Box Article

Digital Services Trade in Malaysia: Opportunities and Policy Imperatives

Executive Summary

- As global trade faces increasing uncertainty, digital services trade will play a crucial role in supporting Malaysia's external resilience.
- Despite a strong digital foundation, Malaysia's digital services trade continues to record a deficit. Without targeted policy action, this trend is expected to persist or even worsen.
- Unlocking Malaysia's true potential in the digital economy requires targeted policies to enhance both hard and soft infrastructure.

From Non-Tradable to Tradable: The Emergence of Digital Services Trade

Global trade is no longer just about physical goods. Services that once required face-to-face delivery are now traded seamlessly across borders through digital platforms. While not new, this shift is accelerating rapidly, driven by technologies such as cloud computing, software-as-a-services (SaaS) and artificial intelligence (AI). For Malaysia, this is a pivotal moment. As traditional goods trade faces headwinds from rising protectionism and supply chain disruptions, digital services trade offers a new source of growth and global competitiveness. This article explores the rise of digital services trade globally and in Malaysia, its role in economic progress, and the opportunities and challenges in the sector. It ends with policy recommendations to unlock the country's potential in this domain.

The Global and Domestic Landscape of Digital Services Trade

Digital services trade is a fast-growing segment of global trade. While a consistent measurement across countries remains a challenge, statistical guidance by international organisations have collectively defined digital trade as 'all international trade that is digitally ordered and/or digitally delivered'.[1] This would be the definition of digital services trade used in this article. Under the Sixth Edition of Balance of Payments and International Investment Position Manual (BPM6)[2], these services span five major categories: information and communications technology (ICT), business and professional services, charges for the use of intellectual property (IP), finance and insurance as well as personal, cultural and recreational services.

Globally, digital services have grown at nearly double the pace of goods trade since 2005 (Chart 1). By 2024, they accounted for over 53% of global services exports, an increase from 41% in 2011. While digital services export is led by advanced economies[3], several countries in the Southeast Asia region have made notable progress (Chart 2). Singapore leads the region as ASEAN's largest exporter of digital services, followed by Philippines and Thailand.

[1] For more details, see *Handbook on Measuring Digital Trade, second edition* (2023), World Trade Organisation (WTO), Organisation for Economic Co-operation and Development (OECD), International Monetary Fund (IMF) and the United Nations.
[2] Source: IMF
[3] The top three exporters of digital services are United States, United Kingdom and Ireland.

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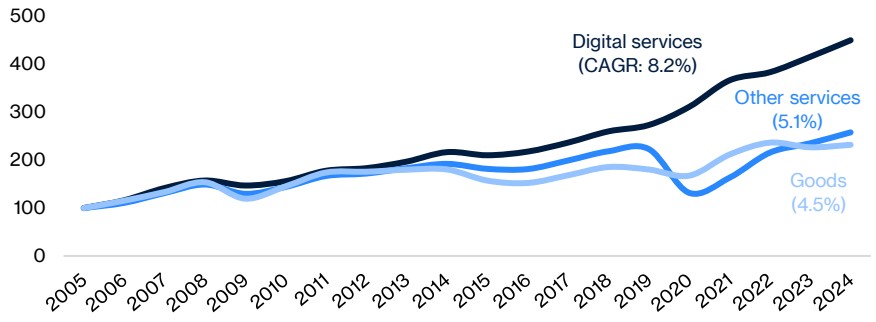
Chart 1: World exports of goods, digital services and other services
Index (2005=100)

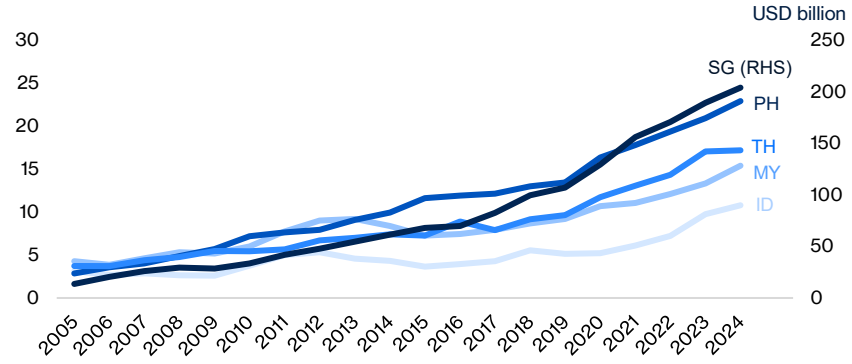


Note: CAGR refers to compound annual growth rate from 2005 to 2024. Other services include manufacturing services, maintenance and repair, transport, travel and construction.
Source: World Trade Organisation

