

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 1,200 categories of industries as shown in **Table 1**.

Table 1: Category of industries by sector

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

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.

The coverage of the census for the Mining and quarrying sector consists of 56 industries at the 5-digit level. These industries are classified according to the Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0. The complete list of covered industries is shown in the Appendix of the Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0.

2. SOURCE OF STATISTICAL FRAME

The main source of the establishment statistics 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 (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 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 the industry of the establishment is based on the principal activity and is in accordance with the Malaysia Standard Industrial Classification (MSIC) 2008 Version 1.0 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

Concepts and definitions used are based on the recommendations of the International Recommendations for Industrial Statistics, United Nations Statistical Division. The definition of Mining and quarrying used in this census accordance with the MSIC 2008 Version 1.0.

4.1 Mining and quarrying definition

Mining and 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. The Mining and quarrying sector consists of 2 sub-sectors namely:

4.1.1 Mineral mining and quarrying

i. Mining is defined as:

The extraction, dressing and beneficiating of minerals occurring naturally as solids, such as coal and ores; liquids, such as crude oil; or gases, such as natural gas. Mining also includes underground and surface mines, quarries and wells and all supplemental activities for dressing and beneficiating ores and other crude minerals such as crushing, screening, washing, cleaning, grading, milling, flotation, melting, pelletizing, topping and other preparation needed to render the material marketable. Mining activities are classified into group on the basis of the principal mineral produced.

ii. Quarrying refers to:

An activity of extraction from a mine or quarry, but also dredging of alluvial deposits, rock crushing and the use of salt marshes. The products are used most notably in construction (e.g. sands, stones, etc.), manufacture of materials (e.g. clay, gypsum, calcium, etc.), manufacture of chemicals, etc.



It includes quarrying, rough trimming and sawing of monumental and building stone such as marble, granite, sandstones, etc., quarrying, crushing and breaking of limestone, mining of gypsum and anhydrite, mining of chalk and unclaimed dolomite, extraction and dredging of industrial sand, sand for construction and gravel, breaking and crushing of stone and gravel, quarrying of sand and mining of clays, refractory clays and kaolin.

Activities of it also includes mining of chemical and fertilizer minerals, extraction of peat, extraction of salt, etc.

4.1.2 Petroleum and natural gas mining

Petroleum & natural gas refers to:

The production of crude petroleum, the mining and extraction of oil from oil shale and oil sands and the production of natural gas and recovery of hydrocarbon liquids. This includes the overall activities of operating and/ or developing oil and gas field properties, including such activities as drilling, completing and equipping wells, operating separators, emulsion breakers, desilting equipment and field gathering lines for crude petroleum and all other activities in the preparation of oil and gas up to the point of shipment from the producing property.

It also includes support activities for petroleum and gas extraction, such as oil and gas field services, performed on a fee or contract basis, oil and gas well exploration and test drilling and boring 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 Online method through e-BE portal

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

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

7.3 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 methods above and this method also targets establishments that have never been involved in a DOSM routine survey.

8. REPORTING UNIT

The reporting unit used in the Economic Census 2023 was the establishment. As 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 and not according to the activities of the parent company.

Each branch of a multi-branch organization 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 was 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. KEY VARIABLES:

9.1 LEGAL STATUS

The legal status of an establishment has been defined as follows:

a. **Individual proprietorship**

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.

b. **Partnership**

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 twenty members.

c. **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. It is coupled with flexibility of internal business regulation through partnership arrangement similar to a conventional partnership.



d. 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.

e. 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.

f. Co-operative

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.

g. Public corporation

Refers an undertaking set up under a Special Act Parliament or by the State Legislature.

h. Private non-profit making organisation

Refers to 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.

9.2 OWNERSHIP

The ownership of an establishment is classified by the residential status of the owner (s) of the majority (more than 50%) of the paid-up capital and not by their citizenship status. In instances where each party (Malaysian Resident and Non-Malaysian Resident) held equal shares in the business, the establishments were classified as "Joint Ownership".

A Malaysian Resident is any individual, company or other organization ordinarily domiciled in Malaysia for a period of at least one year. Malaysian registered branches and incorporated subsidiaries of foreign based/ origins are also regarded as Residents.

A Non-Malaysian Resident is any individual, company or other organization ordinarily domiciled in a country other than Malaysia. Foreign branches and/ or subsidiaries abroad owned by Malaysian Residents are also regarded as Non-Residents.

9.3 VALUE OF GROSS OUTPUT

The value of gross output of **Mining and quarrying** is 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. management fees received, income from 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)

9.4 VALUE OF INTERMEDIATE INPUT

*The value of intermediate input of **Mining and quarrying** is defined to include the following items:*

Value of materials and supplies consumed

- + *Cost of industrial work done (being processed) by others*
- + *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 (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)*

9.5 VALUE ADDED

Value added is the difference between gross output and intermediate input. It is approximately equivalent to commercial profit, salaries and wages, depreciation and indirect taxes; plus, interest paid less interest received.

