

1. Scope and coverage *The survey covered all registered establishments engaged in **arts, entertainment and recreation services** which included main activities as follows:*

- i. Creative, arts and entertainment activities;*
- ii. Museums, amusement and cultural activities; and*
- iii. Sports and recreation activities.*

*Overall, coverage of the survey for arts, entertainment and recreation services was 38 industries at 5-digit level under the Malaysia Standard Industrial Classification (MSIC), 2008. The complete lists of industries are shown in **Appendix**.*

2. Source of establishments

The main source of updating statistical business frame namely Malaysia Statistical Business Register (MSBR). MSBR is a list of establishments operating in Malaysia which 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 establishments registered with local authorities and professional bodies. The list in the MSBR is updated regularly based on surveys and censuses conducted by DOSM and administrative data sources from other 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), 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 so as to ensure that 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 Ver 1.0. The MSIC 2008 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 definition of arts, entertainment and recreation services adopted in this publication is based on the recommendations of the Malaysia Standard Industrial Classification (MSIC) 2008 Ver. 1.0:

Arts, entertainment and recreation services include a wide range of activities to meet various cultural, entertainment and recreational interests of the general public, including live performances, operation of museum sites, gambling, sport and recreation activities.

4.1 Creative, arts and entertainment activities

This activity includes the operation of facilities and provision of services to meet the cultural and entertainment interests of their customers. This includes the production and promotion of, and participation in, live performance, events or exhibits intended for public viewing, the provision of artistic, creative or technical skill such as activities of sculptors, painters, cartoonists and etc., activities of individual writers, including activities of independent journalists and restoring works of arts. This activity also includes activities of producers or entrepreneurs of arts live events, with or without facilities.

4.2 Museums, amusement and cultural activities

This activity includes the operation of museums of all kinds, botanical, zoological, also including activities of recreation parks and beaches and cyber cafe / internet centre activities.

4. Concepts and definitions (cont'd)

4.3 Sports and recreation activities

This activity includes the provision of sport activities, activities of sport teams or clubs primarily participating in live sports events, independent athletes engaged in participating in live sporting or racing events. This activity also included sports trainers providing specialised services to support participants in sports events or competition, operators of arenas and stadiums, other activities of organising, promoting or managing sports events and other sport activities. Gambling and betting activities such as sale of lottery ticket, operation of casinos and gambling machines are also included in this activity.

5. Survey year

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

6. Reference year

The reference year of the survey was the calendar year 2021.

7. Method of data collection

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

- i. Data collection method via Online method through the e-aes portal: This method targets respondents who have used this method for previous routine surveys.*
- ii. Data collection via e-mail / post / fax / telephone: This method targets respondents who have been involved in previous survey. Respondents were given a period of one month to complete and return the questionnaire to the Department.*
- iii. Face-to-face data collection method: Field work operation is carried out to get feedback from organisations that have not yet given answers from the two methods above and this method also targets organisations that have never been involved in a routine DOSM survey.*

8. Sampling design

Sampling design of the survey is a one-stage stratified random sampling. Categories of industries at two (2), three (3), four (4) and five (5) digit MSIC at state level have been classified as stratum and the establishment as the sampling unit.

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

**8. Sampling design
(cont'd)**

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

**9. Sample size and
estimation procedure**

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,

$$\begin{aligned} n &= \text{Sample size} \\ N_i &= \text{Population size for stratum } i \\ S_i^2 &= \text{Variance for stratum } i \\ V &= \text{Desired variance} \end{aligned}$$

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

where,

$$\begin{aligned} \hat{Y}_i &= \text{Total revenues for stratum } i \\ RSE &= \text{Relative standard error} \\ Z &= \text{Value of confidence level} \end{aligned}$$

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

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

$$h = 2, 3 \text{ and } 4$$

$$i = 1, 2, \dots k$$

9. Sample size and estimation procedure (cont'd)

where,

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

N_h = Population size for substratum h

S_h = Standard deviation for substratum h

n_i = Sample size for stratum i

h = Substratum

i = Stratum

The optimum sample size for this survey is 1,818 establishments. Establishments of the large categories were fully covered while establishments of the second to fourth substratum were randomly selected using systematic random sampling.