From 2005 to 2024, Malaysia recorded more than threefold increase in digital services exports, driven mainly by business services and ICT. However, this growth has been accompanied by sharper increase in imports, particularly in IP charges, business services and ICT solutions.[4] Malaysia's persistent and widening trade deficit in digital services (Chart 3) reflects an increasing reliance on foreign digital services, particularly from dominant technology firms. As domestic firms and consumers continue to digitalise their businesses and lifestyles, Malaysia's demand and payments for cloud computing services, online advertising, and licensing fees for digital content such as music and video have also increased. The lack of competitive homegrown alternatives has also contributed to this trend.

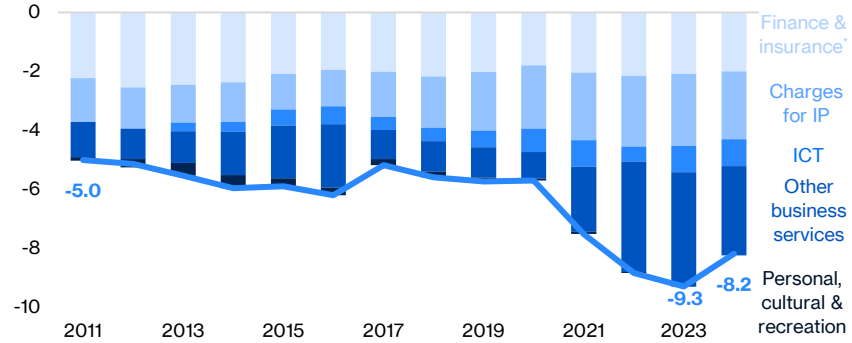
[4] For more details on Malaysia's services account balance, please refer to the box article titled 'Drivers of Malaysia's Current Account of the Balance of Payments in the Post-COVID-19 Period' in BNM's Economic and Monetary Review 2024.

Chart 2: Regional exports of digital services
USD billion



Note: SG = Singapore, PH = Philippines, TH = Thailand, MY = Malaysia, ID = Indonesia
Source: World Trade Organisation

Chart 3: Malaysia's trade balance of digital services
USD billion



* The deficit was primarily driven by imports of freight insurance, which was in line with strong imports of freight transportation amidst robust goods trade activity.
Note: Other business services include research and development (R&D), professional and management consulting services as well as technical (e.g. architectural, engineering) and trade-related services.
Source: World Trade Organisation

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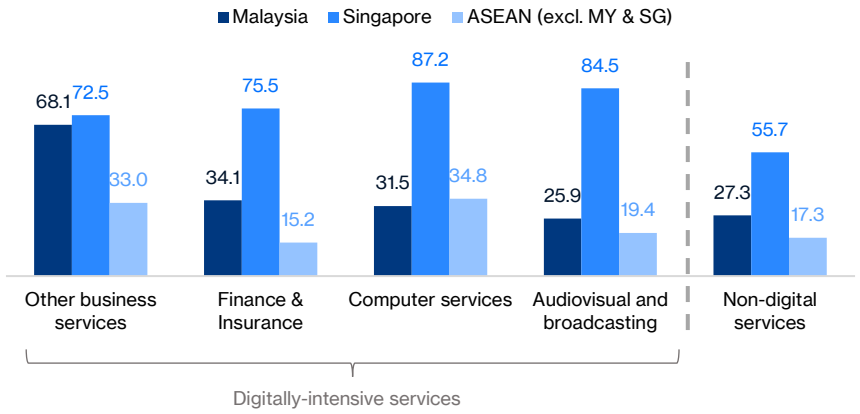
This imbalance reflects deeper structural challenges within the economy. The growing reliance on foreign-developed digital solutions underscores significant gap in domestic capabilities. While digital adoption is rising, export-oriented capacity remains limited. Strengthening this sector is critical not only to narrow the deficit, but also to support a shift toward higher-value economic activity. The economic case for digital services trade is discussed in the next section.

