analysys mason

Report for Persatuan Industri Komputer dan Multimedia Malaysia (PIKOM)

# The economic impact of imposing contributions to the USP Fund on cloud service providers in Malaysia

Dion Teo, Shahan Osman, Sheri-Lyn Lhu, David Abecassis

**22 September 2025**

# Contents

Copyright © 2025. The information contained herein is the property of Analysys Mason and is provided on condition that it will not be reproduced, copied, lent or disclosed, directly or indirectly, nor used for any purpose other than that for which it was specifically furnished.

This report has been prepared by Analysys Mason for Persatuan Industri Komputer dan Multimedia Malaysia (PIKOM), the National Technology Association of Malaysia, and is subject to Analysys Mason's editorial judgement and discretion. The analyses contained within this report are the sole responsibility of Analysys Mason and do not necessarily reflect the views of PIKOM.

Analysys Mason Pte Ltd
77 Robinson Road
#15-02 Robinson 77
Singapore 068896
Tel: +65 6493 6038
enquiries@analysysmason.com
www.analysysmason.com
Registered in Singapore No. 200506242R
Subsidiary of Analysys Mason Ltd
North West Wing, Bush House, Aldwych
London WC2B 4PJ, UK
Reg. No. 5177472

# Executive summary

This paper discusses the implications of imposing Universal Service Provision (USP) Fund contributions on licensed cloud service providers (CSPs) and data-centre operators in Malaysia. We recommend that policy makers strongly consider removing this requirement, given the detrimental effects that USP Fund contributions could have on investment in Malaysia's cloud sector and broader economic implications. The research that underpins this report was conducted between June and July 2025.

***In Malaysia, demand for cloud services has grown, reaching an estimated MYR12.1 billion in 2024, contributing ~MYR12.2–15.4 billion (0.6–0.8%) to GDP; the investments of international and domestic CSPs would be at risk if they are required to contribute to the USP Fund***

Malaysia has ambitious plans for digitally enabled industrial transformation and is poised to benefit significantly from cloud services.[1] While some of these plans are directly related to the promotion of cloud services and adjacent sectors (incl. artificial intelligence (AI)), other sectors, such as manufacturing, will also likely be increasingly enabled by cloud infrastructure moving forward.

Enterprises (including large corporations, small and medium enterprises (SMEs) and start-ups) and public-sector bodies are adopting cloud services to enhance efficiency and improve their ability to offer new and better services to customers. We estimate that enterprises and public-sector bodies in Malaysia spent MYR12.1 billion (USD2.7 billion) on cloud services in 2024, which represents a strong compounded annual growth rate of ~20% since 2021 (see Section 2.1). Our literature review and interpretation of available economic studies suggests that the cloud services sector could have contributed between ~MYR12.2–15.4 billion (~USD2.7–3.4 billion) in GDP to Malaysia's economy in 2024,[2] accounting for ~0.6–0.8% of total GDP (see Section 3.1).

Malaysia's cloud ecosystem is being shaped by international and domestic CSPs that invest in digital infrastructure, develop skills in the local workforce, promote broader sustainability efforts and engage in strategic collaborations with various stakeholders. Investments by CSPs – including large international players, domestic graphics processing unit (GPU) as a service (GPUaaS) providers and systems integrators – are actively supporting Malaysia's digital ambitions, by reinforcing its position as a regional infrastructure hub and stimulating growth across the cloud value chain. Local hardware suppliers (including semiconductor manufacturers) and engineering, procurement and construction (EPC) companies have also benefitted from CSP investments.

1 Announced plans include the Malaysia Digital Economy Blueprint (MyDIGITAL) 2021–2030, National Artificial Intelligence Roadmap 2021–2025, Silicon Vision, New Industrial Master Plan 2030, and Shared Prosperity Vision 2030; see Section 2.1 for details

2 Based on the 2024 exchange rate of USD1=MYR4.575 from Euromonitor

***Imposing USP Fund contributions on CSPs would increase operating costs and lead to higher cloud fees for enterprises and public-sector bodies (~MYR250 million in additional fees per year), which would negatively impact growth in cloud adoption and its associated economic benefits***

Since 2022, locally incorporated CSPs (including international CSPs with a local presence in Malaysia) have been required to obtain the Applications Service Provider (ASP) Class C license if they offer platform as a service (PaaS) and infrastructure as a service (IaaS). The same requirement applies to local data-centre operators that enable international CSPs to offer these services.

Up until recently, CSPs generating revenue from cloud services were not required to contribute to the USP Fund, as the Malaysian Communications and Multimedia Commission (MCMC) imposed a 'zero weightage' on cloud service revenues in order to stimulate demand. However, the Ministerial Direction No. 2 published in July 2024 stated that licensed CSPs will be required to contribute to the USP Fund for the calendar year of 2025 onwards.[3] This policy change contradicts the prior understanding that had been established between the MCMC and industry stakeholders. CSPs may view this as a breach of trust, which would lead to reduced confidence in government policy, ultimately harming Malaysia's attractiveness as an investment destination.

Mandatory contributions to the USP Fund would increase the cost of doing business for CSPs in Malaysia. We estimate that USP Fund contributions would have resulted in an additional cost of ~MYR250 million (USD55 million) for cloud customers (including enterprises and public-sector bodies) in 2024. This estimate comprises of two main components:

- CSPs would experience a direct increase in the cost of providing PaaS and IaaS (equivalent to the application of the 6% USP Fund contribution to all PaaS and IaaS revenue in Malaysia), and would likely pass part of the burden onto cloud customers through higher prices.
- CSPs would face an indirect increase in the cost of providing SaaS and other cloud services in Malaysia, as these rely on underlying PaaS, IaaS and/or data-centre infrastructure (which are directly affected by USP Fund contributions) as inputs. We conservatively estimate that the cost of providing these services could increase by 1.5% due to higher input costs, and that part of this burden would likely also pass onto cloud customers through higher prices.

Higher prices for cloud services would lead customers in Malaysia to reduce their cloud spend and slow cloud adoption. SMEs,[4] which account for the vast majority of Malaysian businesses, would be especially deterred from using cloud services to innovate and improve efficiency if costs increase. This could threaten Malaysia's broader digital transformation ambitions over the long term.

The increase in fees for cloud services in Malaysia could also incentivise cloud customers to purchase cloud services from other countries with more favourable cost structures. This would negatively impact CSPs in Malaysia, and especially domestic CSPs, who are less equipped than

3 In accordance with the provision under the Communications and Multimedia (Universal Service Provision) Regulations 2002

4 Including micro-enterprises

international CSPs to serve customers in Malaysia from other countries in the region. Other local providers in the cloud value chain, including systems integrators (many of whom are SMEs) and suppliers to CSPs (such as providers of data-centre hardware inputs, and engineering, procurement and construction companies), would also face a reduction in growth opportunities.

Imposing contributions to the USP Fund on CSPs would lead to detrimental effects on the Malaysian economy, including reduced investment in infrastructure and services, reduced opportunities to build strategic industries, fewer jobs created, less development of new skills in the workforce and reduced growth in GDP.

***Policy makers in Malaysia should strongly consider removing the need for CSPs to contribute to the USP Fund, given that it would likely divert investments in Malaysia's cloud sector to other countries in the region, and threaten Malaysia's ambitions to develop into a leading digital hub***

There is no clear economic and regulatory justification for requiring CSPs in Malaysia to contribute to the USP Fund. Unlike in the telecoms sector, there is no evidence of a market failure in the cloud services sector that universal service contributions would address. Furthermore, the International Telecommunication Union (ITU) has stated that traditional universal service contributions are becoming less relevant in the context of digital transformation and should generally be limited to operators that control high-demand scarce resources (e.g. spectrum) (see Section 4.1).

From an investment perspective, the imposition of USP Fund contributions on CSPs would make Malaysia a materially less attractive destination for cloud-related investments. When considering the attractiveness of Malaysia's business environment, investors would consider the impact of USP Fund contributions alongside other factors, including the broader range of regulatory and fiscal measures that CSPs are subject to (e.g. the digital services tax, cyber-security regulations, AI governance frameworks), and a new electricity tariff which will likely lead to higher costs for CSPs and data-centre operators.

As a result of imposing contributions to the USP Fund on CSPs, and other developments in Malaysia, investors may redirect future investments to established regional alternatives such as Singapore that are highly conducive for business, as well as emerging regional hubs such as Thailand and Indonesia, which provide incentive plans for digital infrastructure investments and have attracted interest from hyperscalers in recent years. Redirected investments to other countries in the region would negatively impact Malaysia's ambitions to establish itself as a digital hub in ASEAN.

Policy makers should focus instead on ensuring that the business environment in Malaysia remains attractive to investors, and that regulations do not hinder the development of Malaysia's digital ambitions. Policy makers should review cloud-related policies to ensure that they do not create unjustified and unnecessary regulatory burdens, monitor the competitiveness of Malaysia's public-private partnership and investment incentive schemes, and do more to drive cloud adoption and enhance literacy in AI and other advanced technologies. This would help maintain a more calibrated, partnership-based approach that would better support Malaysia's digital ambitions while safeguarding continued innovation and economic growth.

# 1 Mandatory universal service contributions are widely used in telecoms, but lack justification for use in the cloud sector

Universal service contributions are used across the globe to promote equitable access to basic connectivity. Licensed telecoms service providers are often required to make universal service payments, which are then aggregated and disbursed to a qualified subset of those same licensed telecoms service providers to be used for universal service provision, often to cover populations in rural, remote or other underserved areas. These universal service contributions are widely used in the telecoms sector as they address a specific market failure, however there is no evidence of an equivalent market failure in the cloud sector.

## 1.1 The USP Fund in Malaysia aims to expand access to connectivity, and is underpinned by strong direct network effects in telecoms networks

In Malaysia, the Universal Service Provision (USP) Fund[5] is administered by the Malaysian Communications and Multimedia Commission (MCMC), supporting initiatives including rural broadband and mobile coverage expansion, and the establishment of community internet centres. Under current regulations, licensed telecoms service providers with an annual net revenue exceeding MYR2 million are required to contribute 6% of their weighted net revenue[6] to the USP Fund, which, as of December 2023, has accumulated a total of MYR9.1 billion (see Figure 1.1).[7]

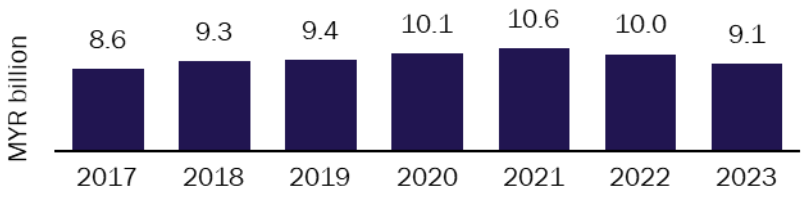



*Figure 1.1: USP accumulated funds at December [Source: MCMC, 2025]*

Licensed telecoms service providers may draw from the fund. They can do this by registering to be universal service providers and submitting plans regarding USP initiatives for digital inclusion to the MCMC for approval. The initiatives can only be implemented in underserved areas and for underserved groups within the community.

