

Bahagian | *Part*

4

Nota Teknikal
Technical Notes

1. SCOPE AND COVERAGE

This census covered all registered establishments engaged in Professional Services which include main activities as follows:

- i. Architectural activities;*
- ii. Engineering activities;*
- iii. Land & quantity surveying activities;*
- iv. Accounting activities;*
- v. Legal activities;*
- vi. Advertising activities;*
- vii. Management consultancy and market research activities;*
- viii. Veterinary activities;*
- ix. Scientific research & development and technical testing & analysis activities;*
- x. Other professional activities.*

*Overall, 36 industries were covered based on the classification under Malaysia Standard Industrial Classification (MSIC), 2008 version 1.0. in accordance with the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008. The complete list of industries covered is shown in **Appendix**.*

2. SOURCE FRAME

The main source for the establishment frame is obtained from government agencies, boards and associations of professional bodies and other relevant agencies / bodies as stated below:

- i. High Court Registry*
- ii. Bar Council-Legal Directory*
- iii. Judicial Department, Sarawak*
- iv. Malaysian Institute of Accountants*
- v. Malaysia Institute of Certified Public Accountants*
- vi. Board of Architects, Malaysia*
- vii. Malaysian Institute of Architects*
- viii. Board of Engineers, Malaysia*
- ix. The Institution of Engineers, Malaysia*
- x. Association of Consulting Engineers, Malaysia*
- xi. Board of Land Surveyors, Malaysia*
- xii. Board of Quantity Surveyors, Malaysia*
- xiii. Institution of Surveyors, Malaysia*
- xiv. Board of Value's, Appraisers and Estate Agents, Malaysia*
- xv. Sabah Surveyors Board*
- xvi. Land and Survey Department, Sarawak*

3. TYPE OF BUSINESS ACTIVITY

The 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 to which it contributes the largest 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 to the Malaysia Standard Industrial Classification (MSIC) 2008 Ver.1.0. The MSIC 2008 Ver.1.0 conforms to the International Standard Industrial Classification of All Economic Activities.

4. CONCEPTS AND DEFINITIONS

The definition of professional, scientific and technical services adopted in this publication are based on the recommendations of the Malaysia Standard Industrial Classification (MSIC) 2008 ver. 1.0:

Professional, scientific and technical includes specialized professional, scientific and technical activities which require a high degree of expertise and training, and specialized knowledge and skills available to users. Activities performed include legal and accounting activities, activities of head offices, management consultancy activities, architecture and engineering activities, technical testing and analysis, scientific research and development, advertising and market research, other professional, scientific and technical activities, veterinary activities.

i. Architectural activities

Refers to the provision of architectural services on a fee or contract basis. These services must be provided by establishments operated by persons registered under Section (A) of the Register of Architects and Section (B) of the Register of Building Draughtsman maintained by the Board of Architects under the provisions of the Architects Act, 1967 (Revised 1973). Architectural consulting activities which concerns building design and drafting and often supervision of construction, town and city planning and landscape architecture.

4. CONCEPTS AND DEFINITIONS (CONT.)

ii. Engineering Activities

Refers to the provision of engineering services for others on a fee or contract basis. Included are engineering research, development and testing services. These services must be provided by establishments operated by persons registered under Section 7(1) of the Registration of Engineers Act, 1967 (Revised 1987).

- a) *Include engineering design (i.e. applying physical laws and principles of engineering in the design of machines, materials, instruments, structures, processes and systems) and consulting activities for:*
 - *machinery, industrial processes and industrial plant; projects involving civil engineering, hydraulic engineering, traffic engineering;*
 - *water management projects;*
 - *projects elaboration and realization relative to electrical and electronic engineering, mining engineering, chemical engineering, mechanical, industrial and systems engineering, safety engineering;*
 - *project management activities related to construction.*
- b) *Engineering services refers to elaboration of projects using air conditioning, refrigeration, sanitary and pollution control engineering, acoustical engineering, etc.*

iii. Land & quantity surveying activities

Refers to the provision of surveying services for others on a fee or contract basis. These services must be provided by establishments operated by persons registered under the Board of Land Surveyors and Board of Quantity Surveyors maintained under the Licensed Land Surveyors Act, 1958 (Revised 1991) and the registration of Quantity Surveyors Act, 1967 (Revised 1992). (Note: in 2010, other architectural and engineering activities and related technical consultancy (MSIC 71109) data are combined with other professional, scientific and technical services.

