



BAHAGIAN *PART*

4

NOTA TEKNIKAL *TECHNICAL NOTES*



1. SCOPE AND COVERAGE

*This publication used data from Economic Census 2023 (reference year 2022). The census collected information from registered establishments in Agriculture, Mining & quarrying, Manufacturing, Construction and Services sectors. The classification for industries refers to Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0, which is in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4 United Nations. The coverage for all sectors encompasses 1,174 categories of industries as shown in **Table 1**. In this census, 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.*

Table 1: Category of industries by sector

Sector	Category of Industries
<i>Agriculture</i>	<i>142</i>
<i>Mining & quarrying</i>	<i>56</i>
<i>Manufacturing</i>	<i>259</i>
<i>Construction</i>	<i>72</i>
<i>Services</i>	<i>645</i>
Total	1,174

2. SOURCE OF STATISTICAL FRAME

The main source of the establishment statistical frame is from the Malaysia Statistical Business Register (MSBR). 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 and professional bodies. The list in MSBR is updated regularly based on surveys and censuses conducted by the Department of Statistics Malaysia and administrative data sources from various agencies. The main source of administrative data is from the Companies Commission of Malaysia (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 Organization (SOCSO), local authorities and professional bodies. The frame is updated to take into account new establishments and to record any changes in the status of the establishments such as closed down, not in operation, change in activity and location/ correspondence address to ensure the frame is at the most current status.

3. TYPE 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 industry for the establishment is based on the principal activity and is in accordance with the Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0 which conforms to the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4, United Nations, with modifications to suit local conditions.

4. CONCEPTS 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:

4.1 Agriculture

Agriculture comprises 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 sub-sectors; crops, livestock, forestry & logging and fisheries.

4.1.1 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.*

4.1.2 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, etc;*

4.1.3 Forestry and 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; and*

4.1.4 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.

4.2 Mining & quarrying

Mining and quarrying includes 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, Mineral mining & quarrying sub-sectors are not covered in this publication.

4.3 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
Food products	
10	Manufacture of food products
Beverages and tobacco products	
11	Manufacture of beverages
12	Manufacture of tobacco products
Textiles, wearing apparel and leather products	
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products

Division	Description
Wood products, furniture, paper products and printing	
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
31	Manufacture of furniture
Petroleum, chemical, rubber and plastic products	
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastics products
Non-metallic mineral products, basic metal & fabricated metal products	
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
Electrical, electronic and optical products	
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
Transport equipment, other manufacturing and repair	
29	Manufacture of motor vehicles, trailers and semitrailers
30	Manufacture of other transport equipment
32	Other manufacturing
33	Repair and installation of machinery and equipment

4.4 Construction

Defined as new construction, alteration, repair and demolition. Installation of any machinery or equipment 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 to install.

4.5 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 & social work; Art, entertainment & recreation and Personal services & other activities.

- 4.5.1** ***Electricity, gas, steam & air conditioning supply** 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 & pipes. The dimension 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;*
- 4.5.2** ***Water supply, sewerage, waste management & remediation** activities comprised of activities related to waste management including collection, treatment & disposal such as scheduled waste, solid waste & 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;*
- 4.5.3** ***Wholesale & retail trade** encompasses of wholesale and retail trades, sales and repair of motor vehicles & motorcycles;*
- 4.5.4** ***Transportation & storage** includes all establishments providing 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 freight and other supporting activities for transportation services;*
- 4.5.5** ***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;*

- 4.5.6** ***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;*
- 4.5.7** ***Food & beverage** services include food & 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;*
- 4.5.8** ***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;*
- 4.5.9** ***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 state, 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;*
- 4.5.10** ***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;*
- 4.5.11** ***Administrative & support services** include 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 building & landscape activities & office administrative, office support & other business support activities;*
- 4.5.12** ***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;*

- 4.5.13** *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;
- 4.5.14** *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; and
- 4.5.15** *Personal services & other activities* include activities of membership organisations, activities of business, employers and professional membership organisations, activities of trade unions, activities of other membership organisations, repair of computers and personal & household goods and other personal services activities such as washing and dry-cleaning of extiles and fur products; hairdressing and other beauty treatment and funeral and other services activities.

5. CENSUS YEAR

Refers to the year in which a census was conducted.

6. REFERENCE YEAR

The reference year of the census was the calendar year 2022. Establishments whose accounting year differed from calendar year were requested to report according to the accounting year or financial year covering at least six (6) months in the reference year.

