

TECHNICAL NOTES

1. INTRODUCTION

This report provides information on usage of ICT and e-commerce by establishment for reference year 2024. The data were collected and compiled from Annual E-Commerce Survey in 2025.

The ICT indicators has been developed by the World Summit on the Information Society (WSIS) and was launched in June 2004. The purpose of the core list as a guidance/ input to countries that are conducting ICT surveys. The core list also assists in produce quality and internationally comparable ICT data.

There are 48 ICT indicators in six groups as follows:

- | | |
|---|-----------------|
| • ICT infrastructure and access | - 10 indicators |
| • Usage and access of ICT by households and individuals | - 13 indicators |
| • Usage of ICT by businesses | - 12 indicators |
| • ICT sector (producing) | - 2 indicators |
| • International trade in ICT goods | - 2 indicators |
| • ICT in education | - 9 indicators |

2. LEGAL AUTHORITY

*The Annual E-Commerce Survey is conducts under the **Statistics Act 1965 (Revised 1989)**. Section 5 under this Act requires any establishment operating in Malaysia to provide actual or best estimate information to the Department. According to the Act, the contents of the questionnaire are **confidential** and only aggregate figures are published.*

3. SCOPE AND COVERAGE

*This publication used data from Annual E-Commerce Survey 2025 (reference year 2024). The survey collected information from registered establishments in Agriculture, Mining & quarrying, Manufacturing, Construction and Services sectors. This classifications for industries were referring to Malaysia Standard Industrial Classification (MSIC) 2008 Version 1.0, which is in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4 United Nations. The coverage for all sectors encompasses 1,122 categories of industries as shown in **Table 1**.*

Table 1: Number of industries by sector

Sector	Name of Industries
Agriculture*	140
Mining and Quarrying	56
Manufacturing	259
Construction	72
Services	595
Total	1,122

Note:

(*) Entrepreneurs in the Agriculture sector which registered with relevant government agencies for the purpose of receiving aid were **NOT** covered except palm oil's entrepreneurs.

4. SOURCE OF STATISTICAL FRAME

The main source for the establishment statistics frame is from the Malaysia Statistical Business Register (MSBR), while for the accommodation sub-sector, includes unregistered homestay. MSBR is a list of organisations/ enterprises operating in Malaysia that includes the Register of Companies (ROC), Register of Business (ROB), and Limited Liability Partnership (LLP) registered with the Companies Commission of Malaysia (CCM) as well as organisations registered with local authorities (LA) and professional bodies. The list in MSBR is updated regularly based on surveys and censuses conducted by the Department of Statistics Malaysia (DOSM) and administrative data sources from various agencies. The main source of administrative data is from the CCM.

In addition, DOSM also works together to obtain the latest information from other agencies such as the Employees' Provident Fund (EPF), the Royal Malaysian Customs Department, the Inland Revenue Board (IRB), Social Security Organisation (SOCSO), LA and professional bodies. The frame is updated by taking into account new establishments such as closed down, not in operation, change in activity and location/ correspondence address so as to ensure that the frame is at the most current status.

5. TYPES OF BUSINESS ACTIVITY

Type of business activity refers to both principal and secondary activities. The principal activity refers to the activity to which the establishment devoted most of its resources or activity which derived most of its income. Secondary activities are defined as those incidental or ancillary to the principal activity. The classification of the industry of the establishment is based on the principal activity and is in accordance with the Malaysia Standard Industrial Classification (MSIC), 2008 Ver. 1.0. The MSIC 2008 conforms to the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4, published by United Nations Statistics Division, with modifications to suit local conditions.

6. CONCEPT AND DEFINITIONS

The industries are categorised into five main sectors namely Agriculture, Mining & quarrying, Manufacturing, Construction and Services. The sectoral definitions include the following activities:

6.1 Agriculture

Agriculture comprising the activities of growing, breeding and rearing of animals and production of animal products, felling of trees and other plants, as well as capture fishery and aquaculture includes the use/ utilisation of plants/ vegetal and animals natural resources. There are four subsectors crops, livestock, forestry & logging, and fisheries.

