Market Review on the Digital Economy Ecosystem Under the Competition Act 2010

Malaysia Competition Commission (MyCC)

Interim report
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Abbreviations

3D	Three dimensional
3PL	Third-party logistics
4G	Fourth generation
4IR	Fourth Industrial Revolution
5G	Fifth Generation (Mobile Network Technology)
6G	Sixth Generation
AdTech	Advertising Technology
AI	Artificial Intelligence
APAC	Asia Pacific
APEC	Asia-Pacific Economic Cooperation
API	Application Programming Interface
AR	Augmented reality
ARR	Average Room Rates
ART	Average Response Time
ASEAN	Association of Southeast Asian Nations
ATT	App Tracking Transparency
B2B	Business to Business
B2C	Business to Consumer
MyBHA	Malaysia Budget Hotel Association
BNM	Bank Negara Malaysia
BNPL	Buy-Now-Pay-Later
BRI	Belt and Road Initiative
C2C	Consumer-to-Consumer
CAGR	Compound annual growth rate
CAP	The Consumers' Association of Penang
CCI	Competition Commission of India
CCM	Companies Commission Malaysia
CDD	Compatibility Definition Document
CDEI	Centre for Data Ethics and Innovation
CDN	Content-delivery network
CII	Critical Information Infrastructure
CMA	Competition and Markets Authority
CMA	Communications and Multimedia Act
CNMC	Spanish Competition Authority

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COD	Cash on Delivery
COVID	Coronavirus Disease
CPA	Cost per Acquisition / Action
CPC	Cost per Click
CPM	Cost per Mille
CPU	Central Processing Unit
CPV	Cost per View
CRM	Customer relationship management
CRR	Chat Response Rate
DBKL	Kuala Lumpur City Hall
DDA	Developer Distribution Agreement
DFTZ	Digital Free Trade Zones
DMA	Digital Markets Act
DMP	Data management platforms
DNB	Digital Nasional Bhd
DOJ	Department of Justice
DOOH	Digital-Out-Of-Home
DOSM	Department of Statistics Malaysia
DSA	Digital Services Act
DSP	Demand-side platforms
DV360	Display & Video 360
EC	European Commission
ECJ	European Court of Justice
ED	Enforcement Directorate
EEA	European Economic Area
EPU	Economic Planning Unit
ESG	Environmental, Social, and Governance
EU	European Union
EUR	Euro
FBA	Fulfillment by Amazon
FCO	Federal Cartel Office
FEMA	Foreign Exchange Management Act
FMCG	Fast-moving consumer good
Fomca	The Federation of Malaysian Consumers Associations
FPX	Financial Process Exchange
FRT	First Response Time
FTC	Federal Trade Commission

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FWIG	Foreign Workers Insurance Guarantee
FYE	Financial Year End
GDI	Global Digitalisation Index
GDP	Gross domestic product
GDPR	General Data Protection Regulation
GDS	Global Distribution System
GERD	Gross Expenditure on Research and Development
GMS	Google Mobile Services
GMV	Gross Merchandise Value
GPS	Global Positioning System
ICA	Italian Competition Authority
ICT	Information and Communication Technology
ID	Identification
IDC	International Data Corporation
IDI	ICT Development Index
IDI	In-depth Interview
IHG	InterContinental Hotels Group
IMD	Institute for Management Development
IP	Internet Protocol
IP	Intellectual Property
IPP	Instalment Payment Plan
ISP	Internet Service Provider
IT	Information Technology
ITU	International Telecommunication Union
JARING	Joint Advanced Research Integrated Networking
JD	Jingdong
JENDELA	National Digital Infrastructure Plan
JFTC	Japan Fair Trade Commission
JPJ	Jabatan Pengangkutan Jalan
JV	Joint Venture
KLIA	Kuala Lumpur International Airport
KOL	Key Opinion Leader
KPDN	Ministry of Domestic Trade and Cost of Living
KPKT	Ministry of Housing and Local Government
KPPU	Indonesia Competition Commission
LEX	Lazada Express
LHDN	Inland Revenue Board of Malaysia

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LPI	Logistics Performance Index
LVG	Low-Value Goods
MAA	Malaysian Advertisers Association
MADA	Mobile Application Distribution Agreements
MADANI	keMampanan (Sustainability), kesejAhteraan (Prosperity), Daya cipta (Innovation), hormAt (Respect), keyakiNan (Trust) and Ihsan (Compassion)
MAH	Malaysian Association of Hotels
MAMPU	Malaysian Administrative Modernisation and Management Planning Unit
MATRADE	Malaysia External Trade Development Corporation
MATTA	Malaysian Association of Tour and Travel Agents
MAVCOM	Malaysian Aviation Commission
MCMC	Malaysian Communications and Multimedia Commission
MCO	Movement Control Order
MCPA	MyChannel Partner Agreement
MDA	Medical Device Authority
MDC	Multimedia Development Corporation
MDEB	Malaysia Digital Economy Blueprint
MDEC	Malaysian Digital Economy Corporation
MFA	Multi-Factor Authentication
MFN	Most Favoured Nation
MITI	Ministry of International Trade and Industry
MIUI	Xiaomi's User Interface
ML	Machine Learning
MM	Market Manager
MNC	Multinational corporations
MOC	Memorandum of Cooperation
MODA	Make-Own-Delivery-Arrangement
MOF	Ministry of Finance
MOQ	Minimum Order Quantity
MOSTI	Ministry of Science, Technology and Innovation
MOTAC	Ministry of Tourism, Arts and Culture
MPC	Malaysia Productivity Corporation
MPPM	Malaysian Premium Publishing Marketplace
MRANTI	Malaysian Research Accelerator and Technology Innovation
MSC	Multimedia Super Corridor

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MSIC	Malaysia Standard Industrial Classification
MSME	Micro, Small and Medium Enterprises
MYR	Malaysian Ringgit
N-IICS	Number-Independent Interpersonal Communication Service
N4IRP	National 4th Industrial Revolution Policy
NCSS	National Cyber Security Strategy
NESR	National E Commerce Strategic Roadmap
NFC	Near Field Communication
NGM	Next-Generation Manufacturing
NIMP	National Industrial Master Plan
NPRA	National Pharmaceutical Regulatory Agency
NTIS	National Technology and Innovation Sandbox
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
OS	Operating System
OSS	Open-Source Software
OTA	Online Travel Agency
OTT	Over-the-top
PC	Personal Computer
PD	Programmatic Direct
PDG	Princeton Digital Group
PDP	Personal Data Protection Department
PDPA	Personal Data Protection Act
PENJANA	Pelan Jana Semula Ekonomi Negara
PIAM	General Insurance Association of Malaysia
PLKS	Pas Lawatan Kerja Sementara
PMP	Private Marketplace
PPC	Pay Per Click
PPP	Tourist Accommodation Premises
PSA	Postal Services Act
Q2	Quarter 2
R&D	Research and Development
RFP	Request For Proposal
RM	Relationship Manager
RMKe-12	Rancangan Malaysia Ke-12
RMN	Retail Media Networks
ROI	Return on Investment

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RTB	Real-Time Bidding
SC	Securities Commission Malaysia
SCENIC	Sabah Creative Economy and Innovation Centre
SDEC	Sarawak Digital Corporation
SDK	Software Development Kit
SECOMS	Strategic E Com Services
SEM	Search Engine Marketing
SEO	Search Engine Optimisation
SGD	Singapore Dollar
SiC	Silicon Carbide
SLA	Service Level Agreement
SME	Small and Medium Enterprise
SMS	Short Message Service
SPX	Shopee Express
SSFS	Seller Shipping Fee Saver
SSP	Supply-side platforms
SST	Sales and Service Tax
STAAH	Software for Travel Agents and Accommodation Hosts
STRA	Short-term rental accommodations
SUPER	Malaysia Startup Ecosystem Roadmap
TTPM	Tribunal of User Claims Malaysia
TV	Televisions
UAE	United Arab Emirates
UI	User Interface
UK	United Kingdom
UN	United Nations
UOKiK	Polish Competition Authority
URL	Uniform Resource Locator
U.S.	United States
USD	United States Dollar
UWB	Ultra-wideband
VAT	Value-Added Tax
VC	Venture Capital

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1. Introduction

1.1 Market review on the digital economy ecosystem

The Malaysia Competition Commission (MyCC) is an independent body established under the Competition Commission Act 2010, tasked with enforcing the Competition Act 2010. Through its efforts, MyCC aims to foster a robust, efficient, and sustainable economy for Malaysia and its people.

Under section 11(1) of the Competition Act 2010, MyCC has the authority to conduct market reviews to assess if there are any activities in a market that may prevent, restrict or distort competition. These reviews help MyCC understand market conditions and identify any competition issues that need to be addressed.

Given the rapid growth of the digital economy, MyCC has decided to conduct a market review focusing on selected digital economy sub-sectors. The market review will be the eighth review, following previous studies on the professional body fees, domestic broiler market, pharmaceutical, building materials in construction, food, wholesale retail trade and transportation sectors since 2013.

1.2 Market review objectives

The Market Review on the Digital Economy Ecosystem under the Competition Act 2010 aims to achieve the following objectives:

- To study the market structure, supply chain and profile of industry players that are involved throughout the upstream and downstream of the digital economy and sub-sectors studied;

- To study any market interactions and competition concerns in the digital economy and sub-sectors studied;

- To study the extent of potential market distortion by authority's regulations and policies and whether government intervention is

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necessary in curbing competition concerns in the digital economy and sub-sectors studied; and

- To provide recommendations to the government agencies and regulators in the digital economy to minimise the actual or potential restrictive effect of regulations on competition.

1.3 Expected outcomes

Four outcomes expected from the market review of the digital economy sector:

- Identify potential anti-competitive behaviour in the sub-sectors, and validate the effectiveness of MyCC's enforcement tools;

- Provision of an all-encompassing study of the digital economy to the government (which provides details on the supply chain and its current state and prospect);

- Provision of better understanding of the sector to the government in the areas of market practices and competition issues; and

- Serve as a detailed guidance for the government and industry stakeholders to bolster Malaysia's digital economy in line with international standards, thereby further boosting its contribution to the national gross domestic product (GDP).

1.4 Research methodology

This study will rely on a two-pronged approach, utilising both primary and secondary research methods:

1.4.1 Primary research

Involves the collection of original data directly from individuals or groups within the sub-sectors. Approach is aimed at gaining insights into players' and end users' preferences, behaviours, and perceptions. Key primary research activities being carried out are:

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- Focus Group Discussion (FGD)
- In-depth interviews (IDI) with sub-sector players
- Written input from sub-sector players
- Sub-sector surveys
- Customer survey
- Public consultation sessions

1.4.2 Secondary research

Analysis of existing data collected by external parties, including but not limited from published articles, reports, databases, academic studies, and industry sources. Key secondary research activities being carried out are:

- Literature review
- Public data/information review
- Industry research report review
- Player analysis
- Benchmarking analysis

1.5 Focus of the market review

The review focuses on three sections:

1.5.1 Overview of the digital economy sector

Historical performance and expected performance of the sector as a whole, including key policies and regulations related to the digital economy.

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1.5.2 Sub-sector deep dive

Four digital economy sub-sectors are selected for review in this study, with focus on its market structure and supply chain, level of competition, market practices, consumer behaviour and innovation trends, relevant regulations, key issues (competition, market- and regulatory-related) and recommendations:

(a) Mobile Operating & Payment System

Software platforms are designed for mobile devices and serve as intermediaries between device hardware and applications. This study will focus exclusively on the mobile operating system (OS), app store, app distribution and its integrated payment system.

(b) E-commerce (Marketplace)

Business-to-consumer (B2C) marketplace platforms that allow users and merchants to buy and sell goods over the internet. These platforms act as intermediaries between sellers and buyers. This excludes service-related (e.g., transportation, food delivery) platforms.

(c) Digital Advertising Services

Online marketplaces and platforms that enable supply and demand partners to buy or sell digital ad inventory, with ads displayed on search engine results, social media, and other digital properties.

(d) Online Travel Agencies (OTAs)

Web and mobile-based platforms that allow consumers to book travel services, with the focus being only on accommodation booking platforms.

The selected sub-sectors are based on two considerations: (a) alignment with other digital economy studies and (b) alignment with key digital economy anti-competition cases. Detailed rationale is highlighted in section 1.6.

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In addition to the four sub-sectors, one enabling area will be studied across them:

(e) Data Privacy & Protection:

Data plays a central role in the business models of all the aforementioned sub-sectors. For example, app stores use data to customise app offerings and improve user experience; e-commerce marketplaces rely on customer data to personalise product recommendations; digital advertisers leverage data to tailor content and target audiences effectively; and OTAs rely on data to offer personalised travel recommendations and dynamic pricing.

Given the critical role of data in the digital economy, access to relevant data can thus be a key factor in determining the competitive position of companies in their respective sub-sector [1] . influencing both market dominance and the ability to expand its market presence.

This study examines two key data-related areas:

- **Data privacy**, which relates to the rights of internet users to control which data is shared with whom, and how their personal information is used in the digital marketplace.

- **Data protection**, which focuses on the mechanisms and management practices employed by companies (data controller) to prevent the misuse or unauthorised access of personal and sensitive information that they collect, store, and process.

In understanding data privacy & protection across the four sub-sectors, key areas of data usage, transparency, data control and compliance will be studied.

[1] CMA (2021). Competition and data protection in digital markets: a joint statement between the CMA and the ICO, page 13. https://ico.org.uk/media/about-the-ico/documents/2619797/cma-ico-public-statement-20210518.pdf

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1.5.3 Strategic recommendations

Key recommendations for each sub-sector are provided to address the identified competition-, market- and regulatory-related issues. These recommendations may be implemented by the relevant ministries and government agencies to promote greater competition and ensure an inclusive digital economy, without undermining foreign investment or stifling innovation.

1.6 Benchmarking studies

The selected sub-sectors (mobile operating and payment system, e-commerce (marketplace), digital advertising services and online travel agencies) are based on two considerations, aimed at identifying areas with the highest likelihood for anti-competitive practices:

1.6.1 Alignment with other digital economy studies

Table 1: Published studies on the digital economy by competition commissions of selected economies:

Country	Year	Study	Focus area
Japan[2]	2019	Report regarding trade practices on digital platforms (Business-to-Business transactions on online retail platform and app store)	E-commerce, Mobile OS
	2021	Final Report Regarding Digital Advertising	Digital advertising
		The Study Group on Competition Policy in Digital Markets Released the Report on Algorithms/AI and Competition Policy	General digital economy
		Report of the Study Group on Competition Policy for Data Markets	Data
	2022	Report Regarding Cloud Services	Cloud services

[2] JFTC (2025).Press releases. https://www.jftc.go.jp/en/

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Country	Year	Study	Focus area
Japan	2023	Market Study Report on Mobile OS and Mobile App Distribution	Mobile OS
		Report on the Follow-up Survey on Fintech-based Services	Fintech
India[3]	2020	Market study on e-commerce in India	E-commerce
United Kingdom[4]	2019	Assessment of merger control decisions in digital markets	General digital economy
	2020	Centre for Data Ethics and Innovation (CDEI) Review of online targeting	
	2021	2021 Compendium of approaches to improving competition in digital markets	
	2022	CMA consumer research into purchasing behaviour in the UK smartphone market	Mobile OS
		Mobile ecosystems market study final report	
		Online Choice Architecture: How digital design can harm competition and consumers	General digital economy
		2022 Compendium of approaches to improving competition in digital markets	
		Music and streaming market study	Music & streaming
	2023	2023 Compendium of approaches to improving competition in digital markets	General digital economy
		Frontier AI: capabilities and risks	
		Trends in Digital Markets: a CMA horizon scanning report	

[3] CCI (2025). Market studies. https://www.cci.gov.in/

[4] GOV.UK (2025). Competition and markets authority. https://www.gov.uk/government/organisations/competition-and-markets-authority

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Country	Year	Study	Focus area
United Kingdom	2024	International Scientific Report on the Safety of Advanced AI	General digital economy
Germany[5]	2019	Algorithms and Competition	
	2021	Digital Markets Act: Perspectives in (inter)national competition law	
	2022	Merger control in the digital age	
United States[6]	2020	A Brief Primer on the Economics of Targeted Advertising	Digital advertising
		Social Media Bots and Advertising: FTC Report to Congress	
	2022	Combatting Online Harms Through Innovation	General digital economy
	2023	Protecting Kids from Stealth Advertising in Digital Media: A FTC Staff Perspective	Digital advertising
	2023	Generative Artificial Intelligence and the Creative Economy Staff Report: Perspectives and Takeaways	General digital economy
	2024	Smart Device Makers' Failure to Provide Updates May Leave You Smarting	Mobile OS
		A Look Behind the Screens: Examining the Data Practices of Social Media and Video Streaming Services	Data
	2024	Tech Summit on Artificial Intelligence: Consumer Facing Applications	General digital economy
Singapore[7]	2019	Online Travel Booking Sector	OTA
	2020	E-commerce Platforms	E-commerce

[5] Bundeskartellamt (2025). Publication. & Markets Authority. https://www.bundeskartellamt.de/EN/Home/home_node.html

[6] Federal Trade Commission (2025). Reports. https://www.ftc.gov/

[7] CCCS (2025). Market studies. https://www.cccs.gov.sg/resources/publications/market-studies/

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Country	Year	Study	Focus area
Australia[8]	2020	Digital Platforms Services Inquiry 2020-25 (Ongoing)	Digital platform
	2021	Digital Advertising Services Inquiry	Digital advertising
European Union[9]	2019	Competition issues in the area of Financial Technology (FinTech)	Financial technology
		Competition policy for the digital era	Digital economy regulation
	2020	Market study on the distribution of hotel accommodation in the EU	OTA
		Opportunities of artificial intelligence	Artificial intelligence
	2021	Digital Markets Act in the making	Digital economy regulation
		The Digital Services Act and the Digital Markets Act	
		The EU digital markets act	
	2022	Merger review in digital and technology markets	General digital economy
		Digital Services Act & Digital Markets Act	Digital economy regulation
		Merger enforcement in digital and tech markets	

Source: Secondary research and MyCC's analysis

Studies published by various competition authorities in key economies since 2019 – including the Japan Fair Trade Commission (JFTC), Competition Commission of India (CCI), Competition and Markets Authority (CMA - UK), Federal Cartel Office (FCO - Germany), and Federal Trade Commission (FTC – U.S.), Competition and Consumer Commission of Singapore (CCCS), Australian Competition & Consumer Commission (ACCC) and European Commission (EC) – indicated the four sub-sectors of this study as focus. Below are the emphasis of the studies:

[8] ACCC (2025). Publications. https://www.accc.gov.au

[9] European Union (2025). Competition Policy. https://competition-policy.ec.europa.eu/index_en

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- A comprehensive overview of the sub-sectors (e.g., Mobile OS, E-commerce, Digital advertising, OTA, Data Privacy and Protection) analysed;

- Examination of consumer behaviour, market practices, and supply chain developments;

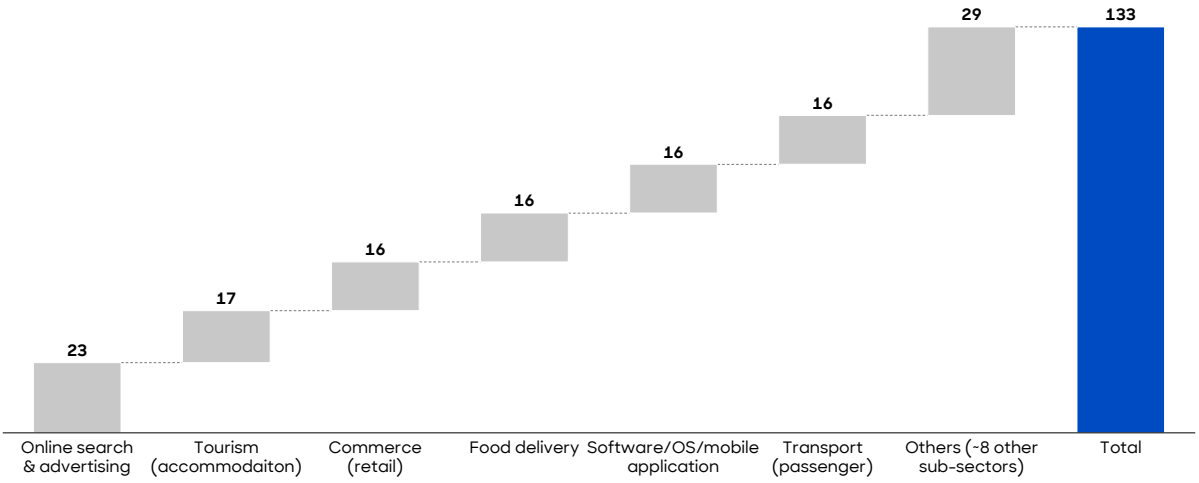
- Discussion of global issues related to competition, market dynamics, and regulatory frameworks;

- Analysis of data utilisation by market players and interventions by competition authorities, and

- Consideration of any other pertinent matters that could further enhance this market review.

1.6.2 Alignment with key digital economy anti-competition cases

Figure 1: Anti-competitive cases by sub-sectors in the digital economy sector worldwide, 2006-2022 [# of cases] [10]



Source: Global Digital Antitrust Database by World Bank, 2006 - 2022

[10] World Bank Group (2025). The Global Markets Competition and Technology Digital Antitrust Database. https://dataviz.worldbank.org/views/Global-Digital-Antitrust-Database/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y

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The selected sub-sectors are also based on the volume of anti-competitive cases observed globally. According to the World Bank Group's Global Markets Competition and Technology Digital Antitrust Database, from 2006 to 2022, the five sub-sectors with the most anti-competition cases were primarily related to online search and advertising, tourism (accommodation), e-commerce, food delivery, and software/OS/mobile applications.

Recent notable cases include the abuse of dominance ruling against Yandex in Russia for self-preferencing its own products in online search results[11], Japan's antitrust case against Booking.com over price parity clauses in hotel contracts[12], South Korea's investigation of Naver for self-preferencing its own online shopping site[13], and China's case against Alibaba for exclusive dealing practices[14].

1.7 Limitation of the study

- The conclusions, analysis, and recommendations in this report are derived from both primary and secondary sources. While effort has been made to ensure the completeness and accuracy of the information, it is important to note that the information may be influenced by the respondents' knowledge or willingness to disclose details, as well as potential unintentional errors or gaps from the publishers.

- This market review will consist of confidential and non-confidential version. The non-confidential report will only utilise publicly available information, and any data involving numbers will be aggregated. Any

[11] Global Competition Review (2021). Russia probes Yandex over self-preferencing concerns. https://globalcompetitionreview.com/article/russia-probes-yandex-over-self-preferencing-concerns

[12] Lexology (2023). Spotlight: restrictive agreements and dominance in Japan. https://www.lexology.com/library/detail.aspx?g=ed6bc6bc-a67c-4287-97f0-187c3215394d

[13] Kluwer Competition Law Blog (2023). A cursory overview of self-preferencing in Korea: Naver Shopping. https://competitionlawblog.kluwercompetitionlaw.com/2023/02/15/a-cursory-overview-of-self-preferencing-in-korea-naver-shopping/

[14] Kluwer Competition Law Blog (2021). China's antitrust penalty for Alibaba: reading between the lines. https://competitionlawblog.kluwercompetitionlaw.com/2021/04/14/chinas-antitrust-penalty-for-alibaba-reading-between-the-lines/

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confidential information shared by both private and publicly listed companies[15] is considered sensitive and competitive in nature. Such information will be exclusively retained for MyCC's internal use to protect the data provided by key stakeholders while allowing the MyCC to conduct a comprehensive and thorough analysis.

- Additionally, given that data availability for certain sub-sectors varies depending on the level of confidentiality of the data retrieved from market participants, the coverage in the sections of (a) market structure and supply chain, and (b) key players and level of competition may vary across sub-sectors.

- This study aimed at understanding the current state of the market, including prevalent practices, issues, and potential concerns related to competition, market structure, and regulation. Given the continuously changing nature of these sub-sectors, it is challenging to comprehensively identify every issue along the supply chain.

- The report's highlighted issues are based on observations and inputs gathered through primary and secondary research. Since much of the information required to substantiate these findings is sensitive – often requiring access and disclosure of internal company documents and transparency from the companies involved – a more thorough examination (if required) is thus necessary in order to validate any claims of anti-competitive behaviour.

Despite these limitations and the acknowledgment of the dynamic nature of the market, the MyCC remains resolutely committed to further developing the study through continuous, rigorous, and thorough analysis. This aligns with the initial objective of conducting a comprehensive study and assures stakeholders of the MyCC's unwavering competence in market oversight.

[15] Unless the information is disclosed in the companies' public documents (e.g., annual reports).

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2. Overview of digital economy

Key findings:

- The digital economy encompasses a wide range of activities primarily driven by digitised technologies. The sector is dynamic and rapidly evolving, continuously adapting to technological advancements and changing societal needs.

- As of 2022, the sector was valued at USD 11.1 trillion globally, with an expected annual growth rate of 10.4% by 2028.

- Key trends shaping the sector's development include its growing role in geopolitics, data emerging as a critical factor, and increasing digitalisation of governments, businesses, and consumers.

- The sector has given rise to companies that dominate global industries – e.g., Google, Apple, Meta. Many of the largest global companies are also operating across multiple industries.

- Key players' involvement in anti-competitive practices are becoming more prominent - largely due to their strong dominance and traditional regulatory frameworks struggling to keep up with rapid sector changes.

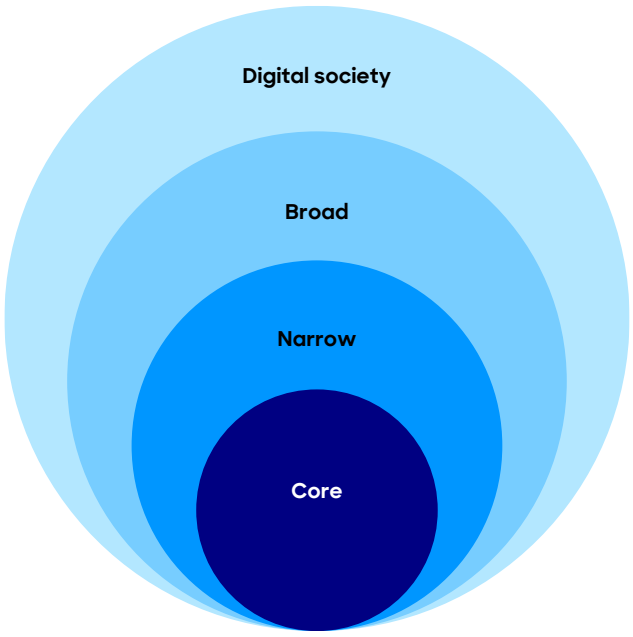
- As Malaysia continues to develop its digital economy, understanding the sector and the potential anti-competition challenges posed by key players will be crucial.

2.1 Digital economy in a global context

Digital economy refers to a broad spectrum of activities that are primarily driven by the use of digitised technologies. A crucial sector within an economy, the digital economy plays a key role in transforming industries, enhancing productivity, and driving economic growth. By adopting digital

technologies such as artificial intelligence (AI), cloud computing, and big data analytics, businesses can streamline operations, lower costs, and develop new products and services. The digital economy also facilitates global trade and expands access to services, especially in emerging markets. Additionally, it supports job creation, skill development, and enhances global competitiveness.

Figure 2: Layers of the digital economy



Source: OECD publication, 2021

According to the Supporting the Digital Transformation of Higher Education in Hungary, published by the Organisation for Economic Co-operation and Development (OECD), the digital economy is divided into four key layers[16]:

(a) **Core measurement**: Includes all economic activities linked to the production of Information and Communication Technology (ICT) goods and digital services.

[16] Organisation for Economic Co-operation and Development (2021). Supporting the digital transformation of higher education in Hungary. https://www.oecd.org/en/publications/supporting-the-digital-transformation-of-higher-education-in-hungary_d30ab43f-en.html

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(b) **Narrow measurement**: Expands on the core measurement by encompassing businesses that rely entirely on digital technologies and data to operate. These organisations do not directly produce ICT goods or services, but their operations are heavily dependent on them.

(c) **Broad measurement**: Further extends to include all sectors where digital technologies and data significantly enhance the production processes, even if they do not rely on them exclusively.

(d) **Digital Society**: Refers to the non-commercial use of digital activities by individuals in a society, involving activities like social media interaction, personal data use, and digital communication that are not conducted for profit but influence social dynamics and everyday life.

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Figure 3: Key digital economy industries from 1990s to present

- **Fintech**: Internet-based financial services, such as online lending platforms and digital payment solutions
- **E-commerce** : Dot-com boom in late 1990s and early 2000s fueled the growth of e-commerce as more businesses and consumers embraced online shopping
- **Digital marketing**: Emergence of search engine optimization (SEO), pay-per-click advertising and email marketing
- **Online travel agencies:** Growth in view of increased internet accessibility, as well as globalisation and travel trends

- **Software as a Service (SaaS)**: Emergence of companies like Salesforce & Google offering software applications via the internet on subscription basis
- **Artificial Intelligence (AI) and Machine Learning (ML)**: Significant advancements in ML algorithms during this period led to the proliferation of AI-driven products
- **Data privacy and protection**: Growth in view of the increasing prevalence of cyber threats and data breaches
- **Online streaming and entertainment**: Rise of platforms such as YouTube, Spotify, which changed the way people consume video content

- **Sharing economy**: Companies like Grab, Airbnb, gained prominence in shaping the sharing economy landscape and disrupting traditional industries
- **Healthtech**: Advances in digital health technologies, including telemedicine platforms, wearable devices, etc. - accelerated particularly in response to the COVID-19 pandemic
- **Blockchain and cryptocurrency**: Significant developments in blockchain applications following the mainstream adoption of cryptocurrencies in the late 2010s & early 2020s

Source: Secondary research and MyCC's analysis

The digital economy is an ever-evolving sector, constantly adapting and expanding in response to technological advances and shifting societal needs. The rise of the digital economy began in the early 1980s with the creation of the internet, which initially offered basic online services like email and internet access. Early platforms such as Compuserve[17] and Prodigy[18] provided basic digital communication but were not widely accessible. A significant turning point came in the early 1990s with the advent of the World Wide Web[19], which made it easier for individuals to share content online, sparking a surge in website creation and digital resources.

As internet usage increased, the "dot-com boom" ushered in a new era for key industries. This period saw the rise of e-commerce, with major players like Amazon and Alibaba emerging, alongside the growth of financial technology (fintech) as online payment solutions (e.g., Paypal in 1998) became essential. Digital marketing (e.g., Yahoo! in 1994, Google in 1998) also gained traction as businesses sought to reach consumers online and online travel agencies (e.g., Priceline in 1997, Expedia ZZin 1996) transformed the travel industry by making bookings more accessible[20,21].

This period culminated in the dot-com (stock market) bubble in the year 2000, which resulted in the failure of many companies, including but not limited to Pets.com (pet supply), Webvan.com (grocery delivery) and eToys (toys)[22]. Despite this, the boom laid the groundwork for future advancements in the digital economy and at the same time, also led to the increase in regulation and scrutiny of the industry.

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[17] Wired (2009). Sept. 24, 1979: First online service for consumers debuts. https://www.wired.com/2009/09/0924compuserve-launches/

[18] The Atlantic (2014). Where online services go when they die. https://www.theatlantic.com/technology/archive/2014/07/where-online-services-go-when-they-die/374099/

[19] CERN (2025). A short history of the web. https://home.cern/science/computing/birth-web/short-history-web

[20] Medium (2023). A journey through time: looking back at the dot com bubble and early internet companies. https://medium.com/@sikanderfraz72/a-journey-through-time-looking-back-at-the-dot-com-bubble-and-early-internet-companies-c937d5d1cba2

[21] Skift (2025). The definitive oral history of online travel. https://skift.com/history-of-online-travel/

[22] CNN Money (2010). 10 big dot.com flops. https://money.cnn.com/galleries/2010/technology/1003/gallery.dot_com_busts/2.html

The mid-2000s to late 2010s marked another transformative phase in the digital economy. Software as a Service (SaaS) became increasingly popular, enabling businesses to access applications via cloud. This era also witnessed the rise of AI and machine learning (ML), which allowed companies to harness big data for personalised customer experiences. With this, the importance of data privacy and protection grew, leading to regulatory developments. Additionally, online streaming and entertainment services gained prominence, changing how consumers accessed media.

From the late 2010s to the present, the sharing economy has taken centre stage, driven by the proliferation of smartphones and mobile applications. Platforms like Airbnb and Grab connected users directly, enabling individuals to monetise underutilised assets such as spare rooms and vehicles. Healthcare technology also emerged as a key industry, focusing on telehealth and digital health solutions. Meanwhile, blockchain technology and cryptocurrencies gained traction, introducing new paradigms in finance and data security.

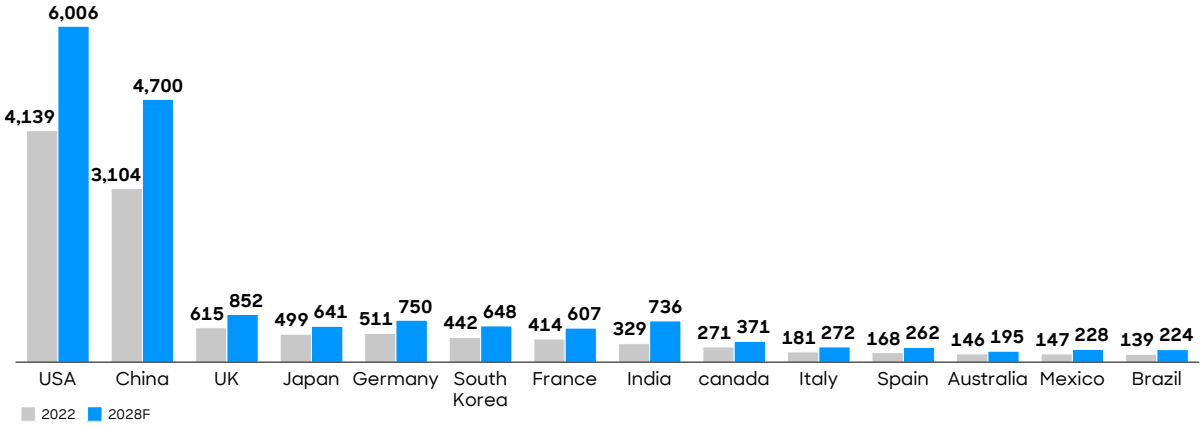
Today, the digital economy is characterised by ongoing digital transformation across various sectors, enhancing efficiency and customer engagement. The COVID-19 pandemic further accelerated the adoption of remote work and digital collaboration tools, reshaping workplace dynamics. However, as the digital economy continues to grow, concerns around two aspects, data privacy and data protection, are also becoming more prominent. This is especially the case, considering growing cybersecurity, data breach, and monopolistic practice issues in the digital economy (see Table *2* for more details), all of which leads to increased regulatory scrutiny, signalling a new chapter in the evolution of the digital landscape.

2.2 Large and growing digital economy

As of 2022, the global digital economy was valued at USD 11.1 trillion, with an anticipated annual growth rate of 10.4%. By 2028, this figure is projected to reach approximately USD 16.5 trillion[23].

Technology spending plays a central role in the digital economies of many countries. South Korea, for example, stands out for its significant spending on research and development (R&D), with a strong focus on areas such as AI, semiconductors, Fifth Generation (5G) and Sixth Generation (6G) networks, quantum computing, the metaverse, and cybersecurity.

Figure 4: Selected key economies projected digital economy growth, 2022 & 2028F [USD billion]



Source: Forrester Research, 2022 - 2028

In contrast, countries such as India and Mexico's digital economies are primarily driven by exports of ICT products and services. India, for example, contributed USD 257 billion to the global digital economy in 2023[24], representing 4.4% of the world's total exports of digitally delivered services. Meanwhile, Mexico, is the largest exporter of technology-related products

[23] Forrester (2024). The global digital economy will reach $16.5 trillion and capture 17% of global GDP by 2028. https://www.forrester.com/blogs/the-global-digital-economy-will-reach-16-5-trillion-and-capture-17-of-global-gdp-by-2028/

[24] International Trade Administration (2023). Mexico - country commercial guide. https://www.trade.gov/country-commercial-guides/mexico-advanced-manufacturing

and services in Latin America, with key exports including satellites, computers, and automation-focused robotics[25].

2.3 Leaders in the digital economy

The United States (U.S.) and China lead the expansion of the global digital economy, together accounting for roughly two-thirds of the sector.

The U.S. digital economy's strength lies primarily in digitally delivered services, which comprised about a quarter of its total exports in 2022. Telecommunications, computer services and software licensing are key contributors. These services not only boost the country's economic output but also solidify its position as a technological innovator.
Overall tech dominance also resides in the U.S., where it is home to the world's largest tech companies by market capitalisation, such as Microsoft, Apple, NVIDIA, Alphabet, etc.

China, as the second-largest digital economy, has made significant strides, especially in 5G infrastructure. Between 2022 to September 2024, it built a network of four million 5G base stations, up from one million in 2022[26]. This rapid expansion has led to a substantial increase in 5G mobile subscribers, reaching 966 million by September 2024. Additionally, China dominates digital payments, with apps like WeChat Pay and Alipay integrated into daily life and business.

Furthermore, the country's intelligent manufacturing equipment industry is valued at over USD 450 billion and continues to innovate to maintain its position as the world's top manufacturer[27]. It has more than 420 national-

[25] World Trade Organization (2024). Global trade outlook and statistics. https://www.wto.org/english/res_e/publications_e/trade_outlook24_e.htm
[26] State Council of the People's Republic of China (2024). China home to 4 million 5G base stations.
https://english.www.gov.cn/archive/statistics/202409/25/content_WS66f40117c6d0868f4e8eb416.html
[27] World Bank Group (2025). Manufacturing, value added (current US$). https://data.worldbank.org/indicator/NV.IND.MANF.CD

level demonstration factories, with AI and digital twins being applied in more than 90% of the factories[28].

According to the China Academy of Information and Communications Technology, to-date, the digital economy in the country is estimated to represent 41.5% of the country's Gross Domestic Product (GDP)[29].

2.4 Trends impacting the development of digital economy

2.4.1 Digital economy as a flashpoint for geopolitics

Beyond the obvious economic impact, the digital economy is becoming a crucial geopolitical factor. The competition between the U.S. and China in this sector, for example, has seen significant implications for global power dynamics and international relations.

At the heart of the competition between the two countries lies the bifurcation of the global digital ecosystem and the push for technology dominance. Each nation has developed its own technological infrastructure and set of dominant players. On the U.S. side, companies such as Google, Meta, and Apple lead the way in software, services, and platforms. Similarly, China's ecosystem is dominated by tech giants like Alibaba, Tencent, Baidu, and Huawei. This division has led to a growing fragmentation of global technology markets, with competing standards in areas such as 5G networks, cloud computing, and digital applications.

For example, in the telecommunications sector, 5G infrastructure in the U.S. is largely built by companies like Verizon and AT&T and partners such as Nokia and Ericsson, while Huawei and ZTE control the Chinese market. Similarly, popular global platforms such as TikTok, which originated in China, face potential bans or heavy scrutiny in multiple countries due to national security concerns. This rivalry has contributed to the emergence of two

[28] The State Council of the People's Republic of China (2024). Digital economy expands in scale, demonstrating enormous potential. https://english.www.gov.cn/archive/statistics/202405/26/content_WS6653223bc6d0868f4e8e77a9.html

[29] The State Council of The People's Republic of China (2023). Digital sector roadmap to aid recovery. https://english.www.gov.cn/news/202312/09/content_WS6573d73dc6d0868f4e8e204a.html

distinct digital spheres, with varying levels of access to platforms, apps, and services depending on geographical region.

Data security and privacy concerns have further exacerbated these tensions. The U.S. government has cited potential threats posed by Chinese tech firms (e.g., TikTok, China Mobile) to national security[30, 31]. This has led to increased scrutiny and restrictions on Chinese applications and platforms.

Such rivalry has significant implications for Malaysia, as both countries are major investors in the nation. This is particularly the case in ICT manufacturing, where Malaysia has emerged as one of the key destinations for many global companies' (e.g., Micron, Intel) China Plus One (C+1) strategy, where they seek to diversify its supply chains in one or more additional countries. Additionally, many international tech companies have or planned to set up data centres in the country, including but not limited to NVIDIA, AirTrunk, GDS Holdings, Princeton Digital Group (PDG)[32] and ByteDance[33].

However, Malaysia's position in a digital economy dominated by global technological superpowers – the U.S. and China – requires a careful balancing act. Its close economic ties with China, especially under initiatives like the Belt and Road Initiative (BRI), have opened the door for collaboration on various digital-related projects, including the "Digital Twin Cities[34]" (2024: collaboration between China's Lingang New Area and

[30] CNN Business (2023). Lawmakers say Tiktok is a national threat, but evidence remains unclear. https://www.cnn.com/2023/03/21/tech/tiktok-national-security-concerns/index.html

[31] Reuters (2024). Exclusive: US probing China telecom, China mobile over internet, cloud risks. https://www.reuters.com/business/media-telecom/us-probing-china-telecom-china-mobile-over-internet-cloud-risks-2024-06-25/

[32] Channel News Asia (2024). Johor's data centres getting a boost from the Singapore factor; water, power remain bottlenecks. https://www.channelnewsasia.com/asia/malaysia-johor-data-centres-nvidia-ytl-kulai-sedenak-sez-us-china-trade-war-4310496

[33] Data Centre Dynamics (2024). TikTok owner ByteDance to expand Malaysia data center footprint in $2.1bn AI deal. https://www.datacenterdynamics.com/en/news/tiktok-owner-bytedance-to-expand-malaysia-data-center-footprint-in-21bn-ai-deal/

[34] China (Shanghai) Pilot Free Trade Zone, Lin-Gang Special Area (2024). Lin-gang special area, Malaysia sign Mou to build 'digital twin cities'.

Malaysia's Cyberjaya in areas such as data economy, cross-border data flows), Digital Free Trade Zone[35] (2017: establishment of a logistics center for global marketplaces) and City Brain initiative[36] (2018: Kuala Lumpur became the first city outside of China to adopt AliCloud's system, allowing real-time data collection and integration of traffic and emergency data from traffic cameras and other sources).

Separately, Malaysia's dependence on the U.S. for technological imports and investment in sectors like cloud computing (commitment by Amazon to invest MYR 29.2 billion to establish Amazon WebServices Asia Pacific[37]), software and enterprise and cybersecurity solutions, underscores the country's delicate positioning in the wider tech geopolitical competition.

2.4.2 Emphasis on data

Data is increasingly recognised as a critical driver of economic growth and innovation, particularly within the digital economy. The ability to collect, analyse, and leverage vast amounts of data enables organisations to make more informed decisions, improve efficiency, and develop new products and services that meet the evolving needs of consumers. In advanced areas like AI and ML, data is being harnessed across to learn, adapt, and make predictive analyses.

In view of this, many countries are implementing policies to leverage data for economic development and influence in the global digital economy. A prime example is China, where in 2020, it formally recognised data as the fifth factor of production, alongside land, labour, capital, and technology[38].

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https://www.lingang.gov.cn/html/website/lg/English/News1630758253379031042/Updates/c1810961039432421377.html

[35] The Straits Times (2017). Malaysia and Alibaba launch regional logistics hub. https://www.straitstimes.com/asia/se-asia/alibaba-launches-electronic-trading-hub-in-malaysia

[36] Alibaba Cloud (2018). Alibaba Cloud launches Malaysia City Brain to enhance city management. https://www.alibabacloud.com/en/press-room/alibaba-cloud-launches-malaysia-city-brain-to-enhance-city-management?_p_lc=1

[37] Amazon (2024). AWS launches Malaysia's first cloud infrastructure region. https://www.aboutamazon.sg/news/aws/aws-launches-malaysias-first-cloud-infrastructure-region

[38] Standford University, DigiChina (2022). China wants to put data to work as an economic resource - but how? https://digichina.stanford.edu/work/china-wants-to-put-data-to-work-as-an-economic-resource-but-how/

This showcases a shift in how China views data – not just as a resource, but as an essential component of its economic future. United Arab Emirates (UAE) "Dubai Data" is an example of an initiative by the local government aimed at creating a seamless sharing of data citywide to enable the powering of smart cities, resolving business problems and improving residents' quality of life[39].

With data becoming a critical economic resource, many countries are focusing on data sovereignty which is the concept of regulating data within national borders. Governments are increasingly concerned with controlling their citizens' data and preventing foreign entities from accessing it. For instance, the European Union (EU) has established a comprehensive data protection framework through the General Data Protection Regulation (GDPR), enacted in 2018. It sets strict guidelines on how personal data, especially from EU citizens, can be collected, processed, and stored. It requires companies to obtain consent before collecting data, mandates transparency in data usage, and gives individuals the right to access or delete their data. While focused on privacy, the GDPR reflects the EU's approach to controlling data generated within its borders[40]. In China, the Cybersecurity Law (2017) requires that data generated in China be stored domestically and restricts the transfer of sensitive data abroad[41]. This regulation ensures that China can manage the data produced within its borders and prevent foreign access to certain types of data.

2.4.3 Digitalisation in government, business and consumers

The growing digitalisation of governments, businesses, and consumers is a key driver of the global digital economy, contributing to increased efficiency, new economic opportunities, and broader market access.

Many governments worldwide are increasingly adopting digital technologies to improve public services, enhance administrative efficiency, and drive economic development. In 2023, Gartner, a

[39] Digital Dubai (2025). Initiatives. https://www.digitaldubai.ae
[40] European Union (2016). Regulation (EU) 2016/679 of the European parliament and of the council. https://eur-lex.europa.eu/eli/reg/2016/679/oj
[41] In Country (2024). China's digital data sovereignty laws and regulations. https://incountry.com/blog/chinas-digital-data-sovereignty-laws-and-regulations/

technology research company, estimated worldwide government Information Technology (IT) spending would reach USD 589.8 billion, with a growth of 7.6% from 2022. Majority of the spending lies in IT services (35.5%) and software (31.2%)[42], with the aim to ensure more effective public services can be delivered.

Digitalisation has become a standard practice for many businesses. According to the International Data Corporation (IDC), global spending on digital transformation across business processes, products, and organisations is projected to reach USD 2.8 trillion by 2025, more than double the amount spent in 2020. In addition to investments in operational digital transformation, customer experience in consumer-oriented sectors such as securities and investment services, banking, and retail are attracting significant investments[43].

Consumers are also driving the growth of the digital economy. Greater access to the internet and mobile devices has fuelled a rise in online shopping, digital banking, and on-demand services. According to the World Bank, 67.4% of the global population were internet users in 2023, nearly double the 35.4% recorded in 2013[44]. This widespread internet adoption has created a more connected consumer base, increasing demand for digital services across various industries.

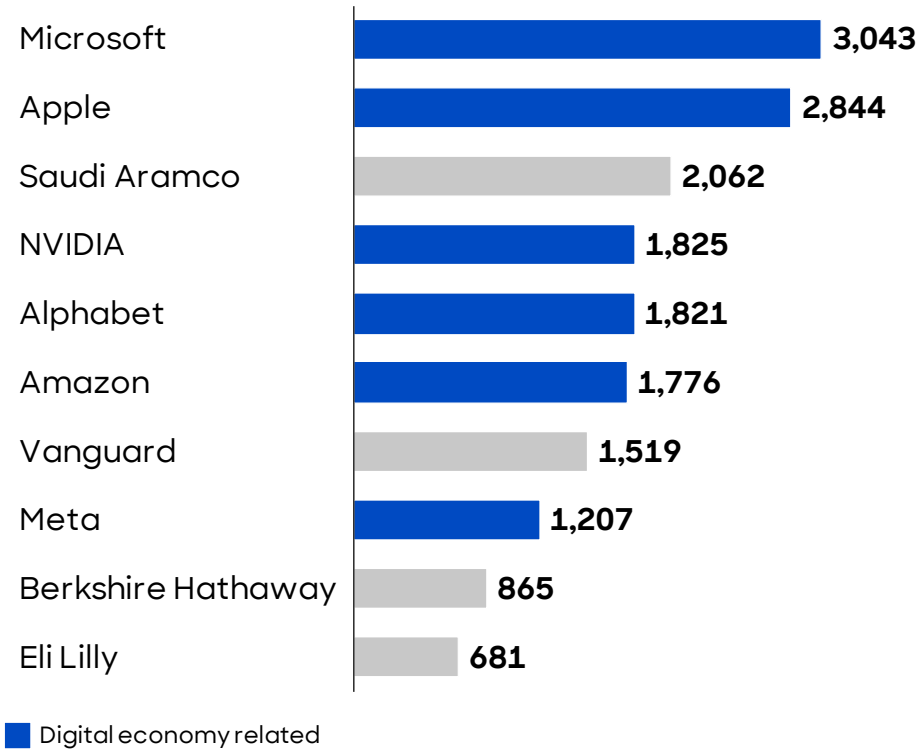
[42] Gartner (2023). Gartner forecasts worldwide government IT spending to grow 8% in 2023. https://www.gartner.com/en/newsroom/press-releases/2023-05-24-gartner-forecasts-worldwide-government-it-spending-to-grow-8-percent-in-2023

[43] Business Wire (2021). New IDC spending guide shows continued growth for digital transformation in 2020 as organizations focus on strategic priorities. https://www.businesswire.com/news/home/20211109006138/en/New-IDC-Spending-Guide-Shows-Continued-Growth-for-Digital-Transformation-in-2020-as-Organizations-Focus-on-Strategic-Priorities

[44] World Bank Group (2025). World development indicators. https://datatopics.worldbank.org/world-development-indicators/

2.5 Digital economy and competition

Figure 5: Companies with the largest market capitalisation in the world, as of February 2024 [USD billion]

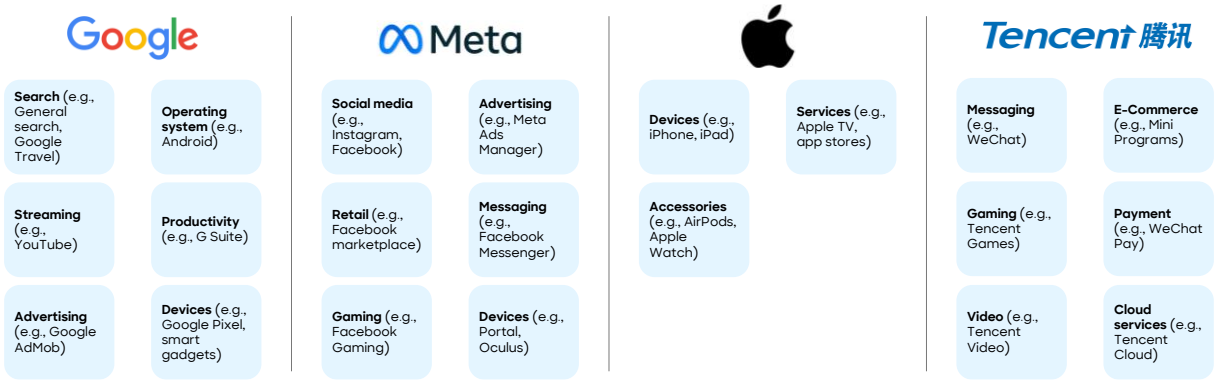


Source: Capital IQ and MyCC's analysis

The digital economy has given rise to numerous companies that now dominate selected industries across the world. Companies like Amazon, Apple, Microsoft, Alphabet (Google), Meta and Alibaba, to name a few, have emerged as leaders in the sector, with their influence extending beyond traditional market boundaries. As of early 2024, many players in digital economy-related industries dominate as the world's largest companies[45].

[45] Capital IQ

Figure 6: Selected digital economy players' involvement in different digital economy sub-sectors



Source: Secondary research and MyCC's analysis

Many of the major players in the digital economy have expanded their operations across multiple sub-sectors by leveraging their core technological strengths and vast data capabilities. For instance, Alphabet Inc. (Google), originally a search engine company, has leveraged its ability to process and analyse mass amounts of data to diversify into areas such as Google Ads, allowing them to deliver targeted ads based on user interests and search history. Additionally, its core strength helps build a foundation for branching into online travel. Through Google Hotel Ads, it utilised its search capabilities to aggregate data from travel providers and display it in a user-friendly format. This effectively turned Google into a metasearch engine for the travel industry, allowing users to compare prices, explore options, and make bookings[46].

For Meta, it began as a social media platform with Facebook in 2004, with a core strength in connecting people and sharing content. The platform's rise was driven by its ability to capture vast amounts of data on user behaviour, interests, and interactions. Utilising these data provided Meta with the insights to offer targeted advertising, turning Facebook into a digital advertising player. Its acquisition of Instagram in 2012 and WhatsApp in 2014 further expanded its reach and user base, allowing Meta to strengthen its social media and messaging capabilities[47].

[46] Google (2025). From the garage to the Googleplex. https://about.google/our-story/
[47] Meta (2025). Company information. https://about.meta.com/company-info/

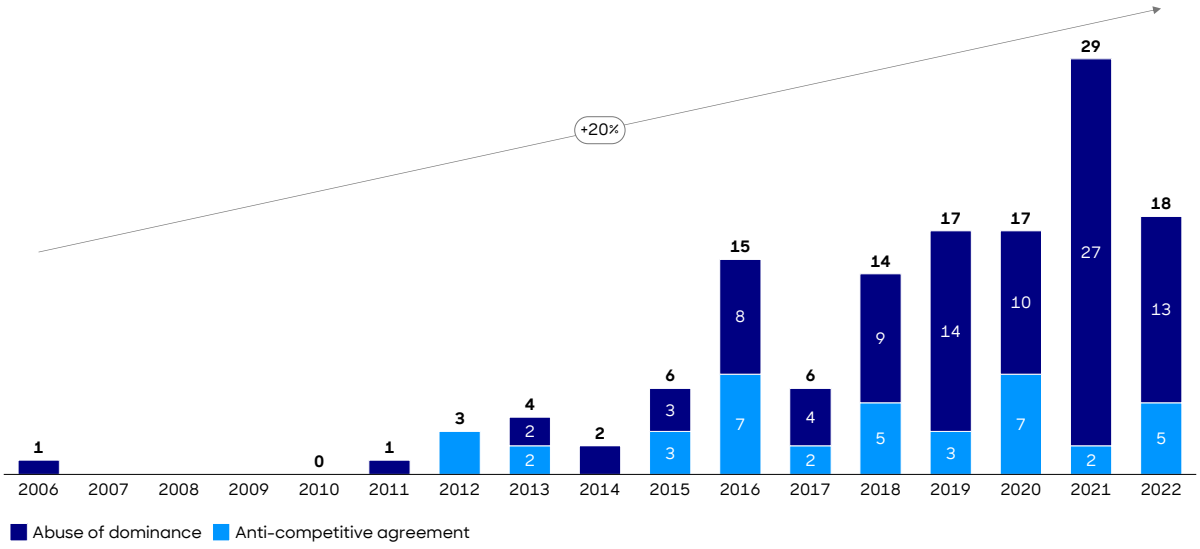
Apple's emphasis on seamless integration of hardware and software as its core has been central to its expansion into new areas. For instance, iOS, the mobile OS, powers Apple's iPhones and iPads. It also capitalised on its OS integration by creating the App Store in 2008 by providing a controlled marketplace for apps, allowing app developers to reach its users while also generating revenue from app sales and in-app purchases[48].

Tencent started in 1998 as a simple messaging platform called QQ in China. However, it quickly evolved into a vast digital ecosystem spanning multiple sectors, including social media, gaming, fintech, cloud computing, and AI. In particular, drawing on its messaging expertise, Tencent developed WeChat, an all-in-one app that enabled it to expand into diverse areas such as fintech (WeChat Wallet and WeChat Pay), e-commerce (Mini Programs), and entertainment (Tencent Games), among others[49].

As the digital economy continues to expand, concerns regarding anti-competitive practices, data privacy, and data protection are becoming increasingly prominent. The rapid growth of major tech players and digital platforms has raised alarms about the impact of their market dominance and business practices on competition and consumer rights.

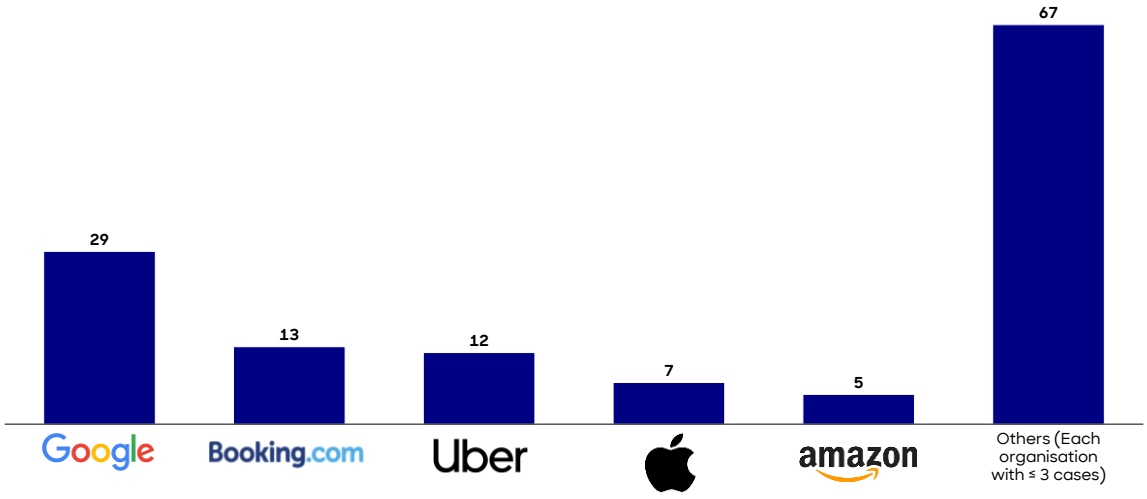
[48] PBS News (2023). A timeline of Apple's most influential product announcements. https://www.pbs.org/newshour/science/a-timeline-of-apples-most-influential-product-announcements
[49] Tencent (2025). About us. https://www.tencent.com/en-us/about.html

Figure 7: Anti-competitive cases by types of infringement in the digital economy sector worldwide, 2006-2022 [# of cases][50]



Source: Global Digital Antitrust Database by World Bank, 2006 - 2022

Figure 8: Anti-competitive cases by companies in the digital economy sector worldwide, 2006-2022 [# of cases][51]



Source: Global Digital Antitrust Database by World Bank, 2006 - 2022

[50] World Bank Group (2025). The Global Markets Competition and Technology Digital Antitrust Database (2006-2022). https://dataviz.worldbank.org/views/Global-Digital-Antitrust-Database/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y

[51] World Bank Group (2025). The Global Markets Competition and Technology Digital Antitrust Database (2006-2022). https://dataviz.worldbank.org/views/Global-Digital-Antitrust-Database/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y

Between 2006 and 2022, the number of anti-competitive cases experienced a compound annual growth rate (CAGR) of 20%. Notably, digital giants such as Google, Booking, Uber, Apple and Amazon account for a significant share of anti-competitive cases during this period.[52]. This growing trend indicates a key concern: as the digital economy continues to evolve, the frequency of anti-competitive cases is likely to increase in the future.

With the expansion of digital platforms across various industries, it is expected that these practices could further disrupt competition, potentially harming consumers and smaller businesses.

Several high-profile cases underscored the rise of anti-competitive conduct within the digital economy – see Table 2:

[52] World Bank Group (2025). The Global Markets Competition and Technology Digital Antitrust Database (2006-2022). https://dataviz.worldbank.org/views/Global-Digital-Antitrust-Database/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y

Table 2: Selected[53] global anti-competitive cases related to the digital economy:

Year	Parties	Type of conduct	Case details
2012	U.S. Department of Justice (DOJ) and Apple with various publishers	Anti-competitive agreement (vertical restraints)	The U.S. DOJ charged Apple and five major book publishers—Hachette, HarperCollins, Simon & Schuster, Macmillan, and Penguin Group—over a conspiracy to fix e-book prices. Before Apple entered the e-book market, publishers used wholesale contracts, letting retailers like Amazon set steeply discounted prices, which publishers feared undermined their business model. In response, Apple and the publishers allegedly shifted to agency agreements, giving publishers control over retail pricing and limiting retailers' ability to discounts, thereby raising e-book prices across the market. Apple also negotiated a deal taking a 30% commission on e-book sales and included a "Most Favoured Nation" (MFN) clause to ensure that no other retailer could offer lower prices than Apple. In 2016, the U.S. Supreme Court declined to review an appeals court decision affirming that Apple conspired with five major publishers to fix e-book prices. This decision made final the lower court rulings that Apple orchestrated a price-fixing conspiracy, which led to high e-book prices for consumers. As a result, Apple agreed to pay USD 400 million to e-book purchasers, bringing the total recovery for

[53] Selected based on the size of the fine

Year	Parties	Type of conduct	Case details
			consumers to USD 565 million when combined with settlements from the publishers[54].
2013	EC and Microsoft	Abuse of dominance (illegal tying)	The EC imposed a EUR 561 million fine on Microsoft for failing to comply with its commitment to provide Window users with a browser choice screen. The EC had initially raised concerns over Microsoft's practice of tying Internet Explorer to the Windows operating system, which was installed on the majority of PCs worldwide, effectively giving Internet Explorer an unfair distribution advantage. Despite undertaking in 2009 to display a screen offering alternatives such as Google Chrome and Mozilla Firefox until 2014, Microsoft omitted it between May 2011 and July 2012, allegedly affecting up to 15 million EU users. The EC viewed this oversight as a serious infringement of competition law because it perpetuated Microsoft's dominant position in the browser market, depriving consumers of a straightforward method to select alternative browsers and thereby limiting genuine market competition[55].

[54] Archives, US Department of Justice (2016). Supreme Court rejects Apple's request to review E-books antitrust conspiracy findings. https://www.justice.gov/archives/opa/pr/supreme-court-rejects-apples-request-review-e-books-antitrust-conspiracy-findings

[55] The Guardian (2013). Microsoft fined €561m for browser choice' error. https://www.theguardian.com/technology/2013/mar/06/microsoft-fined-browser-error#:~:text=Microsoft%20has%20been%20fined%20%E2%82%AC,it%20had%20made%20in%202009.

Year	Parties	Type of conduct	Case details
2018	EC and Google (Android)	Abuse of dominance (illegal tying)	The EC fined Google EUR 4.34 billion for abusing its dominant position in the mobile operating system market. Google required Android device manufacturers to pre-install its search engine and Chrome browser to access the Google Play Store. Additionally, Google prevented manufacturers from selling devices with alternative versions of Android and offered financial incentives to pre-install only Google's search service. These practices violated EU antitrust laws, as they limited consumer choice and hindered competition. In 2022, the General Court largely upheld this decision, slightly reducing the fine to EUR 4.12 billion[56].
2020	Autorité de la concurrence / French competition authority (FCA) and Google	Abuse of dominance (self-preferencing, unfair trading conditions)	FCA fined Google up to EUR 500 million for failing to comply with several injunctions issued in April 2020 regarding its obligations under the law on related rights for press publishers and agencies. Specifically, the authority found that Google's negotiations with publishers and agencies were not conducted in good faith, as Google insisted on including a new service, Publisher Curated News, in the negotiations, effectively preventing discussions on the remuneration for existing content usage.

[56] Court of Justice of The European Union (2022). The general court largely confirms the Commission's decision that Google imposed unlawful restrictions on manufacturers of Andriod mobile devices and mobile network operators in order to consolidate the dominant position of its search engine. https://curia.europa.eu/jcms/upload/docs/application/pdf/2022-09/cp220147en.pdf

Year	Parties	Type of conduct	Case details
			Additionally, Google limited the scope of the negotiations by excluding certain content, such as press agency photos, and did not provide the information needed for fair negotiations. By restricting meaningful discussion of compensation and narrowing the scope of talks, Google's approach ultimately undermined competition and reinforced its dominant market position[57].
2021	Autorità Garante della Concorrenza e del Mercato (AGCM) or Italian Competition Authority (ICA) and Amazon	Abuse of dominance (self-preferencing)	ICA imposed a fine of EUR 1.13 billion on Amazon for abusing its dominant market position for intermediation services on marketplaces. The ICA concluded that Amazon tied key benefits—such as the Prime label and access to major shopping events—exclusively to its Fulfillment by Amazon (FBA), thereby pressuring third-party sellers to adopt its logistics services. This practice restricted competition by disadvantaging competing logistics operators, who could not offer comparable visibility or sales benefits, and discouraged sellers from listing on other marketplaces[58].

[57] French Competition Authority (2021). Remuneration of related rights for press publishers and agencies: the Autorité fines Google up to 500 million euros for non-compliance with several injunctions. https://www.autoritedelaconcurrence.fr/en/communiques-de-presse/remuneration-related-rights-press-publishers-and-agencies-autorite-fines

[58] Italian Competition Authority (2021). Amazon, press release, case no. A528, 9 December 2021. https://en.agcm.it/en/mediaépress-releases/2021/12/A528

As highlighted in the above cases, anti-competitive practices typically revolve around tying and exclusivity (e.g., EC and Google, ICA and Amazon, EC and Microsoft), abuse of dominance (EC and Google, DOJ and Apple with various publishers), and lack of transparency (FCA and Google) - all of which hinder competition by limiting consumer choice, raising barriers to entry, and entrenching the market power of dominant platform. Despite the harm caused by these practices, regulatory authorities face various challenges in effectively enforcing competition laws. Primary obstacles include:

(a) **Global operations of large technology companies:** The EC's case against Google for Android restrictions underscores the challenges of regulating multinational companies. Google operates globally, and its practices, such as requiring Android device manufacturers to pre-install its search and browser apps, have had an impact on markets around the world, including regions outside the EU. The global nature of its business means that, even though EU regulators imposed a penalty, ensuring compliance across all markets where Google operates remains a complex task. In particular, jurisdictions with less developed regulatory frameworks may face difficulties addressing these practices in the same way, potentially allowing such practices to continue and affecting global competitive conditions.

(b) **Complexity of digital markets:** Many digital platforms operate with complex, opaque and multi-sided business models, making it difficult for regulators to identify and assess anti-competitive behaviour. For example, in the case of the FCA's commitment decision against Google, the web of interconnected services (Search, News, and Discover) and convoluted data flows adds another layer of complexity in determining market boundaries, outcomes and practices. This presents a challenge for regulators in numerous ways including in determine the precise values for digital products and services or in ensuring that any renumeration or conditions imposed by the platform are fair and do not distort competition.

(c) **Uncertainty of harm and consumer benefit:** Digital platforms typically emphasise that their practices benefit consumers through low prices, innovation, and improved services. However, regulators face challenges in proving that these short-term benefits are outweighed by long-term anti-competitive effects, such as reduced innovation, monopolistic behaviour, or consumer exploitation through data. In the case of the EC's decision against Microsoft, the company defended its actions by pointing to its provision of free internet browsing to consumers. However, the long-term impact appeared to be a lack of competition in the browser market, where Internet Explorer's dominance may have hindered innovation and limited consumer choice, potentially slowing the development of better alternatives.

To address these challenges, various new regulatory frameworks have been introduced. For example, the Digital Markets Act (DMA) in the EU aims to regulate dominant companies in digital markets, ensuring that they operate fairly and do not limit competition through practices such as self-preferencing or restrictive clauses. Similarly, the Digital Services Act (DSA) focuses on increasing transparency and accountability for digital platforms, particularly concerning user content and advertising practices, thus reducing the risk of platforms leveraging their market power in ways that distort competition.

In addition to these regulations, data protection laws such as the GDPR in Europe and similar frameworks in other regions aim to limit how companies can use consumer data to maintain a competitive edge. By granting consumers with greater control over their personal information, these regulations help curb anti-competitive practices driven by data exploitation, such as exclusive access to vast datasets that can further entrench a dominant position.

3. Digital economy in Malaysia

Key findings:

- Malaysia's digital economy is crucial to the country's growth. In 2022, it contributed approximately 23% to the national GDP and employed around 1.2 million people (7.9% of total employment). E-commerce holds the largest share, at about 41%.

- The sector is vulnerable to anti-competitive practices and data privacy violations. Several companies, such as DagangNet, MyEG, Grab, Shopee, Carousell, and iPay88, have faced both allegations and formal investigations in recent years. As the digital economy grows, anti-competitive cases are expected to rise.

- Malaysia has developed several policies and regulations to support the digital economy. However, there are gaps which hinder effective oversight and enforcement, such as the lack of an overarching digital economy act, unclear jurisdictional boundaries between regulatory bodies, and overlapping competition regulations.

- As anti-competitive practices increase, it is essential for Malaysia to understand the technologies and complexities within the sector, especially in the four sub-sectors.

3.1 Definition of digital economy in Malaysia

The digital economy has traditionally been defined as a business and/or government driven sector. According to the OECD, the sector "incorporates all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data[59]".

[59] OECD (2021). Digital supply-use tables: A step toward making digital transformation more visible in economic statistics, page 8. https://goingdigital.oecd.org/data/notes/No8_ToolkitNote_DigitalSUTs.pdf

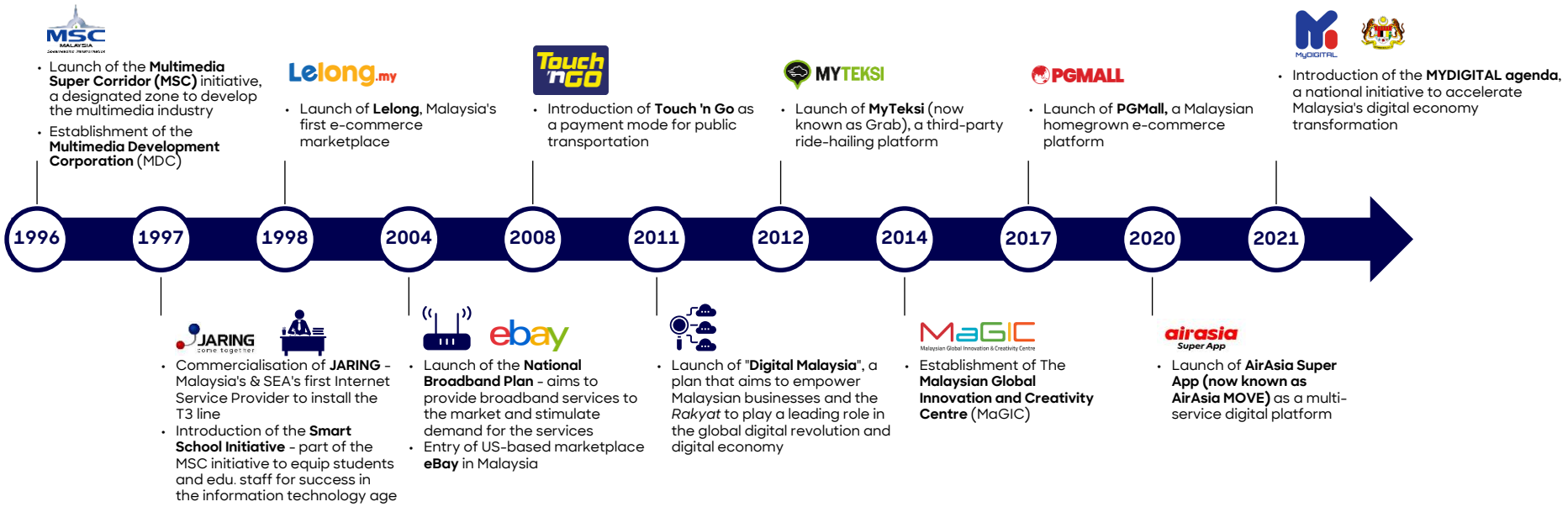
In Malaysia, the definition of the digital economy is broader. According to the Malaysia Digital Economy Blueprint (MDEB), the sector encompasses "economic and social activities that involve the production and use of digital technology by individuals, businesses and the government.[60]" The definition ensures all parties' interests/activities (including social) are covered and should be addressed in any related-future endeavours.

Furthermore, through the inclusion of social activities, it ensures a more comprehensive understanding of how digital technologies impact all aspects of life and can help support more informed decision-making.

[60] Ministry of Economy (2025). Malaysia digital economy blueprint. https://www.ekonomi.gov.my/sites/default/files/2021-02/malaysia-digital-economy-blueprint.pdf

3.2 Development of digital economy in Malaysia

Figure 9: Selected developments in Malaysia's digital economy sector[61]



Source: Secondary research and MyCC's analysis

[61] Secondary research, MyCC analysis

Similar to what happened globally, Malaysia's digital economy journey began in the 1990s, with one of the key initiatives being the launch of the Multimedia Super Corridor (MSC) in 1996 [62] which aimed to foster the development of the multimedia industry and attract investments in technology and digital services. This was subsequently followed by the establishment of Multimedia Development Corporation (MDC) (now known as the Malaysian Digital Economy Corporation - MDEC), which further supported the sector's growth. This era also saw the rise of first internet service providers (ISPs), such as Joint Advanced Research Integrated Networking (JARING), which helped increase internet access for businesses and consumers.

Recognising the significance of technology in education, the government introduced programmes such as the Smart School programme (MSSi). It was one of the seven flagship applications under the MSC, aimed to equip students and educators for the IT age, developing relevant curricula and teaching materials, as well as to foster a knowledge-based economy[63].

In the 2000s to 2010s, Malaysia made significant strides in its digital economy. The National Broadband Plan of 2004 was launched to enhance internet connectivity nationwide and facilitate broader access to online services. E-commerce platforms, including C2C sites like eBay and Lelong, began gaining traction, while digital payment solutions like Touch 'n Go laid the foundation for cashless transactions.

In 2011, the government introduced the Digital Malaysia initiative that set the stage for Malaysia's goal of becoming a developed digital economy by 2020.

During this period, key global players began to emerge and gain traction. YouTube, launched in 2005, became globally available and widely adopted in Malaysia. This was followed by Facebook in 2006, which transitioned

[62] Lexology (2025). Multimedia Super Corridor (MSC) to Malaysia Digital (MD): A revamp of Malaysia's digital economy initiative. https://www.lexology.com/library/detail.aspx?g=5cb38784-44d8-4f4c-ad96-631ce458630b

[63] World Bank Education (2016). Building and sustaining national ICT/education agencies: lessons from Malaysia. https://openknowledge.worldbank.org/server/api/core/bitstreams/7499a1ce-f135-5334-8c0c-d27071365544/content

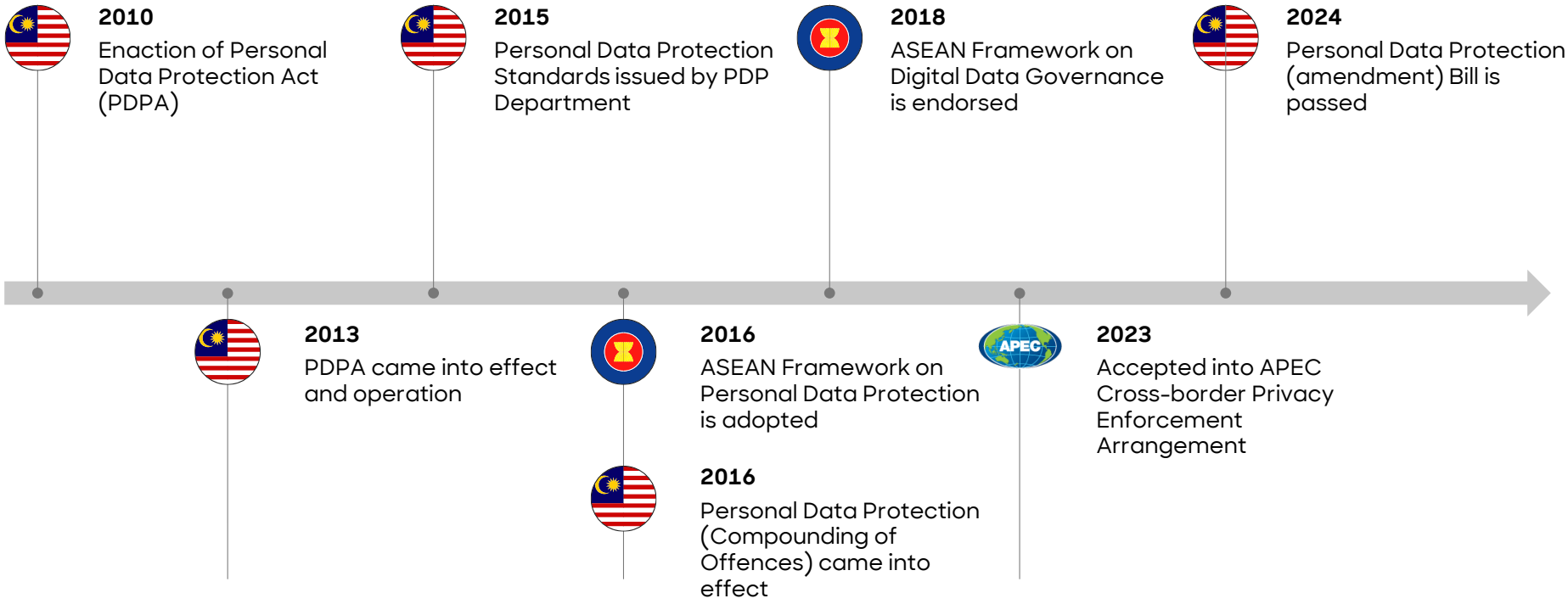
from serving university students to becoming a global social media platform. Twitter (now known as "X") was also launched in the same year. These platforms, along with earlier ones like Friendster and MySpace, shaped digital interaction in Malaysia. The newer platforms gained widespread popularity due to their user-friendly features, global connectivity, and localised content that resonated with Malaysia.

From the 2010s onwards, startups such as MyTeksi (now known as Grab) emerged, shaping the ride-hailing space. During this same period, PGMall was established as a homegrown e-commerce platform, marking Malaysia's entry into the competitive B2C e-commerce marketplace. Most recently, in 2020, local airline AirAsia launched its Super App, shifting its focus from being an airline-centric company to expanding into broader digital services, such as accommodation, fintech, and gaming[64].

At the same time, the government made various efforts to develop the digital economy sector. In 2014, it established the Malaysian Global Innovation & Creativity Centre (MaGIC), focusing on building a vibrant ecosystem for startups and the digital economy. In 2021, the agency then merged with Technology Park Malaysia Corporation (TPM) under MOSTI, introducing a new agency called the Malaysian Research Accelerator for Technology and Innovation (MRANTI). In the same year, MyDIGITAL agenda was introduced and is overseen by MyDIGITAL Corporation, an agency under the Ministry of Digital.

[64] Airasia (2020). Airasia.com is the Asean super app for everyone. https://newsroom.airasia.com/news/2020/10/8/airasiacom-is-the-asean-super-app-for-everyone

Figure 10: Timeline of Malaysia's development and participation in data privacy and protection



Source: Secondary research and MyCC's analysis

As the digital economy expanded, concerns around protecting and ensuring the privacy of personal data grew. In response, Malaysia enacted the Personal Data Protection Act (PDPA) in 2010, which regulates the processing of personal data in commercial transactions. This regulation applies to any transaction of a commercial nature, even if the data controllers are not listed under the Personal Data Protection (Class of Data Users) Order 2013, which categorises specific types of data users such as banks, insurers, and telecommunication providers[65]. While such data controllers are not required to be registered, they must still adhere to the Act's principles. These include ensuring data is processed lawfully and with consent, informing individuals about the purpose of data collection, protecting data from unauthorised access and allowing individuals to access and control their personal data.

To further protect consumer and public rights, the Personal Data Protection Standard 2015 was introduced. This standard provides businesses with detailed guidelines to safeguard personal data from loss, misuse, unauthorised access, and other threats, regardless of whether the data is processed electronically or otherwise. Key provisions include secure data storage, limiting access to authorised personnel, and maintaining audit trails to ensure accountability[66].

By 2016, Malaysia, as part of the Association of Southeast Asian (ASEAN), adopted the ASEAN Framework on Personal Data Protection 2016 to align its data protection laws and practices with regional standards[67]. This framework sets strategic priorities for digital data governance and supports the growth of the ASEAN digital economy. In 2018, Malaysia endorsed the ASEAN Framework on Digital Data Governance[68], which provides principles and initiatives to help ASEAN member states to

[65] Personal Data Protection Commissioner (2025). Personal data protection order (class of data users). https://www.pdp.gov.my/ppdpv1/en/akta/personal-data-protection-order-class-of-data-users/

[66] Personal Data Protection Commissioner (2025). Personal data protection standard 2015. https://www.pdp.gov.my/ppdpv1/en/akta/personal-data-protection-standard-2015/

[67] Asean.org (2025). Framework on digital data governance. https://asean.org/wp-content/uploads/2012/05/10-ASEAN-Framework-on-PDP.pdf

[68] Asean.org (2025). Framework on digital data governance. https://asean.org/wp-content/uploads/2012/05/6B-ASEAN-Framework-on-Digital-Data-Governance_Endorsedv1.pdf

enhance its data management, harmonise data regulations among the states and promote intra-ASEAN flows of data. The framework focuses on the key areas of data life cycle and ecosystem, cross-border data flows, digitalisation and emerging technologies, and legal, regulatory and policy frameworks. Furthermore in 2021, ASEAN (consisting of Malaysia) introduced the ASEAN Data Management Framework[69], a voluntary and non-binding detailed guidance for ASEAN businesses to adopt effective data management practices.

Recognising the opportunity of digitalisation and the challenges brought by the COVID-19 pandemic, Malaysia introduced the MyDIGITAL agenda in 2021 to accelerate its digital economy transformation. As part of this agenda, two key documents were introduced: the Malaysia Digital Economy Blueprint (MDEB) and the National 4IR Policy (N4IRP). These policies aim to position Malaysia as a technologically advanced economy by 2030, complementing the broader goals of the Shared Prosperity Vision 2030 (SPV 2030)[70]. SPV 2030 seeks to ensure inclusive and sustainable economic growth while reducing income inequality among Malaysians.

In 2023, Malaysia joined the Asia-Pacific Economic Cooperation (APEC) Cross-Border Privacy Enforcement, demonstrating its commitment to international cooperation in protecting personal data. This move aligns with global efforts to create stronger data protection standards. Following this, the country took another significant step with passing of the Personal Data Protection (Amendment) Bill in 2024, which introduced enhanced safeguards and more comprehensive provisions for the protection of personal data.

In line with global trends, Malaysia is also set to establish a Digital Trust and Data Safety Commission in the first half of 2025. This commission, spearheaded by the Ministry of Digital, aims to build a safe, secure, and

[69] Digital Policy Alert (2021). Asean: Adopted Asean data management framework. https://digitalpolicyalert.org/event/7533-adopted-asean-data-management-framework

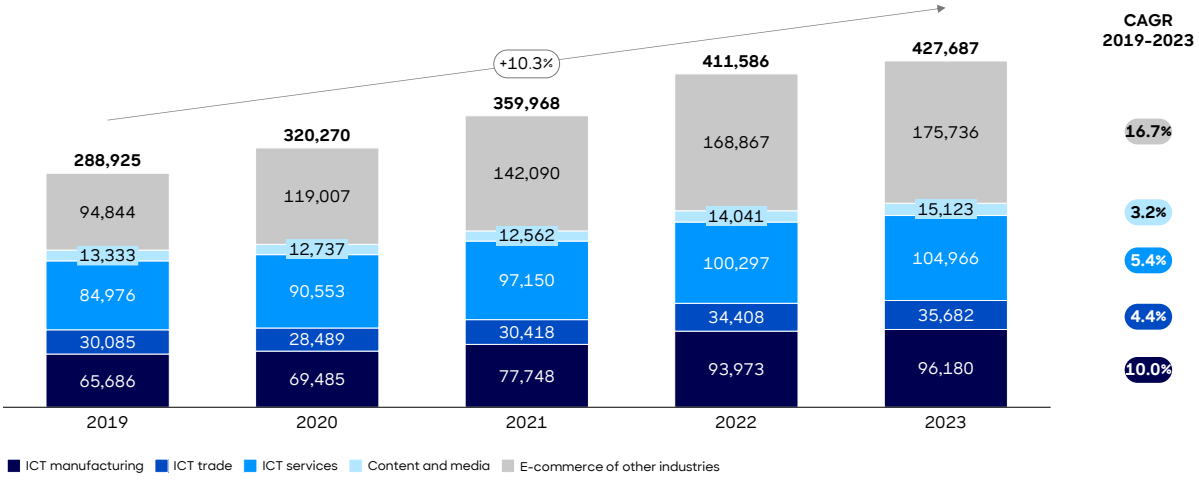
[70] MyDigital (2022). MyDigital progress report 2021: building a dynamic digital economy by 2030. https://www.mydigital.gov.my/mydigital-progress-report-2021-building-a-dynamic-digital-economy-by-2030/

trusted data ecosystem that promotes productive data flows across industries[71].

3.3 Performance in digital economy

3.3.1 Domestic performance

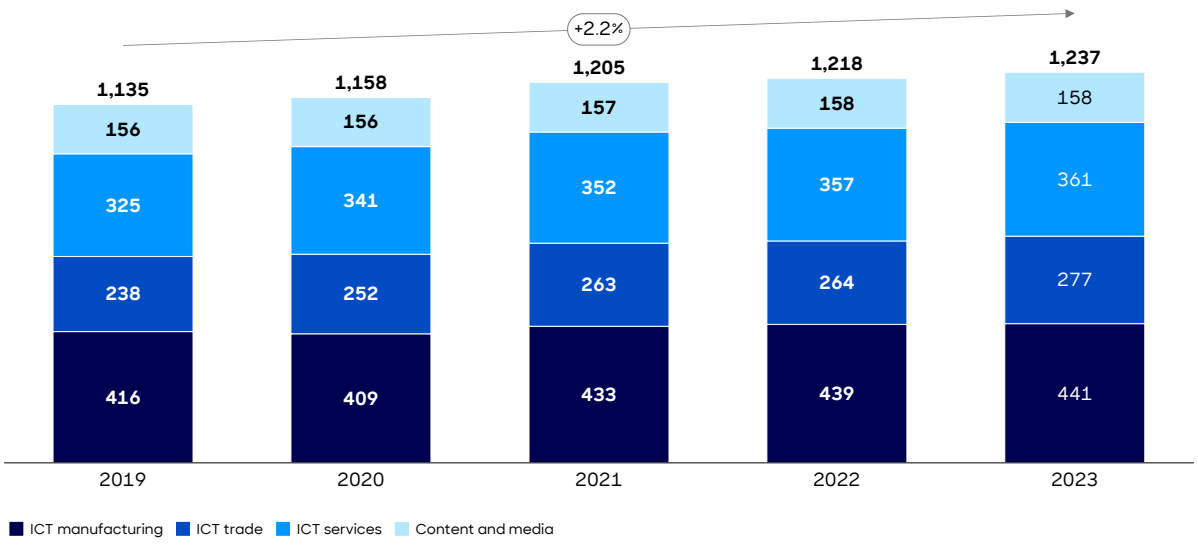
Figure 11: GDP contribution of Malaysia's digital economy, 2019-2023 [MYR million]



Source: Malaysia Digital Economy, 2024 by DOSM

[71] The Star (2024). Gobind: proposal to set up a digital trust and data safety commission in the first half of 2025. https://www.thestar.com.my/business/business-news/2024/10/24/gobind-proposal-to-set-up-a-digital-trust-and-data-safety-commission-in-the-first-half-of-2025

Figure 12: Employment in Malaysia's ICT sector, 2019-2023 ['000 persons]



Source: Malaysia Digital Economy, 2024 by DOSM

The digital economy sector is a key driver of Malaysia's economic growth. In 2023, the Information and Communication Technology (ICT) and e-commerce sectors generated RM427.7 billion, accounting for 23.5% of the national GDP, up from 22.9% in 2022. Between 2019 and 2023, the sector experienced an average annual growth rate of 10.3%, surpassing the overall economy's growth of 2.4% during the same period[72]. Employment in the sector also grew, reaching 1.2 million jobs in 2023, making up 7.8% of total employment[73].

The e-commerce sub-sector has been particularly significant. Specifically in 2022, 78,236 establishments involved in e-commerce transactions, generating an income of RM1,126.9 billion. The domestic e-commerce market outperformed the international market, contributing RM1,003.5 billion. B2B transaction recorded the highest contribution (RM786.5 billion), followed by B2C transactions (RM312.6 billion) and B2G (RM27.8 billion). This growth is largely driven by the digital transformation of businesses, as

[72] DOSM (2024). Malaysia digital economy 2024, page 125. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf
[73] DOSM (2024). Malaysia digital economy 2024, page 18. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

well as increasing preference for online shopping among Malaysian consumers[74].

Within the sub-sector, online travel agencies have contributed positively, where more Malaysians today turn to the internet for travel planning. Platforms such as AirAsia, Agoda, and Booking.com have gained popularity over the years, enabling them to easily compare prices and book flights, accommodations, and travel packages.

ICT services represent the second-largest sub-sector, contributing 24.5% to the overall digital economy in 2023. This sub-sector includes industries such as data management (data centres, data security, big data analytics), software and system design (application development, e-platforms) and creative and digital content (eSports, gaming, and animation).

One of the key industries is app development. With the increasing penetration of smartphones and mobile internet, apps have become essential tools for daily activities, from shopping and banking to healthcare and education. Recognising its importance, various government entities have launched specific programmes to support and nurture this sub-sector. For instance, MDEC's Digital Content Fund provides financial assistance to startups involved in digital content creation, including mobile apps.

Separately within ICT services, the government has prioritised data management as a core industry. From 2021 to 2023, investments totalling MYR 114.7 billion related to data centres and cloud services were approved, with contributions from global tech companies such as Amazon, GDS Holdings Ltd, YTL Corp Bhd, and ByteDance Ltd[75]. Additionally, in May 2024, the Ministry of Investment, Trade & Industry (MITI) secured a commitment

[74] DOSM (2024). Malaysia digital economy 2024, page 45. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

[75] MIDA (2024). Data centres make up the bulk of RM144.7b in approved digital investments. https://www.mida.gov.my/mida-news/data-centres-make-up-the-bulk-of-rm144-7b-in-approved-digital-investments/

from Google to invest MYR 9.4 billion, which will support the establishment of its first data centre and cloud region in Malaysia[76].

Following closely behind ICT services is ICT manufacturing, which contributed 22.5% to the total digital economy in 2023. Key industries in this sub-sector include components (e.g., semiconductors), electronic boards, communication equipment and consumer electronics. The government has placed particular emphasis on the semiconductor industry, aiming to attract MYR 500 billion in investment to advance its National Semiconductor Strategy. Several major players have already established operations in Malaysia, including US-based Intel, which plans to set up its first overseas facility for advanced Third Dimensional (3D) chip packaging and German-based Infineon, which unveiled the world's largest 200-millimetre silicon carbide (SiC) Power Fabrication facility in August 2024.

ICT trade follows, contributing 8.3% to the total digital economy. It includes ICT resale transactions among both wholesalers and retailers.

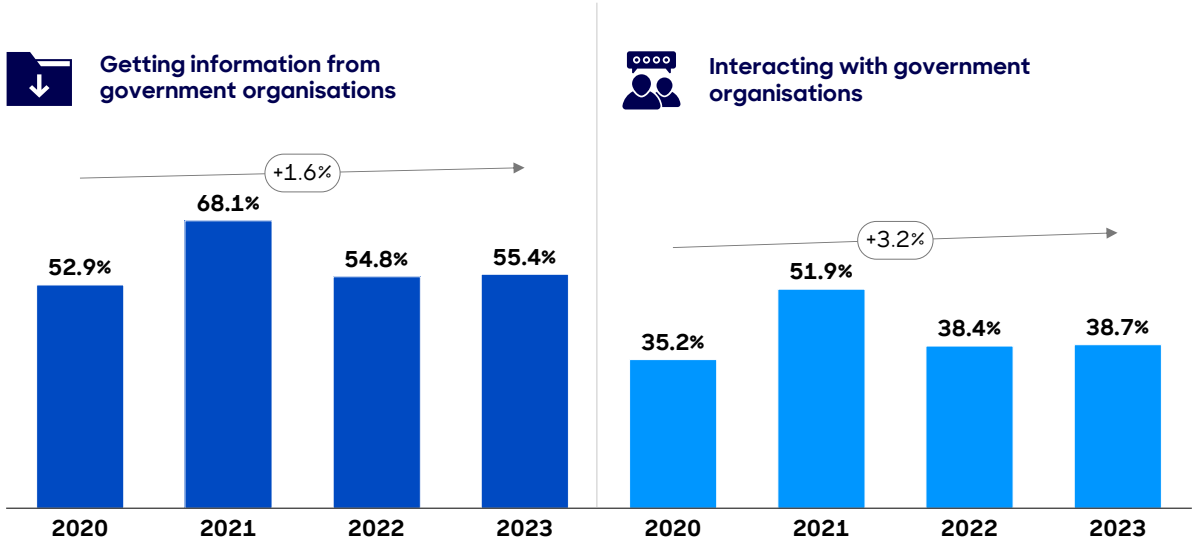
The smallest sub-sector within the digital economy is content and media, accounting for 3.5% of the total market. This includes industries such as motion picture, video, and television programme activities, along with online content and related services. The digital advertising services industry, which is highly relevant to this study, plays a vital role in fostering engagement and generating revenue for businesses within the digital landscape. The rapid growth of digital advertising is largely fuelled by increased engagement in various online activities, particularly social media and search platforms. At the same time, the industry is undergoing a rapid transformation, with emerging players like Retail Media Networks (RMNs)[77] gaining prominence[78]. These networks, which include major platforms and apps such as Grab, Shopee, and others, have the potential to disrupt traditional digital advertising models. They leverage real-time consumer data and purchasing behaviour within their own retail ecosystems, enabling highly targeted and personalised advertising that drives conversions on their platforms.

[76] Bernama (2024). Malaysia approved RM114.7bln investments in data centres, cloud services from 2021 to 2023. https://www.bernama.com/en/news.php?id=2306763
[77] Advertising technology (AdTech) platform owned and/or operated by a retailer
[78] The Edge (2024). Trends: the rising advertising superpower of super-apps. https://theedgemalaysia.com/node/723900

3.3.2 Digitalisation in government, businesses, and among citizens

According to the Department of Statistics Malaysia's (DOSM) Malaysia Digital Economy 2024 report[79], there are varying levels of participation and activity among the government, business establishments, and citizens.

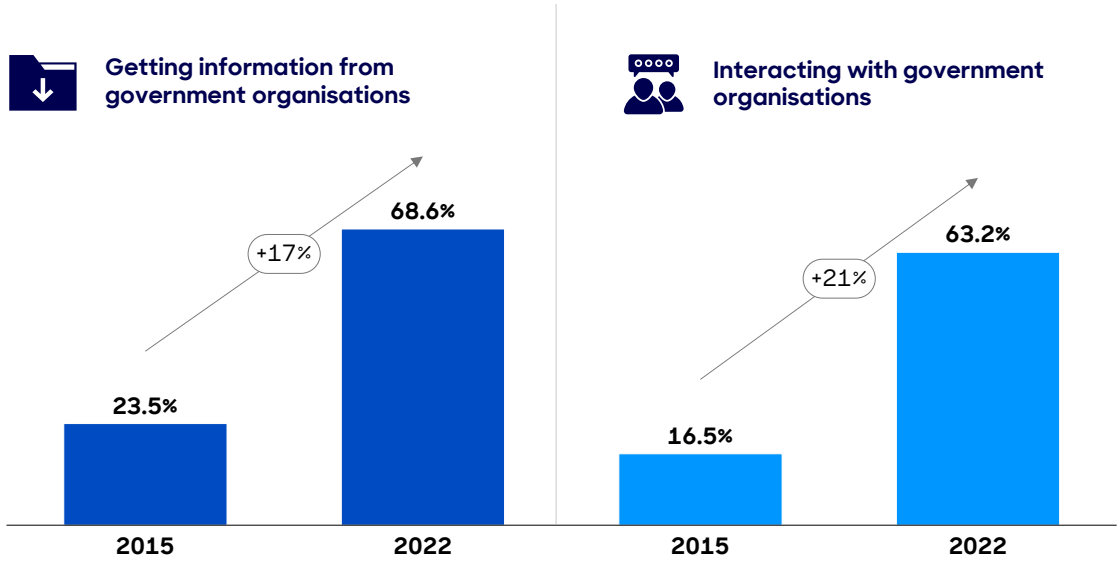
Figure 13: Purpose of internet usage by individuals, 2020-2023 [%]



Source: Malaysia Digital Economy, 2024 by DOSM

[79] DOSM (2024). Malaysia digital economy 2024, page 80. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

Figure 14: Purpose of internet usage by establishments, 2015 and 2022 [%]



Source: Malaysia Digital Economy, 2024 by DOSM

From the government's perspective, the two most prominent activities involve the level of digital interaction that businesses and individuals have with government organisations. These activities are measured by both parties' use of ICT to (a) get information and (b) interact with government organisations.

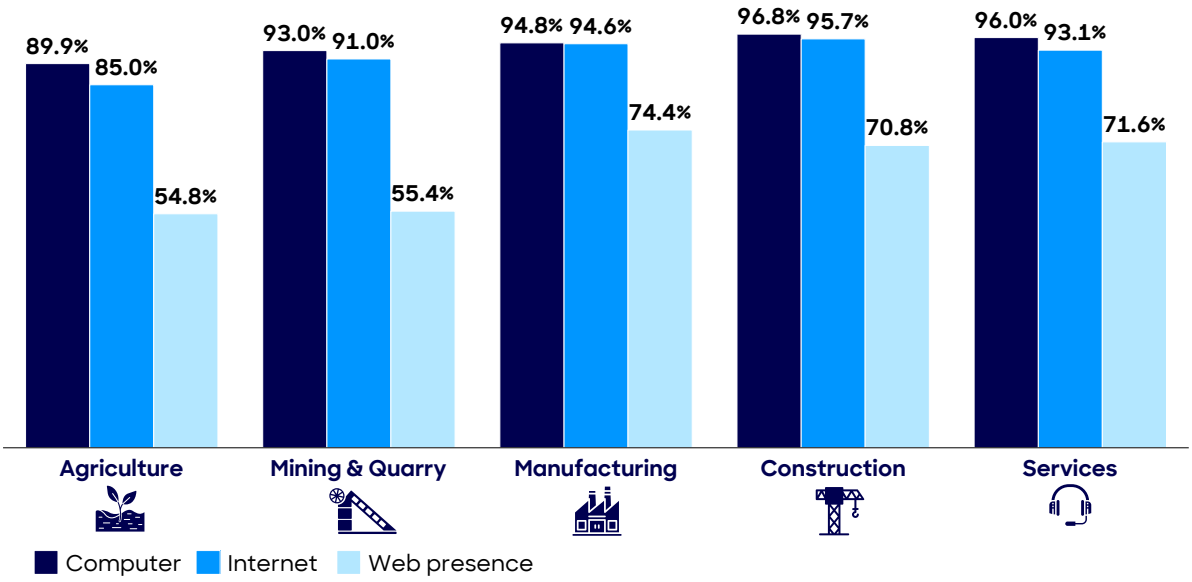
Overall, there has been an increase in their reliance on ICT tools to engage with the government by both individuals and businesses. While activities peaked during the COVID-19 pandemic in 2021, continuous efforts by the government are expected to further enhance its digital engagement with both individuals and businesses.