10. Weights

Weighted analysis is done using sampling weight to ensure that the selected sample can reflect the 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:

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

where,

N_h = Total population of substratum h

n_h = Total sample of substratum h

Non response weight at substratum h as below:

$$NRW_h = \frac{1}{n'_h/n_h}, h = 1, \dots, 4$$

where,

n'_h = Number of response sample size for substratum h

n_h = Number of sample size for substratum h

10. Weight (cont'd)

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

11. 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 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.

12. Value of gross output

The value of gross output of **arts, entertainment and recreation services** is defined to include the following items:

Income from services rendered

- + Income from the sale of tickets / entrance fees
- + Income from membership fees
- + Income from recreational activities
- + Income from gambling and betting activities
- + Income from consulting services
- + Income from conducted tours
- + Income from sales of food and beverages (including catering)
- + Income from commissions and brokerage earned and management services

12. Value of gross output (cont'd)

- + Rental income received (except land)
- + Value of sales (good / materials purchased for resales without undergoing further processing)
- + Other operating income
- + In-house research and development expenditure
- + Built / self-produced fixed assets
- Cost of goods sold (goods / material purchased for resale without undergoing further processing)
- Payment for winning prizes / rebates

13. Value of intermediate input

*Value of intermediate input of **arts, entertainment and recreation services** is defined to include the following items:*

- Excavation expenses of museums / historical objects*
- + *Conservation expenses of museums / historical objects*
- + *Cost of exhibition and display*
- + *Purchase of animal food*
- + *Payment for winning prizes / rebates*
- + *Amount paid for current repairs & maintenance work done by others and payment for providing workers*
- + *Royalties paid to non-government organisations / corporate sponsorship (local and foreign)*
- + *Telecommunication, printing cost and advertising and promotion*
- + *Expenditure for electricity, water, fuel, lubricants, gas, stationery, office supplies and others*
- + *Payment for security services*
- + *Operation expenditure and operational lease*
- + *Fees paid to non-working directors for their attendance at Board of Directors' meetings*
- + *Value of free wearing apparel provided and staff training cost*
- + *Other operating expenditure*
- + *Opening stock except trading stock*
- *Closing stock except trading stock*

- 13. Value of intermediate input (cont'd)** *Effective 2014, research and development expenditure has been removed from calculation of intermediate input and treated as capital asset in line with the Recommendation of System of National Accounts (SNA) 2008.*
- 14. 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.*
- 15. Number of person engaged** *Number of persons engaged 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:*
- 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. It therefore, excludes silent and inactive partners.
 - ii. Unpaid family workers**
This category encompass all persons in the household of any of the owners of the establishment who perform a specified job (full-time or part-time) 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 a part of the household of an owner but this would continue whether they workers in the establishment or not.
 - iii. Paid full-time employees**
It refers to all paid workers who work for at least 6 hours a day and 20 days a month.
 - iv. Paid part-time employees**
It refers to all paid workers who work for at less than 6 hours a day and / or less than 20 days a month.

16. Category of skills *Category of skills has been categorised according to Malaysia Standard Classification of Occupations 2020 (MASCO) as follow:*

i. High-skilled workers

Managers and Professionals, Researcher, Technicians and Associate Professionals;

ii. Semi-skilled workers

Clerical Support Workers; Service & Sales Workers; Craft & Related Trades Workers; Plant and Machine Operators & Assemblers; and

iii. Low-skilled workers

Elementary Occupations.

17. Value of fixed assets *Fixed assets covers all goods, new or used, tangible or intangible and repeated & continuously that have a normal economic life span of more than one year. Included are land, buildings and structure, transport equipment, other machinery equipment, computer software and furniture and fittings. Value of assets as at the beginning and end of 2021 were based on net book value. Purchases, alterations and major repairs or capital expenditure during the year valued at actual cost incurred. Value of assets sold during the year refers to the realized value. Research and development expenditure also treated as capital asset in line with the recommendation of System of National Accounts (SNA) 2008.*

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

19. Percentage change year-on-year *The calculation is based on the following formula:*

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

where,

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

**19. Percentage change
year-on-year (cont'd)**

where,

- y_t = Value at current year
 y_o = Value at previous year
 t = Number of years, $y_t - y_o$
 r = Compounded annual growth rate

**20. Symbols and
abbreviations**

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