6.1.1 Crops *refer to production of crops products including organic farming. Crops also include the growing of non-perennial and perennial crops for the purpose of seed production.*

6.1.2 Livestocks refer to animals or bird that are preserved for commercial and breeding purposes. Livestock production includes raising (farming) and breeding of all animals, also production of livestock products such as eggs, milk, honey.

6.1.3 Forestry & logging includes the production of round wood for the forest based manufacturing industries as well as the extraction and gathering of wild growing non-wood forest product. Besides the production of timber, forestry activities which produce the product through the minimum process, such as fire wood, charcoal, wood chips and round wood used in unprocessed form are also included. These activities can be carried out in natural or forests plantation. This also includes part of the forestry operation based on fee or contract basis.

6.1.4 Fisheries comprise of fishing and aquaculture, covering the use of fishery resources from marine, brackish or freshwater, with the purpose of capturing or gathering fish, crustaceans, molluscs and other marine organisms and products. Aquaculture refers to the production process involving the culturing or farming (including harvesting) of aquatic organisms using techniques designed to increase the production of the organisms beyond the natural capacity of the environment.

6.2 Mining & quarrying

Mining & quarrying include the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, etc. However, the sub-sector of mineral mining & quarrying was not covered in this publication.

6.3 Manufacturing

The physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold at wholesale or retail.

The classification of eight (8) sub-sectors by division are as follows:

Division	Description
<i>Food products</i>	
10	<i>Manufacture of food products</i>
<i>Beverages and tobacco products</i>	
11	<i>Manufacture of beverages</i>
12	<i>Manufacture of tobacco products</i>
<i>Textiles, wearing apparel and leather products</i>	
13	<i>Manufacture of textiles</i>
14	<i>Manufacture of wearing apparel</i>
15	<i>Manufacture of leather and related products</i>
<i>Wood products, furniture, paper products and printing</i>	
16	<i>Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials</i>
17	<i>Manufacture of paper and paper products</i>
18	<i>Printing and reproduction of recorded media</i>
31	<i>Manufacture of furniture</i>
<i>Petroleum, chemical, rubber and plastic products</i>	
19	<i>Manufacture of coke and refined petroleum products</i>
20	<i>Manufacture of chemicals and chemical products</i>
21	<i>Manufacture of basic pharmaceutical, medicinal chemical and botanical products</i>
22	<i>Manufacture of rubber and plastics products</i>

Division	Description
<i>Non-metallic mineral products, basic metal & fabricated metal products</i>	
23	<i>Manufacture of other non-metallic mineral products</i>
24	<i>Manufacture of basic metals</i>
25	<i>Manufacture of fabricated metal products, except machinery and equipment</i>
<i>Electrical, electronic and optical products</i>	
26	<i>Manufacture of computer, electronics and optical products</i>
27	<i>Manufacture of electrical equipment</i>
28	<i>Manufacture of machinery and equipment n.e.c.</i>
<i>Transport equipment, other manufacturing and repair</i>	
29	<i>Manufacture of motor vehicles, trailers and semi-trailers</i>
30	<i>Manufacture of other transport equipment</i>
32	<i>Other manufacturing</i>
33	<i>Repair and installation of machinery and equipment</i>

6.4 Construction

New construction, alteration, repair and demolition. The installation of any machinery or equipment installed which is built-in at the time of the original construction is included, as well as installation of machinery or equipment after the original construction but which requires structural alteration in order install.

6.5 Services

Services related to Electricity, gas, steam & air conditioning supply; Water supply, sewerage, waste management & remediation activities, Wholesale & retail trade; Transportation & storage; Information & communication; Accommodation; Food & beverage; Finance; Real estate; Professional, scientific & technical; Administrative & support services; Private education; Private health & socialwork; Art, entertainment & recreation and Personal services & other activities.