Turning Bandwidth into GDP: The Economic Case for Digital Services Trade

Digital services are critical enabler of economic transformation. For Malaysia, building strong capabilities in digital services trade can unlock significant domestic value, enhance sectoral linkages, and boost productivity gains and income growth.

First, compared to traditional services, digitally-intensive industries tend to grow faster and generate higher domestic value-added. As they can be remotely delivered via digital platforms, these services are scalable and depend more on intellectual capital rather than physical inputs. Once developed, they can be deployed to global markets at relatively low marginal cost. Digital services generate higher domestic value-added, meaning each export contributes more to the local economy. Findings from Trade in Value Added (TiVA) analysis shows that most digital services outperform traditional services in the share of domestic content embodied in foreign demand (Chart 4).

Chart 4: Domestic value added in foreign final demand by sectors
% share of total value added of sub-sectors



Note: For every RM1 of other business services exported by Malaysia, RM0.68 of input is sourced domestically.
Source: OECD Trade in Value Added (TiVA)

Second, expanding digital services trade can reduce cyclicality in external trade. Vis-a-vis goods or merchandise trade, digital services demonstrated relatively lower volatility and correlation with global growth (Chart 5), as they are less exposed to logistical disruptions and less sensitive to interest rate cycles.[5] Digital services trade is also more resilient to economic downturns than goods trade. During the COVID-19 pandemic and past crises, digital services exports have continued to rise steadily or experienced shallower contractions (Chart 5).

[5] This is because digital services tend to grow through accumulation of intangible capital which is driven more by equity financing than bank lending (European Central Bank, 2021).

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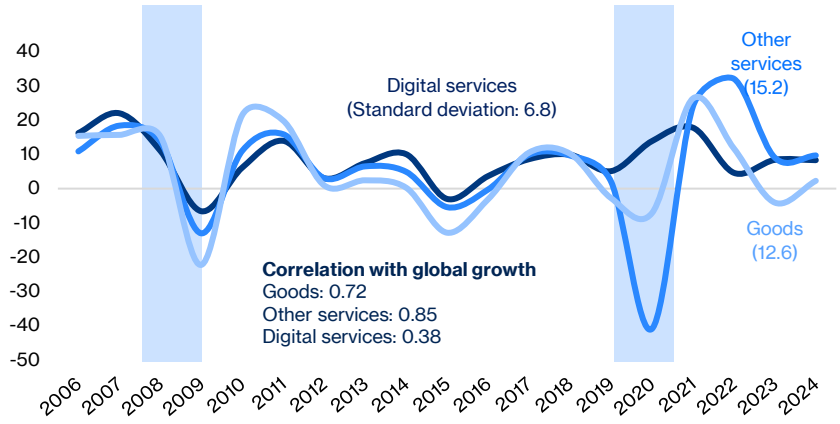
Chart 5: Growth of world exports of goods and services
Annual change, %