4. CONCEPTS AND DEFINITIONS (CONT.)

iv. Accounting activities

Refers to services involving the recording of commercial transactions from businesses or others, preparation or auditing of financial accounts, examination of accounts and certification of their accuracy and preparation of personal and business income tax returns. Included are related advisory activities and representation (other than legal representation) on behalf of clients before tax authorities.

v. Legal activities

Refers to legal representation of one party's interest against another party, whether or not before courts or other judicial bodies by, or under supervision of, persons who are members of the bar; general counseling and advising, preparation of legal documents and other activities of notaries public, civil law notaries, bailiffs, arbitrators and examiners and referees.

vi. Advertising activities

Refers to provision of a full range of advertising services through in-house capabilities or subcontracting. Advertising agency activities encompasses:

- *creating and placing advertising in newspaper, periodicals, radio, television, the internet and other media;*
- *creating and placing of outdoor advertising, example: billboards, panels, bulletins and frame, window dressing, showroom design, car and bus carding, and others;*
- *media representation i.e. Sale of time and space for various media soliciting advertising, aerial advertising; distribution or delivery of advertising material or samples, provision of advertising space on billboards, creation of stands and other display structures and sites;*

Include conducting marketing campaigns and other advertising services aimed at attracting and retaining customers (promotion of products; point-of-sale marketing; direct mail advertising; marketing consulting).

vii. Management consultancy and market research activities

This activities includes the provision of advice, guidance and operational assistance to businesses and other organisations on management issues, such as strategic and organisational planning; decision areas that are financial in nature; marketing objectives and policies; human resource policies, practices and planning; production scheduling and control planning.

4. CONCEPTS AND DEFINITIONS (CONT.)

This service may include advice, guidance or operational assistance to businesses and the public service regarding public relations and communication; lobbying activities; design of accounting methods or procedures, cost accounting programmed, budgetary control procedures and advice and help to businesses and public services in planning, organisation, efficiency and control, management information, etc.

Market research services refers to investigation into market potential, acceptance and familiarity of products and buying habits of consumers for the purpose of sales promotion and development of new products, including statistical analyses of the results; investigation into collective opinions of the public about political, economic and social issues and statistical analysis thereof.

viii. Veterinary activities

Refers to animal health care and control activities for farm animals and animal health care and control activities for pet animals. These activities are carried out by qualified veterinarians when working in veterinary hospitals as well as when visiting farms, kennels or homes, in own consulting and surgery rooms or elsewhere. It also includes activities of veterinary assistants or other auxiliary veterinary personnel, clinic-pathological and other diagnostic activities pertaining to animals and animal ambulance activities.

ix. Scientific research & development and technical testing & analysis activities

This activity refers to research and development of natural sciences, engineering and technology, medical sciences, biotechnology, agricultural sciences, social sciences, humanities research and development. Technical testing and analysis includes the performance of physical, chemical testing and other analytical for all types of materials and products; certification of products, Including consumer goods, motor vehicles, aircraft, pressurized containers, nuclear plants and others; periodic road-safety testing of motor vehicles; testing with use of model or replica (e.g. aircraft, ships, dams etc.); operation of police laboratories.

4. CONCEPTS AND DEFINITIONS (CONT.)

x. Other professional activities

Refer to the activities of their industrial design, namely: creating and developing the specifications and design in order to optimize the use, value and appearance of products, including the determination of the materials, construction, mechanisms, shape, color and polished final product, taking into account the nature and human needs, security, market traction and efficiency of production, distribution, use and maintenance.