Various initiatives have driven the growth, starting with the 1996 "Electronic Government" initiative under the MSC Flagship Applications[80], aimed at optimising operational processes and improving government information delivery. This included projects such as E-Procurement, E-Syariah, and the Electronic Labour Exchange. More recently, the government and MDEC launched the Malaysia Digital initiative[81] to attract companies, talent, and investment, while enabling businesses and

[80] ePerolehan (2009). Overview. https://eperolehan.com/en/about/overview2.html
[81] MDEC (2022). Malaysia Digital. https://mdec.my/malaysiadigital

Malaysians to participate in the digital economy. Targeting nine key sectors—Digital Agriculture, Services, Cities, Health, Finance, Trade, Content, Tourism, and the Islamic Digital Economy—the initiative seeks to foster innovation, entrepreneurship, and investment.

Figure 15: Usage of computer, internet and web presence by various sector, 2022 [%]



Source: Malaysia Digital Economy, 2024 by DOSM

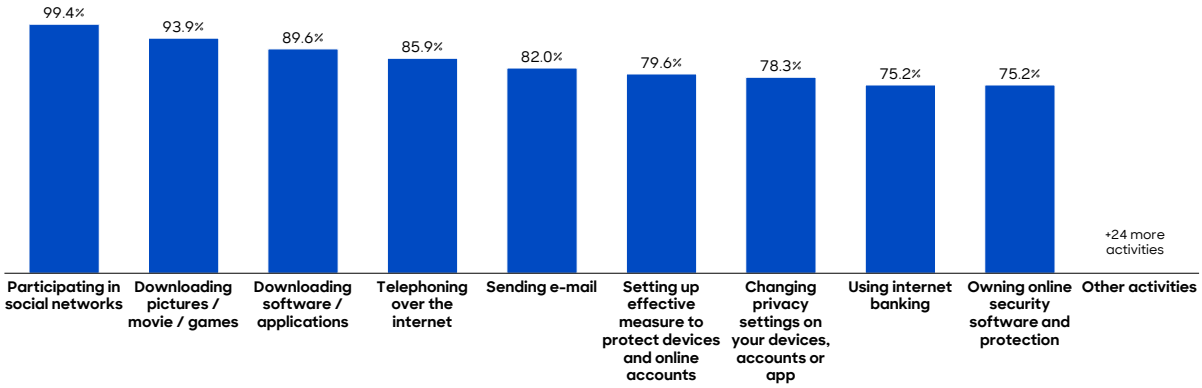
The usage of ICT by businesses and establishments, in terms of computers, internet, and web presence, varies across sectors. Construction leads in both computer and internet usage, while manufacturing leads in web presence. Overall, the average usage of computers and internet among Malaysian businesses is high, at approximately 95.9% and 93.3%, respectively. However, web presence remains lower, with about 71.4% of businesses having an online presence. The service sector, which includes most of the sub-sectors in this report, performs largely above the national average across all three ICT elements, with 96.0% for computer usage, 93.1% for internet usage, and 71.6% for web presence[82].

[82] DOSM (2024). Malaysia digital economy 2024, page 65. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

Specifically, the adoption of e-commerce by businesses in Malaysia has grown significantly, particularly during the Covid-19 pandemic. According to MyCC's Market Review under the Competition Act 2010 for the Service Sector in Malaysia, published in 2020[83], the pandemic accelerated digital adoption for both consumers and industries. In particular, businesses have begun adopting digital platforms like Grab.

Businesses' digitalisation efforts are further supported by government initiatives, such as the National E-Commerce Strategic Roadmap (NESR 1.0), which aims to accelerate e-commerce adoption by offering support in areas like digital marketing and online payment systems. With the global e-commerce market projected to reach USD 8.0 trillion by 2027[84], it is crucial for Malaysian businesses—particularly SMEs—to leverage digital platforms to expand their market reach and remain competitive.

Figure 16: Top 10 activities by Malaysian using internet, 2023 [%]



Source: Malaysia Digital Economy, 2024 by DOSM

Separately, Malaysians have varying levels of participation rates amongst the different activities made available via the internet, which is a large part of how Malaysians today interact with the ICT sector. The primary activities that Malaysians perform using ICT tools is shown above, with the top five activities being communications-related and the highest being participating in social networks (e.g., Facebook, Whatsapp, Instagram, X,

[83] MyCC (2020). Market Review under the Competition Act 2010 for the Service Sector in Malaysia, page 81. https://www.mycc.gov.my/market-review/final-report-market-review-for-service-sector

[84] EMarketer (2024). Worldwide retail ecommerce forecast 2024. https://www.emarketer.com/content/worldwide-retail-ecommerce-forecast-2024

etc.) at ~99%. Emphasis on data privacy and protection is observed as the second core focus among Malaysians, with activities including setting up measures to protect devices, online accounts, and adjusting privacy settings[85].

3.3.3 International performance

Figure 17: Malaysia's performance in IMD's World Digital Competitiveness, 2024[86]

Country	World Digital Competitiveness 2024 global ranking
Singapore	1
Malaysia	**36**
Thailand	37
Indonesia	43
Philippines	61

Source: World Digital Competitiveness, 2024 by IMD

Malaysia is ranked 36th out of 64 countries in the Swiss-based International Institute for Management Development (IMD)'s World Digital Competitiveness Ranking. Within ASEAN, it holds the second position behind Singapore, which ranks third globally[87].

However, the country's ranking has been slipping over the years, dropping from a high of 26 in 2019 to 36 in 2024. According to the Malaysia Productivity Corporation (MPC), the challenges include embracing a

[85] DOSM (2024). Malaysia digital economy 2024, page 234. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf
[86] Ranks the extent to which countries adopt and explore digital technologies.
[87] IMD (2024). Rankings out of 67 economies. https://www.imd.org/centers/world-digital-ranking/#_tab_List

digital-first mindset and enhancing digital technology across various sectors[88].

Published annually by the World Competitiveness Center (WCC), the ranking evaluates how prepared and capable economies are in adopting digital technologies for economic and social transformation. It assesses digital competitiveness through three main factors: knowledge, technology, and future readiness. The ranking relies on various in-country partners, including the Malaysia Productivity Corporation (MPC), to supply data from national sources and distribute survey questionnaires[89].

Figure 18: Malaysia's performance in ITU's ICT Development Index, 2024[90]

Country	ICT Development Index 2024 score (max. being 100%)
Singapore	97.8%
Brunei Darussalam	95.7%
Malaysia	**95.0%**
Thailand	91.0%
Vietnam	85.0%
Indonesia	82.8%

Source: ICT Development Index (IDI), 2024 by ITU

Despite these challenges, Malaysia has made significant progress in ICT development in recent years, with collaboration between the government and private sector driving investments in digital technology and infrastructure. In the 2024 ICT Development Index (IDI) published by the

[88] Malay Mail (2023). Malaysia falls to 33rd spot in world digital competitiveness ranking, trails Singapore. https://www.malaymail.com/news/malaysia/2023/12/02/malaysia-falls-to-33rd-spot-in-world-digital-competitiveness-ranking-trails-singapore/105384

[89] IMD (2025). Partner institutes. https://www.imd.org/centers/wcc/world-competitiveness-center/partnerships/

[90] Ranks the extent to which connectivity is universal and meaningful.

International Telecommunication Union (ITU)[91], Malaysia scored 95%, surpassing the Asia Pacific average of 77.3% and the Upper Middle Income category's score of 79.1%.

One of the recent efforts contributed to the growth is the establishment of Digital Nasional Bhd (DNB), where it has accelerated the deployment of 5G infrastructure across Malaysia. As of 2024, Malaysia's 5G network has received global recognition for its quality and performance, earning various accolades, including:

- Ranked 1st globally for OOKLA 5G consistency score in 2023[92].
- Winner of FutureNet World Global Award 2024 for automated operations Solution incorporating AI functionality[93].
- Malaysian Telco companies using DNB's 5G network continue to be the highest-ranked mobile operators globally for all categories in the Opensignal 5G Global Awards 2024[94].

As Malaysia continues to develop its digital infrastructure, it will not only improve its ranking in the IDI but also enhance overall competitiveness and readiness to adopt new digital technologies, positively impacting its IMD World Digital Competitiveness Ranking (as highlighted in the previous index). More importantly, it is projected to have a favourable effect on the economy. According to an Ernst & Young study commissioned by DNB, the

[91] ITU Data Hub (2024). Malaysia ICT development index. https://datahub.itu.int/dashboards/idi/?y=2024&e=MYS

[92] OOKLA (2024). 5G in Malaysia - single wholesale network driving regional leadership. https://www.ookla.com/articles/malaysia-5g-swn-q4-2023

[93] Ericsson (2024). DNB & Ericsson's AI intent-based operations solution wins third award, recognizing future-readiness of Malaysia's 5G network. https://www.ericsson.com/en/press-releases/2/2024/10/dnb--ericssons-ai-intent-based-operations-solution-wins-third-award-recognizing-future-readiness-of-malaysias-5g-network

[94] Opensignal (2024). 5G global mobile network experience awards 2024. https://www.opensignal.com/2024/10/5g-global-mobile-network-experience-awards-2024

widespread adoption of 5G enterprise use cases could boost Malaysia's GDP by 5% (MYR 122 billion) by 2030[95].

Figure 19: Malaysia's performance in Huawei's Global Digitalisation Index ranking, 2024[96]

Country	Huawei Global Digitalisation Index (GDI) 2024
Singapore	76.1
Malaysia	**49.9**
Thailand	47.2
Vietnam	36.7
Philippines	34.9
Indonesia	33.1

Source: Global Digitalisation Index (GDI), 2024 by Huawei

Separately, according to Huawei's Global Digitalisation Index (GDI) 2024, which evaluates digital economic development, industry progress, and talent ecosystem readiness across 77 countries, Malaysia scored 49.9 ranking second highest in Southeast Asia and classified as an "Adopter". This classification reflects Malaysia's rapid progress in digital development, driven by widespread basic connectivity and supportive industry policies.

As an adopter, Malaysia focuses on expanding reliable connectivity, which is essential for digital services and the development of cloud, data centres, and storage. By strengthening its digital foundations, Malaysia is positioned to foster economic growth and accelerate its digital transformation initiatives.

[95] Ernst & Young (2021). Estimating the economic impact of the single wholesale 5G network in Malaysia. https://www.digital-nasional.com.my/themes/custom/dnb/pdf/estimating-the-economic-impact-of-the-single-wholesale-5G-network-in-malaysia.pdf

[96] Huawei (2024). Global Digitalization Index (GDI) 2024. https://www.huawei.com/en/gdi

Figure 20: Malaysia's performance in UN's E-Government Index, 2024[97]

Country	UN E-Government Index 2024
Singapore	96.9
Thailand	83.5
Malaysia	**81.1**
Indonesia	79.9
Vietnam	77.1
Philippines	76.2

Source: E-Government Index, 2024 by UN

On government services, Malaysia has made significant progress. According to the United Nations (UN) E-Government Index, which measures a country's readiness, capacity, and progress in using e-government for the provision of public services, Malaysia improved its score from 61.1% in 2014 to 81.1% in 2024, ranking third in Southeast Asia after Singapore and Thailand.

Various initiatives contributed to the improve in ranking, including but are not limited to, the digitalisation of motor vehicle licenses (road tax)[98], the introduction of MyDigital ID as the sole verification system for other government-related apps[99], and the launch of Pangkalan Data Utama (PADU)[100], a centralised database hub designed to consolidate information on Malaysian citizens and support the government in better distributing benefits. These efforts have enhanced the efficiency and accessibility of

[97] United Nations (2024). UN E-government survey 2024. https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2024

[98] Ministry of Transport (2023). Digital road tax and licence explained., pages 1-3. https://www.mot.gov.my/en/News/DIGITAL%20ROAD%20TAX%20AND%20LICENCE%20EXPLAINED.pdf

[99] MyDigital ID (2024). Brochure. https://digital-id.my/pdf/MyDigital_ID_Brochure_2024.pdf

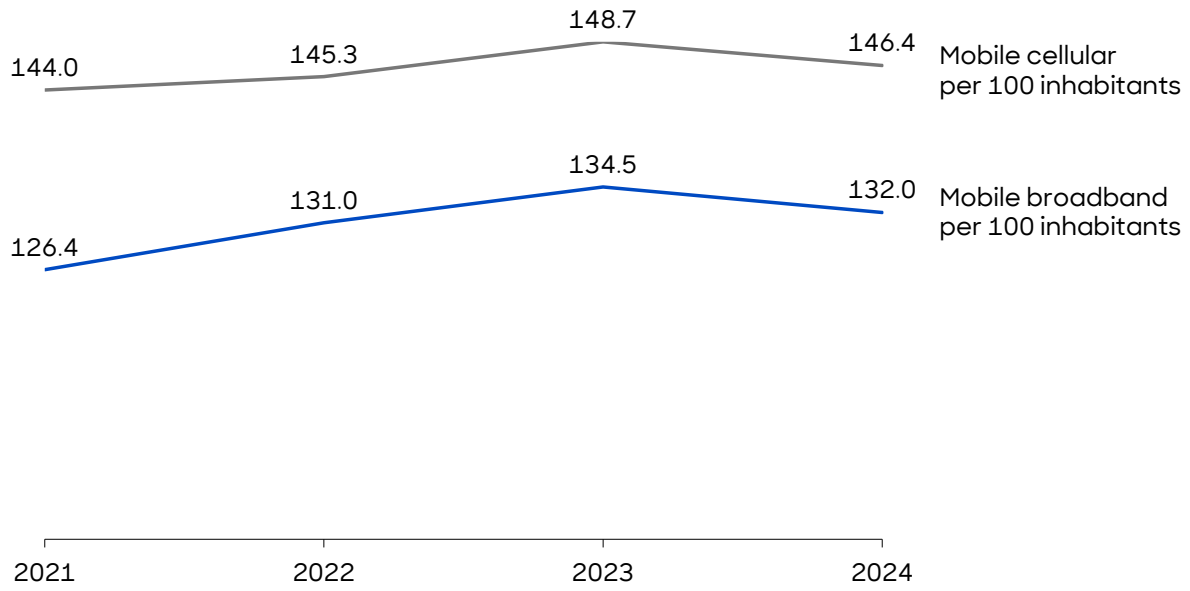
[100] PADU (2025). Homepage. https://padu.gov.my/

public services, contributing to Malaysia's advancement in e-government development.

3.3.4 Key factors driving Malaysia's digital economy

3.3.4.1 Population's increasing connectivity

Figure 21: Mobile broadband and mobile cellular penetration rates, 2021-2024[101] [%]



Source: Malaysia Digital Economy, 2024 by DOSM

Growing internet penetration in Malaysia is a significant catalyst for the expansion of the digital economy. According to DOSM, the percentage of individuals using mobile phones and computers is 99.4% and 80.4%, respectively as of 2023[102]. DOSM also highlighted mobile broadband penetration rate reaching 132.0 subscriptions per 100 inhabitants, while mobile cellular subscriptions reached 146.4 per 100 inhabitants by the Quarter 3 (Q3) of 2024[103].

[101] Penetration rate for the year is based on the latest available figures from the most recent quarter

[102] DOSM (2024). Malaysia digital economy 2024, page 57. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

[103] DOSM (2024). Malaysia Digital Economy 2024, page 85. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

As more Malaysians come online through the deployments of Fourth Generation (4G) and 5G high-speed networks coverage in both sub-urban and rural areas (80% of population coverage), it has enabled greater access to innovative digital services, further boosting economic growth and digital transformation across sectors[104].

A key factor in this growth is the country's focus on improving connectivity, particularly through the recent push for 5G development. Malaysia's 5G network development began in 2018 with the establishment of the National 5G Taskforce. Initially, a Single Wholesale Network (SWN) model was adopted to accelerate the rollout and ensure inclusive coverage across the country. However, in May 2023, the government transitioned to a dual-network approach to mitigate risks associated with a single point of failure, ensure redundancy for 5G services, and foster a competitive 5G ecosystem[105].

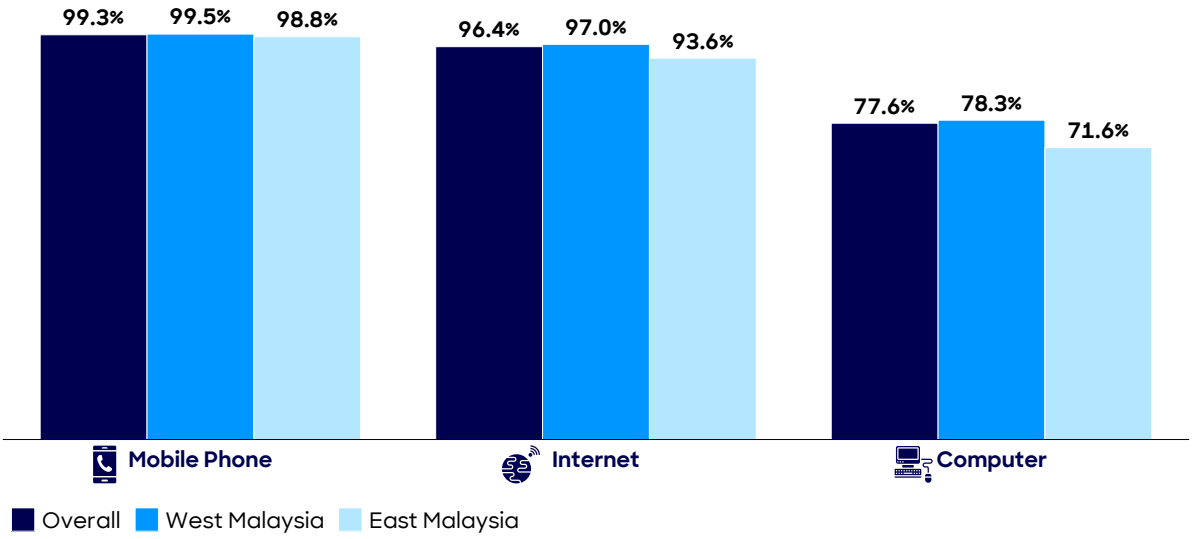
As of October 2024, 5G penetration stands at 51.5%, and the coverage of 5G infrastructure now extends to 82.1% of populated areas, benefiting more than 17.5 million subscribers[106]. This shows a rate of increase of ~20% per month from ~3.1% in March 2023. Various 5G use cases have been adopted across multiple sectors of the economy, including the implementation of Malaysia's first 5G private network in the oil and gas industry by Petronas in October 2023[107].

In terms of access to ICT tools, the country has experienced a sustained increase in key areas, including computers, internet connectivity, and mobile phone. Current statistics indicate that each of these areas has surpassed a penetration rate of 90% [108], reflecting a high level of accessibility and integration of technology within the population. This

[104] Malaysia Network Operators Group (Mynog) (2024). Malaysia's unique approach on 5G network rollout. https://www.mynog.org/wp-content/uploads/2024/06/Plenary-1010-DNB-1.pdf
[105] The Edge (2023). 5G: no rollback as Cabinet decides to stay with single wholesale network till DNB completes 80% coverage. https://theedgemalaysia.com/node/665485
[106] Bernama (2024). 17.5 million 5G users in Malaysia - Gobind. https://www.bernama.com/en/news.php/crime_courts/sports/news.php?id=2370501
[107] Petronas (2023). Petronas becomes first in Malaysia to adopt 5G private network for enterprise use. https://www.petronas.com/media/media-releases/petronas-becomes-first-malaysia-adopt-5g-private-network-enterprise-use
[108] DOSM (2023). Malaysia digital economy 2024, page 220. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

significant penetration highlights that the majority of the population is equipped with the necessary tools for digital engagement, positioning the country as well-prepared for the digital economy.

Figure 22: Percentage of households with access to selected ICT services in Malaysia, 2023[109] [%]



Source: Malaysia Digital Economy, 2024 by DOSM

Despite Malaysia having high overall ICT development, variations in geography, population densities, economic activities, and cultural factors have led to slight disparities in access and development between East and West Malaysia. These differences are particularly evident in the penetration rates of ICT tools, as seen in the comparison between the two regions shown in Figure 22.

3.3.4.2 COVID-19 and digitalisation

Similar to many countries, the pandemic has acted as a catalyst for Malaysia's digital economy, accelerating the adoption of digital technologies across various sectors.

During that period, various incentives were given to businesses by the government with the objective to stimulate economic growth.

[109] Figures from both West and East Malaysia are based on the average access rate across all states within each region.

In June 2020, the government launched the PENJANA *(Pelan Jana Semula Ekonomi Negara)* stimulus package, a short-term economic recovery plan worth MYR 35 billion. The package included various digital initiatives for businesses and citizens, such as[110]:

- **Digital Adoption Grant and Loans:** Provision of MYR 700 million in grants and loans to eligible enterprises for the adoption or subscription of digitalisation services.

- **Micro and SME (Small and Medium Enterprise) E-Commerce Campaign:** Initiative to encourage micro, small and medium enterprises (MSMEs) to adopt e-commerce, providing onboarding training, seller subsidies and sales support. This campaign is co-funded by the Government through MDEC and various e-commerce platforms.

- **Shop Malaysia Online Campaign:** Collaboration between the government and e-commerce platforms to co-fund e-commerce digital discount vouchers.

- **ePenjana Credit:** Credit of MYR 50 for e-wallet users, with an additional MYR 50 in value offered through cashback vouchers and discounts from e-wallet service providers.

- **Dana PENJANA Nasional:** MYR 1.2 billion fund aimed at providing capital to digital-focused Malaysian venture capital funds and startups.

- **Promotion of Remote Learning and Work**: Provision of 1 gigabyte of free daily capacity for all users to access educational websites, news and video conferencing applications.

According to JENDELA (*Jalinan Digital Negara*), the Digital Network Plan introduced by the Malaysian Communications & Multimedia Commission (MCMC), Malaysia's internet traffic increased up to 70%[111]. Additionally,

[110] Bernama (2020). List of 40 initiatives under Penjana. https://www.bernama.com/en/news.php?id=1848388

[111] Malaysian Wireless (2020). Malaysia government wants 100% 4G coverage, 100mbps 5G speeds. https://www.malaysianwireless.com/2020/09/malaysia-government-jendela-4g-coverage-100mbps-5g-speeds/

internet usage in residential areas saw a similar rise of up to 70%. Lockdowns and social distancing measures compelled businesses and consumers to shift online, resulting in a surge in e-commerce, online education and remote work solutions. The need for contactless transactions also led to the rapid growth of digital payment systems and e-wallets, e.g., Touch 'n Go and DuitNow, making financial transactions more convenient and secure.

In line with Malaysia's push for digitalisation, the Sarawak and Sabah government have also introduced various state-level initiatives via its local entities[112] - Sarawak Digital Corporation (SDEC)[113] and Sabah Creative Economy and Innovation Centre (SCENIC)[114]:

SDEC:

- **Sarawak rural Broadband Network (MySRBN):** Provision of high-speed broadband connectivity across suburban and rural areas in Sarawak.

- **Innovation hubs:** Platform for startups, creative industries, SMEs and social enterprises.

- **Sarawak Digital Mall:** Platform aimed at boosting e-commerce adoption and sales performance of MSMEs.

- **GoDigital:** Purchase of hardware, software, and digital services aimed at assisting MSMEs in digitalising their business.

SCENIC:

- **SCENIC-SATA Hasanah Special Fund:** Provision of funds to Sabahan social entrepreneurs.

[112] SDEC is a wholly-owned company by the Sarawak Government through State Financial Secretary Inc. under the Ministry of Finance and Economic Planning. It serves as the state's implementing agency in driving the Sarawak Digital Economy initiatives; SCENIC is an initiative under the Sabah state's Ministry of Science, Technology and Innovation. It is responsible to accelerate industries in the state through entrepreneurship, technology, innovation and creativity.
[113] Sarawak Digital Economy Corporation (SDEC) (2025). https://sdec.com.my/
[114] Sabah Creative Economy and Innovation Centre (SCENIC) (2025). https://scenic.my/

- **SEMAI Summit:** Summit with forums, sharing sessions focusing on social entrepreneurship.

3.3.4.3 Growing adoption of new technologies

Malaysia's digital economy is at the forefront of adopting new technologies, which are driving significant changes across various sectors. The adoption of AI and ML is noteworthy, with applications ranging from personalised shopping experiences in e-commerce to predictive analytics in digital advertising. For instance, e-commerce platforms are now increasingly using AI to recommend products based on user behaviour, resulting in higher engagement and sales conversion rates. In 2023, e-commerce player Lazada launched its AI-powered and augmented reality (AR) "Skin Test Technology", allowing consumers to diagnose their skin condition through phone cameras[115].

In the digital advertising sub-sector, digital advertising publisher REV Media group in October 2024 introduced AI influencers Liz Spark and Adam Spark, offering brands innovative ways to engage with diverse markets[116]. Separately, Astro partnered with Talon Creative to launch an AI-driven initiative that utilises a social listening system to identify online posts expressing emotions like sadness and frustration. In response, AI-generated personalised messages, crafted to mimic the style and tone of the series' cast members, are sent to offer support and encouragement[117].

In the online travelling sub-sector, AirAsia launched an AI-powered concierge, 'Ask Bo,' in February 2023. With enhanced ML capabilities, 'Ask Bo' offers more proactive and personalised customer service, providing live

[115] Retail Asia (2024). Lazada launches AI, AR-powered skin test technology. https://retailasia.com/e-commerce/news/lazada-launches-ai-ar-powered-skin-test-technology

[116] New Straits Times (2024). REV Media unveils new AI influencers as part of digital marketing push. https://www.nst.com.my/news/nation/2024/10/1117194/rev-media-unveils-new-ai-influencers-part-digital-marketing-push#google_vignette

[117] Marketech Apac (2024). Astro, Talon creative team up on AI-powered campaign to provide positive encouragement online. https://marketech-apac.com/astro-talon-creative-team-up-on-ai-powered-campaign-to-provide-positive-encouragement-online/

updates on flight status, boarding information, baggage tracking, and flight changes[118].

3.3.4.4 Government's push for startups

The vibrant startup ecosystem in Malaysia plays a crucial role in fostering innovation. While recognising its importance, the government is also aware of the key challenges faced by startups. According to the Malaysia Startup Ecosystem Roadmap (SUPER) 2021-2030, challenges such as funding for early-stage startups, a limited talent pool—particularly in tech and digital fields—and issues related to the regulatory environment and market access remain as hurdles[119].

In response, the government has introduced several initiatives to promote entrepreneurship and drive innovation. One of the most notable efforts is the Ministry of Economy's KL20 Summit 2024, which aims to position Kuala Lumpur among the world's top 20 global startup hubs by 2030. Key activities outlined in this initiative include, but are not limited to[120]:

- **Unicorn Golden Pass**: Attractive incentives offered to startups, including waived fees for employment passes for senior management, subsidised rental options, concessionary tax rates on corporate profits, etc.

- **KL20 Action paper**: Comprehensive roadmap with initiatives that aim to make talent access easier (Visa Green-laning), investing and deal-sourcing more regular (Venture Capital (VC) Golden Pass) and AI Infrastructure more mature (Graphical Processing Units installation).

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[118] AirAsia (2023). "We have listened." Capital A fires chatbot AVA and introduces new AI-powered "Ask Bo" as part of commitment to more transparent, enhanced customer experience. https://newsroom.airasia.com/news/capital-a-welcomes-ask-bo#gsc.tab=0

[119] MOSTI (2021). Malaysia Startup Ecosystem Roadmap 2021-2030, pages 1-38. https://www.mosti.gov.my/wp-content/uploads/repository/penerbitan/2021/(SUPER)%20Malaysia%20Startup%20Ecosystem%20Roadmap%202021-2030.pdf

[120] KL20 Summit (2024). Malaysia launches major initiatives at KL20 summit to boost global startup standing. https://www.kl20.gov.my/malaysia-launches-major-initiatives-at-kl20-summit-to-boost-global-startup-standing/

- **Kuala Lumpur Innovation Belt**: Initiative by the Malaysian Research Accelerator for Technology & Innovation (MRANTI) to create a one-stop centre for startups and investors.

Furthermore, the Ministry of Science, Technology and Innovation (MOSTI) mandated Cradle Fund, Malaysia's early-stage startup influencer, to lead its ASEAN Startup initiative with the aim to foster greater collaboration, innovation, and growth among startups in the region. The initiative will unfold in two phases: the first phase in 2024 will focus on developing the ASEAN Startup Portal, while the second phase in 2025 will emphasise capacity-building programs.

3.3.5 Projected growth of Malaysia's digital economy

By 2025, the Ministry of Digital projects a total contribution of 25.5% from the digital economy to Malaysia's total GDP[121]. This target will be driven by various initiatives, including government-led projects and "Catalytic Projects" through Public-Private Partnerships (PPPs), where the private sector leads and finances the projects[122].

The overall target will be supplemented by the various sub-targets laid out in both MDEB and the National 4IR Policy (N4IRP) (see **section** 3.4 for more information):

Target under MDEB (by 2025):

- Total investment in digitalisation: MYR 70 billion
- Number of MSMEs adopting e-commerce: 875,000
- Number of start-ups: Up to 5,000

[121] Malay Mail (2024). Digital minister: govt targets 25.5pc GDP contribution from digital economy by end-2025. https://www.malaymail.com/news/malaysia/2024/06/25/digital-minister-govt-targets-255pc-gdp-contribution-from-digital-economy-by-end-2025/141472

[122] MyDigital (2022). MyDigital catalytic projects facilitating game-changing technological innovation for key sectors. https://www.mydigital.gov.my/mydigital-catalytic-projects-facilitating-game-changing-technological-innovation-for-key-sectors/

- Number of unicorns (privately held startup company with a valuation of ≥ $ 1 billion): at least two and being based in Malaysia

- Job opportunities in digital economy: More than 500,000

Target under N4IRP (by 2030):

- Transform 20% of semi- and low-skilled labour to highly skilled labour

- More home-grown Fourth Industrial Revolution (4IR) technology providers
- 3.5% in Gross Domestic Expenditure on R&D (GERD), including for 4IR-related R&D

- Ranked Top 20 in Global Innovation Index

- 80% of online government services are integrated and supported by 4IR technology application

- All teachers are trained to use 4IR technology

The MYDIGITAL agenda is overseen by the Council of Digital Economy and the Fourth Industrial Revolution (MED4IRN), led by the Prime Minister of Malaysia. The Council includes Cabinet Ministers, private sector representatives, industry leaders, and think tank members[123].

Moreover, in October 2024, the government's Budget 2025 outlines various initiatives aimed at enhancing the digital economy, innovation and infrastructure [124], and supporting the achievement of the above-mentioned targets:

[123] MITI (2021). Publication of information and communication technology satellite accounts (ICTSA) 2021 by Department of Statistic Malaysia (DOSM) - https://www.miti.gov.my/index.php/pages/view/8527

[124] Ministry of Finance (2024). Budget tabling for 2025. https://belanjawan.mof.gov.my/en/

Supporting Digital Initiatives (Malaysia Budget 2025):

- Expansion of R&D funding to MYR 600 million is planned to encourage innovation and the development of new technologies.

- Allocation of MYR 320 million to improve internet access, including MYR 120 million for higher education institutions (HEIs), MYR 100 million for broadband in rural schools, and MYR 100 million for the National Information Dissemination Centres (NADI) over five years.

- MYR 10 million allocation to establish of the National Artificial Intelligence Office (NAIO), which will coordinate AI efforts and develop a strategic action plan for AI technology.

- The New Investment Incentive Framework (NIIF) includes a MYR 1 billion fund to support high-value activities like integrated circuit (IC) design services. Special tax deductions will also be given to HEIs that develop new courses in digital technology, AI, robotics, IoT, data science, Fintech, and sustainable technologies.

3.4 Digital economy-related policies

While digitalisation has been recognised in key policy documents such as the Malaysia Plan, a focused approach was only introduced in 2019 under the Shared Prosperity Vision 2030 (SPV 2030) [125, 126], which identified Digital Economy as one of its 15 Key Economic Growth Areas (KEGA).

In 2021, the government formalised its commitment to the digital economy with the launch of the MYDIGITAL agenda, which introduced both the Malaysia Digital Economy Blueprint (MDEB) and the National Fourth Industrial Revolution Policy (N4IRP). These policies aim to streamline sectoral policies and align them with broader national goals, with the N4IRP

[125] Ministry of Economy (2019). Shared prosperity vision 2030. https://ekonomi.gov.my/sites/default/files/2020-02/Summary%20Shared%20Prosperity%20Vision%202030.pdf

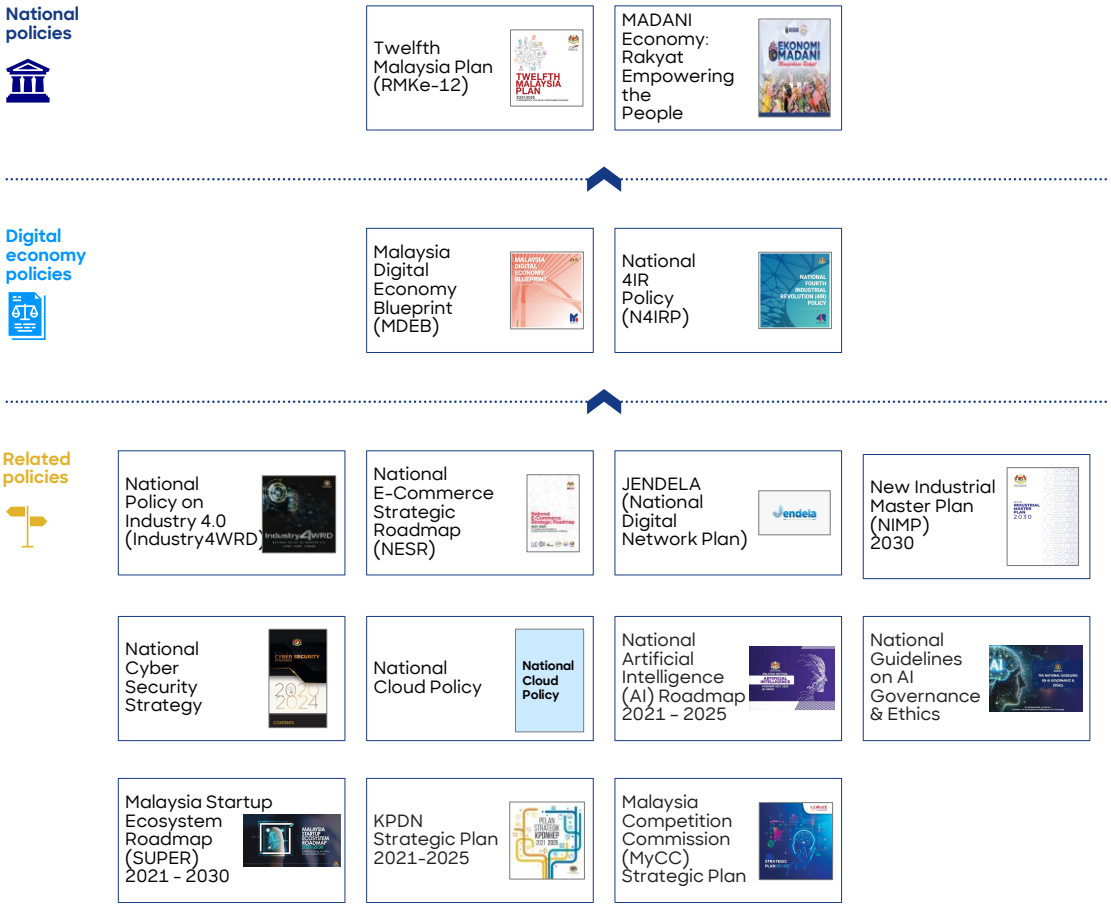
[126] New Straits Times (2023). Armizan: Malaysia Madani replaces SPV 2030, framework to be launched soon by PM. https://www.nst.com.my/news/nation/2023/02/883055/armizan-malaysia-madani-replaces-spv-2030-framework-be-launched-soon-pm)

serving as a central industrialisation policy focused on manufacturing and related services.

Subsequent policies were introduced to support the MDEB and N4IRP, with additional industry-specific policies developed in alignment with these frameworks. The figure below outlines the comprehensive policies governing the digital economy, along with related initiatives.

These policies reflect the government's commitment to the robust development of Malaysia's digital economy. The primary goals are to drive national growth, foster inclusiveness, and enhance competitiveness for the benefit of the economy, the people, and the country as a whole.

Figure 23: National, key and supporting policies related to the digital economy[127]



Source: Secondary research and MyCC's analysis

[127] MyCC analysis

3.4.1 National policies

Table 3: Guiding national policies for the digital economy in Malaysia

#	Policy	Description	Competition aspect	Data privacy and protection aspect
1	**Twelfth Malaysia Plan (RMKe-12)** *by Economic Planning Unit (EPU) under the Ministry of Economy* 	Five-year, medium-term plan with the objective of developing a "Prosperous, Inclusive, Sustainable Malaysia." It emphasises the importance of digital transformation across sectors, aiming to enhance digital literacy, promote e-commerce and support technology adoption under the Policy Enabler 2: Accelerating Technology Adoption and Innovation.	Recognises the weak digital global presence of Malaysian companies and proposes initiatives such as developing standards, setting up new platforms, and fostering cross-border activities promote competition in the digital economy. It also plans to expand digitalisation by scaling up digital skills and opportunities for targeted groups to promote inclusiveness of	Recognises the importance of improving data integration and privacy for efficient service delivery. Proposes formulating policies on data sharing whilst protecting data privacy such as developing national digital identification policy to build trust and security for digital transactions and data movement, with the

#	Policy	Description	Competition aspect	Data privacy and protection aspect
			Malaysians in the digital economy.	goal of curbing fraud and enhancing individual rights alongside the PDPA.
2	**MADANI[128] Economy: Empowering the People** *by the Prime Minister & Finance Minister of Malaysia, Datuk Seri Anwar Ibrahim* 	Launched in 2023 with the aim to restore Malaysia's economy, position it as a leading nation in Asia and to enhance the people's quality of life through economic growth. It emphasises the integration of digital technologies across various sectors to enhance productivity and competitiveness through the creation of a 'digital and innovation-led Industry'. A	Attempts to reform the digital economy and increase the exposure of MSMEs to the digital era through providing matching grants of 50% or up to RM5,000 for smaller businesses to equip them with financial capabilities to compete with larger, more established companies in the digital marketplace. Additionally, it highlighted the need to address all	Looks to implement Digital ID, which is an initiative to verify people's identity on the internet or in the cyber world. It aims to foster the expansion of online businesses and application whilst ensuring that personal data is well protected from potential misuse or unauthorised access.

[128] *keMampanan* (Sustainability), *kesejAhteraan* (Prosperity), *Daya cipta* (Innovation), *hormAt* (Respect), *keyakiNan* (Trust) and *Ihsan* (Compassion)

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		'digital and innovation-led industry' will be created through Domestic Direct Investment (DDI) from government-linked companies (GLCs) and government-linked investment companies (GLICs). Through the promotion of digital literacy and access to technology, the plan seeks to empower individuals and businesses, thereby fostering a robust digital economy.	forms of malicious deception and fake news in advertising that can sow division and mistrust within the digital advertising sub-sector. These initiatives aim to enhance Malaysia's competitiveness in the digital economy by supporting small businesses and ensuring a trustworthy digital advertising environment.	The Digital ID is designed to enhance trust in the digital ecosystem, supporting the growth of Malaysia's digital economy. It is part of the broader Malaysia Digital Economy Blueprint, aligning with the MADANI Economy's aspiration to elevate the country as an Asian economic leader and improve the well-being of its people.

Source: Secondary research and MyCC's analysis

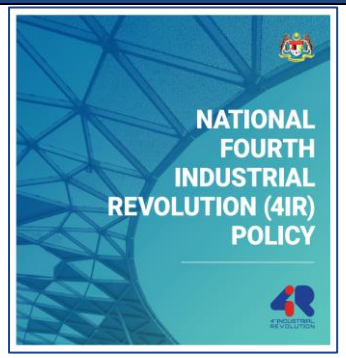
3.4.2 Digital economy policies

Table 4: Digital economy policies in Malaysia

#	Policy	Description	Competition aspect	Data privacy and protection aspect
1	**Malaysia Digital Economy Blueprint (MDEB)** *by EPU under the Ministry of Economy* 	Launched in early 2021, the blueprint aims to transform Malaysia into a digitally driven, high-income nation and regional leader (in the field of digital economy) by 2030. It focuses on three outcomes: 1. Socio-environmental wellbeing for all; 2. Business growth in all sectors; and 3. Fit-for-future government. The blueprint is driven by 22 strategies, 48 national	Contains various initiatives such as the streamlining of regulatory requirements to respond to the digital economy and encourage innovative business models. The initiative focuses on adapting regulations to support the growth of the digital economy and encourage innovative business models. It includes streamlining regulatory requirements, reviewing existing	Initiative of "Enhancing cyber security awareness among businesses and society members" which aimed to raise the public's confidence to go digital. This initiative includes the development of a multi-pronged and sustained cyber security awareness programme through a People-Private-Public Partnership

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		initiatives and 28 sector-specific initiatives to achieve its goals within the 10-year timeframe (2021-2030). It highlights the need for flexible regulations ("Agile Regulations") to address challenges such as evolving technologies and new business models. One key focus is ensuring fair competition by streamlining pro-competition measures under its second thrust. MyDIGITAL Corporation, an agency under the Ministry of Digital, is responsible for implementing the blueprint. It is also aligned with other policies, such as the Personal	policies and competition laws, and using regulatory sandboxes to test new rules before full implementation. These efforts aim to ensure fair competition, improve market monitoring by regulators, and create a level playing field for businesses. It also promotes better alignment and interoperability between policies and regulations for more efficient implementation and enforcement.	approach, promoting platforms like the CyberSafe website, enhancing cyber security month activities, and strengthening law enforcement and governance. It also incorporates the development of guidelines for digital users, including consumer rights in commercial transactions. Netiquette modules as part of the national education curriculum

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		Data Protection Act and strategies for the Fourth Industrial Revolution (4IR). Several states, including Negeri Sembilan (Negeri Sembilan Digital Economy Blueprint 2027) and Sarawak (Sarawak Digital Economy Blueprint 2030), have introduced their own digital economy blueprints in line with the national plan.		will also be implemented. This blueprint also addresses cross-border data flows by promising that by 2025, all new trade agreements will incorporate cross-border data protection elements.
2	**National 4IR Policy (N4IRP)** *by EPU under the Ministry of Economy*	Comprehensive national framework aimed at guiding the use of 4IR technologies to enhance the country's socioeconomic development.	Introduces the initiative to develop critical 4IR-enabling infrastructure to enable wider application of 4IR technologies, as part of the strategy to strengthen digital	Introduces an ethics framework for technological development and deployment to ensure responsible use of 4IR technologies, specific

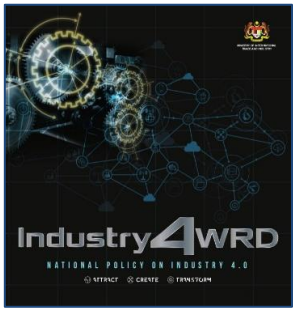
#	Policy	Description	Competition aspect	Data privacy and protection aspect
		It serves as a foundational document to various plans, including the RMKe-12 and the MDEB. The policy sets a timeframe of ten years (from 2021 – 2030) to improve the following, with 4IR technologies: 1. The *rakyat* to have an improved quality of life; 2. Businesses to become more productive, competitive and innovative through streamlined bureaucratic and policy processes; and	infrastructure, which will enable higher accessibility and adoption of companies towards 4IR technologies to promote healthy competition. Another part of this policy addresses the need to expand the digital marketplace for the underserved rural community to bridge the technology adoption gap. .	legislation on cyber security and enhance personal data protection law, regulations and guidelines. This future-proofs the regulations, at the same time improves the ease of doing business and safeguards the society's interests.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		3. Government to be technologically enabled and able to provide more efficient and effective public services. The policy will be realised through four policy thrusts, 16 strategies and 32 national initiatives. Similar to the MDEB, the N4IRP is being implemented by MyDIGITAL Corporation.		

Source: Secondary research and MyCC's analysis

3.4.3 Related policies

Table 5: Related policies to the digital economy

#	Policy	Description	Competition aspect	Data privacy and protection aspect
1	**National Policy on Industry 4.0 (Industry4WRD)** *by MITI* 	Aims to facilitate the adoption of Industry 4.0 technologies across the manufacturing sector. This policy promotes the use of automation, AI and other advanced technologies to enhance productivity and competitiveness.	Indirectly addresses anti-competitive issues in the digital economy by supporting firms in overcoming challenges related to lack of awareness, adoption, and high investment costs. This is achieved through assessment platforms and tax-based incentives, which are particularly beneficial for SMEs, enabling them to compete more effectively with larger, more dominant players.	Highlights the importance of data integrity, security, and analysis as important areas to ensure seamless data flow across value chains. Also covers the need for centralised and easily accessible information to better help firms protect their data handling, ownership, and

#	Policy	Description	Competition aspect	Data privacy and protection aspect
				storage, ensuring compliance with relevant privacy and protection laws.
2	**National E-Commerce Strategic Roadmap (NESR)** *by MDEC under the Ministry of Digital* 	Launched in 2016, the National E-Commerce Strategic Roadmap (NESR) was implemented from 2017 to 2020 and guided by the National E-Commerce Council. With a supportive governance framework and infrastructure, it was aimed at accelerating the growth of e-commerce with focus on six strategic thrusts:	Highlights the need to boost consumer and business confidence in e-commerce, given the ongoing deterrence and enforcement challenges in the sector. One example of this is the establishment of the NESR Taskforce, which is responsible for overseeing effective e-commerce strategies and action plans.	Addressed indirectly through enhanced data gathering and publication efforts, which provide more accurate and comprehensive data. By making data reporting and availability more accessible, stakeholders are better equipped to make informed

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		Accelerate seller adoption of e-commerce. Increase adoption of eProcurement by businesses. Lift non-tariff barriers, Realign existing economic incentives. Make strategic investments in selected e-commerce players. Promote national brand to boost cross-border e-commerce. NESR 2.0 was developed at the end of NESR 1.0 in	These include initiatives focused on adoption, innovation, fulfilment capabilities, as well as consumer and seller protection. Such efforts aim to enable businesses of all sizes to compete more effectively, expand the addressable market, and enhance regional competitiveness.	decisions and take effective actions. NESR 2.0 indirectly addresses data privacy and protection through enhanced data collection and reporting efforts. These initiatives help businesses make informed decisions and improve their practices by providing accurate, comprehensive data, thus enhancing transparency in the

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		2020. Led by the NESR taskforce, this initiative is a nationwide collaborative effort between the public and private sectors aimed at boosting Malaysia's e-commerce ecosystem from 2021 to 2025. The roadmap focuses on three main goals: 1. Increasing e-commerce adoption 2. Improving ecosystem development 3. Strengthening the policy and regulatory environment		e-commerce ecosystem.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
3	**JENDELA (National Digital Infrastructure Plan)** *by MCMC under the Ministry of Communications* 	Five-year national digital infrastructure plan, starting from September 2020 until 2025. It is aimed at improving Malaysia's digital infrastructure by enhancing broadband connectivity and expanding access to high-speed internet across the country. By addressing connectivity issues, JENDELA supports the digital economy by enabling more Malaysians to engage in online activities.	Indirectly supports the digital economy by ensuring nationwide internet coverage, particularly through improvements in 4G connectivity in remote areas, fibre networks, and mobile broadband speeds. These efforts enable digital businesses to operate effectively while preventing potential exploitation of consumers. Additionally, the standardisation of electrical tariffs for communications services, aligned with industrial rates, helps create a level playing field among competitors. This prevents	No explicit mention/highlight of data privacy and protection within its framework.

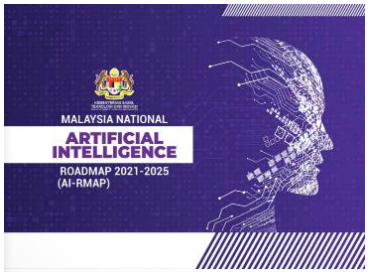
#	Policy	Description	Competition aspect	Data privacy and protection aspect
			large companies from leveraging their financial advantages to negotiate lower electrical rates due to their scale and purchasing power.	
4	**National Industrial Master Plan (NIMP) 2030** *by MITI* 	The NIMP 2030 is a seven-year industrial policy aimed at enhancing the competitiveness and sustainability of Malaysia's manufacturing and manufacturing-related services sectors. It emphasises the integration of digital technologies, including automation, AI, and data-driven decision-making, to drive productivity and innovation.	Highlights the needs for companies to embrace digital transformation to improve productivity, create value, and spur innovation, especially for SMEs. Under Mission 2, the policy aims to streamline and modernise all interactions between the government and businesses, from start-up to operation, ensuring efficiency, transparency, and ease of doing business.	Emphasises the need for a national digital platform for analytics and to facilitate data sharing and collaboration among stakeholders. Proposes using Generative AI in various industries such as healthcare and finance in line

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		Specifically, chapter 6 of the plan focuses on the market structure of digital and ICT services, recognising their critical role in supporting industrial growth. It outlines the need to strengthen the ecosystem for digital and ICT services by promoting fair market practices, supporting the entry of new players, and addressing issues related to market concentration and dominance. The chapter also highlights the importance of fostering collaboration of fostering collaboration	These efforts will help businesses, especially SMEs, to lower their operational costs and reduce barriers to entry. Under chapter 6, it highlights the need to address market concentration in digital and ICT services by promoting fair competition and reducing barriers for smaller players. It emphasises policies to foster innovation, support new entrants, and prevent anti-competitive practices. By ensuring a more balanced market structure, the plan aims to enhance opportunities for SMEs and encourage a	with parameters under the PDPA to ensure compliance with data protection laws.

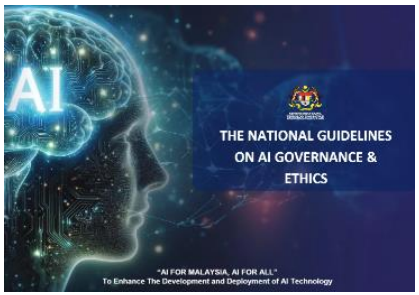
#	Policy	Description	Competition aspect	Data privacy and protection aspect
		between public and private sectors to develop a robust digital infrastructure that aligns with global standards.	dynamic and competitive digital economy. The policy also focuses on workforce measures such as proposing a multi-tiered levy mechanism to support SMEs in upgrading their tech and to ensure supply chain resilience.	
5	**Malaysia Cyber Security Strategy 2020-2024 (MCSS)** *by National Cyber Security Agency (NACSA) under the National Security Council (NCS) of Prime Minister's Department*	Aims to strengthen Malaysia's cybersecurity framework. It outlines strategic initiatives to protect the nation's critical information infrastructure (CII), promote cybersecurity awareness, ensure the resilience of digital services against cyber threats and	No explicit mention/highlight of anti-competition. However, the initiative to ensure businesses are aware of data protection and strengthen cybersecurity leads to improved measures in safeguarding users' data.	Includes implementing policies, procedures, and guidelines related to data protection, public key infrastructure, and electronic information management.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		enhance public trust in digital services. It fosters a secure environment for online transactions and digital services and enhances consumer confidence in e-commerce and other online activities.	Not only will it ensure businesses are better equipped to protect their customers' information, enhancing overall data security and trust, but it will also encourage customers to engage with a wider range of businesses, further supporting a competitive and vibrant digital economy.	These efforts will be realised through the development of a data leakage protection mechanism, carried out under the National Cryptography Policy.
6	**National Cloud Policy** *by Ministry of Digital*	According to the Prime Minister's speech at Google's groundbreaking ceremony on October 2, 2024, the policy is set to be finalised in 2025 and designed to enhance Malaysia's digital ecosystem by fostering public service innovation,	No explicit mention/highlight of anti-competition. However, the policy aims to ensure that SMEs and startups enhance their cloud technology for innovation, operational	Strengthening user trust and data security is one of the four core areas of the National Cloud Policy. Aims to establish robust security frameworks and

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		economic competitiveness, data security and inclusivity By modernising public services through cloud technology, it seeks to make government operations more accessible, responsive and transparent. The policy also supports economic growth by helping SMEs and startups adopt cloud technology, boosting their innovation and global reach. In addition, the policy emphasises user trust and data security, establishing safeguards across public	efficiency, and access to global markets. This means these businesses will have the resources to innovate and improve their operations, allowing them to compete more effectively with larger companies indirectly.	protocols to protect sensitive data and critical infrastructure in both public and private cloud environments. This focus ensures that as digital adoption increases, user data remains secure, thereby fostering trust in digital services.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		and private sectors to protect sensitive information. Lastly, this policy promotes digital inclusivity, ensuring all Malaysians have access to digital services and bridging the digital divide for an equitable digital society.		
7	**Malaysia Artificial Intelligence Roadmap 2021 - 2025 (AI-RMAP)** *by MOSTI* 	Aims to make Malaysia an AI-driven economy through six key strategies. It establishes AI governance with policies, standards and a National AI Park to guide responsible growth. National and global R&D initiatives will also be	Highlights the need for Malaysian organisations to invest in digital platforms, such as hyper-scale intelligent cloud, rather than relying on traditional IT infrastructure, to maintain a competitive edge. Additionally, it aims to clarify the challenges of data	Highlights the need for companies to improve data governance to protect sensitive data and prevent data breaches whether through government guidelines, legal agreements /

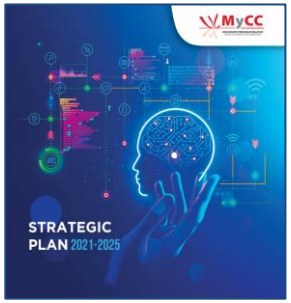
#	Policy	Description	Competition aspect	Data privacy and protection aspect
		initiated to boost innovation across sectors, while digital infrastructure upgrades to enhance AI accessibility. Talent development is also prioritised through education and reskilling programs to build a skilled workforce. Furthermore, AI awareness initiatives to promote AI adoption across industries and create a sustainable AI innovation ecosystem with the AI-Catalyst Hub connecting government, academia, industry and society, will be carried out.	sharing for AI implementations in the digital marketplace by developing clear data classification guidelines. This will promote responsible data sharing and collaboration, ensuring that data is exchanged fairly and transparently across the digital ecosystem.	templates, or through new technologies such as Responsible AI etc.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
8	**National Guidelines on AI Governance & Ethics** *by MOSTI* 	Aims to strengthen Malaysia's digital economy by promoting responsible, trustworthy AI aligned with Malaysia's National AI Roadmap (2021 - 2025). These guidelines are anchored in seven core principles (fairness, reliability, safety, privacy and security, inclusiveness, transparency, accountability and human-centred benefit). By mitigating AI-related risks, this framework ensures equal distribution of AI's benefits and prioritises the well-being of citizens, while	Promotes responsible AI development, especially when it comes to promoting competition and preventing anti-competitive behaviour. Also proposes the development of national AI guidelines for policy makers, developers, designers, technology providers, and suppliers that will promote transparent, explainable, and fair AI practices.	Proposes consumer protection principles for AI, including the rights to information, to object, to be forgotten, and to interact with a human instead of AI, to collectively redress and be compensated. It also proposes synergistic implementation with the National Cyber Security Agency to strengthen Malaysia's cyber defence and

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		enhancing national productivity, driving economic growth and building a competitive edge. It also fosters public trust in AI technologies, maximising their value and ensuring fair, secure and transparent practices across sectors, enriching consumer experiences and advancing digital innovation.		enhance its resilience against emerging AI-related threats.
9	**Malaysia Startup Ecosystem Roadmap (SUPER) 2021 - 2030** *by MOSTI*	Aims to position Malaysia among the Top 20 global startup ecosystems by 2030. This objective will be realised through 16 strategic initiatives	Outlines six critical interventions to foster a competitive startup environment, including the establishment of a regulatory sandbox -	No explicit mention/highlight of data privacy and protection.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		focused on five main thematic drivers. By nurturing a vibrant startup ecosystem, Malaysia aims to drive economic growth, create employment opportunities, and establish itself as a centre for innovation and entrepreneurship.	National Technology and Innovation Sandbox (NTIS), the promotion of open data, and the development of a startup-friendly legal framework. Such interventions are meant to provide a safe space for startups to test innovative products and services without the heavy burden of regulatory compliance, thereby promoting innovation and innovation and competition within the ecosystem.	
10	**Ministry of Domestic Trade and Cost of Living's (KPDN) Strategic Plan 2021-2025**	Aims to strengthen domestic trade through value creation and digitisation, push for the	Details various strategic initiatives aimed at creating a conducive business environment that	Proposes strengthening the redress mechanism through the Tribunal

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		adoption of innovation and technology to serve as companies' foundation and instil rational consumer behaviour through empowering consumers and civil societies. The plan consists of five strategic thrusts, with a key focus on advancing domestic trade. To achieve this, the policy will encourage initiatives such as the increased usage of technology in businesses and strengthening of the business innovation ecosystem.	encourages innovation, the application of technology, and ethical best practices among local industry players. The plan also proposes the development of a technology-enabled supply chain aimed at enhancing supply chain effectiveness and optimisation, which could potentially reduce reliance on middlemen and mitigate the risk of monopolistic practices, particularly in e-commerce.	of User Claims Malaysia (TTPM) and enhance user on their rights and responsibilities. This will help users make more informed decisions regarding their data in a responsible manner. Additionally, the plan suggests optimising technology to provide efficient and appropriate services, including the development of a cyber-secure, cloud-based

#	Policy	Description	Competition aspect	Data privacy and protection aspect
				commercial environment that ensures data protection and security against cyber threats.
11	**MyCC's Strategic Plan 2021-2025** 	This Strategic Plan marks the commission's third five-year plan. With overall economic growth set to recover from the COVID-19 pandemic, it aims to support the country's recovery measures, growth of new economic sectors such as markets for e-commerce and innovation and promote environmental, social, and governance (ESG) agenda for businesses.	Ensures that businesses refrain from engaging in anti-competitive practices, such as cartels and abuse of dominant positions in the marketplace (including digital markets). Plan also includes to continue advise other sector regulators, ministries, and government agencies on competition-related policies to ensure consistency in the application of competition	No explicit mention/highlight of data privacy and protection.

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		As part of its strategic initiative, MyCC is conducting a comprehensive market study on digital markets to enhance its understanding of the rapidly evolving digital economy. This in-depth analysis aims to identify potential competition concerns arising from the accelerated digitisation of businesses in Malaysia. The study underscores MyCC's commitment to adapting its regulatory approach in response to the changing market dynamics, ensuring fair	policy and law in the Malaysian markets. Additionally, it aims to expand and strengthen MyCC's cooperation and collaboration at both international and regional levels. With the goals established in this plan, the MyCC has decided to conduct market studies in the digital economy to better understand and identify potential competition issues, extending beyond the e-commerce sector to include other critical elements of digital markets.	

#	Policy	Description	Competition aspect	Data privacy and protection aspect
		competition in the digital landscape.		

Source: Secondary research and MyCC's analysis

3.5 Digital economy-related regulation

Malaysia's digital economy is supported by a regulatory framework that promotes innovation, protects consumer rights, and ensures data security. Although there is no specific act for the sector, 14 relevant laws can be considered as governing regulations for Malaysia's digital economy[129]:

Table 6: Digital economy-related regulation in Malaysia

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
1	**Competition Act 2010 (Act 712)** *by the MyCC under the Ministry of*	Aims to protect the competition process by prohibiting anti-competitive agreements such as	Relevant across all sub-sectors by ensuring fair business practices in	Key legislation that establishes a legal framework to prevent and address business behaviours and	Indirectly covers data privacy and protection in the context of preventing sensitive

[129] MyCC analysis

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
	Domestic Trade & Cost of Living (KPDN) 	price-fixing and the abuse of dominant position in the market. It is also to ensure fair business operations to improve quality, provide better choices and offer competitive prices for goods and services.	pricing and service delivery.	activities that could harm competition in the market. Key provisions include: • Section 4: Prohibition of horizontal and vertical agreement; • Section 10: Prohibition of abuse of dominant position.	data sharing during investigations and proceedings, subsequently rights of action for relief for individuals. Key provisions include: • Section 21: Protection of confidential information • Section 64: Rights of private action
2	**Personal Data Protection Act 2010 (Act 709)** *by the Department of Personal Data*	Protects personal data in commercial transactions by regulating how personal information is collected, stored, and	Highly relevant to e-commerce and digital advertising, where personal data is widely	Strict data protection requirements can limit data sharing and collaboration between companies, preventing larger	Strict guidelines for companies to adhere to ensure consumers' awareness and acknowledgement of

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
	Protection (PDP) under the Ministry of Digital 	used. Personal data refers to any information about an individual, such as their name, address, contact details, and even sensitive data (e.g., physical and mental health condition, political opinions, religion beliefs, etc.). The act applies to data processed either automatically or as part of a relevant filing system, requiring data controllers and processors to protect this information to	used and processed. It ensures that consumers' personal data is treated with respect and protection.	companies from exploiting consumer's personal data for their own benefit (except for the purpose of credit reporting). Key provisions include: • Section 6: General principle of processing personal data • Section 8: Disclosure principle • Section 129: Transfer of personal data to places outside Malaysia	having their personal data processed. Key provisions include: • Section 7: Notice and choice principle • Section 9: Security principle • Section 30: Right of access to personal data • Section 38: Withdrawal of consent to process personal data • Section 40: Processing of

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		prevent misuse or abuse.			sensitive personal data • Section 43: Right to prevent processing or purposes of direct marketing • Section 130: Unlawful collecting etc. of personal data
3	**Communications & Multimedia Act 1998 (Act 588)** *by MCMC under the Ministry of Communications*	Regulates the communications and multimedia industries and provides a legal framework for the development of the industries.	Relevant across all sectors by ensuring equitable access to communication	Fosters a competitive market, encourages innovation and the introduction of new services and technologies; also prevents anti-	Ensures that any inquiry or report excludes confidential information and prevents unlawful interception and disclosure of

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
			and multimedia services.	competitive practices which aims to promote fair competition by regulating monopolistic behaviours. Key provisions include: • Section 133: Prohibition on anti-competitive conduct • Section: 135: Prohibition on entering into collusive agreements • Section 136: Prohibition on tying or linking arrangements	communications that may contain sensitive personal information. Key provisions include: • Section 63: Confidential material not to be disclosed • Section 65: Report on an inquiry • Section 80: Publication of information • Section 234: Interception and disclosure of communications prohibited

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
				• Section 137: Determination of dominant licensee	
4	**Electronic Commerce Act 2006 (Act 658)** *by KPDN* 	Ensure electronic transactions are as legally binding and enforceable as traditional paper-based counterparts.	Directly relevant to e-commerce, underpinning online transactions and digital marketplaces.	Indirectly promotes competition by lowering market entry barriers for new and small businesses, ensuring that electronic transactions are legally valid and enforceable. Key provisions include: • Sections 6 – 7: Legal recognition of electronic message	Promotes some form of protection or steps, to ensure the integrity of information in its original form is protected and completely unaltered. Key provisions include: • Section 12: Original

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
				• Sections 8 – 16: Fulfilment of legal requirements by electronic means • Sections 17 – 24: Communication of electronic message	
5	**Digital Signature Act 1997 (Act 562)** *by MCMC under the Ministry of Communications*	Ensures the validity and enforceability of digital signatures.	Particularly relevant for e-commerce and online transaction platforms.	Enables secure digital transactions, therefore indirectly lowers barriers to entry and promotes market participation by establishing trusted digital signature standards. Key provisions include:	Indirectly provides guidance to ensure that private keys are kept secure and that digital signatures are protected. Key provisions include: • Sections 43 – 45: Control of private key

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
				• Sections 22 – 26: Requirements of licensed certification authorities • Sections 38 – 42 Representations and duties upon acceptance of certificate • Section 26: Requirements as to advertisement	• Sections 62 – 67: Effect of digital signature • Section 72: Obligation of secrecy • Section 73: False information
6	**Consumer Protection Act 1999 (Act 599)** *by KPDN*	Ensure fair trade practices, prevent exploitation and provide redress mechanisms for consumers.	Relevant to all sectors, especially e-commerce and digital advertising, protecting	Addresses consumer-related aspects of market competitions (e.g., misleading and deceptive practices, unfair trading), contributing to a comprehensive	Includes some provisions covering protection of consumers' personal data. Key provisions include:

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
			consumer rights.	regulatory environment that supports both consumer rights and fair competition. Key provisions include: • Section 10: False or misleading representation • Section 12: Misleading indication as to price • Section 28: Defence of innocent publication of advertisement •	• Section 24X: Restriction on disclosure or circulation of personal data • Section 139: Use of confidential information
7	**Postal Services Act 2012 (Act**	Pursuant to Section 12(1) of the Postal	Particularly relevant to e-	Provides guidelines on anti-competitive	Some form of acknowledgement

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
	741) *by MCMC under the Ministry of Communications* 	Services Act 2012, the licensing requirement under the Act does not apply to the categories specified in the First Schedule. As such, these categories fall outside the MCMC's jurisdiction for licensing, and any competition issues related to these categories will fall within MyCC's purview: 1. Trade announcements, circulars, printed extracts from newspapers, or advertisements,	commerce logistics and delivery services.	conduct in the postal sector, with specific guidelines to be determined by MCMC to ensure fair competition and consumer protection. Key provisions include: • Section: 34: Postal financial services • Sections 36 – 37: Regulation of rates • Sections 38 – 48: General competition practices	that only authorised officers conducting search with a warrant can access computerised data. Key provisions include: • Section 81: Access to computerised data

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		without any name, address or other particulars of the recipient. 2. Postal articles delivered by an employee of the sender. 3. Postal articles delivered by a messenger on request by the sender specifically for that purpose, not being a person employed or engaged in the course of his business or employment in delivering or procuring the		• Sections 49 – 56: Consumer protection	

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		delivery of postal articles. 4. Postal articles exceeding two kilograms in weight per postal article. 5. Postal articles sent with the goods and delivered together with the goods. 6. Postal articles carried to or from a post office. 7. Postal articles carried in accordance with an agreement entered into by the licensee. 8. Transfers between document exchanges.			

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		9. Electronic postal services. 10. Postal articles carried and delivered by a private friend without hire, reward or other profit. 11. Postal articles carried and delivered personally by the sender.			
8	**Cyber Security Act 2024 (Act 854)** *by Ministry of Digital*	Provision of a legal framework safeguarding the nation's cyber defences and enhancing resilience against cyber threats.	Relevant to all sectors reliant on digital transactions and communicatio ns.	Helps to protect consumer data, thereby enhancing trust and encouraging competition among businesses.	Guidelines on how companies with national critical information should conduct themselves or act in the event of

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		The Act also establishes the National Cyber Security Committee.		Key provisions include: • Sections 25 – 26: Code of practice • Sections 27 – 34: Cyber security service provider	a cyber-security breach. Key provisions include: • Section 21: Duty to implement code of practice • Section 22: Duty to conduct cyber security risk assessment and audit • Section 23: Duty to give notification on cyber security incident • Section 24: Cyber security exercise

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
					• Section 35: Cyber security incident
9	**Financial Services Act 2013 (Act 758)** *by Bank Negara Malaysia (BNM)* 	Regulates financial institutions, payment systems and other relevant entities, as well as oversees money market and foreign exchange market to promote financial stability.	Relevant to mobile operating and payment systems, governing payment transactions.	Establishes a regulatory framework to promote the stability and integrity of the financial sector, indirectly fostering competition by ensuring consumer trust in financial institutions. Key provisions include: • Sections 8 – 29: Authorization and registration • Sections 30 – 45: Payment systems	Provides a framework to safeguard customer information by establishing obligations for financial institutions to ensure confidentiality and specify conditions for lawful disclosures, reinforcing data privacy and protection within the financial sector. Key provisions include:

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
				• Section 124: Prohibited business conduct Sections 135 – 139: Restrictions relating to consumer protection	Sections 131 – 134: Information and secrecy
10	**Payment Systems Act 2003 (Act 627)** *by BNM* 	Regulates payment systems, ensuring their stability, security, and efficiency. The Act governs payment instruments, services, and infrastructure to ensure proper functioning of payment systems in the financial sector.	Relevant to e-commerce (digital transactions), OTA and mobile platforms that rely on secure payment processing.	No explicit mention of matters related to competition. However, Act ensures proper market conduct in payment systems, which may prevent potential anti-competitive practices.	No explicit mention of matters related to personal or private data privacy and protection.

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		This includes electronic payment systems, card payments, and mobile payments.			
11	**Islamic Financial Services Act 2013 (Act 759)** *by BNM* 	Regulates Islamic financial institutions, payment systems, and other relevant entities, and oversight of the Islamic money market and Islamic foreign exchange market to promote financial stability and Sharia compliance.	Relevant to mobile operating systems, payment systems, and e-commerce in Islamic finance.	Indirectly supports competition in the Islamic finance sector by ensuring fair and transparent operations in line with regulatory requirements, fostering innovation and consumer choice in financial services. Key provisions include: • Sections 8 – 26: Authorization	Provides a framework for safeguarding customer information in Islamic financial institutions by outlining obligations to maintain confidentiality and conditions for lawful disclosures, thereby reinforcing trust and compliance within

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
				• Sections 27 – 28: Shariah requirements • Sections 39 – 55: Payment systems • Section 136: Prohibited business conduct Sections 147 – 151: Restrictions relating to consumer protection	the Islamic finance sector. Key provisions include Sections 142 – 146: Information and secrecy
12	**Copyright Act 1987 (Act 332)** ***by*** *MyIPO under KPDN*	Governs the protection of original works, including literary, artistic, and software creations, detailing ownership, duration, and	Relevant to e-commerce and digital advertising, regulating the use of creative works.	Protects creative works, thereby encouraging innovation and competition in the digital economy. Ensures businesses	Prohibits unauthorised disclosure of information obtained under the Act, safeguarding sensitive data

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
		enforcement of copyright rights.		can safeguard their intellectual property, which is crucial for maintaining competitive advantages. Key provisions include: • Sections 13 – 25A: Nature and duration of copyright • Sections 26 – 27 – Ownership and assignment of copyright Sections 27A – 27L: Copyright licensing	Key provision Section 52: Disclosure of information
13	**Computer Crimes Act 1997 (Act 563)** *by*	Addresses cybercrimes such as unauthorised access,	Relevant to all sub-sectors by ensuring a	Enhances competition by reducing risks of data theft and	Protects against unauthorised access and manipulation of

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
	Ministry of Communications 	data breaches, and misuse of computer systems.	secure digital environment, particularly for e-commerce and digital advertising.	sabotage, protecting businesses from malicious attacks	personal and sensitive data. Key provisions include: • Section 3: Unauthorised access to computer material • Section 5: Unauthorised modifications of the contents of any computer
14	**Electronic Government Activities Act 2007 (Act 680)**	Provides the legal framework for electronic government services, ensuring transparency	Supports e-commerce by legitimising digital processes in	Promotes a level playing field for businesses engaging in government	Ensures secure data handling in digital government transactions.

#	Act	Description	Relevance to the 4 sub-sectors	Relevance to competition	Relevance to data privacy and protection
	by Ministry of Communications 	and accountability in digital governance	government interactions	tenders through e-platforms	Key provision includes: • Section 7: Confidentiality and security in e-transactions

Source: Secondary research and MyCC's analysis

Despite the above-mentioned policies and regulations provide a strategic direction for the digital economy, several potential gaps in the policy and regulatory landscape have been identified, including:

3.5.1.1 Absence of an overarching act and lack of ex-ante legislation

In Malaysia, there is currently no comprehensive framework specifically designed to regulate competition within the digital economy. Considering the uniqueness and rapid development of this industry, existing regulations may not be sufficient to address the potential challenges and complex dynamics it presents. This situation is further complicated by the dominance of majority large foreign players in the digital market, which might be beyond the regulatory reach of the local government.

There are existing foreign regulations that specifically target the digital economy market, with a particular focus on efforts to regulate Big Tech companies. Developed countries and regions, such as the UK and the EU have made strides toward more proactive or ex-ante regulation—for example the EU's DMA, introduced in 2022 and effective in 2023 and the UK's Digital Markets, Competition and Consumers (DMCC) Act, published in 2024 and already set into force in 2025.

Specifically, on the DMA, the Digital Markets Act (DMA) aims to establish a framework for fair and competitive markets in the digital sector. It applies to all platforms operating in the EU, regardless of their physical location, with a particular focus on 'gatekeepers.' These are large online platforms that have a significant impact on digital markets, defined by[130]:

- Either with an annual turnover of at least EUR 7.5 billion in the last three financial years or a market value of at least EUR 75 billion in the previous financial year and operations in at least three member states.

- Served more than 45 million monthly active end users.

[130] European Commission (2023). Remarks by Commissioner Breton: Here are the first 7 potential "Gatekeepers" under the EU Digital Markets Act. https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_23_3674

- More than 10,000 yearly active business users during the last three years on a number of core platform services, such as social network, Number-Independent Interpersonal Communication Service (N-IICS), video sharing, intermediation, video sharing, search, browser, ads and operating system.

Consequently, as of May 2024, seven companies have been considered as gatekeepers, after being assessed and found to fulfill the criteria outlined in the act. The gatekeepers are Alphabet, Amazon, Apple, Booking, ByteDance, Meta and Microsoft[131]. The DMA has set out some specific dos and don'ts for "gatekeepers" to abide by, as below:

Dos:

- Enable third-party integration with the gatekeeper's services under specific circumstances.

- Permit business users to access the data they generate while using the gatekeeper's platform.

- Equip companies advertising on their platform with the necessary tools and information for independent verification of their advertisements.

- Allow business users to promote their goods or services and establish contracts with customers outside of the gatekeeper's platform.

Don'ts:

- Favouring the gatekeeper's own services and products in rankings over similar offerings from third parties on the platform.

- Restricting consumers from connecting to businesses outside the gatekeeper's platform.

[131] European Union (2023). Gatekeepers. https://digital-markets-act.ec.europa.eu/gatekeepers_en

- Preventing users from uninstalling any pre-installed software or app (for instance, on a new smartphone).

- Tracking end users outside the gatekeeper's core platform service for targeted advertising without effective consent.

While regulation aims to improve market fairness, over-regulation can sometimes lead to unintended consequences. For example, the DMA requires platforms to provide third-party developers with equal access to certain functionalities, such as Apple's AirDrop and AirPlay[132]. While this may promote fairness, it can also discourage key players from continuing to innovate, creating a situation where it becomes more attractive to copy existing features rather than investing in the development of new solutions.

Furthermore, due to the extensive reach of these large companies, any regulation on them often affects other businesses as well. For instance, under the DMA, Google Search can no longer showcase its own vertical services—such as Google Maps or Google Hotel Ads—on search results, as these were deemed as "self-preferencing." As a result, when a Google user searches for hotels in Europe, they can no longer view key hotel details directly and easily in the search results, such as prices or locations[133, 134]. Instead, users must click through to the preferred search result to view the information. According to Mirai[135], a hospitality digital marketing and technology solutions company, this change has led to an estimated 30% drop in clicks to hotel websites and a 36% decline in direct bookings.

A balanced regulatory approach is therefore essential to ensure market fairness without stifling innovation and impacting business growth.

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[132] Gizmodo (2024). Apple Airdrop for Android? It sounds like a dream that will never come true. https://gizmodo.com/apple-airdrop-for-android-it-sounds-like-a-dream-that-will-never-come-true-2000541134

[133] D-Edge (2024). The DMA is changing Google search, but not how hoteliers had hoped. https://www.d-edge.com/the-dma-is-changing-google-search-but-not-how-hoteliers-had-hoped/

[134] Search Engine Roundtable (2024). Google completes DMA hotel tests in search. https://www.seroundtable.com/google-completes-dma-hotel-tests-38572.html

[135] Mirai (2024). DMA implementation sinks 30% of clicks and bookings on Google Hotel Ads. https://www.mirai.com/blog/dma-implementation-sinks-30-of-clicks-and-bookings-on-google-hotel-ads/

3.5.1.2 Unclear jurisdictional boundaries between regulatory bodies

The legal infringement on anti-competitive or unlawful market practices in the digital market may primarily fall under the purview of the MyCC. However, it may also extend to other regulatory bodies, such as the MCMC, which oversees telecommunications, broadcasting and postal services, or the SC, which regulates fintech and digital financial services. This overlapping jurisdiction can lead to ambiguity and inconsistent enforcement, which may hinder fair competition, stifle innovation and diminish consumer trust.

In the realms of policies and roadmaps, the same challenges may persist where seemingly similar strategic initiatives with overlapping themes are managed or steered by different ministerial bodies, which is particularly evident when it comes to new advanced technologies.

For example, Industry4WRD: National Policy on Industry 4.0 is governed by the MITI whereas National 4IR Policy (N4IRP) is governed by the Ministry of Economy. Similarly, AI-related matters fall mainly under the Ministry of Digital as it involves data but at the same time, addressing the risks and harms of AI requires involvement from the Ministry of Science, Technology, and Innovation. Unclear boundaries are also further pronounced when policies and legislative acts are embedded or referenced by one another, potentially creating challenges for businesses navigating the competitive landscape[136].

3.5.1.3 Coverage on new developing technology

The PDPA 2010 (Act 709) by the Department of Personal Data Protection (PDP), serves as the Malaysia's main form of legislation that regulates the processing of personal data in commercial transactions. However, it has faced challenges in addressing the complexities introduced by emerging technologies such as AI and ML. These technologies often function as "black box (where internal processes are not transparent or easily understood)", which complicates compliance with PDPA's requirements

[136] Tech for Good Institute (2024). Shaping the digital future: Regulatory updates from Malaysia. https://techforgoodinstitute.org/blog/expert-opinion/shaping-the-digital-future-regulatory-updates-from-malaysia/

for transparency and accountability, which are critical for fostering trust and competition in the digital economy.

Some of the risks involved in trying to regulate new technologies alongside PDPA include:

- Overregulation that is excessively implemented could stifle innovation and growth within the industry and hinder development for new technologies.

- Compliance burdens as companies may face significant compliance costs to meet the requirements of the act, which could deter smaller companies from entering the market and increase operational costs for existing businesses.

- Legal ambiguities should the definitions be unclear and misunderstood may result in additional precaution by companies to navigate these complexities and could lead to less competitive market behaviour as businesses err on the side of caution to avoid legal pitfalls.

- Flexibility challenges because as new technology continues to evolve, so will the regulations to remain effective, which requires balancing innovation with compliance to prevent market distortions.

- Implementation risks as regulation may disproportionately affect players in the industry depending on how well regulators understand the market structure and competitive dynamics.

3.5.1.4 Coverage on existing data protection regulation

In 2013, an additional requirement was introduced under the PDPA, mandating that specific classes of data users register as “data users”. However, this requirement excluded foreign companies from mandatory registration. While the PDP encourages foreign companies to comply voluntarily, enforcement remains challenging due to limited resource. Furthermore, the PDPA only applies to personal data processed for commercial transactions, exempting government entities (largest data

processors in Malaysia) and not covering data processed outside Malaysia. These limitations created gaps in the legal framework[137].

To address these gaps and align with international standards, Malaysia introduced the PDPA (Amendment) Act 2024. Key amendments include:

- **Data Transfer Abroad**: Effective 1 April 2025, data controllers can transfer personal data outside Malaysia if the destination has laws substantially like PDPA or ensures an adequate level of protection equivalent to the PDPA.

- **Mandatory Data Protection Office (DPO) Appointment:** Starting 1 June 2025**,** data controllers and processers engaged in large-scale data processing must appoint a DPO. The DPO will oversee compliance with PDPA requirements, ensuring the data protection measures are effectively implemented.

- **Data Portability Rights:** Effective 1 June 2025**,** data subjects gain the right to request the transfer of their personal data from one data controller to another, provided the transfer is technically feasible and compatible with existing data formats. This empowers individuals with greater control over their personal data.

The reliance or co-regulation alongside PDPA extends to national and digital-related policies, such as the MDEB. These policies often reference the PDPA to address data privacy and protection without elaborating on the necessary boundaries and coverage. For instance, under Strategic Thrust 4: Strengthen Cross-Border Data Transfer Mechanisms and Protection, the blueprint mandates both the Ministry of Communications and MITI to co-lead efforts in establishing cross-border data transfer provisions. This initiative aims to facilitate seamless data flows while maintaining adequate levels of protection[138].

[137] Thomas Philip (2020). Personal data privacy in Malaysia: An introduction. https://www.thomasphilip.com.my/articles/personal-data-privacy-in-malaysia-an-introduction/

[138] Ministry of Economy (2019). Malaysia Digital Economy Blueprint, page 60. ttps://ekonomi.gov.my/sites/default/files/2021-02/malaysia-digital-economy-blueprint.pd

The PDPA (Amendment) Act 2024, particularly section 129, complements this by removing the whitelist regime for cross-border transfer. While this amendment aligns the PDPA with international practices, its implementation relies heavily on collaboration between regulators, such as MCMC, MITI, and the PDP. Furthermore, national policies often incorporate the PDPA without clearly defining its boundaries or specifying how co-regulation should function in practice. This lack of clarity can result in fragmented enforcement and inconsistent application of data protection measures, particularly when addressing emerging technologies and cross-border data transfer. The absence of unified approach could hinder Malaysia's efforts to establish itself as a secure and competitive digital economy.

3.5.1.5 Overlapping coverage of competition-related matters

While the Competition Act 2010 (Act 712), administered by MyCC, serves as the primary law for competition issues across all sectors, other acts, such as the Postal Services Act 2012 (PSA)[139] and the Communications and Multimedia Act 1998 (CMA)[140] under the MCMC also address competition concerns within their respective domains.

For example, in assessing the dominant position of a licensee or player, PSA and CMA consider a market share exceeding 40% in the postal and communication market as "high", whereas MyCC considers a market share threshold of over 60%[141] as an indicator of a dominant enterprise in relation to general markets.

This situation underscores that different regulatory bodies may interpret competition issues in varying ways, depending on their market understanding, leading to overlap in governance. Such inconsistencies can cause inefficiencies and confusion for businesses, impacting both

[139] MCMC (2024). Guidelines on dominant position (postal services industry). https://mcmc.gov.my/skmmgovmy/media/General/Resources/Guidelines-on-Dominant-Position-Postal-Services-Industry.pdf

[140] MCMC (2014). Guideline on dominant position. https://mcmc.gov.my/skmmgovmy/media/General/pdf/Commission-Guideline-on-Dominance-in-a-Communications-Market-Final.pdf

[141] MyCC (2012). Guidelines on abuse of dominant position. Chapter 2: Prohibition, page 4. https://www.mycc.gov.my/sites/default/files/pdf/newsroom/MYCC%204%20Guidelines%20Booklet%20BOOK2-6%20FA%20copy.pdf

enforcement and compliance efforts for enterprises operating across sectors.

In 2023, MyCC and MCMC signed a memorandum of understanding (MoU) to address exclusivity arrangements between telecommunications service providers and property developers or building management companies in high-rise buildings, including residential complexes. While this collaboration does not yet focus on digital platforms, there is potential for further cooperation between the two agencies, as well as with other relevant ministries and agencies (e.g., PDP), to harmonise regulatory frameworks.

3.5.1.6 Lack of coverage on key players

Certain key players in the identified sub-sectors are not covered by the relevant regulatory framework. For example:

E-commerce (marketplace): Merchants on the platforms are not required to be SSM-certified. They can register as individual sellers with just a valid personal identification document, meaning they are not subject to the Companies Act 2016.

OTAs: While the Tourism Industry Act 1992 mandates licensing for all travel agencies operating in Malaysia, only a few OTAs are licensed as of December 2024[142]:

- Malaysia Airlines Holidays Sdn Bhd
- AirAsia.Com Travel Sdn Bhd
- Global Airlines Holiday Sdn Bhd (airpaz.com)
- Traveloka Sdn Bhd
- BEX Travel Malaysia Sdn Bhd (expedia.com)

[142] MOTAC (2025). List of travel operating business and travel (TOBTAB). https://www.motac.gov.my/en/check/tobtab

- Klook Travel Technology Sdn Bhd

- Ctrip International Travel Malaysia Sdn Bhd (trip.com)

Furthermore, when it comes to policy and roadmap objectives and strategic initiatives, a lack of definition of relevant players has led to low adoption rates of digital adoption especially amongst SMEs and low outreach efficacy of suitable programmes by the responsible agencies. For instance, inadequate clarity regarding the obligations and rights of SMEs in relation to data governance under the PDPA may hinder their ability to comply effectively and leverage support programmes. Examples include the lack of awareness amongst eligible SMEs regarding schemes such as MSME Digital Grant and Smart Automation Grant under Madani policy[143].

3.5.1.7 Regulation of foreign participation in unregulated service sector

The "Guidelines on Foreign Participation in Distributive Trade Services in Malaysia 2010" introduced by the Ministry of Domestic Trade and Cost of Living (KPDN), aims to regulate various activities in the distributive trade sector. This includes businesses with foreign participation (more than 50% foreign equity) in the digital marketplace, which are required to obtain KPDN's approval. However, enforcement of these guidelines has been ineffective because the guidelines do not have the force of law. There are no legal sanctions, fines, or penalties for businesses that fail to comply, allowing some foreign operators to avoid obtaining approval. This lack of legal backing creates regulatory gaps and makes it difficult to ensure compliance.

Additionally, some businesses can operate in Malaysia without being incorporated locally, which bypasses the Companies Act 2016. This further complicates enforcement and leaves certain sectors unregulated.
Recognising these challenges, regulatory authorities are gradually taking steps to address the challenge of jurisdictional boundaries. For instance, in August 2024, the MCMC introduced a new regulatory framework. This

[143] The Malaysian Reserve (2024). Are Malaysian SMEs falling behind in the digital age? https://themalaysianreserve.com/2024/07/10/are-malaysian-smes-falling-behind-in-the-digital-age/

requires selected locally incorporated applications service providers[144, 145] in the areas of internet messaging (internet messaging service) and social media (content-sharing media platform) with eight million or more registered users to register for an Application Service Provider Class (ASP (C)) License by 1 January 2025. A grace period of five months from the Gazettement date (1 August 2024) was provided to all eligible providers to apply for the license and comply with the requirements. Full effect of the license took place on 1 January 2025.

The move will see selected providers required to comply with the license conditions, CMA 1998 and its subsidiary legislations (licensing regulations, licensing and exemption order and universal service provision regulations) and PDPA 2010[146].

It also allows the government to take proportionate measures based on risk assessments to address online harms, particularly online harms such as scams, cyberbullying, and sexual exploitation of minors. As of December 2024, the Malaysian government identified eight platforms that must obtain a license: WhatsApp, Facebook, Instagram, X, YouTube, Telegram, WeChat, and TikTok[147]. Additionally, a code of conduct outlining best practices was published[148] on 20 December 2024, following the public consultation report on the draft code released on 18 December 2024[149],

[144] Broad definition of "Applications Service Providers" under the CMA 1998 - person who provides an Applications Service

[145] PDP (2017). The personal data protection code of practice. https://www.pdp.gov.my/ppdpv1/wp-content/uploads/2024/07/KOD-TATA-AMALAN-PERLINDUNGAN-DATA-PERIBADI-UNTUK-SEKTOR-KOMUNIKASI-ENGLISH-VERSION.pdf

[146] MCMC (2024). Frequently asked questions (FAQ) on the regulatory framework for internet messaging service and social media service providers in Malaysia, page 3. https://www.mcmc.gov.my/skmmgovmy/media/General/pdf2/FAQ-for-Regulatory-Framework.pdf

[147] New Straits Times (2024). Govt names 8 platforms that must obtain license. https://www.nst.com.my/news/nation/2024/12/1150721/govt-names-8-platforms-must-obtain-licence

[148] MCMC (2024). Code of conduct (best practice) for internet messaging service providers and social media service providers. https://www.mcmc.gov.my/skmmgovmy/media/General/Resources/MCMC_Code-of-Conduct-Best-Practice-for-Service-Providers.pdf

[149] MCMC (2024). Public consultation report on the draft code of conduct (best practice) for internet messaging service providers and social media service providers. https://www.mcmc.gov.my/skmmgovmy/media/General/PressRelease/MCMC_Public-Consultation-Report-on-Draft-Code-of-Conduct-Best-Practice-for-Service-Providers-18122024.pdf

and a public consultation session held in October 2024[150]. The code will undergo periodic reviews to ensure its relevance and effectiveness in addressing emerging online issues[151].

As Malaysia continues to navigate the complexities of the digital economy, it is essential for regulators, businesses, and other stakeholders to collaborate in creating a competitive, fair and secure digital environment that benefits all Malaysians. Thus, addressing these regulatory gaps, enhancing cooperation among regulatory bodies, and focusing on the regulation of emerging technologies will further strengthen the framework, ensuring it remains robust and responsive to the dynamic digital landscape.

[150] Malaysia Kini (2024). MCMC releases social media code of conduct public consultation report. https://www.malaysiakini.com/news/729345

[151] The Star (2024). MCMC publishes code of conduct for internet and social media providers. https://www.thestar.com.my/news/nation/2024/12/20/mcmc-publishes-code-of-conduct-for-internet-and-social-media-providers

3.6 Sub-sector-related regulation

There are various regulations, standards, and codes that are specific to the four sub-sectors, each tailored to address the unique needs and challenges of these areas. The following provides an overview of these areas, with further details and analysis of the specific regulatory frameworks highlighted in each sub-sector chapter[152].

Table 7: Related regulations in the four sub-sectors[153]

Sub-sector	Legislation	Standards	Codes
Mobile Operating and Payment System	**Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (Act 613)** *by Bank Negara Malaysia (BNM)* **Financial Services Act 2013 (Act 758)** *by BNM* **Islamic Financial Services Act 2013 (Act 759)** *by BNM*	**Malaysian Public Sector Open-Source Software (OSS)** *by Malaysian Administrative Modernisation and Management Planning Unit (MAMPU)* **Technical Code: Internet of Things (IoT) Device Security Requirements** *by MCMC under the Ministry of Communications*	**Malaysian Communications and Multimedia Content Code** *by MCMC under the Ministry of Communications* **Payment Purpose Codes** *by BNM*

[152] To be detailed in the draft final report
[153] MyCC analysis

Sub-sector	Legislation	Standards	Codes
		Policy Document on Electronic Money (E-Money) *by BNM*	
E-commerce (Marketplaces)	**Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (Act 613)** *by BNM* **Customs Act 1967 (Act 235)** *by Ministry of Finance (MOF)* **Electronic Commerce Act 2006 (Act 658)** *by KPDN* **Personal Data Protection Act 2010 (Act 709)** *by the Department of Personal Data Protection (PDP) under the Ministry of Digital*	**ASEAN Online Business Code of Conduct** *by ASEAN Secretariat* **ASEAN Guidelines for Consumer Protection in E-Commerce** by ASEAN Committee on Consumer Protection (ACCP) **Malaysian Standard (27001:2013) - Information Security Management** *by Department of Standards Malaysia (Standards Malaysia) under Ministry of Investment, Trade and Industry (MITI)*	**The Malaysian Business Code of Ethics** *by KPDN* **eTRADE Programme 2.0** *by Malaysia External Trade Development Corporation (MATRADE)* **Malaysian Communications and Multimedia Content Code 2022** *by MCMC under the Ministry of Communication*

Sub-sector	Legislation	Standards	Codes
	Price Control and Anti-Profiteering Act 2011 (Act 723) *by KPDN* **Sales Tax Act 2018 (Act 806)** *by MOF* **Trade Descriptions Act 2011 (Act 730)** *by KPDN* **Consumer Protection Act 1999 (Act 599)** *by KPDN* **Consumer Protection (Electronic Trade Transactions) Regulations 2012** *by KPDN* **Digital Signature Act 1997 (Act 562)** *by MCMC under the Ministry of Communications*	**Service Tax 2018 (Guide on Digital Services)** *by Royal Malaysian Customs Department (RMCD) under MOF*	

Sub-sector	Legislation	Standards	Codes
Digital Advertising Services	**The Trade Descriptions Act 2011 (Act 730)** *by KPDN* **Indecent Advertisements Act 1953 (Act 259)** *by Royal Malaysia Police (PDRM) under the Ministry of Home Affairs* **Companies Act 2016 (Act 777) by** *Companies Commission of Malaysia (SSM)* **Medicines (Advertisement & Sale) Act 1956 (Act 290)** *by the Ministry of Health (MOH)* **Food Act 1983 (Act 281)** *by MOH* **Control of Smoking Products for Public Health Act 2024 (Act 852)** *by MOH*	**Guideline for Cosmetic Advertisement** *by National Pharmaceutical Regulatory Agency (NPRA) under MOH* **The Malaysian Communications and Multimedia Content Code** *by the Communications and Multimedia Content Forum of Malaysia (CMCF) under MCMC* **Guidelines on Advertising for Capital Market Products and Related Services** *by the Securities Commission Malaysia (SC) under MOF*	**The Malaysian Code of Advertising Practice** *by Advertising Standards Malaysia* **Cosmetic Advertising Code** *by NPRA under MOH* **Medical Device Code of Advertisement** *by Malaysian Medical Device Authority (MDA)*

Sub-sector	Legislation	Standards	Codes
Online Travel Agencies (OTAs)	**Innkeepers Act 1952 (Act 248)** *by the Ministry of Housing and Local Government (KPKT)* **Local Government Act 1976 (Act 171)** *by the Local Government Department under the KPKT* **Malaysian Aviation Commission Act 2015 (Act 771)** *by Malaysian Aviation Commission (MAVCOM) under Ministry of Transport (MOT)* **Personal Data Protection Act 2010 (Act 709)** *by PDP under the Ministry of Digital* **Price Control and Anti-Profiteering Act 2011 (Act 723)** *by KPDN*	**ASEAN Tourism Standards** *by MOTAC* **Muslim Friendly Hospitality Services (MFHS) Requirements (MS 2610:2015)** *by Department of Standards Malaysia (Standards Malaysia) under the Ministry of Science, Technology, and Innovation (MOSTI)* **Service Tax 2018 (Guide on Accommodation)** *by the Royal Malaysian Customs Department under MOF* **Star Rating System for Hotels** *by MOTAC* **Tourism Malaysia Strategic Plan 2022 - 2026** *by Tourism Malaysia under MOTAC*	**"Clean & Safe Malaysia" Label Certification** *by Malaysian Association of Hotels (MAH)* **Code of Ethics** *by Malaysian Association of Tour and Travel Agents (MATTA)* **MAMPU Guidebook: Getting Started for Hotels in Malaysia** *by National Digital Department (JDN), formerly known as MAMPU under the Ministry of Digital* **Guidelines for Registration and Classification of Tourist Accommodation Premises (PPP)** *by MOTAC*

Sub-sector	Legislation	Standards	Codes
	Strata Management Act 2013 (Act 757) *by KPKT* **Tourism Industry Act 1992 (Act 482)** *by MOTAC* **Tourism Industry (Tour Operating Business and Travel Agency Business) Regulations 1992 (P.U.(A) 333/92)** *by MOTAC* **Tourism Tax Act 2017 (Act 791)** *by RMCD under MOF* **Tourism Vehicles Licensing Act 1999 (Act 594)** *by MOTAC*	**National Tourism Policy 2020 – 2030** *by MOTAC* **Guidelines for the Operation of Private Accommodation in the Landed Residential Scheme in Pulau Pinang** *by the City Council of Penang Island under Penang State Government* **Guidelines for the Operation of Private Accommodation in the Strata Property Scheme in Pulau Pinang** *by the City Council of Penang Island under Penang State Government* **Perak Hotel Bill 2023** *by the Perak State Government*	

Source: Secondary research and MyCC's analysis

3.7 Malaysia's digital economy and competition

Similar to the global landscape, anti-competitive cases and allegations are on the rise in Malaysia. Since 2023, a total of 20 public complaints were raised to MyCC, of which majority is related to unfair trading conditions on suppliers and customers, such as inability to choose courier providers, unreasonably withholding or releasing money, and unfair operational policies.

Additionally, complaints related to limiting market access such as restricting users who favour overseas sellers in e-commerce and restricting access to the platform despite having required documentation were raised.

Aside from public complaints, various formal allegations and actions have been taken in recent years:

Table 8: Digital economy-related anti-competition cases in Malaysia

#	Year	Relevant sub-sector	Parties	Details
1	2015	Online trade	• MyCC • Dagang Net	MyCC investigated and found that Dagang Net had abused its dominant position in the provision of trade facilitation services in Malaysia under the National Single Window (NSW) system. The abuse involved imposing an exclusivity clause in the MyChannel Partner Agreement (MCPA) with software providers over 2015 – 2016, preventing them from providing similar services for the upcoming uCustoms system and by refusing to supply electronic mailboxes to non-complaint end users. In the end, the MyCC, pursuant to section 40(4) of the Competition Act 2010 imposed a financial penalty of MYR 12,878,094.97 (later reduced to MYR 10,302,475.98 in consideration of COVID-19) for an infringement period of October 2015 to November 2017. It also directed Dagang Net to cease its anti-competitive practices and required its directors and senior management executives to enrol in in a competition law compliance program[154].

[154] MyCC (2024). Case. https://www.mycc.gov.my/case

#	Year	Relevant sub-sector	Parties	Details
2	2016	Government services	• MyCC • MyEG	MyCC found MyEG guilty of abusing their dominant position in the sale of mandatory insurance for online *Pas Lawatan Kerja Sementara* (PLKS) renewal applications in Peninsular Malaysia by imposing different conditions on equivalent transactions, thereby harming competition in the downstream market for such insurances. MyEG made it mandatory for employers to purchase Foreign Workers Insurance Guarantee (FWIG) through its platform and induced them to buy other mandatory insurances from MyEG by creating additional steps and delays for those who chose other insurers. This led to significant increase in MyEG's market share and commissions, putting competitors at a disadvantage. As a result, MyEG was fined a total of MYR 9,644,700 and directed to cease these anti-competitive practices immediately, provide an efficient gateway for all competitors within 60 days, and comply with General Insurance Association of Malaysia's (PIAM) rules and regulations or risk paying higher penalties[155].

