.0	7,823.5	52.0
2016	17,685.4	1.44	7,667.8	43.4	10,006.1	57.0
2018	15,045.0	1.04	8,431.0	27.9	6,614.0	38.2
2020	13,491.7	0.95	7,967.0	59.0	5,516.0	41.0

GERD	Gross Domestic Expenditure on Research and Development
BERD	Business Enterprise Expenditure on Research and Development
HERD	Higher Education Expenditure on Research and Development
GOVERD	Government Expenditure on Research and Development
PNPERD	Private Non-Profit Expenditure on Research and Development

To access the data, follow these steps:

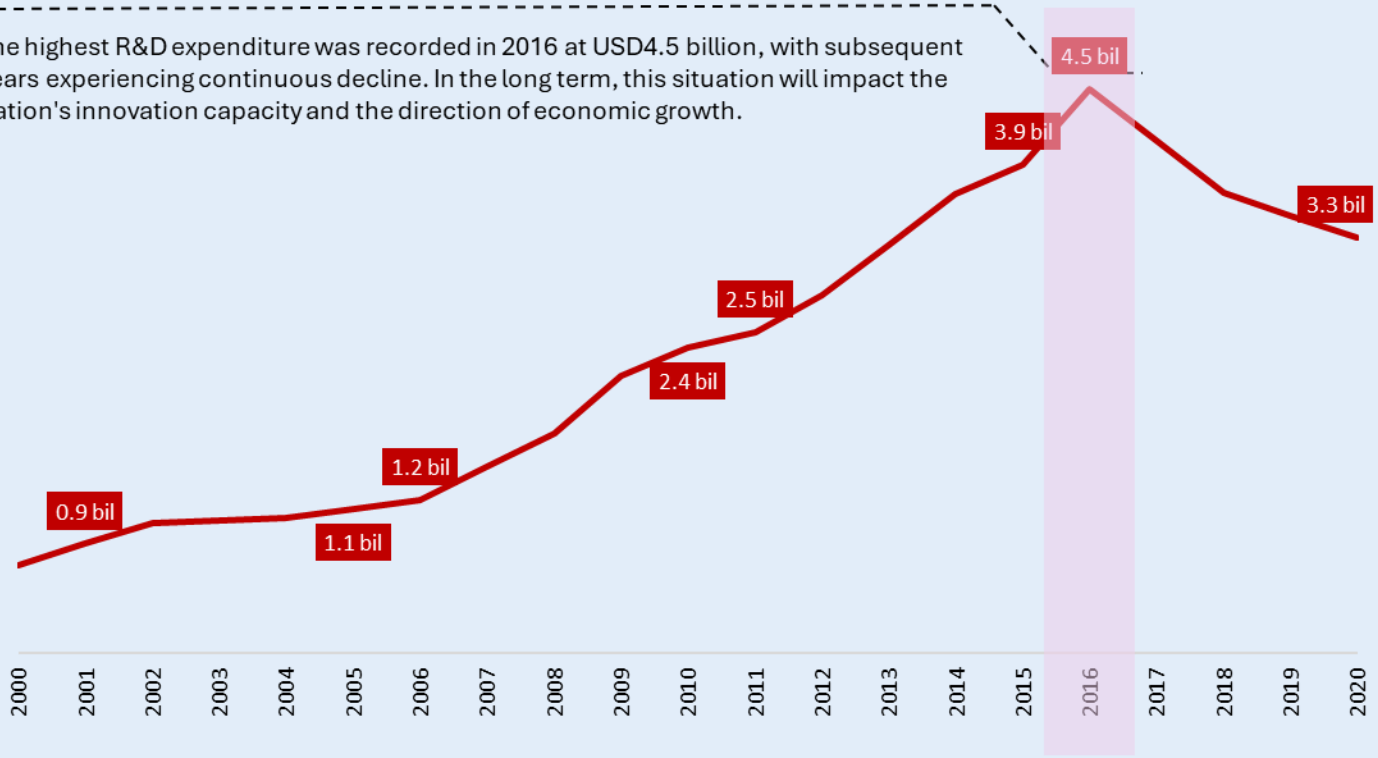
1. Go to "**https://mastic.mosti.gov.my/**"
2. Click on "**Statistic**" tab
3. Then, click on "**STI Trend > Research & Development (R&D) Indicators"**
4. From **"Chart context menu**" on the top right of the chart, select "**Download XLS"** to download the data in Excel form.

Malaysia's historical GERD trend and gaps

7.7% CAGR
GERD Growth, 2000-2020

GERD expenditure trend in Malaysia, 2000-2018 (billion USD)

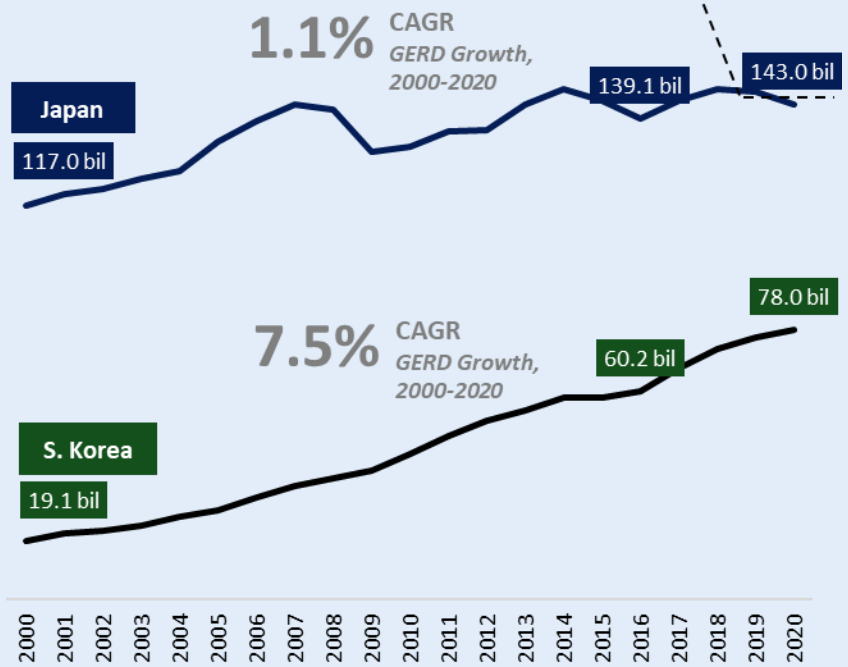
The highest R&D expenditure was recorded in 2016 at USD4.5 billion, with subsequent years experiencing continuous decline. In the long term, this situation will impact the nation's innovation capacity and the direction of economic growth.



Source: MASTIC, estimation made for years with missing data using a simple average.

GERD expenditure trend in Japan and South Korea, 2000-2018 (billion USD)

Japan and South Korea, on the other hand, exhibit more stable growth in GERD, with overall increasing trends observed over the years.



Source: World Development Indicators, The World Bank

Ideal Indicators and the Fragmented R&D Data Ecosystem

Despite having defined indicators, gaps in survey coverage, different samples each year, data fragmentation and limited use of administrative records reduce Malaysia's ability to report comprehensively at the national and international level.

Sample Size and Response Rate of the National R&D Survey

Business Enterprises R&D
Sample: 3,671 **Respond**: 2,223 (67.7%)

Higher Learning Institutes R&D
Sample: 620 HLIs **Respond**: 552 (95.8%)

Government Research Institutes and Agencies R&D
Sample: 95 **Respond**: 94 (99.9%)

Non-Governmental Organisation R&D
Sample: 44 **Respond**: 33 (89.2%)

Note: For 2019 ref. year | Source: MASTIC, MOSTI

Business R&D is underreported, with only two-thirds of sampled firms responding to the national R&D survey.

Data Fragmentation and Limited Use of Administrative Records

MINISTRY OF SCIENCE, TECHNOLOGY, AND INNOVATION	MINISTRY OF ECONOMY DEPARTMENT OF STATISTICS MALAYSIA	MINISTRY / AGENCIES
27 indicators	12 indicators	6 indicators
National R&D Survey	AES & Economic Census	Administrative Records

MASTIC and DOSM surveys capture a broad range of R&D indicators, but response rates are limited, and the data is not systematically integrated.

Administrative records hold valuable R&D information but remain siloed/underutilised for national reporting.

Bridging the Gaps in Malaysia's R&D Data Ecosystem

A multi-source strategy is needed to address long-standing R&D data gaps, supported by measures to improve response rates.

Options and Strategies to Address Data Gaps

To build a more complete and responsive R&D data ecosystem, Malaysia must draw on three primary data streams.

1. **Survey-based data gaps**
   Improve completeness through better sampling, coordination with administrative sources, and targeted outreach to underreported sectors (especially business and NGOs).
2. **Administrative data gaps**
   Unlock data from ministries and agencies, through structured access protocols and shared classifications.
3. **Public-listed companies R&D data**
   Extract R&D disclosures from corporate reports (e.g., Bursa Malaysia) by standardising extraction and linking them to economic classification systems for statistical integration.

Improving Survey Response Rates

Raising response rates is critical to improving the reliability of national R&D statistics.

1. **Legislative framework**
   Explore options to make certain R&D reporting fields mandatory for selected sectors or entities (e.g., high R&D-intensity firms, recipients of public funds).
2. **Incentive mechanisms**
   Incentives can include tax credits, grant access, performance points, or institutional recognition, tailored to encourage timely and detailed R&D reporting across sectors.
3. **Adoption of a Panel Approach for High R&D-Intensity Firms**
   Adopt a panel structure for tracking high R&D performers over time to reduce burden while improving consistency and trend analysis.

R&D data collection approaches in Malaysia

While Frascati- and SNA-based R&D data collections provide differing guidance—leading to gaps and overlapping efforts by different agencies—they also present opportunities to bridge the disconnect and advance toward more integrated, coherent measurement.

National Survey of Research and Development (R&D) are firmly **grounded in the Frascati Manual (2015)**, applying its definitions, classifications, and reporting standards across all sectors.

Frascati-based survey			
Business Enterprises R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sample : 3,671 (for 2019 ref. year) Responded: 2,223 (67.7%)
Higher Learning Institutes R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sampling: 620 HLIs (for 2019 ref. year) Responded: 552 (95.8%)
Government Research Institutes and Agencies R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sample : 95 (for 2019 ref. year) Responded: 94 (99.9%)
Non-Governmental Organisation R&D	• R&D expenditure and activities • R&D personnel • R&D Source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D	Sample : 44 (for 2019 ref. year) Responded: 33 (89.2%)

Source: MASTIC, MOSTI

Annual Economic Survey (AES) is primarily **guided by the System of National Accounts (SNA) framework**, with Section C capturing key R&D data and incorporating selected Frascati-aligned elements.

SNA-based survey	
	Covered under Section C – Innovation and R&D
Annual Economic Survey	• Certification and accreditation • Intellectual Property (IP) protection • Technical assistance received • Innovation activities • Innovation funding sources • R&D total expenditure • In-house R&D activities • Current R&D expenditure • Capital R&D expenditure • Source of R&D funds • Type of R&D • Employees involved with R&D

Source: DOSM

R&D data collection approaches in Malaysia

The comprehensive and standardised nature of National R&D survey provides a strong foundation for harmonising with SNA-based surveys and strengthening national data integration efforts.

National Survey of Research and Development (R&D)

1 Business Enterprises **2** Higher Learning Institutes **3** Government Research Institutes and Agencies **4** Non-Governmental Organisation

R&D Expenditure & Activities

1. Total R&D expenditure breakdown (RM)
2. Value of the R&D spent in previous year (RM)
3. R&D activities by field of research (%)
4. R&D activities by socio-economic objective (%)
5. R&D activities by national priority area (%)
6. Type of R&D activities (%)

R&D Personnel

7. Internal R&D personnel (numbers)
8. Total labour cost (%)
9. External R&D personnel (numbers)

R&D Source of Funds

10. Sources of R&D funds (%)
11. Location of R&D projects (%)

R&D Outsourced

12. R&D outsourcing
13. Projects being outsourced (RM)
14. Projects collaborated (numbers)

R&D Output

15. Publications
16. Intellectual property
17. Revenue
18. Commercialisation
19. *Human capital (graduated)

**R&D Incentives

20. R&D incentives provided by the government
21. Types of R&D incentives
22. Benefits obtained from R&D activities

Factors Limiting R&D Activities

23. Factor preventing involvement in R&D

Impact of COVID-19 on R&D activities

24. Reduction in R&D expenditure
25. Influence of pandemic to research focus
26. Measure government should take to assist

Suggestion to Enhance R&D Activities

27. Measure government should take to enhance effectiveness of R&D

Notes:
* indicates the question only available for Higher Learning Institute. | ** indicates the section not applicable for Higher Learning Institutes.

Benchmarking against leaders: Insights from the R&D Satellite Account and tailored approaches

Five countries have embarked on the development of R&D Satellite Accounts, with most efforts being research-based, while other leaders in R&D and innovation have adopted unique, tailored approaches to track and evaluate R&D performance.

R&D Satellite Account

United States

Early foundations
- 1990s: Recognition of the need to measure R&D activities as part of economic accounts.

Development of R&D Satellite Account
- 2000s: The R&D Satellite Account treats R&D expenditures as investments rather than expenses to better capture the economic value of R&D in national accounts.

Integration into National Accounts
- 2010s: The R&D expenditures incorporated into the National Income and Product Accounts (NIPAs), classifying them as intangible investments.

Current status
- Fully operational and integrated into the U.S. economic accounting system to provide insights into sectoral R&D investments and their contributions to the economy.

Availability of R&D SA in other countries

R&D Platform for Investment & Evaluation

South Korea

Early foundations
- 2017-2018: In response to the challenges posed by the IR4.0, the South Korean government recognized the need for a more efficient R&D investment and evaluation system.
- This led to the conceptualization of R&D PIE to streamline R&D processes and foster innovation.

Development of R&D PIE
- R&D PIE platform designed to integrate big data analysis, enabling the identification of key investment areas and promoting collaboration among ministries to align R&D with industrial policies and human resource development.

Current status
- Fully operational and the platform's integration of big data analysis and inter-ministerial collaboration has positioned it as a central component in South Korea's R&D strategy.

Australian Innovation Statistics

Australia

Early foundations
- 2022-2023: AIS tracks the conditions for creating and adopting new technologies and knowledge in Australia, and their impacts on economic productivity.

Development of AIS
- AIS data are organized in 7 dashboards, each linking to a key aspect of Australia's innovation system.

Current status
- Fully operational with dashboards for
  1) Domestic business environment
  2) Collaboration (national and international)
  3) Skills (training, skilled migration and job mobility)
  4) International trade
  5) R&D (public and private)
  6) Innovation outcomes
  7) Science, research & innovation (SRI) budget tables

Coordinated R&D ecosystems

A well-coordinated institutional ecosystem ensures each agency contributes to a unified R&D account.

01 **A satellite account is more than a statistical output**
It functions as a system-wide integration tool, linking R&D activities to the broader economic narrative—especially in terms of GDP, productivity, and national planning.

02 **Developing a satellite account requires system alignment**
It depends on aligning institutions, methodologies, and data flows across agencies—ensuring that survey systems, classifications, and reporting are interoperable.

03 **We're not replicating the U.S.—we're learning from them**
The goal is to benchmark good practices and understand how a satellite account can strengthen the national return on R&D investment.

Function	United States	Malaysia
Data collection (Frascati & SNA-based)	• U.S. Census Bureau & NCSES collect detailed R&D data (Frascati) • U.S. Census Bureau collects complementary R&D items (SNA-based)	• MASTIC collects detailed R&D data (Frascati) • DOSM collects R&D data via AES and EC (SNA-based)
Data validation & quality assurance	• Cross-validated using admin data (IRS, Census) • Methodological reviews by U.S. Census Bureau & NCSES	• Validation conducted separately by agencies • Potential for alignment and shared standards
Sampling frame structure (by sector)	• Unified business register used across agencies • Integrated Postsecondary Education Data System used for higher education • Agency registers for government and nonprofit organizations	• MASTIC maintains separate frames for sectors • DOSM uses national business register
Use of administrative data	• Used to verify expenditures, personnel, sector classification and supports harmonisation	• Integration opportunities exist to support validation and estimation
Data integration & harmonisation	• BEA integrates NCSES and Census data using harmonised variables and classification	• Currently compiled separately; harmonisation framework yet to be developed
Institutional coordination	• NCSES and BEA have formal data-sharing protocols and collaborative estimation processes	• Formal integration mechanisms can be developed
Estimation for satellite account	• BEA capitalises R&D data (using Frascati) and estimates investment, depreciation, and value added	• Satellite account not yet implemented; potential exists using existing survey foundations
Output & reporting for policy use	• Satellite account jointly published by BEA (macro) and NCSES (sectoral) • Supports GDP, productivity analysis etc.	• Separate outputs, but huge opportunity to converge for national account integration

Notes: BEA = Bureau of Economic Analysis | NCSES = National Center for Science and Engineering Statistics | NSF = National Science Foundation

Aligning Malaysia's R&D data with global standards

Malaysia already collects many core R&D variables—providing a solid base to transition into a satellite account framework.

1 Business Enterprise R&D

R&D paid for by company

1. Worldwide R&D expense ($)
2. Types of R&D paid
3. R&D paid by types ($)
4. Indirect R&D charges ($)
5. Cost for each business code ($)
6. Cost for each location ($)
7. Largest and second largest domestic location for R&D ($)
8. Domestic R&D paid by foreign subsidiaries ($)
9. Foreign R&D paid by domestic operations ($)
10. Monetary gifts to universities or colleges ($)
11. Projected cost for next year ($)
12. Domestic R&D paid by categories ($)

Cost paid for by others

13. Worldwide cost ($)
14. Cost incurred paid in domestic and other countries ($)
15. Cost for each location ($)
16. Largest and second largest domestic location for R&D ($)
17. Amount paid by agencies ($)
18. Projected cost for next year ($)

Assets

19. Net worldwide assets ($)
20. Accumulated depreciation and amortization ($)
21. reduction in value due to impairment charges, disposals, or retirement ($)
22. Value assets acquired through mergers and acquisitions ($)
23. Worldwide expenditure for capitalized assets ($)
24. Assets paid by other company ($)

Management and strategy of R&D

25. R&D paid to new business area (%)
26. R&D paid for research purpose and development purpose ($)
27. Areas of application for domestic R&D (%)
28. Technology focus domestic R&D paid (%)
29. Foreign R&D paid by company ($)
30. Foreign R&D paid by other ($)

Human resources

31. Total R&D and other employees
32. Domestic employees in each state
33. Employees from other countries

Tax (state and federal tax)

34. Tax credit filing
35. U.S state tax credit filing
36. Charge for foreign R&D subsidiaries as part of cost sharing agreement
37. Charge foreign company for company R&D as part of cost sharing agreement

2 Higher Education R&D

1. Total R&D by source ($)
2. Internal funding types ($)
3. Foreign R&D funding ($)
4. Funding agreement type (% of total)
5. Medical school R&D ($)
6. Clinical trials ($)
7. R&D by activity type ($ or %)
8. R&D received as subrecipient ($)
9. R&D given to subrecipients ($)
10. Federal R&D by field ($)
11. Other federal agencies ($)
12. Nonfederal R&D by field ($)
13. R&D cost categories ($)
14. Capitalization thresholds ($)
15. Capital equipment by Field ($)
16. R&D personnel headcount (persons)
17. Full-time equivalent (FTE) count for R&D personnel by function

3 Government R&D

R&D activities (for screening purposes)

1. Division, branch, or office devoted to R&D
2. Performed R&D activities using agency staff
3. Funded R&D at another state or local government
4. Funded universities or nonprofit organization
5. Funded companies or individuals

Internal R&D expenditures

6. Internal R&D funded by federal funds, state funds, other non-federal government, nonprofit organizations, businesses, higher educations institutions ($)
7. Internal R&D expenditure by types ($)
8. Internal R&D employees ($)
9. External R&D expenditures
10. Total R&D expenditures by function (sectoral) ($)
11. Funds received from federal agencies ($)
12. R&D expenditures for land and facilities ($)

4 Nonprofit Organization R&D

1. Research funding sources ($)
2. Research performance by field ($)
3. Clinical trial research (%)
4. Research performance by type of research ($)
5. Research performance by type of cost ($)
6. Research personnel (full-time, contract, volunteers) (persons)
7. Funding for research performed by others ($)
8. Capital expenditures for research operations ($)

Note: Extracted from the Annual Business Survey (Section C – Research Activities at Nonprofit Organizations)

Note: Not available for Malaysia

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: SCIENTIFIC INFRASTRUCTURE

INDICATOR 4.3.04

Business expenditure on R&D

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.3.04: Business expenditure on R&D

INDICATOR DEFINITION

National estimates, projections or provisional of business research and development expenditure data for the most recent year.

DETAILED CALCULATION OF INDICATOR

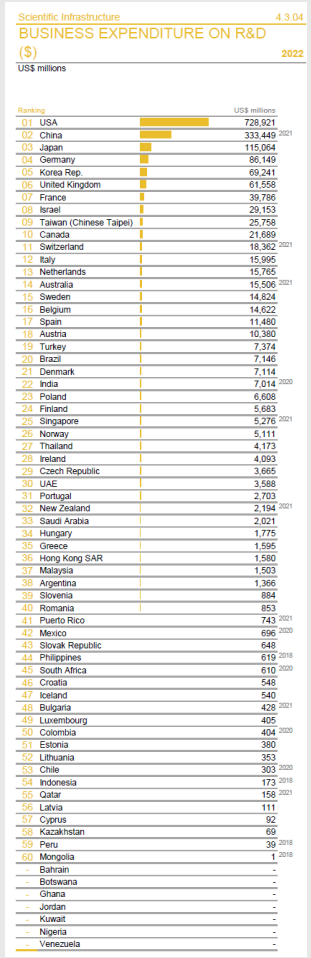
$$\boldsymbol{Business\ Expenditure\ on\ R\&D\ (BERD) =}$$

Total intramural R&D expenditure performed by businesses, covering current costs and capital expenditures related to R&D activities.

DATA SOURCE FROM WCY

OECD Main Science and Technology Indicators
UNESCO
National sources

WHAT DOES THE SCORE INDICATE?



Scientific Infrastructure 4.3.04

BUSINESS EXPENDITURE ON R&D ($) 2022

US$ millions

Ranking		US$ millions	
01	USA	728,921	
02	China	333,449	2021
03	Japan	115,064	
04	Germany	86,149	
05	Korea Rep.	69,241	
06	United Kingdom	61,558	
07	France	39,786	
08	Israel	29,153	
09	Taiwan (Chinese Taipei)	25,758	
10	Canada	21,689	
11	Switzerland	18,362	2021
12	Italy	15,995	
13	Netherlands	15,765	
14	Australia	15,506	2021
15	Sweden	14,824	
16	Belgium	14,622	
17	Spain	11,480	
18	Austria	10,380	
19	Turkey	7,374	
20	Brazil	7,146	
21	Denmark	7,114	
22	India	7,014	2020
23	Poland	6,608	
24	Finland	5,683	
25	Singapore	5,276	2021
26	Norway	5,111	
27	Thailand	4,173	
28	Ireland	4,093	
29	Czech Republic	3,665	
30	UAE	3,588	
31	Portugal	2,703	
32	New Zealand	2,194	2021
33	Saudi Arabia	2,021	
34	Hungary	1,775	
35	Greece	1,595	
36	Hong Kong SAR	1,580	
37	Malaysia	1,503	
38	Argentina	1,366	
39	Slovenia	884	
40	Romania	853	
41	Puerto Rico	743	2021
42	Mexico	696	2020
43	Slovak Republic	648	
44	Philippines	619	2018
45	South Africa	610	2020
46	Croatia	548	
47	Iceland	540	
48	Bulgaria	428	2021
49	Luxembourg	405	
50	Colombia	404	2020
51	Estonia	380	
52	Lithuania	353	
53	Chile	303	2020
54	Indonesia	173	2018
55	Qatar	158	2021
56	Latvia	111	
57	Cyprus	92	
58	Kazakhstan	69	
59	Peru	39	2018
60	Mongolia	1	2018
-	Bahrain	-	
-	Botswana	-	
-	Ghana	-	
-	Jordan	-	
-	Kuwait	-	
-	Nigeria	-	
-	Venezuela	-	

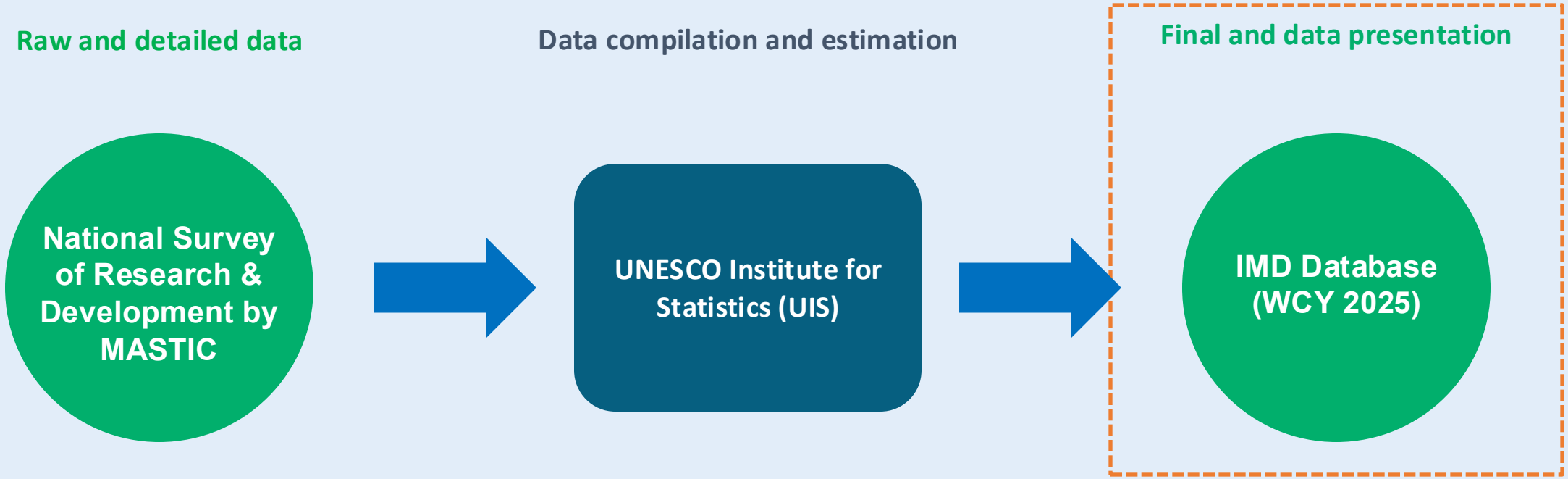
The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

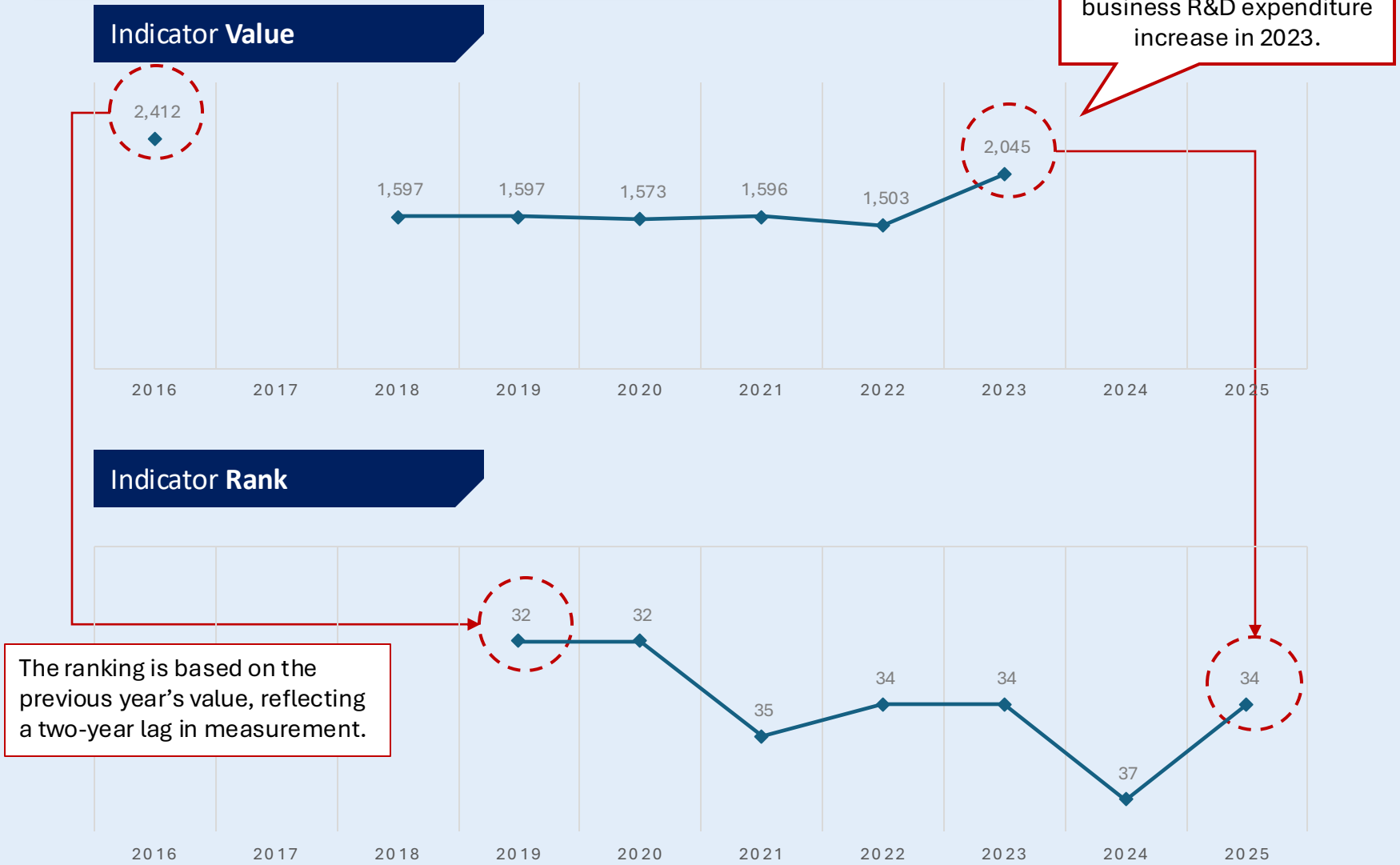
Business expenditure on R&D (BERD) reflects the capacity of the private sector to invest in innovation and technology-driven growth. Higher BERD indicates stronger industry engagement in R&D, contributing to national competitiveness, productivity, and long-term economic resilience. A high level of business R&D activity also signals closer linkages between research, innovation, and commercial applications.

