Chapter 5

Malaysia's Digital Economy: Policies and Challenges for the ASEAN Economic Community 2045

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Chapter 5
Malaysia's Digital Economy: Policies and Challenges for the ASEAN Economic Community 2045

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1. Introduction

The digital economy is one of the fastest growing and most critical sectors in Malaysia, particularly as the country strives to escape the middle-income trap and achieve high-income status. In 2021, the digital economy contributed 22.6% to Malaysia's gross domestic product (GDP), with projections indicating this will rise to 25.5% by 2025 (Economic Planning Unit, 2021), Malaysia recognises the digital economy as a key driver of economic growth, enhancing the country's competitiveness and empowering micro, small, and medium-sized enterprises to participate in higher value-added economic activities.

The paper explores the importance of the digital economy in Malaysia, with a focus on e-commerce. Malaysia has long regarded information and communication technology (ICT) and, more recently, the digital economy as integral components of its economic development plan. The launch of the Multimedia Super Corridor (MSC) and related initiatives in 1996 marked the beginning of this journey. This ambition is further reflected in subsequent policies relating to the Fourth Industrial Revolution, the digital economy, e-commerce, and the national investment policy. Malaysia's digital economy initiatives are bolstered by the country's participation in regional arrangements such as the Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations (ASEAN), the Regional Comprehensive Economic Partnership (RCEP), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

However, for Malaysia to emerge as a leading regional and global player in the digital economy, it must address a main weakness: the country is a technology adopter rather than a technology frontrunner. Additional areas for improvement include developing more talent, increasing research and development (R&D) efforts, attracting greater investment, and identifying niche areas where Malaysia can assume a leadership role.

2. The Importance of the Digital Economy

The digital economy is a key driver in Malaysia's pursuit of high-income nation status. The Malaysian Digital Economy Corporation (MDEC) predicts that by 2025, the digital economy will contribute approximately 25.5% to the GDP (MDEC, 2023). MDEC reported a significant growth in digital economy investments, with US$6 billion invested in the first half of 2023, compared with 2022.

The advancement of the digital economy in Malaysia involves the adoption of various digital technologies, particularly those related to the Fourth Industrial Revolution. This includes the integration of digital technologies, automation, and data analytics, leading to innovations such as smart manufacturing, the use of artificial intelligence (AI), and industrial Internet of Things (IoT) (OECD, 2023).

The World Bank emphasises that as Malaysia progresses towards becoming a high-income nation, it is essential to establish the digital economy as a key growth engine within a knowledge-based, innovation-led economy (World Bank, 2018) According to the World Bank, digital technologies can drive Malaysia's economic growth through three main channels: promoting the inclusion of underserved markets, increasing competitiveness, and fostering innovation by enabling new forms of businesses and entrepreneurships to emerge (World Bank, 2018).

3. Early Initiative: Multimedia Super Corridor

Malaysia's adoption of digital and information technology started with the launch of the MSC in 1996, modelled after Silicon Valley. This initiative formed part of the Seventh Malaysia Plan 1996–2000 (7MP), covering Kuala Lumpur and Putrajaya (Economic Planning Unit, 1996). The 7MP identified information technology as an important driver of economic growth, covering various hardware and services (Economic Planning Unit, 1996).

Businesses established and operating within the MSC were granted MSC status, enabling them to enjoy several benefits under the Bill of Guarantees.[1] These benefits included freedom of ownership, unrestricted employment of foreign knowledge workers, global access to capital, and tax holiday incentives.

However, as stated in the Ninth Malaysia Plan (9MP) 2006–2010, the MSC did not fully meet its original goals in content development, talent growth, and the creation of cutting-edge products and services (Economic Planning Unit, 2006). Consequently, the 9MP initiated MSC Phase II, expanding the reach of MSC Multimedia Applications into several other regions. Under the 10th Malaysia Plan (10MP) (Economic Planning Unit, 2011), Malaysia shifted its focus to niche areas in software and e-solutions, creative multimedia, shared services and outsourcing, and e-business (Economic Planning Unit, 2011).