For photographic activities include commercial and consumer photograph production such as portrait photography for passports, schools, weddings and other; photography for commercials, publishers, fashion, real estate or tourism purposes, aerial photography and videotaping of events: weddings, meetings, etc.; film processing such as developing, printing and enlarging from client-taken negatives or cine-films, film developing and photo printing laboratories, one hour photo shops (not part of camera stores), mounting of slides and copying and restoring or transparency retouching in connection with photographs; activities of photojournalists; microfilming of documents.

Activities of head offices refers to the overseeing and managing of other units of the company or enterprise; undertaking the strategic or organisational planning and decision making role of the company or enterprise; exercising operational control and manage the day-to-day operations of their related units.

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 the e-BE portal

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**. 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 to 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.

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. LEGAL STATUS (CONT.)

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.

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;*

9. LEGAL STATUS (CONT.)

- 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.

9.7 Public corporation

This refers to an undertaking set up under a Special Act Parliament or by the State Legislature.

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. 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.

11. VALUE OF GROSS OUTPUT

The value of gross output is defined to include the following elements:

- + *Revenue from services provided*
- + *Income from membership fees*
- + *Rental income received except land*
- + *Income from management services*
- + *Commissions and brokerage earned*
- + *Other operating income*
- + *Value of sales (goods/materials purchased for resale without undergoing further processing)*
- + *Research and development expenditure (in-house)*
- + *Build / self-produced fixed assets*

12. VALUE OF INTERMEDIATE INPUT

The value of intermediate input is defined to include the following elements:

- + *Purchase of goods, materials and services*
- + *Payments for repairs and maintenance*
- + *Expenditure for stationery, office supplies and others*
- + *Purchases of transport services*
- + *Travel and entertainment expenses*
- + *Expenditure for electricity, water, fuel, lubricants and gas*
- + *Accounting, secretarial and audit*
- + *Legal and other professional services fees*
- + *Management fees*
- + *Commissions and agency fees*
- + *Telecommunication, postage and printing cost*
- + *Advertising, marketing and promotion*
- + *Insurance premiums except workers' compensation work*
- + *Payments for security services*
- + *Rental payments excludes rent for use of land*
- + *Other operating expenditure*
- + *Fees paid to non-working directors for their attendance at Board of Directors' meetings*
- + *Value of free wearing apparel provided and staff training cost*
- + *Closing stock*
- *Opening stock*

13. VALUE ADDED

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

14. 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 was classified under the following categories:

14.1 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 is defined as all persons (full-time or part-time) in the household of any of 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.

14.2 Paid employees (full-time)

This is defined as all paid workers who work for at least 6 hours a day and at least 20 days a month.

i. Manager, professional and researcher included:

a. 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

b. 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.

14. NUMBER OF PERSONS ENGAGED (CONT.)

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:

a. 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;

b. 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;

c. 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

d. 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.

14. NUMBER OF PERSONS ENGAGED (CONT.)

14.3 Paid part-time employees

This is defined as all paid workers who work for less than 6 hours a day and/or less than 20 days a month.

15. CATEGORY OF SKILLS

Category of skills has been categorized according to Malaysia Standard Classification of Occupations (MASCO) 2020 as follow:

i. High-skilled workers

Managers and professionals, researcher, technician and associate professionals;

ii. Semi-skilled workers

Clerical support, service and sales, craft and related trades workers and plant and machine operators and assemblers; and

iii. Low-skilled workers

Elementary occupations.

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 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 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.

18. 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.



19. ROUNDING

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

20. COMPOUND ANNUAL GROWTH RATE (CAGR)

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

$$Y_t = Y_o (1 + r)^t$$

Where r ,

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

Where,

Y_t = Value at current year

Y_o = Value at previous year

t = Number of years, $Y_t - Y_o$

r = Annual growth rate

21. SYMBOLS AND ABBREVIATIONS

-	: nil
%	: per cent
&	: and
>	: more than
<	: less than
}	: combined
RM	: Ringgit Malaysia
etc.	: et cetera
cont.	: continue
i.e	: that is
n.e.c	: not elsewhere classified
W.P.	: Federal Territory