SOURCE OF DATA



INDICATOR 4.3.04: Business expenditure on R&D

How do the indicators perform across years?



The ranking for WCY 2025 improved since the value of business R&D expenditure increase in 2023.

The ranking is based on the previous year's value, reflecting a two-year lag in measurement.

The indicator shows a positive improvement in 2023, with an increase in business R&D expenditure following several years of stagnation.

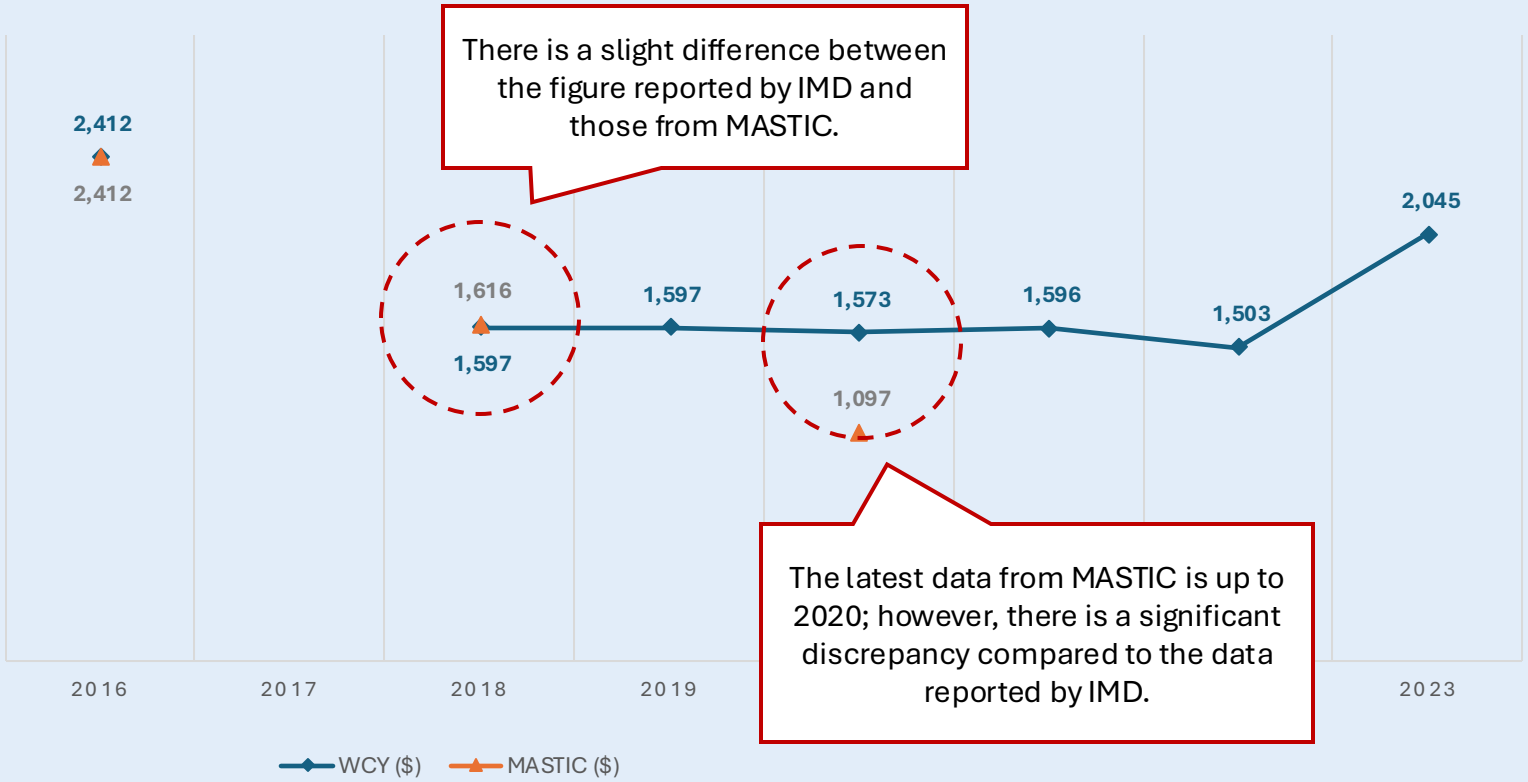
This upward trend contributed to an improvement in Malaysia's rank in WCY 2025. Given the two-year lag in ranking, sustained efforts to encourage private sector investment in R&D will be critical to further enhance future competitiveness.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.3.04: Business expenditure on R&D

Comparative Measurement Assessment of Indicator

Indicator **Value**



The business R&D expenditure data reported by IMD shows discrepancies when compared to MASTIC figures. These differences are mainly due to variations in data coverage, estimation methods, and reporting periods.

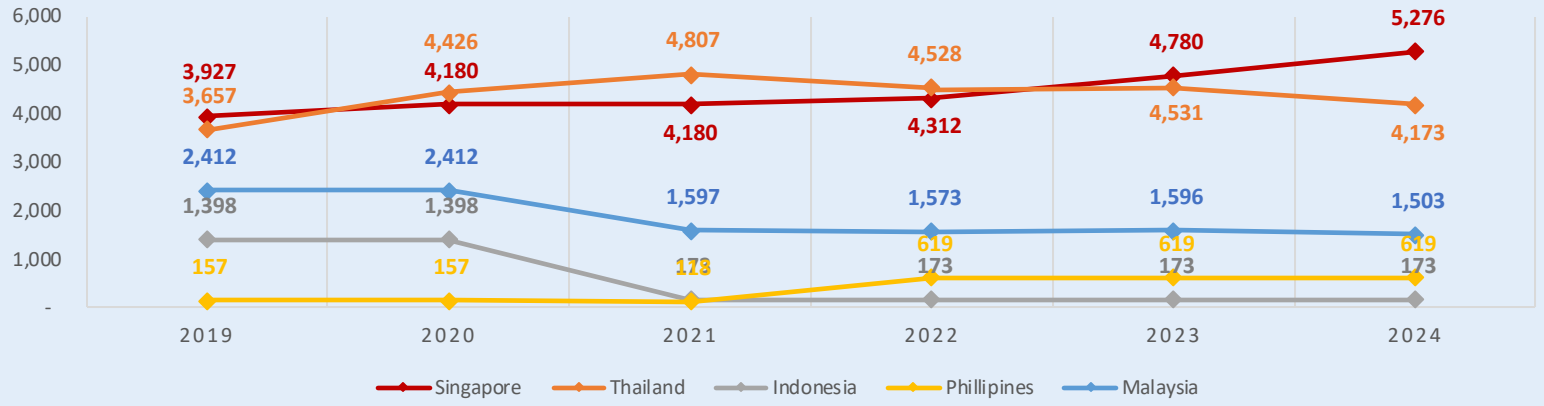
IMD relies on international data compilations and projections to ensure cross-country comparability, whereas MASTIC reports based on Malaysia's national surveys and methodologies.

In addition, the latest MASTIC data is only available up to 2020, while IMD incorporates more updated estimates (2023), contributing to the gap observed between the two datasets.

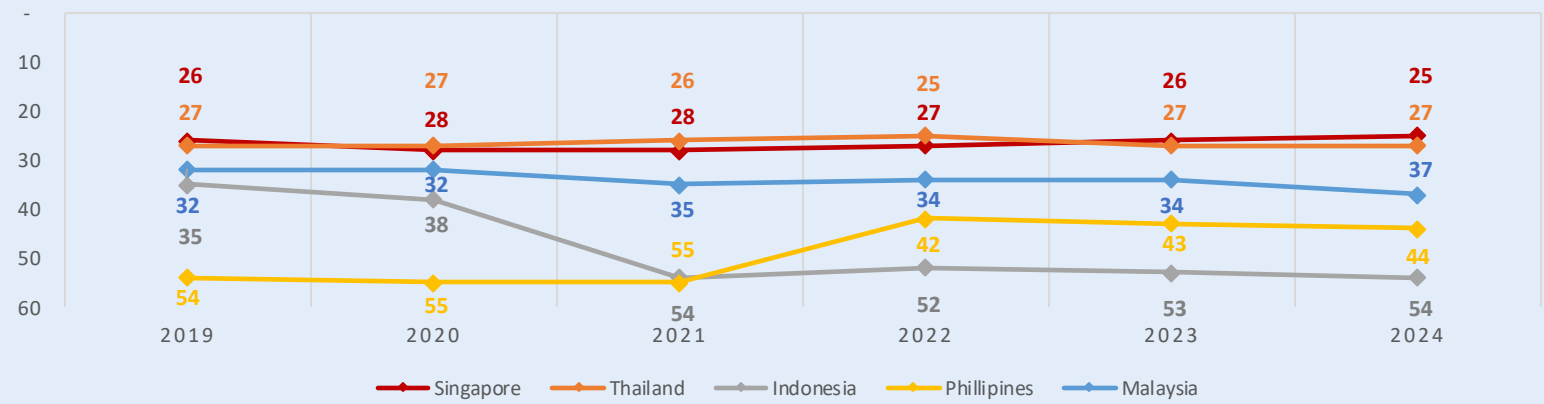
Source: *IMD World Competitiveness Yearbook 2024 and Department of Statistic Malaysia 2023*

INDICATOR 4.3.04: Business expenditure on R&D

Indicator Values for Selected Countries



Indicator Rankings for Selected Countries



Malaysia's business expenditure on R&D has remained stagnant over recent years, with a slight decline recorded in 2024. In contrast, Singapore and Thailand continue to demonstrate steady growth, widening the regional gap.

This trend has resulted in Malaysia's competitiveness ranking in this indicator falling to 37th position globally.

Sumber: IMD (2024)

Comparative Measurement Assessment of Indicator

Breakdown from **MASTIC**

MASTIC provides a more detailed components breakdown of type of R&D expenditure, by sectors and number of personnels and researchers, allowing for deeper national-level analysis.

TAHUN	GERD (RM JUTA)	GERD/KDNK (%)	BERD (INDUSTRY)	
			RM JUTA	BERD/GERD (%)
1992	550.7	0.37	246.3	44.7
1994	611.3	0.34	292.6	47.9
1996	549.2	0.22	400.1	72.9
1998	1,127.0	0.39	746.1	66.2
2000	1,671.5	0.50	967.9	57.9
2002	2,500.6	0.69	1,633.1	65.3
2004	2,843.8	0.63	2,033.3	71.5
2006	3,646.7	0.64	3,096.4	84.9
2008	6,070.8	0.82	4,279.4	70.5
2009	7,199.9	1.01	5,029.5	69.9
2010	8,510.8	1.07	5,532.0	65.0
2011	9,422.0	1.07	5,339.0	56.7
2012	10,613.0	1.13	6,840.0	64.5
2014	13,971.0	1.26	6,379.0	45.7
2015	15,058.3	1.30	7,823.5	52.0
2016	17,685.4	1.44	10,006.1	56.6
2018	15,045.0	1.04	6,614.0	43.3
2020	13,491.7	0.95	4,613.0	34.2

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   Unlock data from ministries and agencies, through structured access protocols and shared classifications.
3. **Public-listed companies R&D data**
   Extract R&D disclosures from corporate reports (e.g., Bursa Malaysia) by standardising extraction and linking them to economic classification systems for statistical integration.

Improving Survey Response Rates

Raising response rates is critical to improving the reliability of national R&D statistics.

1. **Legislative framework**
   Explore options to make certain R&D reporting fields mandatory for selected sectors or entities (e.g., high R&D-intensity firms, recipients of public funds).
2. **Incentive mechanisms**
   Incentives can include tax credits, grant access, performance points, or institutional recognition, tailored to encourage timely and detailed R&D reporting across sectors.
3. **Adoption of a Panel Approach for High R&D-Intensity Firms**
   Adopt a panel structure for tracking high R&D performers over time to reduce burden while improving consistency and trend analysis.

R&D data collection approaches in Malaysia

While Frascati- and SNA-based R&D data collections provide differing guidance—leading to gaps and overlapping efforts by different agencies—they also present opportunities to bridge the disconnect and advance toward more integrated, coherent measurement.

National Survey of Research and Development (R&D) are firmly **grounded in the Frascati Manual (2015)**, applying its definitions, classifications, and reporting standards across all sectors.

Frascati-based survey			
Business Enterprises R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sample : 3,671 (for 2019 ref. year) Responded: 2,223 (67.7%)
Higher Learning Institutes R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sampling: 620 HLIs (for 2019 ref. year) Responded: 552 (95.8%)
Government Research Institutes and Agencies R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sample : 95 (for 2019 ref. year) Responded: 94 (99.9%)
Non-Governmental Organisation R&D	• R&D expenditure and activities • R&D personnel • R&D Source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D	Sample : 44 (for 2019 ref. year) Responded: 33 (89.2%)

Source: MASTIC, MOSTI

Annual Economic Survey (AES) is primarily **guided by the System of National Accounts (SNA) framework**, with Section C capturing key R&D data and incorporating selected Frascati-aligned elements.

SNA-based survey	
	Covered under Section C – Innovation and R&D
Annual Economic Survey	• Certification and accreditation • Intellectual Property (IP) protection • Technical assistance received • Innovation activities • Innovation funding sources • R&D total expenditure • In-house R&D activities • Current R&D expenditure • Capital R&D expenditure • Source of R&D funds • Type of R&D • Employees involved with R&D

Source: DOSM

R&D data collection approaches in Malaysia

The comprehensive and standardised nature of National R&D survey provides a strong foundation for harmonising with SNA-based surveys and strengthening national data integration efforts.

National Survey of Research and Development (R&D)

1 Business Enterprises **2** Higher Learning Institutes **3** Government Research Institutes and Agencies **4** Non-Governmental Organisation

R&D Expenditure & Activities

1. Total R&D expenditure breakdown (RM)
2. Value of the R&D spent in previous year (RM)
3. R&D activities by field of research (%)
4. R&D activities by socio-economic objective (%)
5. R&D activities by national priority area (%)
6. Type of R&D activities (%)

R&D Personnel

7. Internal R&D personnel (numbers)
8. Total labour cost (%)
9. External R&D personnel (numbers)

R&D Source of Funds

10. Sources of R&D funds (%)
11. Location of R&D projects (%)

R&D Outsourced

12. R&D outsourcing
13. Projects being outsourced (RM)
14. Projects collaborated (numbers)

R&D Output

15. Publications
16. Intellectual property
17. Revenue
18. Commercialisation
19. *Human capital (graduated)

**R&D Incentives

20. R&D incentives provided by the government
21. Types of R&D incentives
22. Benefits obtained from R&D activities

Factors Limiting R&D Activities

23. Factor preventing involvement in R&D

Impact of COVID-19 on R&D activities

24. Reduction in R&D expenditure
25. Influence of pandemic to research focus
26. Measure government should take to assist

Suggestion to Enhance R&D Activities

27. Measure government should take to enhance effectiveness of R&D

Notes:
* indicates the question only available for Higher Learning Institute. | ** indicates the section not applicable for Higher Learning Institutes.

Benchmarking against leaders: Insights from the R&D Satellite Account and tailored approaches

Five countries have embarked on the development of R&D Satellite Accounts, with most efforts being research-based, while other leaders in R&D and innovation have adopted unique, tailored approaches to track and evaluate R&D performance.

R&D Satellite Account

United States

Early foundations
- 1990s: Recognition of the need to measure R&D activities as part of economic accounts.

Development of R&D Satellite Account
- 2000s: The R&D Satellite Account treats R&D expenditures as investments rather than expenses to better capture the economic value of R&D in national accounts.

Integration into National Accounts
- 2010s: The R&D expenditures incorporated into the National Income and Product Accounts (NIPAs), classifying them as intangible investments.

Current status
- Fully operational and integrated into the U.S. economic accounting system to provide insights into sectoral R&D investments and their contributions to the economy.

Availability of R&D SA in other countries

R&D Platform for Investment & Evaluation

South Korea

Early foundations
- 2017-2018: In response to the challenges posed by the IR4.0, the South Korean government recognized the need for a more efficient R&D investment and evaluation system.
- This led to the conceptualization of R&D PIE to streamline R&D processes and foster innovation.

Development of R&D PIE
- R&D PIE platform designed to integrate big data analysis, enabling the identification of key investment areas and promoting collaboration among ministries to align R&D with industrial policies and human resource development.

Current status
- Fully operational and the platform's integration of big data analysis and inter-ministerial collaboration has positioned it as a central component in South Korea's R&D strategy.

Australian Innovation Statistics

Australia

Early foundations
- 2022-2023: AIS tracks the conditions for creating and adopting new technologies and knowledge in Australia, and their impacts on economic productivity.

Development of AIS
- AIS data are organized in 7 dashboards, each linking to a key aspect of Australia's innovation system.

Current status
- Fully operational with dashboards for
  1) Domestic business environment
  2) Collaboration (national and international)
  3) Skills (training, skilled migration and job mobility)
  4) International trade
  5) R&D (public and private)
  6) Innovation outcomes
  7) Science, research & innovation (SRI) budget tables

Coordinated R&D ecosystems

A well-coordinated institutional ecosystem ensures each agency contributes to a unified R&D account.

01 A satellite account is more than a statistical output

It functions as a system-wide integration tool, linking R&D activities to the broader economic narrative—especially in terms of GDP, productivity, and national planning.

02 Developing a satellite account requires system alignment

It depends on aligning institutions, methodologies, and data flows across agencies—ensuring that survey systems, classifications, and reporting are interoperable.

03 We're not replicating the U.S.—we're learning from them

The goal is to benchmark good practices and understand how a satellite account can strengthen the national return on R&D investment.

Function	United States	Malaysia
Data collection (Frascati & SNA-based)	• U.S. Census Bureau & NCSES collect detailed R&D data (Frascati) • U.S. Census Bureau collects complementary R&D items (SNA-based)	• MASTIC collects detailed R&D data (Frascati) • DOSM collects R&D data via AES and EC (SNA-based)
Data validation & quality assurance	• Cross-validated using admin data (IRS, Census) • Methodological reviews by U.S. Census Bureau & NCSES	• Validation conducted separately by agencies • Potential for alignment and shared standards
Sampling frame structure (by sector)	• Unified business register used across agencies • Integrated Postsecondary Education Data System used for higher education • Agency registers for government and nonprofit organizations	• MASTIC maintains separate frames for sectors • DOSM uses national business register
Use of administrative data	• Used to verify expenditures, personnel, sector classification and supports harmonisation	• Integration opportunities exist to support validation and estimation
Data integration & harmonisation	• BEA integrates NCSES and Census data using harmonised variables and classification	• Currently compiled separately; harmonisation framework yet to be developed
Institutional coordination	• NCSES and BEA have formal data-sharing protocols and collaborative estimation processes	• Formal integration mechanisms can be developed
Estimation for satellite account	• BEA capitalises R&D data (using Frascati) and estimates investment, depreciation, and value added	• Satellite account not yet implemented; potential exists using existing survey foundations
Output & reporting for policy use	• Satellite account jointly published by BEA (macro) and NCSES (sectoral) • Supports GDP, productivity analysis etc.	• Separate outputs, but huge opportunity to converge for national account integration

Notes: BEA = Bureau of Economic Analysis | NCSES = National Center for Science and Engineering Statistics | NSF = National Science Foundation

Aligning Malaysia's R&D data with global standards

Malaysia already collects many core R&D variables—providing a solid base to transition into a satellite account framework.

1 Business Enterprise R&D

R&D paid for by company

1. Worldwide R&D expense ($)
2. Types of R&D paid
3. R&D paid by types ($)
4. Indirect R&D charges ($)
5. Cost for each business code ($)
6. Cost for each location ($)
7. Largest and second largest domestic location for R&D ($)
8. Domestic R&D paid by foreign subsidiaries ($)
9. Foreign R&D paid by domestic operations ($)
10. Monetary gifts to universities or colleges ($)
11. Projected cost for next year ($)
12. Domestic R&D paid by categories ($)

Cost paid for by others

13. Worldwide cost ($)
14. Cost incurred paid in domestic and other countries ($)
15. Cost for each location ($)
16. Largest and second largest domestic location for R&D ($)
17. Amount paid by agencies ($)
18. Projected cost for next year ($)

Assets

19. Net worldwide assets ($)
20. Accumulated depreciation and amortization ($)
21. reduction in value due to impairment charges, disposals, or retirement ($)
22. Value assets acquired through mergers and acquisitions ($)
23. Worldwide expenditure for capitalized assets ($)
24. Assets paid by other company ($)

Management and strategy of R&D

25. R&D paid to new business area (%)
26. R&D paid for research purpose and development purpose ($)
27. Areas of application for domestic R&D (%)
28. Technology focus domestic R&D paid (%)
29. Foreign R&D paid by company ($)
30. Foreign R&D paid by other ($)

Human resources

31. Total R&D and other employees
32. Domestic employees in each state
33. Employees from other countries

Tax (state and federal tax)

34. Tax credit filing
35. U.S state tax credit filing
36. Charge for foreign R&D subsidiaries as part of cost sharing agreement
37. Charge foreign company for company R&D as part of cost sharing agreement

2 Higher Education R&D

1. Total R&D by source ($)
2. Internal funding types ($)
3. Foreign R&D funding ($)
4. Funding agreement type (% of total)
5. Medical school R&D ($)
6. Clinical trials ($)
7. R&D by activity type ($ or %)
8. R&D received as subrecipient ($)
9. R&D given to subrecipients ($)
10. Federal R&D by field ($)
11. Other federal agencies ($)
12. Nonfederal R&D by field ($)
13. R&D cost categories ($)
14. Capitalization thresholds ($)
15. Capital equipment by Field ($)
16. R&D personnel headcount (persons)
17. Full-time equivalent (FTE) count for R&D personnel by function

3 Government R&D

R&D activities (for screening purposes)

1. Division, branch, or office devoted to R&D
2. Performed R&D activities using agency staff
3. Funded R&D at another state or local government
4. Funded universities or nonprofit organization
5. Funded companies or individuals

Internal R&D expenditures

6. Internal R&D funded by federal funds, state funds, other non-federal government, nonprofit organizations, businesses, higher educations institutions ($)
7. Internal R&D expenditure by types ($)
8. Internal R&D employees ($)
9. External R&D expenditures
10. Total R&D expenditures by function (sectoral) ($)
11. Funds received from federal agencies ($)
12. R&D expenditures for land and facilities ($)

4 Nonprofit Organization R&D

1. Research funding sources ($)
2. Research performance by field ($)
3. Clinical trial research (%)
4. Research performance by type of research ($)
5. Research performance by type of cost ($)
6. Research personnel (full-time, contract, volunteers) (persons)
7. Funding for research performed by others ($)
8. Capital expenditures for research operations ($)

Note: Extracted from the Annual Business Survey (Section C – Research Activities at Nonprofit Organizations)

Note: Not available for Malaysia

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: SCIENTIFIC INFRASTRUCTURE

INDICATOR 4.3.06

Total R&D personnel

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.3.06: Total R&D personnel

INDICATOR DEFINITION

National estimates, projections or provisional of total research and development personnel data for the most recent year.