[1] The Bill of Guarantees is replaced with the My Digital Status.

4. Strengths and Weaknesses of Malaysia's Digital Economy

In 2020, Malaysia was ranked as the second most digitally advanced country in ASEAN by Huawei's Global Connectivity Index (Hua Wei, 2022). Malaysia also ranked 31st overall and 2nd in ASEAN, just behind Singapore (4th overall), in the IMD World Digital Competitiveness Ranking 2022 (IMD, 2022). In this ranking, Malaysia was 25th in the knowledge indicator, 29th in technology, and 31st in future readiness. Malaysia ranked 32nd in the United Nations Trade and Development (UNCTAD) Frontier Technologies Readiness Index 2022 (with a score of 0.76), again behind Singapore, which held the 3rd overall position (with a score of 0.96).

Table 5.1. Malaysia's Strengths and Weaknesses in the Digital Economy

Three Malaysia's Strengths	Three Malaysia's weaknesses
• Training and Education • Technological Framework • Industry	• Talent and skills • Digital User and adopter and not a frontrunner • Digital divide

Source: IMD World Digital Competitiveness Ranking 2022; UNCTAD Frontier Technologies Readiness Index 2022; National Investment Policy 2022; 12th Malaysia Plan 2021-25.

Based on the IMD's ranking, Malaysia's main strengths in the digital economy lie in training and education (10th out of 64) and its technological framework (16th out of 64). The UNCTAD Frontier Technologies Index highlights Malaysia's strengths in industry and finance, as well as access to capital (IMD, 2022). Conversely, Malaysia's main weaknesses are in talents and skills, scientific concentration, business agility, and its regulatory framework.

The UNCTAD Technology and Innovation Report 2023 classifies Malaysia as a digital technology user rather than as an emerging frontrunner or producer of digital technology (UNCTAD, 2023). This classification aligns with the finding of the World Bank's Digital Adoption Index in 2016, which classified Malaysia as an 'adopter' country. This classification puts Malaysia behind frontrunner countries such as Singapore, the United States, Estonia, the Republic of Korea, and Japan in terms of digital progress (World Bank, 2016).

A digital divide persists in Malaysia. It is evident between states, urban and rural areas (Economic Planning Unit, 2021), younger and older generations in adapting to the internet and digital economy, and across income groups (Soh, et al., 2020). A study by Devisakti, Muftahu, and Hu (2023) highlights a digital divide in higher education, particularly amongst students from different income levels. According to this study, this divide leads to varying levels of technological readiness and limited technological skills.

5. Malaysia's Policy Responses

In response to identified weaknesses, Malaysia has introduced several new policies, with a particular focus on e-commerce and the role of digital services in manufacturing, emphasising the development of service-oriented pathways (Baldwin and Forslid, 2020). Following the MSC initiative, Malaysia shifted its focus towards specific domains such as IoT (MOSTI, 2015), e-commerce (MDEC, 2916), and technologies related to the Fourth Industrial Revolution (Economic Planning Unit, 2019). Amongst focus technologies are AI, big data analytics, augmented reality, additive manufacturing, cybersecurity, simulation, system integration, IoT, advanced materials, autonomous robots, and cloud computing.

The most recent policy on the digital economy is the Malaysia Digital Economy Blueprint 2021 (My Digital). MyDigital is designed to enhance Malaysia's value proposition to attract digital investments and establish the country as a regional leader in the digital economy (Economic Planning Unit, 2021). MyDigital has three primary objectives: encourage industry players to become creators, users, and adopters of innovative business models; harness human capital capable of thriving in the digital economy; and nurture an integrated ecosystem that enables society to embrace the digital economy. These objectives are supported by three pillars: facilitating digitalisation in the public and private sectors, building Malaysia's digital talent pool, and promoting digital trade opportunities. The National Strategic Initiatives focuses on trade, agriculture, services, smart cities, healthcare, finance, content, tourism, and the Islamic digital economy.