[155] MyCC (2024). Case. https://www.mycc.gov.my/case

#	Year	Relevant sub-sector	Parties	Details
3	2019	Transportation/ delivery-related	• MyCC • Grab	MyCC issued a Proposed Decision to fine Grab for MYR 86,772,943.76 for breaching section 10 of the Competition Act 2010 by abusing its dominant position. Grab allegedly imposed restrictive clauses on its drivers, preventing them from promoting and providing advertising services for Grab's competitors, thereby distorting competition and creating barriers to entry and expansion for other players. This action followed numerous complaints received after Grab's merger with Uber in 2018. Grab was required to present its defense or face an additional penalty of MYR 15,000 per day from the date of service of the Proposed Decision[156].
4	2021	E-commerce (marketplace)	• The Federation of Malaysian Consumers	In 2021, FOMCA and CAP urged MyCC to investigate Shopee for allegedly offering MYR 3,000 in vouchers to sellers for discounts on service fees to close their Lazada stores during the 9/9 sale event, arguing that

[156] MyCC (2024). Case. https://www.mycc.gov.my/case

#	Year	Relevant sub-sector	Parties	Details
			Associations (FOMCA) • Consumers' Association of Penang (CAP) • MyCC • Shopee	this stifles competition and unfairly attracts sellers to Shopee. The allegations were based on a leaked WhatsApp conversation from 2020[157].
5	2022	E-commerce (marketplace)	• MyCC • Shopee	MyCC engaged with Shopee in response to escalating complaints from consumers and merchant's about Shopee's practices concerning dissatisfaction with its first and last mile delivery services. The engagement aimed to gain a better understanding of the online marketplace and logistics industries and to inquire into Shopee's practices that raised concerns. Shopee was required to justify its conduct and provide a detailed plan by the end of October 2022 on how it will address these issues without further jeopardising user interests.

[157] FOMCA (2021). Consumer groups call on MyCC to probe e-commerce giant. https://www.fomca.org.my/v1/index.php/fomca-di-pentas-media/fomca-di-pentas-media-2021-21/1350-consumer-groups-call-on-mycc-to-probe-e-commerce-giant

#	Year	Relevant sub-sector	Parties	Details
				This has led to MyCC to continue monitoring other industry players in the relevant market and consider enforcing legal action if necessary to ensure a conducive environment for users in the digital economy[158].

Source: Secondary research and MyCC's analysis

On data privacy and protection-related cases, several recent accounts of data breach allegations and investigations (data protection related) in Malaysia have been made over the past few years including:

Table 9: Data privacy and protection-related cases in Malaysia

#	Year	Relevant sub-sector	Parties	Details
1	2022	E-commerce (marketplace)	• Shopee Online user	An online user claimed that there were various listings on Shopee offering personal data for sale. One listing allegedly offered a million phone numbers for MYR 18, while another offered phone numbers of 'online shopping addicts' for MYR 15, among several others.

[158] MyCC (2022). Shopee to respond to MyCC's enquiries. https://www.mycc.gov.my/sites/default/files/pdf/newsroom/NEWS%20RELEASE%20-%20SHOPEE%20TO%20RESPOND%20TO%20MyCC%E2%80%99S%20ENQURIES.pdf

#	Year	Relevant sub-sector	Parties	Details
				Shopee had responded and stated that it is planning to take action against these sellers and has removed and blacklisted these listings as a start[159].
2	2022	E-commerce (C2C marketplace)	• Carousell Online users	Around 2.6 million Carousell users from Malaysia and Singapore were subjected to a data breach where the stolen data was sold online for USD 1,000. Information relating to usernames, full names, email addresses, phone numbers, and more were publicly listed posted online by the hackers. As a result, Carousell contacted all affected users and advised them to look for phishing emails or Short Message Service (SMSes) and to ignore any communications that request for sensitive information[160].

[159] The Star (2024). Netizens express concern over online sales of Malaysian phone numbers (Updated with Shopee's response). https://www.thestar.com.my/tech/tech-news/2022/03/18/netizens-express-concerns-over-online-sales-of-malaysian-phone-numbers

[160] The Straits Times (2022). Data of alleged 2.6m Carousell users being sold on Dark Web, hacking forums. https://www.straitstimes.com/singapore/data-of-alleged-26m-carousell-accounts-being-sold-on-dark-web-hacking-forums

#	Year	Relevant sub-sector	Parties	Details
3	2022	Payment gateway	• iPay88 • Online users	Payment gateway iPay88 for e-commerce and retail encountered a cybersecurity incident after its customers' card data from online transactions was compromised. As a result, banks were notified to immediately notify affected cardholders of the additional protective measures that will be taken to further protect them against risks of fraudulent or unauthorised transactions[161].

Source: Secondary research and MyCC's analysis

As the local digital economy continues to evolve, the need for a deeper understanding of market dynamics by regulators will grow. This, in turn, will require more efficient governance to effectively address emerging anti-competitive challenges specific to each sub-sector, as demonstrated by the above cases or allegations.

[161] Malay Mail (2022). Major data breaches in Malaysia in the past 24 months. https://www.malaymail.com/news/malaysia/2022/12/31/major-data-breaches-in-malaysia-in-the-past-24-months/47722

4. Sub-sector deep dive

4.1 Mobile Operating & Payment System

4.1.1 Key findings

Figure 24: Snapshot of the mobile operating and payment system market in Malaysia

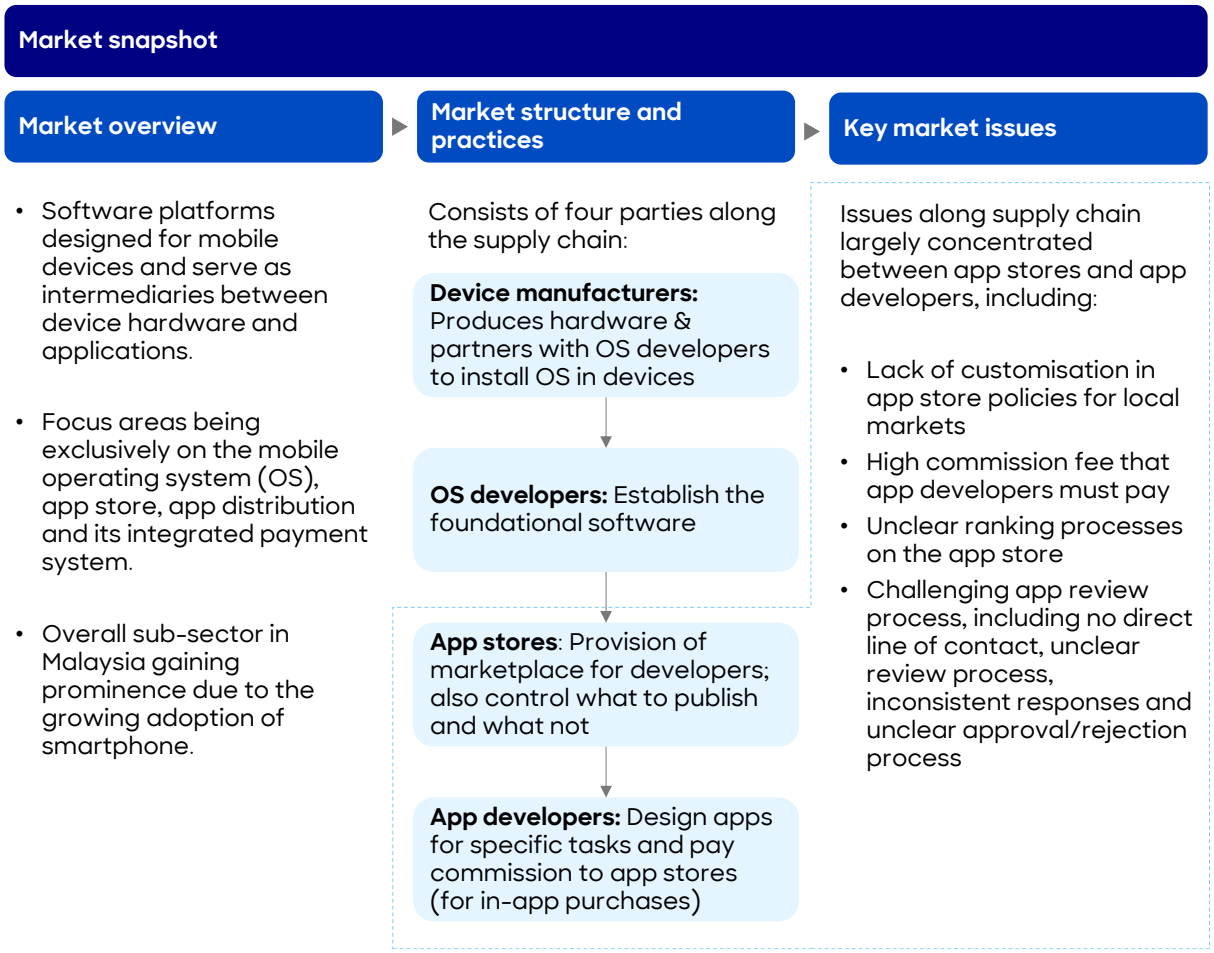
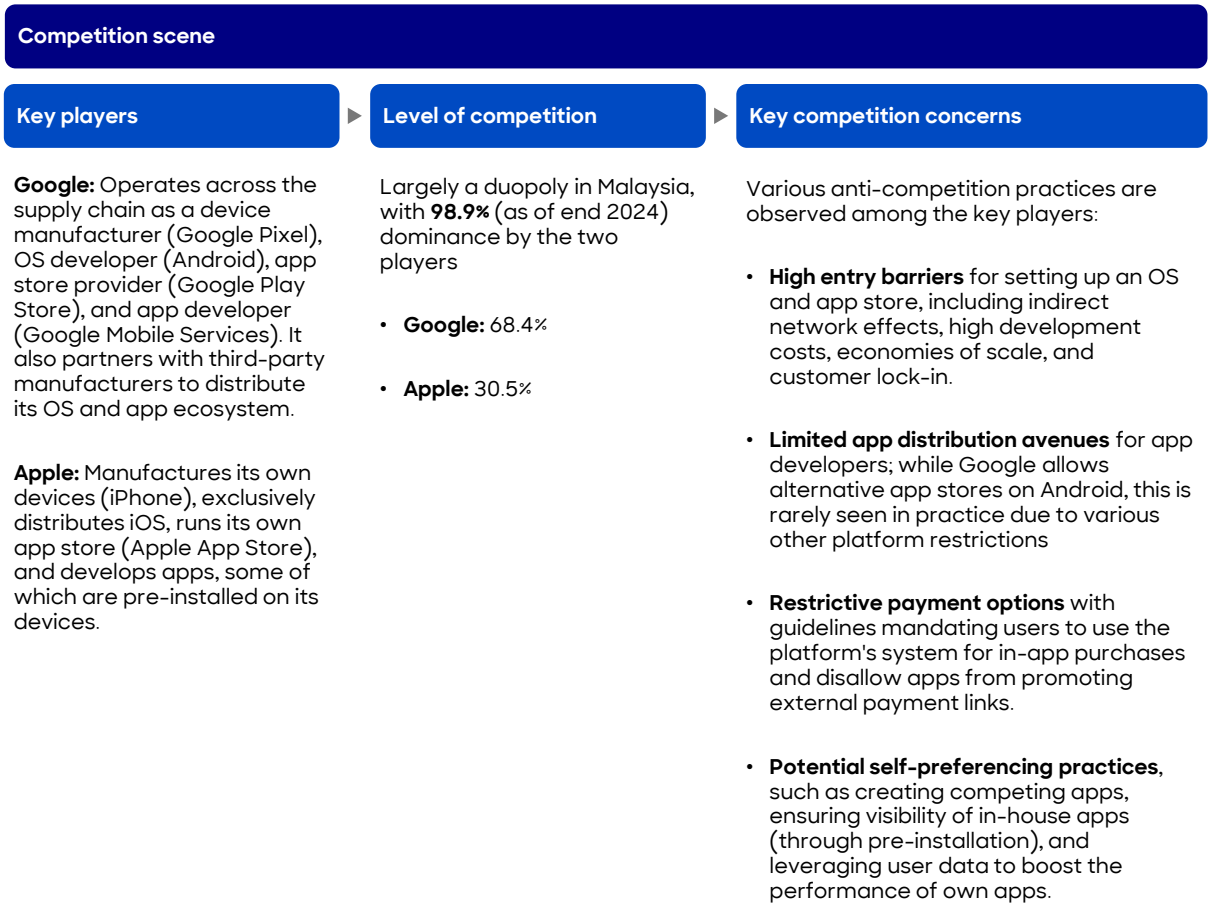


Figure 25: Snapshot of the mobile operating and payment system's competitive scene in Malaysia



4.1.2 Market definition

This review will focus on three key components within this sub-sector: mobile OS, app stores and integrated payment systems. The mobile OS are the software platforms that facilitate the operation of smartphones and similar devices, app stores are the distribution platforms of apps used by app developers, and integrated payment systems refer to payment mechanisms embedded within mobile applications. These payment systems, which are facilitated through APIs, allow for seamless in-app transactions, such as the purchase of digital goods and services.

The focus will be strictly on smartphones, excluding other devices such as desktop computers or smartwatches. Additionally, the study will concentrate specifically on payments made within app stores, such as Apple Pay within Apple App Store or Google Pay within Google Play and will

not consider payments made outside of these platforms (e.g., external e-wallets or any payment gateways).

The activities of the mobile operating & payment system sub-sector impact the following Malaysia Standard Industrial Classification (MSIC) industries:

Table 20: MSIC codes relevant to the mobile operating and payment system sub-sector

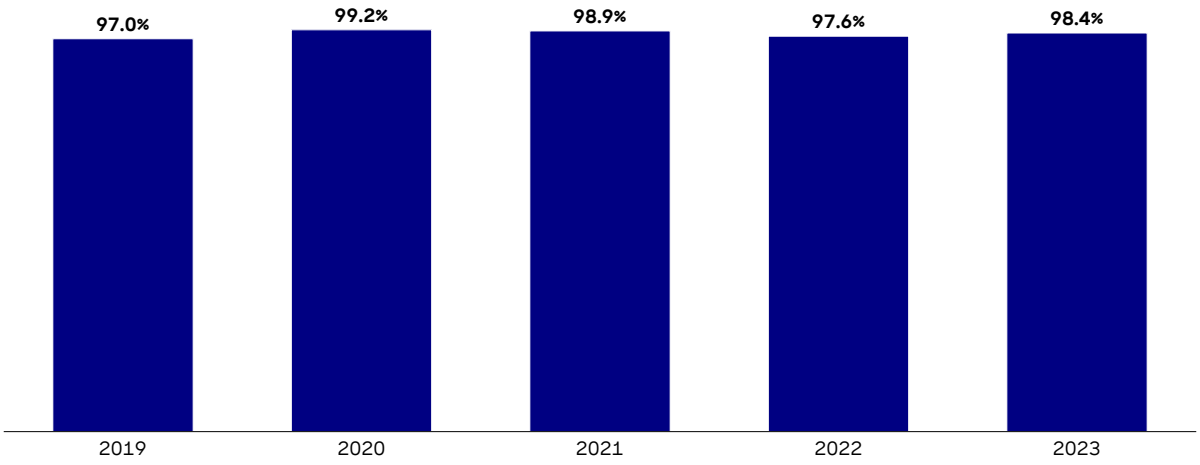
MSIC Code	MSIC Industry Description
26300	Manufacture of communication equipment
58201	Business and other applications
58202	Computer games for all platforms
58203	Operating systems
63111	Activities of providing infrastructure for hosting, data processing services and related activities

Source: MSIC 2008, DOSM

4.1.3 Market structure and supply chain

4.1.3.1 Market structure

Figure 26: Adult population with smartphones in Malaysia, 2019-2023 [%]



Source: Data Reportal Malaysia, 2024

In the past decade, smartphones have emerged as a cornerstone of daily life globally and in Malaysia, underscoring its increasing importance. From 2019 to 2023, smartphone ownership in Malaysia has remained high, consistently at or above 97%. As of 2023, the ownership rate has reached 98.4%[162].

The growth in smartphone use has directly contributed to an increase in digital content and services. In May 2024, Malaysians spent an average of five hours and six minutes per day on their smartphones. Most of this time is spent on entertainment apps such as YouTube and TikTok (39.8%), social media (26.7%), and mobile gaming (14.9%). The remaining 18.7% of usage is dedicated to shopping, utilities, and productivity apps[163].

Additionally, the rise of adjacent products continues to enhance the significance of smartphones, thanks to the APIs provided by OS developers. These APIs enable access to various functions and data on smartphones, further integrating them into users' daily lives. Key functionalities include Bluetooth, Near Field Communication (NFC), camera, and Global Positioning System (GPS), all of which facilitate seamless interactions between smartphones and other devices.

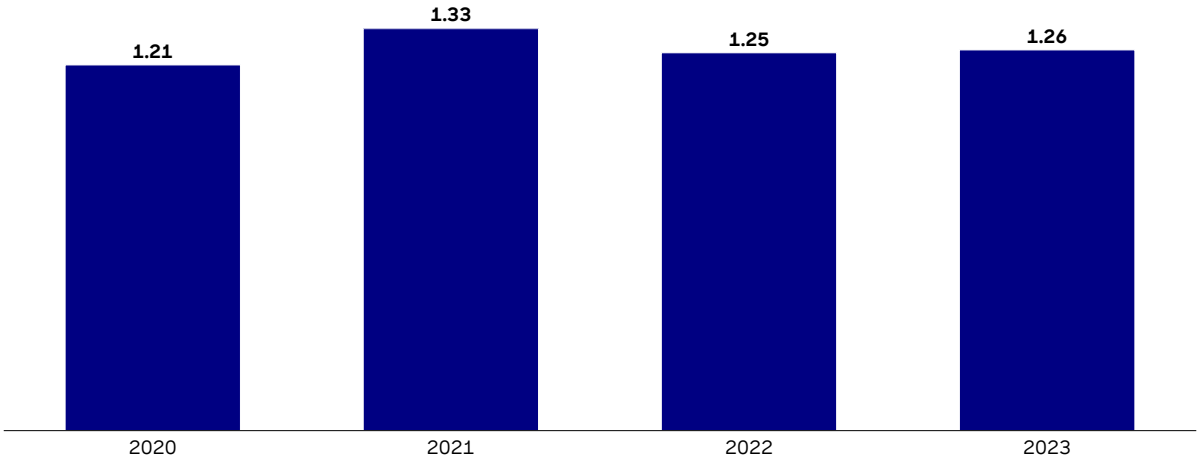
One of the more prominent adjacent products is smartwatches (e.g., Apple Watch, Google Pixel Watch, Samsung Galaxy Watch). These devices not only offer health tracking features but also provide notifications, music control and remote camera operation via Bluetooth. Smart tags (e.g., AirTag, Galaxy SmartTag) are another innovative addition to the ecosystem. These devices can be attached to personal belongings, helping users locate items through their smartphones using technologies like Wi-Fi, GPS, Bluetooth and ultra-wideband (UWB). Some smart tags leverage a "search network" to find lost items by connecting with other users' devices.

Smart home devices also play a crucial role in this ecosystem, enhancing the functionality of smartphones. Devices such as smart speakers,

[162] DataReportal (2024). Digital 2024: Global overview report. https://datareportal.com/reports/digital-2024-global-overview-report.
[163] Meltwater (2024). Social media statistics for Malaysia (Updated 2024). https://www.meltwater.com/en/blog/social-media-statistics-malaysia

including Amazon's Alexa, Google Nest and Apple HomePod, allow users to control various aspects of their home environment using voice commands. These smart speakers serve as hubs for managing other connected devices, such as smart lights, temperature and security cameras, all of which can be controlled through a smartphone app.

Figure 27: Mobile app downloads in Malaysia, 2020-2023 [billion of downloads]

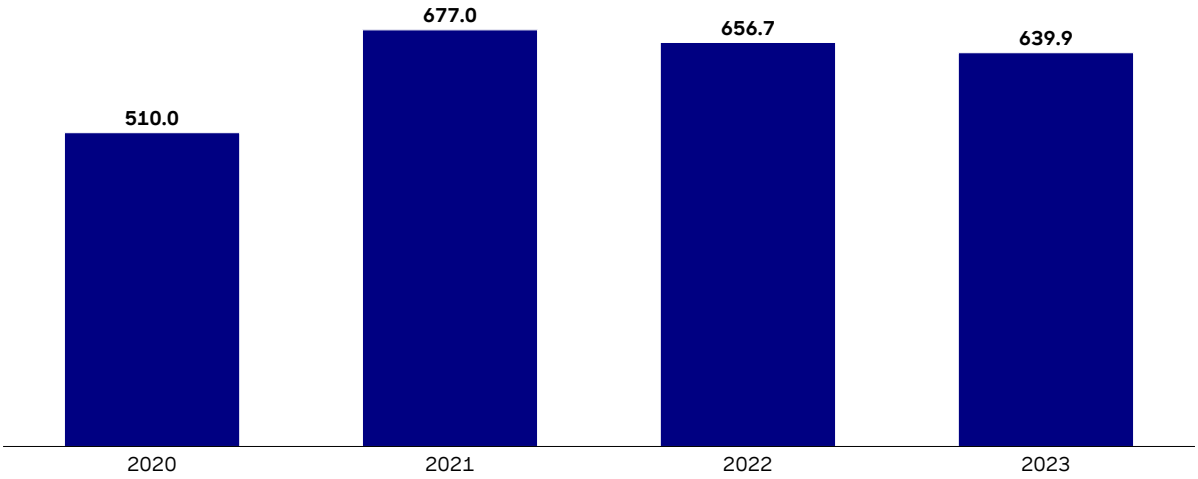


Source: Data Reportal Malaysia, 2024

Apps, which are software designed to perform specific tasks, are a critical component in this growing ecosystem, providing functionality across various domains. In Malaysia, app downloads have soared, with a total of 1.3 billion downloads in 2023. This marks an increase from 1.2 billion in 2020, with a spike (~9.9%) in 2021 driven by the pandemic as people spent more time at home[164].

[164] DataReportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia?rq=digital%20malaysia

Figure 28: Consumer spending on mobile apps in Malaysia, 2020-2023 [USD million]



Source: Data Reportal Malaysia, 2024

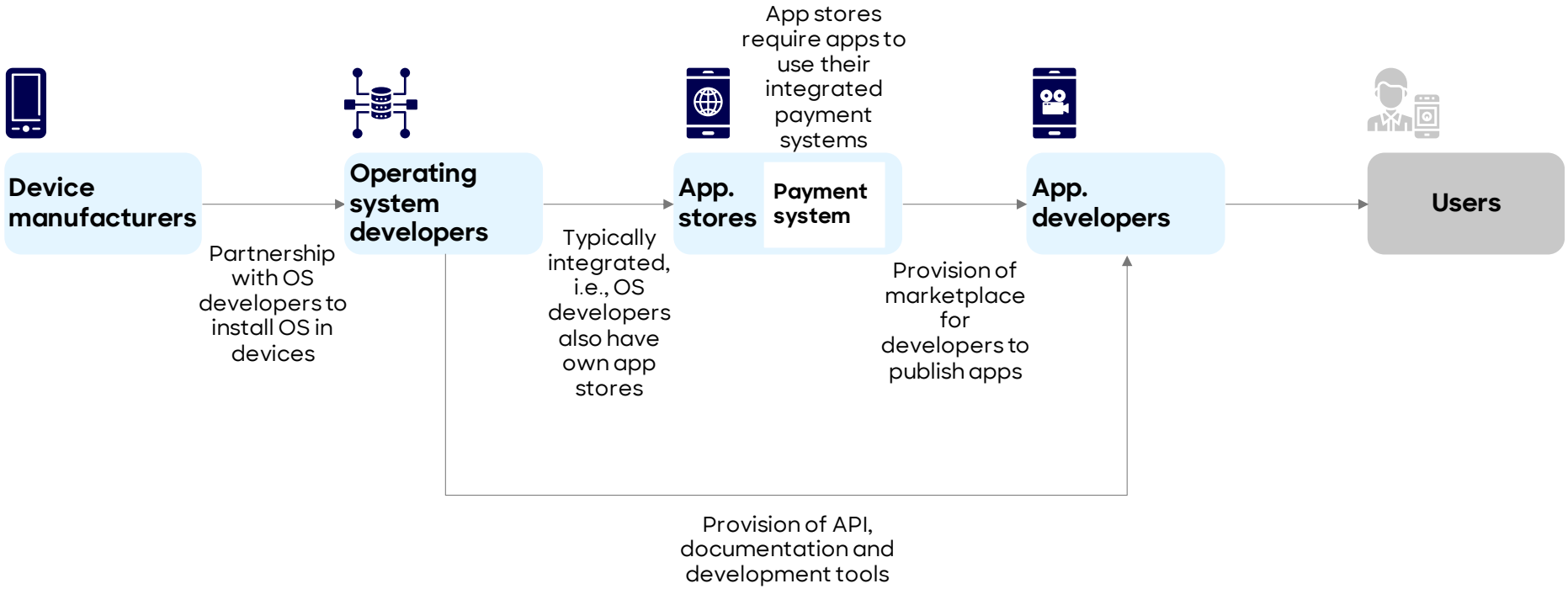
On the payment system side, in-app systems such as Apple Pay, Google Wallet and Samsung Pay are increasing in usage. In 2023, total spending on apps in Malaysia reached USD 639.9 million, reflecting a 7.9% CAGR since 2020[165].

[165] DataReportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia?rq=digital%20malaysia

4.1.3.2 Supply chain

The mobile operating and payment systems in Malaysia are characterised by a multifaceted supply chain involving several key players, each contributing distinctively to the overall framework:

Figure 29: Supply chain of the mobile operating and payment system sub-sector[166]



Source: Interaction with industry players and MyCC's analysis

[166] MyCC's analysis and interaction with industry players

Device manufacturers: Invest in R&D to produce hardware. These companies design smartphones that not only incorporate the latest technology but also support the latest mobile OS. To ensure compatibility and optimise user experience, manufacturers frequently enter agreements with OS developers. This collaboration allows them to implement new features and updates, ensuring their devices remain competitive. Device manufacturers generate revenue primarily through the direct sale of smartphones and accessories.

OS players: Play the crucial role in establishing the foundational software that powers smartphones. They are responsible for crafting the overall architecture of the mobile OS, which includes essential components such as the kernel (the central module of the OS), user interface (UI) and application framework. This architectural design aims to ensure that apps can run smoothly and efficiently on devices.

Key players in this space include Google, which develops Android as an open-source platform, allowing manufacturers to customise the OS for their devices. This flexibility results in a wide variety of Android devices featuring different interfaces (e.g., Samsung's One UI, Xiaomi's MIUI, Oppo's ColorOS), capabilities and performance levels, as manufacturers can modify the Android experience to align with their brand identity. At a broad level, the Android OS can be categorised into three variants:

(a) **Licensed**: Android OS versions officially licensed by Google. These include stock Android, Android One, and custom versions like Samsung One UI or Xiaomi MIUI, which are built on top of the Android Open-Source Project (AOSP) and incorporate Google's proprietary services (e.g., Play Store, Google Maps).

(b) **Compatible**: Android versions that are designed to be compatible with the official Android ecosystem. Examples include Android Go and Android One, which adhere to Google's guidelines and ensure seamless integration with Google services.

(c) **Forked**: A version where a device manufacturer modifies the AOSP without using Google's proprietary services. An example is

Amazon's Fire OS, which is based on AOSP but lacks Google services like the Play Store.

In contrast, Apple operates within a closed system, tightly controlling the design and functionality of iOS. This approach aims to provide a uniform user experience across all its devices, as updates are released uniformly for all compatible models, maintaining a high level of performance and security.

Application (app) stores: Serve as key distribution platforms within the mobile ecosystem, facilitating access to native apps for users and managing the processes surrounding app downloads and updates. They enforce a set of processes and policies, particularly regarding quality, security and privacy, that all app developers must adhere to in order to list their apps.

Additionally, app stores control the payment systems that govern financial transactions between developers and users. They often charge commissions on these transactions (specifically on digital goods). In return, the collected payments help sustain the platform, offering app developers access to a wide audience and valuable insights into users' app usage behaviour.

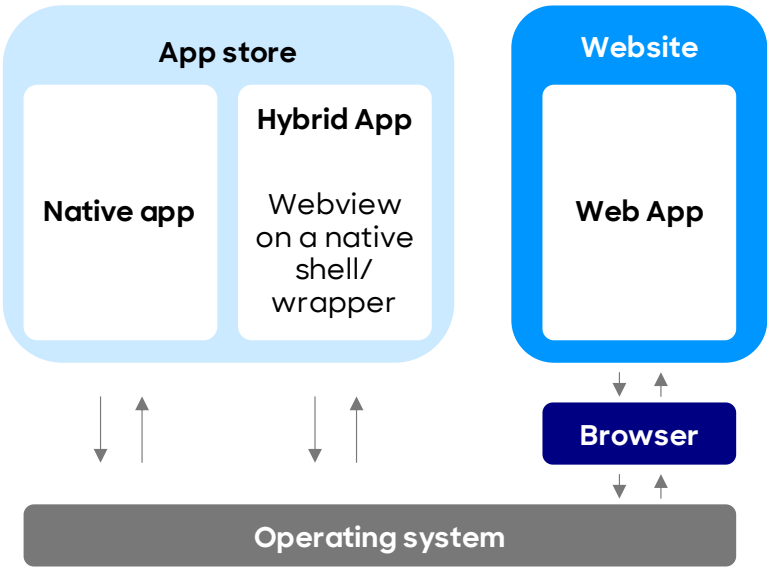
The availability of app stores can vary depending on the OS. In the Android ecosystem, users can install multiple app stores, including but not limited to the Google Play Store, Huawei AppGallery, Samsung Galaxy Store, F-Droid, TapTap, APKPure, SlideME, Epic Games Store (gaming-specific), etc.

Separately, iOS devices only have access to Apple's App Store due to Apple's vertically integrated approach. Additionally, there is an app store called TestFlight, designed specifically for app developers to distribute beta versions of their apps to testers. There are also third-party app stores, such as AltStore and Cydia, that only work on jailbroken iOS devices.

Application (app) developers: Design apps to perform specific tasks on devices. Apps are created either by independent developers working individually or by dedicated app development companies. App developers generate revenue through various monetisation strategies, including

direct app sales, in-app purchases, subscriptions, and advertising within their apps. These revenue models are entirely controlled by the developers, allowing them to choose the most suitable strategy based on their app's goals, target audience, and market dynamics. Apps on smartphones can be categorised into three primary types:

Figure 30: Difference between a native, hybrid and web app



Source: MyCC's analysis

Figure 31: Native app examples (from left to right, Safari, Agoda, Notes and Shopee)

(a) **Native Apps:** Specifically developed for a particular OS, allowing them to fully utilise the device's hardware and software features (e.g., face recognition to login). This results in optimised performance, enhanced user experience (especially for gaming-related native apps) and seamless access to device functionalities like the camera and GPS. Native apps often offer

offline capabilities and benefit from the security measures of their OS, making them faster and more responsive.

These apps are generally preferred over web apps because they align more closely with current user preferences and trends, offering a more tailored and engaging experience. Furthermore, growing emphasis on cybersecurity makes native apps more appealing, as they typically benefit from the robust security features built into the OS. This ensures better data protection and user privacy compared to web apps, which can be more vulnerable to security breaches and may not offer the same level of control over user data.

Native app developers navigate the app approval processes set by OS and app stores, often adjusting their designs to comply with specific guidelines and restrictions. Such requirements can lead to added costs for developers, as they may need to invest time and resources to meet the guidelines and prepare for the approval process. Developers may also need to continuously refine their apps based on user feedback.

(b) **Web Apps**: Function through the internet. They offer platform independence, require an internet connection and are designed to be responsive for different screen sizes. Updates are made on the server side, ensuring users always access the latest version. Web apps do not require app store reviews, which can lower overall development costs.

Web apps are only accessible through a browser app. These apps (browser) use rendering engines (like WebKit, Blink, or Gecko) to process web content and display it visually. The choice of engine can affect performance, compatibility and rendering quality.

Depending on their default settings—such as being pre-installed as the default browsing app on devices—they can significantly influence users' search behaviour.

Within the iOS system, the Safari browser app is pre-installed. The app uses the WebKit engine for content rendering, with the same engine also required for all other web browsers if they wish to operate on iOS. Separately, in the Android ecosystem, the Google Chrome browser app comes pre-installed. However, Google's open-source Chromium project offers the Blink engine but does not require developers to use a specific browser engine, providing them with greater flexibility.

While web apps are device-agnostic, meaning they can be accessed across different platforms and devices through a web browser, they lack the credibility of native apps. This is because web apps are not listed in app stores, which means users cannot rate and review them, making it harder to assess their reliability and quality. Furthermore, due to the limitations of browser-based APIs, web apps cannot access many hardware functions, such as biometric authentication (e.g., Face ID or fingerprint recognition) or more advanced device capabilities (e.g., NFC, GPS). While basic features like camera access or geolocation can still be utilised, these restrictions can limit the user experience.

Additionally, web apps are often considered less secure than native apps because they operate over the internet and can be more easily targeted by hackers. According to CyCognito[167], a cybersecurity company, an estimated 70% of web apps assessed have security gaps, including the absence of web application firewall (WAF) protection[168] or an encrypted connection like Hypertext Transfer Protocol Secure (HTTPS)[169]. Furthermore, 25% of all web apps lacked both[170].

[167] CyCognito (2024). 2024 state of web application security testing, page 2. https://www.cycognito.com/documents/reports/CyCognito-State-of-Web-Application-Seucirty-Testing-2024.pdf

[168] Security system designed to protect web applications by filtering and blocking malicious traffic.

[169] Secure transfer protocol that encrypts data exchanged between a web browser and a server.

[170] Security Magazine (2023). 70% of web applications have severe security gaps. https://www.securitymagazine.com/articles/99770-70-of-web-applications-have-severe-security-gaps

Figure 32: Hybrid app examples (from left to right, Instagram, X, Gmail and Uber)

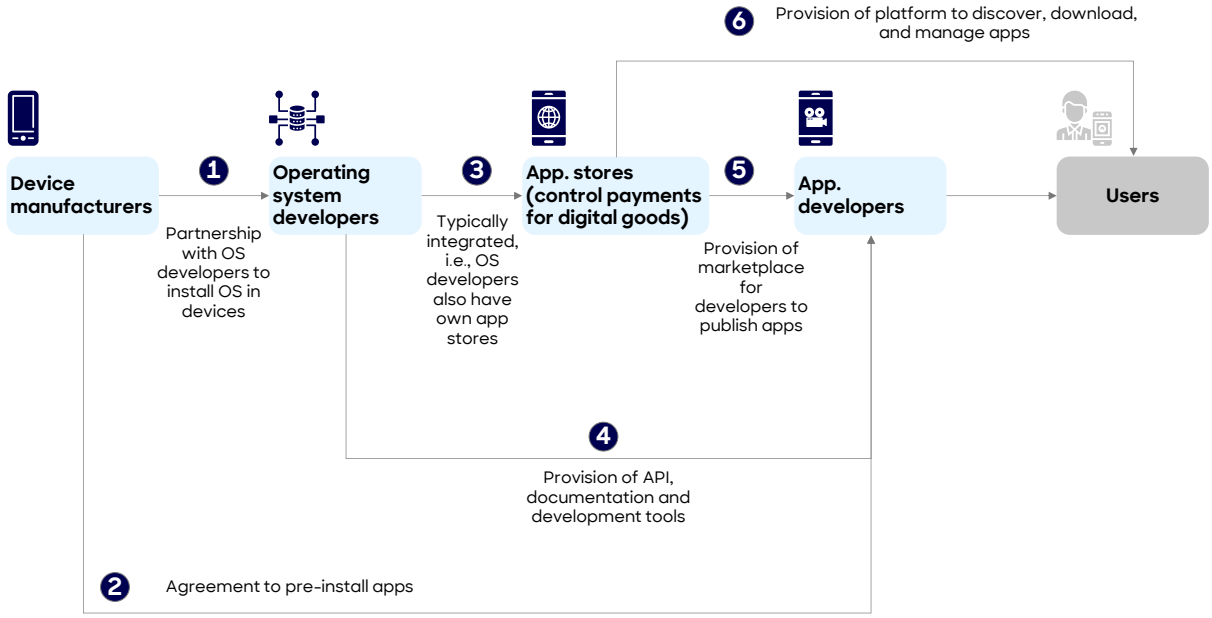
(c) **Hybrid Apps:** Combine elements of both native and web applications, allowing developers to leverage the benefits of both approaches. They are essentially native apps that contain a significant component known as a "webview."

A webview is a lightweight embedded web browser that lacks its own navigation controls or borders. This allows it to display web content seamlessly within the app, enabling users to access online resources without leaving the application. The webview can load content from within the app itself or retrieve data from the internet, functioning similarly to conventional browsers like Chrome or Safari.

By integrating webviews, hybrid apps can offer a responsive and interactive user experience while also benefiting from the device's native capabilities, such as accessing the camera, GPS and other hardware features. This combination allows for faster development cycles and easier updates, as changes to the web content can be made without needing to update the entire app.

4.1.4 Market practices

Figure 33: Key relationships along the mobile operating and payment system supply chain



Source: Interaction with industry players and MyCC's analysis

1. Device manufacturers and OS developers

Market practices between device manufacturers and OS developers involve a complex dynamic of collaboration and dependency. Device manufacturers rely on OS developers for the software that powers their devices, with user experience heavily influenced by the integration of hardware and software. However, the dynamics vary significantly between open and closed systems. Android, as an open system, partners with multiple manufacturers, creating an expansive ecosystem with broad market reach. In contrast, Apple operates a closed system, tightly controlling its hardware and software to maintain exclusivity and a uniform user experience.

Table 8: Key agreement points in Google's MADA[171]

Key agreement terms	Description
Pre-installation Requirement	Manufacturers must pre-install specified Google applications on their devices.
Default Search Engine	Google Search must be set as the default search provider on the device.
Placement of Google Apps	Google applications must be placed prominently on the home screen.
Google Play Store Access	Access to Google Play Store is conditional upon compliance with MADA terms.
Branding Requirements	Devices must comply with Google's branding and compatibility requirements.
Revenue Sharing	Potential revenue-sharing agreements for pre-installed Google services.
Compliance and Audit	Google retains the right to audit compliance with MADA terms.
Termination Rights	Google can terminate the agreement for non-compliance with the terms.

Source: MADA agreement by Google

(a) **Android OS:** One of the key agreements between Google and Android device manufacturers is the Mobile Application Distribution Agreement (MADA). This contract governs the distribution of Google's proprietary apps, such as Google Play Store, Google Search, Google Chrome, and others, on Android devices. While Android is an open-source OS, many of its core features and services depend on Google's proprietary apps and APIs. Under MADA, manufacturers are required to pre-install specified Google applications on their devices and set Google Search as the default search provider.

[171] Google (2008). Mobile Application Distribution Agreement (MADA) between Google Inc. and Motorola Inc. https://www.sec.gov/Archives/edgar/containers/fix380/1495569/000119312510271362/dex1012.htm

Additionally, Google provides manufacturers with several resources to support product development, including:

- **Android Compatibility Definition Document (CDD)**: Document that outlines the minimum hardware and software requirements to ensure devices are compatible with Android and can properly run Android apps. It specifies standards for features such as the touch interface, battery life, camera capabilities, and sensors. Manufacturers must comply with these requirements to be officially licensed by Google.

- **Android Software Development Kit (SDK)**: Offers tools and libraries needed to develop applications for Android devices. Manufacturers also use this SDK to create custom apps or system-level features that integrate with the Android ecosystem.

- **Android APIs**: Offers a wide range of APIs that allow manufacturers to integrate specific hardware features, such as the camera, GPS, sensors, or Bluetooth, into the Android system. These APIs ensure that devices can use Android's software to leverage their hardware capabilities in a standard way, providing consistency for both app developers and users.

  While Android is the core OS, manufacturers sometimes implement exclusive features. For example, Samsung has developed its own UI, One UI, which includes proprietary features such as advanced multitasking, Samsung DeX (a desktop experience), and Samsung Pay. These features differentiate Samsung devices but can create inconsistencies within the broader Android ecosystem and add complexity for app developers. Similarly, Amazon's Fire OS is a heavily modified version of Android that removes Google services entirely and replaces them with Amazon's Appstore and Alexa integration. This modification makes Fire OS incompatible with apps that rely on Google Play services.

(b) **iOS:** Apple operates within a closed ecosystem, where it tightly controls both hardware and software (both being developed by Apple only), ensuring tight integration across all its products. At the

heart of this ecosystem is iOS, Apple's OS, which runs exclusively on Apple devices such as iPhone and iPad.

Unlike other manufacturers, Apple does not allow iOS to run on non-Apple hardware, which means no other device maker can use this OS. This closed nature of iOS is reinforced by Apple's custom-built hardware, such as the A Series chip[172] and Graphics Processing Units (GPUs), which are specifically designed to work seamlessly with iOS.

Additionally, features like Face ID, iMessage, and AirDrop are all designed to function exclusively on Apple hardware and software, creating a system where everything is connected and works only within the Apple ecosystem.

2. Device manufacturers and app developers

The relationship between device manufacturers and app developers often involves agreements for pre-installing third-party apps, granting these apps immediate access to large users bases. In return, app developers may share revenue generated from in-app purchases, ads, or subscriptions with the manufacturers. These agreements may also include terms for exclusive app availability or preferential app store visibility. Below highlights selected third-party pre-installed apps on selected manufacturers' devices. Pre-installed apps may vary by region or country:

[172] A type of System on a Chip (SoC) – a single integrated circuit that combines multiple components of a computer or electronic system into one chip.

Table 9: Selected pre-installed third-party apps on Samsung, Xiaomi and Oppo devices

Device	Pre-installed third-party apps (selected)[173]
Samsung	Facebook, Amazon, Prime Video, Spotify, Outlook, LinkedIn
Xiaomi	Facebook, Amazon, LinkedIn, Netflix, Spotify
Oppo	LinkedIn, Amazon, Snapchat

Source: The Gadgets Now by the Times of India

Pre-installed apps often collect user data, such as location, personal information, financial details, app activity, and health metrics. This data is used for purposes like advertising, analytics, and personalisation. For example, studied have shown that certain apps (e.g., fitness apps) collect extensive user data, which may be shared with third parties, including advertisers and data brokers[174].

3. OS developers and app stores

The relationship between OS developers and app stores is crucial to the digital marketplace. OS developers, such as Google and Apple, create the software that powers devices, while their app stores are the primary distribution channels for apps. These app stores provide users access to a wide variety of apps, which enhances the functionality of the OS. Additionally, app stores act as a communication channel between OS developers and app developers, ensuring that apps comply with OS requirements through updates, guidelines, and feedback mechanisms. This ensures compatibility, security, and user satisfaction.

[173] Gadgets Now (2022). Pre-installed apps on Xiaomi, Oppo, Samsung and other phones: What you can install and what you can't. https://gadgetsnow.indiatimes.com/featured/pre-installed-apps-on-xiaomi-oppo-samsung-and-other-phones-what-you-can-install-and-what-you-cant/articleshow/93106987.cms

[174] News.com.au (2025). Fitness apps sucking 21 different types of user data, study finds. https://www.news.com.au/technology/fitness-apps-sucking-up-21-different-types-of-user-data-study-finds/news-story/aaed2d7eee252536c90369aa917fd156

Apple's iOS is a closed system, requiring all apps to be distributed exclusively through its App Store, giving Apple complete control over app distribution and payment processing.

In contrast, Android allows third-party app stores, such as the Samsung Galaxy Store and Amazon Appstore, offering more flexibility but also increasing potential risks, such as fragmentation and security vulnerabilities. For instance, users can sideload apps from unofficial sources, which may expose devices to malware, like the "Joker" malware, designed to steal personal data.

The availability of app stores other than the Google Play Store on Android devices is largely dependent on the device manufacturer, as users are typically unable to download these stores from the Google Play Store due to restrictions on apps promoting or facilitating alternative app stores[175]. As a result, alternative app stores like Oppo's App Market and Samsung's Galaxy Store are often pre-installed by the device manufacturer and are exclusive to their respective brands. However, exceptions exist, such as Huawei's AppGallery, which can be downloaded on non-Huawei Android devices (excluding Apple devices) via an external link[176], as part of Huawei's expansion strategy and Android's open-source nature.

Both Apple and Google collect various type of data, including personal information, usage data, and device data, for purposes like improving services, personalising ads, and enhancing security. OS developers have access to this data, and while Apple restricts app developer's access to sensitive data, Google provides more access depending on app permissions. App developers are limited to the data users provide directly to their apps, with both platforms having strict rules in place to protect privacy.

[175] Google (2024). Google Play developer distribution agreement. https://play.google/developer-distribution-agreement.html

[176] Huawei (2025). How can I install HUAWEIAppGallery? https://consumer.huawei.com/sg/support/content/en-gb00696141/

4. OS and app developers

OS developers provide the foundational software that supports apps, offering essential components. The objective is to maintain a stable, secure and efficient platform to ensure apps can function across various devices. However, changes or updates in the OS often place the burden of adaptation on app developers, requiring significant effort to maintain compatibility.

Following are the key software and areas provided by OS developers to app developers:

(a) Technical tools

- **APIs and SDKs**: Provision of APIs and SDKs that app developers use to access device features like storage, camera, and GPS.

- **Developer tools**: Offer platforms such as Xcode (iOS) and Android Studio (Android), which provide the necessary environment to build, test, and optimise apps.

(b) Standards

- **Security standards**: Enforces security policies to ensure apps meet certain standards for user data protection, including but not limited to encryption, data storage, and app communication protocols.

- **Privacy regulations**: Initiate and enforce privacy policies (e.g., App Tracking Transparency in iOS) that require app developers to adjust their apps to handle user data with transparency and obtain user consent.

(c) System performance

- **Background operations**: Manages system resources like Central Processing Unit (CPU), memory, and battery life. OS updates may change the way background apps are handled (e.g., battery-saving

protocols), requiring app developers to adjust their apps to maintain optimal performance.

5. App stores and app developers

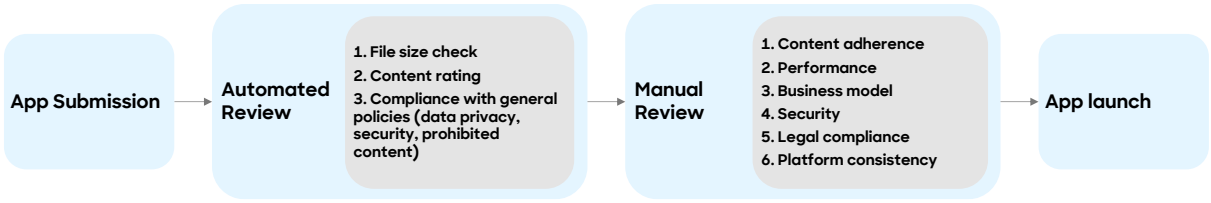
App stores, such as the Apple App Store and Google Play, act as gatekeepers for app distribution, offering developers access to audiences through centralised platforms. These stores provide essential tools for app submission, marketing and updates, which can help developers increase visibility and acquire users. Several practices are involved between app stores and app developers:

(a) App review:

Both Apple and Google require app developers to submit their apps for review through dedicated platforms: the App Store Connect and Google Play Console. Once submitted, developers are notified of any status updates related to their app's review process.

Although the specific review guidelines are not fully disclosed, the review process generally follows a set of publicly known criteria[177]:

Figure 34: App Review Process from submission to launch



Source: Interaction with industry players and MyCC's analysis

I. **Automated Review**: The first step in the process is an automated review, which happens immediately after the app is submitted. During this stage, the app undergoes an automated check for basic requirements such as file size, content rating, and compliance with both Apple and Google's general policies. The automated system

[177] Based on IDI input and secondary research

ensures that the app does not exceed size limits, is rated appropriately for its intended audience, and adheres to rules related to data privacy, security, and prohibited content. This stage helps quickly identify apps that fail to meet the minimum criteria before moving to the next review phase.

II. **Manual Review**: If the app passes the automated checks, it moves on to the manual review stage. This process involves human reviewers and outcome may vary. The manual review focuses on the following key areas:

- **Content adherence**: Must comply with the stores' content policies, which prohibit illegal activities, hate speech, intellectual property infringement, and any content that may be offensive, insensitive, or in exceptionally poor taste.

- **Performance**: To function as intended, without crashes or critical bugs. It should be the final version of the app, with all required metadata and fully operational Uniform Resource Locators (URLs).

- **Business model**: Developers must clearly define the business model, especially if the app includes in-app purchases.

- **Security**: Free from malware, phishing scams, or any other security vulnerabilities.

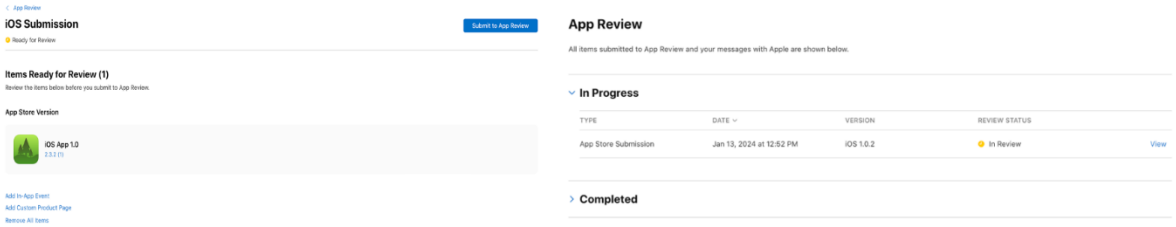
- **Legal compliance**: Must comply with legal regulations in the countries where it is made available.

- **Platform consistency**: Adhere to the design and UI guidelines of the respective app store, ensuring a consistent and user-friendly experience.

According to both app stores, the standard review duration takes approximately one day. However, for apps requiring extended reviews (e.g., those with access to hardware or high-security features such as

financial services-related apps), the review time may be longer [178]. According to input from interviewed app developers, overall review time may also be longer during festive seasons (e.g., Chinese New Year, Christmas). Communication between developers and the platform's review team occurs through the app developer platforms, with no specific or dedicated personnel assigned to individual app submissions.

Figure 35: iOS (Apple) app submission for review (from left to right, submission for review, review in progress)



Source: Secondary research

If an app is not approved within the app developer's timeframe, they can appeal to the platform for an expedited review process.

If the app is rejected, the platform will provide feedback and the rationale behind the decision. The reasons for rejection can include, but are not limited to:

- **Violation of content and/or privacy policies:** e.g., offensive material, harmful content, absence of data privacy policy.

- **Technical issues**: e.g., app crashes, performance issues, inaccurate declarations, unable to meet OS' application programming interface, incomplete app.

- **Inadequate business model clarity:** e.g., vague in-app purchase details, directing users to external payment systems.

[178] Apple (2025). App Review. https://developer.apple.com/distribute/app-review/ and Google (2025). Publishing your app. https://support.google.com/googleplay/android-developer/answer/9859751

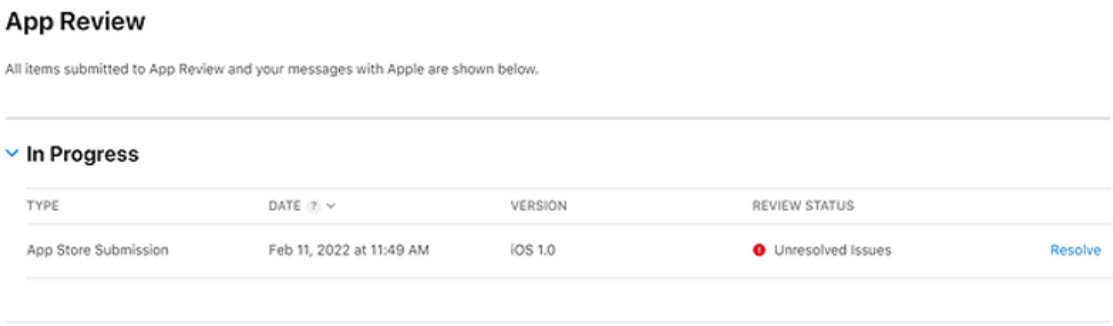
- **Poor design and UI issues:** e.g., cluttered or inconsistent design.

In the rejection communication, the platform will provide details on the steps developers must take to resolve the issues. Only after the issues are addressed and the app is approved by the app store will the app be published. For apps that are seeking an update, the rejection will not result in the removal of the existing approved app. However, only the outdated version will remain available on the app store.

In some cases, an app may be deemed in violation of app store policies after its launch. This can occur if platform policies change (e.g., introduction of ATT by Apple) or new restrictions are introduced (e.g., the implementation of GDPR). When such changes occur, app stores generally provide a sufficient timeline for developers to comply.

According to Apple, in 2022[179], it received 6.1 million app submissions, of which 1.7 million were rejected, representing a rejection rate of approximately 28%. For Google, while no specific rejection rate was provided, it reported rejecting a total of 2.28 million apps in 2023[180].

Figure 36: iOS (Apple) app submission review failed (resolution needed)



Source: Secondary research

[179] Apple (2023). App store stopped more than $2 billion in fraudulent transactions in 2022. https://www.apple.com/sg/newsroom/2023/05/app-store-stopped-more-than-2-billion-in-fraudulent-transactions-in-2022

[180] Google Security Blog (2024). How we fought bad apps and bad actors in 2023. https://security.googleblog.com/2024/04/how-we-fought-bad-apps-and-bad-actors-in-2023.html

During the review process, several types of data may be shared[181, 182], including:

- **App metadata**: Includes the app's name, description, screenshots, and any provided promotional material.

- **Backend service-related data:** Includes access to databases or cloud services, which are required to test the app's operationality during the review process.

- **App functionality:** Includes details about the app's features and functionality. The developer must ensure the app works as intended, including the demonstration of in-app features, login credentials, and any specific hardware or software resources required for proper testing.

- **Compliance documents**: Developers may be required to provide documentation proving compliance with local laws, such as data protection laws (GDPR, CCPA) or age restrictions.

(b) Integration with OS' ecosystem

App stores encourage developers to integrate their apps with the respective operating system's ecosystem to ensure a seamless user experience. For example, Apple mandates that apps offering third-party or social login services[183] (e.g., Facebook Login, Google Sign-In, Sign in with LinkedIn) must also provide Sign in with Apple (SIWA) as an option. This policy helps maintain privacy and consistency across iOS apps. On the other hand, Google offers Google Sign-In as an authentication option[184], allowing users to log in quickly using their existing Google accounts. These integrations enhance convenience, improve user retention, and provide a more consistent experience across platforms.

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[181] Apple (2025). App review guidelines. https://developer.apple.com/app-store/review/guidelines/

[182] Google (2025). Developer policy center. https://play.google/developer-content-policy/

[183] Apple (2025). App review guidelines. https://developer.apple.com/app-store/review/guidelines/

[184] Google (2025). Integrate Google Sign-In into your Android app. https://developers.google.com/identity/sign-in/android/legacy-sign-in

By incorporating these services, apps can align better with the OS's ecosystem, making it easier for users to interact with the app while maintaining a uniform look and feel across both iOS and Android.

(c) App visibility

Both Apple and Google use a combination of factors to determine how apps are ranked within their respective app stores. While both companies do not disclose the exact details of their ranking algorithms, publicly available information [185] indicates several factors that influence app ranking.

- **Number of downloads:** Apps with more downloads are considered popular. A high download count shows that many users find the app useful.

- **App ratings and reviews:** Higher ratings and positive reviews indicate that users are satisfied with the app.

- **User engagement:** High interaction by users (e.g., time spent using it) indicate higher satisfaction, reliance on the app.

- **App stability and performance:** Apps that crash less and run smoothly indicate stronger stability.

- **Update frequency:** Regular updates show that developers are maintaining and improving the app.

- **App store optimisation (ASO):** Refers to how well the app's title, description, and keywords are set up for easy search.

- **Relevance to users' search queries:** Apps that closely match what users are searching for (keywords matching) will rank more favourably.

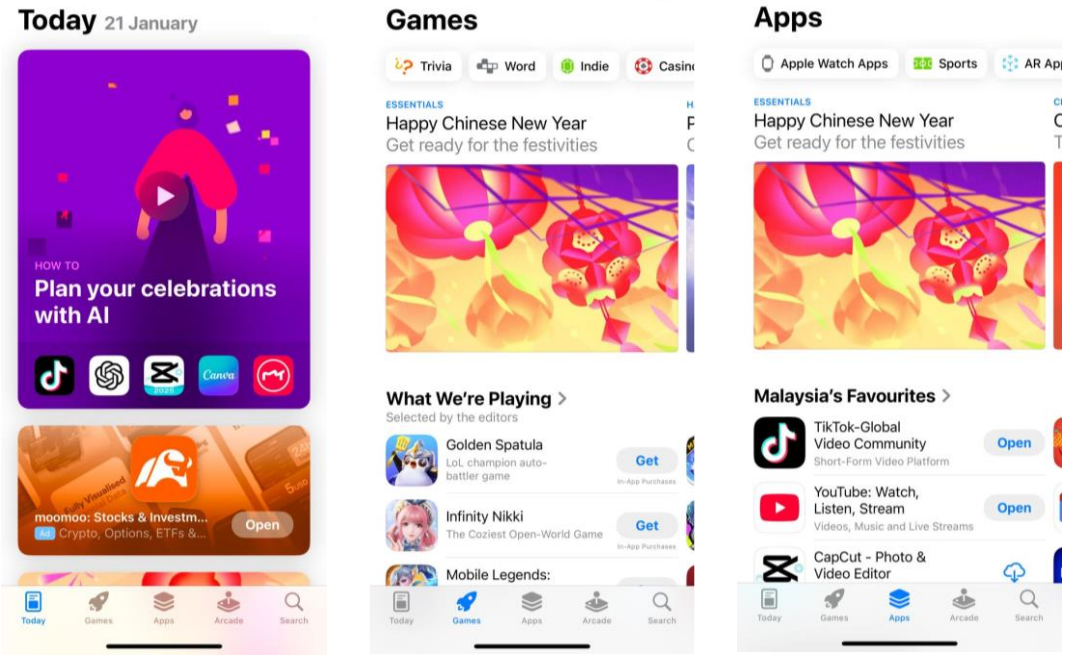
[185] Yellowhead (2025). What are the real app store ranking factors? https://www.yellowhead.com/blog/what-are-the-real-app-stores-ranking-factors/

- **Revenue generation:** Apps that generate more revenue through in-app purchases.

- **Content localisation:** Apps that are available in multiple languages and tailored to specific regions demonstrate a stronger connection to local users.

According to discussions with app developers, app stores are ultimately business-driven and typically rank apps that generate substantial revenue for the store, particularly those with in-app purchases. They may also promote selected new apps if they believe there is high potential for monetisation and significant revenue.

Figure 37: App featuring locations in Apple App Store



Source: Apple Mobile App Store

On the Apple App Store, there are two main areas where app can be visible[186]:

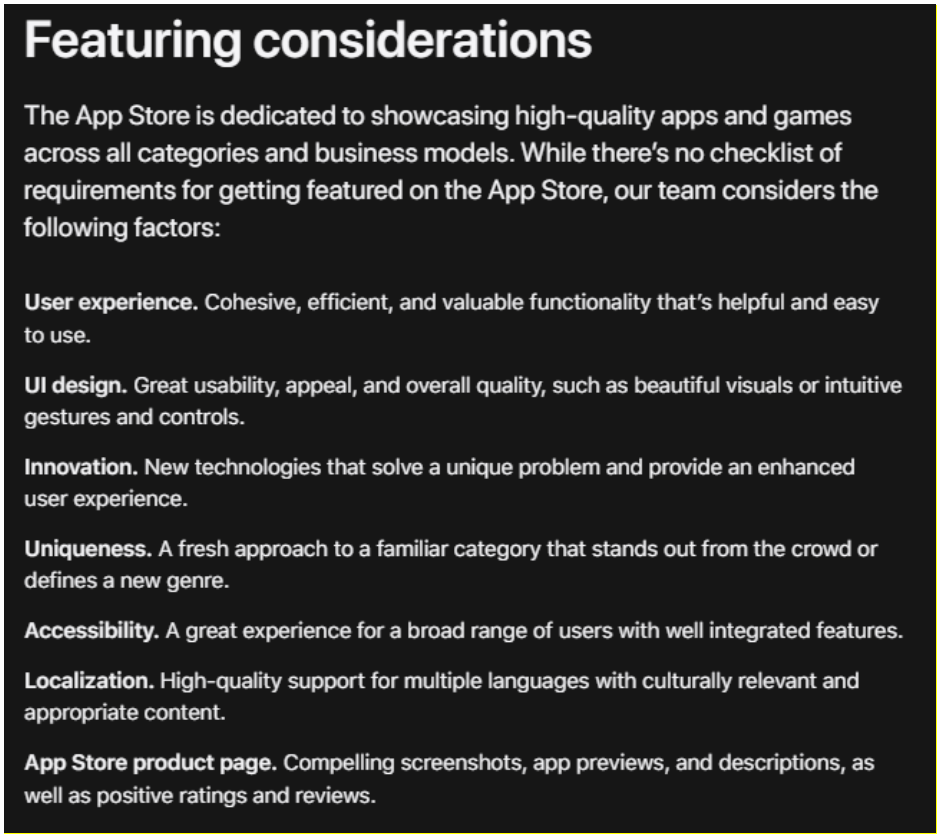
[186] Apple (2025). Discovery on the app store and Mac app store. https://developer.apple.com/app-store/discoverability/

- **Today Tab:** Landing page of the app, which highlights curated apps, featuring premiers, new releases, highlights, feature apps for the week etc.

- **Games and Apps Tabs:** Showcases app collections by category or genre. Also features app preview videos that autoplay.

According to Apple, seven criteria are assessed when featuring the apps. Below highlights the criteria:

Figure 38: App store featuring considerations of Apple[187]

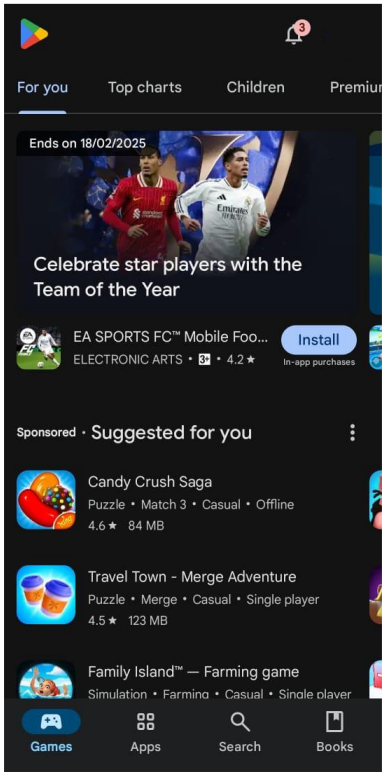


Source: Apple App Developers website

In the Google Play Store, apps are categorised into two main tabs - Games and Apps. Within these tabs, users can find additional categories that help further customise their search and discovery experience:

[187] Apple (2025). Getting featured on the app store. https://developer.apple.com/app-store/getting-featured/

Figure 39: App featuring locations in Google Play Store



Source: Google Mobile Play Store

- **For You:** Personalised based on the user's preferences, previous downloads, and interactions with apps.

- **Top charts:** Showcases the most popular apps and games on the Play Store.

- **Children:** Designed to help parents and guardians find age-appropriate apps for kids.

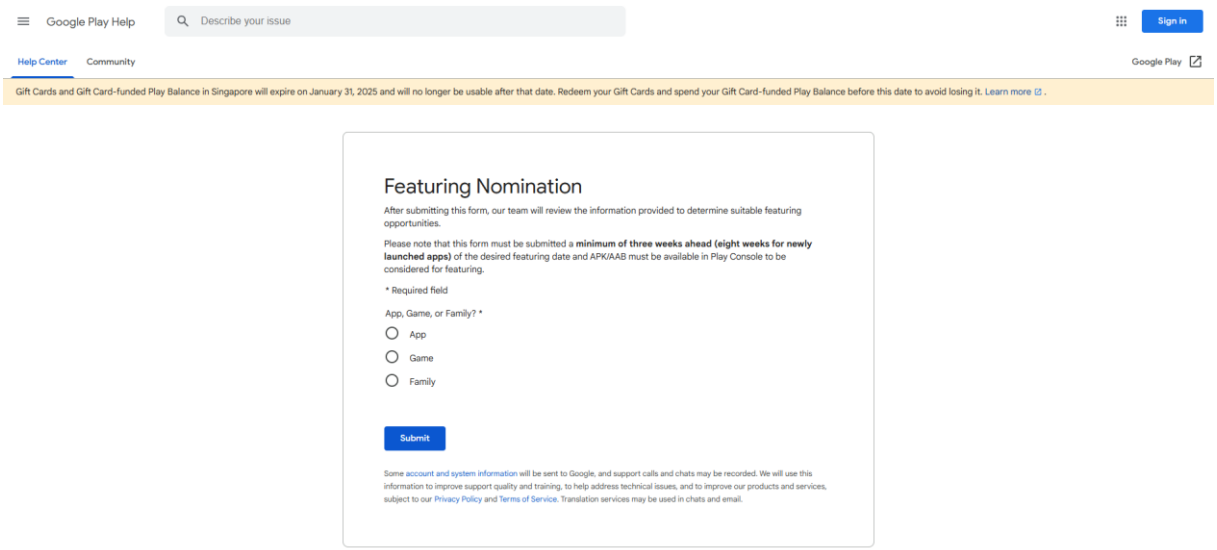
- **Premium:** Features apps and games that require a paid download or in-app purchases.

- **Categories**: Allows users to explore apps and games based on their specific interests or needs.

According to Google, four criteria are assessed when featuring the apps. Below highlights the criteria[188]:

- **Core value:** Able to deliver value by being “useful, fun or both”.
- **User experience**: Apps are intuitive and easy to use, offering an engaging experience.
- **Technical quality:** Works well on all the devices it supports, able to provide smooth transition to different devices.
- **Privacy and security:** Protects user privacy and provides a safe and secure environment.

Figure 40: App nomination form by Google



Source: Google Play Help

A unique feature of the Google Play Store is that it allows app developers to nominate their apps for specific promotional placements through a nomination form[189]. This process enables developers to submit their apps for consideration in various featured sections of the Play Store, such as the

[188] Google (2025). Getting featured on Google Play. https://play.google.com/console/about/guides/featuring/
[189] Google (2025). Featuring nomination. https://support.google.com/googleplay/contact/featuring_review?hl=en

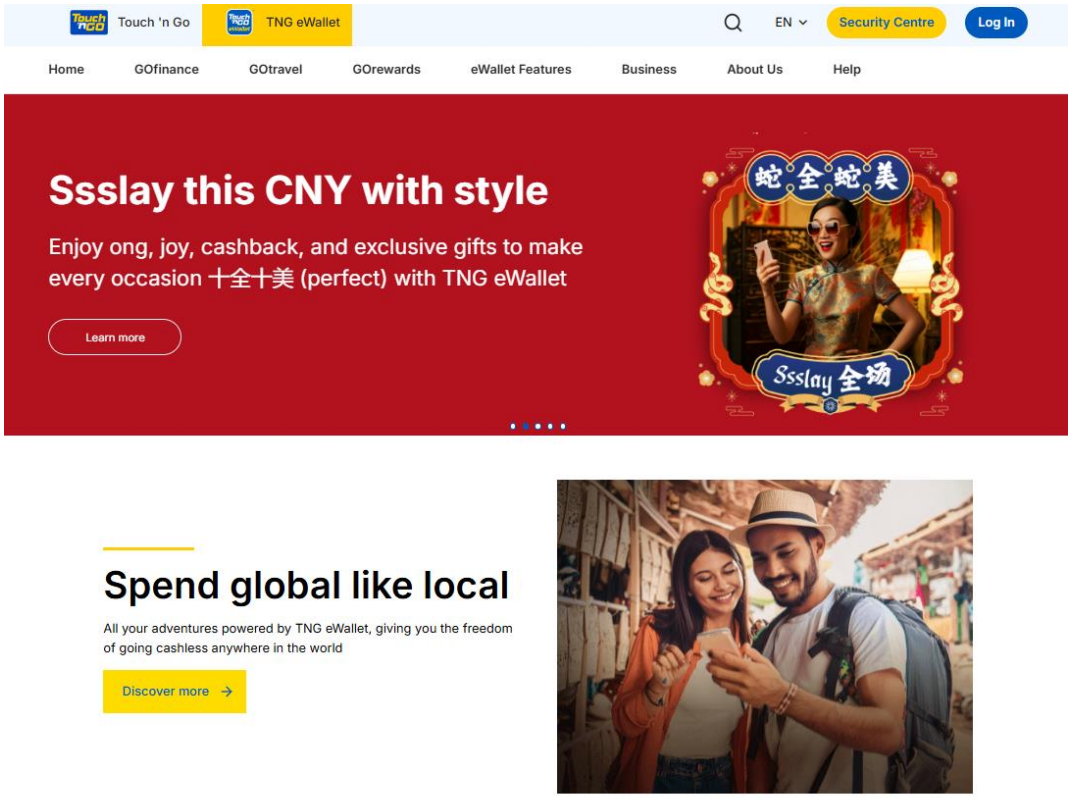
"Top Charts," "For You," or "Categories" sections. There is however no guarantee that the store will feature/promote the app on the app store.

Both platforms also allow paid advertising to help developers increase visibility, for instance:

- **Apple Search Ads**[190]: Developers can use this program to promote their app. The ad may appear on the app store page, search results, or product pages.

- **Google Ads**[191]: Developers can use Google Ads to run ads across Google's network, including within the Google Play Store.

Figure 41: Promotions within TNG eWallet website[192]



Source: TNG website

[190] Apple (2025). Search ads. https://searchads.apple.com/
[191] Google (2025). Find people who will love your app. https://ads.google.com/intl/en_sg/home/campaigns/app-ads/
[192] Touch 'n Go (2025). Principal: Ssslay into prosperity campaign. https://www.touchngo.com.my/promotion/principal-ssslay-into-prosperity-campaign/

Apart from paid advertising, many app developers choose self-promotion through various social media platforms; for instance, Touch 'n Go promotes its services through its own website. Developers may also collaborate with content creators or celebrities to increase the app's visibility. For example, Shopee partnered with celebrities like Jackie Chan [193] and Cristiano Ronaldo[194] to boost visibility during major shopping events.

(d) App pricing

App stores provide structured app pricing tiers to help developers set prices based on regional market conditions while ensuring consistency and accessibility for users. The pricing tiers across major app stores in Malaysia are as follows:

- Apple app store: MYR 4.90 - MYR 4,799.90[195].
- Google: Malaysia: MYR 0.30 – MYR 4,800.00[196]

(e) App payment

App stores typically categorised payment into two categories, non-digital goods and digital goods. For non-digital goods, payments can be processed through the app store's payment system or via external payment gateways like iPay88 or RazorPay. Additionally, developers can direct users to external websites for payment processing, though this is subject to app store guidelines.

For digital goods or "in-app purchases", app stores operate on a revenue-sharing model and impose a commission on sales." These transactions

[193] Marketing Interactive (2021). Shopee packs a punch with Jackie Chan as face of 9.9 shopping festival. https://www.marketing-interactive.com/shopee-packs-a-punch-with-jackie-chan-as-face-of-9-9-shopping-festival
[194] The Straits Times (2019). Football: Cristiano Ronaldo unveiled as Shopee's latest brand ambassador. https://www.straitstimes.com/sport/football/football-cristiano-ronaldo-unveiled-as-shopees-latest-brand-ambassador
[195] Apple (2022). Apple announces biggest upgrade to app store pricing, adding 700 new price points. https://www.apple.com/my/newsroom/2022/12/apple-announces-biggest-upgrade-to-app-store-pricing-adding-700-new-price-points/
[196] Google (2025). Supported locations for distribution to Google Play users. https://play.google.com/supported-locations/?hl=en&sjid=10548044899152396005-AP

typically involve virtual items and can be broadly classified into four types[197, 198]:

- **Consumable content**: Items such as lives or gems in a game.
- **Non-consumable content**: Premium features such as access to exclusive articles, ad-free browsing, or advanced functionalities.
- **Auto-renewable subscriptions**: Ongoing access to virtual content, services, and premium features.
- **Non-renewing subscriptions**: Time-limited access to services or content, such as an in-game battle pass.

As of September 2024, the commission rate for app payments[199, 200] in Malaysia ranges between 15% and 30%, which aligns with global standard rates (see below). However, commission rates vary across different countries and regions, including the EU, India, Netherlands, and South Korea.

- **Apple App Store (standard commission fee)**: 30%
- **Apple App Store (Global App Store Small Business program, initiated in 2020[201])**: 15%, but only for developers earning up to USD 1 million across all their apps. Developers exceeding this threshold are subject to the standard 30% commission for the remainder of the year. Developers whose earnings fall below USD 1 million in a future year can become eligible again for the 15% rate.

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[197] Apple (2025). In-app purchases. https://developer.apple.com/design/human-interface-guidelines/in-app-purchase/

[198] Google (2025). Make in-app purchases in Android apps. https://support.google.com/googleplay/answer/1061913?hl=en

[199] Apple (2025). Distributing apps in the European Union. https://developer.apple.com/help/app-store-connect/distributing-apps-in-the-european-union/commissions-fees-and-taxes/

[200] Google (2025). Service fees. https://support.google.com/googleplay/android-developer/answer/112622?hl=en

[201] Apple (2020). Apple announces app store small business program. https://www.apple.com/newsroom/2020/11/apple-announces-app-store-small-business-program/

- **Google Play Store (standard commission fee)**: 30%

- **Google Play Store (15% service fee tier, initiated in 2021[202])**: 15% for the first USD 1 million in earnings. Earnings above USD 1 million are charged at the standard 30% rate. To qualify, developers must maintain a valid developer account and comply with the Developer Distribution Agreement (DDA) and related policies.

- **Google Play Store (subscriptions)**: 15% for automatically renewing subscriptions, regardless of the developer's annual earnings.

- **Google Play Store (other)**: 15% or lower for eligible developers under specific programs, such as the Play Media Experience Program[203]. Key eligibility criteria include offering video, audio, or books for purchase, having over 500,000 monthly active installs, a high user rating, and integration with specific Google platforms and APIs based on the type of media content.

Despite this, app developers are observed to apply different approaches in bypassing in-app payment rules, such as:

- **Reader apps**: Apps that serve as a platform for content like newspapers, music, and books. Users purchase content on the company's website and access it via the app.

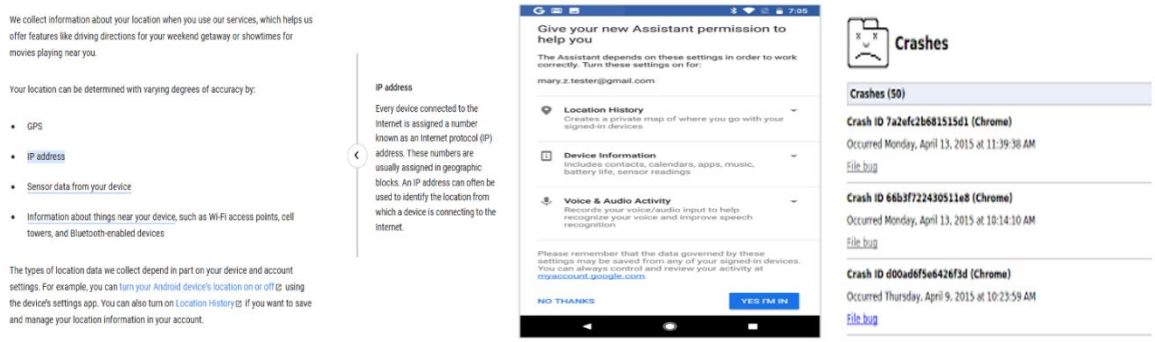
- **Multiplatform services**: Apps allowing users to buy content outside the app while still granting access within the app. This bypasses App Store fees if payments are made elsewhere.

- **Enterprise services**: Developers sell directly to organisations, rather than individual consumers, allowing external content purchases.

[202] Google (2021). Changes to Google Play's service fee in 2021. https://support.google.com/googleplay/android-developer/answer/10632485
[203] Google (2025). Play media experience program. https://play.google.com/console/about/programs/mediaprogram/

(f) Data collection and usage

Figure 42: Google data collection (from left to right, IP address collection, personal data collection, Google's crashes report)



Source: Google Privacy and Terms

Google collects various types of users' data at different stages of its services to enhance functionality provide personalised experiences and improve service quality. The types of data collected can be categorised as personal data (e.g., phone numbers or email addresses) and behavioural data (e.g., browsing patterns or app usage)[204]. Below are details of the type of data collected and used:

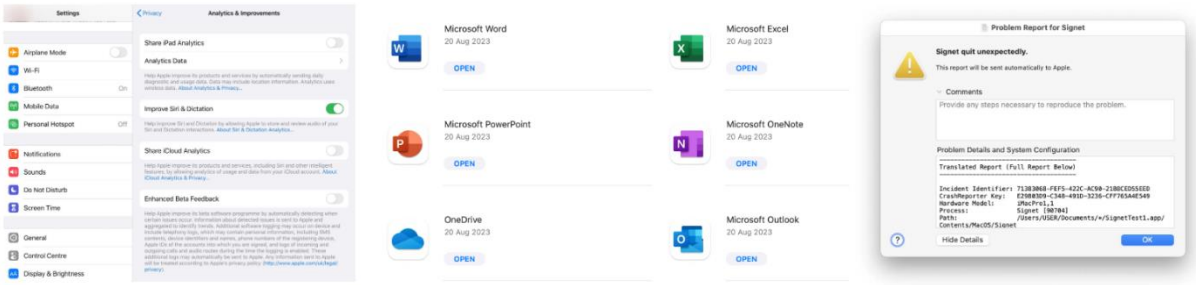
I. **Service interaction and usage:** As users use Google services like Search and YouTube, Google collects personal data like device info and IP address, which helps it to optimise services for the users' location. It also collects behavioural data, such as search queries and app interactions, to provide relevant results or suggestions based on activities.

II. **Advertising and analytics:** Uses personal data like age, gender, and language preferences to show targeted ads. This could include promotions for local businesses or tourism. Behavioural data, such as clicks on ads, helps refine ad targeting.

[204] Google (2025). Privacy policy. https://policies.google.com/privacy?hl=en-US

III. **System monitoring and performance optimisation:** Collects technical data to monitor and fix issues. This includes device identifiers for troubleshooting and crash reports to improve app functionality, such as resolving frequent crashes in specific areas.

Figure 43: Apple data collection (from left to right, Siri data collection, App Store download history, Apple's crashes report)



Source: Apple Privacy and Terms

On the other hand, Apple also collects different types of user data at various stages of its services to improve functionality, personalise experiences, and enhance overall service quality. Similar to Google, the data collected can be categorised into personal data (e.g., Apple ID, email address, and device information) and behavioral data (e.g., app usage, browsing activity in Safari). Below are the key areas where Apple collects and uses data:

I. **Service interaction and usage:** When users interact with Apple service such as Siri, Safari, or Apple Maps, Apple collects personal data such as device information and location to provide relevant services (e.g., personalised search suggestions, route optimisation, etc.). Behavioural data, such as app usage patterns and interaction history, is also collected to improve recommendations and user experience across Apple services.

II. **Advertising and analytics:** Apple uses personal data such as age, gender (if provided), and device preferences to deliver relevant ads within its ecosystem, such as in the App Store and Apple News. Behavioural data, such as app download history and interaction with

ads, is collected to refine ad targeting and measure ad performance. Apple's advertising platform follows a privacy-focused approach, offering users control over personalised ads through setting like "Limit Ad Tracking".

III. **System monitoring and performance optimisation:** Apple collects technical data to maintain and enhance device and service performance. This includes device identifiers, diagnostic reports, and crash logs, which help Apple identify and resolve system issues. Data collected in this area allows Apple to improve software stability and ensure a smooth user experience across devices.

In addition, Apple requires third-party apps to use the App Tracking Transparency (ATT) framework if they wish to track user activity across apps and websites. This framework gives users the ability to opt out of being tracked, and developers must respect this decision. In this case, especially for apps that rely heavily on user data for operations (e.g., navigation-related apps, weather apps, fitness trackers), developers must manage these limitations by offering alternatives or notifying users of potential issues if permissions are denied. Apple also has strict rules regarding third-party advertising, developers' marketing, analytics, product personalisation, and app functionality, ensuring user privacy is maintained across these processes[205].

6. App stores and users

Relationship between app stores and end users revolve around two areas:

(a) App discovery and payments

App stores are the primary platform for users to discover and manage applications. They provide various methods for app discovery, including browsing, searching, and personalised recommendations based on user behavior. App stores also feature curated lists and categories to help users find relevant apps based on their interests.

[205] Apple (2025). App privacy details on the app store. https://developer.apple.com/app-store/app-privacy-details

App stores provide a streamlined process for downloading apps, making it easy for users to acquire apps. The process typically involves a few taps or clicks, and users can authenticate their downloads using methods like fingerprint scanning or facial recognition.

In-app purchases are another key function of app stores provided to users. Many apps offer additional content, features, or upgrades through in-app purchases. These purchases, which are only applicable to “digital goods” are processed through the app stores' payment systems.

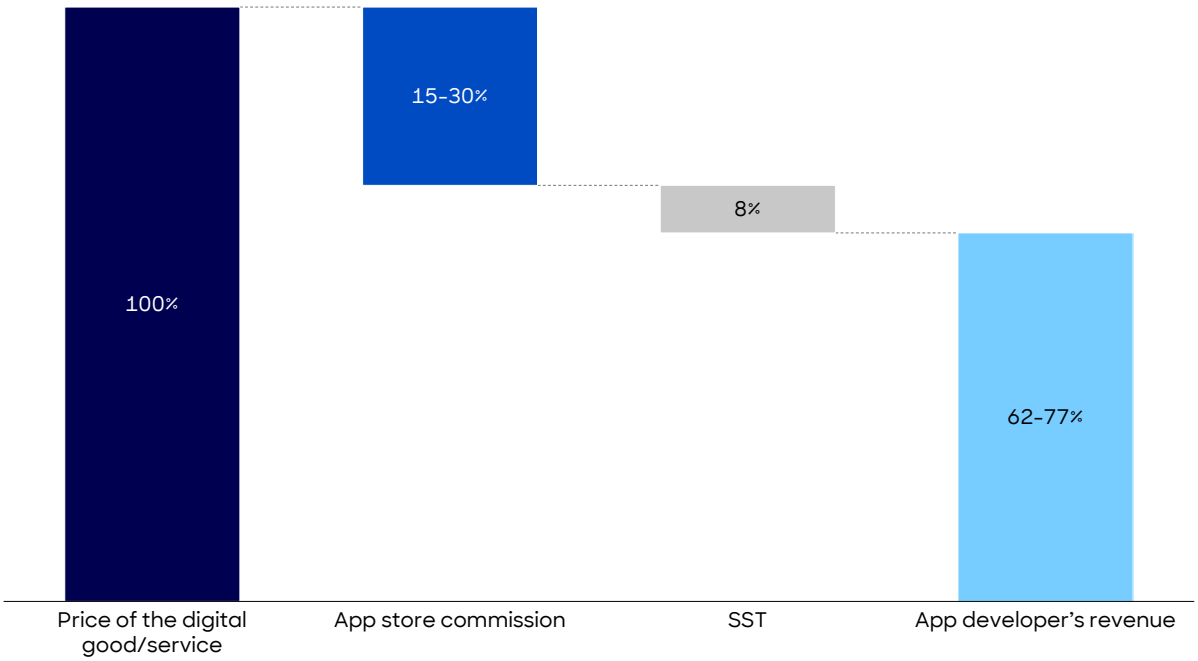
(b) App usage and review

App stores also manage app updates and notifications (though app developers). They provide users with the ability to update their apps automatically, ensuring the latest bug fixes, security patches, and features are applied. Updates are typically installed automatically, which minimises user effort and keeps apps functioning properly.

Separately, users can rate and review apps they have downloaded, providing feedback to other users and developers. Ratings and reviews help users make decisions about which apps to download and allow developers to receive input on areas for improvement.

4.1.5 Supply chain take rates and approximate earnings by supply chain players

Figure 44: Mobile operating and payment system sub-sector take rates (for local Malaysian app developers) [%]



Source: Interaction with industry players and MyCC's analysis

Take rates within the mobile operating and payment system sub-sector in Malaysia are relatively straightforward, involving only two main parties – the app store and the government (Royal Malaysian Customs Department, RMCD).

For any transaction involving Google Pay or Apple Pay, the app stores charge a commission fee ranging from 15% to 30%. This commission is taken to cover platform services, including transaction processing, infrastructure maintenance, and providing access to a large user base. The rate varies depending on the app store and the specific terms of the agreement between the app store and the developer (see above for more information).

At the outset (2008), both Google Play Store and the Apple App Store imposed a standard commission rate of 30%. Over time, this rate has been

adjusted in response to pressure from app developers, resulting in varying terms based on specific regions and circumstances. Examples include:

- **2020:** Globally, Apple launched the App Store Small Business Program, reducing its commission rate to 15% for developers earning up to USD 1 million annually. Google followed suit in 2021.

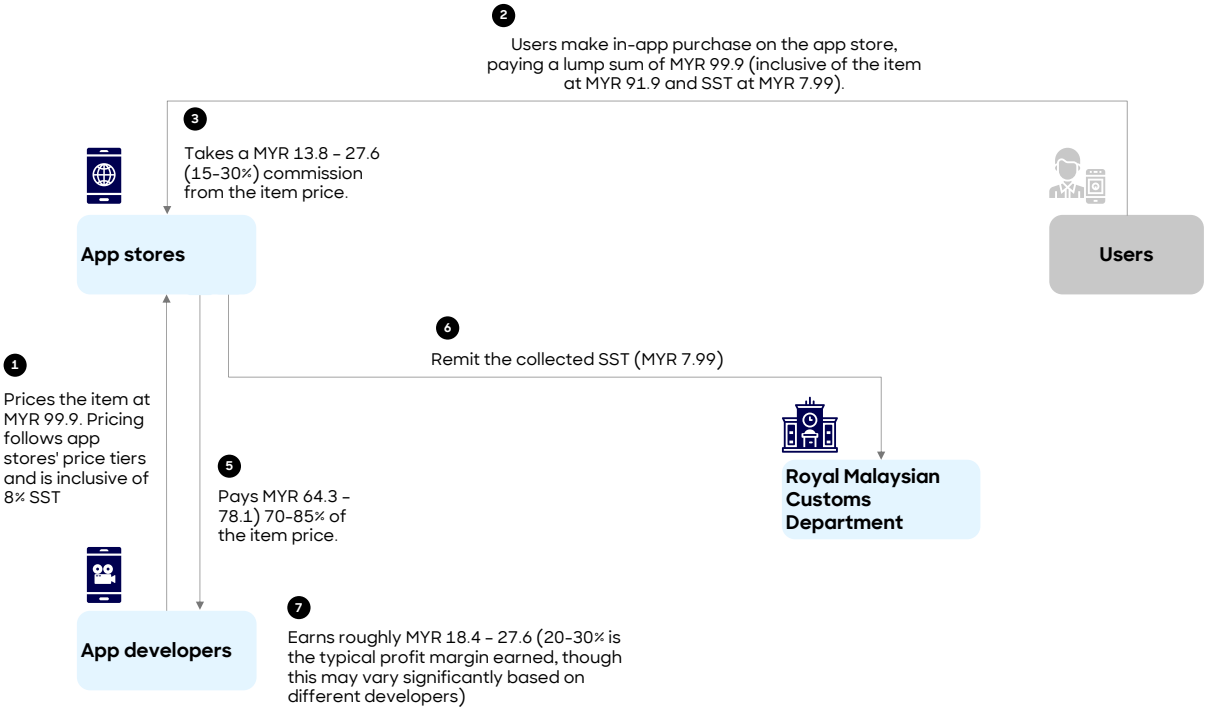
- **2021:** In South Korea, following the enactment of the Telecommunications Business Act, the government mandated that both Google and Apple allow developers to use third-party payment systems. Apple subsequently reduced its commission to 26% (from 30%) for developers using these alternative systems.

- **2021:** In Netherlands, The Netherlands Authority for Consumers and Markets (ACM) ruled that Apple's 30% commission and mandatory payment system for dating apps violated competition law. Apple was subsequently required to allow alternative payment systems for dating apps, imposing a 27% commission on these transactions.

In addition to the app store commission, an 8% Sales and Service Tax (SST) is applied to the transaction. This tax is collected by the app store and subsequently remitted to the government. For foreign, non-Malaysian app developers, an additional Digital Service tax of 6% is imposed by the Royal Malaysian Customs Department (RMCD)[206, 207].

[206] Foreign registered persons who provide digital services to consumers in Malaysia.
[207] RMCD (2021). Guide on: Digital services by foreign service provider (FSP), page 3. https://mystods.customs.gov.my/storage/app/media/pdf/guide/Guide%20on%20Digital%20Service_V2.1_01022021.pdf

Figure 45: Approximate earnings by value chain players (example)



Source: Interaction with industry players and MyCC's analysis

While it can vary significantly, the typical profit margin for an app developer is usually around 20-30% [208]. Costs include fees to external parties (commission fees to app stores) and app operational expenses (including development, hosting and server costs, customer support, and maintenance).

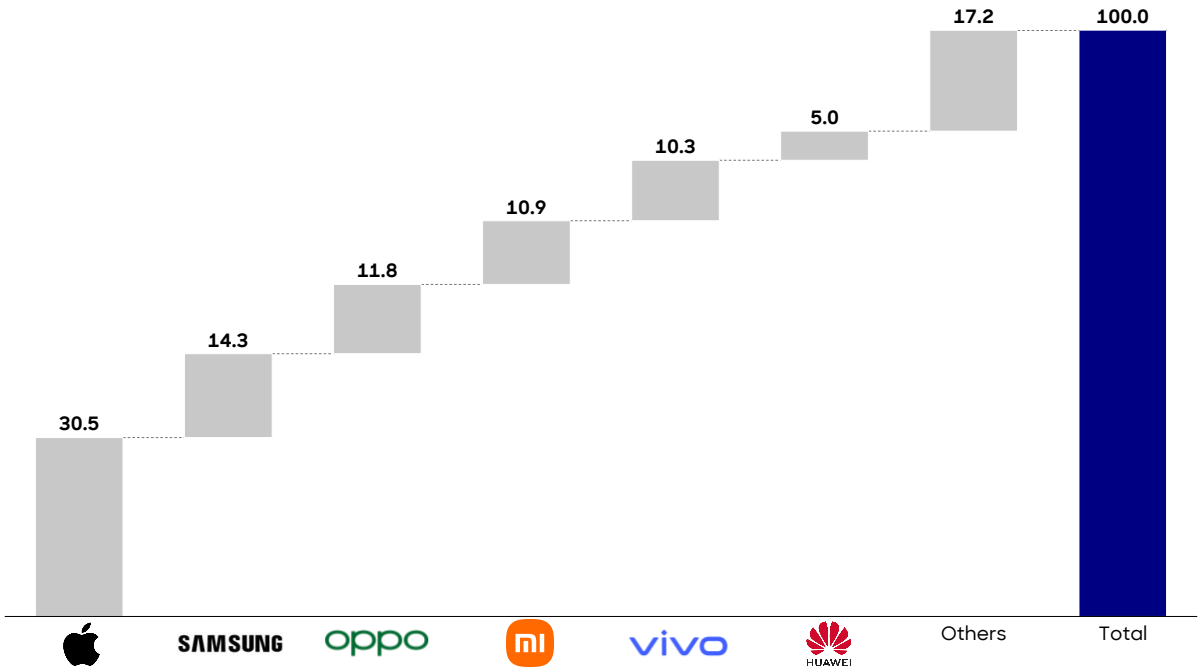
[208] UXCam (2024). Top 4 strategies for low cost mobile app development. https://uxcam.com/blog/low-cost-mobile-app-development/

4.1.6 Key players

4.1.6.1 Key players along the supply chain

(a) Key device manufacturers

Figure 46: Mobile device market share in Malaysia, December 2024, [%]



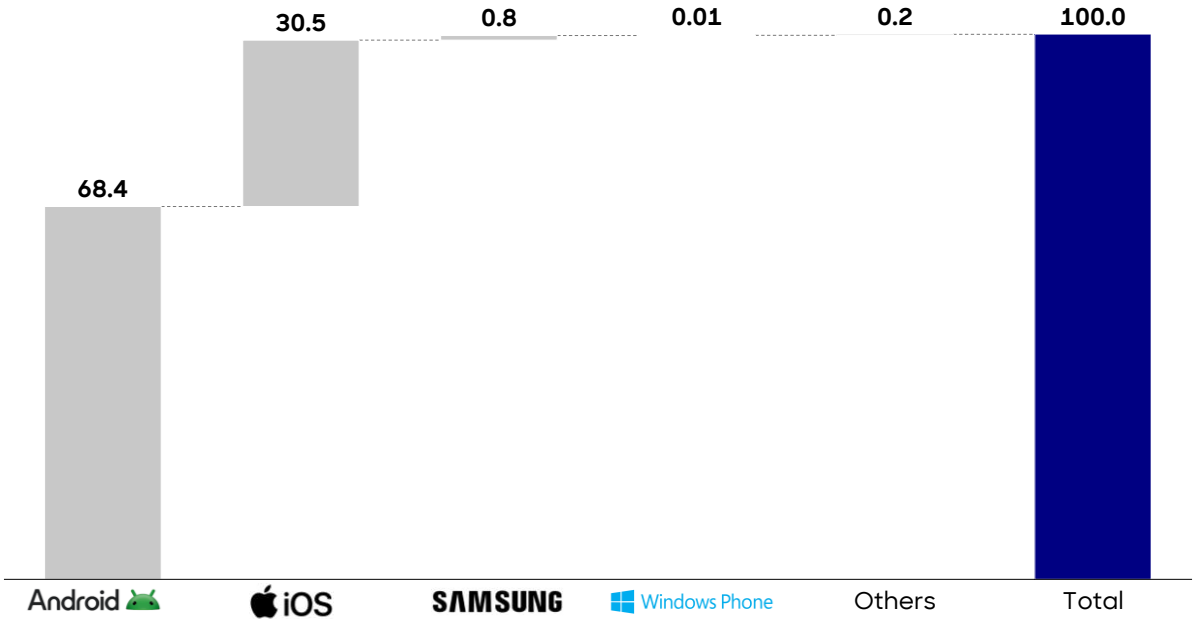
Source: StatCounter Malaysia, 2024

As of December 2024, Apple leads the smartphone market in Malaysia, holding a dominant share of 30.5%. Its focus on premium features, such as advanced camera technology, security through Face ID, etc., is particularly appealing among tech-savvy and higher-income consumers. The next four major contenders—Samsung, Oppo, Xiaomi, and Vivo—each maintain a market share of over 10%[209], contributing to a competitive landscape in the country's mobile device sector. Samsung holds a strong presence, particularly in the premium segment with its Galaxy S and Note series, while Oppo, Vivo and Xiaomi cater to both the mid-range and budget markets with their diverse product portfolios.

[209] StatCounter (2024). Mobile vendor market share Malaysia. https://gs.statcounter.com/vendor-market-share/mobile/malaysia/

(b) Key mobile OS players

Figure 47: Mobile OS market share in Malaysia, December 2024, [%]



Source: StatCounter Malaysia, 2024

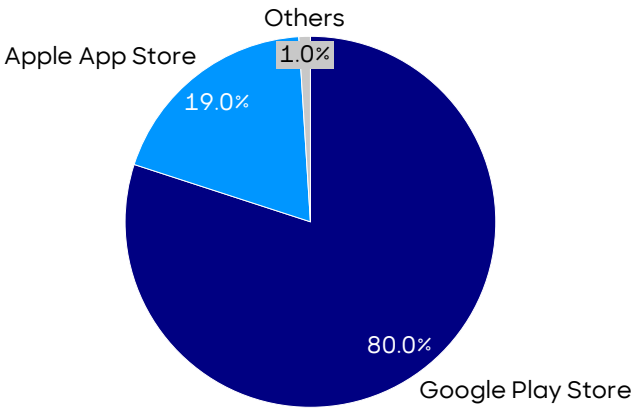
Separately, mobile OS in Malaysia shows considerable dominance by Android, which, as of December 2024, commands a market share of 68.4%. This significant growth can be attributed to its open-source system, allowing device manufacturers to customise and enhance the platform, resulting in a wider range of devices and applications that cater to diverse consumer needs. iOS follows with a substantial share of 30.5%, while Samsung's OS holds a mere 0.8% and other systems represent just 0.2%[210].

Users who value more technical customisation often prefer Android devices. Android offers greater flexibility, even allowing users to remove the graphical user interface (GUI) and revert to command line mode, providing more control for those with technical expertise. However, for Apple, customer preference toward is largely driven by its streamlined features, which make its devices easier to use, particularly for those seeking a simple and cohesive experience.

[210] StatCounter (2024). Mobile operating system market share Malaysia. https://gs.statcounter.com/os-market-share/mobile/malaysia

(c) Key app stores

Figure 48: Mobile app downloads by store in Malaysia, 2021 [%]



Source: Rakuten Insight (Statista), 2021

Android's business model, where the Google Play Store is set as the default app store on its partner devices, has contributed to its dominance in the app store market. As of 2021, the Google Play Store accounts for approximately 80% of all mobile app downloads in Malaysia, followed by Apple's App Store at 19%, with other app stores making up the remaining 1%[211].

[211] Rakuten Insight (via Statista) (2021). Leading app store to download mobile phone apps in Malaysia as of September 2021. https://www.statista.com/statistics/1278753/malaysia-leading-app-store-for-app-downloads/

(d) Key app developers

Figure 49: App ranking by downloads in Malaysia, 2024 [ranking]

Rank	App		Developer
1	TikTok	TikTok	ByteDance
2	CapCut	Capcut	ByteDance
3	Shopee	Shopee	SEA
4	MAE	MAE	Maybank
5	MYJPJ	MYJPJ	Jabatan Pengangkutan Jalan
6	Whatsapp	Whatsapp	Meta
7	Touch n' Go	Touch n' Go	TNG Digital
8	Telegram	Telegram	Telegram
9	Facebook	Facebook	Meta
10	Instagram	Instagram	Meta

Source: Data Reportal Malaysia, 2024

On apps, as of the end of 2023, the top apps downloaded in Malaysia are predominantly developed by international companies, with seven out of the top 10 being foreign apps. ByteDance leads the segment with its popular apps TikTok and CapCut. Following closely are Shopee, developed by SEA Group, MAE by Maybank, and MyJPJ by *Jabatan Pengangkutan Jalan* (JPJ)[212].