6.5.1 Electricity, gas, steam & air conditioning are defined as an activity of providing electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. The dimensions of the network is not decisive; also included are the distribution of electricity, gas, steam, hot water and the like in industrial parks or residential buildings. This section therefore includes the operation of electric gas utilities, which generate, control and distribute electric power or gas. Also included is the provision of steam & air-conditioning supply.

6.5.2 Water supply; sewerage, waste management & remediation activities comprised of activities related to waste management includes collection, treatment & disposal such as scheduled waste, solid waste and waste water from industrial and household, including recovery materials & contaminated sites. The waste from the treatment process can be disposed of or used as input for other production process. Related activities in water treatment and supply are also included in this sector.

6.5.3 Wholesale & retail trade encompasses of wholesale and retail trades, sales and repair of motor vehicles & motorcycles.

6.5.4 Transportation & storage includes all establishments provided land transport, freight transport by road, other land transport, water transport, warehousing & supporting activities such as storage & warehousing, terminal operations, car parking services, highway operations, port operations, cargo handling/stevedoring, shipping agencies & forwarding of eight and other supporting activities for transportation services.

6.5.5 Information & communication comprises activities of publishing, motion picture, video & television programme production, sound recording & music publishing, programming & broadcasting, telecommunication services, computer programming, consultancy & related activities and information services.

- 6.5.6 Accommodation services** refer to the provision on a fee of short-term lodging, whether open to the general public or restricted to members of a particular organisation. It excludes rental of long term furnished accommodation which is classified in Real Estate.
- 6.5.7 Food & beverages services** include food and beverage serving activities providing complete meals or drinks fit for immediate consumption, whether in traditional restaurants, self-service or take-away restaurants, whether as permanent or temporary stands with or without seating.
- 6.5.8 Financial services** include monetary intermediation activities; other financial service activities and activities auxiliary to financial services; insurance/ takaful, reinsurance/ retakaful and pension & provident funding activities; and activities auxiliary to insurance/ takaful and pension funding.
- 6.5.9 Real estate services** include acting as lessors, agents and/or brokers in one or more of the following: selling or buying real estate, renting real estate, providing other real estate services such as appraising real estate, property management or acting as real estate escrow agents. Activities in this division may be carried out on own or leased property and may be done on a fee or contract basis. Also included is the building of structures, combined with maintaining ownership of leasing of such structures.
- 6.5.10 Professional, scientific & technical** includes specialised professional, scientific & technical activities which require a high degree of expertise and training, and specialised knowledge and skills available to users. Activities performed include legal & accounting activities, activities of head offices, management consultancy activities, architecture & engineering activities, technical testing & analysis, scientific research & development, advertising & market research, other professional, scientific & technical activities and veterinary activities.

- 6.5.11 Administrative & support services** includes a variety of activities that support general business operations, including rental & leasing activities, employment activities, travel agency, tour operator & other reservation service activities, security & investigation activities, services to buildings and landscape activities & office administrative, office support & other business support activities.
- 6.5.12 Private educational services** refer to establishments registered with the Ministry of Education, Malaysia and the Ministry of Higher Education that provides academic, pre-primary & primary education, secondary education, higher education, other education and educational support activities.
- 6.5.13 Private health & social work services** include hospital services, medical & dental practice activities, other human health activities, residential care activities and social work activities without accommodation.
- 6.5.14 Arts, entertainment & recreation services** include a wide range of activities to meet varied cultural, entertainment & recreational interests of the general public, including live performances, operation of museum sites, gambling, sport and recreation activities.
- 6.5.15 Personal services & other activities** includes activities of membership organisations, activities of business, employers and professional membership organizations, activities of trade unions, activities of others membership organizations, repair of computers and personal & household goods and other personal services activities such as washing and dry-cleaning of textiles and fur products; hairdressing and other beauty treatment and funeral and other services activities.