DETAILED CALCULATION OF INDICATOR

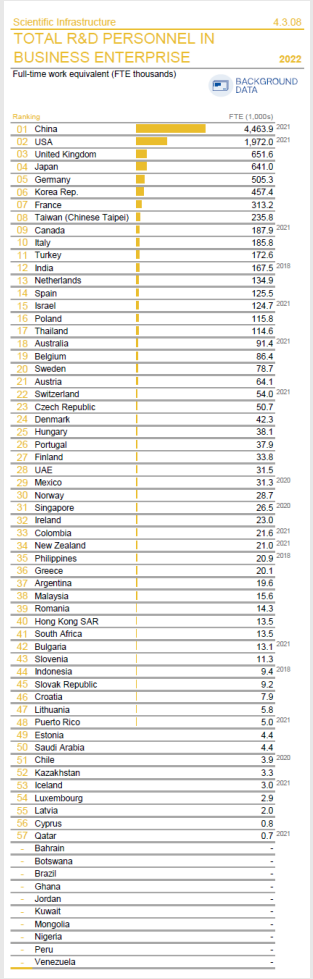
$$\boldsymbol{Total\ R\&D\ personnel} =$$

$$Full-time\ equivalent\ (FTE)\ of\ Researchers\ +\ Technicians\ +\ Other\ Supporting\ Staff\ engaged\ in\ R\&D\ activities$$

DATA SOURCE FROM WCY

OECD Main Science and Technology Indicators
UNESCO
National sources

WHAT DOES THE SCORE INDICATE?



Scientific Infrastructure 4.3.08

TOTAL R&D PERSONNEL IN BUSINESS ENTERPRISE 2022

Full-time work equivalent (FTE thousands)

BACKGROUND DATA

Ranking		FTE (1,000s)	
01	China	4,463.9	2021
02	USA	1,972.0	2021
03	United Kingdom	651.6	
04	Japan	641.0	
05	Germany	505.3	
06	Korea Rep.	457.4	
07	France	313.2	
08	Taiwan (Chinese Taipei)	235.8	
09	Canada	187.9	2021
10	Italy	185.8	
11	Turkey	172.6	
12	India	167.5	2018
13	Netherlands	134.9	
14	Spain	125.5	
15	Israel	124.7	2021
16	Poland	115.8	
17	Thailand	114.6	
18	Australia	91.4	2021
19	Belgium	86.4	
20	Sweden	78.7	
21	Austria	64.1	
22	Switzerland	54.0	2021
23	Czech Republic	50.7	
24	Denmark	42.3	
25	Hungary	38.1	
26	Portugal	37.9	
27	Finland	33.8	
28	UAE	31.5	
29	Mexico	31.3	2020
30	Norway	28.7	
31	Singapore	26.5	2020
32	Ireland	23.0	
33	Colombia	21.6	2021
34	New Zealand	21.0	2021
35	Philippines	20.9	2018
36	Greece	20.1	
37	Argentina	19.6	
38	Malaysia	15.6	
39	Romania	14.3	
40	Hong Kong SAR	13.5	
41	South Africa	13.5	
42	Bulgaria	13.1	2021
43	Slovenia	11.3	
44	Indonesia	9.4	2018
45	Slovak Republic	9.2	
46	Croatia	7.9	
47	Lithuania	5.8	
48	Puerto Rico	5.0	2021
49	Estonia	4.4	
50	Saudi Arabia	4.4	
51	Chile	3.9	2020
52	Kazakhstan	3.3	
53	Iceland	3.0	2021
54	Luxembourg	2.9	
55	Latvia	2.0	
56	Cyprus	0.8	
57	Qatar	0.7	2021
-	Bahrain	-	
-	Botswana	-	
-	Brazil	-	
-	Ghana	-	
-	Jordan	-	
-	Kuwait	-	
-	Mongolia	-	
-	Nigeria	-	
-	Peru	-	
-	Venezuela	-	

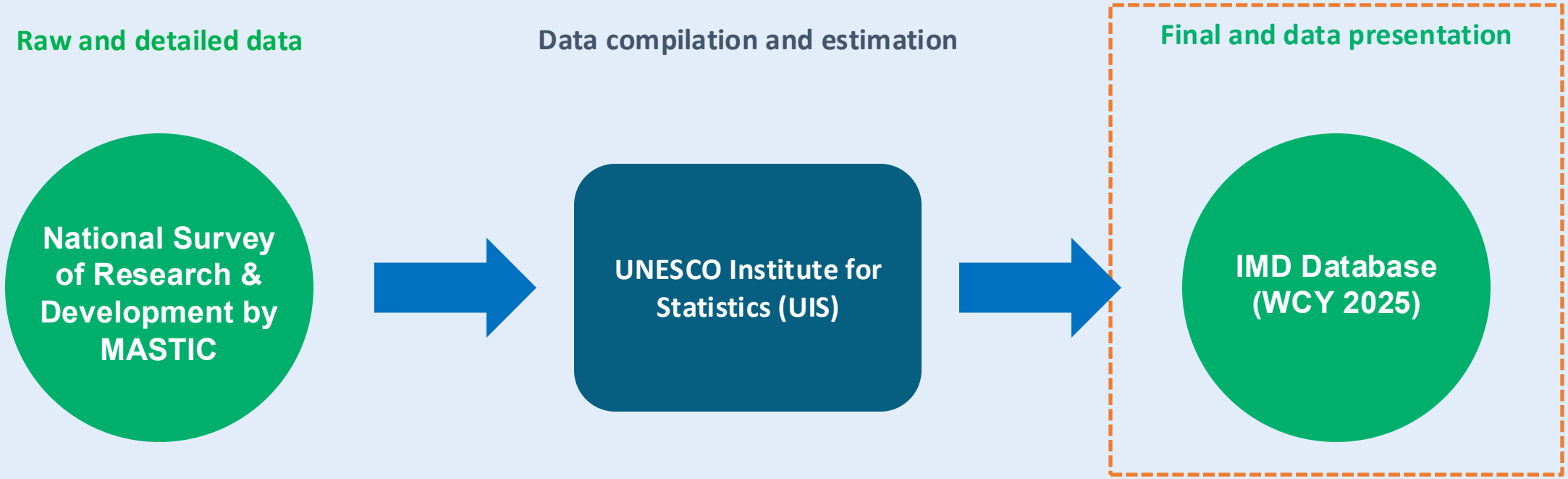
The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

A higher stock of R&D personnel reflects a country's capacity to conduct scientific research and develop innovations.It indicates the depth of human capital available for R&D, which drives technological advancement, industrial competitiveness, and productivity growth.IMD uses this metric as a key input factor to assess innovation capability

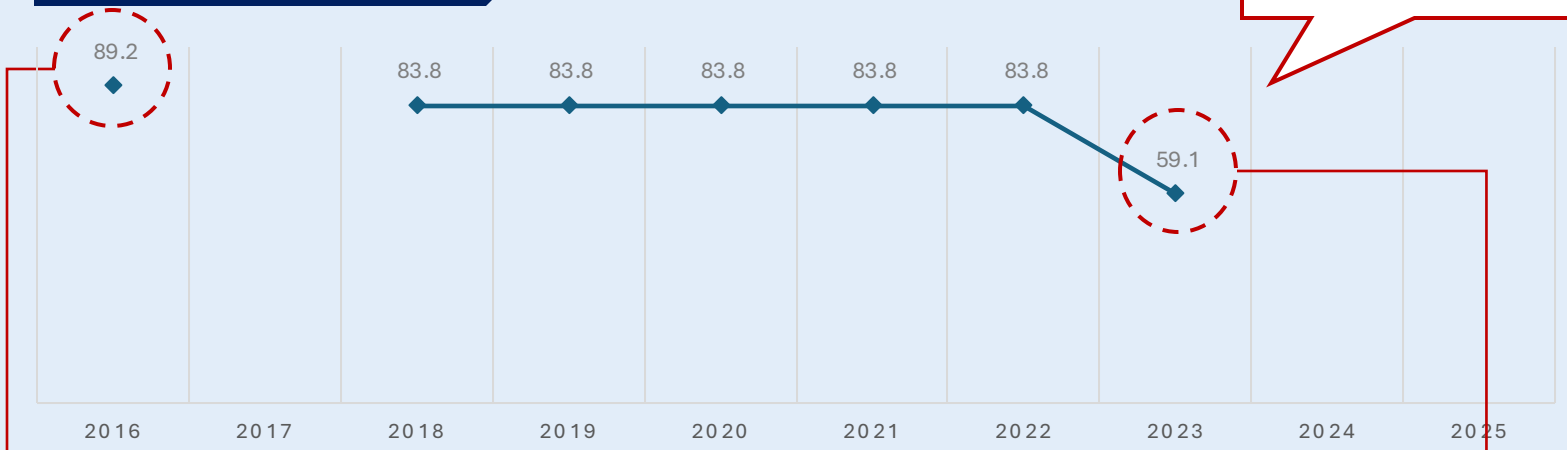
SOURCE OF DATA



INDICATOR 4.3.06: Total R&D personnel

How do the indicators perform across years?

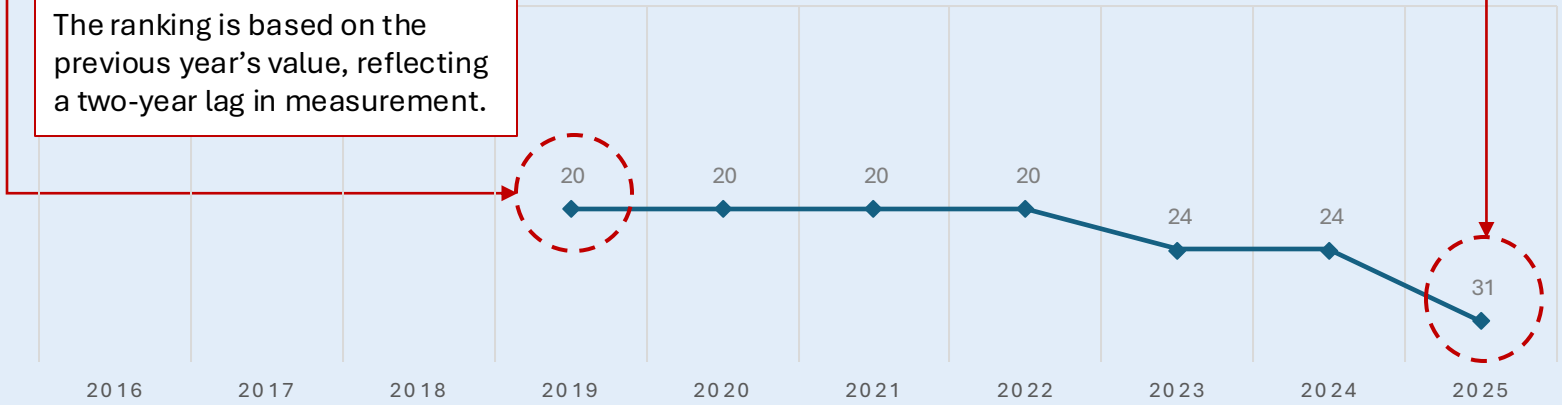
Indicator **Value**



The ranking for WCY 2025 declined since the number of total R&D personnel decrease in 2023.

Indicator **Rank**

The ranking is based on the previous year's value, reflecting a two-year lag in measurement.



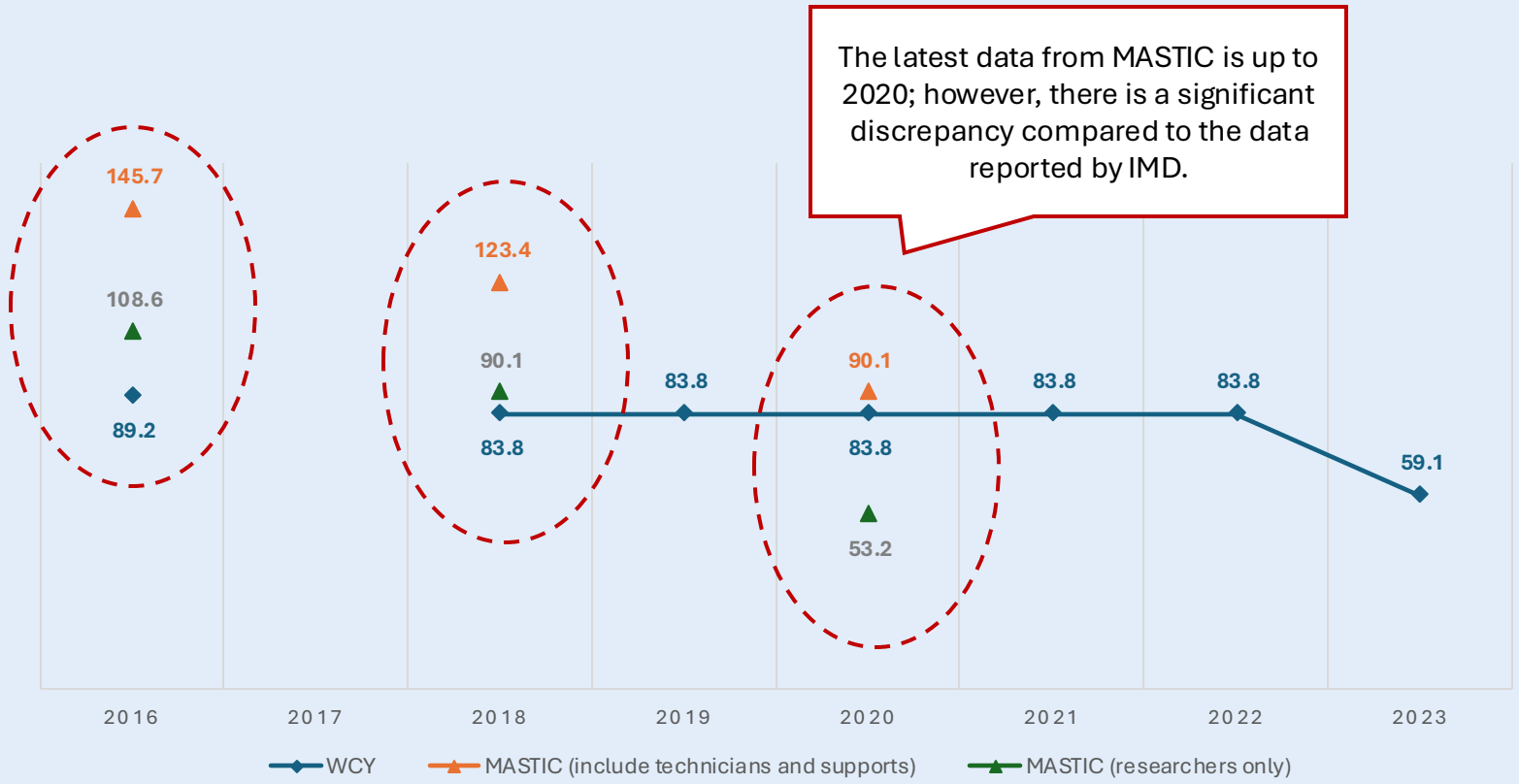
The indicator shows a decline in 2023, with a significant reduction in total R&D personnel after several years of stability.This downward trend contributed to a deterioration in Malaysia's rank in WCY 2025.

Given the two-year lag in ranking, reversing this decline and strengthening the national R&D talent pool will be essential to enhance future competitiveness.

Source: *IMD World Competitiveness Yearbook 2024*

Comparative Measurement Assessment of Indicator

Indicator **Value**



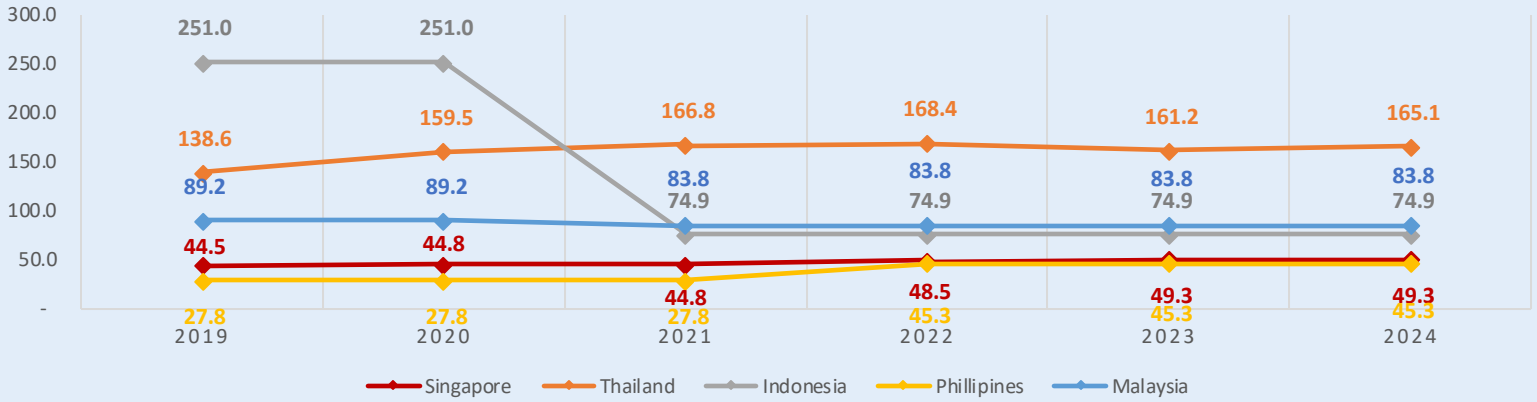
There is a significant data discrepancy between IMD WCY and MASTIC, driven by differences in coverage, classification, and reporting cycles.

While WCY figures reflect a broader and more recent international dataset (aligned with OECD definitions), MASTIC data (latest 2020) is based on national surveys with partial sector coverage and lag in updates.
Efforts to align and update national R&D personnel reporting will be important to improve data accuracy for future international benchmarking.

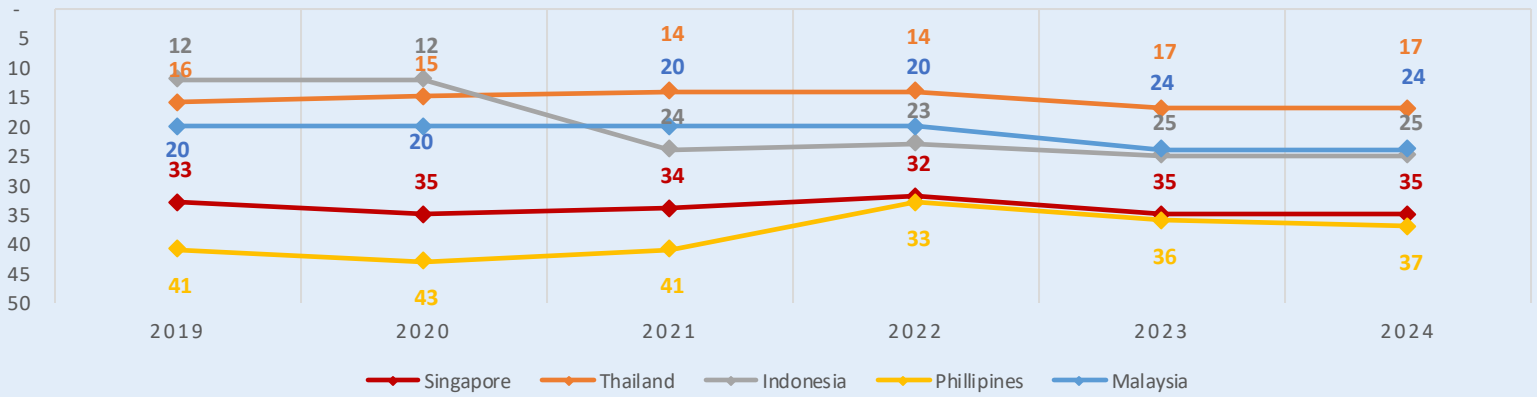
Source: *IMD World Competitiveness Yearbook 2024 and Department of Statistic Malaysia 2023*

INDICATOR 4.3.06: Total R&D personnel

Indicator Values for Selected Countries



Indicator Rankings for Selected Countries



Among ASEAN-5 countries, Thailand leads in total R&D personnel, showing consistent growth since 2019. Malaysia's total R&D personnel has remained stable over the past four years but is not improving at the same pace as regional leaders. Despite maintaining the second highest absolute value in ASEAN, Malaysia's ranking fell to 25th, slightly behind Indonesia, indicating weaker performance when benchmarked globally.

Sumber: IMD (2024)

Comparative Measurement Assessment of Indicator

Breakdown from **MASTIC**

MASTIC provides a more detailed components breakdown of type of R&D expenditure, by sectors and number of personnels and researchers, allowing for deeper national-level analysis.

To access the data, follow these steps:

1. Go to "**https://mastic.mosti.gov.my/**"
2. Click on "**Statistic**" tab
3. Then, click on "**STI Trend > Research & Development (R&D) Indicators**"
4. From **"Chart context menu**" on the top right of the chart, select "**Download XLS"** to download the data in Excel form.

R&D Personnel and Researchers, 2000 - 2020

Years	Researchers	Technicians	Support Staff	Total R&D Personnels	Researchers Per 10,000 Labour Force
2000	15,022	2,289	5,951	23,262	16
2002	17,790	3,090	4,057	24,937	18
2004	23,092	2,919	4,972	30,983	21
2006	19,021	1,891	3,676	24,588	18
2008	31,442	2,797	6,601	40,840	29
2009	53,304	5,135	12,014	70,453	47
2010	67,412	7,210	13,692	88,314	55
2011	73,752	8,347	14,862	96,961	58
2012	75,257	10,939	17,790	103,986	58
2015	84,516	12,515	17,508	114,539	61
2014	89,861	14,258	32,564	136,683	62
2016	108,557	14,657	22,526	145,740	74
2018	90,064	12,532	20,766	123,362	59
2020	53,205	11,291	25,603	90,099	33

Ideal Indicators and the Fragmented R&D Data Ecosystem

Despite having defined indicators, gaps in survey coverage, different samples each year, data fragmentation and limited use of administrative records reduce Malaysia's ability to report comprehensively at the national and international level.

Sample Size and Response Rate of the National R&D Survey

Business Enterprises R&D
Sample: 3,671 **Respond**: 2,223 (67.7%)

Higher Learning Institutes R&D
Sample: 620 HLIs **Respond**: 552 (95.8%)

Government Research Institutes and Agencies R&D
Sample: 95 **Respond**: 94 (99.9%)

Non-Governmental Organisation R&D
Sample: 44 **Respond**: 33 (89.2%)

Note: For 2019 ref. year | Source: MASTIC, MOSTI

Business R&D is underreported, with only two-thirds of sampled firms responding to the national R&D survey.

Data Fragmentation and Limited Use of Administrative Records

MINISTRY OF SCIENCE, TECHNOLOGY, AND INNOVATION	MINISTRY OF ECONOMY DEPARTMENT OF STATISTICS MALAYSIA	MINISTRY / AGENCIES
27 indicators	12 indicators	6 indicators
National R&D Survey	AES & Economic Census	Administrative Records

MASTIC and DOSM surveys capture a broad range of R&D indicators, but response rates are limited, and the data is not systematically integrated.

Administrative records hold valuable R&D information but remain siloed/underutilised for national reporting.

Bridging the Gaps in Malaysia's R&D Data Ecosystem

A multi-source strategy is needed to address long-standing R&D data gaps, supported by measures to improve response rates.

Options and Strategies to Address Data Gaps

To build a more complete and responsive R&D data ecosystem, Malaysia must draw on three primary data streams.

1. **Survey-based data gaps**
   Improve completeness through better sampling, coordination with administrative sources, and targeted outreach to underreported sectors (especially business and NGOs).
2. **Administrative data gaps**
   Unlock data from ministries and agencies, through structured access protocols and shared classifications.
3. **Public-listed companies R&D data**
   Extract R&D disclosures from corporate reports (e.g., Bursa Malaysia) by standardising extraction and linking them to economic classification systems for statistical integration.

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2. **Incentive mechanisms**
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Frascati-based survey

Business Enterprises R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sample : 3,671 (for 2019 ref. year) Responded: 2,223 (67.7%)
Higher Learning Institutes R&D	• R&D expenditure and activities • R&D personnel • R&D source of funds • R&D outsourced • R&D output	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D activities	Sampling: 620 HLIs (for 2019 ref. year) Responded: 552 (95.8%)
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Non-Governmental Organisation R&D	• R&D expenditure and activities • R&D personnel • R&D Source of funds • R&D outsourced • R&D output • R&D incentives	• Factors limiting R&D activities • Impact of COVID-19 on R&D activities • Suggestions to enhance R&D	Sample : 44 (for 2019 ref. year) Responded: 33 (89.2%)

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SNA-based survey

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Source: DOSM

R&D data collection approaches in Malaysia

The comprehensive and standardised nature of National R&D survey provides a strong foundation for harmonising with SNA-based surveys and strengthening national data integration efforts.

National Survey of Research and Development (R&D)

1 Business Enterprises **2** Higher Learning Institutes **3** Government Research Institutes and Agencies **4** Non-Governmental Organisation

R&D Expenditure & Activities

1. Total R&D expenditure breakdown (RM)
2. Value of the R&D spent in previous year (RM)
3. R&D activities by field of research (%)
4. R&D activities by socio-economic objective (%)
5. R&D activities by national priority area (%)
6. Type of R&D activities (%)

R&D Personnel

7. Internal R&D personnel (numbers)
8. Total labour cost (%)
9. External R&D personnel (numbers)

R&D Source of Funds

10. Sources of R&D funds (%)
11. Location of R&D projects (%)

R&D Outsourced

12. R&D outsourcing
13. Projects being outsourced (RM)
14. Projects collaborated (numbers)

R&D Output

15. Publications
16. Intellectual property
17. Revenue
18. Commercialisation
19. *Human capital (graduated)

**R&D Incentives

20. R&D incentives provided by the government
21. Types of R&D incentives
22. Benefits obtained from R&D activities

Factors Limiting R&D Activities

23. Factor preventing involvement in R&D

Impact of COVID-19 on R&D activities

24. Reduction in R&D expenditure
25. Influence of pandemic to research focus
26. Measure government should take to assist

Suggestion to Enhance R&D Activities

27. Measure government should take to enhance effectiveness of R&D

Notes:
* indicates the question only available for Higher Learning Institute. | ** indicates the section not applicable for Higher Learning Institutes.

Benchmarking against leaders: Insights from the R&D Satellite Account and tailored approaches

Five countries have embarked on the development of R&D Satellite Accounts, with most efforts being research-based, while other leaders in R&D and innovation have adopted unique, tailored approaches to track and evaluate R&D performance.

R&D Satellite Account

United States

Early foundations
- 1990s: Recognition of the need to measure R&D activities as part of economic accounts.

Development of R&D Satellite Account
- 2000s: The R&D Satellite Account treats R&D expenditures as investments rather than expenses to better capture the economic value of R&D in national accounts.

Integration into National Accounts
- 2010s: The R&D expenditures incorporated into the National Income and Product Accounts (NIPAs), classifying them as intangible investments.

Current status
- Fully operational and integrated into the U.S. economic accounting system to provide insights into sectoral R&D investments and their contributions to the economy.