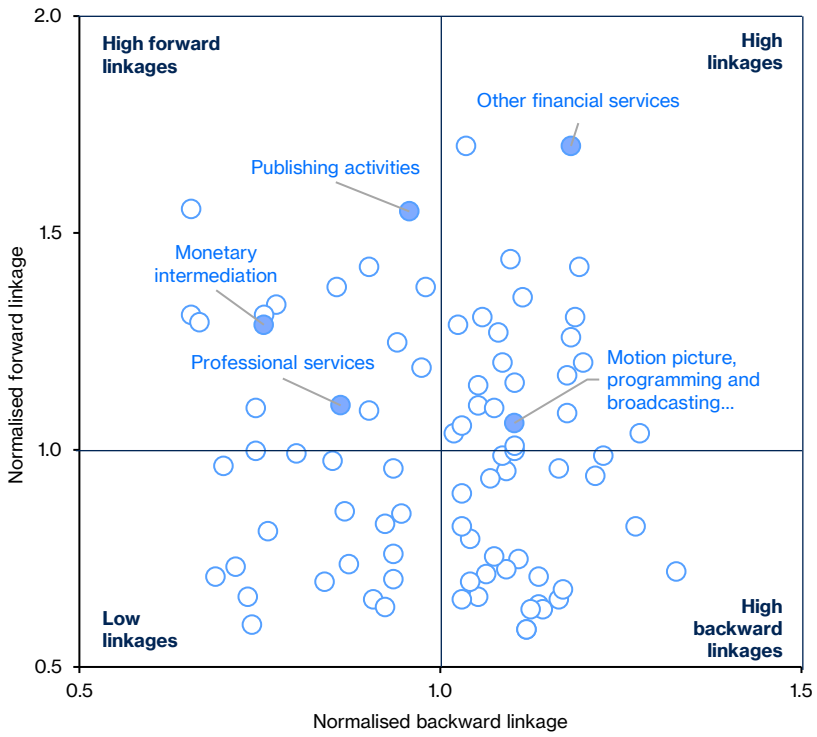


Note: Other services include manufacturing services, maintenance and repair, transport, travel and construction.
Source: World Trade Organisation, International Monetary Fund and Bank Negara Malaysia estimates

Third, digital services contribute to wider economic spillover through strong forward and backward linkages.[6] They provide essential inputs for other sectors and create demand for upstream industries, resulting in high multiplier effects. Input-output analysis of Malaysia's economy reveals that many digitally-intensive industries exhibit strong linkages in the economy, such as motion picture, programming and broadcasting activities as well as other financial services (Chart 6).

[6] Forward linkage is a relative measure of how much output from digital services sector is used as input for other industries. Backward linkage reflects potential increase in output induced in upstream industries in response to a unit increase in the digital services output.

Chart 6: Forward and backward linkages by industries



Note: An industry is forward- or backward-oriented if its linkages exceed one, showing above-average linkages compared to other industries.
Source: Input-Output Tables 2021, Department of Statistics, Malaysia and Bank Negara Malaysia estimates

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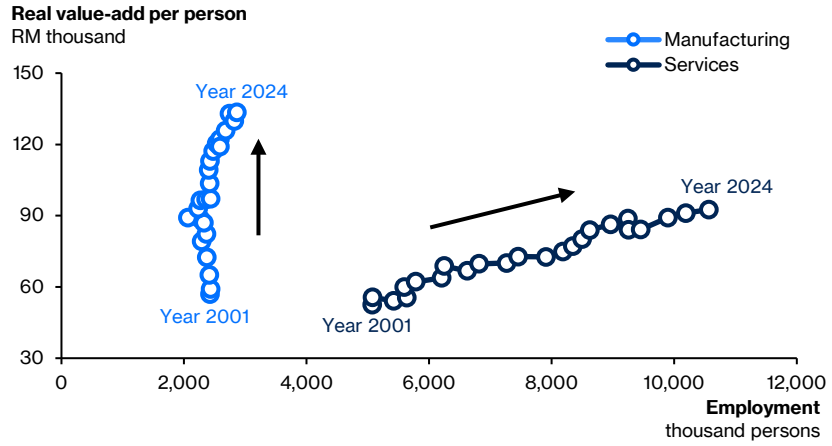
Lastly, strengthening of digital services trade could help address one of the most enduring structural challenges in Malaysia: weak productivity growth. Despite the services sector accounting for over 60% of employment, many services jobs remained concentrated in low-productivity segments which weighed on overall productivity and income growth (Chart 7 and 8). This reflects Baumol's Cost Disease, where labour-intensive sectors such as services often show slower productivity growth. This is because services sector often depends heavily on human interaction, limiting the scope to adopt productivity-enhancing technologies as compared to the manufacturing sector. The low productivity in the services sector subsequently weighs on the overall productivity in the economy. In this respect, digital services could improve productivity and income growth, as their digital- and knowledge-intensive nature allows firms to scale and engage in cross-border trade. Such dynamic is reflected by the higher income levels and growth created in ICT industries subsector, which is supported by their productivity levels (Chart 8a and 8b).