7. ICT DEFINITION

Based on Organisation for Economic Co-operation and Development (OECD) 2015 definition:

a) Computer

*Computer includes personal computer, portable computer (e.g. laptop), tablet and other devices such as *smartphone.*

b) Intranet

Refers to the internal communications network using internet protocols and allowing communication within the organisation.

c) Extranet

Refers to a closed network that uses internet protocols to secure the sharing of business information with suppliers, vendors, customers or other business partners. It also can be part of a personal website business, where business partners can navigate after being confirmed in the login page.

d) Local area network (LAN)

A network connecting computers and associated devices within a localised area such as a single building, department or site; it may be wireless.

e) Wireless local area network (WLAN)

Local area network using high frequency radio waves instead of wires to communicate between networks-enabled devices. WLAN allows users to move around a small area within a radius of 20 to 91 meters.

f) Wide area network (WAN)

A network that connects computers and associated devices within a wide geographic area, such as a region or country.

Note.

**Malaysia including smartphone*

g) Fixed broadband

Refers to a technology with a speed of at least 256 kbit/s in one or both directions. It consists of wired fixed broadband and fixed wireless broadband.

Wired fixed broadband internet access most commonly used to send/ receive information via cable/ fiber optic (ADSL, SDSL, VDSL), fiber optic technology/ cable technology.

h) Mobile broadband

Refers to technology at speeds of not less than 256 kbit/s in one or both directions. It covers technologies such as 3G/ LTE/ 4G, 5G, UMTS, CDMA2000 and future technologies including both standard and dedicated data subscriptions. Typically used by mobile devices (e.g. laptops, tablets, USB wireless modems, smart phones and other mobile device.

Mobile broadband connection to the internet refers to access via WIFI hotspot (tethering) and not through a router (e.g. USB dongle/ modem/ surf stick such as YES dongle etc.).

i) Website

A website is a collection of network-related web resources such as a website, multimedia content that is usually identified by a common domain name and published by at least one web server. Websites can be accessed through public Internet Protocol (IP) networks such as the Internet or private local area network (LAN) by the URL that identifies the site. A website can be a personal website, a corporate website for a company, a government website, an organisation website and so on.

j) Social media

Refers to those who have a user profile, account or user license depending on the needs and types of social media. Types of social media are social networks (e.g. Facebook, Instagram and TikTok), enterprise blogs or enterprise microblogs (e.g. X) and multimedia content sharing websites (e.g. YouTube).

k) Mobile internet and technologies

Refers to an inevitable product in the development of the PC internet. It combines mobile and internet communications into one. This is a general term for activities where technology, platforms, business models and internet applications are combined with mobile communication technology (e.g. mobile IT equipment, Global Positioning System (GPS) equipment, wireless debit/ credit card payment terminals).

l) Cloud computing

Cloud computing refers to ICT services used over the internet to access software, computing power, storage capacity, etc. (e.g. HUAWEI Cloud Server, AVM Cloud).

m) Data analytic

Data analytic is a process or effort to process data into new information so that the characteristics of the data become easier to understand and useful for solving problems, especially those related to research (e.g. Tableau, Big Data Analytics, Mobile Business Intelligence).

n) Management software

Management software is application software that helps users while performing management activities (e.g. Enterprise Resource Planning, etc.).

o) Collaborative online platforms

Refers to economic partnerships (e.g. Lazada, Shopee, Grab, etc.).

p) Usage of internet and 5G technology necessity

Refer to a mobile internet connection technology that offers faster speeds and more stable connections on mobile devices.

8. E-COMMERCE DEFINITIONS

Based on OECD, 2015, e-commerce transaction is defined as sale or purchase of goods or services, through a network of computers that have been designed for this purpose. E-commerce transactions can occur between enterprises, households, individuals, governments and public or private organisation to another.

Goods or services that have been ordered through e-commerce methods, but the payment or receipt of goods or services can be received either through online or offline.

E-commerce transaction, includes orders placed on websites, extranet or Electronic Data Interchange (EDI). However, the transactions made by telephone, fax, e-mail (mail that is typed manually) and the similar transactions are not categorised as e-commerce transactions.