7. METHOD OF COLLECTION

This census was generally conducted through three (3) methods of data collection, namely:

7.1 Data collection via online

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

7.2 Data collection 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 month to complete and return the questionnaire to the DOSM.

7.3 Face-to-face data collection

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

8. REPORTING UNIT

The reporting unit used in the Economic Census 2023 was the establishment. The establishment is defined as “an economic unit engaged in one activity, under a single legal entity and operating in a single physical location”. Each establishment is assigned an industry classification based on its principal activity. In the case of a multi-activity entity, units engaged in separate activities in the same location constituted distinct establishments.

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

9. LEGAL STATUS

The legal status of an establishment is defined as follows:

9.1 Individual proprietorship

This refers to a business, owned and operated by one person for his own profit. The owner has the exclusive right to control the operation of the establishment.

9.2 Partnership

This refers to a group of individuals who agree to contract and to carry out a business with the objective of profit making. All shareholders or anyone could manage the business for all parties. A trading partnership must comprise of at least two members and should not exceed a maximum of twenty members.

9.3 Limited liabilities partnership

Refers to business entity regulated under the Limited Liability Partnerships Act 2012. It is featured with the protection of limited liability to its partners similar to the limited liability enjoyed by shareholders of a company coupled with flexibility of internal business regulation through partnership arrangement similar to a conventional partnership; and

9.4 Private limited company

A private company established to undertake a business with the objective of making a profit. The shares are closely held by the shareholders of the company who have control over its operation. Characteristics:

- i. Regulated under the Companies Act 1965 and is a legal entity separate from the owners;*
- ii. Number of its shareholders between 2 - 50 members;*
- iii. Company owners have limited liability;*
- iv. Shareholders who own 51 per cent or more of the total shares shall be entitled to manage the company. The company's shares can be traded but not in the open market;*
- v. Trading of share must be with the consent of the other shareholders;*
- vi. Not listed on the Stock Exchange; and*
- vii. Business life expectancy is longer and can be identified by the words "Sendirian Berhad" (Sdn. Bhd.) at the end of the company name.*

9.5 Public limited company

A public limited company is a company established with limited liability, by a minimum of two persons to operate the business with the objective of making a profit. The shares in a public limited company are openly held and in the case of company listed on the Bursa Malaysia, the shares are freely transferable. Characteristics:

- i. Regulated under the Companies Act 1965 and is a legal entity separate from the owner;*
- ii. Owned by the shareholders and there is no limit to the shareholder;*
- iii. Management of the company is under the board of director responsibilities as appointed by shareholders; and*
- iv. Listed on Bursa Malaysia.*

9.6 Co-operative

This refers to a voluntary association with unrestricted number of members and registered under the Co-operatives Act 1993. Funds are collectively owned to meet the needs of members.

9.8 Private non-profit making organization

This is non-stock company set up with limited liability. It comprises mainly welfare, religious, educational, health, cultural, recreational and other organisations providing social and community services to households. These services are provided free of charge or at prices, which do not necessarily or fully cover the cost of providing such services (subsidy). Any profit made is reinvested in the organisation.

10. VALUE OF GROSS OUTPUT

10.1 The value of gross output of **Agriculture** (crops, livestock, forestry & logging and fisheries) is defined to include the following items:

Sales of agriculture product

- + *Stocks of agricultural products (closing)*
- + *Goods in progress and stocks of finished goods (owned manufactured) (closing)*
- + *Sales of agricultural products*
- + *Income from agricultural work done for others*
- + *Income from products processed from agricultural*
- + *Value of sales from goods/ materials/ products related to agricultural activity that is purchased for resale without further processing*
- + *Other income related to agriculture*
- + *Income from other agricultural activities*
- + *Forestry area sub-contracted to contractors (Forestry & Logging only)*
- + *Royalties, copyrights, licensing and franchise fees*
- + *Rental income received*
- + *Income from agro tourism (Crops/ Livestock/ Fisheries)*
- + *Value of sales from non-agricultural goods/ materials that is purchased for resale without further processing*
- + *All other income: Output*
- + *Research and development expenditure: In House*
- *Rental income received: Land*
- *Stocks of agricultural products (opening)*
- *Goods in progress and stocks of finished goods (owned manufacturing) (opening)*
- *Cost of goods/ materials/ products related to planting activity, purchased for resale without under going further processing*
- *Cost of goods/ materials sold (non-agricultural goods/ material that is purchased for resale without under going further processing)*

10.2 The value of gross output of **Mining & quarrying, Manufacturing and Construction** are defined to include the following items:

Sale of mineral/ quarry products/ manufactured products and construction work done

- + *Values of goods sold in the same condition as purchased*
- *Cost of goods sold in the same condition as purchased*
- + *Capital expenditure on own construction*
- + *Income from industrial services rendered to others*
- + *Income from industrial work done*
- + *Receipt from scrap, electricity, waste product, etc. sold to others*
- + *Receipt from commission and brokerage earned*
- + *All other output (such as receipts of non-industrial services, e.g. payment of management rental of property, etc)*
- + *Closing stock of finished goods*
- *Opening stock of finished goods*
- + *Closing stock of goods being processed*
- *Opening stock of goods being processed*
- + *Research and development expenditure (In-house)*

10.3 The value of gross output of **Services** is defined to include the following items:

- + *Value of goods sold in the same condition as purchased*
- + *Management services*
- + *Commission and brokerage earned*
- + *Fees earned from membership*
- + *Rental income received except land rental*
- + *Other operating income*
- + *Service tax and services charges*
- *Value of goods purchased for resale in the same condition as purchased*
- + *Closing stocks*
- *Opening stocks*
- + *Research and development expenditure (In-house)*

11. VALUE OF INTERMEDIATE INPUT

11.1 Value of intermediate input of **Agriculture** (crops, livestock, forestry & logging and fisheries) is defined to include the following items:

Cost of direct materials consumed in agricultural activities

- + Total payment on agricultural work done by other establishments
- + Cost of non-perennial crops seeds/ non-breeder livestock and fisheries
- + Expenditure for other agricultural activities
- + Packing materials consumed
- + Materials used for repairs and maintenance
- + Stationery and office supplies consumed
- + Water purchased
- + Electricity purchased
- + Fuel, lubricants and gas
- + Payments for current repairs and maintenance work done by others on this establishment's fixed assets
- + Transportation of goods (carriage outwards)
- + Travelling expenses
- + Accounting, secretarial and auditing fees
- + Advertising and promotional expenses
- + Legal fees
- + Payment for other professional services
- + Management fees
- + Commissions and agency fees
- + Telecommunication fees
- + Postage (include courier services)
- + Bank charges
- + Insurance premium on building, machinery, transport equipment and goods
- + Payment for security services
- + Payment for data processing and other services related to information technology
- + Rental payment (excludes for rent on land)
- + Expenses on agro tourism
- + Royalties paid to: Non-government organisations/ corporate sponsorship
- + GST on net purchasers are not claimable as input tax
- + Fees paid to non-working directors for their attendance at Board of Directors' meetings
- + Other expenses: Input
- + Value of free wearing apparel provided
- + Staff training cost

11.2 The value of intermediate input of **Mining & quarrying, Manufacturing and Construction** are defined to include the following items:

Value of materials and supplies consumed

- + *Cost of industrial work done by others include stripping overburden (earth removal) and internal transport in mines/ quarries site*
- + *Electricity and water purchased*
- + *Value of fuels, lubricants and gas consumed*
- + *Cost of materials used for repairs and maintenance of assets (including payments to others for this work)*
- + *Payments for non-industrial services such as toll, ferry, pilotage, towage and harbour fees and charges (including payments for carriage outwards, travelling, management fees, legal services, information technology, advertising, bank chargers, postage, telecommunication, etc*
- + *All other input costs (including training and value of the free apparel provided for the workers)*

11.3 The value of intermediate input of **Services** is defined to include the following items:

Purchase of goods, materials and services

- + *Insurance premiums*
- + *Royalty and patent fees*
- + *Bank charges*
- + *Purchase of electricity and water*
- + *Purchase of fuels, lubricants and gas*
- + *Research and development expenditure*
- + *Environmental compliance expenditure*
- + *Other operating expenditure*

12. VALUE ADDED

Value added is the increment to the value of commodities and services contributed by the establishment. This value added is derived as the difference between the value of gross output and intermediate input.

13. NUMBER OF PERSONS ENGAGED

Employment covers all persons engaged during December or the last pay period of the reference year. The number of persons engaged is classified under the following categories:

13.1 Working proprietors and unpaid family workers

i. Working proprietors and active business partners

This category refers to all individual proprietors and partners full-time or part-time who are actively engaged in the work of the establishment. Therefore, it excludes silent and inactive partners; and

ii. Unpaid family workers

This category includes all household members (full-time or part-time) to the owners of the establishment who perform a specified job and work for a minimum of one third of the normal working time for the establishment, but do not receive regular payment either in cash or in kind for the work done. Such workers generally receive food, shelter and other support as part of the household of an owner but this would continue whether they worked in the establishment or not.