Investment in the digital economy is further supported by the New Investment Policy 2022 (NIP) (MITI, 2023). Under the NIP, Malaysia seeks to accelerate the creation of high-value digital jobs supported by a local digital talent pool that is both agile and competent. To attract and facilitate investments in the digital economy, MyDigital has introduced the Digital Investment Office, a collaborative platform between the Malaysian Investment Development Authority (MIDA) and the MDEC.

From the perspective of the digital economy, the NIP focuses on the following:

a. Addressing the needs of communities with a focus on consumption.
b. Building on applications and services, emphasising digital solutions and services across various service sectors.
c. Facilitating investments in digital platforms, including digital identification, authentical and digital signing, unified and interoperable data, cloud computing, big data and AI, content management, IoT, blockchain, security and encryption, digital procurement, billing and payment, open government and industry.
d. Enhancing digital connectivity and infrastructure.

The 12th Malaysia Plan 2021–2025 (12MP), launched in 2021, encompasses three dimensions: economic empowerment, environmental sustainability, and social re-engineering (Economic Planning Unit, 2021). Within the digital economy, the 12MP addresses challenges such as insufficient digital infrastructure and services, fragmented governance, the digital divide, low levels of R&D, and the slow adoption of technologies. The 12MP aims to enhance the talents and skills required to drive the digital economy, intensify R&D, and aggressively attract investments. The 12MP identifies two game changers: enhancing digital connectivity for inclusive development and aligning R&D with commercialisation and wealth generation.

The National Industrial Master Plan 2030 (NIMP 2030), launched in September 2023 (MITI, 2023), sets out an integrated plan for Malaysia's industrial development by 2030. NIMP 2030 predicts that Malaysia's internet economy will generate an annual economic value of RM257.2 billion (US$61.3 billion) by 2030. Consequently, Malaysia will focus on facilitating digitalisation in both public and private sectors, fostering digital talent, and promoting digital trade opportunities.

6. Digital Economy and Regional Trade Agreements

Malaysia's quest to position digital economy as an important driver of its economic performance is bolstered by its international commitments, including those under RCEP, CPTPP, ASEAN, and APEC.

RCEP supports the digital economy through chapters on electronic commerce, trade in services, and investment (Kelsey, 2022). It adopts a pragmatic approach to the digital economy by implementing ICT-driven trade facilitation measures, enabling the free cross-border flow of data, and adopting less stringent data localisation requirements (Park et al., 2023). CPTPP contains provisions on e-commerce that could drive the uptake of digital economy amongst its parties, including protections for data movement and the elimination of tariffs on digital goods and services.

Regionally, Malaysia stands to benefit from the ASEAN Digital Masterplan 2025 (ASEAN, 2021), which envisions ASEAN as a leading digital community and economic bloc powered by secure and transformative digital services, technologies, and ecosystems. As a member economy of APEC (APEC, 2020), Malaysia is aligned with pillar 2 of the Putrajaya Vision 2040. Under this pillar, member economies will take steps to create an enabling environment through policies that encourage innovation and digitalisation, adopt new and emerging technologies, share best practices, and promote approaches for a digital economy (APEC, 2021).