Like other universal service funds that are implemented across the globe, the USP Fund in Malaysia aims to address a fundamental market failure relating to the deployment of telecoms infrastructure in underserved areas. Telecoms networks exhibit strong direct network effects (whereby the value

5 The fund was established in 2002 under the Communications and Multimedia Act, with the objective of expanding telecoms infrastructure in underserved areas and promoting digital inclusion

6 MCMC defines this as net revenue multiplied by a "weightage factor" based on their list of designated services. More details can be found in the legislation by MCMC "Communications And Multimedia (Universal Service Provision) Regulations 2002"

7 MCMC, 2024. "Universal Service Provision Annual Report 2023"

of the network increases as more subscribers are connected), however these effects are often not fully realised if network providers are guided solely by commercial considerations,[8] resulting in a market failure that needs to be addressed. By extending coverage to areas which may not be commercially viable, universal service funds help to address this market failure, and generate benefits for newly covered subscribers, as well as for existing subscribers who would now be able to reach a larger network.

## 1.2 CSPs must contribute to the USP Fund for the calendar year of 2025 onwards, even though they do not deploy the types of infrastructure that typically use USP funding

In January 2022, Malaysia introduced a licensing requirement for cloud service providers (CSPs), effective from 1 April 2022, which aims to address growing concerns over data safety and trust amid the rapid increase in the adoption of cloud services.[9] 'Cloud services' are defined as "any service made available to end users on demand via the internet from a cloud computing provider's server".[10]

Under these licensing requirements,[11] locally-incorporated providers must obtain an Application Service Provider (ASP) Class C licence if they offer platform as a service (PaaS) and infrastructure as a service (IaaS).[12] This includes foreign companies that have set up a local presence in Malaysia and provide these services either directly to cloud customers or through local resellers. Local data-centre operators must also obtain the licence if they enable foreign CSPs to provide PaaS and IaaS services in Malaysia.

Foreign CSPs that offer PaaS and IaaS to customers in Malaysia do not need an ASP (C) licence if they are not locally incorporated, regardless of whether they utilise already licensed local data centres, or whether they serve customers in Malaysia from data centres outside of the country. However, we expect that the majority of cloud customer spend on PaaS and IaaS in Malaysia is served from local data-centre facilities that are operated by providers subject to the ASP (C) licence, particularly since international CSPs have already invested heavily in the country. Pure software providers (i.e. providers that only provide software as a service (SaaS)), as well as resellers of cloud services, are not required to obtain the licence.

Up until recently, CSPs generating revenue from cloud services were not required to contribute to the Universal Service Provision (USP) Fund, as the Malaysian Communications and Multimedia

8 Network operators have incentives to concentrate their investments in urban and high-density areas where returns are strongest, and may therefore neglect to deploy network infrastructure in less profitable areas

9 The licensing requirement has been introduced to establish standard operating procedures that ensure high levels of data security, privacy, protection and flow, while offering legal safeguards for consumers and public agencies. See MCMC, "Cloud service regulation introduced to increase accountability for user data security and sustainability of services"

10 In the Advisory Notice by MCMC "Advisory Notice on Cloud Service Regulation Introduced to Increase Accountability for User Data Security and Sustainability of Services" and Information Paper "Information Paper on Regulating Cloud Services"

11 Based on MCMC's Advisory Notice and Information Paper, and Rajah & Tann Asia (2022). "New licensing requirements on the provision of cloud services in Malaysia to come into operation on 1 April 2022"

12 These licences must be renewed annually, and do not carry any foreign shareholding restrictions

Commission (MCMC) imposed a 'zero weightage' on cloud service revenues in order to stimulate demand.[13] However, the Ministerial Direction No. 2 published in July 2024 stated that licensed CSPs will be required to contribute to the USP Fund for the calendar year of 2025 onwards.[14] This policy change contradicts the prior understanding that had been established between the MCMC and industry stakeholders. CSPs may view this as a breach of trust, which would lead to reduced confidence in government policy, ultimately harming Malaysia's attractiveness as an investment destination.

In contrast to the telecoms sector, where there is a clear market failure that universal service contributions address, there is no evidence of an equivalent market failure in the cloud services sector, and therefore no clear need for universal service contributions. This is evident when considering how digital inclusion initiatives funded through the USP in Malaysia have no relevance to CSPs' operating models. Examples of USP-funded initiatives include:

- Jalinan Digital Negara (JENDELA), a digital infrastructure plan aimed at addressing rising needs and demand for better quality of fixed and mobile broadband coverage; it encompasses the deployment of mobile towers, satellite connectivity to improve mobile coverage and fixed broadband with gigabit speeds[15]
- Pusat Ekonomi Digital (PEDi), an initiative that aims to provide collective internet access to rural communities and urban poor, through PEDi centres equipped with computers and internet access, ICT training programmes and entrepreneurship training programmes[16]
- improvements to backhaul capacity via the provisioning of submarine cable systems to islands, which included Perhentian, Sabah, Sarawak and Tioman.[17]

These USP initiatives align with the operating models of telecoms operators. For example, mobile network operators (MNOs) contribute to, and use, USP funding to deploy rural towers because this aligns with their existing business activities. Telecoms operators have therefore historically funded these initiatives due to their direct relevance and benefit. CSPs, meanwhile, do not deploy the types of infrastructure that are typically funded by the USP Fund. Therefore, there is no clear justification for the requirement that they should contribute to the USP Fund in Malaysia.

In the next subsection, we provide further background on how similar policies and policy proposals in various jurisdictions are generally based on the assumption that the cloud services sector is similar to the telecoms sector. Furthermore, we explain why this assumption is flawed.

13 MCMC, 2024. "Information Paper on Regulating Cloud Services"

14 In accordance with the provision under the Communications and Multimedia (Universal Service Provision) Regulations 2002; see MCMC, 2024. "Information Paper on Regulating Cloud Services" and Ministry of Communications, 2024. "Ministerial Direction No. 2 of 2024"

15 MCMC, 2024. "Universal Service Provision Annual Report 2023"

16 Jendela, 2024. "Jendela"

17 MyGovernment, 2020.

## 1.3 Policies that aim to impose universal service contributions on cloud services are based on flawed assumptions about the similarity of cloud services to telecoms connectivity

In the USA, a proposal to expand the scope of the universal service fund to include contributions from CSPs has also emerged, although proponents have yet to provide compelling justifications.[18] This, and similar proposals in Europe,[19] are based on a flawed assumption that cloud services function in the same way as telecoms connectivity. However, there are important differences between the two types of services which suggest that they should not be regulated in the same way.

The rationale for universal service in telecoms is based on the presence of strong direct network effects in telecoms networks, and the need to ensure affordable access to a basic utility. The same direct network effects are not prevalent in the cloud sector, as cloud services are 'horizontal building blocks' that cloud customers (enterprises and public-sector bodies) combine to build solutions that suit their own specific needs. This means that each cloud customer does not typically benefit directly from the use of cloud services by other cloud customers, in the same way that telecoms subscribers benefit when new subscribers join the network. The main differences between the telecoms and cloud sectors are further outlined in Figure 1.2 below.

*Figure 1.2: Summary of differences between telecoms and cloud sectors in the context of network effects and market characteristics [Source: Analysys Mason,[20] 2025]*

| Area | Telecoms sector | Cloud sector |
|---|---|---|
| Network effects | • Strong direct network effects due to the need to connect two users trying to communicate, meaning that unless there is interconnection, networks with larger user bases would have an advantage | • Limited direct network effects as the value of a cloud platform to a user is not directly dependent on the presence of other users<br>• Businesses adopt cloud platforms to access flexible, scalable computing to support innovation and efficiency |
| Market characteristics | • Consumer and business oriented<br>• Universal service funds focus on improving affordability and last-mile consumer access | • Business oriented<br>• Globally accessible via the internet |

Given these differences, proposals to impose universal service contributions on CSPs are not justified, at least not in any way related to universal service for connectivity.

18 A study by Telecom Advisory Services on the "Economic Impact of the Imposition of a Universal Service Fund Obligation on Cloud Services in the United States" found that imposing universal service fees on cloud services will harm US consumers and drive a significant reduction in state GDP. It concludes that cloud services should remain exempt from universal service contributions

19 The European Commission (EC) was considering expanding the European Union's telecoms regulatory framework to include cloud services, on the basis that cloud and telecoms sectors may be converging. Analysys Mason conducted a study to assess the EC's proposal; see "The European telecoms regulatory framework: not a good fit for the public cloud"

20 See Analysys Mason, 2024. "The European telecoms regulatory framework: not a good fit for the public cloud"

Furthermore, imposing contributions on CSPs risks distorting the intent of universal service funding, and reducing the effectiveness of the universal service system. In most universal service systems, telecoms providers are contributors as well as potential recipients of disbursements. This reciprocal structure helps to align incentives and ensure accountability in how funds are used.[21] By contrast, imposing contributions on CSPs introduces a structural asymmetry. CSPs would contribute funds, but they are not in the business of using them for universal service – building data centres in rural, remote and underserved areas would not help to improve consumer access to connectivity.

This would also provide existing universal service contributors (telecoms operators) with incentives to demand more of the universal service system (and CSPs, as asymmetric contributors), without necessarily delivering better outcomes. In practice, such an approach functions less as a universal service contribution and more as a sector-specific 'digital platform tax' on cloud services.

In addition, imposing USP Fund contributions on CSPs could impede Malaysia's wider national ambitions. CSPs would likely consider redirecting future investments to regional alternatives that are more conducive for business, and this would result in Malaysia losing its competitive position. This would also impact Malaysia's prospects as a hub for cloud, AI and semiconductors, and hinder its broader ambitions for digital transformation and industrial growth.