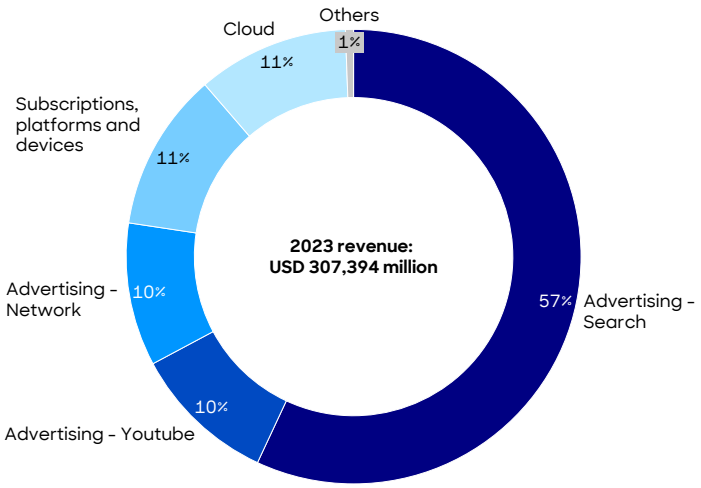
4.1.6.2 Key mobile operating and payment system players

(a) Google

Founded in 1998 as a search engine and has since evolved into a multifaceted technology company. It is known for products like Android, Google Chrome and services such as Google Maps and YouTube.

[212] DataReportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia?rq=digital%20malaysia

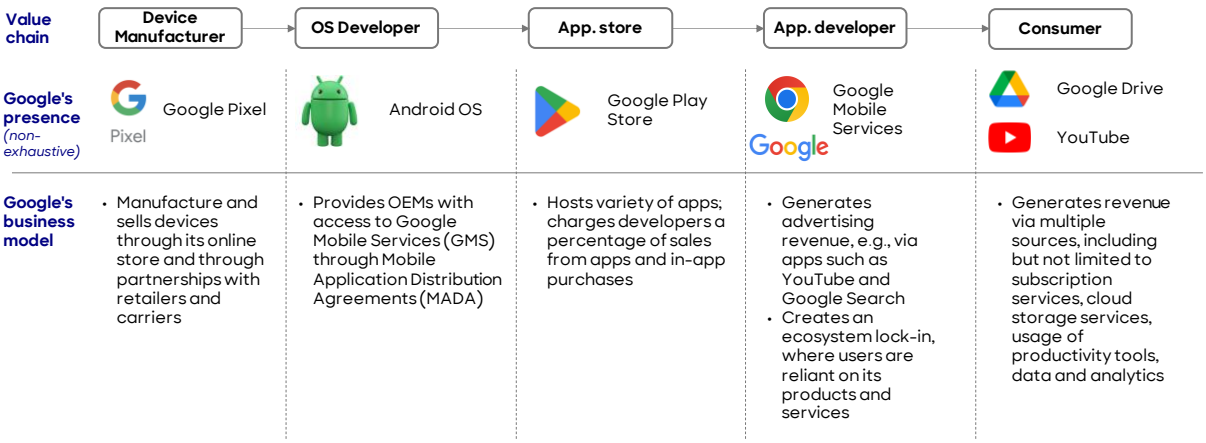
Figure 50 : Google's global revenue breakdown, 2023 [%]



Source: Alphabet Inc's annual report, 2023

Google's revenue model is heavily reliant on digital advertising, with 79.4% of its earnings stemming from this segment. Its browser app plays a critical role in driving traffic and engagement within its ecosystem. Other sources of revenue include subscriptions and platforms (10.3%), cloud services (9.3%) and miscellaneous income (1.1%)[213].

Figure 51 : Google's involvement and business model along the mobile operating and payment system supply chain



Source: Secondary research

[213] Google (2024). Annual report pursuant to Section 13 or 15 (d). https://abc.xyz/investor/sec-filings/annual-filings/2024/

In the mobile operating and payment system sub-sector, Google plays a significant role throughout the entire supply chain. It operates as a device manufacturer with its Google Pixel smartphones, an OS developer with Android OS, an app store provider through the Google Play Store and an app developer with Google Mobile Services (GMS).

As an OS player, its Android open-source nature allows Original Equipment Manufacturers (OEMs) to access GMS apps, such as Google Play, Chrome (Google's default browser) and YouTube, at no cost through its MADA. Selected apps serve important functions within the Android ecosystem, with a key example being Chrome, which acts as the default web browser for Android devices. It plays a critical role in gathering user data, which supports Google's advertising business by helping deliver more targeted ads.

For the installed GMS apps, although they cannot be removed, users can disable them if desired.

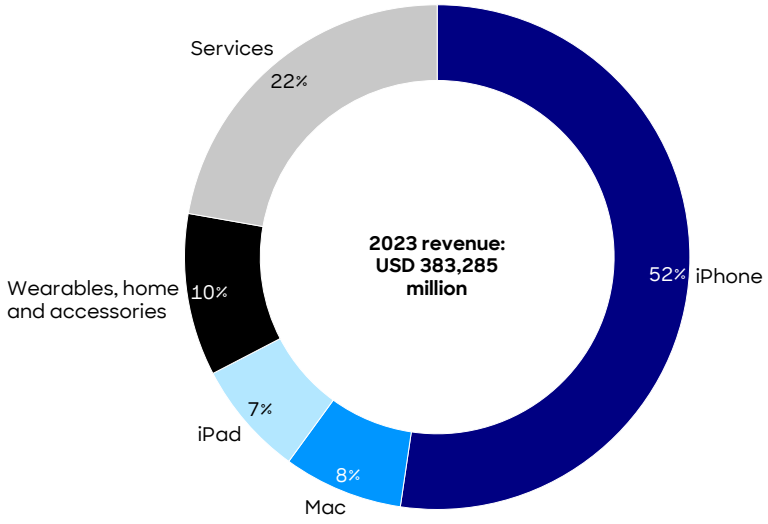
Overall, Google's strategy encourages widespread use of Google's services, which helps to increase its advertising revenue and enhancing its market share. Each layer of the ecosystem operates as a multi-sided market, involving various players. These services are often for free to attract users into the ecosystem, creating a seamless user experience that strengthens reliance on its ecosystem.

On the payment system, Google's Android OS faces variability in security across different device manufacturers. However, Google is continuously improving its security through initiatives like Google Play Protect, which leverages AI to detect and mitigate security threats in real-time.

(b) Apple

Established in 1976, Apple is known for its hardware, including the iPhone, iPad and Mac computers, alongside its OS like iOS and macOS. The company focused on a closed, tightly integrated ecosystem that offers a seamless user experience across its devices, fostering strong brand loyalty and a distinct identity in the technology market.

Figure 52: Apple's global revenue breakdown, 2023 [%]



Source: Apple's annual report, 2023

Apple's revenue model is fundamentally built around device sales, with the iPhone contributing 52.3% to its total revenue of USD 383.3 billion in 2023. Other non-mobile devices, such as Macs and iPads, represent 25.4%, while services account for 22.3%[214].

The company creates its own operating system, iOS and MacOS, which is specifically tailored to optimise performance on its devices (e.g., iPhone, iPad, Mac, etc.). This integration allows for features that enhance user interaction, such as continuity across devices and advanced security measures. Apple also controls the app distribution process through its App Store, which is pre-installed as the only official platform for iOS applications. By restricting access to other app stores, Apple ensures a high level of quality and security for its apps.

In addition to its hardware and software, Apple is also a major app developer specifically tailored to optimise performance on its devices. It offers popular applications such as Apple Music, Apple TV, iCloud, and Safari (which is the default web browser on all Apple devices).

[214] Apple (2024). Investor updates. https://investor.apple.com/investor-relations/default.aspx

As the default browser, Safari partners with Google to make Google its default search engine. According to documents released in the U.S. DOJ's ongoing antitrust lawsuit against Google in 2024, it was noted that Google paid Apple USD 20 billion in 2022, which allegedly represents 36% of the revenue Google generates from search ads[215]. This arrangement allows both Apple and Google to have significant influence over the browsing habits of users, encouraging the use of their services while maintaining control over their online experiences.

On the payment system, Apple offers a more secure environment due to its consistent device-level security measures. It implements extensive layers of fraud prevention, including tokenisation, secure storage, authentication methods, monitoring, and fraud detection, all of which are integrated into its closed ecosystem. This ensures a highly controlled environment, enhancing overall security for users.

In the mobile operating and payment system sub-sector, Google plays a significant role throughout the entire supply chain. It operates as a device manufacturer with its Google Pixel smartphones, an OS developer with Android OS, an app store provider through the Google Play Store and an app developer with Google Mobile Services (GMS).

(c) Other players

Aside from Google and Apple, two other smaller players (in mobile operating and payment system) also have end-to-end integration throughout the entire supply chain:

Samsung: Founded in 1969 and known for its wide range of consumer electronics, including smartphones, tablets, televisions (TVs) and home appliances. In this sub-sector, Samsung is involved throughout the entire supply chain. It has an extensive production line of smartphone devices that cater to different market segments.

[215] The Business Times (2024). Google's payments to Apple reached US$20 billion in 2022, antitrust court documents show. https://www.businesstimes.com.sg/companies-markets/telcos-media-tech/googles-payments-apple-reached-us-20-billion-2022-antitrust-court-documents-show

While it does not produce its own OS, Samsung adds customisation and features on Android OS through its own UI system – One UI. This interface enhances the user experience on Samsung devices and offers unique features such as Samsung Pay, Bixby and Knox, tailored to their hardware.

Samsung also operates the Galaxy Store, an app store designed specifically for its devices, which provides users access to applications optimised for Samsung's ecosystem. Although Samsung primarily relies on third-party developers for app creation, it also invests in developing its own apps and services, such as Samsung Health and Samsung Kids, Samsung Internet.

Huawei: Established in 1987 as a telecommunications equipment and consumer electronics company. Its device manufacturing focuses on a range of smartphones, from budget models to premium devices under its Pura and Mate series.

On the OS side, Huawei developed its own system, HarmonyOS, in response to restrictions imposed by the U.S. government on its access to Android. It also operates the Huawei AppGallery, its proprietary app store. In addition to supporting third-party developers, Huawei develops its own applications, such as Huawei Health, Huawei Browser and Huawei Books.

4.1.7 Key market-related issues

(a) **Lack of customisation in app store policies for local markets:** App store policies are often broad and do not specifically consider local market regulations, creating challenges for app developers when conflicts arise with Malaysian laws. For example, under Apple's new deletion requirement implemented in 2022, all apps that allow user account creation must also offer an option to delete the account [216]. This policy is likely done to align with GDPR's Article 17, which grants users the right to request the deletion of personal data under certain circumstances [217].

[216] Apple (2022). Offering account deletion in your app. https://developer.apple.com/support/offering-account-deletion-in-your-app/
[217] GDPR (2024). Art. 17 GDPR: Right to erasure ('right to be forgotten'). https://gdpr-info.eu/art-17-gdpr/

However, this creates complications for financial service apps in Malaysia, as its domestic Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA) requires financial institutions to keep records for at least six years following the completion of a transaction or termination of a business relationship[218]. It is therefore not always feasible or appropriate to allow users to delete accounts tied to such financial transactions.

To work around this, various options were seen. One of it was the implementation of "kill switch" option[219, 220] to meet Apple's requirements while still adhering to financial regulations. The kill switch is a self-service security feature that immediately blocks a user's current, savings, fixed deposit, loan accounts, and cards if they suspect they have been a victim of a scam. Since app store policies do not always align with local regulations, developers often need to negotiate with Apple and provide justifications to achieve conditional compliance.

(b) **High app development cost and resource demands:** Different OS require distinct frameworks for app development, with Android primarily using Java or Kotlin and iOS using Swift or Objective-C. This creates challenges for developers in building apps that are compatible with both platforms, resulting in higher costs, longer development times, and complexities in maintaining and updating multiple codebases. While cross-platform frameworks like React Native, Flutter, and Xamarin aim to alleviate these challenges, issues such as performance concerns, UI/UX consistency, and integration with native features can still emerge.

(c) **No direct line of contact during app review**: Developers often face challenges due to the lack of direct communication with the person reviewing their app. When issues arise, they must rely on

[218] BNM (2025). Anti-money laundering/countering financing of terrorism. https://amlcft.bnm.gov.my/

[219] The Straits Times (2024). Malaysia's government to introduce 'kill switch' to boost online security. https://www.straitstimes.com/asia/se-asia/malaysia-s-government-to-introduce-kill-switch-to-boost-digital-security

[220] Option is not directly made in response to the policy.

generic support channels or automated systems, which can be inefficient and time-consuming.

(d) **Unclear review process:** According to selected app developers, the app review process can be unclear, as the guidelines are sometimes open to varying interpretations. While developers typically seek clarification through the app store's support system, the feedback they receive can be vague. As a result, developers often need to follow up with the app store to ensure their issues are resolved effectively.

(e) **Inconsistent responses**: While submitting a ticket may lead to support from an actual support personnel, developers reported that communication with app stores can vary each time they reach out, resulting in inconsistent and often unclear guidance. This can lead to discrepancies, where similar apps are treated differently, or policies are enforced inconsistently.

(f) **Unclear approval/rejection process**: Developers often encounter delays or confusion due to an inconsistent approval/rejection process and lack of specific feedback on rejections. In some cases, they are directed to app stores' community forums for clarification or issue resolution. For example, in 2022, a Malaysian eWallet was unavailable for download on the Apple App Store for several days[221]. It was later restored, but no official reasons were provided for its delisting.

(g) **Hidden dynamics of app store ranking algorithm**: The app stores' recommendation and ranking algorithms play a significant role in determining which apps gain visibility. However, these algorithms are largely opaque due to proprietary reasons. This situation makes it difficult for developers, especially small ones, to ensure their apps are discovered by users. The app stores may also push developers toward paid advertising for visibility, where only those with significant marketing budgets can succeed.

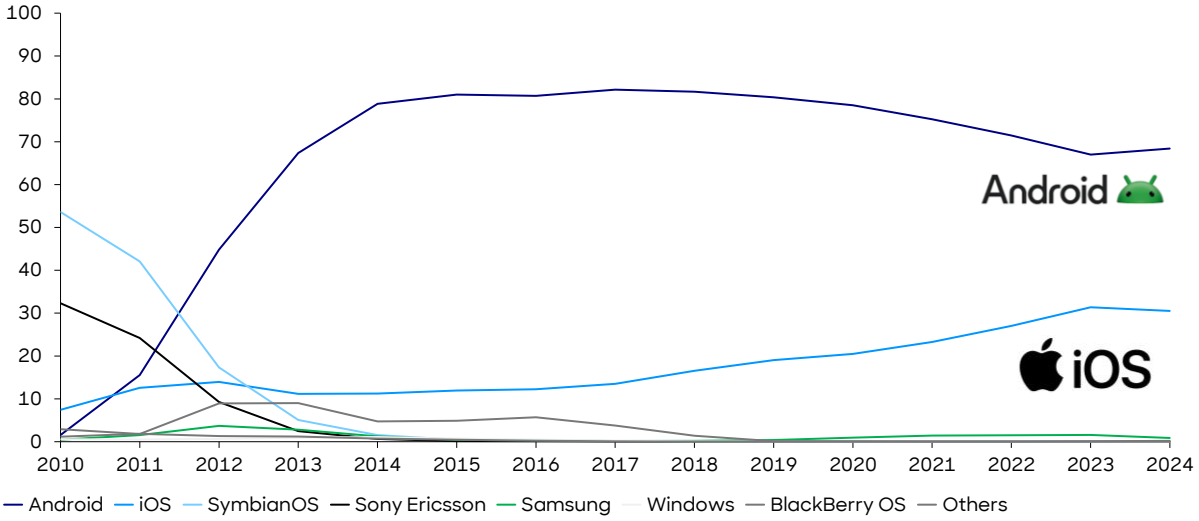
[221] Input from IDI

(h) **Impact of high commission fees**: High commission fees charged by app stores can significantly impact the profitability of developers, especially independent or smaller-scale developers. These fees make it difficult to sustain long-term operations, limiting the ability to reinvest in app development or improve the app experience.

4.1.8 Competition assessment

4.1.8.1 Market share

Figure 53: OS players' market share in Malaysia, 2010-2024 [%]



Source: Statcounter, 2024

Based on data from Statcounter[222], high concentration is evident in the mobile operating and payment system sub-sector. As of the end of 2024, Apple and Google collectively control 98.9% of the OS market. Google's Android leads with a 68.4% share, while Apple's iOS follows with 30.5%. Both players have dominated the market since 2012, with a combined share of 58.8%. From 2014 onwards, their market share has consistently exceeded 90%, indicating the relative stability of their duopoly in the sub-sector.

[222] StatCounter (2024). Mobile operating system market share Malaysia. https://gs.statcounter.com/os-market-share/mobile/malaysia/#yearly-2009-2024

4.1.8.2 Market dynamics

In the early days of smartphones in the 2000s, Symbian was the dominant mobile OS, powering a wide range of devices, particularly those from Nokia and Sony Ericsson. In 2010, Symbian held a significant share of the global (32.3%) and Malaysian (53.6%) smartphone market, with Nokia leading the way. Sony Ericsson, which used a variant of Symbian, also enjoyed strong market presence in Malaysia (32.3% in 2010)[223]. However, as consumer preferences shifted towards more user-friendly and feature-rich platforms, Symbian's limitations in terms of UI and app ecosystem led to its decline.

By 2012, Apple's iOS and Google's Android emerged as leaders in Malaysia (with a combined market share of 58.8%). iOS gained prominence due to its intuitive touchscreen interface. On the other hand, Android gained prominence due to its open-source nature, offering a core system that manufacturers could customise. This flexibility led to a wide range of device makers adopting Android. As of 2024, Android has partnered with 135 device brands[224].

Both iOS and Android are pioneers in the mobile app distribution system, with both introducing the concept of "app store" in 2008[225], where users could easily download and update apps. Before the app stores, apps were typically distributed through various methods such as software packages from manufacturers or third-party websites. Users also had to manually download and install apps, which was more complicated and less secure than the streamlined experience offered by app stores today.

Due to their large user bases, the Apple App Store and Google Play Store are preferred platforms for app developers. This is particularly true in regions with strict security and regulatory standards, as both platforms adhere to relevant rules and regulations. These stores ensure compliance with local and international requirements, providing developers with a level

[223] StatCounter (2024). Mobile operating system market share worldwide. https://gs.statcounter.com/os-market-share/mobile/
[224] Android (2025). Partners. https://www.android.com/certified/partners/
[225] App Radar (2024). App store history: The evolution of the app marketplace from 2008 to 2004. https://appradar.com/blog/app-stores-history

of assurance that their apps will meet legal and security standards in various markets.

4.1.8.3 Degree of horizontal and vertical integration

Both Apple and Google are highly vertically integrated in their operations, controlling key aspects such as hardware, operating systems, app distribution platforms, and app development. Apple, in particular, exemplifies this integration with its closed ecosystem of iPhones, iOS, the App Store, and proprietary apps. Google, while relying on third-party hardware manufacturers for Android devices, maintains strong control over the Android OS, Google Play Store, and its suite of apps.
In terms of horizontal integration, there are limited examples – a notable case is Google's acquisition of Android Inc. in 2005 for USD 50 million[226], which enabled Google to develop and expand the Android OS. Today, Android and iOS dominate the global market, accounting for the majority of mobile operating and payment usage. This dominant market position has created challenges for other OS players. Several platforms are seen to have exited the market, including but not limited to:

- **Windows Mobile OS**: In late 2019, Microsoft officially ended support for the OS[227].

- **BlackBerry OS**: Lost relevance as touchscreen smartphones from Apple and Android gained popularity, leading to its decline and exit in 2022[228].

[226] Medium (2022). Nearly 17 years ago, Google secured its most significant acquisition: Have you any idea what it was? https://medium.com/@Blank_Misfit/nearly-17-years-ago-google-secured-its-most-significant-acquisition-have-you-any-idea-what-it-3e3d9bf1d87d
[227] Microsoft (2022). Support ending for Windows 10 mobile in 2019. https://learn.microsoft.com/en-us/lifecycle/announcements/windows-10-mobile-end-of-support
[228] The Economic Times (2022). End of an era! BlackBerry OS smartphones will stop working from January 4. https://economictimes.indiatimes.com/magazines/panache/end-of-an-era-blackberry-os-smartphones-will-stop-working-from-january-4/articleshow/88658655.cms?from=mdr

- **Firefox OS**: Failed to attract developers and users and was discontinued in 2016[229].

4.1.8.4 Level of entry barriers

The sub-sector is characterised by high entry barriers, making it challenging for new players to compete. Indirect network effects create a self-reinforcing cycle where established platforms like iOS and Android can attract more users and developers, increasing the platform's value and entrenching their dominance. Newcomers may struggle to build a robust app ecosystem, which is critical for attracting users.

Additionally, high development costs for creating and maintaining a mobile OS, including expenses for software, hardware, and security systems, pose significant financial challenges for smaller entrants. Established players may also benefit from economies of scale, spreading development and marketing costs over a large user base, which allows them to offer competitive pricing and quality. Furthermore, customer lock-in effects make it difficult for users to switch platforms due to non-transferable app purchases, media subscriptions, and platform-specific services.

Further details of the entry barriers are detailed in the key anti-competitive issues.

4.1.9 Key anti-competitive issues

4.1.9.1 High entry barriers for OS developer and app stores

Description: In Malaysia, as well as globally, the OS market is primarily a duopoly. In the early days of smartphones, platforms like Symbian OS (used by brands such as Motorola and Nokia) and Sony Ericsson's OS were dominant. However, these OS eventually lost ground due to their primary hardware manufacturers—Motorola, Nokia, and Sony Ericsson—not being able to adapt quickly enough to the competition posed by Apple and Samsung. Additionally, the pace at which these companies developed a

[229] ZDNet (2016). Mozilla to end development for Firefox OS on smartphones in IoT shift. https://www.zdnet.com/article/mozilla-to-end-development-for-firefox-os-on-smartphones-in-iot-shift/

comprehensive mobile ecosystem lagged behind that of their rivals. Today, Android (with 68% market share in Malaysia) and iOS (at 31%) dominate the OS market[230].

This trend is also evident in the app store landscape, where dominance is similarly concentrated. As of 2021, the Apple App Store accounted for 80% of mobile app downloads in Malaysia, while the Google Play Store made up 19%[231]. This is largely due to both Apple[232] and Google being pioneers in app development and distribution, benefiting from a first-mover advantage. Although other app stores exist, their visibility and market share in Malaysia remain minimal.

For new players looking to enter the market (OS and app store), several barriers to entry exist:

- **Indirect network effects:** Ecosystems created by OS developers and app stores ensure a positive and thriving relationship between consumers, app developers, and smartphone manufacturers. As more participants join the ecosystem, the value of the platform grows, making it increasingly difficult for newcomers to compete. Established players benefit from large user bases, which attract developers to create apps specifically for those platforms. This creates a self-reinforcing cycle: the more users an OS has, the more appealing it becomes to developers, further entrenching its market position. In contrast, newcomers struggle to attract users without a robust ecosystem of apps, which significantly limits their ability to compete.

- **High development costs:** Developing a mobile OS requires significant investment in both software and hardware infrastructure, while ongoing costs associated with maintaining and updating the

[230] StatCounter (2024). Mobile operating system market share Malaysia. https://gs.statcounter.com/os-market-share/mobile/malaysia/#yearly-2009-2024
[231] Rakuten Insight (via Statista) (2021). Leading app store to download mobile phone apps in Malaysia as of September 2021. https://www.statista.com/statistics/1278753/malaysia-leading-app-store-for-app-downloads/
[232] Apple was the first to provide a polished and controlled ecosystem for app developers and consumers, introducing the concept of "apps" as a major revenue stream. The app store was launched in October 2008.

platform only add to the financial burden. For instance, OS developers must manage systems like Multi-Factor Authentication (MFA), which, while essential for security, adds complexity and expense. According to the JFTC[233], majority of the cost associated with providing mobile OS and app store services is fixed, such as development costs. Such costs place new and smaller players at a disadvantage, limiting their ability to scale effectively.

- **Economies of scale by established players:** Key players can spread their development and marketing costs over a broader user base (i.e. lower cost per user), making it difficult for smaller entrants to compete on price or quality. This dynamic reinforces the market dominance of key players, creating an environment where the cost of entry is prohibitively high for many aspiring OS developers. Additionally, these companies may have the advantage of cross-subsidising services, using profits from one area to support growth or experimentation in others. This allows them to take risks and innovate in new areas, further consolidating their market position.

- **Customer lock-in effects:** Occur when users find it difficult to switch to alternative products or services due to factors like switching costs and network effects. For instance, media purchases and subscriptions bought through app stores are often tied to their respective platforms. This includes items like music purchased on iTunes, subscriptions via Google Play Music, or storage on iCloud. As a result, both the content and subscriptions are closely linked to the OS, making it inconvenient for users to switch to a competing OS. Additionally, app purchases are typically non-transferable between different platforms, meaning that once a user commits to one ecosystem, they are effectively locked in and must repurchase apps or services if they decide to switch to another OS.

  Over the past decade (2014-2024), Android's OS market share for the past 10 years has been 66-72%, while Apple has been from 28-

[233] Japan Fair Trade Commission (2023). Market study report on mobile OS and mobile app distribution, page 39. https://www.jftc.go.jp/file/230209EN_hontai2.pdf

32%[234]. This consistency over time can suggest that switching rates between these two platforms are relatively low**.**

From a regulatory perspective, the market power of Android and iOS (which collectively hold 99% of OS market share in Malaysia as of September 2024 [235]) could potentially raise concerns about market dynamics. The dominance of these platforms may make it more challenging for new entrants to gain traction, reinforcing their position and potentially reducing competitive pressure. This could have implications for innovation and consumer choice, as the market may become more focused on existing ecosystems.

Implication on competition:

- **Dominant players with entrenched market positions** lead to reduced competition and discourage potential entrants into the sub-sector.

- **Increasing business costs and declining commercial viability** make it harder for new players to compete in the sub-sector.

- **Market influence exerted by dominant players**, particularly in the regulatory space, can further shape the competitive landscape.

- **Reduced consumer experience and choice** as the sub-sector is primarily controlled by the products and services of two dominant players.

- **Stifled innovation and diversity**, as dominant market players may have less incentive to develop new products or services due to their established market share.

Relevant case(s): In November 2024, the U.S. Department of Justice has proposed that Alphabet's Google (GOOGL.O) be required to sell off its

[234] StatCounter (2024). Mobile operating system market share Malaysia. https://gs.statcounter.com/os-market-share/mobile/malaysia/#yearly-2009-2024
[235] StatCounter (2024). Mobile operating system market share Malaysia. https://gs.statcounter.com/os-market-share/mobile/malaysia/#yearly-2009-2024

Chrome internet browser[236]. Google's integration of its Chrome browser with its search engine and advertising business illustrates how vertical integration may reinforce market dominance. Google's control over how people access the internet and view advertisements is heavily linked to its Chrome browser, which typically defaults to Google Search and collects data critical to Google's advertising business. With an estimated two-thirds share of the global browser market, Chrome is a significant revenue driver for Google.

Additionally, when users sign into Chrome with their Google account, the company is able to deliver more targeted search advertisements, which further solidifies its market position. By controlling how users access the internet and view advertisements, Google not only strengthens its position in the digital advertising market but also has the potential to limit opportunities for competitors, creating barriers to entry in both the browser and advertising markets.

Observations in Malaysia: Similar to global - issues in Malaysia reflect broader global trends.

However, on the regulatory front, complication may arise due to the potential influence of key investors in the country. In May 2024, Google announced a commitment of MYR 9.4 billion to establish its first data centre and Google Cloud region in Malaysia. According to MITI, the investment is expected to create approximately 26,500 jobs and generate an estimated economic impact of MYR 15.4 billion. Additionally, Malaysia stands to benefit from advancing its digital goals as outlined in the Malaysia Digital Economy Blueprint (MDEB) and the New Industrial Master Plan 2030[237].

4.1.9.2 Limited access to device functionalities

Description: Third-party app developers face restrictions in accessing certain device functionalities that are reserved for the OS provider's own

[236] Reuters (2024). DOJ to ask judge to fore Google to sell off Chrome, Bloomberg News reports. https://www.reuters.com/technology/doj-ask-judge-force-google-sell-off-chrome-bloomberg-reports-2024-11-18/
[237] Malay Mail (2024). Google to invest RM9.4b in Malaysia to set up data centre and cloud region. https://www.malaymail.com/news/malaysia/2024/05/30/google-to-invest-rm94b-in-malaysia-to-set-up-data-centre-and-cloud-region/137176

applications. This issue is particularly prominent on iOS due to Apple's vertical integration approach, which tightly controls access to key hardware features. One of the most notable restrictions is Near-Field Communication (NFC), a short-range wireless technology that allows devices to exchange data when brought close together. NFC is commonly used in applications like contactless payments, access control, and data sharing.

While NFC is a standards-based technology and not proprietary to any single company[238], Apple has limited its use on iPhones. Apple Pay is the primary service that fully utilises the NFC chip for payments, and third-party apps cannot implement their own mobile wallet functionalities using the NFC chip for payments.

For banks and financial institutions, while NFC technology can be utilised, it can only be done through Apple Pay, not through independent apps with direct NFC functionality access. This limitation exists because Apple Pay operates as a secure payment gateway with specific regulatory requirements that are distinct from general banking services [239]. The limitations on NFC access are also tied to platform restrictions on iOS and are part of Apple's strategy to maintain control over the payment ecosystem, ensuring security, privacy, and compliance with financial regulations**.**

This may be viewed as a competitive advantage for Apple, particularly in the context of growing contactless payment adoption. For instance, in Malaysia, Visa Consumer Payment Attitudes Study reveals that over 90% of consumers use card payments, with 20% of total transactions being contactless[240].

[238] Secure Technology Alliance. NFC frequently asked questions. https://www.securetechalliance.org/publications-nfc-frequently-asked-questions/
[239] Apple (2025). Apple Pay security and privacy overview. https://support.apple.com/en-sg/101554#:~:text=Apple%20Pay%20uses%20security%20features,to%20protect%20your%20personal%20information.
[240] New Straits Times (2024). Visa study says more than two-thirds of Malaysian consumers have tried to go cashless. https://www.nst.com.my/business/corporate/2024/06/1065634/visa-study-says-more-two-thirds-malaysian-consumers-have-tried-go

Apple justifies this restriction on the grounds of user experience and security, arguing that by controlling NFC, it ensures a seamless payment experience. Apple Pay allows multiple payment cards from different issuers to be stored in one place, giving users easy access without the need to switch between apps or settings[241].

Implication on competition:

- **Limiting third-party apps** from leveraging NFC for payment purposes, further limiting their capability to operate.

- **Reduced market competitiveness** as Apple's control over NFC for payment systems may create an uneven playing field, where third-party app developers cannot innovate or offer alternative payment solutions.

- **Potential impact on payment method diversity** to end users of iPhones (less consumer choice).

Relevant case(s): In May 2022, the EC preliminarily concluded that Apple had abused its dominant position by restricting access to its NFC functionality exclusively for Apple Pay, thereby hindering competition among mobile wallet providers. This restriction prevented other providers from developing competing solutions, reinforcing Apple's control over the mobile payments market.

Following discussions with the EC, Apple committed in July 2024 a ten-year agreement that allows other mobile wallet providers to access the NFC function free of charge, without requiring integration with Apple Pay or Apple Wallet. This commitment is significant as it removes a key barrier to entry for third-party providers and levels the playing field. It also applies to iPhone users across the EEA, which encompasses the EU, Iceland, Liechtenstein, and Norway. By opening up NFC capabilities, this move is

[241] CMA (2022). Mobile ecosystems: Market study final report, page 187. https://www.gov.uk/cma-cases/mobile-ecosystems-market-study

expected to boost competition in the mobile payments market, encouraging innovation and providing consumers with greater choices[242].

Furthermore, in August 2024, Apple announced that starting with its iOS version 18.1, app developers in Australia, Brazil, Canada, Japan, New Zealand, the UK and the US will be able to offer NFC contactless transactions using the Secure Element from within their own apps on iPhone, separate from Apple Pay and Apple Wallet.

Observations in Malaysia: According to feedback from one of the study's participants, an e-wallet developer, they have a desire to implement the NFC feature within their app to provide greater convenience for users, enabling payments for various purchases and transportation. However, this is challenging due to the limited access granted by device manufacturers and OS developers.

4.1.9.3 Restrictions/challenges in browser app development

Description: On iOS, Apple mandates that all browsers must use its proprietary WebKit engine, including browsers like Chrome, Firefox, and Edge, which must run on WebKit rather than their own engines (e.g., Blink for Chrome, Gecko for Firefox). This may limit the features and performance enhancements these browsers can offer compared to their versions on other platforms.

In contrast, Android offers flexibility by allowing browsers to use different engines, such as Blink (used by Chrome and others) or Gecko (used by Firefox), giving developers more freedom to innovate and customise their browsers.

Recently, in the EU and due to the DMA, Apple has allowed third-party developers to use their own engines on iOS, subject to authorisation from Apple, based on specific privacy and security criteria[243].

[242] European Commission (2024). Commission accepts commitments by Apple opening access to 'tap and go' technology on iPhones. https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3706

[243] Apple (2024). Apple announces changes to iOS, Safari, and the app store in the European Union. https://www.apple.com/sg/newsroom/2024/01/apple-announces-changes-to-ios-safari-and-the-app-store-in-the-european-union/

Implication on competition:

- **Limited innovation on iOS,** where the WebKit restriction reduces the ability of browsers to differentiate, and thus limiting innovation.

- **Unfair competition on browser apps on iOS**, as Apple's Safari is pre-installed, which may result in it having a more prominent presence, while third-party browsers must be downloaded. Additionally, the requirement for third-party browsers to use the same WebKit engine may limit their ability to differentiate in terms of performance or features.

- **Impact web app quality**, as developers must adjust compatibility and features to align with the limitations of the WebKit engine, potentially reducing performance and functionality.

Relevant case(s): In 2024, the CMA conducted an investigation on the Mobile Browsers and Cloud Gaming space[244]. It provisionally found that Apple's rules restrict other competitors from being able to deliver new, innovative features that could benefit consumers. According to input from other browser providers, the WebKit restriction on iOS results in several impacts:

- **Browser improvements & innovation:** Third-party browser developers cannot implement unique features or optimisations due to the reliance on WebKit.

- **Security:** Only Apple can implement security fixes for browsers on iOS, delaying important updates for other browser vendors.

- **Privacy:** Browser developers are unable to implement privacy features or improvements effectively, as they are restricted by WebKit.

[244] CMA (2024). Mobile browsers and cloud gaming market investigation. https://assets.publishing.service.gov.uk/media/667d2f0caec8650b100900c0/WP2_-_The_requirement_for_browsers_operating_on_iOS_devices_to_use_Apple_s_WebKit_browser_engine_1.pdf

- **Performance:** Lack of access to necessary APIs within WebKit limits performance improvements for third-party browsers.

- **Web app compatibility:** WebKit's limited feature support hampers the ability of third-party browsers to provide full support for web app features.

- **Maintenance costs:** Browser vendors face additional costs to maintain separate versions of their browsers for WebKit and other engines on different platforms.

Separately, Apple highlighted that the WebKit restriction is necessary "for reasons of security, privacy and performance"[245].

Observations in Malaysia: Similar to global - issues in Malaysia reflect broader global trends.

4.1.9.4 Control over app distribution

Description: Due to their significant share of the mobile OS market, Apple's App Store and Google's Play Store may hold considerable influence over app developers, shaping a competitive environment where developers depend on these platforms to reach customers effectively. As a result, many app developers may feel compelled to establish a presence on both app stores to maximise visibility and remain competitive, which in turn reinforces the prominence of these platforms and presents challenges for alternative app stores in gaining traction.

Specifically, in Apple, due to its vertical integration approach, only its own App Store is allowed on its mobile OS, creating the situation where app developers can only distribute its apps through Apple App Store in iOS.

In Japan, based on the survey conducted by the Japan Fair Trade Commission (JFTC), 76.5% of app developers have not distributed their

[245] CMA (2024). Mobile browsers and cloud gaming market investigation, page 33. https://assets.publishing.service.gov.uk/media/667d2f0caec8650b100900c0/WP2_-_The_requirement_for_browsers_operating_on_iOS_devices_to_use_Apple_s_WebKit_browser_engine_1.pdf

applications through any app stores other than Google Play Store and Apple App Store[246], largely due to the limited user base and visibility of alternative app stores, limited user base and visibility of alternative app stores, which restricts meaningful competition in the app distribution market.

Implication on competition:

1. **Market dominance of key players**, where they control the primary distribution channels for apps, limiting competition and making it difficult for alternative app stores to thrive; additionally, dominance may inhibit innovation in app distribution methods.

2. **Increased dependency/reduced market power by app developers**, as they heavily rely on limited platforms for customer access.

3. **Reduced app store platform diversity** which also impacts end-users and app developers' availability of choice.

Relevant case(s): In response to the key app store constraints, some app developers have sought alternative distribution methods, such as downloading from other app stores or sideloading applications within the Android ecosystem. However, as of September 2024, the latest Android 15 OS (Vanilla Ice Cream) includes a "Google Play Integrity" API that allows app developers to check whether a user has sideloaded apps[247].

Additionally, Samsung, as Android's leading OEM, has taken measures by shipping devices with maximum restrictions, disabling sideloading by default[248]. These measures, while addressing security concerns, further limit developers' options and underscore the competitive challenges posed by the existing app distribution landscape.

[246] JFTC (2023). Market study report on mobile OS and mobile app distribution, page 77. https://www.jftc.go.jp/file/230209EN_hontai2.pdf
[247] Forbes (2024). Google to block some sideloading and push Android users to Play Store. https://www.forbes.com/sites/zakdoffman/2024/09/13/google-issues-new-app-install-warning-for-pixel-9-pro-samsung-galaxy-s24-android-users/
[248] PCMag (2024). Newer Samsung Galaxy phones will block app sideloading by default. https://www.pcmag.com/news/newer-samsung-galaxy-phones-will-block-app-sideloading-by-default

Observations in Malaysia: Based on interactions with local app developers, in addition to relying on Google Play Store and Apple App Store, some developers also list their apps on Huawei AppGallery. This provides an additional option to ensure their apps are available and accessible to specific markets.

4.1.9.5 Restrictive app store payment option

Description: Both Apple's App Store and Google Play Store have stringent guidelines that control how developers can process payments within their apps. Specifically, these guidelines require that in-app purchases for digital content, including games, subscriptions, and other digital goods, be processed through Apple's In-App Purchase system or Google Play's billing system. These systems are mandatory for developers who want to offer digital goods or services within their apps.

In addition to mandating the use of their own payment systems, both Apple and Google impose a 30% commission fee on most transactions processed through their platforms (see market practices for more information). This means that for every purchase made within an app, the app developer must pay a fee to the app store.

Furthermore, both Apple and Google restrict how developers can promote or link to external payment options**.** According to the Apple's Developer Program License specifies that a licensed application can read or play digital content purchased outside the app (such as on a developer's website) but cannot link to or market these external purchases within the app[249]. Similarly, Google's Developer Policy prohibits apps from directing users to any payment method other than Google Play's billing system[250].

There are, however, exceptions and potential instances of preferential treatment in the app store policies. In 2021, as part of the Epic Games lawsuit against Google, it was revealed that Google allegedly offered Netflix, a video streaming company, a significantly reduced commission

[249] Apple (2025). Apple developer program license agreement. https://developer.apple.com/support/terms/apple-developer-program-license-agreement/

[250] Google (2025). Payments. https://support.google.com/googleplay/android-developer/answer/9858738

rate of 10% if it agreed to use Google's payment system exclusively. This offer was made in response to Netflix's request for an alternative payment system. However, Netflix ultimately rejected the deal due to profitability concerns[251].

Additionally, companies like Spotify, which offer digital goods (subscriptions to streaming services), are not required to use the Google Pay or Apple Pay systems. This is likely due to the influence and negotiating power of these large companies, as well as regulatory pressure that has led to exceptions being made in certain cases[252].

Implication on competition:

- **Reduced flexibility for developers** as they are required to use Apple's and Google's payment systems, limiting their ability to choose alternative solutions.

- **High commission fees** (up to 30%) on in-app purchases reduces developers' profits, disadvantaging competitiveness, especially among smaller players.

- **Limited consumer choice** where end-users are restricted to using the app store's payment system, preventing access to potentially better payment options.

- **Barriers to entry for new competitors**, as the mandatory commission and payment restrictions discourage new developers from entering the market.

Relevant case(s): A notable example of competitive constraints in the app market is Epic Games' legal challenge against Apple's App Store policies in 2021. The case centred on Apple's requirement for developers to use its in-app payment system, which includes a 30% commission fee. Epic Games

[251] Android Police (2023). Court documents show Google offered Netflix a deal to stick with Play Store billing. https://www.androidpolice.com/google-netflix-deal-play-store-lawsuit/

[252] Cnet (2023). Spotify drops all payments via Apple App Store. Here are other ways to pay, https://www.cnet.com/tech/services-and-software/spotify-drops-all-payments-via-apple-app-store-here-are-other-ways-to-pay/

criticised this policy, arguing that it limits developers' flexibility, increases costs, and restricts their ability to offer alternative payment methods or set competitive prices.

In response to the lawsuit, Apple removed Fortnite from the App Store but later made adjustments to its policies by providing a "StoreKit External Purchase Link Entitlement"[253]. This entitlement allows developers to include links directing users to external payment sites, represent a limited concession to developer concerns by providing a limited way to bypass Apple's in-app payment system. (Apple now takes a commission of up to 12-27% [254], [255] on proceeds from sales made through links to external payment systems).

In Indonesia, the Indonesia Competition Commission (ICC) imposed a fine of USD 12.4 million on Google for abusing its dominant position by mandating that app developers exclusively use Google Play Billing for in-app purchases in January 2025[256]. The commission also ordered Google to cease this mandatory requirement and to allow app developers to participate in the "User Choice Billing" programme. The programme is intended to offer an incentive by reducing service fees by at least five percent for one year, starting from the date the ICC's decision becomes final/legally binding[257].

Observations in Malaysia: A Malaysian digital e-book retailer faced challenges due to the 30% commission fees imposed by Google Play Store. This high commission rate impacted the company's profitability and market operations.

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[253] Apple (2025). Distributing apps in the U.S. that provide an external purchase link. https://developer.apple.com/support/storekit-external-entitlement-us/

[254] Gamesindustry.biz (2024). Apple now allows direct payment links but charges 27% commission. https://www.gamesindustry.biz/apple-now-allows-direct-payment-links-but-charges-27-commission

[255] 12% for participants in the company' Small Business Program.

[256] KPPU (2025). Google found in violation, KPPU imposes fine of IDR 202.5 billion. https://eng.kppu.go.id/google-found-in-violation-kppu-imposes-fine-of-idr-202-5-billion/

[257] Tempo.co (2025). Indonesia's KPPU fines Google Rp202.5bn for monopolistic practices. https://en.tempo.co/read/1966803/indonesias-kppu-fines-google-rp202-5bn-for-monopolistic-practices

In an attempt to circumvent the steep app store commission, the app provided an alternative payment option within its app. However, this move led to the app being removed from the app store, as it violated the platforms' policies requiring all transactions to go through their designated payment systems.

In the e-book industry, the standard revenue share model typically allocates 70% to publishers and 30% to the platform. However, with the app store taking a 30% commission on e-book sales, the retailer thus makes little to no financial gain, as the app store fees effectively absorbed the publisher's share, leaving no margin.

In order to be relisted on the app stores, the retailer had to fully comply with the app store policies, removing its alternative payment option from its app entirely[258].

4.1.9.6 Self-preferencing

Description: Potential self-preferencing by mobile OS providers occur at various levels within their ecosystems, influencing the availability, visibility, and performance of apps. At the first level – **app availability**, both Apple and Google offer apps that compete with third-party alternatives. For example:

Table 10: Selected OS apps that compete with 3rd party alternatives

App type	OS apps	Relevant third-party apps (not exhaustive)
Browser	iOS: Safari Android: Google Chrome	• Firefox • Opera
Email	iOS: Mail Android: Gmail	• Microsoft Outlook • Spark
Maps/navigation	iOS: Apple Maps Android: Google Maps	• Waze
Messaging	iOS: iMessage Android: Google Messages	• Telegram • Facebook Messenger

[258] Input from IDI

App type	OS apps	Relevant third-party apps (not exhaustive)
Music	iOS: Apple Music Maps Android: Google Play Music	• Spotify • Tidal

Source: Secondary research

These companies may also have an advantage when updating their apps, as they have access to platform updates and can adjust their own apps in response to changes ahead of time. This allows them to release updates or features sooner than third-party developers, who must wait for public releases.

Additionally, Apple's ATT policy may raise concerns about potential self-preferencing in the context of app updates. While Apple requires third-party developers to display the ATT prompt for tracking, Apple itself is not subject to the same requirement. By exempting its own apps, Apple may have an advantage, as its tracking practices are subject to less scrutiny than those of third-party developers. Instead, Apple offers users an opt-out option for its own tracking through a different process. iPhone users must navigate to "Settings," then "Privacy," and "Apple Advertising" to disable "Personalised Ads"[259]. Before opting out, users are also shown information explaining how Apple uses targeting data for personalised ads and the consequences of disabling it. This dual system might confuse users and raise concerns about Apple's self-preferencing practices, which disadvantage competitors while protecting its own ecosystem.

The second level of self-preferencing relates to **app visibility**, where Apple and Google pre-install a range of their own apps on devices. For example, Apple pre-installs apps such as Safari, Mail, and Calendar on iPhones, while Google pre-installs Google Search, Chrome, and YouTube on Android devices.

[259] CMA (2021). Appendix J: Apple's and Google's privacy changes. https://assets.publishing.service.gov.uk/media/62a229c2d3bf7f036750b0d7/Appendix_J_-_Apple_s_and_Google_s_privacy_changes__eg_ATT__ITP_etc__-_FINAL_.pdf

Specifically, under Google's MADA, OEMs wishing to pre-install one Google app must pre-install all GMS apps[260]. This bundling practice may contribute to reinforcing Google's market position by limiting OEMs' ability to choose competing apps or services. OEMs are faced with the choice to either accept Google's restrictions or forgo the Android app ecosystem and essential apps like YouTube, a situation further complicated by revenue-sharing agreements[261]. According to similarweb[262], as of January 2025, three of the top 10 most used apps on Android include three pre-installed apps - Google Search, Google Chrome and YouTube.

For Android OS devices, manufacturers also accept deals from third-party app developers to pre-install their apps. This may create an imbalance, as financially strong app developers may gain an unfair advantage.

Separately, selected pre-installed apps are often set as the default for their respective functions, such as Safari for browsing and Mail for email on iOS, and Google Chrome for browsing and Google Search for web searching on Android. This arrangement may give OS-owned apps prominent visibility and a competitive advantage for their apps.

The third level of self-preferencing concerns **app performance**. Mobile OS operators may collect user data through their platforms, which can be used to improve their apps. This includes information such as location data, usage patterns, and payment details. Such data allows these companies to refine app performance and user experience. However, the use of this data also raises privacy concerns, particularly regarding how information is shared with third-party advertisers. Both companies leverage the data collected to target users with personalised ads, which can influence the performance and appeal of their own apps relative to third-party options.

[260] CMA (2021). Appendix E: Google's agreements with device manufacturers and app developers. https://assets.publishing.service.gov.uk/media/62a0d5cbe90e07039ba54eee/Appendix_E_-_Google_agreements_with_device_manufacturers_and_app_developers.pdf

[261] Sharing of a portion of net advertising revenue from specific search access points on manufacturers' devices

[262] Similarweb (2025). Top apps ranking. https://www.similarweb.com/top-apps/google/malaysia/

Implication on competition:

- **Uneven playing field in the app market**, where OS platforms' apps compete with third-party apps; these platforms also have the potential to prioritise their own apps over others, gaining an advantage in terms of visibility and user accessibility; additionally, financially stronger third-party app developers may gain an unfair advantage through agreements with device manufacturers to pre-install apps, therefore reducing opportunities for smaller players to compete effectively.

- **Influence on consumer behaviour**, as studies show users often stick with default apps even when alternatives are available[263].

- **Unfair operating conditions**, with selected OS platforms placing a compliance burden on third party developers (e.g., ATT), while its own apps are not subject to the same requirement.

Relevant case(s): In 2022, Germany's competition authority, Bundeskartellamt, initiated an investigation into Apple's App Tracking Transparency (ATT) framework due to concerns about potential anti-competitive effects. The investigation focuses on whether the ATT framework provides an advantage to Apple's own services by limiting third-party apps' access to user data for targeted advertising while allowing Apple to continue collecting such data, potentially hindering competition[264]. This raise concerns that Apple's services, such as Apple Search Ads, may gain a competitive advantage by benefiting from data exclusivity, while third-party advertisers face reduced effectiveness and increased costs. If proven, such practices could entrench Apple's dominance in the digital advertising market by limiting third-party developers' ability to compete on equal footing, thereby curbing innovation and reducing consumer choice.

[263] The University of Tennessee (2015). When competition fails to optimize quality: A look at search engines. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2598128
[264] Politico (2022). Apple's privacy rules targeted by German competition watchdog. https://www.politico.eu/article/apples-privacy-rules-targeted-by-german-competition-watchdog/

In January 2025, device manufacturers Oppo and RealMe issued a formal apology to users in Thailand for preinstalling the loan-related apps Happiness Loan and Fineasy. This raised concerns about potential access to users' personal information, such as contacts. In response to the backlash, the manufacturers began rolling out over-the-air updates[265] that allow users to delete preinstalled apps from their devices[266].

In a separate case related to "app performance," a report citing internal documents and sources revealed that Google used Android Lockbox data (a pre-installed system used by Google that collects and stores anonymised data on how users interact with apps and services on Android devices) as part of its planned rollout of YouTube Shorts in competing with TikTok in India. Data was used to understand how users were engaging with TikTok and its competitors. Additionally, it highlighted that Lockbox data was used to track and compare how Google's apps perform against rival products worldwide[267].

Responding to the report, Google acknowledged that it has access to usage data from competing apps but clarified that the program is open to the public, allowing other developers to access similar data as well[268].

Observations in Malaysia: On app availability, a digital e-book retailing app in Malaysia faced a competitive disadvantage compared to apps developed by Apple or Google, such as Google Play Books. As e-books are considered digital goods, every sale made within the app is thus subject to a mandatory commission fee from the app store. Additionally, e-books provided by foreign-registered digital services are subject to an 8% SST under the regulations of the Royal Malaysian Customs Department (RMCD). This tax is applied on top of the commission fee, increasing e-Sentral total costs. As a result, the combined impact of the commission fee and the 8%

[265] Method of delivering software updates wirelessly to a device
[266] Bangkok Post (2025). Complaints as big phone brands pre-install loan apps. https://www.bangkokpost.com/thailand/general/2938130/complaints-as-big-phone-brands-pre-install-loan-apps
[267] The Information (2020). Internal Google program taps data on rival Android apps. https://www.theinformation.com/articles/internal-google-program-taps-data-on-rival-android-apps
[268] The Verge (2020). Google reportedly keeps tabs on usage of rival Android apps to develop competitors. https://www.theverge.com/2020/7/24/21336946/google-android-lockbox-data-rival-apps-antitrust-scrutiny

SST significantly erodes the company's profit margins, making it challenging to maintain profitability while offering competitive prices.

In contrast, Google Play Books likely avoids the 30% commission fee from the Google Play Store and may also have a clear competitive advantage over the company and other similar players (in terms of visibility).

4.2 E-commerce (Marketplace)

4.2.1 Key findings

Figure 54: Snapshot of the e-commerce (marketplace) in Malaysia

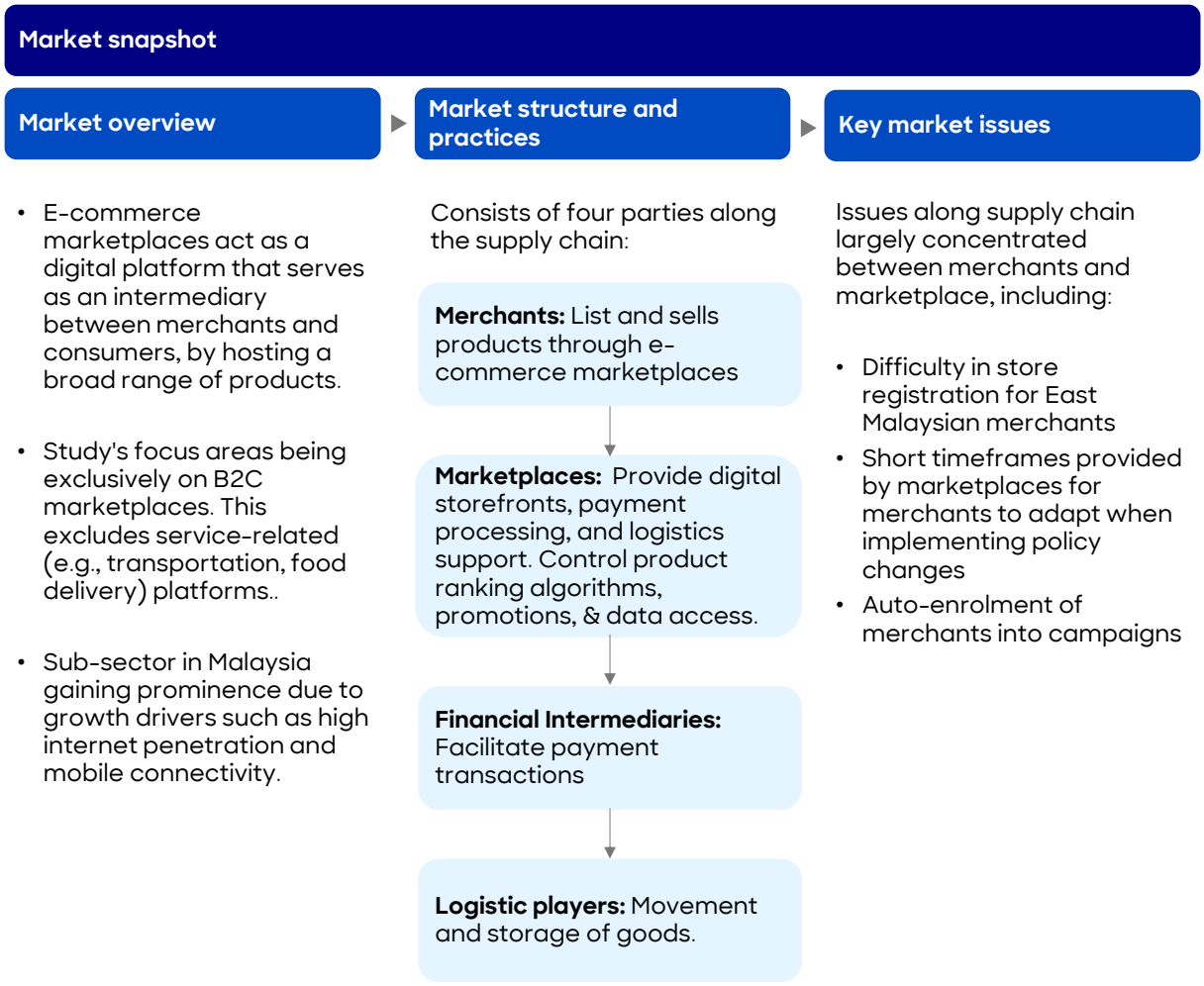
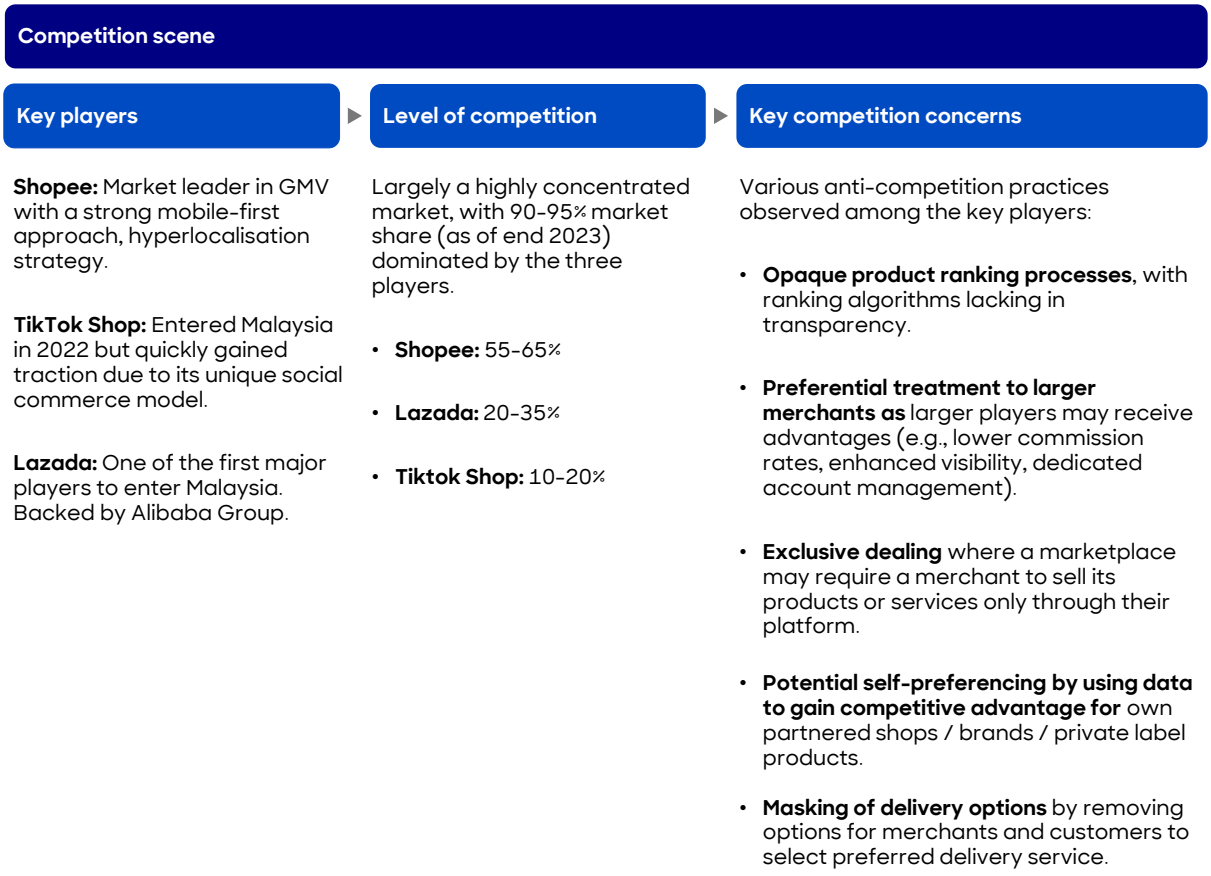


Figure 55: Snapshot of the e-commerce (marketplace)'s competitive scene in Malaysia



4.2.2 Market definition

Two key boundaries define the sub-sector in this study:

Marketplace: A marketplace is an online platform that connects different groups of people, mainly buyers and sellers, allowing them to interact and conduct transactions. Marketplaces have three key features that make them effective. First, they function as multi-sided platforms, meaning they bring together many buyers and sellers in one place. Buyers can browse and purchase products from various sellers, while sellers gain access to a large pool of potential customers.

Second, marketplaces benefit from network effects. This means that as more people use the platform, its value increases. When more sellers join, buyers have more choices, which attracts even more buyers. In turn, the growing number of buyers encourages more sellers to sign up. Over time,

this cycle helps the marketplace grow and become more attractive, making it harder for users to leave and increasing platform's stickiness. A large user base also allows the platform to introduce new features and improve services, further enhancing the user experience.

Third, marketplaces provide various services to support transactions, such as payment processing, customer reviews, and logistics management. These features make it easier and safer for buyers and sellers to do business.

However, this study does not include platforms that focus mainly on service, such as ride-sharing or food delivery services (e.g., Grab, Foodpanda), or online classified platforms like Facebook Marketplace, where users list items for sale and transactions generally occur off-platform.

Format: E-commerce takes various forms and can be categorised into:

- Business-to-Consumer (B2C): Businesses sell goods or services directly to individual consumers.

- Business-to-Business (B2B): Business sell goods or services to another business.

- Consumer-to-Consumer (C2C): Consumers sell goods or services directly to other consumers.

This study focuses exclusively on the B2C model, specifically B2C e-commerce marketplaces. These are digital platforms where multiple independent sellers offer goods such as electronics, clothing, and household items directly to consumers. They facilitate online transactions and offer a variety of product categories. Unlike physical retail stores that sell their own inventory, online marketplaces act as intermediaries that connect buyers and sellers.

Online marketplaces are different from classified ad platforms like Lelong, Mudah.my, or Facebook Marketplace, where users list items for sale, and transactions often happen directly between buyers and sellers outside the

platform. In contrast, B2C marketplaces require that transactions be completed through the platform, ensuring better visibility and security for both parties.

The activities of the e-commerce (marketplaces) sub-sector impact the following Malaysia Standard Industrial Classification (MSIC) industries:

Table 20: MSIC codes relevant to the e-commerce (marketplace) sub-sector

MSIC Code	MSIC Industry Description
47911	Retail sale of any kind of product by mail order
47912	Retail sale of any kind of product over the internet
47914	Internet retail auctions
53100	National postal services
53200	Courier activities other than national postal services

Source: MSIC 2008, DOSM

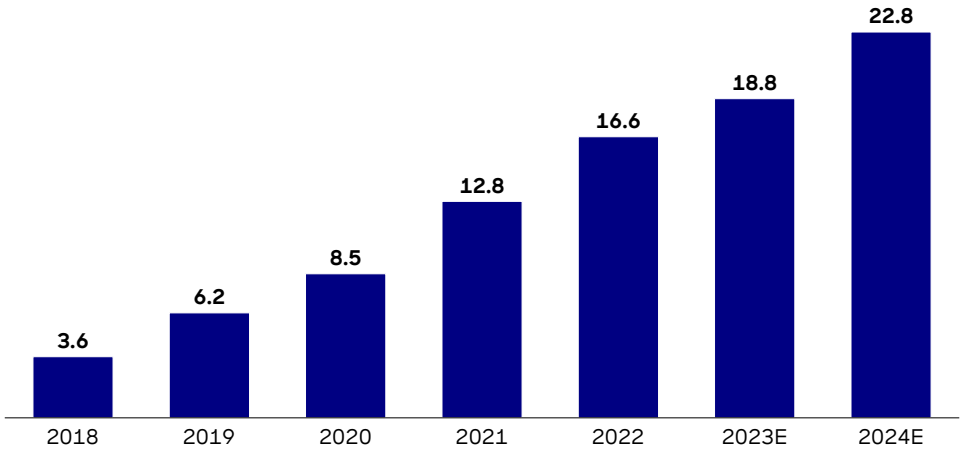
4.2.3 Market structure and supply chain

4.2.3.1 Market structure (Overall)

By the end of 2024, Malaysia's e-commerce market (encompassing all online transactions) is expected to reach a transaction value of USD 22.8 billion[269]. This marks a significant increase from USD 3.6 billion in 2018, representing a CAGR of 36% over the six-year period. This growth is largely driven by rising internet penetration and widespread mobile connectivity. In 2022, approximately 90% of Malaysia's population, or 29.6 million people, were active internet users, further fuelling the expansion of the e-commerce sector.

[269] J&T Global Express Limited (2023). Investor prospectus, page 131. https://www1.hkexnews.hk/listedco/listconews/sehk/2023/1016/2023101600009.pdf

Figure 56: Market size of e-commerce retail market (by transaction value), Malaysia 2018-2027E [USD billion]



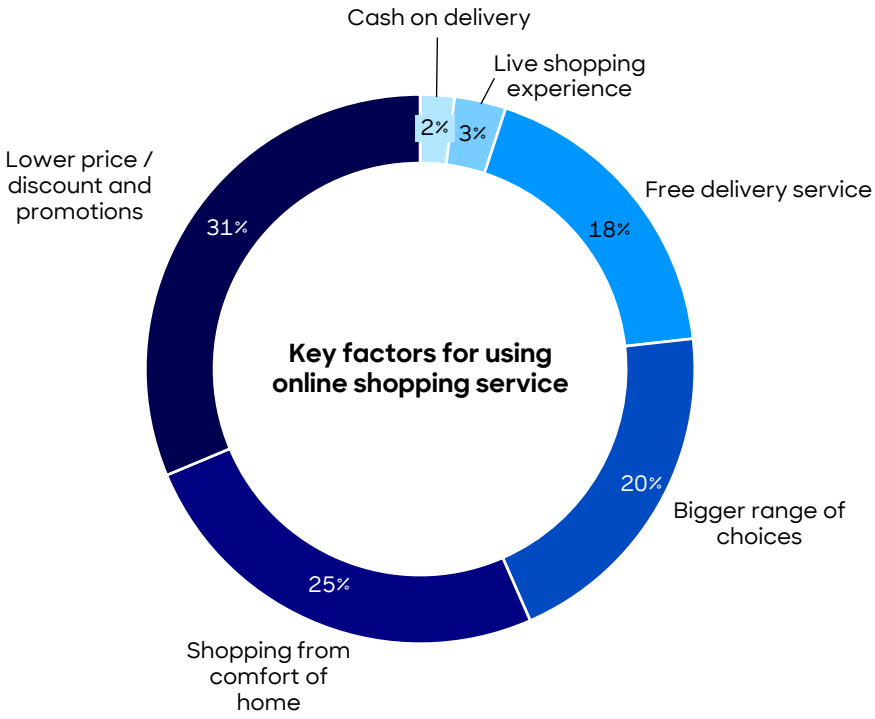
Source: Secondary research

Another key driver of the growth of e-commerce has been the COVID-19 pandemic. Following the Movement Control Order (MCO), a set of strict lockdown measures imposed by the Malaysian government to curb the spread of COVID-19 at the onset of the pandemic, Malaysians increasingly turned to online platforms for purchasing daily essentials[270] and have become accustomed to this shift. According to MCMC[271], there was a reported increase of 30-70% of internet traffic during the lockdown period. Changes in behaviour, such as working from home, have also created more opportunities for e-commerce marketplaces.

[270] International Journal on Recent Trends in Business and Tourism (2021). Impact of Covid-19 on Malaysian e-commerce, page 8. https://ejournal.lucp.net/index.php/ijrtbt/article/view/1464/1658

[271] MCMC (2020). National digital infrastructure lab report, page 1. https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/NDIL-Report.pdf

Figure 57: Consumer's key factors for using online shopping service



Source: Secondary research

Recent findings[272] highlight convenience, affordability, and accessibility as the main drivers of online shopping adoption. The top three factors being lower prices, discounts, and promotions (31%), followed by the convenience of shopping from home (25%), and the wide product selection range (20%).

The expansion of the e-commerce marketplace is further supported by the growing popularity of online shopping events, such as Singles' Day 11.11, 9.9 Super Shopping Day, Super Brand Day and Lazada Birthday Sale, 12.12 Grand Year End Sale. These events have become significant catalysts for consumer spending and engagement in online platforms. Popular categories include electronics, beauty and personal care, apparel and footwear, as well as toys and games, indicating a diverse range of consumer interests.

[272] Maybank Research Pte Ltd (2024). ASEAN internet, page 5. https://www.sg-gems.sg/assets/report/1.%20Others%20-%20ASEAN%20Internet%20(Maybank).pdf

Figure 58: Online shopping events by Lazada and Shopee

Source: Lazada and Shopee

The sector is poised for continued expansion, driven in part by the launch of the second National E-commerce Strategic Roadmap (NESR 2.0) in 2021, which spans from 2021 to 2025. This initiative builds on the success of NESR 1.0, which ran from 2017 to 2020 and was led by the National E-commerce Council (NeCC). The NeCC has since been succeeded by a NESR Taskforce under NESR 2.0, which continues to oversee and drive the implementation of e-commerce strategies.

Furthermore, the Ministry of Digital has proposed the creation of a Digital Trust and Data Safety Commission in the first half of 2025. This commission aims to build consumer confidence in online transactions by protecting sensitive information such as personal details (e.g., name, address, phone number) and financial data (e.g., credit card details, transaction history). Ensuring the safety of this information is important, as it helps prevent fraud and identity theft, making consumers feel more secure when shopping online.

4.2.3.2 Market structure (Logistics or delivery partners' development)

The rapid expansion of the e-commerce sector underscores the critical role of efficient logistic and delivery services in shaping customer experience and operational success. However, Malaysia's logistics infrastructure limitations, particularly the insufficient connectivity between ports and warehouses, have been a hindrance[273]. High logistics costs are a pressing concern with 77.8% of surveyed Malaysian enterprises identifying this as the primary challenge for cross-border e-commerce. The cost

[273] The Malaysian Reserve (2023). Malaysia navigates through supply chain upheaval. https://themalaysianreserve.com/2023/01/30/malaysia-navigates-through-supply-chain-upheaval/

escalation is largely due to infrastructure shortages, including containers and port facilities. For instance, sea freight costs from Malaysia to New York surged by 771.8% during the pandemic period, marking an unprecedented rise. Additionally, Port Klang, reported a congestion rate of 55.8%, 26.7% above the global median, further straining supply chain productivity[274].

This disruption hampers the timely movement of goods from entry points to fulfilment centres, resulting in delays in inventory replenishment, increased operational costs, and customer dissatisfaction. The World Bank's 2023 Logistics Performance Index (LPI) ranks Malaysia 26th, up from 41st in 2018[275], indicating progress but highlighting the need for further improvements in infrastructure connectivity.

Moreover, the Malaysia freight and logistic market is projected to reach USD 28 billion in 2024, with a CAGR of 5.25% to USD 38.28 billion by 2030[276], reflecting the growing demand for efficient logistics services.

In 2020, the Cainiao Aeropolis eWTP Hub (a Joint Venture (JV) between Malaysia Airports and Alibaba's Cainiao Smart Logistics Network signed in 2018), was introduced as a strategic solution to address some of these challenges. Located within Kuala Lumpur International Airport's (KLIA) Free Commercial Zone, this expansive 60-acre hub is set to establish KLIA as a major ASEAN distribution gateway[277]. It features 1.1 million square feet of warehouse space and aims to increase cargo volume capacity by 700,00 metric tonnes by 2029, significantly bolstering logistics capabilities in Malaysia.

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[274] Deloitte (2021). Technology-empowered digital trade in Asia Pacific, page 36. https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-deloitte-launches-technology-empowered-digital-trade-in-asia-pacific-report-en-211214.pdf

[275] Malaysian Investment Development Authority (2023). Malaysia jumps 15 ranks in World Bank Logistics Index https://www.mida.gov.my/mida-news/malaysia-jumps-15-ranks-in-world-bank-logistics-index/

[276] Mordor Intelligence (2025). Malaysia freight and logistics market size & share analysis - growth trends & forecasts up to 2030. https://www.mordorintelligence.com/industry-reports/malaysia-freight-logistics-market-study

[277] KLIA Aeropolis (2020). Malaysia airports and Alibaba announce operation commencement of Cainiao Aeropolis eWTP Hub, Malaysia. https://www.aeropolis.com.my/media-centre/news-events/malaysia-airports-and-alibaba-announce-operation-commencement-cainiao

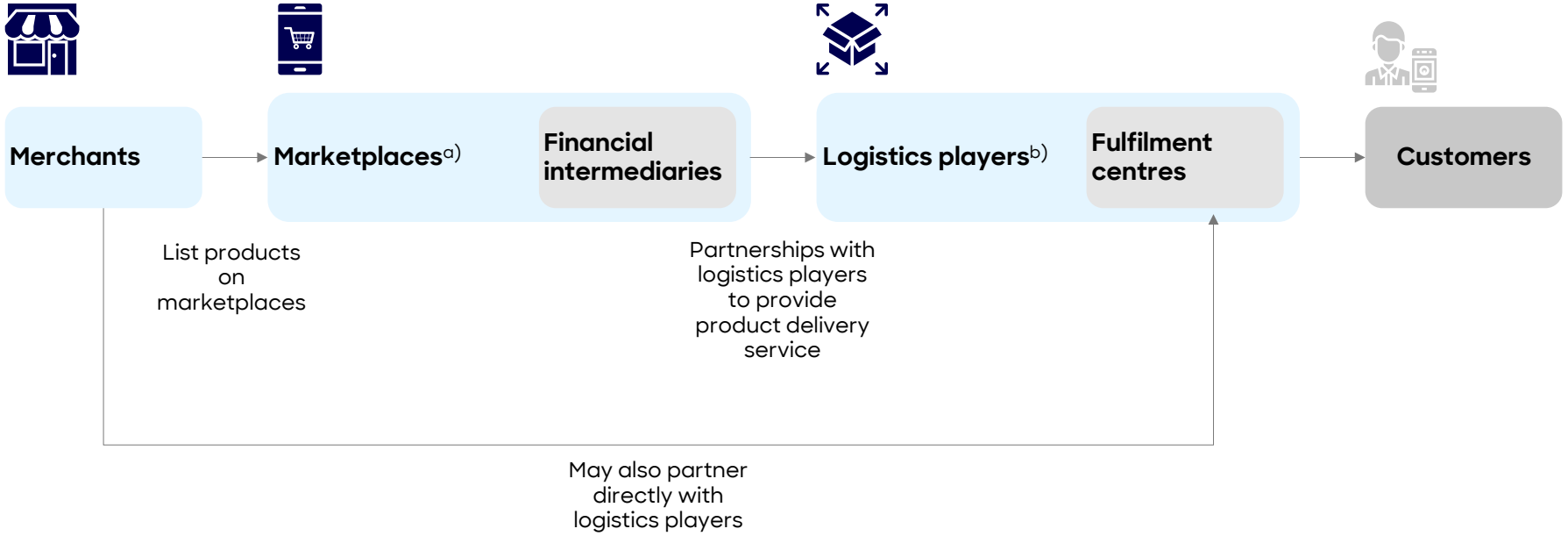
Through advanced automation, AI, and value-added services like light manufacturing. The Cainiao hub thus helps tackle infrastructure bottlenecks, supporting timely inventory movement and boosting SME competitiveness in Malaysia's digital economy. By enhancing last-mile delivery capabilities with partners such as GDEX and Pos Laju, it contributes to a logistics network that can better meet the demands of a growing e-commerce market[278].

[278] Airfreight Logistics (2020). Malaysia airports and Alibaba launch Cainiao Aeropolis eWTP Hub. https://airfreight-logistics.com/malaysia-airports-and-alibaba-launch-cainiao-aeropolis-ewtp-hub/

4.2.3.3 Supply chain

The sub-sector's supply chain comprises several critical participants: merchants, marketplaces and logistics players. Each contributing to the overall functionality, efficiency and success of the ecosystem:

Figure 59: Supply chain of the e-commerce (marketplace) sub-sector[279]



a) Financial intermediaries typically integrated with marketplaces to offer payment processing, b) Logistics players may own and operate fulfillment centers

Source: Interaction with industry players and MyCC's analysis

[279] MyCC's analysis and interaction with industry players

Merchants: Serve as the primary providers of goods, curating and supplying products for online consumers. Merchants can be broadly categorised into two categories:

- **Individual merchants:** An individual without a formal business structure offering goods for sale.

- **Corporate merchants:** A company, corporation, or organisation offering goods for sale, consisting of three sub-categories:

    - **Small to medium:** Small-to medium scale businesses with limited product offering.

    - **Large:** Established, often corporate-level, merchants who run larger operations. Can be either major brands or authorised distributors.

    - **International:** Merchants who are based outside of Malaysia.

To expand market reach, many establish a presence across multiple online marketplaces, leveraging diverse distribution channels to boost visibility and consumer access. In addition to the features provided by the e-commerce platforms, merchants also deploy their own marketing strategies to drive traffic and increase sales. These strategies often include running paid ads on external platforms like social media (e.g., Facebook, Instagram), search engines (e.g., Google Ads), and collaborating with influencers. By using these methods, merchants can attract more consumers to their stores, whether on a marketplace or their own website, improving visibility and customer engagement.

Marketplaces: Act as digital platforms that facilitate interactions between merchants and consumers, essentially serving as intermediaries by hosting a broad range of merchants and products. Their business model focuses on driving traffic, enhancing consumer engagement and optimising conversion rates. Additionally, they leverage advanced algorithms for personalised recommendations and data-driven strategies to maximise profitability. In Malaysia, B2C platforms are further categorised based on the stake ownership and incorporation status:

- **Locally owned and incorporated:** Platforms that are owned by local entities and incorporated within Malaysia (e.g., PGMall).

- **Foreign owned but locally incorporated:** Platforms that are owned by foreign entities but operate as locally incorporated companies in Malaysia (e.g., Shopee, Lazada).

- **Foreign owned and not incorporated:** Platforms that are owned by foreign entities and operate in Malaysia without being locally incorporated (e.g., Temu, Shein).

To facilitate seamless consumer payments processes, marketplaces typically integrate their platforms with a range of financial intermediaries.

Financial intermediaries: Facilitate transactions between merchants and consumers on e-commerce platforms. These intermediaries play a role in enabling various payment methods to cater to diverse consumer preferences. Financial intermediaries can be external or internal:

- **External financial intermediaries:**

    - **Payment processors (cards payment):** Payment gateways integrated with marketplaces to process transactions using credit and debit cards. Examples include Visa and Mastercard transactions facilitated through payment gateways like iPay88 and MOLPay.

    - **Banking Intermediaries:** Direct bank transfers facilitated through marketplace payment gateways that allow consumers to transfer funds directly from their bank accounts to merchants. Banks often integrate secure payment services like Financial Process Exchange (FPX) in Malaysia, which streamlines direct transfers across participating banks (e.g., Maybank, CIMB, etc.)

    - **Cash intermediaries:** Cash-on-delivery (COD) provides alternatives to those consumers without access to digital

payment. In this model, logistics players like Shopee Express or Pos Laju collect payment upon delivery of goods to consumers.

- **Financing intermediaries:** Financing services such as 'Buy-Now-Pay-Later' (BNPL) schemes provide consumers with flexible payment options, enabling them to purchase goods and pay in instalments. An example is Atome, a short of Available to Me, which partners with TikTok Shop. Atome allows users to buy on TikTok Shop and pay later in 3 monthly instalments at 0% interest, or 6 monthly instalments with a service fee of 1.5% per month. As of December 2024, sellers are not charged any additional service fees when their customers use Atome BNPL services. Atome pays the full lump sum upfront to TikTok Shop, which then pays the sellers[280].

- **Internal financial intermediaries:**

  - **Payment processors (e-wallets):** Digital wallets that offer a cashless payment experience, enabling consumers to store funds electronically and make payments. Examples include Shopee Pay and Lazada Wallet, which are integrated into their respective marketplaces.

  - **Financing intermediaries:** This category is similar to external financing intermediaries but specifically refers to platforms offered by marketplaces, such as SPayLater (Shopee) and LazPayLater (Lazada). Specifically, for SPayLater, merchants receive the full payment upfront and are not charged any additional fees when customers choose this payment option[281].

Logistics players: Responsible for the movement and storage of goods. They transport products from fulfilment centres to consumers while managing tracking and last-mile delivery. Some logistics players also operate fulfilment centres, which are specialised warehouses designed for inventory storage, order processing and shipping.

[280] Input from IDI
[281] Input from IDI

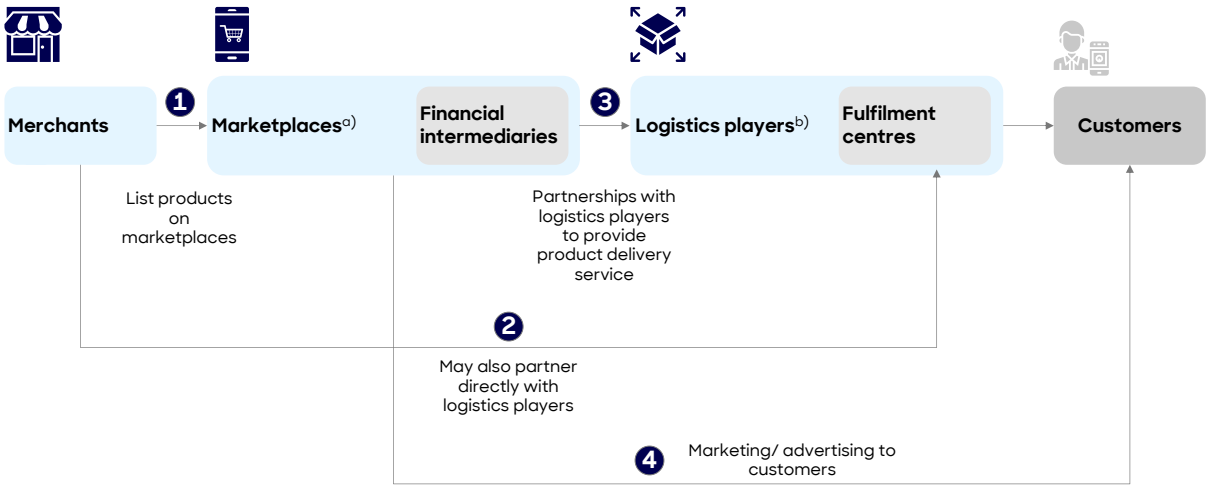
Within the marketplace, two key types of logistics players exist:

- **Third-Party Logistics (3PL) Providers:** External logistics firms that support a marketplace's logistics and supply chain needs. They offer a range of services, including warehousing, transportation, order fulfilment, inventory management and distribution.

- **Integrated Logistics Players:** Logistics arms of marketplaces, with service offerings similar to those of 3PL providers but can be more cost-effective due to their full integration into the marketplace. Due to its integration, customers/merchants can also easily track shipments through in-app features and seller centres.

4.2.4 Market practices

Figure 60: Key relationships along the e-commerce (marketplace) supply chain



a) Financial intermediaries typically integrated with marketplaces to offer payment processing, b) Logistics players may own and operate fulfillment centers

Source: Interaction with industry players and MyCC's analysis

1. Merchants and marketplaces

(a) Registration

The relationship between merchants and marketplaces begins when merchants register their accounts on the platforms. Merchants can register as individuals or registered businesses, with each option requiring the submission of verification documents. For individuals, an ID is required, while registered businesses must provide their business registration certificate and bank account details.

For businesses in East Malaysia, particularly in Sabah and Sarawak, this process can present challenges due to the absence of a Companies Commission of Malaysia (SSM)-issued business registration certificate. Instead, business registration certificates or trading license are issued by the Inland Revenue Board of Malaysia (LHDN) or *Pihak Berkuasa Tempatan (PBT)* / local authority[282]. These certificates must be applied manually (unlike the process for obtaining SSM certificates online) and sometime takes weeks to process[283] (for SSM certificates, they can be obtained within an hour after the payment transaction is made[284]).

The difference from businesses in West Malaysia is due to the Business Registration Act 1956 (Act 197) not adopted in Sabah and Sarawak, as both states have their own respective ordinances to regulate business registration.

[282] Not applicable to private limited (Sdn. Bhd.) and public-listed (Berhad) companies. These types of companies must be registered with SSM (SSM - https://www.ssm.com.my/Documents/Ezbiz%20Online%20User%20Guideline/GUIDELINE-FOR-REGISTRATION-OF-NEW-BUSINESS.pdf)

[283] Invest Sarawak (2025). Registration process. https://investsarawak.gov.my/business-registration/)

[284] Suruhanjaya Syarikat Malaysia (2025). Guidelines for registration of new business, pages 1-2. https://www.ssm.com.my/Pages/Register_Business_Company_LLP/Business/Business-Document/guidelines_for_registration_of_new_business_05062018.pdf

Table 11: Business registration ordinances in East Malaysia

State	Ordinance
Sabah	Trades Licensing Ordinance
Sarawak	Business, Professions and Trades Licensing Ordinance

Source: Secondary research

Below showcases the registration process of business registration certificate for East Malaysian merchants[285]:

- **Step 1:** Prepare at least three potential business names for registration with LHDN and verify them at the Business Name Search Counter located at LHDN offices to ensure availability and compliance with local regulations.

- **Step 2:** Gather the required documents to establish proof of business, which include a stamped Tenancy Agreement or Sales and Purchase Agreement (SPA), Lease of Land, and Land Title.

- **Step 3:** Determine any additional documents required for registration, such as the Trade License Application Form (*Borang* IRD No. 8), Business Names Ordinance Form (*Borang* R20), and *Borang* TL from the Department of Statistics. Additionally, create a business stamp that includes the full commercial address and ensure all necessary documents are prepared for submission to LHDN.

Marketplaces impose limitations on the number of accounts a merchant can have, typically allowing only five accounts, each required to offer distinct product assortments. Merchants are prohibited from creating multiple stores selling similar product ranges, with violations resulting in non-compliance points.

To increase visibility, many merchants choose to register their shops and list their products across multiple marketplaces. Some also use third-party

[285] Invest Sarawak (2024). Business registration in Sarawak. https://investsarawak.gov.my/business-registration/

platforms (e-commerce enablers) to manage stores in various marketplaces, such as Commerce.Asia or Momentum Commerce.

As part of the agreement between both parties, merchants must consent to various terms during registration, including the Seller Agreement, Seller Verification Guidelines, and commission rates. Failure to comply with these policies—such as selling prohibited or counterfeit items—can result in penalties, delisting, or blacklisting, often triggered by consumer complaints or marketplace monitoring.

On key platforms like Shopee, Lazada, and TikTok Shop, there are also exclusive "mall" options (e.g., LazMall, Shopee Mall, TikTok Shop Mall)[286, 287, 288]. Merchants typically receive invitations to these categories, provided they meet two key criteria:

1. Being a brand owner or an authorised distributor, and

2. Fulfilling performance benchmarks such as offering free shipping, supporting free returns/refunds, maintaining a high chat response rate, and achieving a low non-fulfillment rate.

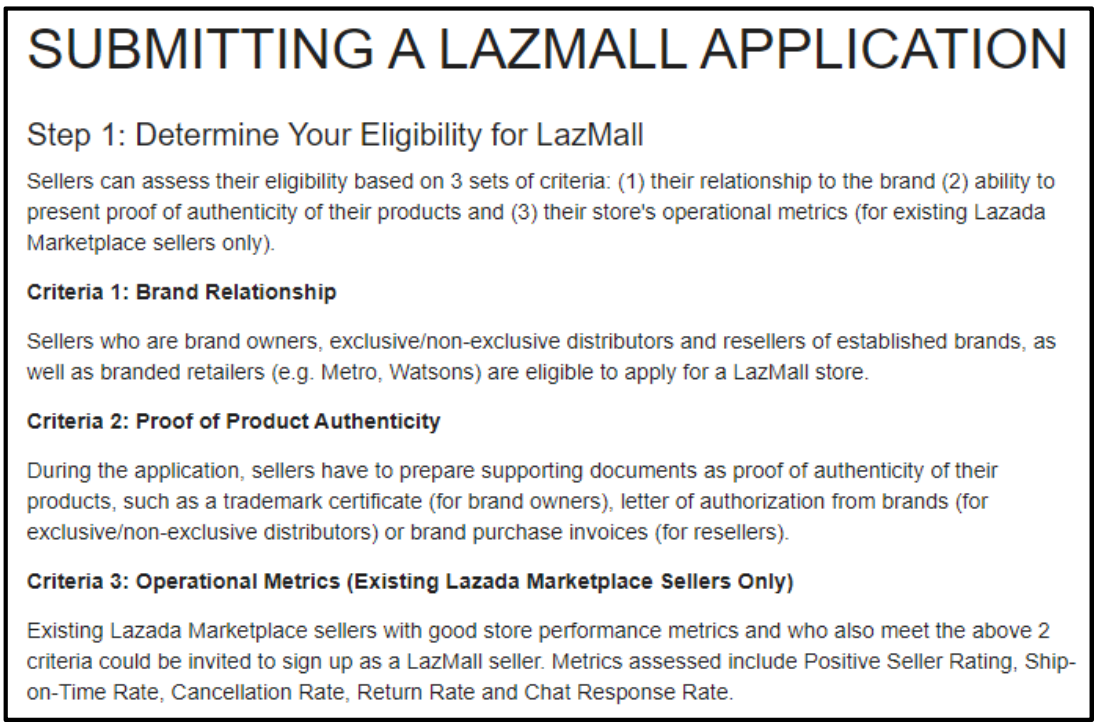
Joining these "mall" options offers advantages, including increased visibility on the homepage, better search rankings, and exclusive access to promotions and marketing solutions, though they come with higher commission rates. These benefits help enhance the reputation of merchants as trusted sellers.

[286] Shopee (2024). Shopee mall onboarding and eligibility criteria. https://seller.shopee.sg/edu/article/19686

[287] Lazada (2025). LazMall seller eligibility and service standards. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148681&hybrid=1&categoryId=1000027819

[288] TikTok Shop (2025). TikTok shop mall policy. https://seller-my.tiktok.com/university/essay?knowledge_id=8766786787149570&default_language=en&identity=1

Figure 61: Criteria to join Lazada's, Shopee's and TikTok Shop's malls



SUBMITTING A LAZMALL APPLICATION

Step 1: Determine Your Eligibility for LazMall

Sellers can assess their eligibility based on 3 sets of criteria: (1) their relationship to the brand (2) ability to present proof of authenticity of their products and (3) their store's operational metrics (for existing Lazada Marketplace sellers only).

Criteria 1: Brand Relationship

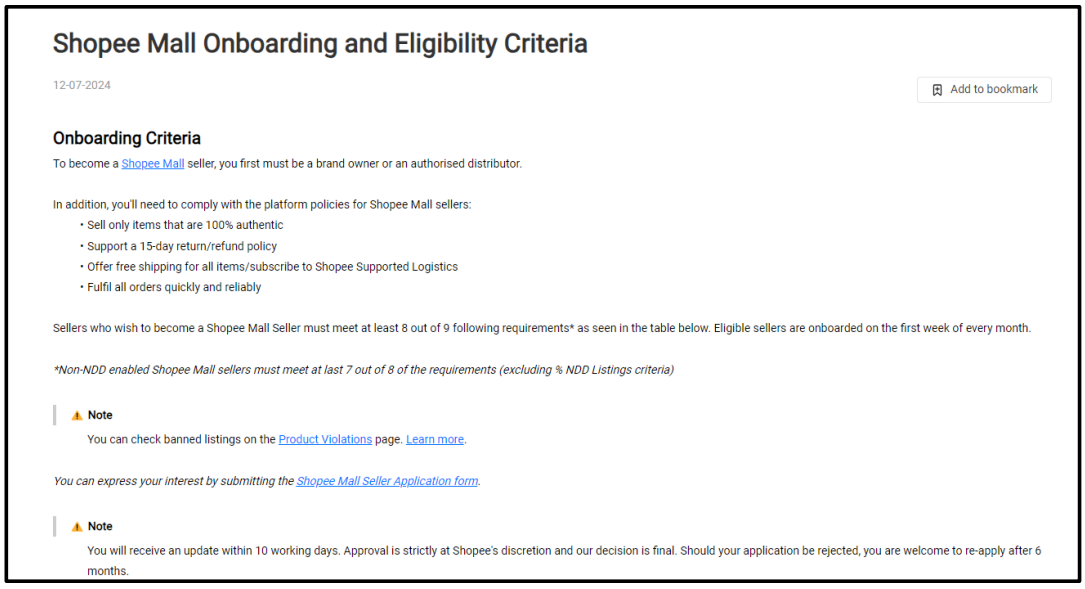
Sellers who are brand owners, exclusive/non-exclusive distributors and resellers of established brands, as well as branded retailers (e.g. Metro, Watsons) are eligible to apply for a LazMall store.

Criteria 2: Proof of Product Authenticity

During the application, sellers have to prepare supporting documents as proof of authenticity of their products, such as a trademark certificate (for brand owners), letter of authorization from brands (for exclusive/non-exclusive distributors) or brand purchase invoices (for resellers).

Criteria 3: Operational Metrics (Existing Lazada Marketplace Sellers Only)

Existing Lazada Marketplace sellers with good store performance metrics and who also meet the above 2 criteria could be invited to sign up as a LazMall seller. Metrics assessed include Positive Seller Rating, Ship-on-Time Rate, Cancellation Rate, Return Rate and Chat Response Rate.



Shopee Mall Onboarding and Eligibility Criteria

12-07-2024

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Onboarding Criteria

To become a Shopee Mall seller, you first must be a brand owner or an authorised distributor.

In addition, you'll need to comply with the platform policies for Shopee Mall sellers:

- Sell only items that are 100% authentic
- Support a 15-day return/refund policy
- Offer free shipping for all items/subscribe to Shopee Supported Logistics
- Fulfil all orders quickly and reliably

Sellers who wish to become a Shopee Mall Seller must meet at least 8 out of 9 following requirements* as seen in the table below. Eligible sellers are onboarded on the first week of every month.

**Non-NDD enabled Shopee Mall sellers must meet at last 7 out of 8 of the requirements (excluding % NDD Listings criteria)*

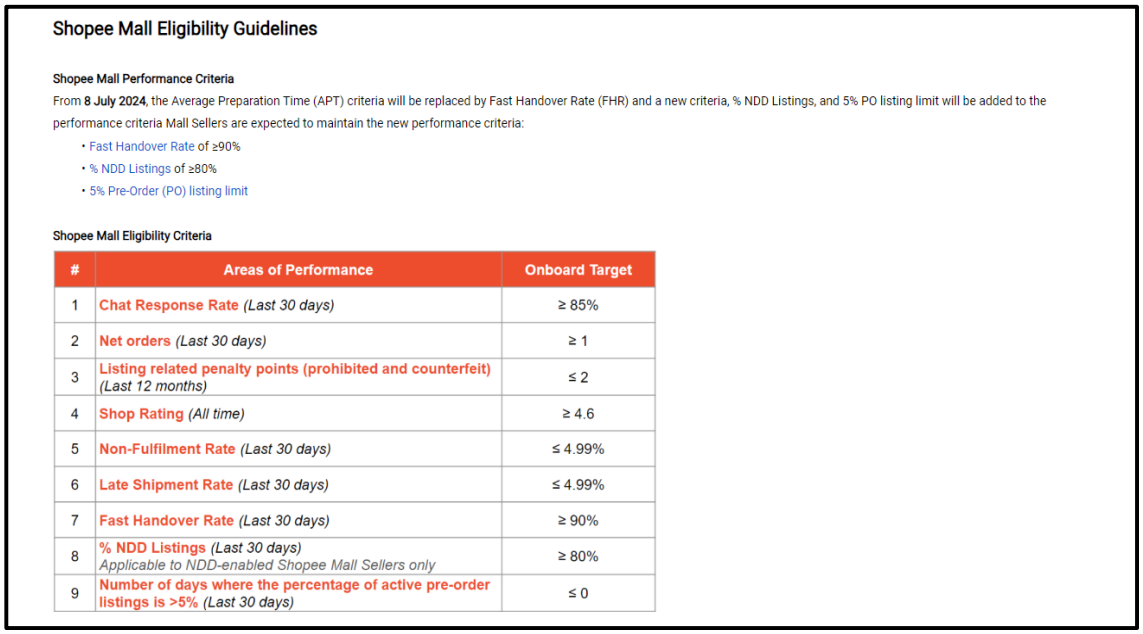
Note

You can check banned listings on the Product Violations page. Learn more.

You can express your interest by submitting the Shopee Mall Seller Application form.

Note

You will receive an update within 10 working days. Approval is strictly at Shopee's discretion and our decision is final. Should your application be rejected, you are welcome to re-apply after 6 months.



Shopee Mall Eligibility Guidelines

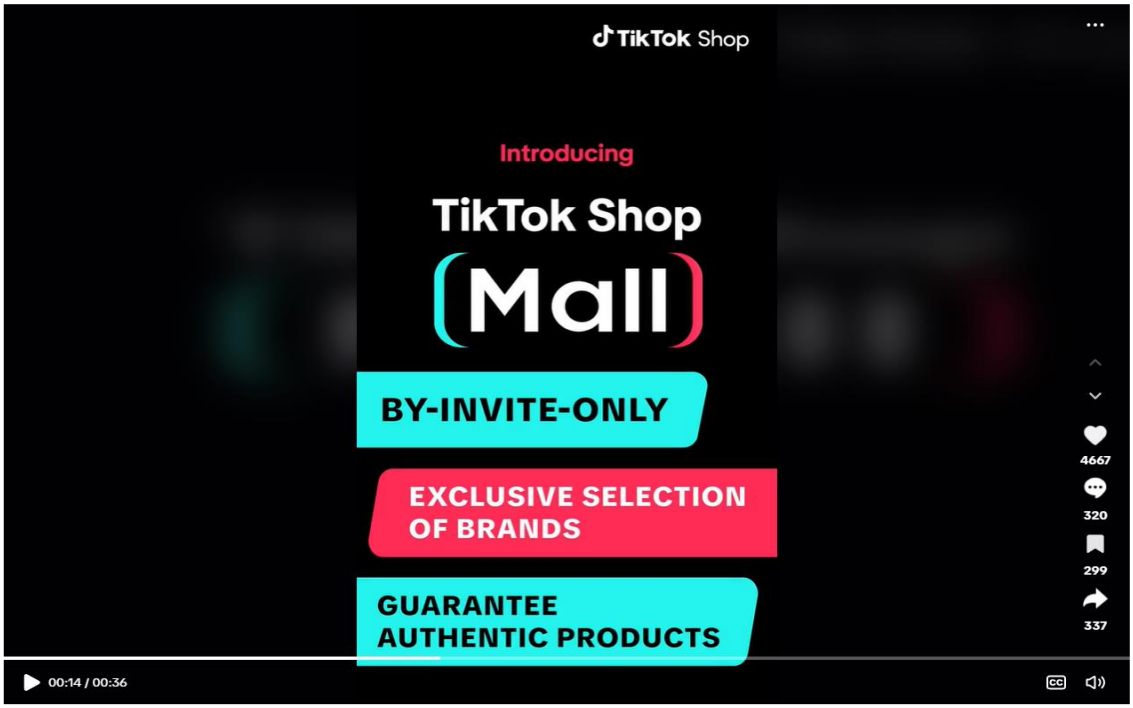
Shopee Mall Performance Criteria

From **8 July 2024**, the Average Preparation Time (APT) criteria will be replaced by Fast Handover Rate (FHR) and a new criteria, % NDD Listings, and 5% PO listing limit will be added to the performance criteria Mall Sellers are expected to maintain the new performance criteria:

- Fast Handover Rate of ≥90%
- % NDD Listings of ≥80%
- 5% Pre-Order (PO) listing limit

Shopee Mall Eligibility Criteria

#	Areas of Performance	Onboard Target
1	Chat Response Rate *(Last 30 days)*	≥ 85%
2	Net orders *(Last 30 days)*	≥ 1
3	Listing related penalty points (prohibited and counterfeit) *(Last 12 months)*	≤ 2
4	Shop Rating *(All time)*	≥ 4.6
5	Non-Fulfilment Rate *(Last 30 days)*	≤ 4.99%
6	Late Shipment Rate *(Last 30 days)*	≤ 4.99%
7	Fast Handover Rate *(Last 30 days)*	≥ 90%
8	% NDD Listings *(Last 30 days)* *Applicable to NDD-enabled Shopee Mall Sellers only*	≥ 80%
9	Number of days where the percentage of active pre-order listings is >5% *(Last 30 days)*	≤ 0



Source: Lazada and Shopee

(b) Commission rates

Commission rates vary based on both the merchant's product category and the length of time the merchant has been on the marketplace.