Chart 7: Real value-add per person, employment



Source: Department of Statistics, Malaysia, Bank Negara Malaysia estimates

Chart 8a: Median monthly salaries & wages

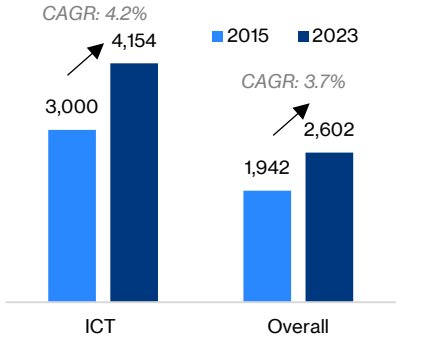
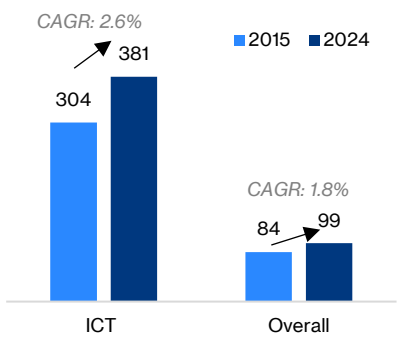


Chart 8b: Annual value-added per employment



Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

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Unveiling Strengths and Identifying Gaps

Malaysia has a solid foundation to advance its digital services industry, with strong ICT infrastructure, supportive government policies, vibrant technology industries, and a competitive talent pool (Diagram 1).

Diagram 1: Malaysia's digital services foundations and enablers

Strong ICT infrastructure	Government initiatives	Emerging tech industries	Competitive talent
31 operational data centres **>20** incoming data centres **80.6%** of firms use the Internet (Internet penetration ratio)	**>30** digital-related national plans were launched since the last decade, including:- 1. Malaysia Digital Economy Blueprint 2. Malaysia National Artificial Intelligence Roadmap 3. National Digital Infrastructure Plan (JENDELA)	**>5000** firms granted 'Malaysia Digital' status as of 1Q 2024 **1st** in the Global Islamic Fintech (GIFT) Index since the index was first launched in 2021	**8th** in the world for talents with digital skills in the Global Talent Competitiveness Index 2023 **4th** in the world for Women with degrees in the IMD World Digital Competitiveness Ranking 2023

Source: Malaysia Digital Economy Corporation (MDEC), World Bank, International Institute for Management Development (IMD), Dinar Standard and newsflow

Nevertheless, several challenges must be addressed to fully capitalise on this sector as a sustainable source of growth (Diagram 2).

Diagram 2: Gaps in Malaysia's digital services ecosystem

1 **Over-reliance on foreign R&D**	• *Misaligned research priority areas under R&D and IP development with industry needs* • *Low and declining Malaysia's R&D spending as % of GDP (~1%)* *Ongoing initiatives: National Research, Development, Innovation, Commercialisation and Economy (RDICE) roadmap to improve R&D ecosystem*
2 **Lacklustre startup ecosystem**	• *Lack of private funding, especially at later stage for commercialisation* • *Fragmented government agencies, with limited support to reach greater market access* *Ongoing initiatives: Malaysia Startup Ecosystem Roadmap 2021–2030, KL20 Action Plan*
3 **Limited measures to boost data centres' (DC) forward linkages**	• *Current initiatives focus on backward linkages, but limited measures to boost forward linkages* • *Once DC operationalises and spur firms' digitalisation, lack of domestic providers can lead to higher digital services imports* *Ongoing initiatives: Data Centre Task Force*
4 **Shortage of skilled talents**	• *Demand outpacing supply, with higher salaries in SG drawing existing talent away* • *Heavy reliance on overseas expertise rather than local talent for high-skilled services (e.g. cloud)* *Ongoing initiatives: MDEC Tech Talent Initiatives*