7. Case Study: E-commerce in Malaysia

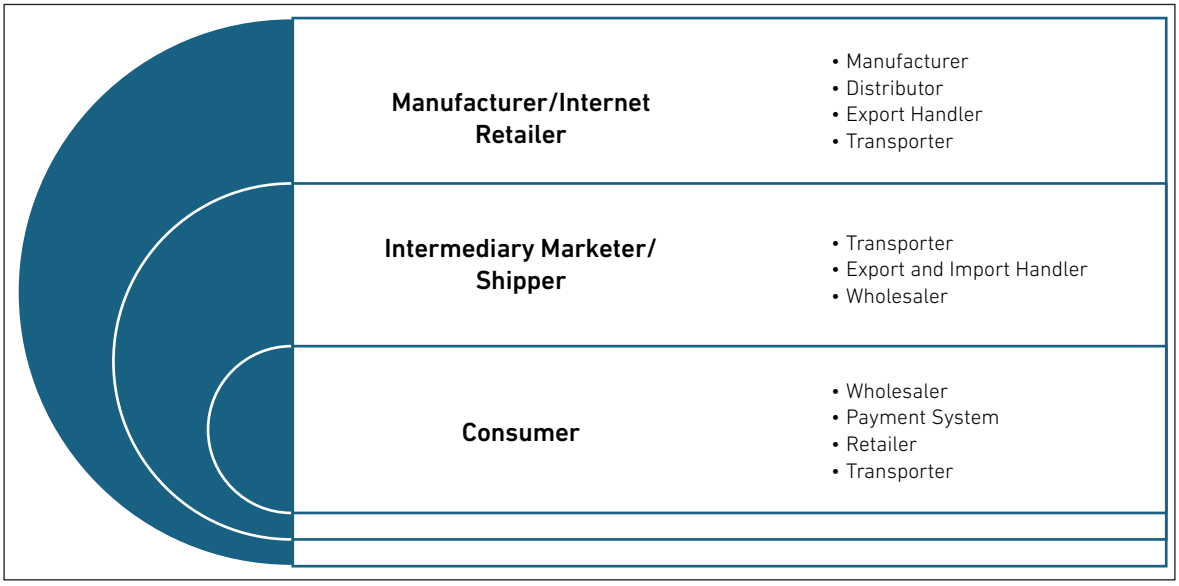
7.1. E-commerce Market in Malaysia

According to the Department of Statistics of Malaysia (DOSM) (2023), the income generated by Malaysia's e-commerce sector reached nearly RM1.1trillion in 2022 and saw a year-on-year increase of 10.4%, totalling RM291.7 billion in the first quarter of 2023 (DOSM, 2023). UNCTAD's Business-to-Consumer E-Commerce Index 2020 ranked Malaysia 30th overall, placing it in the 4th highest place amongst developing economies, behind Singapore, Hong Kong, and the Republic of Korea (UNCTAD, 2021).

The National E-Commerce Strategic Roadmaps 2016 and 2021 (NECSR) aim to future-proof existing businesses and expand market access. NECSR intends to integrate small and medium-sized enterprises (SMEs) into the world of e-commerce, equipping them with the capabilities to keep pace with an online market poised to grow much faster than offline sales. The NECSR is driven by six thrust areas: accelerating seller adoption of e-commerce, increasing e-procurement adoption by businesses, removing non-tariff barriers to e-commerce, realigning existing economic incentives, making strategic investments in select e-commerce player(s), and promoting national brand to boost cross-border e-commerce.

The modern e-commerce value chain involves various activities and players (Figure 5.1).

Figure 5.1. E-commerce Value Chain



Source: Author's modification from World Customs Organisation, Facilitating E-Commerce, https://mag.wcoomd.org/magazine/wco-news-78/facilitating-e-commerce/ (last accessed 18.8.2023).

Based on Figure 5.1, the e-commerce value chain in Malaysia consists of the following:

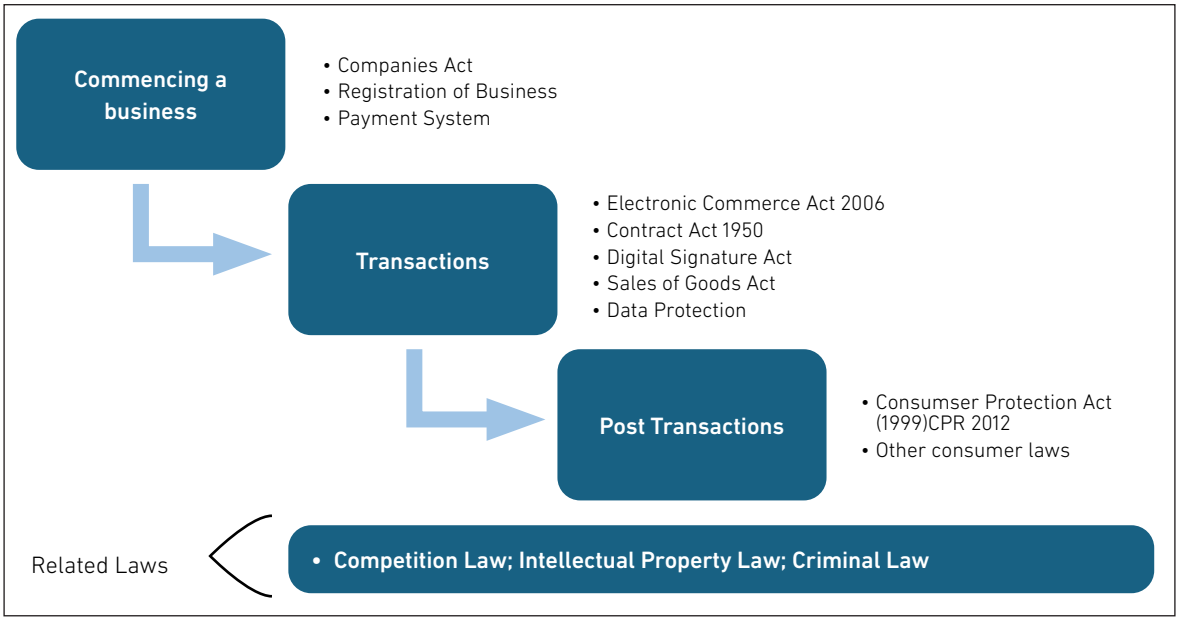
a. **First group**. Manufacturers and internet-enabled retailers (e.g. Amazon, AirAsia Digital, and, gradually, Grab). This group is supported by manufacturers, distributors (e.g. courier companies), and export handlers.
b. **Second group.** Intermediary marketers and shippers (e.g. Grab, AirAsia Digital, Lazada, and Shopee). This group is supported by transport companies, import and export handlers, and wholesalers and distributors.
c. **Third group.** Consumers who interact with either wholesalers or retailers.

Separate studies by the World Bank (2018) and Tham and Kam (2023) reveal that business-to-business (B2B) transactions dominate Malaysia's e-commerce sector, particularly in manufacturing, and are primarily driven by big businesses. A major issue in the Malaysian e-commerce market, especially in the business-to-consumer (B2C) segment, is the emergence of Superapp operators. These operators seek market dominance by acting as internet enablers and market intermediaries whilst offering distribution, handling, or payment gateway services (Gao and Jusoh, 2023).

7.2. Malaysia's E-commerce Regulations

According to Jaller, Gaillard, and Molinuevo (2020), e-commerce regulations provide the legal tools necessary for remote contracts, clarify the rights and obligations of the multiple actors involved in digital transactions, and establish a framework that promotes consumer trust in digital markets. Malaysia's legal framework for e-commerce is based on the laws designed and approved during the early stages of e-government and the MSC initiatives in the late 1990s and early 2000s (Figure 5.2).

Figure 5.2. Situating the Law in the E-commerce Value-Chain



Source: Authors' analysis based on the Malaysian e-commerce related legal framework.

The legal framework mainly addresses B2C markets, whilst B2B transactions and other activities, such as those of the intermediaries and last-mile service providers, are governed by general laws. This framework does not address issues like buyer fraud, where the customer receives goods but fails to make payment (Gao and Jusoh, 2023). . To address these concerns, MyDigital seeks to streamline regulatory requirements to better support the digital economy and encourage sustainable business models (Economic Planning Unit, 2021).

MyDigital aims to address innovations, enhance consumer protections, establish fairer contractual and commercial arrangements between SMEs and e-commerce platform providers, and ensure seamless connectivity and delivery of e-commerce products and services (Economic Planning Unit, 2021). One initiative is to nurture a dynamic intellectual property (IP) system for the digital economy to encourage innovations. This involves reviewing and updating laws, implementing a digital IP enforcement strategy, and raising awareness about digital and online branding protection using a Malaysian domain (.MY).