13.2 Paid full-time employees

Refer to all paid workers (full-time) who work for at least six hours a day and/or 20 days a month. All such employees are to be categorised according to Malaysia Standard Classification of Occupations 2020 (MASCO) as follows:

i. Managers, professionals and researcher included:

a. Managers

Refer to those who devise, analyse, formulate, direct and advise on government policy, and make, amend and repeal laws, public rules and regulations, and represent and act on behalf of the government, and oversee the interpretation and implementation of policies and government legislation, or carry out similar tasks on behalf of special interest organisations, or plan, organise, lead, control and coordinate the policies and activities of enterprises, organisations, departments or the internal section; and

b. Professionals

Refer to those responsible for increasing the existing stock of knowledge, apply scientific or artistic concepts and theories, teach about the foregoing in a systematic manner, or engage in any combination of these three activities.

iv. Elementary workers

Refer to those who perform simple, routine and non-systematic tasks which mainly require the use of handheld tools or with the assistance of simple machines, and in some cases considerable physical effort.

13.3 Paid part-time employees

Refer to all paid workers (part-time) who work less than six hours a day and/ or 20 days a month.

14. CATEGORY OF SKILLS

Category of skills have been classified according to Malaysia Standard Classification of Occupation (MASCO) 2020 as follows:

14.1 Skilled

Managers, professionals and researchers, and Technicians and associate professionals;

14.2 Semi-skilled

Clerical support workers, Service & sales workers, Skilled agricultural, forestry, livestock & fishery workers, Craft & related trades workers, and Plant & machine operators and assemblers; and

14.3 Low-skilled

Elementary occupations.

15. WOMEN-OWNED ESTABLISHMENT

Women-owned establishment refers to a minimum of 51 per cent of the equity held by a women OR the biggest shareholders are women and the establishment is managed by a women OR the Chief Executive Officer or Managing Director is women that owns at least 10 per cent of the equity

16. SALARIES & WAGES

All payments (salaries, wages, bonuses, commissions, overtime pay and cash allowances including cost of living, housing, car, food, etc.) made throughout the reference year to all paid employees in each category. For all directly employed workers, total payments made before deductions for income tax and employees' contributions to Employees' Provident Fund (EPF) / Social Security Organisation (SOCSO)/ Other provident/ Retirement Funds Incorporated (KWAP). The employer's contribution to such funds as mentioned above should be excluded.

17. VALUE OF FIXED ASSETS

Fixed assets are produced assets that are used repeatedly or continuously in production processes for more than one year. Fixed assets include structures, machinery and equipment and cultivated assets such as trees or animals that are used repeatedly or continuously to produce other products such as fruit or dairy products. Additionally, intellectual property products such as software or artistic originals used in production are considered fixed assets.

18. RESEARCH AND DEVELOPMENT (R&D)

R&D comprises creative and systematic work undertaken in order to increase the stock of knowledge including knowledge of humankind, culture and society and to devise new applications of available knowledge. The term R&D covers three types of activity: basic research, applied research and experimental development.(Frascati Manual, 2015)

19. RESEARCHERS

Professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems; as well as, those engaged in managing the projects concerned. These professionals include a broad range of scientists, engineers and lecturers who are involved in generating new knowledge, products and applications through research.

20. SUPRA STATE

Based on the System of National Accounts (SNA) 2008, there are three types of institutional units that have a center of economic interest and most activities are within one region; multi-provincial units with centers of interest in some provinces but not nationwide; and units operating at the national level, i.e. its center of interest cannot be associated with geographical position (Supra State). Supra State at the state level is equivalent to an overseas organisation at the national level. In Malaysia, Supra State covers production activities beyond the centre for the key economic interest of any state.

21. ROUNDING

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

22. SYMBOLS AND ABBREVIATIONS

-	:	<i>no information</i>
0	:	<i>less than 500</i>
0.0	:	<i>less than 0.05 million</i>
<i>n.a</i>	:	<i>not available</i>
&	:	<i>and</i>
%	:	<i>per cent</i>
<i>etc.</i>	:	<i>et cetera</i>
<i>RM</i>	:	<i>Ringgit Malaysia</i>
<i>n.e.c</i>	:	<i>not elsewhere classified</i>
<i>W.P.</i>	:	<i>Federal Territory</i>