Availability of R&D SA in other countries

R&D Platform for Investment & Evaluation

South Korea

Early foundations
- 2017-2018: In response to the challenges posed by the IR4.0, the South Korean government recognized the need for a more efficient R&D investment and evaluation system.
- This led to the conceptualization of R&D PIE to streamline R&D processes and foster innovation.

Development of R&D PIE
- R&D PIE platform designed to integrate big data analysis, enabling the identification of key investment areas and promoting collaboration among ministries to align R&D with industrial policies and human resource development.

Current status
- Fully operational and the platform's integration of big data analysis and inter-ministerial collaboration has positioned it as a central component in South Korea's R&D strategy.

Australian Innovation Statistics

Australia

Early foundations
- 2022-2023: AIS tracks the conditions for creating and adopting new technologies and knowledge in Australia, and their impacts on economic productivity.

Development of AIS
- AIS data are organized in 7 dashboards, each linking to a key aspect of Australia's innovation system.

Current status
- Fully operational with dashboards for
  1) Domestic business environment
  2) Collaboration (national and international)
  3) Skills (training, skilled migration and job mobility)
  4) International trade
  5) R&D (public and private)
  6) Innovation outcomes
  7) Science, research & innovation (SRI) budget tables

Coordinated R&D ecosystems

A well-coordinated institutional ecosystem ensures each agency contributes to a unified R&D account.

01 A satellite account is more than a statistical output
It functions as a system-wide integration tool, linking R&D activities to the broader economic narrative—especially in terms of GDP, productivity, and national planning.

02 Developing a satellite account requires system alignment
It depends on aligning institutions, methodologies, and data flows across agencies—ensuring that survey systems, classifications, and reporting are interoperable.

03 We're not replicating the U.S.—we're learning from them
The goal is to benchmark good practices and understand how a satellite account can strengthen the national return on R&D investment.

Function	United States	Malaysia
Data collection (Frascati & SNA-based)	• U.S. Census Bureau & NCSES collect detailed R&D data (Frascati) • U.S. Census Bureau collects complementary R&D items (SNA-based)	• MASTIC collects detailed R&D data (Frascati) • DOSM collects R&D data via AES and EC (SNA-based)
Data validation & quality assurance	• Cross-validated using admin data (IRS, Census) • Methodological reviews by U.S. Census Bureau & NCSES	• Validation conducted separately by agencies • Potential for alignment and shared standards
Sampling frame structure (by sector)	• Unified business register used across agencies • Integrated Postsecondary Education Data System used for higher education • Agency registers for government and nonprofit organizations	• MASTIC maintains separate frames for sectors • DOSM uses national business register
Use of administrative data	• Used to verify expenditures, personnel, sector classification and supports harmonisation	• Integration opportunities exist to support validation and estimation
Data integration & harmonisation	• BEA integrates NCSES and Census data using harmonised variables and classification	• Currently compiled separately; harmonisation framework yet to be developed
Institutional coordination	• NCSES and BEA have formal data-sharing protocols and collaborative estimation processes	• Formal integration mechanisms can be developed
Estimation for satellite account	• BEA capitalises R&D data (using Frascati) and estimates investment, depreciation, and value added	• Satellite account not yet implemented; potential exists using existing survey foundations
Output & reporting for policy use	• Satellite account jointly published by BEA (macro) and NCSES (sectoral) • Supports GDP, productivity analysis etc.	• Separate outputs, but huge opportunity to converge for national account integration

Notes: BEA = Bureau of Economic Analysis | NCSES = National Center for Science and Engineering Statistics | NSF = National Science Foundation

Aligning Malaysia's R&D data with global standards

Malaysia already collects many core R&D variables—providing a solid base to transition into a satellite account framework.

1 Business Enterprise R&D

R&D paid for by company

1. Worldwide R&D expense ($)
2. Types of R&D paid
3. R&D paid by types ($)
4. Indirect R&D charges ($)
5. Cost for each business code ($)
6. Cost for each location ($)
7. Largest and second largest domestic location for R&D ($)
8. Domestic R&D paid by foreign subsidiaries ($)
9. Foreign R&D paid by domestic operations ($)
10. Monetary gifts to universities or colleges ($)
11. Projected cost for next year ($)
12. Domestic R&D paid by categories ($)

Cost paid for by others

13. Worldwide cost ($)
14. Cost incurred paid in domestic and other countries ($)
15. Cost for each location ($)
16. Largest and second largest domestic location for R&D ($)
17. Amount paid by agencies ($)
18. Projected cost for next year ($)

Assets

19. Net worldwide assets ($)
20. Accumulated depreciation and amortization ($)
21. reduction in value due to impairment charges, disposals, or retirement ($)
22. Value assets acquired through mergers and acquisitions ($)
23. Worldwide expenditure for capitalized assets ($)
24. Assets paid by other company ($)

Management and strategy of R&D

25. R&D paid to new business area (%)
26. R&D paid for research purpose and development purpose ($)
27. Areas of application for domestic R&D (%)
28. Technology focus domestic R&D paid (%)
29. Foreign R&D paid by company ($)
30. Foreign R&D paid by other ($)

Human resources

31. Total R&D and other employees
32. Domestic employees in each state
33. Employees from other countries

Tax (state and federal tax)

34. Tax credit filing
35. U.S state tax credit filing
36. Charge for foreign R&D subsidiaries as part of cost sharing agreement
37. Charge foreign company for company R&D as part of cost sharing agreement

2 Higher Education R&D

1. Total R&D by source ($)
2. Internal funding types ($)
3. Foreign R&D funding ($)
4. Funding agreement type (% of total)
5. Medical school R&D ($)
6. Clinical trials ($)
7. R&D by activity type ($ or %)
8. R&D received as subrecipient ($)
9. R&D given to subrecipients ($)
10. Federal R&D by field ($)
11. Other federal agencies ($)
12. Nonfederal R&D by field ($)
13. R&D cost categories ($)
14. Capitalization thresholds ($)
15. Capital equipment by Field ($)
16. R&D personnel headcount (persons)
17. Full-time equivalent (FTE) count for R&D personnel by function

3 Government R&D

R&D activities (for screening purposes)

1. Division, branch, or office devoted to R&D
2. Performed R&D activities using agency staff
3. Funded R&D at another state or local government
4. Funded universities or nonprofit organization
5. Funded companies or individuals

Internal R&D expenditures

6. Internal R&D funded by federal funds, state funds, other non-federal government, nonprofit organizations, businesses, higher educations institutions ($)
7. Internal R&D expenditure by types ($)
8. Internal R&D employees ($)
9. External R&D expenditures
10. Total R&D expenditures by function (sectoral) ($)
11. Funds received from federal agencies ($)
12. R&D expenditures for land and facilities ($)

4 Nonprofit Organization R&D

1. Research funding sources ($)
2. Research performance by field ($)
3. Clinical trial research (%)
4. Research performance by type of research ($)
5. Research performance by type of cost ($)
6. Research personnel (full-time, contract, volunteers) (persons)
7. Funding for research performed by others ($)
8. Capital expenditures for research operations ($)

Note: Extracted from the Annual Business Survey (Section C – Research Activities at Nonprofit Organizations)

Note: Not available for Malaysia

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: SCIENTIFIC INFRASTRUCTURE

INDICATOR 4.3.18

Number of patents in force

24 – 25 JUNE 2025 I HOTEL PULSE GRANDE, PUTRAJAYA

INDICATOR 4.3.18: Number of patents in force

INDICATOR DEFINITION

Patents in Force per 100’000 inhabitants, by applicant’s origin. Country of origin refers to the country of residency of the first named applicant in the application.

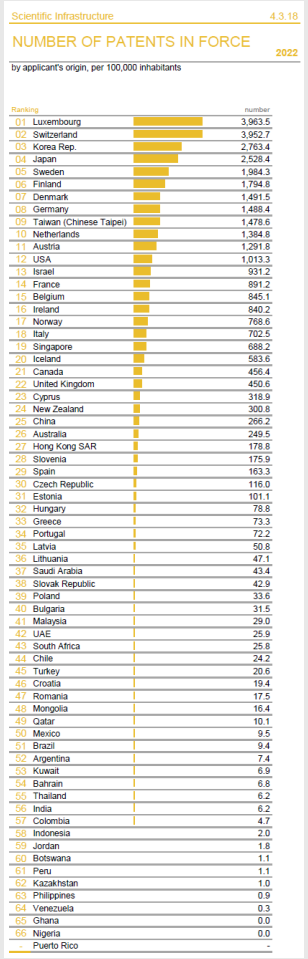
DETAILED CALCULATION OF INDICATOR

$$\textbf{\textit{Number of patents in force}}$$
$$(by\ applicant's\ origin, per\ 100{,}000\ inhabitans)$$
$$= \frac{Patents\ in\ force}{Populations}$$

DATA SOURCE FROM WCY

WIPO Statistics Database
TIPO for Taiwan (Chinese Taipei)

WHAT DOES THE SCORE INDICATE?



Scientific Infrastructure 4.3.18

NUMBER OF PATENTS IN FORCE 2022

by applicant's origin, per 100,000 inhabitants

Ranking		number
01	Luxembourg	3,963.5
02	Switzerland	3,952.7
03	Korea Rep.	2,763.4
04	Japan	2,528.4
05	Sweden	1,984.3
06	Finland	1,794.8
07	Denmark	1,491.5
08	Germany	1,488.4
09	Taiwan (Chinese Taipei)	1,478.6
10	Netherlands	1,384.8
11	Austria	1,291.8
12	USA	1,013.3
13	Israel	931.2
14	France	891.2
15	Belgium	845.1
16	Ireland	840.2
17	Norway	768.6
18	Italy	702.5
19	Singapore	688.2
20	Iceland	583.6
21	Canada	456.4
22	United Kingdom	450.6
23	Cyprus	318.9
24	New Zealand	300.8
25	China	266.2
26	Australia	249.5
27	Hong Kong SAR	178.8
28	Slovenia	175.9
29	Spain	163.3
30	Czech Republic	116.0
31	Estonia	101.1
32	Hungary	78.8
33	Greece	73.3
34	Portugal	72.2
35	Latvia	50.8
36	Lithuania	47.1
37	Saudi Arabia	43.4
38	Slovak Republic	42.9
39	Poland	33.6
40	Bulgaria	31.5
41	Malaysia	29.0
42	UAE	25.9
43	South Africa	25.8
44	Chile	24.2
45	Turkey	20.6
46	Croatia	19.4
47	Romania	17.5
48	Mongolia	16.4
49	Qatar	10.1
50	Mexico	9.5
51	Brazil	9.4
52	Argentina	7.4
53	Kuwait	6.9
54	Bahrain	6.8
55	Thailand	6.2
56	India	6.2
57	Colombia	4.7
58	Indonesia	2.0
59	Jordan	1.8
60	Botswana	1.1
61	Peru	1.1
62	Kazakhstan	1.0
63	Philippines	0.9
64	Venezuela	0.3
65	Ghana	0.0
66	Nigeria	0.0
-	Puerto Rico	-

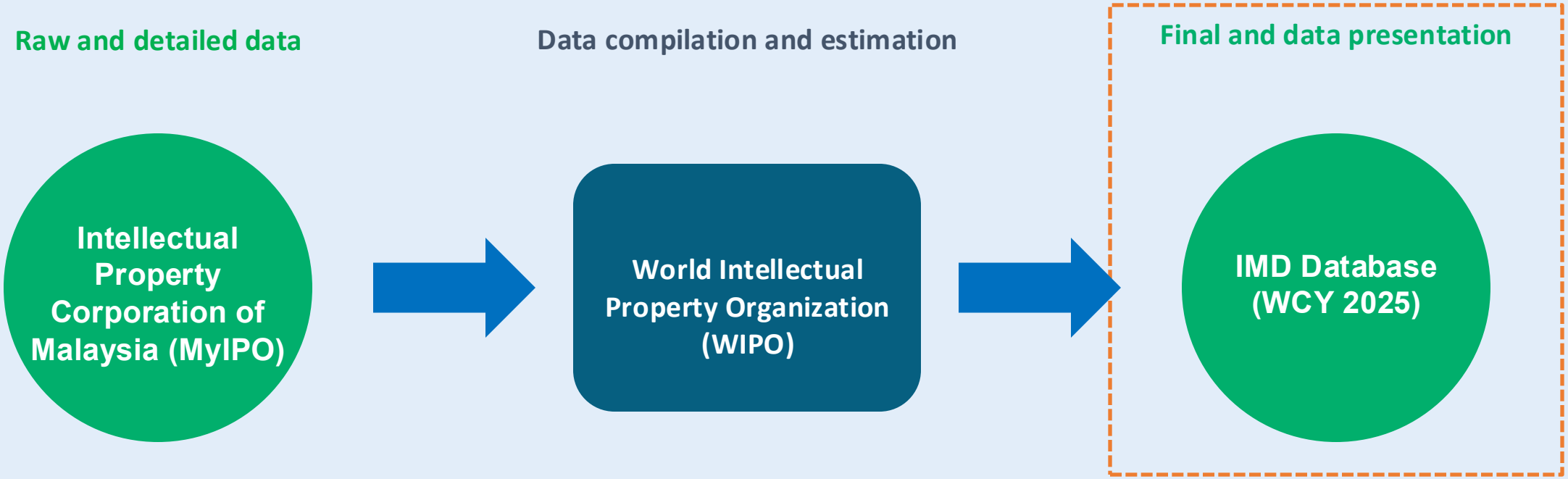
The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

Higher number of patents in force reflects a strong focus on innovation, the protection of intellectual property, and the practical application of research and development efforts. It indicates the success of a country’s innovation ecosystem, the emphasis placed on technological advancement, and the capacity to sustain a knowledge-based economy, thereby enhancing global competitiveness and supporting long-term economic growth."

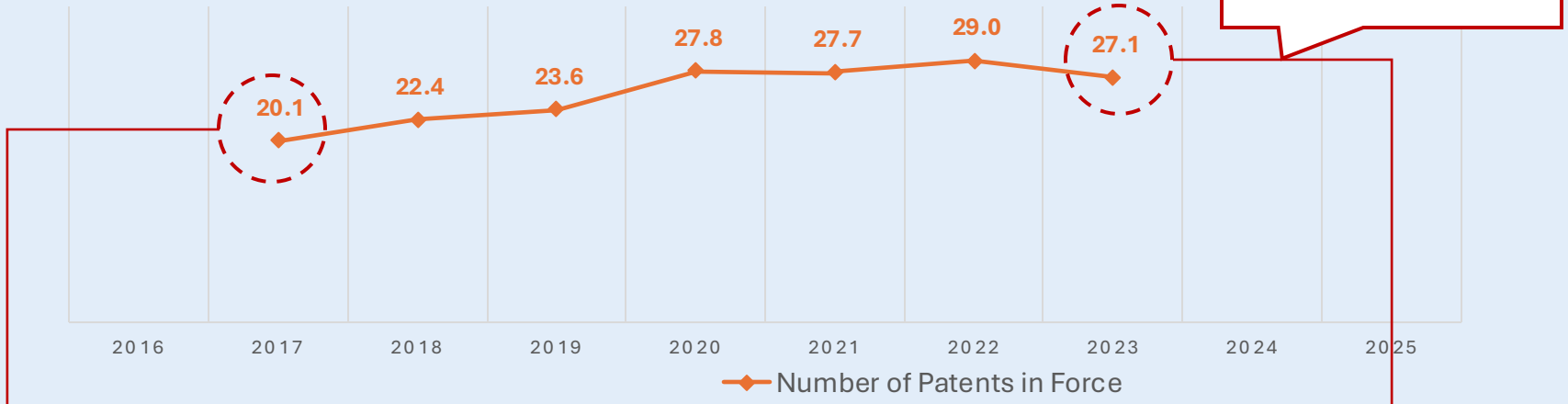
SOURCE OF DATA



INDICATOR 4.3.18: Number of patents in force

How do the indicators perform across years?

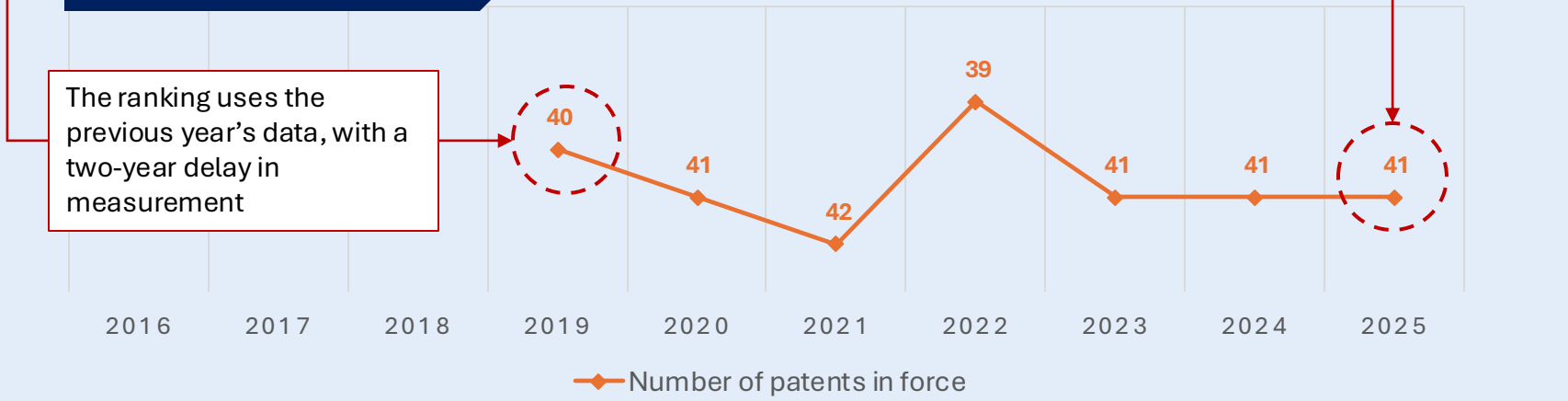
Indicator **Value**



WCY 2025 ranking remain the same, as the number in force remained stable in 2023

Indicator **Rank**

The ranking uses the previous year's data, with a two-year delay in measurement



Malaysia's number of patents in force showed a steady upward trend from **2017 to 2023**, reaching a peak of **29.0** in **2022**. This reflects continuous efforts in innovation and intellectual property protection, contributing to national competitiveness. In **2023**, the value saw a slight decline to **27.1**, suggesting a modest slowdown in patent activity. Given that the WCY ranking is based on the previous year's data, this small drop is not expected to significantly impact Malaysia's ranking in WCY 2025.

Despite fluctuations in value, Malaysia's ranking remained stable at **41st from 2021 to 2025**, following slight changes in earlier years.

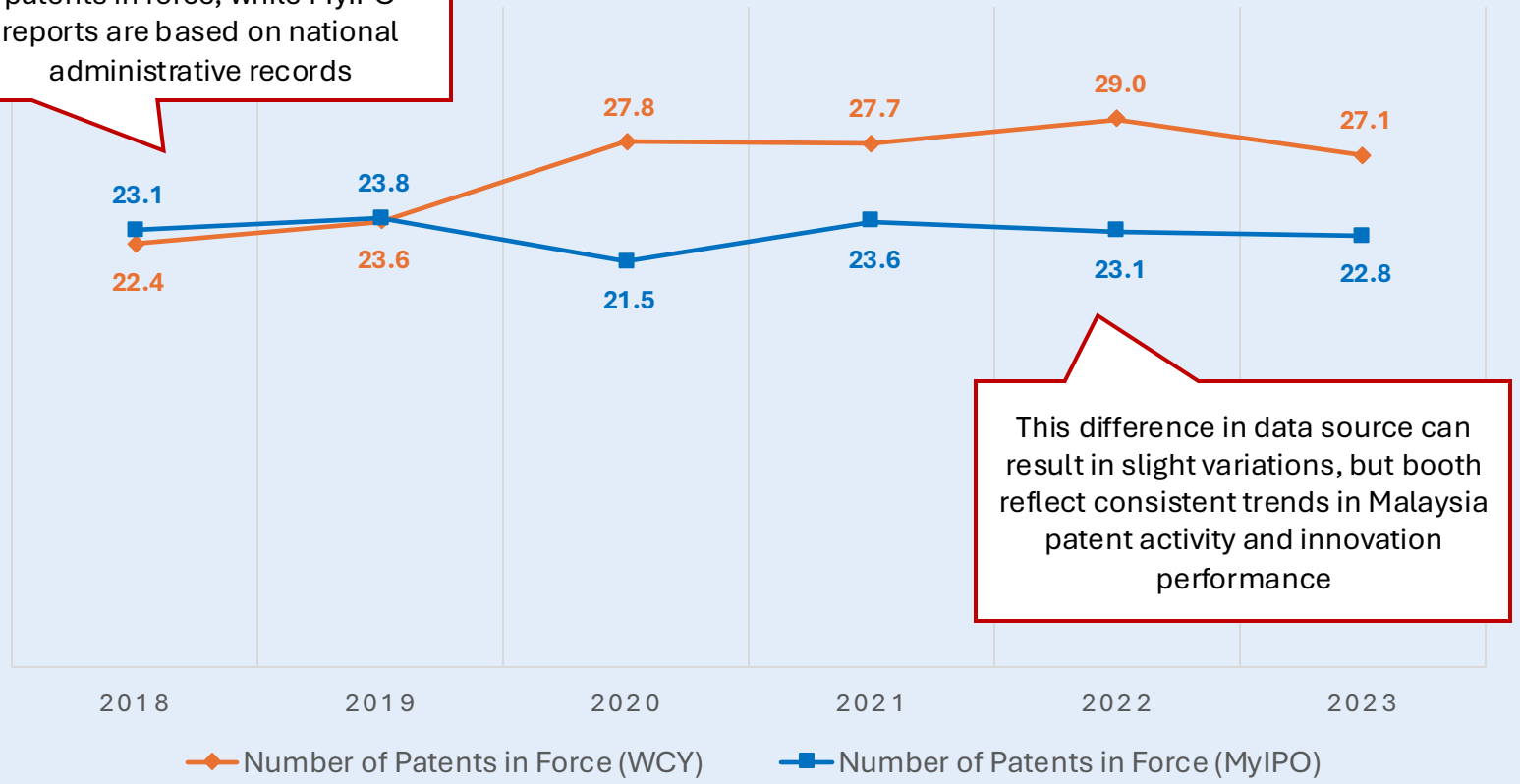
Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.3.18: Number of patents in force

Comparative Measurement Assessment of Indicator

Indicator **Value**

IMD uses data from the WIPO database to report the number of patents in force, while MyIPO reports are based on national administrative records



This difference in data source can result in slight variations, but booth reflect consistent trends in Malaysia patent activity and innovation performance

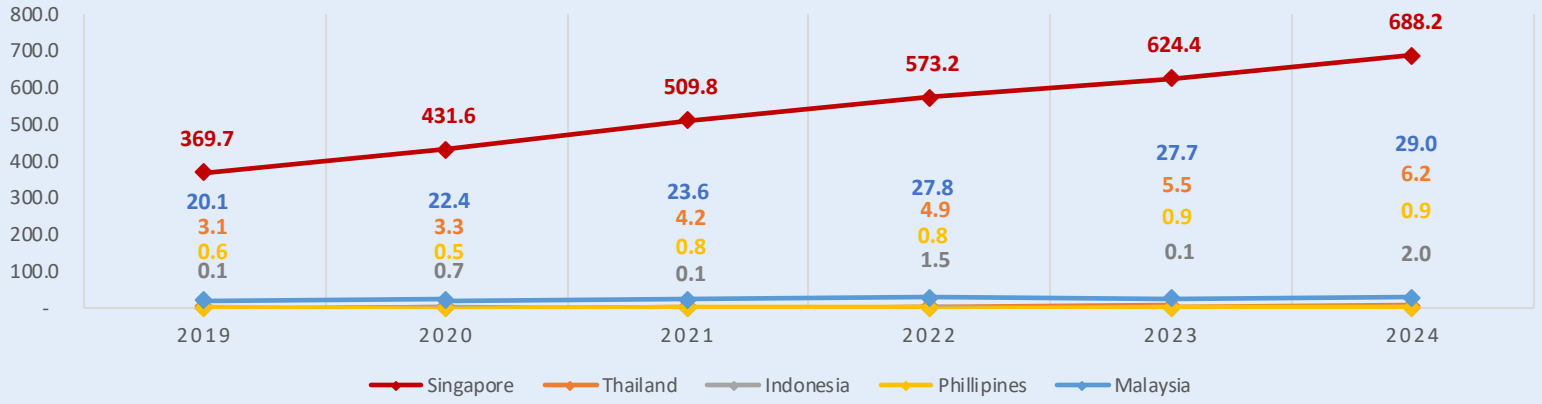
Generally stable trend in the number of patents in force was observed between 2018 and 2023. **IMD** data (based on the **WIPO** database) shows a peak in **2022** at **29.0**, followed by a slight decline to **27.1** in **2023**. Meanwhile, **MyIPO** data (based on national administrative records) shows less fluctuation, maintaining values between **21.5** and **23.8** over the same period. Although the absolute values differ, both sources display consistent overall trends, indicating sustained innovation activity in Malaysia.

The alignment in trend between **IMD** and **MyIPO** figures enhances the credibility of Malaysia's patent data in international comparisons. It reduces inconsistencies between global and national reporting, offering a more accurate representation of the country's innovation landscape. As such, this indicator supports a reliable basis for positioning Malaysia in global innovation rankings.

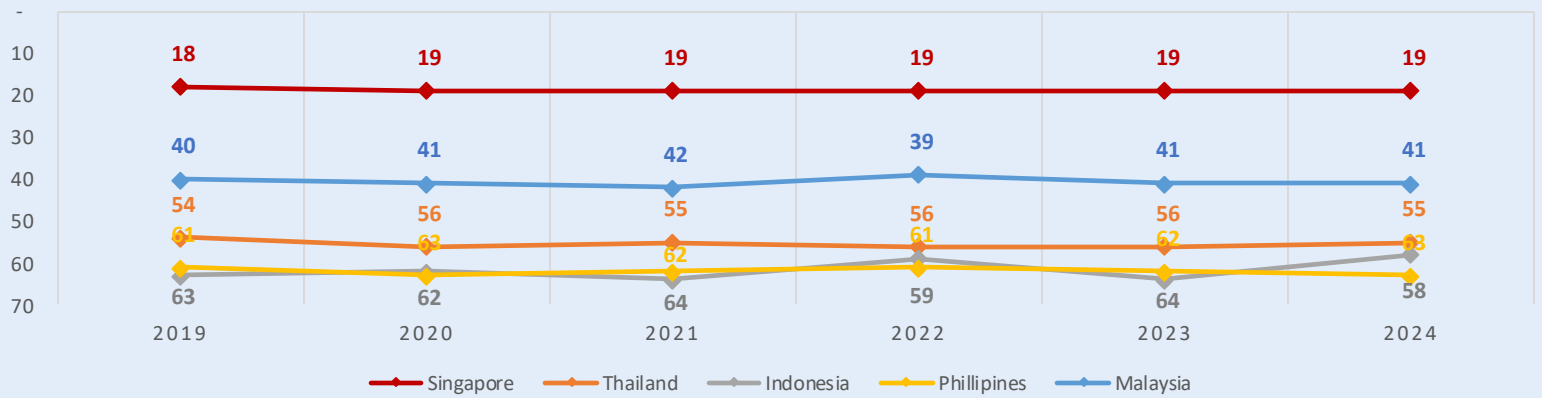
Source: *IMD World Competitiveness Yearbook 2025 and Department of Statistic Malaysia 2023*

INDICATOR 4.3.18: Number of patents in force

Indicator Values for Selected Countries



Indicator Rankings for Selected Countries



Singapore maintains a significant lead in the number of patents in force within the ASEAN-5, with a strong upward trend from 2019 to 2024. Malaysia's patent stock remains relatively low, though a modest increase is observed in 2024. However, Malaysia's ranking (41st) has remained largely stagnant over the period, indicating limited progress in closing the gap with regional and global leaders.