Merchants on the marketplace for less than 120 days have a 0% rate, while those over 120 days face rates ranging from 0% to 20.5%[289, 290, 291, 292].

For TikTok Shop, commission fee reductions may be offered as an incentive to merchants. These reductions are typically extended to active sellers, as a general new platform feature, or merchants who can demonstrate justifiable reasons for the reduction, such as operating with low margins or high operating costs[293].

Announcements regarding rate changes are typically made one month in advance. Below details the rates of the three key marketplaces in Malaysia as of 20 February 2025:

[289] Rates as of 31 December 2024.
[290] Shopee (2025). Marketplace commission fees. https://seller.shopee.com.my/edu/article/6799
[291] TikTok Shop (2025). Commission fee. https://seller-my.tiktok.com/university/essay?knowledge_id=6907739532281602&default_language=en&identity=1
[292] Lazada (2025). Marketplace commission rate. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148698&hybrid=1&categoryId=1000027814
[293] Written input from TikTok Shop

Table 12: Commission rates[294] across E-commerce platforms

Categories	Shopee (Effective 6th March 2025) [295]		Lazada[296]		TikTok[297]	
	Market-place	Mall	Market-place	LazMall	TikTok Shop	TikTok Shop Mall
Electronics	4% to 12%	7% to 15%	4% to 10%	8% to 16%	4.5% to 8.5%	7.5% to 11.5%
Fashion	8% to 12%	9.5% to 17%	7% to 10%	9.5% to 16%	7.5% to 9.5%	10.5% to 12.5%
FMCG	0% to 13%	3% to 17%	0% to 11%	0% to 16%	0% to 10.5%	3% to 13.5%
Lifestyle	5.5% to 11%	11% to 16%	5.5% to 10%	12% to 16%	6% to 9.5%	9% to 12.5%
Virtual / Digital Goods	17.5% to 21.5%[298]	12% to 16%	17.5% to 20.5%	2.5% to 6%	N/A	N/A
General Merchandise *(Lazada only)*	N/A	N/A	5.5% to 10%	12% to 16%	N/A	N/A

Source: Shopee, Lazada and TikTok Shop

[294] Rates are exclusive of 8% SST

[295] Shopee (2025). Marketplace commission fees. https://seller.shopee.com.my/edu/article/6799 and Shopee (2025). Shopee Mall Commission Fee. https://seller.shopee.com.my/edu/article/1773

[296] Lazada (2025). Marketplace commission rate. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148698&hybrid=1&categoryId=1000027814 and Lazada (2025). LazMall commission rate adjustment. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?categoryId=1000027819&language=en_US&m_station=BuyerHelp&questionId=1000148575

[297] TikTok Shop (2025). Commission fee. https://seller-my.tiktok.com/university/essay?knowledge_id=6907739532281602&default_language=en&identity=1

[298] Shopee (2025). Virtual goods SKUs. https://seller.shopee.com.my/edu/article/16550

According to marketplaces[299], rate increase is typically implemented unilaterally due to rising cost of operating platform and market conditions. For some marketplaces, new commission rate rollouts may be paired with support programmes to offset sellers' anticipated additional costs. These programmes include free delivery for customers, which boosts sellers' visibility.

Table 13: Latest rate changes from key marketplaces[300]

Marketplace	Rate change	Date of rate change
Shopee	3% in all categories[301]	1 August 2024
TikTok Shop	Average 4.8% in all categories[302]	5 September 2024
Lazada	3% in all categories[303]	15 August 2024

Source: Shopee, Lazada and TikTok Shop

The commission is calculated based on the item price, minus any merchant promotional charges. Promotional costs funded by the marketplace are not deducted from the item price when calculating the commission fee.

Once a marketplace initiates a rate change, it is typically followed by another. Based on the latest changes by key players, the interval between rate changes is approximately 35 days.

[299] Written response from Shopee, TikTok Shop and Lazada.
[300] As of 20 December 2024
[301] Shopee (2025). Marketplace commission fees. https://seller.shopee.com.my/edu/article/6799
[302] TikTok Shop (2024). Introduction to seller fees https://seller-my.tiktok.com/university/essay?knowledge_id=2602429108078338&default_language=en&identity=1
[303] Lazada (2025). Marketplace commission rate. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148698&hybrid=1&categoryId=1000027814

(c) Product listing

Products listed on marketplaces are ranked based on the platforms' proprietary algorithms, which take into account various factors. Although the specific details are not publicly available, the following provides an indicative view of the factors considered:

- **Product and sales performance**
    - Product price
    - Sales performance
    - Checkout rates
    - Fulfilment performance
- **Customer engagement and feedback**
    - Customer reviews
    - Customer interactions
- **Marketing and visibility**
    - Advertising expenditure
    - Keyword relevance
    - Content information

(d) Payment partners

Marketplaces provide a wide range of payment systems (see supply chain section for more details) that merchants can select as part of their registration process.

For third-party (external) payment options such as online banking and bank transfers, marketplaces are typically charged a fee by the payment gateway providers. These fees are then passed on to customers as "transaction fees" to cover the costs incurred by the marketplace. As of 20 December 2024, across various key marketplaces (Shopee, TikTok Shop, and Lazada), a standard transaction fee of 3.5% (before SST) is imposed,

irrespective of the varying fees that marketplaces may face from their respective payment gateway providers.

Below details selected payment gateway providers' fees.

Table 14: Selected payment gateway providers and fees charged

#	Payment gateway provider[304]	Fee
1	Stripe	3% + MYR 1
2	PayPal	3.9% + MYR 2
3	Braintree	3.4% + MYR 2
4	eGHL	2.3% (domestic cards); 2.5% or MYR 0.6 (whichever is higher, for FPX)
5	WeChat Pay	Free for most transactions
6	Alipay	3% (credit card); 1.5% (online bank transfer)
7	iPay88	3% (credit cards); 2-4% or min. MYR 0.6 (whichever is higher, for online banking & e-wallet)
8	Billplz	MYR 1-1.5 (online bank transaction); 2.5% (card transactions)
9	senangPay	2.5% (credit & debit card); 1.5% or MYR 1 (whichever is higher, for internet banking)
10	Maybank2u	MYR 0.5 per transaction
11	Payex	1.25-2.5% (domestic credit card); MYR 0.99-MYR 1.5 (online banking)
12	HitPay	1.2% + MYR 1 (for domestic credit cards, Apple Pay and Google Pay)

Source: Easy Store

[304] Easy Store (2024). https://support.easystore.co/en/article/payment-gateways-comparison-114ww7g/

(e) Merchants' communication with marketplace

Each marketplace provides a seller portal for communication, where merchants can receive announcements about changes to commission structures, promotional campaigns, and other relevant updates. Additionally, merchants can manage their campaign opt-ins and opt-outs directly through the portal.

In the case of conflicts between merchants and customers, these issues are usually directed to dispute resolution or customer service teams.

Depending on various factors, including but not limited to sales volume, size and strategic value, select merchants are assigned a Relationship Manager (RM). The RM's role is to offer personalised support, including but not limited to providing general guidance/support, improving store performance, addressing merchants' challenges with buyers, delivery partners, and providing customised offers, such as boosting store visibility in exchange for reducing prices on selected products.

(f) Campaigns in the marketplace

To increase consumer lock-in effects, marketplaces often employ strategies like discounts, cash backs and free shipping. The campaigns organised by the marketplaces usually invite all merchants to participate, as long as they meet the minimal criteria (e.g., to offer a certain discount rate, merchant rating, daily cancellation rate).

Offered campaigns include promotional events (featuring products) and voucher-type events (featuring vouchers from merchants or from both marketplace and merchant [305]), both of which require merchants to actively opt in. The merchants are required to manually enroll their store into these campaigns such as Shopee's Preferred Seller Program[306] and

[305] Co-fund vouchers, where sellers are reimbursed with a percentage amount of the voucher cost in accordance with the programme terms and conditions.
[306] Shopee (2025). Introduction to Shopee's preferred seller programme. https://seller.shopee.com.my/edu/article/313/What-is-Shopees-Preferred-Seller-Programme

Shocking Sales Campaigns[307]. Lazada's Free Shipping Program[308] and LazCoins Discount Program[309], and TikTok Shop's Bonus Cashback Program[310] and Bonus Extra Program[311]. For certain trial and ad-hoc campaigns, merchants will be notified in advance for nomination and merchants are able to decide whether to enroll in these special campaigns manually.

There are also selected campaigns where merchants may be automatically enrolled[312]. Auto-enrollment campaign examples include Shopee's Free Shipping Programme, Cashback Programme[313] and SPayLater Programme[314].

However, merchants always have the option to opt out of any campaign during its duration, with opt-out cooling period typically ranging from 7 days to 28 days. Merchants need to actively monitor their Seller Centre and manually reject any campaigns they do not wish to join. If they fail to notice they have been automatically opted in before the campaign starts, they will need to contact their RM or submit a request via the Seller Centre (if their store does not have an RM).

In addition to marketplace-initiated campaigns, merchants can also organise their own promotions through the Seller Centre, including but not

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[307] Shopee's Shocking Sales Campaigns (2024). Shopee Shocking Sale. https://seller.shopee.com.my/edu/article/20315

[308] Lazada (2025). Lazada free shipping program. https://sellercenter.lazada.co.th/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000147740&hybrid=1&categoryId=1000028076

[309] Lazada (2025). LazCoins discount program. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148771&hybrid=1&categoryId=1000027750

[310] Tiktok (2025). Bonus cashback program. https://seller-my.tiktok.com/university/essay?knowledge_id=5507751284115216&default_language=en&identity=1

[311] TikTok (2025). Bonus extra program (BXP). https://seller-my.tiktok.com/university/essay?identity=1&role=1&knowledge_id=8969995510564625&from=feature_guide

[312] Facebook Shopee Malaysia Seller Community (2024). https://www.facebook.com/groups/614751765653533/posts/2001400520321977/

[313] Shopee (2025). Introduction to Shopee cashback programme. https://seller.shopee.com.my/edu/article/1096

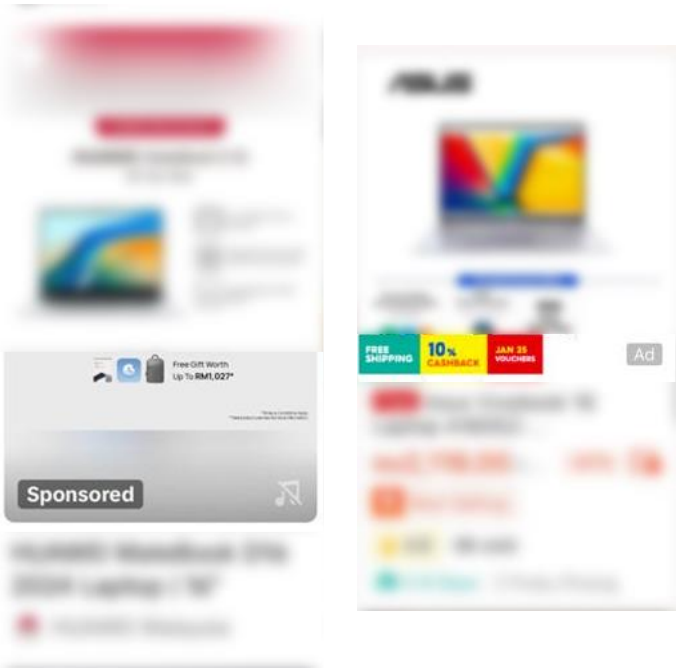
[314] Shopee (2024). Introduction to special SPayLater programme. https://seller.shopee.com.my/edu/article/16542

limited to merchant initiated free shipping, discounts. The full cost of any promotions initiated by the merchants will be borne entirely by them.

(g) Advertising

Merchants advertising on marketplaces typically engage in several key activities to promote their products. First, they conduct keyword research to identify relevant search terms that potential customers might use, often analysing competitor strategies to find effective keywords. Some platforms e.g., Shopee, provides services to auto select keywords relevant to the merchants' products[315]. Next, they select ad types that align with their goals and establish budgets and durations. Merchants bid on chosen keywords, where higher bids can lead to better ad placements, while also crafting ad copy and visuals to attract clicks. They continuously monitor campaign performance, analysing metrics such as click-through rates and conversion rates to make data-driven adjustments.

Figure 62: Sponsored listing observed on Shopee and TikTok Shop



Source: Shopee and TikTok Shop

[315] Shopee (2021). What Are Auto Selected Keywords? https://ads.shopee.com.my/learn/faq/81/139

Advertised products on search results are labelled as “sponsored” or “ad”, indicated by a specific icon. However, the visibility of these products is also influenced by the platform’s algorithm, which determines product ranking based on various factors, including the ad spent by the merchant[316].

On TikTok Shop, ranking is primarily effort driven. Sellers who actively produce live streams and video content tend to achieve higher visibility. The majority of products listed on the first page are organic, with only a few utilising paid sponsorships. Merchants on TikTok Shop can target their videos to specific audiences based on behaviours such as frequent viewers, those who click on descriptions, or users more likely to make a purchase[317]. They can also customise their targeting by demographics, such as age group, gender, or interests. Additionally, TikTok Shop offers an “affiliate marketing” feature, allowing merchants to collaborate with creators on a commission-based arrangement.

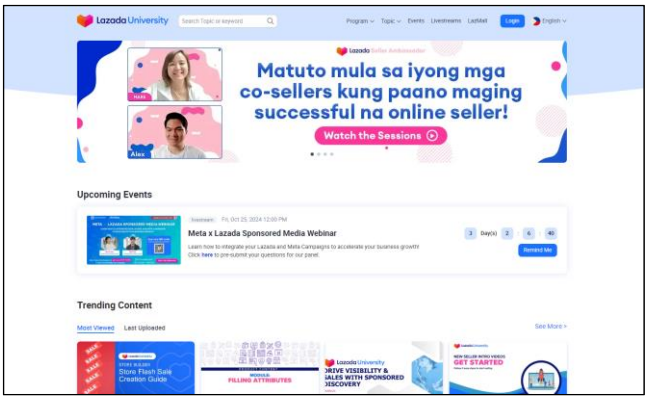
Marketplaces offer promotional campaigns to help sellers boost their visibility, but participation is not automatic. Sellers must independently apply to join these campaigns and have control over the pricing they set. RMs often provide personalised deals to sellers based on their performance and needs.

Although advertising packages are available to enhance visibility, their effectiveness can be unpredictable due to the opaque nature of the algorithms that govern product promotion. Sellers with low visibility often struggle due to inefficient marketing spend and lack of knowledge or budget for effective keyword-based marketing.

To support their success, most marketplaces offer educational programs such as Lazada University, Shopee Seller Education Hub, TikTok Shop Academy, which aimed to improve merchants' digital literacy and business strategies.

[316] Input from IDIs
[317] Input from IDIs

Figure 63: Lazada University



Source: Lazada

(h) Performance tracking

Marketplaces provide merchants with six general data categories, each containing various metrics:

1. **Sales:** Sales by product category, order price, gross merchandise value (GMV), average GMV.

2. **Store:** Product clicks, unique views, average visiting time.

3. **Services:** Enquiry rate, Chat Response Rate (CRR), First Response Time (FRT), Average Response Time (ART), conversion rate.

4. **Traffic:** Page views, visitors, view-to-click rate, and click-to-paid rate

5. **Marketing:** Performance of marketing tools.

6. **General aggregated data:** To help merchants on trend identification.

Buyers' personal information is hidden and not accessible.

(i) Complaints and disputes

For complaints and disputes, merchants can submit them through the marketplaces' dedicated seller centers, virtual assistants (e.g., Lazada's

ADA, Shopee's Shop AI Assistant, TikTok Shop's Customer Service Chat Assistant), or via their RMs.

The complaints or disputes are then processed either manually or automatically, depending on their complexity. Typical resolution times range from less than one to five business days.

(j) Other areas

- **Payout period:** Marketplaces usually take 2 to 7 working days in crediting earnings to merchants.

- **Customer returns:** Customers can return products if they are incorrect, incomplete, or not as described. Marketplaces typically hold payments until disputes are resolved. For example, Shopee's Shopee Guarantee service holds payments temporarily, and if a return is approved, sellers are not charged commission or transaction fees. Depending on the reason selected, buyers may need to provide evidence. For example, for "missing parcel" claims, no proof may be required, but "damaged item" requests need photo or video evidence and product return. Merchants must submit tickets with details to recover transportation costs. If the issue if their fault, they bear the shipping fees. Customers can contact merchants through marketplace chat functions[318].

- **Other support programmes:** There are also various programmes offered by marketplaces to support merchants' operations – For example, Shopee merchants can claim shipping fees for change-of-mind orders. However, this requires actively checking cancelled orders and manually filing claims. There are also specific quotas on claims per month with a maximum claim of MYR 20 per order. In view of this, Shopee's introduced its Seller Shipping Fee Saver (SSFS) programme, where merchants pay a fee of MYR 0.20 per order. This allows them to receive up to MYR 80 per order in refunds, with no claim quota for returns and refunds.

[318] Input from IDIs

2. Merchants and delivery or logistics partners

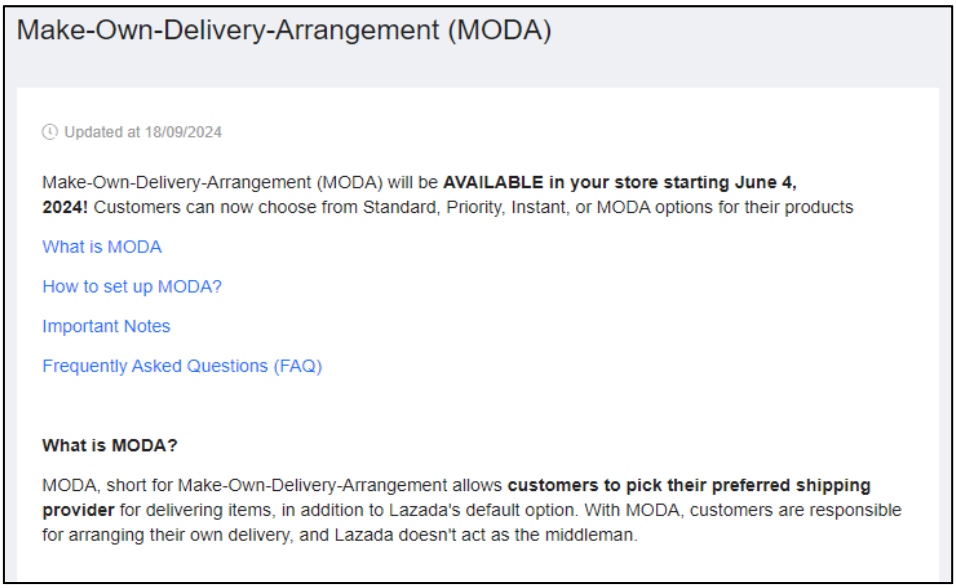
Merchants can also choose their preferred delivery partners, provided those partners are supported by the marketplaces, or they can opt to use their own delivery teams. However, misalignments can occur, particularly when merchants need to fulfil same-day delivery orders but find that their delivery partners have already stopped accepting parcels for the day.

Additionally, some customers may attempt to evade higher transportation fees by altering their postcode – often changing an East Malaysia postcode to a West Malaysia code – which can result in the system misidentifying their location [319]. This practice can lead to merchants incurring unexpected extra costs.

In a bid to offer more flexibility in delivery options, some marketplaces, such as Lazada, have introduced initiatives like Make-Own-Delivery-Arrangement (MODA). This feature allows consumers to pick their preferred shipping provider and arrange their own logistics. Merchants could opt to provide their buyers with this choice, in addition to Lazada's default option. However, a disadvantage is that this arrangement does not allow customers to track their shipments through the merchants' or customers' portals, leading to a less streamlined experience. Customers would also have to go through more steps while checking out, which could be inconvenient. This is because Lazada no longer acts as the middleman under MODA and all communication occurs only between customers, merchants and the MODA 3PL appointed by the customer.

[319] Input from focus group discussion with e-commerce merchants

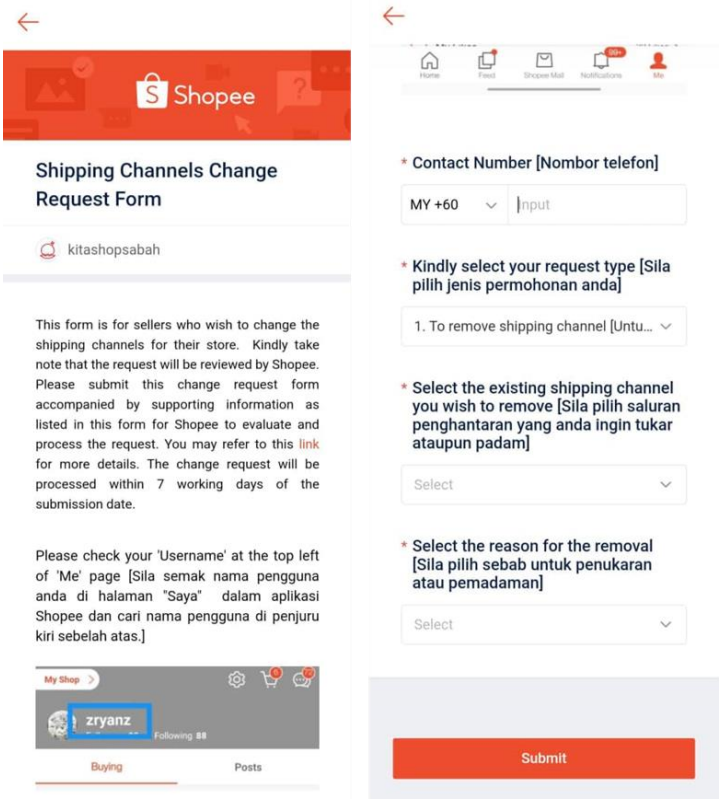
Figure 64: MODA by Lazada



Source: Lazada

Separately for Shopee, merchants are allowed to request change to logistics partners through submitting a form including information such as partners to remove and rationale.

Figure 65: Delivery partner change request form from Shopee



Source: Shopee

3. Marketplaces and delivery/logistics partners

(a) Partnership

Partnerships between both parties involve contractual agreements that define the terms of service. A standard Service Level Agreement (SLA) typically spans one year with no minimum order quantities (MOQ) detailed. Agreements outline the terms of service (including first-mile, middle-mile, last-mile, end-to-end, or cross-border delivery), delivery timelines, pricing structures (on package size, weight, destination zones), payment terms (invoicing cycles, due dates, penalties), and performance metrics. Additionally, financial penalties are highlighted and can be imposed based on various performance indicators (see below for more information).

SLAs are renewed typically on an annual basis, with potential changes in pricing, operational terms, customer service standards or performance metrics.

During peak periods such as shopping festivals like 11.11, marketplaces often seek additional logistics capacity from on-demand logistics services, such as Lalamove, which collaborate with marketplaces without fixed contracts. This flexible approach allows them to manage increased demand effectively while ensuring timely deliveries.

(b) Logistics practices

In Malaysia, most key marketplaces automatically manage order deliveries through their algorithms. E-commerce platforms like Lazada and TikTok Shop have policies that do not allow customers to choose delivery partners, which is known as "delivery masking". This means that customers and merchants cannot choose their preferred courier services. Instead, the platform assigns a logistics provider based on various factors.

Starting 2021, Shopee implemented delivery masking to streamline its logistics operations. By consolidating deliveries and distributing parcels among different courier providers, Shopee aims to optimise delivery times and manage challenges such as regional disruptions. This approach helps prevent delays that could occur if a single courier becomes overwhelmed[320].

Logistics providers in Malaysia participate in delivery masking by integrating their services with these e-commerce platforms. They adhere to the platforms' algorithms and policies, which determine parcel assignments based on factors such as delivery partner capacity, quality, speed, customer feedback, delivery hub locations, average delivery times, and regional challenges (such as potential disasters or floods). This integration requires logistics companies to maintain flexibility and efficiency to meet the varying demands of different platforms.

[320] Lowyat (2021). Shopee reportedly removing courier options on checkout starting 17 June. https://www.lowyat.net/2021/240658/shopee-reportedly-removing-courier-options-on-checkout-starting-17-june/

In addition, to ensure quality, marketplaces conduct regular review sessions (e.g., quarterly reviews) to discuss various performance metrics (including lost rate, on-time delivery rate, on time pickup rate, overall delivery time and customer complaints). These sessions help marketplaces to update metrics in their algorithm to further enhance its delivery allocation system.

(c) Data access

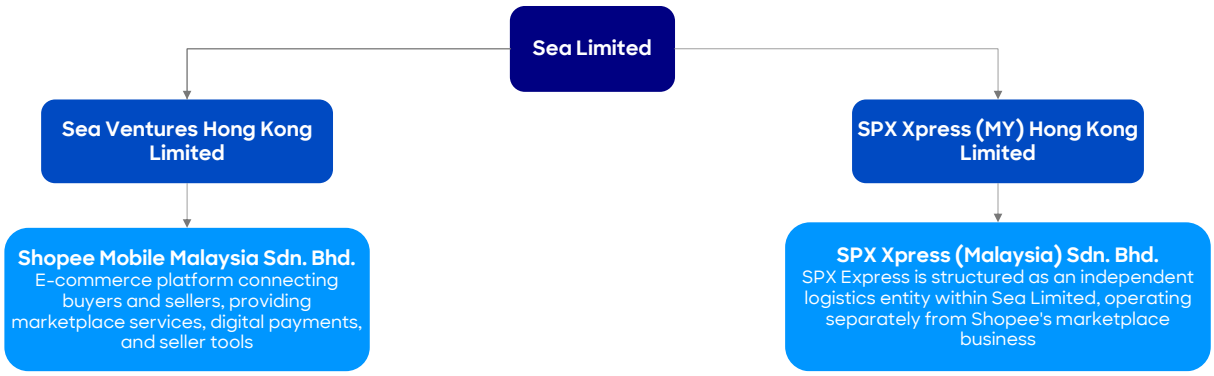
Delivery/llogistic partners would typically be required to undergo data security screening to determine its data handling practices. During operations, partners' access to data is limited to the following:

- Order number
- Product details (name, package quantity)
- Basic information of the buyer and seller (contact information, delivery address)
- Payment information

(d) Integrated logistics players

Selected marketplaces, such as Shopee and Lazada, enhance their logistics capabilities by maintaining their own delivery fleets, SPX and LEX, which is also integrated into the fulfilment algorithm.

Figure 66: Corporate structure of Shopee and SPX Xpress



Source: Written input from Shopee

The logistics arms operate as separate entities from the marketplaces under the same parent company. Specifically, SPX, which exclusively serves the Shopee marketplace, currently has no overlap in its corporate structure. SPX's shareholder is SPX Xpress (MY) Hong Kong Limited, while Shopee's shareholder is Sea Ventures Hong Kong Limited[321].

For LEX, the entity is under Lazada South East Asia Pte Ltd, while Lazada Malaysia is 100% owned by Lazada South East Pte Ltd[322].

4. Marketplaces and customers

Marketplaces in Malaysia heavily invest in advertising to attract and engage consumers, with a focus on increasing brand awareness and driving sales. In the first half of 2022, Nielsen reported that the top three biggest advertisers in Malaysia were the Ministry of Health (MOH), Ministry of Communications, and Shopee[323].

Customers in Malaysia often use multiple e-commerce platforms to compare prices and find the best deals. They want cheaper prices, better offers, and convenience. Many customers switch between apps to take advantage of discounts, free shipping, and rewards. Some customers also

[321] Written input from Shopee
[322] Written input from Lazada
[323] Marketing Interactive (2022). SEA biggest advertisers: Who is dishing out those ad dollars? https://www.marketing-interactive.com/biggest-advertisers-sea-nielsen-2022

prefer platforms that offer personalised recommendations based on their browsing habits.

To reach a wide range of audiences, marketplaces employ various marketing strategies tailored to different consumer segments. One of the strategies employed is the use of celebrity endorsements and influencer marketing. Shopee, for instance, partnered with footballer Cristiano Ronaldo[324] and actor Jackie Chan in 2021[325].

In addition to celebrity collaborations, marketplaces like Lazada use targeted advertising, seasonal campaigns, and flash sales to boost consumer interest. Lazada's "Lazada 11.11" and "Lazada 12.12" sales events are prominent examples of these strategies, featuring discounts and exclusive deals.

Moreover, marketplaces rely on social media platforms to foster community engagement. TikTok Shop, for instance, leverages its own platform to promote its e-commerce offerings through viral content, including challenges and shoppable videos that integrate products into users' feeds. In view of this, other key marketplaces were seen to follow suit by introducing similar features. For example, Shopee launched Shopee Video in 2024.

Various marketplaces have ventured into new areas such as gamification to enhance customer engagement. For example, Lazada offers a range of games[326] (e.g., GoGo Match, Merge Boss, Lucky Egg, Style Star, LazLand) that encourage social sharing and customer interaction, driving traffic to the platform and rewarding users with vouchers and coins that can be used within the app.

[324] Marketing interactive (2019). Shopee scores Cristiano Ronaldo as regional brand ambassador. https://www.marketing-interactive.com/shopee-scores-cristiano-ronaldo-as-regional-brand-ambassador

[325] Marketing Interactive (2021). Shopee packs a punch with Jackie Chan as face of 9.9 shopping festival. https://www.marketing-interactive.com/shopee-packs-a-punch-with-jackie-chan-as-face-of-9-9-shopping-festival

[326] LazBeat (2023). Game On: How Lazada is leveling up online shopping for southeast Asian consumers. https://www.lazbeat.net/entertainment-and-lifestyle/lazada-game-online-shopping-southeast-asian-consumers/

4.2.5 Supply chain take rates and approximate earnings of supply chain players

Multiple parties may be involved throughout the e-commerce (marketplace) transaction process. When a customer purchases a product, the total amount paid (net price) at checkout covers three key components. The first component is an optional tax on Low-Value Goods (LVG), which imposes a 10% tax on goods valued at MYR 500 or less that are imported into Malaysia. The second component is the shipping fee, covering logistics cost. Lastly, this shipping fee is subject to an additional 6% SST[327, 328], further contributing to the overall transaction cost (net price).

After subtracting the tax imposed by the Malaysian government and shipping fee, the remaining amount represents the merchandise value. From this amount, e-commerce marketplaces subtract a commission fee, which can range from 0% to 20.5%, depending on the product categories (e.g., Fashion, Lifestyle, etc.). Based on historical data, the overall commission rate has experienced an upward trend. For instance, in the electronics category, key marketplaces have imposed an increase in commission rates ranging from 3.4% to 7.0% in a span of two years.

Additionally, marketplaces charge merchants a transaction fee for all online transactions (e.g., online banking or card payments) upon successful customer orders. This fee is typically set at a standard rate of around 3.78% (inclusive of 8% SST)[329], though fees from third-party payment providers to the marketplaces may vary.

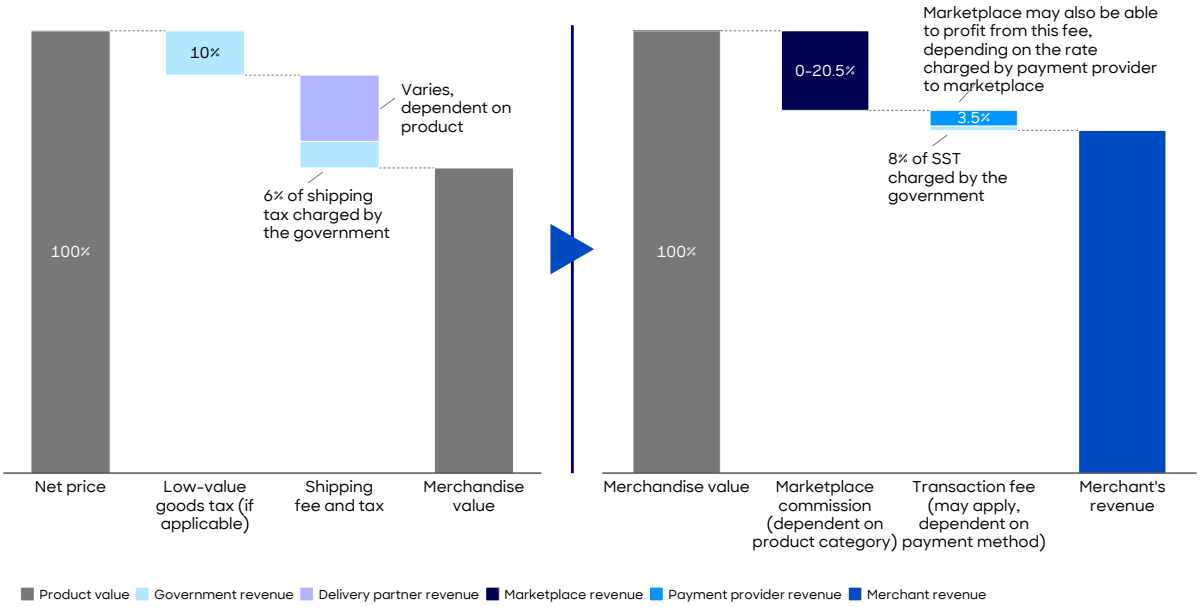
Once commission rates, transaction fees and other fees (e.g., service, campaign-related) are deducted, the remaining balance is transferred to the merchants.

[327] SST of 6% only applicable to food and beverage, telecommunication services, vehicle parking space services and logistics services

[328] BDO (2024). What's new: sales tax and service tax. https://www.bdo.my/getattachment/12980a89-17f5-4108-8be7-e30be596287e/Soalan-Lazim-FAQ-Cukai-Perkhidmatan

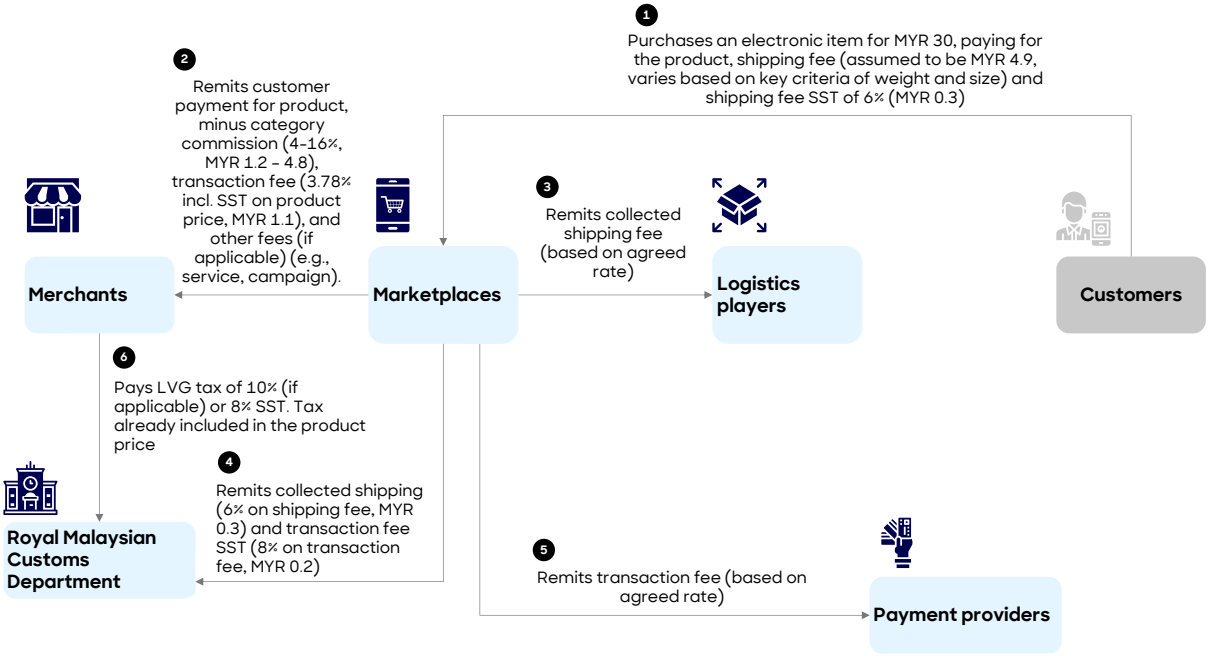
[329] May vary if methods such as credit card instalments or BNPL are selected.

Figure 67: E-commerce (marketplaces) sub-sector take rates [%]



Source: Interaction with industry players and MyCC's analysis

Figure 68: Approximate earnings by value chain players (example)



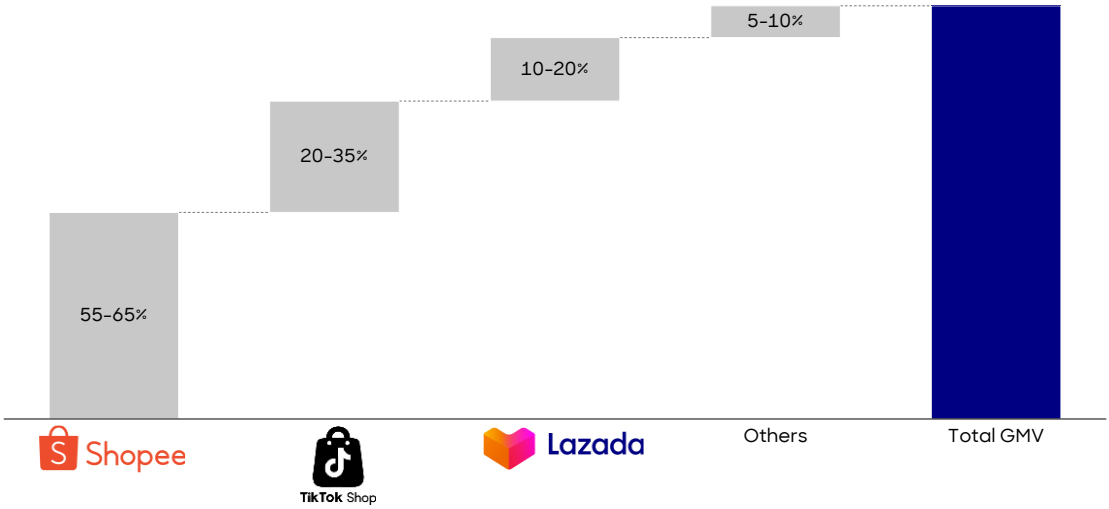
Source: Interaction with industry players and MyCC's analysis

4.2.6 Key players and level of competition

4.2.6.1 Key players along the supply *chain*

(a) Marketplaces

Figure 69: Estimated GMV of key marketplaces in Malaysia, 2023 [%]



Source: Interaction with industry players and MyCC's analysis

GMV[330, 331] in Malaysia's e-commerce landscape is largely dominated by key players, with Shopee holding a commanding share of approximately 55-65%. Following Shopee, TikTok Shop has contributed between 20-35% to the total GMV. TikTok Shop, which only entered the Malaysian market in 2022, has quickly gained traction. Its unique advantage lies in its social commerce model, where short-form videos, influencer partnerships, and interactive features help drive consumer engagement and purchasing behaviour.

Lazada, while holding a smaller share of around 10-20%, remains a key competitor. The remaining share of the GMV, approximately 5-10%, is split among various other players, including international platforms like Temu and Shein, along with local e-commerce companies such as PGMall. Some

[330] Momentum Works (2024). Ecommerce in Southeast Asia 2024, page 11. https://momentum.asia/wp-content/uploads/2024/07/Ecommerce-in-Southeast-Asia-2024_MW_July-2024-1.png
[331] Input from IDI

of these smaller players are gaining traction by catering to niche markets (e.g., Zalora).

(b) Logistics partners

Many logistics partners in Malaysia are dependent on large e-commerce marketplaces for volume, a reliance that puts them at risk, as these marketplaces may impose unfavorable terms. In terms of key players, Pos Malaysia and GDEX are prominent homegrown logistics players in Malaysia. In addition to these local players, international companies like DHL have been early entrants in the market. In recent years, the logistics landscape has evolved with the entry of new VC-backed players such as J&T Express, Flash Express, Ninja Van, and Lalamove.

A notable trend is the rise of integrated logistics services launched by key e-commerce marketplaces, exemplified by Shopee's SPX and Lazada's LEX. As many companies invest in technology and infrastructure to enhance delivery capabilities, they face the challenge of competing with these marketplaces, which are increasingly handling their own logistics operations. According to input from industry players, the majority of e-commerce parcel volume is managed by marketplaces' own integrated logistics services.

However, marketplaces still collaborate with third-party logistics (3PL) providers to complement its in-house capabilities. For independent players, the leaders are J&T, Ninjavan, and GDex. According to an input from a marketplace, application to become a part of the logistic partner, these logistic players should have advantage in service coverage, operational scale and cost competitiveness. Unlike a straightforward application process, the marketplace selection of 3PL partners is primarily a business development initiative, where they would reach out to logistic partners to fulfil logistic needs in underserved areas[332].

[332] Input from industry players

Table 15: Key e-commerce logistics players in Malaysia

Companies	Overview	2023 Revenue [MYR million]*
POS MALAYSIA	Established in the 1800s, today served as the national postal service provider. Possesses a wide domestic network and well-integrated into the Malaysian infrastructure	1,871
GDEX	Established in 1997 as an express delivery services provider	397
DHL	Entered Malaysia in 1973. Global player focusing on internatonal shipping and ourier delivery services	N/A
ninjavan	Established in 2014 and entered Malaysia in 2015. Focuses on last mile delivery services	
J&T EXPRESS	Founded in 2015 and entered Malaysia in 2018. Focuses on last mile delivery services, with competitive pricing as its USP	1,285
LALAMOVE	Established in 2013 and entered the Malaysian market in 2018. Offers on-demand delivery service	71
FLASH EXPRESS	Established in 2017 and entered the Malaysian market in 2021. Offers integrated E-Commerce logistics service.	N/A
SPX EXPRESS	Founded in 2020 as the integrated logoistics channel of Shopee. 100% of its revenue is derived from Shopee	N/A
LAZADA ELOGISTICS	Integrated logistics arm of Lazada. Apart from Lazada, it also carries non-Lazada platform volumes for other customers	N/A

*** Revenues from Capital IQ (for international players, only its Malaysian entity's revenue is highlighted)**

Source: Secondary research

4.2.6.2 Key e-commerce (marketplace) players

(a) Shopee

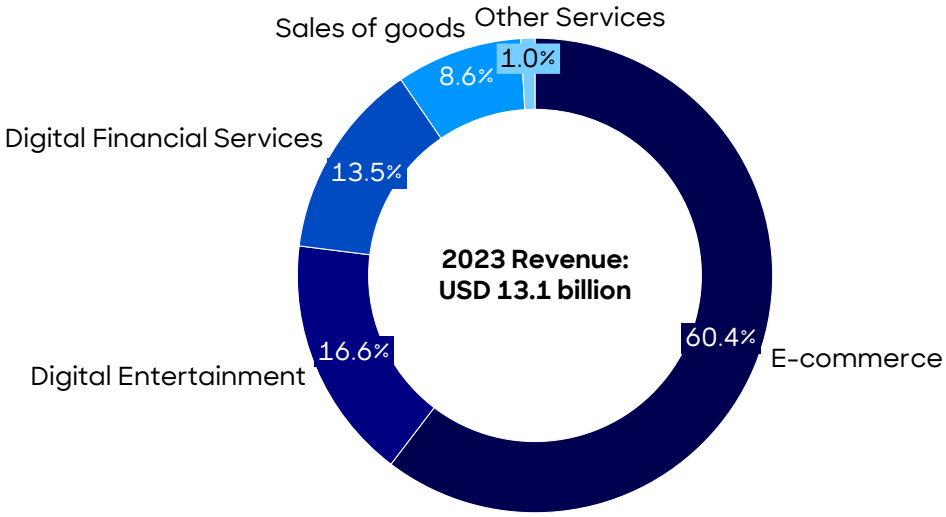
Launched in 2015 by Sea Limited, Shopee entered Malaysia as one of the seven countries in its initial rollout (e.g., Singapore, Indonesia, Thailand, etc.). The platform adopted a mobile-first approach, catering to Malaysia's high mobile penetration, while also offering a website version. At the time, the Malaysian e-commerce landscape was already competitive with players like Lazada. Shopee stood out by offering a user-friendly mobile app, fast delivery localised services, and flexible payment options such as COD.

Shopee in Malaysia focuses on a hyperlocalisation strategy, adapting its offerings and operations to meet the specific needs and preferences of local consumers [333]. This is achieved through the enrolment of local merchants and the employment of local staff. Shopee also leverages engaging marketing campaigns, influencer partnerships, and sales events like 11.11 and 12.12 to strengthen its presence. As of January 2025, the

[333] Input from IDI

Shopee app is ranked 9th in Google Play Store downloads and 24th in Apple App Store downloads[334].

Figure 70: SEA Limited revenue 2023 [USD][335]



Source: SEA Limited

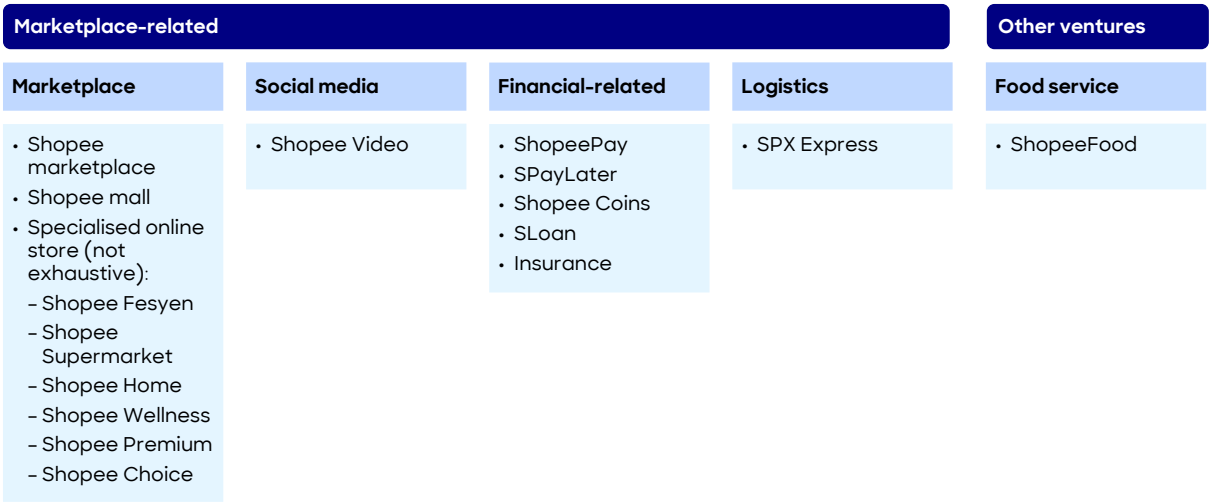
In 2023, SEA Group, the parent company of Shopee, generated approximately USD 9.0 billion in revenue from its e-commerce services and sales of goods. Around 70.3% of this revenue came from Southeast Asia, including markets such as Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

The platform benefits from Sea Group's support and its focus on integrating various services, such as ShopeePay for digital payments, ShopeeFood for food delivery, and SPX for logistics solutions.

[334] Similarweb (2025). Top Apps Ranking. https://www.similarweb.com/top-apps/apple/malaysia/

[335] SEA Limited (2023). Annual Report, page 98. https://cdn.sea.com/webmain/static/resource/seagroup/pressrelease/2023AR/FdMSmBixSlNFi2KM9oBH/2024-04-26%20-%20Form%2020-F.pdf

Figure 71: Services offered by Shopee to end customers



Source: Shopee

As of March 2024, it is estimated that 36.4% of its revenue in Malaysia is generated by electronics and accessories, followed by apparel and fashion at 20.3%, home and furniture at 9.8%, health and beauty at 8.6% and the remaining (consisting of mom and kids, groceries, hobby and toys, others) at 24.9%[336].

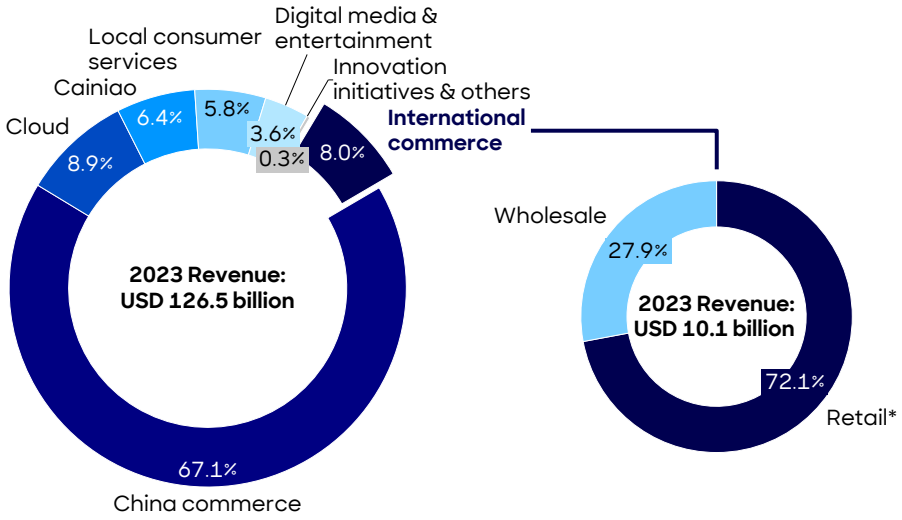
(b) Lazada

Founded in 2012, Lazada was initially backed by Rocket Internet, with investments from companies such as Tesco, Temasek, Summit Partners, JP Morgan Chase, and Kinnevik AB. In 2016, Lazada was acquired by Alibaba Group. Since then, it has grown to become a key e-commerce platform in Southeast Asia, serving over 560 million consumers.

The marketplace was initially launched as a platform selling products from its own warehouse. However, it later shifted its business strategy to allow third-party stores to offer products on the platform.

[336] TMO Group (2024). Malaysia eCommerce data pack. https://www.tmogroup.asia/downloads/malaysia-ecommerce-sales-estimates-march-2024/

Figure 72: Alibaba Group annual revenue 2023 [USD][337]



* Retail includes revenue generated from Lazada, Trendyol, and AliExpress

Source: Alibaba Group

Since becoming an Alibaba Group subsidiary, it has benefited from the group's technology infrastructure. The marketplace operates a comprehensive ecosystem, which includes its core e-commerce platform, Lazada Wallet for digital payments, and Lazada Logistics for end-to-end logistics solutions.

Figure 73: Services offered by Lazada to end customers

Marketplace-related				Other ventures
Marketplace	**Social media**	**Financial-related**	**Logistics**	**Travel & others**
• Lazada marketplace • LazMall • Specialised online store (not exhaustive): – LazBEAUTY – Lazada Groceries – LazHome	• LazLive	• Lazada Wallet • Lazada Installment Payment Plan	• Lazada Logistics	• LazTravel • TopUp, bill and eCoupon

Source: Lazada

[337] Alibaba Group (2023). Fiscal year 2023 annual report. https://static.alibabagroup.com/reports/fy2023/ar/ebook/en/index.html

As of March 2024, 38.3% of Lazada's revenue in Malaysia is generated through TV and home appliances products sales, followed by babies and toys at 37.6%, and ten other categories that make up 24.1% (consisting of health and beauty, electronic devices, electronic accessories, home and lifestyle, sports and lifestyle, women's and men's fashion and accessories, groceries and pets, kid's fashion and accessories and automotive and motorcycles[338].

(c) TikTok Shop

TikTok Shop, launched by TikTok in 2023, allows users to discover and purchase products directly through engaging video content. Unlike Shopee and Lazada, TikTok Shop does not have its own payment or delivery system. Instead, it focuses on enabling merchants to sell their products through in-feed videos, live shopping events, and a dedicated "Shop" tab on their TikTok profiles.

What sets TikTok Shop apart is its ability to leverage TikTok's existing user base and data. In early 2024, TikTok had 26.7 million users aged 18 and above in Malaysia, making it easier for TikTok Shop to reach potential customers[339]. The platform uses this data to show items tailored to each user's preferences, creating a more personalised shopping experience compared to platforms like Shopee and Lazada.

Additionally, features like shoppable ads, product showcases and collaborations with creators allows businesses to engage with their audiences and promote their products in a different manner.

(d) Temu

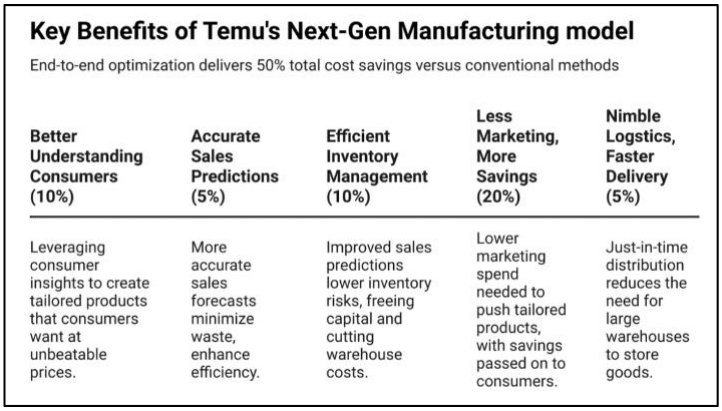
Temu, a US-based marketplace and an offshoot of the Chinese e-commerce platform Pinduoduo, entered the Malaysian market in

[338] TMO Group (2024). Malaysia eCommerce data pack. https://www.tmogroup.asia/downloads/malaysia-ecommerce-sales-estimates-march-2024/

[339] Digital Business Lab (2024). TikTok marketing in Malaysia: trends, user behavior, and industry insights https://digital-business-lab.com/2024/10/tiktok-marketing-in-malaysia-trends-user-behavior-and-industry-insights/#:~:text=Over%20this%20year%2C%20TikTok%20has,million)%20are%20now%20TikTok%20users.

September 2023. The platform focuses on affordability and value, regularly offering deals and promotions to appeal to budget-conscious shoppers. Temu's Next-Generation Manufacturing (NGM) model allows the marketplace to share consumer insights with manufacturers and merchants, enabling the delivery of high-quality products that are tailored to consumer needs.

Figure 74: Temu's Next-Gen Model[340]



Source: Pandaily

(e) PGMall

PG Mall, establish in 2017 by Public Gold Marketing Sdn Bhd, is an online marketplace headquartered in Penang, Malaysia, and registered in Singapore. The platform aims to promote Malaysian industries and handicrafts globally, offering a wide range of products including fashion, electronics, home appliances, and groceries. Merchants benefit from zero registration fees, low transaction fees, free marketing campaigns, and continuous educational support[341].

In its early years, PG Mall experienced significant growth. By 2019, it ranked as the fifth most visited online marketplace in Malaysia, with approximately ~876,100 monthly site visits. This achievement was attributed to its unique

[340] Pandaily (2023). Temu's next-gen manufacturing seeks to drive down prices for consumers by reducing waste. https://www.charlotteobserver.com/contributor-content/article273704075.html
[341] PG Mall (2025). About PG Mall. https://pgmall.my/about-us.html

'ConsuMerchant' model, which incentivised shoppers to promote products, thereby expanding its merchant and customer base[342].

In 2021, PGMall partnered with JD.com, a leading Chinese e-commerce platform, to launch the 'Sell to China' program. This initiative aimed to assist Malaysian SMEs in accessing the Chinese market, providing support in areas such as brand registration, marketing, and customer services[343].

However, recent observations indicate a decline in PGMall's activity (from 871 k in 2019 to 375 k in 2024 in monthly site visits). Potential factors could include increased competition from other e-commerce platforms (e.g., Shopee, Lazada, etc.), shifts in consumer preferences, or operational challenges.

Other platforms in niche markets include:

(f) Zalora

Launched in 2012, Zalora offers a range of fashion brands, including both international labels and local designers. In Malaysia, the platform focuses on user experience with features like easy navigation, personalised recommendations, and a mobile app. It also emphasises fast delivery and straightforward return policies. Zalora employs marketing strategies, such as collaborations with local influencers and seasonal sales events, to increase traffic and sales.

(g) Shein

Shein is a Chinese online fashion retailer that primarily targets young, fashion-forward consumers. The platform offers clothing and accessories, using social media and influencer marketing to reach its audience. Moreover, the platform operates with a direct-to-consumer model,

[342] Marketing Magazine (2019). PG Mall, no 5 most visited online marketplace in M'sia. https://marketingmagazine.com.my/pg-mall-no-5-most-visited-online-marketplace-in-msia/

[343] OH Bulan (2021). PGMall bantu peniaga tempatan kembangkan pasaran jualan ke China. https://ohbulan.com/pgmall-bantu-peniaga-tempatan-kembangkan-pasaran-jualan-ke-china/

updating its inventory with new designs based on fashion trends. In 2023, Shein's revenue in Malaysia was reported to be USD 39.1 million[344].

Table 16: Comparison of Malaysia's top e-commerce marketplace players[345]

		Gross merchandise value [USD][2]	Monthly app download[1][2]	Monthly website visits[2]	Incorporated in Malaysia	Key strategy	Degree of integration
B2C (focus of the market review)	Shopee	6.7 bn	629 k+	37 m+	No	Hyperlocalisation & integrated relevant services	High - own payment and logistics services available
	Lazada	2.5 bn	390 k+	7 m+	No	Emphasises user experience	High - own payment and logistics services available
	TikTok Shop	2.9 bn	48 k+	MY data n/a	No	Leverages social media platform for unique experience	Low - no own payment and logisitcs services
	Temu	MY data n/a	MY data n/a	MY data n/a	No	Focuses on low-cost goods	Low - no own payment and logisitcs services
	Zalora	MY data n/a	34 k+	664 k+	No	Niche marketplace focuses on fashion-related items	Moderate - Has own regional e-fulfilment centre
	Shein	MY data n/a	267 k+	176 k+	No	Fast-fashion with rapid inventory turnover	Low - no own payment and logisitcs services
	PGMALL	MY data n/a	8.1 k	375 k+	Yes	Promotes local Malaysian products globally	Low - no own payment and logisitcs services
C2C	Mudah	Data n/a	144 k+	5.7 m+	Yes	C2C platforms allows users to buy and sell locally	Low - no own payment and logisitcs services
	Carousell	MY data n/a	95 k+	3 m+	No	C2C platform emphasises on a streamlined user experience	Low - no own payment and logisitcs services

1) Only downloads from Google Play Store is included 2) Data is derived from research on stores' websites

Source: Secondary research

4.2.7 Key market-related issues

(a) **Competition from international players**: Malaysian merchants face significant competition from international sellers, particularly from China, who may benefit from lower operating costs. These potential advantages allow international players to offer more competitive prices, making it challenging for local merchants to compete effectively in the marketplace.

(b) **Difficulty in store registration for East Malaysian merchants**: For businesses in East Malaysia, particularly in Sabah and Sarawak, store registration may be challenging due to the absence of an SSM-issued business registration certificate. Instead, business registration certificates or trading licenses are issued by the LHDN or local authorities. These certificates are applied manually, and overall processing time is typically longer. Selected

[344] ECDB. Top eCommerce stores in the Malaysian fashion market. https://ecommercedb.com/ranking/stores/my/fashion
[345] MyCC analysis

merchants highlighted that marketplaces are often unaware of these distinctions and may reject their registration application if they lack an SSM certificate.

(c) **Short timeframes for implementing policy changes**: E-commerce marketplaces often introduce new policies with very short timeframes for implementation (~7-14 days), leaving merchants with limited time to adapt their operations. This adds pressure to merchants and can result in non-compliance or an inability to meet new requirements promptly.

(d) **Auto-enrolment into campaigns:** Numerous merchants reported on the auto-enrolment of stores into fee-based "sales booster" campaigns without clear consent [346], leading to unexpected income deductions. Furthermore, opt-out processes are said to be tedious with manual e-form submissions.

(e) **Non-compliance from delivery partners**: Merchants are required to ship certain products the next day under the next-day delivery policy. However, in some cases, delivery partners delay the scanning or receipt of parcels to avoid being held accountable for late shipments. As a result, merchants may be incorrectly flagged as non-compliant, when in reality the delay is due to the actions of the delivery partners, not the merchants themselves.

(f) **High logistics costs**: Merchants in East Malaysia face logistical challenges, particularly when competing with West Malaysian sellers who benefit from more established logistics networks and lower shipping costs. The lack of investment by large logistics companies in East Malaysia makes it difficult for local merchants to offer competitive pricing. For example, if a product offered by both East and West Malaysian merchants are the same, consumers are more likely to purchase from a West Malaysian merchant due to the lower shipping fees and overall cost.

[346] Shopee Malaysia Seller Community (2024). https://www.facebook.com/groups/614751765653533/posts/2001400520321977/

(g) **Challenging logistics related KPIs:** Marketplaces set challenging key performance index (KPIs) for their logistics and delivery partners. However, as the allocation of parcels is controlled by the marketplaces, partners may fail to meet targets depending on the parcels they are assigned.

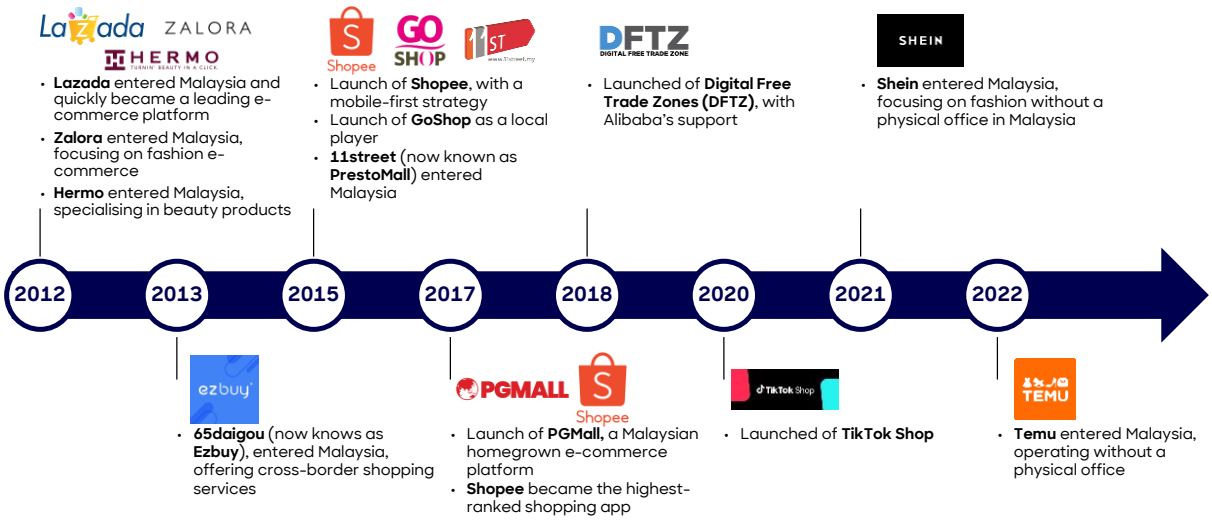
4.2.8 Competition assessment

4.2.8.1 Market share

The Malaysian e-commerce marketplace sector is highly concentrated, with Shopee, TikTok Shop, and Lazada collectively controlling 90-95% of the market share as of 2023. As per input from IDI and FGD participants, market report and estimation, Shopee holds the largest GMV share (55-65%), followed by TikTok Shop (20-35%) and Lazada (10-20%).

4.2.8.2 Market dynamics

Figure 75: Selected e-commerce (marketplace) milestone in Malaysia[347]



Source: Secondary research

E-commerce in Malaysia gained traction between 2008 and 2011, driven by the increased availability of internet services and the growing use of

[347] MyCC analysis

computers in households and offices. Early C2C platforms such as eBay and Lelong became popular, offering individuals a convenient way to sell products, with payment methods such as COD supplementing the experience. During these early years, local online boutiques such as Fashion Valet were also launched.

From 2012 to 2014, players such as Lazada, Zalora, Hermo, and 65daigou (now Ezbuy) entered the market. Lazada quickly rose to prominence and became a key e-commerce platform, quickly surpassing incumbents such as eBay and Lelong.

From 2015 to 2017, with the help of the Malaysian government's NESR, new players like GoShop, 11street (now PrestoMall), and Shopee entered the market. Shopee quickly emerged as Lazada's closest competitor due to its mobile-first strategy, capitalising on Malaysia's high mobile penetration rate. By 2017, Shopee had become the highest ranked shopping app on iOS and Google Play Store while Lazada maintained the highest online traffic on desktop.

From 2018 onwards the government continued supporting e-commerce through Digital Free Trade Zones (DFTZ) with support from Alibaba group and continued support for SMEs to market their products globally[348]. The COVID years from 2020 to 2022 further shaped the e-commerce landscape due to Malaysia's MCO. This allowed Shopee and Lazada to further cement themselves as the most popular platforms whilst adjacent players from social media space such as TikTok and Meta are also starting to integrate into this sector through the "social commerce" phenomenon.

Some of the marketplaces have adopted a hyper-localisation strategy to better adapt to the unique environment of the country. Hyper-localisation refers to the practice of adapting products, services, and marketing efforts to meet the specific needs and preferences of a local market. In Malaysia, this strategy has been implemented by various e-commerce platforms like Shopee and TikTok Shop. For instance, Shopee focused on connecting

[348] Techwire Asia (2018). The history of e-commerce in Malaysia. https://techwireasia.com/2018/07/the-history-of-e-commerce-in-malaysia/

rural sellers with urban buyers by improving logistics and delivery times[349]. Moreover, TikTok Shop has empowered local MSMEs by offering a platform for them to showcase product through engaging content (e.g., videos, live streaming, etc.)[350]. On the other hand, selected players such as Shein and Temu, still operating in Malaysia without maintaining a physical office there.

Malaysia's B2C sector can be divided into two segments - general and niche marketplaces. Shopee, TikTok Shop and Lazada are the most popular general marketplaces, offering a wide range of products from furniture to stationery. There are also a handful of smaller locally founded marketplaces such as PGMall and Youbeli. In contrast, niche marketplaces like Shein and Zalora focus exclusively on specific products, i.e., fashion-related items.

4.2.8.3 Degree of horizontal and vertical integration

There are minimal vertical and horizontal integration in the e-commerce (marketplace) sub-sector.

Key examples of vertical integration can be observed with Shopee and Lazada, both of which have established their own logistics arms—SPX and LEX, respectively. This strategic move allows them to reduce reliance on third-party providers, enhancing their control over the supply chain and improving delivery efficiency.

Horizontal integration in Malaysia's e-commerce (marketplace) sub-sector is also evident, albeit limited. An example is Alibaba's acquisition of Lazada in 2016, which marked a pivotal step for the company. This acquisition allowed Alibaba to strengthen its presence in Southeast Asia while enhancing Lazada's technological, financial, and operational capabilities. The move not only facilitated Alibaba's expansion but also positioned Lazada to better serve the growing market in the region.

[349] MooMoo (2024). Shopee bridges gap for rural sellers in Malaysia's e-commerce boom. https://www.moomoo.com/news/post/44302817/shopee-bridges-gap-for-rural-sellers-in-malaysia-s-e?level=1&data_ticket=1737024637230872

[350] The Star (2024). Redefining shopping: Three key highlights from TikTok Shop Summit. https://www.thestar.com.my/starpicks/2024/09/27/redefining-shopping-three-key-highlights-from-tiktok-shop-summit?

4.2.8.4 Level of entry barriers

Sub-sector has a medium level of entry barrier, where new platforms can enter but may face significant challenges in sustaining competitiveness. The top three players Shopee, TikTok Shop, and Lazada collectively control 90-95% of the market, which can create challenges for newcomers in attracting both merchants and consumers.. Established players benefit from strong network effects, where a larger merchant base attracts more buyers, and vice versa, making it hard for new entrants to scale both supply and demand simultaneously.

Additionally, incumbents have integrated logistics networks such as Shopee Express (SPX) and Lazada Express (LEX), allowing them to offer faster, more cost-effective delivery, whereas new entrants must rely on third-party logistics providers, leading to higher costs and longer delivery times.

Platforms like Temu and Shein, which have recently entered the Malaysian market, have attempted to overcome these barriers through heavy advertising and aggressive pricing strategies, but their lack of localised fulfilment networks and reliance on international shipping may have resulted in longer delivery times and potential customs delays, limiting their ability to compete effectively.

Despite existing market barriers, entry into the e-commerce sector appears attainable. This was evident when Shopee entered the market in 2015 with its mobile-first approach, effectively challenging Lazada's dominance. In 2022, another shift occurred with the rise of social commerce, led by TikTok Shop. These developments indicate that even though the top players have a significant share, the market is not entirely locked in, and new companies can still enter and compete.

4.2.9 Key anti-competitive issues

4.2.9.1 Opaque product ranking processes

Description: Ranking algorithms typically consider factors such as price, sales performance, customer reviews, advertising spend, keyword

relevance, checkout rates, fulfilment performance, and other platform-specific metrics. However, since most of these factors or data points are proprietary to the platforms, they are often undisclosed to parties outside the company.

For example, some merchants have reported that TikTok Shop's ranking system is largely effort-driven, with increased live streaming leading to higher visibility[351]. Without clear guidelines or transparency, merchants struggle to optimise their listings effectively to improve visibility. More importantly, this lack of transparency makes it difficult for merchants to predict performance, which in turn affects their strategies for inventory, marketing, and pricing.

For some merchants, they may also feel compelled to invest in paid ads to maintain visibility. While financially stronger merchants can manage this, smaller ones may struggle with inefficient marketing spend and may lack the knowledge or budget for effective keyword-based marketing.

Additionally, merchants with some understanding of the algorithm may resort to manipulative tactics, such as posting fake reviews or adjusting prices to improve rankings.

Concerns have also been raised about ranking manipulation by marketplaces, particularly among some Malaysian merchants who report receiving special deals from RMs – such as price reductions in exchange for higher rankings. This suggests that, despite the presence of algorithms, they can be influenced to favor financially stronger merchants, such as those able to lower their prices.

Implication on competition:

- **Uneven playing field** where merchants with more financial resources or better relationships may gain unfair advantages, creating an uneven competitive landscape.

- **Reduced trust among merchants** as even established merchants may lose faith in the platform if they feel their efforts to improve

[351] Input from IDI

product quality and customer service are not adequately rewarded, potentially stifling innovation and discouraging investment in better products or services.

- **Erosion of consumer trust** could occur if ranking manipulation leads to the display of products that are not the most relevant to customers, resulting in a suboptimal shopping experience, higher prices, lower product quality, or limited product diversity.

Relevant case(s): In 2024, Chinese sellers were found to dominate Amazon's 3rd party marketplace, driven by its strong e-commerce background and government support. These sellers then employed various manipulative tactics such as fake reviews, counterfeit products, fake IP claims, and listing sabotages to gain unfair advantages. These actions were reportedly accommodated by Amazon's opaque search ranking algorithms, which further promoted deceitful sellers or products, undermining fair competition and compromising the integrity of Amazon's marketplace[352].

In November 2017, China revised its Anti-Unfair Competition Law to better regulate the e-commerce industry, with the aim to penalise online merchants who attempt to manipulate platforms such as Taobao's ranking algorithms by falsifying sales figures or product reviews. Although Taobao introduced more nuanced review systems and loosened the direct linkages between ratings and search ranking, merchants still felt pressured to maintain high ratings through any means, reflecting ongoing challenges in fostering fair competition[353].

In Europe, the Digital Services Act (DSA) aims to address transparency and user autonomy in "recommender systems" by requiring online platforms to disclose how algorithms influence content ranking and purchasing decisions. Article 27 of the DSA enables recipients to understand how certain information is prioritised for them and how their online behaviour influences the recommendation of certain products, services, or content.

[352] Ecomcrew (2024). How Chinese sellers are manipulating Amazon in 2025. https://www.ecomcrew.com/chinese-sellers-manipulating-amazon/
[353] Sixth Tone (2017). Why the law alone won't stop China's crooked online sellers. https://www.sixthtone.com/news/1001170

The DSA further ensures consumers can modify recommendation parameters. This regulatory shift empowers users to understand and control their digital experiences, reducing concerns over opaque ranking practices and unfair influence[354].

Observations in Malaysia: According to selected marketplace merchants[355], there have been allegations of deals where merchants are requested to lower their prices in exchange for improved product rankings. This practice is typically offered to high-sales stores, where it is claimed that lower prices can attract more customers, with the added benefit of boosted rankings. As a result, the marketplaces benefit from higher sales and increased commission income through these transactions.

4.2.9.2 Preferential treatment to larger merchants

Description: E-commerce marketplaces may exhibit preferential treatment toward larger players, creating a dynamic where these merchants receive advantages over smaller competitors. This practice can manifest in various forms, such as:

- **Lower commission rates**: Larger sellers, particularly those with a significant sales volume, as well as international sellers, may be offered preferential commission rates.

- **Enhanced visibility in search results** (see previous issue for more information).

- **Dedicated account management service**: Dedicated RMs may provide selected merchants with exclusive resources, such as advanced marketing tools or priority customer support.

- **Longer lead times for policy changes**: Merchants with significant market sales or parties representing large groups of merchants, such

[354] Pinest Masons (2024). Recommender systems: how the Digital Services Act changes things for platforms. https://www.pinsentmasons.com/out-law/analysis/how-the-digital-services-act-changes-things-for-platforms
[355] IDI & focus groups with stakeholders

as e-commerce enabler companies, may have considerable leverage to influence platform policies. These influential players can negotiate for favourable terms, such as extended lead times for new policy implementations. (request additional time to comply with changes like the implementation of next-day delivery requirements).

Additionally, open preferential treatment is evident in marketplaces. The "Mall" options offered by platforms such as Shopee Mall, LazMall, and TikTok Shop Mall provide merchants with greater visibility in search results and recommendations within the app. In exchange, these platforms typically impose higher commission rates – average 4.5% more than regular listings[356, 357, 358].

Implication on competition:

- **Distorted competitive landscape** where larger players receive preferential treatment, making it more difficult for smaller merchants to compete on a level playing field.

- **Reduced visibility for smaller sellers** occurs as larger merchants are given enhanced search result rankings.

- **Unequal access to resources**, where larger sellers receive more and prioritised account management support.

- **Inequality in compliance timelines** where larger merchants or e-commerce enabler companies leverage their market influence to negotiate extended lead times for policy changes.

Relevant case(s): In 2020, India's CCI investigated an allegation against Amazon and Walmart-backed Flipkart which included the preferential treatment of select merchants, particularly those with established partnerships by having higher search ranking, offering deep discounting,

[356] Lazada (2025). LazMall commission rate adjustment. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?categoryId=1000027819&language=en_US&m_station=BuyerHelp&questionId=1000148575

[357] Shopee (2025). Shopee Mall Commission Fee. https://seller.shopee.com.my/edu/article/1773

[358] TikTok Shop (2025). Commission Fee. https://seller-my.tiktok.com/university/essay?knowledge_id=6907739532281602&default_language=en&identity=1

and direct selling of inventory, which both harms the competitive landscape and circumvents India's foreign direct investment policy[359].

Further investigation by the Enforcement Directorate (ED) under Foreign Exchange Management Act (FEMA) revealed that most of the preferred merchants on the platform were directly linked with the e-commerce giants who had strong control over these merchants. For example, some of these preferred merchants were former employees or had family ties to those running operations in Amazon and Flipkart.[360]

Observations in Malaysia: Based on in-depth interviews conducted with local Malaysian merchants, it was alleged that marketplaces practice different commission rates for the same products. For instance, international merchants reportedly enjoy lower commission rates, giving them a greater competitive advantage. With lower fees, international merchants can price their products more competitively, attract more customers, and maintain higher profit margins.

Additionally, large marketplaces are alleged to prioritise large brands or merchants who invest in paid marketing solutions, offering them more dedicated and prioritised support in terms of account management.

4.2.9.3 Exclusive dealing

Description: Practice in where a marketplace may require a merchant to sell its products or services only through their platform, thereby preventing them from engaging with competitors.

This can involve agreements where the seller is restricted from listing products on other platforms or is incentivised to focus solely on one marketplace. Exclusive dealing is also observed to include penalties for

[359] Legal Business Online (2024). How will the CCI's investigations into Amazon and Flipkart change e-commerce India. https://www.legalbusinessonline.com/features/explainer-how-will-cci%E2%80%99s-investigations-amazon-and-flipkart-change-e-commerce-india

[360] Outlook Business (2024). ED investigation reveals direct link between Amazon, Flipkart & their sellers - https://www.outlookbusiness.com/start-up/news/ed-investigation-reveals-direct-link-between-amazon-flipkart-their-sellers

violating these agreements, such as loss of promotional support or access to resources.

While it can benefit the marketplace by ensuring a stable supply of products, it can also restrict competition by limiting merchants' ability to freely choose where to sell their products.

Implication on competition:

- **Illegal exclusive agreements** can limit competition and consumer choice by restricting which marketplace sellers can use, ultimately reducing the range of products available in the market.

Relevant case(s): In 2020 [361], JD.com filed a lawsuit against Alibaba, accusing the company of forcing retailers and third parties to grant exclusive rights to sell their products on Alibaba's platform. Alibaba reportedly enforced this exclusivity through a combination of incentives and penalties, including diminishing marketing resources and potential bans for merchants who violated these agreements. In 2024, the Beijing High People's Court ruled in favor of JD.com, ordering Alibaba to pay 1 billion yuan (US$141 million) in damages[362].

Observations in Malaysia: During the Covid-19 pandemic, Shopee was allegedly in contact with sellers, encouraging them to delist from Lazada and other platforms. According to FOMCA and CAP, a WhatsApp message from Shopee offered MYR 3,000 in vouchers to selected merchants in exchange for closing their stores on Lazada during its 9/9 sale.

If the offer was accepted but later breached by the merchants, the vouchers would be forfeited, and merchants would face penalties such as

[361] Cable News Network (2020). China launches antitrust investigation into Alibaba. https://edition.cnn.com/2020/12/24/tech/alibaba-china-antitrust-investigation/index.html

[362] SCMP (2023). Chinese e-commerce giant JD.com wins antitrust lawsuit against Alibaba, which was ordered by a Beijing court to pay US$141 million in damages. https://www.scmp.com/tech/big-tech/article/3246715/chinese-e-commerce-giant-jdcom-wins-antitrust-lawsuit-against-alibaba-which-was-ordered-beijing

being excluded from free shipping programs and having their products temporarily removed from marketing campaigns[363].

Furthermore, based on input gathered through engagements with various local merchants, some alleged that marketplaces were observed diverting traffic away from stores found to be opening on competing platforms.

4.2.9.4 Self-preference by using data to gain competitive advantage

Description: As suggested by some third-party merchants, dominant e-commerce platforms may have the ability to leverage their extensive demographic, sociographic, and psychographic data. This could potentially enable them to favour their own partnered shops or brands or promote their private label products over those of other third-party merchants on their marketplaces. Additionally, they have the capability to access competitors' store data. Some of the marketplace-owned stores include:

- **Shopee:** Shopee Choice Local, Shopee Choice Global, Shopee Supermarket,
- **Lazada:** Lazada Groceries

For third-party merchants, however, they typically only receive standard performance metrics, leading to an imbalance in visibility and opportunity compared to the platform-owned stores.

Based on responses from Lazada, they highlighted that a level playing field existed. It noted that it only leverages data not for revenue generation but solely to identify trends, create customised advertisements, and guide merchants on popular products. Separately, Shopee noted that data collected are not disclosed to external parties, except to facilitate government-related investigations. Internally, data is used for managing product advertising, campaigns, and enforcing listing standards for sellers, including guidelines for product photography and descriptions[364].

[363] FOMCA (2021). Consumer groups call on MyCC to probe e-commerce giant. https://www.fomca.org.my/v1/index.php/fomca-di-pentas-media/fomca-di-pentas-media-2021-21/1350-consumer-groups-call-on-mycc-to-probe-e-commerce-giant
[364] Written input from Lazada and Shopee

Implication on competition:

- **Inequality in the playing field** as marketplace-operated stores may have advantage over third-parties, due to access to collected data

Relevant case(s): In 2020, the European Commission sent statement of objections to Amazon for the use of non-public independent seller data on its marketplace to benefit its own retail business. It claimed that Amazon was engaging in preferential treatment of its own retail offers and those of sellers using its logistics services, particularly through the selection of "buy box" and access to Prime users. These actions raised significant competition concerns, as they highlighted Amazon's ability to leverage seller data and platform to distort competition[365].

In 2021, Amazon was accused of aggressively promoting its private label brands, such as AmazonBasics and Happy Belly[366]. These products often receive preferential placement on the site e.g., being featured at the top of search results or in prominent positions on product detail pages thereby diminishing competitive opportunities for independent merchants who struggle to achieve similar visibility.

Separately in 2022, Poland's anti-monopoly office (Polish Competition Authority (UOKiK)) issued a total of EUR 44.8 million on Allegro, an e-commerce platform, over concerns related to self-preferencing via exploiting its own data[367]. According to the investigation, Allegro began favouring its own retail operations in May 2015, utilising information not available to other traders, such as search algorithms and buyer behaviour data, to enhance the visibility of its own offers in search results. This practice creates an uneven playing field for competitors.

[365] European Commission (2020). Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2077

[366] Reuters (2021). Amazon copied products and rigged search results to promote its own brands, documents show. https://www.reuters.com/legal/litigation/amazon-copied-products-rigged-search-results-promote-its-own-brands-documents-2021-10-13/

[367] Reuters (2022). Allegro.eu's Polish unit fined $48 mln for violation of competition rules. https://www.reuters.com/business/retail-consumer/allegroeus-polish-unit-fined-violation-competition-rules-2022-12-29/

On data protection, in 2020, Lazada's grocery delivery service, RedMart, was fined SGD 72,000 by the Personal Data Protection Commission for failing to implement reasonable security measures to protect user data. Information from 1.1 million user accounts was found for sale on an online forum, comprising names, passwords, phone numbers and partial credit card numbers[368]. Similarly, in May 2023, Taiwan's Ministry of Digital Affairs fined Shopee USD 6,500 for failing to protect its customers' personal data. This fine followed an investigation that highlighted gaps in Shopee's data privacy practices, along with instructions for corrective actions that were not addressed[369].

Observations in Malaysia: Engagement with selected merchants indicated that, while some practices are not openly disclosed, price adjustments by marketplaces are noticeable. For example, when a large hypermarket changes its prices on its marketplace store, the marketplace's own stores are reportedly seen adjusting their prices accordingly. Merchants suggest that marketplaces may leverage their position to access competitors' store data, such as product sales volume, conversion rates, customer demographics, and behavior, to gain a competitive advantage.

4.2.9.5 Increasing operational demand for delivery & campaigns, and pressure on merchants

Description: Platforms often impose stringent delivery requirements on merchants, such as faster shipping times, mandatory participation in same-day or next-day delivery services, and adherence to strict packaging and handling standards. Their measures are typically implemented to enhance customer satisfaction and meet rising consumer expectations for quick and reliable delivery. However, the timeframes for implementing these changes are often short, with merchants given as little as one month or less to comply. Some of the rising cost that operations to adjust include but not limited to:

[368] The Straits Times (2020). Personal data of 1.1 million RedMart user accounts stolen in Lazada breach and put up for sale. https://www.straitstimes.com/tech/personal-information-of-11-million-redmart-users-stolen-in-lazada-data-breach

[369] Taipei Times (2023). Ministry of Digital Affairs fines Eslite bookstore, Shopee. https://www.taipeitimes.com/News/taiwan/archives/2023/06/04/2003800948

- **Manpower recruitment:** To meet the demands of faster shipping and same-day or next-day delivery services, merchants may need to hire additional staff. This includes hiring warehouse workers and/or customer service representatives to handle the increased volume of orders.

- **Manpower training:** New hires need to be trained to efficiently handle the increased operational demands, such as managing high-volume order fulfilment and ensuring timely deliveries.

- **Packaging fee:** Marketplaces allow customers to cancel orders even after merchants have packed and prepared the parcels for delivery. As a result, merchants incur additional packaging costs, as they have already expended the cost on materials to prepare the products for shipment, even though the orders are later canceled.

Figure 76: Marketplace rate change for the electronics category, 2023-2024 [%][370, 371, 372]

Marketplace	Rate		Total rate increase
	2023	2024[373]	
Shopee	2.5% - 4.0% (September 2023)	7.0 % - 11.0% (August 2024)	4.5% - 7.0%
Lazada	2.5% - 4.0% (September 2023)	7.0 % - 11.0% (August 2024)	4.5% - 7.0%

[370] Lazada (2025). Marketplace Commission Rate. https://sellercenter.lazada.com.my/helpcenter/s/faq/knowledge?&language=en-US&m_station=BuyerHelp&questionId=1000148698&hybrid=1&categoryId=1000027814

[371] Lowyat (2022). Shopee To increase commission fee for local sellers starting January 2023. https://www.lowyat.net/2022/290981/shopee-increase-commission-fee-january-2023/#:~:text=Starting%20from%2010%20January%202023,not%20part%20of%20Shopee%20Mall.

[372] Input from IDIs

[373]For Shopee, rate is based on merchants who are not on Cashback Programme; For Lazada, rate is based on merchants who are not on LazCoins Discount Programme

Marketplace	Rate		Total rate increase
	2023	2024[373]	
TikTok Shop	1.5% - 3.0% (September 2023)	4.86% - 9.18% (September 2024)	3.39% - 6.18%

Source: Lazada and Shopee

In addition, marketplaces increase commission and transaction rates independently. These increases, typically implemented on short notice (two weeks or less), can significantly impact a merchant's cost structure, potentially reducing their sales and revenue. For example, observations of the electronics category across various marketplaces show that, in a span of slightly more than one year, commissions have increased by a total of 3.4% to 7%, thereby increasing the financial burden on merchants.

Separately, while commission fees are within the discretion of the marketplaces, merchants have alleged that transaction-related fees should reflect the rates of third-party payment systems rather than a uniform rate being applied across the board.

It is also alleged that marketplaces may offer preferential treatment (on operational practices and rates) to merchants with substantial sales or strong brand reputations. These larger players are often given more leeway or better terms, which can further disadvantage smaller merchants (see previous issue for more information).

Lastly, the implementation of new practices by one marketplace is often followed by competitors, which has led to concerns about potential indirect cartel-like behavior.

Implication on competition:

- **Uneven playing field** due to increased operational burden (more financial and resources expense) on smaller merchants arises from stringent requirements/practices. This puts them at a disadvantage compared to larger merchants who can easily meet these demands.

- **Reduced competition and innovation** as platforms adopt similar policies across the sub-sector. This creates a uniform market environment that stifles creativity and new business models, limiting competition.

- **Entry barriers for new merchants** are raised as a result of high compliance costs, fee increases, and preferential treatment for larger players, discouraging new entrants from joining the market.

Relevant case(s): In February 2018, Amazon increased its Fulfillment by Amazon service (FBA) fees for almost all items, affecting merchants' costs due to Amazon's increased demand on operational expenses. The changes include a uniform year-round rate for fulfilment fees, replacing the previous seasonal rates. Additionally, dimensional weight calculation for shipping costs has been adjusted, impacting large standard-size and oversized items. Due to this, merchants were forced to strategise differently to manage these increased costs, which include potentially passing them on to customers. Despite this move, FBA remained advantageous due to merchant's reliance on Amazon's extensive network effects[374]. Since then, it has also introduced many other additional fees since then, including inventory disposal fees, fuel surcharge, peak season outbound fees, storage overage, inbound placement fees and high return product fees, of which merchants have to comply to continue their operations on the platform[375].

Observations in Malaysia: Various merchants interviewed in this study highlighted that while rate increases and operational changes are expected, they believe extended timelines should be provided to adequately prepare for these changes and manage the additional costs. For example, merchants may need more time to recruit and train additional staff to handle next-day delivery requirements. The current timeframe given for these adjustments is typically around 7 to 14 days, which many merchants find insufficient.

[374] Adlucent (2018). Amazon announces 2018 FBA fee changes. https://www.adlucent.com/resources/blog/2018-amazon-fba-fee-changes/

[375] Smartscout (2024). The History of Amazon FBA Fees. https://www.smartscout.com/amazon-fba-fee-history

On a broader scale, marketplaces are observed to implement similar policies in succession. It appears that when one marketplace initiates a rate change, others typically follow suit. Based on the most recent changes of commission rate by key players, the interval between rate changes is approximately 35 days.

4.2.9.6 Masking of delivery options

Description: This practice involves marketplaces selectively displays or prioritises certain deliver options over others, effectively restricting consumers from selecting their preferred delivery methods or couriers.

Currently, the three major marketplaces in Malaysia – Shopee, Lazada, and TikTok Shop– all practice delivery masking. While Lazada and TikTok Shop have employed this strategy since their market entry, Shopee initially allowed consumers to choose their own delivery partners until 2021, when it switched to a delivery algorithm to manage parcel distribution. This shift was said to be done to improve delivery efficiency and reduce delays, especially during peak periods.

Different perspectives on this practice highlight the complexities of delivery masking:

- **Marketplaces**: Positioned delivery masking as a way to enhance the consumer experience by streamlining logistics and improving delivery efficiency through data-driven performance monitoring.

- **Merchants**: Selected merchants prefer the option to choose their preferred logistics provider, often based on factors such as proximity to their shop. This allows for easier parcel management, and in case of delays, they can visit the provider's location to drop off parcels. Additionally, some merchants are less concerned with the choice of provider, as long as the provider arrives within the specified timeframe to pick up the parcels and ensures timely delivery to customers.

- **Delivery Partners**: Despite understanding the objective of delivery masking by marketplaces, some providers still prefer that the

marketplace's user interface include options for consumers to choose their preferred logistics partner. There are also selcted providers who view this practice as potential preferential treatment to larger or selected players, which could undermine fair competition.

- **Consumers**: Generally indifferent as long as the ordered product arrives within the expected timeframe (or sooner) and in good condition. As long as these expectations are met, consumers are typically less concerned with the specific logistics arrangements or the option to choose their logistics provider.

Additionally, the growing presence of integrated logistics services, such as SPX (Shopee's logistics arm) and LEX (Lazada's logistics arm), has raised concerns of potential self-preferencing. Even though algorithms are in place that consider coverage, price, and service quality, these logistics arms are perceived as giving preferential treatment to their own platforms' orders, creating an imbalance in competition. In response, Shopee noted that its logistics arm operates as a separate entity with a different management team, while LEX not only manages Lazada deliveries but also handles deliveries for other clients outside of Lazada[376].

Implication on competition:

- **Reduced consumer choice** among delivery providers, as consumers are unable to freely select their preferred couriers or delivery methods.

- **Exclusion of smaller or independent logistics companies** from key e-commerce platforms may occur due to their overall lower capabilities, as algorithms tend to favour stronger performing players.

- **Unfair advantage to in-house logistics** could harm competition, as platforms may prioritise their own logistics services over third-party providers.

[376] Written input from Shopee and Lazada

Relevant case(s): In Indonesia, the Indonesia Competition Commission (ICC) raised concerns over Shopee and its delivery arm, SPX, accusing them of abusing market dominance and violating competition laws[377]. The central issue involves Shopee's algorithms, which allegedly favour SPX over other courier services, thereby creating an unfair competitive advantage. The automatic activation of SPX and J&T Express for merchants, while excluding other delivery companies from pre-selection, exacerbates these concerns and raises questions about market fairness.

In response to these allegations, Shopee admitted to having violated anti-competition rules and signed an integrity pact with the ICC, committing to implement behavioural changes to address its alleged monopolistic practices. As part of this commitment, Shopee proposed modifications to its user interface to enhance services and ensure that its practices align with regulatory requirements. These changes are intended to create a more level playing field for all logistics providers and improve services for users.

Separately, in 2021, Thailand's Office of the Trade Competition Commission (OTCC) raised concerns about Shopee's practice of not allowing customers to choose their preferred delivery services. The OTCC argued that this could violate the Trade Competition Act. The commission also noted that this practice could negatively impact vendors' sales, as customers would no longer have the option to select their preferred couriers and might face higher delivery costs. Additionally, industry sources highlighted that by restricting delivery choices, Shopee could increase its revenue from couriers by selecting cheaper or smaller service providers, thus boosting its margins[378].

Furthermore, various Thai-merchants also lodged complaints with the OTCC, claiming that marketplaces forced them to use their in-house

[377] The Straits Times (2024). Shopee to make service changes in Indonesia after antitrust violation. https://www.straitstimes.com/business/indonesia-says-shopee-admits-to-violating-monopoly-rule-for-its-courier-service

[378] Bangkok Post (2021). Trade watchdog eyes Shopee courier selection. https://www.bangkokpost.com/business/general/2059399/trade-watchdog-eyes-shopee-courier-selection

logistics services and subsequently raised logistics fees, further increasing operational costs for vendors[379].

Observations in Malaysia: Key marketplaces in Malaysia, including Shopee, Lazada, and TikTok Shop, all engage in delivery masking practices. In response to this issue, Lazada introduced the MODA program as a potential remedy, allowing merchants to offer their customers alternative logistics options alongside Lazada's default delivery service. As of December 2024, 12 merchants have signed up for the program.

[379] Bangkok Post (2022). Firms file complaint over shady logistics. https://www.bangkokpost.com/business/general/2345848/firms-file-complaint-over-shady-logistics

4.3 Digital Advertising Services

4.3.1 Key findings

Figure 77: Snapshot of the digital advertising market in Malaysia

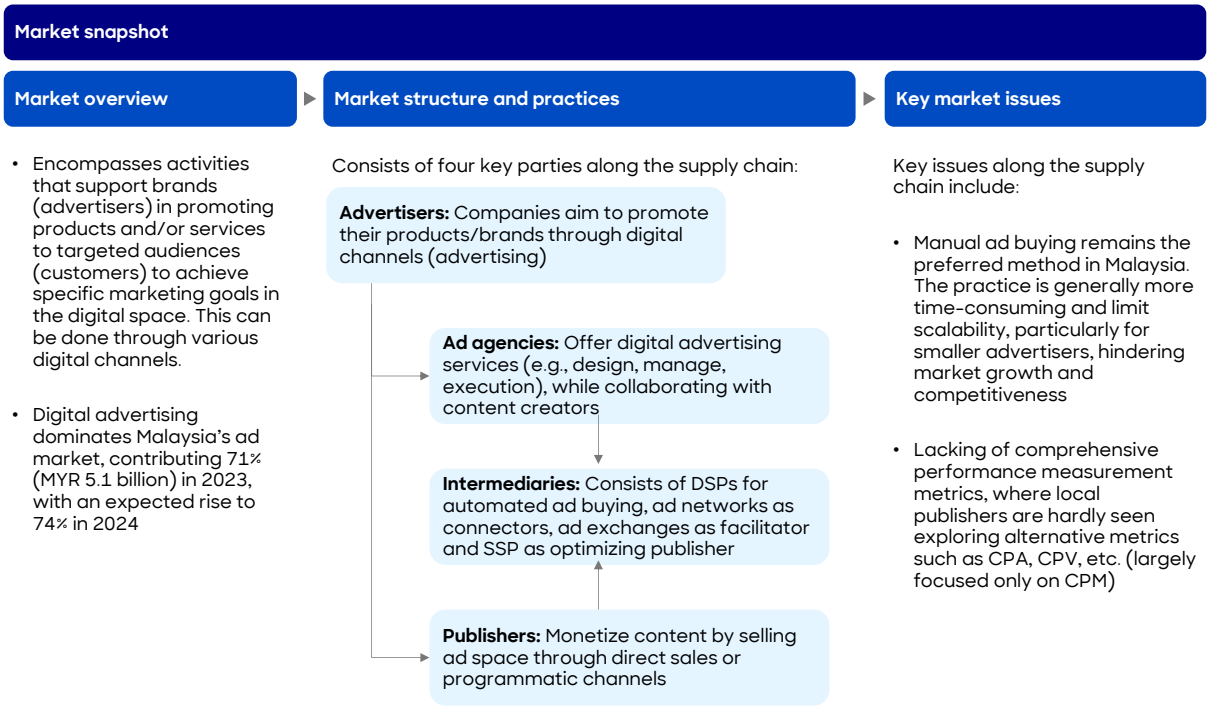
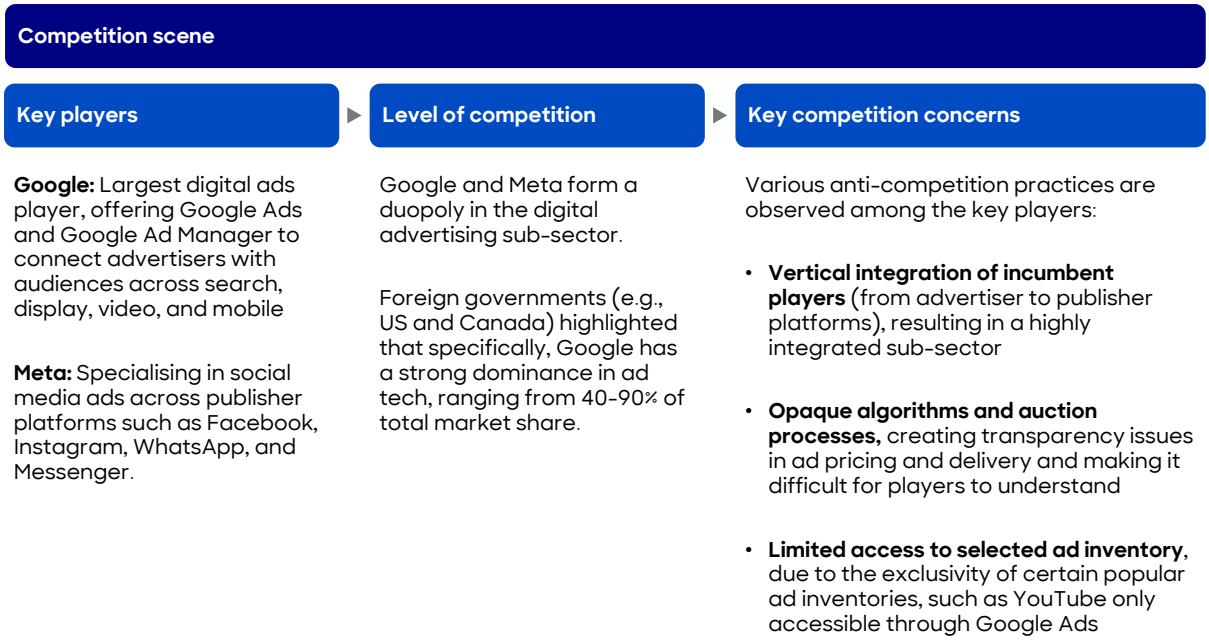


Figure 78: Snapshot of the digital advertising's competitive scene in Malaysia (aligned with global)



4.3.2 Market definition

This sub-sector encompasses activities that support brands (advertisers) in promoting products and/or services to targeted audiences (customers) to achieve specific marketing goals in the digital space. This can be done through various digital channels (publishers), e.g., search engines, social media platforms, websites and video platforms.