- a) **E-commerce income** means the total income of establishments with e-commerce transactions. Income for wholesale and retail trade establishments refers to the value of sales of goods and services. Sales value means the value of all items for which ownership or effective right to use with a view to ultimate purchase, has been transferred to others.
- b) **E-commerce expenditure** means the amount of expenses for establishments that have e-commerce transactions
- c) **E-commerce by type of market**
 - (i) **Domestic** means e-commerce transactions sales/ purchase that conducted in Malaysia.
 - (ii) **International** means e-commerce transactions sales/ purchase that conducted which involves international transaction.

d) E-commerce by type of customers

i) Other business

Business to Business (B2B) is related to e-commerce transaction between businesses which sell/ buy products or services to/ from another business. For example, a manufacturer can sell to a wholesaler or a wholesaler can sell to a retailer.

ii) Individual consumers

Business to Consumer (B2C) is related to e-commerce transaction between businesses and consumers which sell/ buy products or services. For example, business sells garment to consumer (income) or business provide discount coupon to consumers through e-commerce platform (expenditure).

iii) Government and other non-business organisations

Business to Government (B2G) is a business model that refers to businesses selling/ paying for products, services or information governments or government agencies. B2G networks or models provide a way for businesses to bid on government projects or products that governments might purchase or need for their organisations. This can encompass public sector organisations that propose the bids. B2G activities are increasingly being conducted via the internet through real-time bidding. B2G is also referred to as public sector marketing.

9. USAGE OF ICT PERCENTAGE CALCULATION

a) Usage of Computer, Internet and Web Presence

i) Percentage of computer usage

$$= \frac{\text{Number of establishment used computer}}{\text{Number of establishment operating}} \times 100$$

(ii) *Percentage of internet usage*

$$= \frac{\text{Number of establishment used internet}}{\text{Number of establishment operating}} \times 100$$

(iii) *Percentage of business having web presence*

$$= \frac{\text{Number of establishment having web presence}}{\text{Number of establishment operating}} \times 100$$

b) Type of Web Presence Owned

(i) *Percentage of owned website*

$$= \frac{\text{Number of establishment with owned website}}{\text{Number of establishment having web presence}} \times 100$$

(ii) *Percentage of presence on another entity's website*

$$= \frac{\text{Number of establishment with web presence on another entity's website}}{\text{Number of establishment operating having web presence}} \times 100$$

(iii) *Percentage of social media*

$$= \frac{\text{Number of establishment with social media}}{\text{Number of establishment operating having web presence}} \times 100$$

(iv) *Percentage of e-marketplace*

$$= \frac{\text{Number of establishment with e – marketplace}}{\text{Number of establishment operating having web presence}} \times 100$$

c) Type of Computer Network Infrastructure Used

(i) *Percentage of intranet*

$$= \frac{\text{Number of establishment owned intranet}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of extranet*

$$= \frac{\text{Number of establishment owned extranet}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of local area network (LAN)*

$$= \frac{\text{Number of establishment LAN}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) *Percentage of wireless local area network (WLAN)*

$$= \frac{\text{Number of establishment WLAN}}{\text{Number of establishment operating using internet}} \times 100$$

(v) *Percentage of wide area network (WAN)*

$$= \frac{\text{Number of establishment WAN}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) *Percentage of other area network*

$$= \frac{\text{Number of establishment owned other infrastructure network}}{\text{Number of establishment operating using internet}} \times 100$$

d) Type of Internet Access

i) *Percentage of fixed broadband usage*

$$= \frac{\text{Number of establishment owned fixed broadband}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of mobile broadband usage*

$$= \frac{\text{Number of establishment owned mobile broadband}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of both types of broadband usage*

$$= \frac{\text{Number of establishment owned both types of broadband}}{\text{Number of establishment operating using internet}} \times 100$$

e) Purpose of Internet Usage

(i) *Percentage of sending or receiving email*

$$= \frac{\text{Number of establishment used for sending or receiving email}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of telephoning over the internet usage*

$$= \frac{\text{Number of establishment used telephoning over the internet}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of posting information or instant messaging*

$$= \frac{\text{Number of establishment posting information or instant messaging}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) *Percentage of getting information about goods or services*

$$= \frac{\text{Number of establishment information about goods or services}}{\text{Number of establishment operating using internet}} \times 100$$