Sumber: IMD (2024)

INDICATOR 4.3.18: Number of patents in force

Comparative Measurement Assessment of Indicator

Breakdown from **WIPO**

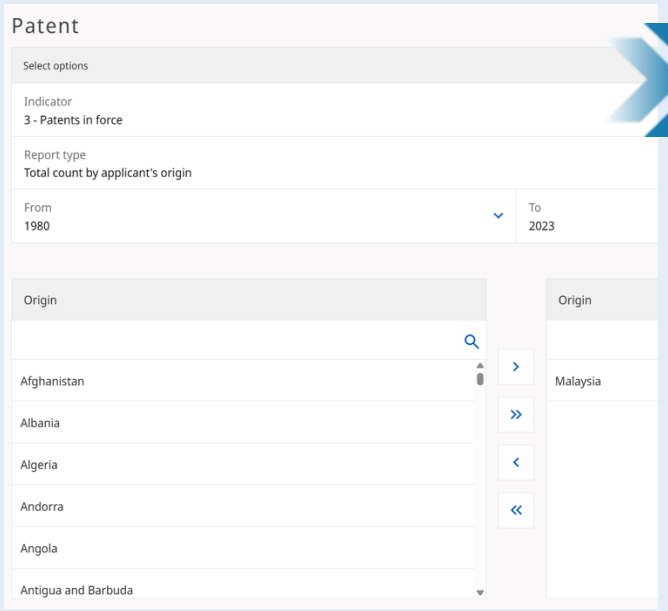
Table | Line chart | Bar chart | Stacked chart | Pie chart | Download CSV

1 of 1 | 1 | 500

	Origin	Type	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1	Malaysia	Total	379	440	542	831	1035	1192	1532	1678	3600	4414	45
2	Malaysia	Resident									1601	1871	187
3	Malaysia	Abroad	379	440	542	831	1035	1192	1532	1678	1999	2543	2703
4	Malaysia	Total (equivalent count)	379	440	542	831	1035	1192	1532	1678	3605	4424	4598
5	Malaysia	Abroad (equivalent count)	379	440	542	831	1035	1192	1532	1678	2004	2553	2728

To access the data, follow these steps:

1. Go to "**WIPO IP Statistics Data Center**"
2. Click detailed on "**Patent**"
3. Click detailed on "**Indicator**" and select "**3 – Patents in force**"
4. Click detailed on "**Report type**" and select "**Total count by applicant's origin**"
5. Select other data preferences
6. Click "**download CSV**" on the top of data table to download the data.



Breakdown from **MyIPO**

MyIPO uses national records to report patents in force, while IMD uses WIPO data. Both show similar trends in Malaysia's innovation activity

To access the data, follow these steps:

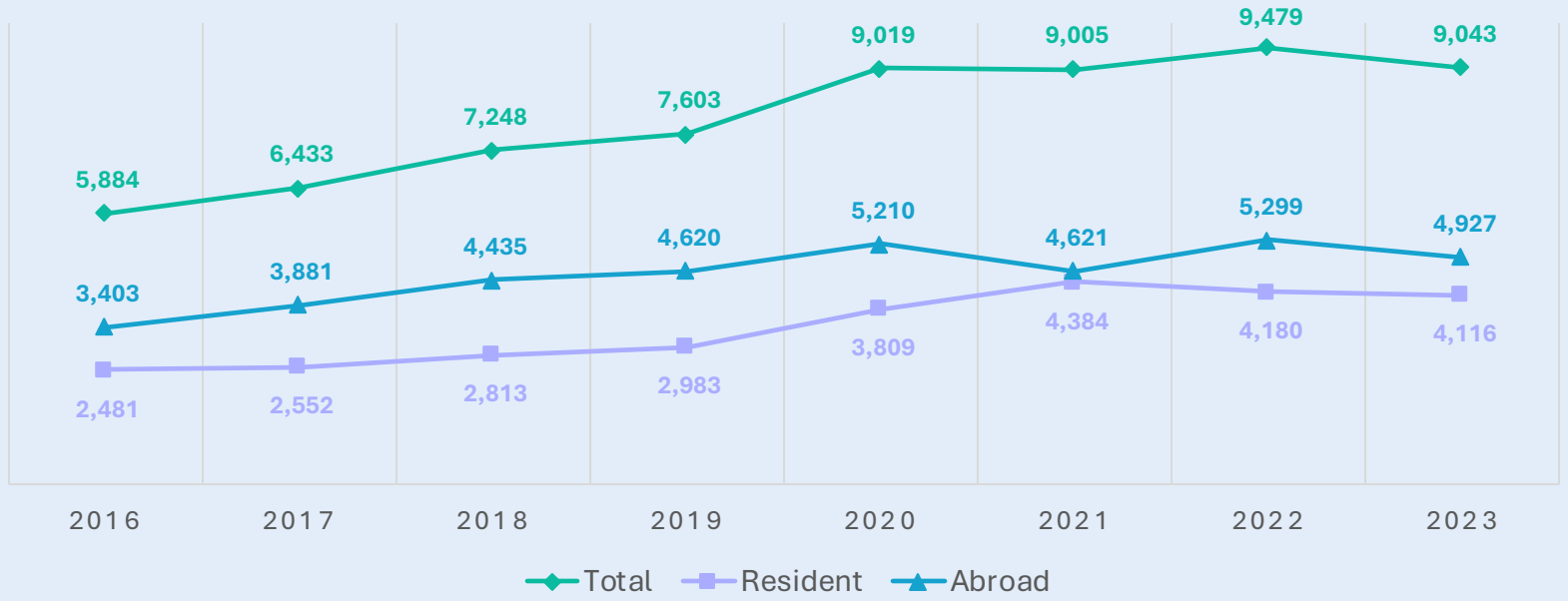
1. Go to "**MyIPO**"
2. Click on "**Sitemap**" at the top right corner
3. Click detailed on **"Statistic Application & Registration"**
4. Refer **"Application and granted patents and utility innovations from 1986-2024"**

APPLICATION AND GRANTED PATENTS AND UTILITY INNOVATIONS FROM 1986 – 2024

YEAR	APPLICATION			GRANTED		
	Malaysia	Foreign	Total	Malaysia	Foreign	Total
1986	29	233	262	-	-	-
1987	71	3,195	3,266	-	-	-
1988	73	1,547	1,620	0	6	6
1989	84	1,803	1,887	11	121	132
1990	92	2,213	2,305	20	498	518
1991	106	2,321	2,427	29	1,021	1,050
1992	151	2,260	2,411	10	1,124	1,134
1993	198	2,684	2,882	14	1,270	1,284
1994	223	3,364	3,587	21	1,608	1,629
1995	185	3,992	4,177	29	1,724	1,753
1996	221	5,354	5,575	79	1,722	1,801
1997	179	6,278	6,457	52	741	793
1998	193	5,770	5,963	21	545	566
1999	218	5,624	5,842	39	683	722
2000	206	6,021	6,227	24	381	405
2001	271	5,663	5,934	18	1,452	1,470
2002	322	4,615	4,937	32	1,460	1,492
2003	376	4,686	5,062	31	1,547	1,578
2004	522	4,920	5,442	24	2,323	2,347
2005	522	5,764	6,286	37	2,471	2,508
2006	531	4,269	4,800	187	6,562	6,749
2007	670	1,702	2,372	338	6,645	6,983
2008	864	4,539	5,403	198	2,044	2,242
2009	1,234	4,503	5,737	270	3,198	3,468
2010	1,275	5,189	6,464	204	1,973	2,177
2011	1,136	5,423	6,559	335	2,057	2,392
2012	1,160	5,867	7,027	308	2,193	2,501
2013	1,269	6,081	7,350	305	2,386	2,691
2014	1,439	6,321	7,760	381	2,381	2,762
2015	1,375	6,532	7,907	360	2,548	2,908
2016	1,219	6,176	7,395	373	2,980	3,353
2017	1,300	5,978	7,278	474	4,653	5,127
2018	1,248	6,245	7,493	527	3,855	4,382
2019	1,182	6,561	7,743	655	3,558	4,213
2020	1,110	5,905	7,015	1,363	7,140	8,503
2021	1,003	6,706	7,709	1,168	5,894	7,062
2022	936	6,606	7,542	956	5,249	6,205
2023	940	6,661	7,601	874	4,639	5,513
Dec-24	993	6,435	7,428	909	5,249	6,158
TOTAL	25,126	186,006	211,132	10,676	95,901	106,577

INDICATOR 4.3.18: Number of patents in force

Number of patents in force (WIPO)



Annual Growth	2017	2018	2019	2020	2021	2022	2023
Total	9.3%	12.7%	4.9%	18.6%	-0.2%	5.3%	-4.6%
Resident	2.9%	10.2%	6.0%	27.7%	15.1%	-4.7%	-1.5%
Abroad	14.0%	14.3%	4.2%	12.8%	-11.3%	14.7%	-7.0%

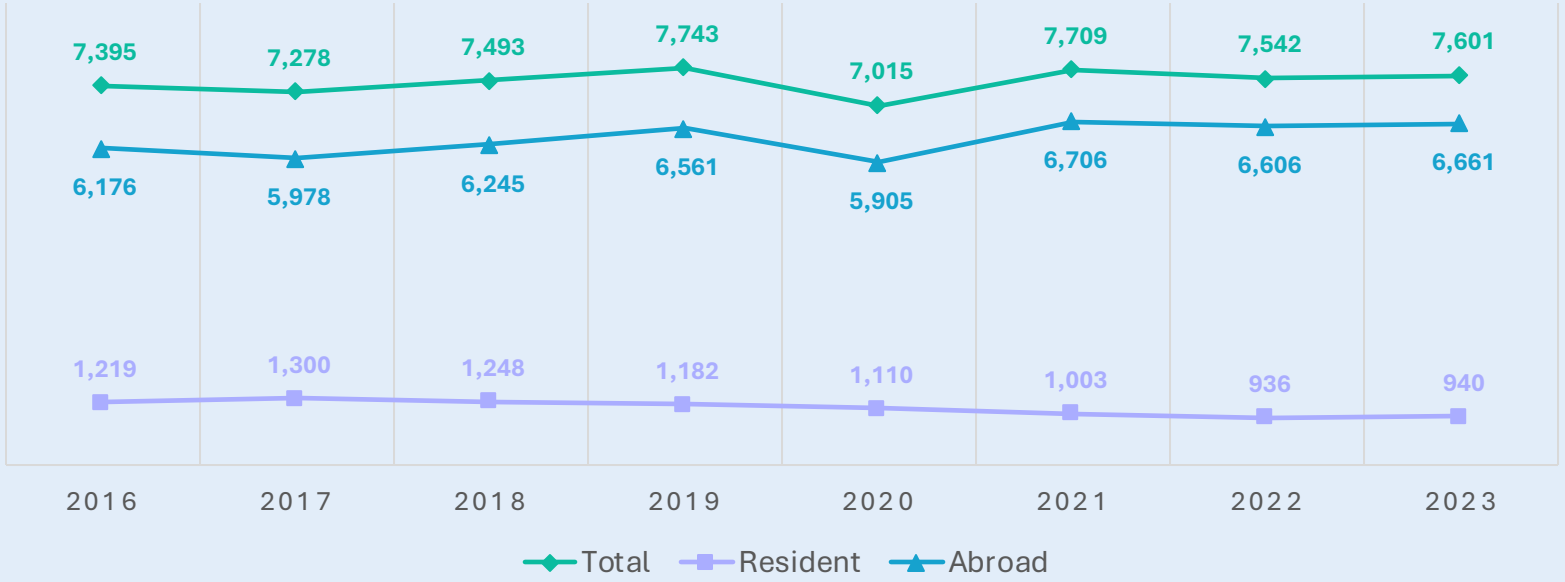
Source: *World Intellectual Property Organization (IPO)*

Malaysia's total number of patents in force declined by 4.6% in 2023, following a peak in 2022.

The drop was mainly due to a 7.0% decrease in patents from abroad, while resident patents saw a smaller decline of 1.5%. This marks the first contraction since 2020, reflecting a slight slowdown in both domestic and international patent activity.

INDICATOR 4.3.18: Number of patents in force

Number of patents in force (MyIPO)



Annual Growth	2017	2018	2019	2020	2021	2022	2023
Total	-1.6%	3.0%	3.3%	-9.4%	9.9%	-2.2%	0.8%
Resident	6.6%	-4.0%	-5.3%	-6.1%	-9.6%	-6.7%	0.4%
Abroad	-3.2%	4.5%	5.1%	-10.0%	13.6%	-1.5%	0.8%

Source: *Intellectual Property Corporation of Malaysia (MyIPO)*

Based on data from MyIPO, Malaysia's total number of patents in force recorded a slight increase of 0.8% in 2023, following a 2.2% decline in 2022.

The growth was supported by marginal increases in both resident (+0.4%) and abroad (+0.8%) patents. This modest rebound suggests a stabilization in patent activity after years of decline, reflecting renewed optimism in both domestic and international innovation engagement.

Benchmarking against leaders: Lessons from Switzerland's Patent Strength

Opportunities to Strengthen Malaysia's Patent Ecosystem

Switzerland Key Drivers of Patent Strength

High Patent Volume and Quality
- Patents in Force: As of end-2022, Switzerland had 151,137 patents in force, predominantly European patents validated domestically
- Patent Applications: In 2024, Switzerland filed 9,966 patent applications, marking a 3.2% increase from the previous year

Robust R&D Investment
- R&D Expenditure: Switzerland invests over CHF 25 billion annually in R&D, accounting for approximately 3.5% of its GDP.

Global Patent Reach
- International Filings: Swiss entities, such as Novartis AG, are among the top filers under the Patent Cooperation Treaty (PCT), indicating a strong global patenting strategy.

Private Sector Leadership
- Corporate R&D: Companies like Roche and ABB are significant contributors to patent filings, reflecting a culture of innovation within the private sector.

Malaysia Current Position

Patent Portfolio
- Patents in Force: Malaysia holds 50,151 patents, ranking 35th globally.
- Resident Filings: Only 39.9% of patent applications are from Malaysian residents, indicating reliance on foreign innovations.

R&D Investment
- Current Spending: Malaysia's R&D expenditure is approximately 1% of GDP.
- Future Targets: The 12th Malaysia Plan aims to increase this to 2.5% by 2025.

International Patent Activity
- PCT Filings: Malaysia's presence in PCT filings is minimal, with no significant representation among top global filers.

Way forward to improve patents in force in Malaysia

Strengthen Innovation and R&D Output

- Boost public and private sector investment in R&D
- Encourage commercialization of research from universities and research institutes
- Facilitate industry–academia partnerships to generate patentable technologies.

Enhance IP Awareness and Capacity

- Promote nationwide IP education, especially for SMEs, startups, and researchers.
- Provide training on patent strategies, filing procedures, and enforcement.
- Expand access to advisory services and patent clinics via MyIPO and related agencies.

Support Patent Filing and Retention

- Offer financial incentives for patent application and renewal (e.g., tax deductions, grants).
- Streamline the patenting process and reduce administrative burdens.
- Introduce fast-track schemes for priority sectors and high-potential innovations.

Encourage foreign participation and IP localization

- Position Malaysia as an attractive destination for IP protection in the region.
- Ensure robust IP enforcement to build investor confidence.
- Encourage multinational companies to file and maintain patents locally.

THANK YOU

Finish

HD
HARD DATA

FAKTOR: INFRASTRUCTURE

SUB-FAKTOR: HEALTH AND ENVIRONMENT

INDIKATOR 4.4.01

TOTAL HEALTH EXPENDITURE

(Percentage of GDP)

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

INDICATOR DEFINITION

Level of current health expenditure expressed as a percentage of GDP. Estimates of current health expenditures include healthcare goods and services consumed during each year. This indicator does not include capital health expenditures such as buildings, machinery, IT and stocks of vaccines for emergency or outbreaks.

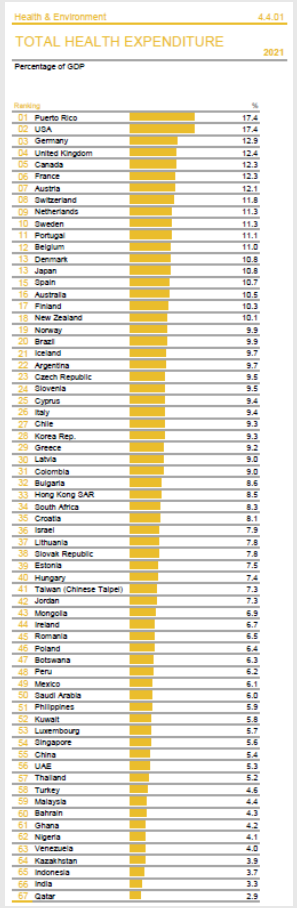
DETAILED CALCULATION OF INDICATOR

$$\textbf{Trade to GDP ratio} = \frac{Total\ Health\ expenditure}{Gross\ Domestic\ Product}$$

DATA SOURCE FROM WCY

- World Health Statistics (World Health Organization) http://apps.who.int/ghodata/
- National sources (Malaysia National Health Account)

WHAT DOES THE SCORE INDICATE?



Health & Environment 4.4.01

TOTAL HEALTH EXPENDITURE 2021

Percentage of GDP

Ranking		%
01	Puerto Rico	17.4
02	USA	17.4
03	Germany	12.9
04	United Kingdom	12.4
05	Canada	12.3
06	France	12.3
07	Austria	12.1
08	Switzerland	11.8
09	Netherlands	11.3
10	Sweden	11.3
11	Portugal	11.1
12	Belgium	11.0
13	Denmark	10.8
13	Japan	10.8
15	Spain	10.7
16	Australia	10.5
17	Finland	10.3
18	New Zealand	10.1
19	Norway	9.9
20	Brazil	9.9
21	Iceland	9.7
22	Argentina	9.7
23	Czech Republic	9.6
24	Slovenia	9.5
25	Cyprus	9.4
26	Italy	9.4
27	Chile	9.3
28	Korea Rep.	9.3
29	Greece	9.2
30	Latvia	9.0
31	Colombia	9.0
32	Bulgaria	8.6
33	Hong Kong SAR	8.5
34	South Africa	8.3
35	Croatia	8.1
36	Israel	7.9
37	Lithuania	7.8
38	Slovak Republic	7.8
39	Estonia	7.5
40	Hungary	7.4
41	Taiwan (Chinese Taipei)	7.3
42	Jordan	7.3
43	Mongolia	6.9
44	Ireland	6.7
45	Romania	6.5
46	Poland	6.4
47	Botswana	6.3
48	Peru	6.2
49	Mexico	6.1
50	Saudi Arabia	6.0
51	Philippines	5.9
52	Kuwait	5.8
53	Luxembourg	5.7
54	Singapore	5.6
55	China	5.4
56	UAE	5.3
57	Thailand	5.2
58	Turkey	4.6
59	Malaysia	4.4
60	Bahrain	4.3
61	Ghana	4.2
62	Nigeria	4.1
63	Venezuela	4.0
64	Kazakhstan	3.9
65	Indonesia	3.7
66	India	3.3
67	Qatar	2.9

The higher the value, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

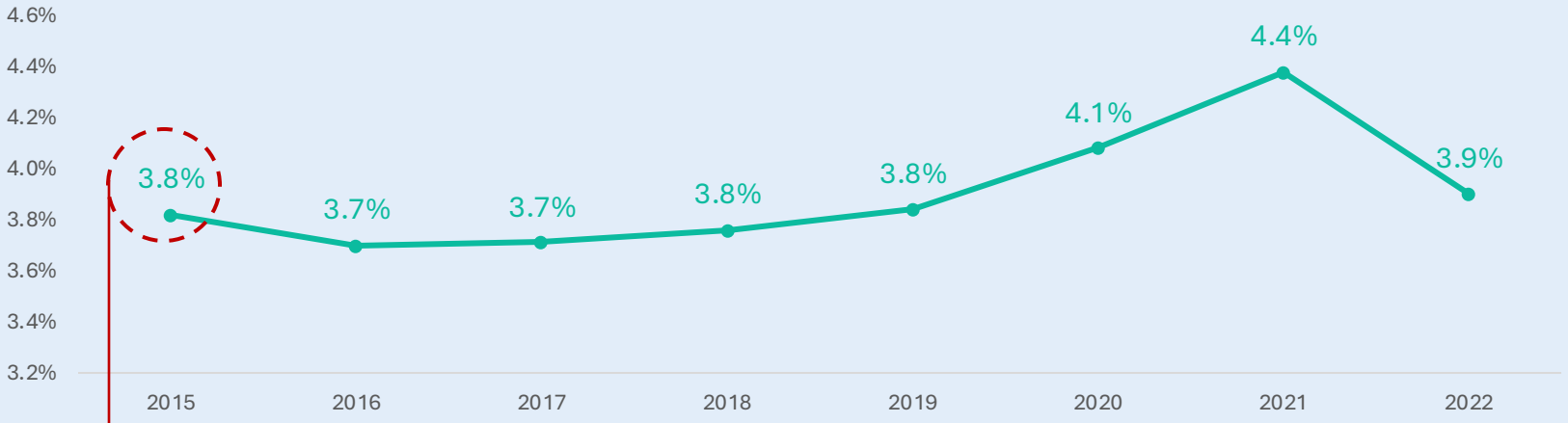
The Total Health Expenditure (% of GDP) reflects a country's investment in healthcare relative to its economic output.

A higher ratio may indicate stronger government and private sector commitment to health services, infrastructure, and well-being. It can also signal a society prioritizing human capital development, with long-term benefits for productivity and resilience. This is especially relevant for countries aiming to strengthen their healthcare systems, enhance population health outcomes, and support economic competitiveness.

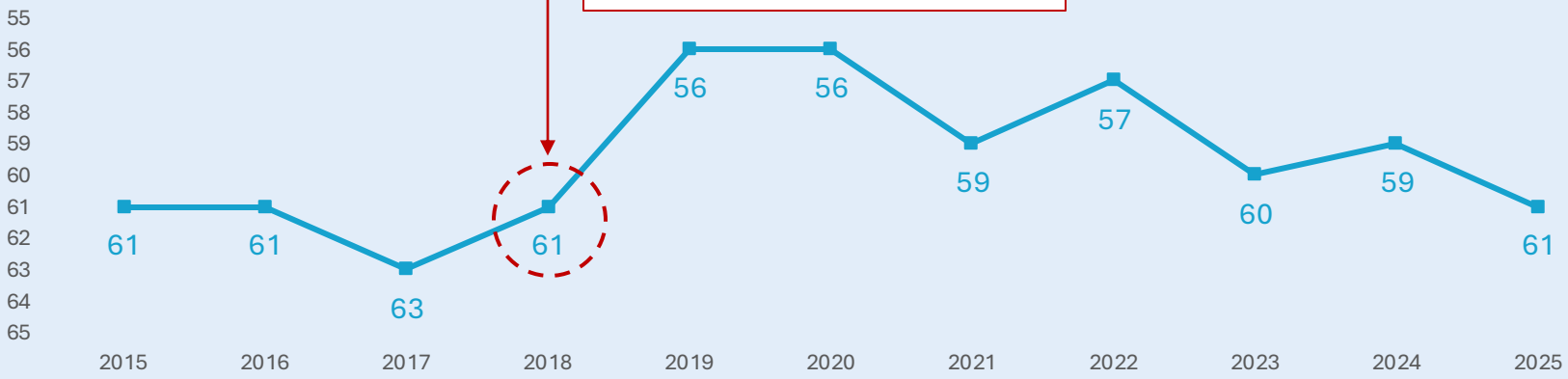
INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**



The ranking is based on the previous year's value, reflecting a three-year lag in measurement.

Malaysia's Total Health Expenditure (% of GDP) showed a moderate upward trend from 2017 to 2021, peaking at **4.4% in 2021**, which contributed to a stronger indicator value and improved international standing. However, the value **declined to 3.9% in 2022**, suggesting a reduced share of healthcare expenditure relative to GDP.

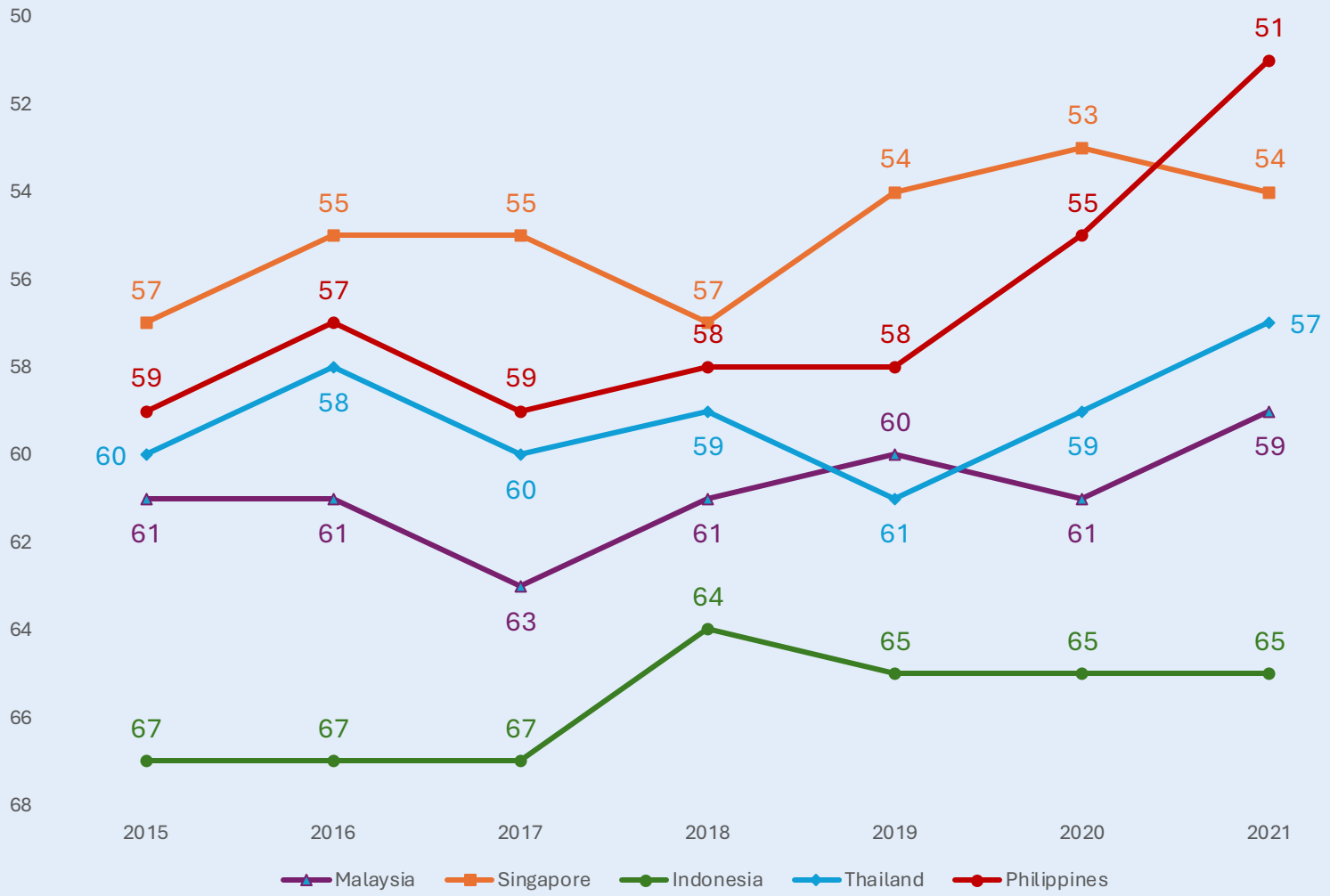
Given that the **WCY ranking is based on the previous year's data**, this decline is expected to **negatively impact Malaysia's ranking in WCY 2025.**

Despite the drop in value, Malaysia's ranking **remained relatively stable at 59th in 2024**, following prior fluctuations from 56th in 2019–2020, to 60th in 2023, showing resilience amid budgetary adjustments and post-pandemic normalization.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

Indicator Rankings for Selected Countries



In terms of ranking among selected ASEAN countries, Malaysia consistently ranks second after Singapore. This indicates Malaysia's relatively strong health expenditure effort compared to regional peers, although there is still a gap with Singapore, which remains significantly ahead globally.