21 Since the entities that contribute to the fund are the same entities that use funds to improve access

# 2 The cloud sector is making significant investments that are enabling Malaysia's digital transformation, while also providing opportunities to develop local industry and skills

Cloud adoption in Malaysia has grown, driven by the increasing availability of cloud infrastructure, a variety of international and domestic CSPs, and rising awareness of cloud benefits among enterprises and public-sector bodies. This has, in turn, provided significant benefits across the entire cloud ecosystem, from upstream suppliers to downstream users and the wider economy.

## 2.1 Total spend on cloud services in Malaysia has been growing, and the cloud sector looks poised to be a key driver of Malaysia's forward-looking industrial ambitions

In Malaysia, spending on cloud services has seen sustained growth, with enterprises increasingly shifting their IT workloads to the cloud. In 2024, cloud spend in Malaysia was estimated to reach MYR12.1 billion (USD2.7 billion) (see Figure 2.1). Cloud adoption among Malaysian enterprises (35% as of 2023) compares favourably to several neighbouring countries,[22] but remains lower than in more developed economies across the Asia–Pacific (see Figure 2.2).

*Figure 2.1: Malaysia cloud spend by product type [Source: Analysys Mason estimate,[23] 2025]*

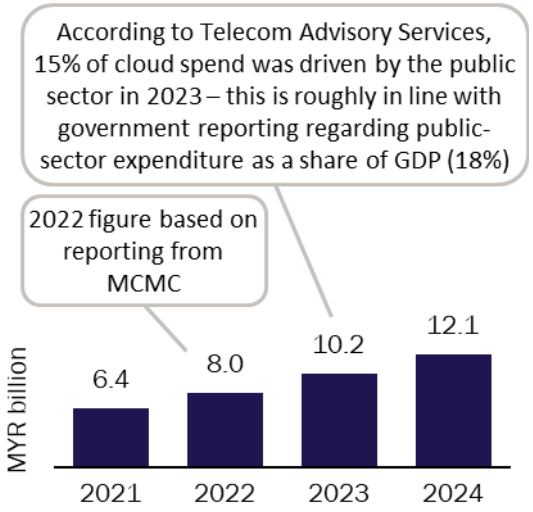
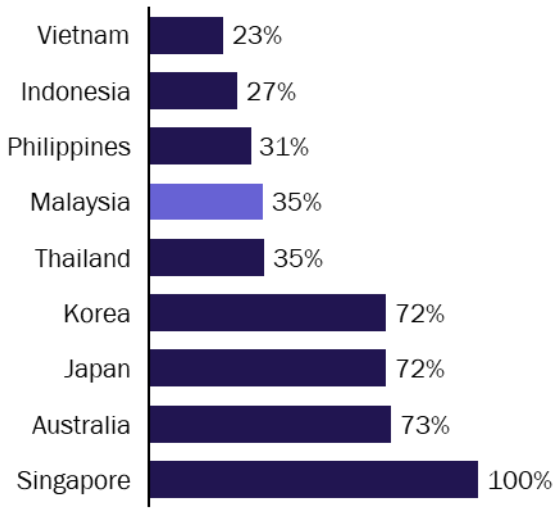



*Figure 2.2: Benchmarks of 2023 cloud adoption rates [Source: Telecom Advisory Services, 2025]*




22 Telecom Advisory Services, 2024. "Economic impact of Cloud-Computing and Artificial Intelligence in Asia-Pacific"

23 The figure for 2022 is from the MCMC Annual Report 2022, published in March 2024; Analysys Mason has extrapolated from this figure, as well as several other publicly available data sources, to produce independent estimates for 2021, 2023 and 2024. Data has been converted to MYR using exchange rate data from Euromonitor

Organisations are not only adopting cloud services at a higher rate than before, but are also opting for more advanced offerings, such as AI and data analytics tools, as well as multi-cloud strategies, to drive efficiency, innovation and customer engagement. According to Telecom Advisory Services (TAS), public-sector organisations drove 15% of cloud spend in 2023.[24] This falls broadly in line with government reporting that shows public-sector expenditure accounting for ~18% of GDP.[25]

Malaysia has laid out ambitious plans for digitally enabled industrial transformation (see Figure 2.3).

*Figure 2.3: Malaysia's economic plans that could be enabled by cloud [Source: Various sources,[26] 2025]*

| Plan | Brief details of plan |
|---|---|
| Malaysia Digital Economy Blueprint (MyDIGITAL) 2021–2030 | • Malaysia aims to transform into a high-income nation that is focused on digitalisation and is a regional pioneer in the digital economy<br>• The blueprint outlines six strategic thrusts, including driving digital transformation in the public sector, boosting economic competitiveness through digitalisation and developing digital infrastructure<br>• Targets for the digital economy to contribute 25.5% to Malaysia's GDP by 2025 (23.5% as of 2024) |
| National Artificial Intelligence Roadmap 2021–2025 | • Malaysia aims to become a regional hub for AI innovation by 2030<br>• The 5-year roadmap outlined six key strategies, including fostering AI talents, advancing AI R&D and escalating digital infrastructure to enable AI<br>• Targets for 80% of SMEs (including micro-enterprises) to adopt cloud computing and storage for AI |
| Silicon Vision | • Malaysia aims to become a global hub for semiconductors, with Malaysian companies driving semiconductor innovation and capturing higher-value semiconductor segments<br>• Malaysia targets to produce the first fully locally made AI chip, designed, manufactured, tested and assembled in Malaysia, within the next 10 years<br>• This would enable Malaysia to become a key supplier to hyperscale data centres and CSPs across the region |
| New Industrial Master Plan 2030 (NIMP 2030) | • Malaysia aims to boost the GDP of its manufacturing sector by 6.5% annually<br>• It has outlined five priority sectors: aerospace, chemicals, electrical and electronics (E&E), pharmaceuticals and medical devices<br>• These are knowledge- and innovation-intensive industries that increasingly depend on technologies powered by cloud platforms, such as AI, automation, real-time monitoring and advanced data analytics |
| Shared Prosperity Vision 2030 | • A commitment to make Malaysia a nation that achieves sustainable growth along with fair and equitable distribution, across income groups, ethnicities, regions and supply chains |

24 Telecom Advisory Services, 2023. "Economic impact of cloud adoption in Asia-Pacific – The importance of pro-cloud policies to promote development and economic growth"

25 See 2023 reported figures from Ministry of Economy (Malaysia), 2025. "The Malaysian Economy in Figures 2024"

26 Derived from: MyDigital, 2025, "Progress Report for MDEB AND N4IRP Phase 2"; MyGovernment. "MyDigital and 4iR"; Malaysia Digital Economy Corporation (MDeC). "Catalysing Malaysia's Digital Economy"; Ministry of Science, Technology and Innovation. "National Artificial Intelligence Roadmap 2021–2025"; Ministry of Economy. "Silicon Vision Malaysia"; Ministry of Investment, Trade and Industry. "New Industrial Masterplan 2030"; Ministry of Economy. "Shared Prosperity Vision 2030"

| Plan | Brief details of plan |
|---|---|
| | • Targets a 50% increase in the contribution of high technology to the manufacturing sector and a 30% increase to the services sector, as adoption of technology in both sectors has been identified to be low |

Some of these plans are directly related to cloud and adjacent sectors, while others will likely need to be increasingly enabled by cloud infrastructure in future. As such, continued investment in, and policy support for, Malaysia's cloud ecosystem will be essential for unlocking economic value and strengthening global competitiveness across different industrial sectors. Imposing USP Fund contributions on CSPs would threaten these broader digital transformation ambitions.

## 2.2 Activity in the Malaysian cloud sector is benefiting entities across the cloud value chain

The growth of Malaysia's cloud sector is contributing to national economic progress by generating demand and creating opportunities across the broader cloud value chain. This ecosystem comprises multiple layers of participants whose roles are interdependent. The value chain, excluding end consumers, can be broadly categorised into three main segments:

- hardware and facilities providers: support physical/technical components of cloud infrastructure
- CSPs: deliver computing services and platforms to the market
- cloud users: use cloud to drive digital transformation, operational efficiency and innovation.

These segments are summarised in Figure 2.4 below.

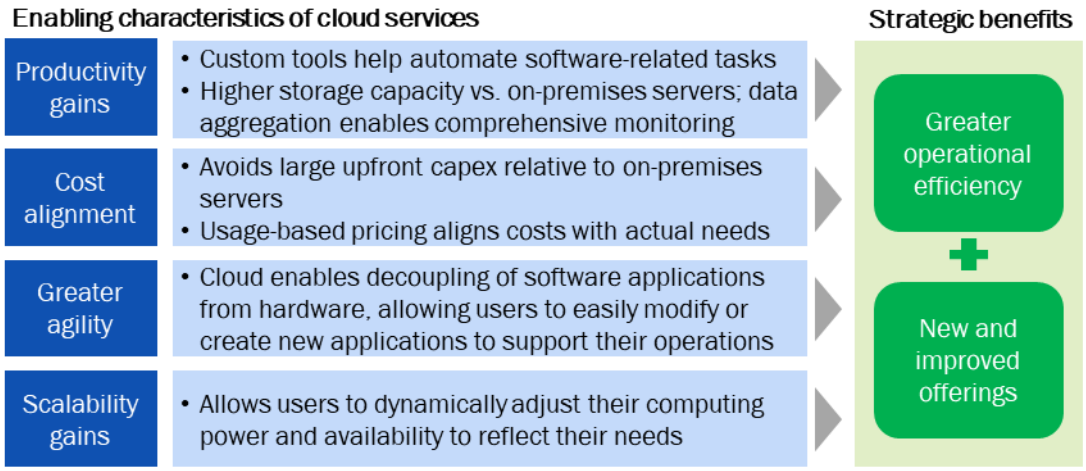
*Figure 2.4: Participants in the cloud value chain [Source: Analysys Mason, 2025]*


The remainder of this section explores these value chain segments in detail, starting with cloud users (Section 2.3), CSPs (Section 2.4) and hardware and facilities providers (Section 2.5).

## 2.3 Enterprises and public-sector bodies are using cloud services to enable their digital transformation, leading to potential gains in efficiency and innovation

Enterprises can use cloud services to achieve greater operational efficiency, and to support better and newer offerings for their customers. These are the result of four important enabling characteristics of cloud services, described briefly in Figure 2.5.