The second initiative is to adopt an agile regulatory approach to meet the needs of digital economy businesses. This includes identifying priority regulations for review and updating, developing a code of conduct for regulators to encourage industry involvement in the regulatory design for the digital economy, expanding regulatory sandboxes, and addressing social security for those involved in the gig economy (Economic Planning Unit, 2021). The third initiative is to align pro-competition measures with digital economy policies to promote fair competition and create a level playing field in the digital economy. This involves reviewing existing policies and competition laws to support responsible digital economy growth (Economic Planning Unit, 2021).

7.3. Infrastructure and Facilities

To support e-commerce and digital trade, Malaysia has established the Digital Free Trade Zone (DFTZ). The objectives of the DTFZ include facilitating seamless cross-border trade via virtual and physical facilities, increasing SME goods exports to US$38 billion, creating over 60,000 jobs, and supporting US$65 billion worth of goods moving through DFTZ by 2025. Other objectives include positioning Malaysia as Asia's leading transhipment hub by 2025, enabling global marketplaces to source from Malaysian manufacturers and sellers, establishing Malaysia as the regional fulfilment hub for global brands to reach ASEAN buyers, and creating an ecosystem to drive innovation in e-commerce and the internet economy (Tham, 2018).

The main components of the DTFZ are the eFulfilment Hub, the Satellite Services Hub, and the eServices Platform (Tham, 2018). The eFulfilment Hub assists SMEs and other businesses in exporting their goods efficiently, with the support of leading fulfilment service providers. The Satellite Services Hub connects SMEs with leading players, offering services such as financing, last mile fulfilment, insurance, and other essential services for cross-border trade. Through the eServices Platform, businesses can efficiently manage cargo clearance and other processes required for cross-border trade.

Alibaba, a Chinese company, hosts its regional eFulfillment hub at KLIA Air Cargo Terminal 1 (KACT1), developed by POS Aviation, serving Alibaba Lazada e-commerce operations. As of March 2019, the government, through MIDA, had approved eight e-fulfilment projects, with more in the pipeline (Jusoh, 2021). In the second phase, a logistics centre spanning over a 60-acre plot at KLIA is operational to support the DFTZ.

8. Conclusions and Policy Proposals

Malaysia has demonstrated a clear intent to be a main player in the digital economy, as evidenced by the various measures taken to build on its strengths and address its weaknesses. However, to fully unlock the economic benefits of digital economy, Malaysia must aspire to be a frontrunner, not just an adopter, of digital-related economic activities and technologies. As the Chair of ASEAN in 2025, Malaysia will need to guide ASEAN digital economy towards achieving its ambitions by 2045.

Malaysia must immediately address several pertinent issues. First, the shortage of talent in new digital technologies needs to be tackled. Addressing this talent gap will alleviate concerns amongst businesses and investors and will, in turn, help the country contribute more effectively to the growth of the digital economy and its associated technologies. ASEAN could encourage the free movement of digital talent amongst its Member States, particularly through the recognition of digital-related qualifications.

Second, Malaysia must address the digital divide within its digital economy. This includes building more digital physical infrastructure, especially in rural and underdeveloped regions. ASEAN must adopt a strategic plan to reduce the digital divide within the region, which involves addressing ASEAN Connectivity and relevant digital economy plans under the ASEAN Economic Community.

Third, Malaysia and ASEAN Member States must address the legal frameworks relating to the digital economy. A holistic review of laws concerning digital activities is needed, aligning this reform with Malaysia's obligations under the CPTPP and the RCEP agreements, which are also applicable to all ASEAN Member States. Finally, Malaysia and ASEAN could explore new areas within the digital economy. For example, Malaysia could investigate the servicification of manufacturing or manufacturing-related services through digital technology as a potential driver of the digital economy.

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