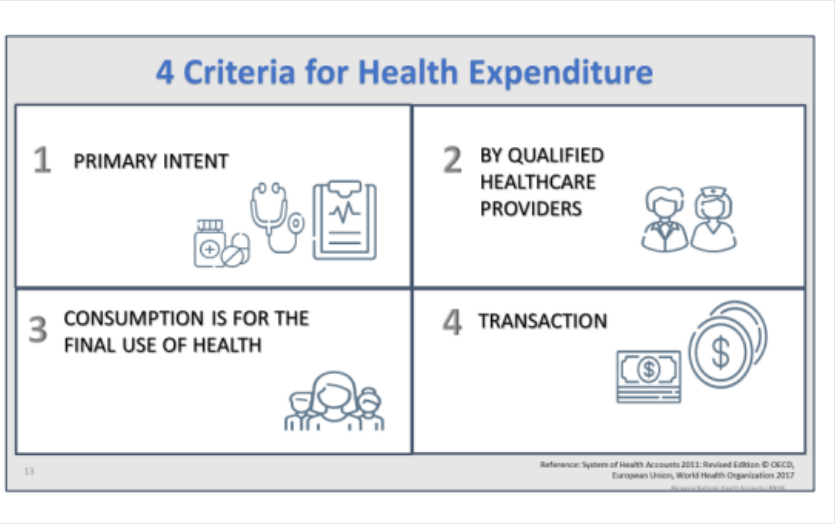
Malaysia maintained a stable position from 2015 to 2024, ranking between 59th and 63rd globally. This consistent performance shows Malaysia's relative commitment to healthcare investment, outperforming Indonesia, Thailand, and the Philippines in this indicator across most years.

Sumber: IMD (2024)

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

Detailed breakdown of indicator

1. DATA SOURCE PREPARATION → 2. DATA COLLECTION → 3. DATA ANALYSIS → 4. DATA VERIFICATION & VALIDATION



Total agencies 4,408

Primary & Secondary Data

Public & Private Sectors

Direct & Indirect Spending for Health

Direct Spending for Health

- Public
  - MOH HQ, Pharm HQ, JKN, PKD, Vector states, PDN, Hospitals, PPD, Kolej, Institutes, MKAK, Bloodbank, Akaun Amanah, COVID-19 KKM, KWC, KWAN, AAB, PKU, DOSH, NIOSH, TCM, IJN & others
- Private
  - Private Hospitals, Private Medical Clinics, Private Dental Clinics, Private Haemodialysis Centres, Community Pharmacies, FOMEMA, MCO & others

Indirect Spending for Health

- Public
  - Federal Statutory Bodies, State Statutory Bodies, Local Authority Bodies, BNM, MAIN/Zakat, SOCSO, EPF, MOHE, APM, MOSTI, TH, JAKOA, JPA, IPTA, Pension, LPPKN, State Governments, JBA, JKM, AADK, NADMA, MOD, EMRS, Institut Sukan Negara & others
- Private
  - Corporations, NGO, Private Insurance, ROW, IPTS & others

Source: Malaysia National Health Account (MNHA)

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

Comparison Methodology: United States and Malaysia

		
Responsible Agency	Centers for Medicare & Medicaid Services (CMS) – Office of the Actuary	Malaysia National Health Accounts (MNHA) under Ministry of Health (MOH)
Primary Data Sources	Administrative billing data (Medicare, Medicaid, private insurers)	Household and provider surveys, government expenditure records
Data Integration	Centralized claims and provider payment systems	Decentralized survey-based integration + budget data
Frequency	Annual, with real-time updates and quarterly breakdowns	Annual, with lag due to survey processing
Spending Disaggregation	Very detailed (by source, service, function, provider, and sponsor)	Detailed but limited by survey granularity
Use of Insurance Data	Fully integrated (Medicare, Medicaid, private market, VA, DoD, etc.)	Minimal; not yet fully integrated into MNHA reporting framework
SHA 2011 Compliance Level	Full compliance + used in OECD and WHO global reporting	Full compliance but reliant on survey structure

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

Methodology Gaps in Malaysia

Heavy Reliance on Survey-Based Estimates

Issue:
Malaysia's MNHA largely depends on household health expenditure surveys and periodic provider surveys.

Implication:
This leads to lagged reporting (12–18 months delay) and potential sampling bias, especially in private sector estimates.

Limited Integration of Administrative Data

What's missing:
EHR, insurance billing, and reimbursement data from MOH, SOCSO, EPF, private insurers. Digital hospital claims and real-time utilization data.

Best practice (e.g., U.S., Korea):
Real-time data feeds from public insurance and private health systems reduce lag and improve accuracy.

Underestimated Out-of-Pocket (OOP) Spending

Issue:
OOP is estimated via household recall surveys, which often underreport minor expenditures (e.g., health supplements, OTC meds, traditional medicine).

Missing:
Many informal or unrecorded transactions from rural providers, pharmacists, and informal caregivers.

Capital Formation is Approximated

What's weak:
Health-related capital investments (hospital construction, ICT systems, equipment) are often estimated based on proxies, not actual project cost data.

Example:
Ministry development budget may not fully reflect capital investments made by GLCs or private hospitals.

Lack of Comprehensive Employer Health Spending

What's often missed:
Corporate wellness programs, company-paid screenings, and employer-paid insurance premiums (especially non-taxed benefits).

Benchmark:
In the U.S., employer-sponsored spending is systematically included through employer surveys and insurer filings.

Incomplete Capture of NGO and Donor Spending

Especially relevant for public health campaigns, vaccinations, and community health, Malaysia's SHA reporting has limited tracking of donor funds (e.g., WHO, Gavi, UNICEF programs).

Areas of Improvement

01

Data integration

Integrate SOCSO claims, EPF withdrawal for health, MOH billing into MNHA baseline

02

Private sector data

Mandate regular reporting by private hospitals, insurers, TPAs (third-party administrators)

03

OOP estimation

Supplement household surveys with point-of-sale scanner data and e-wallet transactions

04

Capital expenditure

Include GLCs, private medical groups, and multi-year MOF development allocations

05

Employer contributions

Conduct firm-level surveys on staff healthcare spending and benefits

INDICATOR 4.4.01: Total Health Expenditure (% of GDP)

Calculation of the alternative approach

Malaysia National Health Account (MNHA)

$$Total\ Health\ Expenditure\ (RM\ Million) =$$

69, 802 2021

$$Total\ Health\ Expenditure\ (\%\ of\ GDP) =$$

4.4%

National Account, DOSM

$$Total\ Health\ Expenditure\ (RM\ Million) =$$

69, 217 2021

$$Total\ Health\ Expenditure\ (\%\ of\ GDP) =$$

5.0%

Detailed breakdown

- Private final consumption expenditure - Health
- Individual consumption of general government - Health services
- Government final consumption expenditure - Health

Input Output Table, DOSM

$$Total\ Health\ Expenditure\ (RM\ Million) =$$

76,464 2021

$$Total\ Health\ Expenditure\ (\%\ of\ GDP) =$$

4.9%

Detailed breakdown

- Pharmaceutical, Medicinal Chemical & Botanical Products *(health related)*
- Insurance/ Takaful and Pension Savings *(health related)*
- Financial and Insurance/ Takaful Support Service Activities *(health related)*
- Education *(health related)*
- Health

THANK YOU

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FAKTOR: INFRASTRUCTURE

SUB-FAKTOR: HEALTH AND ENVIRONMENT

INDIKATOR 4.4.05
UNIVERSAL HEALTH CARE COVERAGE INDEX

INDICATOR 4.4.05: Universal Health Care Coverage Index

INDICATOR DEFINITION

UHC means people receive the health services they need without suffering financial hardship.

**Coverage index for essential health services (0-100)*

DETAILED CALCULATION OF INDICATOR

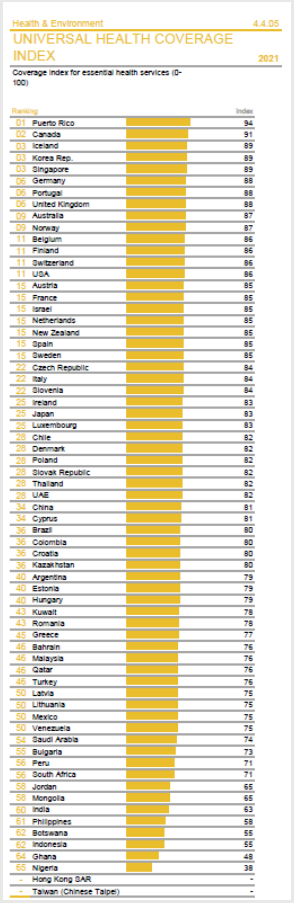
Data on coverage of essential health services and financial protection are used to monitor progress toward UHC.

UHC Index = Average mean (RMNCH, Infectious, NCDs, Services

DATA SOURCE FROM WCY

- World Development Indicators (World Bank)

WHAT DOES THE SCORE INDICATE?


Health & Environment 4.4.05

UNIVERSAL HEALTH COVERAGE INDEX 2021

Coverage index for essential health services (0-100)

Ranking		Index
01	Puerto Rico	94
02	Canada	91
03	Iceland	89
03	Korea Rep.	89
03	Singapore	89
06	Germany	88
06	Portugal	88
06	United Kingdom	88
09	Australia	87
09	Norway	87
11	Belgium	86
11	Finland	86
11	Switzerland	86
11	USA	86
15	Austria	85
15	France	85
15	Israel	85
15	Netherlands	85
15	New Zealand	85
15	Spain	85
15	Sweden	85
22	Czech Republic	84
22	Italy	84
22	Slovenia	84
25	Ireland	83
25	Japan	83
25	Luxembourg	83
28	Chile	82
28	Denmark	82
28	Poland	82
28	Slovak Republic	82
28	Thailand	82
28	UAE	82
34	China	81
34	Cyprus	81
36	Brazil	80
36	Colombia	80
36	Croatia	80
36	Kazakhstan	80
40	Argentina	79
40	Estonia	79
40	Hungary	79
43	Kuwait	78
43	Romania	78
45	Greece	77
46	Bahrain	76
46	Malaysia	76
46	Qatar	76
46	Turkey	76
50	Latvia	75
50	Lithuania	75
50	Mexico	75
50	Venezuela	75
54	Saudi Arabia	74
55	Bulgaria	73
56	Peru	71
56	South Africa	71
58	Jordan	66
58	Mongolia	66
60	India	63
61	Philippines	58
62	Botswana	56
63	Indonesia	55
64	Ghana	48
65	Nigeria	38
-	Hong Kong SAR	-
-	Taiwan (Chinese Taipei)	-

The higher the index, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

The Universal Health Care Coverage Index reflects the extent to which populations have access to essential health services without financial hardship.

A higher index suggests stronger healthcare delivery systems, equitable access, and sustained investment in public health infrastructure. It also indicates progress in health equity, financial protection, and national resilience in addressing both communicable and non-communicable diseases.

Detailed breakdown of indicator

UHC = ¼ (Average score (0-100) of indicators)

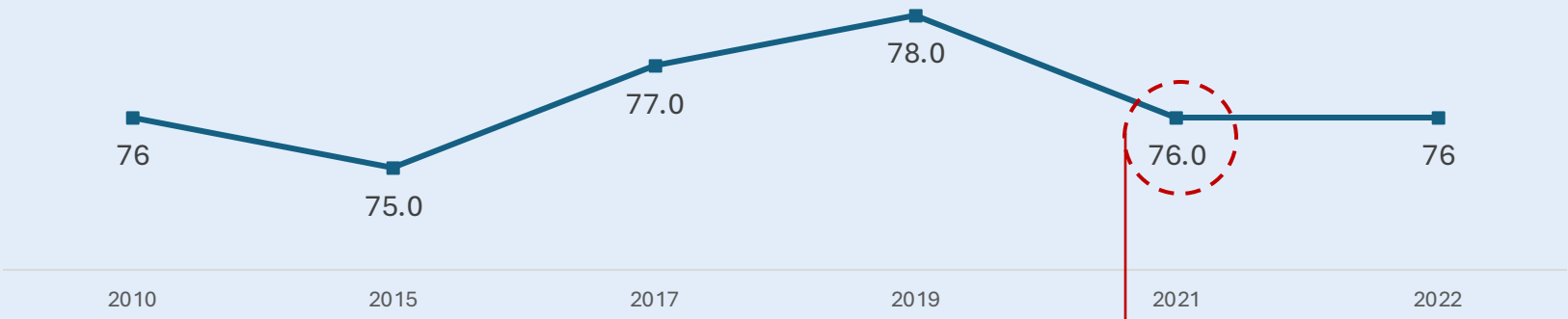
Category	Indicators Used
Reproductive, maternal, newborn and child health	- Family planning (modern methods) - Antenatal care (≥4 visits) - Child immunization (e.g., DTP3)
Infectious diseases	- TB treatment coverage - Antiretroviral therapy (HIV) - Insecticide - treated bed nets (malaria)
Noncommunicable diseases (NCDs)	- Hypertension treatment - Diabetes treatment - Cervical cancer screening
Service capacity and access	- Health worker density - Hospital access - Basic health infrastructure - Essential medicines availability

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.4.05: Universal Health Care Coverage Index

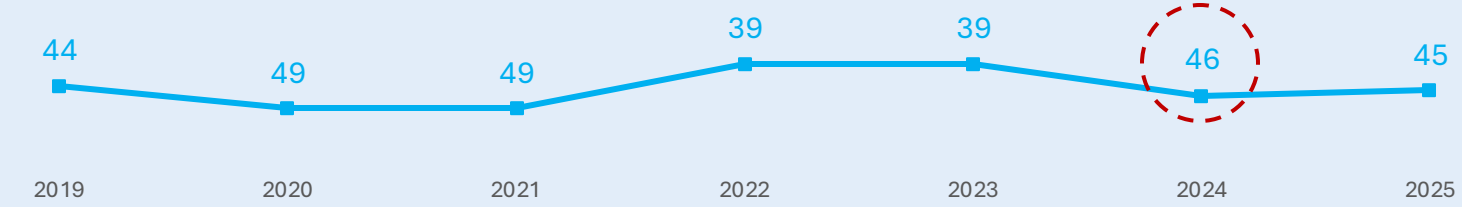
How do the indicators perform across years?

Indicator **Value**



The ranking is based on the previous year's value, reflecting a three-year lag in measurement.

Indicator **Rank**



Malaysia's Universal Health Coverage (UHC) Index demonstrated modest fluctuations over the years, with a dip to 75.0 in 2015 followed by a peak at 78.0 in 2019. The score slightly declined to 76.0 in 2021 and remained unchanged through 2022, reflecting the effects of pandemic disruptions on service delivery and health system capacity.

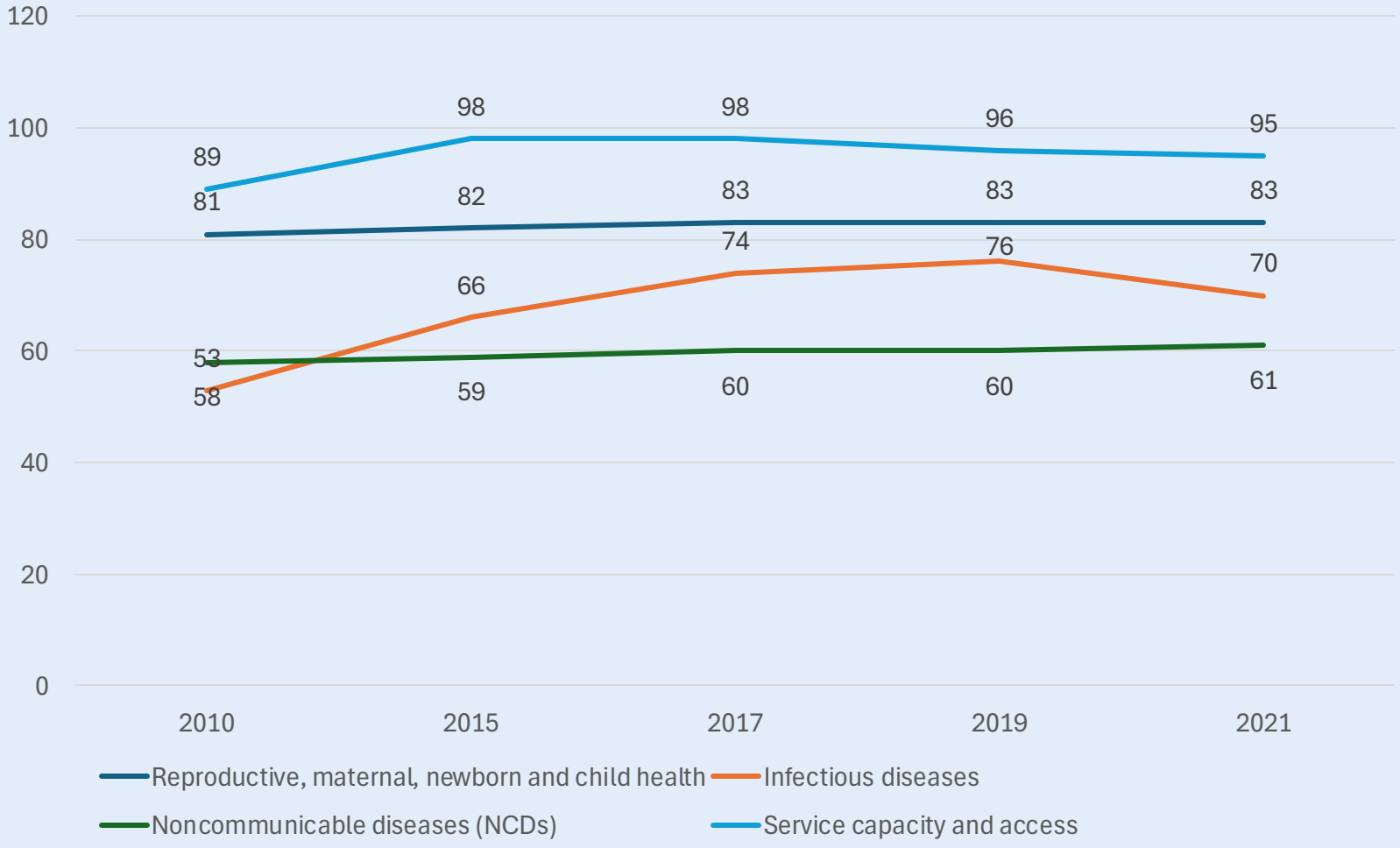
As the WCY ranking is based on the previous year's value, the 2021 decline contributed to a lower indicator rank in 2024. The observed three-year lag in measurement impacts the alignment between real-time improvements and global competitiveness scores.

Despite this, Malaysia's global rank for the UHC Index improved slightly from 46th in 2024 to 45th in 2025. This suggests partial recovery and stabilization, although further progress in noncommunicable disease control, service capacity, and health equity is needed to sustain upward momentum and strengthen Malaysia's global health system performance.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.4.05: Universal Health Care Coverage Index

How do the indicators perform across years?



Malaysia's Universal Health Coverage (UHC) performance shows strong and sustained coverage in reproductive, maternal, newborn, and child health (RMNCH), which remained above 80 throughout 2010–2021. Service capacity and access also improved significantly, peaking at 98 in 2015–2017, though it slightly declined to 95 in 2021, reflecting the effects of system strain during the pandemic.

Coverage for infectious diseases improved steadily from 53 in 2010 to a high of 76 in 2019, but declined to 70 in 2021, likely due to COVID-19 disruptions in routine treatments such as TB and HIV care.

Noncommunicable disease (NCD) service coverage showed the weakest performance among all domains, though it improved modestly from 58 in 2010 to 61 in 2021. This continues to be a critical area for targeted health system strengthening.

Source: *IMD World Competitiveness Yearbook 2024*

Areas of Improvement

Noncommunicable Disease (NCD) Service Coverage

Current challenge:
NCDs (e.g. diabetes, hypertension, cervical cancer screening) show the lowest coverage (score ~61 in 2021).

Gaps:
- Limited early screening and treatment access in rural areas
- Inconsistent data reporting to WHO

What to improve:
- Expand PeKa B40 and community-based NCD screening
- Integrate NCD follow-up into MySejahtera/eHealth
- Report full treatment coverage data (e.g., BP, glucose control) to WHO systems

Service Capacity & Health Workforce Density

Current status:
Score declined from 98 (2015–2017) to 95 (2021)

Gaps:
- Health worker density still below OECD standards (e.g. <2 doctors/1,000 pop)
- Urban–rural infrastructure gap persists

What to improve:
- Accelerate specialist distribution to underserved states (e.g., Sabah/Sarawak)
- Invest in digital health and telemedicine for rural outreach
- Track and report facility availability and drug stock levels regularly

Infectious Disease Resilience

Current status:
Coverage rose to 76 (2019) but dropped to 70 (2021)

Gaps:
- COVID-19 disrupted TB, HIV, and malaria programs
- Drop in routine screening and follow-ups

What to improve:
- Re-prioritize HIV/AIDS and TB treatment continuity
- Use pandemic infrastructure for post-COVID infectious disease surveillance
- Improve malaria control and reporting (especially in rural Borneo)

Data Transparency & Global Reporting

Gaps:
- Some domains use modelled estimates by WHO due to missing national data
- Delays in uploading real-time coverage rates reduce global comparability

What to improve:
- Improve submission of health coverage stats to WHO GHO and World Bank WDI
- Establish real-time dashboards for each domain (RMNCH, NCD, ID, service capacity)

THANK YOU

Finish

HD
HARD DATA

FAKTOR: INFRASTRUCTURE

SUB-FAKTOR: HEALTH AND ENVIRONMENT

INDIKATOR 4.4.06
LIFE EXPECTANCY AT BIRTH

INDICATOR 4.4.06: Life Expectancy at Birth

INDICATOR DEFINITION

Life expectancy is the average remaining age (years) for a person is expected to live (survives) at the beginning of a certain age, if the age-specific death rates of the given period continued throughout his/ her lifetime.

DETAILED CALCULATION OF INDICATOR

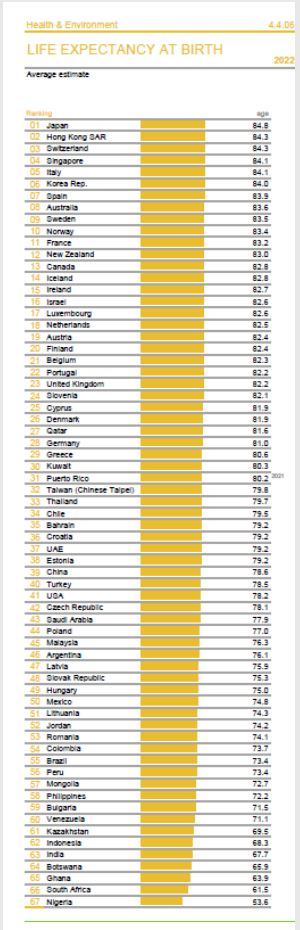
Life Expectancy at Birth =

$$\frac{Number\ of\ person-years\ lived}{Number\ of\ births}$$

DATA SOURCE FROM WCY

- UNDP Human Development Report 2024
- National sources

WHAT DOES THE SCORE INDICATE?