The primary facilitators of the interaction between digital advertisers and digital publishers are intermediaries, including ad exchanges, ad networks, supply-side platforms (SSP), and demand-side platforms (DSP). These platforms are defined by several key characteristics: Firstly, they operate through digital systems, allowing advertisers and publishers to carry out transactions for their ad campaigns and ad inventories respectively, both parties benefit from having data driven targeting capabilities to inform their buying and selling decisions.

Secondly, online advertising benefits from data-driven targeting capabilities, where the use of big data and algorithms allow advertisers to refine their audience targeting and continuously optimise their campaign performance. This is done via data management platforms (DMP) to leverage vast amounts of data for analysis, informing strategies and optimisations made on SSPs and DSPs. Digital advertising can also be carried out via direct interaction between brands and digital publishers.

The activities of the digital advertising services sub-sector impact the following MSIC industries:

Table 17: MSIC codes relevant to the digital advertising services sub-sector

MSIC Code	MSIC Industry Description
58190	Publishing of catalogues, photos, engraving and postcards, greeting cards, forms, posters, reproduction of works of art, advertising material and other printed matter, not elsewhere classified
62099	Other information technology service activities, not elsewhere classified

MSIC Code	MSIC Industry Description
63112	Data processing activities
63120	Web portals
73100	Advertising

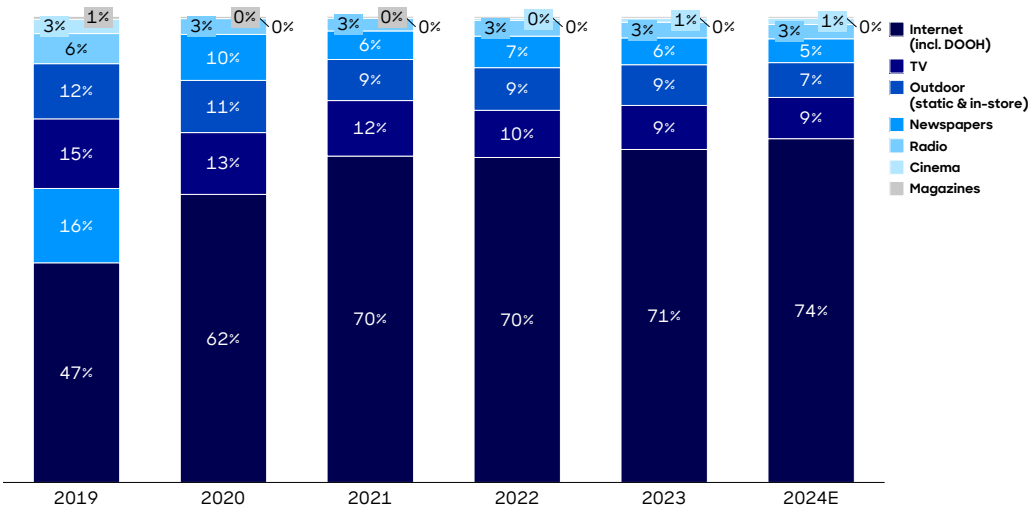
Source: MSIC 2008, DOSM

4.3.3 Market structure and supply chain

4.3.3.1 Market structure

The advertising industry in Malaysia has experienced robust growth in recent years. From 2019 to 2023, total advertising expenditure has increased from MYR 5.2 billion to 7.2 billion (8.6% in CAGR).

Figure 79: Overall advertising market in Malaysia by media type, 2019 - 2024E [%]



Source: Malaysian Advertisers Association

Digital advertising is the main driver of overall market expenditure. Approximately 71% of the total advertising market (MYR 5.1 billion) comes from the internet (inclusive of Digital-Out-Of-Home - DOOH). This trend is

expected to continue growing in 2024, reaching MYR 5.5 billion and accounting for 74% of total expenditure[380].

Key types of digital advertising contributing to this market include:

Figure 80: Description of reported ad formats

Ad formats	Description	Sub-categories	Example publishers
Social	Paid ads on social platforms (includes display, video, boosted etc.)	• Social media platforms • Paying for posting on other people / brands / media social pages but not including organic postings or social media content development or management fees	
Video	Ads that are showed before (pre-roll), during (mid-roll) or after (post-roll); can be in-stream or out-stream	• Pre / mid / post-roll in-stream video ad • Out-stream video ads (in-read, in-banner)	
Display	Also known as banner ads, appears in a typically define by width and height (WxH) format and either static, animated or rich media format	• Standard / rich media banners Dynamic banners • Mobile interstitial • Site takeovers	
Native	Ads that follows the natural form and function of where it is place. Mostly appears as a sponsored content, in-image or content recommendation	• Sponsored editorial write-up / articles on online publishers' sites • Sponsored content as paid media strategies that fit the form & function of the surrounding editorial content on a website • Content dissemination / recommendation ad with networks	
Search	Paid search ads that appears on search engine result pages (SERPs)	• Paid search ads on search platforms	
Audio	Ads in audio form appearing in between live, on demand or podcast content; ads can be inserted pre, mid or post roll during stream	• Pre / mid / post-roll in-stream audio ad • Sponsorship packages via premium audio publishers	
Others	Other digital expenditure that does not fall into the above categories can be lump to others	• Email • Forum seeding • Affiliate marketing • etc.	

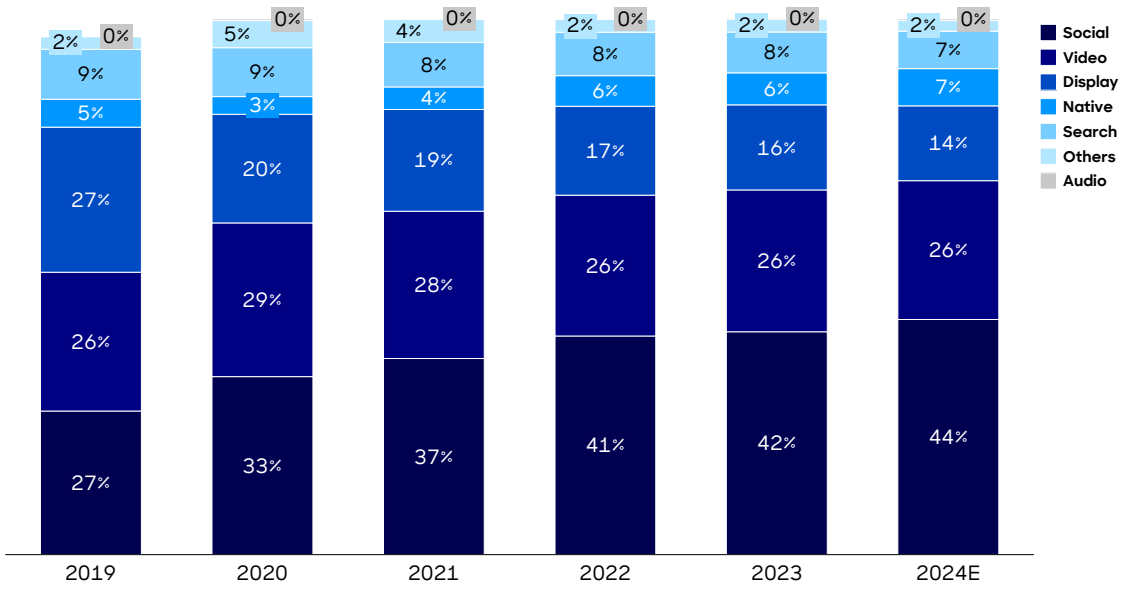
Source: Secondary research

Specifically on digital online platforms (excluding DOOH), the market as of 2023, is dominated by social media at 42%. This is followed by 26% on video and 16% on display. The trend is also expected to strengthen for social, with an estimated 44% share of total digital advertising expenditure by end of 2024[381].

[380] MAA (2024). Malaysian Digital ADEX report 2024. https://www.malaysiaadvertisers.com.my/category/adex

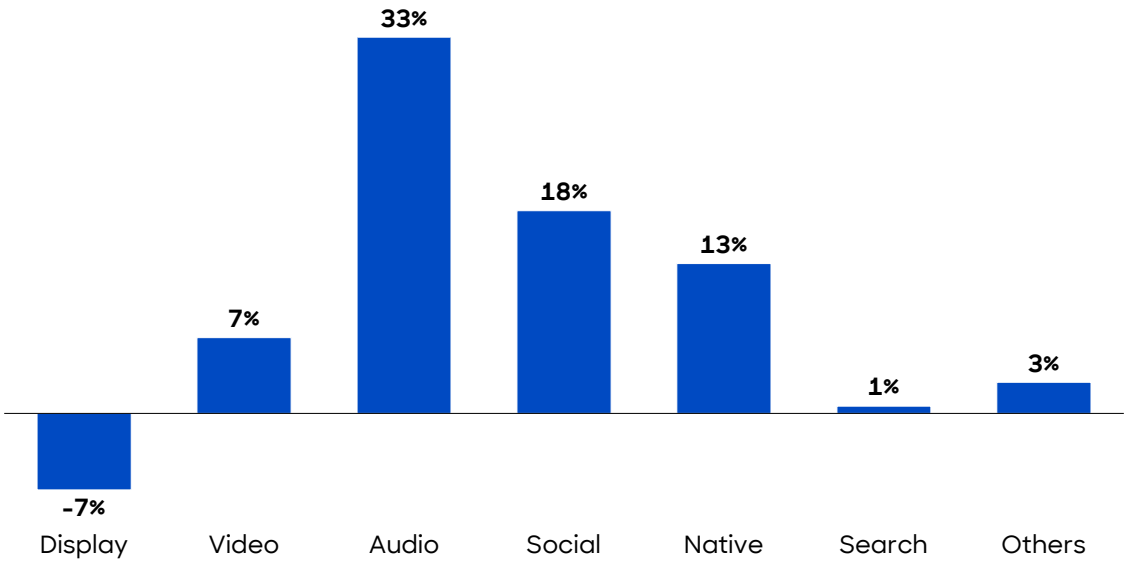
[381] Estimation from Media Specialist Association, with collaboration with MAA and MDA. Based on data from 21 agencies, which is estimated to cover ~60% of the total digital advertising expenditure in Malaysia.

Figure 81 : Digital internet advertising mix in Malaysia, 2019 - 2024E [%][382]



Source: Malaysian Advertisers Association

Figure 82: Digital advertising channels CAGR in Malaysia, 2019-2024E [%][383]



Source: Malaysian Advertisers Association

[382] MAA (2024). Malaysian Digital ADEX report 2024. https://www.malaysiaadvertisers.com.my/category/adex

[383] MAA (2024). Malaysian Digital ADEX report 2024. https://www.malaysiaadvertisers.com.my/category/adex

Over the past five years, video, audio, social, and native ads have shown the highest growth rates as more Malaysians prefer to consume these types of content. Inventory volume of display ads, especially static display ads, is reducing as newer ad formats prove to be more effective and interactive. Search ads continue to maintain a presence in the market due to the continued trust and reliance of larger local players and MNCs on this type of ad format.

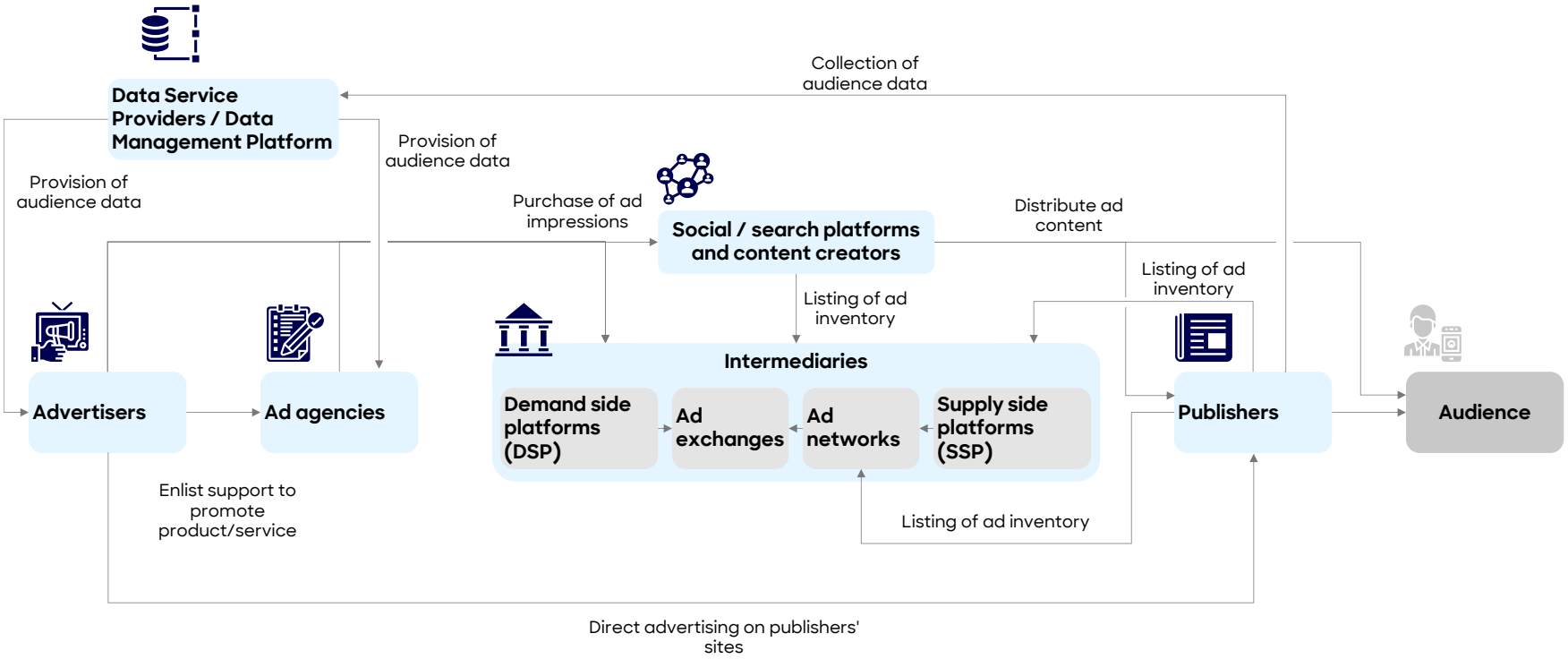
Several key trends are shaping the digital advertising landscape in Malaysia, with the rise of digital media being a significant driver of growth. As Malaysians increasingly engage with online content, brands have shifted their focus to digital platforms (e.g., e-commerce stores), recognising the importance of reaching audiences where they spend most of their time. This trend has also been accelerated by the proliferation of smartphones and improved internet connectivity, allowing for a seamless transition to digital platforms.

Separately, data analytics and personalisation have also become crucial in digital advertising, with advertisers increasingly using sophisticated analytics tools to gain insights into consumer behaviour, allowing for highly personalised ad campaigns. This tailored approach increases engagement and conversion rates, making it a key strategy for success.

4.3.3.2 Supply chain

The digital advertising ecosystem consists of several key actors, each playing a critical role in the supply chain:

Figure 83: Supply chain of the digital advertising services sub-sector[384]



Source: Interaction with industry players and MyCC's analysis

[384] MyCC's analysis and interaction with industry players

Advertisers: Companies that seek to promote their products, services, or brands through digital advertising channels. Primary goal to reach target audiences effectively, driving brand awareness, engagement and conversions. Advertisers may interact with advertising agencies for strategic campaign development and with DSPs for automated ad purchasing. Advertisers can also connect directly with publishers for advertising opportunities.

Advertising agencies: Serve as partners for advertisers, involved in the designing, managing and executing digital marketing campaigns. They offer a range of services, including creative development, media planning, and analytics, often charging clients through retainer fees or a percentage of ad spend. Agencies collaborate closely with content creators to develop engaging content and with DSPs and ad networks to optimise ad placements. Selected advertising agencies include Dentsu, WPP Group, Group M.

Demand-side platforms (DSPs): Facilitate the automated purchasing of ad impressions for advertisers, enabling them to target specific users based on online behaviour and demographics. These platforms take part in real-time bidding systems, allowing advertisers to bid for ad space across multiple publishers efficiently. Their revenue models often involve subscription fees, or a percentage of the total ad spend, providing advertisers with the tools to manage and analyse their digital advertising campaigns effectively. DSPs interact with advertisers to optimise campaign performance and with ad networks to access inventory. Selected DSP players include The Trade Desk, Google Display & Video 360, Meta Ads Manager.

Ad networks: Act as intermediary in the ecosystem, providing platforms where advertisers can buy, and publishers can sell ad inventory. Ad networks aggregate inventory from various publishers and offer it to advertisers, often taking a commission on sales. Selected players include Google Display Network, Adzymic, Meta Audience Network.

Ad exchanges: Ad exchange networks enable a marketplace by aggregating inventory from multiple publishers willing to sell via SSPs and connecting them with advertisers seeking to buy ad inventories via DSPs

based on their ad campaigns goals, often including factors such as audience segments, contextual relevance, and geographic location. This marketplace is where real-time auctions are facilitated, allowing multiple advertisers to bid on the same ad inventory, thus increasing competition and driving up potential revenue for publishers. Nowadays, an important aspect of ad exchanges is the practice of dynamic allocation to allow publishers to optimise their ad inventory by prioritising the highest-paying ad sources on a real-time competition basis to ensure every impression is served to the highest bidder, thus maximising revenues for publishers. Selected players include Google AdX, Magnite, PubMatic.

Supply-side platforms (SSPs): Facilitates interactions between publishers and various ad networks and exchanges, aiming to optimise revenue opportunities through bidding processes. They enable publishers to manage and monetise their digital ad inventory, using data analytics to determine the best pricing and placement strategies for maximum revenue potential. They often charge fees based on a percentage of ad revenue or a flat monthly rate, allowing publishers to benefit from a more competitive bidding process for their inventory. Selected players include Google Ad Manager, Meta Audience Network, Magnite, PubMatic.

Search / social platforms & content creators:

- **Search platforms:** Platforms that provide search results based on user queries. They provide advertising spaces within their ecosystems, allowing advertisers to reach highly targeted audiences actively seeking specific information. Search platforms utilise auction-based pricing models, where advertisers bid for placements based on demand and ad relevance. Key players include Google, Bing.

- **Social platforms:** Online networks that enable users to create, share, and engage with content and connect with others. These platforms provide advertising spaces that allow advertisers to reach highly targeted audiences based on user interests, behaviours, and demographics. They also utilise auction-based pricing models, enabling advertisers to bid for placements within users' feeds and timelines. Key players include Facebook, Instagram, X, TikTok.

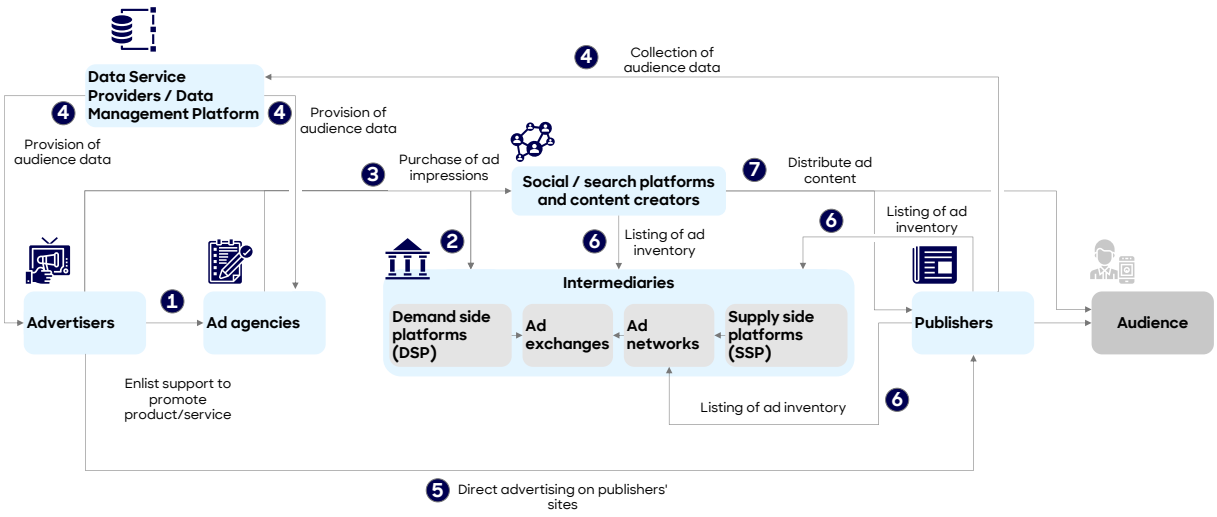
- **Content creators:** Utilising social platforms, individuals or teams develop engaging and relevant content tailored to target audiences. They play a crucial role in digital advertising by producing videos, blog posts, social media content and more, which help capture attention and foster connections with consumers. Content creators interact with advertisers or advertising agencies for direct sponsored deals and may also work with publishers to ensure their content is effectively distributed within the platform.

Publishers: Websites, apps, or digital platforms that provide advertising space and monetise their content by displaying ads to their audience. They earn revenue through direct sales of ad inventory, or programmatically via ad networks, and other means, including affiliate marketing, sponsored content, subscription fees, and selling user data. Publishers often leverage Search Engine Optimisation (SEO) and content marketing to enhance their visibility and engagement, ensuring a steady flow of revenue from their advertising efforts while maintaining a balance between content quality and ad placements. Publishers work with advertisers to sell ad inventory and with agencies and content creators to ensure that ads align with their audience's interests. Selected players

Data service providers / Data Management Platforms: Centralised systems used for aggregating, organising, and analysing data from various sources to create detailed audience segments. They enable advertisers to personalise ad experiences, integrate first-, second-, and third-party data to optimise campaign ads in real-time. DMPs provide the tools advertisers and publishers need for audience targeting across different platforms and measuring campaign performance. DMPs also help manage data in compliance with privacy regulations, ensuring legal and ethical use of consumer information. Selected players include Nielsen, Oracle, Kantar.

4.3.4 Market practices

Figure 84: Key relationships along the digital advertising supply chain



Source: Interaction with industry players and MyCC's analysis

1. Advertisers and ad agencies

In Malaysia, outsourcing of advertising planning and execution to ad agencies is common amongst large local brands. Key practices between the two parties are as follow:

(a) Selection and contractual agreements

Advertisers typically start by selecting ad agencies through a competitive process involving Request for Proposals (RFPs), pitches, and meetings to ensure a good fit. Once selected, agencies are engaged through various contractual agreements, such as retainers, project-based contracts, or performance-based contracts. These agreements define the scope of work (including campaign design, medium, management, and ad inventory bidding etc.), deliverables, timelines, and compensation structures.

(b) Collaboration & execution

Both parties maintain collaboration through detailed briefing sessions, regular check-ins, and sometimes integrated teams from the advertiser's side. Agencies take charge of creative development, media planning, and buying, ensuring that the campaign's visuals, copy, and strategy align with the advertiser's objectives. They also handle the execution and management of campaigns, including budget oversight and compliance with legal standards, to ensure smooth and efficient operations until the campaign or product has been delivered.

(c) Analytics and optimisation

As part of the performance tracking and optimisation, ad agencies can provide:

I. Comprehensive analytics and reporting services typically provided in the form of proprietary dashboards or reports which will provide real-time data or ad trends for monitoring purposes in addition to what ad intermediaries platforms provide to measure campaign performance using key metrics such as:

- **Impressions**: Number of times an ad is displayed or viewed on a digital platform.

- **Click-through rates**: Percentage of users who click on an ad after seeing it, calculated as (Clicks/Impressions).

- **Return on Investment (ROI)**: Profitability of an ad campaign, calculated as profit divided by cost over campaign duration.

II. Industry expertise, good understanding of trends by employing innovative strategies, such as:

- **A/B testing**: A method of comparing two versions of an ad or webpage to determine which one performs better in terms of user engagement or conversions.

- **Market research**: Involves gathering and analysing data about consumers' preferences, behaviours, and needs to inform and improve marketing strategies and decisions.

Based on these insights, agencies recommend optimisations to the advertisers for them to enhance their ad campaign effectiveness amongst the target audience.

2. Advertisers (including ad agencies) and intermediaries

(a) Programmatic buying

Interaction between both parties (excluding content creators) is focused solely on programmatic advertising, which is the automated process of purchasing ad space using software and algorithms, allowing advertisers to target specific audiences with precision using data to determine the most effective placement for their ads, improving efficiency and scalability for better campaign performance.

Advertisers and ad agencies can carry out three types of programmatic ad buying:

I. **Real-time bidding (RTB)**: The most common form of programmatic ad buying (on impressions basis) through instantaneous auction using algorithms that target specific audience criteria. The auction is open to all parties until all available ad inventory has been sold. There are two main strategies used by players:

   - **Header bidding:** Where publishers offer ad inventory to multiple demand sources simultaneously, including DSPs and ad exchanges, therefore increasing visibility and bidding on the inventory.

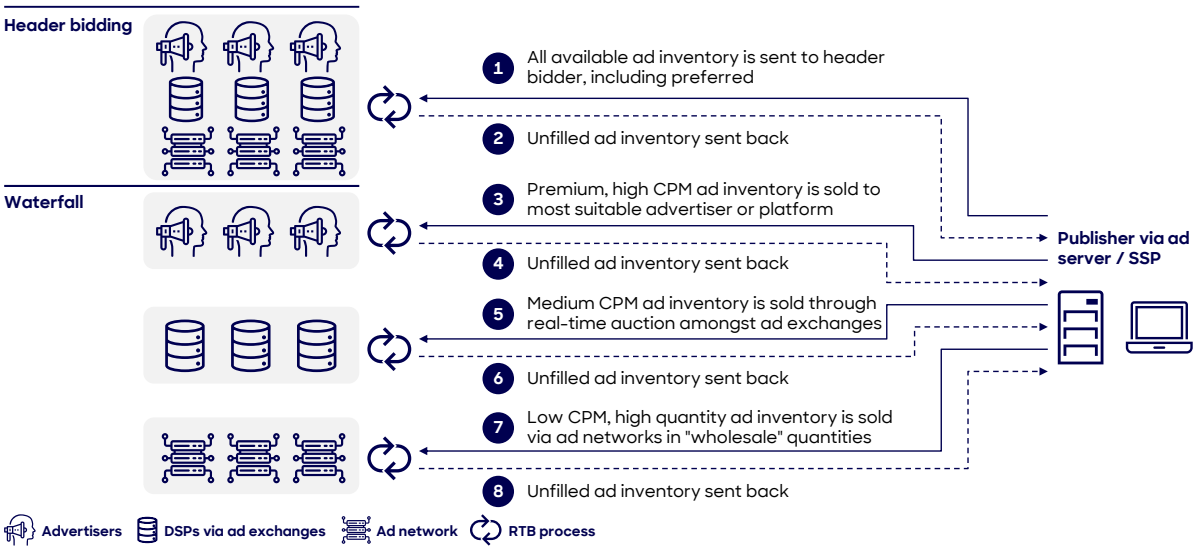
   - **Waterfall method:** Where inventory is offered to one group of advertisers, ad exchange, or ad network at a time.

II. **Private Marketplace (PMP):** An ad exchange platform for select advertisers to participate in an auction for premium ad inventory on

an invite-only basis from publishers or SSPs. This provides greater control over ad quality and pricing.

III. **Programmatic Direct (PD):** Similar to traditional media buying where advertisers and publishers work one-to-one to create deals; advertisers can get priority to work with premium ad inventories, fixed pricing, and better audience targeting whilst publishers have certainty of filling premium inventory.

Figure 85: Example of ads auction, bidding processes and order sequence



Source: Secondary research

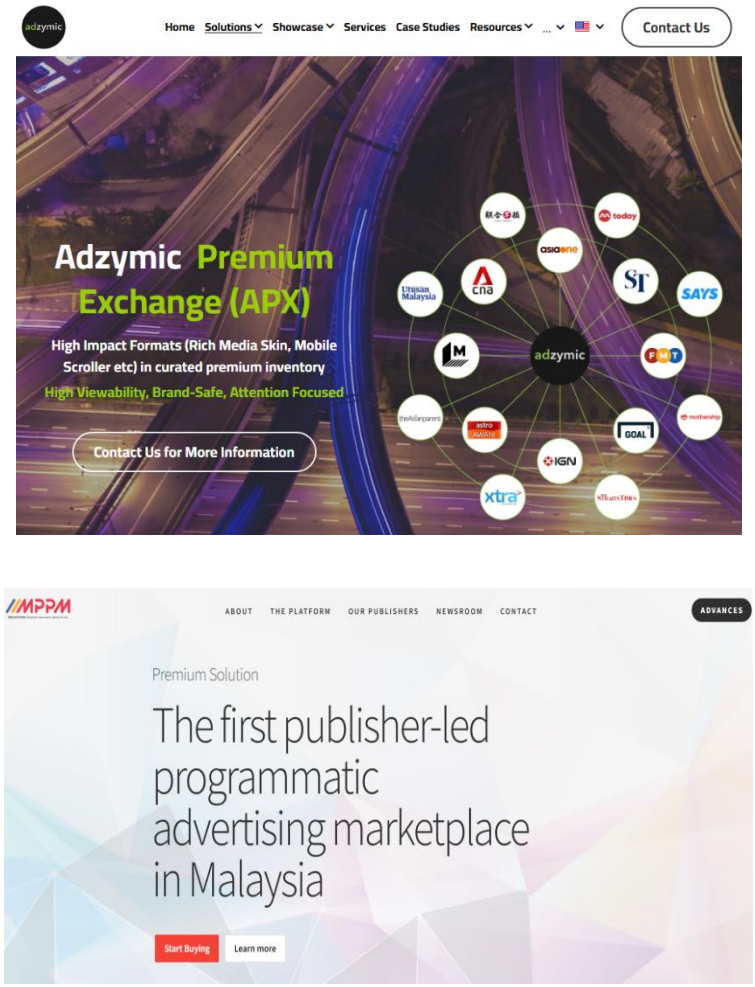
The modern programmatic buying process usually starts with header bidding where publishers send out requests via code to get bids from multiple advertisers, DSP, and ad networks at the same time. The remaining ad impressions that are not filled during header bidding then goes through subsequent rounds of waterfall bidding on PMP, PD, ad exchanges and ad network platforms. Ad inventory prices will continue to drop in each stage either until all available ad inventory is sold off or there are no willing buyers in the marketplace.

Programmatic advertising buying is typically done through a few key global players, including Google's Display & Video 360 and The Trade Desk. According to Google's Display & Video 360, it allows marketers to manage their reservations, programmatic, and programmatic guaranteed

campaigns across various ad formats and channels[385]. In Malaysia, there has also been initiatives to establish a local platform for programmatic buying. Examples include:

I. **Malaysian Premium Publishing Marketplace (MPPM):** One of the first and larger consortium of premium digital publishers in Malaysia which currently includes publishers such as China Press, GuangMing.com.my, Sinar Harian, Malaysiakini, World of Buzz, and NovelPlus[386].

Figure 86: Adzymic ads exchange, MPPM ads exchange



Source: Adzymic and MPPM

[385] Google Marketing Platform (2025). Display & video 360. https://marketingplatform.google.com/about/resources/display-and-video-360-product-overview/

[386] Malaysian Premium Publisher Marketplace (MPPM) (2025). The first publisher-led programmatic advertising marketplace in Malaysia. https://mppm.my/#about

II. **Adzymic:** A regional leader in dynamic creative technology that created Adzymic Premium Exchange (APX) to integrates its creative management platform and dynamic creative optimisation technology for facilitating high-impact and non-intrusive rich media ad units across premium publishers. It is listed as a solution partner for both Rev Media Group and Astro[387].

Different pricing models are utilised by intermediaries depending on the advertiser's goals. The few common pricing models include:

I. **Cost per Mille (CPM)**: Measures the cost incurred by an advertiser for every 1,000 ad impressions.

II. **Cost per Click (CPC)**: Measures the cost incurred by an advertiser each time a user clicks on their ad.

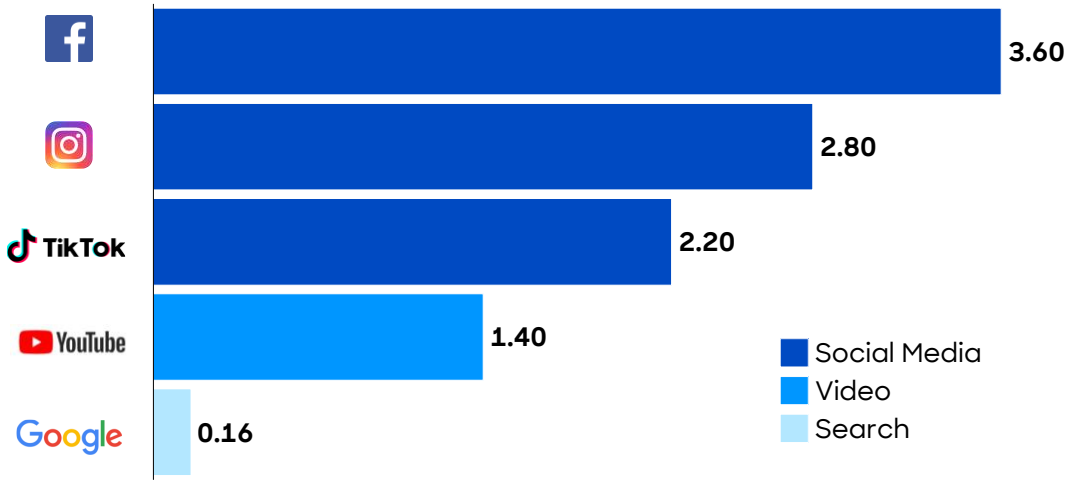
III. **Cost per Acquisition / Action (CPA)**: Measures the cost incurred by an advertiser for each specified action, such as a sale or sign-up.

IV. **Cost per View (CPV)**: Measures the cost incurred by an advertiser each time a video ad is viewed.

Generally, advertisers will prefer to pay for ad spaces on a CPC, CPA, and CPV basis whereas publishers prefer to be remunerated on a CPM basis as it is the widely used metric across the industry. Intermediaries that can reliably calculate and reconcile the two metrics can stand to gain by converting advertisers' CPC, CPA, and CPV demand to publishers' CPM supply. However, methods of this conversion and calculation vary between intermediaries and are not transparent.

[387] Adzymic (2023). Adzymic launches premium advertising network, Adzymic Premium Exchange (APX), in Singapore and Malaysia. https://www.adzymic.co/blog/adzymic-launches-premium-advertising-network-adzymic-premium-exchange

Figure 87: Approximate average CPM rates of search, video, and social ad formats in Malaysia, 2024 [USD][388, 389, 390, 391, 392, 393, 394, 395, 396]



Source: Secondary research

Preliminary research online shows that there may be rather distinct differences in average CPM rates across different ad formats. Social media, due to its effectiveness demands a higher CPM rate compared to other ad formats like video and the traditional search.

[388] Bridging Points Media (2021). Google AdSense CPM rates by countries. https://www.bridgingpointsmedia.com/google-adsense-cpm-rates-by-countries/#google_vignette
[389] World Population Review (2025). Adsense CPC rates by country. https://worldpopulationreview.com/country-rankings/adsense-cpc-rates-by-country
[390] Is This Channel Monetized (2025). YouTube CPM in 2025 (full data analysis): rates by country and category + how to increase RPM. https://isthischannelmonetized.com/data/youtube-cpm/#google_vignette
[391] Silver Mouse (2019). Which ad format is the best (with highest CPM) for YouTubers? https://www.silvermouse.com.my/blog/best-cpm-ad-format-for-youtubers/
[392] The SR Zone (2025). YouTube CPM & RPM rates by country 2025 [with list]. https://www.tsz.com.np/2021/07/youtube-cpm-and-cpc-rates-by-country.html#google_vignette
[393] Lebesgue (2024). Optimizing Facebook ads CPM in different countries. https://lebesgue.io/facebook-ads/facebook-cpm-by-country
[394] Enhencer (2025). 2024 Facebook ads CPM: country stats for e-commerce & Shopify. https://enhencer.com/blog/cpm-of-facebook-ads-2024
[395] Droixagency (2024). Instagram ads price Malaysia. https://droixagency.com/blog/b/instagram-ads-price-malaysia
[396] Marketing Lancers (2024). TikTok ads Malaysia: 2024 cost guide & ROI analysis [updated].. https://marketinglancers.com.my/tiktok-ads-cost-malaysia/

3. Advertisers / ad agencies and social & search platforms, content creators

(a) Social / search network marketing

Advertisers and ad agencies utilise social media and search platforms for advertising to leverage the platform's established large audience base. Specifically, it is common for MSMEs in Malaysia to utilise social platforms such as Facebook, Instagram, and TikTok to keep up with consumer trends and preferences. As for larger enterprises and MNCs, they still depend on their presence on search platforms to maintain their internet and online presence, with Google being the most widely used search platform in Malaysia[397].

(b) Influencer marketing

This relationship enables advertisers to effectively target and engage potential customers through trusted and influential voices. Ad formats through this type of interaction are typically native (done seamlessly with the platform or content they are associated with, making the promotion feel natural or non-disruptive to their audience) and are increasingly gaining traction. They are widely used as part of a brand's affiliate marketing strategy.

Advertisers may access influencers or content creators via ad agencies such as Nuffnang[398] and Involve Asia[399], who both have strong presences in Malaysia. These agencies help connect advertisers with content creators and influencers to organise affiliate marketing campaigns through social media platforms. Local publishers such as REV Media[400] and Astro[401], have

[397] Input from IDIs

[398] Nuffnang. Influencer and content marketing company with over 15 years of experience which caters to brands (e.g., Guardian, F&N, Mamee etc.) and creators within its ecosystem. https://www.nuffnang.com.my/

[399] Affiliate marketing platform for advertisers (e.g., Bike, Zalora, and Sephora etc.) and over 500 partner brands (e.g., Shopee, Lazada, and Tokopedia etc.) https://involve.asia/blog/what-is-involve/

[400] Digital publisher in Malaysia specialised in data-driven digital marketing solutions aimed at engaging its consumers (e.g., SAYS, OHBULAN!, etc.) https://revmedia.my/about-us/

[401] Malaysian satellite television, streaming television and IPTV provider; it possesses a Media Solutions division that uses targeting technology to create audience segments for multi-channel campaigns. https://astro-malaysia.com/

their own influencer marketing platforms or subsidiaries such as SPARK[402] to grow and consolidate all sponsored social media content and influencer marketing within Media Prima and Rocketfuel Entertainment[403] to power influencer marketing space with its dynamic approach to talent management and talent-driven digital content via Astro. This allows content creators to utilise their digital assets or publishing mediums the flexibility to generate income via the gig economy.

Should advertisers or brands choose to access influencers directly, social platforms also provide tools for advertisers to identify and collaborate with creators who align with their brand and have significant following, while search engines help in discovering creators whose content matches relevant keywords and user interests to generate more authentic engagement with the brands' customers. For example, TikTok Creator Marketplace serves an analytics tool within TikTok that allows brands to see an influencer's engagement reach, views, and demographic, allowing them to search for influencers and contact them directly via the TikTok platform[404].

4. Data management platforms and advertisers / ad agencies / publishers

(a) Data collection and analytics

Data management platforms enhance targeting precision by segmenting audiences based on integrated data from various sources, including:

I. **First-party** – Data collected by e-commerce and offline transactions, Customer Relationship Management (CRM) systems, and website & mobile app analytics**.**

[402] REV Media Group (2025). Spark. https://revmedia.my/brand/spark/
[403] Marketing Magazine (2017). Rocketfuel Entertainment to ignite influencer marketing with stardom. https://marketingmagazine.com.my/rocketfuel-entertainment-to-ignite-influencer-marketing-with-stardom/
[404] Aspire (2025). TikTok influencer marketing: what is it and how brands can get started. https://www.aspire.io/blog/tiktok-influencer-marketing-what-is-it-and-how-brands-can-get-started.

II. **Second-party** – First-party data information collected by one company and sold or traded to another.

III. **Third-party** – Supplied by data brokers that collect data via trackers in publishers' and merchants' websites.

Traditional Data Service Providers, such Nielsen, Kanta, and Comscore who have a significant active presence in Malaysia mainly through larger companies or MNCs usually adopt subscription-based revenue models to provide either data licensing or custom analytics services for advertisers, offering access to vast datasets, audience segmentation tools, and real-time analytics for optimising ad campaign strategies and achieving better ROIs. Services such as these are continuously evolving due to the increasing awareness of data privacy and protection in many countries around the world.

Some of the more popular social and search companies such as Google and Meta have integrated DMPs (e.g., Google Analytics or features within Meta Audience Network) to integrate seamlessly into their advertising ecosystem, which is widely accessible by anyone who has an account and utilises its platform.

Some local players In Malaysia (e.g., REV ID by REV Media) are attempting to rival and better market their publishing services to more advertisers by investing in creating their own data collection and management platforms. This trend is favourable towards local players due to advertisers' growing appreciation of localisation and contextual targeting amongst its Malaysian audience.

5. Advertisers/ad agencies and publishers

(a) Direct ad buying

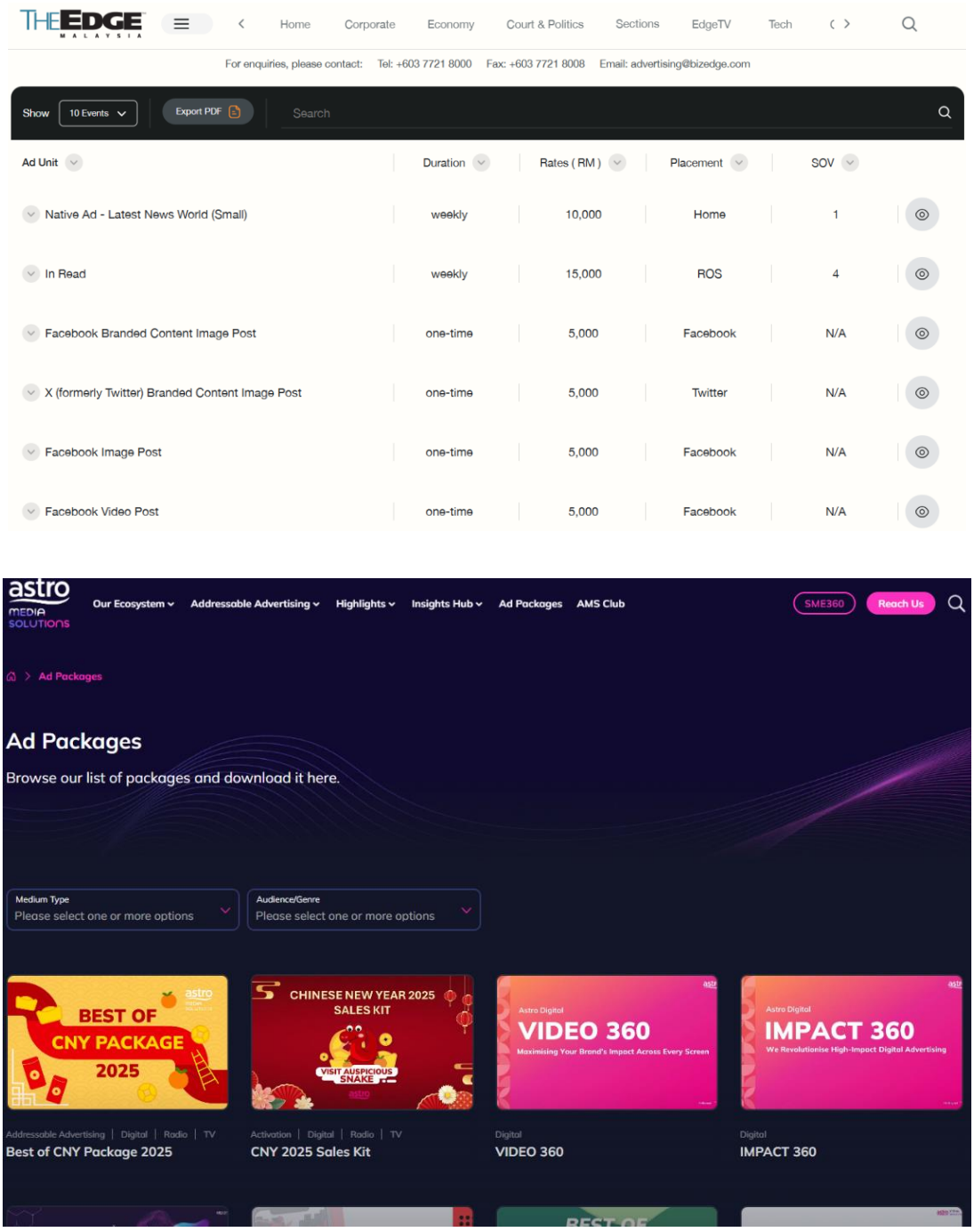
Manual direct ad buying is the traditional method to which advertisers/ad agencies engage directly with publishers to purchase ad inventories. This form of buying is the most common form amongst local publishers such as REV Media and Astro due to the immaturity of the programmatic ad buying market in Malaysia. Previous survey performed by Forrester found that

~58% of Malaysian companies were still yet to implement programmatic buying back in 2017.[405] Primary research conducted with industry players also indicated the issue of tracking and validating these programmatic spend due to popular social media platforms like Meta and Google who don't necessarily report revenues generated from Malaysia through programmatic buying. This is also acknowledged by MAA who claims that ~40% markup on available data is required to estimate the market size of SMEs of which most use social media as a platform for their digital advertising.

In this relationship, advertisers/ad agencies often negotiate contracts that guarantee a specific number of ad impressions and involve fixed pricing agreements like Programmatic Direct, allowing brands a higher chance to secure preferable advertising slots on publisher sites that they are comfortable with which is often by larger companies due to the higher costs. This approach provides cost certainty and brand-safety for advertisers and revenue assurance for publishers. Consequently, advertisers/ad agencies can secure premium ad placements, such as prominent or large digital spaces on a publisher's widely viewed webpage or content, which offers higher visibility, engagement, and audience reach.

[405] Exchange Wire (2016). Almost half of APAC marketers buy programmatically; Indian consumers annoyed by mobile ads. https://www.exchangewire.com/blog/2016/05/20/almost-half-of-apac-marketers-buy-programmatically-indian-consumers-annoyed-by-mobile-ads/

Figure 88: The Edge website and Astro Media Solutions website



Source: The Edge and Astro

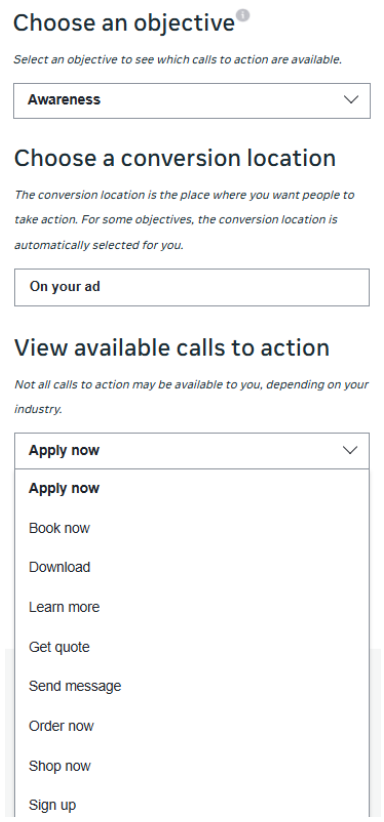
Publishers can also reach out to advertisers/ad agencies via their own channels. For example, local news publisher The Edge and media conglomerate Astro Malaysia Holdings post their ads inventory via packages or rate cards on their website to which any willing advertisers can contact them directly for the ad inventory purchase.

(b) Ad performance measuring

Publishers also provide detailed performance metrics and custom reporting to help advertisers/ad agencies optimise their campaigns. Long-term partnerships between advertisers/ad agencies and publishers can often lead to better rates, priority placements, and collaborative opportunities, such as joint marketing initiatives.

Global players, in particular, hold a competitive edge in performance measurement due to their comprehensiveness. For example, Meta's platform offers "Call to Action" options linked to Cost per Action (CPA), providing advertisers with a more predictable understanding of campaign outcomes.

Figure 89: Example of Meta's guide for display ad



Source: Meta

(c) Ad campaign collaboration

Both parties can collaborate to create custom content and native ads that align with the editorial style to engage the audience effectively. Advertisers/ad agencies can leverage the publishers' first-party data for precise audience targeting based on demographics, behaviour, and interests, and utilise contextual targeting to place ads in relevant content environments. These practices ensure a non-disruptive user experience and enhance ad relevance and engagement.

(d) Brand and publisher safety

Brand safety, or accountability between advertisers and publishers has become more important in recent times due to the prevalence of ad fraud. This caused by bots or unscrupulous actors generating false clicks or impressions, which leads to wasted ad spend, inaccurate reporting, and ineffective campaigns for advertisers. Publishers' reputation may also be tainted when there is a high presence of fraudsters impersonating legitimate websites that manipulate ad placements or sell non-genuine, low quality ad spaces. Previous survey conducted by Statista conducted has shown that the potential cost of ad fraud worldwide is upwards of USD 81 billion[406].

6. Publishers / social & search platforms, content creators and intermediaries

(a) Selling / buying ad slots

Publishers manage their ad inventory using first-party ad servers, which handle the allocation and display of various ad formats such as display, video, sponsored posts, and native ads. These ad servers prioritise direct ad sales but can also manage ads from RTB auctions and other sources. The servers decide which ads to show based on targeting criteria set by advertisers and then serve the ads. Additionally, ad servers can perform inventory forecasting to predict future ad availability and optimise the performance of ad campaigns based on stored historical data.

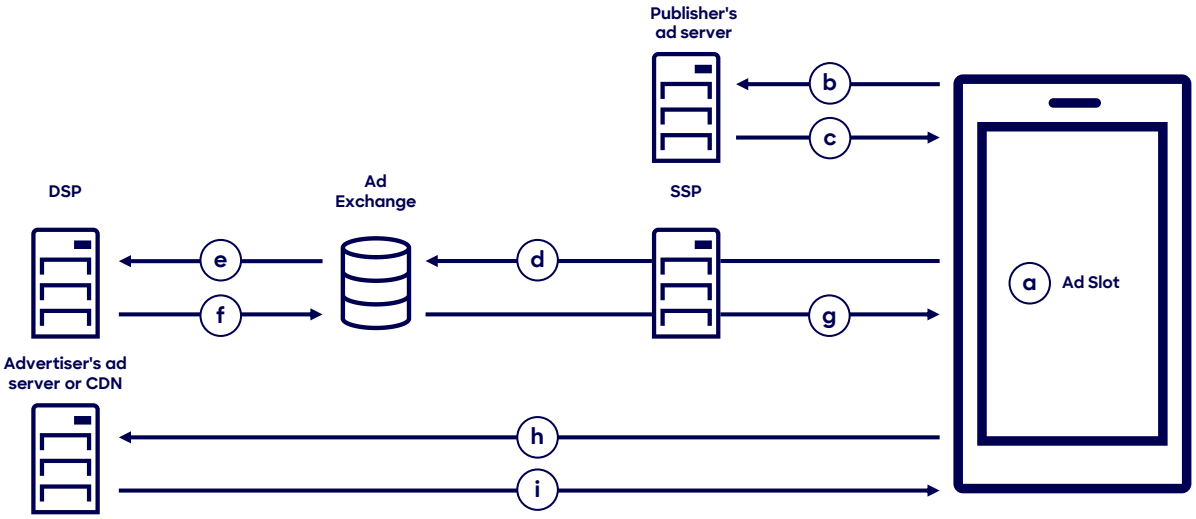
[406] Mile (2024). Are publishers the real victims of ad fraud? https://www.mile.tech/blog/are-publishers-the-real-victims-of-ad-fraud

Social media platforms and search engines can also play a role of the middleman to connect content creators and their products with these ad servers. Publishers, social platforms, and search engines then use intermediary exchange platforms to ensure optimal fill rates and revenue generation while maintaining high ad quality standards through the bidding process. This comprehensive approach allows publishers to offer custom creative solutions to meet different campaign objectives, effectively manage their ad slots, and maximise revenue.

Beyond traditional direct and programmatic sales, publishers are increasingly leveraging partnerships with other publishers to extend their reach and enhance monetisation strategies. For example, as seen in Astro Media's Digital YouTube Category Targeting Packages[407], publishers can bundle their inventory with others to create category-specific ad packages. This allows advertisers to access a more targeted audience across multiple platforms rather than just a single publisher's ecosystem. By leveraging both direct sales and publisher-to-publisher collaborations, ad sellers can offer custom creative solutions, optimise ad slot allocation, and maximise revenue, all while maintaining strong targeting capabilities. This evolving model highlights the increasing importance of strategic partnerships in the digital advertising landscape.

[407] Astro (2023). Astro's YouTube category targeting packages, pages 4-10. https://astromedia.com.my/wp-content/uploads/2024/02/DigitalYouTube-Category-Targeting-Packages.pdf

Figure 90: Simplified process of publishers filling an ad slot



Source: Secondary research

(a) A user visits a webpage (example.com).

(b) The page has an ad slot with JavaScript that requests an ad from the ad server, sending user's information like location and device type.

(c) The ad server checks for matching direct campaigns. If none, it sends a tag for an RTB auction.

(d) The browser runs the SSP ad tag, sending user and page details to the ad exchange.

(e) The ad exchange notifies potential bidders of the available ad spot.

(f) Bidders analyse the bid request and submit their bids with the ad content they want to display.

(g) The ad exchange then awards the ad slot to the highest bidder in a second-price bid format including a small markup for intermediary fees of ~ USD 0.01. The winning ad is sent to the browser.

(h) The browser loads the winning ad, which often comes from a content-delivery network (CDN), and an impression-tracking pixel activates.

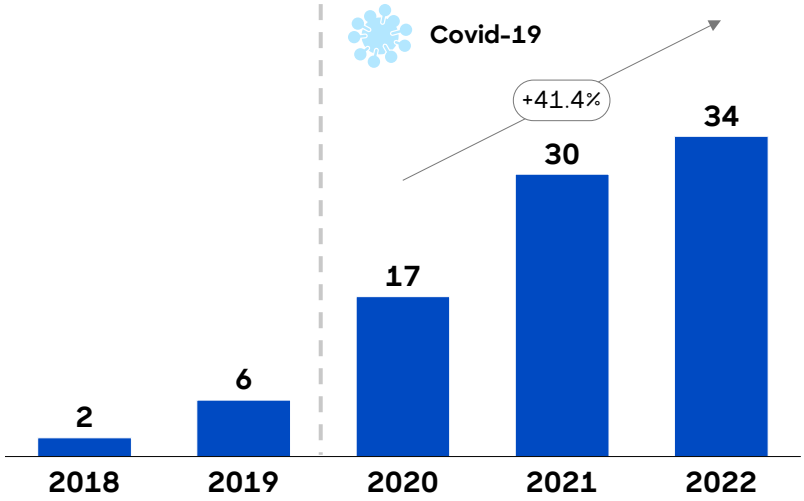
(i) The ad is displayed to the user within 100 – 150 milliseconds of the user accessing the website.

It is important to note that recent trends in internet users, especially the younger generation, using ad blockers to avoid intrusive or irrelevant ads does affect the way ads are being properly filled into an ad slot and also how users engage with them. This is especially impactful towards SMEs and smaller publishers that rely heavily on online ads for revenue will be severely impacted financially as their ability to monetise content reduces.

Other larger publishers such as Meta and Google may have advanced algorithms to allow ads to bypass ad blockers. This will pose anti-competitive behaviour as larger companies will continue to be preferred over other smaller players[408].

7. Social & search platforms, content creators and audiences

Figure 91: Southeast Asia e-commerce GMV on social platforms [USD b][409]



1: GMC estimate includes all transactions where product discovery, evaluation, and selection happens on social platform (payment may or may not happen on the same platform)

Source: Cube Asia

[408] ExpressVPN (2018). Facebook vs. ad blockers: no matter who wins, you lose. https://www.expressvpn.com/blog/facebook-adblockers-sponsored-posts/
[409] Cube Asia (2022). Social commerce in Southeast Asia 2022 Report. https://cube.asia/social-e-commerce-in-southeast-asia/

Social media platforms and search engines enable content creators to engage with their audience instantly through live streams, real-time comments, and interactive posts. This immediate connection allows content creators to respond to their audience's feedback and preferences on the spot, fostering a dynamic and engaging environment. Publishers also benefit from real-time interaction by updating their content based on current trends and user behaviour, ensuring that their audience receives the most relevant and timely information. This is especially popular in the more recent trend of social commerce especially across the Southeast Asia (SEA).

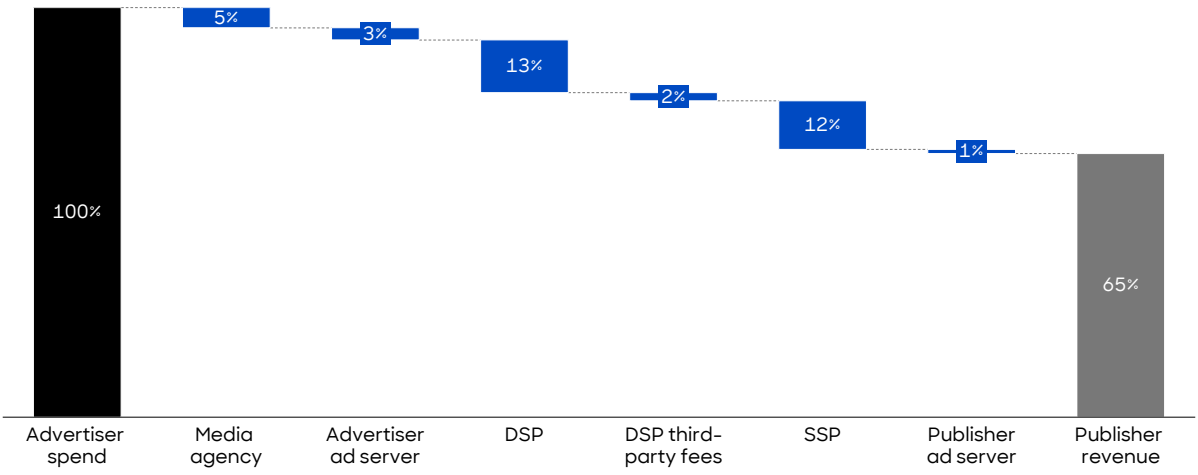
Higher engagement is another crucial practice that enhances the interaction between these players, which is supported by more tailored and personalised content. Social media platforms and search engines help give content creators a platform to understand their audience's interests and behaviours, allowing content creators to craft tailored messages and stories that resonate with their followers, leading to higher engagement and loyalty. Publishers can then leverage tailored content to further attract and retain visitors by presenting articles, videos, and other media that align with their audience's preferences. This personalised approach not only improves the user experience but also encourages end-consumers to spend more time interacting with the content, thereby deepening their connection with the creators and publishers, increasing the effectiveness of this ad format.

This trend towards social commerce and interactive experiences was growing even before Covid-19, has significantly accelerated post-pandemic. This was due to consumers' inability to physically access products during lockdowns, which heightened the appeal of live commerce. The surge in interest reflects a broader shirt towards digital engagement and real-time interaction, making live commerce a vital tool for connecting with consumers in a more engaging and dynamic way. For example, on platforms such as TikTok Shop, buyers, from the comforts of their own homes, can get a first look at products via live demonstrations

and opportunities to interact directly with their sellers, who then become trusted figure to consumers, increasing their presence and engagement.[410]

4.3.5 Supply chain take rates and approximate earnings by supply chain players

Figure 92: Take rates across UK's digital advertising services supply chain, 2019 [%]



Source: Competition and Markets Authority (CMA)

According to the Competition and Markets Authority (CMA), ad intermediaries capture at least 35% of the value in the display and video segments, which is largely due to intermediaries claiming that they are providing value-added functions by providing ad-tech to connect the supply chain seamlessly[411].

[410] The Edge (2023). Is the future of commerce social? https://www.theedgesingapore.com/digitaledge/digital-economy/future-commerce-social

[411] CMA (2020). Online platforms and digital advertising market study, page 65. https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study

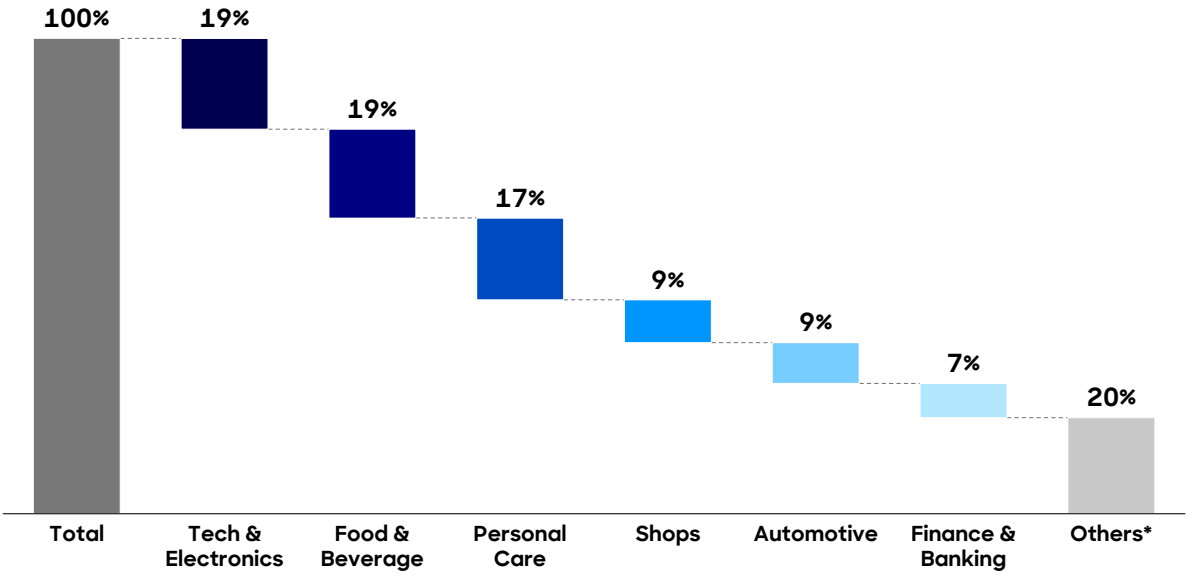
4.3.6 Key Players and level of competition

4.3.6.1 Key players along the supply chain

(a) Advertiser key players

In Q2 2024, Malaysian Advertisers Association (MAA) reported on the split between digital advertising expenditure share among industry players as follows:

Figure 93: Digital advertising expenditure share by industry, Q2 2024 [%][412]



* Including travel & tours, pharmaceuticals, housing, clothing, household care, education, health & wellness, and others

Source: Malaysian Advertisers Association

The data collected above is an estimate of the Malaysian digital advertising market from all players. This estimation is based on the methodology outlined in the Malaysia Digital ADEX Report for Q2 2024, which states that the 21 participating media agencies account for about ~60% of the total digital advertising expenditure in Malaysia. To estimate the remaining total market size, an additional ~40% is added to account for the untracked portion of ad spend, which is a large portion and primarily attributed to

[412] MAA (2024). Malaysian Digital Adex report for Q2, 2024, page 1. https://www.malaysiaadvertisers.com.my/wp-content/uploads/MALAYSIAN-DIGITAL-ADEX-REPORT_Q2-2024.pdf

MSMEs' informal and unsophisticated participation in the advertising market through social media due to the higher cost and knowledge required to properly participate in other more formal advertising channels.

In Q2 2024, Tech & electronics, food & beverage, and personal care continue to be the top industry spenders when it comes to utilising digital advertisements in the Malaysian market. Example key players that are active in the online digital advertising marketplace in Malaysia are as the following table:

Figure 94: Digital advertiser players in Malaysia by industries (non-exhaustive)

Industry	Companies
Tech & electronic	SAMSUNG, Apple, HUAWEI, LG, oppo, TOSHIBA
Food & beverage	McDonald's, Coca-Cola, Mondelēz International, Heineken, Carlsberg Malaysia, Pizza Hut, KOPITIAM
Personal care	P&G, Vinda, Unilever, Johnson & Johnson, L'ORÉAL
Shops	GENTING, TESCO, PARKSON, AEON, Lotus's, ISETAN
Automotive	BMW, PROTON, HONDA, PERODUA
Finance & banking	RHB, PRUDENTIAL, Maybank, CIMB, eTiQa
Others	malaysia airlines, celcomdigi, measat, BHP PETROL, NIPPON PAINT, maxis

Source: Secondary research

(b) Ad agency key players

Majority of advertising agencies that operate in Malaysia are through larger enterprises, who have the financial capabilities to procure these services and MNCs through their regional offices due to existing contracts from their headquarters or base of origin. Examples of key players globally are as shown in the following table. Majority of these ad agencies are conglomerates or a group of companies, with subsidiaries strategically located in countries where their expertise is required.

Table 18: Global ad agency key players

Companies	Focus areas	Subsidiaries in Malaysia	2023 Revenue [USD billion]*
WPP	Specialising in media planning and buying, data analytics, and creative services	VMLY&R, groupm, Ogilvy	18.5
OmnicomGroup	Strong emphasis on digital and data-driven marketing	PHD, nagaddb tribal, TBWA, OMP	14.7
PUBLICIS GROUPE	Offers advertising, media planning and buying, digital marketing, data analytics and consulting services	Leo Burnett, Starcom	16.0
IPG	Specialises in public relations and specialty communications	MW McCANN WORLDGROUP, Initiative	9.4
dentsu	Specialises in advertising, marketing, and public relations especially in creative services, data analytics, and customer experience management	dentsu x, CARAT, iPROSPECT	9.3
HAVAS	Provides integrated services in advertising, digital marketing, public relations and communication		2.5
S4 CAPITAL	Focuses on digital content creation, data analytics, and media planning and buying with emphasis on tech-driven marketing solutions	.monks	1.3

*** Global revenues**

Source: Secondary research

(c) Intermediary key players

Historically, the top technology companies such as Google and Meta dominate the ad tech intermediary scene due to their vertically integrated nature of owning publishing and social media sites. Other ad exchanges do exist but are competing for a small portion of the market by differentiating themselves and offering more unique and tailored services for their advertiser or publisher clients, separating themselves from directly competing with the more dominant players. The following are key players that are used by Malaysia advertisers.

Table 19: Ad tech intermediary key players[413]

Companies	Focus areas	2023 Revenue [USD billion]**
Google	Comprehensive advertising platform via Google Ads and Google Ad manager across search, display, video, and mobile platforms*	307.4
Meta	Specialises in social media advertising via its existing platforms Facebook, Instagram, Whatsapp and Messenger*	134.9
theTradeDesk	Caters more strongly towards demand-side patforms (DSP), enabling advertisers to purchase digital ad across various channels	1.9
Magnite	Leading SSP that helps publishers monetise ad inventory across multiple formats, especially access to premium inventory	0.6
Teads	Specialises in video advertising, providing innovative ad formats and premium inventory between advertisers and publishers	n/a
xandr	Includes demand-side platforms (DSP) Xandr Invest and supply-side platforms (SSP) Xandr Monetise to facilitate ad transactions across digital, TV, and video channels	n/a
nexxen	Specialises in programmatic video advertising via its ad network / exchanges Amobee and Unruly, ensuring more precise targeting for video-centric campaigns	0.3
Taboola	Has expertise in native advertising, helping publishers monetise content through perosnalised content recommendations	1.4
innity	Prominent in Asia-Pacific, including Malaysia. Operates programmatic ad transactions for most ad formats and leverages its local market knowledge	0.03
Outbrain	Specialises in native advertising with a focus on content discovery and recommendation. It also has robust analytics and optimisation tools	0.9

* Involved in multiple segments of the digital advertising value chain

** Global revenues from Capital IQ

Source: Secondary research

(d) Data service provider/data management platforms key players

Data service providers/data management platforms are often used by larger enterprises or MNCs due to their sufficient financial capabilities, which is what enables them to continue maintaining their market position due to better audience understanding and targeting efforts compared to smaller advertisers. As a result, most of the international data service providers and data management platforms are international firms.

[413] Capital IQ

On the other hand, smaller advertisers may resort to Google and Meta, which is more accessible due to their web-based analytics platform Google Analytics and Audience Insights, being integrated with their other advertising applications, making it more accessible to smaller advertisers who utilise these platforms. Some of the key players in space are in the following table.

Table 20: Data service provider/data management platform key players

Companies	Focus areas	2023 Revenue [USD billion]**
Google	Integrated web analytics platform via Google Analytics 360 focusing on use behaviour and website traffic, especially search and video*	282.8
Meta	Within Meta Audience Insights, provides user interaction, engagement, and retention metrics on all Meta apps for optimized marketing and targeting*	116.6
Adobe	Digital marketing and media performance analytics via Adobe Audience Manager*	19.4
Nielsen	Audience measurement across TV, radio, digital, and mobile platforms	n/a
KANTAR	Media monitoring, evaluation, and consumer insights	n/a
Ipsos	Media, content, and technology research with audience measurement and media consumption specialization	2.53
Circana.	Consumer / retail market data analytics, with media measurement and optimization tools	n/a

* Involved in multiple segments of the digital advertising value chain

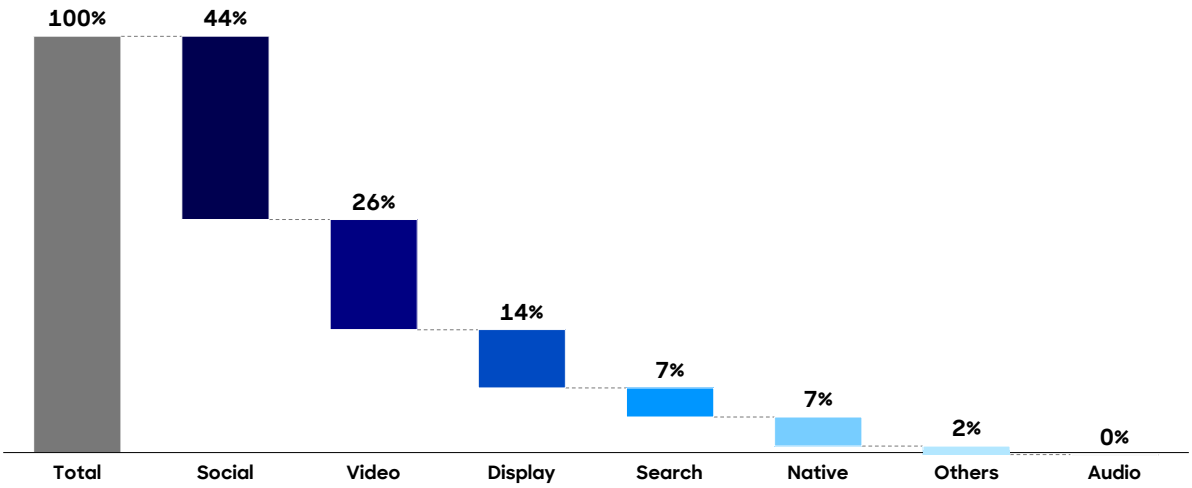
** Global revenues from Capital IQ

Source: Secondary research

(e) Key publishers

Social and video make up the majority at ~66% of digital advertising spend in Malaysia in 2023, followed by display, native, search, audio, and others. This is in line with industry sentiment and consumers' growing trends in increased screen time towards social media and video sharing apps on mobile platforms. Malaysia, similar to the rest of the world, has its social media and video dominated by big players (Google and Meta). Below is the breakdown of digital advertising by publishing format, and an overview of players that are involved in the above-mentioned publishing formats.

Figure 95: Split of digital advertising by publishing formats, Q2 2024 [%][414]



Source: Malaysian Advertisers Association

Figure 96: Overview of publishing players by ad publishing formats[415]

Ad formats	Companies
Social	
Video	
Display	
Native	
Search	
Audio	
Others	Affiliate marketing, emails, forum seeding etc.

Source: Secondary research

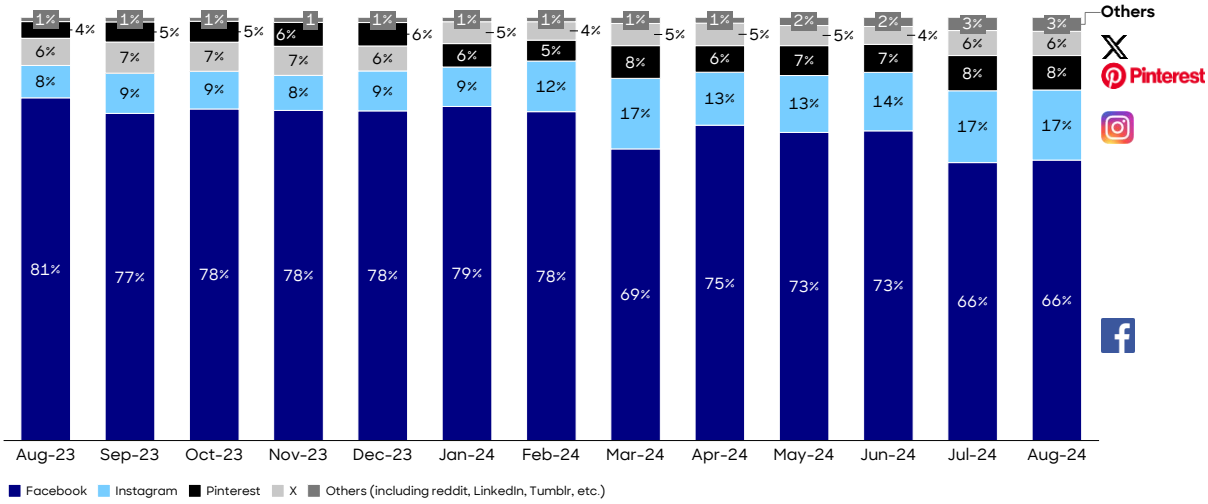
[414] MAA (2024). Malaysian Digital Adex report for Q2, 2024, page 1. https://www.malaysiaadvertisers.com.my/wp-content/uploads/MALAYSIAN-DIGITAL-ADEX-REPORT_Q2-2024.pdf

[415] MAA (2024). Malaysian Digital Adex report for Q2, 2024, page 1. https://www.malaysiaadvertisers.com.my/wp-content/uploads/MALAYSIAN-DIGITAL-ADEX-REPORT_Q2-2024.pdf

Further details into the top four ad formats are detailed below:

I. Key social publishers

Figure 97: Social media market share in Malaysia, August 2022 – August 2023 [%]



Source: StatCounter

In social media usage, Facebook leads with a market share of 50.6%, followed by YouTube at 23.6% and Instagram at 12.7%. Other platforms such as Pinterest, X (formerly Twitter), Reddit and LinkedIn account for the remaining share[416].

Despite the strong dominance of Meta (encompassing Facebook and Instagram) in the social media landscape, the overall dynamics of market competition remain fluid, with numerous new platforms emerging rapidly. As of 2021, TikTok[417] achieved a milestone by amassing one billion monthly active users just five years after its launch in 2016. This growth trajectory starkly contrasts with that of established players: Facebook reached a similar user base in approximately 8.7 years, YouTube in about 8.1 years, and Instagram in 7.7 years[418].

[416] StatCounter (2024). Social media stats Malaysia, Jan 2024-Jan 2025. https://gs.statcounter.com/social-media-stats/all/malaysia
[417] Not tracked by StatCounter
[418] Axios (2021). TikTok hits 1 billion users. https://www.axios.com/2021/09/28/tiktok-hits-1-billion-users

TikTok's rapid rise highlights a shift in user engagement and preferences, particularly among younger demographics who are increasingly drawn to short-form video content. The emergence of these rising platforms not only diversifies the social media landscape but also creates new advertising opportunities and competitive pressures within the sector. As new players continue to innovate and capture user attention, they will likely influence advertising strategies and challenge the established dominance of Meta.

II. Key video publishers

Video in Malaysia is largely dominated by Google (via YouTube) due to it being one of the first movers in the online video sharing platform. Adjacent players like over-the-top (OTT) platforms such as Viu, TonTon, WeTV, and iQIYI have adopted advertisement-supported streaming services which also takes up some market share in this space. Overall, this segment mostly sees international players with a presence in Malaysia.

Table 21: Key players in the OTT video segment

Companies	Focus areas	2023 Revenue [USD b]*
YouTube	Focus on high engagement through user-generated content, targeted advertising and more interactive videos	31.5
tonton	Emphasises localised content for Malaysian audience with a combination of ad-supported videos and exclusive access to Media Prima's shows	n/a
viu	Primarily hosts Asian dramas and variety shows, also caters for localized ads for Southeast Asia audience	0.3*
WeTV	Provides a wide range of Asian content, including some interactive ads and localised content for Malaysian viewers especially with its iflix acquisition previously	7.3**
iQIYI 爱奇艺	Specialises in Chinese dramas and similar ad-supported business models as the other OTT players in Viu and WeTV	0.9*

* Revenues estimated from company annual report's OTT revenue segment (advertising where applicable)
** Revenues estimated from company annual report's Online Advertising revenue segment

Source: Secondary research

III. Key display publishers

In the Malaysian market, the display advertising landscape is dominated by three major players: Star Media Group, Media Prima Berhad, and Astro Malaysia Holdings. These legacy service providers have successfully transitioned from traditional print and TV media into digital platforms, continuously integrating digital advertising opportunities. Additionally, smaller publishing groups and niche players focusing on regional, language-specific, and specialised content also contribute to the market. Overall, most of these companies leverage their established customer bases and local presence to maintain strong engagement with the Malaysian audience.

Table 22: Key players in the display publishers segment[419]

Companies	Focus areas	Display publishing subsidiaries	2023 Revenue [USD m]*
media prima	Focus on digital transformation, multimedia content creation, news and entertainment-based publishing	NEW STRAITS TIMES, BH Berita Harian, Metro	218
	Emphasis is on subscription-based video streaming but has some presence in the website publishing space that cater to different demographics in Malaysia	GEMPAK, astro AWANI, XUAN, astro ulagam	821
Star MEDIA GROUP	Covers comprehensive news, digital journalism, and community engagement content	The Star, Majoriti7, Star CarSifu, mStar	47.8
世界華文	Focuses on delivering chinese-language news, content, cultural publications and some regional reporting	星洲网 sinchew.com.my, e南洋 eNanyang.my	133
THE EDGE MALAYSIA	Specialises in financial news, business intelligence, investment advice, and data-driven journalism	EdgeProp	15
KTS	A timber company with stake in publishing. It focuses on East Malaysia regional news, community reporting, diversified media offerings, and educational content	東方ONLINE, Utusan Borneo online	n/a
Sabah Publishing House	East Malaysia based publisher also highlighting local news cultural stories of Sabah. Also attempts to promote tourism and local business through its platforms	Daily Express, 華僑日報, harianekspres	n/a

* Revenues obtained from Capital IQ and company annual reports

Source: Secondary research

[419] Media Pod (2023). List of digital media publishing groups in Malaysia. https://www.mediapod.co/blog/digital-media-publishing-groups-list-malaysia/

IV. Key search publishers

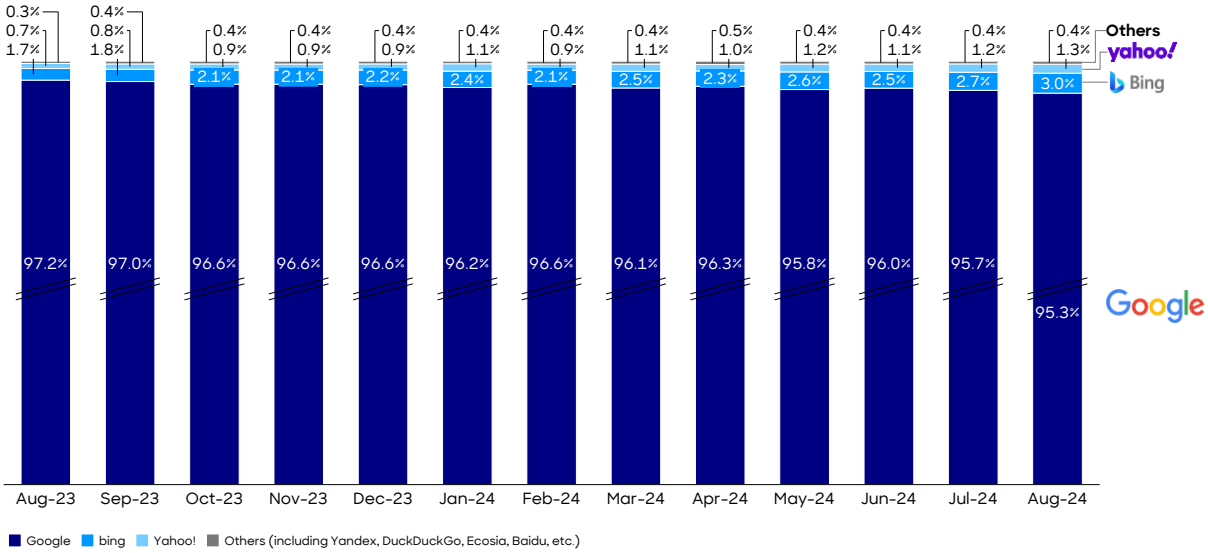
As of August 2024, Google holds a significant 95.3% market share in search engine usage by Malaysians, followed by Bing at 3.0%, with other platforms like Yahoo!, Yandex, and DuckDuckGo making up the remainder [420]. Google's overwhelming market share underscores its pioneering and dominant status in the search engine market, driven by its algorithms, features and integration with other Google services that are also widely adopted/used by users. In response, smaller search engines are innovating and carving out their niches.

For example, Bing has introduced enhanced image and video search capabilities, leveraging AI technology - Copilot, while DuckDuckGo focuses on privacy and user anonymity, appealing to users concerned about data security by not tracking or logging search queries. Yandex, in contrast, offers a geo-targeted search experience tailored to users' locations. Although they all compete in search advertising, they appeal to different target audiences such as those who don't mind personalised ads at the expense of their data getting tracked (e.g., Bing or Google etc.), those who want privacy but less personalised ads (e.g., DuckDuckGo etc.) or those who want ads specialised to specific locations or regions (e.g., Yandex for Russia, and Baidu for China etc.).

The overwhelming dominance creates a competitive environment where advertisers are heavily reliant on Google's platform, driving up competition among advertisers to secure visibility and optimise their bids for ad placements.

[420] StatCounter (2024). Search engine market share Malaysia. https://gs.statcounter.com/search-engine-market-share/all/malaysia

Figure 98 : Search engine market share in Malaysia, August 2022 - August 2023 [%]



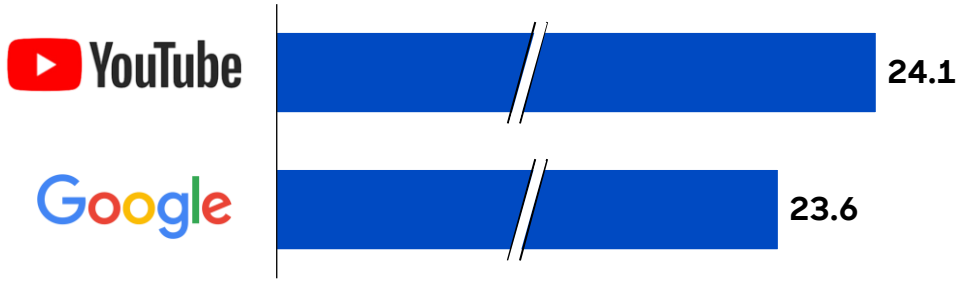
Source: StatCounter

4.3.6.2 Key digital advertising players

(a) Google

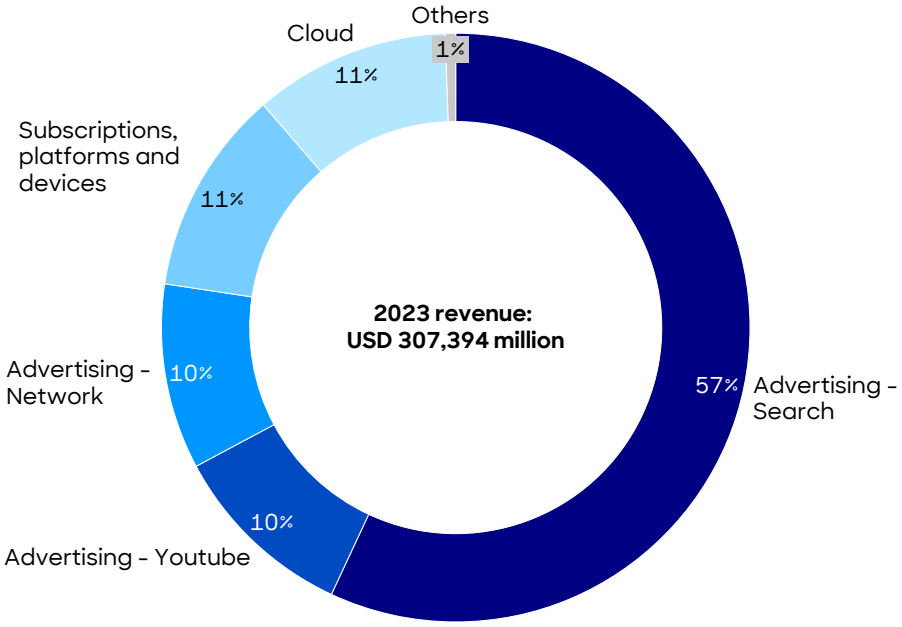
Founded in 1998 as a search engine, the company has since transformed into a versatile technology leader. It is renowned for products like Android and Google Chrome, as well as services such as Google Maps and YouTube. In the digital advertising ecosystem, Google plays a pivotal role by connecting consumers, advertisers and content creators. Consumers interact with content through Google's platforms, while advertisers leverage Google's extensive data to target specific audiences. Content creators, e.g., on YouTube, produce engaging material that attracts viewers.

Figure 99: Number of Malaysian YouTube and Google users [m] [421]



Source: Data Reportal

Figure 100: Alphabet Inc.'s (Google) global revenue breakdown, 2023 [%][422]



Source: Alphabet Inc.

Google's revenue model is heavily reliant on digital advertising, with approximately 77% of its earnings stemming from this segment in 2023. Other sources of revenue for Google include subscriptions and platforms (10%), cloud services (10%) and miscellaneous income (1%).

[421] Data Reportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia

[422] Alphabet Inc. (2023). Form 10-K, page 35. https://abc.xyz/assets/43/44/675b83d7455885c4615d848d52a4/goog-10-k-2023.pdf

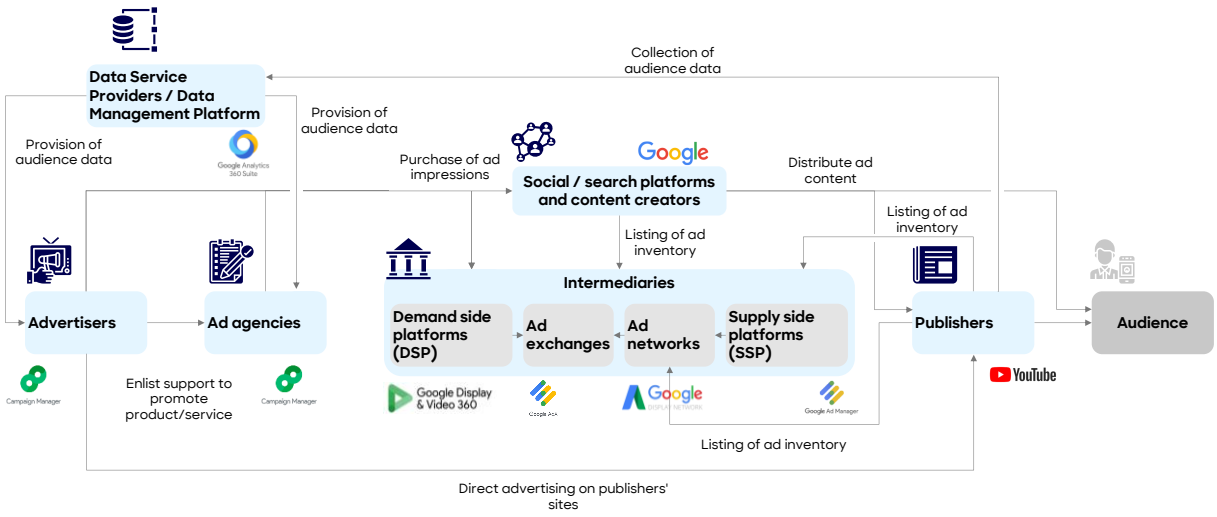
Its primary advertising type is search advertising, where advertisers bid for placements on search results pages, effectively targeting users based on their search intent. Google's services in the ad tech supply chain encompass a range of tools: Google Ads enables advertisers to manage campaigns; Google AdSense allows publishers to monetise content; and the Google Display Network extends display advertising across millions of websites. YouTube serves as a platform for video advertising, while Google Analytics offers insights into campaign performance.

This is complemented by display advertising across the Google Display Network, video ads on YouTube and various ad formats on other platforms like Gmail and Google Maps. The company's browser application (Chrome) plays a critical role in driving traffic and engagement within its ecosystem, contributing to its dominance in the search advertising market.

Google's dominance in search advertising is significantly bolstered by strategic partnerships through Google's Partners program[423]. This initiative is designed for advertising agencies and third parties that manage Google Ads accounts on behalf of other brands or businesses. By collaborating with these partners, Google extends its reach and enhances the effectiveness of its advertising services. The Google Partners directory lists companies with Premier Partner or Partner status, providing businesses with access to advertising experts who can optimize their campaigns. These partnerships enable Google to maintain a strong presence in the advertising ecosystem, ensuring that its services are effectively utilised across various industries and markets. Through these collaborations, Google not only broadens its advertising network but also ensures that its tools and platforms are leveraged to their fullest potential, reinforcing its leadership in the search advertising market.

[423] Google Partners Directory (2025). Partners directory. https://partnersdirectory.withgoogle.com/intl/en-gb/

Figure 101: Google's involvement in the entire digital advertising services supply chain (not exhaustive)



Source: Secondary research

In summary, Google Ads excels in intent-based targeting, primarily using keyword searches to connect with users actively looking for specific products or services. This method allows advertisers to capture high-intent leads effectively. When it comes to ad formats, Google Ads offers a variety of options including search ads, display ads, shopping ads, and video ads through YouTube. These formats are designed to meet user needs by appearing at critical moments in the search journey, making it more effective targeting specific purchasing intent. Google Ads also integrates seamlessly with Google Analytics, offering comprehensive insights into user behaviour across websites. This integration allows advertisers to track conversions and measure ROI with precision.

Table 23: Ad related services offered by Google

Google Ads Service	Role	Integration	Offers to Businesses	Offers to Consumers
Search Ads	Targets users based on search intent via keyword bidding.	Integrated with Google Search and Google Analytics for	High-intent leads, better ROI, measurable	Relevant product/service results when actively searching.

Google Ads Service	Role	Integration	Offers to Businesses	Offers to Consumers
		conversion tracking	campaign success.	
Display Ads	Shows image and banner ads across the Google Display Network (GDN).	Works with AdSense for publisher placements and Google Analytics for performance tracking.	Brand awareness, retargeting potential, reaches across millions of sites.	Discover new brands and products while browsing.
Shopping Ads	Displays product listings with images and pricing in search results.	Integrated with Google Merchant Center and Google Analytics for sales tracking.	Direct product visibility, competitive positioning, increased conversions.	See product details instantly in search, compare options easily.
Video Ads (YouTube)	Serves video-based advertisements before, during, or after videos.	Integrated with YouTube and Google Ads for precise audience targeting.	Engaging storytelling, massive reach on YouTube, better user engagement.	Relevant ads based on interests, non-intrusive skippable ad options.
Gmail Ads	Displays interactive ads within Gmail inboxes.	Integrated with Google Ads audience targeting and Gmail interface.	Personalised direct engagement, high open rates, effective for remarketing.	Relevant promotions in inbox, engaging ad format within emails.
Google Maps Ads	Shows location-based ads in Google	Integrated with Google My Business and Google	Drives foot traffic to stores, enhances	Easily find nearby businesses and special offers.

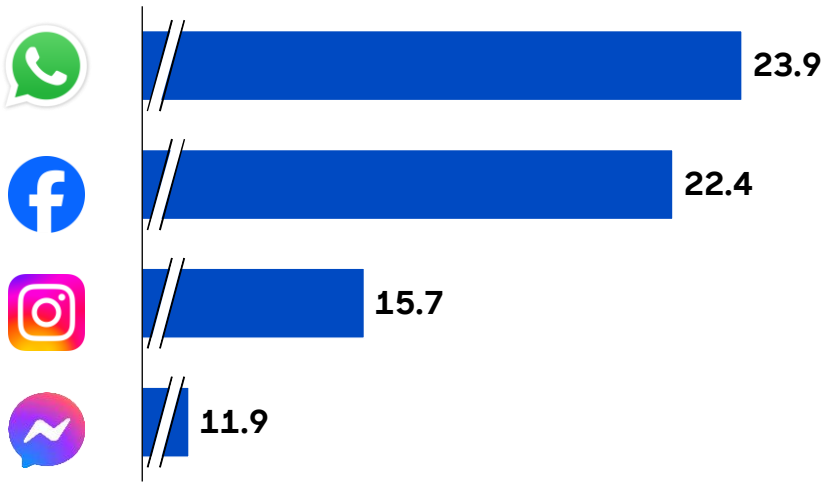
Google Ads Service	Role	Integration	Offers to Businesses	Offers to Consumers
	Maps search results.	Ads location extensions.	local business visibility.	

Source: Google

(b) Meta

Formerly known as Facebook and was initially founded as a social media platform in 2004. It has since grown to become a leading technology company, offering a suite of platforms and services, including Facebook, Instagram, WhatsApp and Messenger. The company rebranded to Meta in 2021 to reflect its focus on building the metaverse – a collective virtual shared space that merges the physical and digital worlds.

Figure 102: Number of Malaysian Meta users [m] [424]



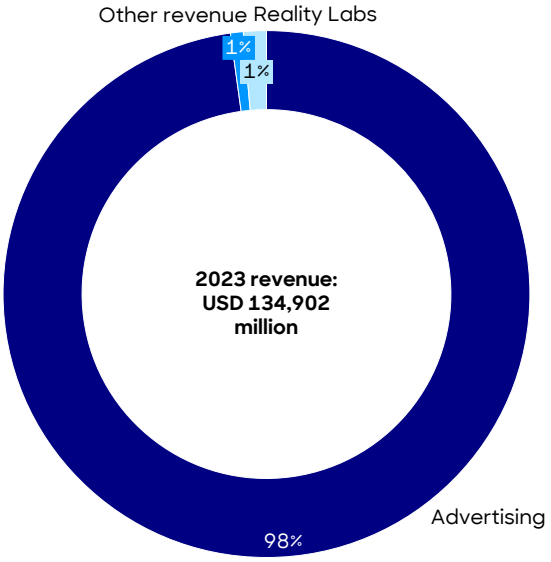
Source: Data Reportal

Meta derives most of its revenue from advertising across its "Family of Apps," which includes (but not limited to) Facebook, Instagram, WhatsApp and Messenger. As of 2023, advertising accounted for 97.8% of Meta's total

[424] Data Reportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia

revenue, with other revenue sources contributing only 0.8% (mainly from WhatsApp Business Platform revenue, where it consists of fees received from developers using Meta's payments infrastructure and revenue from various other sources) and Reality Labs, which includes the delivery of consumer hardware and software, accounted for 1.4%[425]. In Malaysia, Meta was estimated to have earned ~ MYR 2.5 billion.[426]

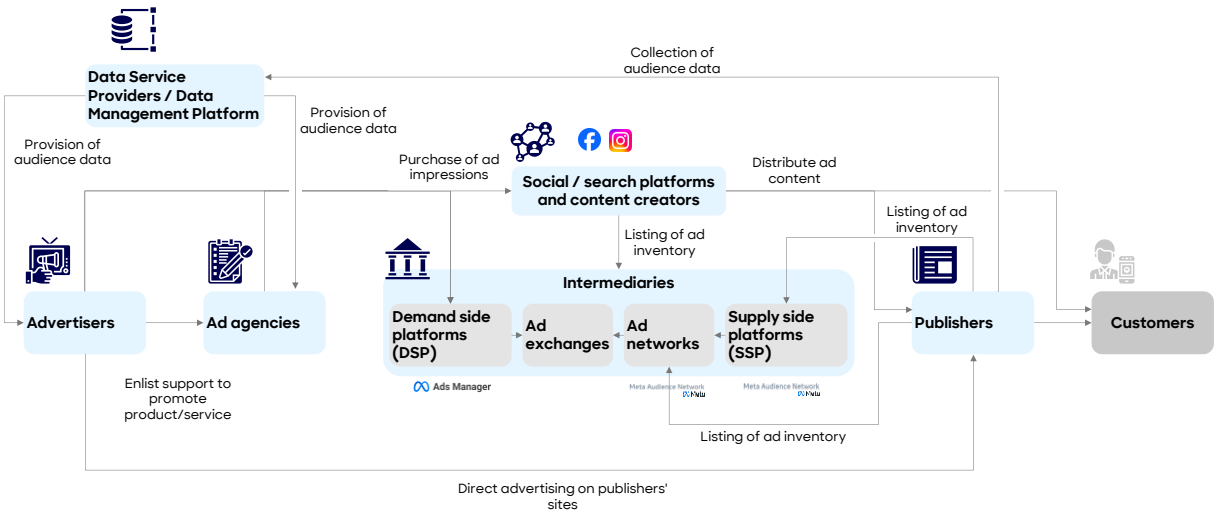
Figure 103: Meta's global revenue breakdown, 2023 [%]



Source: Meta

[425] Meta (2024). Meta investor relations. https://investor.fb.com/financials/default.aspx
[426] New Straits Times (2024). Govt names 8 platforms that must obtain license. https://www.nst.com.my/news/nation/2024/12/1150721/govt-names-8-platforms-must-obtain-licence

Figure 104: Meta's involvement in the entire digital advertising services supply chain



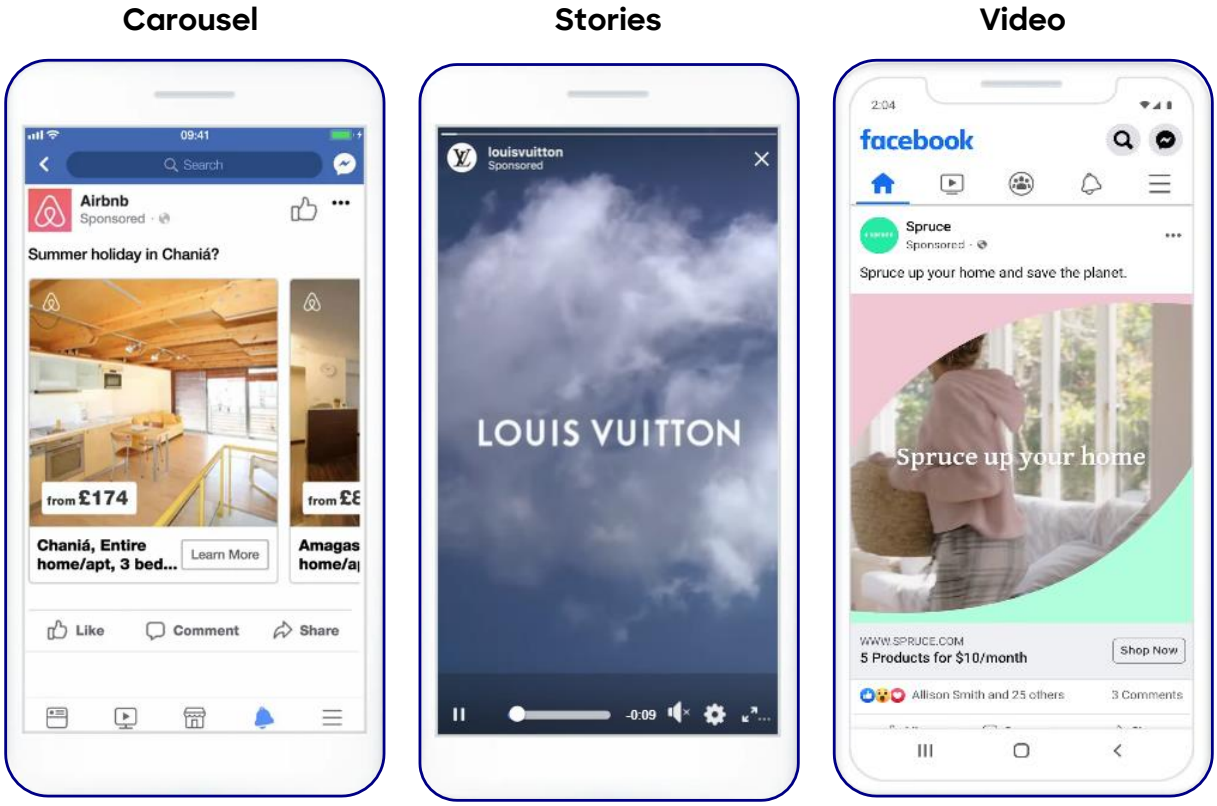
Source: Secondary research

In the digital advertising services supply chain, Meta offers several key services: Meta Ads Manager provides advertisers with tools to create, manage and optimise their campaigns across platforms; Meta Audience Network extends advertising beyond Meta's own apps to partner sites and apps; and Instagram Shopping allows brands to showcase products directly within the Instagram app. Additionally, Meta includes classified advertising options, enabling businesses to list products in the marketplace and run targeted ads based on user demographics and interests. This advertising infrastructure allows businesses to engage consumers across Meta's ecosystem while leveraging targeting capabilities and tools like Meta Business Suite to measure the effectiveness of their campaigns.