9.6 NUMBER OF PERSONS ENGAGED

Number of persons engaged refers to all persons engaged during December or the last pay period of the reference year. The number of persons engaged was classified under the following categories:

a. ***Working proprietors and unpaid family workers***

i. ***Working proprietors and active business partners***

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

ii. ***Unpaid family workers***

This category encompasses all persons (full-time or part-time) in the household of the owners of the establishment who perform a specified job and work for a minimum of one third of the normal working time of 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 and this would continue whether they worked in the establishment or not.

b. Paid employees (full-time)

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

i. Manager, professional and researcher included:

- **Manager**

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

- **Professional**

Refer to those responsible for increase 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.

ii. Technicians and associate professionals

Refer to those who perform technical and related tasks connected with research and the application of scientific or artistic concepts and operational methods, and government or business regulations.

iii. Clerical, services & sales workers, craft workers, plant & machine operators and related occupations includes:

- **Clerical support workers**

Refer to those who record, organise, store and retrieve related information and perform clerical duties especially in connection with administrative operations, handling of money, travel arrangements and requests for information and appointments;

- **Service and sales workers**

Refer to those who provide personal services related to travel, housekeeping, catering, personal care, or protection against fire and unlawful acts, or demonstrate and sell goods in wholesale or retail shops and similar establishments as well as at stalls and markets;



- **Skilled agricultural, forestry, livestock and fishery workers**
Refer to those who grow and harvest field or tree and shrub crops, gather wild fruit, herbs and vegetables, breed, tend or hunt animals, produce a variety of animal husbandry products, cultivate, conserve and gather forest products, breed or catch fish and cultivate or gather other forms of aquatic life;
- **Craft and related trades workers**
Refer to those who apply their specific knowledge and skills in the fields of mining and construction, metal forming, and erect metal structures, make, fit, maintain and repair machinery, equipment or tools, carry out printing work as well as produce or process foodstuffs, textiles, or wooden, metal and other articles including handicraft goods; and
- **Plant & machine operators and assemblers**
Refer to those who operate and monitor industrial and agricultural machinery and equipment, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble product component parts according to strict specifications and procedures.

iv. **Elementary occupations**

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.

c. **Paid employees (part-time)**

Refers to all paid workers who work less than six hours a day and/or less than 20 days a month.

9.7 CATEGORY OF SKILLS

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

a. **High-skilled workers**

Managers, Professionals and Technicians & associate professionals;

b. **Semi-skilled workers**

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

c. **Low-skilled workers**

Elementary occupations.

9.8 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.

9.9 VALUE OF FIXED ASSETS

Fixed assets cover all goods, new or used, tangible or intangible, which have a normal economics life span of more than one year. For instance land, building & structure, transport equipment, computer, machinery & equipment, furniture & fittings, mineral exploration and other assets. Other assets also include biological assets namely trees/ crops (except for logging trees that intended for logging), livestock and aquaculture fisheries which can produce products repeatedly and have a life expectancy of more than one year.

Value of assets as at the beginning and end of 2022 was based on net book value. Purchases alterations and major repairs or capital expenditure during the year were valued at actual costs incurred. Value of assets sold during the year refers to the actual value.

9.10 WOMEN OWNED ESTABLISHMENTS

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.

10. SUPRA STATE

Based on the System of National Accounts (SNA) 2008, categorisation of institutional units based on their economic interest and geographical activities can be as follows; (1) most activities are within a single region; (2) multi-provincial units with centers of interest in multiple provinces or regions but do not operate on a nationwide scale; and (3) units operating at the national level, with their centre of interests not confined to any specific geographical position (e.g. 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.

11. ROUNDING

The sum of components may not add up to the total in the tables presented in this publication due to rounding.



12. COMPOUND ANNUAL GROWTH RATE (CAGR)

The calculation of compound annual growth rate (r) is based on the following formula:

$$y^t = y_0 (1+r)^t$$

where,

$$r = \left[e^{\frac{1}{t} \ln(\frac{y_t}{y_0})} - 1 \right] \times 100$$

where,

- y^t = Value of current year
- y_0 = Value of previous year
- t = Number of years, $y_t - y_0$
- r = Annual growth rate

13. SYMBOLS AND ABBREVIATIONS

The following symbols and abbreviations have been used throughout the publication:

-	: no information
&	: and
%	: per cent
}	: combine
0	: less than 500
0.0	: less than 0.05 million
b	: billion
Btu	: British thermal unit
CAGR	: compound annual growth rate
etc.	: et cetera
n.a	: not applicable
RM	: Malaysia Ringgit
n.e.c	: not elsewhere classified
W.P.	: Federal Territory