*Figure 2.5: Summary of benefits of cloud services to enterprise users [Source: Analysys Mason, 2025]*




Malaysian enterprises across different sectors of the economy, and ranging from large established corporates to SMEs and start-ups, are already active users of cloud services.

Many enterprises in Malaysia use cloud services to boost operational efficiency. For example:

- Axiata Group, a telecoms conglomerate, uses cloud services from AWS to develop generative AI applications that boost productivity across organisational functions.[27]
- AirAsia, a multi-national low-cost airline, uses Oracle ERP cloud financial management and procurement software to monitor its operating costs (incl. fuel and catering) and to predict how actions such as changing fares or opening new routes would affect profitability.[28]
- Mesolitica, an AI start-up, used AWS cloud services to build a Malaysian language generative AI large language model (LLM). Using AWS has helped Mesolitica achieve cost compute savings of 87% and a 5.5-fold increase in throughput while training its model.[29]

Enterprises also use cloud services to improve their offerings, by introducing new services more quickly, ensuring better service availability and enhancing customer experience across touchpoints:

- Pos Malaysia, a parcel and postal service provider, migrated its critical applications from on-premises infrastructure to the AWS Cloud.[30] This allowed Pos Malaysia to cut IT costs in half, improve availability and reduce the amount of time needed to develop new services.

27 Developing Telecoms, 2023. "Axiata picks AWS as main cloud provider for transformation drive"

28 Oracle. "AirAsia"

29 Tech Node Global, 2024. "Malaysia's AI startup Mesolitica builds Malaysian LLM for generative AI assistants on AWS"

30 AWS, 2024. "Pos Malaysia Transforms into a Digitally Driven Parcel and Postal Service Provider by Deploying in AWS"

- Genting Malaysia Berhad, a hospitality and entertainment conglomerate, uses Alibaba Cloud to power its AI-driven virtual queue system at its theme park, providing visitors with real-time ride availability, personalised park itineraries and app-based gamified incentives.[31]

- Bank Islam Malaysia Berhad used AWS's cloud capabilities,[32] as well as Mambu's core banking platform, to build its 'Be U' digital banking platform,[33] while Aeon Bank uses AWS for data management, security AI and machine learning, to create a seamless and secure digital banking experience for Malaysian consumers.[34]

- Carsome Group, a Malaysian online used-car trading platform, uses various offerings from Google Cloud to enhance user experience, for consumers looking to purchase cars, as well as the car dealers looking to sell cars on Carsome's platform.[35]

Public-sector bodies are also leveraging cloud services to drive digital transformation of public services.

**Case study: Public-sector bodies are partnering with CSPs to increase cloud take-up**

The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) provides 'Government Cloud' services to public-sector agencies, through a collaboration between the government's CSP MyGovCloud@PDSA and four commercial CSPs – AWS, Google Cloud, Microsoft Azure and TM Cloud Alpha. The four CSPs had signed a cloud framework agreement (CFA) with the Malaysian government to allow government agencies and departments to access their services through a streamlined procurement and pricing model. This helps public agencies enjoy group discounts and receive cloud-related training and certification.[36] As one example, the Ministry of Higher Education uses AWS to reduce downtime in delivering education services on its cloud-based learning management system.[37]

In parallel, local government agencies also are partnering with Google to build AI applications that improve public services through the Teraju AI Selangor initiative. Government agencies have access to an AI innovation sandbox and Google Cloud's technology stack that enables them to create customised AI applications without extensive programming.[38]

31 Alibaba Cloud. "Genting"

32 The Edge Malaysia. 2022. "Bank Islam picks Amazon Web Services as cloud provider"

33 Mambu. "Malaysia's first Islamic bank takes a digital leap with Be U"

34 The Halal Times. 2024. "AEON Bank leads Malaysia's first Islamic digital bank revolution"

35 Carsome, 2025. "CARSOME Group Consolidates Cloud Infrastructure"

36 MyGovernment. "Government Cloud Services"

37 New Straits Times, 2022. "AWS signs new CFA with Malaysia to drive public-sector innovation"

38 Computer Weekly, 2025. "Selangor teams up with Google Cloud on AI"

## 2.4 International and domestic CSPs, including GPUaaS providers and systems integrators, are investing heavily to develop Malaysia's infrastructure and skills

Malaysia's cloud ecosystem is being actively shaped by both international and domestic CSPs. These providers invest in infrastructure, skills, sustainability efforts and strategic collaborations – supporting Malaysia's digital ambitions and strengthening its position as a regional cloud hub.

Notable examples of investments by international CSPs are shown in Figure 2.6.

*Figure 2.6: Investments in Malaysia by international cloud players [Source: Various sources,[39] 2025]*

| Provider | Announced investments / past commitments [non-exhaustive] |
|---|---|
| AWS | • Plans to invest MYR29.2 billion (USD6.2 billion) in Malaysia through 2038 with the new AWS Malaysia region, which includes capital expenditures on construction labour, materials and services, as well as operating expenditures such as employee salaries, utility and rental costs<br>• Since 2017, AWS has trained over 100 000 individuals in Malaysia in cloud skills; AWS continues to train and upskill developers, students and IT professionals in Malaysia through programmes such as AWS Academy and AWS re/Start<br>• Supports SMEs to begin their digital transformation journey through the AWS Lift programme, whereby users can purchase AWS credits to gain access to AWS services |
| Microsoft | • Plans to invest MYR10.5 billion (USD2.2 billion) in Malaysia through 2028 with the new Malaysia West cloud region comprising three data centres<br>• Will create AI skilling opportunities for an additional 200 000 people in Malaysia through programmes such as AI TEACH Malaysia and Ready4AI&Security<br>• Will strengthen its partnership with the Malaysian government to establish a national AI Centre of Excellence and enhance national cyber-security capabilities<br>• Supports SMEs through its partnership with Cradle, an agency under the Ministry of Science, Technology and Innovation (MOSTI) in Malaysia, to provide start-ups with access to Microsoft Mentor Network, Azure cloud credits and technical guidance to build their products |
| Google | • Started construction of a MYR9.4 billion (USD2 billion) data centre in Malaysia<br>• Aims to create 26 500 jobs and contribute over MYR15 billion (USD3 billion) to Malaysia's economy by 2030<br>• Aims to upskill 300 000 Malaysians by 2026 via its Go Cloud programme, focusing on skills to use generative AI, data analytics and cloud-based productivity tools |
| Oracle | • Plans to invest over MYR27 billion (USD6.5 billion) to open a public cloud region in Malaysia |

39 Derived from the following sources:

AWS, 2024. "AWS launches Malaysia's first cloud infrastructure region"

SME Asia, 2023. "AWS Lift to Assist SMEs in Their Digital Transformation Initiatives"

AWS, 2022. "AWS signs new Cloud Framework Agreement with Malaysia to power public-sector innovation"

Microsoft, 2025. "Microsoft's upcoming cloud region to unlock new economic opportunities for Malaysia"

Microsoft, 2024. "Microsoft announces US$2.2 billion investment to fuel Malaysia's cloud and AI transformation"

Bernama, 2023. "Google, Malaysian Govt on strategic collaboration, skill opportunities for 300,000 by 2026"

Oracle, 2024. "Oracle to Invest More Than US$6.5 Billion in AI and Cloud Computing in Malaysia"

Local companies are also increasingly discovering opportunities to play in the cloud market – with GPUaaS emerging as a prominent business model.

**Case study: Malaysian firms are offering GPUaaS to capture growing cloud and AI demand**

GPUaaS providers have capitalised on the rise of generative AI to offer on-demand access to high-performance GPUs. This enables customers to lease GPU resources for AI development without incurring significant hardware capex, while providers can monetise excess capacity. Examples of Malaysian companies that provide GPUaaS include:

- YTL's power unit (YTLP) has collaborated with Nvidia to develop a MYR20 billion (USD4.3 billion) AI cloud and supercomputer infrastructure, hosted in YTL's Johor data-centre park. Utilising Equinix's interconnection network, YTL will offer customers AI cloud and GPUaaS.[40]

- SNS Network Technology has launched a managed, locally hosted AI cloud and GPUaaS service with Nvidia in Telekom Malaysia's Klang Valley data centre.[41]

- Telekom Malaysia (TM) has announced a GPUaaS offering hosted at its data centres, using Nvidia's chips. TM has reportedly secured an international customer for its GPUaaS.[42]

As demand for digitalisation increases, local systems integrators play a vital role in delivering accessible and high-value services to Malaysian enterprises – especially SMEs requiring tailored cloud solutions. As such, systems integrators play an especially important role in helping to achieve high levels of cloud adoption in Malaysia, given that SMEs (including micro-enterprises) account for the vast majority of enterprises in the country, and are typically less well-equipped than larger corporations to adopt cloud services using only in-house expertise.

**Case study: Malaysian systems integrators are helping SMEs to adopt cloud services**

Systems integrators offer local support, expert guidance on cloud migration and managed services that simplify the adoption and maintenance of cloud infrastructure. Examples of leading Malaysian companies that provide systems integration services include:

40 As part of this initiative, YTL also is leveraging Nvidia's AI cloud computing platform to build a LLM in Malay. Sources referenced:

Data Centre Dynamics, 2023. "Nvidia & YTL Power partner for $4.3bn AI data centers in Malaysia"; Developing Telecoms, 2025. "YTL signs deals with Equinix and Transcelestial to support AI demand"

41 SNS Network is also offering a tailored roadmap to select customers to access AI capabilities, identify use cases and conduct AI trial deployments. Sources referenced:

RinggitPlus, 2025. "SNS Network And NVIDIA Unveil Malaysia's First AI Cloud Infrastructure"

42 Telekom Malaysia, 2024. "TM announces sovereign GPU-as-aservice to empower Malaysia's AI aspirations"

- IP ServerOne is a managed CSP in Malaysia with a regional presence. It is well known for its Cloud Connect service, which allows SMEs to connect and extend their network directly to a major CSP of their choice, while benefitting from reduced networking expenses.[43]

- Shinjiru is a web hosting provider in Malaysia. It was the first local host to offer Microsoft's Azure PaaS from data centres in Malaysia. This offering helped Shinjiru secure a partnership with the Malaysia Digital Economy Corporation (MDeC),[44] to assist other Malaysian enterprises in cloud-enabling their solutions.[45]

- Exabytes has grown to be one of South-East Asia's leading AI, business app, cloud, digital and e-commerce solutions providers. Among its partnerships, Exabytes works with AWS to assist local manufacturers in adopting the fourth industrial revolution (Industry 4.0). Exabytes also collaborates with Huawei Cloud to offer more smart cloud-based solutions to its customers.[46]

## 2.5 The evolving supply chain also presents opportunities for engineering, procurement and construction providers, as well as local suppliers of data-centre hardware inputs

An evolving value chain presents opportunities for a broader ecosystem of Malaysian firms, such as those that supply inputs (e.g. electrical and mechanical components, specialised construction services for build-outs) used by CSPs and GPUaaS players to support their services.