In summary, Meta Ads leverages demographic and interest-based targeting, utilising extensive user data from Facebook and Instagram. Advertisers can reach specific audiences based on age, gender, interests, and behaviours, enabling highly personalised campaigns that resonate with users on a personal level. Additionally, Meta's "lookalike audience feature" finds users who share similar traits, behaviours, and demographics with an advertiser's existing customers or leads. It then creates new audiences of users who are likely to engage with ads or convert, improving ad performances and driving more relevant traffic for

advertisers. Meta Ads focuses on visual storytelling through engaging formats such as carousel ads, video ads, and stories. These formats aim to capture attention and encourage interaction within social feeds which allows Meta Ads to build brand awareness through immersive visual content. In terms of performance reports, Meta Ads Manager provides detailed and customisable reports on engagement metrics and audience demographics.

Figure 105: Example of Carousel, Story, and Video ad formats



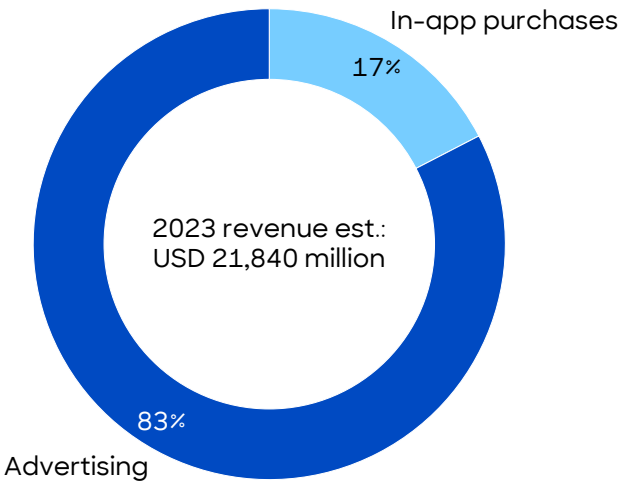
Source: Meta

(c) TikTok

Originally known as Douyin in China, TikTok was launched by Chinese technology company ByteDance in 2016 and rapidly gained global popularity as a short-form 15 – 60 second video platform. By 2018, TikTok had merged with another ByteDance app, Musical.ly to consolidate its presence in the international market, including Malaysia.

In 2023, the number of Malaysian users across TikTok's digital advertising publishing platforms is ~28.7 million[427].

Figure 106: TikTok's global estimated revenue breakdown, 2023 [%][428]



Source: TikTok

In Malaysia, TikTok has seen high growth rates by becoming a significant player in the social media landscape, especially among the younger demographics. Its algorithm-driven feed, known as the "For You" page, curates content tailored to individual user preferences or via user-followed hashtags and hence high engagement and prolonged user sessions, attracting advertisers and content creators alike who look to establish their brand presence beyond existing followers.

TikTok generates revenue in Malaysia primarily through advertising and in-app purchases. Advertising includes branded hashtag challenges, in-feed ads, TopView ads, and sponsored effects whereas in-app purchases are

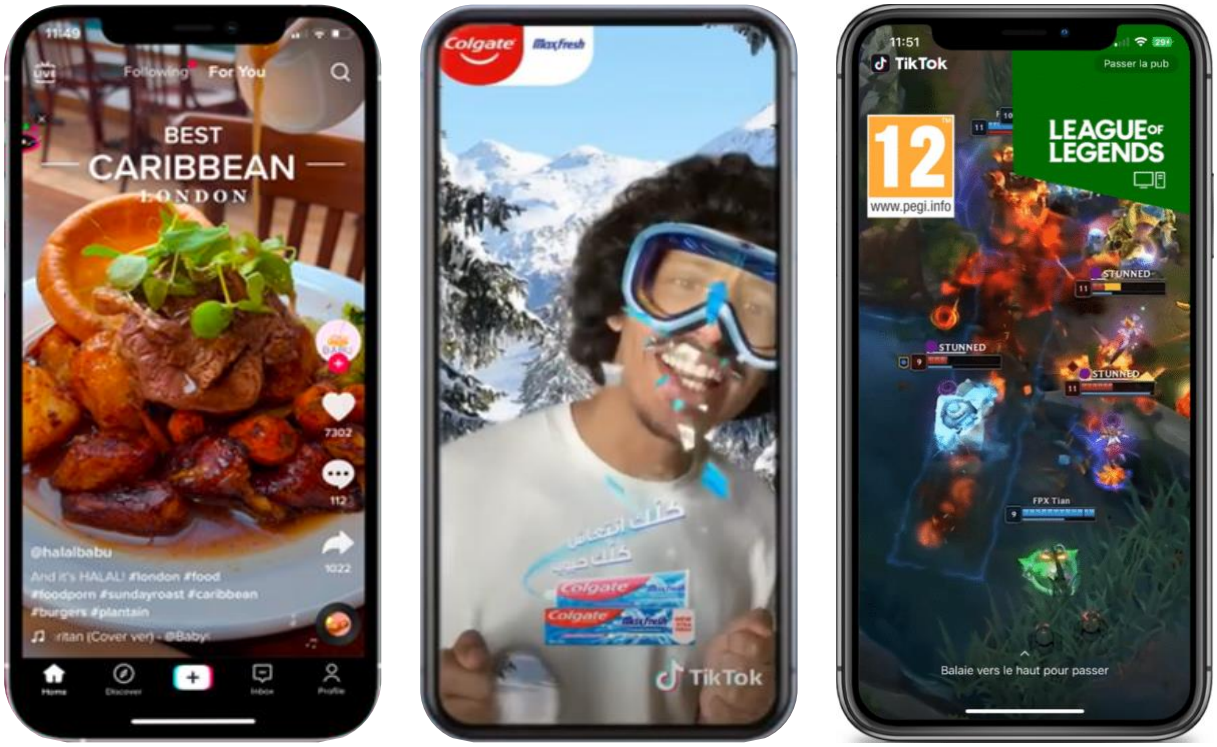
[427] Data Reportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia

[428] TechCrunch (2023). TikTok becomes first non-game app to reach $10B in consumer spending. https://techcrunch.com/2023/12/11/tiktok-becomes-first-non-game-app-to-reach-10b-in-consumer-spending. and EMarketer (2022). TikTok surpasses Snapchat as the favorite app of teens. https://www.emarketer.com/content/tiktok-surpasses-snapchat-favorite-app-of-teens

driven by the sale of virtual coins that users can gift to their favourite creators during live streams, which also contribute to the platform's financial success. Overall, through users' interaction with these features, TikTok is able to collect customer data and browser behaviour to optimise its ad targeting experience, which also supports its other services on its platform[429], including TikTok Shop and merchants using the platform[430].

Figure 107: Example of For You, Branded Hashtag, and Top View features

For You **Branded hashtag** **Top View**



Source: TikTok

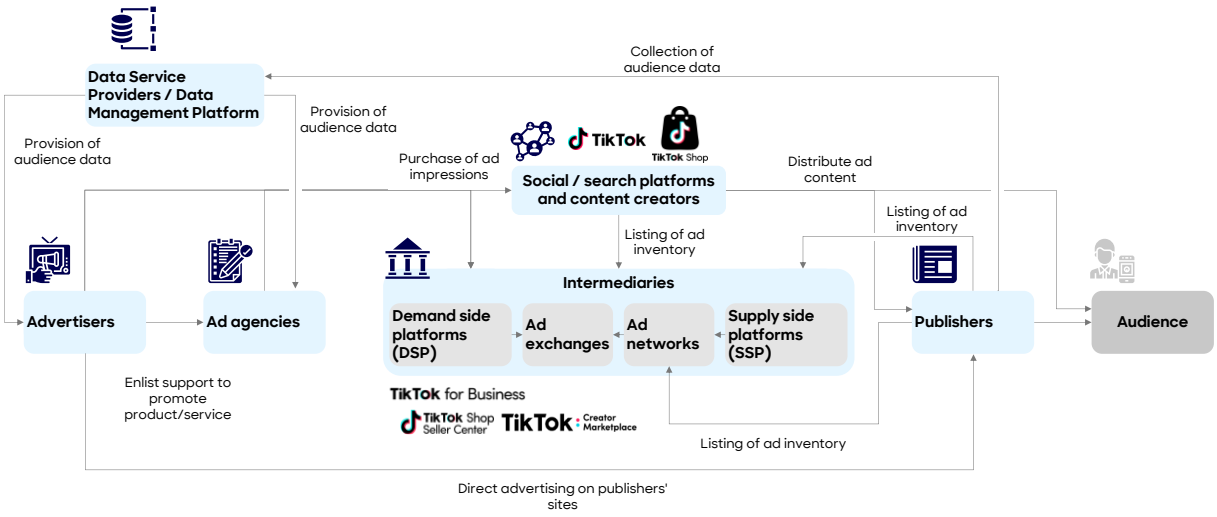
In the digital advertising ecosystem, TikTok offers several key services: TikTok Ads Manager which provides advertisers with tools to create, manage, and optimise their campaigns across the platform; TikTok Creator Marketplace which connects brands with popular local creators for influencer marketing campaigns; and TikTok Shop, which is in its early

[429] TikTok (2024). About data sharing with TikTok Pixel partners. https://ads.tiktok.com/help/article/data-sharing-tiktok-pixel-partners?lang=en

[430] TikTok (2024). Privacy policy. https://www.tiktok.com/legal/page/row/privacy-policy/en

stage and aims to integrate e-commerce capabilities directly within the app to allow Malaysian brands to showcase and sell products seamlessly.

Figure 108: TikTok's involvement in the entire digital advertising services supply chain (not exhaustive)



Source: Secondary research

TikTok's advertising infrastructure enables businesses in Malaysia to engage with an active and diverse user base, leveraging its targeting capabilities and analytics tools to measure campaign effectiveness to bring value to advertisers and publishers across Malaysia. The value is enabled by TikTok's algorithms that initially pick up on numerous signals such as likes, comments, follows, video watch time. This is then further refined through other interactions such as "For You" page, hashtags, search keywords, and more, allowing its algorithm to continuously learn and adapt based on users' interactions, improving its targeted advertising capabilities over time.

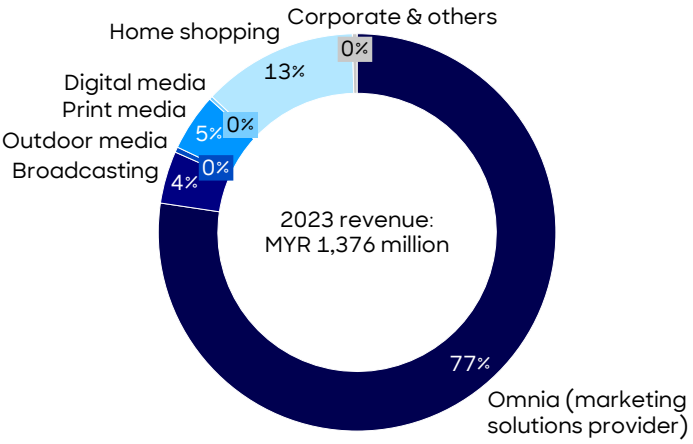
(d) Local players

Aside from Google, Meta and TikTok, several established local players are present in this sub-sector:

Media Prima Group: Founded in 2000, Media Prima Berhad has since grown to become Malaysia's leading fully integrated media group, offering a suite

of platforms and services, including television, radio, print, digital media, and out-of-home advertising.

Figure 109: Media Prima's revenue breakdown, 2023 [%][431]

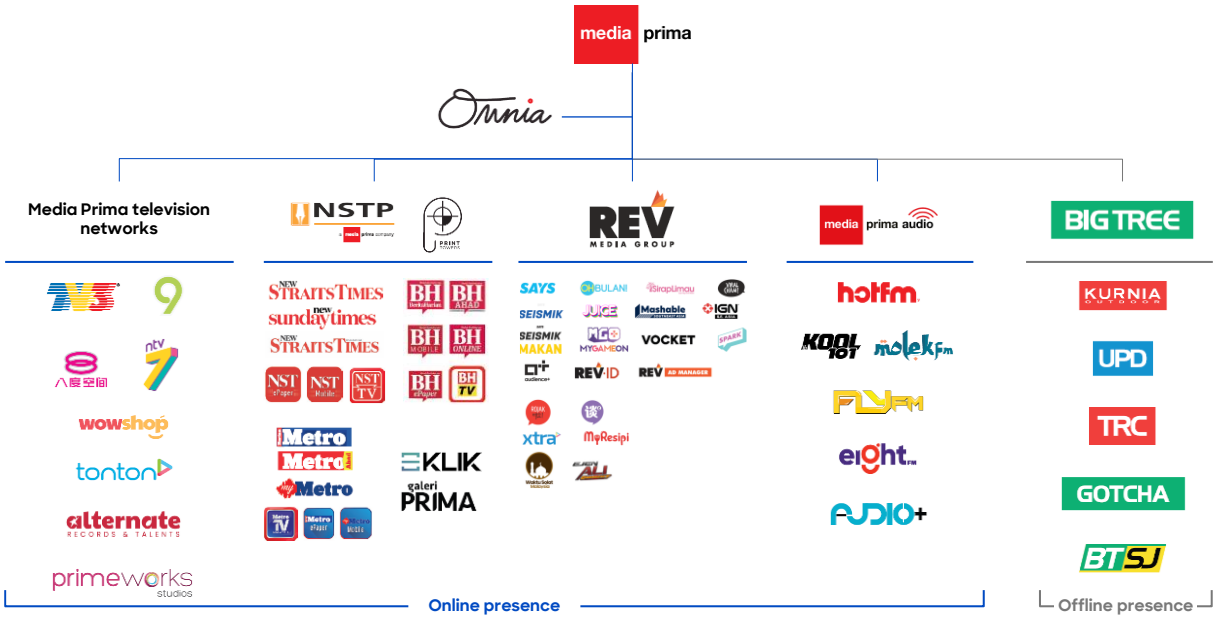


Source: Media Prima

Media Prima derives most of its revenue ~ 90% from advertising across its diverse media platforms including broadcasting (ad-supported free-to-air, commercial radio broadcasting, video-on-demand streaming), outdoor media, print media (printing and publishing), digital media (digital media and online advertising services) and its integrated advertising solutions platform Omnia. Despite its currently smaller online digital segment business at ~ 12% of revenue, it continues to attempt to enhance its digital offerings and increase its digital revenue contribution.

[431] Media Prima (2023). Annual report 2023. https://www.insage.com.my/ir/cmn/downloading.aspx?sFileName=23298000054685&sReportType=AR&sCompanyCode=MEDIA (2023 figures have been pro-rated from a third of 2023 annual report's 18-month figures ending 30-June 2023 and half of 2024 annual report's 12-month figures ending 30 June 2024)

Figure 110: Media Prima corporate structure, 2023



Source: Media Prima

In digital advertising services, Media prima offers several key services via REV Media Group, which provides advertisers with solutions to create, manage, and optimise their campaigns across Media Prima's digital platforms; Big Tree extends advertising beyond traditional media to out-of-home advertising solutions; Tonton is its streaming service that allows brands to showcase products directly within the app via video ads. Through its digital news platforms, Media Prima also enables Malaysian businesses to list classified ads to target relevant user demographics and interests. It is currently integrating AI technology across its group of companies such as piloting AI to generate reels on its Berita Harian channel on Instagram's platform, which aims to generate 7 - 8 million views each month, enhancing productivity.[432]

Lastly, Media Prima, through OMNiA, its omnichannel solution provider that offers creative services and integrated marketing solutions, helping client's advertising needs end-to-end across all Media Prima platforms. It

[432] New Straits Times (2024). Media Prima to integrate AI tech across all its companies by year-end: Rafiq. https://www.nst.com.my/business/corporate/2024/10/1113426/media-prima-integrate-ai-tech-across-all-its-companies-year-end

integrates best in class adtech and martech (advertising and marketing technology) to ensure that its media assets, such as Digital Out Of Home (DOOH), e-commerce, and on-ground work together to connect data points to create a unique singular audience tailored to Malaysia. This will enable advertisers to work with REV Media and target local premium Malaysian websites whilst support the local ecosystem. Global players such as Meta, Google, and TikTok, although big, may not show the same enthusiasm or focus on developing local expertise, which allows REV Media to continue compete by differentiating itself from the big players through better content localisation.[433]

Astro Malaysia: One of the largest media and entertainment companies in Malaysia, providing satellite television, radio and digital content. It offers a wide range of channels, catering to diverse audiences with programming in various languages. Its advertising division, Astro Media Solutions, provides comprehensive advertising solutions across its own assets: television, radio, digital platforms (over 40 with focus on news, entertainment, lifestyle) and celebrity/ Key Opinion Leader (KOL) (102 talents)[434] .

The company has also focused on improving its advertising services, as evidenced by the launch of its addressable advertising solution in 2022. According to Astro, the approach merges the precision targeting capabilities of digital advertising with the persuasive power of television. Through leveraging first-party data collected directly from Astro viewers, it allows advertisers to deliver relevant ads to specific households[435].

Star Media Group: Established in 1971, Star Media Group is one of Malaysia's largest media organisations, operating newspapers, radio stations and digital platforms. Its flagship publication, The Star, is widely read in the country. Its advertising services offer integrated solutions

[433] REV Media (2022). Rev Media group accelerates first party data with unifying audiences across digital out of home, e-commerce and on-ground events. https://revmedia.my/rev-media-group-accelerates-first-party-data-with-unifying-audiences-across-digital-out-of-home-e-commerce-and-on-ground-events/
[434] As of October 2024
[435] Astro (2025). Addressable Advertising. https://astromedia.com.my/addressable-advertising/

across its print, digital (e.g., The Star Online, mStar, Majoriti, myStarjob.com, StarProperty, Car Sifu, Kuali.com) and broadcast media.

Table 24: Key digital advertising players in Malaysia

Key players	Advertising services			
	Campaign management	Intermediary / programmatic	Social media / content creator	Publishing
Google	Campaign Manager	Google Display & Video 360, Google Ad Manager, Google Display Network	n/a	YouTube, Google
Meta	Meta Ads Manager	Meta Audience Network		n/a
TikTok	TikTok for Business	TikTok for Business	TikTok Creator Marketplace, TikTok	n/a
media prima	Omnia	n/a	SPARK	New Straits Times, Metro, BH
	astro media solutions	n/a		GEMPAK, astro AWANI, XUAN, astro ulagam
Star Media Group	n/a	n/a	n/a	The Star, Majoriti, Star CarSifu, mStar

Source: Secondary research

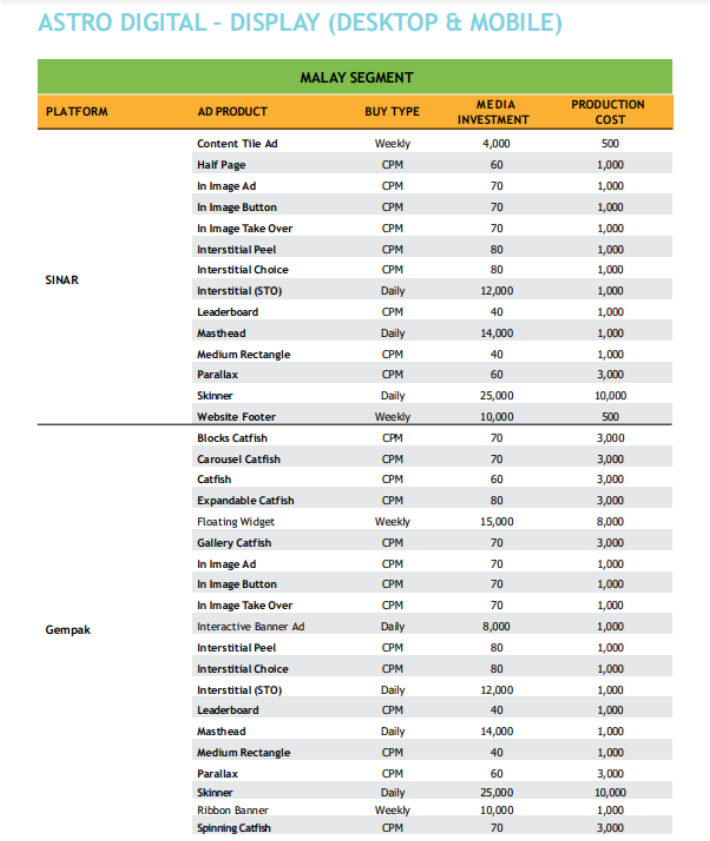
According to the above table, local players are actively competing in the digital advertising market in the publishing segment but focusing on more traditional ad formats (non-social and video). As social media and video ad formats continue to grow and Malaysia's digital advertising market starts to mature, local players may struggle to compete as they are currently not in the intermediary/programmatic segment of the value chain, and they are also heavily utilising global players' social media channels to carry out their own social media ad campaigns and initiatives.

However, local players are continuously trying to differentiate themselves in segments where they are lacking such as through offering talent management services under the social media/content creator segment and establishing themselves as the go-to for campaign creation and management, providing end-to-end marketing and advertising solutions for brands and advertisers.

4.3.7 Key market-related issues

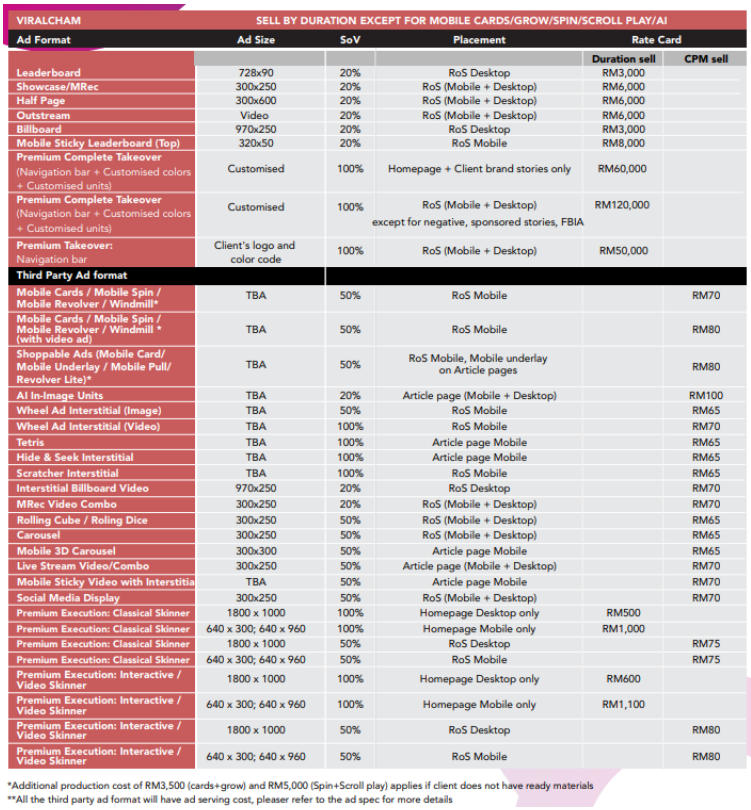
a. **Manual direct ad buying:** Remains the preferred method of ad inventory purchase by many advertisers in Malaysia. However, it is inefficient, time-consuming, and limits reach, particularly for smaller players who struggle with manual processes compared to larger advertisers. This practice not only hampers the ability to scale campaigns but also stifles market competitiveness and growth by preventing the adoption of more efficient, automated solutions.

Figure 111: Example rate cards from local Malaysian publishers



ASTRO DIGITAL - DISPLAY (DESKTOP & MOBILE)

MALAY SEGMENT				
PLATFORM	AD PRODUCT	BUY TYPE	MEDIA INVESTMENT	PRODUCTION COST
SINAR	Content Tile Ad	Weekly	4,000	500
	Half Page	CPM	60	1,000
	In Image Ad	CPM	70	1,000
	In Image Button	CPM	70	1,000
	In Image Take Over	CPM	70	1,000
	Interstitial Peel	CPM	80	1,000
	Interstitial Choice	CPM	80	1,000
	Interstitial (STO)	Daily	12,000	1,000
	Leaderboard	CPM	40	1,000
	Masthead	Daily	14,000	1,000
	Medium Rectangle	CPM	40	1,000
	Parallax	CPM	60	3,000
	Skinner	Daily	25,000	10,000
	Website Footer	Weekly	10,000	500
Gempak	Blocks Catfish	CPM	70	3,000
	Carousel Catfish	CPM	70	3,000
	Catfish	CPM	60	3,000
	Expandable Catfish	CPM	80	3,000
	Floating Widget	Weekly	15,000	8,000
	Gallery Catfish	CPM	70	3,000
	In Image Ad	CPM	70	1,000
	In Image Button	CPM	70	1,000
	In Image Take Over	CPM	70	1,000
	Interactive Banner Ad	Daily	8,000	1,000
	Interstitial Peel	CPM	80	1,000
	Interstitial Choice	CPM	80	1,000
	Interstitial (STO)	Daily	12,000	1,000
	Leaderboard	CPM	40	1,000
	Masthead	Daily	14,000	1,000
	Medium Rectangle	CPM	40	1,000
	Parallax	CPM	60	3,000
	Skinner	Daily	25,000	10,000
	Ribbon Banner	Weekly	10,000	1,000
	Spinning Catfish	CPM	70	3,000



VIRALCHAM	SELL BY DURATION EXCEPT FOR MOBILE CARDS/GROW/SPIN/SCROLL PLAY/AI				
Ad Format	**Ad Size**	**SoV**	**Placement**	**Rate Card**	
				Duration sell	**CPM sell**
Leaderboard	728x90	20%	RoS Desktop	RM3,000	
Showcase/MRec	300x250	20%	RoS (Mobile + Desktop)	RM6,000	
Half Page	300x600	20%	RoS (Mobile + Desktop)	RM6,000	
Outstream	Video	20%	RoS (Mobile + Desktop)	RM6,000	
Billboard	970x250	20%	RoS Desktop	RM3,000	
Mobile Sticky Leaderboard (Top)	320x50	20%	RoS Mobile	RM8,000	
Premium Complete Takeover (Navigation bar + Customised colors + Customised units)	Customised	100%	Homepage + Client brand stories only	RM60,000	
Premium Complete Takeover (Navigation bar + Customised colors + Customised units)	Customised	100%	RoS (Mobile + Desktop) except for negative, sponsored stories, FBIA	RM120,000	
Premium Takeover: Navigation bar	Client's logo and color code	100%	RoS (Mobile + Desktop)	RM50,000	
Third Party Ad format					
Mobile Cards / Mobile Spin / Mobile Revolver / Windmill*	TBA	50%	RoS Mobile		RM70
Mobile Cards / Mobile Spin / Mobile Revolver / Windmill * (with video ad)	TBA	50%	RoS Mobile		RM80
Shoppable Ads (Mobile Card/ Mobile Underlay / Mobile Pull/ Revolver Lite)*	TBA	50%	RoS Mobile, Mobile underlay on Article pages		RM80
AI In-Image Units	TBA	20%	Article page (Mobile + Desktop)		RM100
Wheel Ad Interstitial (Image)	TBA	50%	RoS Mobile		RM65
Wheel Ad Interstitial (Video)	TBA	100%	RoS Mobile		RM70
Tetris	TBA	100%	Article page Mobile		RM65
Hide & Seek Interstitial	TBA	100%	Article page Mobile		RM65
Scratcher Interstitial	TBA	100%	RoS Mobile		RM65
Interstitial Billboard Video	970x250	20%	RoS Desktop		RM70
MRec Video Combo	300x250	20%	RoS (Mobile + Desktop)		RM70
Rolling Cube / Roling Dice	300x250	50%	RoS (Mobile + Desktop)		RM65
Carousel	300x250	50%	RoS (Mobile + Desktop)		RM65
Mobile 3D Carousel	300x300	50%	Article page Mobile		RM65
Live Stream Video/Combo	300x250	50%	Article page (Mobile + Desktop)		RM70
Mobile Sticky Video with Interstitia	TBA	50%	Article page Mobile		RM70
Social Media Display	300x250	50%	RoS (Mobile + Desktop)		RM70
Premium Execution: Classical Skinner	1800 x 1000	100%	Homepage Desktop only	RM500	
Premium Execution: Classical Skinner	640 x 300; 640 x 960	100%	Homepage Mobile only	RM1,000	
Premium Execution: Classical Skinner	1800 x 1000	50%	RoS Desktop		RM75
Premium Execution: Classical Skinner	640 x 300; 640 x 960	50%	RoS Mobile		RM75
Premium Execution: Interactive / Video Skinner	1800 x 1000	100%	Homepage Desktop only	RM600	
Premium Execution: Interactive / Video Skinner	640 x 300; 640 x 960	100%	Homepage Mobile only	RM1,100	
Premium Execution: Interactive / Video Skinner	1800 x 1000	50%	RoS Desktop		RM80
Premium Execution: Interactive / Video Skinner	640 x 300; 640 x 960	50%	RoS Mobile		RM80

*Additional production cost of RM3,500 (cards+grow) and RM5,000 (Spin+Scroll play) applies if client does not have ready materials
**All the third party ad format will have ad serving cost, pleaser refer to the ad spec for more details

Source: Astro and Media Prima

b. **Lack of comprehensive performance measurement metrics:** Research on local publishers, such as Astro, Media Prima, and The Edge Malaysia, reveals that digital ads are typically quoted based on CPM, per ad, or per duration. However, there is limited information available on alternative metrics like CPA, CPV, and others. As Malaysia's advertising market matures, advertisers are likely to demand more comprehensive metrics, beyond just CPM, such as CPA and CPV to better assess campaign effectiveness.

4.3.8 Competition assessment

4.3.8.1 Market share

The digital advertising industry is highly concentrated, with a few dominant players—Google and Meta—controlling a significant portion of global ad tech entities. According to the U.S. Department of Justice, Google's dominance in ad tech results in market shares ranging from 40% to 90%. Similarly, the Canadian Competition Bureau (CCB) highlighted that Google

holds a dominant position in publisher ad servers at 90%, 70% in advertiser networks, 60% in demand-side platforms, and 50% in ad exchanges[436]:

In Malaysia, insights from industry stakeholders indicate that Meta has a substantial share of the digital advertising market, particularly among SMEs. However, these figures are not tracked by relevant associations or national statistics.

4.3.8.2 Market dynamics

The evolution of digital advertising in Malaysia has been shaped by global players from the early days of the internet to present-day key players such as Google (incl. YouTube), Meta (Facebook and Instagram), and TikTok.

From a social media perspective, Facebook (now Meta), gained traction in Malaysia with its global launch back in 2004 and quickly became the dominant social networking platform by early 2010's, quickly displacing industry incumbents such as Friendster and MySpace, the former of which was around four times bigger than both Facebook and MySpace in 2008 in Malaysia.[437] Instagram, another popular social media platform famous for visual content started off in 2010 has quickly integrated other short-form video content such as "stories" in 2016, beating out originator Snapchat that launched in 2011 to become a key player in Malaysia today. The new entrant disrupting the social media landscape in Malaysia is TikTok, which emerged most recently in 2018 and has quickly risen to become one of Malaysia's most used apps especially amongst *Gen* Z due to its engaging short-form video format.

From a video publishing perspective, Google acquired YouTube in 2006, just one year after it launched, and has remained the dominant video sharing platform in Malaysia ever since. Google also launched a localised

[436] Government of Canada (2024). Backgrounder: Competition Bureau sues Google for anti-competitive conduct in online advertising in Canada. https://www.canada.ca/en/competition-bureau/news/2024/11/backgrounder-competition-bureau-sues-google-for-anti-competitive-conduct-in-online-advertising-in-canada.html

[437] MCMC (2009). Advertising development in Malaysia. https://mcmc.gov.my/skmmgovmy/media/General/pdf/Ad_Dev_Malaysia_compressed.pdf

YouTube site in 2012 for Malaysia to solidify its influence, offering tailored content and advertising opportunities for Malaysian creators and brands.

In order to strengthen its local presence, Google launched a localised YouTube site in 2012, providing tailored content and advertising opportunities for Malaysian creators and brands. Beyond its direct platforms, Google has also actively partnered with various digital agencies and advertisers to optimize ad performance and drive business growth. Through its Premier Partner program, Google collaborates with leading agencies and marketing firms to provide businesses in Malaysia with cutting-edge digital advertising solutions, further cementing its role as a key driver of the country's digital advertising ecosystem.

From a display publisher perspective, Star Media Group was a pioneer in the digital advertising market in the 1990s, launching its e-portal, The Star Online[438]. Similarly, Astro Malaysia Holdings, established in 1996, made its mark in the digital space. Media Prima Group, while its individual brands like NST and Berita Harian had e-versions in the 1990s, launched a dedicated digital business unit, Media Prima Digital, in 2012 to streamline and optimise its digital operations across multiple platforms[439]. In 2017, Media Prima further expanded its digital presence with the acquisition of digital media group REV Media[440].

From a search platform perspective, Google launched Google Ads globally back in 2000 but officially established a local office in 2011 to enhance its presence and bring aboard local businesses onto Google Ads. Google managed to overtake Yahoo due to its superior search results and user experience. It has since remained the dominant search engine in Malaysia and globally.

[438] The Star Online (2024). Our history. https://www.starmediagroup.my/about-us/our-history
[439] Marketing Interactive (2012). Media Prima Digital launched. https://www.marketing-interactive.com/media-prima-digital-launched
[440] Digital News Asia (2017). REV Asia enters into US$24mil deal with Media Prima Digital. https://www.digitalnewsasia.com/business/rev-asia-enters-landmark-deal-media-prima-digital

4.3.8.3 Degree of horizontal and vertical integration

Integration activities within the digital advertising sub-sector are active among key players. In the late 2000s and early 2010s, major companies like Google and Meta made significant efforts to strengthen their positions in ad tech and the publishing side.

Google's acquisitions of DoubleClick (2007), AdMob (2009), and Invite Media (2010) enabled it to control both the supply and demand sides of the advertising market. Additionally, Google acquired YouTube in 2006 as part of its strategy to expand its advertising capabilities. Meanwhile, Meta expanded beyond Facebook through acquisitions such as Instagram (2012) and WhatsApp (2014), to reinforce its dominance in social advertising. These integrations allow companies to offer end-to-end advertising solutions, reducing reliance on third-party platforms.

4.3.8.4 Level of entry barriers

Entering the digital advertising market has become increasingly challenging due to high capital requirements, data access limitations, and regulatory constraints. Such investments are typically feasible only for established players who can also cross-subsidise these activities.

For example, programmatic advertising platforms necessitate advanced AI-driven bidding systems, extensive user data, and integration with various ad networks, making it prohibitively expensive for new entrants. Furthermore, dominant players often maintain exclusive relationships with key advertisers and publishers, creating network effects that further entrench their market positions.

4.3.9 Key anti-competitive issues

4.3.9.1 Vertical integration of incumbent *players*

Description: Highly integrated players can create significant barriers to entry in the digital advertising space, making it challenging for other players to compete. Firstly, these companies dominate the market through their extensive reach along the value chain via sophisticated targeting

capabilities, exclusive control over critical platforms, and longstanding relationships with both advertisers and publishers alike. Secondly, their size and resources enable them to implement strategies that further enhance their market power, such as cross-subsidisation. This requires robust technology, effective data analytics capabilities, and strong cash flow to use profits and information from one product or service to support another.

According to the World Bank Group's Digital Antitrust Database, which tracks global market competition and technology, Google remains a prominent player in the digital advertising space. Of the 23 online search and advertising-related cases recorded between 2006 and 2022, 19 (83%) involved Google. The remaining cases were linked to the Korean platform, Naver and the Russian platform, Yandex (more details can be found in the relevant cases sub-section)[441].

An example can be seen from Google overseeing multiple levels of the ad tech supply chain, especially through its previous notable acquisitions in DoubleClick (ad inventory management platform) in 2007 and Invite Media (exchange bidding platform) in 2010. Alongside its already owned AdWords (advertiser demand side platform) and publishing sites such as Google.com and Youtube.com, this structure enables possibilities for conflicts of interest and self-preferencing, wherein Google may prioritise its own ad inventory over that of competitors. This may potentially violate competition law and reduce market competitiveness and choice for advertisers and publishers. Alongside its Android operating platform, it can assign IDs to a user that is persistent across its consumer-facing services to quickly or accurately link together data collected from all first- and third-party sources[442].

The above-mentioned issues are global in nature, affecting all players who utilise ad tech in their digital advertising efforts. However, while the Malaysian advertising market is developed, the adoption of ad tech is still

[441] World Bank Group (2025). The Global Markets Competition and Technology Digital Antitrust Database. https://dataviz.worldbank.org/views/Global-Digital-Antitrust-Database/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y

[442] ACCC (2019). Digital advertising services inquiry, page 39. https://www.accc.gov.au/system/files/Digital%20advertising%20services%20inquiry%20-%20final%20report.pdf

in its early stages. As ad tech adoption grows, these challenges are likely to become more prevalent.

Implication on competition:

- **Limiting advertisers' choices** and increasing dependence on dominant players.

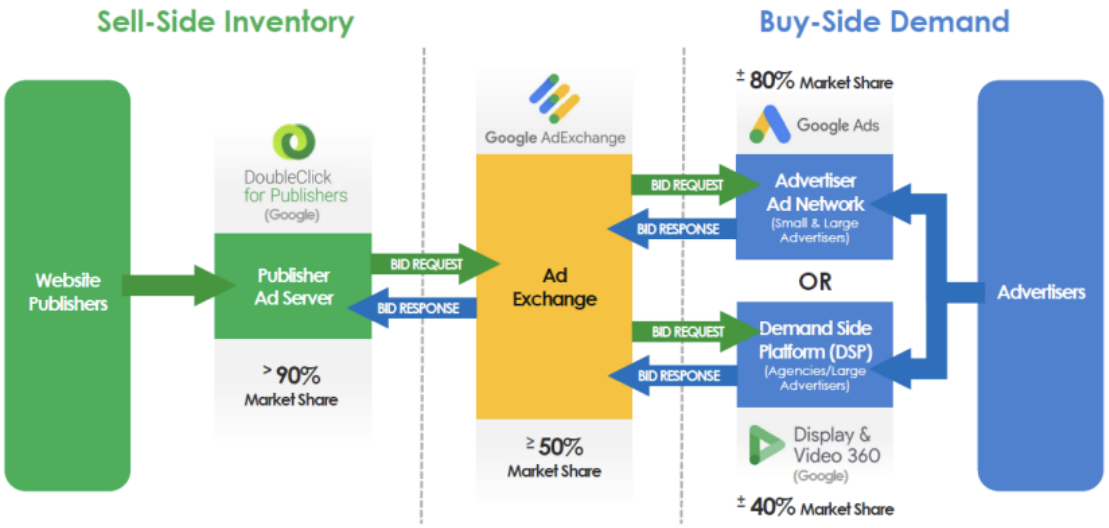
- **Self-preferencing**, where key players may prioritise own ad inventory.

- **High barriers to entry** for smaller platforms and publishers face as they might need substantial investments to compete, but still risk being undercut by dominant players.

- **Increased reliance on advertisers** to selected players, therefore potentially leading to higher fees, less effective ad spending, and publishers losing control over their ad inventories and revenue opportunities.

Relevant case(s): In January 2023, the Department of Justice (DOJ) and 17 states filed a lawsuit against Google, accusing the company of illegally monopolising the digital ad tech market. The DOJ argues that Google engaged in practices such as manipulating ad prices in auction systems to favour Google's own tools and acquiring and eliminating competitors to strengthen its market dominance.

Figure 112: Dominance of Google along the ad tech supply chain in US[443]



Source: US DOJ

It also noted that Google controls the largest ad exchange, Google Ad Exchange, and owns several key ad tech products, including Google Ad Manager and two ad-buying tools, DV360 and Google Ads, with market shares ranging from 40% to 90%.

Effectively, the DOJ and states seek a ruling declaring:

- Google's monopoly as illegal;
- A break-up of Google's ad tech business (requiring the sale of its publisher ad server and ad exchange); and
- An injunction against further anti-competitive practices.

In September 2023, the DOJ launched its second antitrust lawsuit against Google, alleging that it had illegally monopolised the search market and controlled how people view the internet and what ads they see through its Chrome browser, which holds about two-thirds of the global market. The DOJ accused the company of using acquisitions and anti-competitive

[443] US DOJ (2023). Case document, page 31. https://www.justice.gov/atr/case-document/file/1566706/dl

practices to dominate both the supply and demand sides of online advertising, overcharging advertisers, and underpaying publishers. One proposal included breaking up parts of the company, such as potentially selling off its Chrome business, to restore fair competition[444].

Similarly, in November 2024, the Canadian Competition Bureau (CCB) accused Google of abusing its dominant position in online advertising by granting preferential access to its own tools, sometimes selling ads at a loss to block competitors, and imposing restrictive terms on the use of third-party ad tech. The CCB highlighted that no other ad tech provider rivals Google's scale, noting that over CAD 200 billion in web ad transactions flowed through Google's platforms in 2022. It further pointed out Google's dominant market share in Canada: 90% in publisher ad servers, 70% in advertiser networks, 60% in demand-side platforms, and 50% in ad exchanges. In response, the CCB is seeking three actions against Google[445]:

- The sale of two key ad tech tools: its publisher ad server, Google DoubleClick, and its ad exchange, Google Ad Exchange;

- An administrative monetary penalty, calculated as three times the value of the benefit derived from Google's anti-competitive practices, or, if that amount cannot be determined, 3% of Google's worldwide gross revenues;

- A prohibition on Google from continuing its anti-competitive conduct and practices.

In February 2024, Google faced a EUR 2.1 billion lawsuit filed by 32 European media organisations, including Axel Springer and Schibsted, alleging that Google's dominant position in digital advertising undermines fair competition. The lawsuit claims Google's role as the dominant ad server, broker, auctioneer, and sales agent creates a conflict of interest,

[444] Reuters (2024). DOJ to ask judge to force Google to sell off Chrome, Bloomberg News reports. https://www.reuters.com/technology/doj-ask-judge-force-google-sell-off-chrome-bloomberg-reports-2024-11-18/

[445] Government of Canada (2024). Backgrounder: Competition Bureau sues Google for anti-competitive conduct in online advertising in Canada. https://www.canada.ca/en/competition-bureau/news/2024/11/backgrounder-competition-bureau-sues-google-for-anti-competitive-conduct-in-online-advertising-in-canada.html

resulting in financial losses for publishers. The plaintiffs argue that these practices have reduced advertising revenues and increased fees for ad tech services, further harming European media landscape[446].

Observations in Malaysia: Local players highlighted that there is still a long way for local publishers to compete effectively, particularly when it comes to differentiation and technological capabilities. The dominance of global platforms makes it challenging for smaller, local publishers to offer comparable value or advanced tools for advertisers.

Additionally, it will be difficult to persuade SMEs to shift their advertising spend away from Google and Meta due to the long-standing market dominance of these companies. This reliance on global platforms also creates a regulatory challenge for governments, as they must address the power these companies hold while considering the impact on SMEs that rely heavily on their services for effective advertising (advertisers and agencies highlighted that a large percentage of ad spend in Malaysia is assumed to come from SMEs, but this is not accurately tracked).

4.3.9.2 Lack of transparency in ad mechanisms

Description: Lack of transparency happens both in ad pricing and delivery mechanisms. Advertisers and publishers alike often struggle to understand the decision-making processes behind digital advertising due to opaque algorithms and auction processes which are used to allocate and match ad campaigns to ad inventories.

These platforms use proprietary complex algorithms that process large amount of real-time data to deliver targeted advertising. When a user visits a website or app, an ad inventory opportunity triggers an auction. Advertisers then bid based on factors like user demographics, browsing behaviour, location, and ad relevance. The winning ad is determined not just by the bid amount, but by an "ad rank," which incorporates the quality of the ad, the bid, and its relevance to the user. This auction process occurs in milliseconds, making it dynamic and challenging to predict. The

[446] CNBC (2024). Google hit with $2.3 billion lawsuit by Axel Springer, other media groups. https://www.cnbc.com/2024/02/28/google-hit-with-2point3-billion-lawsuit-by-axel-springer-other-media-groups-.html

complexity arises because these algorithms continuously optimise by analysing massive datasets to improve targeting and performance. As a result, the opaque nature of these processes makes it challenging for all parties along the supply chain to fully grasp how decisions are made, specifically:

- **Advertiser's point of view (POV):** Without clear visibility into how some platforms or intermediaries prioritise the ad inventory, advertisers may face higher costs as these platforms can favour large advertisers with higher ad spend or long-term contracts, reducing opportunities for smaller advertisers to compete effectively. Additionally, the lack of transparency hampers' advertisers' ability to assess the actual effectiveness and ROI of their ad campaigns, leaving them uncertain about how their budgets are allocated.

- **Intermediary's POV:** Limited access to detailed bid data and parameters restricts smaller intermediaries from effectively competing with established players. This lack of clarity in auction rules and data sharing discourages new entrants from challenging dominant platforms, further stifling innovation, and reducing competitive dynamics in the intermediary market.

- **Publisher's POV:** Lack of transparency in auction bidding can result in skewed revenue distribution and potentially self-preferencing by platforms. Larger integrated players may prioritise their own or their partner's publishing sites, undermining smaller publishers' ability to secure fair ad placements.

There is also growing trend where major players are introducing "black box" tools, positioned to simplify the advertiser's job by integrating ML and AI into ad tech, further complicating the issue:

- **Google:** In 2021, Google launched Performance Max (PMax), a goal-based campaign type that allows advertisers to access all Google Ads inventory through a single campaign. This tool gives advertisers limited control over where their ads appear, as AI takes over

audience targeting and channel selection across Google's platforms, including YouTube, Display, Gmail, Maps, and more[447].

- **Meta:** In 2022, Meta introduced Advantage+ Shopping Campaigns. Advertisers input their goals, budgets, and product feeds, and Advantage+ uses ML and AI algorithms to take over, optimising campaigns by analysng the intended results and applying advertising best practices across Meta's various platforms[448].

Implication on competition:

- **Unfair operating conditions**, as advertisers are largely unable to assess the effectiveness and ROI of their campaigns.

- **Barriers for new intermediary entrants** as unclear auction rules and limited data sharing discourage new players from challenging dominant platforms.

- **Skewed revenue distribution** as dominant platforms may favour own inventory or that of their partners, therefore limiting smaller publishers' ability to earn fair ad revenues.

Relevant case(s):

Google was previously found to have a "Last Look" advantage around the time when header bidding was introduced in 2014-2015, whereby its SSPs had the opportunity to submit a real-time bid to beat the winning bid from other SSPs in header bidding auctions[449].
This practice raised concerns about fairness and transparency in ad transactions from publishers and competing exchanges. In response, Google removed this "Last Look" advantage entirely in 2017 across all

[447] Google Ads Help (2025). About Performance Max campaigns. https://support.google.com/google-ads/answer/10724817?hl=en
[448] Funnel (2023). How do Meta's Advantage+ campaigns work? https://funnel.io/blog/meta-advantage-plus
[449] AdExchanger (2017). Google removes its 'last-look' auction advantage. https://www.adexchanger.com/platforms/google-removes-last-look-auction-advantage/

markets[450], making its auction process more neutral and transparent. Now, all participating exchanges, including Google's AdExchange (AdX), submit their final bids simultaneously, and the highest bid wins. While this change addressed some transparency issues and levelled the playing field for other ad exchanges, Google retains advantages due to its unparalleled access to user data and its control over other ad tech platforms taking part in these bids[451].

Besides, the Alliance of Digital India Foundation (ADIF), representing startups and app developers, has filed a complaint with the Competition Commission of India (CCI) against Google, alleging anti-competitive practices in the online advertising sector. ADIF contends that Google's dominance in the ad-tech stack and initiatives like the Privacy Sandbox impose unfair conditions on advertisers, thereby distorting competition[452].

ADIF argues that Google's control over the ad-tech ecosystem creates an environment where advertisers struggle to assess the effectiveness and return on investment (ROI) of their campaigns. By leveraging its dominant position, Google can impose opaque policies and practices that limit advertisers' access to critical performance data, leading to inefficient ad spend and reduced transparency[453].

The complaint highlights that Google's integration of its products, such as DoubleClick for Publishers with AdX and Display & Video 360 with AdX, restricts market access for competitors. This bundling practice discourages new intermediary entrants by creating a high barrier to entry, as they cannot compete with Google's comprehensive ad-tech stack.

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[450] MarTech (2017). Countering header bidding, Google drops its 'last look' advantage. https://martech.org/countering-header-bidding-google-drops-last-look-advantage/

[451] ACCC (2021). Digital advertising services inquiry, page 11. https://www.accc.gov.au/system/files/Digital%20advertising%20services%20inquiry%20-%20final%20report.pdf

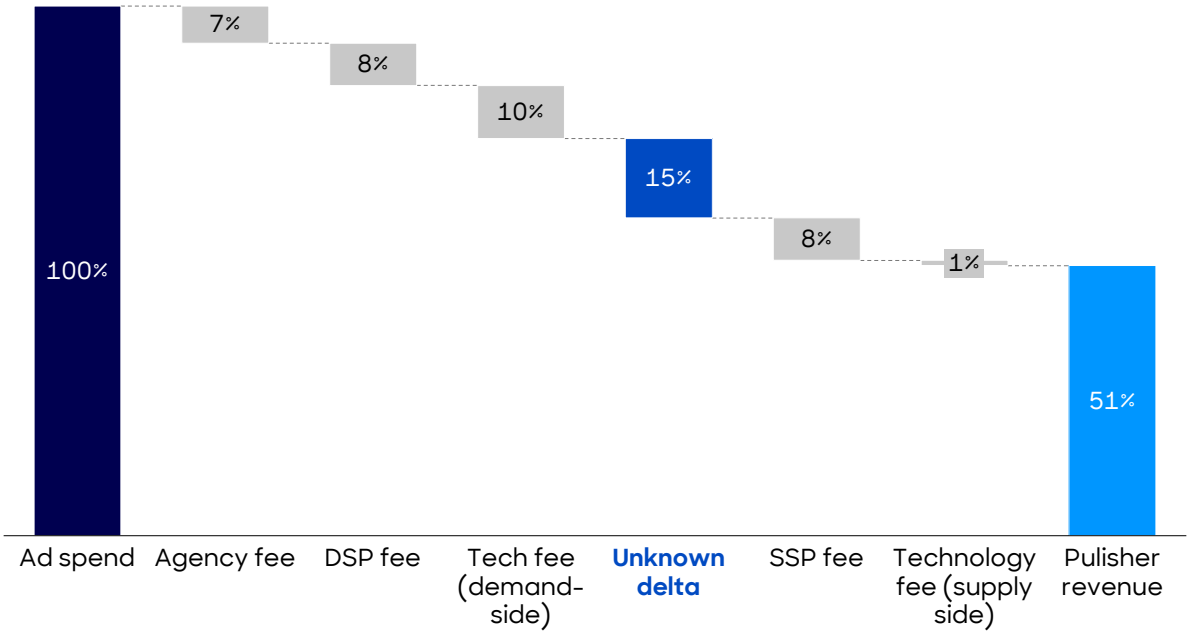
[452] Brand Equity (2024). ADIF challenges Google's dominance in online advertising; files complaint with CCI. https://brandequity.economictimes.indiatimes.com/news/advertising/adif-challenges-googles-dominance-in-online-advertising-files-complaint-with-cci/112282944

[453] Medianama (2024). Alliance of Digital India Foundation accuses Google of anti-competitive ad-tech practices in India. https://www.medianama.com/2024/08/223-alliance-of-digital-india-foundation-adif-accuses-google-of-anti-competitive-ad-tech-practices-in-india/

Additionally, Google's plan to phase out third-party cookies through the Privacy Sandbox initiative could further entrench its market power, making it challenging for new players to offer competitive advertising solutions. ADIF also raises concerns about Google's control over major online platforms and its ability to favor its own inventory or that of its partners. This preferential treatment limits smaller publishers' ability to earn fair ad revenues, as they are often sidelined in favor of Google's offerings. Such practices can lead to a concentration of advertising spend within Google's ecosystem, disadvantaging independent publishers and reducing diversity in the digital advertising market.

These allegations underscore the broader implications of market dominance in the digital advertising industry, highlighting the need for regulatory scrutiny to ensure fair competition and transparency.

Figure 113: Programmatic advertising supply chain take rates



Source: Incorporated Society of British Advertisers

Lack of transparency along the digital advertising supply chain poses significant challenges as it is widely understood in the industry that there are still some discrepancies in fund flow and costs along the value chain. For example, in an advertiser-funded supply chain transparency study in

the UK[454] in 2022 estimated ~15% of costs within the digital advertising supply chain that were unaccounted for (labelled "unknown delta"). These discrepancies highlight ongoing concerns about opaque fund flows and hidden costs along the value chain, which can undermine confidence in the system and disadvantage smaller players unable to afford or adapt to such inefficiencies.

Observations in Malaysia: Local ad publishers noted that the auction bidding processes used by key ad tech players are opaque, revealing only the identity of the losing bidder rather than the winning bid price. This lack of transparency impacts advertisers' ability to understand the competitive landscape, making it difficult to optimise their bidding strategies and resulting in less effective campaign management.

Additionally, platforms only share benchmark data, such as industry averages or performance metrics, leaving advertisers with limited insight into how they can improve their own campaigns. This restriction on detailed data sharing further limits advertisers' ability to fine-tune their ad strategies for better targeting and higher ROI.

4.3.9.3 Potential violation of data privacy

Description: Data privacy is a critical issue in digital advertising, as the extensive collection of user data offers companies significant competitive advantages. These advantages include better audience insights, higher-quality ad inventory, and more precise targeting for advertisers. However, in their pursuit of capturing more data, many companies may engage in invasive and unethical practices. This is especially common among vertically integrated companies or those within large corporate groups, where they can use user data extensively to generate competitive advantages or share it across affiliated companies within the conglomerate, often without user consent. This allows them to gain an unfair edge over smaller competitors by tailoring their products and services more effectively.

[454] Incorporated Society of British Advertisers (2023). Programmatic Supply Chain Transparency Study. https://www.isba.org.uk/knowledge/programmatic-supply-chain-transparency-study

One factor contributing to these companies' ability to collect data from users is the lengthy and complex nature of terms and conditions, which often discourage users from engaging with privacy settings. The UK CMA reports that less than 5% of users actively manage their privacy settings on platforms like Google and Facebook [455] . Similarly, the Australian Competition & Consumer Commission (ACCC), in its Digital Platform Services Inquiry 2020-2025, highlights that lengthy and ambiguous privacy policies, often using "take-it-or-leave-it" terms, make it difficult for consumers to understand and control how their data is used[456].

As these industry practices have evolved, consumers are left with limited control over their personal data, raising privacy concerns. The disparity in how user data is controlled by larger platforms versus smaller players further exacerbates competition issues, as it creates an uneven playing field where dominant companies can further entrench their position in the market.

Implication on competition:

- **Uneven playing field** where large players have the advantage of accessing extensive data, strengthening their market position.

- **High entry barriers** for smaller players who lack access to the same data resources.

Relevant case(s): In February 2019, Meta was accused by Bundeskartellamt of anti-competitive practices. Specifically, the authority found fault with how Meta combined data from different sources, such as Facebook, Instagram and third-party apps, without obtaining explicit consent from users. The ruling emphasised that Meta's approach violated users' rights and created an unfair competitive advantage by consolidating data across platforms to reinforce its market power. This practice enabled Meta to build a data-driven competitive edge, limiting

[455] CMA (2020). Online platforms and digital advertising market study, page 174. https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study

[456] ACCC (2024). Consumers lack visibility and choice over data collection practices. https://www.accc.gov.au/media-release/consumers-lack-visibility-and-choice-over-data-collection-practices

competition in the digital market. To address these concerns, the authority sought to enhance user control over data and foster a fairer competitive environment, instructing Meta to amend its data practices in compliance with privacy laws[457]. Following scrutiny from Bundeskartellamt, Meta took several steps to address the issues. The main initiatives included:

- **Launch of the Accounts Centre:** Allowing users to separate their data across different platforms such as Facebook and Instagram.

- **Updated cookie settings:** New cookie settings to separate Facebook data from other data types.

- **Clearer consent notifications:** Made sure users received clear and prominent notifications when accessing Facebook, directing them to easily accessible consent options.

- **Temporary data retention for security:** Committed to storing data only temporarily for security reasons, specifying the duration for which data would be retained.

In July 2024, Meta was accused of violating EU antitrust rules with its ad-supported subscription service, which the EC describes as a "pay or consent" model. This means users must either pay to access ad-free versions of Facebook and Instagram or agree to have their data processed for personalised advertising. The EC founds this practice breached the DMA, stating it limits users' ability to freely consent and consolidates Meta's market power by using consent as a condition for access. Regulators also noted that Meta's model lacks an option for a less personalised service equivalent to its social platforms, raising concerns over user autonomy and competitive fairness[458].

[457] The Economic Times (2024). Germany closes Meta case after data measures agreed. https://economictimes.indiatimes.com/tech/technology/germany-closes-meta-case-after-data-measures-agreed/articleshow/114121675.cms?from=mdr

[458] PBS News (2024). European Union says Meta breaking digital rules with paid ad-free option for Facebook and Instagram. https://www.pbs.org/newshour/world/european-union-says-meta-breaking-digital-rules-with-paid-ad-free-option-for-facebook-and-instagram

In an attempt to address the concerns, Meta made updates to its subscription model in November 2024. The company reduced the price of its ad-free subscription by 40% and provided free users with the option to see fewer personalised ads[459]. However, by January 2025, the changes were still met with criticism, particularly from the European Consumer Organisation (BEUC), which labelled the adjustments as "cosmetic change". BEUC has since urged the EU to take further action in response to the issue[460].

Observations in Malaysia: According to various local publishers, there is a growing push for stricter regulation on data privacy, which could hinder the competitiveness of local players. As the existing data pool for local publishers is already small, further regulation will make it difficult for them to compete with major players like Meta and Google, who have access to vast amounts of user data.

4.3.9.4 Removing 3rd party tracking

Description: Third-party cookies are small pieces of data stored on a user's device by a website other than the one they are currently viewing. In the context of digital advertising, these cookies are used by advertisers and marketers to collect information about a user's browsing behaviour across multiple websites such as pages visited, time spent on sites, and interactions with content. This data then allows advertisers to build detailed profiles of users, enabling them to deliver highly targeted and personalised ads to improve user engagement and increase conversion rates for their products and services. However, the extensive use of third-party cookies over time has led to user privacy and trust concerns as companies track their online activities and information without explicit consent and without users knowing which entities are obtaining their information.

[459] Facebook (2024). Facebook and Instagram to offer subscription for no ads in Europe. https://about.fb.com/news/2024/11/facebook-and-instagram-to-offer-subscription-for-no-ads-in-europe/

[460] BEUC (2025). Consumer groups red card Meta's latest pay-or-consent policy. https://www.beuc.eu/press-releases/consumer-groups-red-card-metas-latest-pay-or-consent-policy

Third-party cookies are small pieces of data stored on a user's device by a website other than the one they are currently viewing. In the context of digital advertising, these cookies are used by advertisers and marketers to collect information about a user's browsing behaviour across multiple websites, such as pages visited, time spent on sites, and interactions with content. Over time, this data allows advertisers to build detailed profiles of users, enabling them to deliver targeted and personalised ads to improve user engagement and increase conversion rates for their products and services.

Two types of third-party cookies are collected:

- **Strictly necessary:** Websites typically use mandatory cookies that are essential for the site to function properly. These cookies, such as those for session management or authentication (e.g., login cookies), require user acceptance before accessing the site.

- **Functional:** Cookies that are used for analytics, advertising, or social media tracking, are typically not essential for the site's core functionality but are used for improving user experience or delivering targeted content.

Both cookie types, once disabled, will still allow users to access the website, but certain functionalities, such as personalised ads or content recommendations, may be limited. Some websites might also restrict access to certain services or require minimal cookie acceptance to ensure basic functionality, like enabling shopping cart features or keeping users logged in.

A key growing concern is that the extensive use of third-party cookies has led to privacy and trust issues, as companies track users' online activities and gather information without explicit consent, leaving users unaware of which entities are collecting their data. Today, the trend with third-party cookies is shifting toward a "blocked by default" or "opt-in" model, giving internet users more control over what is tracked, particularly through the browsers they use. Popular browsers like Safari and Firefox have already implemented the "block by default" approach, but Google Chrome, one of the most widely used browsers globally, has yet to remove third-party

cookies. Despite several delays, Chrome's eventual removal of third-party cookies may mark a significant shift in digital advertising, potentially disrupting traditional tracking methods and challenging advertisers', publishers and ad tech's ability to target audiences effectively.
Below summarises the impact of third-party cookies on various parties along the supply chain:

- **Advertisers**: The loss of third-party cookies means advertisers may struggle to maintain precise targeting, potentially reducing the effectiveness of campaigns and lowering ROI. Additionally, they may face increased costs to reach their targeted audience.

- **Publishers**: Cookies allow publishers to deliver more targeted and relevant ads. Without them, targeting could become less effective, potentially lowering CPM rates and reducing overall ad revenue.

- **Ad Tech**: The loss of third-party cookies makes it challenging for ad tech providers to offer detailed targeting and reporting features. Without these cookies for tracking and reporting, ad tech providers may find it difficult to sell more relevant ad inventory and optimize bidding.

- **End-users**: Many users view third-party cookies as an invasion of privacy since they track browsing behavior across multiple websites without explicit consent, leading to growing privacy concerns.

Implication on competition:

- **Reduced competition** as the removal of third-party cookies may benefit established global players (due to vast access to first-party data), reinforcing its dominance in digital advertising.

- **Uneven playing field for smaller advertisers** as they will struggle to compete due to the high costs of adapting to new targeting methods.

- **Weakened competition among publishers** as smaller players face difficulties selling ad inventories at lower rates, consolidating market power among a few dominant players.

Relevant case(s): In April 2021, Apple introduced App Tracking Transparency (ATT) with the iOS 14.5 update, requiring apps to ask for user permission before tracking their activities across other apps and websites. This initiative aimed to enhance user privacy and provide consumers with more control over their personal data. The response from users was largely positive (from the perspective of the end user). According to Singular[461], a marketing analytics company, ATT opt-in rate (allow tracking) is only at 14% globally across all verticals.

However, the move faced criticism from industry players. Advertisers, especially smaller ones, expressed concerns about reduced targeting accuracy and the increased cost of reaching desired audiences. The lack of third-party tracking data led to less personalised ad campaigns, decreasing their effectiveness and ROI. App developers also feared user churn due to the additional consent prompts, which could alienate users and negatively impact engagement. Effectively, this will lead to less effective ad campaigns, disproportionately impacting smaller advertisers reliant on the platform's data[462].

Separately, Google previously made similar efforts to follow in Apple's footsteps, but has recently rolled back on this decision to remove third party cookie tracking from Chrome in July 2024.[463] Despite this, Google plans to continue investing in its Google Privacy Sandbox, an initiative which proposes new technology, including Topics API, Attribution Reporting, Private Aggregation API, and Protected Audience API, which aim to balance interest-based advertising with user privacy[464]. This means

[461] Singular (2024). ATT opt-in rates 2024: down, down, down (but here's how to improve). https://www.singular.net/blog/att-opt-in-rates-2024/
[462] Forbes (2022). How does Apple's App Tracking Transparency framework affect advertisers? https://www.forbes.com/councils/forbesbusinesscouncil/2022/08/22/how-does-apples-app-tracking-transparency-framework-affect-advertisers/
[463] Wired (2024). What Google's U-turn on third-party cookies means for Chrome privacy. https://www.wired.com/story/google-chrome-third-party-cookies-privacy-rollback/
[464] Clearcode (2024). Google's privacy sandbox explained. https://clearcode.cc/blog/chrome-privacy-sandbox-explained/

continuing to serve targeted ads based on user interests while respecting privacy rights, by reducing reliance on third-party cookies and limiting cross-site tracking. However, regulators have raised antitrust and privacy concerns, such as Google's control over Privacy Sandbox and risks of user fingerprinting.

Advertisers are responding by testing alternative such as contextual targeting and identify resolution strategies to adapt the growing prevalence of cookieless environments[465].

Observations in Malaysia: According to local ad publishers, Meta and Google's access to first-party data within their own publishing ecosystems (e.g., Facebook, Instagram, YouTube) allows for optimal audience targeting. This is largely due to their large scale and reduced reliance on third-party data.

While some Malaysian advertisers are growing more cautious about sharing their data, opening opportunities for new players to emerge, this shift remains a distant goal for the local market.

4.3.9.5 Limited access to selected ad inventory

Description: Limited access to selected ad inventory in digital advertising exchanges presents several challenges for advertisers. Firstly, the exclusivity of certain popular ad inventories, such as those on Facebook or YouTube, which are only accessible through their own platforms like Meta Audience Network or Google Ads, may limit competition by restricting the channels through which advertisers can purchase these ads. Even advertisers with sufficient resources to navigate these complex platforms may face higher costs and less effective ad rates, particularly for premium ad inventories. These ad spaces are often priced based on their exclusivity and the platform's control over a large volume of inventory, rather than the actual effectiveness of the ad placements. As a result, large advertisers may experience lower ROI in their campaigns. This dynamic further entrenches the dominance of major platforms, making it more difficult for

[465] Forbes (2024). What advertisers should do now: Google reverses decision to eliminate third-party cookies. https://www.forbes.com/sites/forrester/2024/07/25/google-reverses-decision-to-eliminate-third-party-cookies/

smaller players to compete, and stifles innovation and competition within the market.

Secondly, there are challenges in the limited availability of skilled users adept at using these proprietary ad management platforms. In particular, small advertisers often lack the resources and skill sets (e.g., technical proficiency in the ad platforms, targeting and segmentation skills, etc.) to fully utilise the advanced services and offerings of major platforms, leaving them with fewer alternative channels and strategies to execute their ad campaigns. As a result, their advertising efforts become fragmented, with inconsistent messaging, and weakened competitive positioning in the marketplace. This fragmentation not only hampers their ability to reach and engage target audiences effectively, but also diminishes their overall return on investment in advertising.

Implication on competition:

- **High barriers to entry** for smaller advertisers due to the specialised skill sets required to effectively utilise advanced ad tech services and offerings.

- **Reduced competition** in the ad tech space due to the exclusivity of certain platforms, limiting access to premium ad inventories and consolidating control among major players.

Relevant case(s): In June 2021, EC raised concerns about Google's requirement for advertisers to use its Ad Manager and services like Display & Video 360 (DV360) and Google Ads to display ads on YouTube. This practice potentially restricted rivals' access to YouTube ad inventory, giving Google an unfair advantage. This investigation followed over EUR 8 billion in fines[466] for Google over the past decade for blocking rivals in various markets, including online advertising. To address these concerns, Google proposed allowing third-party ad tech providers access to

[466] Reuters (2021). Google in EU crosshairs again with adavertising antitrust inquiry. https://www.reuters.com/technology/eu-antitrust-regulators-investigate-googles-adtech-business-2021-06-22/

YouTube's inventory. The proposal, which aims to prevent further fines, remains under assessment by the EC[467].

Japan's Fair Trade Commission (JFTC) recently found that Google imposed restrictive conditions on Yahoo Japan's keyword-targeted search advertising services, limiting its ability to compete fairly in the digital ad market. These restrictions, in place for over seven years, led to reduced competition and market consolidation. Following an investigation, Google agreed to lift these restrictions but was not found to have violated anti-monopoly laws. Google will remain under regulatory review for three years to ensure compliance [468]. These developments underscore the global scrutiny of Google's practices in the digital advertising ecosystem and highlight the ongoing efforts by regulatory bodies to ensure fair competition.

Observations in Malaysia: In Malaysia, advertisers continue to rely heavily on global platforms like Google and Meta for access to premium ad inventory, as many of the leading ad format publishers operate on a global scale. Local ad inventories, in comparison, often lack the variety and scalability required to compete, making it challenging for advertisers to secure high-quality placements in the local market.

4.3.9.6 Discrepancy in ad performance metrics

Description: The issue of different performance management metrics amongst digital advertising platforms and publishers arises primarily due to a lack of consistent and coherent standards across platforms. Metrics such as CPM, CPA, CPV, and others can vary in their definitions and calculations from one platform to another. This non-standardisation may be driven by various factors, including the unique data models and algorithms used by each platform, differences in tracking user interactions, variations in reporting periods, and the strategic use of metrics as a competitive advantage over other players.

[467] Reuters (2022). Exclusive Google offers to let ad rivals place YouTube ads in EU antitrust probe - sources. https://www.reuters.com/technology/exclusive-google-offers-let-ad-rivals-place-youtube-ads-eu-antitrust-probe-2022-06-13/

[468] Yahoo Finance (2024). Japan's anti-monopoly body orders Google to fix ad search limits affecting Yahoo. https://finance.yahoo.com/news/japans-anti-monopoly-body-orders-083206187.html

These inconsistencies can disadvantage smaller platforms or publishers that may not have the same reporting capabilities or access to robust analytics as larger, more dominant players. These advertisers may need to invest additional resources to understand and experiment with different platforms and publishers to determine which metrics are most suitable for their ad campaigns.

Additionally, the unfamiliarity with the derivation or calculation of these metrics often drives new or less experienced advertisers to rely on dominant international platforms, limiting their willingness to trial smaller ad exchanges or publishers. Over time, the lack of opportunities for smaller ad exchanges and publishers to showcase their capabilities can stifle innovation and reduce the diversity of offerings in the marketplace.

Larger platforms with more resources and proprietary metrics may benefit disproportionately, further entrenching their market position and reducing competitive pressures. Consequently, advertisers face confusion and difficulties in choosing a suitable platform or publisher to buy ad inventories from.

Implication on competition:

- **High barriers to entry** due to the need to invest in robust reporting capabilities.

- **Uneven playing field** where smaller platforms heavily rely on established players.

- **Weakened competitive landscape** for new intermediaries and publishers.

- **Reduced market innovation and diversity**, as new players have fewer opportunities to bring alternative offerings to the market.

Relevant case(s): Although common in digital advertising, ad discrepancies are still closely monitored across different platforms. A recent article in June 2024 showed that Facebook Ads and Google Analytics report

different metrics for clicks and conversions due to their different tracking methods. Facebook attributes conversion to when a user interacts with an ad, while Google Analytics tracks based on when the conversion happens. These discrepancies may negatively affect advertisers' decision-making, leading to poor budget allocation, ineffective campaign adjustments, and inaccurate ROI calculations. From a competition perspective, smaller advertisers face greater challenges, as reconciling these discrepancies requires additional technical expertise and resources[469].

Observations in Malaysia: According to local players, a key reason for the non-standardised metrics used by key players is that by creating proprietary or unique methods to measure and report performance, platforms can make it harder for advertisers to directly compare their effectiveness with competitors. This complexity and lack of transparency may encourage advertisers to remain within a particular ecosystem, ultimately benefiting the platform.

[469] OWOX (2023). Differences between Facebook ads and Google analytics 4 conversions (and how to fix that). https://www.owox.com/blog/articles/differences-facebook-ads-google-analytics-4/

4.4 Online Travel Agencies (OTAs)

4.4.1 Key findings

Figure 114: Snapshot of the OTA market in Malaysia

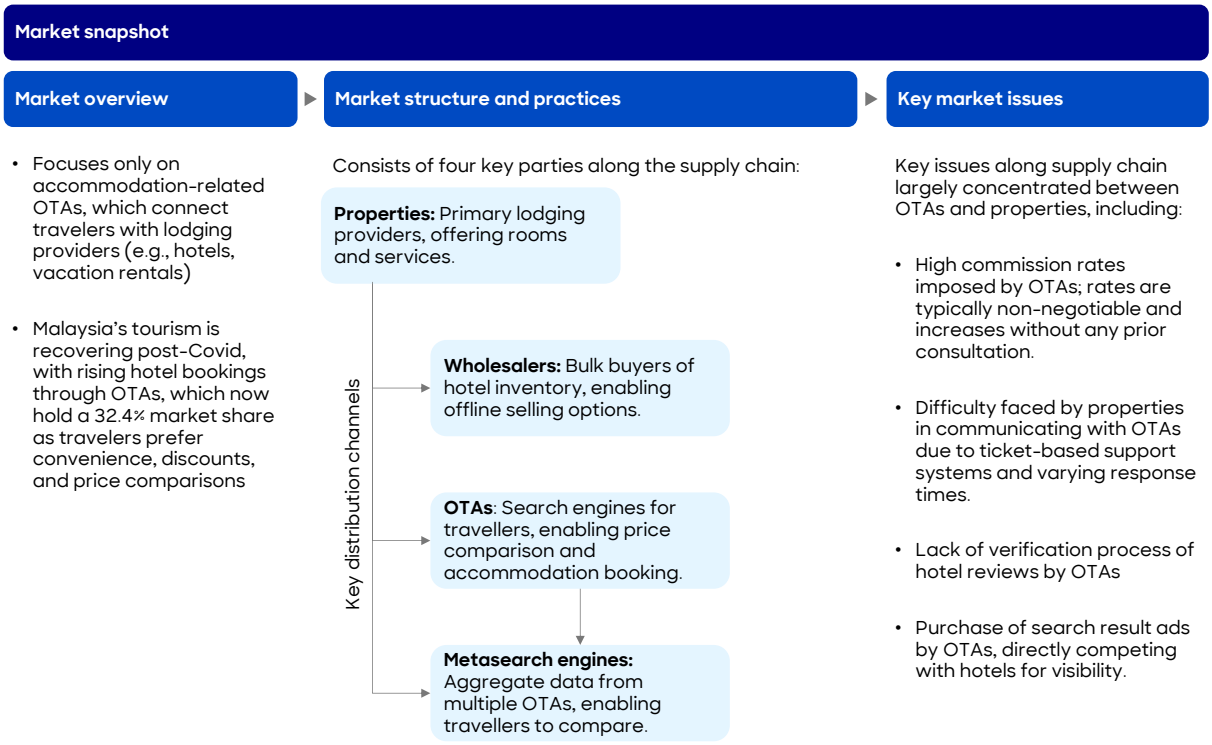
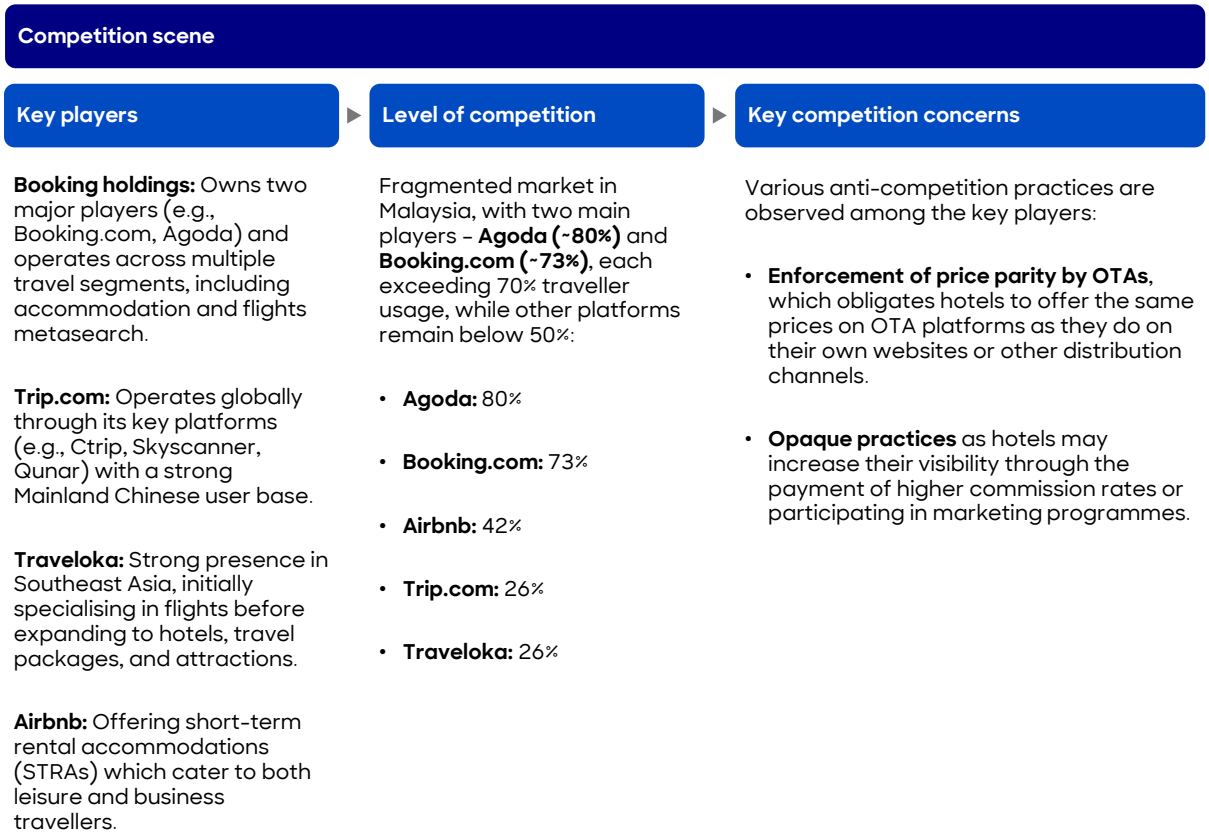


Figure 115: Snapshot of the OTA sub-sector's competitive scene in Malaysia



4.4.2 Market definition

OTAs are digital platforms that facilitate the booking of travel-related services by connecting travellers with various service providers across the travel ecosystems. These platforms let user search, compare, and book travel options like accommodations, flights, and travel packages, making trip planning easier and more efficient.

In Malaysia, the Ministry of Tourism, Arts, and Culture (MOTAC) requires OTAs to have a license under the Tourism Industry Act 1992. This rule covers all digital platforms providing travel services. Companies that wish to apply for the Tour Operating/Travel Agency Business (TOBTAB) License must submit their applications to the Tourism License Division through the Tourism Industry Licence System (SPIP)[470].

[470] MIDA (2021). Tourism and Travel Related Services, page 8. https://www.mida.gov.my/wp-content/uploads/2023/11/Booklet-9-Tourism-Travel-2021.pdf

This market review focuses specifically on accommodation-related OTAs, which specialise in connecting travellers with lodging providers such as hotels, vacation rentals, and hostels. Accommodation-focused OTAs enable users to filter lodging options based on criteria such as price, location, amenities, and guest reviews, simplifying the process of finding accommodations tailored to individual preferences. These platforms typically operate on a commission-based model, charging lodging providers a fee for each booking. This model incentivised properties (hotels) to leverage OTAs to gain visibility and reach a broader, global audience. Additionally, OTAs offer value-added features such as integrated third-party payment systems and customer service support, further enhancing the booking experience for travellers.

While there are other types of OTAs cater to different segments of the travel industry, they fall outside the scope of this review, including:

- **Flight bookings:** OTAs such as AirAsia MOVE and Skyscanner enable users to compare and book airline tickets from various carriers.

- **Travel Experiences:** OTAs such as Tourplus and LokaLocal provide access to tours, attractions, and activities, catering to travellers seeking curated experiences.

The activities of the OTA sub-sector impact the following MSIC industries:

Table 25: MSIC codes relevant to the OTA sub-sector

MSIC Code	MSIC Industry Description
55101	Hotels and resort hotels
55012	Motels
55013	Apartment hotel
55104	Chalets
55105	Rest house/ guest house
55106	Bed and breakfast units
55107	Hostels
55108	Home stay

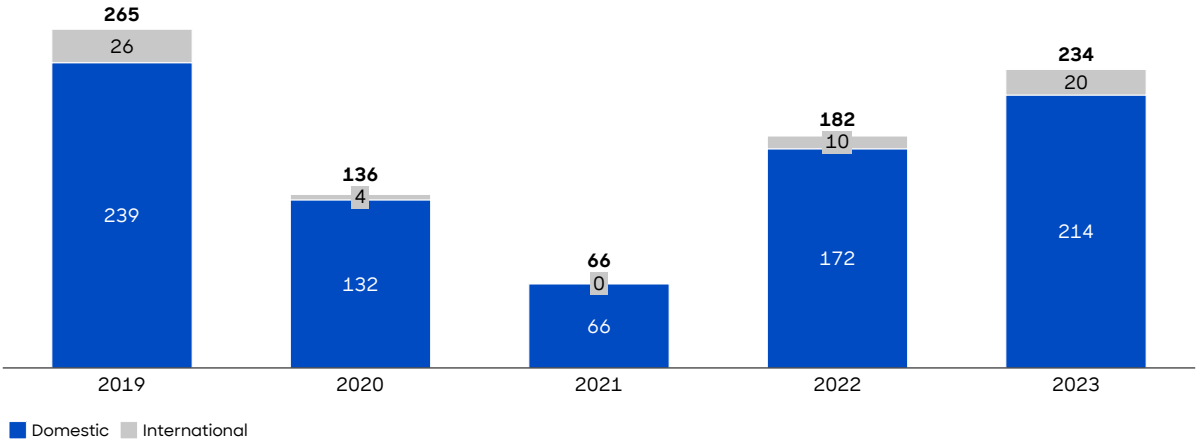
MSIC Code	MSIC Industry Description
55109	Other short term accommodation activities n.e.c.
55220	Camping grounds, recreational vehicle parks and trailer parks
55900	Other accommodation
63112	Data processing activities
79110	Travel agency activities

Source: MSIC 2008, DOSM

4.4.3 Market structure and supply chain

4.4.3.1 Market structure

Figure 116: International and domestic tourists in Malaysia, 2019-2023 [million][471]



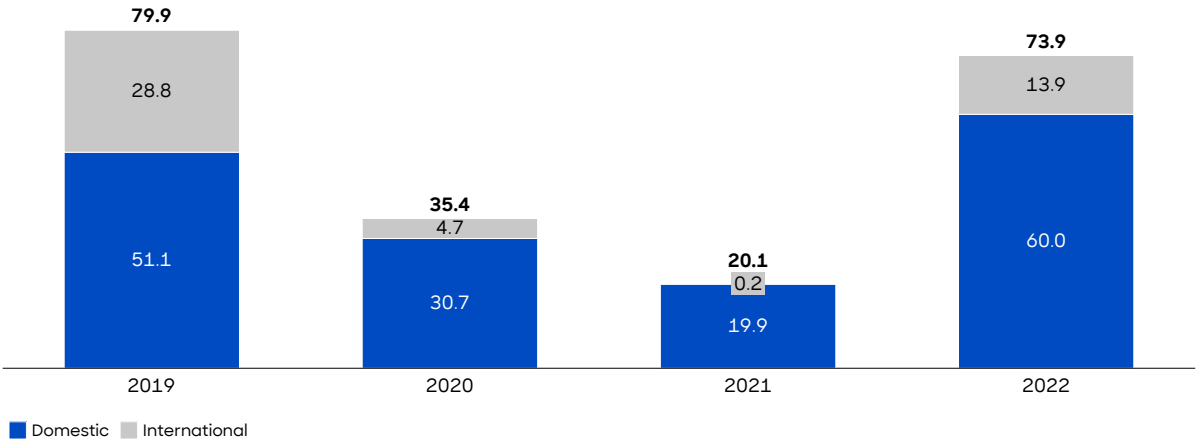
Source: DOSM

Malaysia's tourism sector is experiencing a strong recovery post-COVID-19. In 2023, it welcomed 20.1 million international tourists, a rebound from just 4.3 million in 2020 during COVID-19. More than 70% of arrivals are from Singapore, Indonesia, Thailand and China in 2023. Similarly, domestic

[471] DOSM (2023). Tourism Satellite Account, page vii. https://www.dosm.gov.my/uploads/release-content/file_20240912105639.pdf (Please note that tourist arrival figures account for the possibility of single tourist making multiple inbound trips to Malaysia)

tourist arrivals reached 213.7 million, up from 131.7 million in 2020. Malaysia is on track to regain its pre-pandemic tourist arrival levels.

Figure 117: International and domestic hotel guests in Malaysia, 2015-2022 [million][472]



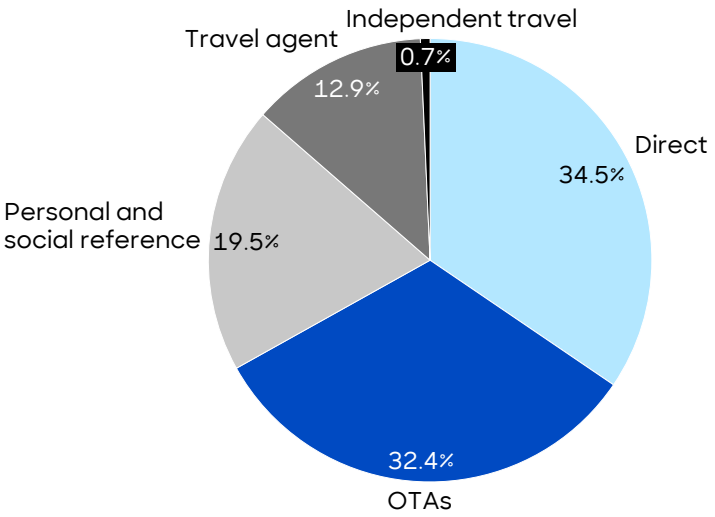
Source: Tourism Malaysia

In terms of hotel guests, the pandemic triggered a sharp decline starting in 2020, slashing international hotel guests to 5 million and reducing domestic guests to 31 million. The downturn deepened in 2021, with international hotel guests dropping to approximately 188,000, and domestic guests fell to 20 million due to stringent travel restrictions and local lockdowns. Recovery began in 2022, with domestic travel rebounding strongly to 60 million, indicating resilience in local tourism. International arrivals, although recovering only 14 million.

Despite the positive recovery in the industry, some hotels are still struggling to bounce back. In an in-depth interview with a resort based in Negeri Sembilan, the resort shared that its occupancy rates have significantly dropped since the pandemic and have not recovered. While the resort previously achieved occupancy rates of around 80% during school holidays, it now struggles to reach 40%. This could be due to various reasons such as changes in consumer behaviour and increased competition.

[472] Tourism Malaysia (2022). Malaysia hotel guest by year. https://archive.data.gov.my/data/en_US/dataset/malaysia-hotel-guest-by-year

Figure 118: Holiday booking channel by domestic tourists in Malaysia, February - March 2024 [%][473]



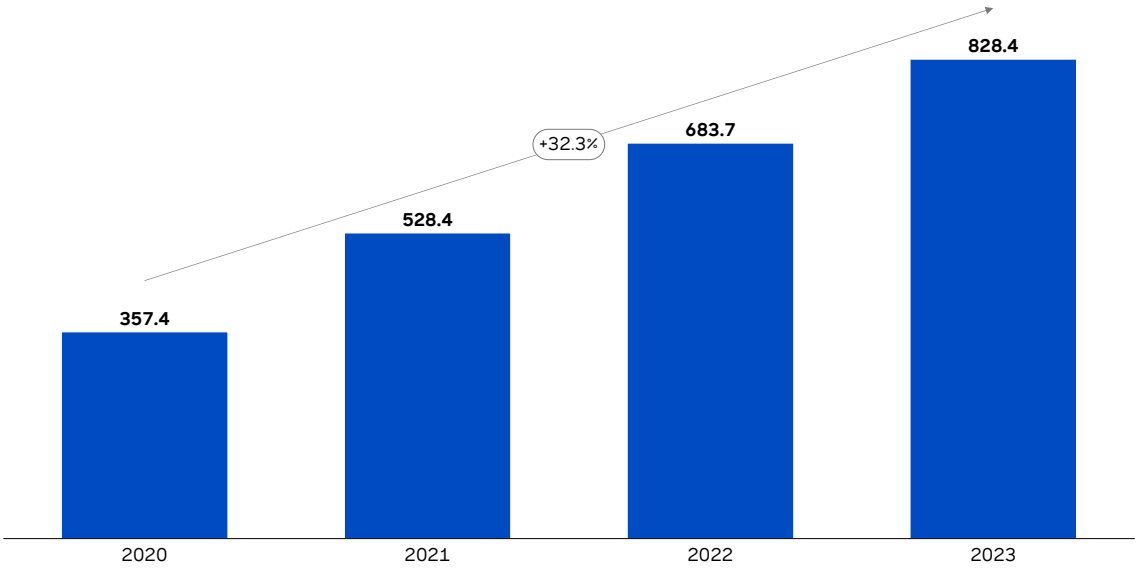
Source: Tourism Malaysia

In terms of booking channels, as of 2023, direct online bookings continued to dominate, representing 34.5% of all domestic hotel bookings. However, OTAs closely followed with a 32.4% market share, demonstrating their growing adoption among travellers. This shift in preference is driven by convenience, exclusive offers, and price comparison capabilities that OTAs provide. According to Rakuten Insight[474], 75% of Malaysian travellers prefer OTAs for their ease of use, while 62% are drawn to special discounts, 48% value price comparisons and reviews, and 43% appreciate the flexibility of booking schedules.

Meanwhile, other booking methods, such as personal and social references (19.5%), travel agents (12.9%), and independent travel arrangements (0.7%), remain as less popular options.

[473] Tourism Malaysia (2024). Malaysia Tourism Statistics. https://data.tourism.gov.my/
[474] Rakuten Insight (via Statista) (2023). Reasons for using online travel agencies (OTAs) for purchasing travel tickets or services in Malaysia as of June 2023. https://insight.rakuten.com

Figure 119: Expenditure on online travel services (hotels) among Malaysians, 2020-2023 [USD m][475]



Source: Data Reportal

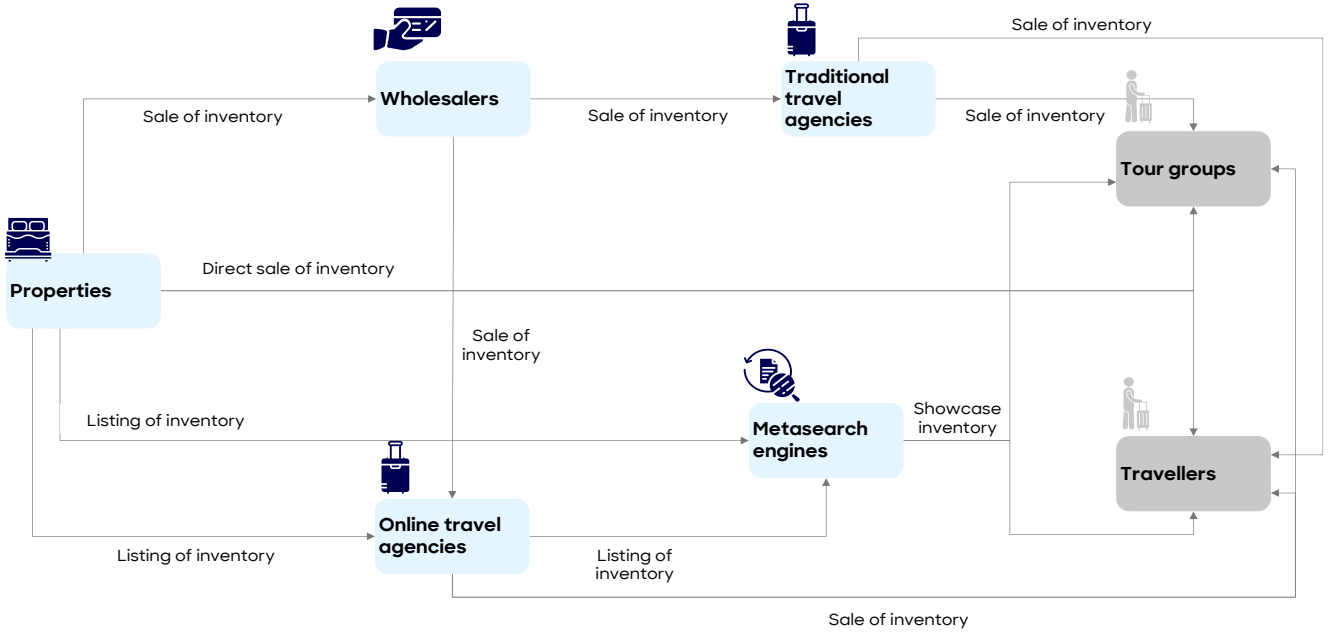
The growing preference for OTAs is evident in the rise of expenditure on hotels through online channels. As of 2023, Malaysia's online hotel sub-sector is estimated to reach a market size of USD 828.4 million, based on total spending by Malaysians. This represents a significant increase from the USD 357.4 million spent during the COVID-19 period (2020).

[475] DataReportal (2024). Digital 2024: Malaysia. https://datareportal.com/reports/digital-2024-malaysia

4.4.3.2 Supply chain

The OTA sub-sector's supply chain comprises several key actors: properties, wholesalers, OTAs, metasearch engines, and customers (both tour group participants and individual travellers). Each actor plays a specific role that contributes to the overall functionality and efficiency of the market:

Figure 120: Supply chain of the OTA sub-sector[476]



Source: Interaction with industry players and MyCC's analysis

[476] MyCC's analysis and interaction with industry players

Properties: Serve as the primary providers of lodging, creating products in the form of rooms and services. Two types of properties seen in the sub-sector:

- **Hotels**: Commercial establishments that provide lodging, meals and various guest services. It can operate as either independent hotels or part of a hotel chain.

  In Malaysia, MOTAC classifies hotels into five categories[477]:

  1. **City:** Hotels located in areas gazetted as cities or settlements with a minimum population of 10,000 people, or in district administration centres with fewer than 10,000 people, provided at least 60% of the population is involved in non-agricultural activities. Any premises not categorised as Resort or Highland Hotels can be classified as City Hotels.

  2. **Resort:** Hotels near a beach, lake, river, or on a remote island (excluding Langkawi, Penang, and Labuan).

  3. **Highland:** Hotels located more than 300 meters above sea level.

  4. **Boutique:** Hotels offering personalised, luxurious services with a unique and distinctive concept and design.

  5. **Innovative:** Hotels featuring artistic, aesthetic, and unconventional designs, such as igloos, treehouses or capsule rooms.

  Within each category, further classification (star rating) is applied based on the level of comfort and amenities offered. The key criteria assessed by MOTAC in determining a hotel's star rating include the

[477] MOTAC (2024). Premis penginapan pelancong. https://www.motac.gov.my/perkhidmatan/daftar/premis-penginapan-pelancong/category/116-penggredan

following, with the weightage of each criterion varying depending on the hotel type[478]:

1. **Hotel's façade:** Building type and façade appearance.

2. **Housekeeping:** Room size, room type, availability of executive floor/lounge, presence of *Kiblat* sign, furniture and fittings, bed with clean linen, blanket/duvet, pillow, mattress, mattress protector, bed runner, extra bed/sofa bed upon request, pillow menu, curtain/blind/screen mover, night table/side table, writing table, writing materials, dressing table, lightings, lighting control, cupboard/wardrobe, hangers, waste basket, luggage rack, iron & iron board, laundry bag, bathroom amenities, shower, hot and cold water, bidet, tissues, hand towel, face towel, bath towel, bath mat, bathroom telephone, bathrobe, umbrella, insect repellent, torchlight, baby cot upon request, fridge, coffee making facilities, electric kettle, drinking water, safety deposit box, guest service directory, in-room dining menu, telephone guide, TV and remove, TV guide, internet access, TV channel, fire escape plan, heater, special request/personalised welcome, turndown service, room key, walk way, suite room, sound proof, local decoration, local artwork, wake up call, flooring, smoke/heat detector and water sprinkler.