(v) *Percentage of getting information from government organisations*

$$= \frac{\text{Number of establishment getting information from gov. organisations}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) *Percentage of interacting with government organisations usage*

$$= \frac{\text{Number of establishment interacting with government organisations}}{\text{Number of establishment operating using internet}} \times 100$$

(vii) *Percentage of internet banking usage*

$$= \frac{\text{Number of establishment used internet banking}}{\text{Number of establishment operating using internet}} \times 100$$

(viii) *Percentage of accessing other financial services*

$$= \frac{\text{Number of establishment accesing other financial services}}{\text{Number of establishment operating using internet}} \times 100$$

(ix) *Percentage of providing customer service*

$$= \frac{\text{Number of establishment providing customer service}}{\text{Number of establishment operating using internet}} \times 100$$

(x) *Percentage of delivering products online*

$$= \frac{\text{Number of establishment delivering product online}}{\text{Number of establishment operating using internet}} \times 100$$

(xi) *Percentage of internal or external recruitment*

$$= \frac{\text{Number of establishment used internal or external recruitment}}{\text{Number of establishment operating using internet}} \times 100$$

(xii) *Percentage of staff training usage (e-learning applications)*

$$= \frac{\text{Number of establishment used for staff (e – learning)}}{\text{Number of establishment operating using internet}} \times 100$$

(xiii) *Percentage of internet usage for others*

$$= \frac{\text{Number of establishment used for others}}{\text{Number of establishment operating using internet}} \times 100$$

f) Usage of Digital Technology

i) *Percentage of website usage*

$$= \frac{\text{Number of establishment used for website}}{\text{Number of establishment operating using internet}} \times 100$$

(ii) *Percentage of social media usage*

$$= \frac{\text{Number of establishment used for social media}}{\text{Number of establishment operating using internet}} \times 100$$

(iii) *Percentage of mobile internet and technologies usage*

$$= \frac{\text{Number of establishment used mobile internet and technologies}}{\text{Number of establishment operating using internet}} \times 100$$

(iv) *Percentage of cloud computing usage*

$$= \frac{\text{Number of establishment used for cloud computing}}{\text{Number of establishment operating using internet}} \times 100$$

(v) *Percentage of data analytics usage*

$$= \frac{\text{Number of establishment used for data analytics}}{\text{Number of establishment operating using internet}} \times 100$$

(vi) *Percentage of managements software usage*

$$= \frac{\text{Number of establishment used for management software}}{\text{Number of establishment operating using internet}} \times 100$$

(vii) *Percentage of online collaborative platforms usage*

$$= \frac{\text{Number of establishment used for online collaborative platforms}}{\text{Number of establishment operating using internet}} \times 100$$

viii) *Percentage usage of internet and 5G technology necessity*

$$= \frac{\text{Number of establishment usage of internet and 5G technology necessity}}{\text{Number of establishment operating using internet}} \times 100$$

(ix) *Percentage of digital technology usage for other purposes*

$$= \frac{\text{Number of establishment used for other purposes}}{\text{Number of establishment operating using internet}} \times 100$$

10. SURVEY YEAR

Survey year refers to the year in which a survey was conducted.

11. REFERENCE YEAR

The reference year of the survey was the calendar year 2024. Establishments whose accounting year differed from calendar year were requested to report according to the accounting year or financial year covering the major part of the reference period.

12. METHOD OF DATA COLLECTION

This survey generally conducted through three (3) methods, namely;

a) Data collection method via Online method through the e-survey portal

This method targets respondents who have used this method for previous routine surveys.

b) Data collection method via e-mail, post, fax and telephone

This method targets respondents who have used this method for previous routine surveys. Respondents were given a period of one (1) month to complete and return the questionnaire to DOSM.

c) Face-to-face data collection method

Field work operation is carried out to get feedback from establishments that have not yet given answers from the two (2) methods above and this method also targets establishments that have never been involved in a routine DOSM

13. REPORTING UNIT

The reporting unit used in the survey was establishment. An establishment is defined as “an economic unit that engaged in one activity, under a single legal entity and operating in a single physical location”. Each establishment was assigned an industry classification based on its principal activity.