Local engineering, procurement and construction (EPC) providers have benefitted from growing cloud and data-centre demand in Malaysia, with several Malaysian construction companies having been awarded major data-centre-related contracts in recent years:

- Gamuda obtained contracts worth MYR1.74 billion (USD380 million) to construct a hyperscale data centre for Sime Darby Property at the latter's Elmina business park.[47] The site will also host Malaysia's first locally developed built-to-suit data centre, with the facility to be developed by Sime Darby Property and leased to Google.[48]

- Sunway Construction has secured work orders valued at MYR1.16 billion (USD274 million) to undertake general contractor services for two data-centre projects by a US-based technology company.[49]

43 New Straits Times, 2023. "IP ServerOne to assist SMEs with secure data transfers in a tough climate"

44 Previously known as the Multimedia Development Corporation

45 Digital News Asia, 2015. "Shinjiru quietly building its hosting business"

46 Malaysian Business Online, 2022. "Exabytes - Pioneering Provider Of Cloud, Digital And E-Commerce In Southeast Asia"

47 GAMUDA, 2024. "Gamuda wins RM1.74 bil job to build Sime Darby Property's hyperscale data centre at Elmina Business Park"

48 SIME Darby, 2024. "Google's Hyperscale Data Centre at Elmina Business Park Breaks Ground"

49 TheEdge, 2025. "SunCon bags two data-centre contracts worth RM1.16 bil from US-based tech firm"

Both companies have seen their share price rise in recent years, as shown in Figure 2.7 below.

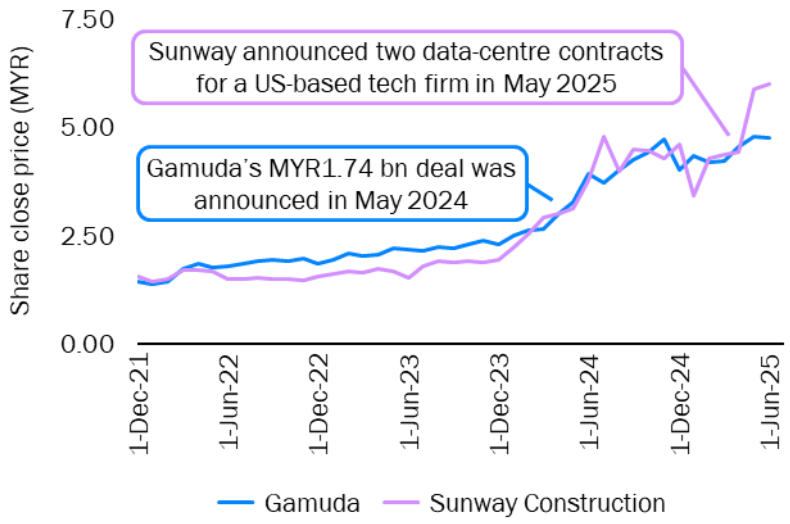



*Figure 2.7: Share price evolution for two Malaysian EPC providers [Source: Analysys Mason based on data from company stock prices,[50] 2025]*

As CSPs and GPUaaS providers continue to scale up their presence in Malaysia, there is also increasing demand for local suppliers of semiconductor chips. This provides an opportunity for Malaysian companies to enter high-value segments of the global semiconductor supply chain.

**Case study: Cloud demand creates opportunities for Malaysian semiconductor manufacturing**

Several recent initiatives have been put in place to help develop local semiconductor companies, with the intention of contributing to Malaysia's 'Silicon Vision' – for instance:

- In a MYR1.1 billion (USD250 million) deal spanning 10 years, the Malaysian government will acquire Arm Holdings's GPU design plans to enable local manufacturers to produce their own chips. The deal is expected to help scale up domestic chip production, creating ten local chip companies with annual revenue of MYR6.8–9 billion (USD1.5–2 billion) each.[51]
- The Selangor Semiconductor Fund worth MYR100 million (USD21 million) has been launched, which is intended to back eight to nine early-stage local integrated circuit (IC) design firms.[52]

These developments allow local suppliers to increase revenue, while also building technical capabilities and skills that support long-term growth and contribute towards Malaysia's industrial ambitions.

50 Figures from:
Gamuda Berhad. "Stock Information"
Sunway Construction Berhad. "Stock Information"

51 Ministry of Economy. "Silicon Vision Malaysia"

52 OpenGov, 2025. "Selangor Advances Malaysia's Semiconductor Chip Ambitions"

# 3 Imposing USP Fund contributions on CSPs would result in higher prices for cloud services, a less competitive Malaysian cloud sector and a loss of economic potential

The imposition of USP Fund contributions on CSPs will not only impact CSPs, but also their customers, suppliers, and Malaysia's broader digital ecosystem. This is consistent with some of the previous concerns expressed by cloud providers, including local players, regarding the proposed cloud licensing scheme prior to its implementation.[53] USP Fund contributions would be counterproductive to Malaysia's digital and economic ambitions, particularly if CSPs redirect future investments to neighbouring countries with more investment-friendly business environments.

## 3.1 USP Fund contributions would create pressure for CSPs to raise prices, potentially limiting cloud adoption and reducing the broader economic benefits of cloud services

The ASP (C) licence applies explicitly to providers of PaaS and IaaS services, as well as data-centre operators.[54] The imposition of USP Fund contributions represents an increase in the cost of doing business for licensees. In response, licensees can either absorb the full effect of these contributions, resulting in an equivalent reduction in profitability, or cover the cost by raising prices for cloud customers (including enterprises and public-sector bodies). It is likely that licensees will absorb part of the impact as higher operating costs, instead of fully passing it through to customers in the form of higher prices, particularly given Malaysia's competitive and fast-growing cloud market that consists of international CSPs as well as local players.[55]

We estimate that if CSPs were required to contribute 6% of PaaS and IaaS cloud service revenues to the USP Fund in 2024,[56] and if part of the burden was passed through to customers, this would have resulted in cloud users having to shoulder an additional cost of MYR212 million (USD46

53 See opinion piece "A data-centre and cloud industry dialogue about regulation" (2021) – published by a technology reporter in Malaysia who was engaged to document the discussions between industry players regarding the proposed licensing and regulations on the cloud services and data-centre sector

54 The licence applies to locally incorporated entities (including international CSPs with a local presence), and we expect locally incorporated entities to account for the vast majority of PaaS and IaaS services sold to Malaysian users, particularly given the significant investments that international CSPs have already made.

55 While global CSPs may have stronger margins, not all providers – particularly local or specialised GPUaaS firms – can absorb cost increases entirely while still offering competitive prices, which suggests that the burden of USP Fund contributions would likely be shared between CSPs and cloud customers (including enterprises and public-sector bodies)

56 According to Statista, PaaS and IaaS accounted for 58% of spend on public cloud services (as opposed to private cloud services) in 2024. For our quantification of additional costs for enterprises and public-sector bodies, we assume that PaaS and IaaS account for a similar share of private cloud services; For Statista source, see Statista (September 2024), Public cloud revenue Malaysia, in Statista https://www.statista.com/outlook/tmo/public-cloud/malaysia

million).[57] Furthermore, the provision of SaaS and other cloud services also tend to rely on underlying PaaS, IaaS and/or data centre infrastructure, which means that although pure software providers (that only offer SaaS) and resellers of cloud services are not explicitly required to make contributions to the USP Fund, it is likely that their input costs (for PaaS, IaaS and/or data centre infrastructure) would also rise, placing pressure on these players to increase their prices as well. We estimate that if, illustratively, the cost of providing SaaS and other cloud services had increased by just 1.5% in 2024 (i.e. a quarter of the impact that USP Fund contributions would have on PaaS and IaaS revenues),[58] and if part of this burden was passed through to customers that purchase SaaS and other cloud services, this would have resulted in cloud users having to shoulder an additional cost of MYR38 million (USD8 million). Together, these two effects would have culminated in an additional cost of MYR250 million (USD55 million) in total for cloud customers in 2024, based on Malaysia's estimated cloud spend that year (MYR12.1 billion, or USD2.7 billion).

Cloud services are used by enterprises of all sizes, as well as public-sector bodies. CSPs would be incentivised to pass the burden of USP Fund contributions onto cloud customers in the form of higher prices, and this could result in a dynamic that is tantamount to a 'regressive tax', as, although the contribution would likely be based on a percentage of cloud revenue, it may result in a larger burden on smaller enterprises in relative[59] terms (especially SMEs (including micro-enterprises)), which make up a large share of Malaysia's business landscape), at a time when digitalisation is critical for growth.