3. **Front office:** Malaysian mode of greetings, uniform, tidiness of staff uniform, staff grooming and cleanliness, tidiness of space, duty manager, reception readiness, reception desk operation time, multi-language, porter service, in room dining service, systematic customer complaint handling, left-luggage facilities, safety deposit box, secretarial services, internet access, reception with sitting facilities, welcome drink, public toilet, decoration, ambience, furniture, check-in process, group check-in, check out process, upgrade room, payment process, check in/check out time, front office, duty roster, first

[478] MOTAC (2024). Premis penginapan pelancong. https://www.motac.gov.my/perkhidmatan/daftar/premis-penginapan-pelancong/category/116-penggredan

aid kit, guest service officer, local decoration, local artwork, musician, in house music, valet service parking and daily newspaper.

4. **Kitchen:** Separate kitchen for halal and non-halal, dry store, fire extinguisher, chiller and freezer, dishwasher, kitchen utensil, cutleries, pastry, chef, specialty dishes, uniform, tidiness of staff, grooming and cleanliness, grease trap, ventilation, steward, pastry utensil, main course serveware, disposal routine, halal certification, health certification, pest control, recycle, kitchen duty roster, kitchen flooring, water sprinkler, fire extinguisher, dustbin with paddle, sensor/elbow/automatic tap, ice machine maker, butchery, air conditioned garbage room, receiving area, kitchen hood, insect trap, first aid kit and toilet.

5. **F&B service:** Coffee house, restaurant, lounge, banquet/function room/meeting room and in-room dining service.

6. **Human resource management**: Staff welfare, staff facilities and corporate social responsibility.

7. **Complaints:** Monitoring customer complaints, respond to customer complaints and appreciation note.

8. **Guest facilities:** Swimming pool, changing room, qualified lifeguard, swimming pool regulation, gymnasium, qualified gymnasium instructor, spa/sauna, sauna regulation, convenience store and business centre.

9. **Security:** CCTV, security staff, uniform provided, emergency respond team, emergency exit, fire extinguisher, water sprinkler, *Bomba* lift, *Bomba* hose, water hydrants, fire door and smoke detector.

10. **ICT:** reservation system, online booking, database for return customer, online payment, online marketing and online laundry/linen system.

11. **Special hotel features:** Waterpark, theme park, kid zone, garden, art gallery, library, self-laundry room, high-end store, hair salon, ladies' floor, bistro, karaoke room, sport recreation, Muslim friendly, heated pool and other special features.

Depending on their targeted customers (e.g., corporate clients, individual travellers, tour groups, etc.), hotels can leverage platforms like Global Distribution System (GDS)[479], wholesalers, traditional travel agents and OTAs to distribute and enhance their visibility and accessibility.

Smaller and budget hotels often depend on revenue management players to optimise their performance on OTA platforms and improve revenue potential. These service providers specialise in managing hotel listings, pricing strategies, and availability across multiple OTAs. For instance, players like Strategic E Com Services (SECOMS) and Software for Travel Agents and Accommodation Hosts (STAAH) support hotels to secure better page rankings on OTAs, improve Average Room Rates (ARR), and reduce commission-related costs (due to the representation of a large number of hotels, which provides leverage in negotiations)[480].

- **Short-term rental accommodations (STRAs)**: Properties that are to be rented out on a short-term basis, often through OTAs. Encompass a wide variety of options, from individual rooms to entire homes and they tend to offer a more personalised experience managed by individual property owners. This allows guests to enjoy unique stays in diverse environments.

[479] Large hotel chains and corporate clients often integrate with GDS such as Sabre, Amadeus, and Travelport. These platforms provide the connectivity infrastructure needed to facilitate seamless booking through corporate systems already linked to GDS networks.
[480] Input from IDI

Wholesalers: Wholesalers in Malaysia typically purchase hotel inventory in bulk from hotels and resell it to traditional travel agencies or list the inventory on OTAs. This approach allows for a variety of selling options, including room-only deals and specialised packages tailored to specific markets. To attract overseas tour groups, particularly from key markets such as China, Taiwan, Hong Kong, and India, hotels often distribute their room inventory to wholesalers, who subsequently resell it to traditional travel agencies.

This approach enables hotels to leverage established networks and benefit from the agencies' local market expertise, facilitating access to a broader audience of international travellers. Moreover, wholesalers are essential for resort and leisure-focused hotels, as these properties depend on wholesalers to expand their reach to travellers (via traditional travel agencies). Wholesalers' business model is based on negotiating lower room rates from hotels and marking them up for resale to traditional travel agents or OTAs. Notable examples of players include Dida Travel, MG BedBanks, and Hotelbeds.

Online Travel agencies (OTAs): Function as search engines for travellers, providing a platform to compare prices and book accommodations. They employ various marketing strategies, such as SEO and digital advertising, to drive traffic and bookings. Some OTAs also act as wholesalers, purchasing inventory directly from hotels. Their business model is heavily reliant on commission-based revenue, often charging hotels a percentage for each booking. Key players include Booking.com, Agoda and Airbnb (STRA-focused only).

OTAs provide several benefits to the tourism sector. For accommodation providers, OTAs increase visibility by listing properties on their platforms, giving them access to a global audience and enhancing brand awareness. They also help hotels and lodging providers reach markets that are challenging to access through direct marketing efforts. For travellers, OTAs simplify the booking process by offering user-friendly platform to search, compare, and book accommodations, making trip planning more efficient[481].

[481] FOUNDERY (2023). The advantages and disadvantages of online travel agencies. https://foundery.ca/insights/advantages-disadvantages-online-travel-agencies/

Additionally, OTAs contribute to the growth of the tourism industry by connecting travellers with a wide range of services and destinations, encouraging travel activity and supporting the overall expansion of the sector[482].

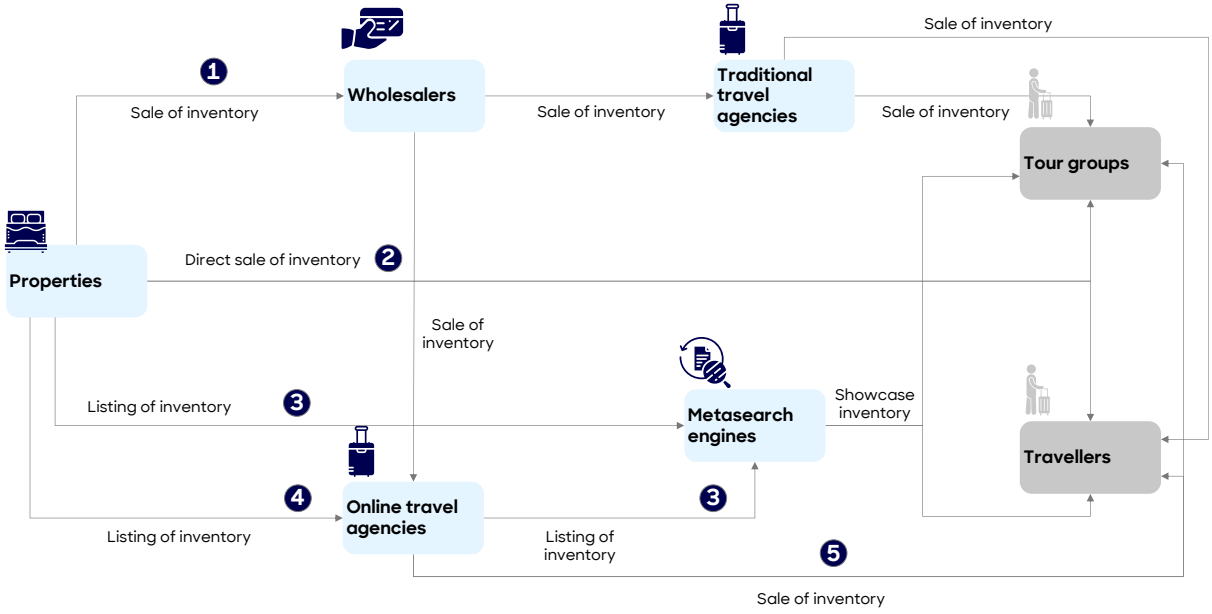
Metasearch engines: Aggregate information from various OTAs, allowing consumers to compare offers from multiple platforms before choosing the most suitable OTA for booking. In addition to aggregating OTA data, metasearch engines allow hotels to list their offerings directly on the site, bypassing the OTAs. This creates an additional layer within the travel ecosystem, providing hotels with increased visibility and more control over their pricing and availability, while offering consumers a direct option for booking (through metasearch).

The business model of metasearch engines typically revolves around advertising, charging a fee (usually on a pay-per-click basis) to OTAs or hotels for referred bookings. The actual user-OTA/hotel transaction occurs on the OTA or hotel's website, as users are redirected to complete their booking. No customer service or support are provided to its users in the area of dispute resolution. Some examples of players include Google Hotel Ads, Kayak and TripAdvisor.

[482] REZGO (2022). Advantages and disadvantages of online travel agencies (OTAs). https://www.rezgo.com/blog/advantages-and-disadvantages-of-online-travel-agencies-otas/

4.4.4 Market practices

Figure 121: Key relationships along the OTA supply chain



Source: Interaction with industry players and MyCC's analysis

1. Properties and wholesalers

Properties typically have contracts with wholesalers to secure room inventory at pre-negotiated rates. These contracts can be short-term or extend over multiple years. Wholesalers bundle rooms with other travel services (e.g., flights, car rentals, tours) and distribute them through various offline travel agencies and tour operators. Notably, some OTAs also operate as wholesalers, making the distinction between these distribution models less clear.

Traditional wholesalers primarily operate in the B2B segment, negotiating static floor prices with hotels. Instead of charging a commission, wholesalers apply a markup before reselling rooms to offline partners. High-performing wholesales may achieve preferred partner status, granting them priority access to inventory and exclusive pricing. Many larger hotel chains in Malaysia are now shifting from static pre-negotiated rates to dynamic pricing. This change helps hotels maintain rate parity

across all distribution channels and adjust rates in real-time based on market demand.

Wholesalers play a key role in distributing room inventory to traditional travel agencies, which remain essential for reaching offline foreign tour groups that rely on conventional booking methods (i.e., traditional travel agencies).

(a) Pricing Structure

Hotels set a static floor price for wholesalers, who then add a markup before reselling the inventory to offline partners (e.g., travel agencies, tour operators). While most wholesalers operate on static pricing, some hotel chains are adopting dynamic pricing to adjust room rates in real-time based on demand and market conditions.

(b) Restrictions

To maintain control over pricing and online presence, hotels typically prohibit wholesalers from listing inventory on online platforms. Wholesalers focus on offline distribution, ensuring rate consistency. Additionally, unsold inventory is often returned to hotel within a set period, typically 3-15 days before check-in, to optimise room occupancy levels.

2. Properties and travellers

Properties utilise a blend of traditional and digital marketing strategies to build connections with travellers and drive direct bookings. Properties utilise a blend of traditional and digital marketing strategies to build connections with travellers and drive direct bookings. Through historical booking data, data from OTA platforms (limited information such as length of stay, price, name), and other customer touchpoints (websites, social media, customer service inquiries), traveller data is extracted and used for targeted marketing.

For online, properties leverage their official websites and social media platforms to enhance visibility and directly engage potential guests. To encourage direct bookings and reduce reliance on OTAs, many hotels offer

exclusive deals and discounts on their websites that are not available through third-party platforms.

In addition to discounts, hotels attract customers with added-value perks, such as complimentary access to on-site amenities like restaurants, sky bars, pools, or spa facilities. These incentives elevate the guest experience and distinguish direct bookings from those made through intermediaries. Email marketing, loyalty programs, and personalised promotions further strengthen guest retention and encourage repeat visits.

To foster loyalty among high-value guests, many hotels provide exclusive benefits to their members. For example, Marriott Hotels offer lower flexible rates to members compared to non-members, incentivising travellers to join their loyalty programme and book directly through Marriott's channels. These member-only rates, combined with perks like room upgrades and personalised services, help build deeper customer relationships while bypassing OTAs. By leveraging such targeted marketing strategies, hotels effectively enhance brand loyalty and maintain direct connections with their guests.

Figure 122: Selected marketing events by selected luxury hotels which are only available through their direct channels

Source: Secondary research

3. OTAs/ Properties and Metasearch Engines

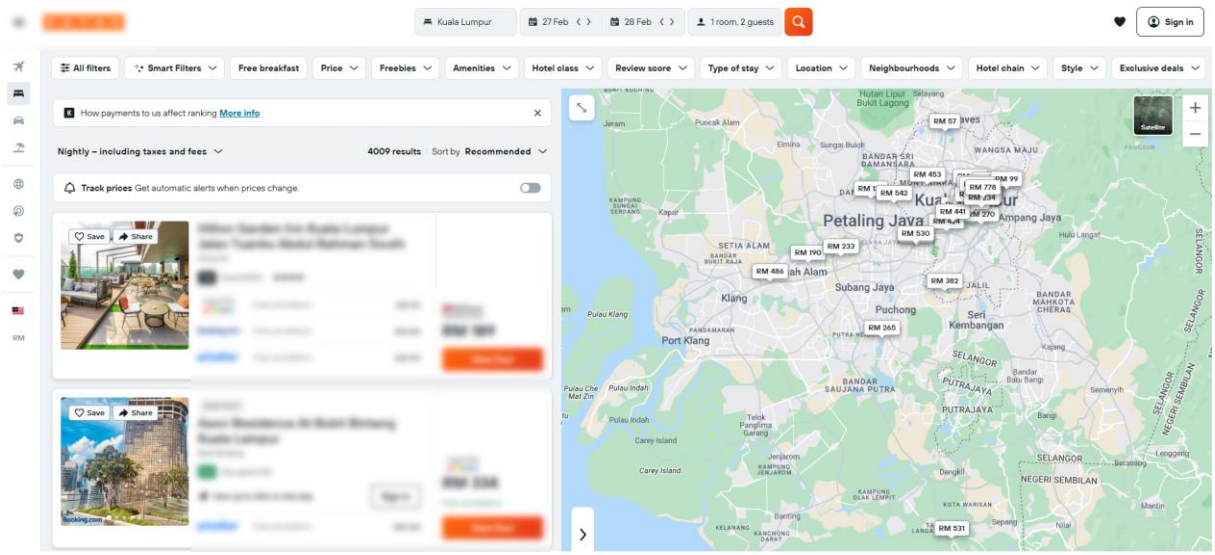
Figure 123: Key travel technology group companies and its OTA and metasearch engine subsidiaries (selected)

Company groups	Online travel agencies (non-exhaustive)	Accommodation-focused metasearch engines (non-exhaustive)
BOOKING HOLDINGS	Booking.com, agoda	KAYAK, Hotels Combined
expedia group	Hotels.com, Expedia	trivago
Tripadvisor	N/A	Tripadvisor

Source: Secondary research

Many major players, such as Booking Holdings, operate both OTAs and metasearch engines to maximise their market reach. For instance, Booking Holdings manages OTAs like Booking.com and Agoda, alongside metasearch platforms such as Kayak. Similarly, Expedia Group owns OTAs like Expedia and Hotels.com, while also operating Trivago as a metasearch platform. Notably, Google Hotel Ads also plays a significant role in the metasearch landscape, further strengthening competition in the online travel industry.

Figure 124: Display of results from a metasearch engine



Source: Secondary research

OTAs and hotels typically engage in performance-based advertising agreements with metasearch platforms, where payment is made each time when a user clicks on their listing. Below details the business model of key metasearch engines:

Table 26: Selected metasearch engines and their business model

Metasearch engine	Business model
Trivago[483]	• **Cost per Click (CPC)**: OTAs/properties pay when based on the number of clicks their ad receives. • **Cost per Acquisition (CPA)**: OTAs/properties pay when a booking is made (pre-defined percentage between both parties).
Kayak[484, 485]	• **CPC**

[483] Trivago (2025). Our metasearch. https://company.trivago.com/get-listed/
[484] Productmint (2022). The Kayak business model – How does Kayak make money?. https://productmint.com/the-kayak-business-model-how-does-kayak-make-money/
[485] Kayak (2025). Hotel owner. https://www.kayak.sg/hotelowner

Metasearch engine	Business model
Trip Advisor[486, 487]	• **CPC** • **Instant Booking:** Serve as an OTA, travellers to book directly from the platform.
Google Hotel Ads[488]	• **CPA** • **Cost per Stay (CPS):** OTAs/properties pay when a traveller completes the stay.

Source: Secondary research

Metasearch engines are connected directly to the databases of OTAs and hotels to display real-time prices and availability. Additionally, some metasearch platforms rely on external providers to facilitate the connection between OTAs and hotels, enabling them to integrate their offerings. Examples of such providers include Mirai, Amadeus Hospitality, Revato, SynXis, and DerbySoft.

Selected metasearch platforms also offer additional services to help OTAs and hotels boost their visibility. These services include, but are not limited to[489,490, 491]:

- Access to traveller data, such as search trends
- Insights into competitors' rates
- Opportunities for higher placement in search results
- Advertisement banners or homepage takeovers

[486] Little Hotelier (2024). TripConnect: TripAdvisor Instant Booking and CPC campaigns. https://www.littlehotelier.com/blog/get-more-bookings/tripconnect/
[487] Trip Advisor (2025). Instant booking. https://www.tripadvisor.com.sg/InstantBooking
[488] Google (2025). About hotel campaigns in Google ads. https://support.google.com/google-ads/answer/9238461?hl=en
[489] Trivago (2025). Business studio +. https://studio.trivago.com/home/getstarted/studio-plus
[490] Kayak (2025). Products. https://www.kayak.sg/c/advertising/products/
[491] Tripadvisor (2025). Sponsored placements. https://www.tripadvisor.com/business/sponsored-placements

- Native advertising opportunities
- Exposure through blogs and social media channels
- Sponsored placements for enhanced visibility

This model enables OTAs and hotels to bid for premium placements, increasing visibility on high-traffic metasearch platforms and driving higher bookings volumes. According to interviews with various smaller, independent hotels in this study, the cost of pay-per-click (PPC) bidding can be significant, especially when they also need to allocate funds to other channels like OTAs. As a result, metasearch engines tend to be a more viable option primarily for large hotel chains and well-funded OTAs with substantial marketing budgets.

4. Properties and OTAs

Two broad types of properties' interaction with OTAs are examined within this sub-section: large hotel chains and standard/budget hotels (including STRAs). When using OTAs, properties may choose to engage directly or through revenue management platforms (e.g., SECOMS, STAAH – see the value chain above for more details).

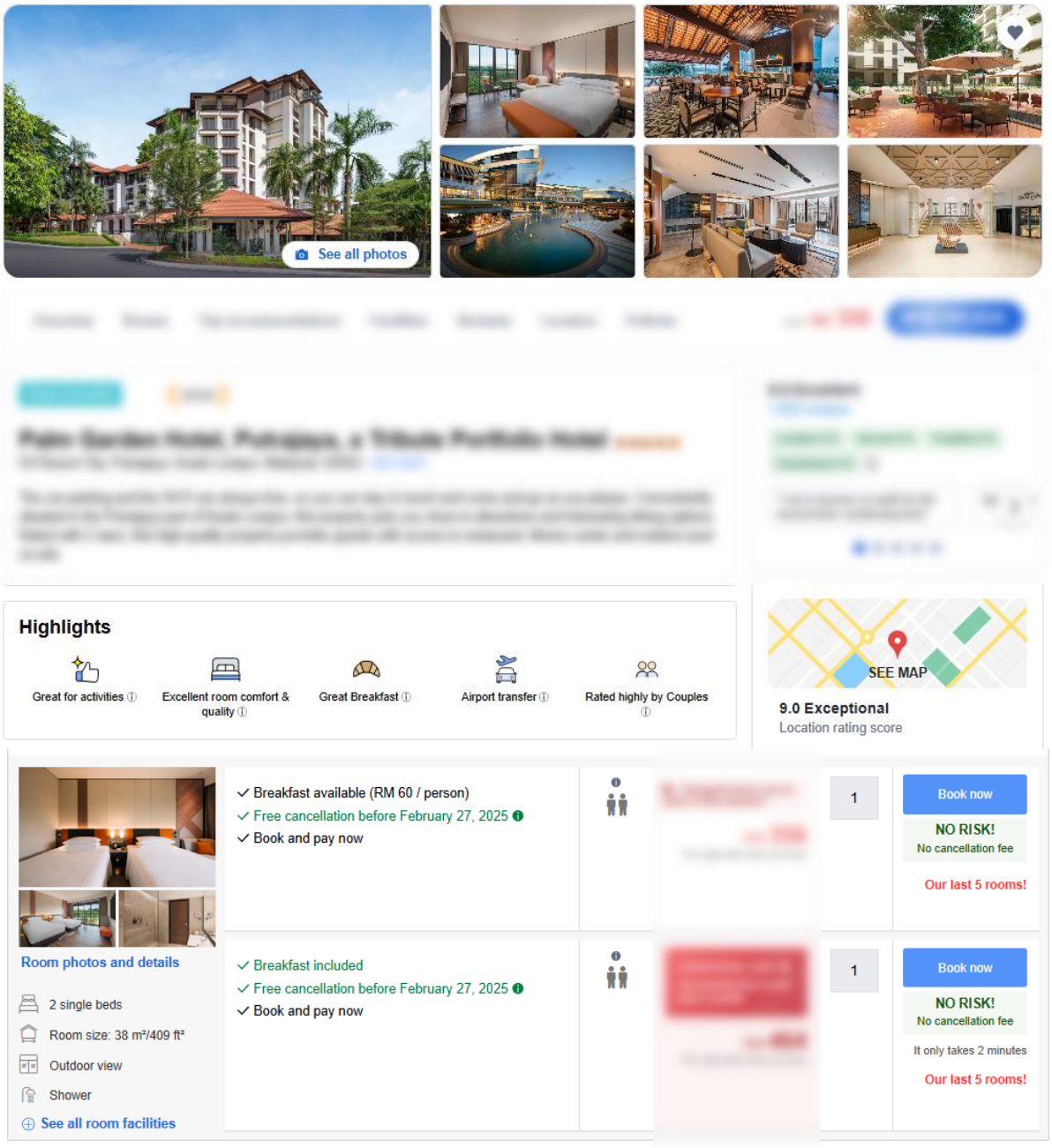
The interaction between these properties and OTAs begins with the registration of properties on the OTA platform, followed by the signing of an agreement that defines key terms, such as commission rates. Depending on the property type, the OTA will implement different relationship management strategies. Once operational, both parties can collaborate on various campaigns to increase visibility. For any terms violated during the relationship, account termination can also be initiated by both parties. The following outlines the key areas of interaction between the two parties:

(a) Platform registration

Registration is done by properties directly creating profiles on the OTAs. While basic information such as property details and location are required,

properties must also showcase an optimal blend of visuals and information to highlight their unique features. Key details typically include:

Figure 125: Listing example on an OTA, featuring images of the property, description, facilities and room details



Source: Secondary research

I. **High-Quality Images:** High-resolutions, clear, well-lit photos of the property's interior and exterior, including key areas like rooms, common spaces, and amenities.

II. **Detailed Descriptions:** Engaging descriptions that highlight the property's unique features, location, and amenities help travellers understand the property.

III. **Amenities and Facilities:** Detailed listing of amenities (e.g., Wi-Fi, parking, pool, gym, breakfast).

IV. **Accurate Room Information:** Detailed room descriptions, including size, bed type, view, and occupancy limits, help cater to various guest preferences.

Upon completion, the OTA will conduct a validation process and provide a contract to the property subsequently.

(c) Agreement structure and terms

Larger hotel chains, such as Marriott and Hilton, typically, establish group-level master service level agreement (SLA) with OTAs. These agreements serve as overarching frameworks governing the terms and conditions for all properties under the chain's ownership. The master SLA outlines key elements, including negotiated commission rates, listing prices, and the provision of dedicated OTA account managers to support larger chains and high-performing properties.

Table 27: Overview of a global, regional and localised level SLA

SLA type	Description
Group level (Global)	• Covers the entire hotel brand or group, encompassing all properties under the same brand, regardless of location. • Key terms typically include the hotel's obligations, such as rate parity, commission structures, payments, and data usage. Agreement also outlines marketing

SLA type	Description
	obligations, license and data terms, as well as provisions for termination and suspension. • For commission rates, a global range is usually agreed upon, which applies uniformly to all properties within the group.
Regional level	• Applies to a specific geographical region, which may encompass several countries or states • Key terms largely similar to those in a group-level SLA, except that commission rates may or may not be included • In cases where commission rates are not specified, they may be guided by the group-level SLA.
Localised level	• Specific to an individual hotel, which may or may not be part of a group • May or may not include commission rates; if commission rates are not specified, they may be guided by the group-level SLA.

Source: Interaction with industry players and MyCC's analysis

While the master SLA sets a unified standard, additional flexibility is often incorporated through regional and property-level agreements. This allows for adaptations to account for varying legal environments, market dynamics, and currency differences across countries and regions. These localised agreements enable tailored solutions that address the unique operational and compliance needs of individual markets, ensuring that both global and local priorities are effectively managed.

For independent and smaller hotels, agreements are made solely at a local level.

(d) Commissions and fees agreement

Historically, OTAs applied flat commission rates across all properties[492]. However, this approach has since evolved, and OTAs now use more dynamic pricing models to account for the unique characteristics of each property and varying market conditions. This means applying different rates to individual properties based on factors such as leverage, potential booking volume, location, target audience, and competitive positioning. Such factors are not shared with properties.

In general, properties with lower booking volumes often face higher commission rates, while high-performing hotels or chains may negotiate for more favourable terms.

Typically, the commission is calculated as a percentage of the booking value (price) and agreed upon in advance. Commission structures can vary significantly between large hotel chains and smaller budget or standard hotels, as outlined below:

Table 28: Commission rates for hotels in Malaysia[493]

Property type	Commission rate
Large hotel chains	10-18%
Standard/ Budget hotels (including STRAs)	17-20%

Source: Interaction with industry players and MyCC's analysis

I. **Large hotel chains:** Commission rates typically range from 10% to 18%, negotiated as part of the Master SLA. Large hotel chains do not adhere to a standardised commission rate across all their locations. Instead, the Master SLA outlines specific rates for each region, ensuring that individual hotels within those regions comply with the agreed terms. Global chains like Hyatt and Marriott leverage their

[492] Input from IDIs
[493] Input from focus group discussions and IDIs

significant market presence and high booking volumes to negotiate lower commission rates and more favourable terms.

II. **Standard/ Budget hotels (including STRAs):** Commission rates for this group are typically higher compared to large hotel chains due to their greater reliance on OTAs. Without a substantial base of direct or walk-in bookings, budget hotels often depend heavily on OTAs, with some properties reporting that OTAs contribute up to 75% of their sales. As a result, OTAs have stronger leverage, and commission rates for budget hotels are usually non-negotiable, ranging from 17% to 20%, depending on factors such as property type and location.

OTAs may also provide tiered commission rates/special programmes, wherein hotels paying higher commission rates gain additional benefits, such as enhanced visibility through featured listings or access to advanced marketing tools. For example, the Agoda Growth Program (AGP) requires a higher commission fee, but in return, properties will receive benefits such as "Preferred Partner" recognition (in the form of a badge), increased visibility, and promotion on Agoda's affiliated partner websites[494].

Commission rates can be negotiated during the agreement renewal process, typically after one year. The outcome of the negotiation often depends on the leverage the property holds (e.g., being part of a large hotel chain, strong sales performance, etc.).

Specifically for listings on Airbnb, the commission rate for properties (known as “hosts”) is fixed at 3%. Although this is much smaller compared to traditional OTAs, Airbnb also charges a 'Guest Service Fee' directly to travelers (on top of the property rate), which is typically under 14.2%. Exact rate is dependent on various factors, including booking length and cross-currency booking[495].

[494] Agoda (2025). Partner hub. https://partnerhub.agoda.com/hotel-solutions/agoda-growth-program/
[495] Airbnb (2025). Airbnb service fees. https://www.airbnb.com.sg/help/article/1857

(e) Property ranking

The ranking of search results on OTAs depends solely on their proprietary algorithms, which are not made public. However, certain broad factors are highlighted by selected OTAs. For example, Booking.com[496] states that to rank highly in search results, a property needs to improve in three key areas:

- **Click-through rate**: Measures how frequently users click on the property listing.

- **Gross bookings:** Refers to the total number of bookings made for the property.

- **Net bookings**: Refers to the number of bookings that remain after cancellations are deducted.

These above-mentioned areas are influenced by various factors, including review scores, availability, policies, pricing, content quality (e.g., photos), and other features. Additionally, rankings can be impacted by factors such as commission rates and participation in OTA programs (e.g., Preferred Partner). Booking.com also noted that data from the platform's interactions with the property will be factored into the ranking.

(f) Campaigns

OTAs frequently run various marketing campaigns to boost bookings. Before launching a campaign or offering discounts, OTAs typically notify hotels in advance (about 2-3 months), allowing them to decide whether to participate in a campaign. If a hotel opts into a campaign, it is responsible for absorbing the associated costs. Hotels also have the option to opt out, even after initially agreeing to participate. If a hotel opts out of the campaign after initially agreeing to participate, it will only be charged for the bookings that have already been made as a result of the promotion, not for any future bookings.

[496] Booking.com (2023). How we work. https://www.booking.com/content/how_we_work.html

OTAs may also organise their own marketing campaigns, fully funding the expenses and discounts without prior consultation with the hotel. While these campaigns can benefit hotels, they may sometimes lead to disputes, as hotels might view deep discounts as potentially harming their property's reputation.

For Airbnb, the platform does not organise marketing campaigns for properties as part of its business model. Instead, properties can offer discounts on rates or take advantage of Airbnb's promotional tools to attract customers, such as setting price discounts or special offers[497].

(g) Relationship management strategies

OTAs typically assign a "Market Manager (MM)" to support and assist hotels with resolving issues and optimising their presence on the platform. The approach to MM assignment varies across OTAs, depending on their operational strategies:

I. **Regional Assignment:** MMs are assigned based on geographic regions, such as Klang Valley or Kuala Lumpur City Centre. MMs designated to a specific region are responsible for managing and supporting hotels located within that area, ensuring localised and tailored assistance to meet the unique needs of each property.

II. **Chain-Specific Assignment:** MMs are assigned to specific hotel chains and are responsible for managing all properties within that chain. For example, an MM may oversee all properties belonging to a hotel chain in Penang.

(h) Account termination

Both parties can initiate termination of the account under the agreement. OTAs may terminate an account for various reasons. According to Booking.com[498]:

[497] Airbnb (2025). Discounts. https://www.airbnb.com.sg/help/topic/1478
[498] Booking.com (2025). General delivery terms. https://admin.booking.com/hotelreg/terms-and-conditions.html

- Failure to pay invoices, charges, or fees on time.
- Attempt to avoid or reduce commission payments in bad faith.
- Provide inaccurate, outdated, or fraudulent information, including misleading details about the property.
- Fail to accept a reservation at the agreed price or on conditions.
- Overcharge a guest.
- Misuse a guest's credit card or personal data, or a data breach occurring.
- Complaints from guests or third parties.
- Repeated poor ratings or reviews.
- Manipulate or attempt to manipulate reservations or guest reviews.
- Safety, security, privacy, or health issues related to the property.
- Terminating a contract without cause or for convenience.
- Breach of contract by the property or any related parties.
- Failure to perform obligations under any agreement with affiliated parties.
- Conduct incompatible with the platform's business model or policies.
- Breach of representations or obligations as outlined in agreements.
- Failure to provide accurate, complete, or timely information or documents when requested for due diligence or legal compliance.

5. OTAs and travellers

OTAs provide platforms where travellers can leave feedback, allowing them to share reviews and ratings about their experiences. Reviews are typically solicited after a traveller completes their stay, with OTAs sending email requesting feedback. All reviews, whether positive or negative, will remain visible, unless they contain sensitive content, such as promotional material, politically sensitive remarks, or fake reviews. Once the review is posted, the responsibility to manage and respond to these reviews falls on the properties, as OTAs do not intervene or assist in addressing negative comments.

For some OTAs, such as Agoda, submitted reviews undergo approval by their own content teams to ensure they meet platform guidelines. Additionally, some OTAs may remove older reviews to keep the review page relevant. For example, Booking.com removes reviews after 36 months or when a property undergoes a change of ownership.

OTAs also leverage a wide range of marketing tactics to attract and engage travellers. These include digital advertising campaigns, such as digital ads, search engine marketing (SEM), and social media outreach, as well as email marketing to directly connect with potential customers. OTAs also invest heavily in SEO to ensure their listings rank prominently in organic search results, increasing visibility and reach.

To build loyalty and encourage repeat business, many OTAs offer loyalty programs. For instance, Booking.com's "Genius" program provides members with exclusive discounts, free room upgrades, and perks such as early check-in and late check-out. Similarly, Agoda's loyalty program offers rewards such as discounts and cash rebates for returning customers. These initiatives strengthen customer retention and enhance brand affinity.

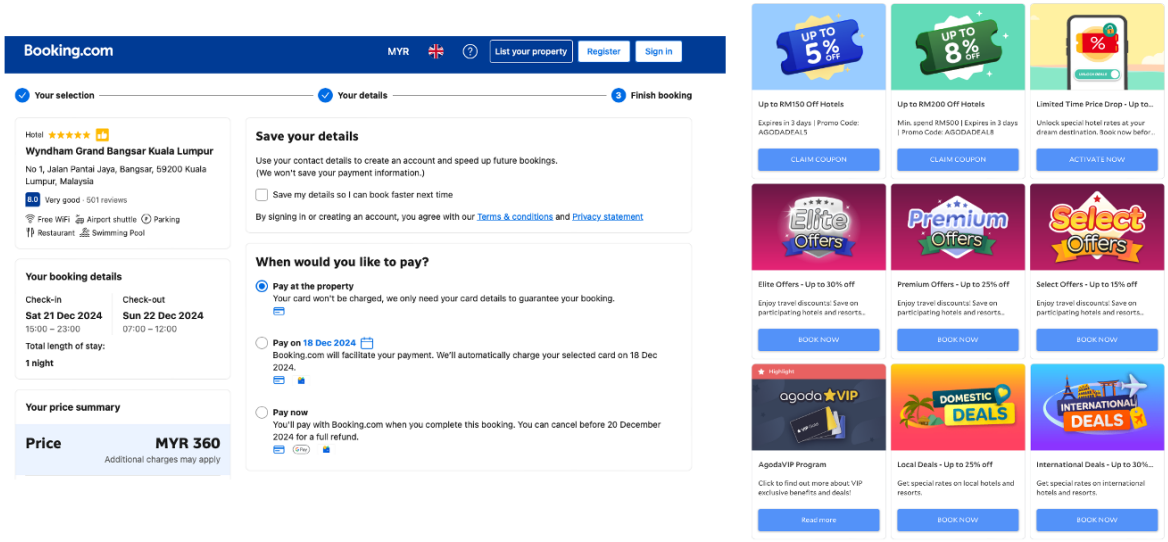
Beyond traditional promotions, OTAs employ strategies such as flexible payment options, last-minute deals, and early-bird discounts to appeal to a wide range of travellers. They also utilise customer reviews and ratings to build trust and credibility, encouraging new users to book through their platforms. When browsing, the onus is on travellers to understand how

these aspects work, such as whether selected tags (e.g., preferred property, last-minute deals) are truly relevant to them. Being aware of this helps ensure they are viewing the most relevant options according to their preferences.

By leveraging vast customer databases and advanced analytics, OTAs personalise marketing effort, tailoring offers and recommendations to match individual traveller preferences, ultimately driving higher engagement and conversion rates.

Additionally, some OTAs run "self-funded" marketing campaigns, using the commission earned from hoteliers to subsidise discounts that lower the final room price for travellers. While this common practice can make listings more competitive, it often conflicts with price parity agreements between OTAs and hoteliers.

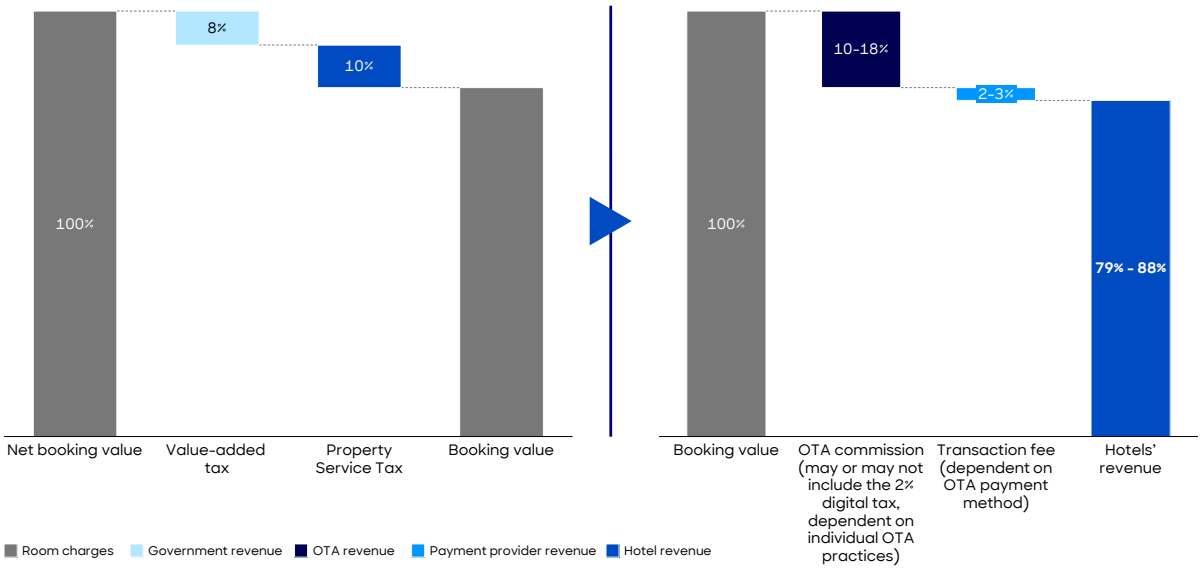
Figure 126: Marketing events by Agoda and Booking.com



Source: Agoda and Booking.com

4.4.5 Supply chain take rates and approximate earnings by supply chain players

Figure 127: OTA sub-sector takes rates [%]



Source: Interaction with industry players and MyCC's analysis

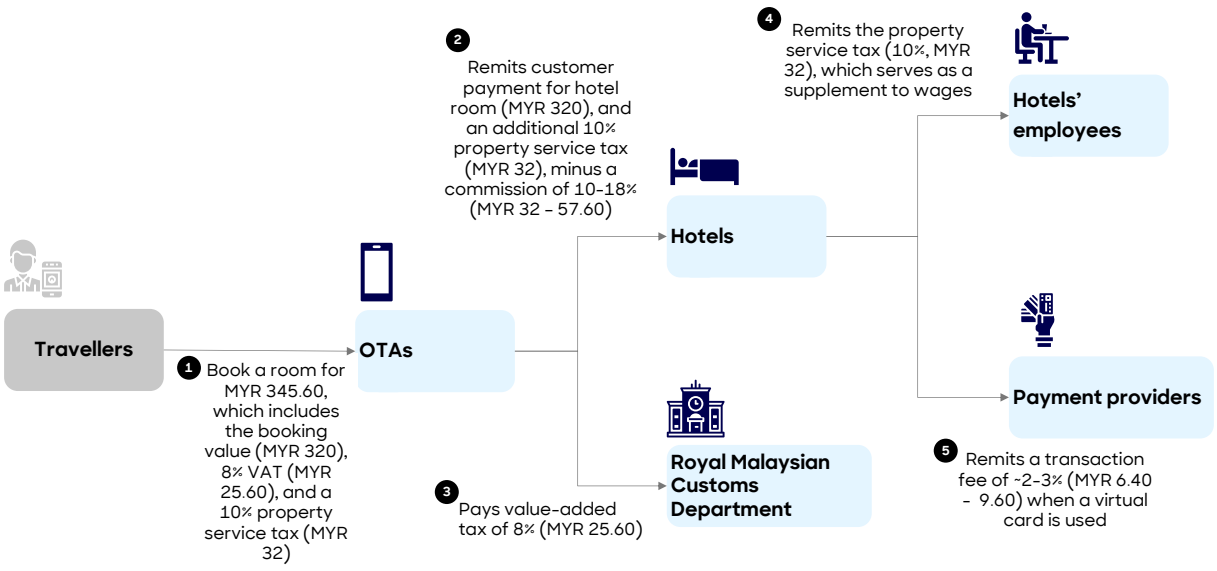
Depending on their strategy to reach travellers and drive traffic, hotels may involve multiple intermediaries in the transaction process. For distribution of inventory through OTAs, the said agencies receive payment from the travellers via its platform, with the amount paid representing the net booking value. The net booking value consists of three components, value-added tax/sales and service tax (VAT/SST) and the property service charge (varies between hotels) and booking value (price). For SST, the Malaysian government imposes it on the traveller at 8% of the net booking value. Additionally, some hotels may apply a property service charge of 10%, which is passed on to travellers. Historically, this charge served as a supplement to employee wages when the Malaysian government had yet to adjust the minimum wage. However, with the government increasing the minimum wage to MYR 1,500 in 2022, this charge is today rarely imposed by hotels.

After subtracting the SST and property service charge, the booking value is determined. From this amount, OTAs deduct a commission fee, which typically ranging from 10% to 18%. Previously, OTA commission rates were structured as flat rates based on region and negotiated under a master

SLA. However, commission structures have since evolved, with rates now varying from hotel to hotel, influenced by factors such as property performance, market demand, and exclusivity agreements. While OTA commission rates historically sat around ~10%[499], they have since increased, with some platforms now charging as high as 18%.

The remaining balance is then transferred to the hotels through two methods. The first method involves a direct bank transfer to the hotel. Alternatively, OTAs may issue a virtual card, which the hotel can use to charge the booking amount immediately. However, this method incurs transaction fees (~2-3%) from external payment providers that the hotel must bear. Ultimately, after all deductions, hotels typically retain approximately ~79-88% of the booking value paid by the traveller.

Figure 128: Approximate earnings by value chain players (example)



Source: Interaction with industry players and MyCC's analysis

[499] Cloudbed (2024). A guide to OTA commission rates. https://www.cloudbeds.com/online-travel-agencies/commissions/

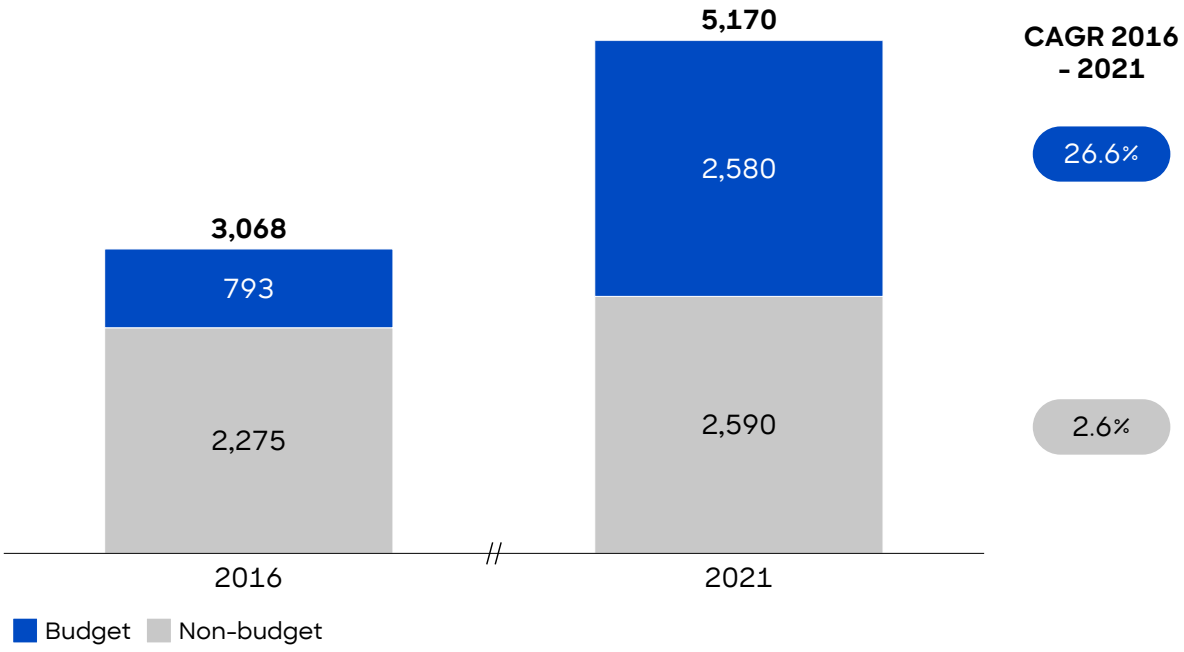
4.4.6 Key players and level of competition

4.4.6.1 Key players along the supply chain

(a) Key hotel players

As of 2023, there are a total of 5,204[500] hotels across Malaysia. The budget hotel segment, in particular, has experienced significant growth, increasing from 793 establishments in 2016 (*25.8%* of total hotels) to 2,590 in 2021 (50.1% of total hotels)[501].

Figure 129: *Malaysia's hotel segmentation, 2016, 2021 [# of hotels]*



Source: DOSM

Global hotel operators also play a critical role in shaping Malaysia's hospitality sector. These operators leverage their extensive portfolio and loyalty programs to secure market share across various segments. Key global players and their number of properties in Malaysia include:

[500] DOSM (2024). Tourism satellite account 2023. https://library.dosm.gov.my/cgi-bin/koha/opac-detail.pl?biblionumber=110108&shelfbrowse_itemnumber=176726
[501] MAH (2021). Industry reports. https://www.hotels.org.my/industry-reports/

- Marriott International: 55 properties
- Accor: 24 properties
- Hilton Worldwide: 24 properties
- InterContinental Hotels Group (IHG) Hotels & Resorts: 12 properties

Additionally, data from MOTAC highlight a wide range of officially rated tourist accommodation establishments. Among these, 792[502] are officially classified by MOTAC as **"**Rated Tourist Accommodation Premises**"** which includes a variety of recognised lodging options that meet specific standards and criteria set by the ministry:

Figure 130: MOTAC-rated tourist accommodation premises, December 2023 [# of hotels]

Source: MOTAC

(b) Key wholesale players

The hotel wholesalers' market in Malaysia features several key global players, with DidaTravel standing out as one of the dominant leaders.

[502] MOTAC (2025). Rated tourist accommodation premises. https://www.motac.gov.my/en/check/hotel?s=&n=&v=0

DidaTravel offers an inventory of approximately ~700,000 properties across more than 180 countries and boasts a network of over ~30,000 global distribution partners. The company has a strong focus on the Asia Pacific (APAC) region, particularly catering to the Chinese outbound travel market.

Hotelbeds, another major player, operates a distribution network that spans over ~250,000 properties in more than 170 countries and has established partnerships with around ~60,000 global distributors. Similarly, MG BedBanks features a distribution network comprising approximately ~350,000 properties, supported by partnerships with around 8,000 global distributors.

The above players interact with both hotels and OTAs.

(c) Key OTA and metasearch players

As of 2023, Agoda leads the Malaysian OTA market, with 80% of travellers reporting usage of its services, followed closely by Booking.com at 73% and Airbnb, known for its STRAs-only offerings, at 42% of the market[503]. Agoda's strong market presence can be attributed to Southeast Asia being its core region, with its headquarters based in Singapore. This strategic location enables the company to quickly develop technology that meets the specific demands of the area[504].

Separately, metasearch engines also play a significant role, allowing consumers with price comparison tools that elevate the convenience and accessibility of the digital travel ecosystem in Malaysia. Trivago leads the Malaysian metasearch market, with 43% of travellers reporting the use of its services. This is followed by Expedia who holds 19% of the market and Skyscanner at 13%.

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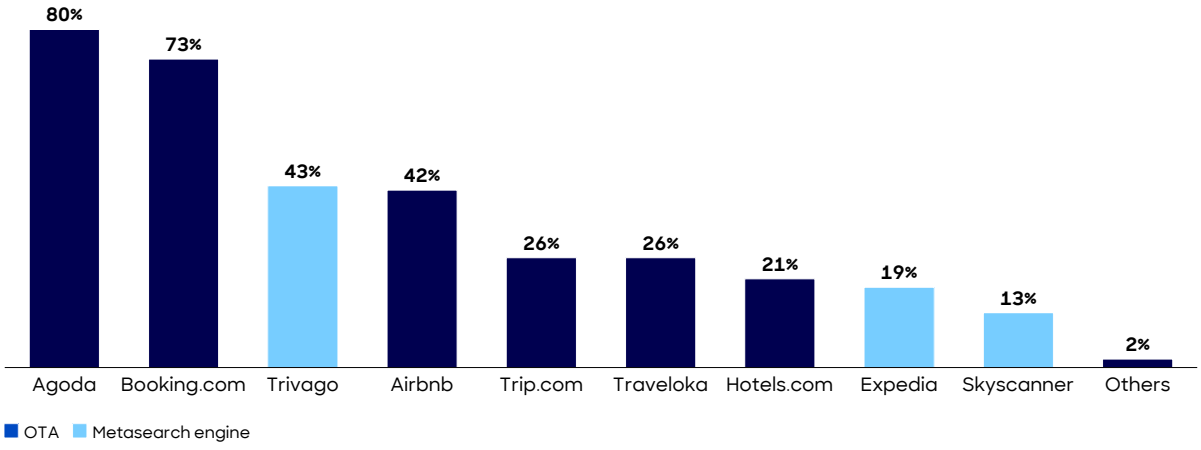
[503] Rakuten Insight (via Statista) (2023). Most popular online travel agencies among consumers in Malaysia as of June 2023. https://www.statista.com/statistics/1200922/malaysia-most-used-online-travel-agencies/

[504] PhocusWire (2019). Q&A: Agoda CMO on how it tackles Southeast Asia. https://www.phocuswire.com/agoda-cmo-southeast-asia

Although not typically regarded in the same category as metasearch platforms like Trivago, Expedia, and Skyscanner, Google Hotel Ads is believed to hold a significant share of the metasearch market, given its dominance in search engines, where it commands a 95.3% market share in Malaysia[505].

Figure 131: Leading OTAs and metasearch engines used in Malaysia by share of respondents, 2023 [%]



Source: Rakuten Insight

4.4.6.2 Key players in the OTA sub-sector

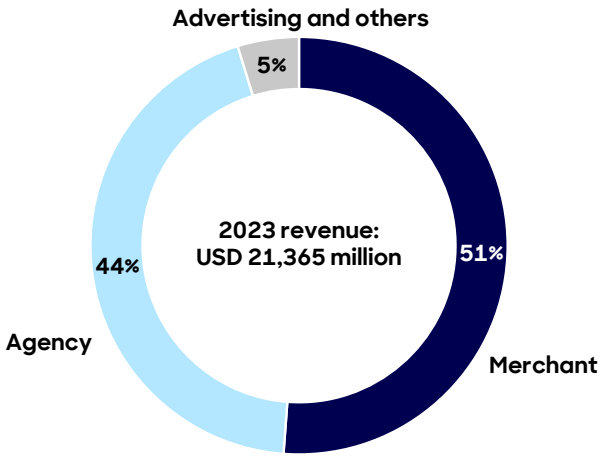
(a) Booking Holdings

One of the largest global players in the travel and hospitality sector, operates across multiple segments, including OTAs, accommodation metasearch, and flight metasearch. Ranked 190 on the 2024 Forbes Global 500[506], the company reported an annual revenue of USD 21.4 billion in Financial Year End (FYE) 2023[507]. Majority of its revenue (95%) is derived from "merchant" and "agency", which includes travel-related transactions (facilitated bookings, with or without payment processing), credit card

[505] StatCounter (2025). Search engine market share Malaysia. https://gs.statcounter.com/search-engine-market-share/all/malaysia
[506] Fortune (2024). Fortune Global 500. https://fortune.com/ranking/global500/
[507] Booking Holdings (2024). Annual reports. https://ir.bookingholdings.com/financials/annual-reports/default.aspx

processing rebates, customer processing fees, and travel-related insurance revenue.

Figure 132: Booking Holdings revenue split



Source: Booking Holdings

Functioning as a financial holding company, Booking Holdings oversees a range of brands that operate independently, including Booking.com, Agoda, Priceline, Kayak, OpenTable, and Rentalcars.com. This structure allows its subsidiaries to maintain agility while leveraging the parent company's resources and guidance.

Figure 133: Subsidiaries under Booking Holdings

Source: Secondary research

Its OTA operations in the Malaysia market are led by Agoda and Booking.com:

I. Agoda

Founded in 2005 and entered the Malaysian market in 2007, Agoda lists approximately ~92,707 [508] vacation rentals and hotels in Malaysia. The platform is known for its competitive pricing, daily special deals, and promotional offers. Additionally, it has a strong focus on the Asian market.

Agoda's service coverage extends beyond accommodations to include flights, bundled hotel and flight packages, and other travel-related bookings (e.g., tours, attractions tickets, airport transfer).

Table 29: Promotions and campaigns offered by Agoda

Promotion/ Campaign	Description	Target Audience
Agoda VIP Program	A tiered loyalty program offering escalating benefits: • **Silver:** Achieved after 2 bookings within two years; access to member-only discounts and points accumulation. • **Gold & Platinum:** Higher tiers provide enhanced deals, faster point accumulation, premium support, VIP deals, and potential free upgrades.	Individual Travelers
PointsMAX	Allows users to earn points with preferred loyalty programs (e.g., airline miles) for each booking. Users select their loyalty program and earn points accordingly	Individual Travelers & Business Traveler
UOB PRVI Miles Elite Card Promotion	UOB Malaysia offers bonus UNIRM (UOB Rewards Points) for accommodations via Agoda.	Business Traveler

[508] As of 19 December 2024, inclusive of other property types such as apartments, vacation homes, homestays, guesthouses, etc.

Promotion/ Campaign	Description	Target Audience
Mastercard Exclusive Discount	Up to 12% off hotel bookings worldwide for UOB Mastercard credit and debit cardholders when booking through Agoda's dedicated offer page.	Individual Travelers & Business Traveler
Visa Card Promotion	Offers discounts on hotel bookings for Visa cardholders. Applicable to hotels with "Promotion Eligible" banner and specific payment types.	Individual Travelers & Business Traveler
AgodaCash	Rewards program where users earn AgodaCash on bookings, which can be used as discounts on future reservations.	Individual Travelers
Daily Special Deals	Regularly updated deals offering significant discounts on selected accommodations.	Individual Travelers & Business Traveler

Source: Agoda

In November 2024, the platform recorded approximately ~5.95 million visitors, making it the most visited OTA website in Malaysia[509].

II. Booking.com

Launched in 1996 and entered the Malaysian market in 2008, Booking.com currently lists approximately ~27,448[510] properties in the country. A key feature of the platform is its extensive database of over 50 million guest reviews, which helps travelers in making informed booking decisions. Booking.com stands out for its strong global reach, with a particular focus on the European market.

[509] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/
[510] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/

Its service coverage spans across accommodations, flights, car rentals, and bundled travel packages, offering travelers multiple travel solutions.

Table 30: Promotions and campaigns offered by Booking.com

Promotion/ Campaign	Description	Target Audience
Genius Loyalty Program	A free, tiered loyalty program offering escalating benefits: • Level 1: Achieved upon account creation; access to 10% discounts on select stays and rental cars • Level 2: After 5 bookings within two years; 15% discounts, complimentary breakfast, and room upgrades at select properties • Level 3: After 15 bookings within two years; 20% discounts, priority support, and additional perks	Individual Travelers & Business Traveler
Mastercard Promotion	Offers up to 16% cashback for bookings made with Mastercard credit, debit, or prepaid cards.	Individual Travelers & Business Traveler
Last Escape Deals	Provides up to 15% discounts on last-minute hotel bookings across various destinations.	Individual Travelers & Business Traveler

Source: Booking.com

In November 2024, the platform attracted around ~3.95 million Malaysian visitors[511].

[511] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/

(b) Trip.com

Founded in 1999 as a subsidiary of the Chinese travel company Ctrip, Trip.com has a total of ~6,884 Malaysian properties listed on its platform. Its primary customer base remains in Mainland China but has in recent years expanded across Southeast Asia, including Malaysia. In June 2024, Trip.com signed a Memorandum of Cooperation (MOC) with Tourism Malaysia to further boost Malaysia's tourism sector. The three-year agreement aims to leverage Trip.com Group's global resources to attract more Chinese and international visitors to Malaysia[512]. Under this MOC, both parties will extend their collaboration beyond China to the broader Asia Pacific region. This includes joint marketing efforts for key products, particularly hotels and attractions. Specific regions within Malaysia, such as Johor and Sarawak, will also be highlighted to travellers[513].

Trip.com is one of the few international OTAs that holds a local "Tour Operating Business & Travel Agency Business" (TOBTAB) license under MOTAC[514,515]. It offers a wide range of services, including accommodations, flights, train tickers, car rental, airport transfer, and packaged tours.

In 2023, the company reported an annual revenue of USD 6.3 billion. Majority of its revenue (87%) is derived from commissions-based fees, including travel ticketing reservations (41%), corporate client bookings (7%), and accommodation (39%). The remaining revenue comes from referral fees for travel products (7%) and others - online advertising services (8%).

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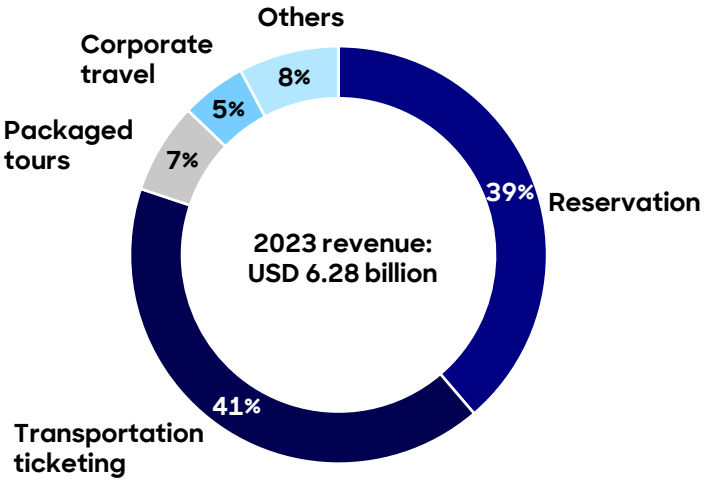
[512] TTRW (2024). Trip.com and Tourism Malaysia sign MoC. https://www.ttrweekly.com/site/2024/06/trip-com-and-tourism-malaysia-sign-moc/

[513] Trip.com (2024). Trip.com Group signs memorandum of collaboration with Tourism Malaysia. https://www.trip.com/newsroom/trip-com-group-signs-memorandum-of-collaboration-with-tourism-malaysia/

[514] As of Dec 2024, six other entities are regulated within the industry: Malaysia Airlines Holidays Sdn Bhd, AirAsia.Com Travel Sdn Bhd, Global Airlines Holiday Sdn Bhd (AirPaz.com), Traveloka Sdn Bhd, BEX Travel Malaysia Sdn Bhd (Expedia.com), and Klook Travel Technology Sdn Bhd

[515] License holder must adhere to various company (e.g., must specifically use "to carry business in Tour Operating Business and / or Travel Agency Business" as the business activity description on e-SSMbusiness), shareholder, director and capital requirements.

Figure 134: Trip.com revenue split



Source: Trip.com

Table 31: Promotions and campaigns offered by Trip.com

Promotion/ Campaign	Description	Target Audience
Trip.com Loyalty Program	A tiered membership program offering escalating benefits: • **Silver:** Basic rewards. • **Gold:** Earn 10% more Trip Coins, one-time free airport VIP lounge access. • **Platinum:** Earn 30% more Trip Coins, two-time free airport VIP lounge access, 1GB/3-day global eSIM data package. • **Diamond:** Earn 40% more Trip Coins, four-time free airport VIP lounge access, 3GB/5-day global eSIM data package, two-time free airport transfer model upgrade. • **Diamond+:** Earn 50% more Trip Coins, eight-time free airport VIP lounge access, additional perks.	Individual Travelers & Business Traveler

Promotion/ Campaign	Description	Target Audience
Refer a Friend Program	Earn up to RM200 in Trip Coins when friends register via our link. New users receive RM20 worth of exclusive promo codes for hotels and flights.	Individual Travelers & Business Traveler

Source: Trip.com

In November 2024, the platform attracted around ~1.5 million Malaysian visitors[516].

(c) Traveloka

Established in 2012 in Indonesia, Traveloka entered the Malaysian market in 2015 as part of its expansion plan. Malaysia, along with other Southeast Asia countries was targeted due to its proximity as a neighbouring market[517]. As one of the few OTAs with a local TOBTAB license from the MOTAC, Traveloka emphasises a hyper-localisation strategy. Compared to other OTAs, Traveloka does not list any STRAs in Malaysia due to the lack of regulation in the sector.

The platform offers a wide range of services beyond accommodation, including travel insurance, tickets for flights, local attractions, and unique local experiences such as classes, art workshops, and activities.

Table 32: Promotions and campaigns offered by Traveloka

Promotion/ Campaign	Description	Target Audience
Traveloka Priority Loyalty Program	A tiered loyalty program offering escalating benefits:	Individual Travelers &

[516] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/
[517] Digital News Asia (2016). Indonesia's Traveloka begins South-east Asian voyage. https://www.digitalnewsasia.com/startups/indonesia%E2%80%99s-traveloka-begins-south-east-asian-voyage

Promotion/ Campaign	Description	Target Audience
	• **Priority:** Access to special price offers, shorter refund times, and extra services.	Business Traveler
Traveloka Points	Earn points through various activities: • Completing bookings for flights, hotels, car rentals, airport transfer, bus & travel, and travel activities. • Utilizing cashback coupons, bonuses, partnership, and conversions from external loyalty programs. • Participating in games, missions, and referral programs. Points can be redeemed for discounts on future bookings.	Individual Travelers & Business Traveler

Source: Traveloka

In November 2024, the platform recorded approximately ~194,000 Malaysian visitors[518].

(d) Airbnb

Established in 2008 and entered the Malaysian market in 2012, Airbnb has provided alternative booking options for travellers. In Malaysia, the platform has approximately ~26,789 properties listed[519]. The platform allows individuals to rent out a range of properties, from private homes and apartments to boutique accommodations, thereby creating a new category within the travel market and providing travellers with a wider range of lodging options. This new business model in the OTA space has raised many regulatory discussions (including in Malaysia), specifically

[518] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/
[519] As of 19 December 2024

regarding zoning issues, tax compliance, and potential disruptions to residential communities[520].

In addition to accommodations, Airbnb provides a curated selection of unique experiences. These include guided tours, cultural workshops, and adventure activities hosted by locals, allowing travellers to experience Malaysia's culture and lifestyle.

Table 33: Promotions and campaigns offered by Airbnb

Promotion/ Campaign	Description	Target Audience
Referral Program	Existing users can refer friends to Airbnb. When a referred friend completes a booking, both the referrer and the new user receive travel credits applicable to future stays.	Individual Travelers & Business Traveler

Source: Airbnb

In 2023, Airbnb reported a revenue of USD 9.9 billion, reflecting an 18% YoY growth. Additionally, as of November 2024, the platform garnered around ~227,679 visitors[521].

4.4.7 Key market-related issues

(a) **High commission rates:** OTAs typically charge non-negotiable commission rates, which can increase without prior consultation with hotels, putting a strain on their profitability. Hotels with fewer bookings may face higher commission rates, while high-performing hotels may be able to negotiate lower rates. However, OTAs do not clearly define the sales performance thresholds that hotels must meet to qualify for reduced rates.

(b) **Challenges in communication with OTAs** (especially for small hotels without MMs): OTAs typically use a ticket-based system for

[520] Regulatory issues to be detailed in the draft final report
[521] SEMRUSH (2025). Top websites. https://www.semrush.com/website/top/malaysia/accommodation-and-hotels/

support, requiring hotels to communicate via email or tickets. Response times vary depending on the OTA and the availability of customer support staff.

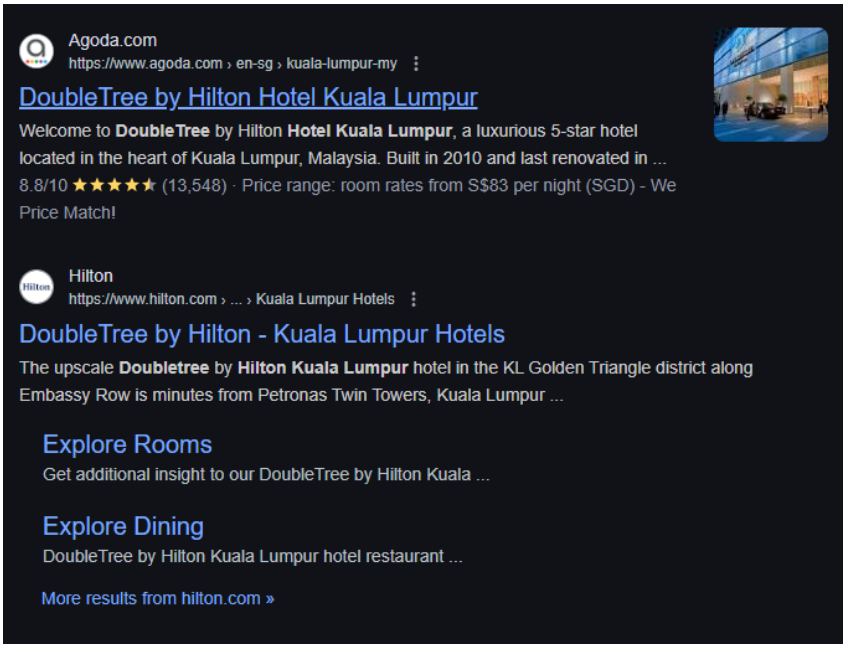
(c) **Misleading reviews:** OTAs are alleged to not assess the authenticity of user reviews for hotels. While hotels can appeal reviews, the process can be lengthy and challenging to navigate.

(d) **Metasearch engine price manipulation:** Metasearch placements can also be subject to price manipulation. For example, Expedia has urged Google to clamp down on OTAs that use "bait-and-switch" tactics to appear favourably in search results. An example provided is when the price of a hotel room changes after a user clicks on the link[522].

(e) **OTA competition with hotels:** OTAs seen bidding on hotel brand names in search engine advertising, causing their sponsored listings to appear above the hotel's official website in search results. This practice diverts direct bookings away from hotels, increasing their dependence on OTAs and the associated commission costs.

[522] Skift (2023). Expendia asked Google to crack down on bait and switch hotel rates. https://skift.com/2023/05/17/expedia-asked-google-to-crack-down-on-bait-and-switch-hotel-rates/

Figure 135: Example of OTA buying domain (advertising) on Google search results



Source: Secondary research

4.4.8 Competition assessment

4.4.8.1 Market share

Findings from focus group discussion and IDIs indicate that the Malaysian OTA sub-sector is highly concentrated, with Agoda and Booking.com each holding an estimated 30-40% market share in hotel bookings. Traveller usage data further supports this dominance, with 80% of travellers in Malaysia using Agoda and 73% using Booking.com as of 2023, while other platforms (e.g., Traveloka, Trip.com) remain below 50%.

4.4.8.2 Market dynamics

OTA began gaining traction in the early 2000s, with Agoda being among the first major international players to establish its presence in the Malaysian market in 2007. Booking.com followed suit in 2008, introducing flexible booking policies that appealed to travellers. These platforms quickly gained momentum, driven by aggressive marketing strategies,

partnerships with established hotel chains, and competitive pricing that resonated with the growing number of online- consumers.

During the initial phase, smaller players like iBilik and HotelQuickly also emerged, targeting niche segments such as room rental, STRA, and last-minute bookings. iBilik, a localised platform founded in 2011, focused largely on room rentals within the Malaysian market[523], while HotelQuickly, established in 2012 and entering the Malaysian market in 2013 [524], specialised in last-minute hotel bookings. However, both struggled to make a significant impact – iBilik's narrow focus on the local market may have limited its growth, while HotelQuickly folded in 2018 due to speculations of fraudulent activity and its inability to achieve profitability[525].

By the early-2010s, competition intensified with the entry of regional players like Traveloka and Airbnb, both of which entered the Malaysian market in 2012. The rapid rise of mobile further fuelled the expansion of OTAs (as of 2023, the percentage of individuals using mobile phones in Malaysia is 99.4% [526]), allowing them to reach broader audiences and enhance the user experience. More recently, innovative offerings from local players, such as AirAsia's Superapp (MOVE)[527], have integrated OTA functionalities with comprehensive travel and lifestyle services.

4.4.8.3 Degree of horizontal and vertical integration

Integration within the OTA sub-sector is relatively active, primarily driven by key global players aiming to expand their reach and scale.

Vertical integration is typically carried out by OTAs to expand its service offering to areas such as travel insurance, car rentals, and tour packages.

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[523] LinkedIn (2025). iBilik. https://www.linkedin.com/company/ibilik/

[524] Archive.today (2013). HotelQuickly arrives in Vietnam. https://archive.ph/20140505083509/http://webintravel.com/news/hotelquickly-arrives-in-vietnam_3729

[525] HNWorth (2019). Falling from grace: Inside the biggest start-up failures in Asia. https://hnworth.com/article/invest/insights/falling-from-grace-inside-the-biggest-start-up-failures-in-asia/

[526] DOSM (2024). Malaysia digital economy 2024, page 59. https://storage.dosm.gov.my/gdp/digitaleconomy_2023.pdf

[527] A key player in Malaysia in the flight-focused OTA market. Not covered in this study due to focus being accommodation-led OTA

A notable example is Trip.com's acquisition of Skyscanner in 2016[528], which allowed Trip.com to incorporate flight search capabilities and metasearch functionality into its service offerings. Similarly, Booking Holdings bolstered its flight booking capabilities with its USD 1.8 billion acquisition of Etraveli Group in 2021[529]. Another significant acquisition was the metasearch engine Kayak by Booking Holdings in 2012[530], further expanding its portfolio.

In terms of horizontal integration, Agoda has benefited from its acquisition by Booking Holdings in 2007[531], leveraging the resources and technology of its parent company. Additionally, Expedia Group acquired Vrbo as part of its purchase of HomeAway in 2015, enhancing its presence in the vacation rental market.

4.4.8.4 Level of entry barriers

Entering the OTA sub-sector requires substantial capital investment in advanced technology to develop seamless booking platforms, ensure secure transactions, and integrate real-time data with service providers. According to Amadeus, a travel and tourism technology company, 94% of OTAs interviewed plan to maintain or increase their technology spending, underscoring the sector's reliance on continuous innovation[532].

Furthermore, existing strategies deployed by OTAs also created entry barriers for new players. Established OTAs are observed to leverage aggressive pricing strategies, promotions, and discounts to attract price-sensitive travellers, making it difficult for new entrants to compete without significant financial backing.

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[528] Trip.com (2016). Ctrip announces completion of acquisition of Skyscanner. https://investors.trip.com/news-releases/news-release-details/ctrip-announces-completion-acquisition-skyscanner

[529] Skift (2021). 10 largest 2021 travel acquisitions ripple across industry. https://skift.com/2021/12/27/10-largest-2021-travel-acquisitions-set-to-reconfigure-industry

[530] TechCrunch (2012). Priceline.com acquires Kayak for $1.8 billion, will allow Kayak to continue to operate indepdently. https://techcrunch.com/2012/11/08/priceline-com-acquires-kayak-for-1-8-billion/

[531] Agoda (2007). Priceline.com acquires Asian online hotel reservation service Agoda company. https://www.agoda.com/info/priceline.html?cid=-218&ds=cx%2Fuz9U7DMAX%2Fe4y

[532] Amadeus (2024). Travel technology investment trends: Online travel agencies. https://amadeus.com/en/resources/research/travel-tech-investment-trends-ota

4.4.9 Key anti-competitive issues

4.4.9.1 Enforcement of price parity

Description: Price parity, also known as the Most Favoured Nation (MFN) practice, is a contractual requirement imposed by Online Travel Agencies (OTAs) that obligates hotels to offer the same prices on OTA platforms as they do on their own websites or other distribution channels. For instance, if a hotel lists a deluxe room at MYR 200 on its website, the same rate must be offered to the OTA. This applies to any discounted or promotional rates as well, with hotels required to notify OTAs of such offers. The clause ensures that hotels cannot offer lower rates through direct booking channels.

There are two types of price parity clauses:

- **Narrow Price Parity**: This restricts hotels from offering the same rate only on their own direct channels, such as their website or sales team (e.g., the hotel must offer MYR 200 on the OTA if it's offered on the hotel's direct channel).

- **Wide Price Parity**: This extends the restriction to both the hotel's direct channels and third-party distribution channels. In this case, the hotel must offer the same rate not only on its website but also to other OTAs, travel agents, GDS, and wholesalers.

From the OTA's perspective, price parity is used to prevent consumers from "free-riding," i.e., using OTAs primarily as price comparison tools without making a booking, which could undermine the OTA business model. OTAs also argue that consistent pricing across distribution channels reduces consumers' hotel search costs, such as time spent comparing prices across different platforms. This helps ensure a smoother and more predictable booking experience, as consumers can trust that the rates are similar everywhere.

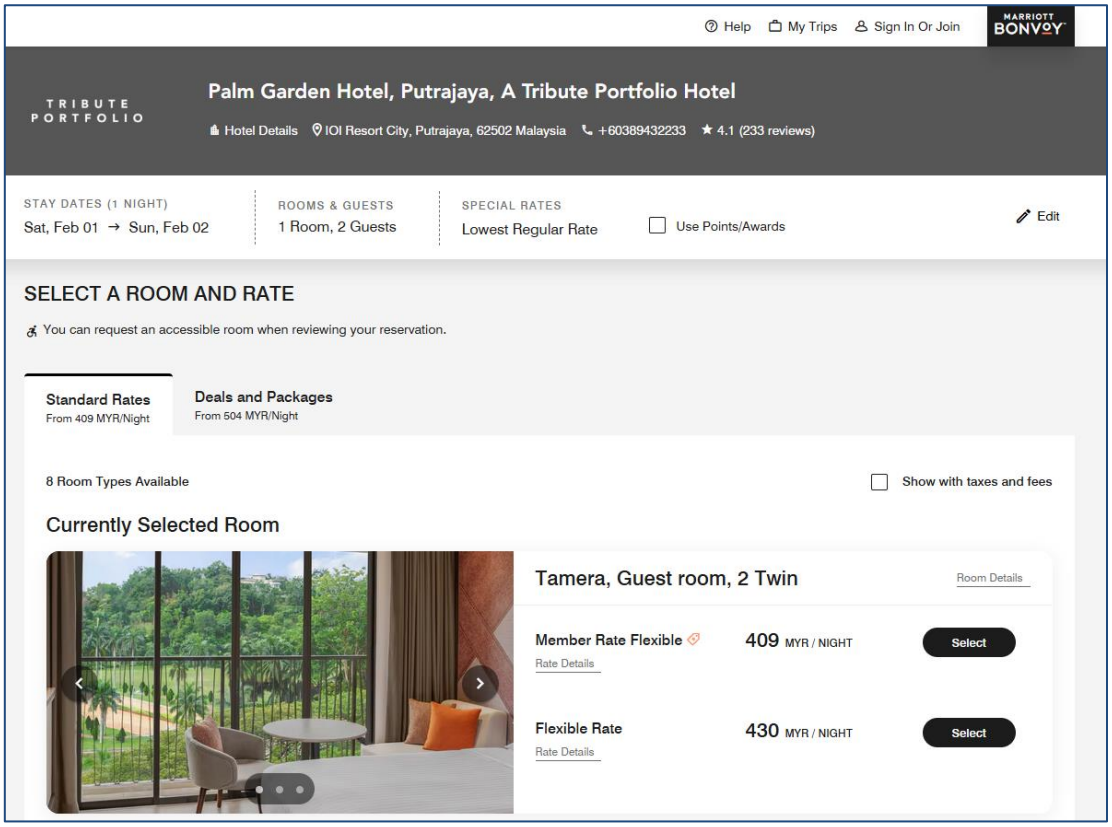
OTAs assert that the price parity agreement is based on mutual consent, as hotels must agree to the rate before the OTA can sell the room. While the ultimate control rests with the hotel, OTAs often exert indirect pressure

due to their significant contribution to hotel sales, with some OTAs accounting for more than 75% of a hotel's room sales.

Moreover, OTAs may run self-funded marketing campaigns, using either their own budget or funds subsidised through commission fees, without prior consultation with the hotel. These campaigns can sometimes promote rates lower than those offered on the hotel's own website, which forces hotels to closely monitor and enforce rate parity. This practice forces hotels to dedicate substantial resources to monitoring and enforcing rate parity, placing an additional burden on smaller operators and further exacerbating competitive imbalances in the market.

Additionally, when OTAs engage in such campaigns, it can negatively affect the hotel's brand image. Hotels typically set their pricing to align with their service standards and overall brand positioning. Offering "lower than expected rates" through OTAs can lead to consumer misperceptions about the quality and value of the hotel experience, potentially damaging the hotel's reputation and its ability to attract guests at the desired price point

Figure 136: Member-only rate offered to customers by Palm Garden Hotel's direct booking website (Marriot Bonvoy)



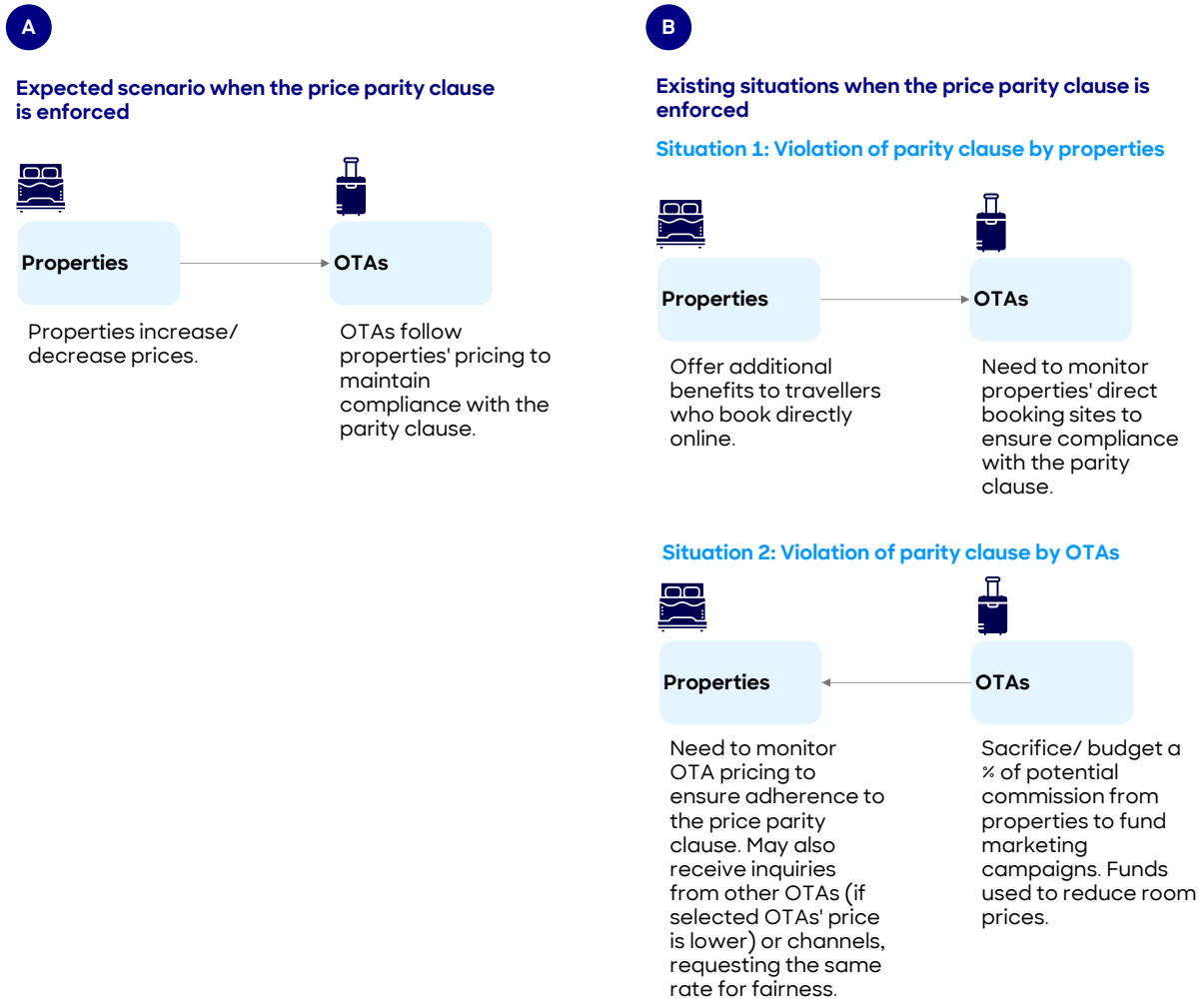
Source: Secondary research

On the other hand, hotels may find ways to circumvent price parity clauses by offering indirect incentives, such as discounts on supplementary services (e.g., food and beverages), to encourage direct bookings. These tactics comply with the price parity agreement since the discounts do not affect the room rate, which is the primary focus of the agreement.

Figure 137: Benefits for member rate – provision of local coffee culture experience

Source: Secondary research

Figure 138: Illustration of expected scenario and existing situations when the price parity clause is enforced



Source: Interaction with industry players

On the other hand, hotels can circumvent price parity clauses by offering indirect incentives, such as discounts on supplementary services (e.g., food and beverages), to encourage direct bookings. These tactics comply with the price parity agreement since the discounts do not affect the room rate, which is the primary focus of the agreement.

Implication on competition:

- **Reduces hotel competitiveness** by hindering their ability to foster customer loyalty and retain higher margins through direct bookings.

- Also **reduces hotel competitiveness** due to the need to increase marketing expenditure (to highlight differentiation through the offering of items such as supplementary services) to compete with OTAs – this is particularly pronounced for smaller hotels that lack the financial resources to match the large advertising budgets of OTAs.

- **Reduces market diversity** through requiring parity in price in different distribution channels.

- **Uneven playing field** as OTAs typically have strong dominance in the market which then further disadvantages smaller hotels with limited resources to compete effectively.

Relevant case(s): In 2020, the Competition Commission of Hong Kong (HKCC) investigated Booking.com, Expedia, and Trip.com, which together is considered to represent a significant portion of OTA bookings in Hong Kong. The investigation found that the parity clauses in their agreements with accommodation providers could potentially soften competition among OTAs and impede the entry and growth of new or smaller OTAs. The specific parity clauses identified were:

- **Wide price parity**: Accommodation providers required to offer OTAs the same or better prices than those available through any other sales channels.

- **Wide conditions parity**: Accommodation providers required to offer OTAs the same or better room conditions as those provided through other sales channels.

- **Room availability parity**: Accommodation providers required to ensure OTAs had at least as favorable room availability as that offered to any other competitor.

In response, the three OTAs committed to no longer enforcing or entering into agreements containing these price clauses[533]. Following a public

[533] HKCC (2020). Expedia. https://www.compcomm.hk/en/enforcement/registers/commitments/files/Final_Commitments_Expedia.pdf

consultation to gather feedback, the HKCC accepted the commitments and subsequently gave the OTAs 90 days to remove the clauses from existing agreements with HK accommodation providers. The commitments will remain in effect for five years, during which the OTAs must self-report to HKCC and submit annual compliance statements[534, 535].

In 2012, Hotelverband Deutschland (IHA), a hotel trade association representing over 2,600 hotels, filed a complaint with the Bundeskartellamt regarding Booking.com's use of both wide and narrow rate parity clauses. In 2015, the Bundeskartellamt ruled against Booking.com, finding that the rate parity clauses had anti-competitive effects. Booking.com appealed the decision, and the case went through various legal proceedings in the years that followed.

Finally, in 2024, the European Court of Justice (ECJ) upheld the decision of the Bundeskartellamt, declaring that the use of such rate parity clauses was illegal under EU competition law. As of 2025, the German case has been transferred to the Amsterdam Regional Court, where compensation claims related to the matter will be addressed[536].

Observations in Malaysia: Price parity is a key component of agreements between hotels and OTAs in Malaysia, with variations depending on the OTA (wide or narrow). According to an OTA operating in the country, the price parity clause is crucial to prevent consumers from using the OTA as a comparison site and then booking directly on the hotel's website.

However, while the clause restricts both hotels and OTAs from altering prices without mutual consent, it has been observed that OTAs employ various tactics to gain a competitive edge. According to a resort based in

[534] HKCC (2020). Proposed commitments by online travel agents – Questions and answers. https://www.compcomm.hk/en/media/press/files/QA_Commitment_Consultation_EN.pdf

[535] Concurrences (2020). The Hong Kong Competition Authority launches a public consultation on the commitments offered by three online travel agents to remove certain parity clauses in their contracts with accommodation providers (Booking.com/Expedia/Trip.com). https://www.concurrences.com/en/bulletin/news-issues/march-2020/the-hong-kong-competition-authority-launches-public-consultation-on-the-en

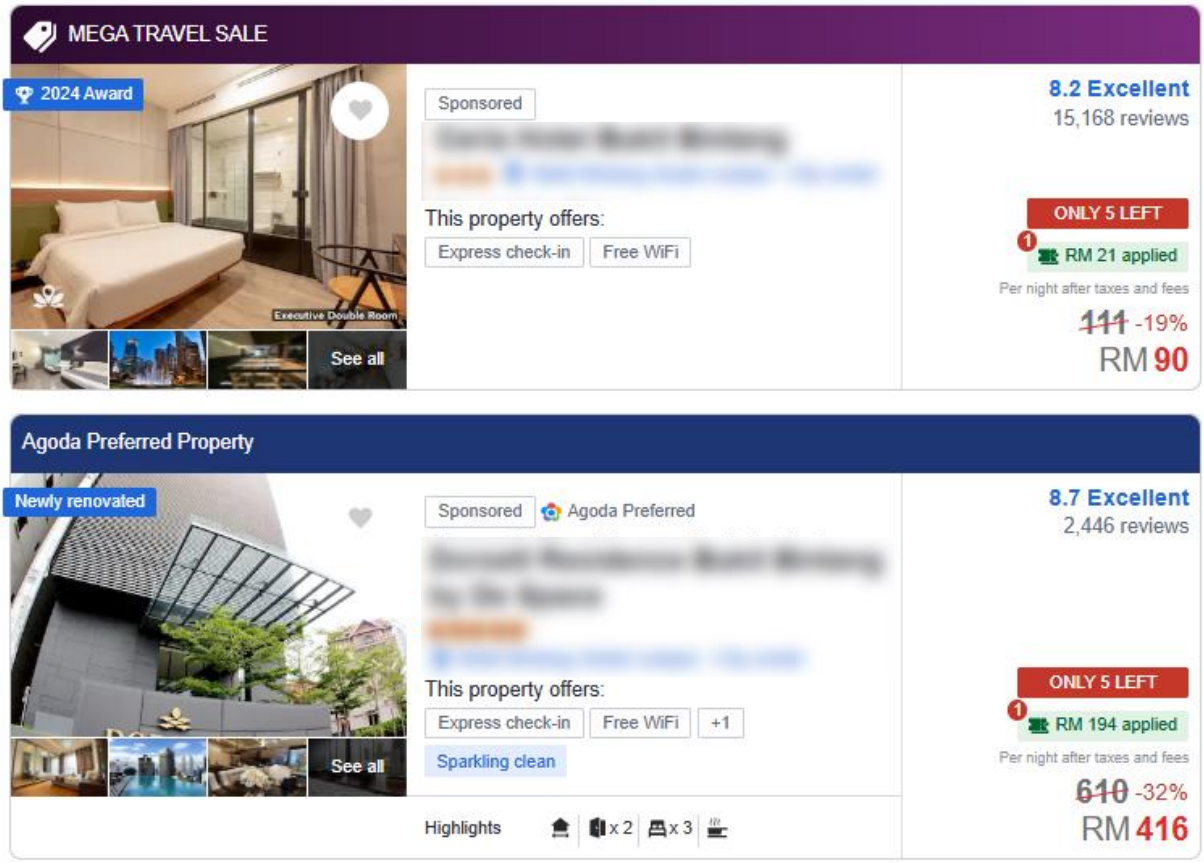
[536] GTP (2024). German hotel association sees optimism in Greece's case against Booking.com. https://news.gtp.gr/2024/11/24/german-hotel-association-sees-optimism-in-greeces-case-against-booking-com/

Negeri Sembilan, OTAs can lower prices through their own promotions, discounts, and bundled deals with attraction-related partners, over which the resort has no control. This, in effect, breaches the price parity agreement. Despite raising this issue multiple times with the OTA's MM, no effective solution has been implemented.

4.4.9.2 Opaque practices

Description: Hotel rankings on OTA platforms are influenced by factors such as popularity, quality, and price. Hotels can also improve their rankings by paying higher commission rates or participating in marketing programmes. Despite these efforts, there is no guarantee of achieving the desired visibility in search results. The exact algorithms behind these rankings remain opaque, leaving hotels uncertain about how these factors are quantified or prioritised.

Figure 139: Sponsored listings as seen in Agoda and Booking.com



Source: Secondary research

For hotels with better financial means and able to pay higher commissions in return for greater visibility, this will result in a biased ranking for consumers. Effectively, end users may be guided towards options that do not necessarily meet their needs or preferences. This is despite the sponsored or advertised listings are typically highlighted in the search results but may sometimes be too subtle for users to notice.

Additionally, there is a reported lack of transparency in account management processes, including account suspension, termination, and reactivation. Smaller hotels have claimed that their accounts were suspended or terminated without clear or detailed explanations, with OTAs often citing vague reasons. This leaves hotels with little recourse to challenge such decisions, disrupting their visibility and bookings on critical platforms.

The review evaluation process is also opaque. While hotels are required to provide evidence to contest negative reviews, OTAs do not disclose how such reviews are assessed. This opacity can lead to reputational harm, particularly for smaller hotels that rely heavily on positive reviews to drive bookings, reducing their ability to compete on a level playing field. Further, the lack of transparency often results in misleading or erroneous reviews remaining publicly visible, which can harm a hotel's reputation and booking performance.

Implication on competition:

- **Uneven playing field** as hotels with limited resources struggle to match the financial flexibility of larger players who can afford higher commissions or promotional fees to boost their visibility.

- **Reduced market fairness** when the lack of transparency in account management gives OTAs disproportionate control over hotel success.

Relevant case(s): In 2022, in addition to finding Booking.com's price parity agreements anti-competitive, the Spanish National Authority for Markets and Competition (CNMC) also charged the platform for not providing insufficient transparency regarding the impact and cost-effectiveness of

its subscription programs – Preferred, Preferred Plus, and Genius. These programs allow hotels to improve their rankings in Booking.com's predetermined search results in exchange for higher commission fees or discounts on the best-selling or lowest-priced rooms.

The CNMC further highlighted that Booking.com restricted competition from other OTAs by considering various biased factors in its ranking algorithm:

- **Hotel's total number of bookings**: This criterion incentives hotels to concentrate their online bookings exclusively through Booking.com, which prevents competing OTA from entering or expanding in the market.

- **Performance**: One of the criteria for hotels to join or remain in the Preferred and Preferred Plus programs. This performance-based model encourages hotels to adopt a pricing and availability strategy that consolidates their sales on Booking.com, ultimately disadvantaging competing OTAs.

Booking.com was fined a total of EUR 413.2 million by CNMC[537].

Observations in Malaysia: According to a hotel revenue management player, hotels can pay higher commission rates to improve their rankings on the OTA platform. This was further highlighted by selected OTAs where such practice is common and sometimes can even be initiated by the hotels.

Additionally, for a resort participating in an OTA marketing programme, it reported that despite paying higher commission rates, there was no noticeable improvement in rankings. Combined with the lack of transparency around the OTA's ranking algorithm, this situation puts the resort – and other smaller players – at a disadvantage, especially when it comes to gaining visibility.

[537] CNMC (2024). The CNMC fines Booking.com €413.24 million for abusing its dominant position during the last 5 years. https://www.cnmc.es/sites/default/files/editor_contenidos/Notas%20de%20prensa/2024/20240730_NP_%20Sancionador_Booking.com_eng.pdf

Separately, it was noted through interviews with hotels that their account on the OTA platform can be terminated for alleged breach of terms without clear explanations. Upon termination, no appeals can be made.

4.4.9.3 Dominance of metasearch engines

Description: Metasearch engines' growing influence is directing customer traffic primarily to a select group of OTAs or directly to hotels' websites, often those that pay for higher visibility on these platforms. Prominent placement in search results is typically determined by financial arrangements, undermining consumer choice and competitive merits.

Furthermore, prominent metasearch engines such as Kayak (under Booking Holdings) and Trivago, Expedia (part of Expedia Group) are linked to parent companies that also own major OTAs. Such ownership structure may create potential conflicts of interest, enabling self-preferencing practices that funnel traffic disproportionately toward their affiliated OTAs.

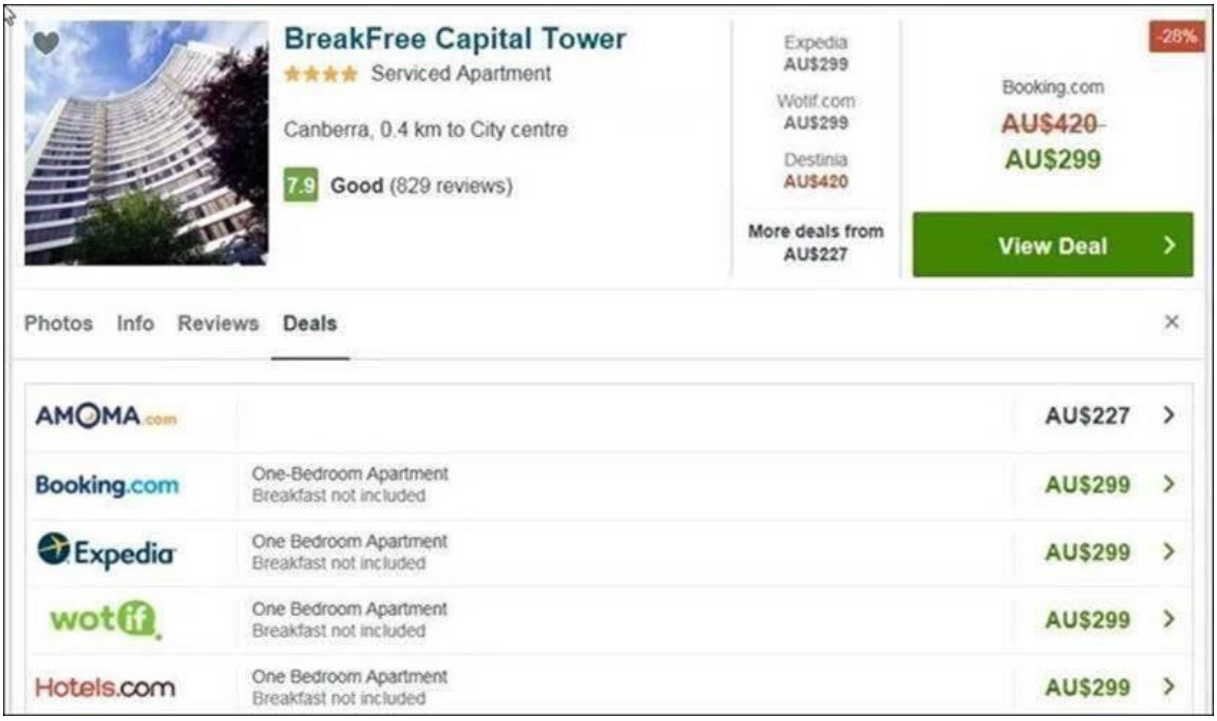
Implication on competition:

- **Reduced competition** as the growing dominance of metasearch engines may favor OTAs and hotels with greater financial resources, limiting market access for smaller or independent OTAs and hotels.

- **Distorted consumer choice** since search result rankings may be dominated by financially strong OTAs and hotels.

- **Self-preferencing concerns** arise from the ownership structure of selected metasearch engines that are linked to major OTAs and may direct traffic toward their affiliated OTAs, further disadvantaging competitors.

Figure 140: Example of preferential treatment of selected OTAs by Trivago[538]



Source: ACCC

Relevant case(s): In August 2018, the Australian Competition & Consumer Commission (ACCC) initiated legal proceedings against Trivago and in January 2020, the Australian Federal Court ruled that Trivago had violated Australian Consumer Law by misleading consumers about its ability to quickly and easily help users find the best deals or the cheapest rates for hotels.

The court found that Trivago's algorithm placed significant emphasis on which online hotel booking sites paid the highest cost-per-click fees, rather than prioritising the lowest prices for consumers. The ACCC also provided an example where a hotel room was listed as costing AUD 299, but cheaper options were available if the consumer clicked the "More deals" button[539].

[538] ACCC (2018). ACCC takes action against Trivago over hotel price advertisements. https://www.accc.gov.au/media-release/accc-takes-action-against-trivago-over-hotel-price-advertisements

[539] ACCC (2018). ACCC takes action against Trivago over hotel price advertisements. https://www.accc.gov.au/media-release/accc-takes-action-against-trivago-over-hotel-price-advertisements

Observations in Malaysia: According to selected hotels interviewed for the study, Malaysians are increasingly relying on metasearch engines to search for hotels. As of 2023, Rakuten Insights reports that when it comes to online bookings (excluding direct website bookings), Malaysians use both OTAs and metasearch engines[540]. The top metasearch engines include Trivago, Expedia, and Skyscanner. This trend has led to the growing dominance of metasearch engines, which has the ability to direct customers to selected OTAs and hotels with greater financial resources.

[540] Rakuten Insight (via Statista) (2023). Most popular online travel agencies among consumers in Malaysia as of June 2023. https://www.statista.com/statistics/1200922/malaysia-most-used-online-travel-agencies/

5. Next steps

For the draft final report submission due in June 2025, the following key areas will be focused:

- Refinement of market practices, competition and key issues based on further IDIs and survey input
- Analysis of consumer behaviour and innovation trends within each sub-sector
- Identification and evaluation of key issues concerning regulations, standards, and codes within each sub-sector
- Development of recommendations addressing the identified key issues

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