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- **Over-reliance on foreign research and development (R&D):** Malaysia depends heavily on foreign technology and expertise. Low R&D spending domestically also limits local innovation. Malaysia's R&D spending as a share of GDP is only around 1%, lower than regional peers such as Singapore (2.2%), Japan (3.4%) and South Korea (5.2%).[7]

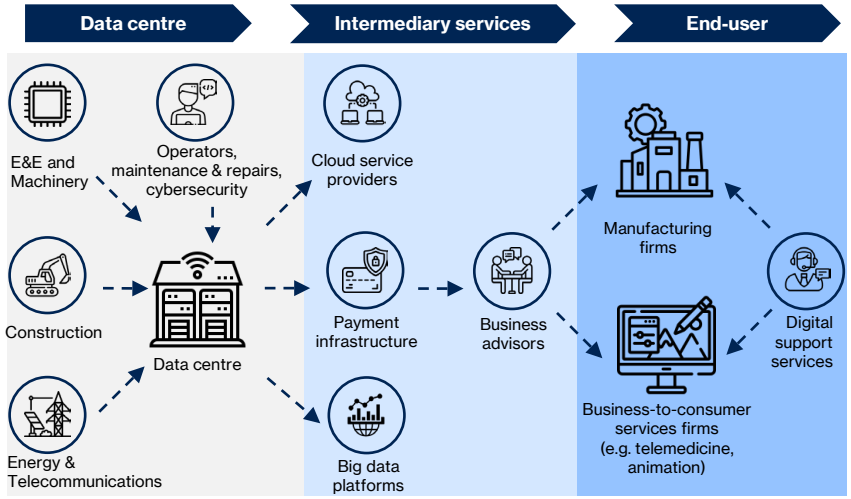
- **Underdeveloped startup ecosystem:** While government initiatives have provided some support, the absence of substantial private sector involvement restricts the development of a competitive entrepreneurial ecosystem. This issue is compounded by a weak innovation ecosystem, where research output are often disconnected from market needs, leading to poor commercialisation of ideas and homegrown technologies. Finally, the local startup ecosystem lacks public and private funding (e.g. venture capital, angel investors).

- **Shortage of skilled talent**: Despite producing a considerable number of professionals with digital skills, Malaysia faces a persistent shortage of experienced talent. This gap is partly due to the country's proximity to Singapore – where salaries are significantly higher for similar roles – draws skilled talent from Malaysia.

- **Limited measures to boost data centre forward linkages:** Having data centres alone is insufficient. Malaysia must develop strong downstream digital services to fully capture the value of digital economy. Efforts must be placed on strengthening the connections between data centres and domestic downstream services, as well as promoting local digital service offerings – many which are tradable (Diagram 3). Without a cohesive strategy, the value of data centre investments to the broader economy would only end at stimulating upstream demand for construction and energy. Worse, once these data centres are operational, the lack of domestic providers may increase the dependence on imports of digital services.

[7] Source: World Bank, data based on latest available year

Diagram 3: An illustration of digital services value chain of data centre



Note: Sectors listed are not exhaustive. The position in the value chain (i.e. front-end and back-end) does not reflect the extent of value added by the sector.
Source: Adapted from MDEC, Copenhagen Economics 'Finland's Economic Opportunities from Data Centre Investment', Shimona Shodipo 'The Digital Value Chain: Risk and Unintended Consequences', and Tech UK 'Data Centre: Engines of Growth'.

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Mini Box: Turnaround in Singapore's Digital Services Trade

Between 2005 and 2013, Singapore experienced a growing deficit in digital services (Chart 10). However, this trend was reversed post-2013, driven by development of a robust digital ecosystem and effective implementation of targeted policy measures. Key factors behind the improvement in Singapore's digital trade balance include:

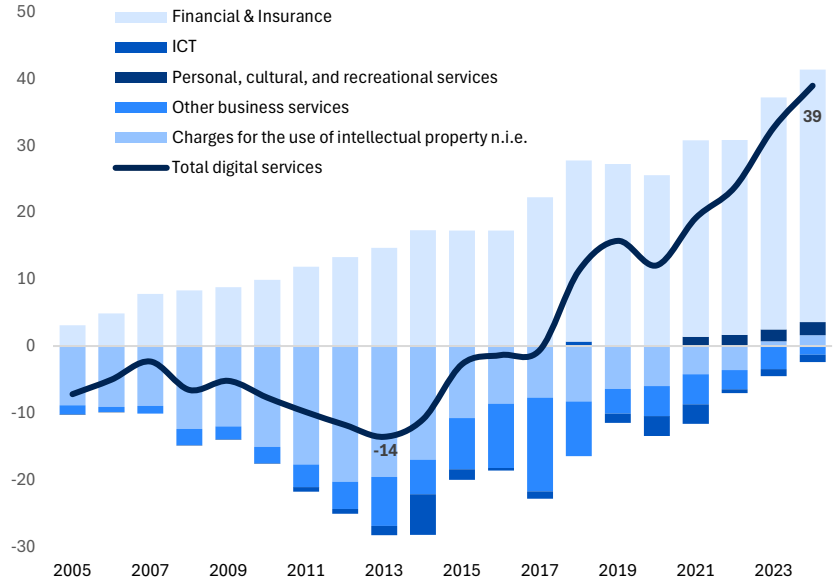
- **Boosting Intellectual Property (IP) exports:** In 2013, Singapore introduced the Intellectual Property Hub Master Plan focusing on creating a robust IP ecosystem by developing a vibrant IP marketplace, increasing access to IP financing and strengthening legal frameworks. The plan played an important role in attracting patenting activity, fostering high-value innovation, and enabling commercialisation of intellectual property, which contributed to a strong growth in IP exports and reduction in IP imports, thereby effectively narrowing the deficit in charges for IP. The country's trademarks in force increased from 273,519 in 2013 to 395,899 in 2023.[8]

- **Increasing surplus of financial services:** Singapore deepened its strength in financial and insurance services , especially in digital banking services and fintech adoption. The country's licensed financial institutions almost tripled from 896 in 2013 to 2,565 in 2024.[9]

In 2018, Singapore's multi-year deficit in digital services trade turned to a surplus. This turnaround highlights the importance of a strong digital framework and targeted policies in strengthening a country's overall digital economy.

Chart 10: Singapore's trade balance of digital services

USD billion



Source: World Trade Organisation

[8] Source: World Intellectual Property Organization (WIPO)
[9] Source: Monetary Authority of Singapore

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Charting the Future for Malaysia's Digital Services Trade

To close the gap in digital services trade performance, policy interventions should focus on three mutually reinforcing areas: developing a skilled workforce, improving infrastructure, and enhancing the business environment. Key priorities include targeting high-value, low-latency industries, strengthening Malaysia's startup and IP ecosystem as well as building digital talent. The strategy is aimed at supporting areas where structural gaps in digital ecosystem are more pronounced. In contrast, finance and insurance sector which has been mostly driven by goods trade activity, falls outside the scope of this discussion.

Table 1: Policy areas and broad strategy

Policy areas	Motivation	Broad strategy
Targeting high-value, low-latency industries	To maximise the positive spillovers (forward linkages) from data centres.	Leveraging on data centres to develop local high-value downstream industries (e.g. animation, gaming, cloud service providers, cybersecurity).
Enhancing start-up and IP ecosystem	To reduce import pressure from R&D and IPs.	Increase access to IP financing and strengthen IP court to protect innovations and incentivise R&D investments.
Building digital talent	To address shortage of high skilled talent in the digital sector.	Strengthen visa and returning expert programmes, expand digital upskilling efforts and align TVET and university curricula with industry needs.

Conclusion

Despite a strong foundation, Malaysia continues to record deficit in digital services trade. Without effective policy interventions, such trend is likely to persist or even worsen. Looking ahead, digital services trade is likely to become even more critical in supporting external resilience amidst geoeconomic tensions and intensifying uncertainty in global trade. Malaysia's true potential in digital economy lies at the digital services, which require policy interventions that are aimed at strengthening both the hard and soft infrastructure.

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