Rising costs for cloud services resulting from USP Fund contributions may reduce adoption and/or growth in cloud usage, which is concerning given the growing importance of cloud to the Malaysian economy. In line with our earlier discussion of activities across the cloud value chain (Section 2.2), various studies have demonstrated that cloud adoption contributes to economic growth across jurisdictions. A comparison of studies in Figure 3.1 reflects the range of estimates derived regarding the economic impact of the cloud sector on GDP across multiple countries and regions.[60]

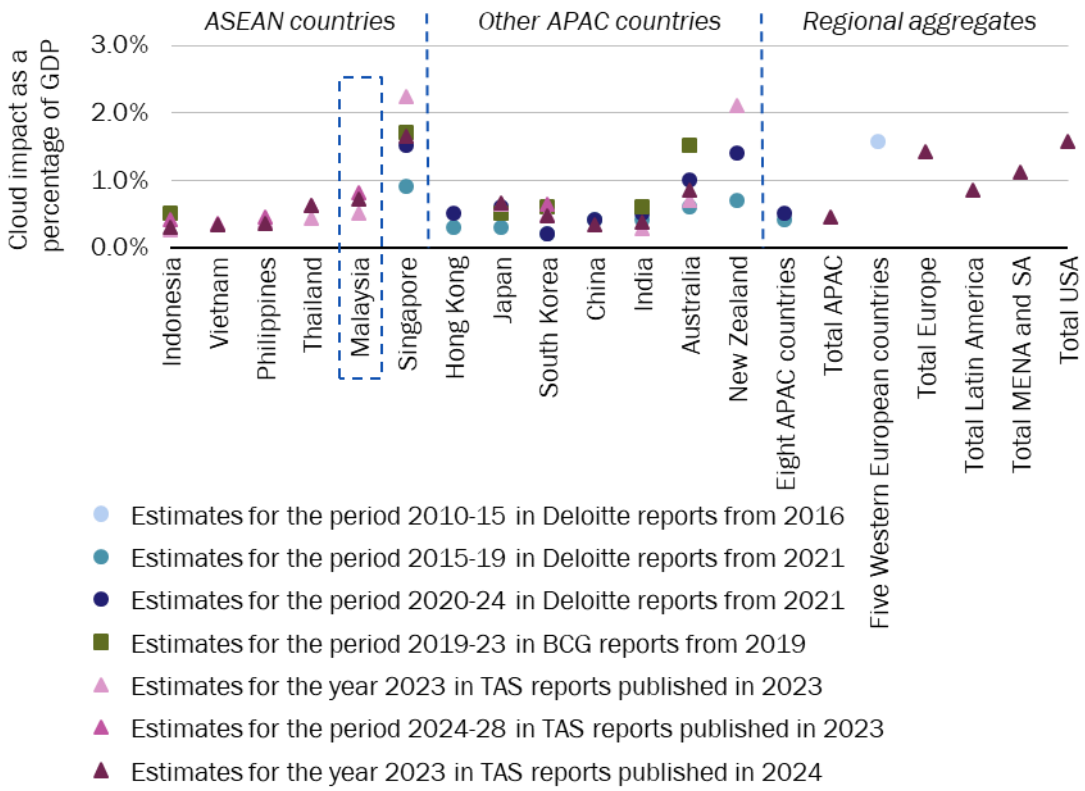
57 For the purposes of this calculation, we have assumed that the increase in prices does not affect demand and cloud spend remains as-is. In reality, demand of cloud services would likely be reduced, with the extent dependent on cloud price elasticity

58 This assumption is conservative, particularly if PaaS and IaaS providers that also offer SaaS and other cloud services are required to contribute 6% of their SaaS and other cloud service revenue to the USP Fund (as opposed to the 1.5% that we have assumed), in addition to the expected requirement to contribute 6% of their PaaS and IaaS revenues, which we have quantified in the previous step

59 Smaller enterprises are likely to be less well-equipped to absorb an increase in prices for cloud services, and may therefore be more likely to reduce cloud spend or slow cloud adoption

60 Reported estimates from all studies except for "Estimates for the year 2023 in TAS reports published in 2024", which has been calculated using current GDP figures from IMF as a denominator. For "Estimates for the year 2024–2028 in TAS reports published in 2023", we have shown figures from the 'middle scenario' (cloud spend evolves at the highest growth rate as predicted by public analysts, but with no policy changes)

*Figure 3.1: Cloud economic impact as a percentage of GDP [Source: Various sources, 2025]*




Notes on Figure 3.1:

1. Eight APAC countries refer to India, South Korea, Australia, China, Hong Kong, Japan, New Zealand, Singapore
2. Five Western countries refer to France, Germany, Italy, Spain, UK

Across studies, economic impact is typically measured as a sum of cloud spend and spill-over effects.[61] Only one source (Telecom Advisory Services) has provided explicit estimates for the impact of cloud in Malaysia, over two different studies. The two TAS studies produced separate estimates for Malaysia for the year 2023. The first,[62] that was conducted earlier, suggests a total economic impact of MYR10.5 billion (USD2.2 billion), that is equivalent to ~0.5% of GDP;[63] the

61 The definition of spill-over effects varies slightly between sources. For example, TAS defines spill-overs as benefits generated by cloud computing in terms of IT cost efficiencies, new product development, and support for the incubation of startups; Other sources generally define it as indirect inter-industry and supply chain spending, and induced household consumption.

62 Telecom Advisory Services, 2023. "Economic impact of cloud adoption in Asia-Pacific – The importance of pro-cloud policies to promote development and economic growth"

63 As reported directly in the study

other[64] suggests a total economic impact of MYR12.95 billion[65] (USD2.8 billion[66]), translating to ~0.7% of GDP.[67]

Some of these inputs were used by AWS' Economic Development team to estimate the projected contribution of AWS's investments in the Malaysian cloud sector from 2024–38,[68] resulting in a forecast of MYR29.2 billion in cloud spend and MYR57.3 billion in GDP impact over the period.[69] These appear broadly reasonable relative to estimates for other countries and regions, produced not only by Telecom Advisory Services, but also by other sources as presented in Figure 3.1.[70] In aggregate, these suggest that Malaysia falls at the higher end of the ASEAN range, at a level more comparable to the Latin America average, and behind more developed countries and regions.

We can also use some of these results to estimate the contribution of cloud services to Malaysia's GDP in 2024. Assuming that the ratio between cloud spend and economic impact holds constant between 2023 and 2024,[71] we can use our estimates of cloud spend (see Figure 2.1) for both years, and economic impact figures from the two TAS studies for 2023, to provide an impact estimate for 2024. This approach suggests that cloud services contributed between ~MYR12.2–15.4 billion (~USD2.7–3.4 billion) in GDP to Malaysia's economy in 2024,[72] or ~0.6–0.8% of total GDP.

Imposing new cost burdens on cloud services could thus reduce the enabling effect of cloud adoption on the rest of the economy and undermine a critical driver of digital and economic transformation.

## 3.2 More broadly, USP Fund contributions would likely have detrimental effects on investment, industry development, skills and growth, for entities across the value chain

The imposition of universal service contributions on CSPs would likely have negative ripple effects across Malaysia's broader digital ecosystem. A wide range of local players, including suppliers of hardware, EPC (engineering, procurement and construction) companies, GPUaaS providers, systems integrators and customers (including enterprises in many sectors and public-sector bodies) that use cloud services, are already benefiting from the cloud sector, and new cost pressures risk

64 Telecom Advisory Services, 2024. "Economic impact of Cloud-Computing and Artificial Intelligence in Asia-Pacific"

65 Calculated using the 2024 exchange rate of USD1=MYR4.575 from Euromonitor

66 As reported directly in the study

67 Using current GDP figures from IMF as a denominator

68 AWS, 2024. "AWS Investment in Malaysia. AWS Economic Impact Study"

69 This implies a multiplier of 1.95× over this 15-year period, which appears to be roughly an average of the multipliers derived by shorter-range TAS estimates (the two TAS' studies referenced in Figure 3.1 imply a multiplier for Malaysia of 2.3× and 1.7×, both referring to the year 2023).

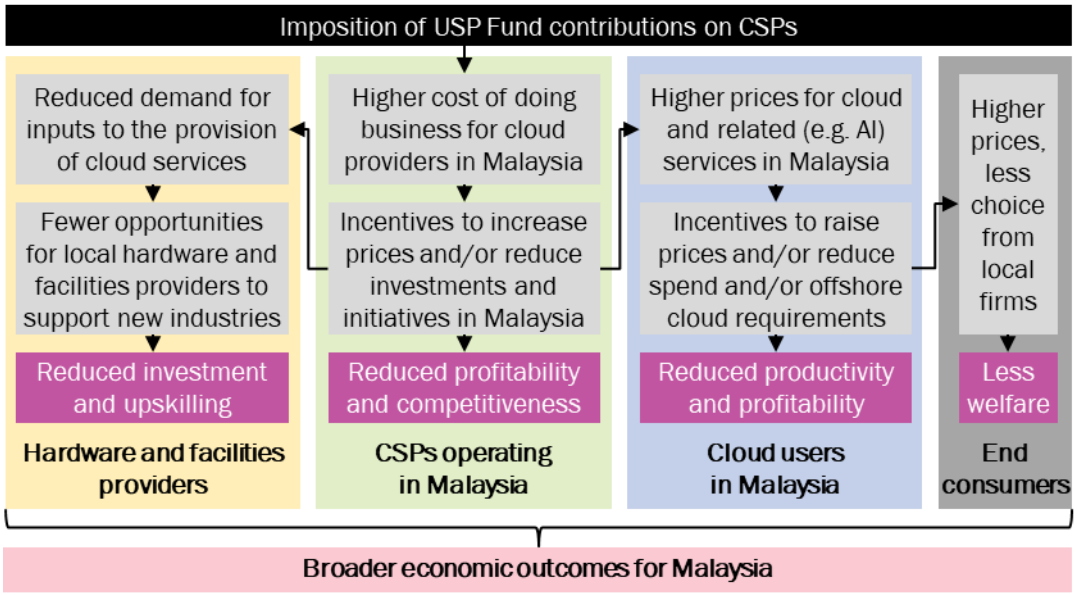
70 Including Deloitte, 2016. "Measuring the impact of cloud computing in Europe", Deloitte, 2021 ."The cloud imperative – Asia Pacific's unmissable opportunity", and BCG, 2019. "Ascent to the Cloud: How Six Key APAC Economies Can Lift-off"

71 The ratio between cloud spend and economic impact is typically expected to decline over time, but gradually, and therefore a one-year estimate could reasonably be produced using the ratio from the previous year.

72 Based on the 2024 exchange rate of USD1=MYR4.575 from Euromonitor

slowing this progress and constraining the wider economic benefits of a thriving cloud ecosystem. The potential effects on participants in the value chain are summarised in Figure 3.2.

*Figure 3.2: Potential effects of imposing USP Fund contributions on CSPs in Malaysia [Source: Analysys Mason, 2025]*




These value chain dynamics would likely result in broader impacts on the Malaysian economy, including reduced investment in infrastructure and services, reduced opportunities to build strategic industries, fewer jobs created, less development of new skills in the workforce, and ultimately reduced growth in GDP.

In the rest of this section, we explore how the imposition of USP Fund contributions on CSPs could impact cloud users including SMEs, large enterprises, and public-sector bodies (Section 3.3), international and domestic CSPs operating in Malaysia (Section 3.4), and local hardware and facilities suppliers (Section 3.5), in turn.