Each branch of a multi-branch organisation at a different location was conceptually treated as a different establishment. The establishment was requested to give separate returns for each activity in terms of value. However, if in practice, the accounts were centrally kept such that it was not possible to obtain separate data for each individual unit or branch, that entity or enterprise was treated as a single reporting unit and allowed to submit a consolidated questionnaire covering all units or branches.

14. SAMPLING DESIGN

Sampling design of the survey is a one-stage stratified random sampling. Categories of industries at national level have been classified as stratum and the establishment as the sampling unit.

Each stratum (industry) has been set up to four substrata to ensure the distributed sample takes into account the economic characteristics of the industry. The main substratum is heterogeneous, was fully covered. Whereas, other substratum that are homogeneous were sampled.

Main substratum include large establishments that have a significant total revenue in the Industry while for the second to fourth substratum are based on micro, small and medium enterprise (MSME) categories.

15. SAMPLE SIZE

The main statistics used to estimate the sample size is the total revenue. The formula used in the estimation of the sample size for a stratum is as follows:

$$n = \frac{\sum N_i S_i^2}{V + \sum N_i S_i^2}$$

where;

n = Sample size

N_i = Population size for stratum i

S_i = Variance for stratum i

V = Desired variance

$$V = RSE^2 \left(\frac{\hat{Y}_i}{Z} \right)^2$$

$\hat{Y}_i$ = Estimated total revenue for stratum i

Z = Relative standard error

RSE = Value of confidence level

Sample is distributed to substratum of the industry using Neyman Allocation method as follows:

$$n_{hi} = \left(\frac{N_h S_h}{\sum N_h S_h} \right) n_i$$

$h = 2, 3 \text{ and } 4, i = 1, 2, \dots k$

where;

n_{hi} = Sample size for substratum h of stratum i

N_h = Population size for stratum h

S_h = Standard deviation for substratum h

n_i = Sample size for stratum i

h = substratum

i = Stratum

The sample size for this survey is 14,137 establishments. Establishments of the large categories were fully covered while establishments in the other categories were selected using a systematic random sampling method.

16. WEIGHTS

Weighted analysis is done using sampling weight to ensure that the selected sample can reflect population survey. The weights required are the sampling design weight and non-response weight.

The sampling design weight for the establishment at stratum h is as follows :

where;

$$W_h = \frac{N_h}{n_h} \quad h = 1, \dots, 4$$

N_h = Total population of substratum h ; and

n_h = Total sample of substratum h

Non response weight at substratum h as below:

where;

$$NRW_h = \frac{1}{n'_n / n_n}, h = 1, \dots, 4$$

n'_n = Sampling design weight at substratum h

n_n = Non response weight at substratum h

The method of calculating the sampling design weight after the survey (adjusted weight) on substratum h as below:

$$W'h = W_h \times NRW_h, h = 1, \dots, 4$$

where;

W_h = Sampling design weight at substratum h

NRW_h = Non response weight at substratum h

17. PUBLICATION AND DATA REVISION

This publication presents the revised estimates of e-commerce income for the period 2023 to the First Quarter of 2026. The revisions were made based on the latest data from the annual survey and company accounts for the year 2024. Meanwhile, for the most recent estimates covering the period 2022 to the First Quarter of 2026, the estimates are compiled based on quarterly data sources.

18. ROUNDING

The sum of the component figures may not tally with the sub-total or total figures due to rounding.

19. SYMBOLS AND ABBREVIATIONS

- : Nil
- & : and
- % : per cent
- b : billion
- etc. : et cetera
- e.g. : example
- RM : Ringgit Malaysia
- ISIC : International Standard Industrial Classification
- MSIC : Malaysian Standard Industrial Classification
- n.e.c. : not elsewhere classified
- Ver. : Version
- W.P. : Federal Territory
- QoQ : Percentage change quarter-on-quarter
- YoY : Percentage change year-on-year