Health & Environment 4.4.06

LIFE EXPECTANCY AT BIRTH 2022

Average estimate

Ranking		age
01	Japan	84.8
02	Hong Kong SAR	84.3
03	Switzerland	84.3
04	Singapore	84.1
05	Italy	84.1
06	Korea Rep.	84.0
07	Spain	83.9
08	Australia	83.6
09	Sweden	83.5
10	Norway	83.4
11	France	83.2
12	New Zealand	83.0
13	Canada	82.8
14	Iceland	82.8
15	Ireland	82.7
16	Israel	82.6
17	Luxembourg	82.6
18	Netherlands	82.5
19	Austria	82.4
20	Finland	82.4
21	Belgium	82.3
22	Portugal	82.2
23	United Kingdom	82.2
24	Slovenia	82.1
25	Cyprus	81.9
26	Denmark	81.9
27	Qatar	81.6
28	Germany	81.0
29	Greece	80.6
30	Kuwait	80.3
31	Puerto Rico	80.2 2021
32	Taiwan (Chinese Taipei)	79.8
33	Thailand	79.7
34	Chile	79.5
35	Bahrain	79.2
36	Croatia	79.2
37	UAE	79.2
38	Estonia	79.2
39	China	78.6
40	Turkey	78.5
41	USA	78.2
42	Czech Republic	78.1
43	Saudi Arabia	77.9
44	Poland	77.0
45	Malaysia	76.3
46	Argentina	76.1
47	Latvia	75.9
48	Slovak Republic	75.3
49	Hungary	75.0
50	Mexico	74.8
51	Lithuania	74.3
52	Jordan	74.2
53	Romania	74.1
54	Colombia	73.7
55	Brazil	73.4
56	Peru	73.4
57	Mongolia	72.7
58	Philippines	72.2
59	Bulgaria	71.5
60	Venezuela	71.1
61	Kazakhstan	69.5
62	Indonesia	68.3
63	India	67.7
64	Botswana	65.9
65	Ghana	63.9
66	South Africa	61.5
67	Nigeria	53.6

The higher the age, the higher the rank.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

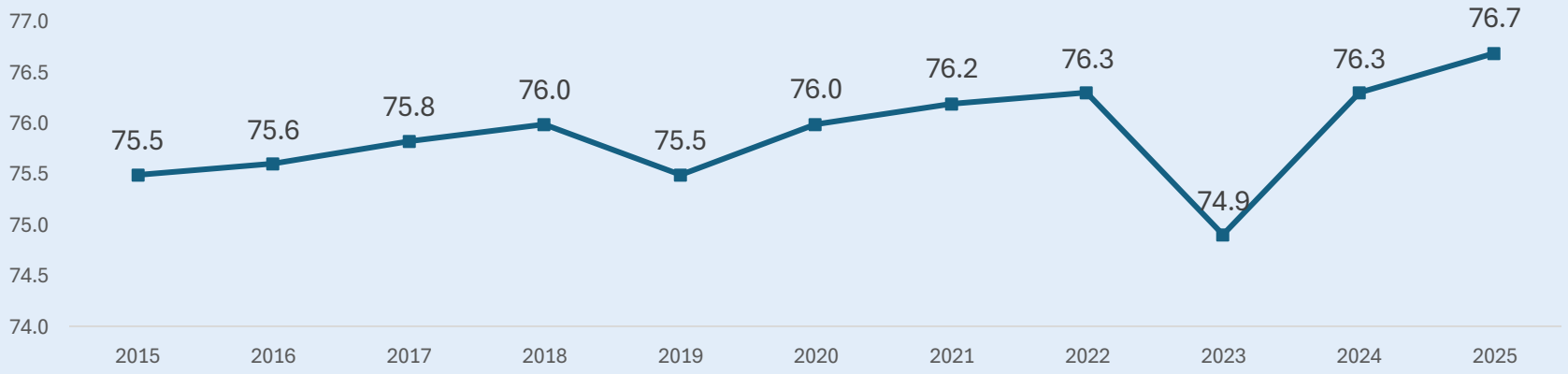
Life expectancy at birth reflects the overall performance of a country's health system and its effectiveness in reducing preventable mortality.

A higher life expectancy suggests better healthcare coverage, access to essential services, and stronger public health outcomes. It also signals broader investments in human development, which contribute to long-term productivity and national competitiveness.

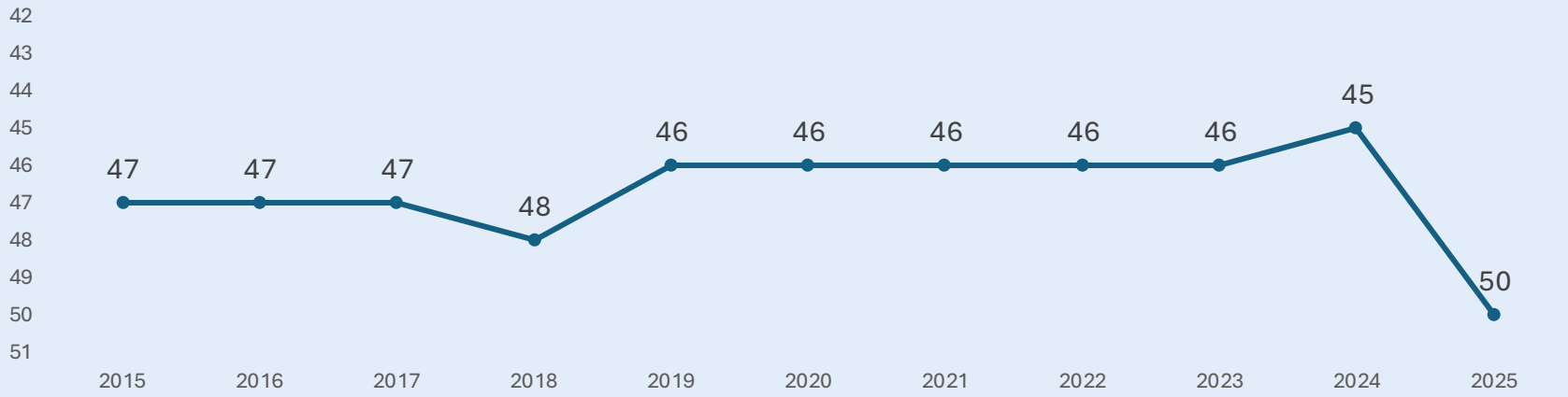
INDICATOR 4.4.06: Life Expectancy at Birth

How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**



Malaysia's life expectancy at birth showed a recovery trend following a decline to 74.9 years in 2023, which was largely attributed to post-pandemic effects. The indicator rebounded to 76.3 years in 2024 and further improved to 76.7 years in 2025, reflecting strengthened access to public healthcare and overall population well-being.

As the WCY ranking is based on the previous year's data, the improvement in 2024 value was expected to support a stronger indicator position in the following cycle.

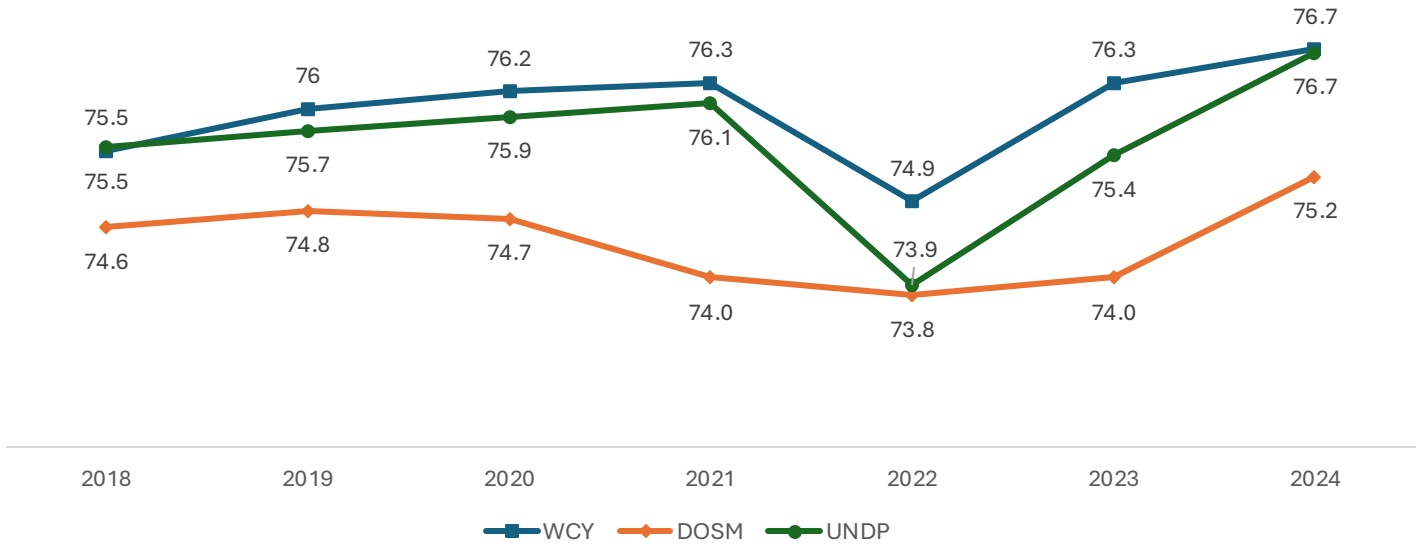
However, Malaysia's global rank for this indicator dropped from 45th in 2024 to 50th in 2025, indicating intensifying international competition and the need for sustained improvements in health outcomes and population longevity.

Source: *IMD World Competitiveness Yearbook 2024*

INDICATOR 4.4.06: Life Expectancy at Birth

Comparative Measurement Assessment of Indicator

Comparison of Life Expectancy at Birth, 2018–2024



Source: IMD World Competitiveness Yearbook 2024, Department of Statistics Malaysia (DOSM).

A comparison between WCY (IMD), UNDP, and national data from DOSM shows that life expectancy values are generally aligned in trend but vary slightly in magnitude. This suggests consistency in direction but highlights differences in estimation methodology and data update frequency.

Notably, WCY and UNDP data for 2024 converge at 76.7 years, while DOSM reports a slightly lower figure of 75.2 years. These discrepancies may arise from variations in underlying mortality assumptions, certification coverage, and reference population sources. This warrants closer coordination to enhance transparency and comparability across international and national datasets used for competitiveness rankings.

Breakdown from **UNDP**

To access the data, follow these steps:

1. Go to "**https://unctadstat.unctad.org/datacentre/**"

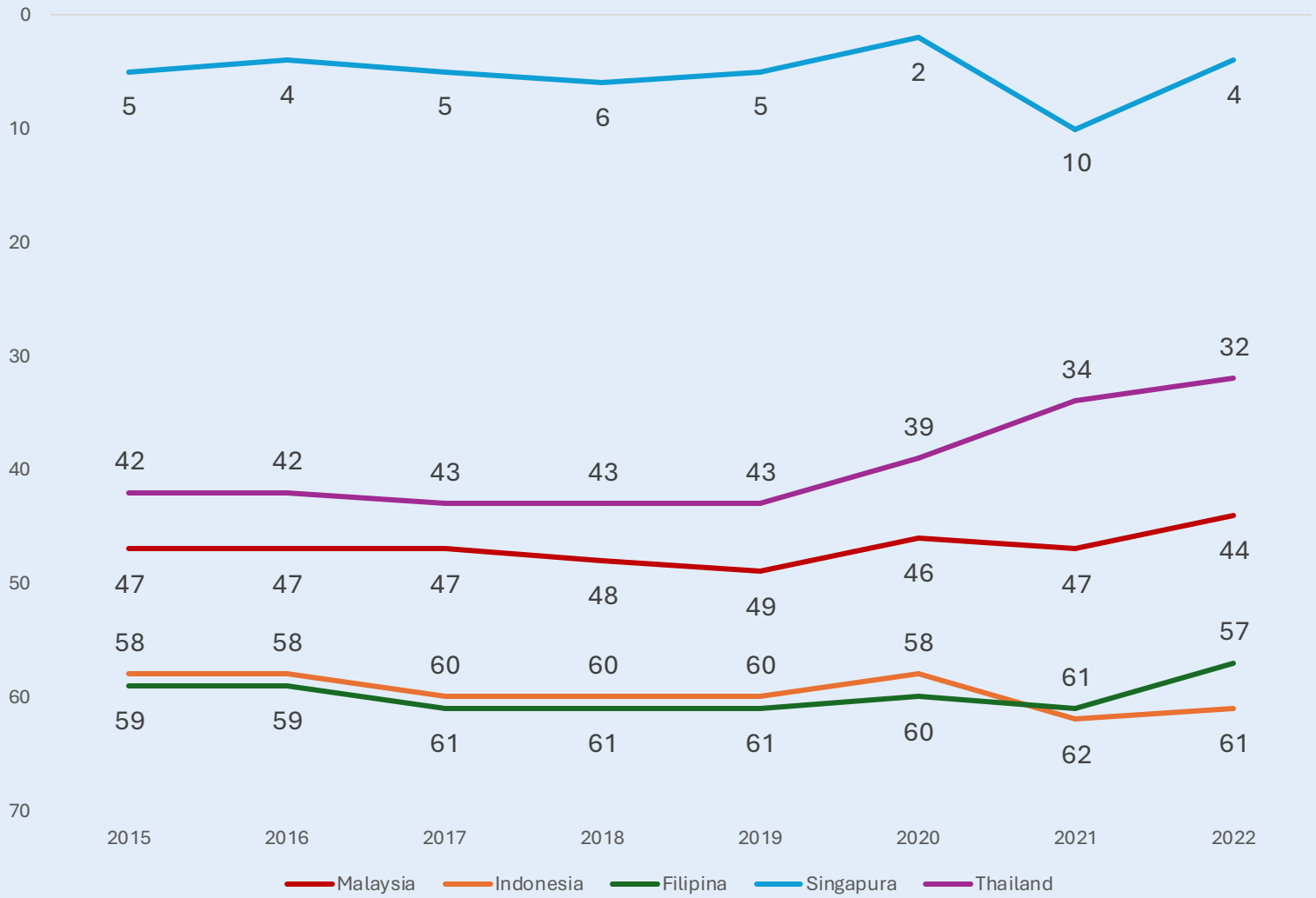
Breakdown from **DOSM**

To access the data, follow these steps:

1. Go to "**eStatistik**" DOSM
2. Click on "**Free Download**"
3. From Main Category, select "**General**"
4. From Sub-Category, select "**Demography**"
5. Click "**Search**"
6. Find "**Final ABRIDGED LIFE TABLES**"
7. Download the excel file.
8. Go to "**Jad 1.1**"

INDICATOR 4.4.06: Life Expectancy at Birth

Indicator Rankings for Selected Countries



Among selected ASEAN countries, Malaysia consistently ranks second after Singapore in life expectancy at birth. While a clear gap remains with Singapore, which is positioned among the global top five, Malaysia performs ahead of Indonesia, Thailand, and the Philippines throughout the 2015–2022 period. This reflects Malaysia's relatively stronger health outcomes and system resilience in the region.

From 2015 to 2022, Malaysia's ranking improved from 47th to 44th, indicating gradual progress in health outcomes. Despite minor fluctuations, this trend reinforces Malaysia's sustained investment in population health, particularly when compared to regional peers whose rankings remained lower or more volatile.

Sumber: IMD (2024)

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: HEALTH AND ENVIRONMENT

INDICATOR 4.4.09
MEDICAL ASISSTANCE

INDICATOR 4.4.09: Medical Assistance

INDICATOR DEFINITION

Number of inhabitants per physician and per nurse.

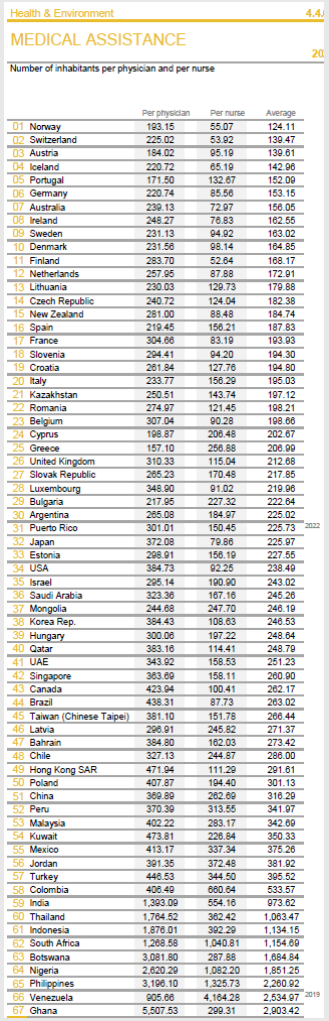
TYPE OF DATA USED

- **Number of inhabitants per physician and per nurse:** This measures the availability of medical professionals relative to the population.

DATA SOURCE FROM WCY

- Values presented are an average compiled from three different sources:
  - Passport
  - Euromonitor International
  - National sources

WHAT DOES THE SCORE INDICATE?



Health & Environment 4.4.

MEDICAL ASSISTANCE 20

Number of inhabitants per physician and per nurse

		Per physician	Per nurse	Average
01	Norway	193.15	55.07	124.11
02	Switzerland	225.02	53.92	139.47
03	Austria	184.02	95.19	139.61
04	Iceland	220.72	65.19	142.96
05	Portugal	171.50	132.67	152.09
06	Germany	220.74	85.56	153.15
07	Australia	239.13	72.97	156.05
08	Ireland	248.27	76.83	162.55
09	Sweden	231.13	94.92	163.02
10	Denmark	231.56	98.14	164.85
11	Finland	283.70	52.64	168.17
12	Netherlands	257.95	87.88	172.91
13	Lithuania	230.03	129.73	179.88
14	Czech Republic	240.72	124.04	182.38
15	New Zealand	281.00	88.48	184.74
16	Spain	219.45	156.21	187.83
17	France	304.66	83.19	193.93
18	Slovenia	294.41	94.20	194.30
19	Croatia	261.84	127.76	194.80
20	Italy	233.77	156.29	195.03
21	Kazakhstan	250.51	143.74	197.12
22	Romania	274.97	121.45	198.21
23	Belgium	307.04	90.28	198.66
24	Cyprus	198.87	206.48	202.67
25	Greece	157.10	256.88	206.99
26	United Kingdom	310.33	115.04	212.68
27	Slovak Republic	265.23	170.48	217.85
28	Luxembourg	348.90	91.02	219.96
29	Bulgaria	217.95	227.32	222.64
30	Argentina	265.08	184.97	225.02
31	Puerto Rico	301.01	150.45	225.73 2022
32	Japan	372.08	79.86	225.97
33	Estonia	298.91	156.19	227.55
34	USA	384.73	92.25	238.49
35	Israel	295.14	190.90	243.02
36	Saudi Arabia	323.36	167.16	245.26
37	Mongolia	244.68	247.70	246.19
38	Korea Rep.	384.43	108.63	246.53
39	Hungary	300.06	197.22	248.64
40	Qatar	383.16	114.41	248.79
41	UAE	343.92	158.53	251.23
42	Singapore	363.69	158.11	260.90
43	Canada	423.94	100.41	262.17
44	Brazil	438.31	87.73	263.02
45	Taiwan (Chinese Taipei)	381.10	151.78	266.44
46	Latvia	296.91	245.82	271.37
47	Bahrain	384.80	162.03	273.42
48	Chile	327.13	244.87	286.00
49	Hong Kong SAR	471.94	111.29	291.61
50	Poland	407.87	194.40	301.13
51	China	389.89	262.69	316.29
52	Peru	370.39	313.55	341.97
53	Malaysia	402.22	283.17	342.69
54	Kuwait	473.81	226.84	350.33
55	Mexico	413.17	337.34	375.26
56	Jordan	391.35	372.48	381.92
57	Turkey	446.53	344.50	395.52
58	Colombia	406.49	660.64	533.57
59	India	1,393.09	554.16	973.62
60	Thailand	1,764.52	362.42	1,063.47
61	Indonesia	1,876.01	392.29	1,134.15
62	South Africa	1,268.58	1,040.81	1,154.69
63	Botswana	3,081.80	287.88	1,684.84
64	Nigeria	2,620.29	1,082.20	1,851.25
65	Philippines	3,196.10	1,325.73	2,260.92
66	Venezuela	905.66	4,164.28	2,534.97 2019
67	Ghana	5,507.53	299.31	2,903.42

The lower the value, the higher the ranking.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

In this context, a lower score (e.g., Malaysia's 345.79 in 2024) suggests better performance, as it may indicate optimized resource use or equitable access, aligning with WCR's focus on infrastructure and government efficiency. Countries with lower values, like top-ranked nations (e.g., Norway), likely excel in these areas, while a higher value (e.g., 366.31 in 2020) signals inefficiencies or gaps, lowering Malaysia's rank (e.g., 52nd in 2024). This inverse relationship assumes that streamlined medical assistance enhances economic productivity, though it may oversimplify factors like quality or rural disparities.

4.04.09 – Comparative of the Definition of Medical Assistance

Doctors/Physicians:

The number of physicians, general practitioners and specialists (including self-employed) who are actively practicing medicine in public and private institutions. The data should exclude dentists, stomatologists, qualified physicians who are working abroad, working in administration, research and industry positions. Data should include foreign physicians licensed to practice and actively practicing medicine in the country.

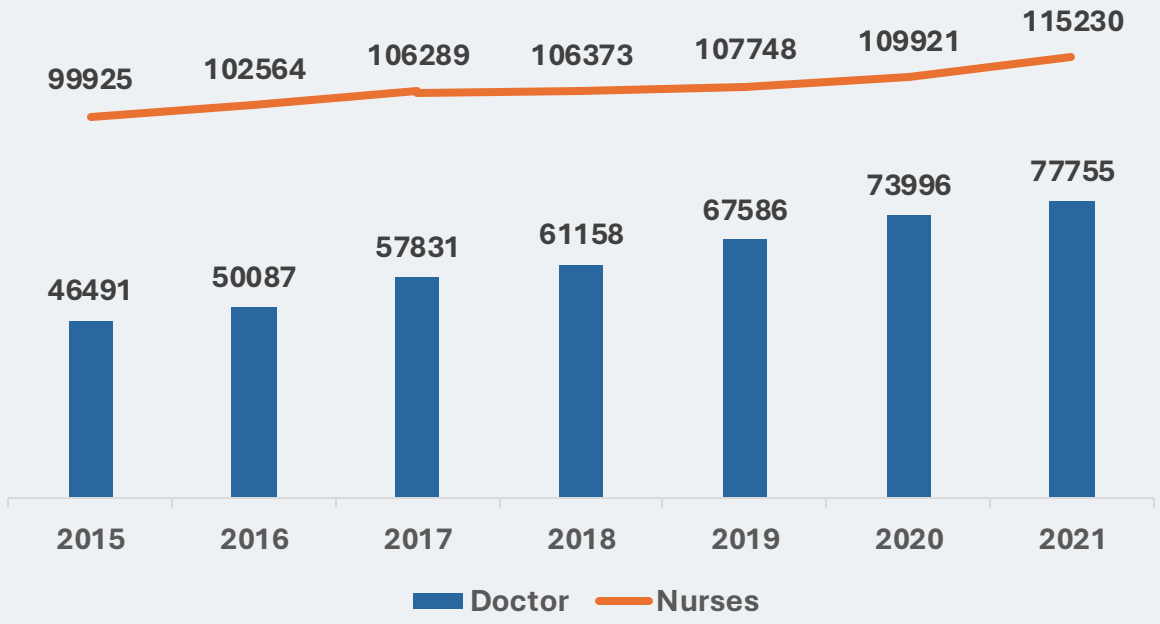
Nurses:
The data refer to the total number of nurses certified/ registered and actively practicing in public and private hospitals, clinics and other health facilities, including self-employed. Nursing assistants and midwives should be included. Data should exclude nurses who are working abroad, in administrative, research and industry positions. A midwife is defined as a practitioner of the obstetric art, qualified to deliver babies and to care for women before, during, and after childbirth.

Hong Kong SAR:

Physicians refer to doctors registered with the Medical Council of Hong Kong with full registration on the local and overseas lists, nurses refer to those registered/enrolled in any part of the register with the Nursing Council of Hong Kong (NCHK). Midwives refer to those registered with the Midwives Council of Hong Kong (MWCHK). The data series is the sum of the number of registered nurses, enrolled nurses and midwives.

Notes: The definition types based on WCR, IMD Report 2025

Number of Registered Doctors and Nurses in Malaysia (2015 – 2021)



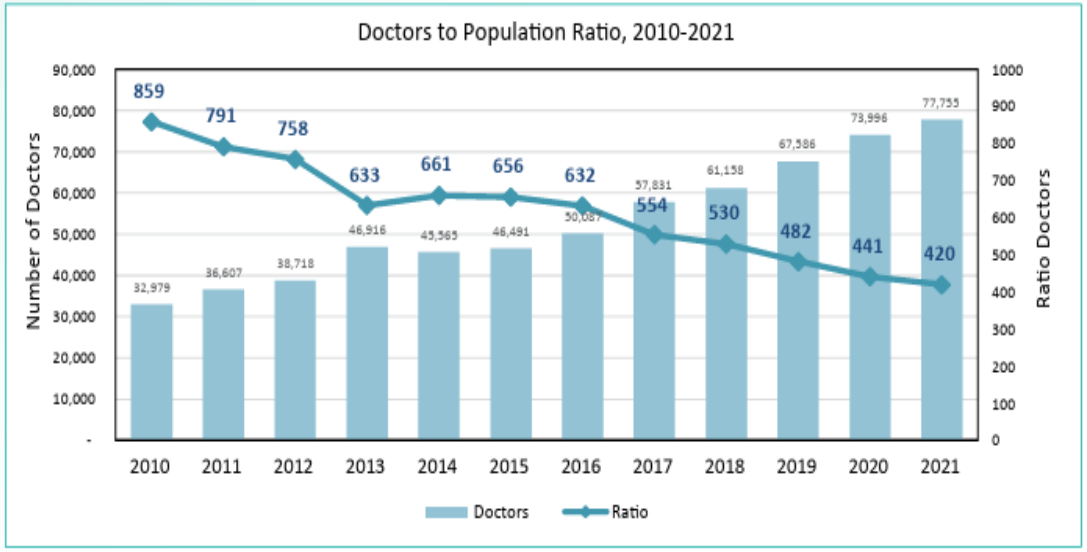
The data shows an exponential growth pattern, particularly noticeable in the 2019-2024 period, where the increase went from 713 in 2020 to 1779 in 2024.