## 3.3 Cloud customers may face higher costs, which would slow adoption by SMEs, large enterprises and public-sector bodies, and hinder Malaysia's digital transformation

Mandatory USP Fund contributions would result in CSPs in Malaysia facing increased costs, potentially making their offerings less price-competitive both domestically and regionally. If USP Fund contributions result in higher prices for cloud services, customers such as SMEs and large enterprises may choose to absorb increased operating costs or pass higher costs onto their own customers through higher prices, both of which could be detrimental to profitability. Public-sector bodies that use cloud services would also feel the financial impact of higher cloud prices.

Cloud customers that prefer to minimise the financial impact of higher prices may choose instead to slow their adoption of cloud services or reduce their cloud spend. In particular, SMEs (including micro-enterprises), which account for the vast majority of businesses in Malaysia, are already less

likely to implement cloud and other digital solutions due to affordability concerns (among other barriers),[73] and will likely be further discouraged by higher prices for cloud services. Although choosing to slow cloud adoption could allow customers to negate the impact of cost rises in the short run, it would likely reduce their ability to innovate and achieve wider operational efficiency gains over the longer term.[74] This would threaten Malaysia's broader digital transformation ambitions, and make it more challenging to achieve related targets set out in MyDIGITAL and other government plans.[75]

Cloud customers may also offshore their cloud requirements by opting to use cloud services provided from CSPs based outside Malaysia. As cloud services are international in nature, it would be relatively easy for enterprises to bypass the cost impact of USP Fund contributions in Malaysia by shifting workloads to other countries with more favourable cost dynamics. Figure 3.3 below highlights the presence of current or planned cloud availability zones offered by international CSPs in various countries in South-East Asia and the rest of the Asia–Pacific.

*Figure 3.3: International CSPs with current or planned cloud availability zones in South-East Asia and the rest of the Asia–Pacific region [Source: Analysys Mason based on various sources,[76] 2025]*

| | Amazon Web Services | Google Cloud | Microsoft Azure | Oracle Cloud | Alibaba Cloud | Tencent Cloud |
|---|---|---|---|---|---|---|
| South-East Asia | | | | | | |
| Singapore | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Indonesia | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Malaysia | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Thailand | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Philippines | | | | | ✓ | |
| Rest of APAC | | | | | | |
| India | ✓ | ✓ | ✓ | ✓ | | |
| China | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Hong Kong | ✓ | ✓ | ✓ | | | |
| Taiwan | ✓ | ✓ | ✓ | | | |
| Japan | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| South Korea | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Australia | ✓ | ✓ | ✓ | ✓ | | |
| New Zealand | ✓ | | ✓ | | | |

73 The Malaysian Reserve, 2024. "Are Malaysian SMEs falling behind in the digital age?"

74 A study by Telecom Advisory Services has found that a 1% increase in the price of cloud services is expected to reduce cloud adoption by 0.5–0.6%, reinforcing the risk that even modest price increases could lead to material declines in usage; see Telecom Advisory Services, 2025. "Economic Impact of the Imposition of a Universal Service Fund Obligation on Cloud Services in the United States"

75 Targets that are still in progress and have yet to be achieved as of 2024 include the digital economy contributing 25.5% to Malaysia's GDP by 2025, 80% of businesses adopting cloud computing architecture and fourth industrial revolution technologies and reaching an average monthly salary of MYR7,600 for digital professionals. Derived from the sources: Malaysia Digital Economy Corporation (MDeC). "Catalysing Malaysia's Digital Economy"; MyDigital, 2025, "Progress Report for MDEB AND N4IRP Phase 2"

76 Sources include: AWS. "Regions and Availability Zones"; Google Cloud. "Cloud locations"; Google, 2024. "Google to invest US$1 billion in Thai data-centre, cloud infrastructure"; Microsoft. "Datacenters"; Data

Increased offshoring of cloud requirements could undermine Malaysia's data sovereignty,[77] as it increases the need for cross-border data transfers. Although these transfers are regulated by the Personal Data Protection Act (PDPA) and associated guidelines,[78] they nonetheless introduce risk.

The offshoring of cloud requirements would also lead to a less competitive cloud services sector in Malaysia, and this would be more detrimental for domestic CSPs (that operate only in Malaysia) than for international CSPs (that operate in multiple countries), as explained in the next subsection.

## 3.4 USP Fund contributions would reduce the competitiveness of Malaysia's cloud sector, and disincentivise investment into the country, in favour of regional alternatives

In recent years, Malaysia has benefitted from spill-over demand for data centres from Singapore, helping it to emerge as a key regional destination for data-centre investments. However, if investment conditions in Malaysia deteriorate due to new cost burdens or regulatory uncertainty, Malaysia risks losing its competitive edge to other countries in the region with similar ambitions.

**Case study: The growing attractiveness of alternative data-centre hubs – Thailand and Indonesia, as rivals to Malaysia**

Thailand is positioning itself as a strong alternative to Malaysia, with government incentives to attract data-centre investments and growing interest from hyperscalers such as AWS, Google and TikTok.

- AWS's new Thailand cloud region went live in January 2025. AWS also affirmed its commitment to investing USD5 billion in Thailand through till 2037.[79]
- Google announced that it would invest USD1 billion from 2025 to 2029 to build its first data centre and cloud region in Thailand.[80]
- TikTok announced it will invest USD8.8 billion in Thailand from 2025 to 2029, spanning data centres, workforce development and online safety initiatives.[81]

In particular, the Eastern Economic Corridor region just outside Bangkok is seeing the majority of new data-centre developments, driven by cheaper land, tax breaks, and proximity to submarine cable landing stations.

Center Dynamics, 2024. "Microsoft to build Azure cloud region in Thailand"; Oracle. "Regions and Availability Domains"; Oracle, 2024. "Oracle to Invest More Than US$6.5 Billion in AI and Cloud Computing in Malaysia"; Alibaba. "Alibaba Cloud's Global Infrastructure"; Tencent Cloud. "Regions and Availability Zones"

77 PIKOM, 2023. "Malaysia Data Security Governance Reference Book"

78 CMS, 2025. "Malaysian Guidelines on Cross-Border Data Transfers"

79 AWS, 2025. "New AWS Region in Thailand to launch by early 2025"

80 Google, 2024. "Google to invest US$1 billion in Thai data-centre, cloud infrastructure"

81 Channel News Asia, 2025. "TikTok to invest US$8.8 billion in Thailand over five years"

Indonesia is likewise gaining momentum from various tax incentives for data centres, a foreign-investment-friendly climate and continued expansion of hyperscalers. CSPs are increasingly viewing Jakarta as a key growth market in South-East Asia, with a growing community of successful start-ups and digital natives.

- AWS launched in the Jakarta region in December 2021. AWS had also announced plans to invest USD5 billion over the next 15 years in Indonesia, which includes data-centre investments and jobs creation.[82]
- Microsoft launched its first cloud region in Jakarta in April 2025. Microsoft had also announced plans to invest USD1.7 billion over the next 4 years in AI computing and cloud in Indonesia.[83]
- BytePlus, the AI and CSP owned by ByteDance, only has Availability Zones in three Asian countries – Hong Kong, Johor and Jakarta.[84]

Additionally, Batam, Indonesia is poised to be a partial beneficiary of the regional data-centre demand spill-over from Singapore and Johor, perpetuated by current lead time constraints in Johor. Oracle is in discussions with the Indonesian government to potentially establish a cloud services centre in Batam.[85] We understand too that other Chinese hyperscalers are also interested in co-locating in Batam.

A shift in investor sentiment in Malaysia could result in CSPs redirecting their investments to attractive neighbouring markets, particularly Thailand and Indonesia, which would lead to fewer local jobs and reduced opportunities for Malaysians to develop advanced digital skills, as well as Malaysia losing its standing as a key regional data-centre hub.

Although all licensed CSPs in Malaysia would be required to contribute to the USP Fund, it would likely place domestic CSPs (that only operate in Malaysia) at a structural disadvantage compared to international CSPs (that also operate in other jurisdictions that do not have such a requirement). While costs for both domestic and international CSPs would rise, international CSPs would be able to direct cloud customers in Malaysia to their offerings in other countries relatively quickly. Domestic CSPs, meanwhile, are unlikely to have the same amount of flexibility, meaning that USP Fund contributions would be more detrimental to the competitiveness of domestic CSPs than to international CSPs.

This discrepancy could then further accelerate the shift toward offshoring cloud workloads (as described in Section 3.3) and discourage future investment into domestic infrastructure in Malaysia, leading to further effects across the cloud value chain, as described in the next subsection.

82 AWS, 2021. "AWS Launches AWS Asia Pacific (Jakarta) Region in Indonesia"

83 Microsoft, 2024. "Microsoft announces US$1.7 billion investment to advance Indonesia's cloud and AI ambitions"

84 BytePlus, 2025. "Regions and Availability Zones"

85 The Business Times, 2025. "Oracle in talks to establish data-centre on Indonesia's Batam Island: sources"

## 3.5 Suppliers to the cloud sector, such as construction and hardware providers, may experience reduced demand for their offerings, and also be left with stranded assets

The imposition of USP Fund contributions on CSPs would represent an unexpected change in cost structure, and may lead to stranded assets among existing CSPs and data-centre operators, diminishing the value of their prior investments.

Upstream providers of hardware and facilities would also be impacted:

- Local EPC providers are typically reliant on domestic contracts and could be hit hard by reduced CSP investment, as this would translate into fewer contracts and slower procurement cycles.
- Reduced CSP investment would also result in reduced demand for semiconductor chips and lost opportunities for Malaysian semiconductor firms to build high-value cutting-edge technology.

These dynamics certainly have forward-looking implications and may also affect suppliers that have already made recent investments. If CSPs scale back on previously planned investments, this could lead to stranded assets deployed by local suppliers, that would lose value over time and potentially result in unintended losses or premature write-downs.

Financial investors in all of these areas (e.g. CSPs, construction companies, hardware suppliers) may also reassess the viability of their plans in light of these changes, potentially reallocating capital to neighbouring countries with more supportive regulatory frameworks. Such outcomes may not only dampen short-term foreign direct investment (FDI) inflows but also undermine long-term confidence and trust in Malaysia's digital policy making.

Overall, imposing USP Fund contributions on CSPs likely would impair ongoing efforts to foster innovation, create high-skilled jobs, and strengthen local capabilities, leading to a dampening of Malaysia's industrial aspirations to become a leading digital hub.

# 4 Policy makers in Malaysia should strongly consider removing the need for CSPs to contribute to the USP Fund, given the risk it poses to Malaysia's economic ambitions

In conclusion, there is no clear justification for imposing USP Fund contributions on CSPs, and policy makers should strongly consider removing this requirement, as it will likely be detrimental to the future growth of Malaysia's cloud sector and economy. Policy makers should instead ensure that the business environment in Malaysia remains attractive to investors, by reviewing cloud-related regulations and industrial policies, and doing more to enhance cloud adoption and digital literacy.

## 4.1 The cloud sector does not face the same types of challenges that justify USP Fund contributions in telecoms, and should therefore not be subject to a similar requirement

In many countries, universal service contributions were introduced in the telecoms sector to address a specific market failure, which was that operators did not have commercial incentives to expand coverage to underserved areas, even though doing so would result in benefits to new and existing network subscribers (due to the presence of strong direct network effects in telecoms networks).

In the cloud services sector, however, there is no evidence that an equivalent market failure exists, and cloud services do not exhibit the same direct network effects that originally warranted universal service funds in the telecoms sector. Unlike telecoms operators, who not only contribute to, but also draw from the USP Fund to deploy telecoms infrastructure and services in underserved areas, CSPs are not in the business of deploying telecoms infrastructure and services. This asymmetry provides telecoms operators with incentives to demand more of the universal service system and such an implementation could also be seen as tantamount to an additional 'digital platform tax' on CSPs.

An ITU study from 2021 also suggests that traditional universal service funds are becoming less relevant in the context of digital transformation, as the focus is shifting from infrastructure deployment and digital inclusion, to enabling innovation and digital adoption. The study notes that these "are not a progressive approach to financing universal access" and highlights that obligations should generally be limited to operators controlling high-demand scarce resources (e.g. spectrum).[86]

## 4.2 Malaysia's cloud sector is enabling broader economic growth, but this could be threatened if USP Fund contributions cause investments to be redirected elsewhere

At present, the cloud sector is already making significant contributions to Malaysia's economy and is poised to play an important role in achieving Malaysia's ambitious plans for digitally-enabled industrial transformation. We estimate that enterprises and public-sector bodies in Malaysia spent MYR12.1 billion (USD2.7 billion) on cloud services in 2024, and a simple extrapolation of findings

86 ITU, 2021. "Evolving funding instruments: universal service and access funds (USAF 2.0)"

from available economic impact studies suggests that the cloud services sector likely contributed between MYR12.2 billion and MYR15.4 billion (~USD2.7–3.4 billion) in GDP to Malaysia's economy in 2024, or ~0.6–0.8% of total GDP.

Cloud customers, including enterprises and public-sector bodies, would likely feel the impact of USP Fund contributions Uin the form of higher prices. We estimate that the imposition of USP Fund contributions would have resulted in an additional cost of ~MYR250 million (USD55 million) for cloud customers (including enterprises and public-sector bodies) in 2024. SMEs (including micro-enterprises), which account for the vast majority of Malaysian businesses, appear most likely to be deterred from adopting cloud services if prices rise, and this could threaten Malaysia's broader digital transformation ambitions over the long term.

At present, Malaysia's cloud ecosystem is being shaped by both international and domestic CSPs that invest in digital infrastructure, develop skills in the local workforce, promote broader sustainability efforts and enhance strategic collaborations with various stakeholders. These investments have been made by CSPs thus far with the understanding that they would not be required to contribute to the USP Fund administered by the MCMC. The imposition of USP Fund contributions on CSPs would be contrary to the prior understanding between CSPs and the MCMC and result in an increase in the cost of doing business for CSPs, as well as a loss of trust in authorities. Mandatory USP Fund contributions would also harm domestic CSPs more than international CSPs, as companies in the latter category can direct cloud customers to their offerings in other countries.

From an investment perspective, the imposition of USP Fund contributions on CSPs would likely make Malaysia a materially less attractive destination for cloud-related investments. Foreign investors tend to assess business environments holistically when deciding where to invest, and the imposition of USP Fund contributions on CSPs would add to the cumulative burden of broader developments in Malaysia's business environment, including:

- other regulatory and fiscal measures that CSPs are subject to, including the digital services tax,[87] cyber-security regulations[88] and AI governance frameworks,[89] and

[87] Malaysia has already included CSPs within its broader digital taxation framework. Since 2020, foreign digital service providers with annual revenues exceeding MYR500,000 – including those offering cloud, streaming and SaaS solutions to Malaysian users – have been subjected to a service tax on digital services (SToDS), which was increased from 6% to 8% in 2024. For more details, see Royal Malaysian Customs Department. "Guide on Transitional Rules for the Change in Service Tax Rate to 8% on Digital Service Provided by Foreign Registered Person" and "Guide on Digital Service by FSP"

[88] Malaysia's Cyber Security Act 2024 places growing compliance and operational demands on businesses, including CSPs. This is especially the case if they are classified as National Critical Information Infrastructure (NCII) entities. For more details, see Rahmat Lim & Partners, 2024. "A comprehensive guide to Cyber Security Act 2024 and corresponding regulations"

[89] Malaysia does not yet have binding AI regulations but has taken early steps to promote ethical AI use. MOSTI introduced the National Guidelines on AI Governance and Ethics, and in late 2024, the government launched the National AI Office (NAIO) to lead AI policy, governance and investment strategies. For more details, see Ministry of Digital, 2024. "Malaysian National AI Office (NAIO)"

- a new electricity tariff (in effect as of 1 July 2025), which (though potentially beneficial for residential customers) will likely lead to much higher costs for CSPs and data-centre operators.[90]

Imposing USP Fund contributions on CSPs, along with other developments in Malaysia's business environment, would likely work against Malaysia's ambitions relating to FDI, and lead investors to view other established and emerging digital hubs in the region as stronger alternatives. Malaysia has historically benefitted from spill-over demand from Singapore, which continues to serve as a regional hub, and other countries in the region have also recently attracted significant investment from CSPs:

- Thailand shares a geographical border with Malaysia, has emerged as an investment destination, and is positioning itself as a strong alternative, with government incentives to attract data-centre investments and growing interest from hyperscalers such as AWS, Google and TikTok.

- Indonesia is likewise gaining momentum from various tax incentives for data centres, a foreign-investment-friendly climate and the continued expansion of hyperscalers. CSPs are increasingly viewing Jakarta and Batam as key investment destinations in South-East Asia.

If investment is directed elsewhere, Malaysia's ability to develop strategic industries of the future (cloud, AI, semiconductors) would be significantly hindered, as would the envisioned contributions of these strategic industries to broader economic growth.

In summary, policy makers in Malaysia should strongly consider removing the requirement for CSPs to contribute to the USP Fund, given that it could:

- hinder the digital transformation of Malaysian enterprises (incl. SMEs) and public-sector bodies
- undermine ongoing foreign and domestic investment in Malaysia's cloud sector
- lead to a less competitive Malaysian economy (both within and beyond the cloud sector)
- stifle the creation of a surrounding ecosystem in adjacent areas (i.e. semiconductors and AI)
- result in lost opportunities to create high-value jobs and skills that underpin future growth.

## 4.3 Instead of imposing USP Fund contributions on CSPs, policy makers should focus on ensuring that Malaysia's business environment remains attractive to investors

Many CSPs are already making significant investments in Malaysia's digital ecosystem, including in infrastructure, skills development programmes, as well as sustainability initiatives. Rather than imposing USP Fund contributions on CSPs, policy makers should consider the impact that CSPs are currently enabling in terms of national digital transformation and growth and take these effects into account when thinking about how best to use policy tools to generate positive outcomes. Below are three categories of recommendations that policy makers could consider.

90 The Edge Malaysia, 2024. "What the new electricity tariff means for you and the grid"

*Ensuring that cloud-related policies do not create unnecessary regulatory burdens*

This study has focused on just one policy (mandatory contributions to the USP Fund) affecting CSPs and that, based on our assessment, appears unjustified. CSPs are also subject to other requirements that have not been reviewed as part of this study (including a digital services tax, cyber-security regulations and AI governance measures), and policy makers should ensure that policies affecting CSPs impose only necessary requirements, as opposed to unjustified and unnecessary regulatory burdens (such as the imposition of USP Fund contributions on CSPs) which could have negative unintended consequences.

Policies targeting adjacent areas can also have a material impact on the cloud sector, such as the new electricity tariff that is likely to significantly increase the cost of operating data centres. It will therefore be important for policy makers to be aware of these effects, and to develop alternative pathways for cloud providers and data-centre operators to maintain access to affordable energy – otherwise, investment may shift to lower-cost destinations.

*Monitoring the competitiveness of Malaysia's public–private partnership and incentive schemes*

Public–private partnerships have the potential to attract investment while stimulating the local industry. The pursuit of these partnerships is an approach that has been endorsed by the ITU.[91] Several investments made by international CSPs and semiconductor companies in Malaysia have been done through partnerships with public-sector bodies and result in opportunities for local skills development and manufacturing. Policy makers should pursue more of such partnerships.

Given that neighbouring countries are also aiming to attract investment from CSPs, it is worth conducting a formal benchmarking exercise to see how Malaysia's incentive schemes compare to those offered by other countries in the region, and to make adjustments if it appears that Malaysia's offerings are falling behind those of regional peers.

*Doing more to drive cloud adoption and enhance literacy in AI and other advanced technologies*

As demonstrated across various economic impact studies referenced in this paper, the use of cloud services generates benefits for the broader economy. While large corporations are typically among the first to adopt new technologies such as cloud services, other potential cloud users, such as SMEs and public-sector bodies, may require additional encouragement and support. SMEs (including micro-enterprises) form the backbone of the Malaysian economy but may lack the resources or technical expertise needed to adopt cloud services. Instead, government schemes, including those offered in partnership with CSPs, may be required.

Over the longer term, the adoption not only of cloud services, but also more advanced cloud-enabled technologies such as AI, depends on the digital literacy of the workforce. As such, policy makers should ensure that appropriate initiatives to improve digital literacy are in place, for existing workers

91 ITU, 2021. "Evolving funding instruments: universal service and access funds (USAF 2.0)"

(in emerging and mature industries), as well as for younger Malaysians who are currently in educational institutions and who are due to join the workforce in the years and decades to come.

Adopting these recommendations would lead to a more calibrated, investment-friendly and partnership-based policy approach that would better support Malaysia's digital ambitions while ensuring continued innovation and economic growth.