This represents a growth of 150% over just 4 years, significantly outpacing earlier periods

Source: ITU (2024)

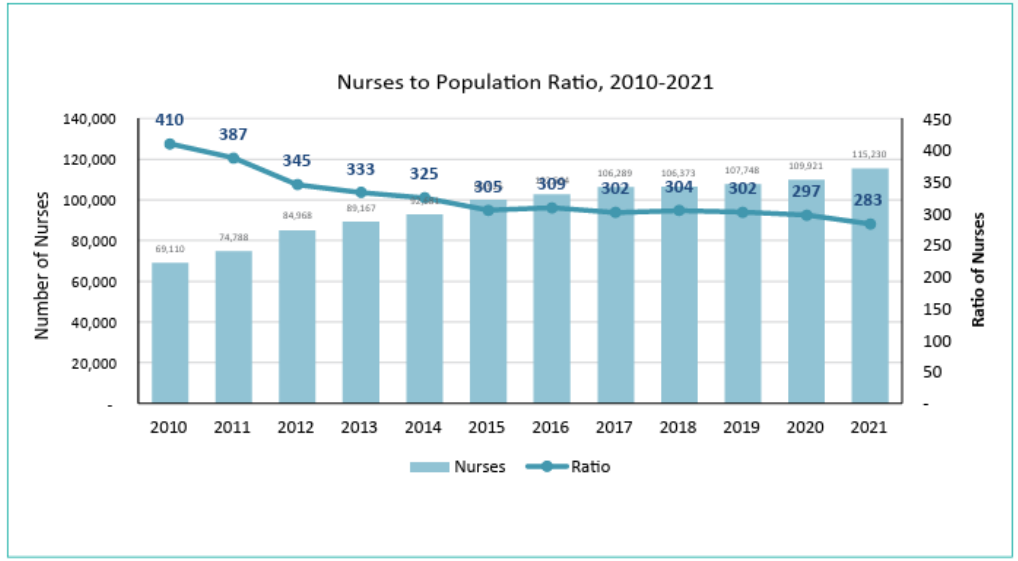
Number of Registered Doctors and Nurses in Malaysia (2015 – 2021)

Figure 15: Doctors to Population Ratio, 2010–2021



Source: Ministry of Health (2011–2022)

Figure 18: Nurses to Population Ratio, 2010–2021

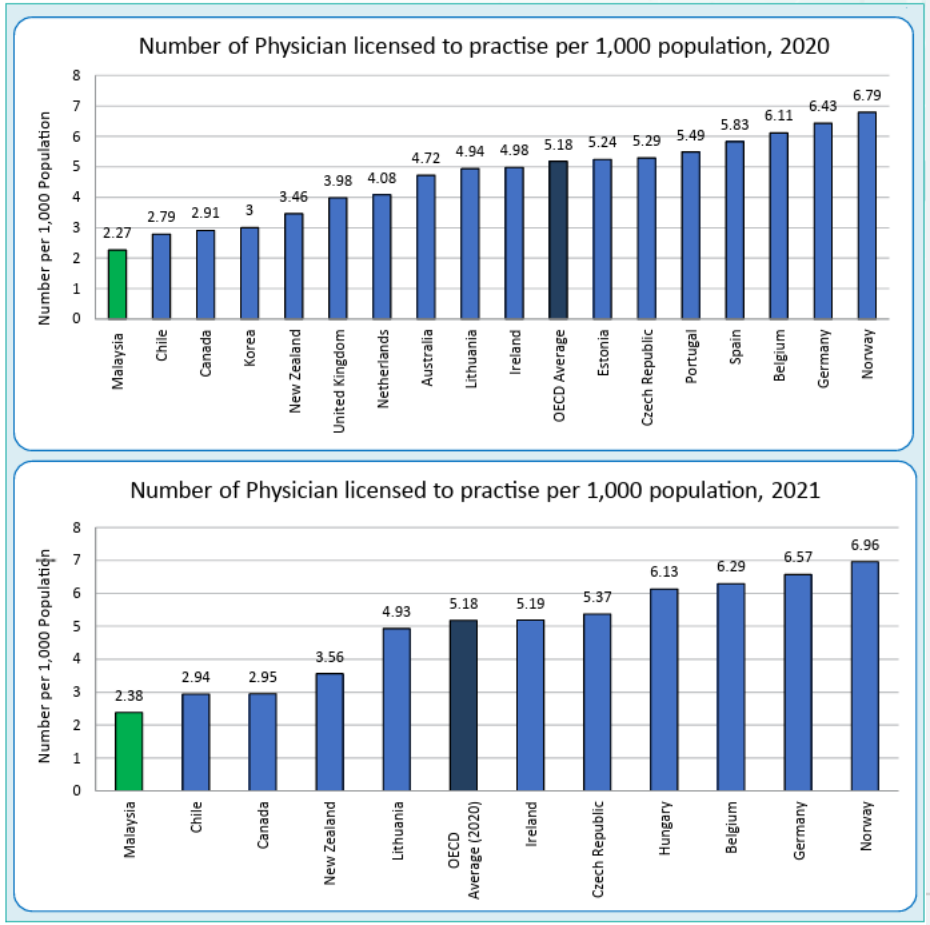


Source: Ministry of Health (2011–2022)

Source: ITU (2024)

Number of Physicians Licensed in Selected OECD Countries (2020)

Figure 8: Number of Physicians licensed to practise per 1,000 Population in selected OECD countries in comparison to Malaysia, 2020 and 2021

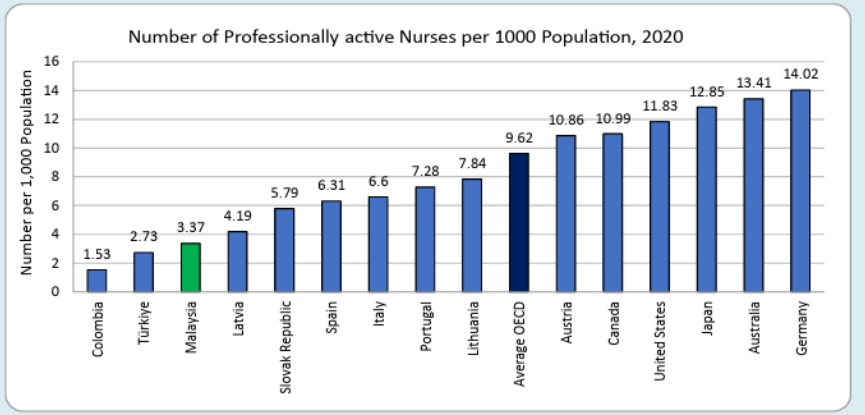


Source: Data for Malaysia data from Ministry of Health (2021); Organisation for Economic Co-operation and Development countries retrieved from https://stats.oecd.org/;

Source: ITU (2024)

Number of Nurses in Selected OECD Countries (2020)

Figure 11: Number of Nurses per 1,000 Population in selected OECD countries in comparison to Malaysia, in 2020 and 2021



Source: Data for Malaysia from Ministry of Health (2019); Organisation for Economic Co-operation and Development countries retrieved from https://stats.oecd.org/;

Note: a) OECD average was calculated from data available from OECD. Stat website up to 2 December 2022 as in Annex 1. b) In 2021, the composition of countries differs from that of 2020 because of lack in data availability during the data retrieval process from the website. Therefore, the average OECD data from 2020 is utilized in both charts.

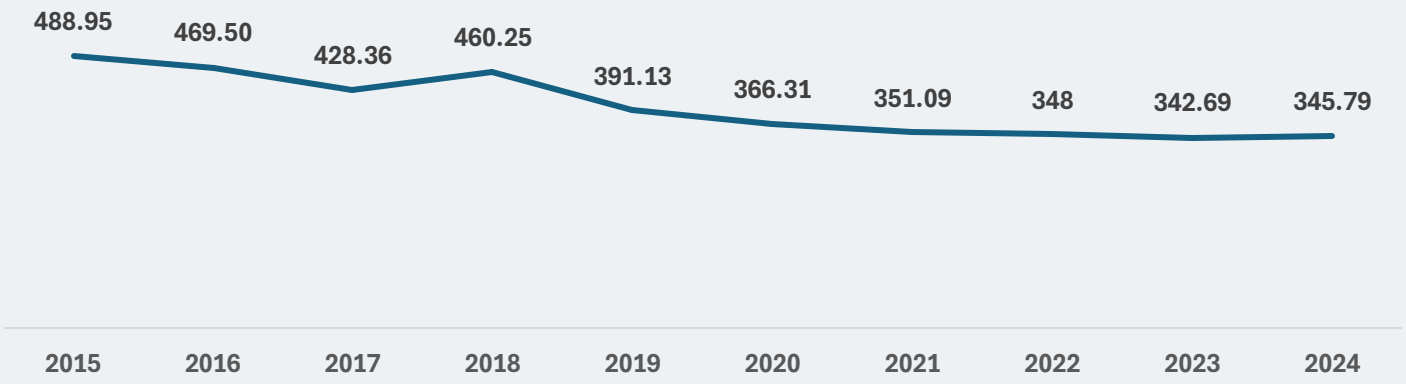
Aspect	Malaysia	Norway
Data Collection Approach	Multi-pronged, situational analyses, surveys.	Centralized, advanced health information systems.
Data Sources	Public/provider surveys, quality improvement maps, telehealth records.	HAQ Index, health system databases, GDP spending data.
Key Focus Areas	Workforce competency, health info systems, rural-urban equity.	Equitable access, preventive care, health spending.
Strengths	Diverse data from community and partnerships.	Comprehensive, standardized, and stable data.
Weaknesses	Timeliness issues, limited rural data coverage.	Potential regional rural data gaps.
Improvement Needs	Enhance real-time data and rural representation.	Improve regional data granularity.

Source: ITU (2024)

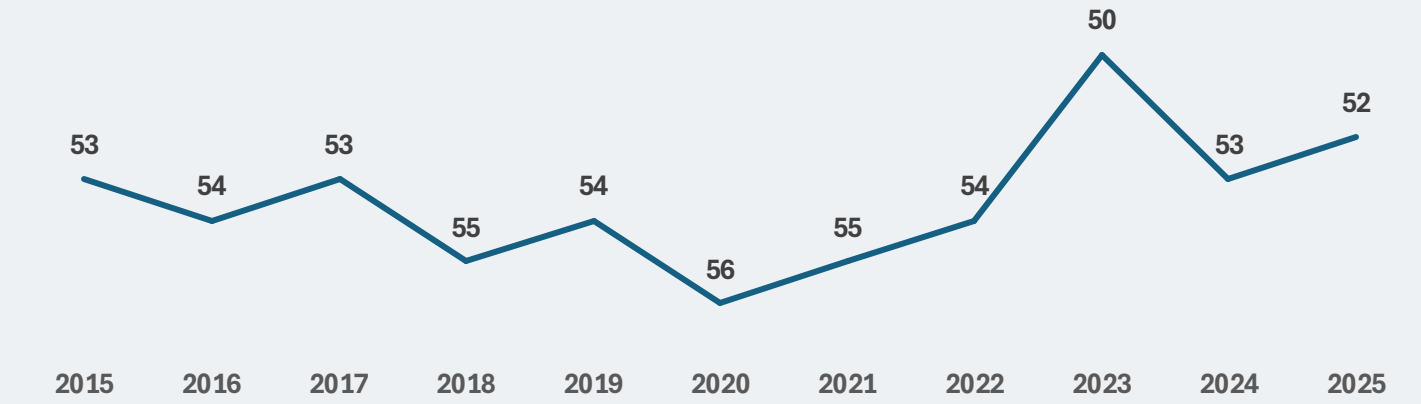
INDICATOR 4.4.09: Medical Assistance

How do the indicators perform across years?

Indicator **Value**



Indicator **Rank**



The figure shows a general decline with a slight recovery. Malaysia's indicator value started at 366.31 in 2020, dropped to 351.09 in 2021, further decreased to 348 in 2022, fell to 342.69 in 2023, and rose slightly to 345.79 in 2024.

This indicates a downward trend over the five-year period, with a total decrease of 20.52 points from 2020 to 2023, followed by a modest rebound of 3.1 points in 2024.

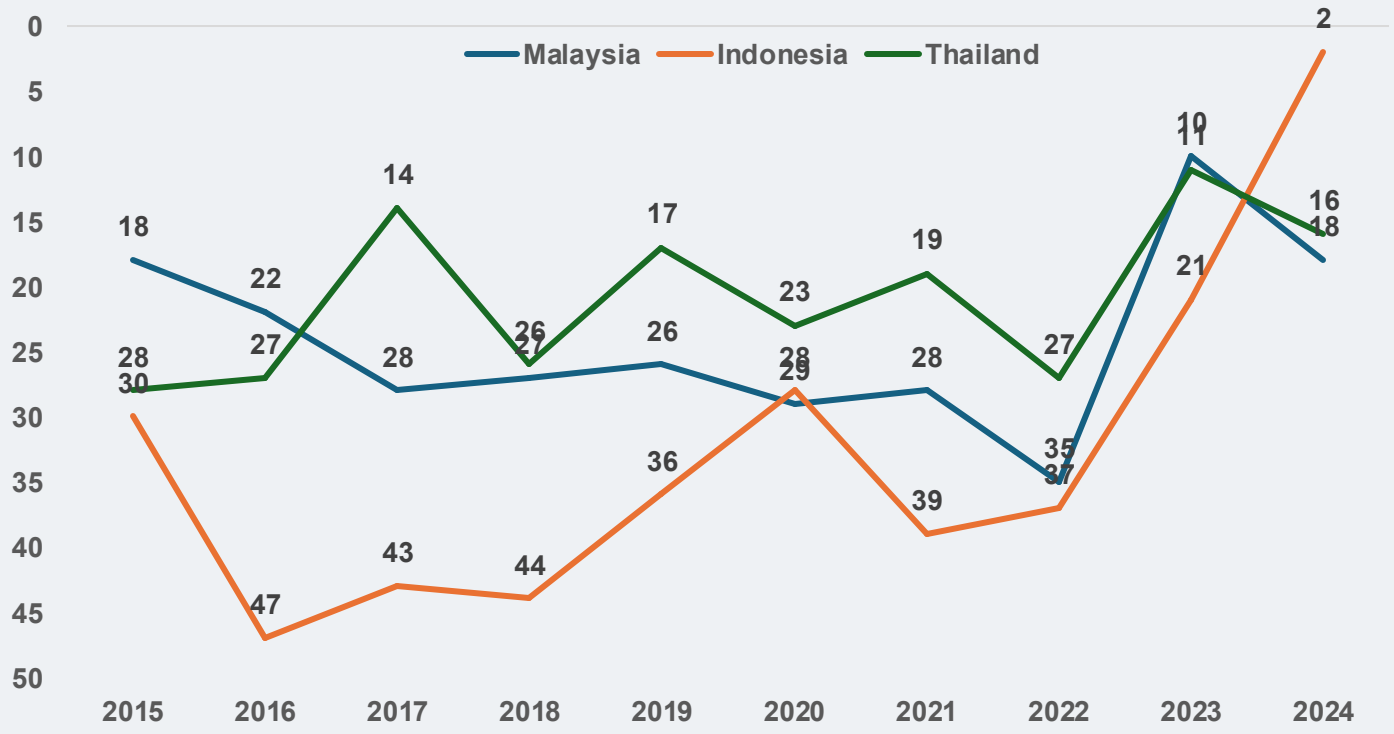
The overall trend shows a peak at 50th in 2022, followed by a minor dip to 53rd in 2023 and a slight recovery to 52nd in 2024, reflecting some volatility. The improvement from 56th in 2020 to 52nd in 2024 (a gain of 4 spots) highlights efforts to enhance medical assistance, though the ranking remains in the lower half, indicating ongoing challenges

Source: IMD (2024)

How do the indicators perform across years?

Indicator **Value** | Indicator **Rank**

SELECTED ASEAN COUNTRIES RANKINGS



The speed gaps by top-ranking countries like **Iceland**, **Singapore**, and **South Korea** will continue to have significantly **faster internet speeds** than many **developing nations**

Iceland, with an average download speed of 200-250 Mbps, remains one of the fastest countries globally. Singapore is a close competitor with similar speeds but also boasts extensive 5G deployment. Malaysia, though improving, will likely lag behind these global leaders, especially in fixed broadband speeds but could catch up in mobile broadband speeds due to its ongoing 5G expansion.

Source: IMD (2024)

THANK YOU

Finish

HD
HARD DATA

FACTOR: INFRASTRUCTURE

SUB-FACTOR: HEALTH AND ENVIRONMENT

INDICATOR 4.4.11
HUMAN DEVELOPMENT INDEX

INDICATOR 4.4.11: Human Development Index

INDICATOR DEFINITION

The Human Development Index (HDI) is a composite statistic used by the United Nations Development Programme (UNDP) to measure a country's overall achievement in three (3) key dimensions of human development: health, education, and a decent standard of living.

CALCULATION USED

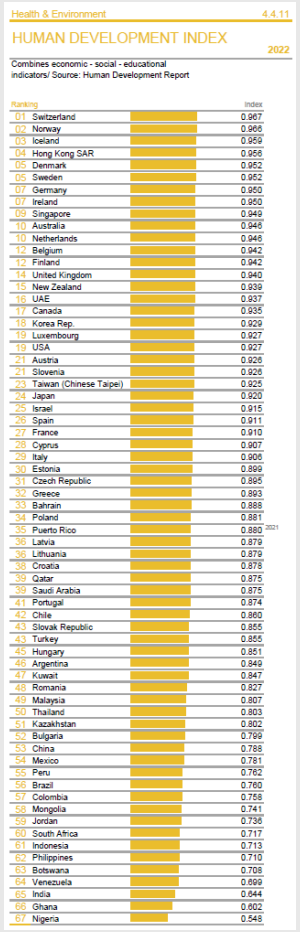
Human Development Index (HDI) =

$$\frac{\textit{Actual Value} - \textit{Minimum Value}}{\textit{Maximum Value} - \textit{Minimum Value}}$$

DATA SOURCE FROM WCY

UNDP Human Development Report 2024
National sources

WHAT DOES THE SCORE INDICATE?



Health & Environment 4.4.11

HUMAN DEVELOPMENT INDEX 2022

Combines economic - social - educational indicators/ Source: Human Development Report

Ranking		Index
01	Switzerland	0.967
02	Norway	0.966
03	Iceland	0.959
04	Hong Kong SAR	0.956
05	Denmark	0.952
05	Sweden	0.952
07	Germany	0.950
07	Ireland	0.950
09	Singapore	0.949
10	Australia	0.946
10	Netherlands	0.946
12	Belgium	0.942
12	Finland	0.942
14	United Kingdom	0.940
15	New Zealand	0.939
16	UAE	0.937
17	Canada	0.935
18	Korea Rep.	0.929
19	Luxembourg	0.927
19	USA	0.927
21	Austria	0.926
21	Slovenia	0.926
23	Taiwan (Chinese Taipei)	0.925
24	Japan	0.920
25	Israel	0.915
26	Spain	0.911
27	France	0.910
28	Cyprus	0.907
29	Italy	0.906
30	Estonia	0.899
31	Czech Republic	0.895
32	Greece	0.893
33	Bahrain	0.888
34	Poland	0.881
35	Puerto Rico	0.880 2021
36	Latvia	0.879
36	Lithuania	0.879
38	Croatia	0.878
39	Qatar	0.875
39	Saudi Arabia	0.875
41	Portugal	0.874
42	Chile	0.860
43	Slovak Republic	0.855
43	Turkey	0.855
45	Hungary	0.851
46	Argentina	0.849
47	Kuwait	0.847
48	Romania	0.827
49	Malaysia	0.807
50	Thailand	0.803
51	Kazakhstan	0.802
52	Bulgaria	0.799
53	China	0.788
54	Mexico	0.781
55	Peru	0.762
56	Brazil	0.760
57	Colombia	0.758
58	Mongolia	0.741
59	Jordan	0.736
60	South Africa	0.717
61	Indonesia	0.713
62	Philippines	0.710
63	Botswana	0.708
64	Venezuela	0.699
65	India	0.644
66	Ghana	0.602
67	Nigeria	0.548

The higher the value, the higher the ranking.

Source: *IMD World Competitiveness Yearbook 2024*

RATIONALITY?

The rationality is generally leads to a higher ranking, reflecting better life expectancy, education, and income, which boost economic competitiveness.

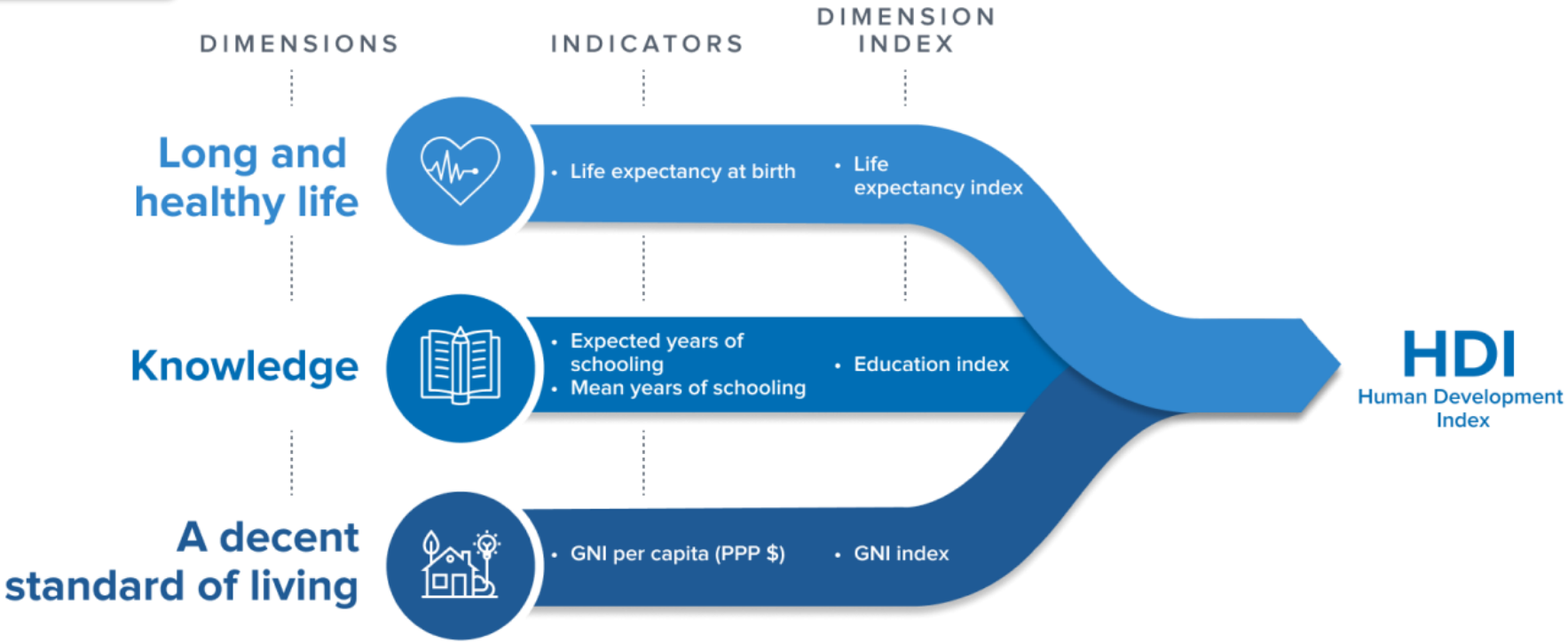
Countries like Switzerland, with HDI above 0.800, rank higher due to strong health and education systems. However, this link isn't perfect—HDI may overlook inequality or sustainability, and its weighting of factors can skew results.

For Malaysia, with an HDI of 0.807 and a 39th WCR rank, the lower education index (e.g., 10.3 mean years of schooling) limits its ranking despite income growth, suggesting HDI's impact depends on addressing these gaps.

4.4.11 – Human Development Index

HDI examines three basic dimensions to measure a country's growth and achievements in human development. The first of these is health for the country's people. This is measured by life expectancy at birth and those with higher life expectancies rank higher than those with lower life expectancies. The second dimension measured in the HDI is a country's overall knowledge level as measured by the adult literacy rate combined with the gross enrollment ratios of students in primary school through the university level. The third and final dimension in the HDI is a country's standard of living. Those with higher standards of living rank higher than those with lower standards of living. This dimension is measured with the gross domestic product per capita in purchasing power parity terms, based on United States dollars.

HDI Dimensions and Indicators



Notes: UNDP Human Development Report 2024

INDICATOR 4.4.11: Human Development Index

Detailed Calculation of indicator

Normalize the Indicator

$$\textit{Human Development Index (HDI)} = \frac{\textit{Actual Value} - \textit{Minimum Value}}{\textit{Maximum Value} - \textit{Minimum Value}}$$

- **Minimum and Maximum Values** (as set by UNDP)
- Example:
- Compute Dimension Indices
  - Life Expectancy: Min = 20 years, Max = 85 years
  - Mean Years of Schooling: Min = 0 years, Max = 18 years
  - Expected Years of Schooling: Min = 0 years, Max = 18 years
  - GNI per Capita: Min = $100, Max = $75,000 (log-adjusted)

Compute Dimension Indices

$$\textbf{Health Index} = \textit{Normalized Life Expectancy}$$

$$\textbf{Education Index} = \frac{\textit{Normalized Mean Years of Schooling} + \textit{Normalized Expected Years of Schooling}}{2}$$

$$\textbf{Income Index} = \textbf{Normalize GNI per capita}$$

using a log transformation to reflect diminishing returns

$$\textbf{Index} = \left(\frac{In\,(Actual\ GNI)\ x\ In\,(100)}{In\,(75{,}000) - In\,(100)}\right)$$

Calculate the HDI

The HDI is the geometric mean of the three dimension indices

$$\textbf{HDI} = \sqrt[3]{\textit{Health Index X Education Index X Income Index}}$$

- **HDI Categories (approximate, based on UNDP):**
  - 0.800–1.000: Very High
  - 0.700–0.799: High
  - 0.550–0.699: Medium
  - 0.350–0.549: Low

Note: LCU refers to local currency unit

Are we measure it right?

Comparative measurement index between UNDP and DOSM

UNDP Human Development Index, 2021 - 2022

Malaysia	
2022 HDI value	0.810
HDI change from 2021	+0.008
Life expectancy at birth	75.4 years
Expected years of schooling	12.5 years
Mean years of schooling	11.1 years
Gross National Income per capita	31,629 (constant 2021 PPP$)

Malaysia	
2021 HDI value	0.802
HDI change from 2020	-0.008
Life expectancy at birth	73.9 years
Expected years of schooling	12.9 years
Mean years of schooling	10.9 years
Gross National Income per capita	29,627 (constant 2021 PPP$)

Malaysia Human Development Index, 2021 - 2022

Dimension Index	*2021*	*2022*	*2021-2022*	
			Index Point Change	*Growth (%)*
Life Expectancy Index	0.826	0.823	-0.003	-0.4
Education Index	0.746	0.757	0.011	1.5
Gross National Income (GNI) Index	0.851	0.872	0.021	2.5
Malaysia Human Development Index (MHDI)	**0.806**	**0.816**	**0.010**	**1.2**

Measurements of the Human Development Index (HDI) by the UNDP and the Department of Statistics Malaysia (DOSM) indicate comparable findings. Consequently, the analysis highlights that the education index represents the weakest component of Malaysia's HDI for 2021 and 2022, implying that focused efforts to improve education—particularly by boosting mean and expected years of schooling—are crucial for elevating the country's overall HDI ranking.

Source: UNDP & DOSM (2021 – 2022)

Are we measure it right?

Comparative measurement index between UNDP and DOSM

UNDP Human Development Index, 2021 - 2022

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2022 HDI value	0.810
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Gross National Income (GNI) Index	0.851	0.872	0.021	2.5
Malaysia Human Development Index (MHDI)	**0.806**	**0.816**	**0.010**	**1.2**

Measurements of the Human Development Index (HDI) by the UNDP and the Department of Statistics Malaysia (DOSM) indicate comparable findings. Consequently, the analysis highlights that the education index represents the weakest component of Malaysia's HDI for 2021 and 2022, implying that focused efforts to improve education—particularly by boosting mean and expected years of schooling—are crucial for elevating the country's overall HDI ranking.

Source: UNDP & DOSM (2021 – 2022)

Areas of Improvement

Proposing an extended questionnaire with specific references to the education attainments in the LFS, capturing both formal and non-formal educations. This extended questionnaire is refined based on the aim for this proposal and after considering the benchmarking country's practice (i.e. ONS United Kingdom)

Implementation strategies

There are another three steps required before the extended questionnaire can be embarked in the annual LFS.

1. **Finalizing questionnaire** — the extended questionnaire has to be finalized by the technical working team, consisting MPC, DOSM and other relevant parties.

2. **Pilot survey through monthly LFS** — the finalized questionnaire is proposed to be tested in the monthly LFS and analysed outcomes from the survey.

3. **Analysis the outcomes and final decision** — decision for embarking the questionnaire into the annual LFS has to be made based on the outcomes. Revision is required if the outcomes do not in line with the expectation.

Scope and sampling frame

This extended questionnaire for education attainments of the respondents is considered as supplementary questionnaire to the current LFS. Therefore, the technical issues relating the scope, coverage, and sampling frame and technique are unrelated.

THANK YOU

Finish